Kentico CMS 5.5 R2 Developer's Guide



Table of Contents

Introduction	22
Introduction	
About this quide	24
Where do I get further hole?	
where do I get further help?	
Version history	
Kentico CMS overview	27
What are the benefits of Kentico CMS?	27
How does it really work?	
Where is the content stored?	
How do Ladit content?	32
How do I develop a website?	
Installation and deployment	37
Overview	
System requirements	
Installation procedure	
Setup (KenticoCMS.exe)	
Web installer	
Overview	
Local IIS server	
Built-in web server in Visual Studio	
Remote server	
Existing installation	
Database setup	
New site wizard	
Overview	
New site	
Website template	
Deployment to the live server	
Oninstallation	
	72
Creating a virtual directory	
Configuration for Medium Trust environment	
Configuring Application Pools	
SMTP server configuration	
Installation on shared hosting server	
Installation in medium-trust environment	
AppPool permissions on Windows 7 or Windows Server 2008 R2	
Database replication	
Overview	

Contents	3

Creating a publication	
Creating a subscription	
Modifying structure of a replicated DB	
Configuration of full-text search in files	
Overview	
Configuration on MSSQL 2005 and 2008	
Configuration on MSSQL 2005 Express Edition	
Searching PDF files	
Searching Office 2007/2010 documents	
Custom URL extensions and extensionless URLs	
Overview	
IIS 7 and higher	
IIS 6	
Configuration of custom URL extensions (.html or other)	
Lock violation on IIS7	
Visual Studio integration	127
Opening the project	
Adding Kentico CMS Controls to the Toolbox	
Debugging	
Pre-compilation (Publish function)	
Visual Source Safe and Team Development	
Opening a VS2005 project in VS2008	
Troubleshooting installation issues	
Qverview	138
SQL Server connection problems	139
ASP.NET not working on Windows Server 2003	
Internal server error when using Integrated pipeline mode	
Disk permissions problems	
Disk permissions problems	
Solution on Windows 7	
Solution on Windows Vista or Server 2008	
Solution on Windows XP	
Solution on Windows 2003	
System backup and recovery	
- · · · · · · · · · · · · · · · · · · ·	

Content management

Overview	160
Organizing pages, files and documents	162
Editing content	165
Creating a new page	
Creating a new structured document	
Previewing documents	
Creating a linked document	170
Drag-and-drop operations with documents	172
WYSIWYG editor	174
Overview	
Insert image or media	175
Overview	175
File sources	177
View modes	
Inserting images	183

Inserting flash	
Inserting audio/video	
Inserting image or media from Web	
Quickly insert image	
Insert link	
Overview	
Link properties	
Links to content within the CMS	194
Links to Web	197
Links to anchors	198
Mailto links	199
Insert YouTube video	200
Editing inserted items	200
Copy & Pasto from Microsoft Word	203
Copy & Paste noin Microsoft Word	
Defining custom tooldars	
Defining styles	
Dialogs security	
Document properties	213
Overview	
General	
URLs	
Template	
Metadata	
Categories	
Menu	
Workflow	219
Versions	219
Related dors	220
Linked docs	220
Attachmonts	
File management	223
File management overview	
Document attachments	
Overview	
Example: Unsorted attachments	
Example: Grouped attachments	
Available web parts	
Available inline controls	
Handling attachments in transformations	
Using the File field	
Temporary attachments handling	
Attachment names	
Handling images	
Image editor	242
Resizing images on upload	243
Where the files are stored	240
Files-related settings	244 216
Lising the Media selection control	240 9 <i>1</i> 7
Document namy	
Content search	251

	Contents	5
Contont coho duling		251
Light the built is shell shocker		
Accessing the built-in spen-checker		
Accessing content using .NET code (API)		
Permissions and security		
FAQ		255
Managing sites		257
Site Management Overview		257
Managing sites		258
Starting and stopping sites		259
Creating a new site		259
Export and import		259
Overview		259
Exporting a site		260
Exporting objects		
Exporting single objects		208 270
Folder structure and import/export		
Excluding files and folders from export		280
Import/export troubleshooting		280
Configuration on W2008/IIS7		
Deleting sites		
Creating web templates		
License management		
Managing site settings		
Configuring multiple web sites		
Multiple web sites on a single domain (in subfolders)		295
Configuring nested web sites		296
API Examples		300
Website settings		302
Settings overview		302
Development		305
Overview		305
Web development overview		305
The role of a web developer		
What is a page template		
Portal templates versus ASPX templates		306
Portal engine development model		308
Portal engine overview		
Creating a new page template		
Re-using an ad-noc page template		
Page layouts		

The master page concept	
Editing the master page	
Visual inheritance	
Content tree and page templates	
Managing page template catalog	
Cloning and modifying a page template	
Using and configuring web parts	
Web part binding (obsolete)	
Adding custom code to web parts (obsolete).	
Common web part properties	343
Path and macro expressions in web part properties	349
Adding custom code to the portal page template	349
Displaying data from an external database or Web Service	352
Developing sites for mobile devices	354
Portal engine development internals and API	356
Database tables and API classes	
Database tables and ATT dasses	357
Catting page template data	257
Getting page template data	
A seize and remained action for the categories	
Assigning and removing page templates from sites	
Ivianaging page template scopes	
Page layouts	
Getting page layout data	
Managing page layouts	
ASPX page template development model	
Overview	
Creating a new ASPX page template	
Creating ASPX master pages	
Adding custom code to the ASPX page template	
Combining ASPX templates and portal engine templates	
Integration with your existing ASP.NET application	
Displaying data from an external database	
Caching and performance	
Overview	
Caching options	
Troubleshooting performance issues	
File management and performance	
CSS stylesheets and design	383
Overview	
App themes	
Printer friendly CSS styles	
Print page	
CSS stylesheet internals and API	
Database tables and API classes	
Getting CSS stylesheet data	
Managing CSS stylesheets	
Assigning CSS stylesheets to sites	
Debugging	396
Overview	
Particular debugs	399
System objects debug	399
Cache items debug	400
Worker threads debug	400 401

Contents	7

Cache access debug	
SQL queries debug	
Page ViewState debug	
Output debug	
Security debug	
Macros debugging	
Request debug	
Web farm debugging	
Bulk keys for all debugs	410
System error notifications	
Document types and transformations	411
Overview	
Transformations	413
Defining a new document type	
Writing transformations	
Adding custom functions to transformations	
Context menus in transformations	
E-mail templates	
E-mail templates	428
Commonstralo	420 130
Overview	
Developing form controls	
Inline controls	
Overview	
How to develop inline controls	
Membership, permissions and security	442
Security model overview	
User management	
Role management	
Username customization	
Permissions	
Permissions overview	
Document permissions	
Document-level permissions	
Security	
Secured website areas	
SSL (HTTPS) support	
Cross site scripting (XSS)	
Configuration of allowed request parameters	
Managing security using .NET code (API)	
Ul personalization	
Overview	
Quick example	
How does it work	
Personalizable parts of CMS Desk	
Overview	
CMS Desk main tabs	
CMS Desk -> Content tab	
CMS Desk -> Content -> Edit -> Properites tab	
CMS Desk -> My desk tab	
CMS Desk -> Tools tab	
CMS Desk -> Administration tab	

WY SIWY G editor	
Media dialog	
Enabling UI personalization	
UI profile configuration	
Ul elements management	
Ul elements management overview	
Example: Adding a new main tab to CMS Desk	
User registration	
Available registration web parts	
Registration form web part	
Creating a custom registration form	
Registration approval and double opt-in	
Shared user accounts	
Badges	
Badges	
Defining badges	
Assigning badges to users	
Activity points	
Available form controls	
Custom fields visibility	
How it works	
Enabling visibility controls	
Use in custom form lavouts	515
Configuring the web parts	516
Authentication	
Authentication overview	
Windows authentication (Active Directory)	
Configuring Windows authentication (Active Directory)	
Windows authentification on Windows 7/2008 R2/Vista (IIS7 or higher)	
Securing a web site section using Windows authentication	
Active Directory Import Utility	
AD Import Utility overview	
Using the wizard	
AD import from command line	
How to recognize imported users and roles	
Configuring mixed mode authentication	
Integrating authentication with external systems	
Single sign-on	
Displaving personalized content	
Third-party authentication services	
Overview	
Windows Live ID	
Overview	
Registering your application	
Settings	
Available w eb parts	
OpenID	
Overview	
Settings	
Available web parts	
Facebook Connect	552
Overview	
Registering your application	
Settings	
-	

Contents	9

Available w eb parts	558
Managing imported users	
Membership internals and API	
Database tables and API classes	
Managing users	
Managing roles and permissions	
Managing badges	
Microsoft Silverlight integration	568
Overview	568
Adding a Silverlight application to your site	
IIS configuration	570
Multilingual and international support	573
Overview	
Configuring multilingual content	
Configuring multilingual and RTL UI	577
RTL languages	580
Languages and URLs	
Default language selection	582
Localization Expressions	
Translation management	583
Overview	
Culture-dependent workflow scopes	
Translation status overview	
Language-bound editors	
Page processing and URLs	587
Overview	587
URI rewriting	
Multiple document aliases	588
URL format and configuration	
Wildcard URLs	
Linking pages and files	
GetFile.aspx parameters	
Output filters	596
Google Sitemap	597
Rebranding	598
Changing a logo in the header	598
Removing the log-on bar	601 - F
Changing logo of CMS Desk and CMS Site manager	603
Renaming resource strings	
Scheduler	605
	605
Scheduling a custom code	
Scheduler internals and API	
Database tables and API classes	610 610
Getting scheduled task data	611
Managing scheduled tasks.	611
Running a scheduled task	613
SQI import	
System tables and custom fields	619
Overview	619
Custom document data	620

Web parts	620
Overview	
Developing web parts	
Modifying web parts	
Modifying web parts	
Setting web part properties dynamically in your code	
Customizing web part layout	
Modifying code of standard web parts	
Web part inheritance	
AJAX support	
Web part containers	
Containers overview	
Creating web part containers	
Data source web parts	
Using Data source web parts	
Problems with XML data source	
Developing Data source web parts	
Developing custom filters	
Widgets	
Overview	
Developing widgets	
Using widgets	
Security	
Widget internals and API	
Database tables and API classes	
Getting widget data	
Managing widgets and their categories	
Setting widget permissions	
Workflow and versioning	
Overview	
Defining a workflow	
Using workflow	
E-mail notification in workflow process	
Versioning and rollback	
Versioning without workflow	
Content locking	
Managing workflow using .NET code (API)	
Modules	687
Overview	687
Developing custom modules	687
Abuse report	694
Overview	
Available web parts	
Using the In-line abuse report web part in transformations	
Abuse reports management	
Integration with other modules	
Security	
Abuse report internals and API	
Database tables and API classes	
Submitting an abuse report	
Getting abuse reports from the database	

Contents	11

Updating an abuse report	
Deleting an abuse report	
Alternative forms	
Overview	
Creating an alternative form	
Joining two classes into one form	
Automatically used alternative forms	
Avatars	
Ονεινίεω	712
Changing user avatars	713
Changing group avatars	715
Managing avatars	716
Settings	
Avatars internals and API	
Database tables and API classes	
Getting avatar data	
Modifying and creating avatars	
Displaying avatars in transformations	
Bad words	
	734
Over view	
Enabling the module	
Descible actions	
Multilingual support	728
Security	729
Bad words internals and API	729
Database tables and API classes	729
Creating bad words	
Getting and updating bad words	
Deleting bad words	
Performing bad word checks	
Banned IPs	
	734
Enabling IP banning	
Banning in Danning	735
Finding an IP address	737
Security	
Banned IPs internals and API	
Database tables and API classes	
Getting banned IP data	
Modifying and creating banned IPs	
Checking if actions are banned	
BizForms	
	742
Creating a new form	
Displaying a form on the live site	
Managing BizForm data	740
Notification and autoresponder e-mails	
Notification and autoresponder e-mails	750
Notification e-mails	750
Autoresponder e-mails	
Using macros with BizForms	

Defining custom form layout	
Security	
BizForms internals and API	
Database tables and API classes	
Creating a new record	
Updating a record	
Deleting a record	
Customization possibilities	
Blogs	
Overview	
Sample blog	
Adding a blog to your site	
Adding posts to your blog	
Moderating comments	
Blog layout and design	
On-site management via User contributions	
Settings	
Security	
Managing blogs using Kentico CMS API	
Trackbacks	
Trackbacks overview	
Enabling trackbacks	
Blog comments notifications	
Who can be notified	
User subscriptions	
E-mail templates	
MetaWeblog API	
Overview	
Windows Live Writer installation	
Registering blog account	
Publishing first blog post	
Managing blog posts	
Multilingual support	
Settings	
Security	
Booking system	
Overview	
Publishing the events	
Managing attendees	
Security	
Booking system internals and API	
Database tables and API classes	
Adding an attendee	
Editing an attendee	
Removing an attendee	
Categories	
Overview	807
Global categories	808
Custom categories	809
Adding a document to a category	
Using the Category list web part	813
Content rating	814
Overview	

Contents	13

How to enable content rating on the web site	
Other involved web parts	
Displaying ratings in transformations	
Content rating internals and API	
Content rating database tables and API classes	
Adding document rating	
Getting document rating	
Modifying document rating	
Content desing	
Content staging	020
Overview	
what can be synchronized	
Content staging configuration	
Bi-directional staging	
Synchronizing the content	
Automatic Synchronization	031 032
Osing A.509 authentication	032 821
Security	
	000 000
Overview	
Creating custom tables	
Managing custom tables	
Managing data in custom tables	
Available web parts	
Transformations for custom tables	
Security	
Custom tables internals and ADI	951
Custom tables internals and API	
Custom tables internals and API Database tables and API classes	
Custom tables internals and API Database tables and API classes Adding an item into a custom table	
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item	
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item	851 851 852 852 852 853 853
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables.	851 852 852 852 853 853 854 855
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables A complete example.	851 852 852 852 853 853 854 855 855
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables A complete example	851 852 852 852 853 853 854 855 855 855
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables A complete example Document library	851 852 852 852 853 853 854 855 855 855 857 857
Custom tables internals and API Database tables and API classes	851 852 852 853 854 855 855 855 855 857 857 857 857 857
Custom tables internals and API Database tables and API classes	851 851 852 852 853 853 854 855 855 855 855 857 857 857 857 857
Custom tables internals and API Database tables and API classes	851 851 852 852 853 853 854 855 855 855 857 857 857 857 857 857 858
Custom tables internals and API Database tables and API classes	851 852 852 852 853 853 854 855 855 857 857 857 857 858 859 860 860
Custom tables internals and API Database tables and API classes	851 852 852 852 853 853 854 855 855 855 857 857 857 857 857 858 859 869 869
Custom tables internals and API Database tables and API classes	851 851 852 852 853 854 855 855 855 857 857 857 857 857 858 859 859 869 869
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables A complete example Document library Document library Overview Document library web parts Document library widget Creating a document library Managing files in document libraries Security	851 851 852 852 853 853 854 855 855 857 857 857 857 857 857 857 857
Custom tables internals and API Database tables and API classes	851 851 852 852 853 853 854 855 855 857 857 857 857 857 858 859 860 869 869 871 871
Custom tables internals and API Database tables and API classes	851 851 852 852 853 854 855 855 857 857 857 857 857 858 859 869 869 871 871 871
Custom tables internals and API Database tables and API classes Adding an item into a custom table. Getting items from a custom table. Editing a custom table item. Deleting a custom table item. Getting custom tables. A complete example. Document library Document library Document library web parts Document library widget. Creating a document library Managing files in document libraries Security Cverview Cverview Custom tables Custom tables Commerce Overview Coverview Coverview Coverview Custom tables	851 851 852 852 853 854 855 855 857 857 857 857 857 857 857 859 860 869 869 869 871 871
Custom tables internals and API Database tables and API classes Adding an item into a custom table. Getting items from a custom table. Editing a custom table item. Deleting a custom table item. Getting custom tables. A complete example. Document library Document library Document library web parts Document library widget. Creating a document library. Managing files in document libraries Security Creating a document libraries Security Creating a document libraries Security	851 851 852 852 853 853 854 855 855 857 857 857 857 857 857 857 857
Custom tables internals and API Database tables and API classes Adding an item into a custom table Getting items from a custom table Editing a custom table item Deleting a custom table item Getting custom tables A complete example Document library Overview Document library web parts Document library widget Creating a document library Managing files in document libraries Security Creating a document libraries Security Creating a document libraries Security Creating a document libraries Security Creating a document libraries Security Creating a document libraries Security	851 852 852 852 853 854 855 855 855 857 857 857 857 857 858 859 860 869 869 871 871 871 871 871
Custom tables internals and API	851 851 852 852 853 854 855 855 855 857 857 857 857 857 859 860 869 869 871 871 871 871 871 871
Custom tables internals and API	851 851 852 852 853 854 855 857 857 857 857 857 858 859 860 861 871 871 871 871 871 871 871 871 871 871 873 875 876
Custom tables internals and API Database tables and API classes. Adding an item into a custom table. Getting items from a custom table. Editing a custom table item. Deleting a custom table item. Getting custom tables. A complete example. Document library Overview Document library web parts. Document library widget. Creating a document library. Managing files in document libraries Security E-commerce . Overview E-mail queue Overview Administrating the e-mail queue Sending mass e-mails. Settings	851 851 852 852 853 854 855 857 857 857 857 857 857 857 857 857 857 858 859 860 869 871 873 874 875 876 876 876 876 876 876 877 8

Design and Styles	
File import	
Overview	878
Importing files	878
Security	
Forums	
Our mile second	
Overview	
Creating a forum group	
Creating a pre-defined forum on the website	
Adding an ad bee forum to the web	
Adding forum soarching	000
Adding for um sear ching	888
Forum moderation	800
Subscriptions	801
Forum nost attachments	803
BBCode sunnort	804
Forum favorites	898
Friendly IRI s	
Customizing forum design	898
Security	899
Settings	900
Forums internals and API	901
Database tables and API classes	901
Creating forums	902
Creating threads	
Friends	
	904
Requesting friendshins	904
Friends management	907
Available web narts	909
Examples of use	
Security	
Settings	
Geo mapping	
	040
Overview	
Bing maps	
Google maps	
fanoo maps	
Groups	
Overview	
Groups management	
Editing a group	
Enabling users to create groups	
How site users create a new group	
Security	
Settings	
Groups Internals and API	
Database tables and API classes	
Getting group data	
Modifying and creating groups	

Contents	15

Managing group members	
Managing group roles	
Creating a group invitation	
Image gallery	
Overview	942
Available web parts	
Available nage templates	948
Importing images	949
Transformations	
Media libraries	
	952
Creating media library	952 95 <i>4</i>
Media library content	954
	930
Files and folders management	950
Supported file types	900
Supported file size	
Supported life size	
Displaying files from modia library	
Using Media library web part	
Using MVSIMVC aditor	
Settings	
Configuring system storage for media library	
Configuring custom flottage for media library	
Configuring custom life types	
Soourity	
Media library norminationa	
Secured very permissions	
Wiessage boards	
Overview	
Using the Message board web part	
Managing message boards	
Editing message boards	
Setting Board base URL	
Settings	
Security	
who can be notified.	
User subscriptions	
Messaging	
Overview	
My messages	
Adding the messaging functionality to the live site	
Security	
wessaging internais and API	
Database tables and API classes	
Creating a new message	
Deleting all messages	
Adding a user to contact list	
Removing a user from ignore list	

Newsletters	1011
Overview	
Creating a static newsletter	
Authoring static newsletter issues	
Creating a dynamic newsletter	
Integrating newsletters into the site	
Newsletter templates	
Subscriber management	
Subscriber import and export	
Troubleshooting	
Security	1027
Notifications	1028
Overview	
Creating a notification message template	
Subscribing users to content changes notifications	
Managing users' notifications	
Custom notification gateway	
Overview	
Custom notification gateway form	
Custom notification gateway class	
Registering a custom gateway	
Using the gateway on your site	
Settings	
Security	
On-line users	1046
Overview	
	1047
Enabling the On-line users module	\cdots
Enabling the On-line users module On-line users tab	
Enabling the On-line users module On-line users tab On-line users web part	
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API	
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes	1048 1050 1051 1051
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data	1048 1050 1051 1051 1052
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line.	1048 1050 1051 1051 1052 1052
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line Kicking a user	1048 1050 1051 1051 1052 1052 1053
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line. Kicking a user.	1048 1050 1051 1051 1052 1052 1053 1053
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line Kicking a user Overview	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line. Kicking a user Overview Managing polls	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1054
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Overview Managing polls Publishing polls	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1054
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Overview Managing polls Publishing polls Adding a poll to your site	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1058 1060
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line. Kicking a user. Overview Managing polls Publishing polls Adding a poll to your site Multilingual support	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1054 1058 1060 1065
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Overview Managing polls Publishing polls Adding a poll to your site Multilingual support	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1054 1054 1058 1060 1065 1067
Checking if a user is on-line	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1053 1054 1058 1060 1065 1067
Chabling the On-line users module On-line users tab On-line users web part Database tables and API Database tables and API classes. Getting on-line user data Checking if a user is on-line. Kicking a user. Polls Overview Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1054 1060 1065 1067 1068 1068
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Within a user Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API classes. Creating a new poll	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1054 1060 1065 1067 1068 1068 1068
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Polls Overview Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API Database tables and API classes. Creating a new poll Updating an existing poll.	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1053 1054 1058 1060 1065 1067 1068 1069 1069
Enabling the On-line users module On-line users tab On-line users web part Database tables and API classes. Getting on-line user data. Checking if a user is on-line Kicking a user. Polls. Overview Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API Database tables and API classes. Creating a new poll. Updating an existing poll. Add a new answer.	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1054 1054 1058 1060 1065 1068 1068 1069 1069 1069
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Polls. Overview Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API classes. Creating a new poll. Updating an existing poll. Add a new answer. Change the number of votes.	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1054 1054 1058 1060 1065 1065 1068 1069 1069 1069 1070
Enabling the On-line users module On-line users tab On-line users web part On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Wanaging polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API classes. Creating a new poll. Updating an existing poll. Add a new answer. Change the number of votes. Add authorized roles.	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1054 1065 1067 1068 1068 1068 1068 1069 1069 1070 1070
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes. Getting on-line user data. Checking if a user is on-line. Kicking a user. Wanaging polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API Database tables and API classes Creating a new poll Updating an existing poll Add a new answer. Change the number of votes Add authorized roles Deleting a poll	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1054 1060 1065 1067 1068 1068 1069 1069 1069 1069 1070
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data. Checking if a user is on-line. Kicking a user. Withing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API Database tables and API classes Creating a new poll. Updating an existing poll. Add a new answer. Change the number of votes Add authorized roles Deleting a poll Deleting a poll	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1053 1053 1054 1068 1060 1065 1067 1068 1069 1069 1069 1070 1070
Enabling the On-line users module On-line users tab On-line users web part On-line users internals and API Database tables and API classes Getting on-line user data Checking if a user is on-line. Kicking a user. Within a user Overview Managing polls Publishing polls Adding a poll to your site Multilingual support Security Polls internals and API Database tables and API classes Creating a new poll. Updating an existing poll. Add a new answer. Change the number of votes Add authorized roles Deleting a poll Deleting a poll Deleting a poll Deleting a poll	1048 1050 1051 1051 1052 1052 1053 1053 1053 1053 1054 1054 1058 1060 1065 1065 1068 1068 1069 1069 1069 1070 1070 1071 1072 1072

Contents	17
----------	----

Project management web parts and widgets	
Using project management on the live site	
Security	
Settings	
Reporting	
. Overview	1089
Managing report categories	1003
Creating a new report	1090
Creating a new report	1090
Creating a new Table	1091
Creating a new Graph	1094
Creating a new Value	1097
Defining report parameters	
Saving a report	
Displaying a report on a website	
Security	
Reporting internals and API	
Database tables and API classes	
Getting report data	
Managing reports and their categories	
Creating graphs, tables and values	
Editing the layout of a report	
Saving the current status of the report	
Getting HTML code of a saved report	
Syndication (RSS, Atom, XML)	1110
Overview	
Syndication web parts and widgets	
Syndication transformations	
Usage examples	
CMS RSS feed	
RSS feed + data source	
RSS repeater + Data source	
Creating RSS feed pages manually (obsolete)	
SharePoint integration	
	1126
Web parts	
lisage examples	1129
Site hierarchy	1129
List items	1130
Picture libraries	1133
List of pictures	
GetSharePointFile page	
Settings	
Smart search	
Overview	4497
Uverview	
Flow It works	
Enability Stildt i Search Indexing Managing indexes	
Creating an index	
Defining document index content	
Defining document index content	
Defining custom tables index content	

Defining user index content	1148
Settings for particular object types	1149
Available web parts	
Using the Smart search filter	1154
Search syntax	1156
Belated scheduled tasks	1157
Searching attachments	1158
Socurity	1158
SOI Search overview	1150
Smart search internals and ADI	1160
Database tables and AD classes	1160
Cotting coareb index data	
Managing search indexes	
Nallaging Search	
Creating on indexing took	
Creating an indexing task	
Iags	
Overview	1166
Managing tag groups	1167
Tagging documents	1170
Using the Tag cloud web part	1175
Time zones	1178
	1178
Enabling the module	
Satting user's time zone	
Managing time zones	
Daylight Saving time	
Use III web parts	
Detabase tables and ADI desses	
Database tables allu AFI dasses	
Managing time constraints to a time range	
Converting time according to a time zone	
User contributions (Wiki)	1190
Overview	1190
Example: Publishing community news	1191
Example: Editing partner profile	1197
Security	
User contributions and API	
Web analytics	1211
	1011
Over view	1211
Available reports	
Tracking CONVERSIONS	1213 4047
Socurity	
Occuring austom roports	1218 4040
	1218
webuav integration	
Overview	1223
Requirements	
Configuration for WebDAV	

Contents	19

Editing files using WebDAV	
Integration with User contributions	
Integration with Document library	
Integration with WYSIWYG editor dialogs	
Settings	
Web farm synchronization	1234
Overview	
Defining web farm servers	
Web farm synchronization internals and API	
Database tables and API classes	
Getting web farm synchronization task data	
Managing web farm servers	
Managing web farm synchronization tasks	
API programming and Kentico CMS internals	1244
Overview	
CMSContext class	1244
TreeHelper class	
Managing documents	1245
Content management internals	
Select document(s)	
Create document	
Update document	
Delete document	
Copy document	
Move document	
Using transactions when managing documents	
Create linked document	
Delete linked document	
Managing attachments and files (cms.file)	1254
Managing attachments	
Managing files (cms.file)	
Managing documents with workflow	
Versioning internals	1256
Werkflow internals	
Undating a versioned document	
Managing workflow schema	1200
A complete example	1264
Security management	1269
	1000
Security Internals Overview	
Managing users	
Setting user password	
wanayiny i vies Managing user roles	
Manayiny user roles Authenticating user	
Authenticating user marmissions	
Sito management import and export	
Creating a new website	
Import and export of a website	
Getting website data	

Updating website properties	1278
Starting and stopping websites	1280
Deleting websites	
Custom Providers	1282
Custom Providers Overview	
Custom Data Provider	
Custom E-mail Provider	
Custom Search Provider	
Data layer	1287
Overview	
Code examples	1287
Pre- and post-processing queries	1289
Global events and their handling	1291
Event handling overview	
Data handler (CustomDataHandler class)	1294
Exception handler (CustomExceptionHandler class)	1295
Security handler (CustomSecurityHandler class)	1296
TreeNode handler (CustomTreeNodeHandler class)	1298
Workflow handler	1299
Customizing system objects with custom data or objects	1300
Customizing the administration interface and web application	
events	1305
Using API and CMS Controls outside CMS project	1308
Customizing providers from the App_Code folder	1314
Appendix A - Macro expressions	1318
Appendix B - Path expressions	1326
Appendix C - Web.config parameters	1329



Introduction

1 Introduction

1.1 Introduction



Thank you for using Kentico CMS, the content management system for ASP.NET developers. Kentico CMS 5.5 R2 empowers developers in creation of dynamic websites. It provides rich functionality out of the box:

- Flexible content repository for storing structured content with versioning and workflow.
- Powerful portal engine for assembling web pages from web parts.
- A wide range of built-in web parts and web controls.
- Export and import for easy deployment.
- Granular security model.
- Support for multiple-site configuration.
- Support for multiple-languages on a single website.
- Many built-in modules:
 - E-commerce
 - On-line forms
 - Forums
 - Image gallery
 - Media libraries
 - Content staging
 - Content rating
 - Blogs
 - Polls
 - Reporting
 - Web Analytics
 - Time zones
 - Booking system
 - User contributions (Wiki)
 - and others



Kentico CMS enables a high level of flexibility, customization and integration – you can create:

- custom page templates
- · custom web parts
- custom document types
- custom workflow schemas
- · custom modules

Kentico CMS object model and **open, well-documented application programming interface (API)** allow you to enhance the system and script any system feature by your .NET code. You can also write custom handlers to add your own actions when a system event (such as creation of a new document) occurs.

More product information

You can download Kentico CMS, find additional information, make the purchase and get support at http://www.kentico.com

1.2 About this guide

24

Who is this guide for?

Kentico CMS Developer's Guide contains reference information for Kentico CMS developers and system administrators.

It is expected that you are familiar with the basics of Kentico CMS explained in <u>Kentico CMS Tutorial</u> (or <u>Kentico CMS Tutorial ASPX</u> if you are developing in the ASPX page templates mode). It is also expected that you have a certain degree of experience in ASP.NET web development and C# programming to be able to fully understand all articles in this guide.

What information can I find in the guide?

This guide should provide comprehensive reference for website development and administration in Kentico CMS. It provides description of the system's functionality and step-by-step examples of typical development and administration tasks.

How is the guide structured?

The guide is divided into several logical chapters:

- Kentico CMS overview basic information about the system and intended for a first-time user
- <u>Installation and deployment</u> covers the installation process, additional configuration tasks that might be needed after installation and a troubleshooting section with solutions to usual installation issues
- <u>Content management</u> information on how to manage the content of your website; it explains how pages can be edited, how the WYSIWYG editor can be used, how files can be managed, etc.
- <u>Managing sites</u> management of sites, i.e. creation of a new site, running and stopping sites, import and export of sites and objects, license management, etc.
- <u>website settings</u> overview chapter with links to other sections of the guide where various website settings are explained in different contexts
- <u>Development</u> provides information on various topics related to website development and system administration
- Modules reference on in-box modules in Kentico CMS
- <u>API programming and Kentico CMS internals</u> examples of the usage of Kentico CMS API and explanation of the internals of the system

Valuable reference can also be found in the four appendices:

- <u>Appendix A Macro expressions</u> explains the possibilities of using macro expressions in Kentico CMS
- <u>Appendix B Path expressions</u> explains how path expressions can be entered in various parts of the system
- <u>Appendix C Web.config paramenters</u> list of keys which can be added to the *web.config* file of your site to perform additional low-level settings

1.3 Where do I get further help?

This guide is not the only reference available. All documentation can be get in various formats at <u>devnet.</u> <u>kentico.com/documentation.aspx</u>.

If you can't find the information that you are looking for, please visit <u>devnet.kentico.com</u>. This is the official portal for Kentico CMS developers where you can find:

Blogs

- Discussion forums
- Knowledge base
- FAQs

Paid license owners can also contact our highly-responsive support team, please visit <u>www.kentico.com/</u> <u>support.aspx</u> to learn more details.

You are also welcome to send us feedback on particular topics in this guide. You can do it by clicking the **Mail us feedback on this topic!** button at the top right corner of the HTML and CHM versions.

1.4 Version history

Listing of all new features, minor improvements and bug fixes in each released version of Kentico CMS can be found at <u>http://www.kentico.com/Download/Version_History.aspx</u>.



Kentico CMS overview

2 Kentico CMS overview

2.1 What are the benefits of Kentico CMS?

Before you dive into the details, it may be useful to understand the big picture. This chapter explains how the system works, describes its architecture and answers the most common questions you may have.

Is Kentico CMS a standard ASP.NET application?

Yes, Kentico CMS is a standard ASP.NET 2.0 application written in C#. It uses only standard functionality of .NET managed code which means you can use it on basically any ASP.NET 2.0-enabled web server without complicated configuration.

How does the CMS work?

The CMS allows you to manage content of dynamic websites. Unlike static websites that uses static HTML files stored on the disk, a dynamic website displays content from the database. Kentico CMS provides both content storage and all surrounding infrastructure to manage the content and display it on the website. Kentico CMS doesn't pre-render static HTML pages; instead, it renders the content in real time, when it's requested by the visitor.



The main advantages of dynamic website with content management system include:

- Easy content editing through a WYSIWYG, browser-based interface for non-technical users
- Content re-use you can display the same structured content in various ways while managing the data at one place
- Multi-user environment website management is not limited to a single web developer
- Additional functionality and applications, such as Newsletters, E-commerce, Forums, etc.

Why should I use Kentico CMS and what benefits does it bring to me?

Kentico CMS simplifies the development of dynamic websites. Instead of developing the whole infrastructure for editing, you can utilize the flexible content management framework of Kentico CMS and focus on the site-specific functionality and design. If you consider how much time you would spend only by developing the security system, there's no doubt you should use an existing framework.

With Kentico CMS, you:

- save time and money by developing the dynamic website faster
- · focus on the client's business needs instead of core infrastructure
- provide your client with additional functionality, such as Newsletters, Forums, and others that would be difficult and expensive to develop

Is it flexible enough for my needs?

Well, now you may think "If I develop the website from scratch I can create the system and enhance it at any time as my client requests." Yes, you're right, but you can do the same with Kentico CMS. Kentico CMS has been used for hundreds of websites worldwide and it was designed to fit various needs of web developers and their clients. Beside, if you need to add extra functionality, you can:

- create your own modules
- add your own code to the pages
- · modify default system behavior using custom handlers and providers
- customize the core engine of the system (if you purchase the source code version)

Kentico CMS was designed for the needs of web developers and their clients. You can be confident that you can **implement basically any website structure**, **navigation**, **graphic design and integrate custom functionality**.



Don't take our word for it

Please visit the Kentico CMS Showcase at <u>http://www.kentico.com/Showcase.aspx</u> for reference websites, clients and testimonials.

2.2 How does it really work?

If you're familiar with dynamic websites, you may want to know what the difference between a CMS system and a common ASP.NET website is. Technically, Kentico CMS is just another ASP.NET web application. It's advantage is that it provides a ready-to use framework for all common tasks.



Here's a comparison of page processing in a typical ASP.NET and Kentico CMS:

But it looks more complex!

Yes, the CMS system is more complex to make your job easier. In Kentico CMS, you do not need to develop complex pages, write ADO.NET code or SQL queries.

The CMS does much of that for you and you usually only drag-and-drop controls or web parts and set their properties. Then, you write .NET code only if you need to add additional business logic or functionality that is not supported out-of-the-box.

What else does the CMS do for me?

Kentico CMS provides a powerful content repository for your web content. Read the next chapter to learn more.

2.3 Where is the content stored?

Kentico CMS provides a content management sub-system, also known as **content repository**, that allows you to organize website structure and content. Moreover, it provides **a layer of security**, **workflow**, **versioning**, **search** and other services. All types of content can be retrieved and modified through a single **Application Programming Interface (API)**.

The following figure explains the difference between common data access approach and a content repository of Kentico CMS:



As you can see, a common approach to building dynamic websites is to write code for every page and every content type. It means that you need to write similar ADO.NET commands and SQL queries over and over again. With unified content repository, you use a complete set of API methods that allow you to save and retrieve any content type using methods someone wrote for you.

It greatly simplifies the management and retrieval of content since:

- you do not need to write your own methods, you only call API or use built-in controls
- same rules and mechanisms can be applied to any content type, without writing additional code for every new type

An important part of content repository is **metadata**. The metadata includes:

- · content organization into a tree hierarchy that also represents the site map
- information about content authors and modifications
- · workflow-related details, such as current workflow step
- content expiration
- permissions for the given document

In the example above, you can see that with classic approach, both News and Articles tables contain the attribute Author. In the content repository, the author is stored in shared metadata for all documents, regardless of their type.

Please note

All metafiles and attachments are stored under a folder specified in **Site Manager -> Settings -> Files -> Files folder**. If this path is not set:

- metafiles of objects not connected with a particular site (global objects) are stored under <web root>/CMSFiles
- metafiles of objects connected with a particular site are stored under <web root>/ <site name>/metafiles
- attachments (always connected with a particular site) are stored under <web root>/ site name>/files

As you can see, the **content repository represents a systematic approach to content storage**, **manipulation and security**.

2.4 How do I edit content?

Until now, we were talking about the architecture and how the system works. But how do I edit the content? After all, it's the most important feature of a content management system.

Kentico CMS comes with browser-based administration interface. It's divided into two parts:

- CMS Desk (typically <u>http://www.example.com/cmsdesk</u>) the user interface for content editors
- CMS Site Manager (typically <u>http://www.example.com/cmssitemanager</u>) the user interface for administrators and web developers

The following figure shows the CMS Desk user interface.



The left **content tree** allows you to browse the content and choose the document you want to edit. The content tree also represents a site map of the site and it's used for rendering navigation. In the following figure, you can see how the content tree, navigation and site map fit together:



The action menu allows you to create, delete, copy, move and order documents.

The view mode allows you to switch between the following views:

- Edit editing mode
- **Preview** preview mode. It displays the current version of the page before it's published (if you're using workflow). It also displays the content without using caching, which allows you to preview the content even if the live website displays the cached version.
- Live site live site view
- List displays a list of child documents under the currently selected document. It can be used for delete of multiple documents at the same time and it's useful if there are too many documents in the given section and cannot be browsed comfortably in the content tree.

The **editing area** allows you to edit the content and metadata of the document you selected in the content tree. You can choose from the following tabs/editing modes:

- **Page** here you can edit the content of editable regions that are used for unstructured content. Besides, any document can have also structured content that can be edited in the editing form on the Form tab.
- **Design** here you can modify the page layout and web parts (this applies to portal engine development that will be described later in this guide). This tab is only available for global administrators (developers).
- Form here you can modify the structured data, such as news title, news summary, release date, etc.
- **Product** here you can modify the product specification if the given document represents a product that can be added to the shopping cart (if you're using the e-commerce module).
- **Properties** here you can modify various settings, permissions, metadata and design settings of the document.

2.5 How do I develop a website?

Now that you know how to edit the content, you may want to know how to develop the website and manage the design. Although these topics will be described later in this guide, let's have take a quick overview of the development process:



This figure shows how you develop the website and how the roles are split between developers and editors. A typical development process consists of the following steps:

- 1. The developer analyzes the client requirements.
- 2. The developer prepares the site structure (site map) and web design.

- 3. The developer creates **page templates** for every type of the page (home page, solutions, products, news, etc.)
- 4. The content editor creates new pages they enter text and images into the page templates defined by the developer.

What is a page template?

The page template is a predefined look of the page that allows content editors to enter the content. A single page template can be re-used for multiple pages with the same structure and design, but with different content.

The templates allow content editors to focus on content editing, without taking care of the page formatting. They also help keep the web design consistent throughout the website. The following figure shows how a single page template can be used for multiple pages:



The details on page template development will be described later.



Installation and deployment
3 Installation and deployment

3.1 Overview

Kentico CMS installation consists of several steps depending on the installation type:

Installation on the local development machine

- <u>Setup (kenticocms.exe)</u> installs only the web project files. No changes to the system configuration (registry, IIS or SQL Server) are made. You do not need to run the setup on your production server it's intended primarily for development machines.
- <u>Web Installer</u> creates a new website project and optionally configures IIS or uploads the project to the server using FTP. Again, you do not need to run the Web Installer on your production server you can run it locally and deploy the files over FTP.
- <u>Database setup</u> runs in the web user interface. It creates a new database on your SQL Server with system tables and basic data.
- <u>New site wizard</u> runs in the web user interface after you create a new database. It allows you to create a new site managed by Kentico CMS.

Installation on the remote (production) server

On the remote (production) server, it's not necessary to run any executable or register DLL libraries. Unless you have full administrative access to the server, you will typically follow these steps:

- After you install Kentico CMS on your development machine using <u>Setup (KenticoCMS.exe)</u> you need to run <u>Web Installer</u> on your development machine and choose to install Kentico CMS on a remote server. Choose the temporary folder on your local disk.
- Copy the files from the temporary folder to the production server (e.g. over FTP). If the files are not copied directly to the root of the website, you will need to create a virtual directory see <u>Additional</u> configuration tasks -> Creating a virtual directory for details.
- Open web browser and navigate to the root URL of the copied files on your web server.
- The rest of the installation is the same as on the local machine.

If you encounter any problems during the installation, please see the <u>Troubleshooting installation issues</u> chapter.



Tip: There's no magic behind!

Kentico CMS is a **standard ASP.NET application**. Since it doesn't make any modifications to the system, you can move it to another system as you do with any other ASP.NET project. You can also open the project in Visual Studio and debug it or compile it.

The database is a standard MSSQL database, so you can move it to another server using a common backup/restore procedure. The connection string is stored in the web. config file, in the ConnectionStrings/CMSConnectionString value.

3.2 System requirements

38

The following configurations are supported by Kentico CMS. Other configurations may work too, but the system was not tested on them.

Server-side Requirements

- Windows XP, 2003, 2008, 2008 R2, Windows Vista Home Premium/Business/Enterprise/Ultimate or Windows 7 (both 32bit and 64bit)
- Microsoft .NET Framework 2.0 or higher
- Microsoft Internet Information Services (IIS) or Visual Studio/Visual Web Developer 2005/2008/2010 built-in web server
- Microsoft SQL Server 2005, 2008 (including free SQL Server Express Edition)

Hosting Requirements

- ASP.NET 2.0 (or higher) and Microsoft SQL Server 2005/2008 support
- Medium-trust or full-trust permissions for the ASP.NET application
- If the server uses medium trust, ASP.NET AJAX 1.0 must be installed on the server.
- It's recommended that your hosting plan comes with 125 MB or more memory and 100+ MB database.

You can use your favorite hosting provider or choose from our hosting partners.

Development Tools

If you want to create custom web parts or integrate custom code, you need **Visual Studio** 2005/2008/2010 or **Visual Web Developer 2005/2008/2010 Express Edition**.

Supported Client Browsers for Content Editors

- IE 7.0, IE 8.0
- Firefox 3.5
- Safari 4.0 or Firefox 3.5 on Mac OS

Supported Client Browsers for Site Visitors

- IE 6.0, IE 7.0, IE 8.0
- Firefox 1.0.5+
- Mozilla 1.7.1+
- Netscape 7.1+
- Opera 7.52+
- Safari or Firefox on Mac OS

(the visitor browser requirements depend on functionality used on the website)

3.3 Installation procedure

3.3.1 Setup (KenticoCMS.exe)

1	*	

Installation on shared hosting server

If you're going to run Kentico CMS on a shared hosting server, you do not need to run any EXE file or register any DLL file on the server (you're usually not allowed to do that anyway). Please read <u>Additional configuration tasks -> Installation on shared hosting</u> <u>server</u> to find how to solve this.

1. Run KenticoCMS_<version>.exe. You will see the welcome screen. Click Next.



2. Read and accept the license agreement if you want to continue. Click Next.

1	License Agreement
	Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
	This License Agreement is a legal agreement between you (either an individual or a single entity), hereinafter "the Licensee", and the manufacturer
	Kentico software s.r.o. with its registered office in Brno, Uzka 8, Post Code 602 00, Czech Republic
	Company Identification Number 269 30 943 a Company incorporated in the Companies Register kept by the Regional Court in Brno, Section C, Insert 46072 (hereinafter "the Licensor").
	By installing and using the software, you agree to be bound by the terms of this license agreement. If you do not agree to the terms of this license agreement, do
	I accept the agreement
	\bigcirc I do not accept the agreement
	< Back Next > Cancel

3. Choose the location where Kentico CMS web installer and documentation will be deployed. Click **Next** and then **Install**.

<u>Please note</u>: this is not the folder where your website will be placed, it's only a place for Kentico CMS program files and help files.



4. After the installation is finished, enable the **Launch Kentico CMS Web Installer** option and click **Finish**. Continue to Kentico CMS Web Installer.

* Setup - Kentico CMS 5.5 R2						
Kentico CMS for ASP.NET	Completing the Kentico CMS 5.5 R2 Setup Wizard					
	Setup has finished installing Kentico CMS 5.5 R2 on your computer. The application may be launched by selecting the installed icons.					
	Click Finish to exit Setup.					
	Launch Kentico CMS Web Installer					
Finish						

3.3.2 Web installer

3.3.2.1 Overview

Kentico CMS Web Installer allows you to create a new project and (optionally) configure Microsoft IIS web server.

Step 1 - Select .NET Framework version

First, you need to choose whether you use:

- .NET Framework 4.0 and Visual Studio 2010
- .NET Framework 3.5 and Visual Studio 2008
- .NET Framework 2.0 and Visual Studio 2005

Depending on your choice, the installer will use appropriate web.config and webproject.sln files. The binaries and code are the same for all options; they are compiled for .NET 2.0 and can be used with . NET 3.5 or .NET 4.0 as well.

* Kentico CMS Web Installer
Step 1 - Select .NET Framework version
Please choose the .NET Framework version you are using:
C I am using .NET Framework 4.0 or Visual Studio 2010
I am using .NET Framework 3.5 or Visual Studio 2008
C I am using .NET Framework 2.0 or Visual Studio 2005
< Back Next > Cancel

Step 2 - Choosing the target location

Choose one of the options. Click the link to view instructions for the selected option.

- <u>I want to use local IIS server</u> you must have local IIS server installed, running and configured for the version of ASP.NET which you chose in the previous step
- <u>I want to use built-in web server in Visual Studio</u> you must have Visual Studio or Visual Web Developer Express Edition installed on your local machine
- <u>I want to install Kentico CMS on a remote (production or testing) server</u> this option only copies the project files to a temporary folder on your disk and you need to copy the files to your production server manually (e.g. over FTP)
- <u>I want to modify existing Kentico CMS installation</u> this option modifies (adds or removes components) an existing installation on the local machine



3.3.2.2 Local IIS server

If you run local IIS server on your machine, choose I want to use local IIS server in Step 2 of the Web installer and click Next.

- 1. In Step 3, you need to specify the following information:
- Choose website: choose one of the websites configured on your IIS; please make sure that the website you choose is running
- **Type of application pool**: type of application pool which will be used for the website (*Integrated* by default, read <u>here</u> for more information)
- Choose target folder: choose the disk folder where web project files will be placed

<u>Please note</u>: if you're installing Kentico CMS into the root of your website (such as *http://www.domain.com*) and do not wish to create a virtual directory (such as *http://www.domain.com/cms*), please check the **This is an installation to the root** check-box.

👫 Kentico CMS Web Inst	aller	
Step 3	- Local IIS	
Please choose the IIS	location:	
Choose web site:	Default Web Site	
Type of application pool:	Integrated 💌	
Choose target folder:	c:\Inetpub\www.root\KenticoCMS	Browse
	☐ This is an installation to the root (do not create virtual directory)	
	< Back Next >	Cancel

- 2. Now you need to decide between the following options:
- Full installation performs full installation using all optional components
- Custom installation lets you choose which components will be installed

* Kentico CMS Web Installer			
Step 3 - Select installation type	e		
Select installation type:			
• Full installation (recommended)			
C Custom installation			
	< Back	Next >	Cancel

3. Now the installer copies the project files to the specified folder:

Kentico CMS Web Installer	x
Step 4 - Copy files	
The installer is copying the files	
c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \ECommerce c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \EDommerce c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Blogs c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Blogs c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Blogs c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Bladges c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Bladges c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Bladges c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Bladges c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Avatars\FormControls c:\Inetpub\wwwroot\KenticoCMS\App_Data\Templates\CorporateSite\Data\Files\cms_formusercontrol\CMSModules \Avatars\FormControls	•
< Back Finish Cance	*

4. At the end, you're displayed with URL of the new Kentico CMS installation. Please put down this URL for future use.

* Kentico CMS Web Installer	
Step 5 - Installation finished	
The web site has been successfully installed to the following location:	
c:\Inetpub\wwwroot\KenticoCMS	
Open the web site http://ocalhost/KenticoCMS/default.aspx	
Partico CMS Tutorial (PDF)	
	Close

5. Now you can continue to Database setup wizard.

3.3.2.3 Built-in web server in Visual Studio

If you want to use the build-in server which is included in Visual Studio, choose I want to use built-in web server in Visual Studio in Step 2 of the Web installer and click Next.

1. You will need to enter the target location of the files on your disk in Step 3 and proceed by clicking

Next.

*	Kentico CMS Web	Installer	
	Ste	p 3 - Visual Studio 2008	
	Please choose the	e web site location:	
	Choose target folder:	c:\Inetpub\wwwroot\KenticoCMS	Browse
		< Back Next >	Cancel

- 2. Now you need to decide between the following options:
- Full installation performs full installation using all optional components
- Custom installation lets you choose which components will be installed

* Kentico CMS Web Installer
Step 3 - Select installation type
Select installation type:
 Full installation (recommended)
C Custom installation
< Back Next > Cancel

3. After the files are copied to the folder, you can open the solution in Visual Studio by clicking the link:



4. The project will open in Visual Studio:

VebProje	ct - Micro	osoft Visua	al Studio	(Admini:	strator)									
e Edit	View	Website	Build	Debug	Tools	Test	Analyze	Window	w Help					
- 🔡 -	💕 🔒	Ø 🛛 🐰	Ъ (В.	19 -	CI - 4	• 🖳	🕨 Deb	ug	- Mixed	Platforms	•	Mentico	-	🔩 😤 🐋 🏷 💽 🖸
lbox			•	μ×								Solution Explorer - C:\\k	(enticoCMS\	
General												🛅 🛃 🛃 🗔	1	
												Solution 'WebProjec	t' (1 project)	
rag an ite	m onto t	his text to	add it to	the								C:\\KenticoCM	S\	
-	too	lbox.										App_Browser	S	
												App_Code		
												🖶 📝 App_Themes		
												🕀 📷 App_WebRef	erences	
												🖶 🔤 Bin		
												🖃 🛄 ClientBin		
												Em CMSControls	Examples	
												🗄 🛅 CMSDesk		
												🖶 🛅 CMSFormCo	ntrols	
												🗄 🔤 CMSHelp		
												🗄 🛅 CMSImportFi	les	
												CIVISININECO COSInstall	ntrois	
												CMSMasterPa	ages	
												🛓 🛅 CMSMessage	s	
												🖶 🗀 CMSModules		
												😥 🚞 CMSPages		
												CMSResource CMSScripte	25	
												CMSScripts Generation CMSSiteMan	ager	
												🗑 🛄 CMSSiteUtils	5	
												🖶 🚞 CMSTemplat	es	
												🗄 🛅 CMSWebPart	s	
												🔬 📴 CommunityS	ite	
												CorporateSite	- Δsnv	
												· mycontrols	- apr	
												🖶 🚞 PersonalSite		
												🖶 🚞 Products		
												Default.aspx		
												Image: Imag		
												parameters.co	onfig	
												📑 web.config		
												Nob Droject c	In	

5. Choose **Debug -> Start without debugging** from the main menu. The site is displayed in the new browser window, using the built-in VS web server.



When you cannot open the website in Visual Studio

If the link for opening the project in Visual Studio doesn't work, you may need to start Visual Studio manually. Then choose **File -> Open -> website...** from the main menu and locate the project folder on your disk manually.

6. Now you can continue to Database setup wizard.

3.3.2.4 Remote server

If you need to install Kentico CMS on a remote web server where you cannot run the setup directly (e.g. a shared hosting server), you need to choose the **I want to install Kentico CMS on a remote** (production or testing) server option in Step 2 of the Web installer.

1. In Step 3, you will need to specify a temporary folder on your local disk where the web project will be

created. Proceed through the rest of the wizard.

🔆 Kentico CMS Web) Installer	- • ×
Ste	p 3 - Remote/Production server	
Please choose a t	temporary folder on your local disk:	
Choose target folder:	C:\Temp\KenticoCMS	Browse
	< Back Next >	Cancel

- 2. Still in Step 3, you need to decide between the following two options:
- Full installation performs full installation using all optional components
- Custom installation lets you choose which components will be installed

* Kentico CMS Web Installer	
Step 3 - Select installation type	
Select installation type:	
 Full installation (recommended) 	
C Custom installation	
< Back	Next > Close

3. When you reach Step 5, the web project is created on your disk and a confirmation message is displayed:



4. You need to copy the website to your server (e.g. over FTP). If your web project isn't placed in the root of the remote website, you may need to create a virtual directory as described in <u>Creating a virtual directory</u>.



Application pool settings

By default, the **web.config** file of the created web project is configured to use an application pool with *Classic* managed pipeline mode. If you know that the remote server uses *Integrated* pipeline mode, replace the default web.config file as described in <u>Troubleshooting installation issues -> Internal server error when using Integrated pipeline mode</u>.

5. Now you can continue to Database setup wizard.

3.3.2.5 Existing installation

The **I want to modify existing Kentico CMS installation** option in Step 2 of the Web installer enables you to add or remove components in an existing Kentico CMS web project.

1. In Step 3, you need to specify the root folder of the project that you want to modify. Enter the path to the project folder and click **Next**.

🔆 Kentico CMS W	/eb Installer	
× s	tep 3 - Modify installation	
Please choose	the project location:	
Project folder:	C:\inetpub\wwwroot\KenticoCMS_0406	Browse
	< Back Next >	Cancel

2. The following step displays the component tree. Gray components are a native part of the installation and can not be removed. Black components are optional. The check-boxes indicate which components are currently installed and you can modify the installation by selecting or unselecting them.

If you enable the **Do not overwrite installed modules (recommended)**, only unselected components will be removed and additionally selected components will be added. If the option is disabled, all enabled components (including *web.config*) will be overwritten by the installation, which means that your modifications to these components may get lost!

Click Next.

Kentico CMS Web Installer Step 3 - Select components		
Modify components:	Select all	Deselect all
Kentico CMS Zontext help Zo		4 H H
< Back	Next >	Cancel

3. When you reach the following screen, it indicates that your project has been successfully modified.

* Kentico CMS Web Installer	
Step 5 - Installation finished	
The project has been successfully modified.	
	Close

3.3.3 Database setup

After you finish the Web Installer successfully, you open a web browser with the Database Setup. It will create database tables for Kentico CMS in a specified SQL Server database.

1. In Step 1, you need to specify the SQL Server and authentication mode used to access the server:

- SQL Server name or IP address enter the name of the server. You will typically use one of these:
 - the name of the server (such as DBSERVER1) or
 - the IP address of the server (such as 192.168.1.105) or (local)
 - <SERVERNAME>\sqlexpress (if you're using Microsoft SQL Server 2005 Express Edition)
- Use SQL Server account use this option if your server is configured for mixed mode authentication with SQL logins
- Use integrated Windows authentication (ASP.NET account) use this option if your server is configured for Windows integrated authentication. In this case, you need to use SQL Server 2005/2008 Management Studio to create a new login for user account under which you currently run the web application (ASPNET for Windows XP and Network Service for 2003 the actual ASP.NET account name is displayed on the screen).

Click the **Next** button.



2. Now you can decide if you want to use an **existing database** or **create a new database**. In both cases, you need to enter the name of the database into the appropriate field.

In case you are using an existing database, you can choose if you want to **Create Kentico CMS database objects**. If the existing database already contains Kentico CMS objects (tables, stored procedures, views), you need to uncheck the box. If the database does not contain these objects (typically when you are installing into an empty database), you need to leave the option enabled.

Click Next.

(Step 2 - Database Instance								
SQL Settings	Database	>	Starter Site		Finish				
Database									
New database name:	KenticoCMS								
 Use an existing database Existing database name: 									
Create Kentico CMS da	atabase objects								
2			< [Back	Next >				

3. When using an existing database, you may also come across the following dialog. It is displayed in case that the <u>database collation</u> is different than *SQL_Latin1_General_CP1_CI_AS*. The dialog lets you choose if you want to change the collation or leave the original one. For correct functionality, it is highly recommended to change it to the recommended value.

	Step 3 - Database Collation							
	SOL Sattings	Database	⇒	Starter Site		Finish		
The coll recomm	ation of existing data	ibase is not fully su e database collatio	ipported ar n.	d could caus	e unexpec	ted issues. It is		
⊚ Cha ⊙ Lea	ange database colla ave original collation	tion to 'SQL_Latin1 'Czech_CS_AI'	_General_	CP1_CI_AS				
?				< 8	lack	Next >		

4. A log will be displayed, showing the progress of database creation. After it finishes, a message *Database has been successfully created*. appears at the top of the log and you are moved forward to the next step.

	S	tep 4 - Databa	ase Crea	tion Lo	g			
	SQL Settings	Database	⇒ 🤇) ter Site		Finish		
Runn Runn Runn Runn Runn Runn Runn Runn	SQL Settings Database Starter Site Finish Running query: proc_cms_tree_updatelinks.sql Image: proc_cms_tree_updatelinks.sql Image: proc_cms_tree_updatelinks.sql Image: proc_cms_tree_updatelinks.sql Running query: proc_cms_tree_selectparentcachenode.sql Running query: proc_cms_tree_selectparentwithsslonde.sql Image: proc_cms_tree_updatechildhodescount.sql Image: proc_cms_tree_updatechildhodescount.sql Running query: proc_cms_tree_updatechildhodescount.sql Running query: proc_cms_tree_updatechildhodescount.sql Image: proc_cms_tree_updatechildhodescount.sql Running query: proc_cms_tree_movenodeup.sql Running query: proc_cms_tree_movenodeup.sql Image: proc_cms_tree_movenodeup.sql Running query: proc_cms_tree_inithodeorders.sql Running query: proc_cms_tree_movenodedown.sql Image: proc_cms_transformationprovider_selectforsite.sql Running query: proc_cms_transformationprovider_selectforsite.sql Running query: proc_cms_transformationprovider_selectal.sql Running query: proc_cms_transformationprovider_selectal.sql Running query: proc_cms_transformationprovider_selectal.sql Running query: proc_cms_transformationprovider_selectal.sql Running query: proc_cms_transformationprovider_selectsql Running query: proc_cms_transformationprovider_selects.sql Running query: proc_cms_transformationprovider_selects.sql Running query: proc_cms_transformationprovider_selects.sql							
_	_			< Ba	ack	Next >		

5. If you run Kentico CMS on a domain other than *localhost* or 127.0.0.1, you will be asked for inserting a license key, since the trial version works only with *http://localhost* and *http://127.0.0.1*. The same dialog is displayed if your trial period has expired.

Enter a valid license key and click the **Next** button. Alternatively, you can skip this dialog and go to **Site Manager -> Sites -> New site wizard** by clicking **Skip this dialog** at the bottom left part of the dialog.

Step 5 - License Key						
	SQL Settings	Database	⇒	Starter Site		Finish
Your tri	al license key has e	xpired, please ente	r a valid li	cense key for c	lomain: lo	ocalhost
Tip: If ye ask for	ou need a temporar a trial key for the fol	y license key for this lowing domain nam	s domain ne: localh	please write to ost	support	@kentico.com and
You ca	n also get a license	of Kentico CMS Fre	e Edition	after registratio	on at <u>http:</u>	//www.kentico.com.
Please	enter the key:					A
						Ŧ
<u>Skip thi</u>	is dialoq					
6						Nexts
						Next >

6. On the next screen, you will be offered with the following options:

- Choose a starter site such as:
 - Corporate Site this option installs the sample corporate site it is recommended for most users, especially for evaluators
 - **Corporate Site ASPX** this option is recommended only for experienced ASP.NET developers who want to use ASPX page templates instead of portal templates
 - Blank site this is a blank site without any content; you will use it to create a new site from scratch
 - Blank site ASPX the same as above, but for ASPX page templates
 - and others
- Continue to the New site wizard this option is recommended if you're starting a new site from scratch; learn more in the <u>New site wizard</u> chapter
- Import an existing Kentico CMS website use this option is you already created a website with Kentico CMS and need to import it into a new installation (e.g. on the production server)

If you're new to Kentico CMS, it's highly recommended that you start with sample Corporate Site (portal engine). If you decide to run the New site wizard, you can find more details in the following chapter. Select an option and click the **Next** button.

	→ 📑	⇒ 🔮) 🔿				
SQL Settings	Database	Starter S	lite	Finish			
Choose starter site							
CompanyLogo	Corporate Sit	e					
	This is a web as a showcas used as a sta portal engine who are new	This is a web template for a general corporate site. It's used as a showcase of Kentico CMS capabilities and it can be used as a starting site that you modify as needed. It uses the portal engine and it's the recommended choice for developers who are new to Kentico CMS.					
CompanyLogo	SPX Corporate Sit	Corporate Site ASPX					
	This is a web as a showcas used as a sta ASPX page te knowledge th	template for a gen se of Kentico CMS (rting site that you n mplates that requir an the portal engin	eral corporate capabilities ar nodify as need e a higher lev e.	site. It's used ad it can be ded. It uses the el of .NET			
Continue to the New	site wizard						
Import existing Kenti	co CMS web site						

7. A log will be displayed in the next step, showing you progress of website creation.

	Step 7 - Starter Site Creation Log							
	SQL Settings		Database		Starter Site	⇒	Finish	
Impor Impor Impor Impor Impor Prepa	ting 'Page templ ting 'Page templ ting 'Page layou' ting 'Countries' of ting 'U cultures' ting 'Settings' ob ting 'Settings ca ring temporary fi	ates' obji ate categ s' objects ibjects objects jects legories' les	ects jories' objects s jects objects					
_	_	_			<	Back	Next >	

Step 8 - Finished								
		→	→ 🚱	⇒ 📀				
	SQL Settings	Database	Starter Site	Finish				
		The site has been	n created successfully.					
		Continue to	the new web site					

8. Once the website is created, you will be displayed with a confirmation and link to your live website.

Default user name and password

The default user name is **administrator**, the default password is blank.

It's highly recommended that you change the password after you finish the installation.

The default URL of your site is *http://localhost/KenticoCMS*. The default URL of CMS Desk is *http://localhost/KenticoCMS/CMSDesk*. The default URL of Site Manager is *http://localhost/KenticoCMS/CMSSiteManager*.

3.3.4 New site wizard

3.3.4.1 Overview

The New site wizard guides you through the process of adding a new website to the system. It is accessible from the *Starter Site* step of the <u>Database setup</u>. You can also launch the wizard from **Site Manager -> Sites**.

Kentico CMS Site Manager	Sites A	dministration	Settings	Development	Licenses	Support					
Sites											
New site wizard											
Actions	Site name 🔺										
/ 💥 💟 💽 🕨 🗐 🌚	Community Site										
2 💥 🕲 💿 🕨 🗃 🎧	Corporate Site										

In the first step of the wizard, you can select if you want to create the new site using a wizard or use a website template.

- <u>Create a new site using a wizard</u> creates a new blank site and allows you to configure the basic structure of the site.
- <u>Use website template</u> creates a new site based on a template chosen in the next step.

Select one of the options and click the **Next** button. Click one of the links above to learn about the following steps of the wizard for the chosen option.

Step 1 Choose default web site If you choose to create a blank site, the wizard will guide you through the process of creating a new site. If you choose to use a template, you will be able to choose one of the predefined web site templates.	
 O Create a new site using a wizard O Use web site template 	
Next	>

3.3.4.2 New site

This topic describes adding of a new website to the system using the **New site wizard** when the **Create a new site using a wizard** option is chosen in the <u>first step</u> of the wizard.

1. In the second step, you need to enter the following basic site properties:

- Site display name name of the new site displayed in the administration interface.
- Site code name name of the new site used in website code.
- Domain name domain name on which the new site will be running.
- Site culture default culture of the site.

Click **Next** to continue.

Step 2	Enter new site settings Enter the display name and code name of the web site. The Domain field must contain the domain that you will use to access the web site during development (you may change it when the site goes live). The default culture is the main language of the web site.
Site display name Site code name: Domain name: Site culture:	Iocalhost English - United States
	< Previous Next >

2. In Step 3, you can select which objects will be imported along with your new site. You can make this selection by choosing one of the categories displayed in the tree view on the left side of the screen. By selecting a category, a set of check boxes appears in the right part of the screen, letting you select the exported objects.

If you select the root of the tree, you will be offered with the following options:

Global selection

- Load default selection if clicked, object pre-selection will be done based on choice in Step 1.
- Select all objects if clicked, all objects will be preselected.
- Select only new objects if clicked, only objects not existing in the database will be preselected.
- Deselect all objects if clicked, all objects will be de-selected.

Import settings

 Assign all objects to the imported site (recommended) - if checked, all imported site related objects will be assigned to the imported site.

- Run the site after import if checked, the updated site will be run after the import is finished.
- Delete incomplete site when import fails if checked, incomplete site will be deleted when import fails.
- Import files (recommended) if checked, files will be imported.
- **Do not import objects where parent object is missing** if checked, objects that are in the package but whose parent object is not present in the target instance will not be imported
- Import tasks (recommended) if checked, delete tasks (incremental deployment) included in the package will be imported

Click Next to continue.

Step 3 Objects selection Please select objects	n which should be imported.	
All objects Web site Documents Administration Settings Clobal objects Global objects Administration Setel Administration Development	 Import objects Please note: The import process may overwrite your existing objects. The existing objects are marked with * and will be overwritten if checked. Please select the object type from the tree if you wish to change the default selection. Click Next to start the import of selected objects. Global selection Load default selection Select all objects Select only new objects Deselect all objects Import settings Assign all objects to the imported site (recommended) Run the site after import Delete incomplete site when import fails Import files (recommended) Do not import objects when eparent object is missing Import tasks (recommended) 	
	< Previous Next >	

3. A log will be displayed, showing you the progress of site import. When the export process finishes, click the **Next** button.

Step 4 Import progress Objects are being imported.	
Importing 'Settings' objects Importing 'Settings categories' objects	
Objects are being imported	< Previous Cancel Ilext >

4. In Step 5, you can select the master page layout. This defines the basic visual structure of the website. These settings can be altered any time later, no matter which layout you have selected. Select one of the layouts and click **Next**.

Step 5 Sel Step 5 The any	lect master page I master page defines the layout of the main menu, logo and content placeholders. You can change it at time later.	
Blank master page	Blank master page Generic default page template.	
	Top logo and left menu Master page template with logo on the top and menu on the left side.	Ш
	Top logo and menu Master page for the Sample web site.	•
	Next>	

5. Site map of you new website can be defined in Step 6. Select the node of the tree under which you want to place a new page and click **New**. Enter the name of the new page and select a page template which will be used on the page. Alternatively, you can inherit the page template from the parent page by clicking the **Inherit template** button. Click **OK**.

The newly created page will appear in the tree view. Repeat this procedure until you have defined the desired site structure, then click **Next**. The defined site structure can be modified later.

Step 6	Define Define th page mu	basic site struc e site map of your n st have some temp	:ture ew web site. The pages you create will be dis late specified or it can inherit page template fr	played in the site me om the parent page.	enu. Every	
New Delete Content mar	tup ↓ Down agement	Page name: Page template:	roperties Blank master page	Select	Remove template	
					-	Next >

6. If you have reached Step 7, you have successfully created the new website. Click the **Edit your new website** link to switch to CMSDesk and start editing the site immediately. Alternatively, click the **Finish** button to get redirected to **Site manager -> Sites**.



3.3.4.3 Website template

This topic describes creation of a new website using the **New site wizard** when the **Use website template** is chosen in the <u>first step</u> of the wizard.

1. In Step 2, you can choose from a number of website templates:

- Corporate site is a typical web presentation of a company.
- E-commerce site is a typical e-shop showing the possibilities of the E-commerce module.
- **Community site** is a sample community website demonstrating social networking capabilities of Kentico CMS.
- Blank site is a blank template used for creating websites from scratch.
- and others.

Some of the templates are available in two versions, one using the <u>portal engine</u> and the other using <u>ASPX page templates</u>. Choose one of the listed website templates and click the **Next** button.

CompanyLogo	Corporate Site This is a web template for a general corporate site. It's used as a showcase of Kentico CMS capabilities and it can be use as a starting site that you modify as needed. It uses the portal engine and it's the recommended choice for developers whe are new to Kentico CMS.
CompanyLogo	SPX Corporate Site ASPX
	This is a web template for a general corporate site. It's used as a showcase of Kentico CMS capabilities and it can be use as a starting site that you modify as needed. It uses the ASPX page templates that require a higher level of .NET knowledg than the portal engine.
1	E-commerce Site
	This is a web template for a simple E-commerce site. It's used as a showcase of Kentico CMS E-commerce module capabilities and it can be used as a starting site that you modify as needed. It uses the portal engine and it's the recommended choice for developers who are new to Kentico CMS.

2. In this step, enter the following basic site properties:

- Site display name display name of the new site.
- Site code name code name of the new site.
- **Domain name** domain name on that the new site will be running.

Click Next to continue.

Step 3	Enter new site settings Enter the display name and code name of the web site. The Domain field must contain the domain that you vill use to access the web site during development (you may change it when the site goes live). The default culture is the main language of the web site.
Site display name: Site code name: Domain name:	Corporate Site CorporateSite localhost
	< Previous Next >

3. In Step 4, you can select which of the objects from the site package will be imported. You can make this selection by choosing one of the categories displayed in the tree on the left side of the screen. By selecting a category, a set of check boxes appears in the right part of the screen, letting you select which objects will to be imported.

If you select the root of the tree, you will be offered with the following options:

Global selection

- Load default selection if clicked, object preselection will be done based on choice in Step 1.
- Select all objects if clicked, all objects will be preselected.
- Select only new objects if clicked, only objects not existing in the database will be preselected.
- Deselect all objects if clicked, all objects will be deselected.

Import settings

- Assign all objects to the imported site (recommended) if checked, all imported site related objects will be assigned to the imported site.
- Run the site after import if checked, the updated site will be run after the import is finished.
- **Delete incomplete site when import fails** if checked, incomplete site will be deleted when import fails.
- Import files (recommended) if checked, files will be imported.
- Do not import objects where parent object is missing if checked, objects that are in the package but whose parent object is not present in the target instance will not be imported
- Import tasks (recommended) if checked, delete tasks (incremental deployment) included in the package will be imported

Click Next to continue.



4. A log will be displayed, showing you the progress of website import. When the export process finishes, click the **Next** button.



5. If you have reached Step 6, you have successfully created the new website. Click the **Edit your new website** link to switch to CMSDesk and start editing the site immediately. Alternatively, click the **Finish** button to get back to **Site manager -> Sites**.

Step 6 The web site has been created successfully Now you can view and edit your new web site.	
<u>Edit your new web site</u> If this is your first web site, the default user account is administrator without password.	
	Finish

3.3.5 Deployment to the live server

With Kentico CMS, you can easily develop the website on your local machine. When the website is ready to go live, you need to export it into an export package. You will need to make sure that the ASP. NET account has the **Modify permission** for the disk, specifically for the CMSSiteUtils\Export folder. See the <u>Troubleshooting installation issues -> Disk permissions problems</u> chapter for more information on how to set up these permissions.

Go to Site Manager -> Sites and click the Export site icon next to the site to be exported. Enter the name of the export package and click OK. The site will be exported to the <web project>\CMSSiteUtils\Export folder.

Now you need to install Kentico CMS on the live server. If you're using a remote server without desktop access, you need to:

- 1. Run Kentico CMS Web Installer on your local development computer.
- 2. Choose to create a new website **on a remote (production) server** and deploy the website into some local disk folder.
- 3. Copy all deployed files to the root of your web server (i.e. the web.config file must be placed in the root of the server). If you need to run the website in a sub-folder, you need to create virtual directory manually as described in <u>Additional configuration tasks -> Creating a virtual directory</u>.
- 4. Copy your exported package into the **<website root>\CMSSiteUtils\Import** folder.
- 5. Make sure your live server is **configured for ASP.NET 2.0**. It's also highly recommended that the ASP.NET account has Modify permission on the server disk for easy import (however, it's possible to complete the import without Modify permission as well).
- 6. Open the page /default.aspx of your live web server in the web browser.
- 7. You will be displayed with <u>Database setup</u> wizard. Create the database for Kentico CMS.

- 8. You may be asked for the license key for your production domain.
- 9. In step 3, choose to Import existing Kentico CMS website.
- 10. Choose to import the previously exported package and overwrite all duplicates. The import wizard is described in Managing sites -> Export and import -> Importing a site.

Now that you have imported the site, you may need to adjust its configuration:

- 1. Go to the **Sites** section. Edit website properties and make sure the website domain and domain aliases are configured correctly for the production domain(s).
- 2. Go to the **Site Manager -> Settings** and make sure your site settings contain correct values, especially the **SMTP server** value in the **E-mails** section.
- 3. Go to the **Sites** section. Click the **Open live site** icon next to your new site and make sure the website is displayed correctly.

Alternative Approach

If you, for some reason, cannot deploy the website using the procedure described above, you can use a classic backup/restore approach:

- 1. Backup your development database and restore it on the production server.
- 2. Copy the web project folder into the root of your production website.
- 3. Update the CMSConnectionString value in the web.config file.

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1	Q	-	

Shared Hosting Environment and Medium Trust Level

If you're deploying Kentico CMS on a shared hosting server that requires medium trust level, you may need to make additional configuration changes as described in Additional configuration tasks -> Configuration for Medium Trust environment.

Related topics: <u>Visual Studio integration -> Pre-compilation (Publish function)</u>

3.3.6 Uninstallation

To uninstall Kentico CMS from your computer, open **Start -> Control Panel -> Programs and Features**. Right-click **Kentico CMS** and choose **Uninstall** from the context menu.

		-	• X	
CO Control Panel Items > Programs and Features - 4 Search Programs and Feature				
Control Panel Home View installed updates	Uninstall or change a program To uninstall a program, select it from the list and then	click Uninstall, Change, or Repair.		
off	Organize - Uninstall		• 0	
Install a program from the network	Name	Publisher	Installed (^	
		EC Software	6/15/2010	
	Generation Help & Manual Premium Pack V1.2	Tim Green IT Authoring for EC S	11/2/2009	
	HTML Help Workshop		10/19/200	
	Intel(R) Graphics Media Accelerator Driver	Intel Corporation	10/19/200	
	🛓 Java(TM) 6 Update 20	Sun Microsystems, Inc.	6/14/2010	
	Kentico CMS 4.1	Kentico Software	11/11/200	
	Kentico CMS 4.1 Documentation	Kentico Software	12/18/200	
	E Kentico CMS 5.0	Kentico Software	1/5/2010	
	Kentico CMS 5.0 Documentation	Kentico Software	10/29/200	
	Kentico CMS 5.0beta Documentation	Kentico Software	12/7/2009	
	Kentico CMS 5.5	Kentico Software	6/22/2010	
	Kentico CMS 5.5 Documenta Uninstall Kentico Software		6/23/201(🚽	
	Kentico Software Help link: http://www Support link: http://www	.kentico.com . <u>kentico.com</u>		

The uninstaller will delete all files created on your computer except the deployed instances of Kentico CMS - it means that the database instances and the website folders will not be removed and you have to delete them manually if needed.

3.4 Additional configuration tasks

3.4.1 Overview

The following chapters contain description of various configuration tasks that require changes to your system. You needn't perform them for <u>standard installation</u>, they are required only in specific situations.

3.4.2 Creating a virtual directory

If you need to install Kentico CMS manually on a remote server or restore it from backup and, at the same time, you run Kentico CMS in a sub-folder (in contrast to running Kentico CMS in the root of the website), you need to create a new virtual directory for the folder where you have the web project files.

Application root

The root of the website or the virtual directory must be the same as the folder that contains the web.config file of Kentico CMS. This folder is called **application root**.

Follow these steps to create and configure a virtual directory on your web server:

Configuring a Virtual Directory
On Windows Server 2003, open Start -> Administrative Tools -> Internet Information Services (IIS) Manager. Right-click Computer -> websites -> chosen website and choose New -> Virtual Directory.



On Windows XP, open Start -> Control Panel -> Administrative Tools -> Internet Information Services.Right-click the Computer -> websites -> Default website item (or other website if you're running multiple websites on the same computer) and choose New -> Virtual Directory....

	销 Internet I	nformation Se	vices									
File Action View Help												
	\leftrightarrow	🖪 🔮 💂										
	Internet Info PETRP2	ormation Services (local computer)) Sites Default Web Site Explore Open Browse Start Stop) ed) rver	Computer BPETRP2 (local computer)	Local Yes	Version IIS V5.1	Status					
		Pause New All Tasks Rename Refresh Properties Help	Virte Sern Sern	ual Directory ver Extensions Web ver Extensions Administrator								

The rest is same for all operating systems:

1. The Virtual Directory Creation Wizard appears. Click Next on the first screen.

2. Enter the **Virtual Directory Alias**. If you want the website to run as http://localhost/ KenticoCMSDemo, you need to enter alias **KenticoCMSDemo**. Click **Next**.

Virtual Directory Creation Wizard							
Virtual Directory Alias You must give the virtual directory a short name, or alias, for quick reference.							
Type the alias you want to use to gain access to this Web virtual directory. Use the same naming conventions that you would for naming a directory.							
<u>Alias:</u> KenticoCMSDemo							
< <u>B</u> ack <u>N</u> ext > Cancel							

3. Now choose the disk folder on your machine where the Kentico CMS web project files are placed. Please note that you cannot use a remote (shared) disk. The web project files are NOT the files in the C: \Program Files folder - you need to create the web project using the Kentico CMS Web Installer first see chapter Web Installer for details. Enter the directory path and click **Next**.

Virtual Directory Creation Wizard	\mathbf{X}
Web Site Content Directory Where is the content you want to publish on the Web site?	S.
Enter the path to the directory that contains the content. Directory:	
C:\Inetpub\www.root\KenticoCMSDemo	B <u>r</u> owse
< <u>B</u> ack	Cancel

4. Now you need to specify the access permissions for the new virtual directory. You need to choose at least **Read** and **Run scripts** and it's recommended that you do NOT allow any other options. Click **Next** and click **Finish**.



5. Right-click the newly created virtual directory and choose **Properties**. Choose the **Documents** tab and make sure the **Enable Default Document** box is checked and the list contains the **Default.aspx** file.

6. Choose the **ASP.NET** tab and make sure the **ASP.NET version is 2.0.50727** (the last number may be different). If you cannot see the **ASP.NET** tab, you may not have **ASP.NET 2.0** installed or registered correctly.

7. Choose the Directory Security tab, click Edit in the Anonymous access and authentication

control section and make sure that both Anonymous access and Integrated Windows authentication are chosen.

Authenticati	on Methods								
No user nam	us access e/password required to access this resource.								
Account used for anonymous access: User name: IUSR_PETRPC Browse Password: ••••••••• Its control password									
<u>U</u> ser name:	IUSR_PETRPC	wse							
Password:									
							For the follow are required - and - acc	ving authentication methods, user name and pas when onymous access is disabled, or cess is restricted using NTFS access control lists	sword
							📃 Djgest au	thentication for Windows domain servers	
📃 Ba <u>s</u> ic aut	hentication (password is sent in clear text)								
Digest authentication for Windows domain servers Basic authentication (password is sent in clear text) Default domain:									
<u>R</u> ealm:	Sel	ect							
🗹 Integrated	d Windows authentication								
	OK Cancel <u>H</u> elp								

8. Click **OK** on all dialogs to save the changes.

3.4.3 Configuration for Medium Trust environment

This chapter describes the procedure of running Kentico CMS in Medium Trust Level environment and the steps required to configure the system for it. It also describes the Precompilation/Deployment procedure and requirements.

Medium trust level

Medium trust level is often used on shared servers by the providers to disallow the applications to access certain resources that could be harmful to other websites running on the server. Kentico CMS can be used with default medium trust policy provided with the Microsoft .NET Framework. To run the system with medium trust, you need to follow certain rules. There are two main components that require higher than medium trust and must be considered in this situation:

- VirtualPathProvider provides virtual objects (layouts, transformations) from the database.
- <u>Content staging module</u> ensures synchronization of content between production and live site servers.

Virtual path provider

This library provides the interface for virtual objects stored in the database that can be compiled, such as document transformations and page layouts. The system references the files with virtual path, and VirtualPathProvider provides the control code to the compiler.

Since the virtual provider cannot run in a medium trust environment (requires AspNetHostingPermission with "high" trust level), you need to store the physical files to the file system. You can save all the virtual objects to the file system in CMS Site Manager -> Administration -> System -> Deployment interface by clicking the button "Save all virtual objects to disk". This will make the copies of the virtual objects in following folders:

- ~/CMSTransformations contains transformation files for documents and custom tables
- ~/CMSLayouts contains shared page layouts
- ~/CMSTemplateLayouts contains custom page template layouts
- ~/CMSAdhocTemplateLayouts contains custom ad-hoc page template layouts

Please note that these files are just copies of the actual virtual object and will be used by the system only if the VirtualPathProvider cannot start. Also that the changes to the objects through the administration interface will not affect these files until you save all the objects to the disk again.

Limitations

In the medium trust environment, the VirtualPathProvider is stopped automatically. When VirtualPathProvider is stopped, **you cannot edit transformations and layouts through the user interface** without saving them on the disk again.

In the portal development model, you cannot use **custom web part code** (**Web part properties** -> **Code tab**). If you need to add custom code on the Code tab and run the website in the medium trust environment, you need to create user controls, place web parts to the user controls and add your custom code to the web parts. Then, you can place the user controls to the page using the General/User control web part.

Please note that **you shouldn't run the system in medium trust while developing the website**. You should use this trust level only for the live website.

Content staging (Microsoft Web Services Extensions 3.0)

This section applies only if you're using content staging.

Library Microsoft.Web.Services3.dll from the Web Services Extensions 3 (WSE) package which is used by the Content staging module requires Full trust permissions because of the low level operations related to the communication protocols. To ensure the proper functionality, the library needs to be registered in the Global Assembly Cache (GAC) of the server. The library is provided by Microsoft and most of the hosting providers pre-install it on their shared servers.

If you manage the server, please follow these steps:

- 1. Go to Control panel -> Administrative tools -> Microsoft .NET Framework 2.0 Configuration.
- Select the Assembly cache, click on Add an Assembly to the Assembly Cache and select the bin\Microsoft.Web.Services3.dll library file from your web project.
- 3. Delete the *bin\Microsoft.Web.Services3.dll* file from your web project if it's present.
- 4. Make sure that your project web.config file contains the following item:



If your hosting provider cannot install the library to GAC, you need to manually remove some of the system components. See the paragraph **Special cases** for details.

Running the website

Now the system should work under medium trust level properly. Restart your IIS for configuration changes to take effect and run the website.

If your website uses any third-party components that do not support medium trust level by default, you may need to configure the system for them. In this case, please contact their author to get the information how to configure the environment to run it in the medium trust environment.

Special cases

You may not be able to access the GAC or convince your hosting provider to add the WSE library to the GAC. In this case, you may still run Kentico CMS in medium trust level, but you will not be able to use the Content staging module.

If this is your case, please delete the *bin/Microsoft.Web.Services3.dll* file from your web project if it's present

After these changes, your system will work correctly in the medium trust environment but you will not be able to use the Content staging operations.

3.4.4 Configuring Application Pools

Application Pools provide you with additional level of website management. They are supported only on Windows Server 2003/2008/Vista/7. You can configure them in Start -> Control Panel -> Administrative Tools -> Internet Information Services (IIS) Manager -> Computer -> Application Pools.



The application pools allow you to group applications (websites) into pools that share server resources using the same rules. This chapter contains recommendations on how to configure the website application pool for Kentico CMS.

You can check the name of the application pool in the website Properties dialog, on the Home directory tab. If you're running Kentico CMS in a virtual directory, you will find it in the Virtual Directory Properties dialog, on the Virtual Directory tab.

fault Web Site Proper	ties	?
Directory Security HTT	P Headers Custom Errors ASP.NET	Server Extensions 200
Web Site Perform	nance ISAPI Filters Home Dire	ctory Documents
The content for this re	source should come from:	
۲	A directory located on this computer	
0	A share located on another computer	
C	A redirection to a <u>U</u> RL	
Lo <u>c</u> al path:	:\inetpub\www.root	Browse
Script source acce	ss 🔽 Log <u>v</u> isits	
IM <u>R</u> ead □ Write	V Index this resource	9
Directory browsing		
Application settings		
A K K	Defectly Applie attent	
Application name:	Derault Application	Remove
Starting point:	<default site="" web=""></default>	Configuration
Execute permissions:	Scripts only	
Application pool:		Unjoad
	,	
	OK Cancel A	Apply Help

You can see the **Application Pool Properties** dialog by right-clicking the appropriate application pool and selecting Properties from the context menu. You will see dialog like this:

DefaultAppPool Properties	? ×
Recycling Performance Health Identity	
Recycle worker processes (in minutes):	× 1740 × 35000
Recycle worker processes at the following times:	
Add Remove Edit Memory recycling	
Recycle worker process after consuming too much memory:	
Maximum <u>v</u> irtual memory (in megabytes):	500
Maximum used memory (in megabytes):	192
OK Cancel Apply	Help

Recommended Application Pool Configuration

1. It's highly recommended that you run Kentico CMS in a separate application pool. If you share the pool with other websites, the system may behave unpredictably.

2. If you need to run multiple websites in a single pool, be sure to run only ASP.NET 2.0 applications in the same pool.

3. It's recommended that you specify some value in the **Recycle worker** processes on the **Recycling** tab. This value shouldn't be too short (less than **60 minutes**) or too long (more than **1440 minutes**/1 day). Setting this value ensures that the **memory is recycled and the application is automatically recovered from failures** by regular restart. **If your website freezes** time to time, you can temporarily set the value to 30 minutes to ensure that the website is restarted automatically. **Short intervals** may lead to high server load and slow response since after each recycling, the application needs to be restarted and data reloaded to the cache.

4. It's recommended that you **do not limit the maximum virtual or used memory**. If you need to use some value, use **at least 100 MB**. If your website is being **restarted too often**, it may be caused by low maximum memory limit. You can check the frequency of application restarts in Kentico CMS Event Log (Site Manager -> Administration -> Event log).

5. The **Maximum number of worker processes** on the **Performance** tab must be set to 1. If you set a higher value, the worker processes will not be synchronized and Kentico CMS website will not work correctly. This may lead to **unexpected caching of content and system objects**.

6. You can configure the **user account** under which the application runs on the **Identity** tab. This information is useful if you need to troubleshoot issues with **permissions**, such as disk write permissions.

7. Kentico CMS does not support Web garden. Therefore, the Maximum number of worker

processes has to be set to 1.

3.4.5 SMTP server configuration

If you want to send e-mails from the web application, you may need to configure the SMTP server.

After you finish the <u>New site wizard</u>, you can configure the SMTP server in **Site Manager -> Settings -> E-mails**. Here, you can set up the following values:

- SMTP server The name, address or IP address of your SMTP server, including the port number (if it's not 25).
- SMTP server user User name use this value only if your SMTP server requires authentication.
- **SMTP server password** Password use this value only if your SMTP server requires authentication.
- E-mail encoding Here you can enter the encoding of the e-mails. The default and recommended value is UTF-8. Change this value only if you encounter issues with extended characters in your e-mails.



If you experience any problem when sending e-mails through your own SMTP server that is part of IIS, please follow this guide:

1. Open **Control Panels -> Administrative Tools -> Internet Information Services** console. Check that the SMTP server is installed and running:



2. Open SMTP server properties and choose the **Access** tab. Click **Connection control** and make sure that the local machine may access the SMTP server:

elect which com C <u>O</u> nly the lis	puters may access this virtual server: t below
All except t	he list below
omputers:	
Access	IP Address (Mask) / Domain Name
Access	IP Address (Mask) / Domain Name
Access	IP Address (Mask) / Domain Name
Access	IP Address (Mask) / Domain Name

3. Click Relay restrictions and check that the local machine can relay through the SMTP server:

Relay Restricti	ons 🔀
Select which com <u>D</u> nly the lis <u>All except</u> <u>C</u> omputers:	puter may relay through this virtual server: t below the list below
Access	IP Address (Mask) / Domain Name
<u>A</u> dd ✓ Allo <u>w</u> all comp of the list abo	<u>Remove</u> uters which successfully authenticate to relay, regardless re.
	OK Cancel <u>H</u> elp



Testing E-mail Sending

You can test sending e-mails from Kentico CMS using the CMS Site Manager -> Administration -> System -> E-mail dialog.

3.4.6 Installation on shared hosting server

If you want to deploy Kentico CMS directly to the live server (or generally to a remote server), you need to follow these steps:

- 1. Install Kentico CMS on your local machine if you haven't done so yet.
- 2. Run Kentico CMS Web Installer (you can find it in Start -> All Programs -> Kentico CMS).
- 3. Choose to **install Kentico CMS on a remote (production or testing) server** and enter the path *C: \tempfiles.* Finish the wizard it only copies the files to the given folder. You do not need to have Visual Studio installed.
- 4. **Copy the files** from your local folder *C*:*tempfiles* to the root of the website using FTP. If you want to use a sub-folder, you will need to create a new virtual directory as described in <u>Creating a virtual</u> <u>directory</u>.
- 5. Open web browser and navigate to your website. You will be displayed with Database Setup Wizard.
- 6. Go through the wizard and create a new Kentico CMS database on your live server.
- 7. At the end of the Database Setup Wizard, choose either to create a new website or import your existing Kentico CMS website.

Installation in Medium Trust Level

If you're installing Kentico CMS in medium-trust environment, please read chapters



Installation_in_medium-trust_environment and Configuration_for_Medium_Trust environment.

Related topics: Deployment to the live server, Configuration for Medium Trust environment

3.4.7 Installation in medium-trust environment

If you want to deploy Kentico CMS directly to the live server (or generally to a remote server) that uses **medium-trust security level**, you need to follow these steps:

1. Install Kentico CMS on your local machine if you haven't done so yet.

2. Run Kentico CMS Web Installer (you can find it in Start -> All Programs -> Kentico CMS).

3. Choose to **install Kentico CMS on a remote (production or testing) server** and enter the path C: \tempsite. Finish the wizard - it only copies the files to the given folder. You do not need to have Visual Studio installed.

4. **Copy the files** from your local folder C:\tempfiles to the root of the website using FTP. If you want to use a sub-folder, you will need to create a new virtual directory as described in <u>Creating a virtual</u> directory.

5. Make sure the web.config file on your server contains the following value in the **appSettings** section (it specifies that the CMS should use the managed provider):

<add key="CMSDirectoryProviderAssembly" value="CMS.DirectoryProviderDotNet" />

6. **Open web browser** and navigate to your website. You will be displayed with the first step of the <u>Database Setup</u>.

7. Go through the wizard and create a **new Kentico CMS database** on your live server. At the end of the process, you will be asked to update your web.config file manually - please follow the instructions on the screen.

8. Choose either to create a new website or import your existing Kentico CMS website.

9. After you create a new website, you will need to save all virtual objects to the disk. Go to **Site** Manager -> Administration -> System -> Deployment and click Save all virtual objects to disk.

If your web application is not allowed to write on the disk, you will need to install Kentico CMS on your local machine, save all virtual objects to disk and then copy the web project over FTP to your server.

Medium Trust Environment Specifics

For more information on medium trust level please read chapter <u>Configuration for</u> <u>Medium Trust environment</u>.

84

3.4.8 AppPool permissions on Windows 7 or Windows Server 2008 R2

Kentico CMS runs on both **Windows 7** and **Windows Server 2008 R2**. On both systems, you need to add the **Write** permission to the website's folder as described in <u>Troubleshooting installation issues -></u> <u>Disk permissions problems</u>.

If you can still see the following screen after the end of the <u>Database setup</u> in either of the systems, it's necessary to make some further settings in your IIS.

The IIS APPPOOL Defa	ultAppPool account is not granted with Modify permission on folder
these permissions.	HINCOCHESI. Although this is not an error, it's highly recommended that you configure
	Learn how to configure permissions on your computer
	Test permission again Skip

1. Select the **Application Pools** node in the **Connections** tree in the IIS console. All application pools will be listed. Right-click the **DefaultAppPool** and chose **Advanced settings** from the context menu.

Internet Information Services (IIS) Manager							
PETRPE + Application	Pools						🔛 🖂 🟠 i 🕡 🗸
File View Help							
Connections	Anni inst	: D	- -			Ac	tions
PETRPE (OFFICE\PetrPe) Application Pools	Applicat This page lets you view Application pools are- applications, and prov Filter: Name Classic .NET Ap Classic	ion Poo w and man associated ide isolatic v Status Status Status Started Ceasted Add App Set Appli Start Stop Recycle Basic Sett Recycling Advance Rename Remove View App Help Online H	OIS age the list of ag with worker pro in among differe Go ~ Sho .NET Fram v2.0 cation Pool Defa d Settings d Settings elp	w All Group by: Managed Pipel Classic	n the server. ne or more Julentity Applicatic NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS NetworkS		Add Application Pool Set Application Pool Defaults Application Pool Tasks Start Stop Recycle Edit Application Pool Basic Settings Recycling Advanced Settings Reame Remove View Applications Help Online Help
	•	111			•		
	Features View	ontent Via	14/				
Ready	Teatures view 12 C	oncent vie	vv				¶.:

2. In the following dialog, switch the Identity value in the Process Model category to Network Service.

86

Internet Information Services (IIS) Ma	anager				23
🚱 💽 👔 🕨 PETRPE 🕨 Appl	ication Pools			🔛 🔛 🟠 I 🤅	2 -
File View Help	Advanced Settings	2 X	Ŋ		
Connections			ן	Actions	
2	🗆 (General)	Application Pool Identity		2 ×	
PETRPE (OFFICE\PetrPe)	.NET Framework Version			lui	lts
Application Pools	Enable 32-Bit Applications	Built-in account:			
⊳õi Sites	Managed Pipeline Mode	NetworkService		-	
	Name	LocalService			
	Queue Length	© (LocalSystem			
	Start Automatically	NetworkService			
	E CPU	ApplicationPoolIdentity		Set	
	Limit				
	Limit Action				
	Limit Interval (minutes)				
	Processor Affinity Enabled		OK	Cancel	
	Processor Affinity Mask				
	Process Model				
	Identity	NetworkService		View Applications	
	Idle Time-out (minutes)	20	S (D Help	
	Load User Profile	False	Online Heln		
	Maximum Worker Processes	1		onnierneip	
	Ping Enabled	True 👻			
	Identity				
	identityType, username, passw as built-in account, i.e. Applicat Service, Local System, Local Ser	ord] Configures the application pool to run ion Pool Identity (recommended), Network vice, or as a specific user identity.			
		OK Cancel			
	Features View 📑 Conter	t View			
Ready					•

3. Now go to your website's Advanced settings ...

Connections	/KenticoCM	1S_0322 Home	
▷ I KenticoCMS_0322 ▷ I KenticoCMS_032	Explore	🕶 🔐 Go 👒 ⋤ Show All	Group by:
 ▷··· P ▷··· P KenticoCMS_040 ▷·· P KenticoCMS_040 P··· P KenticoCMS_040 	Edit Permissions Add Application	<u>A</u>	
▷ ·· () KenticoCMS_041() ▷ ·· () KenticoCMS_042 ▷ ·· () KenticoCMS_042 ▷ ·· () KenticoCMS_042	Add Virtual Directory T Manage Application	.NET Error .NET	.NET Profile
KenticoCMS_042	Refresh	Advanced Settings	ab
KenticoCMS_042 KenticoCMS_102 KenticoCMS 102	Switch to Content View	.NET Users Application Settings	Strings
▷ · P KenticoCMS_1026_2▷ · P KenticoCMS_1029	Machine Key Pages and	Providers Session State	SMTP E-mail
► P KenticoCMS_1102	Controls		

4. ... and set the Application Pool property to DefaultAppPool.

Gener	al)	
Applica	tion Pool	DefaultAppPool
Physica	l Path	c:\Inetpub\wwwroot\KenticoCMS_0
Physica	I Path Credentials	
Physica	I Path Credentials Logon	1 ClearText
Virtual I	Path	/KenticoCMS_0322
🗆 Behavi	Dr	
Enabled	l Protocols	http
	Application pool: DefaultAppPool	
	Properties: .Net Framework Ve Pipeline mode: Inte	rsion: 2.0 grated
Applicatio	m roor	OK Cancel
applicatio	n pool.	application to run in the specified

On Windows 7, you also need to change the Anonymous authentication settings as described below:

- 🝋 Internet Information Services (IIS) Manager 😉 🖂 🟠 🔞 🗸 \bigcirc 😜 🕨 T6-W7 🕨 Sites 🕨 Default Web Site 🕨 File View Help Connections Actions Default Web Site Home 2 Open Feature 🖌 📲 T6-W7 (T6-W7\admin) Explore Filter: 🝷 👬 Go 🕞 🦕 Show All 🛛 Group by: Application Pools Ŧ Edit Permissions.. a 🧃 Sites ۰ .NET .NET Error .NET Profile .NET Roles .NET .NET Edit Site a 😜 Default Web Site Authorizat... Compilation Pages Globalization ▶ □ aspnet client Bindings.. b 🔐 davids_4.0_test 1 5 Basic Settings.. 复 ab davids_4.0_test35 View Applications .NET Trust .NET Users Application Connection Machine Key Pages and Levels Settings Strings Controls **View Virtual Directories** b 💮 davids_4.1_test1 • & Manage Web Site \bigcirc 2 💈 Restart Session State SMTP E-mail Providers ▶ Start Stop Browse Web Site J :=0 <u>_</u> 404 0 Browse *:80 (http) Compression uthenticati ithorizat Default Directory Error Pages Advanced Settings... on Rules Document Browsing Configure 1 0 Ē 2 Failed Request Tracing. Limits.. Failed Handler нттр IP Address ISAPI Filters Logging Help 📰 Features View / 🚰 Content View Online Help Ready •
- 1. Open IIS manager, select your site and double-click the IIS -> Authentication icon.

2. Select **Anonymous authentication** from the list and click **Edit**. In the pop-up dialog, choose **Application pool identity** and click **OK**.

Internet Information Services (IIS) N	1anager			
	5 ► Default Web Site ►			🔛 🖂 🔞 🗸
File View Help				
Connections				Actions
2	Authentication			Disable
■ Surfice T6-W7 (T6-W7\admin)	Group by: No Grouping 🔹			Edit
Application Pools	Name	Status	Response Type	Help
a 😜 Default Web Site	Anonymous Authentication	Enabled		Online Help
 → aspnet_client → → davids_4.0_test → → davids_4.0_test35 → → davids_4.1_test → → davids_4.1_test1 	ASP.NET Impersonation Basic Authentication Digest Authentication Forms Authentication Windows Authentication	Disabled Disabled Disabled Disabled Disabled	HTTP 401 Challenge HTTP 401 Challenge HTTP 302 Login/Redirect HTTP 401 Challenge	
		Edit Anonymou	s Authentication Credentials	? 💌
		Anonymous Specific u	user identity: :er:	
		 Application 	n pool identity	Set
Configuration: 'localhost' application-	Features View 💦 Content View	v :Web Site">	ок	Cancel

3.4.9 Database replication

3.4.9.1 Overview

Replication is a set of technologies for copying and distributing data and database objects from one database to another and then synchronizing between databases to maintain consistency. The databases can be running either on separate servers or even on the same server. You will typically use it for back-up purposes (you have two databases with the same content) or in case that you need to spread the load among more databases.

Kentico CMS database can be replicated using the **merge replication**. It can be configured in MS SQL Server Management Studio. The configuration process consists of creating a publication and one or more subscriptions:

- Publication the database which has the data to offer to the other server
- Subscription the database which receives updates from the publisher when the data is modified

Detailed information about replication in MS SQL can be found at: <u>http://msdn.microsoft.com/en-us/</u> <u>library/ms151198.aspx</u>.

Limitations caused by DB replication!

89



Using database replication with Kentico CMS results in the following limitations:

- importing is not functional
- upgrade from previous versions of Kentico CMS to a higher one is not possible
- newly created document types, BizForms and custom tables can not be synchronized to the subscribers
- field changes in document types and system tables can not be synchronized to the subscribers
- any other additional changes to the database structure are not guaranteed to be synchronized to the subscribers

It is therefore recommended to go through the following procedure when your website is complete, i.e. when you won't need to use any of the limited features.

In case that you needed to use any of the limited features listed above, you would need to disestablish your existing replication, make the required changes and set up new database replication from scratch.

If you want to achieve this manually without disestablishing the existing replication, you can follow the instructions on this page.

3.4.9.2 Creating a publication

The first logical step in setting up database replication is to create the publication.

1. Open MS SQL Server Management Studio. Expand the **Replication** node, right-click the **Local Publications** folder and select **New Publication** from the context menu.

Object Explorer	→ ‡ ×			
Connect 🕶 📑 📑 🖉 😰 🌌				
 GURU (SQL Server 9.0.405 ■ Databases ■ Security ■ Server Objects ■ Replication 	i3 - OFFICE\PetrPe)			
 □ Cocal Publication □ [MartinH_Ker □ [michalp_4.1t □ [petrpe_0225] □ Local Subscriptio □ [petrpe_0219] □ Management □ SQL Server Agent 	New Publication New Oracle Publication Launch Replication Monitor Generate Scripts Publisher Properties Distributor Properties Reports Refresh			

2. The New Publication Wizard starts. Click Next in the first step.



3. Now you need to select the publication database. All databases on the server will be listed, so choose the one which you want to be the publisher and click **Next**.

🚰 New Publication Wiza	rd			_ 0	×
Publication Datal Choose the database	base that contains the	data or objects	you want to publisł	1.	
Databases:					
petrpe_0416 petrpe_0421 petrpe_0426 petrpe_0429 petrpe_0505 petrpe_1221 petrpe_1222 petrpe_40 petrpe_41					•
petrpe_41final petrpe_50 petrpe_501 petrpe_501_0210 petrpe_collationtest2 petrpe_dng1					-
Help	< Back	Next >	Finish >>	Canc	el

4. The **Publication Type** step lets you choose the type of replication which you are going to use. Kentico CMS supports merge replication only, so choose **Merge publication** and click **Next**.

	on Wizard		x
Publication Choose the p application.	Type ublication type that best supports the requirements of your		1
Publication type:			
Snapshot publication of the second se	ication publication publication with updatable subscriptions ion		
Publication type d	lescriptions: publication with updatable subscriptions : eams transactions to SQL Server Subscribers after they receiv ublished data. Transactions originating at the Subscriber are a	ve an initial	*
Dubbahar			
Publisher.			h
Merge publicat The Publisher and Subscribers receiv periodically. Micro	tion: d Subscribers can update the published data independently a ve an initial snapshot of the published data. Changes are men soft SQL Server Compact Edition can only subscribe to merge	fter the ged e publications.	ш
Merge publicat The Publisher and Subscribers receiperiodically. Micro	tion: d Subscribers can update the published data independently a ve an initial snapshot of the published data. Changes are men soft SQL Server Compact Edition can only subscribe to merge	fter the ged e publications.	

5. This step lets you specify which versions of SQL Server are supported for the subscribers. Choose the versions that your subscribers are running on and click **Next**.

New Publication Wizard	_ 0	×
Subscriber Types Specify the SQL Server versions that will be used by Subscribers to this publication.		
The wizard will configure the publication to include only functionality supporter specified Subscriber types.	d by all	
Filestream, Date and other new datatypes are not supported. SQL Server 2005 Mobile, SQL Server Compact 3.1 and higher		
Requires snapshot files to be in character format.		
Logical records, replication of DDL changes, and certain optimizations for filt publications are not supported.	ered	
Help < Back Next > Finish >>	Can	cel

6. This step lets you configure which **Tables** and **Stored Procedures** will be synchronized between the servers. You should not select any **Views** as because changes in metadata which cause changes in any of the Views can not be synchronized automatically (see the note in <u>Overview</u> for more details).

Select the tables and stored procedures that you wish to synchronize (unless you have some specific needs, it makes the most sense to select all) and click **Next**.

New Publication Wizard					
Articles Select tables and other objects to publish as articles. Select columns to filter tables.					
Objects to publish:					
Image: Constraint of the second se	Article Properties				
	Show only checked articles in the list				
Help Sack	Next > Finish >> Cancel				

7. The **Arcile Issues** step is only informational - it notifies you about modifications to your database which are required for the application to work as expected with the replication.

The most important modification is that a column named **rowguid** (uniqueidentifier column with a unique index) and the **ROWGUIDCOL** property are added to each table.

Read through the info and click **Next**.

👬 New Publication Wizard	x
Article Issues The following issues may require changes to your application to ensure it continues to operate as expected.	1
Issues:	
Uniqueidentifier columns will be added to tables.	
Tables referenced by views are required.	
Objects referenced by stored procedures are required.	
Description	
	_
All merge articles must contain a unique/identifier column with a unique index and the ROWGUIDCOL property. SQL Server adds a unique/identifier column to published tables that do not have one when the first snapshot is generated.	
Adding a new column will:	
» Cause INSERT statements without column lists to fail	
» Increase the size of the table	
» increase the time required to generate the first shapshot	
SQL Server will add a uniqueidentifier column with a unique index and the ROWGUIDCOL property to each of the following tables.	
[dba] [Applytics_DayHits]	-
Help < Back Next > Finish >> Cancel	

8. In the **Filter Table Rows** step, you can add filters the published tables. This depends on your specific needs, so add filters as needed (or do not add any) and click **Next**.

Filter lable Rows Add filters to published tables. Extend the filters to other tables by a	dding joins.
Filtered Tables:	
Click Next if you do not need to filter the data in your publication.	Add
Click Add to begin filtering your publication.	Edit
	Delete
Filter:	

9. Now you need to configure the **Snapshot Agent** to take a snapshot of the publisher database. The snapshot will be used for the initial content of the subscriber database, which can not be created without it. You have the following two options:

- Create a snapshot immediately if enabled, the Snapshot Agent will take the snapshot immediately after this wizard is completed
- Schedule the Snapshot Agent to run at the following times if enabled, the Snapshot Agent will take the snapshot on a regular basis, which can be specified if you click the *Change* button

Make the selection and click Next.

New Publication Wizard	
Snapshot Agent Specify when to run the Snapshot Agent.	
Subscriptions are initialized with a snapshot of publication schema and data. T Agent creates the snapshot.	The Snapshot
Create a snapshot immediately	
Schedule the Snapshot Agent to run at the following times:	
Occurs every 14 day(s) at 12:05:00 AM. Schedule will be used starting on 5/7/2010.	Change
If you plan to change the snapshot properties, do not start the Snapshot Ager change the properties in the publication property dialog box.	it until after you
Help < Back Next > Finish >>	Cancel

10. In this step, you need to configure the Snapshot Agent's security settings, i.e. how the Snapshot Agent will get authenticated when accessing the database to create the snapshot. The default **SQL Server Agent account** works fine in most cases, but you may need to specify different account in specific cases.

Make a configuration suitable for your environment and click Next.

🚰 New Publication Wizard	I			_ 0	Х
Agent Security For each agent, specify settings.	the account under	which it will run and	d its connec	tion	
Snapshot Agent:					
SQL Server Agent account			Security	Settings	
Help	< Back	Next >	Finish >>	Cance	el

11. The **Wizard Actions** step lets you decide what happens when you finish the wizard. You have the following two options:

- Create the publication if enabled, the publication will be created as defined throughout the wizard
- Generate a script file with steps to create the publication if enabled, the wizard generates a script which, when executed, creates the publication as defined throughout the wizard

Click Next.

New Publication Wizard		x
Wizard Actions Choose what happens when you click Finish.	V	1
At the end of the wizard:		
☑ Create the publication		
Generate a script file with steps to create the publication		
Help < Back Next > Finish >>	Cancel	

12. In the final step, you need to enter the name of your new publication into the **Publication name** field. The section below gives an overview of options which you defined throughout the wizard.

Click Finish to create the publication based on the listed options.

Сс	lew Publication Wizard		
	Verify the choices made in th	ne wizard and click Finish.	T
Put	blication name:	MyPublication	
Clic	ck Finish to perform the followi	ing actions:	
•	Create the publication.		
		d water to the contract of the second	
	Create a merge publication f	from database betroe 0505.	
	The Snapshot Agent proces	ss will run under the 'SQL Server Agent service' account.	
ŀ	The publication compatibility Server 2005 or later.	y level will support Subscribers that are servers running S	QL
	Server 2005 or later. Publish the following tables as articles:		
•	Publish the following tables	as articles:	
ŀ	Publish the following tables • 'Analytics_DayHits'	as articles:	
•	Publish the following tables	as articles:	
•	Publish the following tables • 'Analytics_DayHits' • 'Analytics_HourHits' • 'Analytics_Index'	as articles:	
•	Publish the following tables	as articles:	
•	Publish the following tables 'Analytics_DayHits' 'Analytics_HourHits' 'Analytics_Index' 'Analytics_MonthHits' 'Analytics_Statistics'	as articles:	
•	Publish the following tables 'Analytics_DayHits' 'Analytics_HourHits' 'Analytics_Index' 'Analytics_MonthHits' 'Analytics_Statistics' 'Analytics_VeekHits'	as articles:	
•	Publish the following tables 'Analytics_DayHits' 'Analytics_Index' 'Analytics_Index' 'Analytics_MonthHits' 'Analytics_Statistics' 'Analytics_VeekHits' 'Analytics_YearHits'	as articles:	Ţ
	Publish the following tables 'Analytics_DayHits' 'Analytics_HourHits' 'Analytics_Index' 'Analytics_Month.Hits' 'Analytics_Statistics' 'Analytics_VeekHits' 'Analytics_YearHits'	as articles:	Ŧ

3.4.9.3 Creating a subscription

When you have a publication configured, you can proceed to creating the subscriptions. There can be one or more subscriptions, while you will need a dedicated database for each subscription. Each subscription database needs to be an **exact copy of the publication database**. The copy can be created using <u>backup</u> and <u>restore</u> in SQL Server Management Studio.

1. In SQL Server Management Studio, expand the Replication node and right-click the Local Subscriptions folder. Choose New Subscriptions from the context menu.



2. The New Subscription Wizard starts. Click Next in the first step.

🛀 New Subscription Wizard	
	New Subscription Wizard
	This wizard helps you: - Create one or more subscriptions to a publication - Specify where and when to run the agents that synchronize the subscription
	Do not show this starting page again.
Help	< Back Next > Finish >> Cancel

3. In the **Publication** step, you need to select the publication to which you want to subscribe. Select the server where the publication is located from the **Publisher** drop-down list. All publications on the selected server will be listed in the **Databases and publications** section below.

Select the required publication and click Next.

Subscription Wizard	- 0 X
Publication Choose the publication for which you want to create one or more subscription	ns.
Publisher:	
GURU	
Databases and publications:	
Martin H_KenticoCMS50NewFeatures Michalp_4. lupgrade5.0_b Petrpe_0225 Petrpe_0505 MyPublication	
Help C Back Next > Finish >>	Cancel

4. In this step, you need to decide where the Merge Agent will be run. You have the following two options:

- Run all agents at the Distributor (push subscription) if selected, the Merge Agent will run at the distributor (the server where the publication is)
- Run each agent at its Subscriber (pull subscription) if selected, the Merge Agent will run at the subscriber (the server where the subscription is)

Make you choice (running the agent at the Distributor is recommended for most cases) and click Next.

Subscription Wizard	
Merge Agent Location Choose where to run the Merge Agent(s).	
For the subscriptions I create in this wizard:	
 Run all agents at the Distributor, GURU (push subscriptions) 	
This option makes it easier to administer the synchronization of subsc	riptions centrally.
Run each agent at its Subscriber (pull subscriptions)	
This option reduces the processing overhead at the Distributor and le Subscriber administer the synchronization of its subscription.	its each
Run the wizard more than once if you want some agents to run at the Distribu run at Subscribers.	tor and some to
Help Next > Finish >>	Cancel

5. Now you need to select the subscription database(s).

The currently managed database server will be offered in the **Subscriber** column. Using the **Add SQL Server Subscriber** button, you can add other servers to the list, which enables you to create subscriptions on a different server than the currently managed one. Next to each server, you can find a drop-down list containing all databases on the server.

Choose the subscription database(s) that you prepared before starting this wizard (as described at the beginning of this page) and click **Next**.

놜 Ne	w Subscription Wiz	ard	
Sul	bscribers Choose one or more S	ubscribers and specify each subscription database.	· 🕵
Sub	scribers and subscript	tion databases:	
	Subscriber 🔺	Subscription Database	
	GURU	petrpe_0429	-
		petrpe_0416 petrpe_0421 petrpe_0426	^
		petrpe_0429	
		petrpe_0505 petrpe_1221 petroe_1222	
		petrpe 40	-
		Add SQL Ser	ver Subscriber
	Help	< Back Next > Finish >>	Cancel

6. In the **Merge Agent Security** step, you are asked to specify the process account and connection options for the Merge Agent. This can be specified for each server by clicking the appropriate "...." button.

Specify the required information according to your environment and click Next.

Subscription properties:		
Agent for Subscriber 🔺	Connection to Publisher	Connection to Subscriber
GURU	Impersonate process ac	Use login 'sa'

7. In the **Synchronization Schedule** step, you need to specify when will synchronization between the subscriber and the publisher be performed. You have the following options:

- Run continuously synchronizes immediately whenever a change is made
- Run on demand synchronization is performed only when executed manually from Replication Monitor in SQL Server Management Studio
- Run on schedule synchronization is performed on a regular basis after a set interval

Select the required schedule and click Next.

Synchronizat Specify the syn	tion Schedule chronization schedule for	each agent.	
Agent schedule:			
Subscriber 🔺	Agent Location	Agent Schedule	
GURU	Distributor	Run on demand only	

8. This step lets you initialize the subscription, i.e. fill the subscription database with data from the

publisher database snapshot. To perform this, the database snapshot needs to be already created. You can select from the following two options defining when will the synchronization be performed:

Subscriber 🔺	Initialize	Initialize When
GURU	V	Immediately
		Immediately
		At first synchronization

9. The **Subscription Type** step lets you decide if you want the subscription to be of the **Server** or **Client** type. For the purposes of our example, leave the default values (*Server* subscription with 75.00 priority) and click **Next**.

Subscription proper	ties:	1
Subscriber 🔺	Subscription Type	Priority for Conflict Resolution
GURU	Server	75.00

10. The **Wizard Actions** step lets you decide what happens when you finish the wizard. You have the following two options:

• Create the subscription(s) - if enabled, the subscription(s) will be created as defined throughout the

wizard

• Generate a script file with steps to create the subscription(s) - if enabled, the wizard generates a script which, when executed, creates the subscription(s) as defined throughout the wizard

Click Next.



11. The final step is only informational. It gives you an overview of the options that you selected throughout the wizard. Click **Finish** to create the publication based on the listed options.

New Subse	ription Wizard	
Complete Verify the	> the Wizard choices made in the wizard and click Finish.	ľ.
Click Finis	h to perform the following actions:	
Create	subscription(s).	
Create a s	ubscription to publication 'MyPublication' from Publi	sher 'GURU'.
Create subs	criptions at the following Subscriber(s):	
GURU • • • • •	Subscription database: petrpe_0429 Agent location: Distributor Agent schedule: Run on demand only Agent process account: SQLServerAgent service account Connection to Publisher & Distributor: Impersonate process a Connection to Subscriber: Use login 'sa' Initialize: Immediately Type: Server Priority: 75.00	account
Help	< Back Next > Finish	Cancel

3.4.9.4 Modifying structure of a replicated DB

It is possible to make some changes to the DB structure even without disestablishing the existing replication.

Adding BizForms, Custom tables or Document types

BizForms, Custom tables and Document types can be created even when database replication is established. You only need to follow the steps below to

1. Create the BizForm, Custom table or Document type from within the publisher's Kentico CMS user interface.

2. Open SQL Server Management Studio. In Object Explorer, expand the Replication -> Local publications node, right-click your publication and choose Properties from the context menu.



3. In **Publication Properties**, select **Articles** from the right menu. You will see a tree of database tables which are synchronized to the subscribers. You can verify that the new table created in step 1 is missing, i.e. it is not synchronized. Right-click **Tables** (the root of the tree) and click **Publish All Tables**.



4. In case that a new table is found, you are displayed with a confirmation window where you need to confirm that you really want to add the table (article) to the publication. Click **Yes**. The table will be added and you should be able to find it in the tree. Click **OK**.



5. Now back in **Object Explorer**, right-click the publication again and choose **Reinitialize All Subscriptions** from the context menu.



6. A dialog window will be raised, telling you that all subscriptions need to be reinitialized from a snapshot the next time its Merge Agent runs. For the changes to be reflected, you need to reinitialize the subscriptions from a snapshot of the new database structure, i.e. from a snapshot which has been taken after steps 1-4 have been performed.

If you haven't created the snapshot since you finished step 4, choose **Use a new snapshot** and **Generate the new snapshot now**. If you already have the snapshot, choose **Use the current snapshot**.

Click **Mark For Reinitialization**. Next time the subscriptions' Merge Agent runs, the subscriptions will be reinitialized with the new database structure.

Reinitialize Subscription(s)
This action marks each subscription to be reinitialized from a snapshot the next time its Merge Agent runs.
What snapshot should be used to reinitialize the subscription(s)?
O Use the current snapshot
Use a new snapshot
Generate the new snapshot now
Changes made to subscription data since the last synchronization will be lost unless the changes are uploaded before the subscription is reinitialized.
Upload unsynchronized changes before reinitialization
Mark For Reinitialization Cancel Help

Field changes in System tables

It is also possible to make changes to the fields of System tables without disestablishing an existing replication. In this case, you need to replace all views on the subscription databases with views from the

modified publisher database.

The easiest way to do this is to generate a DROP And CREATE script on the publication database and run it on the subscription databases.

1. Click **F7** to open **Object Explorer Details** view and select the **Views** folder of the publication database.

2. Select all listed views, right-click and select Script View as -> DROP And CREATE To -> New Query Editor Window from the context menu.

3. Execute the generated script on the subscription databases.



Field changes in Document types

Changes to document type fields can also be made without disestablishing an existing replication. The solution in this case is almost identical to the solution for system tables (described above). The only difference is that you don't need to DROP And CREATE all views, but only the view related to the particular document type.

3.4.10 Configuration of full-text search in files

3.4.10.1 Overview

Kentico CMS allows you to full-text search files uploaded into the database. It uses standard Microsoft SQL Server Search Engine that allows you to index a wide variety of files. This chapter explains how you can configure your installation of Kentico CMS for search in files.

Prerequisites - Important!

If you're using Microsoft SQL Server 2005, you need to ensure that full-text search support is installed on the server. The full-text search is available for all editions of Microsoft SQL Server 2005, including Express Edition with Advanced Services.

Generally, full-text search support must be installed on your SQL Server and your website must be configured for storing files in the database (Site Manager -> Settings -> Files -> Store files in database must be enabled).

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	
Site: (global)	•	Files					
- Settings		Save	Reset	these settings to d	<u>efault</u>		
	These setti	These settings are global, they can be overridden by the local site settings.					
Membership Recurity		Store files in file system				2	
		Store files in database				2 🔽	
Output filter		Generate	thumbnails			2 🔽	

Now follow one of the following guides:

- <u>Configuration of full-text search on Microsoft SQL Server 2005</u>
- <u>Configuration of full-text search on Microsoft SQL Server 2005 Express Edition</u>

Supported file types

The standard full-text search engine delivered with Microsoft SQL Server can search TXT, HTML, DOC, XLS and PPT files.

You can install a free driver from Adobe for searching in PDF files as described in the <u>Searching PDF files</u> topic.

To search Microsoft Office 2007 and 2010 document files such as DOCX or XLSX, it is necessary to install a free IFilter pack as described in the <u>Searching Office 2007/2010</u> <u>documents</u> topic.

If you want to search other types of documents, you need an appropriate lFilter library. IFilter libraries can be purchased from third-party vendors (you can find them using Google).

3.4.10.2 Configuration on MSSQL 2005 and 2008

1. Start Microsoft SQL Server Management Studio.

2. Locate your database with Kentico CMS objects, unfold **Storage**, right-click **Full Text Catalogs** and choose **New Full-Text Catalog**.



3. On the **New Full-Text Catalog** dialog, enter Full-text catalog name *KenticoCMS* and click **OK**.
| 🐱 New Full-Text Catalog - dalil | borp_KenticoCMS_scrshot | |
|---------------------------------|--------------------------------|---------------------|
| Select a page | Script 👻 🎦 Help | |
| General | Full-text catalog name: | KenticoCMS |
| | Catalog location: | |
| | catalog jocation. | |
| | Filegroup: | <default></default> |
| | O <u>w</u> ner: | |
| | Options | |
| | Set as <u>d</u> efault catalog | |
| Connection | Accent sensitivity: | |
| Server:
GURU | Sensitive | |
| Connection:
OFFICE\daliborp | Insensitive | |
| View connection properties | | |
| Ready | | |
| | | OK Cancel |

4. Right-click the newly created KenticoCMS full-text catalog and choose **Properties**. On the Full-Text Catalog Properties dialog, choose the **Tables/Views** tab.

5. Assign the *CMS_Attachment* table to the catalog, check the box next to the *AttachmentBinary* column, set the **Language for Word Breaker** to *English* or other value and set the **Data Type Column** to *AttachmentExtension* as shown on the following figure and click **OK**.

Select a page	🖾 Script 🔻 🎼 Help
Tables/Views Population Schedule	All eligible table/view objects in this database Table/view objects assigned to the catalog
	Object Name A Object Name A
	🗰 dbo.CMS_AbuseReport 👘 🖬 dbo.CMS_Attachment
	dbo.CMS_ACL
	dbo.CMS_ACLItem
	dbo.CMS_AlternativeForm
	dbo.CMS_AttachmentHistory
	🗰 dbo.CMS_Avatar 👻
	Selected object properties
	Unique index: PK_CMS_Attachmer Table is full-text enabled Flinible columns:
Connection	Available Columns A Language for Word Bre Data Type Column
Server	AttachmentBinary
GURU	Attachment Extension
Connection:	AttachmentMime Type
OFFICE\daliborp	Attachmentivame
View connection properties	
Progress	Track changes:
Ready	● <u>A</u> utomatic ○ <u>M</u> anual ○ Do <u>n</u> ot track changes
	OK Cancel

6. Sign in as administrator and go to **Site Manager -> Development -> Document types -> Root -> Queries** and edit the **searchattachments** query. Uncomment the following query:

SELECT view_cms_tree_joined.*, view_cms_tree_joined.NodeName AS SearchResultName
FROM cms_attachment
INNER JOIN view_cms_tree_joined on view_cms_tree_joined.DocumentID =
cms_attachment.AttachmentDocumentID
WHERE NodeAliasPath LIKE @NodeAliasPath
AND
([AttachmentName] Like N'%'+ @Expression + N'%' OR FREETEXT(attachmentbinary,
<pre>@expression))</pre>
AND @SiteName = SiteName AND (@DocumentCulture = DocumentCulture OR
<pre>@DefaultCulture = DocumentCulture)</pre>

Note: It is not necessary to uncomment the query if a **Smart search** web part is used for search. In that case the **Search in attachments** option in **Smart search dialog with results** has to be checked.

3.4.10.3 Configuration on MSSQL 2005 Express Edition

If you cannot use the management console for full-text search configuration, you can use the following SQL script:

```
-- Allow IFilter library loading
exec sp_fulltext_service 'verify_signature', 0
exec sp_fulltext_service 'load_os_resources', 1
-- Create Full-Text catalog
exec sp_fulltext_catalog 'MyKenticoCMSCatalog','create'
-- Add Full-Text catalog to table
exec sp_fulltext_table 'CMS_Attachment','create','MyKenticoCMSCatalog',
'PK_CMS_Attachment'
-- Add Index to table column
exec sp_fulltext_column 'CMS_Attachment','AttachmentBinary','add',NULL,
'AttachmentExtension'
-- Populate the catalog
exec sp_fulltext_table 'CMS_Attachment','start_full'
```

Please note: Similarly to <u>Configuration on MSSLQ 2005 and 2008</u>, you need to go to Site Manager -> **Development -> Document types -> Root -> Queries**, edit the **searchattachments** query and uncomment the following query to be able to run full-text search.

```
SELECT view_cms_tree_joined.*, view_cms_tree_joined.NodeName AS SearchResultName
FROM cms_attachment
INNER JOIN view_cms_tree_joined on view_cms_tree_joined.DocumentID =
cms_attachment.AttachmentDocumentID
WHERE NodeAliasPath LIKE @NodeAliasPath
AND
([AttachmentName] Like N'%'+ @Expression + N'%' OR FREETEXT(attachmentDinary,
@expression))
AND @SiteName = SiteName AND (@DocumentCulture = DocumentCulture OR
@DefaultCulture = DocumentCulture )
```

Note: It is not necessary to uncomment the query if a **Smart search** web part is used for search. In that case the **Search in attachments** option in **Smart search dialog with results** has to be checked.

3.4.10.4 Searching PDF files

Searching in PDF files is not supported in Kentico CMS by default. To enable it, you need to install the free **Adobe PDF IFilter** on your machine. Please note that Adobe PDF IFilter is not a product of Kentico Software and we cannot guarantee its functionality.

The installation differs for 32-bit and 64-bit systems. Both are described in the text below.

Configuration on 32-bit platforms

The following procedure needs to be followed to enable searching in PDF files on 32-bit platforms:

1. Download the free Adobe PDF IFilter 6.0 from the Adobe website: <u>http://www.adobe.com/support/</u> <u>downloads/detail.jsp?ftpID=2611</u>

2. Run the installer and follow the instructions.

3. After you finish the installation, rebuild the full-text search catalog that you created for Kentico CMS. Now you should be able to search PDF files.

4. If you're using MS SQL Server 2005, you may need to run the following SQL commands so that the server can load PDF IFilter libraries:

```
sp_fulltext_service 'verify_signature', 0
GO
sp_fulltext_service 'load_os_resources', 1
```

Configuration on 64-bit platforms

The following procedure needs to be followed to enable searching in PDF files on 64-bit platforms:

1. Download Adobe PDF IFilter 9 for 64-bit platforms from the following location: <u>http://www.adobe.com/</u> <u>support/downloads/detail.jsp?ftplD=4025</u>

2. Make sure that no other version of IFilter is installed on your machine, run the installer and follow the instructions.

3. After installing the PDF IFilter, it is recommended to set your system **Path** environment variable to the **bin** folder of the IFilter installation. Go to **Control Panel -> System -> Advanced system settings -** > **Environment Variables** and append *C:\Program Files\Adobe\Adobe PDF IFilter 9 for 64-bit platforms\bin* to the value of the *Path* variable.

	0	
		System Properties
Control Panel	All Control Panel Items	Computer Name Hardware Advanced System Protection Remote
Control Panel Home	View basic informa	You must be logged on as an Administrator to make most of these changes.
💡 Device Manager	Windows edition	Visual effects, processor scheduling, memory usage, and virtual memory
😵 Remote settings	Windows 7 Enterpris	
🚱 System protection	Copyright © 2009 M	Settings
Advanced system settings		User Profiles
		Desktop settings related to your logon
Environment Variables		Sottion
User variables for PetrPe		adun and Becovery
Variable Value		vstem startup, system failure, and debugging information
TEMP %USERPRO	FILE%\AppData\Local\Temp	
TMP %USERPRC	FILE%\AppData\Local\Temp	Settings
New	Edit Delete	Environment Variables
System variables		OK Cancel Apply
Variable Value	^	PetrPe BChange settings
OS Windows N	T	PetrPe.office.kentico.com
PATHEXT .COM;.EXE	.BAT;.CMD;.VBS;.VBE;.JS;	
PROCESSOR_A AMD64	-	pffice.kentico.com
New	Edit Delete	
	OK Cancel	95-86668 Change product key

4. Restart the computer. When restarted, check whether Adobe IFilter is registered with the server - in a new query window, type and execute the following:

```
SELECT * from sys.fulltext_document_types
```

You should see a list of installed filters in the output window. Verify if you can see an entry for **.pdf** with a correct path set.

5. If you do not see an entry for .pdf, you need to execute the following two lines:

```
EXEC sp_fulltext_service 'load_os_resources', 1
EXEC sp_fulltext_service 'verify_signature', 0
GO
```

6. Restart the SQL Server. Run the query from step 4 above again and verify that you can see the entry for **.pdf**.

114 Kentico CMS 5.5 R2 Developer's Guide

3.4.10.5 Searching Office 2007/2010 documents

Searching in Microsoft Office 2007/2010 documents is not supported in Kentico CMS by default. To enable it, you need to install and configure **Microsoft Filter Pack** IFilters on your machine. Please note that Microsoft Filter Pack is not a product of Kentico Software and we cannot guarantee its functionality.

The following procedure needs to be completed to enable searching in the desired file types:

1. Download the Microsoft Filter Pack installer that matches the architecture of your operating system from the Microsoft website:

- <u>Microsoft Office 2007 Filter Pack</u>
- <u>Microsoft Office 2010 Filter Pack</u>
- 2. Run the installer and follow the instructions.

3. After you finish the installation, start SQL Server Management Studio, select the instance that contains your Kentico CMS database and run the following command in that instance:

sp_fulltext_service 'load_os_resources', 1

This allows the server to load the IFilter libraries.

4. Check whether the IFilters are registered with the server. Type and execute the following in a new query window:

SELECT * from sys.fulltext_document_types

You should see a list of installed filters on the **Results** tab of the output window. Verify that the list contains entries for all desired file extensions with a correct path set.

5. Restart the SQL Server service. Once this is done, **Rebuild** the full-text search catalog that you created for Kentico CMS. Now you should be able to search Office 2007/2010 files.

3.4.11 Custom URL extensions and extensionless URLs

3.4.11.1 Overview

This chapter describes how to configure the system for using custom URL extensions and extensionless URLs. Custom URL extensions let you have the extensions rendered with a different extension than the default *.aspx*, like *.html*, *.php*, *.xxx* and any other.

So for example, instead of the default *http://www.example.com/news.aspx*, you can have URLs ending with .html:

http://www.example.com/news.html



you can also configure an empty extension, which results in an extension-less URL:

http://www.example.com/news

🥖 Corporate Site - News - Windows Internet Explorer					
🚱 🕞 🔻 http://localhost/KenticoCMS_0	50 <mark>:</mark> /News				
🖕 Favorites 🛛 🚖 🏉 Suggested Sites 🔻 🔊 🕅	Veb Slice Gallery 🔻				
* Corporate Site - News					

To achieve this result you have to take the following two steps:

1. Adjust your web.config or IIS to handle the custom extensions. This step is different for <u>IIS 7 or</u> <u>higher</u> and <u>IIS 6</u>.

2. Configure custom URL extensions in Kentico CMS. It is described in this chapter.

3.4.11.2 IIS 7 and higher

If your instance of Kentico CMS is running on a server with IIS 7 or higher installed, the procedure is quite simple - it consists only of adding and modifying a few keys in your project's **web.config** file.

For it to work, you need to modify the *system.webServer* section of your **web.config** file by adding the first highlighted line and changing the opening *<modules>* tag to the second highlighted line in the code example below.



Please be aware that this procedure only works for IIS 7 sites that use an **Application Pool** with **Managed Pipeline Mode** set to *Integrated*. This should be the default setting.

With these modifications in your **web.config**, you can proceed to <u>configuring the extensions</u> in Kentico CMS administration interface. You can also perform some additional configuration as described below.

It is recommended to configure a custom *page-not-found* error page when using custom URL extensions, otherwise a blank page may be displayed in some browsers if a user attempts to access a non-existing resource. This can be achieved by specifying the appropriate page as the value of the **Page not found URL** setting at **Site Manager -> Settings -> Web site -> Web site content**, for example: ~/CMSMessages/PageNotFound.aspx.

You can also add the following key to the *AppSettings* section of your **web.config** file, which ensures that URLs remain the same even after postback.

<add key="CMSUseExtensionOnPostback" value="false" />

If you are using trailing slashes (enabled by the **Use URLs with trailing slash** option in **Site Manager -** > **Settings -> URLs and SEO**), you can use the following extra key to have only extensionless URLs ending with the trailing slash. URLs ending with an extension are rendered without the slash when the key is used.

<add key="CMSUseTrailingSlashOnlyForExtensionLess" value="true" />

Using the cmspages/handler404.aspx special page (obsolete)

Due to backward compatibility, you can also enable custom URLs by configuring your IIS manually. It is not recommended now as it is obsolete.

If you receive the Lock violation error during the procedure, try the solution described here.

The setup procedure on IIS 7 is the following:

1. Open Start -> Control Panel -> Administrative Tools -> Internet Information Services (IIS) Manager.

2. Select your website from the tree on the left and open the Error pages section.



3. Right-click the 404 error and choose Edit Feature Settings.

Internet Information Services (IIS) Manager (○) ○ ▶ PETRPE ▶ Sites ▶ D	efault Web Site 🕨			
File View Help				
Connections PETRPE (OFFICE\PetrPe) Application Pools Sites Default Web Site Sites KenticoCMS_0130 KenticoCMS_0130 KenticoCMS_0217 KenticoCMS_0217 KenticoCMS_0219 KenticoCMS_0314 KenticoCMS_0314 KenticoCMS_0314 KenticoCMS_0314 KenticoCMS_0314 KenticoCMS_0416 KenticoCMS_0416 KenticoCMS_0416 KenticoCMS_0420 KenticoCMS_1026 KenticoCMS_1026 KenticoCMS_1026 KenticoCMS_1029 KenticoCMS_1029 KenticoCMS_1020 KenticoCMS_1020 KenticoCMS_1020 KenticoCMS_1020 KenticOMS_1020 KenticoCMS_1020 KenticOMS_1020 KenticoCMS_1020 KenticoCMS_1020 KenticoCMS_1020 KenticOMS_102	Control Contro	Pages configure HTTP error response formation. ouping • Path %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu %SystemDrive%\inetpu	s. The error responses can that contain Type File File Edit Edit Edit Feature Settings Plep Online Help	Alerts Alerts This feature configures IIS error pages. To learn more about how to configure custom ASP.NET error pages, click here. Add Edit Edit Edit Feature Settings Help Online Help
	Features View	🚡 Content View		<u>0</u> -
Configuration: 'Default Web Site' web.config				1 .:

- 4. Enter the following values:
- Path: enter the URL of the cmspages/handler404.aspx page according to your application's URL. Example: if you run your web project in virtual directory /kenticocms, you need to enter / kenticocms/cmspages/handler404.aspx
- Path type: Execute URL

Click OK.

Edit Error Pages Settings	? 💌
Error Responses	
When the server encounters an error, return:	
Custom error pages	
Detailed errors	
Detailed errors for local requests and custom error pages for remote requests	
Default Page <u>P</u> ath:	
/kenticocms/cmspages/handler404.aspx	
Path type:	
Execute URL 🔹	
ОК	Cancel

5. Now right-click the **404 error** again and choose **Edit** from the context menu.

📬 Internet Information Services (IIS) Manager				
C C C F F F F F F F F F F F F F F F F F	fault Web Site 🕨 Kent	ticoCMS_0130 🔸		🐱 🗠 🟠 🔞 🕶
File View Help				
Connections	Use this feature to configure HTTP error responses. The error responses can be custom error pages, or detailed error messages that contain troubleshooting information.			Alerts This feature configures IIS error pages. To learn more about how to configure custom ASP.NET error pages, click here.
▶ - 🛅 aspnet_client	Group by: No Gro	uping 🔻	Actions	
	Status Code Path Type 401 %SystemDrive%\inetpu File 403 %SystemDrive%\inetpu File 404 Add Add 405 Add Edit 406 Edit Edit.res 500 Edit Feature Settings 501 Edit Help Online Help		Actions Add Edit Remove Edit Feature Settings Help Online Help	
	1201 und souffe	Content view		
Configuration: 'Default Web Site/KenticoCMS_(J130' web.config			4 .:

6. Select **Execute a URL on this site** and enter the same URL that you entered in step 4. Click **OK**.

Edit Custom Error Page	? 🗙
Status code:	
404	
Example: 404 or 404.2	
Response Action	
\bigcirc Insert content from static file into the error response	
File path:	
	Set
✓ Try to return the error file in the client language	
Execute a URL on this site	
URL (relative to site root):	
/kenticocms/cmspages/handler404.aspx]
Example: /ErrorPages/404.aspx	
Respond with a 302 redirect	
Absolute URL:	
Example: http://www.contoso.com/404.aspx	
ОК	Cancel

- 7. Go back to step 3 and repeat the same procedure for the **405 error**.
- 8. Click **OK** on all dialogs to save the changes. It's not necessary to restart the application.

Setting up the .html extension on IIS manually (obsolete)

The following approach is also possible, but not recommended and considered obsolete now. To use the **.html** extension, go through the following steps:

1. Run IIS Manager .

- 2. Select your web.
- 3. Open Handler mappings.
- 4. Click to Add managed handler... .
- 5. Enter the following values:
- Request path: *.html
- Type: System.Web.DefaultHttpHandler
- Name: HTML

Click OK.

G → PETRPE → Sites → Default Web Site → KenticoCMS_2212 →	🖬 🔤 🔄 🔞
<u>File View H</u> elp	
Connections Handler Mappings Image: State of the second	Actions Add Managed Handler Add Script Map Add Script Map Add Module Mapping Edit Feature Permissions Revert To Parent View Ordered List Help Online Help

3.4.11.3 IIS 6

This procedure needs to be performed to configure IIS 6 to hande Kentico CMS's custom URL extensions. You can use this configuration on **Windows XP** and **Windows Server 2003** with Internet **Information Services (IIS) 6** installed. It's not possible to use it with Visual Studio's built-in web server.

1. Go to Start -> Control Panel -> Administrative Tools and launch the Internet Information Services (IIS) Manager. Locate the appropriate website and virtual directory (if you installed Kentico CMS into the root, you will make this change on the website level only).



2. Right-click the directory (or website) and choose Properties and then click the Custom Errors tab:

	1			1	
Virtual Direct	ory	Docur	nents	Directory	/ Security
HTTP Headers	Custor	n Errors	rrors BITS Server Extension ASP.NE		
Error messages f Custom error m file.	or HTTP erro	be an absol	ute URL on th	is server or a poi	nter to a
HTTP Error	Туре	Content	3		
400	File	C:\WIND	OWS\help\iis⊦	lelp\common\400	.htm 🔺
401;1	File	C:\WIND	0WS\help\iis⊦	lelp\common\401	-1.htm
401;2	File	C:\WIND	OWS\help\iis⊦	lelp\common\401	-2.htm
401;3	File	C:\WIND	OWS\help\iis⊦	lelp\common\401	-3.htn
401;4	File	C:\WIND	OWS\help\iis⊦	elp\common\401	-4.htm
401;5	File	C:\WIND	OWS\help\iis⊦	elp\common\401	-5.htm
401;7	File	C:\WIND	OWS\help\iis⊦	elp\common\401	-1.htm
403;1	File	C:\WIND	OWS\help\iis⊦	lelp\common\403	-1.htm
403;2	File	C:\WIND	OWS\help\iis⊦	lelp\common\403	-2.htm
403;3	File	C:\WIND	OWS\help\iis⊦	lelp\common\403	-3.htm
403;4	File	C:\WIND	OWS\help\iis⊦	lelp\common\403	-4.htn
403:5	File	C:\WIND) DWS\heln\iisE	eln'.common'.403	-5.htm
		ļ	Edit	Set to Da	fault
				1	1

- 3. Edit the 404 error and enter the following values:
- Message type: URL
- URL: enter the URL of the cmspages/handler404.aspx page according to your application's URL. E. g. if you run your web project in virtual directory /kenticocms, you need to enter /kenticocms/

cmspages/handler404.aspx

Edit Custom Erro	r Properties	x
Error code:	404	
Definition:	Not Found	
	lun I	
Message type:		_
<u>U</u> RL:	/kenticocms_alfa1/cmspages/handler404.aspx	
[OK Cancel <u>H</u> elp	

4. Now repeat the same for the 405 error, using the same custom URL: /kenticocms/cmspages/ handler404.aspx

Click OK on all dialogs to save the changes. It's not necessary to restart the application.

3.4.11.4 Configuration of custom URL extensions (.html or other)

When you have performed the required configuration for your version of IIS, you can proceed with entering the actual extensions.

This can be done in **Site Manager -> Settings -> URLs and SEO**. For example, try to set the **Friendly URL extensions** value to *.html* and click **Save**.

Kentico		Switch to CMS Desk User: Globa	I Admin
CMS Site Manager Sites A	dministration Settings Development Licenses	Support	
Site: (global)	URLs and SEO		
 Settings Web site Content management Files Membership Security URLs and SEO Output filter System E-mails Avatars Blogs Booking system Content staging Forums Media libraries Message boards Messaging Web analytics Windows LiveID E-commerce Payment gateway - Authorize.NET 	Save Reset these settings to default These settings are global, they can be overridden by th Forbidden URL characters Forbidden characters replacement Friendly URL extensions Files friendly URL extension Excluded URLs Default URL path prefix Use name path for URL path Use permanent URLs Remember original URLs when moving documents Google sitemap URL Allow permanent (301) redirection Use URLs with trailing slash Redirect document aliases to main URL Redirect invalid case URLs to their correct versions	the local site settings. Please select the site to see or change the site set	tings.
	Export these settings		

Now when you go to the live website, you will see that all URLs in menus and listings are rendered with . **html** extensions. In some cases, you may need to update some static links which were created with the default **.aspx** extension.

🏉 Corporate Site - News - Windows Internet Explorer				
O -	* http://localhost/KenticoCMS_0505/News.html			
🚖 Favorites	🛛 👍 🏉 Suggested Sites 🔻 🔊 Web Slice Gallery 🖣	•		
🔆 Corporate	: Site - News			

Using multiple extensions

You can enter multiple extensions into the **Friendly URL Extension** field mentioned above. The following format should be used:

.html;.htm;;.xxx;.abc

- The first extension is used as the default one and the links will be generated with it in the browser.
- Other extensions are entered divided by semicolons (;). Pages can be accessed through URLs ending with all entered extensions.
- If you use a semicolons without any extension in front of it, just as in the middle of the sample entry above, extension-less URLs can be achieved.

Document-level extensions settings

Apart from the global settings described above, document extensions under which the document can be accessed can also be set separately for each document. The default extension with which the pages are **rendered** in the browser is always taken from the **global** settings.

- 1. Select the document from the content tree.
- 2. Switch to its **Properties -> URLs** tab.
- 3. Enable the **Use custom URL extensions** check-box.
- 4. Enter the required extension(s) using the same rules as described above.

<u>Please note</u>: Even if the **Use custom URL extensions** option is disabled, files (**cms.file** documents) can be accessed under their physical extensions.

Kentico	Switch to Site Manager Site: Corporate Site
CMS Desk Content My des	sk Tools Administration
New Delete Move Down	Edit Draview Live site List
Content management	View mode Other
Corporate Site	Page Design Form Properties
Home	General Save
	Template
Company	Categories Document alias: Events
ieiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Menu Document URL path:
Events	Versions
🗑 🖬 Inieges 🗐 📄 Wiki	Related docs URL extensions:
Examples Special pages	Security
🗄 😋 Images	Attachments
	Document aliases

3.4.11.5 Lock violation on IIS7

When configuring your IIS 7 (or later) to allow custom extensions or extension-less URLs, especially if you're running Kentico CMS in a virtual directory, you may receive the **Lock violation** error message. This typically doesn't allow you to specify the path settings in step 4 of the instructions for using cmspages/handler404.aspx described on this page.

The reason is most probably a locked **defaultPath** attribute in the **httpErrors** section. You can check and unlock it in **IIS Manager**. Select your site (IIS site) and open **Configuration Editor** (it is included in the *Management* section in the standard installation of IIS 7.5; if you are using IIS 7, you can download and install it as a part of the <u>IIS7 Administration Pack</u>).

CO CO PETRPE > Sites > Default Web Site >	
File View Help	
Connections PETRPE (OFFICE\PetPe) Application Pools Sites Default Web Site ASP Authentic Authentic Authentic CGI Compression Bindings Default Web Site Default Directory Default Directory Default Directory Default Directory Default Directory Particle HTTP HTTP Redirect Respon MIME Types WebDAV WebDAV <th>sns inns irrectories e Site http) ttings tt Tracing lishing ation From</th>	sns inns irrectories e Site http) ttings tt Tracing lishing ation From

In Configuration Editor, choose webServer/httpErrors from the Section drop-down list.

If there is a **lock icon** next to the **defaultPath** attribute name, right-click on the attribute name and select the '**defaultPath**' **Attribute -> Unlock Attribute** action from the context menu. If the option is missing in the context menu, you will probably have to unlock it on a higher level in the IIS tree, i.e. on the parent site or on the root of the server.

Image: Constructions Image: Configuration Editor Image: Configuration Image: Configuration </th <th>📬 Internet Information Services (IIS) Manager 📃 💷 💽</th>	📬 Internet Information Services (IIS) Manager 📃 💷 💽
File View Help Connections PETRPE (OFFICE/VPetPe) Apply Section: Deepest Path: MACHINE/WEBROOT/APPHOST (Collection) Configuration Deepest Path: MACHINE/WEBROOT/APPHOST (Collection) (Collection) (Collection) (Collection) (Collection) (Collection) Configuration: Configuration: Configuration: Configuration: Configuration: Configuration: Section: Configuration: Section: Configuration: Section: Configuration: Section: Configuration: Configuration: Configuration: Configuration: Configuration: Configuration: Configuratio	🚱 💿 🔍 FETRPE 🔸 Sites 🔺 Default Web Site 🔺
Connections Configuration Editor	File View Help
Configuration: Default web site web.config	Connections PETRPE (OFFICEVPetPe) Point Default Web Site Site Site Site Site Site Site Site

Click **Apply** to save the changes and from now, the *Lock violation* errors shouldn't appear.

3.5 Visual Studio integration

3.5.1 Opening the project

After you create a new Kentico CMS web project, you can open it in Visual Studio by double-clicking the WebProject.sln file in Windows Explorer:

128

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Organize 🔻 🛷 Open 🔻 B	urn New folder		:== ·	- 🔳 🤇
	Name	Date modified	Type Siz	ze
🗃 Libraries	CMSResources	5/5/2010 2:21 PM	File folder	
Documents	CMSScripts	5/5/2010 2:04 PM	File folder	
🁌 Music	CMSSiteManager	5/5/2010 2:04 PM	File folder	
E Pictures	CMSSiteUtils	5/5/2010 2:04 PM	File folder	
📑 Videos	CMSTemplates	5/5/2010 2:11 PM	File folder	
	CMSWebParts	5/5/2010 2:07 PM	File folder	
🖳 Computer	CommunitySite	5/5/2010 2:07 PM	File folder	
🏭 Local Disk (C:)	CorporateSite	5/5/2010 2:09 PM	File folder	
🍌 inetpub	CorporateSiteAspx	5/5/2010 2:11 PM	File folder	
PerfLogs	🛅 Default	1/18/2010 5:12 PM	ASP.NET Serv	1 KB
Program Files	Default.aspx.cs	1/18/2010 5:12 PM	Visual C# So	1 KB
Program Files (x86)	🔆 favicon	1/18/2010 5:12 PM	Icon	3 KB
Temp	🛃 Global	1/18/2010 5:12 PM	ASP.NET Serv	1 KB
totalcmd	parameters	1/18/2010 5:12 PM	XML Configu	2 KB
Users	web	5/10/2010 12·56 PM	XML Configu	13 KB
J Windows	🕞 WebProject	5/5/2010 2:21 PM	Microsoft Vis	3 KB
	wse3policy	1/18/2010 5:12 PM	XML Configu	I KB

If this option doesn't work, you can start **Visual Studio** and choose **File -> Open -> website** in the main menu and navigate to the folder which contains the *WebProject.sIn* file.

The project looks like this:

🖓 WebProject - Microsoft Visual Studio (Administrator)	
File Edit View Website Build Debug Tools Test Analyze Window Help	
👒 + 📖 + 📸 💭 🦪 🗶 🖄 + 🕅 + 🕅 + 🖾 + 🕄 🕨 Relistertooltipscript 🛛 +	
· A 原因 A P A C A R A F F I I I I I I A P A A A B A A F F I I I F F I I I A A A A A A A A	
veb.config · · · · ·	Solution Explorer + # X
xml version="1.0"?	
<pre></pre>	<pre>c:\\KenticoCMS_55\</pre>
ConfigurationState Net extensions" type="system Web Configuration SystemWebEvtensionsSect	🗈 ··· 📑 App_Browsers
<pre>SectionGroup name="scripting" type="System.Web.Configuration.ScriptingSectionGroup. System.Web</pre>	App_Code App_Code
<pre><section <="" name="scriptResourceHandler" th="" type="System.Web.Configuration.ScriptingWebServicesSectionGroup" webservices"=""><th>App_memes</th></section></pre>	App_memes
<pre>section name="jsonSerialization" type="System.Web.Configuration.ScriptingJsonSerialization"</pre>	Bin
<pre>section name="profileService" type="system.Web.Configuration.ScriptingProfileServiceSection" system.Web.Configuration.ScriptingProfileServiceSection" system.Web.Configuration.ScriptingProfileServiceSection</pre>	🗊 🛅 ClientBin
<pre></pre>	🕣 🛅 CMSAdminControls
-	🐵 🛅 CMSControlsExamples
a	🗑 🔤 CMSDesk
الله جاء Content staging BEGIN>	🗑 🔤 CMSFormControls
<pre>section name="microsoft.web.services3" type="Microsoft.Web.Services3.Configuration.WebServicesCo</pre>	🗈 🔤 CMSGlobalFiles
<pre><!-- Content staging END--></pre>	🗈 🛄 CMSHelp
<pre>- - </pre>	CMSImportFiles
<pre><ad key="(MSProgrammingLanguage" value="Cit"></ad></pre>	CivisinineControls
<adk key="WS.webservice" value="http://localhost/WebService/webservice.asmx"></adk>	En CMSMasterPages
<add key="CMSTrialKey" value="CU05-20100301-FCQxx1"></add>	Enderstand States
-	🗄 📩 CMSModules
<pre><connectionstrings></connectionstrings></pre>	🚛 🛅 CMSPages
<pre><clear></clear> <clear></clear></pre>	🐵 🛅 CMSResources
<pre><dd hame="chsconnectionstring" connectionstring="refitst Security Info-raise;database-petipe_ss;
</pre>	🗑 🔤 CMSScripts
System.web>	🗄 🗠 🛅 CMSSiteManager
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	🗈 🗀 CMSSiteUtils
	CMSI emplates
Output - 7 ×	CiviswebParts
Show output from:	
	CorporateSiteAspx
	🚛 📴 Default.aspx
	📓 favicon.ico
	🔬 Global.asax
	parameters.config
	🗈 web.config
	WebProject.sln
	····· is wse3policy.config
Ready	

Making modification to the standard code

Although Kentico CMS is delivered with source code of the administration interface (CMS Desk, CMS Site Manager), it's recommended that you do NOT modify the default files to avoid problems when upgrading to a higher version (your changes may be overwritten by new code).

If you need to modify some dialog, note down its name and merge your modifications with the new version during the upgrade to a higher version of Kentico CMS.

If you need to modify some web part, create its copy and then modify it.

Source Code Options There are two levels of source code: the source code of the website, administration interface and web parts - this source code is delivered with every license (even in the trial version) the full source code of all libraries, including data layer, business layer and Kentico CMS Controls - this source code is only available as a part of the 1 website Ultimate or 1 Server Ultimate licence with Source Code.

130

You're allowed to modify the source code you receive (in both options) and deploy the modified version into production environment, provided you meet all other licensing conditions.

3.5.2 Adding Kentico CMS Controls to the Toolbox

Before you start using Kentico CMS Controls in your ASP.NET project, you need to add the controls to the **Toolbox**:

- 1. Open the website project in Visual Studio and open some ASPX page.
- 2. Right-click the **Toolbox** and choose **Add tab** from the context menu.

3. Type the name of the new tab (e.g. CMS) and press Enter:

Toolbox 🗣 🕈 🗙	CMSWebParts/
Standard	
🗄 Data	Client Objects &
Validation	<% Conti
Navigation	<asp:lit(< td=""></asp:lit(<>
🗄 Login	
WebParts	
AJAX Extensions	
Reporting	
• HTML	
CMS	
There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.	
🗆 General	
There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.	

4. Right-click the new tab and choose Choose items... from the context menu.

5. In the **Choose Toolbox Items** dialog, click **Browse** and locate the **CMS.Controls.DLL** library in the **bin** folder under your website. Click **Open** and then click **OK**.

IET Framework Compon	ents COM Components WPF	Components Activities		
Name	Namespace	Assembly Name	Directory	
BasicCalendar	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	[
🛛 BasicDataGrid	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
✓ BasicDataList	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
✓ BasicDataPager	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
BasicMultiColumnTa	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
✓ BasicRepeater	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
BasicTabControl	CMS.Controls	CMS.Controls (5.0.362	C:\inetpub\	
BehaviorEditorPart	System.Web.UI.WebControls	s System.Web (2.0.0.0)	Global Asse	
BindingNavigator	System.Windows.Forms	System.Windows.For	Global Asse	
BindingSource	System.Windows.Forms	System.Windows.For	Global Asse	
Filter:				Clear
CMSSiteMap				
Language:	Invariant Language (Invariant Co	ountry)		Browse
Version:	5.0.3629.22708 (Retail)	**		

6. The controls are now added to the Toolbox, as you can see in the following screenshot. Now you can easily drag and drop the controls on your Web form.

Toolbox	→ 1	ı x	CMSWebParts
Standard			
🗄 Data			Client Objects 8
Validation			<\$@ Cont
Navigation			<asp:lit< td=""></asp:lit<>
🗄 Login			
WebParts			
AJAX Extensions			
Reporting			
• HTML			
Pointer			
CMSSiteMap			
ColorPicker			
SasicCalendar			
LightboxExtender			
CMSViewer			
BasicDataPager		=	
🎡 DataPager			
BasicDataList			
🎡 QueryDataList			
🎡 CMSTreeMenu			
BasicRepeater			
🎡 QueryRepeater			
🎡 CMSTextPager			
🎡 CMSSearchDialog			
🎡 BasicDataGrid			
🎲 CMSDataGrid			

3.5.3 Debugging

If you're adding custom code using Visual Studio into Kentico CMS, you can easily debug it in Visual Studio as you're used to since Kentico CMS is a standard Visual Studio application. Simply click on the left next to your method or command and it will create a red breakpoint:



Now choose **Debug -> Start debugging** in the main menu or press **F5**. The website starts and you can track the code flow. You may get a message like this:



You will need to choose to **Modify the web.config file to enable debugging** and click **OK**. It's recommended that you disable debugging before deploying the website to a production environment by

setting the value

<compilation debug="true" />

to false in your web.config file for better performance.

Debugging using IIS website

The debug mode starts in built-in web server by default. You can change this in the **website** -> **Start** options dialog by choosing the Use custom server option like this:

References Build	Start action			
Accessibility		Default arm		
Start Options MSBuild Options	Specific page:	Derault.asp		
Mobulid Options	Start external program:			
	Command line arguments:			
	Working directory:			
	Start URL:			
	Server	NTLM Authenti	application.	
	Output Server	Base URL:	http://localhost/KenticoCMS	
	Debuggers			

Please note that you need to be local administration and the website or virtual directory must be configured for both anonymous and Windows authentication (see <u>Additional configuration tasks -></u> <u>Creating a virtual directory</u> for details).

Debugging from within Kentico CMS UI

Kentico CMS provides certain debugging possibilities directly from within its user interface in **Site Manager -> Administration -> System -> Debug**. Further information on this topic can be found in the <u>Development -> Debugging</u> chapter of this guide.

3.5.4 **Pre-compilation (Publish function)**

If you want to pre-compile the website before placing it on the live server, you can use Visual Studio's Publish function. It allows you to compile the source code into assemblies. This provides several advantages:

• faster application start (no compilation is required)

134 Kentico CMS 5.5 R2 Developer's Guide

- intellectual property protection if someone gets your website code, they will not be able to read the source code easily
- · better security the code cannot be easily modified by potential hacker

However, there's also a disadvantage: if you compile the website, you will not be able to use some of the Kentico CMS features:

- import of the website
- New site wizard.
- You cannot add code in the Code tab of web parts (the Code tab is an obsolete feature as of Kentico CMS 3.0, it is mentioned here due to backward compatibility reasons).

If you run a pre-compiled website, you will get the errors like:

The file '/CMSTransformations/cms/event/preview.ascx' does not exist.

This means that the system requires a virtual object, but the **VirtualPathProvider** is probably not running and cannot provide the system with that object.

Pre-compiling the website

Please note that for building the pre-compiled website, you have to rename **Microsoft.Web.Services3**. **dll.rename** file to **Microsoft.Web.Services3.dll** in the ~*Bin* directory.

Since the virtual provider cannot run in a pre-compiled website, you need to store the physical files to the system before compilation. You can save all the virtual objects to the file system in CMS Site Manager -> Administration -> System -> Deployment interface by clicking the button "Save all virtual objects to disk".

Please note that these files are just copies of the actual virtual object and will be used by the system only if the VirtualPathProvider cannot start. Also, the changes to the objects through the administration interface will not affect these files until you save all the objects to the disk again.

Then, you can use **Build -> Publish** item in **Visual Studio** main menu and pre-compile the website. You will see a dialog like this:

Publish Web Site	? <mark>X</mark>
Target Location: (ftp://, http:// or drive:\path)	
C:\inetpub\wwwroot\KenticoCMS\PrecompiledWeb\KenticoCMS	
Allow this precompiled site to be updatable	
Use fixed naming and single page assemblies	
Emit debug information	
Enable strong naming on precompiled assemblies	
Our Sea a key file generated with the Strong Name tool Key file location:	
Delay signing	
O Use a key container Key container:	
Mark assemblies with AllowPartiallyTrustedCallerAttribute (APTCA)	Cancel

You need to enter the path outside your current web project where the compiled version will be placed. You can choose between two compilation modes using the **Allow this precompiled site to be updatable** checkbox:

- Allow the site to be updatable (checked) the code behind and app_code classes are compiled, but ASPX files are stored in their original source code form.
- **Do not allow the site to be updatable (unchecked)** the code behind and app_code, as well as ASPX files are compiled and the website contains only empty "stub" ASPX files without any code.

We generally recommend that you do not allow the site to be updatable, since it provides the best performance.

Limitations
In the precompiled website, the VirtualPathProvider is stopped automatically. When VirtualPathProvider is stopped, you cannot edit transformations and layouts through the user interface without saving them on the disk again.
You may need to copy the database to the server using the standard backup/ restore operation since the compiled website cannot be used for SQL Server database installation. Other options are:
 to install a non-compiled website on the server first, go through the setup wizard and then replace the non-compiled files with compiled ones, while keeping the web. config file as is.
 to install Kentico CMS website locally and run the database setup against the remote SQL Server on the live server.
In the portal development model, you cannot use custom web part code (Web part properties -> Code tab). If you need to add custom code on the Code tab and run the

website in the compiled version, you need to create user controls, place web parts to the user controls and add your custom code to the web parts. Then, you can place the user controls to the page using the General/User control web part.

Testing the website before compilation If you wish to check if your website runs without using VirtualPathProvider (to simulate the precompiled environment), you can disable the provider by adding the following key into the appSettings section of your web.config file:
<add key="CMSUseVirtualPathProvider" value="false"></add>
If your system runs with VirtualPathProvider disabled, you should be able to run it after the precompilation or deployment process.

Related topics: Additional configuration tasks -> Configuration for Medium Trust environment, Installation procedure -> Deployment to the live server, Additional configuration tasks -> Installation on shared hosting server

3.5.5 Visual Source Safe and Team Development

Kentico CMS can be used in team development environment as any other website project in Visual Studio. You can also use Microsoft Visual Source Safe (VSS) as you're used to: you simply add the website to VSS and then you need to check out/check in the files you want to modify.

In this case, all developers have their local copy of Kentico CMS installed, but they use the same VSS code and the same database as shown on the following picture:



Synchronization of memory objects between development machines

Kentico CMS caches some system objects (such as transformations, templates, etc.) in memory. It means that the memory on multiple development machines may not be synchronized and the developers may not see the latest version and they may even overwrite the work of other developers. That's why we recommend you to synchronize the memory objects between development machines using the <u>Web_farm</u> synchronization module.

Team Development without Visual Studio

If the developers do not modify the source code and use the portal engine development model, they do not even need to have the local copies of the web project and they do not need to use VSS. In this case, they can install a single instance of Kentico CMS on their web server and develop the website through the browser-based interface.

3.5.6 Opening a VS2005 project in VS2008

If you were using Visual Studio 2005 for your web project and wish to convert to Visual Studio 2008, all you need to do is:

- 1. Start Visual Studio 2008.
- 2. Click File -> Open website... .
- 3. Choose the folder with your web project on the disk and click OK.
- 4. If you're asked if you wish to upgrade the project to a newer version of .NET Framework and Visual

Studio,	click	Next	and	go	through	the	wizard.
				<u> </u>	<u> </u>		

Visual Studio Conversion Wizard			
net	Welcome to the Visual Studio Conversion Wizard		
$ \land \land \diamond $	The solution or project you are opening was created in a previous version of Visual Studio. It must be converted to the format used by this version. After a solution or any of its projects has been converted, it may no longer be possible to edit, build, or run in previous versions.		
	If the solution or project is under source control, it will be checked out automatically during the conversion. Be sure the correct Source Control Plug- in is active, and no files are exclusively checked out by other users.		
	Click Next to proceed.		
	< Previous Next > Finish Cancel		



Compilation error

You may receive a compilation error saying there are different versions of the **System**. **Web.Extensions.dll** library in the Global Assembly Cache (GAC) and a temporary folder. In this case, you need to locate the file **bin/System.Web.Extensions.dll** in your web project and delete it.

3.6 Troubleshooting installation issues

3.6.1 Overview

You may encounter various issues during the installation. The following chapters may help you sort them out.

You may encounter problems in following areas:

- SQL Server connection problems
- ASP.NET not working on Windows Server 2003
- Internal server error when using Integrated pipeline mode
- Disk permissions problems

Click one of the links to learn how to solve the issues.

3.6.2 SQL Server connection problems

You may encounter problems when entering the database connection details in the first step of database setup:



Error 1: Establishing connection to the server

Error message:

An error has occurred while establishing a connection to the server. When connecting to SQL Server 2005, this failure may be caused by the fact that under the default settings SQL Server does not allow remote connections. (provider: Named Pipes Provider, error: 40 - Could not open a connection to SQL Server)

Troubleshooting:

1. Make sure the SQL Server name or IP address is correct. In some cases, using one of the following values may help:

• your computer name

- localhost
- 127.0.0.1
- (local)

2. Make sure the server has Microsoft SQL Server 2005 or 2008 installed and running.

3. Make sure you are using the appropriate instance of the SQL Server in case you are using different instances of SQL Server. The instance name must be entered as myserver\myinstance (please note there's a backslash \).

4. If you're using Microsoft SQL Server Express 2005 with default installation settings, the correct server name is **.\sqlexpress** or **computername\sqlexpress**.

5. Make sure the access to the database server is not blocked by some firewall (the default port number for TCP/IP protocol is 1433).

6. If you're using **SQL Server 2005** (especially the Express Edition), some protocols are disabled by default. You may need to go to **Start menu -> All Programs -> Microsoft SQL Server 2005 -> Configuration Tools** on the computer where the SQL Server is installed and start **SQL Server Configuration Manager**. Then, go to SQL Server 2005 Network Configuration and enable the TCP/IP protocol:

🛐 SQL Server Configuration Manager		
Eile Action ⊻iew Help ← → € 🗃 🛊 🗒 😵		
SQL Server Configuration Manager (Local) SQL Server 2005 Services SQL Server 2005 Network Configuration Protocols for MSSQLSERVER SQL Native Client Configuration Client Protocols Aliases	Protocol Name Shared Memory Named Pipes TCP/IP	Status Enabled Disabled Disabled

7. You may also need to enable the TCP/IP protocol in the **SQL Native Client Configuration -> Client Protocols** section:

😽 SQL Server Configuration Manager			
Eile Action View Help ← → È É P D B 20 100 Server Configuration Manager (Local)	Name	Order	Foabled
SQL Server 2005 Services SQL Server 2005 Network Configuration Protocols for MSSQLSERVER SQL Native Client Configuration Client Protocols Aliases	Shared Memory TCP/IP Named Pipes VIA	1 2 3	Enabled Enabled Enabled Disabled

Error 2: Login failed for user 'xy'

Error message:

Login failed for user 'xy'

Troubleshooting for SQL Server account

If you're using SQL Server account with password, make sure you are using a valid user name and password. The login must be created on the server, it must be enabled and permissions to connect to the server must be granted to it. You can check the user account in Enterprise Manager/SQL Server Management Studio -> Server -> Security -> Logins:



Also, check the **Server Properties -> Security** dialog in Enterprise Manager/SQL Server Management Studio and make sure your server supports **SQL Server and Windows Authentication mode**:



Troubleshooting for Windows Authentication account

If you're using Windows Authentication account, the situation may be a little more complex and may require you to contact your network administrator. ASP.NET applications run under some particular local or domain account. This current account is displayed on the screen:

Ose integrated Windows authentication (ASP.NET account: NT AUTHORITY/NETWORK SERVICE)

This account must have its own login with Windows authentication in the SQL Server. You can create the login in **Enterprise Manager\SQL Server Management Studio -> Security -> Logins** and grant appropriate permissions on the server to it. If you SQL Server is located on a different machine than your web server, you may need to configure your web application so that it runs under some domain account, rather than local account so that you can the login in the remote SQL Server.

If you do not succeed to configure Windows authentication, you may want to enable Windows and SQL Server Authentication on your SQL Server and use SQL Server account instead. You can learn more about SQL Server authentication in the **Troubleshooting for SQL Server account** section earlier in this chapter.

3.6.3 ASP.NET not working on Windows Server 2003

If you get the *404: Page not found* error or a similar error every time you request some ASPX page on your server and this is the first ASP.NET application installed and running on your server, it may be caused by configuration of Web Services Extensions on Windows Server 2003.

Go to Control Panel -> Administrative tools -> Internet Information Services (IIS) Manager, click Web Services Extensions and make sure that ASP.NET 2.0 (or higher depending on the version you use) is Allowed (IIS 6 may display the ASP.NET version as 2.0.50727 even if you have a higher one installed and registered) as shown in the following screenshot:



3.6.4 Internal server error when using Integrated pipeline mode

When installing Kentico CMS on a <u>Remote server</u> using a project created by the web installer or when running from a source code package, you may encounter an Internal Server Error while starting the <u>Database setup</u>. This occurs if the application pool of your IIS application is set for .NET 4.0 and *Integrated* managed pipeline mode (on IIS 7.0 or higher).

erver Error in Application "DEFAULT WEB SITE/SOURCE/SOURCECODE_5.5R2_2010/CMS"		
	Internet Information Services 7.	
Error Summary HTTP Error 500.22 - Internal Server Err An ASP.NET setting has been detected that does	or not apply in Integrated managed pipeline mode.	
Detailed Error Information		
ModuleConfigurationValidationModule	Requested URLhttp://localhost:80/Source/SourceCode 5.5R2 2010/CMS/	
Notification BeginRequest	Physical PathC:\inetpub\wwwroot\Source\SourceCode_5.5R2_2010\CMS\	
HandlerStaticFile	Logon MethodNot yet determined	
Error Code0x80070032	Logon UserNot yet determined	
This application defines configuration in the system.web/http	Modules section.	
Things you can try:		
 Migrate the configuration to the system webServer/modules UnetSrv approach migrate config "Default Web Site/" on previous versions of 115. If you are certain that it is OK to ignore this error, it can be Alternatively, switch the applications to a Classic mode applici Site/" (applicationPool: Classic. NET AppPool'. Only Site/" (applicationPool: Classic. NET AppPool'. 	section. You can do so manually or by using AppCmd from the command line - for example, %SystemRoot%\system32. Using AppCmd to migrate your application will enable it to work in Integrated mode, and continue to work in Classic mode and disabled by setting system.webServer/validation@validateIntegrateModeConfiguration to false. ation pool - for example, %SystemRoot%\system32\intersv\appcmd set app "Default Web do this if you are unable to migrate your application.	
(Set "Default Web Site" and "Classic .NET AppPool" to your application path	h and application pool name)	
Integrated mode is the preferred mode for running ASP.NET applications o View more information »	in IIS 7.0 and above.	

It is caused by the fact that your **web.config** file is not configured for *Integrated* pipeline mode by default. The application pool mode can be selected in the web installer during the course of an installation to a local IIS server, which causes the correct web.config to be created, but this is not the case when creating a project for a remote server or when using a project from a source code package.

The solution is to replace the default web.config file of your project with one containing the necessary configuration. The appropriate files can be downloaded here:

- Web.config for .Net 4.0 and Integrated managed pipeline mode
- Web.config for .Net 4.0 and Classic managed pipeline mode

3.6.5 Disk permissions problems

3.6.5.1 Disk permissions problems

Kentico CMS is able to perform most operations without writing to disk. However, there are situations when the web application needs to write to the disk for optimal operations or performance, such as importing/exporting a site or storing uploaded files in the files system (which is optional).

If you receive the error message depicted below, saying that the web application cannot write to disk, you need to grant the **Modify** permissions on the whole website folder to the appropriate user account.


User account of the web application

The web application runs under a user account that depends on your environment. Please note that the accounts listed below are just the default ones, they may be different in your environment. However, the **name of the account is always displayed with the error message**, as highlighted in the screenshot above.

- 1. On <u>Windows 7</u>, the user account is the local **IIS_IUSRS** account by default.
- 2. On <u>Windows Vista or Server 2008</u>, the user account is the local **NETWORK SERVICE** account by default.
- 3. On Windows XP, the user account is the local ASPNET account (aspnet_wp) by default.
- 4. On Windows 2003, the user account is the local account NT Authority\Network Service by default.
- 5. If you're using Visual Studio's built-in web server, it is running under your account.

You can see the name of the user account under which the application runs in **Site Manager ->** Administration -> System dialog.

Choosing the component for directory operations

If you're running Kentico CMS under restricted trust level, you may need to use the managed component for directory operations (create/delete/rename directory). You can configure it by setting the following web.config parameter:

<add key="CMSDirectoryProviderAssembly" value="CMS.DirectoryProviderDotNet" />

If you're running Kentico CMS on a shared hosting server, some providers require that you use the nonmanaged methods for directory operations:

<add key="CMSDirectoryProviderAssembly" value="CMS.DirectoryProviderWin32" />

3.6.5.2 Solution on Windows 7

1. Open Windows Explorer, locate the folder with your website, right-click the folder and display its **Properties**. Choose the **Security** tab.

2. Verify that the account that you need to grant the permissions to (the name was displayed with the error message) is present in the **Group or user names** list. If not, click **Edit**, click **Add** in the pop-up

.

dialog and add the required account to the list. Close the pop-up dialog when finished.

3. Back on the Security tab of the folder properties, select the appropriate account and click Advanced

🗼 www.root Properties
General Sharing Security Previous Versions Customize
Object name: C:\inetpub\wwwroot
Group or user names:
& Administrators (PetrPe \Administrators)
& Users (PetrPe\Users)
&IIS_IUSRS (PetrPe\IIS_IUSRS)
1 III b
To change permissions, click Edit.
Permissions for IIS_IUSRS Allow Deny
Full control
Modify
Read & execute 🗸 🗉
List folder contents 🗸
Read 🗸
Write
For special permissions or advanced settings, Advanced dick Advanced.
Learn about access control and permissions
OK Cancel Apply

4. In the pop-up dialog, select the account again and click Change Permissions.

Advanced emissions To view de Obiect nam	A Security Settings for www.r Auditing Owner Effective I stails of a permission entry, doub ne: C:\inetpub\www.root	Permissions Permissions le-click the entry. To n	nodify permissions, click	Change Permissions.	
Permission	entries:				
Туре	Name	Permission	Inherited From	Apply To	
Allow	IIS_IUSRS (PetrPe\IIS_I	Read & execute	<not inherited=""></not>	This folder, subfolders and	
Allow	TrustedInstaller	Full control	C:\inetpub\	This folder, subfolders and	
Allow	SYSTEM	Full control	C:\inetpub\	This folder, subfolders and	
Allow	Administrators (PetrPe\Ad	Full control	C:\inetpub\	This folder, subfolders and	
Allow	Users (PetrPe\Users)	Read & execute	C:\inetpub\	This folder, subfolders and	
Allow	CREATOR OWNER	Special	C:\inetpub\	Subfolders and files only	
Change Permissions Include inheritable permissions from this object's parent Managing permission entries					
			OK	Cancel Apply	

5. Disable the Include inheritable permissions from this object's parent option.

🔒 Advanced	Advanced Security Settings for www.root					
Permissions	Permissions					
To view or Object nar	To view or edit details for a permission entry, select the entry and then click Edit. Object name: C:\inetpub\wwwroot					
Permission	i en <u>t</u> ries: Name	Permission	Inherited From	Apply To		
Allow	IIS_IUSRS (PetrPe\IIS_I	Read & execute	<not inherited=""></not>	This folder, subfolders a		
Allow	TrustedInstaller	Full control	C:\inetpub\	This folder, subfolders a		
Allow	SYSTEM	Full control	C:\inetpub\	This folder, subfolders a		
Allow	Administrators (PetrPe\A	Full control	C:\inetpub\	This folder, subfolders a		
Allow	Users (PetrPe\Users)	Read & execute	C:\inetpub\	This folder, subfolders a		
Allow	CREATOR OWNER	Special	C:\inetpub\	Subfolders and files only		
Add	Add Edit Remove					
Replace	ndude inheritable permissions from this object's parent Replace all child object permissions with inheritable permissions from this object					
Managing	Managing permission entries					
			ОК	Cancel Apply		

6. In the pop-up dialog, click Add.

Windows S	ecurity		
	Warning: If you proceed, inheritable parent permissions will no longer propagate to this object.		
Click Add to convert and add inherited parent permissions as explicit permissions on this object. Click Remove to remove inherited parent permissions from this object.			
	Add <u>R</u> emove Cancel		

7. When the dialog closes, click **OK** to close the dialog under it. Click **OK** again to close the dialog under the previous one.

You are back in the folder properties dialog now. Select the account and click Edit.

🗼 www.root Properties					
General Sharing Security Previous Versions Customize					
Object name: C:\inetpub\wwwroot					
<u>G</u> roup or user names:					
& Administrators (PetrPe\Administrators)					
& Users (PetrPe\Users)					
IIS_IUSRS (PetrPe\IIS_IUSRS)					
M2 Truetadinetallar					
To change permissions, click Edit.					
Permissions for IIS_IUSRS Allow Deny					
Full control					
Modify					
Read & execute 🗸 🗉					
List folder contents 🗸					
Read 🗸					
Write					
For special permissions or advanced settings, Advanced dick Advanced.					
Leam about access control and permissions					
OK Cancel Apply					

8. Check the Allow check-box for the Write and Modify permissions and click OK.

Permissions for wwwroot	×			
Security				
Object name: C:\inetpub\www	root			
Group or user names:				
& CREATOR OWNER				
& SYSTEM				
& Administrators (PetrPe\Admir	histrators)			
& Users (PetrPe\Users)				
IIS_IUSRS (PetrPe\IIS_IUS	RS)			
& TrustedInstaller				
	Add <u>R</u> emove			
Permissions for IIS_IUSRS	Allow Deny			
Modify				
Read & execute				
List folder contents				
Read				
Write				
Learn about access control and permissions				
ОК	Cancel <u>Apply</u>			

9. You have assigned the account with the required permissions. Kentico CMS should now be able to perform all disk write operations and therefore work correctly.

3.6.5.3 Solution on Windows Vista or Server 2008

1. Open Windows Explorer, locate the folder with your website, right-click the folder and display its **Properties**. Choose the **Security** tab.

2. Verify that the account that you need to grant the permissions to (the name was displayed with the error message) is present in the **Group or user names** list. If not, click **Edit**. In the pop-up dialog, click **Add** and add the required account to the list. Close the pop-up dialog when finished.

3. Select the required account and click Advanced.

🖡 KenticoCMS_31a Properties 🛛 💌				
General Sharing Security Previous Versions Customize				
Object name: C:\inetpub\www.root\KenticoCMS_31a				
<u>G</u> roup or user names:				
& CREATOR OWNER				
NETWORK SERVICE				
✓ ►				
To change permissions, click Edit.				
Permissions for NETWORK SERVICE Allow Deny				
Full control				
Modify				
Read & execute 🗸 🗉				
List folder contents				
Head V				
For special permissions or advanced settings, Advanced				
Learn about access control and permissions				
OK Cancel Apply				

4. In the pop-up dialog, select the account again and click Edit.

Advanced Security Settings for KenticoCMS_31a 'ermissions Auditing Owner Effective Permissions To view or edit details for a permission entry, select the entry and then click Edit. Object paper: Chirateuchywwww.setWenticeCMS_21a					
Permission	entries:	ancocmo_ora			
Туре	Name	Permission	Inherited From	Apply To	
Allow	CREATOR OWNER	Special	<not inherited=""></not>	Subfolders and files only	
Allow	SYSTEM	Full control	<not inherited=""></not>	I his folder, subfolders and	
Allow	NETWORK SERVICE	Read, write & exe	<not inherited=""></not>	This folder, subfolders and	
Allow	Administrators (BOBEBT	Eull control	<not inherited=""></not>	This folder_subfolders and	
Allow	Users (ROBERTS\Users)	Read & execute	<not inherited=""></not>	This folder, subfolders and	
Allow	IIS_IUSRS (ROBERTS\II	Read & execute	<not inherited=""></not>	This folder, subfolders and	
Allow	TrustedInstaller	Full control	<not inherited=""></not>	This folder, subfolders and	
Edt Include inheritable permissions from this object's parent Managing permission entries					
OK Cancel Apply					

5. Disable the Include inheritable permissions from this object's parent option.

Advance Permissions To view or Object nar	d Security Settings for Kentic	oCMS_31a try, select the entry and enticoCMS_31a	l then click Edit.	
Permission	i entries:			
Туре	Name	Permission	Inherited From	Apply To
Allow	CREATOR OWNER	Special	<not inherited=""></not>	Subfolders and files only
Allow	SYSTEM	Full control	<not inherited=""></not>	This folder, subfolders a
Allow	NETWORK SERVICE	Read, write & exe	<not inherited=""></not>	This folder, subfolders a
Allow	Administrators (ROBERT	Full control	<not inherited=""></not>	This folder, subfolders a
Allow	Users (ROBERTS\Users)	Read & execute	<not inherited=""></not>	This folder, subfolders a 🛫
۲.				• • • • • • •
Add Edit Remove Imaging permission entries				
- recording to				
			ОК	Cancel Apply

6. On the pop-up dialog, click **Copy**.

Windows S	Security		
<u> </u>	Selecting this option means that the parent permission entries that apply to child objects will no longer be applied to this object. -To copy the permission entries that were previously applied from the parent to this object click Cony		
	-To remove the permission entries that were previously applied from the parent and keep only those permissions explicitly defined here, click Remove.		
	-To cancel this action, click Cancel.		
	<u>Copy</u> <u>R</u> emove Cancel		

7. When the dialog closes, click **OK** to close the dialog under it. Click **OK** to close the dialog under the previous one. You are back in the folder properties dialog now. Select the account again and click **Edit**.

🚶 KenticoCMS_31a Properties		×
General Sharing Security Previous	Versions C	ustomize
Object name: C:\inetpub\www.root\	KenticoCMS_	.31a
<u>G</u> roup or user names:		
SCREATOR OWNER		
NETWORK SERVICE		
CONTRACTOR ALL		*
I III	ietratorel	4
To change permissions, click Edit.		Fdit
To change permissions, click Edit.		Edit
To change permissions, click Edit. Permissions for NETWORK SERVICE	Allow	Edit Deny
To change permissions, click Edit. Permissions for NETWORK SERVICE Full control	Allow	Edit
To change permissions, click Edit. Permissions for NETWORK SERVICE Full control Modify	Allow	Edit
To change permissions, click Edit. Permissions for NETWORK SERVICE Full control Modify Read & execute	Allow	Edit
To change permissions, click Edit. Permissions for NETWORK SERVICE Full control Modify Read & execute List folder contents	Allow	Edit
To change permissions, click Edit. Permissions for NETWORK SERVICE Full control Modify Read & execute List folder contents Read		Edit

8. Check the Allow check-box for the Write and Modify permission and click OK.

📙 Permissions for KenticoCMS_31a 🛛 🛛 💽				
Security				
		~		
Ubject name: L:\inetpub\www	root/KenticoLMS_	_31a		
<u>G</u> roup or user names:				
NETWORK SERVICE		*		
Administrators (ROBERTS V	dministrators).	_		
Source (RUBERTS (Users)		E		
InstedInstaller	105115)	-		
< III		•		
Permissions for NETW/OBK	Aga	<u>H</u> emove		
SERVICE	Allow	Deny		
Modify				
Read & execute				
List folder contents	\checkmark			
Read				
Write				
Learn about access control and permissions				
	Cancel	Applu		
UK				

9. You have assigned the account with the required permissions. Kentico CMS should now be able to perform all disk write operations and therefore work correctly.

3.6.5.4 Solution on Windows XP

1. Open Windows Explorer, locate the folder with your website, right-click the folder and display its **Properties**. Choose the **Security** tab and click **Add...**.

Local Disk (C:) Properties		? 🗙
General Tools Hardware Sharin	g Security Quota	
Group or user names:		
Administrators (PETRP\Adminis	strators)	
CREATOR OWNER		
🕵 Everyone		
SYSTEM		
🕵 Users (PETRP\Users)		
	A <u>d</u> d <u>R</u> ei	move
Permissions for Administrators	Allow De	ny
Full Control	V	-
Modify	v	
Read & Execute	v	
List Folder Contents	v	
Read	v	
Write		
L Coocial Pormissions		
For special permissions or for advance click Advanced.	ed settings, Adva	anced
ОК	Cancel	Apply



Missing Security tab in folder properties dialog

If you cannot see the Security tab, click **Tools -> Folder options** in the Windows Explorer main menu, choose the **View** tab and uncheck the **Use simple file sharing** box. Click OK. Now you should find the Security tab in the folder properties dialog.

General View File Types Offline Files	
Folder views You can apply the view (such as Details or you are using for this folder to all folders. Apply to All Folders <u>R</u> eset All F	r Tiles) that iolders
Advanced settings:	
 Managering pairs of the pairs as a single file Show and manage the pair as a single file Show both parts and manage them individu Show both parts but manage as a single file 	ally
Remember each folder's view settings Restore previous folder windows at logon Show Control Panel in My Computer	
 Show encrypted or compressed NTFS files in cr Show pop-up description for folder and desktop Use simple file sharing (Recommended) 	olor Element
Resto	re <u>D</u> efaults
OK Cancel	

2. The Select Users, Computers and Groups dialog appears. Click Locations....

Select Users, Computers, or Groups	? 🛛
Select this object type: Users, Groups, or Built-in security principals	Object Types
From this location:	
office.kentico.com	Locations
Enter the object names to select (<u>examples</u>):	
l	Check Names
Advanced OK	Cancel

3. Choose your local computer in the pop-up window and click **OK**.



4. Enter **aspnet** into the box and click **Check Names**. The name should be resolved to **<your computer name>\ASPNET**. Click **OK**.

Select Users or Groups	? 🛛
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
Erom this location:	
PETRP	Locations
Enter the object names to select (<u>examples</u>):	
PETRPVASPNET	Check Names
Advanced	OK Cancel

5. The account is added to the list of accounts. Grant the **Modify** permission to the account and click **OK**.

Local Disk (C:) Properties	?×
General Tools Hardware Sharing Security Quota	
Group or user names:	
Administrators (PETRP\Administrators)	<u> </u>
S ASP.NET Machine Account (PETRP\ASPNET)	
CREATOR OWNER	
SYSTEM	≚
Add <u>Remove</u>	
Machine Account Allow Deny	
Full Control	^
Modify 🔽 🗌	
Read & Execute	
List Folder Contents	
Head V	
	~
For special permissions or for advanced settings, Advance click Advanced.	d
OK Cancel Ap	ply

3.6.5.5 Solution on Windows 2003

1. Open Windows Explorer, locate the folder with your website, right-click the folder and display its **Properties**. Choose the **Security** tab and click **Add...**.

beta3_2 Properties			? 2
General Sharing Se	General Sharing Security Web Sharing Customize		
<u>G</u> roup or user names:			
Administrators (D	ELI\Adminis	trators)	
CREATOR OW	NER		
SYSTEM			
🖉 Users (DELI\Us	ers)		
		A <u>d</u> d	<u>R</u> emove
Permissions for Admin	istrators	Allow	Deny
Full Control		\checkmark	
Modify		1	
Read & Execute		\checkmark	
List Folder Content	s	1	
Read		1	
Write		1	
Coosial Parmission	• 		
 For special permission click Advanced 	is or for adva	nced settings,	Ad <u>v</u> anced
		_	
		_	
	OK	Cancel	Apply

2. The Select Users, Computers and Groups dialog appears. Click Locations....

Select Users, Computers, or Groups		? ×
Select this object type:		
Users, Groups, or Built-in security principals		<u>O</u> bject Types
Erom this location:		
office.kentico.com		Locations
Enter the object names to select (examples):		
1		<u>C</u> heck Names
		-
Advanced	OK	Cancel

3. Choose your local computer and click $\ensuremath{\text{OK}}$.

Locations	? ×
Select the location you want to search.	
Location:	
Entre Directory	
	OK Cancel

4. Enter *network service* into the box and click **Check Names**. The name should be resolved to **NETWORK SERVICE**. Click **OK**.

Select Users or Groups		? ×
Select this object type:		
Users, Groups, or Built-in security principals		<u>O</u> bject Types
<u>F</u> rom this location:		
DELI		Locations
Enter the object names to select (<u>examples)</u> :		
NETWORK SERVICE		<u>C</u> heck Names
1		-
Advanced	OK	

5. The account is added to the list of accounts. Grant the **Modify** permission to the account and click **OK**.

beta3_2 Properties		? ×
General Sharing Security We	b Sharing Custor	mize
<u>G</u> roup or user names:		
🗾 🕵 Administrators (DELI\Admin	istrators)	
🚮 CREATOR OWNER		
METWORK SERVICE		
SYSTEM		
🕵 Users (DELI\Users)		
	A <u>d</u> d	<u>R</u> emove
Permissions for NETWORK		
SERVICE	Allow	Deny
Full Control		
Modify		
Read & Execute		
List Folder Contents		
head http://www.		
Coocial Permissions		
For special permissions or for adv click Advanced.	anced settings,	Advanced
OK	Cancel	Apply

3.7 System backup and recovery

Backup

To backup the data of Kentico CMS instance, you need to:

- 1. Backup the Kentico CMS database.
- 2. Backup the files of the Web application.

Recovery

To recover the system, you need to:

- 1. Recover the Kentico CMS database.
- 2. Recover the website files and create a virtual directory for it.



Content management

4 Content management

4.1 Overview

160

The content can be managed through a browser-based, WYSIWYG user interface. You need to sign in to Kentico CMS Desk using your user name and password and you need to have appropriate permissions.

Links for access to the user interface

Kentico CMS user interface, i.e. **CMS Desk** and **Site Manager**, can be accessed via the following links, where the first part of the link is dependent on the installation and domain name. If the default URL of your website is *http://localhost/KenticoCMS*, then:

- The default URL of CMS Desk is http://localhost/KenticoCMS/CMSDesk.
- The default URL of Site Manager is http://localhost/KenticoCMS/CMSSiteManager.

Please note: The beginning of the addresses may be different depending on your installation and domain name, but the highlighted end of the URL is always in this format.

Default user name and password

To log on to a Kentico CMS website for the first time, use the default logon credentials:

- The default user name is **administrator**.
- The default password is **blank (no password)**.

It's highly recommended that you change the password after you finish the installation.

User interface overview

The following figure shows the CMS Desk user interface.



The user interface consists of the following main sections and features:

- Main menu with Content, My Desk, Tools and Administration tabs.
- **Content tree** that represents the site map of the website and allows you to organize the structure of documents and choose document that appears on the right side of the screen.
- **Document actions** toolbar with buttons for creating new documents, deleting, copying, moving and sorting documents.
- View mode selection allows you to choose between editing, preview, live site view and list view.
- Editing mode selection you can choose to edit page content, design the page template, edit the document fields, product properties or document properties.
- Go to Live Site this action redirects you to the title page of the currently edited website, logged under the same user account that you used to log into the user interface. This is a more convenient way than using the Sign out button and logging in on the live site afterwards.
- Switch to Site Manager redirects you to Site Manager, the other part of the system's user interface. This option is only available to global administrators.
- Site selection this drop-down list is used to select the currently edited website. Only those websites that the current user can edit are available in the drop-down list.
- Current user user name of the current user.
- Current version version of Kentico CMS.
- **Sing Out button** clicking this button log you off the user interface and redirects you to the title page of the live site. This button is only displayed if *Forms authentication* is used. When using *Windows authentication*, the link is not displayed.
- WYSIWYG editor allows you to edit text stored in Editable regions, change text formatting or insert graphics into the text.
- **Page in editing mode** this is where you can view and edit the document selected in the content tree, in the mode selected in the view mode and editing mode toolbar.

See also: Kentico CMS overview -> Where is the content stored?, Kentico CMS overview -> How do I

edit content?

4.2 Organizing pages, files and documents

All content in Kentico CMS is stored in a **tree hierarchy**. You can see the content tree on the left in **CMS Desk -> Content**:

Kentico			
CMS Desk		Content	My desk
	Cop	y 🕆 U	Jp
New Delete	📄 Mov	e 🦊 🛙	Down
Content	manage	ement	
🗆 🕑 Corporate Si	ite		
Home			
🖃 📄 Services			
Web D	esign		
Web D	evelop	ment	
	rk Adm	nistration	
in Cell ph	ones		
J San	nsuna s	5GH E250	
🥒 🖉 Nok	da N73		
🕀 📄 PDAs			
🕕 📄 Laptop	s		
🕕 📄 News			
🕕 📄 Partners			
🕕 📄 Company			
🖃 📄 Blogs			
🕂 📄 Forums			
Events			Ŭ
🖶 📄 mayes			
Examples			
🕕 📄 Mobile 🏓			
🗉 🏐 Special pa	iges		
🗄 🟐 Images			

The tree hierarchy provides many advantages:

- It organizes the page in a logical structure that represents the (dynamic) site map.
- It ensures easy-to-navigate information architecture.
- It provides a logical categorization of pages and documents.
- The content of sub-pages can be nested inside the parent pages.
- The position of the document is reflected in its URL that consists of the document path in the tree hierarchy,

such as /products/lcd-displays/nec-52vm.aspx.

• The structure allows you to define permissions for a particular site section and inherit them to underlying items.

The following figure shows how the content tree defines the navigation and site map of the website:



Document types

Each document is of some type - it can be a page, a news item, an article, a product specification, etc. Each document type has its own:

- fields (data structure)
- editing form layout
- transformations (design)
- queries

and other settings.

Document types are fully customizable - you can add, modify and delete custom fields. The advantage of using custom document types is that you can define custom structure of documents and store content (data) separated from design. This can be done in **Site Manager -> Development -> Document types**.

More details can be found in the **Document types** chapter.

Pages and documents

All items in the content tree are basically documents. However, there's a special type of documents called **pages**. The pages (such as /Home, /Products/PDAs) display the content and they are displayed as menu items by default (this can be also customized).

Unlike pages, structured documents (such as news item /News/Your first news in the sample Corporate Site) contain structured data that can be displayed on the pages.

While pages usually contain unstructured content in the form of editable regions that can be edited on the **Page** tab, the structured documents contain structured and typed data stored in document type-

specific database tables and edited on the Form tab.

You will typically use **structured documents** when you need to display a **list of items**, such as list of news, list of products, etc.

Page versus Form

There are two types of content: content stored in editable regions on the page and content stored in forms. The following table compares both approaches:

	Editable regions on the page	Form
Content structure	Simple content structure, only text-based content.	Complex content structures, typed data, such as text, date-time, numbers, etc.
Validation	Only basic validation rules for minimum and maximum length.	Complex validation rules, including regular expressions and custom form controls with custom validation code.
Display	The content is displayed in the context of the page providing truly WYSIWYG editing.	The content is displayed using XSLT or ASCX transformations using special controls or web parts.
Storage	The content is stored in a single XML document in the document properties.	The content is stored in a separate database table. Each field has its own column. The data can be easily modifies using SQL queries or API.
Examples of use.	Home page, contact page. Generally: pages with simply structured or unstructured, text- only content. The editable regions are usually used only in connection with documents of type Page (menu item) .	News, product specification, event details, job opening, etc. Generally: pages with structured content where you need to separate content from design and keep the content in its original data type. The form-based content is usually used in connection with documents of type News , Product, Article , etc.

Organizing media files

There are two types of files you need to manage on the website:

- **website design files** Images and Flash files that are used on the website design template, such as logo, background images, menu images, etc. These should be stored in the file system as a part of the application theme as explained in the <u>App themes</u> chapter.
- **Media files and document files** (images, Flash movies, Word documents, PDFs, etc.) that are published on the website and are part of the content editable by editors. These should be uploaded to the content tree as documents so that they can be managed by the content editors and so that you

can apply all content-related features (permissions, workflow, versioning, multilingual support) to files as well.

You can find more details on files in chapter File management.

See also: <u>Where is the content stored?</u>

4.3 Editing content

4.3.1 Creating a new page

When you're creating a new page, you need to go through the following steps:

1. Click the **New** button in the main toolbar and choose to create a new document using the **Page** (menu item) document type.



2. Enter the **page name** and select the **page template**. The page template defines the layout and design of the new page.

Alternatively, you can choose one of the following options when creating a new page:

- Inherit from parent page use this option if you want the new page to use the same page template as the parent page.
- Create a blank page using this layout this option is available only to site administrators/ developers who can use it to create a new page that doesn't use any existing page template (it's a page with an ad-hoc page template). You can learn more in <u>Content tree and page templates</u>.

Click Save.

Save Save and create another	Spell check								
Page name:									
O Use page template O Inherit from page	arent page 🛛 🔿 Create a blai	nk page							
All page templates Articles	Template name:	Template name: Search							
이상 Blank pages for widgets 이상 Blogs 이상 Corporate Site ASPX 이상 E-commerce									
······································	Header and text	Header and text with left menu	Header, text region	Left menu, right text	в				
·····································									
Membership and security Message boards News Newsletter Offices	Simple text	Simple text with left menu	Simple text with left menu (personalised)	Simple text, page placeholder and left menu					
Press releases Products					-				
	1 <u>2</u> Left menu, right te	xt							
4	Displays a left menu wi	ith editable text on the rig	ht and a placeholder for su	ubpages.					

3. You're redirected to the **Page** tab and you can enter some content. Click **Save** to save your content changes.

Page Design Form Properties	
Save Spell check	
Source Q, X, Ph (Ph (Ph (Ph (Ph (Ph (Ph (Ph (Ph (Ph	B () () () () () () () () () (
1	ign in to CMS Desk. Sign in to CMS Site Manager. The default account is administrator with blank password.
CompanyL	Global Administrator (administrator) Sign out
	Search for:
Home Services Products	News Partners Company Blogs Forums Events Images Wiki Examples
IT Training Web Design	Services > IT Training
Web Development	
Network Administration	

4.3.2 Creating a new structured document

You can create new documents in CMS Desk -> Content.

1. Click the document under which the new item should be placed, click **New** and choose the required document type.





Available document types

The types of documents that can be created under the selected document depend on the type of the selected document. If the required document type is not available, the site administrator needs to add it in Site Manager -> Development -> Document types - > ... edit parent document type ... -> Child types.

2. You are then redirected to the appropriate editing form. For example, if you chose to create a new **News** document in the previous step, you would get an editing form like in the screenshot below. Enter some sample values like the following:

- News title: My testing news
- Released date: 8/15/2007 (the release date displayed on the website)
- News summary: Some news summary.
- News text: Some news text.
- · Publish from: <leave empty for now, it can be used to specify when the document goes live>
- Publish to: <leave empty for now, it can be used to specify when the document expires>

Now you can click Save to save the document and continue editing. You can also click Save and

create another to save the news document and create another news document in the same location. The later option is useful if you need to create several documents of the same type in the same location at once.

🖃 🚭 Corporate Site	News						
Home	Save	Save and create another	Spell check				
Products News Your first news	Source Q	X h f f f f f f f f f f f f f f f f f f	∽ ~ M \\$ Ⅲ > ☆ ≝	<u> В I Ц</u>	ABC X2 X2 1 = 1 =	∉ ∉ ≣≣≣≣	1 🕵 🙈 🕸
······································	Style	Format	Font	▼ Size	•	<u><u> </u></u>	
Company Gongany Gong G	News Title: Release Date:		RP Now				*
ं ्रे ्यु Special pages । ्यु ये ये Images	News Summary:						
							Ŧ
							*
	News Text:						

4.3.3 Previewing documents

When you open the page in CMS Desk -> Content section, the default mode is Edit:

	Kenti	со										
	CIVIS DE	2SK		Content	My desk	Tools	Administ	tration				
B		Co	ру	👚 Up			Q		0			$\mathbf{\rho}$
New	Delete	📄 Mo	ve	🕹 Do	wn	Edit	Previe	ew Live	e site	List		Search
	Conte	ent man	age	ment			Vi	ew mode	в			Other
	Corporate	e Site				Page	Design	Form	Maste	r page	Pro	operties
	Home							_				

The Edit mode allows you to edit the page content and properties.

You can also choose the following modes:

- **Preview** this mode shows you the page as it will be published on the site, before it's published (if you're using workflow see box below for details).
- Live site this mode shows the page as it's currently displayed on the live site to site visitors.
- List this mode shows the list of all documents under the currently selected document. It's useful if you have too many documents in a single site section and need to browse them effectively.



Preview mode and workflow

The preview mode works as expected **only if the displayed document uses workflow** (see <u>Workflow overview</u> for details). When you create a new document and want to preview it before you approve it in your step, click the document and click **Preview**. You will see the document as it will be displayed after it's published.

If you do not wish to use a real workflow, but you'd like to use the preview functionality, you can define a simple two-step workflow (Edit -> Publish) without any approval process. In this case, the editor can preview the content and publish it when it looks as required.

If you do not use workflow for the selected document, the **Preview mode** displays basically the same content as the **Live site** mode, the only difference may be caused by the fact that the preview mode doesn't use caching, so it may display also changes that are not visible on live site yet due to the caching.

4.3.4 Creating a linked document

A linked document is a "stub" or "shortcut" of some existing document. It allows you to place a single document to multiple places in the content tree instead of creating its copies. Such a document is then displayed in the given part of the website, but when you edit it, you actually update the original document.

This feature is useful if you need to include a document (product) in multiple site sections (product categories), but keep only one instance of the document.

In order to create a linked document, click **New** and choose **Link an existing document** in the bottom of the screen:

New document
Please select new document type:
Page (menu item)
Article
灯 <u>Blog</u>
<u>Cell phone</u>
🏴 <u>Event</u>
陽 Event (booking system)
FAQ
🚍 File
lean Folder
🙀 Image gallery
🄱 Job opening
<u>Knowledge base article</u>
<i>😹</i> Laptop
📷 <u>News</u>
Notice
// PDA
🙀 Press release
Product
Simple article
Link an existing document

Then, choose the document that should be linked to the current location:



Click **Save** to save the new link. The link to the document will appear with an arrow in the content tree:



You can see the list of all linked documents for the currently selected document in the Properties -> Linked docs dialog.

4.3.5 Drag-and-drop operations with documents

You can perform the following operations with documents quickly by dragging and dropping in the content tree.

- Move just drag and drop the document
- Copy drag and drop while holding CTRL
- Create linked document drag and drop while holding down CTRL+SHIFT

The following steps describe the process of dragging and dropping a document:

1. Select the document that you want to move.



2. Move the mouse to the target location while still holding down the mouse button.



3. Release the mouse button. The document will be moved to the location where you dropped it.



4. If you drag the document a bit to the right ...



5. ... it will be placed under the document above it.

🖃 🎯 Corporate Site
🗉 📄 Services
📄 📄 Company
🕕 📄 Carriers
🕣 📄 Offices
🕕 📄 Blogs
🗊 📄 Forums
🗉 📄 Events

4.4 WYSIWYG editor

4.4.1 Overview

Kentico CMS comes with a built-in WYSIWYG editor. It is based on the <u>FCKeditor</u>, which is one of the best browser-based editors available on the market. However, it is possible to integrate your custom WYSIWYG editor instead of the built-in one.

Where is the editor available

You can come across the WYSIWYG editor in many parts of the system. However, its main use is related to the **Editable text** web part, which enables content editors to enter page content via the **Page** tab.

Another example of usage of the WYSIWYG editor is the **HTML area** form control that can be displayed e.g. on a document's **Form** tab, as a part of a BizForm or in the web part properties dialog of some web parts (e.g. **Static HTML** or **Silverlight application**).

WYSIWYG editor toolbar

The default toolbar looks like this:

```
      Image: Source
      Image: Source
```

As you can see, it provides functionality similar to Microsoft Word. Still, there are several buttons that may require additional explanation:

æ	Paste as plain text - this command pastes the content of your clipboard while cleaning out all formatting.
	Paste from Word - this command allows you to clean-up content pasted from Microsoft Word. It cleans up the HTML code so that it doesn't contain extra code and so that it fits your website design. You can find more details in <u>this chapter</u> .
9	Insert/Edit link - creates a link from the selected text or inserts link into the text. See this chapter for more details.
	Insert/Edit image or media - inserts an image or other media into the text. See the <u>Insert</u> <u>image or media</u> chapter for more details.
-	Quickly insert image - inserts an image from your local disk in a quick way, without any additional settings when inserting. See <u>this chapter</u> for more details.

	Insert BizForm - inserts an on-line form into the text. You can find more details on BizForms in the <u>Modules -> BizForms</u> chapter.
	Insert inline control - inserts an inline control into the text. You can find more details on inline controls in the <u>Inline controls</u> chapter.
۲	Insert poll - inserts a poll into the text. You can find more details on polls in the Modules -> Polls chapter.
You	Insert/Edit YouTube video - inserts YouTube video. Further details can be learned in <u>this</u> <u>chapter</u> .

4.4.2 Insert image or media

4.4.2.1 Overview

The Insert image dialog can be used to insert the following types of files:

- Images: bmp, gif, ico, png, wmf, jpg, jpeg, tiff, tif
- Audio: wav, wma, mp2, mp3, mid, midi, mpga
- Video: avi, mp4, mpg, mpeg, wmv, qt, mov, rm
- Flash: swf

Custom types can be added as described in this topic.

The **Insert image or media** dialog can be opened by clicking the **screenshot** below.



After clicking the icon, the following dialog will be displayed:



The highlighted parts of the dialog have the following functions. Their position may vary based on the selected file source:

- File sources using these four tabs, you can select where the inserted files should be taken from; more info <u>here</u>
- View modes using these buttons, you can switch between different ways how listed files are displayed in the dialog; more info <u>here</u>
- 3. File properties in this section, you can define properties of the file inserted into the text; the properties are different for <u>images</u>, <u>audio/video</u> and <u>flash</u>

General process of inserting image or media

- 1. Place the cursor in the appropriate position in the WYSIWYG editor.
- 2. Click the Insert image or media (1997) icon.
- 3. The dialog window opens. Select the appropriate file source tab according to where you want to add the file from.
- 4. Locate and select the file on the tab.
- 5. Appropriate properties according to the file type are displayed. Specify the required properties and click the **Insert** button.
- 6. The required code gets inserted into the WYSIWYG editor.

4.4.2.2 File sources

Using the four tabs at the top part of the dialog window, you can choose where the image or media should be inserted from. The following tabs are available:

Attachments

This tab is available only when the WYSIWYG editor is placed on some document (e.g. Form tab, user contributions, ...) so that the attachments of the current document can be offered. In other parts of the CMS, the tab is not displayed.

You can insert the document's unsorted attachments into the text from this tab. You can filter the listed attachments by **Name** using the filter above the list. For more information about document attachments, please refer to the <u>Document attachments</u> chapter of this guide.

You can select an attachment using the **Select** (>) icon or by simply clicking the appropriate line (or tile/thumnail in the other view modes).

You can upload new attachments to the document via this dialog using the **New file** (\Box) button. The following actions can be performed with the listed attachments:

- After clicking the **View** (a) icon, the attachment will be opened in a new window.
- Using the **Delete** (**X**) icon, you can remove the attachment from the document.
- Using the Move up (¹) and Move down ([↓]) icons, you can re-order the attachments. This option is available only in the List view mode. The order is stored in the AttachmentOrder property of each attachment. You can enter AttachmentOrder into the ORDER BY expression property of a displaying web part to have the attachments ordered accordingly.
- Using the **Update** (1) icon, you can replace the original attachment with a new one.



Content

From this tab, you can insert files stored in the content tree of any of the sites running in the system. The site to insert from can be selected using the **Site** drop-down list, while its content tree will be displayed below. You can define which sites will be available and the starting alias path of the displayed content tree when defining the field in field editor, as described <u>here</u>.

If you select a node of the content tree, all insertable files stored under it will be listed in the main area. You can filter the listed files by **Name** using the filter above the list.

You can select a file using the **Select** (>) icon or by simply clicking the appropriate line (or tile/ thumbnail in the other view modes).

New folders (cms.folder documents) can be created in the content tree via this dialog using the **New** folder (\bigcirc) button. You can also upload new files (cms.file documents) into the content tree using the **New file** (\bigcirc) button. You can also perform the following actions with the listed files:

- After clicking the View (a) icon, the file will be opened in a new window.
- Images have also the Edit (𝒜) icon available. Clicking this icon opens the image in the built-in image editor.



Media libraries

From this tab, you can insert files stored in a media library. Depending on the settings described <u>here</u>, you can select a library using the set of three drop-down lists - **Site**, **Group** and **Library** - in the top right part of the dialog.

More information about Kentico CMS Media libraries can be found in this chapter.

When the library is selected, its folder structure is displayed below the drop-downs. After selecting a folder, its content will be offered in the main area. You can filter the listed files by **Name** using the filter above the list.

You can select a file using the **Select** (>) icon or by simply clicking the appropriate line (or tile/ thumbnail in the other view modes).

You can also perform the following actions with the listed files:

- After clicking the **View** (a) icon, the file will be opened in a new window.
- Images have also the Edit (𝒜) icon available. Clicking this icon opens the image in the built-in image editor.

Insertinage or nedia Attachemis Attachemis Insertinage or nedia Attachemis Insertinage or nedia Attachemis Insertinage or nedia	nsert Webpage Dialog								
Attachents Content Meda loraris We New folder Vew file Ust Tile Thumbnails life Corporate Site Thumbnails Life Corporate Site Thumbnails Attachents Content Mame Search CeechCities Name Search CeechCities Name Mame Search CeechCities Name Mame Man	Insert image or media								
New tolder New tolder Name Actions Attriation Attriation Attriation Attriation Attriation Attriation Attriation <th>ttachments Content Media libraries</th> <th>Web</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	ttachments Content Media libraries	Web							
Ite: Corporate Site Trou: (global libraries) Tray: Czech cities Name: Search Actions Name Actions Name Actions Name Actions Name Actio	New folder	List	Tiles	Thum	bnails				
upr: (global libraries) rary: (Zach cities) Actions Name - Type Size Modified upr: (Mod2595) Jpg 31 kB 114/2009 2zechCities Actions Name - Type Size Modified Jpg 35 kB 114/2009 33 kB 114/2009 114/2009 114/2009 2zechCities 114/2009 2zechCities 114/2009 2zechCities 114/2009 2zechCities 114/2009 2zechCities 114/2009 2zechCities 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 114/2009 <td>e: Corporate Site</td> <td>Name:</td> <td></td> <td></td> <td>Search</td> <td></td> <td></td> <td></td> <td></td>	e: Corporate Site	Name:			Search				
Signed Control Signed Cont	oup: (global libraries) 💌 rary: Czech cities 💌	Actions	Name 🔺				Туре	Size	Modified
Image: Sector Cities Image: Im		8 2 0	E IM002595				.jpg	35 kB	1/14/2009 3:37:48 P
Items per page: Centeral Link Advanced Behavior URL: // KenticoCMS_daliborp/CorporateSite/media/CzechCities/IM002595_JPG Alternate text:	zechCities	> 🗟 🦉	E IM002601				.jpg	31 kB	1/14/2009 3:38:23 F
URL: /KenticoCMS_daliborp/CorporateSite/media/CzechCities/IM002595.JPG Alternate text Width: 500 Height: 335 Border width: Border color: Vertical space: Align: (none) (none)		General Link	Advanced	Behavior					
Alternate text: Width: Height: 335 Border width: Border color: Writcal space: Vertical space: Align: (none)		URL:	/KenticoCMS_d	aliborp/Corporate	Site/media/CzechCiti	es/IM002595.JPG			
Width: 500 Height 335 Border width: Image: Color: Border color: Image: Color: Horizontal space: Image: Color: Vertical space: Image: Color: Align: (none)		Alternate text:							23
Border width: Border color: Horizontal space: Vertical space: Align: (none)		Width: Height:	500 335	8				4.3	18
Horizontal space:		Border width: Border color:						-	N. R. M.
Vertical space: Align: (none)		Horizontal space	:				iA		AL DE CONTRACTOR
Align: (none)		Vertical space:				Alle and A		MILL .	
		Align:	(none)	•				IS ILS	
Insert Can								Ins	sert Cancel

Web

From this tab, you can enter an image, audio, video or flash from the Web by entering its URL. More information on how to use this tab can be found in <u>this chapter</u>.


4.4.2.3 View modes

The following three view modes are available on the Attachments, Content and Media libraries tabs:

List



Tiles



Thumbnails

🔊 Insert Webpage Dialog		×
🧊 Insert image or media		
Attachments Content Media libraries	s Web	
New folder 🔒 New file	List Tiles Thumbnalls	0
Site: Corporate Site	Name: Search	-
Corporate Site Home Services Products Products Partners Company Blogs Perents Perents Forums Company	Desit Desit Privangess V V V <td></td>	
🗉 🔄 Special pages 🖃 🔄 Images	General Link Advanced Behavior	
🖲 😋 MyImages	URL: //KenticoCMS_daliborp/MyImages/Penguins.aspx	8
	Alternate text Width: 1024 Height 768	E
	Border Wullt. Border Kullt. Border color: Vertical space: Align: (none)	-
	insert C	ancel

4.4.2.4 Inserting images

General Link	Advanced	Behavior		
URL:	/KenticoCMS_da	liborp/MyImages/	/Koala.aspx?width=512&height=384	8
Alternate text:	Koala		ac odio. Integer eget metus. Sed portition	
Width:	512	A 📾	Aliquam erat volutpat.	
Height:	384			
Border width:	1			
Border color:	#000000	- <i>3</i>		-
Horizontal space:	2			-
Vertical space:	2			
Align:	Left	•		-

Inserting images via this dialog enables setting a number of properties of the image. If you want to insert an image from your disk in a quick way, without specifying any properties, you can use the **Quickly insert image** (Image) action as described <u>here</u>.

When inserting an image, its properties can be set on the following four tabs:

General

- · Alternate text: text displayed when the image is not loaded correctly
- Width, Height: width and height of the displayed image
 - aspect ratio can be locked (⁶), which makes the second dimension recalculated automatically when you change one dimension, while the ratio between the two dimensions is kept
 - if it is unlocked (), dimensions can be entered manually into both fields, without the ratio being kept
- you can also reload the default dimensions using the Reset size (18) icon
- · Border width: width of the border around the displayed image

184 Kentico CMS 5.5 R2 Developer's Guide

- Border color: color of the border around the image; has no effect when border width is not set
- Horizontal space: horizontal space between the image and the surrounding text
- Vertical space: vertical space between the image and the surrounding text
- Align: image alignment

Link tab

- URL: if set, the image will become a link to the resource defined by the entered URL. If set, settings on the Behavior tab are overridden!
- Target: destination where the linked resource should be displayed when the image is clicked

Advanced tab

- **ID**: identifier of the image HTML element
- Tooltip: text displayed when mouse cursor is placed over the image
- Class: image element CSS class
- Style: image element additional styles

Behavior tab

- None: image is inserted as standard image; when the image is clicked, no action is performed
- Open full size in the same window: image will become a link; when the image is clicked, its full size is displayed in the same window
- Open full size in a new window: image will become a link; when the image is clicked, its full size is displayed in a new window
- Show larger size on mouse-over: when the mouse cursor is placed over the image, the image is displayed in a "floating window" in the defined size; the image will be inserted as the **Image** inline control

6 ways how images can be inserted

1. Standard image

- Behavior tab: None
- Link tab -> URL: empty

The image is inserted as a standard image with no special behavior. No action is performed when the image is clicked or mouse-overed.

The output code looks like the following code sample:

```
<img style="width: 320px; height: 240px" alt="" src="/KenticoCMS41/MyImages/
Waterfall.aspx" />
```

2. Image with link

- Behavior tab: None
- Link tab -> URL: some URL is specified

The image functions as a link to the specified URL. When the image is clicked, user is redirected to the

URL in the same browser window.

The output code looks like the following code sample:

```
<a href="www.kentico.com"><img style="width: 320px; height: 240px" alt="" src="/
KenticoCMS41/MyImages/Waterfall.aspx" /></a>
```

3. Image with special behavior - full size in the same window

- Behavior tab: Open full size in the same window
- Link tab -> URL: empty

When the image is clicked, it is displayed in full size in the same browser window.

The output code looks like the following code sample:

```
<a target="_self" href="/KenticoCMS41/MyImages/Waterfall.aspx"><img style="width:
320px; height: 240px" alt="" src="/KenticoCMS41/MyImages/Waterfall.aspx" /></a>
```

4. Image with special behavior - full size in a new window

- Behavior tab: Open full size in a new window
- Link tab -> URL: empty

When the image is clicked, it is displayed in full size in a new browser window.

The output code looks like the following code sample:

```
<a target="_blank" href="/KenticoCMS41/MyImages/Waterfall.aspx"><img style="width: 320px; height: 240px" alt="" src="/KenticoCMS41/MyImages/Waterfall.aspx" /></a>
```

5. Image with special behavior - larger size on mouse-over

- Behavior tab: Show larger size on mouse-over; Height = xx; Width = yy
- Link tab -> URL: empty

When the image is mouse-overed, it is displayed in a new layer in a size defined on the Behavior tab as shown in the screenshot below.

In this case, the image is inserted as the **Image** inline control. The output code looks like the following code sample:

```
{^Image|(behavior)hover|(url)~/MyImages/Waterfall.aspx?width=200&height=150|
(width)200|(height)150|(mouseoverwidth)400|(mouseoverheight)300^}
```



6. Image with special behavior - larger size on mouse-over with link

- **Behavior tab**: Show larger size on mouse-over; Height = xx; Width = yy
- Link tab -> URL: some URL is specified

When the image is mouse-overed, it is displayed in a new layer in a size defined on the Behavior tab as shown in the screenshot above. Furthermore, the image is clickable and when clicked, the user gets redirected to the specified URL in the same browser window.

In this case, the image is inserted as the **Image** inline control. The output code looks like the following code sample:

{^Image|(behavior)hover|(url)~/MyImages/Waterfall.aspx? width=200&height=150|(width)200|(height)150|(mouseoverwidth)400| (mouseoverheight)300^}

4.4.2.5 Inserting flash

General	Advanced		
URL:	/KenticoCMS/Files/Cube.a	ispx?ext=.swf	8
Width:	300 🐁 🕋		
Height:	200		
Autoplay: Loop: Enable menu:			

When inserting flash, its properties can be specified on the following two tabs:

General

- Width, Height: width and height of the flash player; 300x200px is used by default
 - aspect ratio can be locked (), which makes the second dimension recalculated automatically when you change one dimension, while the ratio between the two dimensions is kept
 - if it is unlocked (), dimensions can be entered manually into both fields, without the ratio being kept
 - you can also reload the default dimensions using the **Reset size** (³) icon
- Autoplay: indicates if the video will play automatically when the player loads
- Loop: indicates if the player plays the video repeatedly in a loop
- Enables menu: indicates if flash options are available in flash context menu; flash context menu is displayed on right click of the flash player

Advanced

- Scale: defines how the flash player stretches, shrinks or resizes when the browser window is resized
- ID: identifier of the flash HTML object
- · Advisory title: text displayed when mouse cursor is placed over the flash player
- Class: flash element CSS class
- Style: flash element additional styles

Flash is inserted into the output code as the **Media** inline control. The following code sample shows what the output code looks like:

```
{^Media|(type)swf|(url)http://127.0.0.1/KenticoCMS41/Files/Cube.aspx?ext=.swf|
(width)300|(height)200^}
```

In the WYSIWYG editor, the flash is displayed only in the form of a box with the Flash logo, giving information about the size of the player:



The changes were saved.

	Main te	xt			3
lewsletter subscription	Weld	come to the Samp	le Corporate Si	te 🄶 🛛 La	atest news
First Name: .ast Name: E-mail: Subscr	This is a You car Kentico	a sample web site created with n use it as a starter kit for your CMS.	Nentico CMS for ASP.N rown web site and to learn	ET. <u>Y</u> (1/ E He ne ed imi	Dur first news 10/2008 see you can enter the summary of the wws item. You can use WYSIMYG likor to format the text, insert links and ages. The summary will be used in
Polls				ne	ews item preview
Do you like our product? Yes, I do. No, I don't. I don't know your product.	28 4	FLASH		Fe	aatured product
Vote		O	Q	-	Price: \$389.00

And this is the result on the live site:

Newsletter subscription		Latest news
First Name:	Welcome to the Sample Corporate Site	Your first news
Last Name:	This is a sample web site created with Kentico CMS for ASP.M	IET. 1/10/2008
E-mail:	You can use it as a starter kit for your own web site and to l Kentico CMS.	Here you can enter the summary of the news item. You can use WYSWYG editor to format the text, insert links and images. The summary will be used in
D-8-		news item preview
Polis Do you like our product?		Featured product
© Yes, I do. 28 © No, I don't.		
I don't know your product.		
Vote		Price: \$399.00
	Default user name and nassword	

4.4.2.6 Inserting audio/video

General				
URL:	/KenticoCMS_da	iborp/File	es/Sample_video.aspx	8
Width:	300	a 🔍		
Height:	200]		
Autoplay:				
Loop:				
Show controls:				

When inserting both audio or video, the following properties can be set:

- Width, Height: width and height of the media player; 300x200px is used by default
 - aspect ratio can be locked (⁶), which makes the second dimension recalculated automatically when you change one dimension, while the ratio between the two dimensions is kept
 - if it is unlocked (), dimensions can be entered manually into both fields, without the ratio being kept
 - you can also reload the default dimensions using the **Reset size** (¹/₈) icon
- Autoplay: indicates if playback starts automatically when the page is loaded
- Loop: indicates if playback is performed repeatedly in a loop
- Show controls: indicates if playback controls (play, stop, fast forward, ...) are displayed; in some browsers, the controls may not be displayed if the player size is too small even when this option is enabled

Audio and video is inserted to the output code as the **Media** inline control. The output code looks like the following code sample:

{^Media|(type)avi|(url)http://127.0.0.1/KenticoCMS_0713/Files/Sample_video.aspx|
(width)300|(height)200|(controls)1^}

In the WYSIWYG editor, the player is not displayed. Instead, only a box with audio/video icon is displayed, giving information about the size of the player on the live site:

		II 🕵 🔍 ‡ I 🖩 🖬 🗖 🗄 🥥 💠 🔚
Add widget Keset to defa		
Newsletter subscription First Name: Last Name: E-mail: Polls	Main text Welcome to the Sample Corporate Site This is a sample web site created with Kentico CMS for ASP.NET. You can use it as a starter kit for your own web site and to learn Kentico CMS.	Latest news Vour first news 1/10/2008 Here you can enter the summary of the news item. You can use VV/SWV/G editor to format the text, insert links and images. The summary will be used in news item nreview
Do you like our product? Yes, I do. No, I don't. O I don't know your product. Vote		Featured product

And this is how it looks on the live site:

Newsletter subscription First Name: Last Name: E-mail: Subscribe	Welcome to the Sample Corporate Site This is a sample web site created with Kentico CMS for ASP.NET. You can use it as a starter kit for your own web site and to learn Kentico CMS.	Latest news Your second news 1/15/2008 Here you can enter the summary of the news item. You can use WYSMYG editor to format the text, insert links and images. The summary will be used in
Polls Do you like our product? Ves, I do. 28 No, I don't. 4 I don't know your product. 5		Featured product
Vote		Price: \$470.00

4.4.2.7 Inserting image or media from Web

Via the Web tab, you can insert any of the file types enumerated in <u>this chapter</u> from web just by entering their URL. The generated code depends on the type of linked media and looks as the code samples mentioned in the previous three chapters.

The dialog initially looks as the following on the Web tab:

🤊 Insert Webpage Dialog	•••
http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia/Default.aspx?output=html&	content=media&documentid=/
🙀 Insert image or media	
Attachments Content Media libraries Web	
URL: http://kentico.com/App_Themes/Kentico/images/logo247x97.gif	
Media type: (select)	
	Insert Cancel
http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia 🍚 Internet Protected Mode: On	af

The general process of adding images or media from web is the following:

1. Enter the URL of the resource into the URL field.

2. Try automatic file type detection using the **Refresh** ([®]) icon. In case that the file type can not be detected, you can still choose it manually from the **Media type** drop-down list.

3. Based on the file type, properties will be loaded into the main area. The properties for particular file types are described in the <u>Inserting images</u>, <u>Inserting flash</u> and <u>Inserting audio/video</u> chapters.

4. Enter the properties and click the **Insert** button. The image or media file is inserted into the text.

4.4.3 Quickly insert image

The Quickly insert image action can be used to insert an image from disk in a quick way. It takes just the following three steps to insert an image this quick way:

1. Place the cursor in the appropriate position and click the **Quickly insert image** () icon on the WYSIWYG editor toolbar.

Source 💩	- 2 == == 2 =	
News Title:	Your first news	Â
Release Date:	1/10/2008	
News Summary:	Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.	E

2. Your browser's **Choose file** dialog opens. Locate the file on your disk and click **Open**.

🏉 Choose File to Upload				— ×
CO V Ibraries	▶ Pictures ▶ Sample	Pictures 🔹	← Search Sample	Pictures 🔎
Organize 🔻 New fold	er		E	0
☆ Favorites ■ Desktop	Pictures libra Sample Pictures	ary	Arrange	by: Folder 🔻
🐞 Downloads 🗐 Recent Places				and the second sec
😭 Libraries 📔 Documents		1 and the		Contraction .
Music Pictures	Desert	Hydrangeas	Chrysanthemum	Jellyfish
Videos	2.0		1PN	
I삎 Computer 역및 Network	Koala	Lighthouse	Penguins	Tulips
File <u>n</u>	ame: Penguins		✓ All Files (*.*)	•
			<u> </u>	Lancel

3. The image gets inserted into the text. At the same time, it is uploaded to the document as its <u>attachment</u>. No properties are specified during the insertion process, so the image is inserted in full size with no special behavior. However, you can now edit the image just as images inserted via the **Insert image or media** dialog. For more information, please refer to the <u>Editing inserted items</u> chapter.



4.4.4 Insert link

4.4.4.1 Overview

The Insert link dialog is accessible by clicking the **Insert link** (**b**) icon in the WYSIWYG editor toolbar:

```
      Image: Source
      Image: Imag
```

All links are inserted using the *<a>* tags and the following types of targets can be linked:

- Content within the CMS via the Attachments, Content and Media libraries tabs
- <u>Content anywhere on the Web</u> via the Web tab
- Anchors in documents via the Anchor tab
- Mailto links via the E-mail tab

🦻 Insert Webpage Dialog		×
http://192.168.3.146/3644_9682/CMSForm	Controls/Selectors/InsertImageOrMedia/Default.aspx?output=html&link=1&documentid=27&parentid=	=6&siteid=1&hash=8b37cc2a20479c4
📎 Insert link		
Attachments Content Media libraries	Web Anchor E-mail Target type selection	
🛶 New folder 👍 New file	List Tiles Thumbnails	0
Site: Corporate Site	Name: Search	
🖃 🕘 Corporate Site	Actions Name	Type Size Modified
Home	Your first news	News 6/17/2009 2:21:26 PM
💼 📄 Products	Your second news	News 6/8/2009 4:08:30 PM
•••• News •••• Partners		Items per page: 10 💌
😨 📄 Company		
Forums		
Events		
🕢 🔤 Images		
🕢 📄 Examples		
🕣 📹 Special pages		
	General Target Advanced	
	Protocol: URL:	
	(other) V/3644_9682/News.aspx	
	Link text: News	
		Insert Cancel
http://192.168.3.146/3644_9682/CMSFormCon	trols/Selectors/InsertImageOrMedia/Default.aspx?output=html&link=1&documer 😜 Internet Protected Mo	ode: On

General process of inserting a link

- 1. Select the text that should become a link or place the cursor to the position where the link text should be inserted.
- 2. Click the **Insert link** (**b**) icon on the WYSIWYG editor toolbar.
- 3. Choose the appropriate tab and specify where the link should be leading.
- 4. Specify link properties and click the **Insert** button.
- 5. The link gets inserted in the text.

4.4.4.2 Link properties

On the **Attachments**, **Content**, **Media libraries** and **Web** tabs, you can see the following section for settings link properties:

General	Target Advanced
Protocol:	URL:
(other) 💌	/3644_9682/News.aspx
Link text:	News

You can specify the following properties on the particular tabs:

General

- Protocol + URL: address of the linked resource
- Link text: text of the link that will appear in the text; this field is visible only when inserting link into an empty space in the text area, i.e. when no text or object is selected

Please note: On the Web tab, only the last two tabs are displayed and the general properties are displayed above them.

Target

- Target: using this drop-down list, you can define where will the link be opened
- Frame name: this option is displayed only when the Target property is set to (frame) and specified the name of the frame where the target should be displayed

Advanced

- ID: identifier of the link HTML element
- Name: name of the link HTML object
- Tooltip: text displayed when the mouse cursor is placed over the link
- Class: link element CSS class
- Style: additional link element styles

4.4.4.3 Links to content within the CMS

Links to content within the CMS can be inserted via the **Attachments**, **Content** and **Media libraries** tabs. Detailed descriptions of all possible actions that can be performed on the tabs can be found on <u>this</u> <u>page</u> of the **Inserting image or media** section.

Attachments

Via this tab, you can insert links to attachments of the current document. For more information about document attachments, please refer to the <u>Document attachments</u> chapter of this guide.

The following code sample shows what the output code looks like:

 NewsPhotol.JPG

🙋 Insert Webpage Dialog			— ———————————————————————————————————				
😰 http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia/Default.aspx?output=html&link=1&documentid=27&parentid=6&siteid=1&hash=8b3							
🔊 Insert link							
Attribute Control Media Markov Make Sound							
Accachments Concent Media libraries Web Anchor E-mail			_				
New file			0				
Name: Search							
Actions Update Name	Туре	Size	Modified				
\[\] \[\	.jpg	44 kB	4/16/2009 4:32:57 PM				
\[\] \[\	.jpg	38 kB	4/16/2009 4:33:10 PM				
\[\] \[\	.jpg	36 kB	4/16/2009 4:33:23 PM				
🔈 🗟 🗰 🕆 🦆 🕖 🛛 🔊 🔊 Penquins	.jpg	760 kB	12/23/2009 12:40:12 PM				
			ltems per page: 10 💌				
							
General Target Advanced							
(other) V3644_9682/getattachment/News/Your-first-news/NewsPhoto1.JPG.aspx							
			Insert Cancel				
http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia/Default.aspx?output=html&iamplink=1&; 😜 Internet Protected	Mode: Or	ı					

Content

Via this tab, you can insert links to any pages, documents or files within the content tree of a site. The site can be selected using the **Site** drop-down list, while its content tree will be displayed below. You can define which sites will be available and the starting alias path of the displayed content tree when defining the field in field editor, as described <u>here</u>.

The following code sample shows what the output code looks like:

Services webdesign



Media libraries

Via this tab, you can insert links to files stored within media libraries. Depending on the settings described <u>here</u>, you can select the library using the set of three drop-down lists - **Site**, **Group** and **Library** - in the top right part of the dialog.

The following code sample shows what the output code looks like:

IM002595

🙋 Insert Webpage Dialog			×
http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia/Default.aspx?output=html&link=1&documentid=27&d	p;paren	tid=6&ar	np;siteid=1&hash=8b3
📎 Insert link			
Attachments Content Media libraries Web Anchor E-mail			
			0
			V
Site: Corporate Site Name: Search			
Group: (global libraries)	Туто	Sizo	Modified
Library: Czech cities	ing	35 kB	1/14/2009 3:37:48 PM
CzechCities	.jpg	31 kB	1/14/2009 3:38:23 PM
			Hama nav navai 10
			iterns per page. To
•			
			· ·
General Target Advanced			
Protocol: URL: (other) //3644/9682/CorporateSite/media/CzechCities/IM002595.JPG	7		
Link text: IM002595			
		In	sert Cancel
http://192.168.3.146/3644_9682/CMSFormControls/Selectors/InsertImageOrMedia/Default.aspx?output=html&link=1& 😜 Internet Protected Mode	: On		h

4.4.4.4 Links to Web

On the Web tab, you can link any resource on the Web by entering its URL. The output code is generated as the **<a>** HTML element:



On this tab, you can specify the same properties as described <u>here</u>, with the difference that the content of the **General** tab is displayed above the two other tabs.

Disert Webpage Dialog	×
📎 Insert link	
Attachments Content Media libraries Web Anchor E-mail	
Protocol: URL: http:// www.kentico.com Link text: Kentico Software	0
Target Advanced	
Target: (not set)	
	Insert Cancel
http://localhost/KenticoCMS_daliborp/CMSFormControls/Selectors/Inse 🕥 Local intranet Protected Mode:	Off

4.4.4.5 Links to anchors

Via the Anchor tab, users can insert links to any anchor or any HTML element with specified ID attribute on the current page. Anchors are the <a> html elements with the **name** attribute specified. They can be inserted using the \clubsuit icon on the WYSIWYG editor toolbar. If you link to an anchor, the page will scroll to the anchor after clicking the link.

You have the following options on this tab:

- Link text: text of the link that will appear in the text; this field is visible only when inserting link into an empty space in the text area, i.e. when no text or object is selected
- Link to existing anchor with name: if selected, you can choose an anchor from the drop-down list below as the target
- Link to existing element with ID: if selected, you can choose a HTML element from the drop-down list below as the target
- Link to the following anchor: if selected, you can type in the name of the target anchor or ID of the target element manually

The output code looks like the following code sample, while the text after **#** is the name of the anchor or the value of the ID attribute:

Insert Webpage Dialog Insert Iink Attachments Content Media libraries Web Anchor Ink to existing anchor with name (rone) Ink to existing element with ID (rone) Ink to the following anchor Anchor_2 Ink to the following anchor Anchor_2 Insert Cancel	<a href="</th"><th>"#Anchoı</th><th>r_2">Secon</th><th>d chapter<th>a></th><th></th><th></th></th>	"#Anchoı	r_2">Secon	d chapter <th>a></th> <th></th> <th></th>	a>		
Insert link Attachments Content Media libraries Web Anchor E-mail Cink to existing anchor with name Innone) Cink to existing element with ID Innone) Cink to the following anchor Anchor_2 Insert Cancel Insert Media libraries Web Anchor_2 Insert Media libraries Web Anchor_2 Insert Media libraries Web Anchor_2 Insert Cancel	🤌 Insert We	bpage Dialog	9				×
Attachments Content Media libraries Web Andor E-mail Link text	lnsert	link					
Link text: Image: Cancel Image: Cancel Image: Cancel	Attachments	Content	Media libraries	Web Anchor	E-mail		
Insert Cancel	Link text:	Link to existi (none) Link to existi (none) Link to the fo Anchor_2	ing anchor with n	ame ID			8
						Inse	ert Cancel

4.4.4.6 Mailto links

Via the E-mail tab, you can insert standard "mailto" links. After clicking such a link, the new message window of the user's e-mail program (e.g. Outlook) is opened, while some details may be pre-filled based on what is specified in the following properties:

- Link text: text of the link that will appear in the text; this field is visible only when inserting link into an empty space in the text area, i.e. when no text or object is selected
- To: e-mail recipient's address; required field; multiple addresses can be entered divided by semicolons
- Cc: e-mail copy recipient's address; multiple addresses can be entered divided by semicolons
- Bcc: e-mail blind carbon copy recipient's address; multiple addresses can be entered divided by semicolons
- Subject: subject of the e-mail
- Message body: text of the e-mail

The output code looks as the following code sample:

Contact Kentico CMS Support X Insert -- Webpage Dialog 🔊 Insert link Attachments Content Media libraries Web Anchor E-mail 0 Link text: Contact Kentico CMS Support To: support@kentico.com Cc: Bcc: Subject: Message body: Insert Cancel http://localhost/KenticoCMS_daliborp/CMSFormControls/Selectors/Inse 🔍 Local intranet | Protected Mode: Off

4.4.5 Insert YouTube video

Using this dialog, video from YouTube can be easily added to a page. The dialog can be opened using the **Insert YouTube video** (¹⁶) button on the WYSIWYG editor toolbar, as you can see in the screenshot below:



Inserting YouTube video

The general process of inserting a YouTube video is the following:

- 1. Place the cursor at the appropriate position in the text area and click the **Insert YouTube video** (^{a)} icon.
- 2. The dialog opens.
- 3. Insert the URL of the YouTube video into the URL field and click the Sicon.
- The entered URL gets checked and if it is valid, default properties will be loaded and preview displayed.

- 5. Specify the video's properties according to your needs. The changes you make are reflected in the preview in the right part of the dialog.
- 6. When you are finished with the properties, click the **Insert** button.
- 7. The video is inserted into the text area.

YouTube video properties

The following properties can be specified in the dialog:

- URL: URL of the YouTube video; you can copy&paste it from your browser's address line or from the URL field on the video's page
- Allow full screen: indicates if the control to switch playback to full screen will be available in the video toolbar
- Autoplay: indicates if playback starts automatically when the page is loaded
- Loop: indicates if playback is continuously repeated in a loop
- Include related videos: indicates if related videos will be displayed when playback finishes
- Enable delayed cookies: indicates if delayed cookies should be used, read <u>here</u> for more information
- **Play in HD**: allows to play the video in HD by default; the user can switch back to normal quality by pressing the HD button while playing the video
- Default color: you can choose one of the default color combinations which will be filled in the Color 1 and Color 2 properties
- Color 1: color of the border around the player, relevant only if the Show border property is enabled
- Color 2: color of the player toolbar
- **Default size**: you can choose one of the default sizes of the video player which will be filled in the **Widht** and **Height** properties
- Width: width of the video player
- Height: height of the video player
- **Show border**: indicates if border should be shown around the player; enabling this option adds 20px to both width and height of the player

This is what the dialog window looks like when a video is loaded:

Insert You	ube Video				
					Go to YouTube
URL:	http://www.youtube	.com/watch?v=VtzdJ	IrKmUhs		8
Allow full screen: Autoplay: Loop: Include related videos: Enable delayed cookies; Play in HD:			Kentico interview	with Andy & Adrian from La	st
Default color: Color 1:	#666666	3	HTHER ASLED	A all	You Tube
Color 2: Default size:	#EFEFEF 425 x 284 480 x 295	560 x 340 640 x 385		U.UU / 1:34 agi)	
Width:	425	<u> </u>			
Height	264				
Show border:					
					Insert Cancel

In the WYSIWYG editor, the video itself is not displayed. You can only see a box with the YouTube logo in the middle to give you information about the player size:

🔄 🗵 Source 🗋 🐰 🖹 🛍 🛍 👘 👘 🎒 🕬 🖓 🚧	\langle B I U ANC ×2 x ² \\ □ □ □ □ = ≡ = =	💻 🛚 🍓 🧶 💠 🛛 📾 🖼 🚍 🔚
I 📰 🗔 🕗 🚖 🛗		
Style Format Format	🔻 Size 💽 🔽 🌆 🗸 🦾 🖉	
Add widget Reset to default		
	Main text	
Newsletter subscription First Name: Last Name:	Welcome to the Sample Corporate Site This is a sample web site created with Kentico CMS for ASP.NET. You can use it as a starter kit for your own web site and to learn Kentico CMS.	Latest news <u>Your first news</u> 1/10/2008
E-mail: Subscribe		news fem. You can enter the summary of the news fem. You can use WVSWVG editor to format the text, insert links and images. The summary will be used in news item preview
Do you like our product? Yes, I do. No., I don't. I don't know your product. 5		Featured product
Vote	d <u></u>	Price: \$389.00
		 Construction and the second sec

YouTube video is generated as the **YouTubeVideo inline control**, as you can see in the code sample below:

{^YouTubeVideo|(url)http://www.youtube.com/watch?v=VtzdJrKmUhs|(width)320|(height)
198|(fs)true|(autoplay)false|(loop)false|(rel)true|(cookies)false|(border)false|
(color1)#3A3A3A|(color2)#999999^}

On the live site, the video is displayed in the player:

Newsletter subscription	Welsons to the Osmarla Comparety Oite	Latest news
First Name:	welcome to the Sample Corporate Site	Your second news
Last Name:	This is a sample web site created with Kentico CMS for ASP.NET.	1/15/2008
E-mail: Subscribe	You can use it as a starter kit for your own web site and to learn Kentico CMS.	Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and
	Kentico interview with Andy & Adrian from L	images. The summary will be used in news item preview
Polls		
Do you like our product?		Featured product
© Yes, I do 28		
© No, I don't 4		
I don't know your product.		and a second sec
Vote		Price: \$399.00

Default user name and password

4.4.6 Editing inserted items

Properties of the images, audio, video, flash, links and YouTube video that are already inserted in the WYSIWYG editor can be edited. The same dialog that was displayed when you inserted the items can be opened again the following three ways:

1. Double-click the item



2. Right-click the item and choose Properties from the context menu



3. Select the item and click the appropriate button in the WYSIWYG editor toolbar



4.4.7 Copy & Paste from Microsoft Word

When, copying text from Microsoft Word, the text is encapsulated with lots of unnecessary tags that may break your web page design. Thus, the editor allows you to clean the pasted text so that it contains only basic formatting.

Select the text in Microsoft Word document and copy it to the clipboard (CTRL+C):



Place the cursor into the text in Kentico CMS editor and click Paste from Word. The **Paste from Word** dialog opens. Paste the text into the box using **CTRL+V** and check both boxes:



Click **OK** to paste the text. The pasted text looks like this:

Services > Web Development

Web Development Services	
Running Kentico CMS in a Medium Trust Environment	
This document describes the procedure to run the Kentico CMS in the medium trust level environment and the steps	
required to configure the system for it. It also describes the Precompilation/Deployment procedure and requirements.	=
Medium trust level	
Madium trust level is often used on observe but the providers to displicut the applications to presses extein resources	
wedium trust level is often used on shared servers by the providers to disallow the applications to access certain resources that could be harmful to other web sites running on the server. Since version 2.2, Kentico CMS can be used with default	
medium trust policy provided with the Microsoft .NET Framework. To run the system with medium trust, you need to follow	
certain rules. There are two main components that require higher than medium trust and must be considered with this trust	Ŧ

As you can see, the style follows your website design. However, since Word doesn't provide appropriate tagging information, some formatting may not be preserved and you may need to apply the design manually - e.g. the header in the sample text.

Click Save to save the changes.

4.4.8 Defining custom toolbars

The toolbar of the WYSIWYG editor can be customized so that the content editors cannot use all the formatting features. It helps to keep the website design consistent and clean.

Defining the toolbar sets

You can define toolbar sets in <web project>\CMSAdminControls\FCKeditor\fckconfig.js.

You can define your own toolbar set by adding a command like this to the fckconfig.js file:

```
FCKConfig.ToolbarSets["Default"] = [
       ['Source', '-', 'Preview'],
       ['Cut', 'Copy', 'Paste', 'PasteText', 'PasteWord', '-', 'Print'],
       ['Undo', 'Redo', '-', 'Find', 'Replace', '-', 'SelectAll', 'RemoveFormat'],
       ['Bold', 'Italic', 'Underline', 'StrikeThrough', '-', 'Subscript',
'Superscript'],
       ['OrderedList', 'UnorderedList', '-', 'Outdent', 'Indent'/*, 'Blockquote'*/
],
       ['JustifyLeft', 'JustifyCenter', 'JustifyRight', 'JustifyFull'],
       ['InsertLink', 'Unlink', 'Anchor'],
       ['InsertImageOrMedia', 'QuicklyInsertImage', 'Table', 'Rule', 'Smiley',
'SpecialChar', 'PageBreak'],
      ['InsertBizForms', '-', 'InsertInlineControls', '-', 'InsertPolls', '-',
'InsertRating', '-', 'InsertYouTubeVideo'],
      11,
      1/1,
       ['Style', 'FontFormat', 'FontName', 'FontSize'],
      ['TextColor', 'BGColor'],
      //['AutoSave'],
       ['FitWindow', 'ShowBlocks']
                                      // No comma for the last row.
1;
```

As you can see, the toolbar set definition consists of several arrays, such as ['source','-','Preview']. This array displays a group of two icons: Source and Preview, separated with a vertical line (defined by the '-' string).

You can insert a line break between the icon groups using the '/' string.

The code example above is the default toolbar set and contains all possible icons. You can create your custom toolbar sets by modifying it or using the icon names from it.

Save the changes you made to the **fckconfig.js**. Then, you need to clear the browser cache so that the file is updated in your browser.



Then, you need to configure the page or document type so that it uses your new toolbar as described in the next paragraph.

Assigning the toolbar set to the page

If you want to assign the toolbar set to some **page with editable regions** (edited on the Page tab), you need to configure the web parts of type "Editable region" on the page template and set their Toolbar set property to the name of your toolbar set (in the example above, it's Default).

Toolbar set used for structured documents

If you want to modify the toolbar set used for **structured documents** (edited on the Form tab), you need to set the value of the Toolbar set property of the custom field. If you share the toolbar between multiple fields, the first field's toolbar set will be used.



Standard toolbar sets

Kentico CMS uses some standard toolbar sets that are used by Kentico CMS modules:

- Default used for structured documents
- BizForm used for BizForm forms
- Forum used for the WYSIWYG editor in forums (if enabled)

4.4.9 Defining styles

The WYSIWYG editor allows you to apply a chosen style to the text using the Style drop-down list in the editor toolbar:



The styles offered in the list are defined in file <web project>\CMSAdminControls\FCKeditor\fckstyles.xml. The structure of the file looks like this:

```
<Styles>

<Style name="Image on Left" element="img">

<Attribute name="style" value="padding: 5px; margin-right: 5px" />

<Attribute name="border" value="2" />

<Attribute name="align" value="left" />

</style>

<Style name="Image on Right" element="img">

<Attribute name="style" value="padding: 5px; margin-left: 5px" />

<Attribute name="style" value="2" />

<Attribute name="align" value="right" />

</style>

<Style name="Bold text" element="span">

<Attribute name="style" value="font-weight: bold;" />
```

```
</Style>
<Style name="Red text" element="span">
<Attribute name="style" value="color: red;" />
</Style>
<Style name="Large text" element="span">
<Attribute name="style" value="font-size: large;" />
</Style>
</Style>
```

Every style has some name and element it is used for. The styles are offered in the drop-down list based on the current position of the cursor. If you select some image, the styles for element img will be offered. If you select some text, the styles for element **span** or **div** will be offered.

If you choose to apply e.g. the **Red text** style to the following HTML code:

We provide web development services.

the result will be this:

We provide web development services.

As you can see, the text was encapsulated with a **SPAN** element with attribute **STYLE** set to **color**: **red**.

You may want to apply CSS class names instead of hard-coded styles. In this case, your style definition will look like this:

```
<Style name="Green text" element="div">
<Attribute name="class" value="GreenText" />
</Style>
```

and the result will be:

<div class="GreenText">We provide web development services.</div>

In your CSS stylesheet, you need to define the GreenText class name like this:

.GreenText { color: green; }

Changes to the fckstyles.xml file require clearing browser cache!



4.4.10 Dialogs configuration

When defining a new **HTML area (Formatted Text)** field, you can display advanced dialog settings by clicking the **Field advanced settings: Configure** link.

The following properties can be set, while they are organized in categories related to the particular tabs in the dialogs:

Content tab

- Display tab: indicates if the Content tab is displayed in the Insert image or media and Insert link dialogs
- Available sites: defines which sites' content trees will be available in the dialogs
- Starting path: alias path from where the content tree should be displayed; if not relevant for the selected site, its whole content tree will be displayed

Media tab

- **Display tab**: indicates if the Media libraries tab should be displayed in the **Insert image or media** and **Insert link** dialogs
- Available sites: defines which sites can the media libraries be selected from
- Available site libraries: defines which media libraries from the above selected site can be used
- Available site groups: defines which groups can be the media libraries selected from
- Available group libraries: defines which group libraries can be selected
- Starting path: path within the library from where the content should be offered; if not relevant for the selected library, the whole library will be offered

<u>Other tabs</u>

- Display Attachments tab: indicates if the Attachments tab should be displayed in the Insert image or media and Insert link dialogs
- Display E-mail tab: indicates if the E-mail tab should be displayed in the Insert link dialog
- Display Anchor tab: indicates if the Anchor tab should be displayed in the Insert link dialog
- **Display Web tab**: indicates if the Web tab should be displayed in the **Insert image or media** and **Insert link** dialogs

Automatic image resize on upload

- (do not resize): if selected, images will not be resized and will be pasted in full size
- (use site settings): if selected, images will be resized according to settings made in Site Manager -> Settings -> Files
- (use custom settings): if selected, the settings specified in the three properties below will be used; the settings have the same effects as described <u>here</u>

Some of the properties have the **(current)** values (e.g. current site, current library, ...). This means that the current value from the page's context will be taken - e.g. if you are on a page belonging to some

group and have the **Available group libraries** set to **(current group)**, the group to which the page belongs will be used.



Setup on last insertion

The dialog remembers the selection setup on last insertion for each user. This means that when a user opens the **Insert image or media** or **Insert link** dialog, all of the following are in the same state as on last insertion:

- selected tab
- selected view mode

Content tab only:

- selected site
- selected path in the content tree

Media libraries tab only

- · selected site
- selected group
- selected media library
- selected path within the library

Dialogs-related settings

The following settings in the categories under **Site Manager -> Settings** are related to WYSIWYG editor dialogs:

• URLs -> Use permanent URLs - if enabled, URLs of documents and document attachments will be

generated in permanent format; if disabled, friendly URLs will be used

- Media libraries -> Use permanent URLs indicates if links in permanent format should be used for files stored in media libraries
- Files -> Automatic image resize on upload read here for more information on image resizing

4.4.11 Dialogs security

The following tables show which permissions are required to perform the listed actions on particular tabs.

Media libraries tab

In this table, you can see that three types of permissions may enable users to perform the required action:

<u>Media library module permissions</u> and <u>Groups module permissions</u> are those permissions that can be set in the permission matrices in Site Manager -> Administration -> Permissions.

<u>Media library permissions</u> are those permissions that can be set on the Security tab when editing a particular media library in CMS Desk -> Tools -> Media libraries.

Action/Permission	Media library module permission s		Groups module permissions		Media library permissions							
		Mono		Mono			File			Folde	r	See
	Read	ge	Read	ge		Creat e	Delet e	Modif y	Creat e	Delet e	Modify	conte nt
Global administrator in												
group/global media library												
Creating new media file												
Creating new media folder				No r	ermis	sions a	are rea	uired				
See media library content in dialogs												
Group admin in group media library												
Creating new media file												
Creating new media folder	No pormissions are required											
See media library content in dialogs						310113 0	are req	uncu				
Any other user in global media library												
Creating new media file		Х			or	Х						
Creating new media folder		Х			or				Х			
See media library content in dialogs	X											X
Any other user in group media library												
Creating new media file				Х	or	Х						

Creating new media folder			Х	or		Х		
See media library content		Х		or				Х
in dialogs								

Attachments tab - document already exists

To perform the following actions on the Attachments tab, the user needs to have the appropriate <u>document permissions</u> for the particular document.

	Document persmissions							
Action/Permission	Poad	Create	Modify	Delete				
	Redu	Manage	wouny	Delete				
Creating new attachment (New file)			Х					
Replacing source file of the attachment (Update)			Х					
Deleting attachment (Delete)			Х					
Moving attachment up or down (Move up/Move down)			Х					
See attachments of the specified document	Х							

Attachments tab - document doesn't exist yet

To perform the following actions on the Attachments tab, the user needs to have the appropriate <u>document permissions</u> for the particular document.

Action/Permission		Document persmissions				
		Create	Modify	Doloto		
	Read	Manage	would	Delete		
Creating new attachment		Х				
Replacing attachment		Х				
Deleting attachment		Х				
Moving attachment up or down		Х				
See attachments of the specified document		Х				

Content tab

To perform the following actions on the Content tab, the user needs to have the appropriate <u>document</u> <u>permissions</u> and the listed document types (CMS.File and CMS.Folder) need to be allowed to be created in the location.

The last two columns indicate if **cms.file** and **cms.folder** document types are **allowed child types** of the document under which it should be created. This can be set separately for each document type in Site Manager -> Development -> Document types -> edit the particular document type -> Child types tab.

	Document persmissions					
Action/Permission	Browse tree	Create	Modify	Delete	CMS. File is allowed	CMS. Folder is allowed

		Manage			
Creating new cms.file		Х		Х	
Creating new folder		Х			Х
See child documents of the specified document	Х				

4.5 **Document properties**

4.5.1 Overview

You can edit document properties in **CMS Desk -> Content**, after you click the document and click the **Properties** tab in the **Edit** mode:

🖃 🌍 Corporate Site	Page Design f	Form Properties	
	General		
🖃 📄 Services	General	Save	
Web Design	URLS		
Web Development	Template		
Network Administration	Metadata	Design	
吏 📄 Products	Categories	CSS stylesheat	(default) 👻 Edit
🗼 📄 News	Menu	COO StyleSheet.	Inherit
💼 📄 Partners	Workflow		
💼 📄 Company		Other properties	
🗉 📄 Blogs	versions	Document name:	Web Design
🔒 📄 Forums	Related docs	Type:	Page (menu item)
Events	Linked docs	Created by:	Global Administrator
🗊 📄 Images	Security	Created:	10/30/2007 8:54:33 AM
🔒 📄 Wiki	Attachments	Last modified by:	Global Administrator
🗼 📄 Examples	-	Last modified:	7/7/2009 1:53:36 PM
🗉 🔄 Special pages			****
🖃 🔄 Images		Rating:	N/A
🖃 🔄 MyImages		Node ID:	29
		Node GUID:	1caadf28-b617-473a-ab18-0e83051210c7
		Alias path:	/Services/Web-design
		Culture:	English - United States
		Name path:	/Services/Web Design
		Live URL:	/KenticoCMS_daliborp/Services/Web-design.aspx
		Published:	Yes
		Owner	
		Owner:	Global Administrator Select Clear

4.5.2 General

General tab fields:

CSS Stylesheet	The CSS stylesheet used for the particular page. You can choose some particular stylesheet or use the default site stylesheet. You can also choose to inherit the stylesheet from the parent document.
Owner	Document owner is the user responsible for its editing. This feature doesn't imply any special permissions for the owner, but it allows for easier orientation in documents. The owner can see all their documents in My Desk -> My Documents section. The owner is by default set to the user who created the document. The owner can be changed only by users with "Modify permissions" permission

Owned by group	This field shows which group is the owner of the document (this is particularly the case of group pages). This field is mainly informative, but in some special situations, you might find it useful to change the group that the document belongs to by using the Change button.
Rating	Rating of the document's content posted evaluated by site visitors; you can reset the value using the Reset button; see the <u>Modules -> Content rating</u> chapter for more details.
Cache	This option allows you to specify if the page content should be cached in memory (full-page caching). You can choose to inherit the settings from the parent document or to set a different value or to disable full-page caching.
Cache minutes	Determines how long should the content of this page be cached if caching is enabled.

4.5.3 URLs

Г

URLs tab fields:

Document alias	 The unique name of the document in the given section of the website. This name doesn't change when you modify the document name and it's used: 1. To define the AliasPath, which is the unique path to the document. The developers typically use the AliasPath in the Path property of the web parts and controls. 2. For the URL of the document. The URL of the document is like www.kentico.com/products/cms.aspx where /products/cms is the alias path of the document. Forbidden characters
	character (by default, it's dash -). You can specify the forbidden characters and the replacement character in Site Manager -> Settings -> URLs, in values "Forbidden characters replacement" and "Forbidden URL characters".
Document URL path	If you want to use a specific URL for a given document that doesn't depend on the document AliasPath, you need to check the box Use custom URL path and enter the value, such as: /cms-for-asp-net The URL path must always start with /. Then, the document is accessible through two URLs: www.kentico.com/products/cms.aspx
	www.kentico.com/cms-for-asp-net.aspx The URL path is useful if you need to define a short URL of some page or if you need to optimize the URL for search engines.
	The URL path is, unlike the alias path, culture-specific. It means if you use URL paths: /product (for English version) /produkt (for German version)

	then when the user comes to /produkt.aspx, the language of the website is automatically switched to German.
URL extensions	Default URL extensions are defined in Site Manager -> Settings -> URLs -> Friendly URL extensions. If you check the Use custom URL extensions check box, you can define other extensions under which the document can be accessed.
	In case that the option is disabled, physical file extensions can also be used for cms.file documents.
	Multiple extensions can be entered divided by a semicolon. If you enter a semicolon without any extension, extensionless URLs will be allowed.
	Example: entering '.htm;;' for a document with URL path set to '/test' will cause that both <site path="">/test.htm and <site path="">/test will lead to the same page.</site></site>
	For this to work, you also need to to set up your IIS for handling the 404 and 405 errors the same way as described <u>here</u> .
Track campaign	A web analytics campaign with the same name as entered here will be created on the first access to the page through the entered URL.
Document aliases	This section displays a list of other document aliases under which the document can be accessed. One document can have an unlimited number of aliases. You can edit (\checkmark) and delete (\thickapprox) aliases in the list or create a new alias using the ' Add new alias ' link.

4.5.4 Template

In the Template dialog, you can specify the page template that will be used for the current document.

General properties

The page can be based on some specified page template or inherit the page template from the parent document.

Template	Current template name. Different template can be chosen after clicking the Select button.
Save as new template	Saves the current template appearance as a new re-usable page template.
Inherit template	Indicates if page template should be inherited from the parent page.
Clone as ad-hoc template	Creates a new ad-hoc template based on the current page template. In many cases, you may want to re-use the ad-hoc page template for other pages. In this case, you need to save the ad-hoc template as a new re-usable template.
Edit template properties	Displays a new window with the template properties and settings.

Inherit content

This option allows you (developer) specify if and how the content should be inherited from the parent page(s). It overrides the content inheritance settings of the page template.

Inherit all	Document inherits all the content from all parent pages.
Do not inherit any content	Document does not inherit any content from the parent page.
Inherit only master page	Document inherits content from the first master page above the page in the content tree, i.e. if there are more master pages, it inherits only from the one which is the closest above.
Select inherited levels	Using this option, you can specify from which particular levels should the content be inherited.

4.5.5 Metadata

Here your can manage the information describing the page. You can choose to inherit the values from the parent document or enter document-specific values.

Page title	Title of the browser window (<title> element inner text).</title>
Page description	Page description used for meta tags of the page and for searching content of the website.
Page keywords	Keywords used for meta tags of the page and for searching content of the website.
Page tag group	Tag group that will be used for tagging this document using the Page tags parameter below.
Page tags	Enter the tags that you want to tag the document with. When entering more than one tag into the Page tags field, the tags should be separated with a comma or a blank space. A combination of both in a single entry is also valid. The following examples are all valid entries for adding three tags - <i>tag1</i> , <i>tag2</i> and <i>tag3</i> : <i>tag1</i> , <i>tag2</i> , <i>tag3</i> <i>tag1</i> , <i>tag2 tag3</i> In case that you are entering a tag consisting of more than one word, you should enclose it within quotation marks. Multiple long tags can also be entered and can be also divided by both blank spaces and commas: <i>"long tag1"</i> , <i>tag, "long tag2"</i> Quotation marks can also be used for tags containing special characters that couldn't be used otherwise: <i>"tag@1", "tag#2", "long, strange: tag@#\$"</i>
The page tags field has also an insinuation function implemented. This functions	
--	
offers you tags from the selected tag group while you are writing.	

Global Settings

You can configure prefix of the page title, description and keywords for all documents on the website using the Site Manager -> Settings -> website dialog. Here you can configure the prefixes and also the standard format of the page title.

The default page title format is: {%prefix%} - {%pagetitle_orelse_name%}

It means that the format consists of the prefix followed by the page title value. If the page title value is not set, the document name is used.

Macro expressions in metadata

You can use macros in format {%ColumnName%} to insert the values of the current document into the title or other metadata fields. See <u>Appendix A - Macro expressions</u> for a list of possible macro expressions.

4.5.6 Categories

Categories are topic-related groups of documents. On this page, you can assign the selected document to an unlimited number of categories. There are two lists of categories:

My categories - this list shows the current user's custom categories. Each of the categories can be edited (
 A) or deleted (
 A). By clicking the New category link, you can create your own category. The following details will be required:

Display name	Display name of the category.
Description	Text describing the category.

 Global categories - this list shows global categories that can be defined in Site Manager -> Development -> Categories. These categories can only be edited (2) from this page.

In case that you want to assign the selected document to some of the categories, check the category's **Select** check-box in the list and click **Save**.

See the Modules -> Categories chapter for more details.

4.5.7 Menu

This dialog allows you to specify how the current document is displayed in the navigation.

General properties

Menu caption The name of the document as it's displayed in navigation. It may be diffe	rent to
--	---------

	the document name. If no value is entered, the document name is used.
	Indicates if the document should be displayed in the navigation (in the menus).
	Please note: the document is displayed in the navigation if all of the following conditions are met:
Show in navigation	 The Show in navigation box is checked. The document is published.
	3. The type of the document matches the document types configured in the appropriate navigation control (web part) - by default, only Page (menu item) documents are displayed in navigation.
	4. If you turn on the Check permissions property of the menu control, the user must be allowed to read the given document so that it appears in the navigation controls.
	Indicates if the document should be displayed by the Site map web part (in the dynamic site map).
	Please note: the document is displayed in the navigation if all of the following conditions are met:
Show in site map	 The Show in site map box is checked. The document is published.
	3. The type of the document matches the document types configured in the Site map control (web part) - by default, only Page (menu item) documents are displayed in pavigation
	 4. If you turn on the Check permissions property of the menu control, the user must be allowed to read the given document so that it appears in the navigation controls.

Menu action

You can choose from the following menu item behavior options:

Standard behavior	The menu item redirects the user to the page as expected.
Inactive menu item.	The menu item click doesn't raise any action - the item is disabled. This option is useful if you need to create a menu item for the main section in the drop-down menu that cannot be clicked, but the sub-items can be clicked.
Javascript command	If you enter some JavaScript command, it will be run when this menu item is clicked. Example: <i>alert('hello');return false</i> ;
URL redirection	The user is redirected to the target location when the menu item of this document is clicked. Example: http://www.domain.com or ~/products.aspx

Menu item design properties

The menu item design properties are available in three alternatives:

• standard design

- mouse-over design when you mouse-over the menu item
- highlighted design style of the selected document

These values override the settings of the menu control (web part) and the CSS styles defined in the CSS stylesheet.

Please note: some of the following properties may not be applied to the menu control depending on the menu control you are using.

Menu item style	Style definition of the menu item. Values can be entered the same way as when defining a CSS class in a stylesheet. Sample value: color: orange; font-size: 140%
Menu item CSS class	CSS class defined in the website's stylesheet. Sample value: <i>h1</i>
Menu item left image	Image that will be displayed next to the menu caption on the left side. Sample values as below.
Menu item image	Image that will be displayed in the menu instead of the menu caption. You can enter either an absolute URL or a relative path in the content tree. <u>Sample values</u> : <i>http://www.domain.com/image.gif</i> ~/Images-(1)/icon.aspx
Menu item right image	Image that will be displayed next to the menu caption on the right side. Sample values as above.

4.5.8 Workflow

On this tab, you can approve or reject document if it uses **workflow** and you're authorized to approve/ reject given document in the given workflow step. See the <u>Workflow and versioning</u> chapter for more details.

Approve section

- **Comment** you can add a comment which will be added to the e-mail message to the editor whose work you are approving
- Send e-mail if the box is checked, a message can be sent to the editor whose work is currently being approved; if not, no message is sent to the editor

Workflow steps

This table displays the workflow steps of the current document's workflow, while pointing out the current step

Workflow history

This list displays the current document's workflow steps history.

4.5.9 Versions

On this tab, you can view the previous versions of the document if it uses a workflow. You can also roll back to a previous version of the document by clicking the icon, delete (**X**) the older versions or

destroy the whole document history.

When you click on the 🗟 icon, you can preview the particular document version.

See chapter Workflow and versioning for more details.

4.5.10 Related docs

This dialog allows you to specify documents that are related to the selected document. Click (4) Add related document.

Now you can:

- · select the related document using the Select button
- switch the sides of the relationship
- select the type of the relationship

Page	Design	Form Properties		(0
General		Related documents Ac	Id related document		
URLs					
Template		Laft-sida documant	Polationship name	Pight-side document	
Metadata		Lert side document		Right side document	
Categories		Web Design	is related to	 /Products/Cell-phones 	
Menu			Switch sides	Select document	
Workflow					
Versions				ОК	
Related do	CS				
Linked docs	s				
Security					
Attachmen	its				

The related documents need to be displayed by a control (web part) that is configured for displaying related documents. If you're a developer, please see the **Kentico CMS Web parts and Controls reference -> Displaying related documents** for more details.

The relationship names need to be defined in **Site Manager -> Development -> Relationship names**. Only relationship names enabled for the current website are available in the drop-down list.

4.5.11 Linked docs

This dialog displays the linked documents (see <u>Creating a linked document</u> for explanation of the concept of linked documents).

You can delete the linked documents using the **Delete** (**X**) icon or navigate to other linked documents or to the original document by clicking the link:

Page	Design	Form	Properties			(
General						0
URLs						
Template						
Metadata		T	he documer	nt is linked at the following places of the web site structure:		
Categories	s					
Menu			Actions	Document name		Site
Workflow			×	/Services/Network-administration/Web-design		Corporate Site
Versions				/Services/Web-design	(original)	Corporate Site
Related do	ocs		×	/Services/Web-development/Web-design		Corporate Site
Linked doo	s					
Security						
Attachmer	nts					

4.5.12 Security

This dialog is divided into two independent sections - Permissions and Access

Permissions

Here you can specify the document-level permissions for the given document. Please see the Authorization (permissions) chapter for more details.



Local and global permissions

Please remember that the local permissions are combined with global permissions defined for roles in the **CMS Desk -> Administration -> Permissions** dialog as described in the <u>Authorization (permissions)</u> chapter.

Access

Here you can configure if the page is accessible by public (anonymous) visitors or if it's only available to users who sign in with their user name and password. If you choose the option **Inherits**, the value is inherited from the parent document.

Please read the Secured website areas chapter for more details.

You can also specify if the give page or website section **requires SSL** (HTTPS) protocol. If you set it to Yes, the CMS automatically redirects the user to the URL with http<u>s</u>:// protocol.

Requires authentication

- Yes authentication is required to access the page
- No authentication is not required to access the page
- Inherits value of the setting is required from the parent page

Requires SSL

- Yes users trying to access the page will be redirected to the HTTPS URL of the page
- No users trying to access the page will access the page via the protocol from that they are comming (i.e. they will not be explicitly redirected to the secured URL, but if they are coming from a secured URL, they will access the page via secured URL)
- Inherits settings of the parent page will be used
- Never users trying to access the page will be explicitly redirected to the non-secured version of the page

4.5.13 Attachments

On this tab, files can be attached to the document.

On this page, you can see a list of the currently selected document's unsorted attachments. Grouped attachments can be added to the document on the Form tab in case that the appropriate field(s) are defined for the particular document type.

You can upload new attachment using the **New attachment** (**b**) link. You can also perform the following actions with the attachments in the list:

- Using the **Delete** (**X**) icon, you can remove the attachment from the document.
- Using the Move up (¹) and Move down ([↓]) icons, you can re-order the attachments. The order is stored in the AttachmentOrder property of each attachment. You can enter AttachmentOrder into the ORDER BY expression property of a displaying web part to have the attachments ordered accordingly.

Please note

The order of attachments is **not versioned** with documents' workflow. This means that if you change the order of attachments in one version of a document, the order is changed in all other versions too.

- Images have also the Edit () icon available. This icon opens the image in the built-in image editor.
- Using the **Update** (1) icon, you can replace the original attachment with a new one.
- After clicking an attachment's name, the attachment will be opened.

For more information on the Attachments module, please refer to the <u>Document attachments</u> chapter of this guide.

4.5.14 Languages

This tab is displayed only only for multilingual sites with Translation management enabled. See the <u>Multilingual and international support -> Translation management</u> chapter for more details.

On this tab, you can view the language versions of the selected document. The language versions can have the following statuses:

The colors indicate the following translation statuses:

• **Translated** - the document is translated and up-to-date

- Outdated the document is translated but outdated, which means that the default language version has been modified (or published when using workflow) more recently than the translated version
- Not available the document's version in the language does not exist

By clicking the **Edit culture version** (\checkmark) icon, you can be redirected to the **Edit -> Page** mode of the selected culture version. By clicking the **Add new culture version** (\square) icon of a not-available version, you can proceed to creating the new culture version of the document.

4.6 File management

4.6.1 File management overview

Kentico CMS allows you to upload files (such as GIF, JPG, SWF, PDF, XLS, DOC, etc.) to the Kentico CMS database or file system and manage them as any other content.

File management approaches

There are four types of media files from the file management perspective:

• **CMS.File documents** - these files are uploaded by the content editors as new *CMS.File* documents into the content tree. You will typically use this type for files that are used as part of unstructured documents, such as document links or images inserted into editable regions of pages. It is advisable to have files stored within folders (*CMS.Folder* document type). You can also use the <u>File import</u> module when uploading multiple files. The <u>Document library</u> module allows convenient management of CMS.File documents on the live site.

🗉 🕑 Corporate Site
🗉 📄 Services
🕣 📄 Products
🕀 📄 News
🕣 📄 Partners
🕕 📄 Company
🗉 📄 Blogs
🕕 📄 Forums
🗉 📄 Events
🗉 📄 Images
🗉 📄 Wiki
🕕 📄 Examples
😑 🔄 Files
🖳 📄 people
people 2
🕣 헼 Special pages
🕣 📹 Images
🕣 헼 MyImages

• **Document attachments** - these files are stored as a part of a structured document and their life cycle is also bound with the document (including workflow and versioning). You can have an unlimited number of files attached to a document. A detailed description of the whole concept and examples of typical usage can be found in the <u>Document attachments</u> sub-chapter.

224 Kentico CMS 5.5 R2 Developer's Guide

- Media Libraries the Media Libraries module allows storage of large amounts of files, while large file sizes are supported; the whole module and its typical usage is described in <u>Modules -> Media</u> <u>libraries</u>.
- Unmanaged files these files are part of the website theme and they should be stored in the <web project>\app_themes\<theme>\images folder on the disk. They usually include images and Flash animations used throughout the site. These files are not managed by the CMS system.

For performance optimization tips related to file management, please refer to the <u>Development -></u> <u>Caching and performance -> File management and performance</u> chapter of this guide.

4.6.2 Document attachments

4.6.2.1 Overview

Document Attachments are a concept of attaching files to documents in Kentico CMS. This concept greatly simplifies the way you work with files. Each document can have any number of attached files, which is a great step forward compared to the previous use of the <u>File field</u>, which allowed only one uploaded file per one defined File field.

Attachments are directly bound to a document's life cycle. So if a document gets published, its attachments get published too. If you delete a document, its attachments will also be deleted.

You can find a live example of document attachments on the sample **Corporate Site**. If you enter the **News** section and display some of the news items, you can see the images at the bottom of the page, as highlighted in the screenshot below. These are the attachments of the news document displayed by the **Attachment image gallery** web part.



News > Your second news

Your second news

1/15/2008



Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.

This is the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image.



RSS

There are two types of attachments:

- <u>Unsorted</u> added via the Properties -> Attachments tab; using this approach, you can easily add attachments to any document; all attachments added this way are taken as **one group** and displayed together using the web parts
- <u>Grouped</u> added by defining a 'Document attachments' field for a document type and then uploading a file on a document's **Form** tab; for each Document attachments field, you can have an unlimited number of files attached; you can also define more fields of this type to have several groups of attachments which can be displayed separately on the live site
- File field another type of field that can be used for file upload via the Form tab; the difference from Grouped attachments is that only one file can be uploaded into one File field

The attachments can be displayed with the document using one of the following web parts:

- Attachment image gallery using the default transformation, the web part displays thumbnails of document's image attachments; after clicking a thumbnail, lightbox will open, displaying the attachment in a full size; for non-image attachments, file type icon will be displayed instead, while after clicking it, users are able to download the file; of course, you can modify this behaviour by defining your own transformation
- **Document attachments** displays a list of document's attachments; after clicking an attachment, it is opened in a new window or offered for download in case that it is not an image
- Attachments data source data source web part for providing attachments to a connected displaying web part; see also <u>Using DataSource web parts</u>

More information about the web parts can be found in this chapter.

You can also display document's unsorted attachments using the following two inline controls that can be added via the **Editable text** web part:

- Attachment image gallery displays the document's unsorted attachments' thumbnails; after clicking the thumbnail, the attachment will be displayed in a lightbox
- **Document attachments** displays the document's unsorted attachments; after clicking the thumbnail, image attachment will be displayed on a new page and non-image attachments will be offered for download

More information about the inline controls can be found in the Available inline controls chapter.

Settings which can be configured in **Site Manager -> Settings -> Files** are applied to document attachments. You can learn about available settings in the <u>Files-related settings</u> chapter.

4.6.2.2 Example: Unsorted attachments

In the following example, you will learn how to add attachments to a document via the **Properties -> Attachments** tab and display them on the live site. We will use the **Events** section of the sample **Corporate Site**. First, we will upload the attachments to some of the events in the section. Then we will add the **Attachments image gallery** web part to the **Events** page, which will display the attachments for each displayed event.

1. Adding attachments to a document this way is quite simple. First, you need to select a document from the content tree and switch to its **Properties -> Attachments** tab.

2. On the tab, click the **New attachment** () link. The familiar **Choose file** dialog will be displayed. Choose any file from your local drive and click the **Open** button.

<u>Please note</u>: The mouse pointer doesn't change when you hover the **New attachment** () link. This is by design and you needn't be worried about it.



3. Repeat the same procedure so that you have a few files attached to at least one document. Preferably, include some images among them. The document's attachments tab should look similarly to the screenshot below after the attachments' upload. Note that if you hover an image in the list, its thumbnail is displayed as in the screenshot.

In the list of attachments, you can do several things with each attachment:

- Using the **Delete** (X) icon, you can remove the attachment from the document.
- Using the Move up ([↑]) and Move down (↓) icons, you can re-order the attachments. The order is stored in the AttachmentOrder property of each attachment. You can enter AttachmentOrder into the ORDER BY expression property of a displaying web part to have the attachments ordered accordingly.

Please note

The order of attachments is **not versioned** with documents' workflow. This means that if you change the order of attachments in one version of a document, the order is changed in all other versions too.

- Images have also the Edit (
) icon available. This icon opens the image in the built-in image editor.
- Using the **Update** (1) icon, you can replace the original attachment with a new one.

Kentico CMS Desk Content My des	ik Tools Administra	tion		Switch to Site Manager Site: Corporate S	ite 💌 User: Global Administrator v5.0.3644 Sign out
New Delete Move Down Content management	Edit Preview Viev	Live site List	Searc	h r	0
Corporate Site Corporate Sit	Page Design General URLs Template	Form Properties			0
o Partners o Dompany o Blogs o Broums o Events	Metadata Categories Menu Workflow	The file was delete	d. Update	Name	Size 270 kB
Construction C	Versions Related docs Linked docs Security	/X14 /X14 /X14	6 6 6	Erangipani-Flowers in Sample-document-1 Sample-document-1 Company of the sample document	106 kB 9.7 kB 27 kB
	Attachments	/ * * *	•	Sande-document-d	8 9 KB

• After clicking an attachment's name, the attachment will be opened.

4. Now that we have the attachments uploaded, we can display them on the live site. The events are displayed by a repeater on the **Events** page, so we will have to add the **Document attachments** web part to this page.

Select the **Events** page from the content tree and switch to the **Design** tab. Click the **Add web part** (+) icon of **zoneLeft** web part zone and choose the **Attachments -> Attachments image gallery** web part. You do not need to set any web part properties in order for the web part to display the attachments. However, you can add some heading via the Content before property:

• Content before: <h1>Attached documents</h1>

Click **OK**. If you switch to the live site now, you should see its attachments' thumbnails as in the screenshot below.



4.6.2.3 Example: Grouped attachments

In the <u>previous example</u>, you learned how to add attachments to a document via the **Properties** -> **Attachments** tab. This is the easier approach, however, in some situations, you may want to have more groups of attachments.

In this example, you will learn how to add two **Document attachments** fields to a document type and how to use them on the live site. Again, we will use the **Events** section of the sample **Corporate Site**. So if you completed the previous example right before, please delete the **Document image gallery** web part from **zoneLeft** in order to get the page to the original appearance.

1. The events' document type is **CMS.BookingEvent**. We will need to add the fields to it. Go to **Site Manager -> Development -> Document types** and choose to **Edit** () the **CMS.BookingEvent** document type.



2. Switch to the **Fields** tab. Use the **New attribute** (+) icon to add the following two attributes. For each attribute, set only the following values and leave the default values for the rest.

- Attribute name: AttachedImages
- Attribute type: Document attachments
- Field caption: Attached images
- Field type: Document attachments control
- Attribute name: AttachedDocuments
- Attribute type: Document attachments
- Field caption: Attached documents
- Field type: Document attachments control

Finally, use the **Move up** (Υ) and **Move down** (\clubsuit) arrows to move the two attributes to the bottom of the list so that they will be displayed at the bottom of the **Form** tab.

CMS Site Manager Sites Administration Settings Development Licenses Support Buy Development Document type properties
Development Document type properties
Countries Document types Event (booking system)
Cost stylesheets General Fields Form Transformations Queries Child types Sites Alternative forms Search fields Documents
Custom tables
Form controls EventName Database
EventDetails Attribute name: AttachedDocuments
Attribute type: Document attachments
A Nothcations EventCapacity Attribute size:
EventAllowRegistrationOverCap: Allow empty value:
Relationship names Signat Documents AttachedDocuments AttachedImages
▲ Tag groups Time zones Display attribute in the editing form
WIL cultures Field
Web parts Web parts
Web templates
Widgets
Document attachment configuration
Document name source field: OK
EventName
Document alias source field:

- 3. Optionally, you can set the following specific properties of the field:
- Allow change order indicates if attachments can be re-ordered
- Allow paging indicates if paging should be enabled for the list of attachments
- Page size page size applied if paging is allowed
- Allowed extensions allowed extensions of files to be uploaded; files with other extensions will not be uploaded; check Inherit from settings to use values specified in Site Manager -> Settings -> Files -> Upload extensions
- Automatic image resize on upload:
 - (do not resize) uploaded images will not be resized
 - (use site settings) uploaded images will be resized according to site settings in Site Manager -> Settings -> Files -> Automatic image resize on upload
 - (use custom settings) uploaded images will be resized according to the Width, Height and Max side size values set below

Depending on which values you fill in the **Width**, **Height** and **Max side size** fields, the functionality is the following:

- Only width or only height images will be resized so that the width/height matches the entered value; the other dimension is also resized so that the aspect ratio is kept
- Both width and height images will be resized so that both dimensions match the entered values; the aspect ration needn't be kept in this case
- Max side size if one of the image's sides is larger than this value, the image will be resized so that its larger side's dimension matches the entered value; the aspect ratio is kept and width and height settings are not applied

		_							Switch to CMS Desk
CMS Site Manager	Sites Administration Setting	ls	Development	Licenses	Support	Buy			
Development	Document type prop	ertie	3						
🖓 Categories									
Countries	Document types + Event (booking system)								
CSS stylesheets	General Fields Form Tra	insform	ations Queri	es Child tvn	es Sites	Alternative f	forms Search fields	Documents	
Cultures			autorito querri	es ennersp		1000110010		bocomento	
Custom tables									
Document types									
E-mail templates	bookingeventiD EventName		Field type:		Documer	nt attachments	control	• (1
Inline controls	EventSummary								
Modules	EventDetails				Documen	t attachment	configuration		
Notifications	EventDate				Allow cha	nge order:	\checkmark		
Page layouts	EventCapacity	Ŧ			Allow pag	ing:			
Page templates	EventOpenFrom				Page size	:	10		-
Relationship names	EventOpenTo						Inherit from pottin		
System tables	AttachedDocuments				All		ndf deerdeerrent om	iys twister	
🖓 Tag groups	, meene gee				Allowed e	xtensions:	Example: ipg:gif.pg	JLX,XIS,	
💮 Time zones		E							
💮 UI cultures					Automatio	c image resize	e on upload		
Web part containers					(do not re	esize)		-	
🚀 Web parts					Width (px)	:			
Web templates		•			Height (p)	() :			
Widgets		×			Max side :	size (px):			
······ 🖌 WORKTIOWS		••							
									-
	Document name source field:							OK	
	EventName								
	(Document anas source field:								

4. Now that we have the two fields defined, we can upload some attachments to the existing events on the site. Switch to **CMS Desk** and select the **Events -> December conference** from the content tree. Switch to its **Properties -> Form** tab. If you scroll down the page, you should see the two fields defined in the previous step.

Kentico CMS Desk Content My desi	Tools Administration	Switch to Site Manager Site: Corporate Site 🗸 User: Global Administrator v5.0.3644 Sign	out
New Delete Move Down Content management	Edit Preview Live site	e List Search other	0
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u 🦦 images	Allow registration over capacity: Open from: Open to: Attached documents: Attached images: Publish from: Publish to:		I
			-

5. Use the **New attachment** () link to add attachments into both fields. According to the name of the field, upload some documents into the first one and some images into the second one.

Just as on the **Properties -> Attachments** tab, you can perform the following actions with the

attachments in the lists:

- Using the **Delete** (**X**) icon, you can remove the attachment from the document.
- Using the **Move up** (**1**) and **Move down** (♣) icons, you can re-order the attachments. The order is stored in the **AttachmentOrder** property of each attachment. You can enter AttachmentOrder into the ORDER BY expression property of a displaying web part to have the attachments ordered accordingly.



- Images have also the Edit (
) icon available. This icon opens the image in the built-in image editor.
- Using the **Update** (1) icon, you can replace the original attachment with a new one.
- After clicking an attachment's name, the attachment will be opened.

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间 🚭 Images	Attached Images:	New attachment The file was inserted. Actions Update Image: A transformed transforme	Name DeserfLandscape ing Forsting Tree ing	Size 223 KB 649 KB 752 KB	
	Publish from: Publish to:		P <u>Now</u> P <u>Now</u>		•

6. Now that we have the attachments uploaded, it's time to have them displayed on the live site. The events are displayed by a repeater on the Events page, so we will have to add the displaying web parts to this page. First, we will add the **Document attachments** web part. We will configure it so that it will display attachments from **Attached documents** field.

Select the **Events** page and switch to the **Design** tab. Click the **Add web part** (+) icon of **zoneLeft** web part zone and choose the **Attachments -> Document attachments** web part. Set the following properties of the web part, leave the rest at the default values.

- Show for document types: CMS.BookingEvent
- Attachment group: Event (booking system) -> Attached documents

• Content before: <h2>Attached documents</h2>

Click OK.

7. Below the documents, we will want the attached images to be displayed. For the images, it will be better to use the **Attachment image gallery** web part. Click the **Add web part** (+) icon of **zoneLeft** web part zone and choose the **Attachments -> Attachment image gallery** web part. Set the following properties of the web part, leave the rest at the default values.

- Show for document types: CMS.BookingEvent
- Attachment group: Event (booking system) -> Attached images
- Content before: <h2>Attached images</h2>

Click OK.

8. If you switch to the live site now, you should see the two web parts displaying the attachments, each web part one group defined earlier in this example. If you add attachments to any other event, they would be displayed with the event too.

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New Delete 🚘 Move 🛛 🌷 Down	Edit Preview Live site List Search	U
Content management	View mode Other	
🖃 🕘 Corporate Site	Uecember conterence	^
	Here come the details and additional information of December conference. December conference summary comes here.	
🗉 📄 Services	Event capacity: 10 Location: Boston Massachusette	
🗉 📄 Products	Event location: Boston, Massachusetts Date: 12/21/2009 9:00:00 AM	
🖲 📄 News	Event date: 12/21/2009 9:00:00 AM	
Partners		
Company	Registration	
Eorume	Registration is closed at the moment.	
Events	Add event to Outlook	
December conference	Attacked desuments	
November conference	Attacheu documents	
📲 October conference	Sample-document.docx	
🛛 🙀 September conference	Sample-document.pdf	
🗊 📄 Images	Sample-document.xlsx	
🕘 📄 Wiki	Attached images	
Examples		
급 句 당pecial pages 급·④ Images		

4.6.2.4 Available web parts

In this chapter, you can see an overview of the web parts that can be used to display document attachments. Only the most important web part properties are explained here. For a complete list of web part properties, please refer to <u>Kentico CMS Web Parts</u> reference guide or click the **Documentation** link at the top right corner of the web part properties window.

Document attachments



- Sample-document-(1).pdf
- Sample-document-(1).xlsx

The web part is located in the **Attachments** web part category. This web part displays a list of files attached to a document. After clicking an attachment, it is opened in a new window.

The following properties of the web part are the most important:

- **Path**: alias path of the document whose attachments should be displayed; if blank, the currently displayed document's attachments will be displayed
- Attachment group: specifies the field from which the attachments should be displayed; if blank, ungrouped attachments from the Properties -> Attachments tab will be used
- **Transformation**: transformation used for displaying the attachments; the default transformation is CMS.Root.AttachmentList

Attachments image gallery



The web part is located the **Attachments** web part category. The web part is particularly useful for image attachments. It displays thumbnails of images attached to the document. After clicking a thumbnail, the clicked image is displayed in its full size by a **lightbox**. For non-image attachments, its file type icon is displayed. After clicking such an icon, the file is offered for download.

The following properties are the most important:

- Path: alias path of the document whose attachments should be displayed; if blank, the currently
 displayed document's attachments will be displayed
- Attachment group: specifies the field from which the attachments should be displayed; if blank, ungrouped attachments from the Properties -> Attachments tab will be used
- **Transformation**: transformation used for displaying the attachments; the default transformation is *CMS*.*Root*.*AttachmentLightbox*
- Selected item transformation: transformation used to display the selected item; the default transformation is CMS.Root.AttachmentLightboxDetail
- LightBox Configuration: the properties in this section can be used to customize the used LightBox

Attachments Data Source

This is a special web part - a data source. It is not visible on the live site. It only provides data to another connected web part (e.g. Basic Repeater), which will display the provided data. More information on data source web parts can be found in <u>this chapter</u>.

4.6.2.5 Available inline controls

There are two inline controls that can be used for displaying documents' unsorted attachments. The inline controls can be added to a page via the **Editable text** web part, using the WYSIWYG editor on the **Page** tab. To add the control to the page, just place the cursor in the appropriate position and click the **Insert Inline Control** (a) icon. You can choose one of the following two controls for displaying

attachments:

Attachment image gallery

Displays the document's unsorted attachments' thumbnails based on the **cms.root**. **attachmentLightbox** transformation. After clicking the thumbnail, the attachment is displayed in a lightbox based on the **cms.root.attachmentLightboxDetail** transformation.

In the Editable text's text area, the control is reperesented by the following string: %%control: AttachmentImageGallery?%%

Document attachments

Displays the document's unsorted attachments' thumbnails based on the **cms.root.attachment** transformation. After clicking the thumbnail, image attachment is displayed on a new page and non-image attachments are offered for download.

In the Editable text's text area, the control is reperesented by the following string: %%control: DocumentAttachments?%%

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New Delete Move Down Content management	Edit Preview Live site List View mode Other	0
Corporate Site Home Home Products Products Products Protucts Partners Company Company Bogs	Page Design Form Properties Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check Image: Seal check <th></th>	
i	How Services Products News Home Services Products Home Services Home Services Products Home Services Products Home Services Products Home Services Home Services	E
	% OK Concel - Add news - Your second news 1/15/2008	-

4.6.2.6 Handling attachments in transformations

You can display document's unsorted attachments by adding one of the following two controls directly into the transformations:

- ~/CMSAdminControls/Attachments/DocumentAttachments.ascx
- ~/CMSAdminControls/Attachments/AttachmentLightboxGallery.ascx

In the following example, you will learn how to use these controls in transformations. The news in the **News** section of the sample **Corporate Site** have some images attached by default. In <u>this example</u>, you have learned how to display these attachments using a web part. Another way of displaying the attachments is by modifying the particular transformation for the document type.

The news are displayed on the News page using a **Repeater**. Detail view of each news item is displayed using the **CMS.News.NewsDetail** transformation. We will modify this transformation so that it displays the attachments along with the news summary and text.

1. Go to **CMS Desk** and select the **News** page from the content tree. Switch to **Design** tab and choose to **Configure** () the **NewsRepeater** web part.

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New Delete Move Down Content management	Edit Preview Live site List View mode	0
🖃 🌍 Corporate Site	Page Design Form Properties	🗹 Display web part content 🔞
Home	Sign in to <u>CMS Desk</u> . Sign in to	CMS Site Manager. The default account is administrator with blank password.
Bevies Mews Mews Mours Mours Mours	CompanyLogo	Global Administrator (administrator) Sign out Par Shopping cart My account My wishlist Your shopping cart is empty
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	NewsRepeate // 16/2008	uny text. The news can be displayed in moliphe ways repending on chosen parisonnauon and web
	Here you can enter the summary of the news item. You of in news item preview.	an use WYSWYG editor to format the text, insert links and images. The summary will be used

2. In the web part properties window, choose to Edit the Selected item transformation.

🙋 CMS Desk - Web Pa	rt properties Webpage Dialog		×
🍓 Web part pro	operties (Repeater)		Documentation
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Default			A
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Content	Transformation.	CMS.News.NewsWithSummary Select Edit	
Content filter			
Transformations	Alternating transformation:	Select Edit	
Paging			
Relationships	Selected item transformation:	CMS.News.NewsDetail Select Edit	_
System settings			=
No data benavior	Item separator:	▶	-
HTML Envelope			
AIAX	Nested controls ID:	•	
Time zones			
Partial caching	Paging		
	Enable paging:		
	Paging mode:	Query string	
	Navigation buttons:	► Split	-
Refresh content		OK Cancel	Apply
http://localhost/Kentico	CMS1/CMSModules/PortalEngine/UI/We	ebparts/WebPartProperties.as 🔩 Local intranet Protected Mode: Off	a

3. Replace the original transformation with the following code, which is the original transformation with the highlighted parts added.

```
<%@ Register Src="~/CMSInlineControls/DocumentAttachments.ascx" TagName
<div class="newsItemDetail">
<h1><%# Eval("NewsTitle") %></h1>
<div class="NewsSummary">
 <%# IfEmpty(Eval("NewsTeaser"), "", GetImage("NewsTeaser")) %>
 <div class="NewsContent">
   <div class="Date"><%# GetDateTime("NewsReleaseDate", "d") %></div>
   <*# Eval("NewsSummary") *>
 </div>
 <div class="Clearer">&nbsp;</div>
</div>
<div class="NewsBody">
 </div>
<div class="NewsBody">
<cms:DocumentAttachments ID="ucDocAttachments" runat="server" TransformationName
="cms.root.attachment" Path='<mark><%</mark># Eval("NodeAliasPath") <mark>%></mark>' />
</div>
```

</div>

Click Save. Click OK in the web part properties window.

4. If you go to the live site now and view some of the news, you should see the attachments displayed below the news text, just as in the screenshot below.

Your second news



1/15/2008

Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.

This is the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image.



5. Let's try the other control now. Choose to **Configure** () the **NewsRepeater** again and choose to **Edit** its **Selected item transformation**. Replace the transformation with the code below. Again, it is the original transformation with the highlighted parts added.

```
<%@ Register Src="~/CMSInlineControls/AttachmentLightboxGallery.ascx" TagName
="AttachmentLightboxGallery" TagPrefix="cms" <mark>%></mark>
<div class="newsItemDetail">
<h1><%# Eval("NewsTitle") %></h1>
<div class="NewsSummary">
 <div class="NewsContent">
   <div class="Date"><%# GetDateTime("NewsReleaseDate", "d") %></div>
   <%# Eval("NewsSummary") %>
 </div>
 <div class="Clearer">&nbsp;</div>
</div>
<div class="NewsBody">
 <%# Eval("NewsText") %>
</div>
<div class="NewsBody">
```



Click Save. Click OK in the web part properties window.

6. If you go to the live site now, you should see the result as in the screenshot below. After clicking one of the images, it will be displayed in the lightbox.

Your second news



1/15/2008

Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.

This the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image.



<u>Please note</u>: the appearance shown in this example is based on the controls' default transformations. You can fully customize the appearance by modifying the default transformations or creating your own transformations and specifying them in the **TransformationName** and **SelectedItemTransformationName** properties of the controls.

4.6.2.7 Using the File field

In the overview, we mentioned the **File** field used in the previous versions. Use of this field is still possible and could be particularly useful if you want to have a field where only one file can be uploaded. The default **CMS.File** document type is based on use of this type of field.

If you want to define a new **File** field, choose **File** from the **Attribute types** drop-down when defining a new field.

쏥	Kentico		<u>S</u> 1
	CIVIS SILE Manager	Sites Administration Settings Development Licenses Support Buy	
	elopment Categories Countries CSS stylesheets Cultures Custom tables Couton tables Countrols Courting Courtent types E-mail templates Form controls Inline controls Modules Notifications Page layouts Page templates Relationship names System tables Tag groups Tag groups Tag groups Tag groups Web part containers Web parts Web parts Web templates	Sites Administration Settings Development Licenses Support Buy Document type properties Document types Event (booking system) General Fields Form Transformations Queries Child types Sites Alternative forms Search fields Decument types Fields Form Transformations Queries Child types Sites Alternative forms Search fields The changes were saved. DookingeventiD File EventSummary EventDetails EventDate EventDate EventDetails EventDate EventOpenFrom EventOpenFrom EventOpenTo Image: Support type Image: Support ty	Documents
		Document name source field:	OK

As you can see in the screenshot above, using the **Field type** drop-down, you can choose between two available controls for file upload which will be displayed on the **Form** tab:

• Upload file

This is the original control which was used in the previous versions.

💥 Sam	ple-document.pptx	
Upload:		Browse

• Direct uploader

This is the same control that is used for uploading attachments via the **Form** tab. The only difference is that it allows only one file to be uploaded.

This is how it looks like when no file is uploaded:

🛃 Upload file

And here is the control after file upload:

Actions	Update	Name	Size
1	Þ	Sarden.jpg	504 kB

4.6.2.8 Temporary attachments handling

If you create a new document and start attaching files to it, temporary attachments are created. When the document is saved, the temporary attachment becomes a real attachment. If the document is not saved, the temporary attachments remain on the disk or in the database. To handle the unused files, there is a scheduled task pre-defined.

In Site Manager -> Administration -> Scheduled tasks, you can find the Delete old temporary attachments scheduled task. By default, this task is performed on a daily basis and deletes all temporary attachments older than 24 hours.

You can customize the interval by adding the <add key="CMSDeleteTemporaryAttachmentsOlderThan" value="1"/> key into the <appSettings> section of your site's *web.config* file. The value specifies the interval in hours.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	Buy	
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S Roles	1	Clean	unused mem	погу	10/29/2009	1:25:15 PM	10/29/2009 2:25:15 PM	
Scheduled tasks	2 ×	Delete	old temporal	y attachments	12/23/2009	12:32:28 PM	12/23/2009 1:32:28 PM	
System		Execut	e search tasl	s	12/23/2009	11:31:13 AM	12/23/2009 3:31:13 PM	
UI personalization	2 🗙	Optimi	ze search ind	lexes	12/18/2009	1:32:55 PM	12/25/2009 1:32:55 PM	
Users	1	Proces	s analytics lo	g	12/23/2009	12:32:28 PM	12/23/2009 12:33:28 PM	
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	1	Recald	culate time zo	ne	9/17/2009 1	2:56:10 PM	1/1/2010 12:00:00 AM	
	2 ×	Removed the Rem	ve expired se	ssions	12/23/2009	12:32:28 PM	12/23/2009 12:33:28 PM	
	/ X	Send of	queued e-mai	ils	12/23/2009	12:32:28 PM	12/23/2009 12:33:28 PM	
	/ X	Send of the sen	queued news	letters	12/23/2009	12:32:28 PM	12/23/2009 12:33:28 PM	
		Synchi	onize web fai	rm changes	11/10/2009	3:12:35 AM	11/5/2009 4:44:10 AM	
	/ X	Update	e database s	ession	12/23/2009	12:32:28 PM	12/23/2009 12:34:28 PM	

4.6.2.9 Attachment names

Attachment names are unique for a document (or its version). If you try to upload an attachment that has the same name as some already existing attachment of the particular document, the new attachment gets a number in the -(1) format attached to its name.

This happens for the attachments to be accessible via friendly URLs in the following format:

~/getattachment/<node_alias_path>/<safe_filename>.<extension>

4.6.3 Handling images

4.6.3.1 Image editor

The image editor can be accessed throughout the whole system, everywhere the Edit (\checkmark) icon is available for a listed image, just like:

- document's Form tab
- media libraries
- document attachments
- etc.

The image editor looks as in the following screenshot:



You can see the current appearance of the image on the right, while the following modifications can be done to the image on the particular tabs:

<u>Resize</u>

- By percentage resizes the image to the entered percentage of side size
- By absolute size resizes the image to the size specified in the Width and Height fields
- Maintain aspect ratio if enabled, the other dimension is recalculated automatically when one dimension is specified above

Rotation

- Rotate 90° left
- Rotate 90° right
- Flip horizontally
- Flip vertically

Convert

- From current format of the image
- To target format of the conversion; .bmp, .gif, .jpg, .png
- Quality quality of compression; applicable only for .jpg conversion

<u>Trim</u>

This action reduces the size of the image by removing the borders of the image.

- Width width of the trimmed image
- Height height of the trimmed image

Select the position of the trimming area in the original image and click the **Trim** button.

<u>Color</u>

• Convert to grayscale - if clicked, the image is converted from color to greyscale

Properties

On this tab, you can rename the file using the **File name** field and you can also see the **Extension**, **Size**, **Width** and **Height** of the file.

4.6.3.2 Resizing images on upload

You can set global image resizing values in **Site Manager -> Settings -> Files** by entering the following values:

- Automatic image resize on upload (width, height, max side size) depending on which values you fill in, the functionality is the following when uploading images:
 - No values are entered images will not be resized
 - Only width or only height images will be resized so that the width/height matches the entered value; the other dimension is also resized so that the aspect ratio is kept
 - Both width and height images will be resized so that both dimensions match the entered values; the aspect ratio is not kept in this case
 - **Max side size** if one of the sides of the image is larger than this value, the image will be resized so that the dimension of its larger side matches the entered value; the aspect ratio is kept and the width and height settings are not applied



These settings are applied by default when uploading images as:

- Document attachments
- Media library files
- CMS.File documents
- Editable text web part uploading images using the WYSIWYG editor dialogs
- · Editable image web part uploading images using the Select image dialog
- Field editor fields uploading images using the following field types e.g. in BizForms, Document type field editor, etc.
 - File attribute type -> Upload file and Direct uploader field types
 - Text attribute type -> HTML Area(Formatted Fext), BBcode editor, Image selection, Media selection and File selection field types

The default settings defined here can be **overridden by local settings** in the particular parts of the user interface (e.g. web part properties, field editor, WYSIWYG editor dialogs, etc.).

4.6.4 Where the files are stored

Document attachments and CMS. File documents can be physically stored in the file system, in the database or in both. You can define this in **Site Manager -> Settings -> Files**, using the **Store files in file system** and **Store files in database** options.



The following three combination can be achieved using the settings:

- File system the files are stored in the configured folder on your disk. This option provides the best performance. However, the **Modify** permissions on the disk must be granted to the ASP.NET account on your machine, which is not always possible. The process of granting the Modify permission is described in <u>this chapter</u>.
- **Database** the files are stored in the database. This option provides worse performance, but it allows you to use full-text search in uploaded files. It also doesn't require the Modify permission on the disk and it allows you to easily backup the uploaded files as a part of your database backup.
- Both Database and file system this option combines the advantages of both options. It provides the same performance as the file system-only option since the files are stored on the file system. At the same time, you can use the full-text search because you the database is also available.

Document attachments and metafiles location

Document attachments are stored in the file system under ~/<*site code name>/files*, metafiles are stored under ~/<*site code name>/metafiles*. The location of these folders can be customized in **Site Manager -> Settings -> Files -> Files folder**.

BizForm files location

Files uploaded by site users into <u>BizForms</u> are always stored in the file system. The default location is ~/<site code name>/BizFormFiles. You can customize the location in **Site Manager -> Settings -> Files -> BizForm files folder**.

Media library files location

Files stored in <u>media libraries</u> are always stored in the file system. The default location is ~/<*site code* name>/media, while the location of the folder can be customized in **Site Manager -> Settings -> Media libraries -> Media libraries folder**, as described <u>here</u>.

4.6.5 Files-related settings

You can configure the file storage in Site Manager -> Settings -> Files.

<u>.</u>	Kentico								Switch to CMS Desk	User: Global Admin
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Site: (global)		•	Files	ß						
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			Export the	se settings						

The following options can be set on the page:

Store files in file system	Indicates if files should be stored in the file system.				
Store files in database	Indicates if files should be stored in the database.				
Generate thumbnails	Indicates if the CMS generates image thumbnails on the disk when a resized version of the image is displayed. This option only applies if files are stored in the file system. It improves site performance .				
Files folder	 The folder on the disk where document attachments and metafiles are stored. You can use: physical disk path - e.g. c:\myfiles\mysite virtual path - ~/UploadedFiles 				
	 UNC path - \\server\folder If you do not specify any value, the files are stored in folder ~/<site code<="" li=""> </site>				

	name>/files.
BizForm files folder	Folder where files uploaded via <u>BizForms</u> are stored. If no value is entered, BizForm files are stored in ~/< <i>site code name</i> >/BizFormFiles.
Maximum file size to cache	Specifies the maximum size of a file in kilobytes that is allowed to be cached.
Redirect files to disk	If checked, file requests are redirected to the physical file in the file system if possible.
Upload extensions	Allowed file extensions for the uploaded files. You can restrict the types of uploaded documents to (e.g. 'gif;jpg;doc;pdf'). It allows you to block users from uploading potentially dangerous files, such as ASPX scripts. If no value is specified, all types of files can be uploaded.
Check if files are published	If checked, only files that are in the Published workflow step can be accessed from the live site when a workflow is applied to the document.
Check files permissions	If checked, document permissions are applied to the files.
File import folder	Path to the source folder where files to be imported by the File import should be uploaded before import. If no value is entered, ~/CMSImportFiles is used by default.
	 Depending on which values you fill in, the functionality is the following when uploading images: No values are entered - images will not be resized Only width or only height - images will be resized so that the width/ height matches the entered value; the other dimension is also resized
Automatic image resize on upload (width, height, max side size)	 so that the aspect ratio is kept Both width and height - images will be resized so that both dimensions match the entered values; the aspect ratio is not kept in this case Max side size - if one of the image's sides is larger than this value, the image will be resized so that its larger side's dimension matches the entered value; the aspect ratio is kept and width and height settings are not applied
	More info can be found in <u>Handling images -> Resizing images on upload</u> .

4.6.6 Using the Media selection control

The Media selection form control can be used to enable users to select any types of files on a document's **Form** tab.

When defining the filed in field editor, you need to choose:

- Attribute type: Text
- Field type: Media selection

			-							Switch to CMS Desk
CINS SILE Manager	Si	tes Administration Set	tings	Development	Licenses	Support	Buy			
Development Gategories Countries		Document type pro	opertie	S						
CSS stylesheets		General Fields Form	Transform	nations Quer	ies Child t	rpes Sites	Alternative forms	Search fields	Documents	
Custom tables Document types E-mail templates	Ī	JawelD							_	
Form controls	ľ	vewsid VewsTitle VewsReleaseDate		Database						Î
Inline controls	İ	VewsTereaseDate		Attribute nan	ne:	File				
Notifications	İ	VewsTeaser		Attribute size	5: 5:	1 ext				=
Page layouts Page templates	11			Allow empty	value:					
Relationship names				Attribute defa	ault value:					
System tables Tag groups			4							
Time zones	1		i	🗹 Display a	ttribute in the	editing form				
UI cultures				Field						
🚀 Web parts			4	Field caption	1:	File				
Widgets			-	Field type:		Media se	lection		•	
						Automati (use site	c image resize on ur settings)	oload		~
	D	ocument name source field:							ОК	
		News Little	•							
	Ī	Document name)	•							

In the screenshot below, you can see the default appearance of the control on the **Form** tab. Notice that a preview of the currently selected image is displayed below the selection controls:



File:

When the Select... button is clicked, the Select file dialog opens.

The dialog is similar to the <u>Insert image or media</u> dialog used in the WYSIWYG editor, while only the **Attachments**, **Content** and **Media libraries** tabs are available here. Description of the tabs can be found in the alike named parts of <u>this page</u>.



When you select a file, relative URL of the selected file is inserted into the field, with the with the **width**, **height** and **ext** parameters appended.

/KenticoCMS_0729/Images-(1)/Services_webdevelop.aspx?width=200&height=132&ext=.jpg

Displaying selected items in transformations

In transformations, items selected in the Media selection field can be displayed using the ~/ CMSInlineControls/MediaControl.ascx inline control. When displaying the items in transformations, the ext parameter (extension of the file) defines what needs to be displayed (image, video player, flash player, ...).

The following code sample is a modified **CMS.News.NewsWithSummary** transformation with the control added (highlighted code). As you can see, you only need to register the MediaControl and then use it in the transformation just by providing it the URL. In this case, the URL is got

</div>

And this is the result rendered on the live site:

Your second news | 1/15/2008

Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.



4.7 Document listing

On the CMS Desk -> Content -> List tab, you can see an overview of documents placed under the currently selected document in the content tree. You can filter the displayed pages using the filter above the list.

The **Name** column displays names of the documents in the currently edited culture. If the document's version in this culture **does not exist**, the column displays the name from the **default culture** with the default culture code appended in brackets.

The **Languages** column displays the translation statuses of the documents' particular language versions. More information about translation statuses can be found <u>here</u>.

The following operations can be performed with particular documents:

- *I* Edit by clicking the icon, you get redirected to the document's Edit -> Page tab in the currently selected culture
- **X Delete** deletes the document
- by clicking a document's name, the list tab will display the documents found under the clicked document

You can also perform **bulk actions** with the listed documents using the two drop-down lists at the bottom. First, you need to select from the following two options in the first drop-down list:

- Selected documents performs the action only with the documents selected by the check-boxes (
- All documents performs the action with all listed documents

Then you need to choose the action:

- Move moves the documents to the location specified in a raised pop-up dialog
- Copy copies the documents to the location specified in a raised pop-up dialog
- Link creates a linked document in the location specified in a raised pop-up dialog
- **Delete** deletes the documents
 - Delete documents and their history (documents can not be restored) deletes the document permanently, i.e. without storing it in the recycle bin
 - Delete all culture version of the specified documents only for multilingual sites; if enabled, all culture versions of the documents will be deleted; if disabled, only the versions in the currently edited culture will be deleted
- **Publish/Archive** this option is available only for global administrators and publishes/archives the selected documents; before performed, a dialog gets displayed, listing the selected documents and offering the following extra options:
 - Publish/Archive all culture versions of specified documents if enabled, all culture versions of the documents will be published/archived
 - **Publish/Archive also all child documents** if enabled, all documents located under the selected documents will be published/archived too
 - Perform Undo check-out for checked out documents this option is displayed only if you want to perform the operation for a document which is checked out (currently edited by some user); if you enable this options, such documents will be published/archived too

Kentico CMS Desk	sk Tools Administration	Switch to Site Manager Site: Corporate Site 💌 User: G	obal Administrator v5.0.3641 Sign out
Content management	Edit Preview Live site List View mode	French Juage Other	(
Corporate Site Corporate Sit	Corporate Site Document listing Document name: LIKE		0
Partners Gompany Blogs Forums Events	Document type: LIKE Language: Translated to Show		
🔹 📄 Images	Actions Document name	Document type Modified	Published Version Languages
	/ 🗱 🔲 Home	Page (menu item) 12/14/2009 10:11:56 AM	Yes - 📔 🚺
🗑 🔄 Examples	🖉 🗱 🔲 <u>Services</u>	Page (menu item) 12/20/2009 7:19:04 PM	Yes - 🗎 🚺
💼 🔄 Images	Products	Page (menu item) 7/3/2009 11:44:32 AM	Yes - 📑 🚺
	News	Page (menu item) 9/29/2008 1:59:20 PM	Yes - 📑 🚺
l	Partners	Page (menu item) 8/6/2009 12:50:42 PM	Yes -
	2 🗱 🔲 Company	Page (menu item) 11/25/2008 5:37:23 PM	Yes -
	Diags	Page (menu item) 4/21/2008 3:15:44 PM	Yes -
	P 🗙 🔲 Forums	Page (menu item) 4/21/2008 3:19:08 PM	Yes -
	P 🗱 🔲 Events	Page (menu item) 4/21/2008 3:19:44 PM	Yes -
	🖉 💢 🔲 Images	Page (menu item) 4/21/2008 3:20:27 PM	Yes -
	🖉 🗱 🔲 <u>Wiki</u>	Page (menu item) 5/21/2009 8:39:40 AM	Yes -
	🖉 🗱 🔲 Examples	Page (menu item) 9/4/2008 4:16:42 PM	Yes -
	🖉 🗱 🔲 Special pages	Folder 12/13/2007 11:42:41 AM	Yes -
	🖉 💥 🔲 Images	Folder 11/12/2009 4:29:51 PM	Yes -
	Selected documents 💌 (select some action) 💌	ОК	Items per page: 25 💌

and click **OK** to perform the action.

4.8 Content search

The interface for searching the documents in the content tree can be accessed by clicking the **Search** (\mathcal{P}) icon in **CMS Desk -> Content**.

1. First, you need to decide if you want to perform the search using Smart search or SQL search. This

depends on the selection made in the **website indexes** drop-down:

- **SQL search** you need to select (*SQL Search default*); slower, but supports search in both published and unpublished documents
- Smart search you need to select a particular smart search index; fast, but does not support search in unpublished documents
- 2. Then you need to specify the following criteria:
- Search phrase: the text that you are looking for; if you are searching using a Smart search index, you can use the syntax described <u>here</u>; if you are searching using SQL search, standard SQL syntax can be used
- Search mode: specifies how the search phrase will be used:
- Exact phrase returns documents where the search phrase is found exactly as entered
- Any word returns documents where at least one word of the search phrase is found
- All words returns documents where all words of the search phrase are found, regardless of their
 position or order in the text

Kentico CMS Desk Content My des	Switch to Site Manager Site: Corporate Site Vser: Glo						
Copy TUp New Delete Move Down Content management	Edit Preview Live site List Search View mode Other						
Corporate Site	Content Search						
Home • - Services • - Products	Web site indexes: Corporate site - default						
• - News • - Partners • - Company • - Blogs • - Forums	Search phrase: nokia Search mode: Any word Search						
 Events Images Wiki Examples Special pages Mages 	Nokia N73 (en-US) For some moments there are no words. But when life starts moving, the Nokia N73 has you covered. Edit your photos and movies on the go. Upload instantly to Flicker. And with 3.2 megapixels of clarity, up to 20x digital zoom, and enough space for feature-length memories, yo http://localhost/KenticoCMS_1216/Products/Cell-phones/Nokia-N73.aspx 11/28/2007 9:58:19 AM						
	Nokia 6120 (en-US) I am very happy to be one of the Nokia 6120 owners. It wasn't hard to make a decision which cell phone will be my next - it is the smallest and lightest smartphone in the world. Cell phones today have gone far from just being a communication device. They are now used for downl They are now used for downl No image to the Nokia 6120 owners. It wasn't hard to make a decision which cell phone will be my next - it is the smallest and lightest smartphone in the world. Cell phones today have gone far from just being a communication device. They are now used for downl They are now used for downl They are now used for downl They are now used for downl They are now used for downl						

Click Search. Found documents will be listed as in the screenshot below.

4.9 Content scheduling

Kentico CMS allows you to specify when the document will be published. When you edit the document form, you can typically find the Publish from/Publish to fields at the end of the form:
💒 Kentico	
CMS Desk Content My desk	k Tools Administration
📄 📄 Сору 👚 Up	
New Delete 🚔 Move 🗏 Down	Edit Preview Live site List Search
Content management	View mode Other
🖃 🕑 Corporate Site	Page Design Form Properties
Home	
🗉 📄 Services	Spell check
🗊 📄 Products	
🗄 📄 News	
Partners	Document name: Services
:] Company	Teaser image: 🔒 Upload file
🗄 📄 Blogs	
🔁 📄 Forums	Publish from: 12/23/2009 11:56:54
Events	Publish to:
Images	

When you set these values, the document will be displayed on the website only in the given time period.

If you do not set the **Publish from** value, the document will be displayed on the live site immediately. If you do not set the **Publish to** value, the document will never expire.

Content scheduling and workflow/versioning

If you set publish from/to values to documents that use workflow, they will not be published before they are approved. However, the publishing time may not be exact since the publishing is ensured by a scheduled process that is executed every minute by default. You can check the status of this process in **CMS Desk -> Administration -> Scheduled tasks** -> choose the website and search for the **Content scheduling** task.

4.10 Using the built-in spell-checker

You can spell-check all the content on the Page and Form tabs using the built-in spell-checker:



When you click the **Spell check** button, the spell-checker reads all text fields and checks their content. If it finds any typo, it shows the dialog like this:



You can then ignore the word, add it to the dictionary or replace it with suggested word.

Please note: If you add a new word to dictionary it's only saved in the current session. The next time you sign in to Kentico CMS, the added words will be lost.

Dictionaries

The dictionary is used based on the currently chosen content culture. If no dictionary is available for the current content culture, the default dictionary is used. The default dictionary is specified in the **CMSDefaultSpelICheckerCulture** configuration key in the **appSettings** section of the **web.config** file. By default, it's set to en-US.

Adding addtional dictionaries

The dictionaries are stored in folder **<web project>\App_Data\Dictionaries**. If you need some additional dictionaries, you can download them from the following URLs:

- AR-ae: http://www.kentico.com/Downloads/SpellChecker/ar-AE.zip
- CS-cz: http://www.kentico.com/Downloads/SpellChecker/cs-cz.zip
- DE-de: http://www.kentico.com/Downloads/SpellChecker/de-de.zip
- EL-gr: http://www.kentico.com/Downloads/SpellChecker/el-gr.zip
- EN-au: http://www.kentico.com/Downloads/SpellChecker/en-au.zip
- EN-ca: http://www.kentico.com/Downloads/SpellChecker/en-ca.zip
- EN-gb: http://www.kentico.com/Downloads/SpellChecker/en-gb.zip
- EN-us: http://www.kentico.com/Downloads/SpellChecker/en-us.zip
- ES-es: http://www.kentico.com/Downloads/SpellChecker/es-es.zip
- ES-mx: http://www.kentico.com/Downloads/SpellChecker/es-mx.zip
- FR-fr: http://www.kentico.com/Downloads/SpellChecker/fr-fr.zip
- HE-il: http://www.kentico.com/Downloads/SpellChecker/he-il.zip
- IT-it: http://www.kentico.com/Downloads/SpellChecker/it-it.zip
- NB-no: http://www.kentico.com/Downloads/SpellChecker/nb-no.zip
- NL-nl: http://www.kentico.com/Downloads/SpellChecker/nl-nl.zip

- NN-no: <u>http://www.kentico.com/Downloads/SpellChecker/nn-no.zip</u>
- PL-pl: http://www.kentico.com/Downloads/SpellChecker/pl-pl.zip
- PT-pt: http://www.kentico.com/Downloads/SpellChecker/pt-pt.zip
- RO-ro: http://www.kentico.com/Downloads/SpellChecker/ro-ro.zip
- RU-ru: http://www.kentico.com/Downloads/SpellChecker/ru-ru.zip
- TH-th: http://www.kentico.com/Downloads/SpellChecker/th-th.zip

and unpack them to the dic folder. Then, you should restart the website using **Site Manager -> Administration -> System dialog -> click Restart application**. The file name of the dictionary must match the culture code of the currently edited content - e.g. fr-fr.

4.11 Accessing content using .NET code (API)

You can make all changes to the content programmatically using Kentico CMS API. It allows you to script any actions (create a new document, update document, etc.) using .NET code.

You can find more details and examples in chapter Content management internals.

4.12 Permissions and security

Kentico CMS allows you to configure permissions for particular site sections or even particular documents. You can find more details in the <u>Membership and security</u> chapter.

4.13 FAQ

This topic provides information about the most common issues and their solutions. If you do not find the answer here, please contact our technical support.

Q: The CMS Desk doesn't display the content tree or the WYSIWYG editor doesn't open.

A: Please check that you use one of the <u>supported browsers</u> and that you have JavaScript enabled. You should also unblock the pop-up blocker or any similar blocker for the website with Kentico CMS.

Q: I have modified the document, but the changes are not displayed on the live site.

A: This may be caused by several reasons:

- 1. **Caching** if caching is used, the changes may not be displayed on the website immediately.
- 2. **Workflow** if you use workflow, the changes are published on the live website only after the document has been approved in all workflow steps.

Q: I have defined related documents, but they are not displayed anywhere on the page.

A: You (your developer) need to add some web part/control that will display the related documents - e.g. the **Listings and viewers/Related documents** web part or **Repeater** web part.

Q: I need to add custom field to the document. Is it possible?

A: Yes, every structured document type can be customized with your own fields. See <u>Document types</u> for details.



Managing sites

5 Managing sites

5.1 Site Management Overview

Kentico CMS allows you to manage multiple sites in a single installation. The database contains data for all websites and the websites are managed using a single administration interface (single copy of code). The following figure shows the multi-site configuration where one database and one copy of CMS code are used for multiple websites.



When you use multi-site configuration, you can share:

- documents
- users
- global settings and system tables
- document types
- page templates
- web parts

This feature is useful if you need to create multiple websites for a single company and share users/ documents/settings between them.



When to choose separate installations

There are situations in which we recommend running separate instances of Kentico CMS for every website:

- You build websites with **many documents** and performance is critical for you.
- Your customers have very **different requirements** and you need to customize some common parts of the system, such as administration interface or structure of shared tables.
- Your customers are very sensitive to **security** and you do not want to risk that some other client will get access to other websites by administrator's mistake.

5.2 Managing sites

You can manage the websites in **Site Manager -> Sites** dialog. *Creating a new website* Please see <u>New site wizard</u> for more details on creating a new website.

General tab

Site display name	The name of the site displayed to the users.
Site code name	The name of the site used in the code.
Site domain name	The main domain of the website. Use domain name without http:// protocol and without www. If you use other port than 80, specify it as well.
	Correct: mycompany.com partners.mycompany.com mycompany.com:8080
	Incorrect: http://mycompany.com www.mycompany.com
Default content culture	Default culture of the site content. It can be changed using the Change button.
Default visitor culture	The content culture that should be set to site visitors if they don't have any cookie with preferred culture set. (Automatic) means the culture is decided based on the browser preferences. If none the preferred languages is supported by the current site, the default culture is used.
Site CSS stylesheet	Default CSS style sheet used for all pages unless they override the value with their own CSS stylesheet.
Editor CSS stylesheet	CSS style sheet used for the WYSIWYG editor content.
Site description	Optional description of the website for internal use.

Domain aliases tab

Here you can add domain aliases that point to this website.

Example of domain aliases
If your website uses mycompany.com as its Main domain and you also wish to use the my-company.co.uk domain and have it access the same website, you need to add the my-company.co.uk alias to the list of domain aliases.

Culture tab

Here you can choose in which languages the website content is available. You will use this tab to configure website that provides content in multiple languages.

5.3 Starting and stopping sites

You can run and stop websites using the Start site and Stop site buttons in the Sites dialog.



Switching between Sites on a Single Domain

If you try to run a site that uses the **same domain name (or alias)** as another site that is already running, you will get an error message and the site will not be started.

If you need to test **several websites on a single domain**, such as http://localhost, you need to specify the domain (localhost) for multiple websites and start only one of them.

If you cannot use your own domain names, you can use several alternatives that point to the same computer with different host name http://localhost, http://127.0.0.1 or http://mycomputer.

You can find more details on how to configure the websites in chapter <u>Configuring</u> <u>multiple websites</u>.

5.4 Creating a new site

Please see New site wizard.

5.5 Export and import

5.5.1 Overview

You can export and import website content and settings from one Kentico CMS instance to another. You can use this feature to move website or chosen objects between development, testing (QA) and production (live) server as illustrated in the figure below:



5.5.2 Exporting a site

Kentico CMS allows you to export whole website including its settings and related objects (such as document types, workflows, web parts, page templates, etc.) into a single file that can be imported on the same or different Kentico CMS instance.

Exporting a site

Go to **Site Manager -> Sites** and click the **Export site** icon next to the site you want to export. This will start the export wizard.



In the first step of the wizard, you have to fill in the name of the export package and choose type of objects pre-selection:

File name - name of the export package; a default name will be pre-filled and the package will be stored in **<web project>\CMSSiteUtils\Export**.

- Preselect all objects all site objects will be preselected in the next step
- Preselect objects changed after specific date only objects changed after the specified date will be selected in the next step
- Use previous export settings settings used in a previous export selected from the list below will be used

Select the option that suits your purposes and click the **Next** button.

Step 1 Export type Please enter export details and select type of the export.
File name: export_20091217_1004.zip Site: Corporate Site Preselect all objects Preselect objects changed after specific date Image: Site in the same objects) Use previous export settings (preselect the same objects) 12/17/2009 10:02:53 AM - export_20091217_1002.zip
Next >

In **Step 2**, you can select which objects will be exported. The tree on the left represents object categories. These reflect the sections of the administration interface under that the objects can be found. The **Site** category contains objects related to the selected website. The **Global objects** category contains global objects that can be used by all sites. By selecting a category, a set of check boxes appears in the right part of the screen, letting you select which objects will be exported. If you select the root of the tree (All objects), you will be offered with the following options:

Global selection

- Load default selection objects will be selected based on the pre-selection choice made in Step 1
- Select all objects all objects will be selected
- Deselect all objects no objects will be selected

Export settings

- **Export files** some objects in the database are linked with physical files in the file system; if you check this check-box, these files will be exported along with the database objects
- Export global folders if checked, global files under the folders listed below will be exported
 - <web project>\App_Code\Global
 - <web project>\CMSGlobalFiles
- Export site folders if checked, files under the folders listed below will be exported
 - <web project>\App_Code\<site code name>
 - <web project>\<site code name>
- Export ASPX templates folder if checked, folder with ASPX page templates will be exported - <web project>\CMSTemplates
- Export forum custom layouts folder if checked, folder with custom forum layouts will be exported <web project>\CMSModules\Forums\Controls\Layouts\Custom
- Export tasks if checked, delete tasks (incremental deployment) will be included in the package

Image: Imag	Step 2 Objects select Please select obje	ion cts which should be exported.
	All objects Web site Occuments Occuments Administration Settings Development Occuments Occuments Occuments Occuments Occuments Occuments Occument Occume	 Export objects Please select the object type from the tree if you wish to change the default selection. Click Next to start the export of selected objects. Global selection Load default selection Select all objects Deselect all objects Export settings Export files Export global folders Export site folders Export ASPX templates folder Export tasks

The following categories contain extra options to be set:

Documents

- Export documents if checked, documents will be exported
- Export document histories if checked, histories of all exported documents will be exported
- Export document relationships if checked, relationships of all exported documents will be exported
- Export document level permissions if checked, document security settings made in CMS Desk will be exported
- Export blog comments if checked, blog comments will be exported

• Export event attendees - if checked, event attendees will be exported for all exported events

BizForms

• Export BizForms data - if checked, stored BizForms' data will be exported together with the exported BizForms

Forums

• Export forum posts - if checked, forum posts will be exported together with the exported forums

Message boards

• Export board messages - if checked, board messages will be exported together with particular message boards

Media libraries

- Export media files if checked, media files stored in the database will be exported
- Export physical files if checked, physical media files stored in the file system will be exported; this
 option is not selected by default as it may cause the package size grow extremely large; instead, it is
 recommended to export these files manually

If you have the "Log export tasks" option enabled in Site Manager -> Settings -> Content Staging, a list of object deletion tasks may also be displayed at the bottom of the list. This happens when some objects have been deleted (just as the two Web part containers in the screenshot below). If you leave the check-boxes checked, the objects will be deleted after importing the package on the target server.



After making all required selections, click **Next** to proceed to the next step.

A log appears, showing you the progress of exporting. You can abort exporting by clicking the **Cancel** button at any time. When exporting finishes, a message appears at the top of the log, telling you the full path to the exported file. Click the **Finish** button. You will be redirected back to **Site manager** -> **Sites**



Now you can copy the exported package to the target installation of Kentico CMS, into the **<web** project>\CMSSiteUtils\Import folder and use the Import site or objects wizard described in the Importing a site or objects topic.

5.5.3 Exporting objects

Besides exporting the whole website, you can also choose to export only selected objects (web parts, document types, page templates, etc.). This is useful when you update some object on the development machine and want to copy the updated object to the staging or production server.

Exporting selected objects

Go to Site Manager -> Sites and click Export objects. The Export objects wizard starts.

	O Manager	Sites	Administration	Settings
Sites				
🙀 <u>New site wizard</u>	Import site o	or objects	Export objects	

In the first step of the wizard, you have to fill in the name of the export package and choose type of objects pre-selection:

- File name name of the export package; a default name will be pre-filled and the package will be stored in <web project>\CMSSiteUtils\Export.
- Do not preselect any objects no objects will be preselected in the next step
- Preselect all objects all objects will be preselected in the next step
- Preselect objects changed after specific date only objects changed after the specified date will be preselected in the next step
- Use previous export settings settings used in a previous export selected from the list below will be used

Select the option that suits your purposes and click the **Next** button.

Step 1 Export type Please enter export details and select type of the export.
File name: export_20091217_1007.zip Site: (no site, only global objects) Do not preselect any objects Preselect all objects Preselect objects changed after specific date Image: Comparison of the same objects) Image: Comparison of the same objects) Use previous export settings (preselect the same objects) 12/17/2009 10:06:50 AM - export_20091217_1006.zip
Next >

In **Step 2**, you can select which objects will be exported. The tree on the left represents object categories. These reflect the sections of the administration interface under that the objects can be found. The **Site** category contains objects related to the selected website. The **Global objects** category contains global objects that can be used by all sites. By selecting a category, a set of check boxes appears in the right part of the screen, letting you select which objects will be exported. If you select the

root of the tree (All objects), you will be offered with the following options:

Global selection

- Load default selection objects will be selected based on the pre-selection choice made in Step 1
- Select all objects all objects will be selected
- Deselect all objects no objects will be selected

Export settings

- **Export files** some objects in the database are linked with physical files in the file system; if you check this check-box, these files will be exported along with the database objects
- Export global folders if checked, global files under the folders listed below will be exported
 - <web project>\App_Code\Global
 - <web project>\CMSGlobalFiles
- Export ASPX templates folder if checked, folder with ASPX page templates will be exported - <web project>\CMSTemplates
- Export forum custom layouts folder if checked, folder with custom forum layouts will be exported - <web project>\CMSModules\Forums\Controls\Layouts\Custom
- Export tasks if checked, delete tasks (incremental deployment) will be included in the package

Step 2 Objects selection Please select object	on ts which should be exported.	
 All objects Global objects Global sobjects Administration Settings Gevelopment License keys R-commerce 	 Export objects Please select the object type from the tree if you wish to change the default selection. Click Next to start the export of selected objects. Global selection Load default selection Select all objects Deselect all objects Export settings Export files Export forum custom layouts folder Export tasks 	
	< Previous Next >	

If you have the "Log export tasks" option enabled in Site Manager -> Settings -> Content Staging, a list of object deletion tasks may also be displayed at the bottom of the list. This happens when some objects have been deleted (just as the two Web part containers in the screenshot below). If you leave the check-boxes checked, the objects will be deleted after importing the package on the target server.

Step 2 Objects selection Please select objects	n whic	h should b	e exported.			
Cultures Custom tables Custom tables Custom tables E-mail templates Form controls Inline controls Modules Custom Form controls Custom Form Custom Form Custo	• E	All None Export V V V Tasks All None	Default Display name Black box Breadcrumbs Box Content padding Div element Search box			
Web part containers		Export	Task title	Туре	Task time	
Widgets Workflows		V	Delete Web part container 'Orange box'	DELETEOBJ	12/17/2009 10:02:02 AM	
License keys		V	Delete Web part container 'Gray box'	DELETEOBJ	12/17/2009 10:01:32 AM	
🛨 🛱 E-commerce	-					-
					< Previous Nex	t>

After making all required selections, click **Next** to proceed to the next step.

A log appears, showing you the progress of exporting. You can abort exporting by clicking the **Cancel** button at any time. When exporting finishes, a message appears at the top of the log, telling you the full path to the exported file. Click the **Finish** button. You will be redirected back to **Site manager** -> **Sites**.

Step 3 Export progress Objects are being exported.	
The site has been exported to file c:\Inetpub\wwwroot\KenticoCMS\CMSSiteUtils\Export\export_20091217_1007.zip. The file is being compressed Exporting Web part containers' objects	
Objects are being exported	Cancel Finish

Now you can copy the exported file to the target installation of Kentico CMS, into the **<web** project>\CMSSiteUtils\Import folder and use the Import site or objects wizard described in the Importing a site or objects topic.

5.5.4 Exporting single objects

Some objects can also be exported separately as single object packages. This is useful when you want to quickly export only one or few objects apart from the rest of all other objects.

Single object export is supported for: CSS stylesheets, Document types, E-mail templates, Form controls, Inline controls, Page layouts, Page templates, Web part containers, Web parts, Workflow schemas.

These objects can be found in the corresponding sections in **Site manager -> Development**. You can export an object by clicking the **Export object** (**b**) icon.

Actions	Display name 🔺	Code name
N 🗙 💽	Article	CMS.Article
/ X 📑	Blog	CMS.Blog
N 🗙 📑	Blog month	CMS.BlogMonth

Or the **Export selected** link in case of Page templates and Web parts.

Page templates			
New category			
🖃 🔄 All page templates			
🛓 🔄 Ad-hoc			
🖃 🔄 Articles			
- 🥥 Article list with left menu			
🛛 🥥 Article list with teasers			
🦳 🥥 Article list without teasers			
🥥 🧾 Simple article list			

The following window will appear. Enter the name of the export file (default name will be pre-entered) and click **OK**.

😰 Export single object Webpage Dialog	×
Export object	
You are about to export the object Article list with left menu. Please enter the export package file name.	
File name cms_pagetemplate_cms_articlelistleftmenu_20091217_1015.zip	
Export C	ose
http://localhost/KenticoCMS/CMSModules/ImportExport/SiteMa 🔩 Local intranet Protected Mode: Off	

Now wait while the object is being exported.

Export single object Webpage Dialog	
Export object	
The object Article list with left menu is being exported	
Export Close	
http://localhost/KenticoCMS/CMSModules/ImportExport/SiteMa 💊 Local intranet Protected Mode: Off	

When the exporting is successfully finished, the following message with path to the exported file will be displayed. The **Download object** link below can be used for storing the file into a different location. Click it to open the typical file download dialog of your web browser.

Export single object Webpage Dialog	×
Export object	
The object with name Article list with left menu has been successfully exported to the location /KenticoCMS/CMSSiteUtils/Export/cms_pagetemplate_cms_articlelistleftmenu_20091217_1015.zip. Download object	
	Close
http://localhost/KenticoCMS/CMSModules/ImportExport/SiteMa 🕥 Local intranet Protected Mode: Off	

Finally, close the window by clicking the **Close** button.

5.5.5 Importing a site or objects

After you export some site or objects using the **Export site wizard** or **Export objects wizard**, you can import it using the **Import site or objects wizard**. Before you start the wizard, you need to copy your exported packages into the **<web project>\CMSSiteUtils\Import** folder.

Importing a site

Go to Site Manager -> Sites and click Import site or objects.



In the first step, a list of **Import packages** located in *<web project>\CMSSiteUtils\Import* is displayed. If you want to add an import package to the folder, do it and click the **Refresh** ([®]) link. The new package will be displayed in the list.

Using the two radio buttons below, you can determine if duplicate items will also be preselected or if only new items will be selected for import in the next step.

Choose to import the appropriate package and click the **Next** button.

Step 1 Import type Please select package to be imported and type of the import	rt.
Import packages: cms_pagetemplate_cms_articlelistleftmenu_20091217_1015.zip export_20091217_1002.zip export_20091217_1004.zip export_20091217_1006.zip export_20091217_1007.zip	
 Preselect all items Preselect only new items 	,
	Next>

Step 2 will be displayed only when you are importing a site package. In case that you are importing a package containing only global objects, Step 3 will be displayed instead.

You have the following two options in Step 2:

- **Import a new site** when chosen, a new site will be created based on the contents of the package; you have to enter the site's display name, code name and domain name
- Import objects into an existing site when chosen, contents of the package will be imported into the site chosen by the check-box below

Click the **Next** button to proceed to the next step.

Step 2	Site details Please enter the site code name, display name and doma	ain or select existing site.	
 Import a new site Site display name: Site code name: Domain name: Import objects into a Select site: 	Corporate Site CorporateSite localhost an existing site Corporate Site ASPX		
			< Previous Next >

In **Step 3**, you can select which of the objects from the package will be imported. The tree on the left represents object categories. These reflect the sections of the administration interface under that the objects can be found. By selecting a category, a set of check boxes appears in the right part of the screen, letting you select which objects will be imported. Objects that already exist on the target server are marked with *. If you leave the check-box of such object checked, this existing object will be overwritten with the newly imported one.

If you select the root of the tree (**Import objects**), a number of global choices will be offered to you. The **Global selection** section allows you to select all, only new or no objects at all. You can also load the default selection, so that all selection changes you've done will be rolled back. The Import settings section contains other basic import settings:

- Update site definition displayed only when importing to an existing site; if enabled, all settings stored as a part of the site object will be updated with those contained in the package; these settings are contained in the Site\cms_site.xml file inside the export package
- Assign all objects to the imported site (recommended) if checked, all imported site-related objects will be assigned to the imported site
- Run the site after import if checked, the imported site will be run after the import process finishes
- Delete incomplete site when import fails if checked, incompletely imported site will be deleted when the import process fails
- Import files (recommended) some objects in the database are linked with physical files in the file system; if you check this check-box, such files contained in the package will be imported too
- Overwrite system queries if checked, system queries will be overwritten by those contained in the package
- Do not import objects where parent object is missing if checked, child objects whose parent objects are not found will be skipped and the import process will continue
- Import tasks (recommend) if checked, delete tasks (incremental deployment) included in the

package will be performed



Overwrite system queries

This option is displayed only when importing from version older than the current one; if checked, all queries from the package will be imported and will overwrite the current ones; if the package contains your own **custom queries** that you added to the system, it is necessary to have this option enabled.



The following categories contain extra options to be set:

Documents

- **Import new documents** if checked, documents will be imported (when importing into an existing site, only new documents will be imported)
- Import document relationships if checked, document relationships will be imported
- Import document level permissions if checked, document security settings made in CMSDesk will be imported
- Import blog comments if checked, blog comments will be imported

Please note



When importing into an existing site, only new documents can be imported. Modified documents that are already present on the target server will not be overwritten.

BizForms

• Import BizForms data - if checked, BizForms data included in the package will be imported together with the BizForms

Forums

• Import forum posts - if checked, forum posts included in the package will be imported together with the forums

Message boards

• **Import board messages** - if checked, board messages included in the package will be imported together with the message boards

Media libraries

- Import media files if checked, media files (stored in database) included in the package will be imported together with the media libraries
- **Import physical files** if checked, physical files (stored in the file system) included in the package will be imported together with the media libraries

If you have the "Log export tasks" option enabled in Site Manager -> Settings -> Content Staging, a list of tasks may also be displayed under the objects list. This happens when some global objects were deleted (just as the two Web part containers in the screenshot below). If you leave the check-boxes checked, these objects will be deleted on the target server.



An import log will be displayed, showing the progress of importing (you can abort importing by clicking the **Cancel** button any time). Click the **Finish** button. You will be redirected back to **Site manager** -> **Sites**, where the newly imported site will be running.





Please note

Packages from different versions of Kentico CMS have different structure. When importing packages from an older version of Kentico CMS to a newer one, structure of the package is always converted to the newer format automatically.

Please pay special attention when importing **Form user control**, **Inline control** and **Web part** objects from older packages. If possible, avoid overwriting your current objects of these types with objects from older packages, as it may cause incompatibility problems.

Conflicts of running sites

If the imported site uses the same domain name or alias as one of the websites that already run on your server, you may get an error message at the end of the import:

Step 4	Import progress Objects are being imported.		
Import has finish Starting site 'Corp Copying objects f Ensuring missing Processing additi Importing 'Smart a Importing 'Smart a Importing 'Notifica Importing 'Notifica Importing 'Bad we Importing 'Bad we Importing 'Bad we Importing 'Bad we Importing 'Media I Importing 'Media I Importing 'Terum Importing forum '/ Importing forum '/ Importing forum '/ Importing 'Forum Importing 'Report Importing 'Newsle Importing 'Newsle Importing 'Newsle Importing 'Newsle Importing 'Newsle Importing 'E-mail Importing 'E-mail	ed with minor problems. Please see warning mes orate Site 2' les site settings onal actions search indexes' objects tion templates' objects tion gateways' objects corporate Site - sample message board' messages pe boards' objects birary 'Czech cities' file objects birary 'Czech nature' file objects biraries' objects "echnical support' posts innouncements' posts ' objects categories' objects categories' objects titer issues' objects titers' objects titers' objects titers' objects titers' objects titers' objects titers' objects	sages below.	
Objects are be	ing imported		Cancel Finish

WARNING: Failed to start site 'Corporate Site 2', there is already a running site with this domain alias, you need to stop the other site to run this site and run the site manually.

In such case, you need to go to the **Sites** section, change the domain name or domain alias and start the new website manually using the **Start site** button.



project root. Remove the '.export' extensions from the included files and copy them manually to the appropriate location inside your web project folder with respect to the original folder structure.

3. Under the Site folder, the ##SITENAME## folder may be found in the folder structure. If so, please rename this folder to the name of the imported website and copy the content of the Site folder to the root of the web.

5.5.6 Folder structure and import/export

Kentico CMS uses a single folder structure, even if you manage multiple websites in a single installation. The following list describes the main folders and how they are affected during the import and export:

• App_Browsers

- App_Code
- - CMSModules\<module_name> (folders of custom modules)
- - Global (exports with any site, needs to be created manually; the folder is exported if the 'Export global folders' option is checked in Step 2 of the export process)

- <**site code name>** (exports with given site, needs to be created manually;the folder is exported if the 'Export site folders' option is checked in Step 2 of the export process)

- App_Data
- CMSModules\<module_name> (folders of custom modules)
- App_Themes
 - <stylesheet name> (all folders related to stylesheets assigned to or used on the website)
- App_WebReferences
- aspnet_client
- bin
- ClientBin
- CMSAdminControls
- CMSControlsExamples
- CMSDesk
- CMSFormControls (all form controls selected in Step 2 of the export process are exported with any site)
- **CMSGlobalFiles** (exports with any website, needs to be created manually; folder is exported if the 'Export global folders' option is checked in Step 2 of the export process)
- CMSImportFiles
- CMSInlineControls (all form controls selected in Step 2 of the export process are exported with any site)
- CMSInstall
- CMSMasterPages
- CMSMessages
- CMSModules
- Forums\Controls\Layouts\Custom (forum custom layouts; exported with any website, needs to be created manually;folder is exported only if the 'Copy forum custom layouts folder' option is checked in Step 2 of the export process)
- <module name> (folders of custom modules)
- CMSPages
- CMSResources
- CMSScripts
- CMSSiteManager
- CMSSiteUtils
- CMSTemplates (all files for selected ASPX page templates are exported with any site, page

templates in other folders are exported as well if they are assigned/used in the given site; whole folder is exported if the 'Export ASPX templates folder' option is checked in Step 2 of the export process)

- CMSWebParts (all web parts selected in Step 2 of the export process are exported with any site, if the web part uses some additional files, they must be placed in the <webpartCodeName>_files folder)
- <site code name> (exports with given site, needs to be created manually or may be created automatically when storing files on the disk; the folder is exported if the 'Export site folders' option is checked in Step 2 of the export process)
 - Files (default folder for storing files if the system is configured for saving files on the disk)

Here's the explanation of colors:

- red system folder, do not make changes or place your files here unless you want to modify the administration interface
- blue folders for custom files, part of the export package
- green folders for custom files, part of the export package, may need to be created manually
- black service folders (import files, import/export)

Export/Import package security

It is highly recommended to disable **Directory Browsing** in IIS for websites on live servers, at least for the **CMSSiteUtils** directory. If enabled, sensitive data from site export/import packages could be accessed directly from the browser, such as for example user credentials.

📬 Internet Information Services (IIS)	Manager	
G S ■ ► DAVIDB-PC ►	Sites Default Web Site KenticoCMS_5.5R2.3996 CMSSiteUtils	😰 🛛 🟠 🔞 -
File View Help		
Connections	Directory Browsing	Actions
 KenticoCMS_5.5R2.3996 App_Browsers App_Code App_Data App_Themes App_Code App_Code App_Code Comparing the second seco	Use this feature to specify the information that displays in a directory listing. Image: I	 Apply Cancel Disable Help Online Help
IntranetPortal	E Features View Content View	
Configuration: "Default Web Site/Kent	ticorivi2'3'347'3AAO/ Civi22iteOfilis, meprooutid	1 .:

5.5.7 Excluding files and folders from export

Files and folders that are exported into the **Files** folder of the export package can be filtered to be excluded from export. This is achieved by adding the following keys into the *AppSettings* section of your site's *web.config* file:

- Excluding folders from export: <add key="CMSExportExcludedFolders" value="test*;cms*" /
- Excluding files from export: <add key="CMSExportExcludedFiles" value="test*;cms*" />

Values of the keys define names of files/folders which will be excluded from export, i.e. will not be exported. Multiple values can be entered separated by semicolons.

You can also use the standard file system mask using the * wildcard, which substitutes any number of characters in the name. No other file system mask wildcards are supported.

.scc files and .svn folders are excluded by default, even if the keys are not entered in the web.config file.

5.5.8 Import/export troubleshooting

5.5.8.1 Configuration on W2008/IIS7

KenticoCMS fully supports **Microsoft Windows Server 2008** and **Internet Information Server 7**. Should you experience difficulties with import/export on IIS7, please go through the following steps:

- 1. Open IIS manager.
- 2. Open Application pools section.
- 3. Select application pool of your site and select Advanced settings... .
- 4. For property Managed Pipeline Mode select Classic instead of Integrated
 - or

You can select **Classic** .NET AppPool for your website.

dva	nced Settings	8 ×
Ξ	(General)	A
	.NET Framework Version	v2.0
	Enable 32-Bit Applications	False
	Managed Pipeline Mode	Classic 🗨 📼
	Name	DefaultApprol
	Queue Length	1000
	Start Automatically	True
Ξ	CPU	
	Limit	0
	Limit Action	NoAction
	Limit Interval (minutes)	5
	Processor Affinity Enabled	False

5.6 Deleting sites

You can delete sites in the system in Site Manager -> Sites.

1. Clicking the **Delete** (X) icon of the site that you want to delete.



- 2. In the Site deletion confirmation dialog, you can select the following options:
- Delete document attachments physical files if checked, document attachment files stored in the file system will be deleted; these files are stored in the <web project>\<site name>\files folder
- Delete meta files physical files if checked, meta files stored in the file system will be deleted; these files are stored in the <web project>\<site name>\metafiles folder
- Delete media files physical files if checked, physical files stored in media libraries will be deleted; these files are stored in the <web project>\<site name>\media folder

Make the selection and click **Yes** to continue deleting the site.

Site deletion confirmation	
Are you sure you want to delete site 'Corporate Site'?	
	Yes No

3. A log will be displayed, showing you the progress of site deletion. When the process finishes, click **OK**. You will be redirected back to **Site Manager -> Sites**, where the deleted site will not be listed.

Site 'Corporate Site' is being deleted	
Site 'Corporate Site' has been successfully deleted.	Ĩ
Deleting site meta files folder Deleting site media files folder Deleting site attachments folder Deleting other site objects Deleting document /Images' (en-US)	
Deleting document '/Products' (en-us) Deleting document '/Events' (en-US) Deleting document '/Examples' (en-US) Deleting document '/Kamples' (en-US) Deleting document '/Wiki' (en-US)	
Deleting document // orums' (en-US) Deleting document // Company' (en-US) Deleting document // Partners' (en-US) Deleting document // News' (en-US) Deleting document // Home' (en-US) Deleting document // Home' (en-US)	
	ОК

5.7 Creating web templates

In case that you want to use your current site created with Kentico CMS as a web template, so that you can use it a a starting point for developing new sites, you have to take the following steps:

1. Export your site. For a step-by-step tutorial on how to export a site, please refer to the Exporting a site chapter of this guide.

2. Go to **<web project>\App_Data\Templates**. As you can see, this is the folder where all the default templates, such as Community or Corporate site, are stored. Create a new folder with the name of your new page template. Then create one sub-folder under the newly created folder and give it the name **Data**



- 3. Extract the content of your export package into the Data folder.
- 4. Go to Site Manager -> Development -> Web templates and click the New web template link.

Web templates				
New web template				
Actions	Web template name			
N 🗙 🕯 🦊	Corporate Site			
🥒 💥 🕆 🦊	Corporate Site ASPX			
N 🗙 🕆 🦊	E-commerce Site			
N 🗙 🕆 🦊	Personal Site			

- 5. Enter the following details:
- Web template display name name of the web template displayed in the administration interface
- Web template code name name of the web template used in code
- Web template folder name path to the folder where you have extracted the content of the export package; ~\App_Data\Templates\<your folder>
- Web template description text describing your new web template
- License editions editions of Kentico CMS in that this web template will be available; check all for full availability

and click **OK**. Your new web template should now be present in the list.

5.8 License management

Kentico CMS requires an appropriate license key for every domain you use. The licenses can be managed in **Site Manager -> Licenses**:

Kentico CMS Site Manager	Sites Admi	nistration Settings	Development	Licenses Support		
Licenses						
New license	lomain <u>s</u>					
		_				
Actions License domain -	License expirat	ion License editio	n License pack	ages Web farm se	rvers	
🗟 💢 127.0.0.1	1/13/2010	Ultimate		Unlimited		
🗟 💢 🛛 localhost	Full license	Ultimate	ECM;SCN;AD	V 1		

The list displays the information about licensed domain, expiration and edition. When you get full or trial key for a particular domain, you need to click **New license** (a) and enter the full text of the key into the **License key** field.

You can also use the **Export list of domains** (i) link to export your domains. The export package will be saved in ~*CMSSiteUtils\Export* and can be used to import the licenses on another instance of Kentico CMS.

How licensing works

If you're running website on domain example.com, you need a single license key that will also work for:

- http://example.com
- https://example.com
- http://www.example.com
- https://www.example.com
- http://localhost
- http://127.0.0.1

If you use a domain alias (different domain name that points to the same website), such as *example1*. *com* or *example.net*, you need extra license keys for these domain aliases. Please ask <u>Kentico support</u> for generating the additional keys (they are free of charge if you already own a license for the main domain).

5.9 Managing site settings

Most of the site settings can be configured in Site Manager -> Settings section.

Kentico CMS Site Manager Sites A	Administration Settings Development Licens	es Support	Switch to CMS Desk	User: Global Administrator v5.0.	.3629
Site: Corporate Site	Web site				
Corporate Site Settings Settings Content management Files Membership Content management Generation Key and SEO Output filter System Computing Avatars Key Bad words Blogs Souther staging Forums Media libraries Save & Reset these settings to default Cache content (minutes) Cache images (minutes) Cache page info (minutes) Combine with default culture Combine with default culture Combine files with default culture Default alias path Default culture of the content Page description prefix Page title format Page title prefix Page not found for non-published documents Page not found URL Exclude document types from SQL search Exclude documents from SQL search Control element	2 10 2 10 2 10 2 10 2 10 2 10 2 10 2 10 2 10 2 10 2 Image: Composition of the states 2 [% 2 [% 3 Corporate Site 3 Image: Composition of the state state 4 [% 5 [% 6 [% 6 [% 7 [SpecialPages/% 6 [m]	Select	Inherit from global s Inherit from global s	settings settings settings settings settings settings settings settings settings settings settings settings settings settings settings settings settings settings settings	
	Export these settings				

There are two basic types of settings:

- Global such settings apply to all sites.
- Site-specific such settings apply to the particular site and they override the global settings values.

If you want to inherit value from the global settings, you need to check the "inherit from global settings" button and click Save.

Tip: If you mouse-over the name of the settings key, you will see the description of the key.

5.10 Configuring multiple web sites

Kentico CMS allows you to run multiple websites from a single installation (code base) and database. All websites run as a single website in IIS. The following tutorial explains how to set up multiple websites on Windows XP and Windows Server 2003.

We will configure two websites:

- mysite.com
- mysite2.com

Configuring multiple sites in Kentico CMS (common for all operating systems)

This part is common for all operating systems.

- 1. Create two websites in **Site Manager -> Sites** you can either import your existing websites or you can create new websites using the New site wizard.
- 2. Edit the properties of each website in **Site Manager -> Sites** and set the **Site domain name** value of the each website to the appropriate domain (without www prefix and without http:// protocol).
- 3. Make sure both sites are running. You can check this in the Site list, in the Status column.
- 4. Make sure you have valid license keys for both domains in Site Manager -> Licenses.



Configuring multiple sites on Windows Server 2003

Open Start -> Administrative tools -> Microsoft Internet Information Services (IIS) Manager, go to websites section and if the website does not exist yet, create it.

🐚 Internet Information Service	es (IIS) Manager			
🐚 <u>Fi</u> le <u>A</u> ction <u>V</u> iew <u>W</u> indow	Help			_ 8 ×
	😫 🖳 🕨 🔲 💷			
Internet Information Services DELI (local computer) FTP Sites Application Pools Web Sites Microsoft SharePoi RootSite_8080 (Stop) RootSite_80 (Stop) Web.com Computer Service Extension Default SMTP Virtual Se	Description Default Web Site Microsoft SharePoint Administ RootSite_8080 (Stopped) Www.mycms.com RootSite_80 (Stopped) kent.com	Identifier 1 2 2057276146 606884867 65224925 1272501008	State Running Stopped Running Stopped Running	Host header value I * * www.mycms.com * kent.com *
	•			<u> </u>

Right-click **websites** and choose **New -> website...** The website Creation Wizard starts. Enter the site descriptive name, such as **mysite.com**:

Web Site Creation Wizard			×
Web Site Description Describe the Web site to help administrate	ors identify it.		×.
Type a description of the Web site.			
Description:			
mysite.com	_		
,			
	< <u>B</u> ack	Next >	Cancel

Click Next. Enter the Host header for this website as mysite.com:

Web Site Creation Wizard
IP Address and Port Settings Specify an IP address, port setting, and host header for the new Web site.
Enter the IP address to use for this Web site:
ICP port this Web site should use (Default: 80):
Host header for this Web site (Default: None): mysite.com
For more information, read the IIS product documentation.
< <u>B</u> ack <u>N</u> ext > Cancel

Click **Next**. Select the disk path where the root of your website is placed. This must be the folder where web.config file is placed.

Web Site Creation Wizard	×
Web Site Home Directory The home directory is the root of your Web content subdirectories.	
Enter the path to your home directory.	
Path:	
C:_Test\mysite_com	B <u>r</u> owse
☑ <u>A</u> llow anonymous access to this Web site	
< <u>B</u> ack	Cancel

Click Next. In the next step, enable the Read and Run scripts boxes.

Web Site Creation Wizard
Web Site Access Permissions Set the access permissions for this Web site.
Allow the following permissions:
✓ <u>B</u> ead
Run scripts (such as ASP)
<u>Execute</u> (such as ISAPI applications or CGI)
☐ <u>W</u> rite
E Browse
To complete the wizard, click Next .
< <u>B</u> ack Cancel

Click **Next**. The wizard is finished. Click **Finish**. Now we need to add the other domain name to the list of URLs hosted by this website. Right-click the newly created website and display website properties. On the **website** tab, click **Advanced...**

mysite.com Properties	;					?	'
Directory Security BITS Server Exten	, j	HT ASI	TP Headers P.NET	3	Cu Server Exte	stom Errors ensions 2002	
Web Site Perfo	rmance	ISAPI	Filters	Home	Directory	Documents	s
Web site identification De <u>s</u> cription:	n mysite.c	com assigned)	·			dvanced]	
ICP port:	80		SS <u>L</u> po	ort:			
Connections Connection timeout	eep-Alives	120	seconds				
✓ Enable logging Active log format:							
W3C Extended I	.og File Fo	rmat	•	<u>P</u> ro	perties		
	0	эк	Cance		Apply	Help	

Now you need to add another host header value for your second domain:
Default 80 mysite.com	P address	TCP port	Host header v	alue
Add Remove Edit Itiple SSL identities for this Web site SSL port address SSL port	Default	80	mysite.com	
Add Remove Edit Itiple SSL identities for this Web site SSL port address SSL port				
Add Remove Edit Itiple S5L identities for this Web site SSL port P address SSL port				
Add Remove Edit Itiple SSL identities for this Web site				
tiple SSL identities for this Web site address SSL port	ſ	Add	Demove	Edit
Paddress SSL port		<u></u>	Nemeve	Eaterry
Addus Remove Edit.	ltipla GGL idaptitia	c For this Wab site	<u>Temove</u>	Fairw
Add Remove Edit	ltiple SSL identitie	s for this Web site		
Add Remove Edit	ltiple SSL identitie P address	s for this Web site		SSL port
Add Remove Edit	ltiple SSL identitie P address	s for this Web site		SSL port
Add Remove Edit	ultiple SSL identitie P address	s for this Web site		SSL port
Add Remove Edit	ultiple SSL identitie P address	s for this Web site		SSL port
Tabut trailing patent	utiple SSL identitie P address	s for this Web site		SSL port
	ltiple SSL identitie P address	s for this Web site	Remove	SSL port

Click the top Add... button and enter the appropriate values. The standard HTTP port is 80:

A	dd/Edit Web Site Ide	ntification 🛛 🗙
	Identification	
	IP address:	(All Unassigned)
	TCP p <u>o</u> rt:	80
	Ho <u>s</u> t Header value:	mysite2.com
	OK]	Cancel <u>H</u> elp

You need to repeat this also for www.* alternatives of your website:

juitiple identities ro	r this web site		
IP address	TCP por	rt Host header	value
ğ Default	80	mysite.com	
ğ Default	80	mysite2.com	
ğ Default	80	www.mysite.	com
🕻 Default	80	www.mysite2	.com
[<u>A</u> dd	Remove	<u>E</u> dit
Igltiple SSL identitie	<u>A</u> dd	<u>R</u> emove	Edit
Iultiple SSL identitie	Add	<u>R</u> emove	Edit

Click **OK** on all dialogs.

Please note: You may also need to configure the website for ASP.NET 2.0 in website Properties, on the **ASP.NET** tab. IIS 6 may display the **ASP.NET version as 2.0.50727** even if you have **ASP.NET 3.5** or higher installed and registered:

siteleoini i operties			?
Directory Security	HTTP Headers	Cus	tom Errors
Web Site Performance	ISAPI Filters H	ome Directory	Documents
BITS Server Extension		Server Exter	nsions 2002
Microsoft			
ASPne			
ASP.NET version:	2.0.50727		-
Virtual path:	mysite.com		
	· · · · · · · · · · · · · · · · · · ·		
File location:	C/_Test\musite	com/web.config.	
File location:	C:_Test\mysite_	_com\web.config	
File location: File creation date:	C:_Test\mysite_	_com\web.config 7:51 PM	
File location: File creation date: File last modified:	C:_Test\mysite_ 10/26/2006 1:07 10/26/2006 1:10	_com\web.config 7:51 PM 0:46 PM	
File location: File creation date: File last modified:	C:_Test\mysite_ 10/26/2006 1:07 10/26/2006 1:10	_com\web.config 7:51 PM 0:46 PM	
File location: File creation date: File last modified: Edit <u>G</u> lobal Configuration	C:_Test\mysite_ 10/26/2006 1:07 10/26/2006 1:10	_com\web.config 7:51 PM 0:46 PM _Edit Configuratio	n
File location: File creation date: File last modified: Edit <u>G</u> lobal Configuration	C:_Test\mysite_ 10/26/2006 1:07 10/26/2006 1:10	_com\web.config 7:51 PM 0:46 PM _Edit Configuratio	n

Your new website is now configured to host all incoming requests for domains mysite.com and mysite2.

com (or other domains depending on your particular situation). You may need to ask your network administrator to redirect the domain in the DNS records to your website.

If you do not own the domain, you can test it by modifying the C:\WINDOWS\system32\drivers\etc\hosts file in notepad and adding the following lines to the end of the file:

127.0.0.1mysite.com127.0.0.1www.mysite.com127.0.0.1mysite2.com127.0.0.1www.mysite2.com

Save the file. Please note: these are client settings, which means they will work only if you use web browser on your server.

Now, when you go to *http://www.mysite.com* and to *http://www.mysite2.com* (or your own domain names), you should see two different websites.

Configuring multiple sites on Windows Vista / Server 2008

Go to Start -> Control Panel -> Administrative tools -> Microsoft Internet Information Services (IIS) Manager. In the tree view, right click Sites and choose Add website....

	IS Sites				- U ×
File View Help					
File View Help Connections Start Page MORFEUS (OFFICE\pe Application Pools Consection Application Pools Consection Consection Add Web Si Consection Switch to Co Consection Switch to Co Switch Sites	• M Ga 1 3 5 4 6 7 2	Status Status Started (ht Started (http) Stopped (h Started (http) Started (http) Stopped (h	Group by: No Grouping Finding *:80 (http),808;* (net.tcp),* (net.pipe; jurajo on 192.168.3.12:8888 (http) *:888 (http) 192.168.3.12:80 (http) www.mycmscom.com on 192.168.3.12: 192.168.3.12:666 (http) *:80 (http),mycms.com on *:80 (http),v	Actions Add Web Site Set Web Site Defaults Add Web Site Defaults Add Web Site Set Web Site Defaults	
Pearly	Features View	Content View			<u>6</u> =

Enter the following details:

- Site name: mysite.com
- **Physical path**: disk path to the location where your website is placed; this must be the location where the *web.config* file is stored
- Host name: www.mysite.com

Click OK.

mysite.com	Select
1	
gs	
Port:	
ed 💽 80	
or marketing.contoso.com	
	_
	gs gs ed or marketing.contoso.com

The site should now appear in the tree, under the **Sites** node. Right click the site and choose **Edit bindings** (or **Bindings** on Vista).

	• 😔	MORFEU	S 🕨 Sites 🕨	mysite.com 🕨	8				
File View	Help								
onnections				ite com k	lome				Actions
	183		S mik	SILE COITT I	IOITIC				🔊 Explore
Start Page MORFFUS	(OFFIC	Finetro	Group by: Ar	ea					Edit Permissions
	ation Po	ols	ASP.NET					-	Edit Site
Sites	Eault W	/eb Site				TEN		-	Bindings
🗄 🌄 jur	ajo	O Dice		2		(E)		48	Basic Settings
🗄 😜 mi	thalv CMS		.NET Compilation	.NET Globalization	.NET Profile	.NET Roles	.NET Trust Levels	.NET Users	View Applications
⊕ 💮 my	cmscor	n	<u> </u>				0	6	view virtual Directories
🗄 😔 rol	berts		¥=	ab	1 A		195	**	Manage Web Site
E 😜 💽	scingsio /s <mark>ite_co</mark>	m	Application	Connection tripos	Machine Key	Pages and Controls	Providers	Session State	Kestart
	الغ	Explore		- in ige					Stop
		Edit Perr	nissions						Browse Web Site
		Add App Add Virtu	lication Jal Directory						Browse www.mysite.com on *:8 (http)
		Edit Pind	inac						Advanced Settings
									Configure
		Manage	Web Site		A				Failed Request Tracing
		Refresh		orization		Default	Directory	Error Pages	Limits
	×	Remove		Rules		Document	Browsing		🕜 Help
		Rename			1. h.	meren Da		~ _	Online Help
	R	Switch to	Content View	Content	View				an.

The site bindings dialog appears. Click Add....

Туре	Host Name	Port	IP Address	Bind	Add
nttp	www.mysite.com	80	*		Edit
					Remove
1					Browse
					Close

Enter the domain name of your second website (*www.mysite2.com* in this case) into the **Host name** field and click **OK**. Repeat this for both of the sites without the '*www.*' prefix.

ALC:		territ in		
nttp		<u> </u>	80	
lost name	:			
www.mysi	e2.com			
Section Section	www.contoso.com.or.ma	arketing.contoso.com		
:xample: v	in the second se			
:xample: \		-		

The result should look like the following screenshot.

Туре	Host Name	Port	IP Address	Bind	Add
http	www.mysite.com	80	*		13950
http	mysite2.com	80	*		Edit
http	www.mysite2.com	80	*	2	Domouo
http	mysite.com	80	*		Remove
•				Þ	Browse

Your new website is now configured to host all incoming requests for domains mysite.com and mysite2. com (or other domains depending on your particular situation). You may need to ask your network administrator to redirect the domain in the DNS records to your website.

If you do not own the domain, you can test it by modifying the C:\WINDOWS\system32\drivers\etc\hosts file in notepad and adding the following lines to the end of the file:

127.0.0.1	mysite.com
127.0.0.1	www.mysite.com
127.0.0.1	mysite2.com
127.0.0.1	www.mysite2.com

Save the file.

Please note: these are client settings, which means they will work only if you use web browser on your server.

Now, when you go to http://www.mysite.com and to http://www.mysite2.com (or your own domain names), you should see two different websites.

Configuring mulitple sites on Windows XP

On Windows XP, the support of multiple sites and domains in IIS is limited, so we will use a single IIS website and define "virtual" domains in our hosts file:

Open the c:\WINDOWS\system32\drivers\etc\hosts file in notepad and add the following lines to the end of the file:

127.0.0.1	mysite.com
127.0.0.1	www.mysite.com
127.0.0.1	mysite2.com
127.0.0.1	www.mysite2.com

Save the file. Please note: these are client settings, which means they will work only if you use web browser on your local computer.

Go to http://www.mysite.com or http://www.mysite.com/kenticocms (where kenticocms is the name of the virtual directory with Kentico CMS website) and to http://www.mysite2.com. You should see two different websites.

	_	
	26	- 4
	-	- 1

Multiple websites on a single domain (in subfolders)

If you cannot use (for some reason) multiple domain names, you can configure Kentico CMS so that it differentiates websites by subfolder (virtual directory). Read chapter <u>Multiple websites on a single domain (in subfolders)</u> for more details.



Using multiple websites on Windows XP

Windows XP allows you to run only one IIS website at a time. If you need to develop multiple websites (multiple Kentico CMS instances) in the root folder, you may need to create additional websites and switch between them using the IISAdmin utility that can be downloaded at <u>http://jetstat.com/iisadmin/download.asp</u>.

5.11 Multiple web sites on a single domain (in subfolders)

In some cases, you may want to run multiple websites in separate subfolders, without getting a new domain.

In this case, you can configure the domain names (or domain aliases) of the websites like in the following example:

Example

1. Install Kentico CMS to the following folder: C:\inetpub\wwwroot\mykenticofolder. Make sure the name of the folder is different from the name in the URL that you will later enter in IIS. In the same step of the installer, choose This is an installation to the root (do not create virtual directory). When the setup finishes, the link to your new website will not work as the virtual directory is not created in IIS.

2. Open IIS console (Control Panels -> Administrative Tools -> Internet Information Services) and create a new virtual directory named **mykenticoweb**. Assign it to a **non-website-root folder** on your disk. Ideally, create an empty folder on the disk for this purpose (e.g. c:\empty).

3. Create two new virtual sub-directories under mykenticoweb called web1 and web2. Both of them

need to be assigned to the installation folder on the disk, which is C: \inetpub\wwwroot\mykenticofolder in this example.

💐 Internet Information Services			
<u> Eile A</u> ction <u>V</u> iew <u>H</u> elp			
		Ш	
🍓 Internet Information Services	^	Name	Path
🖻 🖳 💭 PETRPE (local computer)		🛞 web1	C:\Inetpub\wwwroot\mykenticofolder
🖃 🛄 Web Sites		🛞 web2	C:\Inetpub\wwwroot\mykenticofolder
E Brault Web Site			
E Printers			
mykenticoweb			
🐨 🛞 web1			
🗄 💑 web2			
🕀 🛞 KenticoCMS_0611			
🗉 🕵 KenticoCMS			
🕀 🎇 KenticoCM5_40			
KenticoCMS_0210			
H 40 dotnetgroup11			
🗄 🛞 40_dotnetgroup12			
🕀 🛞 40_dotnetgroup			
🗊 🛞 40_dotnetgroup111			
KenticoCMS_41_0313			
KenticoCMS_testhosting			
🕀 🎇 testuris			

4. Now open your browser and type in either http://localhost/mykenticoweb/web1 or http://localhost/ mykenticoweb/web2. <u>Kentico CMS Database setup</u> appears. Continue through the setup as usual and install the first site.

- 5. When the setup finishes, go to Site Manager -> Sites and install the second site.
- 6. Configure website 1 domain name as: localhost/mykenticoweb/web1
- 7. Configure website 2 domain name as: localhost/mykenticoweb/web2

Now when you go to http://localhost/mykenticoweb/web1, you will see website 1. If you go to http://localhost/mykenticoweb/web2, you will see website 2.

5.12 Configuring nested web sites

In the following example, you will learn how to set up two nested websites. It should be possible to achieve any level of nesting in case that the following steps are complied with.

1. Install two projects into two independent, not overlapping folders. Choose folder names that won't be the same as the names in the URL to prevent later colision when seting up the IIS. The installation folders may be for example like this:

- Inetpub/wwwroot/NestedWeb/Web1 (first website from Web installer)
- Inetpub/wwwroot/NestedWeb/Web2 (second website from Web installer)

This means that you have two completely independent projects, as you can see in the screenshot below:

~								×
🕒 🔾 🗢 📙 « Local Disk (C:) 🕨 inet	pub 🕨 www.root	 Nested 	Neb ▶	- - + + + + + + + + + +	Search Neste	:dWeb		۲
Organize 👻 Include in library 👻	Share with 🔻	Burn	New folder			:	•	?
KenticoCMS_vs2005	Name	^		Date r	nodified	Туре		Size
NestedWeb	🌗 Web1			10/29/	2010 3:54 PM	File folder		
▷ 🔐 Web1 ▲ 🚹 Web2	🌗 Web2			10/29/	2010 3:56 PM	File folder		
App_Browsers								
🛛 🐌 App_Code 👘								
⊳ 퉲 App_Data 🛛 🗉								
D App_Themes								
App_WebReferences								
🐌 Bin								
📗 ClientBin								
CMSAdminControls								
Description of the second s								
CMSDesk								
CMSFormControls								
CMSHelp								
CMSImportFiles								
CMSInlineControls +	•							
2 items								

2. Open IIS management console and create two applications under the Default website:

- [Default website]/KenticoCMS1 (pointing to physical directory Web1)
- [Default website]/KenticoCMS1/KenticoCMS2 (child directory pointing to physical directory Web2)

Like this, you have two independent projects configured as nested only in the IIS.



3. The last step is to avoid duplicate module and handler definition keys in the two projects' *web.config* files. To achieve this, open the nested application's (*Web2*) *web.config* file and remove all module and handler definitions from the two sections highlighted in the following code extract.

In case that you needed any additional custom keys in these sections, please ensure that they are not duplicate in the two *web.config* files, i.e. that they are only added in one of the two files.

```
<system.webServer>
<validation validateIntegratedModeConfiguration="false" />
<modules>
// remove or comment out all keys in this section
</modules>
<handlers>
// remove or comment out all keys in this section
</handlers>
```



4. The websites are now accessible via nested URLs as you can see in the screenshot below. The websites can be configured independently without experiencing any issues.

Additional configuration for Content staging

You may come to the point where you want to set up <u>Content staging</u> from one of these sites to another. Content staging has some sections in the *web.config* that collide. Config files are inherited within the IIS virtual directories structure (even when the projects are not nested on the file system), but you cannot have the same section of *web.config* twice in the config file.

So if we configure staging from the **KenticoCMS1** site to the **KenticoCMS1/KenticoCMS2** site (see details on how to configure the staging <u>here</u>), the inner project may have issues with the configuration. You would get an error like this:

Sy Sy	nchronization lo	g		
ask: Upd	ate document Service	S	Clea	r log
Actions	Time •	Server	Result	
×	6/18/2009 2:22:26 PM	Kentico CMS 2	Synchronization client error: Exception occured: System.Web.Services.Protocols.SoapHeaderException: S unavailable, please try later —> System.ApplicationException: WSE042: The service pipeline could not be created> System.Configuration ScofingurationErrorsException: WSE032: There was an error loading th microsoft web.services3 configuration section> System.Configuration.ConfigurationErrorsException: T entry 'UsernameToken' has already been added. at System.Configuration.BaseConfigurationRecord.EvaluateOne(String]] keys, SectionInput input, Boolean s Trusted, Factor/Record factor/Record, SectionRecord excluate(Factor/Record, Object parentResult) at System.Configuration.BaseConfigurationRecord.Evaluate(Factor/Record factor/Record, SectionRecord SectionRecord, Object parentResult, Boolean getLkg, Boolean getRuntimeObject, Object& result, Object& resultRuntimeObject) at System.Configuration.BaseConfigurationRecord.GetSectionRecursive(String con Boolean getLkg, Boolean checkPermission, Boolean getRuntimeObject, Boolean requestIsHere, Object& configKey, Boolean checkPermission, Boolean getRuntimeObject, Boolean requestIsHere, Object& System.Configuration.BaseConfigurationBaseConfigurationRecord.GetSectionRecursive(String configKey, Boolean getLkg, Boolean checkPermission, Boolean getRuntimeObject, Boolean requestIsHere, Object& resultRuntimeObject) at System.Configuration.BaseConfigurationRecord.GetSection(String configKey, Boolean resultRuntimeObject) at System.Configuration.BaseConfigurationRecord.GetSection(String configKey) at System.Configuration.BaseConfigurationRecord.GetSection(String configKey, Boo Putlicrosoft.Web.Services3.Configuration.WebServicesConfiguration.get_Current() End of inner exception race at Microsoft.Web.Services3.Configuration.WebServicesConfiguration.get_Current() at Microsoft.Web.Services3.Configuration.WebServicesConfiguration.get_Ourput) at Microsoft.Web.Services3.Configuration.WebServicesConfiguration.get_MessoajingConfiguration() at Microsoft.Web.Services3.Configura	erver e he figKey resul tring re, olean a stack

The imporant part of the error message is "The username token has already been added", that means that some of the configuration is duplicate.

User name token authentication is defined in the policy file which is referenced from the **<microsoft**. **web.services3>** section, so **remove the whole <microsoft.web.services3>** section from the **web**. **config** of the **inner project (Web2)**. Do not remove it from the Web1 (outer) project since this configuration will be used for both websites. After doing this, Content staging should work flawlessly between the sites.

5.13 API Examples

You can use Kentico CMS API to create new websites or update and delete existing ones. To create a new website, you need to import some of the website templates (typically the Blank website template stored in folder App_Data\Templates\BlankSite.

You can find API examples in the following chapters:

- Creating a new website
- Import and export of a website
- Getting website data
- Updating website properties
- Starting and stopping websites
- Deleting websites.



Website settings

6 Website settings

302

6.1 Settings overview

Kentico CMS settings are stored in two places:

- Site settings are used for site configuration. These settings are stored in the database.
- System settings are used for low-level configuration of the CMS system. These settings are stored in the *web.config* file. You can find more details in <u>Appendix C Web.config parameters</u>.

Site settings

The site settings are stored in the Kentico CMS database. You can configure them in **Site Manager -> Settings**. There are two types of settings:

- Global applied on all sites in the system
- Site-specific you can edit them after you choose the relevant website in the drop-down list in the upper left corner

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses
Site: (global)	•	🔵 Web	site		
(global) Community Site Corporate Site		Save	Reset	these settings to d	lefault

The site-specific settings may inherit global values:

Site time zone	?	(GMT-10.00) Hawaii	Inherit from global settings
No-reply e-mail address	?	no-reply@mydomainXY.com	🗷 Inherit from global settings

Settings are organized in the following categories:

- Web site general website settings
- Content management settings related to content management of your website
- · Files settings related to the way files are handled by the system; more info here
- Membership settings related to user accounts, on-line users monitoring, etc.
- Security settings related to passwords, permissions, secured protocols, banned IPs etc.
- URLs and SEO settings related to URLs and SEO, URL extensions, forbidden characters in URLs, permanent redirection etc.
- Output filter settings of how the output HTML code is modified before it is sent to the browser; more info here
- **System** general system settings, including time zones, UI, DB, event log, notification e-mails, etc.
- E-mails settings related to the e-mail engine, used SMTP server, etc.; more info here
- Avatars settings related to user and group avatar images and their resizing; more info here
- Bad words settings related to the Bad words module; more info here
- Blogs settings related to the Blogs module; more info here
- Booking system settings of the booking system notification e-mails
- Community settings related to the community features groups, members, activity points, etc.

- MetaWeblog API settings related to MetaWeblog API; more info here
- Content staging settings related to the Content staging module; more info here
- Forums settings related to the Forums module; more info here
- Media libraries settings related to the Media libraries module; more info here
- Message boards settings related to the Message boards module; more info here
- Messaging settings related to the Messaging module
- Web analytics settings related to the Web analytics module; more info here
- Windows LiveID settings related to LiveID authentication; more info here
- E-commerce settings related to the E-commerce module; more info in <u>this chapter</u> of the Ecommerce guide
- OpenID setting related to OpenID; more info here.
- **Payment gateway Authorize.NET** settings of the Authorize.NET payment gateway used by the E-commerce module; more info in <u>this chapter</u> of the E-commerce guide
- Facebook Connect settings related to connecting to Facebook; more info here
- Payment gateway PayPal settings of the PayPal payment gateway used by the E-commerce module; more info in <u>this chapter</u> of the E-commerce guide
- · Microsoft SharePoint settings related to LiveID authentication; more info here
- Intranet portal settings related to Intranet portal
- Project management settings related to the Project management module; more info here
- WebDAV setting related to the WebDAV integration module; more info here

You can find more details on particular settings keys when you mouse-over the key name - you will see a pop-up info box that displays the key description. Detailed descriptions can also be found in **Context help**, which can be displayed by clicking the **2** icon at the top right corner of the page.



Development

7 Development

7.1 Overview

This section provides reference on various topics related to website development and system administration. Open the particular sub-chapters in order to get the related topics displayed.

7.2 Web development overview

7.2.1 The role of a web developer

The role of a web developer is described in the following figure:



This figure shows how you develop a website and how roles are split between developers and editors. A typical development process consists of the following steps:

- 1. The developer analyzes client requirements.
- 2. The developer prepares site structure (site map) and web design.
- 3. The developer creates **page templates** for every type of page required on the site (home page, solutions, products, news, etc.)
- 4. The content editor creates new pages they enter text and images into the page templates defined by the developer.

7.2.2 What is a page template

A page template is a predefined look of the page that allows content editors to enter the content. A single page template can be re-used for multiple pages with the same structure and design, but with different content.

The templates allow content editors to focus just on content editing, without the need to take care of page formatting. They also help keep the web design consistent throughout the whole website. The following figure shows how a single page template can be used for multiple pages:



Pages Created Using the Page Template

The <u>following topic</u> describes the two development models for creating such page templates with Kentico CMS.

7.2.3 Portal templates versus ASPX templates

Kentico CMS provides two development models and you can choose which one suits you better:

- **Portal Engine** this model allows you to build websites using a portal engine. It's the recommended way for most developers since it doesn't require programming in Visual Studio. Instead, you can simply build websites using web parts in the **browser-based** user interface.
- ASPX Templates this model can be chosen by advanced ASP.NET developers who prefer to create websites using standard ASP.NET architecture and using standard development tools, such as Visual Studio. This model requires you to be familiar with ASP.NET development and have at least basic programming knowledge of C# or VB.NET.

Both approaches are fully supported and they provide **the same level of flexibility and extensibility**. We recommend that you use the portal engine model, but if you're an advanced .NET developer and do not trust portal engines, you may want to use ASPX templates.

	Portal Engine	ASPX Template
How you work	You build the website using the browser-based interface.	You build ASPX pages in Visual Studio.
	No programming knowledge is required for common tasks.	At least basic programming knowledge of ASP.NET and either C# or VB.NET

The following table compares portal engine and ASPX templates:

		is required.
How you assemble pages	You use built-in or custom web parts that you place into customizable page layouts (HTML code with placeholders for web parts).	You use built-in or custom ASP.NET server controls that are placed on the ASPX pages. You can also use the code behind files - these are standard ASPX pages and they are part of the website project that you can open in Visual Studio. You can also place web parts (which are actually ASCX user controls) on the page templates if the appropriate server control is not available.
Master pages and visual inheritance	Sub-pages inherit the content from the parent pages by default (so called "visual inheritance"). The inheritance can optionally be broken if you want to create a page without parent content.	All page templates may use a master page, which is a standard ASP.NET 2.0 master page. The pages do not inherit content from their parents, they only inherit content from the master page (if it's used).
Custom code integration and extensibility	You can create your own user controls (ASCX) and web parts (ASCX with specific interface) in Visual Studio if you need to integrate some custom functionality. You can add any custom controls and code to the web parts or user controls that you use on your website.	You build standard ASPX pages with codebehind files, which means you can put any custom controls and code onto the page in Visual Studio as you normally would.
Advantages	 Easier and faster to build a website. ASP.NET programming knowledge is not required for common tasks. You can build the whole website very quickly, using only the web browser. 	 Standard ASP.NET architecture. You can use your favorite development tools, such as Visual Studio for all changes.
Disadvantages	Proprietary architecture and development.	Requires ASP.NET programming knowledge.

Is Kentico CMS just another portal engine?

Now you may wonder what the difference between Kentico CMS and DotNetNuke or Rainbow Portal is.

Well, the main difference is the **flexibility**. Kentico CMS gives you full control over:

- site structure
- site navigation
- page layout
- design
- content structure

Also, it's important to explain that Kentico CMS is a **content management system**, not only a portal engine. This means it provides features of advanced CMS systems, such as:

- content repository using a logical tree hierarchy for all types of content see <u>Where is the content</u> <u>stored?</u> for details
- content/design separation
- custom document types with custom fields
- workflow and versioning
- content locking (check-out, check-in)
- multilingual content
- content preview and content staging
- · document-level permissions with permission inheritance
- full-text search in all content
- · document management features for uploaded files

Moreover, Kentico CMS comes with many **professional and flexible built-in modules out-of-the-box**, including:

- Newsletters
- On-line forms
- Forums
- E-commerce
- Content Staging
- Image gallery
- Blogs
- Polls
- Web analytics
- Reporting

It means you do not need to obtain or purchase third-party modules with inconsistent user and programming interfaces, but you get everything from a single source, with complete documentation and support.

7.2.4 Portal engine development model

7.2.4.1 Portal engine overview

Each page in a Kentico CMS website uses some page template. A **page template** consists of a layout with particular web parts and their configuration. The portal engine page templates are physically stored in the database, so you will not find them on the disk.

Design of the page template is defined by the **page layout**, which is a standard HTML code. The HTML code can be used to define two-column, three-column, or virtually any custom layout you can think of.

The page layout contains special markup tags that specify places where developers can place web parts - so called **web part zones**. A web part zone can contain any number of web parts.

A **web part** (also called "servlet", "portlet" or "module" in other solutions) is a piece of code that displays some content or provides some functionality. Technically, web parts are standard ASCX user controls with some predefined programming interface (inherited from *CMSAbstractWebPart*). More information about web parts can be found in the <u>Development -> Web parts</u> chapter.

The following figures show an example of a simple page, its page template, layout, web part zones and web parts:

1) The sample page on the live site

This image shows our sample page on the live site. It displays text on the top, news in the left column and products on the right.



2) The sample page in the editing mode

Here you can see the top region with editable text and the lists of news and products.



3) The page template of the sample page on the Design tab

This is the **Design** mode view of the page template used for our sample page. As you can see, it consists of three web part zones - **zoneTop**, **zoneLeft** and **zoneRight**. The web part zones contain particular web parts.



4) HTML layout of the page template

This image shows the HTML layout of the page template with tags representing web part zones on the top and in the table columns. We are using tables for the layout here, but you can easily use a CSS-based layout - you have full control over the HTML code and CSS styles.



7.2.4.2 Creating a new page template

There are two ways to create a new page template:

- 1. Creating a blank page using an ad-hoc template.
- 2. Cloning an existing page template.

We will start with the first option.

What is an ad-hoc template?



An ad-hoc template is a page template that is used by only one page. An ad-hoc template doesn't have any name. If you want to re-use the template for multiple pages, you need to save it as a named template first.

Creating a blank page using an ad-hoc template

Please note: It's recommended that you use the sample Corporate Site for this example.

1. Go to **CMS Desk -> Content**, click **New** and choose to create a new **Page (menu item)** under the website root.

2. Enter *My test* into the **Page name** field and choose the **Create a blank page** option. Choose **Simple** from the list of layouts and leave the box **Copy this layout to my page template** checked. Click **Save**.



3. The page is now displayed in the tree view and selected. Click the **Design** tab. You will see a page as in the screenshot below.

The green box with **/My test** title displays the current page. As you can see, we are now using an adhoc template that is specific for this page. The yellow box with the **zoneLeft** title displays the web part zone, where web parts can be placed.



4. Click Add web part (+). The Select web part dialog opens. Select the Text/Editable text web part and click OK. This web part allows you to create editable regions where content editors can insert content.



5. The **Web part properties** dialog opens. Enter *Main text* into the **Editable region title** property and click **OK**. The web part is now added to the web part zone:

▼ /My test - page template: ad-hoc	
▼ zoneLeft	
▼ editabletext	

6. Now click the **Page** tab. You will see the page in editing mode. The page now contains your web part which displays the editable region. Enter some text into the region and click **Save**.

Page Design Form Properties	
Save Spell check	
Image: Source Q X Image: Ima	e (# # E = = = % % \$
Sign in to CMS Desk. Sign in to CMS Site Manager. The default account is administra	ator with blank password.
CompanyLogo	Global Administrator (administrator) Sign out Shopping cart My account My wishlist Your shopping cart is empty
	Search for:
Home Mytest Services Products News Partners Company Blogs Forum	s Events Images Wiki Examples
This is my first page based on my first <u>page template</u> .	

7. Click **Live site** in the main toolbar. You will see the live version of the page that is displayed to the visitors:



What you did

You have created a new page based on an ad-hoc page template. The page template defines the page structure and contains the editable text web part which enables content editors to enter text into the page.



Important!

Please, keep in mind that when you create a page based on an ad-hoc page template and later delete the page, the corresponding ad-hoc page template is deleted as well.

7.2.4.3 Re-using an ad-hoc page template

In many cases, you may want to re-use an ad-hoc page template for other pages. In this case, you need to save the ad-hoc template as a new re-usable template.

1. Go to **Content ->** switch to **Edit** mode on the main toolbar -> select your new page created in the previous example -> **Properties -> Template**. You will see a page as in the following screenshot. As you can see, the current page is based on an ad-hoc template.



2. If you want to re-use this page template for some other page, click **Save as new template**. The **Save as new page template** dialog opens. Fill in values as shown in the picture below and click **OK**, then click **Save** on the **Template** dialog.

page template	
Page with single editable region	
SingleEditableRegion	
General	•
Page with single editable region.	*
	-
OK Cancel	
	Page template Page with single editable region SingleEditableRegion General Page with single editable region. OK Cancel

3. Now when you try to create a new page, you will be able to create the page based on this new page template:

Page name:				
💿 Use page template 🔿 Inherit from pare	ent page 🔘 Create a blank	page		
All page templates Articles Blank pages for widgets	Template name:		Sear	ch
·····에 Biogs ····에 Community Site 표··에 Corporate Site ASPX ····에 E-commerce		no image	no image	no image
	Empty	LiveIDUserData	Page with single editable region	Print
Home pages Images Job openings	no image	Search 	Site map 	
	Profile	Search	Site map	
·····································				
Products Templates with editable regio Wiki	Page with single	editable region		
۰ ۱۱۱	Page with single edita	able region.		

Additionally, the template is now added to the content tree at **Site Manager -> Development -> Page templates**, where it can be configured.

What you did

You have converted the previously created ad-hoc page template that was specific only for a single page into a re-usable page template that can be used for any number of pages.

7.2.4.4 Page template scopes

Page template scopes define where a page template can be used. **Important - template scopes are not a security feature!** They only provide a way how to simplify the user experience by not offering too many page templates to the users!

This means that you can limit which page templates will be offered to the users in the page template catalog in a certain location. But when a user creates a page there, they can move it to another location, even to one which is not allowed by the template scope.

Template scopes can be defined on the **Scopes** tab when selecting a page template from the content tree at **Site Manager -> Development -> Page templates**. You have the following two basic options:

- Template can be used on all pages: the use of the page template is not limited and it can be used anywhere
- Template can be used only within following scopes: if selected, the page can be used based on the defined template scopes

If you choose the second of the options mentioned above, UI controls for managing the scopes will be displayed below the line.

Based on the site selected in the **Site** drop-down list, you can display either site-related scopes or global scopes. Site-related scopes are applied only on the selected site, while the **(global scopes)** option indicates that the scopes are valid on all sites in the system.

Using the **\mathbb{F}** New template scope link, you can create new template scopes. Listed scopes can be Edited (\mathbb{A}) or Deleted (\mathbb{A}).

Page template properties	0
Templates Simple article list	
General Sites Scopes Layout Web parts Header Documents	
 Template can be used on all pages Template can be used only within following scopes <u>New template scope</u> 	
Site: Corporate Site	
Actions Starting path - Document type Culture Levels	
🧪 🗱 / Page (menu item) en-US 1, 2	
	Items per page: 25 💌

When creating a new scope or editing an existing one, you can specify the following details, which define where the page template can be used:

- **Starting path**: path in the content tree where the page template can be used; the page template cannot be used outside this path
- **Document type**: the page template can be used only for documents of the specified type

- Culture: the page template can be used only in the specified culture
- Levels: the page can either be used on all levels or only on the selected levels in the content tree

General Sites	S Scopes Layout Web parts Header Documents	
Scopes + / (Corp	rporate Site)	2
Starting path:	/ Select	
Document type:	Page (menu item)	
Culture:	English - United States (en-US)	
Levels:	Allow for all levels	
	Allow only for following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allow only following levels Allowing levels Allow only	
	····· 🗖 Level0	
	Level1	
	Level2	
	Level3	
	Level4	
	Level5	
	Level6	
	Level7	
	OK	

7.2.4.5 Page layouts

A page layout consists of the HTML layout of the page template and web part zones that specify regions where web parts can be placed. You will use page layouts to define the layout and design of your site.

The easiest way to edit a page layout is to switch to the **Design tab** of the page and click the **Edit layout** (\widehat{P}) button at the top-right:

Page Design Form Master page Properties	🗹 Display web part content 🛛 🕜
✓ / - page template: Top logo and menu	
▼ zoneTopInfo	÷
txtTrialInfo Sign in to CMS Desk. Sign in to CMS Site Manager. The descent of the second s	efault account is administrator with blank password.
zoneLogo editableimage Opposition of the second	v zoneTop v languageselectionwithflags (a) v SignOutButton (a) v CurrentUser (administrator) v ShoppingCartMiniPreview (a) Shopping cart My account My wishlist Your shopping cart is empty v SearchBox (a) Search for:
 ▼ zoneMenu ▼ cmsmenu St Services Products News Partners Compare 	ny Blogs Forums Events Images Wiki Examples
 zoneContent 	÷

Page layout	\boxtimes
ave 🔤 Check out	
Check out the layout to file c:\Inetpub\wwwroot\KenticoCMS\CMSTemplateLayouts\cms\toplogoandmenu.ascx to d	edit the layout externally.
Use the following expression to add a new web part zone: <cc1:cmswebpartzone id="zoneTopRight" runat="server"></cc1:cmswebpartzone> (the ID must be unique within page layout)	
Top info	*
<div class="zoneTopInfo"></div>	
<pre><cc1:cmswebpartzone id="zoneTopInfo" runat="server"></cc1:cmswebpartzone></pre>	
Content container	
<div class="mainDiv"></div>	
Logo	
<div class="zoneLogo"></div>	
<cc1:cmswebpartzone id="zoneLogo" runat="server"></cc1:cmswebpartzone>	
Top zone	=
<div class="zoneTop"></div>	-
<pre><cc1:cmswebpartzone id="zoneTop" runat="server"></cc1:cmswebpartzone></pre>	
Menu	
<div class="zoneMenu"></div>	
<pre><cc1:cmswebpartzone id="zoneMenu" runat="server"></cc1:cmswebpartzone></pre>	
Content	
<pre><div class="zoneMainContent"></div></pre>	
<pre><cc1:cmswebpartzone id="zoneContent" runat="server"></cc1:cmswebpartzone></pre>	
<pre><div style="clear:both;line-height:0px;height:0px;"></div></pre>	
Bottom zone	
<pre><div class="zoneBottom"></div></pre>	
<cc1:cmswebpartzone id="zoneBottom" runat="server"></cc1:cmswebpartzone>	
	-

The web part zones are defined by the following tag:

<cc1:CMSWebPartZone ID="xy" runat="server" />

The ID value must be unique within the given layout.

As you can see, the layout code is standard HTML. It means **you have full control over rendered HTML code** and you can choose between table and CSS layout.

	Editing the layout in your favorite editor
2	Editing of HTML code in a plain text area may not be very comfortable. However, you can use the Check out to file button to save the layout code to the disk and open it in your favorite HTML editor.
	Please note: The file is saved on the disk where the web application is running.

Managing pre-defined page layouts

When you are creating a new blank page, you can choose from pre-defined page layouts:

Page name:					
💿 Use page template 🦱	Inherit from parent page 🍥	Create a blank page			
Layout name:			Search		
					-
Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple	E
Three columns	Three columns (CSS)	Top row, three columns, bottom row	Top row, two columns, bottom row	Two columns	
1 <u>2</u>					
Three columns					
Three columns with web p	part zones.				
Copy this layout to my p	age template				

The **Copy this layout to my page template** option allows you to decide whether you will be using the shared layout or if you create a copy of the layout specific for your page template only. If you choose the **shared layout** and make changes to the HTML layout code, they will affect all pages that use the same shared page layout, so it's better to use a copy of the layout in most cases.

You can manage the pre-defined page layouts in **Site Manager -> Development -> Page layouts**. You can configure the following properties:

Layout display name	The name of the layout displayed to the users.
Layout code name	The name of the layout used in the code.
Layout description	Optional description.
Page layout thumbnail	Upload field for the layout preview image (available only when editing an existing layout). This image is used in the page layout selection dialog shown when creating a new blank page as seen in the image above.
Layout code	ASCX code of the page layout.

Sample layout code

The following sample page layout code uses a table to define a two-column layout:

```
<ccl:CMSWebPartZone ID="zoneLeft" runat="server" />
```

The following layout code defines the same two-column layout, but using DIV elements and CSS styles:

```
<div style="width: 50%;">
  <div style="width: 80%; float: left;">
    <cl:CMSWebPartZone ID="zoneLeft" runat="server" />
    </div>
  <div style="width: 50%; float: right;">
    <ccl:CMSWebPartZone ID="zoneRight" runat="server" />
    </div>
  </div>
```

7.2.4.6 The master page concept

Master pages represent the powerful concept of sharing the same header and footer for all pages on the website. It allows you to manage repeated items, such as the site logo, main menu and footer content in a single place.

The root of the content tree is always a master page. You can also configure any other page template to be a master page by enabling the **Master page** option on the **General** tab of the page template editing interface at **Site Manager -> Development -> Page templates**.

The following figure shows how the same master page is used for the home page and product page. As you can see, the pages are inserted inside the master page:



7.2.4.7 Editing the master page

Master pages are either the root of the content tree or pages whose page template has the **Master** template option enabled on the **General** tab of the page template editing interface at **Site Manager** -> **Development** -> **Page templates**. They can be edited just like any other page. You can use the **Design** tab to edit the web parts and HTML layout of the master page. In addition, there's a special **Master page** tab available only for master pages:



As you can see, you can define the following sections of the HTML code of the master page. This code is used for all pages that inherit content from the master page:

- **DOCTYPE** here you can enter any code that needs to be placed at the beginning of the file, typically the DOCTYPE definition
- HEAD here you can put any HTML code that needs to be placed inside the <head> element of the page.
- BODY here you can add custom attributes to the <body> element.
- Master page code this is actually the HTML layout of the master page template. This is the same code that you can edit on the **Design** tab, by using the **Edit layout** () button.

Please be aware that the code between the editable sections is of informative character only and may not be identical to the actual rendered code.

Page placeholder

A master page must always contain the **Page placeholder** web part that specifies where the content of sub-pages should be loaded. Visual inheritance is described in more detail in the next topic.

7.2.4.8 Visual inheritance

As you can see in the topic <u>The master page concept</u>, the content of sub-pages is displayed within the master page or generally within any parent page using the **Page placeholder** web part. The result of this approach is that the sub-page content is "nested" inside the content of the parent pages.

In some cases, you may want to hide some parts of the parent page. There are several ways how to achieve that:

Using the "Inherit content" property of the page template

Click the **/News** page and click **Properties -> Template -> Edit template properties**. Now you can set the **Inherit content** value to **Selected inherited levels** and check only the **Level1** box. It means that only the content from the first level of the content hierarchy will be displayed and the master page (root) is not inherited. Click **OK** to save the changes.



The page will now look like this:



Set the Inherit content value back to Level0 for now.

Similarly, you can set the content inheritance on the level of **individual pages** using the **Properties -> Template** dialog. The content inheritance settings you configure for the page override the page template settings:



Using the "Hide on sub-pages" web part property

Click **/News**, switch to the **Design** tab and click the **Configure** () button of the **HeaderText** web part. The web part has the property **Hide on sub-pages** set to true:
🥖 CMS Desk - Web Pa	rt properties Webpage Dialog			X
🛷 Web part pro	operties (Editable text)			Documentation
General Layout				
Default Visibility	Default			ŕ
Content	Web part control ID:	► HeaderText		E
Behavior	Web part title:	•		
Security HTML Envelope	Disable view state:	•		
AJAX Time zones	Disable macros:	•		
Partial caching				
	Visibility			
	Visible:			
	Hide on subpages:			
	Show for document types:	CMS.Menultem	Select C	lear
	Display to roles:	•	Add roles C	lear
	Content			
Refresh content			ОК	Cancel Apply

Click **Cancel** and click **Live site**. Please note that when you display the list of news, the title **News** is displayed:

Home Services Products News Partners Company Blogs Forums Events Images Wiki Examples

News

This page contains a list of news with a header and introductory text. The news can be displayed in multiple ways depending on chosen transformation and web part.

Your second news | 1/15/2008

Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.

Your first news | 1/10/2008

Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.

If you go to some particular news item, the title is hidden:

Home Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
News > Your second	news										
Your second	news										
	1/15/2008 Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.										
This is the news te may be displayed i	xt. It's displayed n various format	d in combi s, with or	nation with ne without tease	ews title and s er image.	summary.	Depending o	n transform	ation choser	by the v	web developer,	the news item

This is ensured by the Hide on sub-pages property that hides the web part displaying the News title.

Using the "Show for document types" web part property

The **Show for document types** property allows you to define a list of document types for which the web part will be displayed. Click **/News**, click **Design** and click **configure** in the **BreadCrumbs** web part. The **Show for document types** field is set to the **News** document type. Click **Cancel**.

💋 CMS Desk - Web Pa	rt properties Webpage Dialog				x
🍓 Web part pr	operties (Breadcrumbs)			Document	tation
General Layout					
Default	Default				Î
Visibility Content	Web part control ID:	BreadCrumbs			=
Content filter					
Design No data behavior	web part title:	•			
System settings	Disable view state:				
HTML Envelope	Disable macros:				
Time zones					
Partial caching	Visibility				
	Visible:				
	Hide on subpages:				
	Show for document types:	► cms.news	Select	Clear	
	Display to roles:	•	Add roles	Clear	
	Contont				- -
Refresh content	Content		ОК	Cancel Apply	
http://localhost/Kentico	CMS/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.asp 🕥 (ocal intranet Protected Mode: (Off	

Go to the live site, to the /News page. The breadcrumb navigation is hidden since the currently selected

document type is a page:



When you go to some particular news item, the currently selected document is a news item and the breadcrumb navigation is displayed:



You have learned how to break inheritance of content and how to display content based on the current document type.

7.2.4.9 Content tree and page templates

The content tree defines not only the site map of your website, but it also how the pages are nested.

For example, when you request the */Products/Laptops/Acer-Aspire-3105WLMi* page, the portal engine loads the content in the following order:

Processed	Page	Rendered page
path	template	

328 Kentico CMS 5.5 R2 Developer's Guide

/ (root)	Main menu page template	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder
/Products	Products page template	Page Layout Web part zone 1 Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 - Left menu Web part 2 - Page placeholder

_		
/Products/	Laptops	Page Layout
Laptops	page	Web part zone 1
	template	Web part 1 – main menu
		Web part 2 - Page placeholder
		Page Layout
		Web part zone 1
		Web part 1 – Left menu Web part 2 - Page placeholder
		Page Layout
		Web part zone 1
		Web part 1 - Document viewer
		displaying the list of notebooks
/Products/	Inherits	Page Layout
/Products/ Laptops/	Inherits page	Page Layout Web part zone 1
/Products/ Laptops/ Acer-	Inherits page template	Page Layout Web part zone 1 Web part 1 – main menu
/Products/ Laptops/ Acer- Aspire-	Inherits page template from	Page Layout Web part zone 1 Web part 1 – main menu
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent	Page Layout Web part zone 1 Web part 1 – main menu
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part zone 1 Web part 1 – Left menu Web part zone 1 Web part zone 1 Web part zone 1 Web part 1 – Left menu
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 2 - Dage placeholder Page Layout Web part 2 - Dage placeholder Page Layout Web part 1 – Left menu Web part 2 - Dage placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the document	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 1 – Document viewer displaying the details of the selected notebook.
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the document viewer.	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Dage placeholder Page Layout Web part 1 – Document viewer displaying the details of the selected notebook.
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the document viewer.	Page Layout Web part zone 1 Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 - Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 2 - Document viewer displaying the details of the selected notebook.
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the document viewer.	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 1 - Decument viewer displaying the details of the selected notebook.
/Products/ Laptops/ Acer- Aspire- 3105WLMi	Inherits page template from parent page. The product detail is displayed automatic ally instead of the listing by the document viewer.	Page Layout Web part zone 1 Web part 1 – main menu Web part 2 - Page placeholder Page Layout Web part zone 1 Web part 1 – Left menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 1 – Deft menu Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 2 - Page placeholder Page Layout Web part 1 – Deft menu Web part 2 - Page placeholder

7.2.4.10 Managing page template catalog

You can manage page templates in **Site Manager -> Development -> Page templates**. Here you can organize the templates into categories, configure their properties, create new templates, etc.

These configuration options can also be accessed for the templates of individual pages by selecting the page in the content tree of **CMS Desk**, and using **Edit -> Properties -> Template -> Edit template properties**.

Each template has the following properties:

General tab

On this tab, you can specify the following properties of the page template:

Template display name	The name of the template displayed to the users.
Template code name	The name of the template used in website code.
Category	Here you can choose the category of the page template.
Template description	Description of the template.
Thumbnail	Teaser (preview) image of the template. It is displayed in the Select template dialog, e.g. when you are creating a new page.
Template type	Indicates if the page template is a portal page template or ASPX page. If you choose ASPX page you will need to specify the path to its .aspx file using the Select button, or by manually entering it, the tilde (~) represents the root directory of your project folder, e.g.: ~/ <i>CMSTemplates/CorporateSiteASPX/Blog.aspx</i>
Master template	Indicates if the pages that use the template should be <u>Master pages</u> . Master page templates are usually used for the main menu and logo of a website. Enabling this also causes the template to be selectable as the root master page template in the New site wizard .
Inherit content	 Configures the visual inheritance as explained in the <u>Visual inheritance</u> topic. You can choose from the following options: Inherit all - inherits the content of all parent pages Do not inherit any content - displays only the current page without any parent content Inherit only master page - inherits from the first master page above the page in the content tree, i.e. if there are more master pages, it inherits only from the one which is the closest above it in the hierarchy Select inherited levels - inherits only content from the chosen content tree levels

Sites tab

On this tab, you can choose which websites the page template will be available for.

Scopes tab

Please refer to the <u>Page template scopes</u> topic for information about this tab.

Layout tab

Here you can edit the HTML layout of the page template. You can either choose to use some of the predefined ("shared") layouts or you can specify your own HTML layout code ("custom layout"). Learn more in the <u>Page layouts</u> topic.

Web parts

Here you can see the XML document with the configuration of the web parts. Use this dialog only in a situation when the standard **Design** mode isn't working as expected (e.g. due to some data inconsistency).

Header

Here you can specify custom HTML code that will be added to the **<head>** element (it will be placed between the <head></head> tags) of all pages that use this page template. This is useful if you need to link some additional CSS or JavaScript files.

Documents tab

On this tab, you can see a list of documents (pages) that are using the page template. By clicking a document in the list, you will be redirected to the document's **CMS Desk -> Edit** mode. The documents in the list can be filtered according to the **Site** they are on, their **Document name** and their **Document type**.

7.2.4.11 Cloning and modifying a page template

You may need to create a new page that will be similar to existing pages, but with some minor modification of the page template. Imagine you want to display the editable region from the previously created page template in a container box.

Instead of creating the page template from scratch, simply create a new page based on your existing page template.



Then choose the page, click **Properties -> Template**, click **Clone as ad-hoc template** and click **Save**. A new ad-hoc template is now created and you can edit it without modifying the existing pages based on the original template:

Page	Design	Form Properties
General		
URLs		Save
Template		
Metadata		Template
Categories		Ad-hoc: New test Select
Menu		
Workflow		Save as new template
Versions		Inherit template
Related do	cs	
Linked doc	s	
Security		
Attachmen	ts	Inherit content
		Ose page template settings
		Do not inherit any content
		Select inherited levels

Now switch to the **Design** tab and click the **Configure** () button of the **Editable text** web part. Select the *Black box* container from the **Web part container** drop-down list and enter *What's new* into the **Web part container title** field:

🟉 CMS Desk - Web P	art properties Webpage Dialog	×
🛷 Web part p	roperties (Editable text)	Documentation
General Layout		
Default	HTML Envelope	· · · · · · · · · · · · · · · · · · ·
Visibility Content	Web part container:	► Black box
Design Behavior	Web part container title:	► What's new
Security HTML Envelope	Content before:	۰ (۲۰۰۰) ۲۰۰۰ (۲۰۰۰) ۲۰۰۰ (۲۰۰۰) ۲۰۰۰ (۲۰۰۰)
Time zones Partial caching	Content after:	۲
	AJAX	
	Use update panel:	
	Time zones	
	Time zone:	► Inherit
	Custom time zone:	► (none)
Refresh content		OK Cancel Apply
http://localhost/Kentic	:oCMS/CMSModules/PortalEngine/UI/	Webparts/WebPartProperties.asp ዒ Local intranet Protected Mode: Off

Click **OK**. Switch to the **Page** tab and enter some text into the editable region. Click **Save** and click **Live site** in the main toolbar. You will see a page like this:

Home	New test	Services	Products	News		
What's new						
Some ne	<u>w text</u> on the	new testing p	age.			

As you can see, the text is now surrounded by a black container. When you check the original **My test** page, you will see it uses the original design and it wasn't affected by the change we made to our new copy of the page template.

Re-using the adjusted template again If you want to re-use the new, adjusted page template, you can click the Save as new template button in the Properties -> Template dialog as you did previously.



Important!

Please keep in mind that when you create a page based on an ad-hoc page template and later delete the page, the corresponding ad-hoc page template is deleted as well and **cannot be restored**.

7.2.4.12 Using and configuring web parts

Web parts can be used on both portal page templates and ASPX page templates. However, with ASPX page templates, you lose the friendly user interface and need to set the properties in Visual Studio.

Go to **CMS Desk -> Content**, click some page and choose **Design** in the toolbar. You will see the page template structure like this:



Every web part can be moved up/down, to another web part zone and it can be configured using the **Configure** () button. It opens the **Web part properties** dialog like this:

CMS Desk - Web Pa	art properties Webpage Dialog		Document	X
General Layout				auc
Default	Default			
Content	Web part control ID:	MainContentText		
Design Behavior	Web part title:	•		
Security HTML Envelope	Disable view state:			
AJAX	Disable macros:	•		
Partial caching				
	Visibility			
	Visible:			
	Hide on subpages:			
	Show for document types:	•	Select Clear	
	Display to roles:	•	Add roles Clear	
Pefresh content	Content		OK Cancel Apply	
in Keiresh content	- CMC/CMCM- dute-/De-talE////		Destanted Marder Off	

When you click **OK**, the changes are saved and the window closes. When you click **Apply**, the changes are saved, but you can continue modifying the properties. All changes are applied immediately, the page templates are not connected with workflow or versioning.

Impacts of changing page templates

When you change a re-usable page template that is used by several pages, the changes will appear on all page templates.

If you need to modify only a single page structure, you need to clone the page template as an ad-hoc template or as a new page template. See also <u>Cloning and modifying a page template</u>.

7.2.4.13 Web part binding (obsolete)

Obsolete feature

This feature is now obsolete. If you need to bind the behavior of some web part to another web part value, please use URL parameters or create a user control that contains both web parts and write custom code that will ensure the communication between the web parts. If you need to use this feature for backward compatibility, you need to add the following parameter to your web.config file, to the **appSettings** section: <add key="CMSShowWebPartBindingTab" value="true"/>

Web part binding allows you to connect two web parts. For example: you can have a web part containing a drop-down list with countries. When some value is selected, it is provided to another web part that displays a list of company offices in the selected country. You can manage web part binding on the **Binding** tab:

🧉 CMS Desk - Web Pa	art properties Webpage Dialog	×
ன Web part pi	operties (Datalist)	Occumentation
General Layout	Bindings	
Add binding:		
Local property:	AlternatingTransformationName	
Source web part ID:		
Source property:		
Add		
		Close
ttp://dominikp/3644_9682/CMSModules/PortalEngine/UL/Webparts/WebPartProperties.aspx; 👒 Local intranet Protected Mode: Off		

Alternative option

If binding doesn't work as expected, you can alternatively create your own user control, place the required web parts on it and manage their interactions using your own code. You can find more details on creating your own user control in the <u>Adding custom code</u> to the page topic.

Example - creating a product selection dialog with drop-down list and product list

In this example, we will create two web parts - selector and viewer and bind their properties so that the product viewer reflects the product selector status.

1. Open the CMS project in Visual Studio and create a new folder MyWebParts under CMSWebParts folder in the Solution Explorer:

🖶 🛃 🖥	b 🍋 🍅
🚊 🎁 C:\	\KenticoCMS\
÷ 🗔	App_Browsers
÷ 🛅	App_Code
÷ 📷	App_Data
÷ 📝	App_Themes
÷ 🗔	App_WebReferences
÷ 📷	Bin
÷ 🚞	ClientBin
÷ 🚞	CMSAdminControls
÷ 🚞	CMSControlsExamples
÷ 🚞	CMSDesk
÷ 🚞	CMSFormControls
÷ 🚞	CMSHelp
÷ 🚞	CMSImportFiles
÷ 🚞	CMSInlineControls
÷ 🚞	CMSInstall
÷ 🚞	CMSMasterPages
÷ 🚞	CMSMessages
÷ 🚞	CMSModules
÷ 🚞	CMSPages
÷ 🚞	CMSResources
÷… 🚞	CMSScripts
÷	CMSSiteManager
<u>ن</u>	CMSSiteUtils
÷	CMSTemplates
e 🧖	CMSWebParts
	AbuseReport
±	Attachments DieFermen
±	BizForms
	Diogs
	Community
±	ContentPating
	CustomTables
	DataSources
	Ecommerce
	Events
	Forums
	🧰 General
	GoogleServices
	🚞 Media
	🛅 MediaLibrary
	🛅 Membership
÷	🛅 MessageBoards
	🛅 Messaging
	🚞 MyWebParts
±	Navigation
.	Newsletters

2. Create a new user control (ASCX) under MyWebParts folder and call it ProductSelector.ascx. Switch to its HTML source and paste the following code:

```
<asp:DropDownList ID="DropDownList1" runat="server"
OnSelectedIndexChanged="DropDownList1_SelectedIndexChanged" AutoPostBack
="true">
<asp:ListItem Value="Under">Under 250</asp:ListItem>
<asp:ListItem Value="Over">Over 250</asp:ListItem>
</asp:DropDownList>
```

Switch to the code behind and add the following code to the beginning of the code:

[C#]

338

```
using CMS.PortalControls;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.ExtendedControls;
```

Change the class inheritance like this:

[C#]

public partial class CMSWebParts_MyWebParts_ProductSelector : CMSAbstractWebPart

Add the following code inside the page class:

[C#]

```
protected void DropDownList1_SelectedIndexChanged(object sender, EventArgs e)
{
    this.SetValue("PriceRange", this.DropDownList1.SelectedValue.ToString());
    this.ReloadConsumers();
}
```

Please note that you need to set the new value of the web part property PriceRange and call the ReloadConsumers method.

3. Create a new user control (ASCX) under MyWebParts folder and call it ProductViewer.ascx. Switch to its HTML source and paste the following code:

```
<%@ Register Assembly="CMS.Controls" Namespace="CMS.Controls" TagPrefix="ccl" %>
<ccl:CMSRepeater ID="CMSRepeater1" runat="server" EnableViewState="true"
    TransformationName="cms.product.default" SelectedItemTransformationName="cms.
product.default"
    Path="/%" ClassNames="cms.CellPhone">
</ccl:CMSRepeater>
```

The CMSRepeater web part displays the product list.

Switch to the code behind and add the following code to the beginning of the code:

[C#]

```
using CMS.PortalControls;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.ExtendedControls;
using CMS.PortalControls;
```

Change the class inheritance like this:

[C#]

public partial class CMSWebParts_MyWebParts_ProductViewer : CMSAbstractWebPart

Add the following code inside the page class:

[C#]

```
/// <summary>
/// Content loaded event handler
/// </summary>
public override void OnContentLoaded()
{
    base.OnContentLoaded();
    SetupControl();
}
/// <summary>
/// Reloads data on request
/// </summary>
public override void ReloadData()
{
   base.ReloadData();
    this.SetupControl();
    this.CMSRepeater1.ReloadData(true);
}
/// <summary>
/// Initializes the control properties
/// </summary>
protected void SetupControl()
{
    if ((this.PagePlaceholder.ViewMode == ViewModeEnum.Design) || (this.
HideOnCurrentPage) || (!this.IsVisible))
    {
        // Stop processing in Design mode and if the control is invisible
       this.CMSRepeater1.StopProcessing = true;
    }
    else
    {
        // set CMSRepeater properties according to the selected value (price
range)
        string priceRange = ValidationHelper.GetString(this.GetValue("PriceRange")
), "Under");
        if (priceRange == "Over")
        {
            this.CMSRepeater1.WhereCondition = "SKUPrice > 250";
        }
        else
        {
            this.CMSRepeater1.WhereCondition = "SKUPrice <= 250";</pre>
    }
}
```

4. Save the changes and go to **Site Manager -> Development -> Web parts**. Create a new category called *My Web Parts* and add a new web part:

- Web part display name: Product selector
- Web part code name: ProductSelector
- Web part file name: MyWebParts/ProductSelector.ascx

5. Create another new web part:

• Web part display name: Product viewer

- Web part code name: ProductViewer
- Web part file name: MyWebParts/ProductViewer.ascx

... and then switch to the Properties tab and create a new property:

- Attribute name: PriceRange
- Attribute type: Text
- Attribute size: 100
- · Allow empty value: yes
- Display attribute in the editing form: no

6. Go to CMS Desk and create a new blank page using the Simple page layout and call it Product list.

7. Switch to the **Design** tab and add the web parts **Product selector** and **Product viewer** on the page.

8. Configure the **Product viewer** web part and choose the **Binding** tab. Add a new web part binding using the following values:

- Local property: PriceRange
- Source web part ID: ProductSelector
- **Source property**: PriceRange

9. Go to the Live site mode and see the page. It should look like this:



When you change the drop-down list value, the product list below is automatically updated.

7.2.4.14 Adding custom code to web parts (obsolete)

Obsolete feature

This feature is now obsolete. If you need to customize the behavior of some web part, please clone the web part and customize it.

You can find more details in the Modifying web part behavior topic.

If you still need to use this feature (for backward compatibility), you need to enable it by adding the following parameter to your web.config file, to the **appSettings** section:

<add key="CMSShowWebPartCodeTab" value="true" />

2

Limitations when you use the Code tab

If you add custom code on the Code tab, you will not be able to pre-compile the website and you will not be able to use the website in medium trust environment. If this is an issue for you, you can use an alternative solution described in the <u>Modifying web</u> <u>part behavior</u> topic.

If you need to modify the behavior or enhance the functionality of some web part only on a single page template, you can add custom code on the **Code** tab:

CMS Desk - Web Par	t properties Webpage Dialog	×
🍦 Web part pro	operties (Editable text)	Documentation
General Layout	Code	
The following custom	cade will be added to the web part ASDV cade and compiled together with the web parts	
<script runat='</td> <td>"server"></td> <td><u>_</u></td>	"server">	<u>_</u>
protected (override void OnLoad(EventArgs e)	
{		
base.U this.H	nLoad(e); plTime.Text = "The time is: " + DateTime.Now.ToString();	
)		
		~
	III	•
🗸 Refresh content	OK Cancel	Apply
n://dominikn/3644_9	682/CMSModules/PortalEngine/UI/Webparts/WebPartProperties.aspx: 💊 Local intranet Protected Mode: Off	

The following code displays the current date and time below the current web part:

[C#]

```
<asp:Label runat="server" id="lblTime"></asp:Label>
<script runat="server">
    protected override void OnLoad(EventArgs e)
    {
        base.OnLoad(e);
        this.lblTime.Text = "The time is: " + DateTime.Now.ToString();
    }
</script>
```



Please note: You can only use the programming language in which the web part is written. If the web part was written in C#, you can use only C# here.

The following code sample sets the WhereCondition property of the web part dynamically at run-time:

[C#]

```
<script runat="server">

public override void OnContentLoaded()

{

this.SetValue("WhereCondition", "NewsTitle LIKE '%News%'");

base.OnContentLoaded();

}

</script>
```



Calling the original method from the inherited class

If you override some method of the web part, please be sure to always also call the original method (using base.Method in C# or MyBase.Method in VB). If you omit this, the web part may not work properly.

7.2.4.15 Common web part properties

Many web parts use the same or similar properties. The following table summarizes the most important properties found in most web parts:

Default properties

Property Name	Description	Sample Value
Web part control ID	Unique identifier of the web part.	text1

Visibility

Property Name	Description	Sample Value
Visible	Indicates if the web part is visible.	
Hide on sub-pages	Indicates if the web part should be hidden on sub-pages. If you check this box, the web part will be displayed only on the page that uses the page template with this web part and it will be hidden on sub-pages that inherit the page template.	
Show for document types	Indicates for which document types the web part should be displayed. If the type of the currently selected document is different, the web part will not be displayed.	cms.news;cms.event
Display to roles	List of roles whose members should see the web part. If no role is specified, the web part zone is displayed to all users.	cmseditors;customrole

Web part container

Property Name	Description	Sample Value
Web part container	Container (box) displayed around the web part. The containers can be defined in Site Manager -> Development -> Web part containers .	
Container title	Container title displayed in the web part container if one is specified. Displayed only if the {%ContainerTitle%} macro is used in the code of the container.	Latest news
Container CSS class	CSS class used for the web part container. Applied only if the {%ContainerCSSClass%} macro is used as a value of the Class attribute in the code of the container.	
Container custom content	Custom content of the web part container; applied only if the {% <i>ContainerCustomContent%</i> } macro is used in the code of the container.	

HTML Envelope

Property Name	Description	Sample Value
Content before	HTML content to be displayed before the web part. Can be used to display a header or	color: red">

	add some encapsulating code such as <i><div></div></i> or <i></i> elements for the required layout.	
Content after	HTML content to be displayed after the web part. Can be used to display a footer or close the tags contained in the ContentBefore value, such as or <i table> elements.	

The structure of a web part and its envelope looks like this:

Container
ContentBefore
Web part (ASCX) content
ContentAfter

You can find more details on web part containers in the Containers overview topic.

Content

Property Name	Description	Sample Value
Path	Path of the documents to be displayed. See <u>Appendix B - Path expressions</u> for details.	/news/%
Highlighted node path	Alias path of the node that should be selected in a menu control. If you do not specify any value, the current path is used.	/products/nokia
Query	Name of the query to be used for retrieving data from the Kentico CMS Database. The queries can be defined in Site Manager -> Document types -> edit some document type -> Queries .	cms.news.selectlatest

Content filter

Property Name	Description	Sample Value
Document types	Types of documents that should be displayed, separated by a semicolon (;). In the case of menu and navigation web	cms.article;cms.news;cms. menuitem

346

	parts, page (cms.menuitem) documents are selected by default.			
	The other web parts retrieve all documents without their custom fields by default.			
	Please note: if you specify more than one document type, only common data fields from the <i>View_CMS_Tree_Joined</i> view will be available in the web part (in transformations, WHERE condition and ORDER BY expressions).			
Combine with default culture	Indicates if the default language version of the document should be displayed if the document is not translated to the current language.	You can choose between Yes and No or you can use website-level settings.		
Culture code	Culture of the content to be displayed.	en-us		
Maximum nesting level	Maximum nesting level. It specifies the number of sub-levels in the content tree that should be included in the displayed content.			
	The value 1 indicates that only the current document should be returned. The value -1 indicates all child documents.			
ORDER BY expression	ORDER BY part of the SELECT query.	ProductName ASC, ProductPrice DESC		
Select only published	Indicates if only published documents should be displayed.			
Site name	Code name of the website from which you want to display the content.	CorporateSite		
	If you leave the value empty, the content is retrieved from the current website.			
WHERE condition	WHERE part of the SELECT query.	ProductPrice > 100 AND ProductColor='green'		
Filter out duplicate documents	If the displayed data contains multiple links to the same document (see <u>Linked docs</u> for details), you can choose to display only one of them.			

System settings

Property Name	Description	Sample Value	
Check permissions	Indicates if the permissions of the current user should be checked for the content		

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	displayed by the web part. If enabled, only documents for which the user has the <i>read</i> permission will be displayed.	
Cache item name	Sets the name of the cache key used for the content displayed by the web part. If not specified, this name is generated automatically based on the site, document path, Web part control ID and current user.	latestnewslist
	multiple web parts displaying the same content on different pages in order to avoid keeping redundant data in the memory.	
Cache minutes	Sets the number of minutes for which the content displayed by the web part should remain cached before its latest version is reloaded from the database. If left empty, the value entered into the Site Manager -> Web site -> Cache content (minutes) setting will be used instead. If set to <i>0</i> , caching will be disabled for the web part.	10
Cache dependencies	Contains a list of cache keys on which the content cache of the web part depends. When the specified cache items change, the content cache of the web part is deleted. Each line may only contain a single item. If the Use default cache dependencies box is checked, the default dependencies will be used, which include all possible object changes that could affect the content of the specific web part.	

Design

Property Name	Description	Sample Value	
CSS prefix	Prefix used for CSS class names. This property allows you to set up different CSS styles for particular menu levels. Every level of the menu will use the prefix for CSS class names that you specify.	Main;Sub1;Sub2	
Highlight all items in path Indicates if all items in the currently selected path of the menu control should be displayed			

	as highlighted.	
Submenu indicator	Path to the image that should be displayed next to items that have sub-items.	/images/submenu.gif
Use alternating styles	Indicates if odd and even items should have different styles.	

Paging

Property Name	Description	Sample Value		
Enable paging	Indicates if displayed data should be paged.			
Paging mode	Type of paging parameter - it can be passed either through the URL (Query string) or through postback (Postback).			
Pager position	Position of the pager - top or bottom			
Page size	Number of records per page.	10		
Query string key	The name of the URL parameter that will contain the current page number.	mylistpage		
Show first and last buttons	Indicates the buttons that link to the first and last page should be displayed.			

Relationships

These settings allow you to configure the web part so that it displays only content that is related to the specified (main) document.

Property Name	Description	Sample Value
Main document	Document for which you want to display related documents.	
Relationship name	Name of the relationship between documents.	Is related to
Main document is on the left side	Indicates if the main document is on the left side of the relationship.	

No data behavior

Property Name	Description	Sample Value	
Hide if no record found	Indicates if the web part should be hidden when no record is found.		
No record found text Text that should be displayed if no data is		No data found.	

found.	

Editing buttons

Property Name	Description	Sample Value	
Show New button	Indicates if the button for adding new items should be displayed in the Edit mode when viewing the page.		
New button text	New button description text.	Add new news.	
Show edit and delete buttons Indicates if edit and delete buttons should be automatically shown for each displayed item in the Edit mode.			

Transformations

Property Name	Description	Sample Value	
Alternating transformation	Transformation used for even items in list view mode in format <i><class prefix="">.</class> <document type="">.<transformation name="">.</transformation></document></i>	cms.news. preview_alternating	
Transformation	Transformation used for items in list view mode in format <i><class prefix="">.<document type="">.<transformation name=""></transformation></document></class></i> .	cms.news.preview	
Selected item transformation	Transformation used for items in detail view mode in format <i><class prefix="">.<document type="">.<transformation name="">.</transformation></document></class></i>	cms.news.default	
Item separator	Item separator displayed between records.	<hr/>	

7.2.4.16 Path and macro expressions in web part properties

Many web parts use the **Path** property to specify what content from the content tree should be displayed. You can find all path format options in <u>Appendix B - Path expressions</u>.

Also, all web part properties support macro expressions that allow you to insert a dynamic value instead of a constant in the property. Such a dynamic value is evaluated at run-time and allows you to specify context-dependent values. See <u>Appendix A - Macro expressions</u> for details.

7.2.4.17 Adding custom code to the portal page template

The easiest way to insert custom code into a portal engine-based website is using standard ASCX user controls. This chapter will show you how to do this. If you're not familiar with Visual Studio development, you can skip this chapter.

Current time example

In this example, we will create a simple user control (ASCX) using Visual Studio and integrate it into our home page.

Open the website project using the WebProject.sIn file that is placed in the folder where you deployed the website. Right-click the web project in the Solution Explorer window and click **New Folder**. Name the folder the same as the code name of your site, e.g. CorporateSite - this folder will be exported with your project when you decide to export the site and import it on a live server.

Right-click the new folder and click the **Add new item...** option. Choose to create a new Web User Control and set its name to **GetTime.ascx**. You can set the programming language option to either Visual C# or Visual Basic.

Add New Item - C:\ine	etpub\wwwroot\Kenti	coCMS\				? ×
Templates:						
Visual Studio insta	alled templates					
🛅 Web Form		🔲 Master Page		🗄 Web User Control		
📑 ADO.NET Data	Service	🛃 ADO.NET Entity I	Data Model	AJAX Client Behavi	or	
AJAX Client Cor	ntrol	🗿 AJAX Client Libra	iry	🛅 AJAX Master Page		
🛅 AJAX Web Form	ו	🎇 AJAX-enabled W	CF Service	일 Browser File		
🔮 Class		뢿 Class Diagram		🔊 Crystal Report		
🛃 DataSet		遐 Dynamic Data Fi	eld	🖹 Generic Handler		
📄 HTML Page		🗿 JScript File		🔮 LINQ to SQL Classe	25	
🔝 Report		🔊 Report Wizard		🛃 Resource File		
🚵 Site Map		🔡 Skin File		间 SQL Server Databas	se	
Al Style Sheet		📄 Text File		👺 WCF Service		
🔊 Web Configurat	tion File	📓 Web Service		🔮 XML File		
🛃 XML Schema		🛃 XSLT File				
My Templates —						
Search Online T	emplates					
An ASP.NET server	control created using	the visual designer				
Name:	GetTime					
Language:	Visual C#	•	✓ Place code in se Select master pa	parate file ge		
					Add	Cancel

Click Add. Switch to the **Design** tab and drag and drop the following controls and set their properties:

Button control:

- ID: Button1
- Text: Show current time

Label control:

- ID: Label1
- Text: <clear the value>

Show current time [Label1]

Double-click the **Show current time** button and enter the following code into the **Button1_Click** method:

[C#]

Label1.Text = DateTime.Now.ToString();

[VB.NET]

Label1.Text = DateTime.Now.ToString()

This code ensures that the label displays the current date and time when the button is clicked. It's not necessary to compile the project - the user controls are compiled at run time.

Save all changes.

Adding the user control on the page

Sign in to Kentico CMS Desk, click the Home page and click Design. Remove the web part in the **zoneCenter** zone and click the Add web part (+) button in this zone. Choose the General/User control web part. Enter the following value in the User control virtual path property:

~/CorporateSite/GetTime.ascx

(the folder name must reflect the folder that you previously created)

The ~ character represents the root of your web application. Click **OK**. Click the **Live site** mode and now you can see the user control in the page. When you click the **Show current time** button now, the current date and time is displayed next to the button:



In this short example, you have seen that you can easily add any custom code developed as an ASCX user control in Visual Studio. This user control can contain any .NET controls, third-party controls or ADO.NET code that will retrieve data from an external database.

User controls versus web parts

Another option how to insert custom code into the page is creating your own web part. A web part is basically an ASCX user control, but it inherits some standardized properties and methods from the *CMSAbstractWebPart* class. You will usually build web parts in case you need to create re-usable, parameterized user controls. Web part development is described in the <u>Development -> Web parts -></u> <u>Developing web parts</u> topic.

7.2.4.18 Displaying data from an external database or Web Service

Besides displaying Kentico CMS content, you can also display data from your external database or Web Service. In this case, you need to develop a user control (ASCX) that will use ADO.NET to retrieve the data or that will contact the Web Service and call its methods. Since you can place any custom code into the user control, you will simply use the standard ASP.NET code you would use when creating the website from scratch.

Example: Retrieving data from the sample Northwind database

In this simple example, you will see how to display data on the sample Corporate Site from the *Categories* table of the Northwind database using ADO.NET. You may need to use some other database if you do not have the sample Northwind database on your server.

Open the web project in Visual Studio using the **WebProject.sln** file. Create the folder **CorporateSite** and create a new user control **CustomData.ascx** in this folder. It's important to create the control in this folder so that it's exported with your website later, when you decide to import the website on your live server.

Drag and drop the standard ASP.NET **GridView** control on your user control and set its ID to **GridView1**.

Add the following line to the beginning of the code behind file:

[C#]

using System.Data.SqlClient;

Add the following code to the **Page_Load** method:

[C#]

```
// create sql connection - you could use Oracle or OLEDB provider as well
SqlConnection cn = new SqlConnection("Persist Security Info=False;
database=northwind;server=server1;user id=sa;password=psswd;Current
Language=English;Connection Timeout=120;");
// create data adapter
SqlDataAdapter da = new SqlDataAdapter("SELECT * FROM categories", cn);
DataSet ds = new DataSet();
// fill the dataset with data from database
da.Fill(ds);
// bind data to the grid view
GridView1.DataSource = ds;
GridView1.DataBind();
```

Save all changes.

Sign in as administrator to CMS Desk, select the /Examples document in the content tree and create a new Page (menu item). Call it Custom Data and choose the Create a blank page option. Select the Simple layout and click Save.

Page name: Custom Data							
🔿 Use page template 🔿 Inherit from parent page 💿 Create a blank page							
Layout name:			Search				
Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple			
Three columns	Three columns (CSS)	Top row, three columns, bottom row	Top row, two columns, bottom row	Two columns			

Switch to the **Design** tab, add a new web part **General/User control** and set its **User control virtual path** property value to ~/corporatesite/customdata.ascx.

Click **OK** and switch to the **Live site** mode of the page. You will see a grid with data from the external database:

Custom Data	Home	Services	Products	News
CategoryID	CategoryName	Des	cription	
1	Animals	Dogs, cats,	horses	
2	Colors	Red, green,	blue, orange,	1
3	Names	John, Kevin	, Julia, Robin	1

As you can see we used standard ASP.NET methods to display external data on the website.

7.2.4.19 Developing sites for mobile devices

Kentico CMS allows you to create a dedicated site section where users accessing the site from mobile devices will be redirected.

An example of such a site section can be found on the sample **Corporate Site**, under the **/Mobile** node. The **Mobile** page works as a master page for the mobile section. It has no template inheritance configured so that it doesn't inherit from the site's main master page. Under it, you can find the following sections:

- Home this is the page where the mobile user gets redirected from the site's main *Home* page; the content of the page is loaded by the *Repeater* web part dynamically from the *Editable text* web part on the main *Home* page
- News this page contains a *Repeater* web part displaying the *News* documents stored under */News*; its transformation is written so that when you click a news item's title, you get redirected to the */ Mobile/News/Detail* page with the *ID* of the news item in the wildcard part of the URL (*/Mobile/News/ {id}*)

- Articles the *Repeater* web part on this page displays the articles stored under it; the content of this section is not shared with the rest of the site and is used only in the mobile section
- About us this page contains only two *Editable text* web parts and its content is separate and used only in the mobile section



Mobile device recognition

Mobile device recognition is ensured by the **Mobile device redirection** web part placed on the **Home** page. Site visitors accessing the site's main **Home** page from a mobile device get recognized by the web part and are redirected to the URL specified by its **Redirection URL** property. In this case, they get redirected to the mobile section of the website, i.e. ~/Mobile/Home.aspx.

The figures below show how the page looks when viewed on different mobile devices:

356



CSS stylesheet for the mobile section

There is a dedicated CSS stylesheet - **Corporate Site – Mobile** - which is used only by the pages in the mobile section. While the site's main stylesheet is **Corporate Site**, the pages in the mobile section have the **Corporate Site – Mobile** stylesheet assigned in **Properties -> General -> CSS stylesheet**.

7.2.4.20 Portal engine development internals and API

7.2.4.20.1 Database tables and API classes

The following database tables are used during portal engine development:

- CMS_Layout contains pre-defined page layouts and information about them
- CMS_PageTemplate contains page templates and their settings
- CMS_PageTemplateCategory contains page template categories and information about them
- CMS_PageTemplateScope contains page template scopes (used to limit where a page template can be used)
- CMS_PageTemplateSite assigns page templates to the sites where they can be used

The following **CMS.PortalEngine** namespace classes can be used to perform certain portal engine development tasks through the API:

- PageTemplateInfo, PageTemplateInfoProvider these classes provide functionality for managing page templates
- PageTemplateCategoryInfo, PageTemplateCategoryInfoProvider these classes provide functionality for managing page template categories
- PageTemplateScopeInfo, PageTemplateScopeInfoProvider these classes provide functionality for managing page template scopes

As well as the following CMS.SiteProvider namespace classes:

• LayoutInfo, LayoutInfoProvider - these classes provide functionality for managing page layouts

The following topics show examples of how these classes can be used:

- Page template examples:
 - Getting page template data
 - Managing page templates and their categories
 - Assigning and removing page templates from sites
 - <u>Managing page template scopes</u>

• Page layout examples:

- Getting page layout data
- <u>Managing page layouts</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

7.2.4.20.2 Page templates

7.2.4.20.2.1 Getting page template data

The following sample code shows how you can get a page template as a PageTemplateInfo object:

[C#]

```
using CMS.PortalEngine;
...
// Get page template object by template code name
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("cms.art
// Get page template object by template ID
PageTemplateInfo pti2 = PageTemplateInfoProvider.GetPageTemplateInfo(10);
```

The following sample code shows how you can get a DataSet containing page templates from the system:

[C#]

```
using System.Data;
using CMS.PortalEngine;
```

```
...
string where = "PageTemplateID > 10";
string orderby = "PageTemplateDisplayName";
// Get DataSet of page templates according to the given parameters
DataSet ds = PageTemplateInfoProvider.GetTemplates(where, orderby);
```

7.2.4.20.2.2 Managing page templates and their categories

The following sample code shows how you can create a new page template category under the root category:

[C#]

```
using CMS.PortalEngine;
. . .
        // Get parent for new category
        PageTemplateCategoryInfo parent = PageTemplateCategoryInfoProvider.GetPageTe
        // If parent exists
        if (parent != null)
        {
            // Create new page template category object
            PageTemplateCategoryInfo ptci = new PageTemplateCategoryInfo();
            // Set properties
            ptci.DisplayName = "Test category";
            ptci.CategoryName = "TestCategory";
            ptci.ParentId = parent.CategoryId;
            // Save to database
            PageTemplateCategoryInfoProvider.SetPageTemplateCategoryInfo(ptci);
        }
```

The following sample code shows how you can create a new page template under an existing category and add it to the system:

[C#]

```
using CMS.PortalEngine;
using CMS.CMSHelper;
....
// Get parent category
PageTemplateCategoryInfo ptci = PageTemplateCategoryInfoProvider.
```

```
GetPageTemplateCategoryInfo("TestCategory");
        // If parent exists
       if (ptci != null)
        {
            // Create new page template object
            PageTemplateInfo pti = new PageTemplateInfo();
            // Set properties
            pti.DisplayName = "Test page template";
            pti.CodeName = "TestPageTemplate";
            pti.Description = "This is page template created by API Example";
            pti.PageTemplateSiteID = CMSContext.CurrentSiteID;
            pti.FileName = " ";
            pti.ShowAsMasterTemplate = false;
            pti.IsPortal = true;
            pti.InheritPageLevels = ""; // inherits all
            pti.IsReusable = true;
            // Template layout with a web part zone
            pti.PageTemplateLayout = "<ccl:CMSWebPartZone ID=\"zoneLeft\" runat=\"se
            pti.CategoryID = ptci.CategoryId;
            // Save to database
            PageTemplateInfoProvider.SetPageTemplateInfo(pti);
        }
```

The following sample code shows how you can modify an existing page template:

[C#]

```
using CMS.PortalEngine;
....
// Get template object
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("TestPag
// If template exists
if (pti != null)
{
    // Update properties
    pti.DisplayName += " updated";
    pti.PageTemplateLayout += " updated";
    // Update data in database
    PageTemplateInfoProvider.SetPageTemplateInfo(pti);
    }
```

The following sample code shows how you can delete an existing page template:

[C#]

```
using CMS.PortalEngine;
...
// Get template object
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("TestPag
// If template exists
if (pti != null)
{
// Delete
PageTemplateInfoProvider.DeletePageTemplate(pti);
}
```

The following sample code shows how you can delete an existing page template category:

[C#]

```
using CMS.PortalEngine;
....
// Get template category object
PageTemplateCategoryInfo pti = PageTemplateCategoryInfoProvider.
GetPageTemplateCategoryInfo("TestCategory");
// If category exists
if (pti != null)
{
// Delete
PageTemplateCategoryInfoProvider.DeletePageTemplateCategory(pti);
}
```

7.2.4.20.2.3 Assigning and removing page templates from sites

The following sample code shows how you can assign a page template to the current site:

[C#]

```
using CMS.PortalEngine;
using CMS.SiteProvider;
....
// Get site and page template objects
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("TestPag
SiteInfo si = SiteInfoProvider.GetCurrentSite();
```


The following sample code shows how you can remove a page template from the current site:

[C#]

```
using CMS.PortalEngine;
using CMS.SiteProvider;
....
// Get site and page template objects
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("TestPag
SiteInfo si = SiteInfoProvider.GetCurrentSite();
// If objects exist
if ((pti != null) && (si != null))
{
PageTemplateInfoProvider.RemovePageTemplateFromSite(pti.PageTemplateId,
}
```

7.2.4.20.2.4 Managing page template scopes

The following sample code shows how you can create a new page template scope and assign it to a template:

[C#]

```
using CMS.PortalEngine;
using CMS.CMSHelper;
....
// Get template object
PageTemplateInfo pti = PageTemplateInfoProvider.GetPageTemplateInfo("TestPag
// If template exists
if (pti != null)
{
    // Set page template so that it isn't available for all pages
    pti.PageTemplateForAllPages = false;
    // Create new template scope
    PageTemplateScopeInfo ptsi = new PageTemplateScopeInfo();
    // Set scope properties
```



The following sample code shows how you can delete a page template scope from the system:

[C#]

```
using CMS.PortalEngine;
....
// Get template scope by ID
PageTemplateScopeInfo ptsi = PageTemplateScopeInfoProvider.GetPageTemplateSco
// If exists
if (ptsi != null)
{
    // Delete from database
    PageTemplateScopeInfoProvider.DeletePageTemplateScopeInfo(ptsi);
  }
```

7.2.4.20.3 Page layouts

7.2.4.20.3.1 Getting page layout data

The following sample code shows how you can get a pre-defined page layout as a LayoutInfo object:

[C#]

```
using CMS.SiteProvider;
....
// Get layout object by layout code name
LayoutInfo li = LayoutInfoProvider.GetLayoutInfo("LayoutCodeName");
// Get layout object by layout ID
LayoutInfo li2 = LayoutInfoProvider.GetLayoutInfo(1);
```

The following sample code shows how you can get a DataSet containing pre-defined page layouts from

the system:

[C#]

```
using System.Data;
using CMS.SiteProvider;
....
string where = "LayoutID > 10";
string orderby = "LayoutCodeName";
int topN = 10;
string selectedColumns = "LayoutCodeName,LayoutCode";
// Get dataset of page layouts according to the given parameters
DataSet ds = LayoutInfoProvider.GetLayouts(where, orderby);
DataSet ds2 = LayoutInfoProvider.GetLayouts(where, orderby, topN, selectedCo
```

7.2.4.20.3.2 Managing page layouts

The following sample code shows how you can create a new pre-defined page layout:

[C#]

```
using CMS.SiteProvider;
....
// Create new layout object
LayoutInfo li = new LayoutInfo();
// Set properties
li.LayoutDisplayName = "Test layout";
li.LayoutCodeName = "TestLayout";
li.LayoutCodeName = "This is a layout created for an API Example";
li.LayoutDescription = "This is a layout created for an API Example";
li.LayoutCode = "<ccl:CMSWebPartZone ID=\"zoneLeft\" runat=\"server\" />";
// Save to database
LayoutInfoProvider.SetLayoutInfo(li);
```

The following sample code shows how you can modify an existing pre-defined page layout:

[C#]

using CMS.SiteProvider;
....

```
// Get layout object by layout code name
LayoutInfo li = LayoutInfoProvider.GetLayoutInfo("TestLayout");
// If layout exists
if (li != null)
{
    // Update properties
    li.LayoutDisplayName += " updated";
    li.LayoutCode += " updated";
    // Save to database
    LayoutInfoProvider.SetLayoutInfo(li);
}
```

The following sample code shows how you can delete a pre-defined page layout from the system:

[C#]

364

```
using CMS.SiteProvider;
...
// Get layout object by layout code name
LayoutInfo li = LayoutInfoProvider.GetLayoutInfo("TestLayout");
// If layout exists
if (li != null)
{
    // Delete from database
    LayoutInfoProvider.DeleteLayoutInfo(li);
}
```

7.2.5 ASPX page template development model

7.2.5.1 Overview

If you're familiar with ASP.NET development in Visual Studio, you may want to choose to develop websites using standard ASPX page templates. ASPX page templates in Kentico CMS are standard ASP.NET pages that display content from Kentico CMS. They receive the **aliasPath** as a URL parameter that tells the page template which page should be displayed.

What does the ASPX page template consist of?

The page template is a combination of static HTML code and ASP.NET server controls (or user controls) that render dynamic content. You can also use code behind (using either VB.NET or C#) to modify page behavior and add custom functionality. The following figure illustrates how an ASPX page template and page content are combined to display a page:



How is the ASPX page template processed?

When a user requests some page, such as **/services/web-development.aspx**, the system calls the assigned page template with the URL parameter **aliasPath** that specifies what content (which page from the content tree) should be displayed using the given template:



The built-in Kentico CMS controls understand the aliasPath parameter in the URL and render the appropriate content automatically.

As you can see, the system uses standard ASP.NET architecture. If you developed the website without Kentico CMS, you would most likely use URLs like this: /news.aspx?newsid=127 which is similar to / news.aspx?aliaspath=/news/your-first-news.aspx used in Kentico CMS. Kentico CMS also uses friendly URLs in format /news/your-first-news.aspx that are better for search engine optimization.

7.2.5.2 Creating a new ASPX page template

Now you will learn how to create a new page ASPX page template. We will create a new **About us** page with two columns that will contain editable regions.



Toolbox topic.

1. Open the web project in Visual Studio. You can open it either using the WebProject.sln file or using File -> Open -> Web Site... in the menu.

2. Now right-click the **CMSTemplates -> CorporateSiteASPX** folder in the Solution Explorer and select **Add New Item**:



3. Choose to create a new web form and call it **TwoColumnTemplate.aspx** and check the **Select master page** box. Click **Add**.

Add New Item - C	:\inetpub\wwwroot\Ke	nticoCMS\		? ×
<u>T</u> emplates:				
Visual Studio i	installed templates			A
📴 Web Form		🔲 Master Page	🗄 Web User Control	
ADO.NET Da	ata Service	🋃 ADO.NET Entity Data Model	🗿 AJAX Client Behavior	
AJAX Client	Control	AJAX Client Library	🔲 AJAX Master Page	
🛅 AJAX Web F	orm	ତ AJAX-enabled WCF Service	🚇 Browser File	
Class 🔮		🛃 Class Diagram	🔊 Crystal Report	
🛃 DataSet		📴 Dynamic Data Field	🚵 Generic Handler	=
📄 HTML Page		JScript File	🚇 LINQ to SQL Classes	
🔝 Report		🔊 Report Wizard	🛃 Resource File	
🚵 Site Map		🔡 Skin File	间 SQL Server Database	
A Style Sheet		📄 Text File	🗱 WCF Service	
B Web Configuration File		🚵 Web Service	🔮 XML File	
🛃 XML Schema		🛃 XSLT File		
My Templates				
A form for Web	Applications			
<u>N</u> ame:	TwoColumnTem	plate.aspx		
<u>L</u> anguage:	Language: Visual C#		n separate file er page	
			Add	Cancel

4. The **Select a Master Page** dialog appears. Choose the folder **CMSTemplates/CorporateSiteASPX** and choose the **root.master** file and click **OK**.

Select a Master Page		? ×
Select a Master Page Project folders: CMSMasterPages CMSMessages CMSModules CMSPages CMSResources CMSScripts CMSSiteManager	Contents of folder:	
CMSSiteUtils CMSTemplates CMSTemplates CorporateSiteAspx CorporateSiteAspx ControlsExamples CMSWebParts CMSWebPar		
	OK	Cancel

Writing the ASPX code

5. Switch to the **Source** view of the newly created ASPX page. Add the following line under the <%@ **Page** %> directive:

<%@ Register Assembly="CMS.Controls" Namespace="CMS.Controls" TagPrefix="cms" \$>

Then add the following code inside the <asp:Content></asp:Content> control:

```
<cms:CMSEditableRegion ID="txtLeft" runat="server" DialogHeight="400"
RegionType="HtmlEditor" RegionTitle="Left column" />
<cms:CMSEditableRegion ID="txtText" runat="server" DialogHeight="400"
RegionType="HtmlEditor" RegionTitle="Right column" />
```

The **<cms:CMSEditableRegion>** control defines an editable region that will be displayed as an HTML editor in the **Edit** mode. On the live site, it ensures the displaying of the page content.

Please note: this example uses a table layout. If you prefer a CSS layout, you can simply replace the surrounding HTML code with <DIV> elements. As you can see, you have full control over the HTML code.

6. Switch to the code behind. You need to add a reference to the CMS.UIControls namespace:

[C#]

using CMS.UIControls;

7. The last step is to modify the class from which our page is inherited. Change the following code:

[C#]

public partial class CMSTemplates_CorporateSiteAspx_TwoColumnTemplate : System. Web.UI.Page

to this:

[C#]

public partial class CMSTemplates_CorporateSiteAspx_TwoColumnTemplate : TemplatePage

so that the page can be used as a page template in Kentico CMS.

Please keep in mind that the name of the class must be identical to the value of the **Inherits** attribute of the **<%@ Page %>** directive on the ASPX page. This is case sensitive.

Registering the ASPX page as a page template

Now that we have created a new ASPX page, we need to register it in Kentico CMS as a page template, so that it can be used by content editors.

8. Sign in to **Site Manager** and go to **Development -> Page templates**. Click the **Corporate Site ASPX** folder and click **New template**. Enter the following values:

- Template display name: Two column template
- Template code name: TwoColumnTemplate

Click OK. Now enter the following value in the File name field:

~/CMSTemplates/CorporateSiteASPX/twocolumntemplate.aspx

It is the virtual path of our ASPX page. Alternatively, the **Select** button can be used to manually select the file. Click **Save**.



9. Now switch to the **Sites** tab, assign the page template to the current website using the **Add sites** button and click **OK**.



Creating an About Us page based on the new page template

10. Go to **Kentico CMS Desk -> Content**. Click **Corporate Site ASPX** (the root of the content tree) and click **New** in the Content section main menu. Choose to create a new **Page (menu item)**. Enter *About Us* into the page name field and choose to create a page using the page template **Corporate Site ASPX/Two column template**. Click **Save** to create the new page.

Kentico CMS Desk Content My desi	k Tools Administration	Switch to Site Mar	ager Site: Corporate Site ASPX 🗨 User: Global Administrator v5.0.3835 Sign out
New Delete Move Down Content management	Edit Preview Live site List View mode	Search Other	0
Corporate Site ASPX Home Grant Services	Save Save and create anothe	I Spell check	
 Products News Partners Company 	Page name: About Us Use page template Inherit from page 	arent page 🔿 Create a blank pa	ge
 Blogs Forums Events Wiki Examples Kamples Trages Trages Trages Trages Trages Trages 	 All page templates Articles Blank pages for widgets Blank pages for widgets Blogs Community Site Corporate Site ASPX Special pages WebParts Ecommerce Ecommerce site Events FAQs Forums General Home pages Job openings Membership and security Message boards News News Offices Pres releases Im 	Template name: Two Column Template Wishlist ASPX	Search Unsubscribe ASPX User contributions Wiki ASPX Wiki ASPX

11. Click **Page** and you will see a page with editable regions like this:

Page Form Properties	
Spell check	
Image: Source Q, I, X, Image: I	
Sign in to CMS Desk. Sign in to CMS Site Manage	r. The default account is administrator with blank password.
CompanyLogo	Global Administrator (administrator) Sign out
	Search for:
About Us Home Services Products News Partners	Company Blogs Forums Events Images Wiki Examples
Left column	Right column

Congratulations, you have just created your first ASPX page template. Now you can enter some text and click **Save** to save the changes.

7.2.5.3 Creating ASPX master pages

Kentico CMS allows you to use standard ASP.NET 2.0 master pages together with ASPX page templates. This is a very powerful concept which allows you to share the same site header and footer with a logo, main menu, search box, etc. over all pages without having to create these sections on each page template again and again.

The master pages are defined in files with the **.master** extension. You can assign a single master page to each ASPX page. The master page must always contain the **ContentPlaceHolder** control like this:

```
<asp:ContentPlaceHolder ID="plcMain" runat="server">
```

The **ContentPlaceHolder** control specifies where the content of page templates that use this master page should be loaded. So the master page typically contains the main logo and navigation elements and the content is displayed by ASPX pages loaded into the master page.

The following code sample defines a very simple master page.

<u>Please note</u>: If you installed the Kentico CMS project as a web application, you need to rename the *CodeFile* property on the first line to *Codebehind* for the code example to be functional.

```
<%@ Master Language="C#" AutoEventWireup="true" CodeFile="Root.master.cs" Inherits
= "CMSTemplates_CorporateSiteASPX_Root" %>
<%@ Register Assembly="CMS.PortalControls" Namespace="CMS.PortalControls" TagPrefix=</pre>
<%@ Register Assembly="CMS.Controls" Namespace="CMS.Controls" TagPrefix="cms" %>
<%=DocType%>
<html xmlns="http://www.w3.org/1999/xhtml">
<head id="Head1" runat="server">
   <asp:literal runat="server" id="ltlTags" enableviewstate="false" />
</head>
<body class="<%=BodyClass%>" <%=BodyParameters%>>
    <form id="form2" runat="server">
       <cms:CMSPageManager ID="CMSPageManager1" runat="server" />
        <cms:CMSMenu ID="cmsmenul" runat="server" CSSPrefix=";Sub" Cursor="Pointer"</pre>
           HighlightAllItemsInPath="true"
            Layout="Horizontal"
            Padding="0"
            Spacing="1" />
        <asp:ContentPlaceHolder ID="plcMain" runat="server">
        </asp:ContentPlaceHolder>
   </form>
</body>
</html>
```

The **CMSPageManager** control ensures the loading of content from the database into editable regions. The **CMSMenu** control displays a drop-down menu. The **ContentPlaceHolder** control defines where the content of sub-pages should be loaded. In case you are planning to use AJAX components on your site, you need to add the **ScriptManager** control after the CMSPageManager control.

<asp:ScriptManager ID="manScript" runat="server" />

In the code behind file, you need to add a reference to the CMS.UIControls namespace:

[C#]

using CMS.UIControls;

The master page must be inherited from the TemplateMasterPage, so the class definition must look like this:

[C#]

public partial class CMSTemplates_CorporateSiteASPX_Root : TemplateMasterPage

And you also need do add the following code to the master page code behind class:

[C#]

```
protected override void CreateChildControls()
{
    base.CreateChildControls();
    this.PageManager = this.CMSPageManager1;
}
protected override void OnPreRender(EventArgs e)
{
    base.OnPreRender(e);
    this.ltlTags.Text = this.HeaderTags;
}
```

[VB.NET]

```
Protected Overloads Overrides Sub CreateChildControls()
    MyBase.CreateChildControls()
    Me.PageManager = Me.CMSPageManager1
End Sub
Protected Overloads Overrides Sub OnPreRender(ByVal e As EventArgs)
    MyBase.OnPreRender(e)
```

374 Kentico CMS 5.5 R2 Developer's Guide

```
Me.ltlTags.Text = Me.HeaderTags
End Sub
```

You should store master pages in the **CMSTemplates** folder together with page templates, so that they are exported with your website.

7.2.5.4 Adding custom code to the ASPX page template

In this simple example, you will see how you can easily add custom code to the Home page template. You will see that you can add custom code in Visual Studio, as you usually do. You will need to use the sample **Corporate Site ASPX** website for this example.

1. Open the web project in Visual Studio using the **WebProject.sln** file and open the **home.aspx** page located in the **CMSTemplates\CorporateSiteASPX** folder.

2. Switch to the **Design** tab and add a new button to the page. Call it **btnGetTime** and set its text to **Get time**. Add a new label, call it **IbITime** and clear its text.

		Root.master	
ScriptManager - manScript		^ 	
[CMSPageManager Control : ctl00_CMSPageManager1]			
Sign in to CMS Desk. Sign in	to CMS Site Manager. The default account is administrator with blan	k password.	
[lnkHome]			
[Literal "ltrDivOpen"] [Literal "ltlHyperlinks"] [Literal "ltr]	DivClose"]		
[btnSignOut] [btnSignOutLink]			
[lblLabel] [Literal "ltrSignLink"]			
[Literal "ltlRTLFix"] 🔽		E	
plcMain (Custom)ontrol : cmsmenu menuElem table]			
div.zoneLeft)bleImage: EditableImage]			
[CMSEditableRegion: MainContentTe	ext][lblNoData] [Literal "ltlBefore"]		
	CMSRepeater - repItems		
	Switch to source view to edit the control's templates.		
[Literal "ltlAfter"]			
CMSRepeater - repeater			
	Switch to source view to edit the control's templates.		
	btnGetTime		
		Site man Disclaimer	

3. Double-click the button and add the following code inside the click event handler:

[C#]

lblTime.Text = DateTime.Now.ToString();

4. Save the changes and view the home page on the live site. When you click the button, you can see the label displays the current date and time:

Welcome to the Sample Corporate Site

This is a sample web site created with **Kentico CMS for ASP.NET**. You can use it as a starter kit for your own web site and to learn Kentico CMS.

Default user name and password

You can sign in to CMS Desk (the administration interface) using the link at the top of the page or by going to the following address http://localhost/KenticoCMS/CMSDesk (if you're using the default installation path). Use the following credentials:

User name: administrator Password: Leave the password blank.

Getting Started

Kentico CMS Tutorial will guide you through Kentico CMS. You can also get help at http://www.kentico.com/Support.aspx.

1/15/2008		
Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item neview		
Featured product		
Price: \$249.00		

Latest news

Your second news

Get time 12/10/2009 2:14:32 PM

As you can see, you can use the standard programming methods you usually use. You can also use the standard debugging process in Visual Studio.

7.2.5.5 Combining ASPX templates and portal engine templates

In some cases, you may need to combine ASPX page templates or external ASPX pages and the portal engine page templates. The following text describes how you can accomplish this.

Imagine that you have created a website using the portal engine model - this means that the master page and the other pages use portal engine page templates. The problem here is how to "insert" ASPX pages inside the same master page. Unfortunately, it's not possible to do this directly. However, you can use the following workaround:

Use two master pages - the portal engine master page defined in the root document of the content tree and the ASPX master page (.master file) used for all ASPX pages within the website.

The drawback is that you will need to manage the master page in two places. But this issue also has a simple solution:

Take the web parts and HTML code you have "above" the **Page placeholder** web part in your original master page and place them into a user control called **Header.ascx**. Then, take the web parts and HTML code "below" the **Page placeholder** and place them into a user control called **Footer.ascx** as shown in the following figure:

	CompanyLogo	Shopping call 1 My account 1 My withhat You insping and a windy Search for	
	Home Services Products News Partners Company Blogs	Forums Events Images Wile Examples	
		Sita map Disclamer	
	Ken	tico	
CompanyLogo	Shopping.cat I My account I My wishlast Vour integring cast is ensity Search for:	Kentico	Site map Disclaimer
Home Services Products News Partners Comp	any Blogs Forums Events Images Wild Examples	Footer.ascx	

Now delete the content of the original **portal engine master page** and place only the following web parts onto the master page template:

- General/User control web part using the Header.ascx user control
- Page placeholder web part
- General/User control web part using the Footer.ascx user control

In the ASPX master page (.master file), you simply put:

- the Header.ascx user control
- the ContentPlaceHolder control
- the Footer.ascx user control

In this way, you ensure that you can manage the header and footer in a single place for both the portal engine and ASPX master page.

7.2.5.6 Integration with your existing ASP.NET application

If you need to integrate some existing ASP.NET application with a Kentico CMS website, there are several issues you need to consider. This chapter contains a summary of this topic, if you need more details or help with some particular issues, please contact Kentico support.

Location of CMS and your application

There are three ways how you can organize the CMS web project and your application web project:

1. Mixing both together

It makes sense to mix both applications into a single project if you wish to share functionality, content, security information and session or application variables between the CMS and your application. The easiest way is to use the Kentico CMS web project, as the main project since it's already correctly

configured for the CMS, and add your own ASPX pages and other files to this project.

If you need to display your own ASPX pages inside the context of the website, you can simply register them as page templates and then create new pages based on these page templates in the standard website navigation (in the content tree). You will also need to modify your ASPX pages so that they use the master page (.master file) of the Kentico CMS website.

If you wish to use a website built using the Kentico CMS portal engine development model, please also read the <u>Combining ASPX templates and portal engine templates</u> topic.

2. Having the CMS in the root and your application in a sub-folder

If your application can or needs to run separately from the CMS and you want the CMS to manage the main website, you can place the Kentico CMS web project in the root of the website and your application into a sub-folder. You will need to create a virtual directory for the sub-folder so that your application runs correctly.

3. Having your application in the root and the CMS in a sub-folder

If your application can or needs to run separately from the CMS and your application is the main part of the website and you wish to use the CMS only for some sub-section of the website where you publish the content, you need to place the CMS into a sub-folder and create a virtual directory for it.

Interaction between the CMS and your application

If you need to include your application inside the website (front-end), you can do so either through ASPX pages (see paragraph **Mixing both together** above) or you need to create ASCX user controls that you place into the CMS website.

If you need to build an application that will interact with the CMS system, but will mostly provide backend user interface, you can create a custom module as described in the <u>Custom modules</u> topic.

Sharing security information between the CMS and your application (single-sign-on)

If you wish to use single-sign-on for both your application and the CMS, you need to configure your environment as described in the <u>Single sign-on</u> topic. If you wish to use a single system of permissions (authorization), you can leverage the permission system for custom modules as described in the <u>Custom modules</u> topic.

7.2.5.7 Displaying data from an external database

Besides displaying Kentico CMS content, you can also display data from your external database or Web Service. In this case, you need to add custom code to your ASPX page that will use ADO.NET to retrieve the data or that will contact the Web Service and call its methods. Since you can place any custom code into the page (page template), you will simply use the standard ASP.NET code you would use when creating the website from scratch.

Example: Retrieving data from the sample Northwind database

In this simple example, you will see how to display data on the sample Corporate Site ASPX website from the *Categories* table of the Northwind database using ADO.NET. You may need to use some other

database if you do not have the sample database Northwind on your server.

Open the web project in Visual Studio using the **WebProject.sln** file. Open the *CMSTemplates/ CorporateSiteASPX/Home.aspx* page.

Drag and drop the standard ASP.NET GridView control onto the page and set its ID to GridView1.

Add the following line to the beginning of the code behind file:

[C#]

using System.Data.SqlClient;

Add the following code to the **Page_Load** method:

[C#]

```
// create sql connection - you could use Oracle or OLEDB provider as well
SqlConnection cn = new SqlConnection("Persist Security Info=False;
database=northwind;server=server1;user id=sa;password=psswd;Current
Language=English;Connection Timeout=120;");
// create data adapter
SqlDataAdapter da = new SqlDataAdapter("SELECT * FROM categories", cn);
DataSet ds = new DataSet();
// fill the dataset with data from database
da.Fill(ds);
// bind data to the grid view
GridView1.DataSource = ds;
GridView1.DataBind();
```

Save all changes. Look at the page on the live website. You will see a grid with data from the external database:

CategoryID	CategoryName	Description
1	Animals	Dogs, cats, horses
2	Colors	Red, green, blue, orange,
3	Names	John, Kevin, Julia, Robin

As you can see we used standard ASP.NET methods to display external data on the website.

7.3 Caching and performance

7.3.1 Overview

The performance of your website depends on many aspects:

- 1. Hardware on which your website and database server are running.
- Available system performance when you're sharing system resources with other applications (typically in shared hosting environment).

- 3. Size of your website.
- 4. Complexity of the website (number of nesting levels, number of web parts on a page, etc.)
- 5. Custom code added to the website.
- 6. Use of caching.
- 7. Other special circumstances, such as network connectivity between web server and SQL server, etc.

7.3.2 Caching options

Global caching settings

Go to **CMS Site Manager -> Settings -> website**, choose your website from the drop-down list. You can configure the following values:

- **Cache content (minutes)** this option specifies that all web parts/controls should cache the content they retrieve from Kentico CMS. You can override this value by setting the Cache minutes property of the web parts to 0, which disables caching for the given control, or generally to some different number of minutes. It's recommended that you cache all possible content that is not modified too often. The drawback of this option is that when you modify some content, the changes appear on the live site after the old version expires in the cache.
- **Cache images (minutes)** this option is used only for caching of images. It's recommended that you always use it. Kentico CMS automatically removes the cached image when it's modified, so it doesn't cause displaying of outdated content.
- Cache page info (minutes) this option is used for caching of page content and metadata. Since Kentico CMS often retrieves page information many times during a single page processing, it's actually a must to always set this value to at least 10 minutes! Kentico CMS automatically removes the cached page when it's modified, so it doesn't cause displaying of outdated content.

Full-page caching

Full-page caching represents the most powerful option. It caches the whole page, so it's not necessary to contact the SQL Server and run the page code again when the page is requested second time. You can configure the full-page caching in **CMS Desk -> Properties -> General**. The configuration is automatically **inherited to child pages** unless you disable caching on them.

The page stored in the cache is automatically removed when you modify the given page. However, if the page displays other documents (such as news list) and you modify these documents, the page will not be updated.

This option is not suitable for pages with web parts that need to be refreshed very often (e.g. the Random document web part) since you cannot disable caching for particular web parts. For such pages, it's recommended that you do not use full-page caching and use content caching instead.

Full client cache

You can enable full client cache by adding the following key into the *configuration/appSettings* section of your *web.config*:

<add key="CMSFullClientCache" value="true"/>

If you enable this type of caching, **CSS styles** and **images** will be cached in the client browser. This type of caching can be useful only for live site displaying, as changes made to the page in non-live-site modes would not be displayed due to the caching.

Web part/control-level caching settings

Some web parts/controls used for displaying content have two properties related to caching:

- Cache item name/CacheItemName this property specifies the key name under which the content will be stored in the cache; if not specified, the system generates the key name automatically based on the site name, page path, web part ID and current user name.
- Cache minutes/CacheMinutes this property specifies for how long the web part should cache the content retrieved from Kentico CMS. The default value is defined in the Cache content (minutes) site settings value described above. You can override the global value by setting this property to a different number.
- Cache dependencies/CacheDependencies using this property, you can specify which object changes cause the web part's cache to get cleared. Below, you can find a table showing which dummy cache keys get touched when some object gets changed, including some examples. By entering the appropriate dummy keys, one per line, you can specify that when the object gets changed, the cache gets cleared.

If you check the **Use default cache dependencies** check-box, default settings will be used. The default settings are configured for each web part and include all possible object changes that the content of the web part could depend on.

Object	Touched keys	Sample values
Document (TreeNode)	node <sitename> <aliaspath> <culture> node <sitename> <aliaspath> nodeid <nodeid> nodeid <linkednodeid> nodes <sitename> <classname> all + for every parent node: node <sitename> <aliaspath> childnodes</aliaspath></sitename></classname></sitename></linkednodeid></nodeid></aliaspath></sitename></culture></aliaspath></sitename>	node corporatesite /home en-us node corporatesite /home nodeid 12 nodeid 34 nodes corporatesite cms.menuitem all node sitename / childnodes
Any object (except documents)	<classname> all <classname> byid <id> <classname> byname <codename> <classname> byguid <guid></guid></classname></codename></classname></id></classname></classname>	cms.user all cms.user byid 53 cms.user byname administrator cms.user byguid 1ced44f3-f2fc
Metafile	metafile <guid></guid>	metafile 1ced44f3-f2fc
Document attachment	attachment <guid></guid>	attachment 1ced44f3-f2fc
Forum attachment	forumattachment <guid></guid>	forumattachment 1ced44f3-f2fc
Avatar	avatarfile <guid></guid>	avatarfile 1ced44f3-f2fc
Media file	mediafile <guid> mediafile preview <guid></guid></guid>	mediafile 1ced44f3-f2fc mediafile preview 1ced44f3-f2fc

Page template	template <id></id>	template 12
CacheHelper .ClearFullPageCache	fullpage	fullpage

Example 1: let's presume that you have a web part displaying some information about users. Therefore, whenever some user gets its details modified, the web part's cache should be cleared. To ensure this, you need to enter **cms.user|all** into the field, which is the dummy key that would get touched whenever some user's details get changed.

Example 2: now let's presume that your web part is displaying information about one particular user - the administrator. Her user name is *administrator*, her ID is *53* and her GUID is something beginning with *1ced44f3-f2fc*. So if you want to have the cache cleared whenever this user's details are changed, you can use any of the following three keys that specify the user by the previously named properties:

- cms.user|byid|53
- cms.user|byname|administrator
- cms.user|byguid|1ced44f3-f2fc-...

Partial caching

Partial caching is, simply put, full-page caching for web parts. Like with full-page caching, partial caching also stores the output HTML code. But in this case, it doesn't store the whole page, but only the output HTML code of the particular web part. The web parts have the **Partial cache minutes** and **Partial cache dependencies** properties, which can be used the same way as the **Cache minutes** and **Cache dependencies** properties described above.

<u>Please note</u>: default partial cache dependencies are not specified for the web parts, so if you want to use this feature, you need to specify them manually by entering the dummy keys as described above.

Caching and personalization

If your website contains sections for site members, the caching will be personalized, which means each signed in user will have their own cache. This may lead to large memory consumption, so it's recommended that you set caching to lower values for membership sites.

Previewing modifications made to pages with caching

Caching may confuse the content editors since they will not see the changes they made on the live site immediately. In such case, they can preview their changes in the **Preview** mode in Kentico CMS Desk since this mode doesn't use caching. The **Edit** mode doesn't use caching either.

7.3.3 Troubleshooting performance issues

If you encounter performance issues, please try to follow these steps to make sure that your system is optimized for best performance:

1. Make sure you're using the latest version of Kentico CMS

We improve the performance with every new release. Especially the 2.0 and 2.1 versions didn't provide a very good performance. You can find the version number in the lower right corner of Kentico CMS Desk -> Content dialog or on the logon screen of the administration interface.

2. Make sure caching is configured on your website.

Go to CMS Site Manager -> Settings, choose the appropriate website in the Sites drop-downlist and choose the website category. Make sure the values are set like these:

- Cache content >= 0

- Cache images > 0, at least 10 minutes recommended (images are automatically removed from the cache and reloaded if you modify them)

- <u>always set Cache page info > 0</u>, at least 10 minutes recommended (page data is automatically removed from the cache and reloaded if you modify it)

3. Try configuring full-page caching

Full-page caching is the most powerful caching option. Once the page is cached in the memory during the first view, it's displayed without contacting SQL server and running the page code. You can configure full-page caching in **CMS Desk -> Content -> Properties -> General -> Cache**.

The page is automatically removed from the memory and reloaded when you modify it's content. Please note that the performance improvement will be visible only during the second load of the page.

4. Turning off output filters

In special cases, the website may be slowed down by output filters. Go to Site Manager -> Settings, choose the appropriate website in the Sites drop-down list and choose the **Output filter** category. You can try to temporarily turn off all output filters by setting the following values to / (slash), which will disable the given filter for the whole website:

- Excluded output form filter URLs
- Excluded resolve filter URLs
- Excluded XHTML filter URL

If it helps, please contact us and we will help you find a workaround (if possible).

5. Configure file caching

Displaying files stored in Kentico CMS repository may be require lots of CPU time and may harm the overall website performance. Please try to configure these values in the **Site Manager -> Settings -> Files** section (your web application needs to have Modify permissions on the disk):

- Generate thumbnails: yes
- Redirect files to disk: yes
- Store files in file system: yes

6. Check your code

If you integrated any custom .NET code into the website, please make sure it works properly. Please be sure to avoid too many database operations and be sure to close the database connections properly. Try to comment out your code and see if it improves the performance.

7. Check your hardware

It's recommended that your system has at least 1 GB RAM and Pentium 4 or Pentium Core 2 Duo (or similar) processor.

8. Check the other applications/websites running on the same server

Whether you use your own server or shared hosting, make sure that the other applications do not take all the server performance. It's highly recommended that you run Kentico CMS in a **separate application pool** on Windows Server 2003.

9. Setting application pool Idle time-out in IIS

If your website is accessed not very frequently (less that every 20 minutes by default), users may experience long delays on first access to the site. To prevent this, you need to set the **Idle time-out** (minutes) property of the application pool to a higher value. This property can be accessed through:

IIS 6: open **IIS Manager** -> select **<machine>/Application Pools** -> right click the application pool -> select Properties -> switch to the **Performance** tab -> set the **Shutdown worker process after being idle for (time in minutes)** to a higher value or disable the option completely by unchecking the box

IIS 7: open **IIS Manager** -> select **<machine>/Application Pools** -> right click the application pool -> select **Advanced Settings** -> the property is located in the **Process Model** section

If the above mentioned settings don't help, please send us an exported copy of your website and we will try to analyze it.

7.3.4 File management and performance

Files can be stored in the file system (faster) or in database. If you're experiencing problems with slow image viewing, please try to configure the following values in the **Site Manager -> Settings -> Files** section:

- Generate thumbnails: yes
- Redirect files to disk: yes
- Store files in file system: yes

You can find more details on file management in chapter Where the files are stored.

7.4 CSS stylesheets and design

7.4.1 Overview

CSS stylesheets allow you to modify the design of your website. You can use standard <u>CSS styles</u> with Kentico CMS as you are used to.

Every website has some default CSS stylesheet. It can be modified in Site Manager -> Sites -> edit (/) a site, in the Site CSS stylesheet field.

Every page can either use the website stylesheet or it can override it with its own stylesheet. The page stylesheet can be configured in CMS Desk -> Content -> Properties tab -> General, in field CSS stylesheet.

Creating and managing stylesheets

You can create and manage CSS stylesheets in Site Manager -> Development -> CSS stylesheets.

Kentico CMS Site Manager	Sites Adminis	stration Settings Developm	nent Dashboard Licenses	Support
Development Categories Countries CSS stylesheets	CSS sty	lesheets esheet		
Cultures	Actions	Display name 🔺	Code name	
Custom tables	2 💥 🚺	Corporate Site	CorporateSite	
Document types	N 💥 🐻	Corporate Site - Gray and Blue	e CorporateSiteGrayBlue	
	N 🗙 📑	Corporate Site - Mobile device	CorporateSiteMobile	
Inline controls	2 🗙 🐻	Corporate site printer styles	CorporateSitePrinter	
🛃 Modules <u>ल</u> Notifications	1	test	test	
Page layouts				

Each stylesheet has the following properties:

- Stylesheet display name name of the stylesheet displayed in the user interface
- Stylesheet code name name of the stylesheet used in website code
- Stylesheet text standard CSS stylesheet code

You also need to enable the stylesheet for particular websites on the Sites tab.

Stylesheet URL
You can receive any stylesheet using a URL in the following format:
<domain>/CMSPages/GetCSS.aspx?stylesheetname=mystylesheetcodename</domain>

Combining website and page stylesheet

If you need to only combine the website and page stylesheet, you need to configure the page for using its own style sheet and import the website stylesheet using the following CSS directive:

[CSS]

@import url(/alfa17/CMSPages/GetCSS.aspx?stylesheetname=corporatesite);

The @import directive must be placed at the beginning of the stylesheet. All styles defined after this directive override the styles defined in the imported stylesheet.

Using your favorite CSS editor for stylesheet editing

If you want to edit CSS styles with your favorite editor, you can simply use the @import

directive to import your static CSS stylesheet and edit it in your editor. After you finish the design, you can simply copy and paste the stylesheet to Kentico CMS stylesheet.

Using CSS blocks for easier navigation in CSS code

You can use comments in format /* **#BLOCKNAME#** */ to make your navigation in CSS code easier. The comments may contain sub-blocks separated with a slash, such as /* **#BLOCKNAME/SUBBLOCK#** */.

Example:

[CSS]

```
/* #Menu# */
// some CSS code
/* #Menu/TreeMenu# */
// some CSS code
/* #Menu/MainMenu# */
// some CSS code
```

The outlined structure will look like this:



7.4.2 App themes

In some cases, you may leverage the built-in support for ASP.NET themes. You can use them for setting styles of controls that do not have their own CSS class name, such as Datagrid or Calendar.

The name of the theme folder under App_Themes must be same as the code name of the site CSS stylesheet. So if you use the Green stylesheet on your site, your theme must be stored in the App_Themes\green sub-folder.

You need to add your skins to the default.skin file. Here's an example of CMSCalendar / Calendar web part skin:

```
<cms:CMSCalendar Runat="server">

<NextPrevStyle ForeColor="Red"></NextPrevStyle>

<WeekendDayStyle BackColor="#E0E0E0"></WeekendDayStyle>

</cms:CMSCalendar>
```



Website design files

It's recommended that you store all images or Flash movies that are part of the website design template in the application theme folder. This ensures that the files are exported together with website when your deploying it to some other server.

7.4.3 Printer friendly CSS styles

This chapter explains how to use the printer friendly CSS styles on your website. These styles are used only if a document is sent to a printer.

1. Create a new CSS style sheet in **Site Manager** -> **Development** -> **CSS style sheets**, name it *Printer styles* and set its code name to *Printer_styles*, for example. See the simple example bellow for an illustration of the printer friendly CSS styles created for our default **Corporate site**.

```
.zoneLeft, .zoneRight, .zoneTopInfo, .zoneTop, .horizontalmenu, .zoneBottom
{
      display: none;
}
.eventCalendarDetail .zoneLeft, .eventCalendarDetail zoneRight
{
      display: block;
}
.eventCalendarDetail zoneRight
{
      float: left;
}
.logonReg .zoneLeft, .logonReg .zoneRight
{
      display: block;
}
.logonReg .zoneRight
{
      float: left;
}
.zoneContent
```

{
 float: left !important;
}

Please note that you have to hide the all the elements that should not be visible in the print version. You can do this by adding **display:none;** to the given style.

2. Add to the master page header tag link to appropriate CSS style. For example:

```
<link href="CMSPages/GetCSS.aspx?stylesheetname=Printer_styles" type="text/css"
rel="stylesheet" media="print" />
```

7.4.4 Print page

Kentico CMS allows you to add a link button to your web page that will create print version of the given document. The following example shows you on the sample Corporate Site how to create the given button for the news section.

1. Go to CMS Desk -> Content -> News -> Your second news -> Design and click the Add web part (+) button at the zoneLeft.



2. Select Text/Static Text.



3. In the web part properties, enter *PrintLink* as **ID** and choose **CMS.News** for the Show for document types text box. Enter the following code into the **Text** text box. Then click **OK**.



CMS Desk - Web Part	properties Webpage Dialog			
Web part prop	berties (Static text)			Documentatio
General Layout				
Default Visibility	Default			
Content	Web part control ID:	PrintLink		
HTML Envelope	Web part title:	•		
Time zones Partial caching	Disable view state:			
	Disable macros:	•		
	Visibility			
	Visible:	•		
	Hide on subpages:	•		
	Show for document types:	► CMS.News	Select Clear]
	Display to roles:	•	Add roles Clear	
	Content			
	Text:	<pre><div class="PrintLink"></div></pre>	÷	
Refresh content			OK Cancel	Apply
tp://localhost/KenticoCl	MS/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.asp 🕥 Local intra	anet Protected Mode: Off	

4. Now you have to specify the Print transformation for the new document type. Go to **CMS Site Manager** -> **Development** -> **Document Types** and click the **Edit** button next to the **News** document type. Switch to the **Transformation** tab and click **New Transformation**. 390



5. Enter *Print* as **Transformation name** and enter the following code into the **Code** text box. Then click **Save**.

```
<div class="newsItemDetail">
<hl><%# Eval("NewsTitle") %></hl>
<div class="NewsSummary">
<%# IfEmpty(Eval("NewsTeaser"), "", GetImage("NewsTeaser")) %>
<div class="NewsContent">
<div class="NewsContent">
<div class="Date"><%# GetDateTime("NewsReleaseDate", "d") %></div>
<%# Eval("NewsSummary") %>
</div>
</div>
</div class="Clearer">&nbsp;</div>
</div
<div class="Clearer">&nbsp;</div>
</div>
</div>
```

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					Switch to CMS Des	User: Global Administrator	v5.0.3637 Sign out	
CMS Site Manager	Sites Administration	Settings Development	Licenses Support					
 Development Categories Countries CSS stylesheets Cultures Cultures Cultures Document types 	Document type	e properties					0	
	General Fields Form	m Transformations Qu	ieries Child types Sites	Alternative forms	Search fields Doo	ruments	_	
	Transformations > Print @							
E-mail templates	Save 🗟 Check out to file							
Inline controls	You can check out the transformation to file c:\Inetpub\wwwroot\KenticoCMS\CMSTransformations\cms\news\print.ascx to edit transformation externally.							
Notifications Dege layouts Jage templates Gerege templates	Transformation name: Print							
	Transformation type: Code:	ASCX Generate default transformation						
System tables Tag groups		<%@ Control Language="C#" AutoEventWireup="true" Inherits="CMS Controls.CMSAbstractTransformation" %> <%@ Register TagPrefix="cc1" Namespace="CMS.Controls" Assembly="CMS.Controls" %>						
Time zones		<pre><div)<="" <div="" class="News?" new="" pre=""></div></pre>	ItemDetail"> vsTitle") %> Summary">				^	
Web part containers	_	<%# IfEmpty(Eva <div "'<br="" class="New</td><td>al(" newsteaser"),="">vsContent"></div>	wsTeaser")) %>					
Widgets		<div class="I
<%# Eval(" new<br=""></div>)ate"><%# GetDateTir /sSummary") %>	e ("NewsRelease)	Date", "d") %><	/div>		
Workflows		<pre><div class="Cle
</div></pre></td><td>earer"> </div></pre>						
		<div class="News
<%# Eval(" news]<="" td=""><td>Sody"> Sext") %></td><td></td><td></td><td></td><td></td></div>	Sody"> Sext") %>					
							~	
		Click here to view	w list of transformations exa	nples.				

6. Now, go back to **CMS Desk** -> **Content** -> **News** -> **Your second news** and click the newly created **Print** button. You will be redirected to the **Print** page that displays the print version of the given news item.

CompanyLogo

Your second news



Creating the Print page on your site

The **Print** page is already created on the sample Corporate Site. On your own website, you will have to create it by yourself. The following steps need to be taken in order for the Print page to be created:

- 1. Add a new blank page to the **Special pages** folder and name it **Print**.
- 2. Firstly, you have to disable content inheritance at **Properties -> Template**.



3. Every **Print** page contains the repeater web part that renders the **Print** transformation for the given document type. The transformation can be specified at **Site Manager** -> **Development** -> **Document Types** -> **<edit** () **document type** -> **Transformations**.

Therefore, add the Repeater web part and set its properties to the following values:

- **Path:** {?printpath|/%?}
- Document types: {?classname|cms.root?}
- Transformation: {?classname|cms.root?}.print

The **Path** text box specifies the path to the document whose print version you want to make. The value of the **printpath** macro expression is supplied in URL. If no value is supplied in URL (for instance you go directly on the **Print** page from the content tree and not through the print link button), the default **Print** transformation for **cms.root** is displayed.

The **Document types** text box specifies the document types that should be displayed.

The **Transformation** text box specifies the name of the transformation that should be used to render the print version. If the **Print** transformation is not defined for the given document type, the **Print** transformation for the **cms.root** is used.

4. You can try out the functionality of the **Print** page by printing the detail of any product, because the **Print** link button is already created for all products on the Corporate Site.



7.4.5 CSS stylesheet internals and API

7.4.5.1 Database tables and API classes

The following database tables are used to store CSS stylesheets:

- CMS_CssStylesheet contains CSS stylesheets and information about them
- CMS_CssStylesheetSite assigns CSS stylesheets to the sites where they can be used

The CSS stylesheet API is provided by the following CMS.SiteProvider namespace classes:

• CssStylesheetInfo, CssStylesheetInfoProvider - these classes provide functionality for managing CSS stylesheets

The following topics show examples of how these classes can be used:

- <u>Getting CSS stylesheet data</u>
- <u>Managing CSS stylesheets</u>
- <u>Assigning CSS stylesheets to sites</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

7.4.5.2 Getting CSS stylesheet data

The following sample code shows how you can get a CSS stylesheet as a CssStylesheetInfo object:

[C#]

```
using CMS.SiteProvider;
...
// Get stylesheet object by ID
CssStylesheetInfo csi = CssStylesheetInfoProvider.GetCssStylesheetInfo(1);
// Get stylesheet object by stylesheet name
CssStylesheetInfo csi2 = CssStylesheetInfoProvider.GetCssStylesheetInfo(
"CorporateSite");
```

The following sample code shows how you can get a DataSet containing CSS stylesheets:

[C#]

```
using System.Data;
using CMS.SiteProvider;
using CMS.CMSHelper;
. . .
        string siteName = CMSContext.CurrentSiteName;
        string where = "";
        string orderBy = "";
        string columns = "";
        int topN = 10;
        // Get dataset of stylesheets according to the given parameters
        DataSet ds2 = CssStylesheetInfoProvider.GetCssStylesheets(siteName);
        DataSet ds3 = CssStylesheetInfoProvider.GetCssStylesheets(where, orderBy);
       DataSet ds4 = CssStylesheetInfoProvider.GetCssStylesheets(where, orderBy,
topN);
        DataSet ds5 = CssStylesheetInfoProvider.GetCssStylesheets(where, orderBy,
topN, columns);
        // Get dataset of all stylesheet objects
        DataSet ds = CssStylesheetInfoProvider.GetAllCssStylesheets();
```

Development	395

7.4.5.3 Managing CSS stylesheets

The following sample code shows how you can modify the *Display name* of an existing CSS stylesheet:

[C#]

```
using CMS.SiteProvider;

...
    // Get stylesheet object
    CssStylesheetInfo csi = CssStylesheetInfoProvider.GetCssStylesheetInfo(
"TestStylesheet");
    // If stylesheet exists
    if (csi != null)
    {
        // Update property
        csi.StylesheetDisplayName += " updated";
        // Save to database
        CssStylesheetInfoProvider.SetCssStylesheetInfo(csi);
    }
```

The following sample code shows how you can create a new CSS stylesheet and add it to the system:

[C#]

```
using CMS.SiteProvider;
....
// Create new object
CssStylesheetInfo csi = new CssStylesheetInfo();
// Set properties
csi.StylesheetDisplayName = "Test stylesheet";
csi.StylesheetDisplayName = "TestStylesheet";
csi.StylesheetText = "Some CSS code";
// Save to database
CssStylesheetInfoProvider.SetCssStylesheetInfo(csi);
```

The following sample code shows how you can delete an existing CSS stylesheet:

[C#]

using CMS.SiteProvider;

```
...
    // Get stylesheet object
    CssStylesheetInfo csi = CssStylesheetInfoProvider.GetCssStylesheetInfo(
"TestStylesheet");
    // If stylesheet exists
    if (csi != null)
        {
            // Delete from database
            CssStylesheetInfoProvider.DeleteCssStylesheetInfo(csi);
        }
```

7.4.5.4 Assigning CSS stylesheets to sites

The following sample code shows how you can assign a an existing CSS stylesheet to a site:

[C#]

```
using CMS.SiteProvider;
....
// Get stylesheet and site object
CssStylesheetInfo csi = CssStylesheetInfoProvider.GetCssStylesheetInfo(
"TestStylesheet");
SiteInfo si = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
// If both exist
if ((csi != null) && (si != null))
{
// Add stylesheet to site
CssStylesheetSiteInfoProvider.AddCssStylesheetToSite(csi.StylesheetID,
si.SiteID);
}
```

7.5 Debugging

7.5.1 Overview

Debugging in the UI

The **Administration -> System -> Debug** tab can be used for system debugging, i.e. finding and fixing performance or settings issues on your website. Debugs are also particularly useful in case that you are reporting an issue to our support department. Every extra bit of information related to your issue that you find in the debugs can significantly shorten the time needed to solve the issue.

The debugging interface is divided into several sub-tabs. Only the following two tabs are displayed by default. Click the name of the tab to learn more.
- <u>System objects</u>
- <u>Cache items</u>

The other sub-tabs are displayed only after adding a dedicated key into the *AppSettings* section of your *web.config* file. Here again, click the name of the tab to get detailed information.

- <u>Cache access</u>
- <u>SQL queries</u>
- Page ViewState
- Output
- <u>Security</u>
- <u>Requests</u>
- Worker threads

You can enable all these debugs at once using the bulk keys.

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Debugging on the live site

You can also enable debugging directly on the live site. In this case, the debug log is displayed at the bottom of each loaded page. Like UI debugs, live site debugging too can be enabled either separately using the dedicated keys (follow the links above) or all at once using the <u>bulk keys</u>.

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2 Proc_CMS_Class_SelectGeneration ClassLoadGeneration (0)	App_Start	N/A
3 Proc_CMS_QueryProvider_SelectGeneration QueryLoadGeneration (0)	App_Start	N/A
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Request details

You can display request details for each debugged request by clicking its URL in any debug log either in the UI or on the live site.

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After doing so, a new pop-up window gets opened, listing the request's debug log for all enabled debugs.

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7.5.2 Particular debugs

7.5.2.1 System objects debug

On the **Debug -> System objects** tab, you can see the numbers of objects currently stored in hash tables on the server.

The first table shows the names of particular **hash tables** and the numbers of records in them. The second table shows particular **object types** and the numbers of currently hashed objects of each type.

All hash tables can be cleared using the **Clear hash tables** button.

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7.5.2.2 Cache items debug

On the **Debug -> Cache items** tab, you can see which **Keys** and **Dummy keys** are currently stored in the system cache. For more information about caching in Kentico CMS, please refer to this topic.

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pageinfo[corporatesite]/en-usi]false CMS.PortalEngine.PageInfo (771 B) pageinfo[corporatesite]/news]en-usi/news[true CMS.PortalEngine.PageInfo (887 B)	-	languageselection corporatesite								
pageinfo[corporatesite/news en-us/news true		pageinfo;corporatesitel/ien-usijfalse GMS.PortalEngine.PageInfo (771 B)								
		pageinfo corporatesite /news en-us /news true								
pageinfobyurl corporatesite http://localhost/kenticocms_501_0210/news.aspx en-us true true	_	pageinfobyurl corporatesite http://localhost/kenticocms_501_0210/hews.aspx en-us true true								
Dummy key		Dummy key								
attachment/887a2ff3-884b-493a-azce-105b3025f8ec		attachment(887a2ff3-884b-493a-a2ce-105b3025f8ec								
cms.cssstylesheet byguid 8caaf19d-1ad7-4a52-8407-2561220a4a05		cms.cssstylesheet byguid 8caaf19d-1ad7-4a52-8407-2561220a4a05								
cms.cssslylesheet[byguid]bc4f184a-14d0-4f79-9804-3f65908d12a5		cms.cssstylesheet byguid bc4f184a-14d0-4f79-9804-3f65908d12a5								

All dummy keys can be cleared from the cache using the **Clear cache** button.

7.5.2.3 Worker threads debug

On the **Debug -> Worker threads** tab, you can see which worker threads are currently running in the system. This is particularly useful if your application is consuming significantly more resources than it normally should. It may often be caused by threads running in the background, e.g. threads for Smart Search re-indexing or Mass e-mail sending.

You can perform the following actions with the listed threads:

- **X** Cancel cancels execution of the thread (useful if the original window where the thread was started is already closed)
- **Solution** View displays a pop-up window showing the current content of the thread log (in case that there is a log)

The **Run testing thread** button can be used to launch a testing thread in order to verify that threads debugging works correctly.

Kentico CMS Site Manager	Sites Administr	ation Settings	Development Lie	censes Support		Switch to CMS	Desk Use	r: Global Adminis	rator v5.5.3782	Sign Out
Administration Administration Avatars	Interpretation System									0
💮 Bad words & Badges	General E-mail	l Files Deploymer	nt Debug							
Banned IPs	System Debug									U
Event log	System objects	Cache items Worke	er threads Cache a	access SQL queries	Page ViewState	Output Security	/ Macros	Requests Wet	farm	-
Recycle bin									Run t	esting thread
🖓 Roles C Scheduled tasks	Actions	Calling context /	URL				Thread ID	Status	Start time	Duration
🗐 Smart search	1 🗱 🗟	ASP.cmssitemana /KenticoCMS_0510/	ger_administration CMSSiteManager/A	_system_debug_syst .dministration/System/	tem_debugthread: Debug/System_De	s_aspx.RunTest bugThreads.aspx	25	WaitSleepJoin	5/11/2010 1:54:55 PM	0:00:01.256
UI personalization	2 💥 🖻	ASP.cmssitemana /KenticoCMS_0510/	ger_administration CMSSiteManager/A	_system_debug_syst .dministration/System/	tem_debugthread: Debug/System_De	s_aspx.RunTest bugThreads.aspx	24	WaitSleepJoin	5/11/2010 1:54:55 PM	0:00:01.761
崎 Web farm		Version: 5.5 Build: 5	5.5.3782							0:00:03.018

7.5.2.4 Cache access debug

Cache access debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

- CMSDebugCache enables the Cache access tab in Administration -> System -> Debug
- CMSDebugCacheLive enables cache access debugging on the live site
- CMSDebugAllCaches enables cache access debugging for all operations (including the UI)
- CMSDebugCacheLogLength maximal length of the cache access debug log (number of preserved records)
- CMSLogCache if applied, cache access debug log will be stored into ~/App_Data/logcache.log

Here is a list of these keys for easy copy&paste into your web.config:

```
<add key="CMSDebugCache" value="true" />
<add key="CMSDebugCacheLive" value="true" />
<add key="CMSDebugAllCaches" value="true" />
<add key="CMSDebugCacheLogLength" value="10" />
<add key="CMSLogCache" value="true" />
```

Cache access debugging can also be enabled using the bulk keys.

User interface

On the Debug -> Cache access tab, you can see a log of accesses to the system cache.

For each access, you can see the URL of the page on whose loading the cache was accessed. The table below the URL always shows the type of **Access**, the accessed **Cache key**, the object type and size of cached **Data** and the **Context** from which the cache was accessed. For more information about caching in Kentico CMS, please refer to <u>this topic</u>.

All dummy keys can be cleared from the cache using the **Clear cache** button.

By clicking the **View object** (a) icon, you can display details of the cached object in a new window. Clicking the **Clear cache log** button clears all records in this debug log.

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support	
Administration Avatars	System	0
Bad words	General E-mail Files Deployment Debug	
Badges	System + Debug	2
E-mail queue E-mail queue	System objects Cache items Worker threads Cache access SQL queries Page ViewState Output Security Macros Requests Web farm	
Permissions	Streambeler	
Roles O Scheduled tasks	/KenticoCMS 501 0210/getfile/9836d166-e320-4533-b49b-8cded71ccbfc/CompanyLogo.aspx (03:02:16)	
	Access Cache key Data Context	Е
	1 ADD getfile corporatesite en-us nodeguid=98364166-e320-4533-b49b-8cded71ccbfc *CMS.UIControls.CMSOutputFile (680 B)* (36 B)	
	Version: 5.0 Build: 5.0.3656	
	/KenticoCMS 501 0210/CMSPages/GetCSS.aspx?stylesheetname=CorporateSite (03:02:15)	
	Access Cache key Context	
	1 ADD getcss[corporatesite CMS.UIControls.CMSOutputCSS (53 kB)* (35 B) GetCSS	
	Version: 5.0 Build: 5.0.3656	
	/KenticoCMS_501_0210/CMSPages/GetCSS.aspx?stvlesheetname=CorporateSitePrinter (03:02:15)	
	Access Cache key Context	
	1 ADD getcss[corporatesiteprinter CMS.UIControls.CMSOutputCSS (417 B)" (35 B)	
	Version: 5.0 Build: 5.0.3656	

7.5.2.5 SQL queries debug

SQL queries debugging can be turned on by adding one or more of the following keys to *AppSettings* section of your project's *web.config* file:

- CMSDebugSQLQueries enables the SQL queries tab in Site Manager -> Administration -> System -> Debug
- CMSDebugSQLQueriesLive enables SQL queries debugging on the live site
- CMSDebugAllSQLQueries enables debugging of all SQL queries (including the UI)
- CMSDebugSQLQueriesLogLength maximal length of the SQL queries debug log (number of preserved records)
- CMSLogSQLQueries if applied, SQL queries debug log will be saved into ~/App_Data/logsql.log

Here is a list of these keys for easy copy&paste into your web.config:

```
<add key="CMSDebugSQLQueries" value="true" />
<add key="CMSDebugSQLQueriesLive" value="true" />
<add key="CMSDebugAllSQLQueries" value="true" />
<add key="CMSDebugSQLQueriesLogLength" value="10" />
<add key="CMSLogSQLQueries" value="true" />
```

SQL queries debugging can also be enabled using the bulk keys.

User interface

On the **Debug -> SQL queries** tab, you can see a log of SQL queries called on loading of particular pages. For each record, there is row with a URL of the loaded page followed by its time of display. Below it, you can find a table listing all SQL queries executed when loading the page.

For each query, there are two lines in the table. The first line contains the exact text of the query, while the second line contains the number of loaded rows, columns in each row and the size of the loaded data. The Context column shows where the query was called from. The last column of the table displays the exact duration of query execution. The last line of the table displays the overall page loading time.



Clicking the Clear SQL log button clears all records in this debug log.

7.5.2.6 Page ViewState debug

Page ViewState debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

- CMSDebugViewState enables the Page ViewState tab in Administration -> System -> Debug
- CMSDebugViewStateLive enables ViewState debugging on the live site

- CMSDebugAllViewStates enables ViewState debugging for all operations (including the UI)
- CMSDebugViewStateLogLength maximal length of the ViewState debug log (number of preserved records)

Here is a list of these keys for easy copy&paste into your web.config:

```
<add key="CMSDebugViewState" value="true" />
<add key="CMSDebugViewStateLive" value="true" />
<add key="CMSDebugAllViewStates" value="true" />
<add key="CMSDebugViewStateLogLength" value="10" />
```

Page ViewState debugging can also be enabled using the bulk keys.

User interface

On the **Debug -> Page ViewState** tab, you can see the ViewState of particular controls on recently loaded pages. The **Is dirty** column indicates if the item was added to ViewState after call of the *Track ViewState()* method (happens typically in *OnInit*).

The log can be cleared using the Clear ViewState log button.

<u>Please note</u>: ViewState of the controls is retrieved using reflection. Therefore this debug may not work properly under <u>medium trust environment</u> or other specific circumstances.

Kentico CMS Site Manager	Sites	Settings	Switch to CMS Desk User: Global Administrator v5.5.3742 Sign out									
Administration	System	octango		2								
Bad words	General E-mail Files Deployment Debug System ▶ Debug											
E-mail queue	System objects Cache it	ems Wo	ker threads Cache access SQL queries Page ViewState Output Security Macros Requests Web farm	^								
Recycle bin Recycle bin Roles Costeduled tasks	/KenticoCMS 0331/Co	mpany.as	Clear View State log									
Smart search	Control ID	ViewState										
UI personalization	1 plc pnlPage	No	CssClass = "PagePlaceholder" (15 B)	E								
📲 Users 📲 Web farm	PagePlaceholder 2 PagePlaceholder pnlPage	No	CssClass = "PagePlaceholder" (15 B)									
	ContentText 3 BizFormControl1 Bizform1	Yes Yes	FormName = "ContactUs" (9 B) FormMode = Insert									
	BizFormControl1 4 Bizform1 cti00	No No	Mode = insert SiteName = "CorporateSite" (13 B)									
	Bizform1 5 ctl00 pnlCategoryList	No	CssClass = "FormCategoryList" (16 B)									
	Bizform1 6 cti00 pnIForm	No	CssClass = "FormPanel" (9 B)									
	7 pnlForm FirstName_control	Yes	CssClass = "EditingFormControlNestedControl" (31 B)									

7.5.2.7 Output debug

Output debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

• CMSDebugOutput - enables the Output tab in Site Manager -> Administration -> System -> Debug

- CMSDebugOutputLive enables output debugging on the live site
- CMSDebugAllOutputs enables output debugging for all operations (including the UI)
- CMSDebugOutputLogLength maximal size of the output debug log (number of preserved records)
- CMSLogOutputToFile if applied, output debug log is saved into ~/App_Data/logoutput.log

Here is a list of these keys for easy copy&paste into your web.config.

```
<add key="CMSDebugOutput" value="true" />
<add key="CMSDebugOutputLive" value="true" />
<add key="CMSDebugAllOutputs" value="true" />
<add key="CMSDebugOutputLogLength" value="10" />
<add key="CMSLogOutputToFile" value="true" />
```

Output debugging can also be enabled using the bulk keys.

User interface

On the **Debug** -> **Output** tab, you can see the exact output code of recently displayed pages. This is particularly useful in case of AJAX request, whose code can not be viewed as part of the page source directly in the browser.

The log can be cleared using the **Clear output log** button.

7.5.2.8 Security debug

Security debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

- CMSDebugSecurity enables the Security tab in Site Manager -> Administration -> System -> Debug
- CMSDebugSecurityLive enables security debugging on the live site
- CMSDebugAllSecurity enables security debugging for all operations (including the UI)

- CMSDebugSecurityLogLength maximal length of the security debug log (number of preserved records)
- CMSLogSecurity if applied, output debug log will be saved into ~/App_Data/logsecurity.log

Here is a list of these keys for easy copy&paste into your web.config.

```
<add key="CMSDebugSecurity" value="true" />
<add key="CMSDebugSecurityLive" value="true" />
<add key="CMSDebugAllSecurity" value="true" />
<add key="CMSDebugSecurityLogLength" value="10" />
<add key="CMSLogSecurity" value="true" />
```

Security debugging can also be enabled using the bulk keys.

User interface

On the **Debug -> Security** tab, you can see which security checks were recently performed on the site. This is particularly useful if you want to quickly find out why some user is not able to access some section of the UI or gets the *Access denied* page displayed.

The log can be	cleared using the	Clear security	log button.
----------------	-------------------	----------------	-------------

Kentico	Citere Administra	-	1:	Connect	Switch to CMS Desk	User:	Global Administrator v5.0.3656	Sign out
Administration Avatars	Sites Administra	auon setungs Development	Licenses	Support				0
Bad words	General E-mail	Files Deployment Debug	1					_
🛃 Badges 🚚 Banned IPs	System + Debug							0
E-mail queue	System objects	Cache items Worker threads	Cache access	SQL queries Page ViewSta	te Output Security Mac	ros F	Requests Web farm	
	/KenticoCMS :	501 0210/CMSSiteManager/A	dministration	n /System/System.aspx (0-	4:02:01)		Clear	security log
🔊 Smart search	User name	Operation	Result	Resource / Class / ID	Permission / UI element	Site	Context	
W personalization	1 administrato	r IsGlobalAdministrator	True				CurrentUserInfo.get_IsGlobalAdm CMSPage.CheckGlobalAdministra	ninistrator ator
		Version: 5.0 Build: 5.0.3656						
	/KenticoCMS 5	501 0210/CMSSiteManager/A	dministration	n/System/System Header	.aspx (04:02:01)			
	User name	Operation	Result	Resource / Class / ID	Permission / UI element	Site	Context	
	1 administrato	r IsGlobalAdministrator	True				CurrentUserInfo.get_IsGlobalAdm CMSPage.CheckGlobalAdministra	ninistrator ator
		Version: 5.0 Build: 5.0.3656						
	/KenticoCMS 5	501 0210/CMSSiteManager/A	dministratio	n/System/System Frames	et.aspx (04:02:00)			
	User name	Operation	Result	Resource / Class / ID	Permission / UI element	Site	Context	
	1 administrato	r IsGlobalAdministrator	True				CurrentUserInfo.get_IsGlobalAdm CMSPage.CheckGlobalAdministra	ninistrator ator
		Version: 5.0 Build: 5.0.3656						

7.5.2.9 Macros debugging

Macros debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

- CMSDebugMacros enables the Macros tab in Site Manager -> Administration -> System -> Debug
- CMSDebugMacrosLive enables macros debugging on the live site
- CMSDebugAllMacros enables macros debugging for all operations (including the UI)
- CMSDebugMacrosLogLength maximal length of the macros debug log (number of preserved

records)

Here is a list of these keys for easy copy&paste into your web.config.

```
<add key="CMSDebugMacros" value="true" />
<add key="CMSDebugMacrosLive" value="true" />
<add key="CMSDebugAllMacros" value="true" />
<add key="CMSDebugMacrosLogLength" value="20" />
```

Macros debugging can also be enabled using the bulk keys.

User interface

On the **Debug** -> **Macros** tab, you can see which macros were recently resolved. For each macro, its exact expression, result (1 - resolved successfully, 0 - not resolved) and context from which it was called is logged. This is useful if you want to analyze how macros were processed.

The log can be cleared using the **Clear macro log** button.

							Switch	to CMS De	<u>sk</u> Use	r: Global Ad	Iministrator	v5.5.3782	Sign Out	
CIVIS Site Manager		Sites	Administration Settings Dev	elopment Licer	nses Support									
Administration		9	System										0)
Bad words	Bad words General E-mail Files Deployment Debug													
Baned IPs System + Debug											8			
E-mail queue		Sys	System objects Cache items Worker threads Cache access SQL queries Page ViewState Output Security Macros Requests Web farm											
Permissions Recycle bin Boles Scheduled tasks		<u>/Ke</u>	nticoCMS_0510/CMSSiteManager	administration/	/administration.a	spx (01:12:28)					I	Clear mae	cro log	-
🔊 🔊 Smart search			Expression	Result				Co	ntext					
System	1 (%CurrentSite.SiteID%) ContextResolver.MacroMatch MacroResolver.MacroMatch MacroResolver.MacroMatch CMSAdminControls_UU_UIProfiles_UIGuide.GetGuideItemParameters CMSAdminControls_UU_UIProfiles_UIGuide.DetGuideItemParameters													
			> CurrentSite.SiteID	1									:	÷
	•	2	{%CurrentSite.SiteID%}	1	ContextResolver. MacroResolver.M MacroResolver.R CMSContext.Res CMSAdminContro CMSAdminContro	MacroMatch acroMatch esolveMacros olveMacros ols_UI_UIProfiles_ ols_UI_UIProfiles_	UlGuide.Ge UlGuide.Pa	tGuideltem ge_Load	Parameters	3				
			> CurrentSite.SiteID	1										

7.5.2.10 Request debug

Request debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

- CMSDebugRequests enables the Request tab in Site Manager -> Administration -> System -> Debug
- CMSDebugRequestsLive enables request debugging on the live site
- CMSDebugAllRequests enables request debugging for all pages (including the UI)
- CMSDebugRequestsLogLength if applied, output debug log will be saved into ~/App_Data/ logrequests.log

Here is a list of these keys for easy copy&paste into your web.config:

```
<add key="CMSDebugRequests" value="true" />
<add key="CMSDebugRequestsLive" value="true" />
<add key="CMSDebugAllRequests" value="true" />
<add key="CMSDebugRequestsLogLength" value="10" />
```

Request debugging can also be enabled using the bulk keys.

User interface

On the **Debug** -> **Requests** tab, you can see the time each of the recent page requests took to process. You not only see the overall time, but also separate times of particular parts of each requests, along with other detailed information about the request.

This is particularly useful if your response time is too large and you need to figure out why. You can basically see whether the issue is outside the application or inside it by comparing the real response time and response time spent in the application, what data came with the request and from which context.

1	Kentico											Switc	h to CMS D	esk Us	er: Global A	dministrator	v5.0.3656	Sign out
	CMS Site Manager	:	Sites	Administration	S	ettings	Developr	nent	Licenses	Support								
dmir	nistration		ء 😓	System														
- []	Avatars Rad words		Come	ad Email	Tiles	Deeleur	and De											
2	Badges		Gene	rai E-maii	Files	Depioyr	nent De	bug										
	Banned IPs	-	Syster	n ▶ Debug														
9	E-mail queue		Syste	m objects Ca	che iterr	is Wo	rker threads	Ca	ache access	SQL queries	Page ViewState	Output	Security	Macros	Requests	Web farm		
	Event log																01	
77	Permissions Recurls him																Clear reques	ts log
. U 91	Roles		/Ken	ILICOCMS 501	0210	/CMSS	teManage	r/Adı	ministratio	on/System/S	ystem.aspx (04:0	2:06)						
Ø	Scheduled tasks			Method							Additional i	nfo					From last I	rom firs
Ô	Smart search		1 Be	ginRequest														0.00
5	System		2 Au	thorizeRequest													0.001	0.00
	UI personalization		3 Ac	quireRequestSt	ate												0.000	0.00
	Users		4 > (OnPreInit													0.000	0.00
U	web farm		5 > 0	DnInit													0.001	0.00
			6 > 0	DnLoad													0.000	0.00
		_	7 > 0	Dorerender													0.008	0.01
		•	8 > F	kender dRogwoot	20	0 OK											0.001	0.01
		Ĩ	9 EI	Idrequest	20	reion: 6	0 Puild: 5 (3656									0.001	0.01
			Bogu	Request cookies:														
			Na	ame			Value											
			1 CI	MSPreferredCul	ture		en-US											
			2 CI	MSPreferredUIC	ulture		en-us											
			3 Vi	sitorStatus			1											
			4 AS	SP.NET_Sessio	nld	i4vgdhnsqz0rn345wsqyljzv												
			5 Vi	ewMode			0											
			6 Fo	ormState			6c40dd	48-1e8	85-4978-91	55-9bf584635	f14							
			7 .A	SPXFORMSAUT	н		C04C4E	D792	B62CE690	9AAD35E751	C048FA2426C9C7	E8B63FDD	E42F8881	0EA87AE8	9ECF3D			
			Requ	iest informatio	on:													
			Na	ame	Valu	e												
			1 Ht	tpMethod	GET													
			2 UI	rlReferrer	http://	localhos	t/KenticoC	MS_50	01_0210/CI	MSSiteManage	er/Administration/Sy	stem/Syste	em_Frames	set.aspx				
			3 U:	serAgent	Mozil PC 6	la/4.0 (co .0; InfoP:	ompatible; l ath.2)	VISIE 8	3.0; Window	/s NT 6.1; WO)	W64; Trident/4.0; SI	LCC2; .NET	CLR 2.0.5	0727; .NET	CLR 3.5.307	729; .NET CLF	R 3.0.30729; Med	a Center

The log can be cleared using the **Clear request log** button.

7.5.2.11 Web farm debugging

Web farm debugging can be turned on by adding one or more of the following keys into the *AppSettings* section of your *web.config* file:

• CMSDebugWebFarm - enables the Web farm tab in Site Manager -> Administration -> System ->

Debug

- CMSDebugAllWebFarm enables web farm debugging for all operations (including the UI)
- CMSDebugWebFarmLogLength maximal length of the web farm debug log (number of preserved records)

Here is a list of these keys for easy copy&paste into your web.config:

```
<add key="CMSDebugWebFarm" value="true" />
<add key="CMSDebugAllWebFarm" value="true" />
<add key="CMSDebugWebFarmLogLength" value="20" />
```

Web farm debugging can also be enabled using the bulk keys.

User interface

On the **Debug -> Web farm** tab, you can see which web farm tasks were logged and which servers were notified about the changes. This is particularly useful if you want to find out if the web farm works effectively and synchronizes correct data, or generally if you want to troubleshoot web-farm-related issues.

The following screenshot shows how the debug looks on the source server (the server where the data was modified). The bottom part show the logged tasks, while the top part shows asynchronous notifications of other web farm servers.

Switch to CMS Desk User: Global Administrator v5.5.3782 Sign Out			💒 Kentico							
t Licenses Support	nistration Settings	Sites Administration	CMS Site Manager							
0	n	right System	- Administration							
	-mail Files Deploy	General E-mail F	Bad words							
0	Banges System > Debug									
Cache access SQL queries Page ViewState Output Security Macros Requests Web farm	s Cache items W	System objects Cach	E-mail queue E-mail queue							
			2 Permissions							
Clear web farm log			Recycle bin Roles							
ache/CMSSiteManager/Administration/Roles/Role_New.aspx?siteId=1 (04:13:37)	16]/5.5 3782.142	[Thread ID 16] /5.5	Scheduled tasks							
Target Data Context	type	Task type	🕬 Smart search							
HCMSPages/webfarmupdater.aspx	http://david	1 NOTIFY	System							
Version: 5.5 Build: 5.5.3782			UI personalization							
lanager/Administration/Roles/Role_New.aspx?siteId=1 (04:13:37)	14205 Beta3-Apac	/5.5 3782.14205	Web farm							
Data Context	type Target	Task type								
Image: WebSyncHelperClass CreateTask CacheHelper.TouchKeys Abstractinto TouchKeys Abstractinto Insert synchronizedinto Insert soleh0973d97-b937-4add-99d7-18709d7ad7bc RoleInt0Provider.SetRoleInt0 RoleInt0Provider.SetRoleInt0 CMSstleManager_Administration_Roles_Controls_RoleEdit.btnOK_Click	CHEITEM Cache	1 TOUCHCACHEITEM	t							
Version: 5.5 Build: 5.5.3782										
Target Data Context NCMSPages/web/armupdater.aspx Image: Administration/Roles/Role_New.aspx?sit=td=1 (04:13:37) Version: 5.5 Build: 5.5.3782 Image: Administration/Roles/Role_New.aspx?sit=td=1 (04:13:37) Data Context Data Context MebSyncHelperClass.CreateTask CacheHelperTouchKeys Abstractinfo TouchKeys Abstractinfo TouchKeys Abstractinfo TouchKeys Significant RoleInformation Roles RoleInfoProvider.SetRoleInfontemal RoleInfoProvider.SetRoleInfontemal CHS/SteManager_Administration_Roles_Controls_RoleEdit.btnOK_Click: Version: 5.5 Build: 5.5.3782	t type http://david	Task type 1 NOTIFY /5.5 3782.14205 / Task type 1 TOUCHCACHEITEM	 ✓ Scheduled tasks ✓ Smart search ✓ System ✓ Upersonalization ✓ Users ✓ Web farm 							

The second screenshot shows how the debug looks on the target server after it is notified about the modification. You can recognize the task by the *DO:* prefix, which indicates that the synchronization task was (is being) processed.

The log can be cleared using the Clear web farm log button.

Kentico CMS Site Manager	Sites	Administration	ngs Developi	ment Licenses	Support		Switch	to CMS De	<u>sk</u> Use	er: Global A	dministrator	v5.5.3779	Sign Out
Administration Administration Avatars Bad words Back	Gene	S <mark>ystem</mark> ral E-mail Files Di	eployment De	bug									0
Sadges Banned IPs C E-mail queue	Syster	m • Debug m objects Cache items	Worker threads	Cache access	SQL queries	Page ViewState	Output	Security	Macros	Requests	Web farm		0
Permissions Recycle bin Scheduled tasks	<u>/5.0</u>	Release/CMSPages/w	ebfarmupdate	r .aspx (04:13:37	')							Clear	web farm log
- 🔊 Smart search	T	ask type	Target	Data					C	ontext			
UI personalization	1 D	O: TOUCHCACHEITEM	Cache	cms.role all cms.role byid 13 cms.role bynam cms.role byguid	3 ie newrole 03b73d97-b93	7-4add-99d7-1870	09d7ad7bc		V	VebSyncHelj :MSPages_\	per.ProcessM NebFarmUpd	lyTasks later.Page_L	pad
									v	ersion: 5.5 l	Build: 5.5.377	9	

7.5.3 Bulk keys for all debugs

You can also add one of the following bulk keys to the *AppSettings* section of your *web.config* file in order to enable all the debugs with a single key.

- CMSDebugEverything enables all debugging sub-tabs in Site Manager -> Administration -> System -> Debug
- CMSDebugAllForEverything enables all debugging sub-tabs, while UI operations are debugged too
- **CMSDebugEverythingLive** enables all debugging on the live site (the debug log will be displayed at the bottom of the page)
- CMSDebugEverythingLogLength limits the maximal length of the debug log (number of preserved log records)
- CMSLogEverythingToFile logs all possible operations (including Event log and E-mail sending log) into .log files stored in ~/App_Data/

Here is a list of these keys for easy copy&paste into your web.config.

```
<add key="CMSDebugEverything" value="true"/>
<add key="CMSDebugAllForEverything" value="true"/>
<add key="CMSDebugEverythingLive" value="true"/>
<add key="CMSDebugEverythingLogLength" value="20"/>
<add key="CMSLogEverythingToFile" value="true"/>
```

These keys enable all the available debugs listed <u>on this page</u>, while the dedicated keys for particular debugs have higher priorities. This means that you can for example enable all debugs using *CMSDebugEveryting* with the value set to *true* and hide one particular sub-tab by using its dedicated key with the value set to *false* at the same time.

7.5.4 System error notifications

If you go to **Site Manager -> Settings -> System** and fill in an e-mail address into the **Error notification e-mail address**, notifications about internal errors in Kentico CMS system will be sent to this address whenever such an error occurs.

The e-mail address specified in the **No-reply e-mail address** field will be used as the sender ('From') e-mail address.



7.6 Document types and transformations

7.6.1 Overview

Each document in Kentico CMS is of some type. Each document type has its own:

- fields (data structure)
- editing form layout
- transformations (design)
- queries

and other settings.

Document types are fully customizable - you can add, modify and delete custom fields. The advantage of using custom document types is that you can define custom structure of documents and store content (data) separated from design. This can be done in **Site Manager -> Development -> Document types**.

Doc	Document type properties								
Document	Document types Computer								
General	Fields Form	Transformations	Queries	Child types	Sites	Alternative forms	Search fields	Documents	
🔒 <u>New tra</u>	nsformation	New hierarchical tran	sformation						
Actions	Transformatio	on name 🔺 Tran	sformtion	type					
N 💥	Default	ASC	х						
1	preview	ASC	х						

General properties of a document type

Document type display name	The name of the site displayed to the users.
Document type code name	The name of the site used in the code.
New page	URL of the page that will be used for creating new documents of this type.
Editing page	URL of the editing page that will be used when the document is displayed in the editing mode, using the Page tab.
Editing form	URL of the editing page that will be used when the document is displayed in the editing mode, using the Form tab.
Preview page	URL of the editing page that will be used when the document is displayed in the preview mode.
List page	URL of the editing page that will be used when the document is displayed in the list mode.
Use publish from/publish to	Indicates if publish from/to fields should be displayed for this document type.
Show template selection	Indicates if users must select some page template first when they create a new document of this type.
Default page template	The page template used by default when the document is created. If no page template is specified, the document inherits the parent page template.
Behaves as Page (menu item) type	Indicates if the document type has similar behavior as Page (menu item) document type. The default view mode for such a document type is the Page tab. Viewer web parts are automatically set to display the child documents if the path is not configured and the document does not inherit its parent template by default.
Document is product type	Indicates if documents of this type are products of the E-commerce module.

Transformations are pieces of code that determine how Kentico CMS documents, or certain parts of them, are rendered by listing web parts and controls. They take raw data from the Kentico CMS

database and *transform* it into the form you wish it to appear in. This makes them a crucial tool when displaying documents and document related data on the pages of your website. Transformations can be accessed in **Site Manager -> Development -> Document types -> Edit (**//) **<document_type>**, on the **Transformations** tab.

- If you would like to learn about the functionality of transformations and/or would like to see examples of the code, please refer to the <u>Transformations</u> topic.
- If you would like to learn how to define a new document type, please refer to the <u>Defining a new</u> <u>document type</u> topic.
- If you would like to see an example of writing transformations for a particular document type, please refer to the <u>Writing transformations</u> topic.
- If you would like to learn how to add your own functions to transformations, please refer to the <u>Adding</u> <u>custom functions to transformations</u> topic.
- To learn how to add context menus to web parts displaying **Users** or **Groups**, please refer to the <u>Context menus in transformations</u> topic.

Kentico CMS E-commerce Guide contains several examples of the use of document types and transformations. See e.g. Integration with your existing Kentico CMS web site -> Web parts -> Random products, Customizing the product fields -> Defining a new product type or Customizing product design in the same section of the E-commerce Guide. Please note that these practical examples do not concern the whole functionality of the Document types and transformations section but focus on its specific application.

You will need to have the E-commerce Site sample website installed to follow Kentico CMS E-commerce Guide.

A number of practical examples of the use of document types and transformations are available in Kentico CMS Community Site Guide; please note that these examples are again specific applications within the context of the Community Site sample website. See e.g. Part 2 -> Creating the Blogs section -> Creating the Blogs page in Kentico CMS Community Site Guide.

Please note that Kentico CMS Personal Site Guide also contains several topics where the use of document types is mentioned.

7.6.2 Transformations

The functionality of transformations is very similar to that of templates used by standard ASP.NET list controls such as the Repeater. The main difference is that our transformations are stored separately in the database and can easily be used repeatedly. They can be assigned to listing web parts or controls through the appropriate **Transformation** properties.

The code of transformations depends on their type. ASCX transformations are the most common, they can contain a mix of HTML elements, embedded controls, standard ASP.NET data binding expressions and methods, such as *Eval()*, and special methods designed to be used in transformations. XSLT type transformations need to be in valid XML format and can contain standard XSL elements.

The use of transformations is supported by all web parts that can display document data, as well as by those listing controls that are designed to work directly with Kentico CMS documents.

Transformations are categorized under the document types that they are supposed to display. They can be managed in the Kentico CMS administration interface at **Site Manager -> Development -> Document types -> ... Edit document type ... -> Transformations**. Some document types do not represent an object but serve only as a container for transformations and queries. The full name used to identify transformations uses the following format: <*document type code name*>. <*transformation name*>

The sample sites include many transformations for all document types and you can modify them or write new transformations to suit any of your requirements.

Example

The code of the **Ecommerce.Transformations.Product_SimplePreview** ASCX transformation, which is used to display key information about products, looks like this:

```
<div class="ProductPreview">
 <div class="ProductBox">
   <div class="ProductImage">
      <*# EcommerceFunctions.GetProductImage(Eval("SKUImagePath"), 140, Eval(</pre>
"SKUName")) <mark>%></mark>
   </div>
   <div class="ProductTitle">
      <%# HTMLEncode(ResHelper.LocalizeString(Convert.ToString(Eval("SKUName")))</pre>
)))) <mark>%></mark>
   </div>
   Our price: 
      <%# EcommerceFunctions.GetFormatedPrice(Eval("SKUPrice"
</div>
</div>
```

When this transformation is assigned to a listing web part or control that has products (SKUs) in its data source, the output code of individual products will contain the values returned by the methods and data binding expressions, like the following example:

```
<div class="ProductPreview">
 <div class="ProductBox">
   <div class="ProductImage">
      <img alt="Samsung SGH E250" src="/KenticoCMS_FilterTest/getmetafile/</pre>
da2495b2-ff5f-47cb-b463-4b99d308eadd/CELL SAMSUNG SGH E250.aspx?maxSideSize=140"
border="0" />
  </div>
   <div class="ProductTitle">
     Samsung SGH E250
  </div>
  >
     Our price: 
     $249.00
```

</div> </div>

The final output of this product on the website will then look like this:





Please note

The CSS stylesheet used by the page or site is applied to the output of the transformation. This example uses the default **Corporate Site** stylesheet.

7.6.3 Defining a new document type

In this example, you will learn how to define a new custom document type.

1. Go to **Site Manager -> Development -> Document types** and click the **Wew document type** link. You will be redirected to the New document type wizard. In the first step, enter the following values:

- Document type display name: Computer (this name will be displayed to the users)
- **Document type code name:** custom.computer (*custom* is your namespace to distinguish your document types from system types that use the *cms* namespace, *computer* is the document type). You will use this value in web part properties later.

Click Next.

Kentico							Switch to CMS Desk	User: Global Administ	rator v5.0.3637
CMS Site Manager	Site	s Administration	Settings	Development	Licenses	Support			
 Development Categories 		New documen	t type						
Ocuntries	Do	cument types + New	document ty	pe					
- () Cultures									
Custom tables		04	Gene	eral					
Document types		Step 1	Pleas	e enter documen	t type display	name (for users) and co	ode name (it will be used in your co	de when necessary).	
E-mail templates			1						
Form controls									
Modulos		Decument time die	play pame:	Computer					
		Document type code name:	computer			computer			
Page Javouts		Document type coo	ie name. ju r	namespace			document type		
Page templates				-					
Relationship names									
🖓 Time zones	-								
UI cultures	•								
Web part containers									
web parts									
Widgets									
Workflows									
									Next >

2. In Step 2, you need to choose the name of the database table that will be used for storing computer details. You also need to enter the name of the primary key in this table. Enter the following values:

- Table name: CUSTOM_Computer
- Primary key name: ComputerID

Click Next.

Step 2	Data type Please choose document data type. If you choose a document type with custom attributes you will also need to supply names of the ne database table and its primary key.
 The document type Table name: Primary key name The document type 	as custom fields custom_computer ComputerID s only a container without custom fields
	Next >

3. The wizard has created a new database table for computers. Now you need to define the fields (columns of the table). Click **New attribute** (+) to create a new field. Enter the following values:

- Attribute name: ComputerName
- Attribute type: Text
- Attribute size: 200
- Field caption: Computer name
- Field type: Text box

Click OK. Click New attribute (+). Enter:

- Attribute name: ComputerProcessorType
- Attribute type: Text
- Attribute size: 200
- Field caption: Processor type
- Field type: Drop-down list, choose to use Options instead of SQL Query
- **Options:** enter the following options, one per line: Athlon;Athlon Pentium XEON;Pentium XEON Pentium Core 2 Duo;Pentium Core 2 Duo

Click **OK**. Click **New attribute** (+). Enter:

- Attribute name: ComputerRamSize
- Attribute type: Integer number
- Field caption: RAM (MB)
- Field type: Text box

Click OK. Click New attribute (+). Enter:

- Attribute name: ComputerHddSize
- Attribute type: Integer number
- Field caption: HDD (GB)
- Field type: Text box

Click OK. Click New attribute (+). Enter:

- Attribute name: ComputerImage
- Attribute type: File
- Field caption: Image
- Field type: Upload file
- Allow empty value: check the box

Click OK.

Step 3 Fields Please numbe	define ci r, produc	ustom attributes of the docu t weight, press release text,	iment type and their appearance in the editing form. You can define attributes, such as product etc.
The changes were saved.			
ComputerID ComputerName		Database	·
ComputerProcessorType		Attribute name:	ComputerImage
ComputerHddSize		Attribute type:	File
Computerimage		Attribute size:	
		Allow empty value:	
		Attribute default value:	
		 Display attribute in the Field 	editing form
		Field caption:	Image
	÷	Field type:	Upload file
	×		Automatic image resize on upload
			Width (px):
			Hoight (ax)
			ОК
			Next>

Please note that you can also define system fields to be displayed on the documents' **Form** tab. This can be done by clicking the **Add system attribute** icon. Using the **Group** drop-down list, you can then choose from the following two groups of system fields:

- Document attribute offers the document's system fields
- Node attribute offers the document node's system fields

Document or node system fields will then be offered in the **Attribute name** drop-down list. If you leave the **Display attribute in the editing form** check-box checked, the field will be visible on the documents' **Form** tab.

Click Next.

Step 3 Fields Please de number, p	fine cu roduct	istom attributes of the docume weight, press release text, etc	nt type and their appearance in the editing form. You can de	fine a	attributes, such as product
ComputerID ComputerName ComputerProcessorType		Database Group:	Node attributes	-	
ComputerRamSize ComputerHddSize		Attribute name:	NodeAliasPath		
ComputerImage New attribute		Attribute type:	Text		
	~	Attribute size:	450		
		Allow empty value:		1	5
	Q	Attribute default value:			
	<u>نې</u>	Display attribute in the edit	ting form		
	_	Field			
	÷	Field caption:	NodeAliasPath		
	×	Field type:	Label		
	••		A		
				-	•
			ок		

4. Now you need to choose the field that will be used as document name. Choose the **Use document name field** option from the drop down list. It means that when you create a new computer document, its name will be automatically taken from the *ComputerName* value and this value will appear in site navigation and in the CMS Desk content tree.

Click Next.

Step 4	Additional settings Please choose the source field that will be used as a document name. You can choose either one of the custom fields or you can choose to use document name as a separate field.
Document name so	urce: Use document name field 💌
	Next >

5. In Step 5, you need to select the document types under which computer documents will be displayed. Check only the **Page (menu item)** value, which means that editors will be able to create computer documents only under some page, not under an article or news document in the content tree.

Click Next.

Step 5	Parent types Please select document types under which this document template can be placed.
Decumo	nt turo nomo
Page (m	enu item) (CMS.Menultem)
Remove sele	cted Add document types
	Next>

6. In Step 6, you need to choose which websites will use this document type. Check the appropriate website and click **Next**.

Step 6	Sites Please select sites where this document type can be used:
Corporate S Remove selecte	ite ed Add sites
	Next>

7. In Step 7, you are asked to specify how documents of this type will be indexed and displayed in the search results. For more information on these settings, please refer to <u>this topic</u>. Make your choice and

click Next.

tle field: DocumentNa ontent field: DocumentCo lage field: ComputerIma	me ntent		-		
ate field: DocumentCre et automatically	age eatedWhen		•		
Field name	Content	Searchable	Tokenized	Custom search name	
ComputerID		V			
ComputerName	V				
ComputerProcessorType	V				
ComputerRamSize		V			
ComputerHddSize		V			

8. The wizard has finished the configuration of the new document type. It has automatically created not only the database table, but also the SQL queries for SELECT, INSERT, UPDATE and DELETE operations and a default transformation.

Click **Finish**. Congratulations, you have learned how to define a new document type.

Step 8	The wizard has finished
The setup has finish The new docume The new editing fo The document typ The sites were se The default querie The default ASCX The default permi The default icon w Document smart	ed the following steps: type was created. m was created. s were added among allowed child types of the new document type. ected where this document type can be used. s were created. sion names were created. sion names were created. is created. earch specification was created.
	Finish
Н	ow the content is stored



As you already know, the new document type *Computer* has its own database table. Each document is stored in three tables: *CMS_TREE* (tree structure), *CMS_Document* (document properties and metadata) and the custom table - in this case *CUSTOM_Computer*.

CMS_Tree	
	•

CUSTOM_Computer				
8	ComputerID			
	ComputerName			
	ComputerProcessorType			
	ComputerRamSize			
	ComputerHddSize			
	ComputerImage			

The system automatically ensures all operations are performed correctly on these tables. The advantage of this storage is that it is very fast and you can easily write standard SQL SELECT queries to retrieve data from the repository (i.e. from the Microsoft SQL Server database).

Changing the document type icon

If you create a new document type, documents of this type will appear with the default document icon (E) in the administration interface. To change the document type icon:

1. go to <web project folder>\App_Themes\Default\Images\DocumentTypeIcons\

2. find your document type's icon named <*namespace*>_<*document type*>.png

3. open the file in your image editor and modify it, or create a new image with the same name and format and replace the original one with it

After doing so, all documents of this type should appear with the new icon. You can also change any other document types' icons this way, as all document type icons are stored in the location mentioned above.

7.6.4 Writing transformations

Now that you have created a new document type, you need to prepare the transformations that will be used for displaying product details in the list and in the detail view.

In the Computer document type properties dialog, click the Transformations tab:

Kentico CMS Site Manager	Sites Ad	dministration	Settings	Developm	ient L	icenses Su	pport
Development Gategories Countries	Document t	ument type	propertie uter	es			
GSS stylesheets	General	Fields Form	Transfor	mations	Queries	Child types	Sites
Custom tables Image: Custom tables Image: Custom tables	e <u>New tran</u>	nsformation					
🕬 🗟 E-mail templates 🏎 🎸 Form controls	Actions	Transform	ation name	•			
Inline controls	2 🗙	Default					
Notifications	2 🗙	Preview					
···· 🚺 Page layouts ···· 당 Page templates ··· 🖷 Relationship names							

As you can see, the wizard has created a default transformation. You will use it for the detail view. Click **Edit** (\checkmark) and enter the following code:

```
<h1><%# Eval("ComputerName") %></h1>
Processor:
<*# Eval("ComputerProcessorType") *>
RAM (MB):
<*# Eval("ComputerRamSize") *>
HDD (GB):
<*# Eval("ComputerHddSize") *>
Image:
```

```
<$# GetImage("ComputerImage")
```

Click **OK**. As you can see, the transformation code is the standard **ItemTemplate** template that you may already know from the ASP.NET 2.0 **Repeater** and **DataList** controls. It combines HTML code with ASP.NET commands and data binding expressions. You can use several built-in functions such as **GetImage** that simplify some tasks. You can find the list of all functions immediately under the transformation code.

Now you will create a transformation for the list of computers. Go back to the transformations list and click the **New transformation** link. Enter the following values:

- Transformation name: preview
- Transformation type: ASCX (it is also possible to use XSLT, but you will not use it now)

Enter the following transformation code:

```
<div style="text-align:center;border: 1px solid #CCCCCC">
<h2><a href="<%# GetDocumentUrl() %>"><%# Eval("ComputerName") %></a><h2>
<img src="<%# GetFileUrl("ComputerImage") %>?maxsidesize=120" />
</div>
```

Click OK.

Please note how the link to the document is created:

<a href="<%# GetDocumentUrl() %>"><%# Eval("ComputerName") %>

It consists of standard HTML tags for links and it inserts the URL and link text dynamically.

Similarly, you can create an image tag with parameter that ensures automatic resize of the longest side to 120 pixels on the server side:

<img src="<%# GetFileUrl("ComputerImage") %>?maxsidesize=120" />

You have learned how to write transformations for displaying the content of structured documents.

Please note: Should you want to use the XSLT transformation, it can be used for the **XSLT viewer** (CMSViewer) web part. Otherwise it won't work.

Transformations for multilingual websites



7.6.5 Adding custom functions to transformations

In many cases, you may need to process values and display them in a different format or add custom conditions. The following example shows you how to create a custom function that will return the first N characters of a text and how to use it in a transformation.

Open the web project in Visual Studio. Create a new folder under the **App_Code** folder and call it as your site code name. Right-click the folder and choose **Add New Item**. Choose to add a new Class and call it **MyFunctions.cs** (custom transformation functions can be developed only in C# at this moment).



Paste the following code to the MyFunctions.cs file:

[C#]

```
using System;
using System.Data;
using System.Configuration;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Web.UI.HtmlControls;
```

```
/// <summary>
/// Summary description for MyFunctions
/// </summary>
public static class MyFunctions
{
        public static string TrimText(object txtValue, int leftChars)
            if (txtValue == null | txtValue == DBNull.Value)
            {
                return "";
            }
            else
            {
                string txt = (string) txtValue;
                if (txt.Length <= leftChars)</pre>
                 {
                    return txt;
                 }
                else
                 {
                    return txt.Substring(0, leftChars) + "...";
                 }
            }
        }
}
```

Please note: The function must be defined as **static** so that you can easily call it from the transformation.

Then, go to **Site Manager -> Development -> Document types -> News -> Transformations**. Edit the **preview** transformation and change its code like this:

[C#]

```
<b><a href="<%# GetDocumentUrl() %>">
<%# Eval("NewsTitle") %></a></b> (<%# GetDate("NewsReleaseDate") %>)<br/><i>
<i><%# MyFunctions.TrimText(Eval("NewsSummary"), 10) %>
</i>
</i>
</br/>>
```

Click **OK** to save. Go to the live site and see the page with news listing. As you can see, the news summary text is truncated to the first 10 characters.

In this topic, you have learned how to write your own transformation methods.

7.6.6 Context menus in transformations

When writing transformations for a web part displaying **Users** or **Groups**, you can enclose the transformation in a menu container control, which ensures displaying context menus after right-clicking on a user or group. You can see a live example of these context menus on the sample **Community**

Starter site:

In the screenshot below, you can see the context menu displayed when you right-click one of the users listed in the **Members** section:



The following screenshot shows the context menu displayed when you right-click one of the groups listed in the **Groups** section:



How is this achieved? As you can see when you view the transformation code used in the **Users** viewer or **Groups viewer** web parts, you need to have enclosed your transformation in the **cms:** usermenucontainer or **cms:groupmenucontainer** control:

Users

```
<cms:usermenucontainer runat="server" ID="userMenuElem" MenuID="userContextMenu"
Parameter='<%# Eval("UserID").ToString() %>' ContextMenuCssClass="UserContextMenu"
>
... transformation code ...
</cms:usermenucontainer>
```

Groups

```
<cms:groupMenuContainer runat="server" ID="groupMenuElem" MenuID
="groupContextMenu" Parameter='<%# Eval("GroupID").ToString() %>'
ContextMenuCssClass="UserContextMenu" >
... transformation code ...
</cms:groupmenucontainer>
```

Modifying context menu design

The default controls used for context menus are stored in **<web** project>\CMSAdminControls\ContextMenus:

- GroupContextMenu.ascx
- UserContextMenu.ascx

These two controls are used automatically for the Group or User context menus. If you want to modify the design of the context menus, you can edit these controls in Visual Studio.

You can also develop your custom controls for this purpose. In this case, you need to include the **MenuControlPath** parameter in the *cms:usermenucontainer* or *cms:groupmenucontainer* controls in the transformation and set its value to the path to your control:

```
<cms:groupmenucontainer runat="server" ID="groupMenuElem" MenuID
="groupContextMenu" Parameter='<%# Eval("GroupID").ToString() %>'
ContextMenuCssClass="UserContextMenu" MenuControlPath
="~\CMSAdminControls\ContextMenus\MyGroupContextMenu.ascx" >
... transformation code ...
</cms:groupmenucontainer>
```

7.7 E-mail templates

7.7.1 E-mail templates

Kentico CMS sends automatic system e-mails for various purposes, such as for example workflow notification. The content of these e-mails is determined by templates according to the type of a given e-mail. E-mail templates can be modified at **Site Manager -> Development -> E-mail templates**, which allows you to alter the e-mails sent by the system to match a certain design and/or language.

The following Kentico CMS modules and features send e-mails based on these templates:

- Blogs
- <u>Message boards</u>
- E-commerce (<u>E-commerce Guide -> Configuration settings -> Customizing invoice and e-mail templates</u>)
- Forums
- Friends
- Groups
- Membership Registration
- <u>Messaging</u>
- <u>Newsletters</u>
- Project management
- Workflow

There are two types of e-mail templates: global and site-specific. If a site-specific template of a certain type is not defined, the global template is used instead.

An e-mail template has the following properties:

Display name	The name of the template displayed in the user interface.
Code name	The name of the template used in code.
From	E-mail address that will be used as the sender (From) address of the e-mail.
Сс	E-mail addresses of copy recipients.
Всс	E-mail addresses of blind copy recipients. These will get a copy of the e-mail, but won't see the addresses of other recipients in the mail.
Subject	Subject of the e-mail.
HTML version	HTML code of the e-mail template.
Plain text version	Plain text of the e-mail template.

Example of the HTML version of a template:

```
<html>
      <head>
      </head>
      <body style="FONT-SIZE: 12px; FONT-FAMILY: arial">
             >
            This an automatic notification sent by Kentico CMS. The following
document is waiting for your approval. Please sign in to Kentico CMS Desk and
approve it.
             <p>
             <b>Document:</b> <a href="{%applicationurl%}/cmsdesk/default.aspx?</a>
expandidpath={%idpath%}&expandmode=publish">
                                                        {%documentname%}</a>
            <br>
            <br>>
             <b>Last approved when:</b> {%approvedwhen%}
            <br>
            <b>Original step: {%originalstep%}
            <br>
             <b>Current step:</b> {%currentstep%}
            <br>
            <b>Comment:</b>
             <br>
            {%comment%}
             </body>
</html>
```

Please note that e-mail template properties may contain <u>macro expressions</u>, such as those marked in the code above, that are resolved (merged) when the e-mail is sent. The use of macros is necessary to ensure that individual e-mails contain information relevant to the situation that caused them to be sent.

7.8 Form controls

7.8.1 Overview

Form controls allow you to use custom field types in editing forms that are based on Kentico FormEngine. These include:

- Document editing forms (Form tab)
- Web part properties
- BizForms
- Forms using system tables defined in Site manager -> Development -> System tables
- Forms using custom tables defined in Site manager -> Development -> Custom tables
- Report parameters

Form controls are standard ASCX controls that inherit from the **CMS.FormControls.** FormEngineUserControl class.

Managing form controls

You can register form controls in the catalog at **Site Manager -> Development -> Form controls**. Form controls have the following properties:

Control display name	The name of the control displayed in the user interface.
Control code name	The name of the control used in code.
Control file name	Relative path to the ASCX control starting from ~/ <i>CMSFormControls</i> folder.
	Example: countryselection.ascx
Use control for text	Indicates if the control can be used for text values.
Use control for long text	Indicates if the control can be used for long text values.
Use control for integer	Indicates if the control can be used for integer values.
Use control for decimal	Indicates if the control can be used for decimal values.
Use control for date-time	Indicates if the control can be used for date-time values.
Use control for boolean	Indicates if the control can be used for boolean (bit) values.
Use control for file	Indicates if the control can be used for files (attachments).
Use control for GUID	Indicates if the control can be used for GUID values.
Use control for visibility	Indicates if the control can be used as a field visibility control. See the <u>Development -> Membership</u> , <u>permissions and</u> <u>security -> Custom fields visibility</u> chapter for more details.
Show control in BizForms	Indicates if the control should be offered among field types in the simple mode of the Fields tab of the BizForms module. If you enable this box, you also need to enter the following

430

	values:
	 Default data type - the data type of the field that will be used by default when a user chooses to create a new field of this type. Column size - default size of the database column (applies only to the Text data type).
Show control in document types	Indicates if the control should be offered among field types in the document types field editor.
Show control in system tables	Indicates if the control should be offered among field types in the system tables field editor.
Show control in custom tables	Indicates if the control should be offered among field types in the custom tables field editor.
Show control in controls (web parts and inline controls)	Indicates if the control should be offered among field types in the web part property editor.
Show control in reports	Indicates if the control should be offered among field types in the report parameter field editor.

7.8.2 Developing form controls

The following example shows how to create a form control that will allow users to choose a color from a drop-down list.

1. Open the web project in Visual Studio (or Visual Web Developer) using the **WebProject.sln** file or using **File -> Open -> Web site** in Visual Studio.

2. Right-click the **CMSFormControls** folder and choose **Add New Item**. Choose to create a new **Web User Control** and call it **ColorSelection.ascx**.

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🖶 🖮 🛅 Viewers
👳 🛅 VisibilityControls
🖶 🗄 AutoResizeConfiguration.ascx
🖅 🔠 CacheDependencies.ascx
🛓 🔚 CategorySelector.ascx
🚋 📰 ColorSelection.ascx
🛓 🗄 CountrySelector.ascx
🛓 🗄 CustomTableSelector.ascx

3. Edit the ColorSelection.ascx user control on the **Design** tab. Drag and drop a **DropDownList** control onto the form:

Unbound 💌

- 4. Edit the properties of the DropDownList and change its ID to *drpColor*.
- 5. Switch to the code behind.
- 6. Change the following line

[C#]

public partial class CMSFormControls_ColorSelection : System.Web.UI.UserControl

to

```
public partial class CMSFormControls_ColorSelection : CMS.FormControls.
FormEngineUserControl
```

[VB.NET]

Partial class CMSFormControls_ColorSelection Inherits SystemWeb.UI.UserControl
```
to

Partial class CMSFormControls_ColorSelection Inherits CMS.FormControls.

FormEngineUserControl
```

This ensures that our user control inherits from the **FormEngineUserControl** class and can use its standardized properties.

7. Modify the code behind like this:

[C#]

```
protected void Page_Load(object sender, EventArgs e)
{
     // Ensure drop down list options
     EnsureItems();
}
/// <summary>
/// Gets or sets field value, color hexa code in this case.
/// </summary>
public override Object Value
{
     get
     {
        return drpColor.SelectedValue;
     }
     set
     {
         // Ensure drop down list options
         EnsureItems();
         drpColor.SelectedValue = System.Convert.ToString(value);
     }
}
/// <summary>
/// Returns an array of values of any other fields returned by the control.
/// </summary>
/// <returns>It returns an array where first dimension is attribute name and the
second dimension is its value.</returns>
public override object[,] GetOtherValues()
object[,] array = new object[1, 2];
array[0, 0] = "ProductColor";
array[0, 1] = drpColor.SelectedItem.Text;
return array;
}
/// <summary>
/// Returns true if some color is selected. If not, it returns false and displays
an error message.
/// </summary>
public override bool IsValid()
{
    if ((string)Value != "")
```

```
{
       return true;
    }
    else
    {
        // Set form control validation error message
        this.ValidationError = "Please choose some color.";
        return false;
    }
}
/// <summary>
/// Ensures that the DropDownList contains color options.
/// </summary>
protected void EnsureItems()
{
    if (drpColor.Items.Count == 0)
    {
        drpColor.Items.Add(new ListItem("(select color)", ""));
        drpColor.Items.Add(new ListItem("red", "#FF0000"));
        drpColor.Items.Add(new ListItem("green", "#00FF00"));
        drpColor.Items.Add(new ListItem("blue", "#0000FF"));
    }
}
```

[VB.NET]

```
Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
    ' Ensure drop down list options
   EnsureItems()
End Sub
''' <summary>
''' Gets or sets field value, color hexa code in this case.
''' </summary>
Public Overrides Property Value() As Object
   Get
       Return drpColor.SelectedValue
    End Get
    Set(ByVal value As Object)
       EnsureItems()
       drpColor.SelectedValue = System.Convert.ToString(value)
    End Set
End Property
''' <summary>
''' Returns an array of values of any other fields returned by the control.
''' </summary>
''' <returns>It returns an array where first dimension is attribute name and the
second dimension is its value.</returns>
Public Overrides Function GetOtherValues() As Object(,)
   Dim arr(0, 1) As Object
   arr(0, 0) = "ProductColor"
   arr(0, 1) = drpColor.SelectedItem.Text
   Return arr
```

```
End Function
''' <summary>
''' Returns true if some color is selected. If not, it returns false and displays
an error message.
''' </summary>
Public Overrides Function IsValid() As Boolean
   If CType(Value, String) <> "" Then
        Return True
   Else
        ' Set form control validation error message
       Me.ValidationError = "Please choose some color."
       Return False
    End If
End Function
''' <summary>
''' Ensures that the DropDownList contains color options.
''' </summary>
Public Sub EnsureItems()
   If drpColor.Items.Count = 0 Then
       drpColor.Items.Add(New ListItem("(select color)", ""))
       drpColor.Items.Add(New ListItem("red", "#FF0000"))
       drpColor.Items.Add(New ListItem("green", "#00FF00"))
       drpColor.Items.Add(New ListItem("blue", "#0000FF"))
    End If
End Sub
```

8. Go to **Site Manager -> Development -> Form controls** and click **4 New form control**. Enter the following values:

- Control display name: Color selection
- Control code name: colorselection
- Control file name: colorselection.ascx

Check the Use control for text box, check the Show control in document types box and click OK.

Form controls New form control	D				
				1	
Control display name:	Color selection				
Control code name:	ColorSelection				
Control file name:	colorselection.as				
Use control for text:	\checkmark				
Use control for long text:					
Use control for integer:					
Use control for decimal:					
Use control for date-time:					
Use control for boolean:					
Use control for file:					
Use control for GUID:					
Use control for visibility:					
Show control in BizForms:					
	Default data type:	Text			*
	Column size:	0			
Show control in document types:					
Show control in system tables:					
Show control in custom tables:					
Show control in controls:					
(web parts and inline controls)					
Show control in reports:					
	ОК				

9. Now we will test this control in some document editing form. Go to **Site Manager -> Development -** > **Document types** and edit () the **Product** document type. Click the **Fields** tab and add 2 new fields with the following properties:

- Attribute name: ProductColor
- Attribute type: Text
- Attribute size: 100
- **Display attribute in editing form**: false (the field will be set via the **GetOtherValues()** method of the ColorSelection control)

Click **OK** to save the new field

- Attribute name: ProductHexaColor
- Attribute type: Text
- Attribute size: 100
- Field caption: Color
- Field type: Color selection

Click OK to save the new field

Document type properties										
Document	types 🕨	Product								
General	Fields	Form	Transformations	Queries	Child types	Sites	E-commerce	Alternative forms	Search fields	Documents

ProductID	_	Database		*
ProductColor ProductHexaColor ProductName		Attribute name:	ProductColor	
	1	Attribute type:	Text	
	J	Attribute size:	100	
		Allow empty value:		=
		Attribute default value:		
	(in the second s	Display attribute in the ed	liting form	
		Field		
		Field caption:		
	×	Field type:	Label	
			*	-
Document name source field:	_		ОК	
ProductName	•			
(Document name)	•			

10. Go to **CMS Desk -> Content** and create a new product in the **Products** section. The new form control will be displayed like this:



If you do not choose any color, the validation error label is displayed.

Getting and setting values of other fields using the API You can get and set the values of the other fields by getting their reference like this: [C#]
<pre>TextBox txtBox = (TextBox) Form.FieldControls["productprice"];</pre>
[VB.NET]
<pre>Dim txtBox as TextBox = CType(Me.Form.FieldControls("productprice"), TextBox)</pre>

Please note that the field name must be written in lowercase.

When you get the reference to the control, you can get or set its value (for example: txtBox.Text = "150")

If you want to change the value of some other control **before it's loaded**, you need to place the code inside the **PageLoad** method of your form control.

If you want to change the value of some other control **before it's saved**, you need to place the code inside the **IsValid** method of your form control.

You can also use the **this.DataDR (me.DataDR)** property of the form control that provides the DataRow object with data of the current form.

7.9 Inline controls

7.9.1 Overview

Inline controls are user controls (ASCX) that can be placed into the text of editable regions using a special expression in format *%%control:MyUserControl%%*, where *MyUserControl* is the name of the inline control. The system dynamically loads the controls when the page is displayed on the live site.

The controls may contain any functionality, such as "polls", "latest news", "mortgage calculator", "travel destination search", etc. The advantage of inline controls is that any content editor can place them anywhere into the text without programming knowledge.

How to insert inline controls into text

Inline controls can be inserted into text using the **Insert inline control** (a) button on the <u>WYSIWYG</u> <u>editor</u> toolbar. If the text is not edited in the WYSIWYG editor, you can insert inline controls by typing the *%%control:MyUserControl%%* expressions manually. Only controls that have been registered in the system and assigned to the currently edited site can be inserted. This can be done at **Site Manager -> Development -> Inline controls**.

The inline control may also have a single parameter. In this case, you must use one of the following expression formats:

- %%control:BizFormControl?form1%%
- {^BizFormControl|form1^}
- {^BizFormControl|(formname)form1^}

To learn how to create a new inline control and add it to the system, please see the <u>How to develop</u> inline controls topic.

7.9.2 How to develop inline controls

This topic will show you an example of inline control development. We will create a simple control that will display the current time when a button is clicked.

1. Open the web project in Visual Studio (or Visual Web Developer) using the **WebProject.sln** file or using **File -> Open -> Web Site...** in Visual Studio.

2. Right-click the **CMSInlineControls** folder and choose **Add New Item**. Choose to create a new **Web User Control** and call it **ShowTime.ascx**.

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🗄 🖆 CMSImportFiles
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3. Switch to the **Design** tab and drag and drop a **Label** control and a **Button** control onto the form:



4. Double-click the Button control and enter the following code into the **Button1_Click** method. It will ensure the displaying of the current date and time by the label control.

[C#]

Label1.Text = DateTime.Now.ToString();

[VB.NET]

Label1.Text = DateTime.Now.ToString()

5. Change the following line:

[C#]

```
public partial class CMSInlineControls_ShowTime : System.Web.UI.UserControl
to
public partial class CMSInlineControls_ShowTime : CMS.ExtendedControls.
InlineUserControl
```

[VB.NET]

```
Partial Class CMSInlineControls_ShowTime
Inherits System.Web.UI.UserControl
to
Partial Class CMSInlineControls_ShowTime
Inherits CMS.ExtendedControls.InlineUserControl
```

What you did

You have changed the user control so that it inherits from the **InlineUserControl** class. It allows you to access the parameter of the control in the next step.

6. Add the following code to the Page_Load method of the control:

[C#]

Button1.Text = this.Parameter;

[VB.NET]

(The **Page_Load** method is not generated by default in VB.NET)

```
Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
Buttonl.Text = Parameter
End Sub
```

What you did

This code sets the Button1 caption based on the parameter of the inline control.

7. Save the changes.

8. Go to **CMS Site Manager -> Development -> Inline controls**. Click **Wew control** and enter in the following values:

- Control display name: Show time
- Control name: ShowTime (the name of the user control without the extension)
- Control file name: ~/CMSInlineControls/ShowTime.ascx
- Parameter caption: Button text

Inline controls ► New of	control		
Control display name:	Show time		
Control name:	ShowTime		
Control file name:	~/CMSInlineControls/ShowTime.ascx		
Parameter caption:	Button text		
	This is an inline control showing current time.	*	
Description:			
		-	
assign to web site	Corporate Site		

Click OK.

9. Now click the **Sites** tab and check the boxes for all sites where content editors should be able to insert this control. Click **OK**.

10. Go to CMS Desk, edit some page with editable regions and click the **Insert Inline Control** (a) button. Select the control and set the **Button text** value to *Show time*. Click **OK**. The special expression is now inserted into the text.

Insert Inline Control		\boxtimes
Available inline controls: BizForm Poll Rating Document attachments Attachment image gallery Show time	Show time This is an inline control showing current time.	E
ОК	Button text :	•
	Ca	ancel

11. Click **Save** to save changes and click **Live site** to see the live version of the page. The user control is now displayed inside your text. The button has the caption you have specified. When you click the button, the label displays the current date and time:



7.10 Membership, permissions and security

7.10.1 Security model overview

Kentico CMS provides a flexible security model that allows you to configure granular access permissions for content and modules.

The security model consists of:

- <u>users</u> (shared among websites)
- <u>roles</u> (specific for websites)
- module permissions
- document permissions
- Ul personalization

User, role and global permissions can be managed at two levels:

- In Site Manager -> Administration, where global administrators can edit all data.
- In CMS Desk -> Administration, where local administrators can edit only data related to the current website (the current website is recognized by the current domain).

Relationships between users, roles and permissions

The following figure shows how users are assigned to roles and how permissions for documents and modules are granted to users and roles:



<u>Users</u> can be members of any number of roles. Permissions for particular documents in the CMS repository can be granted to them. If you want to grant permissions for some module to a user, you need to make the user a member of some role and grant the permissions to the role (i.e. permissions for modules cannot be granted to users directly).

<u>Roles</u> in Kentico CMS are fully customizable. It means you're not limited to some predefined set of roles. Instead, you can define your own roles with custom sets of permissions.

If a user is a member of multiple roles, their **permissions for modules** are calculated as a sum of all permissions granted to all roles.

If **permissions for documents** in the CMS repository are granted to both a user and their roles, document permissions are calculated as a sum of all permissions granted to the user and to all roles. If a user or some of their roles are **denied to make some action** (such as modify document), then the result is always "denied" for the given permission, even if some of the roles are allowed to perform the action.

7.10.2 User management

A user can be a member of any number of roles and can be assigned to any number of websites.

There are two important attributes of the user account:

- Is editor the user can access the CMS Desk interface; this attribute doesn't implicate any particular permissions it only differentiates between the site editors and "registered users" who only access the live website and its secured areas and thus provides an extra security layer; the user can access CMS Desk for all sites to which they are assigned on the Sites tab
- Is global administrator the user is authorized to perform all operations and their access cannot be denied by permissions or otherwise limited; global administrators are the only users who can use the **Site Manager** interface



Default user accounts

The following default user accounts are available:

- Administrator user with full permissions.
- **Public** user that represents an anonymous visitor of the site.

Creating a new user

New user accounts are typically created when a user goes through <u>registration</u> on the live site. However, you can also create accounts manually in **Site manager -> Administration -> Users** or **CMS Desk -> Administration -> Users**. Click the **New user** link and enter the following properties into the displayed form:

- User name the user's user name (login); it must be unique across all websites in the system
- Full name user's full name (first name, middle name and last name)
- E-mail user's e-mail address
- Enabled indicates if the user account is enabled and the user can sign in
- Is editor indicates if the user is authorized to sign in to CMS Desk; it's used to differentiate users
 who are only allowed to visit member areas of the website from content editors who can use the
 CMS Desk user interface; this provides an extra security layer
- Password user's password
- Confirm password user's password again for confirmation

Editing user properties

You can edit user properties in **Site manager -> Administration -> Users** -> click the **Edit** () icon of the chosen the user.

General properties

The following properties can be set on the **General** tab:

- User name the user's user name (login); it must be unique across all websites in the system
- Full name user's full name (first name, middle name and last name)
- First name user's first name
- Middle name user's middle name
- Last name user's last name
- E-mail user's e-mail address
- Enabled indicates if the user account is enabled and the user can sign in

- Is editor indicates if the user is authorized to sign in to CMS Desk; it's used to differentiate users who are only allowed to visit member areas of the website from content editors who can use the CMS Desk user interface; this provides an extra security layer
- Is global administrator indicates if the user is a global administrator; global administrators have full permissions for all features and data across the system and are not affected by permission settings for particular modules
- Is external user this attribute is used when you are using an integration with an external user database
- Is domain user indicates if the user was imported from Active Directory
- **Is hidden** if true, the user is not visible on the site (e.g. on-line user monitoring, repeaters displaying users, etc.)
- **Disable site manager** this option is available only when editing a global administrator, but not when a global administrator is editing their own account; if enabled, the user is still a global administrator, but cannot access Site Manager, i.e. can only perform actions in CMS Desk
- Preferred content culture preferred culture in which the content is displayed to the user
- Preferred user interface culture preferred culture in which the users wants to see the user interface (CMS Desk and Site Manager)
- Created date and time when the user account was created
- Last logon date and time when the user last logged in
- Last logon information information about the IP address and browser agent of the user's last logon
- Starting alias path the starting alias path of the content tree in CMS Desk -> Content; if you specify this value, the user is not allowed to browse other sections of the website in the content tree; please note that this feature is only intended for better usability and it doesn't ensure security control if you need to establish access rights for a given user, grant appropriate document permissions (Properties -> Security) to them

Impersonation

Global administrators can also see the **Log in as this user** link at the top of this tab. By clicking this link, the administrator gets logged in as the currently edited user and gets redirected depending on the type of user:

- Global administrator if you log in as some other global administrator, you will stay on the General tab
- Editor if you log in as some editor (a user with the Is editor option enabled), you will be redirected to CMS Desk
- Standard user if you log in as a standard user, you will be redirected to the title page of the live site

In Site Manager -> Administration -> Event log, any changes made while impersonated will be logged with under the user name in format <user name> (<original user name>) where the original user is the administrator who clicked the **Log in as this user** link.

Password

Here you can change the user's password:

• Password - user's password

• Confirm password - user's password again for confirmation

Please be aware that this tab is hidden if the edited user is authenticated using either an external user database or Active Directory, i.e., if the user has the **Is external user** or **Is domain user** property enabled on the **General** tab of the user editing interface and the application is configured to use <u>Windows authentication</u>.

Settings

On the **Settings** tab, you can edit the following properties of the user:

- User nick name nick name of the user used in website forums, on the user's profile, etc.
- User picture user's avatar image; this image will be used in forums and on user's profile; you can either upload an image or select a pre-defined avatar
- User signature user's signature that will be used below the user's forum posts
- **Description** optional text describing the user
- URL referrer URL from that the user came to the site when they performed registration
- Campaign the campaign from which the user came to your website before they registered; see the <u>Modules -> Web analytics -> Tracking marketing campaigns</u> topic for details
- Messaging notification e-mail notifications about new messages received in the messaging module will be sent to this e-mail address
- **Time zone** user's time zone; if set, this time zone will be used where applicable instead of the site time zone
- Badge user's badge; depends on the number of gained activity points
- User activity points number of user's activity points; these points are gained for forum posts, message board posts, blog posts and blog post comments
- Live ID user's Live ID token; this is a hexadecimal number that the user is identified by when logging-in via Windows Live ID
- Facebook user ID user's Facebook user ID; it is used when the user is logging in via Facebook Connect
- OpenID user's OpenID; it is used when the user is logging in via OpenID
- Activation date date of the user's account activation
- Activated by user user who activated this user's account
- Registration info user's IP and browser agent detected on registration
- Gender user's gender
- Date of birth user's date of birth
- Skype account user's Skype account
- Instant messenger user's instant messenger; format of values of the field is not strictly required, you may use any string of characters according to your specific needs (e.g. *ICQ: 123456789*)
- Phone number user's phone number; the number may be entered in any format, no validation is applied
- Waiting for approval if checked, the user is waiting for administrator's approval
- Show splash screen determines if splash screen should be displayed to the user when accessing Kentico CMS administration interface
- Forum posts number of user's forum posts
- Forum comments number of user's forum comments

- Blog comments number of user's blog comments
- Message board posts number of user's message board posts

Custom Fields

Here you can edit the custom fields added to the user profile. The custom fields can be defined in **Site Manager -> Development -> System tables -> User**.

Sites

Here you can specify the sites into which the user can sign in with their user name and password. Simply check the appropriate boxes and click **OK** to save the changes. This dialog applies only to logging in to CMS Desk and is intended for separation of content editors responsible for different websites.

Roles

Here you can add or remove user from roles. First, you need to select the site (since roles are always connected with a single website) and then check the appropriate boxes and click **OK**.

Please note: if you cannot see any sites in the listbox, you may need to assign the user to some site on the **Sites** tab.

Departments

Here you can specify the E-commerce module departments the user is authorized to manage products in.

Notifications

On this tab, you can see a list of all notification subscriptions of the currently edited user. You can **Delete** (X) subscriptions in the list, which unsubscribes the user from receiving notifications.

Categories

This tab displays a list of the user's custom categories. Each of the categories can be edited (\nearrow) or deleted (\varkappa).

By clicking the **New category** link, you can create a new category that will behave the same way as if it was created by the user in **CMS Desk -> Edit -> Properties -> Categories**.

The following details will be required when creating a new category:

- **Display name** name of the category displayed in the user interface
- Code name name of the category used in website code

Friends

On this page, you can manage the currently edited user's friends.

Subscriptions

On this tab, you can manage the user's subscriptions to newsletters and notifications about new blog posts and message board messages.

Languages

On this tab, you can specify which cultural versions of documents can be edited by the user. You have the following options:

- User can edit all languages if selected, the currently edited user can edit documents in all language versions of all sites in the system
- User can edit following languages if selected, you can specify which language versions can be edited by the user by checking the check-boxes in the list of language versions; this can be set separately for each site in the system using the **Select site** drop-down list

7.10.3 Role management

Roles are assigned to a particular (single) website. A role can have any number of members.

You can manage roles in Site Manager -> Administration -> Roles.

Creating a new role

Go to Site Manager -> Administration -> Roles and click & New role .Enter the following values:

- Role display name The name of the role displayed to the users.
- Role code name The name of the role used in the code.
- Role description Optional description.
- Is domain role Indicates if the role was imported from Active Directory.

Editing a role

Go to Site Manager -> Administration -> Roles and click the Edit () button of the appropriate role.

General

- Role display name The name of the role displayed to the users.
- Role code name The name of the role used in the code.
- Role description Optional description.
- Is domain role Indicates if the role was imported from Active Directory.

Users

Here you can add or remove users to/from the current role. If you want to add a user, click the **Add user** to role button. The **Select users** dialog appears. Enter the name of the user or its part and click **Search users**. Now select the listed users in the box (you can use CTRL+left mouse button) and click **Add selected users to role**.

Deleting a role

Go to Site Manager -> Administration -> Roles and click the Delete (X) button of the appropriate role.

7.10.4 Username customization

If you want to customize the way usernames are displayed in the administration interface, you can do it by modifying the **GetFormattedUsername** method in **~/AppCode/CMS/Functions.cs**. The method has four overrides and is used to retrieve usernames in the whole administration interface.

<u>Example</u>: Usernames are displayed in the *<full name>* (*<user name>*) (e.g. *Abigail Woodwarth (Abi)*) format in some parts of the system, e.g. in document **Properties -> General -> Owner**. The following code example shows how you can modify the method to get usernames in format *<user name>* [*<full name>*] (e.g. *Abi* [*Abigail Woodwarth*]):

[C#]

```
public static string GetFormattedUserName(string username, string fullname, bool
isLiveSite)
{
    if (!String.IsNullOrEmpty(DataHelper.GetNotEmpty(fullname, "").Trim()))
    {
        return String.Format("{1} [{0}]", fullname, username);
    }
    else
    {
        return username;
    }
}
```

7.10.5 Permissions

7.10.5.1 Permissions overview

Permissions are a way how you can control access to particular sections of Kentico CMS administration interface (modules), documents in the content tree and custom tables.

Permissions for roles

Permissions for roles can be configured in **Administration -> Permissions**. Every website has its own set of roles (there are no shared or global roles). These permissions are also assigned to roles, which means every website can use a different configuration of role permissions.

Based on the selection made by the **Permission type** drop-down list, you can choose from the following three types of permissions. Then you need to select the appropriate Permission matrix, which will be offered based on the selected Permission type.

- Modules permissions for specified actions in Kentico CMS modules; you can find details on particular permissions in documentation of respective modules
- Document types permissions applied to all documents of a particular type; these permissions
 represent one level of the three-level document permissions hierarchy, as described in the <u>Document</u>
 permissions topic

 Custom tables - permissions for the custom tables module, see <u>Modules -> Custom tables -></u> <u>Security</u> for more info

Kentico CMS Site Manager	Sites Administration Settings Development	Licenses Support
Administration Avatars Rad words Badges Banned IPs E-mail queue E-mail queue	Permissions Site: Corporate Site Permission type: Modules Permission matrix: Modules Document types Custom tables	•
10 Permissions		
Recycle bin		Manage Read
Roles	Authenticated users	Manage Read
Recycle bin Roles Scheduled tasks	Authenticated users CMS Basic users	Manage Read
Recycle bin Roles Control Scheduled tasks Smart search	Authenticated users CMS Basic users CMS Community Administrators	Manage Read C C C C C C C C C C C C C C C C C C C
Recycle bin Roles Scheduled tasks Smart search System	Authenticated users CMS Basic users CMS Community Administrators CMS Designers	Manage Read I I I I I I I I I I I I I I I I
Recycle bin Image: Solution of the second	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators	Manage Read Image Image Image

Permission-related settings for users

When editing (\mathbb{P}) a user in **Administration -> Users**, you can enable the following two options for the user. These options have impact on permissions checking and provide an extra security layer:

- Is global administrator the user is authorized to perform all operations and their access can not be denied by permissions or otherwise limited; global administrators are the only users who can use the Site Manager interface
- Is editor the user can access the CMS Desk interface; this attribute doesn't implicate any particular permissions it only differentiates the site editors and "registered users" who only access the live website and its secured areas and thus provides and extra security layer; the user can access CMS Desk for all sites to which they are assigned on the Sites tab

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support					
Administration	🜡 Users					
	Users Mass e-mail On-line users					
	Users + administrator					
E-mail queue	General Password Settings Sites Roles Departments Notifications	Categories				
Permissions	User name:* administrator Full name: * Global Administrator First name: Global Middle name:					
	Enabled: Is editor: Is global administrator: Is external user: Is domain user: Is hidden:					

7.10.5.2 Document permissions

Permissions for access to documents can be configured at three levels:

- 1. Permissions for all content granted to roles
- 2. Permissions for document types granted to roles
- 3. Document-level permissions granted to roles or individual users

Permissions from these three levels are merged together when checking if a user is a permitted to perform an action with a document. For example, to read a document, a user must have the *Read* permission on at least one of the three levels: either on document-level, or for the document's document type, or for all content.

Permissions for all content

In **Site Manger -> Administration -> Permissions**, there is a special permission matrix for controlling access to all documents within the content tree. It is the **Modules -> Content** permission matrix.

The following global permissions can be granted to particular roles:

- Read allows members of the role to view any document in the content tree
- Modify allows members of the role to modify any document in the content tree
- Check in any document authorizes user to perform the Check in or Undo check-out actions on the Properties -> Versions tab of a document
- Create allows members of the role to create any document in the content tree
- Delete allows members of the role to delete any document in the content tree
- Manage workflow allows members of the role to approve/reject any document at any workflow step

- **Destroy** allows members of the role to destroy any document (delete without undo option)
- Modify permissions manage local permissions of any document
- Browse tree allows members of the role to browse the content tree; if not assigned, the Content tab may not be displayed (unless the role has the Read permission for the *CMS.Root* document type or for the *Root* document (on document level))
- **Design website** allows members of the role to access the Design tab; <u>please note</u>: although users can make changes only to the current website, the changes may affect other websites if they modify a page template shared among multiple websites

Permissions for document types

Document type permissions allow control of access to all documents of a particular document type in the content tree. These permissions are assigned to roles in **Administration -> Permissions**, by selecting **Permission type:** *Document types* and choosing the document type from the **Permission matrix** drop-down list. All documents of a type will have access limited by the permissions configured for the document type.

You can grant the following document type permissions to particular roles:

- Read read all documents of this type
- Create create documents of this type
- Modify modify all documents of this type
- **Delete** delete all documents of this type
- **Destroy** destroy all documents of this type
- Browse tree display child documents of all documents of this type
- Modify permissions manage local permissions of all documents of this type

Document-level permissions

You can also configure permissions on document level, directly in the content tree. These permissions are merged with global permissions for all content (the *Content* module) and global permissions for document types. Document-level permissions are described in detail on the following page.

7.10.5.3 Document-level permissions

You can manage local permissions (i.e. permissions for a particular document or site section) in CMS **Desk -> Content ->** select a document in the content tree -> **Properties -> Security**.

Select the appropriate user or role in the left box. If the user or role is not available in the box, you may need to add them using the **Add users** or **Add roles** button. Now you can choose if the permissions should be "allowed" or "denied".

If you deny a permission, the action will not be allowed even if the user or role has the permission assigned on a global level, i.e. the Deny option overrides global settings for this permission.

You can configure the following permissions:

- Full control perform all operations with the document
- Read read document content
- Modify modify document content, check in, check out
- Create create new documents under this document
- **Delete** delete this document

- **Destroy** destroy this document (without undo option)
- · Browse tree unfold the current document and see its child documents
- Modify permissions change document permissions

Page Design	Form Properties				
General					
URLs					
Template					
Metadata	Permissions				
Categories	This document inherits permissions from the parent document.				
Menu	Change permission inheritance				
Workflow					
Versions	Users and Roles:	Access rights:			
Related docs	CMS Editors		Allow	Deny	
Linked docs		Full control			
Attachments		Read			
		Modify			
		Create		V	
		Delete	V		
		Destroy			
		Browse tree			

Permission inheritance

You will typically need to set up permissions for site sections, rather than for particular documents. In this case, you grant permission for the main section document to users and these permissions are inherited by all child documents.

Example

Consider the site structure like this:

- Root
 - Home
 - News
 - Products
 - Category 1
 - Category 2

You may want to grant the following permissions to the users:

JohnS	Marketing manager John can manage all content.	Grant the Full control permission on the root to the user or grant permissions for the CMS Content module to some of this user's roles.
MarkJ	Product manager Mark can manage only the	Grant the Browse tree permission on the root to the user so that they can browse the Products section.

	documents in the /Products section.	Grant the Read , Modify , Create , Delete , Destroy and Browse tree permissions on the /Products document to the user. These permissions are inherited by all child documents under the /Products section.
		Please note that if you click the /Products/Category 1 document, the Browse tree permission is grayed and disabled. It means that this permission is inherited and cannot be removed - you can only deny the permission (unless you break inheritance - see below).
AliceM	Copy writer Alice can modify the copy of all documents, but Mark prefers to manage the copy of the /Products section by himself only.	Grant the Read , Modify , Create , Delete and Browse tree permissions for the root to the user. Go to the /Products document and deny the Modify , Create , Delete permissions to the user so that Alice cannot modify the copy in the /Products section.

Please note: It's recommended that you configure local permissions for roles and then only assign users to the appropriate roles. In this example, you would first create roles "Marketing manager", "Product manager" and "Copy writer" and then configure their permissions.

Breaking the inheritance

In case you need to break the permission inheritance and configure different permissions for some site section, you need to click the **Change permission inheritance...** link in the **Security** dialog and choose one of the following options:

- Break inheritance and copy parent permissions breaks permission inheritance and adds parent permissions to the document, while original permissions configured for the document are preserved.
- Break inheritance and remove parent permissions breaks inheritance and removes all permissions inherited from the parent, while additional permissions configured for the document will be preserved.

Restoring the inheritance

If you decide to inherit the permissions from the parent again, click the **Change permission** inheritance... link in the **Security** dialog and then click **Restore inheritance to parent document** permissions.

7.10.6 Security

7.10.6.1 Secured website areas

Kentico CMS allows you to easily create secured website areas that are accessible only by authenticated users. When an non-authenticated (public) user comes to the secured section, they are redirected to the logon page specified for the site at **Site Manager -> Settings -> Security -> Website logon page URL**.

You can mark any section of the website as a secured site area by setting **Properties -> Security -> Requires authentication** to:

- Yes page is secured, authentication is required to access it
- No authentication is not required to access the page
- Inherits value of the setting is required from the parent page

Page	Design	Form	Properties						0
General									a
URLs									U
Template									
Metadata			Permissions						
Categorie	s		This document inherits permissions from the	e parent documen	it.				
Menu			Change permission inheritance						
Workflow									
Versions		_	Users and Roles:	Acce	ess rights:				
Related d	ocs					Allow	Deny		
Security	25			Fu	ill control				
Attachme	nts			Re	ead				
				M	odify				
				Cr	reate				
				De	elete				
				De	estroy				
				Br	rowse tree				
				M	odify ermissions				
			Add users Add roles Rem	iove			ок		
		1	Access					1	
			Requires authentication:	Requires SSL:					
			Yes	🖱 Yes					
			No	No					
				 Introductor 					
				Innerits		_			
				Never			ОК		
								1	

Configuration of a secured site area

This example explains how to secure the Products section in the sample Corporate Site.

- 1. Sign in as administrator to **CMS Desk**. Go to the **Content** section and click the **Products** document in the content tree.
- 2. Click **Properties -> Security**. Set the value of the **Requires authentication** attribute to **Yes** and click **OK**.
- 3. Go to **Site Manager** -> **Settings** -> **Security** and choose the *Corporate Site* site in the drop-down list. Make sure the **Secured areas logon page** is set to ~/*logon.aspx*. This is the URL of the logon page. You can either use the system logon page ~/*cmspages/logon.aspx* or you can define your own as it's defined in the Corporate Site sample.
- 4. Go to CMS Desk -> Content, click the Log-on Page document and click Design. As you can see,

the page is based on page template *Log-on page with registration form* that contains the *Logon form web* part and the *Registration form* web part.

CompanyLogo	Global Administrator (administrator) Sign out R Shopping cart My account My wishlis Yourshopping cart is emp								
	Search for:								
Home Product list Services Products News Partn	ers Company Blogs Forums Events Images Wiki Examples								
▼/Special pages/Logon page - page template: Logon page									
▼ zoneTop									
 ▼ zoneLeft ↓ LogonForm ↓ User name: ↓ Password: ↓ Remember me ↓ Log on ↓ Forgotten password 	ZoneRight Ip now! First name:								

5. Sign out and click **Products** in the main menu. You are redirected to the logon form:

CompanyLogo	Shopping cart My account My wis Yourshopping cart is	<u>shlist</u> empty
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Search for:	
Home Product list Services Products News F	Partners Company Blogs Forums Events Images Wiki Example	es
Log on	Not a member yet? Sign up now!	
User name: Password: Remember me Log on Forgotten password	First name: Last name: E-mail: Password: Confirm password: Register	

6. Sign in as administrator and you will see the Products section.

Checking access to page content
The page content is not secured by default, even if the current user is denied to the given page. You need to configure this either by setting <b>Check permissions</b> to in the Editable region web part properties (local configuration) or globally by setti value in <b>Site Manager -&gt; Settings -&gt; Security -&gt; Check page permissions</b> to the following values:

- NO doesn't check any permissions.
- ALL checks permissions for all pages, including public pages.
- SECUREDAREAS checks permissions only for pages within a secured area.

When the user is not authorized to read the page, they are displayed with the *Access denied* page. You can configure custom access denied page URL in the **Site Manager** -> **Settings -> Security -> Access denied page URL** property.

## 7.10.6.2 SSL (HTTPS) support

Kentico CMS allows you to specify which pages of the website can be displayed only over the secured SSL (HTTPS) protocol. When a user tries to open such a page with standard HTTP protocol, they are redirected to the secured (HTTPS) URL of the same page.

**Please note:** Kentico CMS doesn't configure your website for SSL/HTTPS, you need to do this manually using standard IIS settings as described in IIS documentation or in this article: <u>http://msdn.</u> microsoft.com/cs-cz/magazine/cc301946(en-us).aspx

In order to specify which pages should be available only through the SSL protocol, you need to go to **CMS Desk -> Content** and select the document in the content tree. Then you can choose one of the following option in **Properties -> Security -> Requires SSL**:

- Yes users trying to access the page will be redirected to the HTTPS URL of the page
- No users trying to access the page will access the page via the protocol from that they are comming (i.e. they will not be explicitly redirected to the secured URL, but if they are coming from a secured URL, they will access the page via secured URL)
- Inherits settings of the parent page will be used
- Never users trying to access the page will be explicitly redirected to the non-secured version of the page

Page	Design	Form	Master page	Properties						
General										
URLs										
Template										
Metadata		Г	– Permissions –							
Categorie:	s		This document	t does NOT i	nherit permi	issions from th	he pare	ent document.		
Menu										
Workflow										
Versions			Users and Ro	les:			A	ccess rights:		
Related do	ocs								Allow	Deny
Linked doo	:s							Full control		
Attachmer	nts							Read		
								Modify		
								Create		
								Delete		
								Destroy		
								Browse tree		
								Modify permissions		
			Add users	Add ro	oles	Remove				ОК
			ALLESS	ontiontion:		Conviran				
			requires autr	ientication:		Requires	58L)			
			🔘 Yes			O Yes				
			No			🔘 No				
			Inherits			Inhe	erits			
						Neve	er			OK -
						<u> </u>				ON

#### 7.10.6.3 Cross site scripting (XSS)

For your websites to be <u>Cross site scripting (XSS)</u> safe, the following rules need to be followed:

1. Do not use the built-in WYSIWIG editor (HTML area (Formatted Text) field type) to enable users enter text into the site (e.g. user profiles, forums, etc.). Instead use the **BBcode editor**.



This editor is displayed by selecting **BBcode editor** as the value of the Field type attribute when defining document type fields:

Document type properties											
Document types  Blog post											
General	Fields	Form	Transforma	tions	Queries	Child types	Sites	Alternative forms	Search fields	Documents	
blogpostID											*
BlogPostTitle BlogPostDate			Field type:			BBcode editor					

BlogPostDate		Field type:	BBcode editor	
BlogPostSummary BlogPostBody			Columns:	
BlogPostTeaser BlogPostAllowCommonto			Rows:	
DocumentTags	-		Size:	
BlogPostPingedUrls BlogPostNotPingedUrls			Show "Insert image" button	
biogr coavour ingedeno			💿 No 💿 Simple dialog 💿 Advanced dialog	=
	-		Show "Insert link" button	
	-23		🔘 No 💿 Simple dialog 🔘 Advanced dialog	
	- Contraction of the contraction		Show 'Insert quote' button	
			Show 'Insert code' button	
			Show 'Bold' button	
			Show 'Italics' button	
	<b>M</b>		Show 'Underline' button	
	~		Show 'Strikethrough' button	
			Show 'Color' button	-
Document name source field:			ОК	
BlogPostTitle	-			
Document alias source field:	_			
(Document name)	-			

2. When writing your transformations, use the following method to resolve text entered via the BBcode editor:

CMSHelper.CMSContext.ResolveDiscussionMacros(string inputText)

3. When writing your transformations, use the Eval(string columnName, bool encode) method with the second parameter enabled to display content of any field whose content was entered by the users, e.g.:

<%# Eval("PostSubject",true) %>

#### 7.10.6.4 Configuration of allowed request parameters

In some cases, you may need to use super-secure configuration where any non-standard GET or POST parameter sent to your website results in an error. This allows you to avoid some of the possible vulnerabilities, including cross-site scripting and SQL injection.

This functionality is only used for the website, not for the administration interface.

# How to configure the allowed parameters

First, you need to enable allowed parameter checking in the web.config file by setting the value CMSCheckParameters to true:

<add key="CMSCheckParameters" value="true" />

If you're not sure which parameters cause the problem, you can turn on reporting using the following web.config key:

<add key="CMSReportCheckParameters" value="true" />

All parameters are defined in the **~/parameters.config** file. The schema of the file is described in the file itself and it's rather simple. For every page or site section, you need to define a new <location> section with path specifying the page and allowed form (POST) and query (GET) parameters. The following example allows URL parameter pagenumber in the whole products section of the website:

```
<location path="/products/%">
  <queryparameters>
        <allow param="pagenumber" />
        </queryparameters>
    </location>
```

The **path** location specifies the path of the pages based on their alias path in Kentico CMS, while the **page** location is used for single pages that are not part of the Kentico CMS content (custom applications, etc.). The page location starts at the root of the web application and is used without slash (/) at the beginning.

## **Default allowed parameters**

The common parameters of ASP.NET web forms and URL parameters **aliaspath** and **lang** are allowed by default.

#### 7.10.6.5 Managing security using .NET code (API)

You can manage the users, roles and permissions using your own .NET code. Please see the <u>Security</u> <u>Management</u> API examples for more details.

## 7.10.7 UI personalization

#### 7.10.7.1 Overview

Ul personalization enables you to provide certain users of the website with **simplified user interface**. This is useful **typically for business users** who don't need to see all the **tabs**, **menu items**, **actions** and **parts of Ul pages** which they don't use. Instead, they have the possibility to see only the things that they need for their job and are not overwhelmed by loads of other options.

Setting up personalized UI can significantly decrease the learning time for new end-users and makes the system generally easier to use and understand for them.

If you are new to UI personalization in Kentico CMS, we recommend you to take the following steps to fully understand it:

1. For UI personalization to be functional, you first need to enable it as described here.

2. It is a good idea to start with the <u>Quick example</u> topic, where you can instantly see what UI personalization is good for.

3. With some basic information from the Quick example, you can get deeper knowledge of the terminology, concept and internals in the <u>How does it work</u> chapter.

4. Finally, you can learn what parts of CMS Desk can be hidden in Personalizable parts of CMS Desk.

With the knowledge gained in the chapters above, you can start making UI personalization settings for particular roles as described in <u>Configuring UI personalization for a role</u>. You can also modify or even create your custom UI elements as described in <u>UI elements management</u> and the related <u>example</u>.

#### 7.10.7.2 Quick example

To see UI personalization in practice, first enable UI personalization as described <u>here</u>. Install one of the sample sites (e.g. Corporate Site) and try logging in to CMS Desk as the **Global Administrator** (login *administrator* with blank password). You will see the full-featured user interface as in the screenshot below.



Now log out and try logging in as **Andrew Jones** (login *andy* with blank password). Andy is a member of the **CMS Basic users** role only. This is a role which was added to Kentico CMS to demonstrate the capabilities of UI personalization and its members see only simplified user interface.

As you can see in the screenshot below, the **Administration** tab in the top menu is not present. The **Design** tab in **Edit** mode is missing too. You can also notice the **WYSIWYG editor**, which offers only a limited number of actions.



If you switch to the **Properties** tab, you can notice the limited number of items in the left menu. Particular sections accessible via the menu also do not contain all the options available for administrators.

Kentico			Site: Corporate Site 💌 User: Andrew Jones v5.0.362					
CMS Desk Content My desk	< Tools							
New Delete Move Down	Edit Preview	Live site List	Search					
Content management	View	w mode Other						
🖃 🌍 Corporate Site	Page Form Pro	perties						
Home	General							
😠 📄 Services	URLs	Save						
📄 📄 Products	Washflow							
🕀 📄 News	WORKNOW							
Partners	Versions	Other properties	Home					
🖃 🔛 Company	Attachments	Type:	Page (menu item)					
HINGS		Created by:	Global Administrator					
Forums		Created:	10/30/2007 8:07:21 AM					
		Last modified by:	Global Administrator					
inages		Last modified:	12/3/2009 10:28:09 AM					
Examples		Rating:	skirkskirkskirk Reset					
🕞 🟐 Special pages			N/A					
🔃 🔄 Images		Node ID:	4					
		Node GUID:	a110280e-fca8-4ba1-8cd5-ac5ff783e000					
		Allas path:	/Home					
[*		Nome noth:	English - United States					
		Ivanie patri.	/online					
		Live URL.	Voc					
		Fublished.	100					

The My desk tab contains only two items.

Kentico CMS Desk	Content	My desk	Tools
→ My desk	/ approval	Solution My	Desk Vaiting for his section d ogged-on use rpe, date and edirected to a

The Tools tabs offers only the Newsletters module.



It is obvious that this UI is much easier to understand for an end user who only needs to send out newsletters and does not need to do anything else with the CMS.

To see a full overview of which parts of the UI can be hidden, please see <u>Personalizable parts of CMS</u> <u>Desk</u>.

## 7.10.7.3 How does it work

This chapter explains the principles behind Kentico CMS UI personalization. It is important to get familiar with the following two terms in order to fully understand the concept:

- Ul element page or part of a page in CMS Desk which can be hidden from a specified user; it can be a tab, a menu item or a group of controls
- **UI profile** visibility of specified UI elements for a particular role; it is defined as a set of (role) x (UI element) relationships

# Each user's UI profile is defined by UI profiles of their roles. If a user wants to see a UI element, at least one role where the user is member needs to have the UI element set as visible.

The following diagram illustrates how UI personalization settings from two roles are merged to create a user's UI profile.



<u>Please note</u>: User's UI profile is **site-related**. This means that the user can see some personalized UI when editing one site and a completely different UI when editing another site. This is possible because a user's UI profile is dependent on the roles. Roles are site-related and a user can be a member of any number of roles across all sites in the system.

# **UI element display authorization**

The diagram below shows the process of authorization when deciding if a single UI element should be displayed to a user. This process is applied to UI elements in the following parts of the UI:

- main tabs in CMS Desk (Content, MyDesk, Tools, Administration only the tabs, not their content!)
- left menu in CMS Desk -> MyDesk
- left menu in CMS Desk -> Tools
- left menu in CMS Desk -> Administration



This diagram shows the same authorization process in the remaining tabs and parts of pages:



UI element definitions vs. UI elements in the real user interface

The relation between the UI element definition in **Site Manager** -> **Modules** -> **edit** (*P*) **a module** -> **User interface** and the UI elements in the real UI is different according to the type of UI element.

There are three basic types of UI elements: tabs, menu items and groups of controls.

**Tabs** in the following locations are **generated dynamically** from the defined UI elements, which means that when a new UI element is defined, the element gets instantly displayed in the UI:

- main tabs in CMS Desk (Content, My desk, ...)
- tabs in CMS Desk -> Edit (Page, Design, ...)
- vertical tabs in CMS Desk -> Edit -> Properties (General, Metadata, ...)
- tabs in CMS Desk -> My desk -> My profile

Menu items in the following menus are also generated dynamically:

- CMS Desk -> My desk -> left menu
- CMS Desk -> Tools -> left menu
- CMS Desk -> Administration -> left menu

**Groups of controls** on particular UI pages (e.g. the Design, Other properties, Owner and Cache sections in CMS Desk -> Content -> Properties -> General) are **pre-defined** and their UI elements are bound to them. You can not define a new group of controls on a page just by definig a new UI element.

More information related to this topic can be found in <u>Personalizable parts of CMS Desk</u>.

#### 7.10.7.4 Personalizable parts of CMS Desk

#### 7.10.7.4.1 Overview

Ul personalization can be applied to **CMS Desk only**. Site Manager cannot be personalized as it is typically used by administrators and developers who need the full rather than a simplified UI.

As for CMS Desk, you can personalize the UI elements in the following parts of CMS Desk. Module names in parentheses show which module represents these parts of CMS Desk:

- CMS Desk main tabs (module CMS Desk)
- CMS Desk -> Content tab (module Content)
- <u>CMS Desk -> My desk tab</u> (module My desk)
- <u>CMS Desk -> Tools tab</u> (module Tools)
- <u>CMS Desk -> Administration tab</u> (module Administration)
- <u>WYSIWYG editor</u> (module WYSIWYG editor)
- Media dialog (module Media dialog)

Click particular sections to learn more.

#### 7.10.7.4.2 CMS Desk main tabs

You can hide each of the four main tabs - **Content**, **My desk**, **Tools** and **Administration** - as highlighted in this screenshot:

Kentico CMS Desk						_			Switch to	
		Content My desk		k Tools Administration		ion				
	i 📄	Copy	/ î Up						P	R
New	Delete 📄	Move	e 🕹 Dor	wn	Edit	Preview	Live site	List	Search	Maximize
	Content	mana	gement			View	mode		Ot	her

As you can see, the **CMS Desk** module has UI elements with exactly the same names as the tabs above:



7.10.7.4.3 CMS Desk -> Content tab

The **Content** tab provides vast possibilities of UI personalization. For easier explanation, we will divide them in **three groups**: **Edit mode** tabs, **Design** tab and **Properties** tab.

# Edit mode tabs

You can hide any of the main tabs displayed in Edit mode as highlighted in the screenshot below.

	Switch to Site Manager						
Content My desi							
📄 📄 📄 Copy 🕯 Up							
New Delete 🚔 Move 🕹 Down	Edit Preview Live site List Search Maximize						
Content management	View mode Other						
Corporate Site	Dago Design Form Master page Brenerties						
Home	Page Design Form Master page Properdes						
Services	Save Spell check						
Products							
news	Sign in to CMS Desk. Sign in to CMS Site Manager. The defau						
Partners							
Company							
	VLOQO						
Forums							
Events							
🗑 📄 Images	· · · · · · · · · · · · · · · · · · ·						
💮 📄 Wiki							
Examples	Home Services Products News Partners Company Blogs						
🕣 🔄 Special pages							
🗉 🔄 Images							

These main tabs are represented by the first-level UI elements of the Content module as highlighted

below.

Please note that the **Product** tab is not displayed in the screenshot above as it is only displayed when a product type document is selected in the content tree. This is also the case of the **Master page** tab, which is displayed only when you are using Portal engine and the root of the content tree (the master page) is selected.



# **Design tab**

On the **Design** tab, you customize all the essential editing actions highlighted in the screenshot below. The corresponding UI elements can be found under the **Design** node of the **Content** module's UI elements tree.



# Web part properties dialog

You can hide the four main tabs - General, Layout, Bindings and Code - in the Web part properties dialog.
🙋 CMS Desk - Web Pa	art properties Webpage Dialog		Madeda menenettas	×
🗋 Web part pr	operties (Repeater)		Module properties	Documentation
General Layout	Bindings Code		Modules   Content	
Default			General Permission names User interface	
Visibility	Culture code:	•	New element 1 Up	
Content	Maximum nesting level	▶ -1	Delete element 4 Down	
Content filter			Ple	
Transformations	ORDER BY expression:	<ul> <li>NewsReleaseDate D</li> </ul>	Page	
Relationships	Oalast ank sublished		Edit lavout	
System settings	Select only published.		Edit template	
No data behavior	Select top N documents:	•	Clone template as ad-hoc	=
Editing buttons			Web part zone properties	
AJAX	Site name:	•	<ul> <li>Web part properties</li> </ul>	
Time zones	WHERE condition:		General	
Partial caching	WHERE COndition.	·	Layout	
	Filter out duplicate documents:	•	Bindings	
			Add web parts	
	Filter name:	•	Remove web parts	
	Transformations			
	Transformation:	<ul> <li>CMS.News.NewsWit</li> </ul>	hSummary Select Edit	
	Alternating transformation:	•	Select Edit	
	Selected item transformation:	<ul> <li>CMS.News.NewsDet</li> </ul>	ail Select Edit	-
Refresh content			OK Cancel	Apply
http://localhost/Kentico	oCMS_2611/CMSModules/PortalEngine/UI	/Webparts/WebPartPropertie	🗣 Local intranet   Protected Mode: Off	.44

## **Properties tab**

You can hide all items in the left menu on the **Properties** tab. You can also hide particular parts of the **General**, **URLs**, **Template**, **Metadata**, **Menu** and **Security** pages. More information can be found on this page.

## 7.10.7.4.4 CMS Desk -> Content -> Edit -> Properites tab

This chapter describes UI personalization possibilities for the **Content -> Edit -> Properties** tab of a document.

First of all, you can hide all items in the left menu on the **Properties** tab as highlighted in the screenshot below.

💥 Kentico			Switch to Site Manager	Site: Corporate Site 💌	User: Global Administrator
CMS Desk Content My des	k Tools Administration				
📄 📄 📄 Copy 🔒 Up			)		
New Delete 🕞 Move 🦊 Down	Edit Preview I	ive site List Sea	ch		
Content management	View m	ode Oth	er		
🖃 🕘 Corporate Site	Page Design For	m Properties			
Home	General	-			
Services	URLs	E Save			
	Template				
Partners	Metadata	Design			
Company	Categories	(defa	ult)	▼ Edit	
⊕ Blogs	Menu	CSS stylesheet:	nerit		-
😨 📲 Forums	Workflow				
🗈 📄 Events	Versions	Other properties			
🗈 📄 Images	Related docs	Document name: Home	l i i i i i i i i i i i i i i i i i i i		
i Wiki	Linked docs	Type: Page	(menu item)		
Examples	Convibu	Created by: Globa	I Administrator		
🖃 🔄 Special pages	security	Created: 10/30	2007 8:07:21 AM		
🖃 🖤 Images	Attachments	Last modified by: Globa	I Administrator		

In the **Content** module, you can find the relevant UI elements under the **Properties** node. These elements have the same names as the names of particular menu items.

Module properties	
Modules   Content	
General Permission names User inter	face Sites
📴 New element 🛛 👚 Up	UI elements
Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Conte	Please select or create some UI element.
Versions Related docs	
Security     Attachments     Languages	

You can also expand the **General**, **URLs**, **Template**, **Metadata**, **Menu** and **Security** UI elements using the I icon in order to display their child UI elements. These child UI elements represent parts of the relevant pages as described in the text below:

#### **General tab**

The General tab consists of the Design, Other properties, Owner, Cache and Advanced sections.

The related UI elements have the same names as these sections, as you can see in the following screenshot:



## **URLs** tab

The URLs tab consists of the **Path**, **Extended properties** and **Document aliases** sections. The related UI elements have the same names as these sections, as you can see in the following screenshot:

CMS Desk Content My desk Tools Administration     New Delete Move Down Edit Preview Live site List   Search Other     Module properties   Modules > Content     General   Wex mode     Content     Page   Design   Properties     Menu   Workflow   Page   Design   Properties   Master page   Properties   Unked docs   Security   Atachment   Document aliases     Add new aliase	💒 Kentico		Switch to Site Manager Site: Corporate Site 🔍 User: Glob
Image: Converties   Nodule properties   Module s > Content   General   Image: Convert   Page   Design   Page   Octoment   Page   Design   Progreties   Octoment   Page   Design   Progreties   Octoment   Page   Design   Progreties   Outer   Page   Design   Progreties   Outer   Properties   Outer   Outer   Outer   Outer   Properties   Outer	CMS Desk Content My de	sk Tools Administration	
Module properties     Modules > Content     General     URLs     Content     Page     Design     Product     Urks     Page        <	New Delete Move Down	Edit Preview Live site List Search	
Modules Content   General User interface   General User interface   Wetweiement User interface   Ple Metadata   Categories Menu   Page Document aliass:   Home Document uRL path:   Product Unked docs   URLs Extended properties   Ourge Content Use custom URL extensions   Product URLs   URLs Document aliases   Ocument aliases Document aliases   Document aliases Document aliases	Hodule properties		
General Versions   Page   • Design   • Page   • Design   • Product   • Master page   • Opporties   • Office   • Opporties   • Opporties   • Opporties   • Opporties   • Desting   • Desting	Modules   Content	Page Design Form Properties	
Image: New element Image: Delete element   Image: Delete element Image: Down   Image: Design Ples   Image: Design Menu   Vorkflow Versions   Image: Design Image: Design   Image: Design Ples   Image: Design Resided docs   Image: Design Extended properties   Image: Design Image: Design   Image: Design Extended properties   Image: Design Image: Design	General Permission names User interface	URLs	
Categories       Pleis         Menu       Workflow         Page       Workflow         • Design       Refued docs         • Product       Unked docs         • Master page       Security         • General       Outment aliases         • Dath       Extended properties         • Dath       Document aliases         • Decument aliases       Outment aliases         • Decument aliases       Outment aliases         • Decument aliases       Outment aliases         • Decument aliases       Add new alias	New element & Up	Template Metadata Path Lises	
Image: Souther DKL path       Were         Image: Projecties       Workflow         Image: Properties       Unked docs         Image: Properties       Unked docs         Image: Properties       Security         Image: Properties       Attachments         Image: Properties       Image: Properties         Image: Propertis <td></td> <td>Categories Document anas. Home</td> <td></td>		Categories Document anas. Home	
Design     Versions     Related docs     Versions     Related docs     URL extensions:     URL extensions:     Use custom URL extensions     Track campaign:     Document aliases     Document aliases     Document aliases     Template	- Content	Workflow	tom URL path
Form       Related docs         Product       Linked docs         Waster page       Security         Or Properties       Use custom URL extensions         URL stransions       Document aliases         Document aliases       Document aliases         Document aliases       Add new alias	📄 Design	Versions	
Master page     Use custom URL extensions     Track campaign:     Track campaign:     Document aliases     Document aliases     Add new alias	···· Form ··· Product	Linked docs	
General     URLs     Document aliases     Document aliases     Template	Master page Properties	Security Track campaign:	tom URL extensions
Extended properties     Document aliases     Template		Document aliases	
· Template	Extended properties	Add new alias	
	💽 Template		

#### **Template tab**

On the **Template** tab, you can hide the **Save as new template**, **Inherit template**, **Clone template as ad-hoc** and **Edit template properties** actions. These actions are represented by the UI elements with the same names, as you can see in the screenshot below.

You can also hide the whole Inherit content section using the UI element with the same name.

The **Modify shared templates** UI element works as a permission: it determines if the users can modify shared page templates both from here and on the **Design** tab.

<u>Please note</u> that the **Save as new template** action is not displayed in the screenshot because it is available only for ad-hoc or reusable templates. If displayed, the action is positioned instead of the **Inherit template** action. This is why the UI element is connected by a dotted line with the action button.



## Metadata tab

The Metadata tab consists of two main sections. The **Page settings** section is represented by the **Page title**, **description**, **keywords** UI element. The **Tags** section is represented by the **Tags** UI element.

Kentico CMS Desk Content My desi	Tools Administration			Switch to Site Manager	Site: Corporate Site 💌	User: Glob
Image: Copy     Image: Copy     Image: Copy       New     Delete     Image: Move     Down       Content management	Edit Preview Li View ma	ve site List	Search Other			
Corporate Site  Corporate Site  Corporate Site  Content  ontent  Content  Content  Content	Page Design Form General URLs Template Metadata Itegories enu orkflow rsions Bated docs iked docs iked docs curity ple: tachments	Properties          Save         Page settings         Page title         Page description:	<ul> <li>✓ Inherit</li> <li>✓ Inherit</li> </ul>			
Design     Design     Form     Product     Master page     Oroperties     General     OULs     Template     Metadata		Page keywords: (separated by comma) Tags	Inherit			
Page title, description, key     Tags     Categories     Menu		Page tag group: Page tags: (separated by comma)	Enter tags se	eparated with comma. Exa	Select	-

## Menu tab

The **Menu** tab consists of three sections - **Basic properties**, **Menu actions**, **Menu design** - while these sections are represented by UI elements with the same names as shown in the following screenshot:



#### Security tab

The **Security** tab consists of the **Permissions** section, which is represented by the **Permissions** UI element, and the **Access** section, which is divided into two UI element - **Requires authentication** and **Requires SSL**:



7.10.7.4.5 CMS Desk -> My desk tab

You can hide each item in the left menu (1.). Additionally, you can also hide all four tabs on the **My** profile page (2.).

Kentico CMS Desk Content	My desk Tools Administratio	n
My desk  Recent documents  Outdated documents  My disk for my angle of the second sec	My profile Details Change password	Notifications Subscriptions
Waiting for my approval     Gecked out by me     My recycle bin     D My documents	User name: Full name:	administrator Global Administrator
My profile My blogs	First name: Last name:	Global Administrator
My friends 1.	Nick name: E-mail:	Admin administrator@mydomainXY.com

In the screenshot below, you can see UI elements of the **My desk** module. Their names match the names of the menu items and tabs on the screenshot above.



#### 7.10.7.4.6 CMS Desk -> Tools tab

You can hide each item in the left Tools menu as highlighted in the following screenshot:



The Tools module has UI elements with the same names as the menu items in the screenshot above.



#### 7.10.7.4.7 CMS Desk -> Administration tab

You can hide all items in the left Administration menu.



The **Administration** module has UI elements with the same names as the menu items in the screenshot above.



7.10.7.4.8 WYSIWYG editor

All action buttons on the <u>WYSIWYG editor</u> toolbar can be hidden. This can be particularly useful for content editors who do not need to use all these actions.

Source 🗟 🐰	ⓑ ⑧ ⑲ │● ◇ ◇ │ 桷 铩 │ 圓 Ø B Z Ŭ 艸 │ ᅕ × 〕 註 註 │ 律 律   書 書 言   ● ● ● ◆
🐺 🔍 🥅 🏣 😀	🏶 🔚 🗉 🖂 🕑 🛛 🗙 🛛 🟙
Style	▼ Format Heading 1 ▼ Fort ▼ Size ▼ Tar ▼ @ ▼ □ ™

Ul element names match tooltips displayed when you place your cursor over a particular button in the WYSIWYG editor toolbar.

🛃 Module properties		
Modules  • WYSIWYG Editor		
General Permission names	User interface	Sites
🙀 <u>New element</u> 🛭 🕆 Up		Ul elements
Delete element 🛛 🕹 Down	D	lesse select or creste some III element
CMS WYSIWYG Editor		lease select of cleate some of element.
Source		
Preview     Glipboard		
<ul> <li>Search and history</li> </ul>		
<ul> <li>Formatting</li> <li>Lists and indent</li> </ul>		
<ul> <li>Justify</li> <li>Links</li> </ul>		
<ul> <li>Images and media</li> </ul>		
HIML elements     Components		
Style     Colors	•	

## **Custom toolbar actions**

If you use your custom plug-in in the WYSIWYG editor and want its action button to be displayed or hidden based on UI profile settings, you need to create a new UI element in the WYSIWYG Editor module with the same code name as the code name of the plug-in.

#### How it works

- 1. Action buttons are loaded into the toolbar based on the toolbar definition.
- 2. If UI personalization is enabled, action buttons get filtered according to the user's UI profile.

This means that only such UI elements are displayed in the toolbar that are available both in the user's UI profile and in the toolbar definition.

## Toolbar personalization on the live site

Toolbar personalization on the live site is disabled by default. To change this, you need to enable it in your web.config file by adding the following key to the **/configuration/appSettings** section:

<add key="FCKEditor:PersonalizeToolbarOnLiveSite" value="true" />

Once this is done, all UI personalization settings will be applied to the WYSIWYG editor on the live site.

More web.config settings can be found in <u>Appendix C - Web.config parameters -> WYSIWYG editor</u> <u>settings</u>.

#### 7.10.7.4.9 Media dialog

This dialog is displayed e.g. when using the <u>Insert image or media</u> or <u>Insert link</u> actions in the WYSIWYG editor or when selecting an image in the **Editable image** web part.

You can hide the dialog's tabs - Attachments, Content, Media libraries, Web, Anchor and E-mail.

🙀 Insert li	nk					
Attachments	Content	Media libraries	Web	Anchor	E-mail	
New file		List	E Ti	les	T 🔝	humbnails
Name:					Searc	:h

Ul elements are defined centrally in the **Media dialog** module. They are applied to all occurrences and versions of the dialog, even though some of these tabs are not displayed in all cases (e.g. the E-mail tab is not displayed in Insert image or media dialog).



## 7.10.7.5 Enabling UI personalization

For UI personalization to be functional, you need to go to **Site Manager -> Settings -> Security** and enable it using the **Enable UI personalization** check-box.

Using the **Site** drop-down, you can decide if you want to turn it on globally, or just for some particular sites in the system.



#### 7.10.7.6 UI profile configuration

In the following step-by-step example, you will learn how to define UI profile for a new role in **Site Manager -> Administration -> UI personalization**.

Let's presume that we want some users to be **Forum administrators** of our website. This means that they will not need to use the **Content** or **Administration** tabs at all, all they will be concerned about is the **Forums module** administration interface in the **Tools** menu and a few parts of the **My desk** section.

How to achieve it? We will create a new role and a new user who will be a member of this role only. Then we will define UI profile settings for this role and try logging in as the new user to see the simplified UI.

1. Install some of the sample sites or your own site and enable UI personalization for the site as described <u>here</u>.

2. Go to **Site Manager -> Administration -> Roles**, choose your site in the **Site** drop-down and click the **New role** (4) icon. In the following dialog, enter these details:

- Role display name: Forum Administrators
- Role code name: ForumAdministrators
- Role description: some text describing the role
- Is domain role: leave the field blank

Click OK.

Kentico CMS Site Manager	Sites Administrati	on Settings	Development	Licenses	Support
Administration     Avatars     To Bad words	New Role Roles  New role				
Badges         Banned IPs         F-mail queue         Event log         Permissions         Recycle bin         Roles         Scheduled tasks         Smart search         System	Role display name: Role code name: Role description: Is domain role:	Forum Administ ForumAdministr Members of administrate	trators rators this role wi e discussion	ll forums.	۸ ۲
- 🛃 UI personalization - 🍇 Users - 🔩 Web farm		ОК			

3. Now let's create the user. Go to **Site Manager -> Administration -> Users** and click the **New user** ( **b**) icon. Enter the following details in the New user dialog:

- User name: ForumsGuy
- Full name: Jack McKay
- Enabled: enabled
- Is editor: enabled

Click OK.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> </ul>	Users Users	Mass e-mail	On-line users			
<ul> <li>E-mail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> <li>Roles</li> <li>Scheduled tasks</li> <li>Smart search</li> <li>System</li> <li>UI personalization</li> <li>Users</li> <li>Web farm</li> </ul>	User na Full nar E-mail: Enable Is edito Passw Confirn	ame:* Forume: * Jacl	umsGuy k McKay OK			

4. You are redirected to the new user's editing interface. We first need to assign the user to our site. Go to the **Sites** tab and add the site using the **Add sites** button.



5. Now that the user belongs to our site, we can assign her to the **Forum Administrators** role, which also belongs to the site. Switch to the **Roles** tab and use the **Add role** button to add the Forum Administrators role.

Kentico CMS Site Manager	Sites Adr	ministration	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> <li>E-mail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> </ul>	Users Ma	ess e-mail umsGuy Password assigned to	On-line users Settings	Sites Roles	Departments	Notifications
<ul> <li>Roles</li> <li>Scheduled tasks</li> <li>Smart search</li> <li>System</li> <li>UI personalization</li> <li>Users</li> <li>Web farm</li> </ul>	Select site:	Corporate S le name um Adminis! e selected	trators	Add roles		

6. Now that the user belongs to our role, we can set up UI personalization for the role. Go to **Site Manager -> Administration -> UI personalization** and chose:

- Site: your site
- Role: Forum Administrators

<u>Please note</u>: UI personalization settings are **site-related**. This means that members of one role can see some personalized UI when editing one site and a completely different UI when editing another site. More information on how UI personalization works can be found <u>here</u>.

You can choose the module whose UI elements you want to set up using the **Module** drop-down. Full reference on the personalizable parts of CMS Desk and the appropriate modules can be found <u>here</u>.

7. Let's start with the main tabs in CMS Desk, where we want only the **My desk** and **Tools** tabs visible. Choose **Module**: CMS Desk and make the following settings:

- Content: disabled
- My desk: enabled
- Tools: enabled
- Administration: disabled

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> <li>Femail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> <li>Roles</li> <li>Scheduled tasks</li> <li>Smart search</li> <li>System</li> <li>UI personalization</li> <li>Users</li> <li>Web farm</li> </ul>	Dialogs	ersonalizat	ion			
	Site: [ Role: [ Module: [	Corporate Site Forum Adminis CMS Desk	trators		•	
	Expand	d all 🛛 🚭 Collaps	se all			
		Desk (select a Content My desk Tools Administration	ll, unselect	all)		

8. On the My desk tab, we will need only the My profile, My messages and My friends sections, all others are not needed for forum administrators. Choose **Module**: My Desk and enable only the UI elements listed below, do not enable the rest.

- My profile: enabled
  - Details: enabled
  - Change password: enabled
  - Notifications: enabled
  - Subscriptions: enabled
- My messages: enabled
- My friends: enabled



9. Finally, we need only the Forums option in the Tools menu. Choose **Module**: Tools and enable only the **Tools** UI element as you can see in the screenshot below. Leave all the remaining UI elements disabled.



10. We can now verify what we have achieved. Log out of **Site Manager** and log back in to **CMS Desk** as the *ForumsGuy* user created in step 3. You will see the a simplified user interface as in the following screenshot.



If you switch to the **Tools** tab, there is only the **Forums** menu item present. It is evident that this UI is much easier to understand for a first-time end user.



## 7.10.7.7 UI elements management

7.10.7.7.1 UI elements management overview

The user interface of Kentico CMS consists of modules. Modules contain particular UI elements. UI element is a page or part of a page in CMS Desk which can be hidden from a specified user. It can be:

- tab
- menu item
- group of controls

Ul elements of a particular modules can be edited or added in **Site Manager -> Development -> Modules**. This is where you can see a list of all modules in the system. For information on which module represents which parts of the CMS, please read <u>Personalizable parts of CMS Desk</u>. 490



If you want to manage UI elements of some module, click the **Edit** ( $\checkmark$ ) icon next to the module and switch to the **User interface** tab. On the **User interface** tab, you can see all UI elements of the module in the tree on the left.

- You can re-order UI elements using the Up ([↑]) and Down ([↓]) buttons. This order will then be reflected in the real UI for tabs and menu items. Parts of pages (groups of controls) can not be re-ordered this way.
- You can delete existing elements using the **Delete element** ( button.
- New elements can be created using the **New element** (B) button (see the <u>example</u>), while the new element is always created under the currently selected node.

Settings for each UI element are divided into two tabs - General and Roles.

On the **General** tab, you can set the following properties of the UI element.

- **Display name**: name of the element displayed in the administration interface (i.e. in the settings, not in the final UI); can be entered either as plain text or as a localizable string in the {*\$mystringname*\$} format
- Code name: name of the element used by developers in website code, it must be unique within a module
- **Parent element:** using this drop-down list, you can change the hierarchical position of the element in the UI elements tree for this module; you can select either the name of the module (which places the element under the root) or some of the other UI elements (which places the element under the selected element)
- Element is custom: if false, the element is a native part of Kentico CMS; set this value to true for your custom UI elements
- Caption: caption of the UI element displayed in the final UI; can be entered either as plain text or as

a localizable string in the {\$mystringname\$} format

- Target URL: URL of the page which is the content of the UI element; you can enter both absolute (e.g. http://www.google.com) and relative (e.g. ~/CMSModules/Content/CMSDesk/Default.aspx) URLs
- Icon path: icon displayed next to element caption applicable only for menu items; you can enter either a full relative path begining with ~ (e.g. ~/App_Themes/Default/Images/CMSModules/list.png) or a short path begining under the Images folder of the current skin (e.g. CMSModules/list.png)



If you switch to the **Roles** tab, you can directly configure access to the selected UI element for particular roles.

- If you enable (1) a check-box, the UI element will be visible to members of the role.
- If you disable (
  ) a check-box, members of the role will not see the UI element (unless they are members of some other role which has it allowed).

💒 Kentico								Switch to CMS Desk
CMS Site Manager	Sites Administration	Settings	Deve	elopment	Licenses	Support		
CMS Site Manager  CMS Site Manager  CMS Site Manager  CMS Site Manager  Cultures  Countries  Cultures  Cultures  Cultures  Cultures  Cultures  Cultures  Cultures  Countrols  Cultures  Countrols  Cultures  Countrols  Cultures   Sites Administration	Settings ties mes User in Up Down	Devi	e Sites Ul element General Site: Corp Authentic CMS Bas CMS Corr CMS Des CMS Des CMS Des CMS Rea Everyone Forum Ad Gold Part Live ID us	Licenses	Support	Content 		
				Silver Pa	rtners			

This is just another way how to make the same configuration as described in <u>UI profile configuration</u>, i.e. settings made here are reflected in **Site Manager -> Administration -> UI personalization** (see the screenshot below) and vice-versa.



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7.10.7.7.2 Example: Adding a new main tab to CMS Desk

In this example, you will see how to add another tab next to the **Content**, **My desk**, **Tools** and **Administration** tabs in **CMS Desk**. This procedure can be used to add your custom UI elements to any other <u>personalizable part</u> of the CMS. You can also integrate your custom modules into the UI this way as described <u>here</u>.

1. We know from <u>this chapter</u> that the main tabs belong to the **CMS Desk** module. Go to **Site Manager** -> **Development** -> **Modules** and **Edit** (*l*) the **CMS Desk** module.



2. In the module's administration interface, switch to the **User interface** tab. You can see the four UI elements representing the tabs in the tree on the left. Select the root of the tree and click the **New element** (B) button.

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>CSS stylesheets</li> <li>CUltures</li> <li>Custom tables</li> <li>Document types</li> <li>E-mail templates</li> <li>Form controls</li> <li>Inline controls</li> <li>Modules</li> <li>Notifications</li> <li>Page layouts</li> <li>Page templates</li> <li>Relationship names</li> </ul>	Module properties  Modules  CMS Desk  General Permission names User interface Sites  Mew element  My desk  Content  My desk  Cools  Administration  Multiple

- 3. In the **New element** dialog, enter the following details:
- Display name: Google
- Code name: Google
- Element is custom: true
  - **Caption**: Go to Google
  - Target URL: <u>http://www.google.com</u>
  - Icon path: leave blank (icons can be used only for left menu items, not for tabs)

and click **OK**. The new UI element will be added to the tree as in the screenshot below.

	L Kentico			Switch to CMS Desk				
<b>~i</b>	CMS Site Manager	Sites Administration Settings	Development Licenses Support					
	evelopment 衛 Categories	Module properties						
	- 🎱 Countries	Modules + CMS Desk						
	<ul> <li>CSS stylesheets</li> <li>Cultures</li> </ul>	General Permission names User interface Sites						
-	👜 Custom tables	🔜 New element 🛛 😭 Up	Ul elements + Google					
	Document types E-mail templates Form controls	Delete element 🛛 🕹 Down	General Roles					
		CMS Desk Content My desk Tools Administration Google	The changes were saved.					
			Display name: Google					
	Page layouts		its Administration	Code name: Google				
	Page templates		Parent element: CMS Desk	•				
	Relationship names		Element is custom:					
	System tables							
	Time zones		Menu item settings					
	UI cultures	4	Capiton. Go to Google					
	Web part containers	•	Target ORL. nttp://www.google.com					
-	🛷 Web parts		Icon path:					
	Web templates		ОК					
	Widgets							
	Workflows							

4. Switch to the Roles tab and enable the UI element for the desired roles.

5. Now switch to **CMS Desk** logged in as a member of one of the roles enabled in the previous step. You will see our new **Go to Google** tab present next to the original four tabs as you can see below. By clicking it, you get the Google title page displayed within the CMS UI.





If you try to display a page with scroll bars within the CMS UI, you may not be able to view the whole page. This is because the current version of Kentico CMS does not allow **page scrolling** here due to the UI design.

To enable page scrolling within the CMS UI, it is recommended to create a new **.aspx** page containing a frameset with just one scrolling-enabled frame pointing to your page.

## 7.10.8 User registration

## 7.10.8.1 Available registration web parts

There are three different ways how you can let site visitors register to your site:

- Using the **Registration form** web part. Read more here.
- Using the Custom registration form web part. Read more here.
- Via Windows Live ID. Learn more here.

## 7.10.8.2 Registration form web part

The Registration form web part is a ready-made web part that can be used right out of the box. You can just place it on any page of your website without setting any web part properties. However, if you want to modify the default behavior of the web part, you can set a number of web part properties. You can find a detailed description of these properties in **Kentico CMS WebParts** reference guide.

First name:	
Last name:	
E-mail:	
Password:	
Confirm password:	
	Register

### 7.10.8.3 Creating a custom registration form

The **Custom registration form** web part can be used in situations when you want to use a different registration form than the default one provided by the **Registration form** web part. This is typically when you want users to provide different details or when you want to customize the form's layout.

In the following example, you will learn how to use a custom registration form on your site. You will create an **alternative form** and use it for registration via the **Custom registration form** web part. If you are not familiar with the **Alternative forms** concept, please refer to the <u>Alternative forms</u> chapter first.

1. Go to **Site Manager -> Development -> System tables** and choose to **Edit** (*P*) the **User** system table.

Kentico CMS Site Manager	Sites Admi	nistration Settings Developm	ent Licenses Support	<u>Switch to</u>
Development ම Categories Ocuntries	Syster	n tables		7.11
CSS stylesheets	Actions	Class display name 🔺	Class name	l'able name
Cultures		Ecommerce - Customer	ecommerce.customer	COM_Customer
Custom tables	1	Ecommerce - Order	ecommerce.order	COM_Order
E-mail templates		Ecommerce - Order item	ecommerce.orderitem	COM_OrderItem
Form controls	P	Ecommerce - Shopping cart	ecommerce.shoppingcart	COM_ShoppingCart
- Inline controls		Ecommerce - Shopping cart item	ecommerce.shoppingcartitem	COM_ShoppingCartSKU
Notifications	1	Ecommerce - SKU	ecommerce.sku	COM_SKU
Page layouts		Group	Community.Group	Community_Group
estemplates	P	Media file	media.file	Media_File
System tables		Newsletter - Subscriber	newsletter.subscriber	Newsletter_Subscriber
		User	cms.user	CMS_User
🐨 🕼 Time zones 🍓 VI cultures		User - Settings	cms.usersettings	CMS_UserSettings
Web nart containers				

2. Switch to the Alternative forms tab and click the **Create new form** link above the list.

Fields Qu	ueries Alternative forms	
🛃 <u>Create nev</u>	w form	
Actions	Display name 🔺	Code name
N 🗱	Display profile	DisplayProfile
1	Edit profile	EditProfile
N 🗙	Edit profile (Community)	EditProfileCommunity
1 🗙 🖉	Edit profile (MyDesk)	EditProfileMyDesk
N 🗙	Registration form	RegistrationForm

3. Fill in the following details:

- Display name My registration form
- Code name MyRegistrationForm
- Combine with user settings make checked; this ensures that all user's fields will be available

and click OK.

Fields Queries Alternati	ive forms
Alternative forms  • New alte	rnative form
Display name:	My registration form
Code name:	MyRegistrationForm
Combine with user settings:	
	ок

4. Your new form is now created and you are redirected to the editing interface of it. Switch to the **Fields** tab.

On this tab, you can see the attributes defined in the **User** system table. You can select an attribute from the list on the left. In the right part, you can modify its properties. We will want our registration form to contain the following fields:

- UserName
- FirstName
- Email
- UserPassword

Go through the attributes and check the **Display attribute in the editing form** check-box for those mentioned above, which makes them visible on our registration form. Uncheck the check-box for the rest. For the **UserPassword** attribute, also change the value of the **Field type** drop-down list to **Password with confirmation**.

General Fields Layout

UserPassword PreferredCultureCode	🗹 Display attribute in the e	diting form	^
PreferredUICultureCode UserEnabled	Field		
UserIsEditor UserIsGlobalAdministrator	Default visibility:	Display to none 🔹	
UserIsExternal	Visibility control:	Visibility (drop down list) -	
UserCreated LastLogon	Allow user to change field visibility:		
UserStartingAliasPath UserGUID UserLastModified	Field caption:	UserPassword	E
UserLastLogonInfo UserIsHidden UserVisibility	Field type:	Password with confirmation 🔹	
UserVisibility UserIsDomain UserHasAllowedCultures testfield UserSettingsID UserNickName UserPicture UserSignature	Field description:	•	
- Ken			-

5. You can also switch to the **Layout** tab and define the registration form's layout using the built-in WYSIWYG editor.

To do it, check the **Use custom layout** check box and click the **Generate table layout** button. A default layout will appear in the editor. Try playing around a bit with the layout or just create something similar to what you see in the screenshot below. Click **Save** when you are finished.

General Fields Layout	
Save	
✓ Use custom form layout       Generate table layout       Image: Source       Image: Source       Image: Source	Available fields:
B       I       U       ABC       ×2       x ² 1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       1000       10000       10000       10000       100	User/D User/Name FirstName MiddleName LastName FullName Fmail
First name: \$\$input:FirstName\$\$ \$\$validation:FirstName\$\$         User name: \$\$input:UserName\$\$ \$\$validation:UserName\$\$         E-mail address: \$\$input:Email\$\$ \$\$validation:Email\$\$         Password : \$\$input:UserPassword\$\$ \$\$validation:UserPassword\$\$	UserPassword PreferredCultureCode PreferredUlCultureCod UserEnabled UserIsEditor <del>•</del>
E	Insert label Insert input Insert validation label
	Insert submit button Insert visibility control

6. Now switch to **CMS Desk**. Choose or create a page where you want to add the registration form and select it in the content tree. Switch to the **Design** tab and add (+) the **Membership -> Custom registration form** web part to the page. Set the following property of the web part:

• Alternative form - cms.user.MyRegistrationForm

7. If you switch to the live site now and go to your page with the Custom registration form web part, you should see the custom registration form that you created. You can now try to register to your website using the form and verify that the user has been created in **Site Manager -> Administration -> Users**.

Home	MyPage	Services	Products	Ν
First name				
i list name	s.			
Name				
User name	90			
User1				
E-mail add	Iress:			
user1@lo	calhost.local			
0				
Password	:			
	••			
Register				
register				

### 7.10.8.4 Registration approval and double opt-in

By default, users can sign-in to the site immediately after successful registration. However, the two options highlighted in the following screenshot can be enabled in **Site Manager -> Settings -> Membership**. By enabling these options, you can include additional steps in the registration procedure.

💒 Kentico		Switch to CMS Desk User: Global Admin
CMS Site Manager Sites A	Administration Settings Development Licenses	Support
Site:	2 Membership	
(global)	<ul> <li>Membership</li> </ul>	
	Save Beset these settings to default	
Settings	III and of the contract of the	
🕘 Web site		
划 Content management	These settings are global, they can be overridden by t	the local site settings. Please select the site to see or change the site settings.
- 📊 Files		
Membership	Administrator's e-mail 📀	admin@mydomainXY.com
🖓 Security	Monitor online users	
URLs and SEO		
Output filter	Store online users in database 🛛 📀	
System	Deny login interval	10
E-mails		
- U Avatars	Update online users (minutes)	1
👦 Bad words	Reserved user names (2)	admin:root;administrator;sysadmin;sa
Blogs		
Booking system	Registration requires e-mail confirmation	
20 Community	Registration requires administrator's approval 📀	
Content staging	Delete non-activated user after (days)	5
	Delete non-activated user alter (days)	5
Media libraries	Shared user accounts 📀	
Message Doards	Require unique user e-mails	
Mob applytics		
Windows LiveID	Export these settings	
E-commerce	<u>Espartaneou counte</u>	
Payment dateway - Authorize NET		
Payment gateway - PayPal		
- r dymene gateway - PayPar		

# Registration requires e-mail confirmation

If checked, newly registered users will receive a confirmation e-mail to the e-mail address specified during registration. This e-mail contains a confirmation link that has to be clicked in order to activate the account. The e-mail is based on the **Membership - Registration confirmation** e-mail template.

C. 50 -	₹	Confirm your registrat	ion - Message (HTML)				- 0 <b>X</b>
Message Ad	dd-Ins						۲
Reply Reply Forward to All Respond	Delete Move to Create Oth Folder * Rule Action Actions	er Is * Block Not Junk Sender Junk E-mail	Categorize Follow Mark Up V Unre Options	A Find A Find A Related → ad A Select → Find	Send to OneNote OneNote		
From: no-reply@my To: Pavel Knotek Cc: Subject: Confirm you	/domainXY.com : ur registration					Sent:	st 9.12.2009 12:41
Thank you for regist <u>http://localhost/Ken</u> You can find your c Usemame: <u>pavelk@</u> Password: secretpas	ering at our site. Please cli <u>ticoCMS/CMSPages/User</u> redentials below: <u>kentico.com</u> sword	ck the link below to com	plete your registration d=239dbe14-9c86-44	ı: 47 <u>f-8243-d1b71</u> ;	c74 <u>3c01</u>		

After clicking the link, the user will be redirected to the page specified in the **E-mail confirmation page** property of the web part used for registration. This page must contain the **Registration e-mail confirmation** web part to work correctly.

By default, the ~/CMSPages/Dialogs/UserRegistration.aspx page is used, which displays the following message:

Your user account is now active. You can sign in using your user name and password. <u>Click here to</u> <u>continue</u>.

The link at the end of the message will redirect the user to the title page of the website. The user can then log in using the registration details received in the e-mail.

## **Registration requires administrator's approval**

If this option is enabled, users will not be able to sign-in immediately after registration. Their registration will have to be approved by the site administrator. At this point, users will receive an e-mail based on the **Membership - Registration waiting for approval** e-mail template. You can see the default version of the e-mail in the screenshot below.



If the option is enabled, the **Waiting for approval** tab will be displayed in **Site Manager** -> **Administration** -> **Users**. On this tab, site administrators can **Approve** ( $\checkmark$ ) or **Reject** ( $\oslash$ ) a user's registration.

Kentico CMS Site Manager	Sites	ministrati	ion	Settings	Develo	opment	Lice	nses	Suppo	rt				<u>Swit</u>	ch to C	MS De	<u>sk</u> U	ser: G	lobal A	dminis	trator	v5.0.36	29	Sign o	ut
Administration     Administration     Bad words     Bad ges     Banned IPs	Users W.	aiting for	r approva approv	al Mass e	-mail	On-line	users	in dica	30000																•
<ul> <li>E-mail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> </ul>	(all) A	В	С	DE	F	G	Н	I	J	к	L	м	N Searct	0	р	Q	R	S	т	U	v	w	x	Y	z
2 Roles C Scheduled tasks Smart search System	<ul> <li><u>Display ad</u></li> <li>Approve</li> </ul>	vanced all sele	<u>filter</u> ected us	sers	Rejec	ct all sel	lected ı	isers																	
📲 UI personalization 🔒 Users	Actions			User nam	ie •	om		Full na	ime Knotek		Emai	l Ik@ker	atico cor	m		Nicknar	ne	Ci	reated	0 12:41	-03 PM		E	inabled	
🦓 Web farm				paverk@k	onaco.c	.0111		i averr	UNDER		pave	ingener	1000.001					14	2131200	0 12.41	.05 P M	Item	s per p	age: 25	

After the administrator's approval, users receive another e-mail, confirming that their account has been approved and can be used. The e-mail is based on the **Membership - Registration approved** e-mail template. You can see the default appearance of the e-mail in the screenshot below.

C. 904 * ;	Ŧ	Registration approve	d - Message (HTML)			
Message Add-Ins						۷
Reply Reply Forward to All Respond	te Move to Create Other Folder v Rule Actions v	Block Not Junk Sender Junk E-mail	Categorize Follow M v Up v Ut	Ark as nread	Send to OneNote OneNote	
From: no-reply@mydomair To: Pavel Knotek Cc: Subject: Registration appro	nXY.com				2	ient: st 9.12.2009 13:40
Your registration has been <u>Click here to navigate to</u>	n approved by administra <u>the web site</u>	ator. Now you can sig	n in using your use	mame and passwor	d.	

# **Enabling both options**

In case that you enable both of the options mentioned above, the e-mail with the confirmation link will be sent first. After the user's confirmation, registration will have to be approved by the administrator.

#### Please note

If you have one or both of the options enabled, it is important to properly set the

**Redirect to URL** property of the web part used for registration. This means that users should not be redirected to any page displaying information about their user account (like the **Members -> Profile** page on the sample Community Starter site), because the account is not active yet (it is waiting for e-mail activation or approval). Such a page would display an error message, which might be misleading for the users.

# Third-party authentication issues

Using double opt-in or registration approval in combination with <u>Third-party</u> <u>authentication services</u> may cause certain problems for first-time users. In these cases, new users are by default created without an e-mail address when they log in for the first time. This means that they cannot activate their account via e-mail confirmation or receive notifications informing that their account must be approved by an administrator.

These issues can be avoided by creating a **Required user data page** where users must enter an e-mail address for their account, as described in the chapter linked above.

## 7.10.8.5 Shared user accounts

User accounts can be shared among all sites running on one Kentico CMS installation. This means that if a user creates an account on one site, they can automatically log-on to the other sites running on the same installation using the same credentials.

This behaviour can be switched on or off in **Site Manager -> Settings -> Membership**, using the **Shared user accounts** check-box.

- If the check-box is enabled, user accounts created on one site will be shared among all the sites running on the installation.
- If the check-box is disabled, new accounts will be assigned only to the current site and not the others.


However, registration web parts have the **Assign to sites** property. Using this property, you may determine which sites the user accounts created via the web part will be assigned to.

🙋 CMS Desk - Web Pa	rt properties Webpage Dialog					×
材 Web part pr	operties (Registration form)					Documentation
General Layout	Code					
Default	Display to roles:	•		Add roles	Clear	^
Visibility						
Registration form settings	Registration form settings					
Extended settings	Accian year to raise:			Add rolog	Cloar	
Label text settings	Assign user to roles.	•		Aduitoles	Cleal	E
Design	Assign to sites:	•		Select	Clear	
Conversion tracking						
HTML Envelope	Redirect to URL:	•			]	
AJAX		_				
Time zones	Display captcha image:					
Partial caching	Starting alias path:	•		Select		
	Extended settings					
	Enable user after registration:	•				
	Send welcome e-mail:	• 🔽				
Refresh content			,	ок	Cancel	Apply

## 7.10.9 Badges

#### 7.10.9.1 Badges

Users can be labeled with badges. These are images with a short text, expressing a user's activity level, importance or role in the context of the website. They are displayed in forum posts, on user public profiles or in your own custom controls.

There are two types of badges:

- Automatic badges these are assigned to users based on the number of gained activity points
- Non-automatic badges these are assigned to users manually by site administrators and are assigned permanently, regardless of the number of gained activity points

In the screenshot below, you can see one of the pre-defined badges in a forum post.



## 7.10.9.2 Defining badges

Badges can be defined in **Site Manager -> Administration -> Badges**. On this page, you can see a list of currently defined badges. You can **Edit** ( $\checkmark$ ) or **Delete** (**X**) badges in the list or define a new badge by clicking the  $\frac{1}{2}$  **New badge** link at the top part of the page.

Kentico CMS Site Manager	Sites	dministration Settings	Developmen	nt Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> </ul>	Line User	badges ≞			
	Actions	Name	Top limit 🕶	Is automatic	Image preview
	2 🗙	Advanced member	100000	Yes	S S S
Permissions	1 🗙	Valued member	30	Yes	5 5 5
Recycle Din	2 🗙	Member	10	Yes	000
Scheduled tasks	2 🗙	Site admin	0	No	3 3 3
<ul> <li>Smart search</li> <li>System</li> <li>UI personalization</li> <li>Users</li> <li>Web farm</li> </ul>					

When creating a new badge, the following properties can be defined:

- Display name name of the badge displayed in the administration interface and on the site
- Code name name of the badge used in code
- Image URL URL of the badge's image
- **Is automatic** if checked, the badge will be assigned to users automatically based on the number of gained activity points; if unchecked, the badge can be assigned to users by site administrator and will remain assigned permanently, regardless of the number of gained activity points
- **Top limit** number of activity points required for the user to get the badge; applies only for automatic badges

#### 7.10.9.3 Assigning badges to users

Site administrators can assign badges to users in **Site Manager -> Administration -> Users -> Edit ( /**) user -> Settings. It can be done by the **Badge** drop-down list.

This is typically used to assign users with non-automatic badges. However, automatic badges can be assigned to users this way too.

Kentico CMS Site Manager	Sites	dministration	Settings	Development	Licenses	Support		Sw	itch to CMS Desk
-·· Administration	🜡 Users	5							
👦 Bad words	Users W	Vaiting for appro	oval Mass	s e-mail On-line	users				
- 🔏 Badges 	<u>Users</u> ► Da	avid							
E-mail queue	General	Password	Settings	Sites Roles	Departments	Notifications	Categories	Friends	Subscriptions
- Event log - Permissions - Recycle bin - S Roles - S Scheduled tasks - S System - S System - U personalization - U personalization	Description URL referre Campaign: Messaging	i: er: notification e-	-mail:			· · · · · · · · · · · · · · · · · · ·	]		
🔤 🧤 Web farm	Time zone:		(non	e)		•			
	Badge:		Adva	anced member (	Automatic)	•	J		
	User activity Live ID:	y points:	20				]		

### 7.10.9.4 Activity points

Users can gain activity points for their activity on the site. Based on the number of gained activity points, user can be assigned with automatic badges. For this feature to be functional, you have make the following settings in **Site Manager -> Settings -> Community**:

- Enable user activity points enables the activity points feature
- Activity points for blog posts number of activity points that users receive for adding a blog post
- Activity points for blog comment post number of activity points that users receive for adding a blog post comment
- Activity points for forum post number of activity points that users receive for adding a forum post
- Activity points for message board post number of activity points that users receive for adding a message board post



#### 7.10.9.5 Available form controls

The following form controls can be used in your custom controls to display users' badges:

- Viewer Badge image (ViewBadgeImage) used for displaying image of a badge
- Viewer Badge text (ViewBadgeText) used for displaying 'Display name' of the badge

## 7.10.10 Custom fields visibility

#### 7.10.10.1 How it works

The visibility controls functionality is designed to enable registered users to decide which fields of their public profile will be visible to other users. You can find an example of how this works on the sample **Community site**.

1. Run the **Community site** and sign out of the administration interface. Log on to the site using the **Sign in** form on the right. Enter *David* with blank password and click **Log on**.

2. Once logged in, **Shortcuts** menu will be displayed where the Sign in form previously was. Click the **Edit my profile** link, you will be redirected to the user's profile editing page.

3. You can see a drop down list next to the **E-mail** field, as in the screenshot below. Using this control, users can define to whom will the e-mail address be displayed. The following four options are available:

- **Display to none** the field will not be displayed to anyone
- Display to all the field will be displayed to everyone
- Display to authenticated the field will be displayed only to authenticated users
- Display to friends the field will be displayed only to the user's friends

Choose Display to authenticated and click OK.

Personal settings	Change password Notifications
Username:	David
Full name:	David Silver
Email:	david.silver@localhost.local
	Display to authenticated
Nickname:	David
	* * D-a-v-i-d * *
Signature:	
Messaging notificati	on e-mail:
Time zone:	(none)
Avatar:	Upload:
	Select nre-defined avatar
Gender:	
Date of birth:	5/6/1987 PNow
	OK

4. You have just configured the user's profile so that only authenticated users can see their e-mail address. Let's verify that it really works. Sign out and visit David's profile as an unauthenticated site visitor. From the site's main menu, select Members and click David's icon in the list below. You should see his profile, but the e-mail address is not present.

### Member profile



5. Now sign in the same way as you did in step one, but use *Mia* with blank password instead. This signs you in as another registered member of the site. And these are the ones who should see the e-

mail address, aren't they? So once signed in, view David's profile again. And ... Bingo!!! ... the e-mail address is visible.

#### Member profile



### 7.10.10.2 Enabling visibility controls

The visibility selection drop-down list can be added to any field of the user's profile, not only the e-mail field as shown in the example in the <u>How it works</u> topic. This can be changed in **Site Manager -> Development -> System tables**. Choose to **Edit** ( $\checkmark$ ) the **User (CMS_User)** system table and switch to the **Alternative forms** tab.

If you are not familiar with the **Alternative forms** concept, please read the <u>Module Alternative forms</u> chapter first.

The **CMS_User** system table is the database table where information about registered users is stored. Each of the four alternative forms that you see in the list is used in a specific situation when the system accesses the table:

- Registration form when registering a new user using the Custom registration form web part
- Display profile when displaying a user's public profile using the User public profile web part
- Edit profile when editing a user's profile using the My account web part
- Edit profile (MyDesk) when editing the user profile in CMS Desk -> My Desk -> My profile

The **Community_Group** system table is the database table where information about groups is stored. The table has the following alternative form:

• Display profile - displaying group's public profile using Group public profile web part

The visibility field can be set in each of these forms.



Let's presume that we want the **Full name** to be optionally hidden in users' public profiles, based on the users' decisions made in their profile editing section.

1. Choose to Edit () the Edit profile (Community) alternative form, which is the form that is used by the My profile web part on the Community site. Switch to the Fields tab and select FullName from the list on the left. Select Visibility (radio buttons - horizontal) from the Visibility control drop-down. Check the Allow user to change field visibility check-box and click OK.



2. Switch to the **Layout** tab. We will need to create another line in the table and add the visibility control into it.

Place the cursor into the FullName line (where the \$\$label:FullName\$\$ value is). Right-click and choose **Row -> Insert Row After** from the context menu. Into the first column of the new row, enter *Display my full name to:*.

Now we will add the visibility control itself. Place the cursor into the second column, select **FullName** from the **Available fields** list and click the **Insert visibility control** button. The result should look as in the screenshot below.

When you are finished, click Save.



3. Now sign out of the administration interface and sign in to the website as *David* with blank password. Click the **Edit** my profile link in the right **Shortcuts** menu. You should see a drop-down list next to the full name field, so that now the users can determine the visibility of the Full name field.

Personal settings Cha	nge password Notifications
Username:	David
Full name:	David Silver
Display my full name	to: 💿 Nobody 🖲 (all) 💿 Site members 💿 Friends
Email:	david.silver@localhost.local
Display my e-mail to:	🔘 Nobody 🔘 (all) 💿 Site members 🔘 Friends
Nickname:	David
	* * D-a-v-i-d * *
Signature:	
Maaaaina aalifaalian a m	
Messaging notification e-m	
Time zone:	(none)
Avatar:	
	Upload: Browse
	Select pre-defined avatar
Gender:	Male
Date of birth:	5/6/1987
	ОК

#### 7.10.10.3 Use in custom form layouts

If you want to define a custom form layout and use the visibility drop-down list for some field, you have to do the following two things:

- the **Allow user to change visibility** check-box must be enabled for each field that you want to use the drop-down list for. If it is not enabled, the drop-down list will not be functional.
- add the drop-down list manually to the form, using the **Insert visibility control** button:

1. Go to **Site Manager -> Development -> System tables**. Choose to **Edit** ( $\checkmark$ ) the **User** system table and switch to the **Alternative forms** tab. Choose to **Edit** ( $\checkmark$ ) the **Edit profile** alternative form and switch to the **Layout** tab. Check the **Use custom form layout** check-box.

2. Click the **Generate form layout** button. A default form layout will be generated and you can make modifications to it.

3. Enter the visibility controls by placing the cursor to the desired location, selecting the appropriate field and clicking the **Insert visibility control** button. Click **Save** when you are finished.



#### 7.10.10.4 Configuring the web parts

If you want to enable visibility controls in these web parts, you have to add the controls to the appropriate alternative forms and set the following properties of the web parts:

### User public profile

- Form name specify the full name of the desired alternative form (*cms.user.DisplayProfile* by default)
- Apply user's visibility settings check this to enable the visibility controls
- Use visibility settings from form if left blank, the form entered in Form name will be used to get visibility settings; if filled, the form specified here will be used (*cms.user.EditProfile* by default);

#### **Custom registration form**

• Alternative form - specify the full name of the desired alternative form (*cms.user.RegistrationForm* by default)

#### My account

- Form name specify the full name of the desired alternative form (cms.user.EditProfile by default)
- Allow user to edit field visibility check to enable the visibility controls

# 7.10.11 Authentication

### 7.10.11.1 Authentication overview

The system supports both forms and Windows authentication. The **forms authentication** stores user names and passwords in the database and requires users to log on. The **Windows authentication** gets user identity from the network credentials and creates the user automatically in the database, including the user's roles (if they exist in the CMS database).



## **Configuring forms authentication**

The forms authentication is configured by default. It uses the standard ASP.NET forms authentication and its settings. You can find the settings in the web.config file:

```
<system.web>

<authentication mode="Forms">

<forms loginUrl="CMSPages/logon.aspx" defaultUrl="Default.aspx" name=".

ASPXFORMSAUTH" timeout="60000" slidingExpiration="true" />

</authentication>

<system.web>
```

## **Password Encryption**

You can also configure the **password encryption** in **Site Manager -> Settings -> Security**, in the **Password format** key. By default, the passwords are stored in plain text. If you want to use SHA1 hash format, please set the value to **SHA1**. Then, you need to set all password again so that they are stored in the new format - thus, it's recommended that you make the change after the installation, before you create user accounts.

## Membership provider and ASP.NET 2.0 Membership support

Kentico CMS contains an ASP.NET 2.0 Membership provider for the Kentico CMS user database. It means you can use ASP.NET 2.0 Membership API and controls, such as Login control. However, Kentico CMS uses its own user information database instead of the ASP.NET 2.0 Membership tables.



If you happen to lost your administrator's password, you can still recover from this:

- If you're using plain text passwords, you can change the password directly in the CMS_User table.
- If you're using hashed passwords, you need to set the password in the CMS_User table to an empty string. Then, you can sign in to **Site Manager** with an empty password and change the password.

### **Configuring Windows authentication**

Please see the chapter Configuring Windows authentication.

### **Configuring custom authentication**

If you want to use user and role information from an external source (such as a custom database), you need to configure the system as described in chapter <u>Configuring custom authentication</u>.

#### 7.10.11.2 Windows authentication (Active Directory)

7.10.11.2.1 Configuring Windows authentication (Active Directory)

Kentico CMS supports Windows integrated authentication. It means that when a user signs in to a Windows domain, Kentico CMS automatically recognizes their identity without requiring a user name and password.

Moreover, Kentico CMS is able to automatically import the authenticated users from domain (Active Directory) into the user database, including their roles.

## Configuration

1. Before you configure the application for Windows authentication, you need to create a user account that will be the same as your current domain name and assign this user account with administrator permissions. This will allow you to access all features as an administrator once you sign in using Windows authentication.

2. Sign in as an Administrator to the **Site Manager** and go to **Administration -> Users**. Create a new user with following values:

- User name: your domain user name in format domain-username, example: office-johns
- Full name: your full name

Click OK.

3. On the General tab, set the following values:

- Is global administrator: yes
- Is external user: yes
- Is domain user: yes

Click OK.

4. Now you can switch the application to the Windows authentication mode. Edit the web.config file of the web project and change the following line:

<authentication mode="Forms">

to:

<authentication mode="Windows">

5. <u>Optional</u>: when using Windows authentication, you may also want to have the following settings in your *web.config* file so that the windows authentication is required for access to the live site:

```
<location path="">
<system.web>
<authorization>
<deny users="?"/>
</authorization>
</system.web>
</location>
```

6. Save the modified web.config file. Close all browsers with Kentico CMS and open the website in a new browser. Try to go to **<web project>\cmssitemanager** to make sure you are recognized as a global administrator.

With this configuration, when an authenticated user comes to the site, their user account is created in Kentico CMS database automatically and their domain groups are imported as roles into Kentico CMS database. It means that the users and roles are not imported on some regular basis, but they are imported when the user comes to Kentico CMS website.

If you are experiencing the 401 error on Windows 7 or Windows Server 2007, learn the solution to the problem <u>here</u>.

Sign out button missing with Windows authentication

When Windows authentication is enabled, the **Sign out** button in the top right corner of **CMS Desk** or **Site Manager** is not displayed. The same applies to the live site, where the sign out link is not displayed in all web parts that can be used to sign out.

## Forbidden characters replacement on Active Directory import

When importing users and roles, forbidden characters in their names are replaced by the character defined in **Site Manager -> Settings -> URLs -> Forbidden characters replacement**.

Dash "-" is the default value and therefore it is used in this example (*domain-username* instead of *domain\username*). If you are using a different character, please change the entered user name accordingly.

You can override this setting by using the following keys in the *AppSettings* section of your *web.config* file. In both cases, the value must be exactly one character which will be used as the replacement character:

- <add key="CMSForbiddenUserNameCharactersReplacement" value="-" />
- <add key="CMSForbiddenRoleNameCharactersReplacement" value="-" />

If you want to achieve the same functionality as in **older versions** of Kentico CMS (**office\username**), forbidden characters replacement can be turned off completely using the following two keys. This may cause problems when using wildcard URLs with user names in the wildcard part and is therefore not recommended.

- <add key="CMSEnsureSafeUserNames" value="false" />
- <add key="CMSEnsureSafeRoleNames" value="false" />

7.10.11.2.2 Windows authentification on Windows 7/2008 R2/Vista (IIS7 or higher)

If you are experiencing the **401 error** with Windows authentication on **Windows 7**, **Windows Server 2008 R2** or **Windows Vista**, you have to **set up your IIS** the following way:

1. Go to Start -> Control Panel -> Administrative Tools and start the Internet Information Services (IIS) Manager.

All Contro > Adr	inistrative Tools - 47 Search Administrative Tools	٩
Organize 🔻 Burn	8== 👻	
☆ Favorites	A Name	Date r 📤
🧮 Desktop		14.7.2
🐌 Downloads	🛃 Computer Management	14.7.2
🕮 Recent Places	Data Sources (ODBC)	14.7.2
	🚺 Event Viewer	14.7.2
📜 Libraries	Internet Information Services (IIS) 6.0 Manager	2.11.2
Documents	😹 Internet Information Services (IIS) Manager	2.11.2
👌 Music	🔊 iSCSI Initiator	14.7.2
Pictures	👼 Local Security Policy	23.10.
Videos	Microsoft .NET Framework 2.0 Configuration	27.10.
	Performance Monitor	14.7.2
🖳 Computer	📻 Print Management	23.10.
🚢 Local Disk (C:)	🗟 Services	14.7.2
	🛃 System Configuration	14.7.2
📬 Network	✓ ✓ Ⅲ	
17 items		

2. Locate and select your site in IIS tree and click on the Authentication icon.



3. Enable Windows Authentication by clicking on the Enable link in the Actions menu.





#### Windows Authentication missing in the list

The default installation of Windows 7, Windows 2008 R8 and Windows Vista does not contain Windows Authentication by default. If it is missing in the list is step 3 above, you need to install it.

To do it, go to **Control Panel -> Programs and Features -> Turn windows features on or off**. Scroll down to *IIS*, expand all of the nodes to find the *Security* node and under it, check the Windows Authentication check-box. Click **OK** to save the settings.

#### 7.10.11.2.3 Securing a web site section using Windows authentication

It is also possible to secure only a certain section of your website using Windows authentication. In the following example, you will learn how to set the **Products** section of our sample **Corporate site** to be secured by the Windows authentication:

1. Locate your web project on the disk (typically *c:\Inetpub\wwwroot\<web project>*). Create a new directory in your web project's folder and give it the same name as the filename in the document's URL. In this case, the filename is *Products.aspx*, so we will create a folder named **Products**.

- 🖥 Internet Information Services Action View Help File (+ -> 🗈 🖪 🗙 🖀 🗟 😫 🖪 💂 🛓 🚞 CMSFormControls ^ Name Path Status 🛓 🧰 CMSHelp There are no items to show in this view. 🗄 🦲 CMSImportFiles 🗄 🦲 CMSInlineControls 🖻 🚞 CMSInstalL Explore 🗄 🚞 CMSMess 🗄 🚞 CMSModu Open 🗄 🧰 CMSPage Browse 🗄 🦲 CMSReso New ۲ 🗄 🦲 CMSScrip All Tasks ۲ 🗄 📄 CMSSiteM 🗄 🧰 CMSSiteL ۲ View 🗄 🚞 CMSTemp 🗄 🧰 CMSWebl Delete - Products Rename 🗄 🧰 aspnet_client Refresh 🗄 🧰 KenticoCMS_ Export List... 🗄 🏷 Default SMTP Virtual Properties < > Opens the properties dialog box fo Help
- 2. Open the IIS and locate the directory in the tree. Right click it and choose Properties.

3. Switch to the **Directory security** tab and click the **Edit** button placed in the **Anonymous access and authentication control** section.

Products Prope	rties 🔹 🤶	K
Directory Docum	nents Directory Security HTTP Headers Custom Errors ASP.NET	
Anonymous ac	inable anonymous access and edit the suthentication methods for this resource.	
- IP address and	d domain name restrictions	
G G	irant or deny access to this resource using	

4. Uncheck the **Anonymous access** check-box and click **OK**. Check the same setting for the root of the web and make sure that Anonymous access is allowed for it.

Authenticati	on Methods	×						
honyma	ous access	h						
No user nam	e/password required to access this resource.							
Account use	ed for anonymous access:							
User name:	IUSR_PETRPENEW Browse							
Password:	•••••							
	Allow IIS to control password							
Authenticate	d access							
For the follow	For the following authentication methods, user name and password							
are required - an	onymous access is disabled, or							
-ac	<ul> <li>access is restricted using NTFS access control lists</li> </ul>							
📃 Digest au	Digest authentication for Windows domain servers							
📃 Basic au	Basic authentication (password is sent in clear text)							
Default do	main: Select							
Realm:	Select							
🗹 Integrate	d Windows authentication							
	OK Cancel Help							

5. Open the web.config file of your web project and change value of the **mode** attribute of the **authentication** tag to **Windows**. Also find the section marked with **Windows authentication BEGIN** and change the path parameter of the location tag to the name of the created directory, which will be **Products** in our case:

```
...
<authentication mode="Windows">
...
<!--- Windows authentication BEGIN -->
<location path="Products">
</system.web>
</system.web>
</system.web>
</system.web>
</location>
</system.web>
</location>
</system.web>
</system.w
```

6. The authentication is now configured. If you try to access any of the menu items placed under the **Products** section, **Windows authentication** will be required. However, if you also want the authentication to be required for the **Products** main page (which is obviously not located under itself, hence requires no authentication now), you will have to use the following workaround.

Create a new page under the Products section, give it the same content as the main page has got and redirect the Products link in the menu to this new page. Because the new page is located under the Products section, windows authentication will be required for it.

Kentico		Switch to Site Manager Site: Corporate Site 💌 User: Globa
CMS Desk Content My des	k Tools Administra	ation
📄 📄 📄 Сору 👚 Ир		
New Delete 🚔 Move 🛛 🐺 Down	Edit Preview	w Live site List Afrikaans English Search
Content management	Viev	ew mode Language Other
🖃 🌍 Corporate Site	Page Design I	Form Properties
Home	General	
	URLs	Save Save
	Template	
Main	Metadata	Basic properties
PDAs	Categories	Menu caption:
🗄 📄 Laptops	Menu	Show in navigation: 🔽
🗼 📄 News	Workflow	Show in sitemap:
🔁 🃄 Partners	Versions	
Company	Related docs	Menu actions
🕣 🔚 Blogs	Linked docs	Standard behavior
🖃 📄 Events	Security	Inactive menu item
	Attachments	Javascript command:
🖼 🔚 Wiki	Languages	Example: alert('hello');return false;
		URI redirection: ~/Products/Main aspy
🗉 🔄 Special pages		
🖃 📹 Images		Example. http://www.nlydomainxy.com/or-vproducts.aspx

#### 7.10.11.2.4 Active Directory Import Utility



## Introduction

Kentico CMS Active Directory Import Utility is a standalone Windows application which allows importing of users and groups (roles) from Active Directory (AD) into Kentico CMS and assigning users to roles depending on AD settings. The application also provides the possibility of updating already imported users and roles so that their properties are the same as in the current AD.

### What it can do?

- Import users from AD into Kentico CMS.
- Import roles (groups) from AD into Kentico CMS.
- Assign users to appropriate roles based on AD settings.
- Update already imported users and roles according to current AD.

## What it can't do?

- Import from multiple ADs or domains at once.
- Import the tree structure of roles, since Kentico CMS does not support hierarchical roles.
- Since there is no hierarchy in the CMS roles, import cannot keep the tree structure of AD groups.

## Terminology

- Import profile XML file with import settings; this file can be created using the wizard mode, or even written manually; it is necessary to have an import profile prepared when you want to use the console mode of the tool
- SAM Account Name logon name used to support clients and servers on older versions of the

operating system, such as Windows NT 4.0, Windows 95, Windows 98, and LAN Manager.

- UPN (User Principal Name) Internet-style login name for a user. It is based on the RFC 822 standard. The UPN is shorter than the distinguished name and easier to remember. By convention, the name should map to the user's e-mail name. The value set for this attribute is equal to the length of the user's ID and the domain name. (Sample UPN: username@subdomain.domain.tld)
- Role or Group these two terms have almost identical meaning, while ,group' comes from AD terminology and ,role' is used in Kentico CMS

## Requirements

- Kentico CMS 5.0 or higher
- Ultimate edition or any edition with the Advanced package

## Launching the utility

There are two ways how the utility can be launched. You will typically use the AD import wizard, which is described in the <u>Using the wizard</u> chapter. If you want to schedule AD import to be performed on a regular basis, you may utilize the second option - launching AD import from the command line. This approach is described in the <u>AD import from command line</u> chapter.

#### 7.10.11.2.4.2 Using the wizard

The AD Import Utility wizard can be executed either from **Start menu -> All programs -> Kentico CMS** <version number> -> Kentico CMS Utilities, or by launching the ADImport.exe file located in <Kentico CMS installation folder>\ADImport (typically *c:\Program Files (x86)\KenticoCMS\5.5* \ADImport\).



The following text describes particular steps of the wizard:

## Step 1 – Import profile settings

In the first step, you need to choose if you want to create a new import profile or use an existing XML profile. If you select an existing profile, values will be pre-filled in the following steps based on the profile settings.

Step 1 - Import profile         Please choose if you want to create a new import profile or use an existing one.         © Create new import profile         © Use an existing import profile         Path:         Browse	¥ 5142
5.0.3643.15     Create new import profile     Use an existing import profile     Path:     Browse	5142
Create new import profile     Use an existing import profile     Path:     Browse	
Use an existing import profile     Path:     Browse	
Path: Browse	
Next > Cancel	

# Step 2 – Kentico CMS DB Setup

In the second step, specify the target database of the CMS where the users and roles will be imported:

- SQL Server name or IP address: name or IP address of the server where the target database is stored
- Database name: name of the target database
- Use integrated Windows authentication: choose this option if you want to log on to the server using Windows authentication
- Use SQL Server account: choose this option if you want to log on to the server using credetials filled in the fields below

It is a good idea to test the specified connection using the **Test connection** button before proceeding to the next step.

* Kentico CMS Active Directory	/ Import Tool - Step 2		l	- 0 <b>X</b>
Step 2 - Choose Kentico CM Please enter the databse connect	S database tion details.			*/*
				5.0.3643.15142
SQL Server name or IP address:	myserver			
Database name:	mydatabase			
Use integrated Windows authority	entication			
Ose SQL Server account				
User name:	admin			
Password:	•••••			
Connection to SQL Server wa	Test connection s successfully established.			
		< Back	Next >	Cancel

# Step 3 – Active directory connection

In the third step, specify the source AD's domain controller. You have two options:

- Use current user account: uses the domain where the current user belongs
- **Specify domain controller and logon credentials**: if you choose this option, you can enter the logon details manually into the fields below

Here again, it is recommended to test the specified connection using the **Test connection** button.

* Kentico CMS Active Directory Import	Tool - Step 3	
Step 3 - Choose Active Directory co Please enter the Active Directory controller	n <b>troller</b> details.	*/?*
		5.0.3643.15142
Use current domain controller and curre	nt user account	
Specify domain controller and logon cre	dentials	
Domain controller name or IP address:	server1.office.example.com	
User name:	office\james	
Password:		
	Test connection	
	< Back N	ext > Cancel

## Step 4 – Import settings

In this step, you can adjust some general settings of the import process:

- Import users/groups: determines which users or groups (roles) will be pre-selected in Step 6, you have the following options:
- All: all users or groups will be pre-selected
- **Only selected**: when using an existing import profile, selection stored in the profile will be used; otherwise, nothing will be pre-selected
- Only selected and new: same as above, while new users and groups will be selected as well
- Update user and role data: if enabled, properties of users and roles already imported from the AD will be updated in the CMS based on the current values in AD
- Update user membership in roles: if enabled, membership of users imported from the AD will be updated in the CMS based on the current membership settings in AD
- Delete users and roles that were deleted in the Active directory: if enabled, users who were previously imported from the Active Directory but were deleted on the source server since then will be deleted in the CMS
- Log import process to file: if enabled, you can specify a file where the import log will be stored
- Select sites: choose the sites to which the imported users and roles will be assigned

<u>Please note</u>: If you do not choose any site in this step, the rest of the wizard will leave out steps related to roles (groups) import. This happens because roles are site-related in Kentico CMS (i.e. each role must belong to some site).

🔆 Kentico CM	S Active Directory Import Tool - Step 4	
Step 4 - Impo Please adjust	ort settings the settings of the import process.	F 0.2642 15142
Import users:	All users O Only selected Update selected and import new users	5.0.5045.15142
Import groups:	All groups  Only selected  O Update selected and import new groups	
	☑ Update user and role data	
	Update user membership in roles	
	Delete users and roles that were deleted in the Active Directory	
	Log import process to file	
	Path: C:\Program Files (x86)\KenticoCMS\5.0\ Browse	
Select sites:	Import Site	
	Corporate Site	
	< Back Next >	Cancel

## Step 5 – Import properties

In this step, you are asked to define user name and role name format and to bind AD user properties to CMS user properties. The following options can be defined:

- User name format: choose one of the three possilbe formats:
- Domain\SAM (e.g. intranet\joe)
- SAM account name (e.g. joe)
- UPN (joe@intranet.mycompany.com)
- **Configure user as CMS editor**: if enabled, all imported users will have the ls editor option enabled (this option is located in Administration -> Users -> user edit -> General)
- Target/Source: you can choose which properties from AD (Source) will be mapped to particular properties of the CMS_User role
- Role display name format: choose one of the two possible formats:
  - Domain\SAM (intranet\DB Admins)
  - SAM (DB Admins)
- Role code name format: choose one of the following formats:
- Domain\SAM (intranet\DB Admins)
- SAM (DB Admins)
- Guid (16-byte number)
- Import description: indicates if role description should be imported from the AD

* Kentico CMS Active Directory Import T	Fool - Step 5	
Step 5 - Field mapping Please choose the user name and role name	e format and specify mapping of user fields.	5.0.3643.15142
Users		
User name format: UPN (joe@	Pintranet.mycompany.com) 🔻	
Configure user as CMS editor:		
Target	Source	<b>^</b>
LastName	Last name (sn)	<b>•</b>
LastName	Last name (sn)	-
LastName	Last name (sn)	-
MiddleName	Middle name (middleName)	-
MiddleName	Middle name (middleName)	
Roles		
Role display name format: Domain\SA	AM (intranet \DB admins) 🔹	
Role code name format: Guid (16-by	yte number) ▼	
Import description:		
	< Back Next >	Cancel

# Step 6 – Select users & groups to be imported

In the sixth step, you can select which roles and users will be imported. It will be possible to adjust the settings made here in the following two steps.

On the left, you can see all groups (roles) found on the source server. If you select a group, its members are displayed in the list on the right. You can define which users and roles will be imported using the appropriate check-boxes.

By right-clicking a group, you can display a context menu with the following actions:

- Select all: selects all child groups directly under the selected group
- Select all recursively: selects all child groups under the selected group until the last level
- **Deselect all**: selects all groups directly under the selected group

• Deselect all recursively: selects all group under the selected group until the last level

All users in a role or all roles can be selected or deselected in one click using the **Select all** and **Deselect all** buttons.

* Kentico CMS Active Directory	Import Tool - Step 6				
Step 6 - Select users & groups Please select users and groups to	s to be imported be imported into the Kentia	co CMS databa	ase.		**
Calact arruna to be imported:		Calact upon to	he imported:		5.0.3643.15142
Select groups to be imported:		Jenect Users to	b be imported:	CMS U	
		Import Disp	nay name		sername
		Admi Admi	nistrator		
Domain Computers					
Domain Controllers	=				
Exchange Enterprise Servers	; []				
Group Policy Creator Owners	C20				
	Select all				
	Select all recursiv	/ely			
	Deselect all				
	Deselect all recu	rsively			
	8				
Intranet Developers	-				
· · · · · · · · · · · · · · · · · · ·	•				
Select all Deselect all				Select all	Deselect all
		< Back	Ne	xt >	Cancel

# Step 7 – Adjust users to be imported

In this step, you can adjust the users to be imported. Users are selected based on settings made in the previous step, while you can adjust the selection using the check-boxes.

You can also filter the listed users by Display name and User name using the filter above the list.

Step 7 Please	Adjust users to be impo adjust selected users.	nted Display name/CMS User r	name:	acc		5.0.3643.1514
Import	Display name		CMS L	Jser name	•	 
	ASP.NET Machine Account					
<b>V</b>	Internet Guest Account					
-	Internet Guest Account					
<b>V</b>	Launch IIS Process Account					
<b>V</b>	Launch IIS Process Account					
			< Bad	k ]	Next >	Cancel

# Step 8 – Adjust groups to be imported

This step is similar to the previous one, while groups (roles) to be imported can be adjusted here using the check-boxes.

Listed groups can be filtered by Group name using the filter above the list.

Step 8 Please	Adjust groups to be imported     adjust selected groups.			*/**
	Group game / CMS Bal			5.0.3643.15142
	Group hame / Civis Hor	e name.		Filler
Import	Group name	CMS Role name	)	
	Account Manager	7bf337b4-2808-4	¥f7a-83aa-aa118b77¥873	
	Account Operators	32687d44-d871-	4a51-840e-f23002ad2b7	d
<b>V</b>	Accountant	a70db534-57ec-	4fbd-a9da-f77147c8557f	
<b>V</b>	Accounts Payable Manager	232e0b1a-0062-	4f2a-b890-255cfb3e71b8	5
<b>V</b>	Accounts Receivable Manager	9e93d4e0-3b69-	43b0-823e-d0d829700e	la
<b>V</b>	Administrators	53d9f83b-bc91-4	1449-b559-aad1257be47	6
	all	6f27d4e6-11aa-4	1793-9af9-a9fc807a5753	
	all-cz	ffaed012-4305-4	c2a-a9b0-d8f9e39e5971	
	all-us	26d6c1cd-9ac1-	4d35-838d-08e03996ff19	9
	Analysis & Design	d4a03154-d2f7-4	4d90-a4b4-e8b8637aac8	0
	Analytic	79be9d9f-288b-4	4878-b1cb-940fee2c3215	5
	Audit Pro Admino	-0-9h-7h f1-9	1122 0507 6504-56-4-6	<b>•</b>
		< Back	Next >	Cancel

# Step 9 – Assign to CMS roles

In the sixth step, you can select roles to which the imported users will be assigned. If you are importing to multiple sites, you first need to choose the site whose roles should be displayed using the **Site** drop-down.

Kentico CM	IS Active	Directory Import Tool - Step 9	
Step 9 - Ass Please select	<b>ign impo</b> Kentico C	rted users to CMS roles MS roles to which the imported users will be assigned.	*/**
Site:	Corporat	e Site   Role name:	5.0.3643.1514 Filter
Select roles:	Assign	Role	
		CMS Basic users	
		CMS Community Administrators	
	<b>V</b>	CMS Designers	
	<b>V</b>	CMS Desk Administrators	
	<b>V</b>	CMS Editors	
		CMS Readers	
		Gold Partners	
		Live ID users	
		Silver Partners	
		Rack Novi >	Cancel
		< Back IVEXL >	

# Step 10 - Finalize

Now you have your import profile configured. You can execute it immediately, save it into a file or perform both of these actions, depending on which of the **Import now** and **Save import profile to file** check-boxes is enabled.

¥ Kentico	o CMS Active Directory Import Tool - Step 10	
Step 10 Please c	<ul> <li>Finalize</li> <li>hoose if you want to import the data now or/and save the import profile.</li> </ul>	**
	DOW	5.0.3643.15142
Save i	mport profile to file	
Path:	C:\temp\importProfile.xml Browse	
	< Back Next >	Cancel

## Step 11 – Import log

The last step displays an import log, showing the progress of the import process. When the import finishes, you can close the wizard using the **Finish** button.

* Kentico CMS Active Directory Import Tool - Step 11	
Step 11 - Import log Please make sure that all selected data has been successfuly imported.	*/?*
Log file was successfully saved. Import has finished with 11 warnings (0h 0m 4s). WARNING: Impossible to import user with identifier a563a498-0152-48f6-b9c9-b96d31366860 be name. Importing user test_uzivatel2-office kentico.com' Assigning user test_eters-office kentico.com' Assigning user 'cm-office kentico.com' to role 'office\ServiceAccounts' Importing user 'cm-office kentico.com' Assigning user test_importAD-office kentico.com' Importing user 'test_importAD-office kentico.com' Importing user 'screports-office kentico.com' WARNING: Impossible to import user with identifier f066ed1a-c21a-4790-9682-7af882e4dd23 bec name. WARNING: Impossible to import user with identifier 052f6f86f33e-492d-92a8-17593b83cb08 bec name. WARNING: Impossible to import user with identifier 6535989-3e76-48b1-b539-d34b5bdc3e74 be name.	cause of empty user
< Back Finish	Cancel

#### 7.10.11.2.4.3 AD import from command line

Apart from the wizard described in the <u>Using the wizard</u> chapter, the AD Import Utility can also be launched from windows command line. It is achievable by executing the **ADImport.exe** file located in **<Kentico CMS installation folder>\ADImport** (typically *c:\Program Files (x86)\KenticoCMS\5.5* *ADImport*)) using a special syntax.

You can launch the utility with the **-h** parameter, which displays help on using the utility from the command line:

ADImport -h

To perform the actual import, you need to have an import profile created via the wizard. With the import profile prepared, you need to execute the utility using the **ADImport /profile <profile file name>** syntax. When specifying the profile file name, both an absolute and a relative path can be used. Please make sure that you use proper quotation when entering an absolute path containing special characters (e.g. blank spaces).

```
ADImport /profile my_profile.xml
ADImport /profile "C:\Temp\AD Import\my_profile.xml"
```

After executing the command, users or groups from Active Directory will be imported to your Kentico CMS instance based on settings contained in the specified import profile.

#### 7.10.11.2.4.4 How to recognize imported users and roles

In the CMS, you can recognize users imported from AD by the **Is domain user** check-box on a user's **General** tab, as you can see in the screenshot below.

When editing roles, you can see the **Is domain role** check-box, which has the same meaning for roles.

These check-boxes reflect the values of the following Boolean fields in the database tables:

- CMS_User -> UserIsDomain
- CMS_Role -> RoleIs Domain

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	Buy	
CMS Site Manager  Administration  Administration  Avatars  Badges Banned IPs  Femail queue Event log  Permissions Recycle bin Roles Scheduled tasks Smart search System EUI personalization U personalization U personalization U personalization U personalization U personalization U personalization U personalization U personalization U personalization	Sites	Administration Sers Mass e-mail Administrator eral Password name:* aame: aame: aame: aame: aame: aame: aame: aame: aame: aame: aame: aame: bal administrator	Settings On-line users Settings add Glo Glo Glo Glo U U U	Development	Licenses Departments tor alhost.local	Support	Buy	Categories
	Is external is don	ernal user: nain user: den:		)				

#### 7.10.11.3 Configuring mixed mode authentication

Mixed mode authentication enables users to sign in to your website using both Windows authentication and standard forms authentication at the same time.

To enable this authentication mode, you have to modify your *web.config* file so that the **connectionStrings**, **membership** and **roleManager** sections are the same as the code sample below:

```
<connectionStrings>
   <add name="CMSADConnectionString" connectionString="<LDAP connection string>" />
   </connectionStrings>
   <membership defaultProvider="CMSProvider" userIsOnlineTimeWindow="30">
        cyroviders>
        <clear/>
        <add name="CMSProvider" type="CMS.MembershipProvider.CMSMembershipProvider"
connectionStringName="CMSConnectionString" enablePasswordRetrieval="false"</pre>
```

```
enablePasswordReset="true" requiresQuestionAndAnswer="false" requiresUniqueEmail="
true" passwordFormat="Hashed"/>
    <add name="CMSADProvider" type="CMS.MembershipProvider.CMSADMembershipProvider"
" connectionStringName="CMSADConnectionString" connectionUsername="username"
connectionPassword="password" />
  </providers>
</membership>
<roleManager defaultProvider="CMSRoleProvider" enabled="true" cacheRolesInCookie="
true" cookieName=".ASPROLES" cookieTimeout="30" cookiePath="/" cookieRequireSSL="
false" cookieSlidingExpiration="true" cookieProtection="All">
 <providers>
   <clear/>
    <add name="CMSRoleProvider" type="CMS.MembershipProvider.CMSRoleProvider"
connectionStringName="CMSConnectionString" applicationName="SampleApplication"
writeExceptionsToEventLog="false"/>
    <add name="CMSADRoleProvider" type="CMS.MembershipProvider.CMSADRoleProvider"
connectionStringName="CMSADConnectionString" connectionUsername="username"
connectionPassword="password" />
  </providers>
</roleManager>
```

The <LDAP connection string> part highlighted in green in the code example above should be replaced with the actual connection string. It should be entered in the format shown below. The first part is the full domain. In the second part, the same domain is divided using the DC parts:

LDAP://mydomain.example.com/DC=mydomain,DC=example,DC=com

User name and password need to be entered only on Windows XP, in the following format:

- Username: <domain name>\user
- Password: relevant password

When you have entered this code to your *web.config*, users can log in using their Active Directory user name (without domain) and password, or using their standard Kentico CMS user name and password.

You can also enable users to sign-in using their full Active Directory user name (e.g. *MyName*@office. example.com). For this to work, you have to add the following key to the *AppSettings* section of your *web.config* file:

<add key="CMSADDefaultMapUserName" value="userPrincipalName" />

#### 7.10.11.4 Integrating authentication with external systems

Kentico CMS allows you to write a custom authentication provider. In this way, the provided user name and password are checked against an external user profile source/authentication source and if the user is successfully authenticated, the user account is automatically created/updated in the Kentico CMS database, without copying the user password.

You can learn more about custom authentication in chapter Security handler (CustomSecurityHandler

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536

<u>class)</u>.

### 7.10.11.5 Single sign-on

Single sign-on is supported for the following scenarios:

## Forms Authentication

You are using Forms authentication and you need to share user identity across applications that run on the same domain and all of them use the standard ASP.NET 2.0 Forms authentication. You need to ensure that:

1. All applications use the same user database or at least the same user names. You may need to integrate the authentication using a <u>custom security handler</u>.

2. The *web.config* file of all applications uses the same authentication cookie name and the path is set to "/":

```
<authentication mode="Forms">
<forms name=".ASPXFORMSAUTH" path="/" ...="" />
</authentication>
```

3. The *web.config* file of all applications uses the same <u>machine key</u>. The machine key is not present in the web.config by default. You can generate is using various machine key generators that can be found on the Internet. Once you have a key generated, you can add it to the *<system.web>* section the following way:

```
<system.web>
...
<machineKey validationKey="ABCD0708...." decryptionKey="DDFF8943...." validation
="SHA1" />
...
</system.web>
```

4. If your applications run on different sub-domains, such as *www.example.com* and *forums.example.com*, you need to set the domain attribute of the authentication cookie to the main domain so that it's shared across domains:

<forms name=".ASPXFORMSAUTH" path="/" domain=".mywebsite.com" ...="" />

# **Windows Authentication**

You are using Windows authentication. In this case, the user identity is shared within the Windows domain. No additional configuration is required.

### 7.10.11.6 Displaying personalized content

Kentico CMS allows you to personalize the displayed content based on the current user.

Personalization in short
1. If you want to customize content displayed to the users, you need to grant or deny the READ permission to these users and turn on the <b>Check permissions</b> attribute of the appropriate web parts.
2. When the user is not authenticated, the system uses a special user <b>Public</b> anonymous User (public).

## Example: Personalizing the Products menu

In this example, you will learn how to display the Products section only to members of the **Customers** and **Partners** roles and how to display the PDAs category only to the members of the **Partners** role.

- 1. Sign in to CMS Desk as administrator.
- 2. Go to Administration -> Roles and create new roles Customers and Partners.
- 3. Go to Administration -> Users and create a new user Customer1 with following values:
- User name: Customer1
- Full name: Testing Customer
- Enabled: true
- Is editor: no

Click **OK**. Go to the **Sites** tab and assign the user to Corporate Site. Go to the **Roles** tab and add the user to the **Customers** role.

4. Create another user **Partner1** with following values:

- User name: Partner1
- Full name: Testing Partner
- Enabled: true
- Is editor: no

Click **OK**. Go to the **Sites** tab and assign the user to **Corporate Site**. Go to the **Roles** tab and add the user to the **Partners** role.

5. Switch to **CMS Desk -> Content** and click the root of the content tree. Switch to **Properties -> Security**.

First, we need to grant the **Read** permission for the whole website to the **Public anonymous user** (public), **Customers** and **Partners** roles.

Click Add users, select these the three users and click OK. When the users are added, grant the Read permissions to them using the check-box (III), as you can see in the screenshot below. You need to

Modify

permissions

OK

Switch to Site Manager Site: Corporate Site Viser: Global Kentico CMS Desk 쏬 Content My desk Tools Administration 📄 Сору 1 Up Q 0 0 × **U**Down New Delete Ave Edit Preview Live site List Afrikaans English Search Content management View mode Other Language 🖃 🕑 Corporate Site Page Design Form Master page Properties - Home General 🗉 📄 Services URIS 🗉 📄 Products Template 🗉 📄 News Metadata 🗄 📄 Partners Permissions E Company This document does NOT inherit permissions from the parent document. Categories 🗉 📄 Blogs Menu 🗉 📄 Forums The changes were saved. Workflow Events Versions Users and Roles: Access rights: 🛓 📄 Images Related docs 🗉 📄 Wiki Allow Deny Partner1 (Partner1) Examples Linked docs Public Anonymous User (public) Full control 🗉 🟐 Special pages Security 🗄 뉔 Images Read Attachments Modify Languages Create Delete Destroy Browse tree 

click OK in order to save the settings.

6. Now we will hide the product categories from public users. In the content tree, click /Products/Cell Phones and switch to the Properties -> Security tab.

Add users

Add roles Remove

The permissions that you configured for the root of the content tree are inherited by this document. We need to break the inheritance. Click the Change permission inheritance link. In the following dialog, choose Break inheritance and copy parent permissions.

nis document inherits permissions from the parer nange permission inheritance	nt document.		
Isers and Roles:	Access rights:		
Customer1 (Customer1)		Allow	Deny
Public Anonymous User (public)	Full control		
	Read	$\checkmark$	
	Modify		
	Create		
	Delete		
	Destroy		
	Browse tree		
	Modify permissions		
Add users Add roles Remove	permissions		

7. Now select the Public Anonymous User (public) and deny the Read permission.

8. Repeat the last two steps for categories **Laptops** and **PDAs**. Deny the **PDAs** category also for the **Customers** role.

9. The permissions are not checked by web parts by default, so we need to configure the web parts so that they check the **Read** permission of the current user.

Choose the root in the content tree and click the **Design** tab. Configure the **cmsmenu** web part and set its property **Check permissions** to true ( $\mathbb{V}$ ). Click **OK**. Repeat the same for the **LeftTreeMenu** and **ProductDataList** web parts on the **/Products** page.

10. Sign out. If you mouse-over the **Products** menu item, you will see that the sub-categories are no longer displayed.

11. Sign in as user **Customer1** (use the My account link at the top right part of the page) and click **Products** in the main menu. You will see a page like the one below. As you can see, the PDAs section and PDA products are not displayed to this user.



```
Site map | Disclaimer
```

Now sign out and sign in again as user **Partner1**. You will all categories and products:


You have learned how to personalize the content displayed to users based on their permissions.

# 7.10.12 Third-party authentication services

#### 7.10.12.1 Overview

Third-party authentication services provide an alternative way how users can log in and register to your site. This way, they do not need to go through the registration process and create a new username and password for your site. Instead, they can use some username and password that they already use on some popular site (like Windows Live, Facebook, Google, Yahoo!, etc.). Even new users can log on to your site like this, in which case a new user account is created.

Kentico CMS supports the following three authentication providers:

- <u>Windows Live ID</u>
- OpenID
- Facebook Connect

Click the links above to learn more about how to set up authentication using the particular provider.

## 7.10.12.2 Windows Live ID

#### 7.10.12.2.1 Overview

Windows LiveID is a single sign-on service provided and maintained by Microsoft. By integrating LiveID into your website, you can allow site visitors to log in to your website using their LiveID login and password.

# How to start using it

For this to work on your site, you have to do the following things:

- 1. Register your website at https://manage.dev.live.com/ to learn how to do it click here
- 2. Set up Kentico CMS for LiveID authentication for more details click here
- 3. Use one of the LiveID web parts on any page of your site info here

# How it works

The following diagram shows how the process of LiveID login works.



#### 7.10.12.2.2 Registering your application

To enable LiveID logon for your website, you must register it on the Windows Live application management site at the following address: <u>https://manage.dev.live.com/</u>.

1. Once on the page, sign in with your Windows Live ID (you may need to create an account if you don't already have one) and you will be redirected to the application registration page.

2. Now fill in the following information:

- **Application name** enter a name that will be used to identify your web application. This name will be displayed in the Windows Live user interface.
- Application type select Web application.

the state of the state of the state of the state of the s

• **Domain** - enter the fully qualified domain name of your website.

Connect your applica	ation to windows live	
It's quick, easy, and free — just ty	pe the following information.	
Application name (English):	My Web Application	The name your users will see in Windows Live. Include your company name in the application name. You can provide localized versions of the name later.
Application type:	Web application	Integrate your website with Windows Live for the following usage scenarios:
	Desktop application	<ul><li>Sign-in</li><li>Profile</li></ul>
	Activity feed only	<ul> <li>Contacts, friends</li> <li>Calendar, documents, photos</li> <li>Activities</li> <li>Personal status message</li> <li>Chat</li> <li>Instant messaging</li> </ul>
Domain:	www.mykenticowebsitedomain.com Clicking <b>I accept</b> means that you agree to the Windows Live Terms of Use. Read the privacy statement.	You cannot change this domain later. Do not specify a domain that is used for redirection. Learn more
	I accept	

Read the terms of use and the privacy statement, then click the **I accept** button to register the application.

3. You will be shown a screen with important information about the newly registered application. Please make a note of the **Client ID** and **Secret key** values, as they will be required later when filling in Kentico CMS <u>settings</u>.



Next, click on the Essentials link in the message below the information box.

4. Fill in the additional settings of the web application:

- Return URL enter a URL in the following format: http://<yourdomain>/CMSPages/liveidlogin.aspx, where <yourdomain> should be replaced with the domain name of your website (as entered in the Domain field).
- Home page URL, Terms of service URL, Privacy URL, Support URL fill in these fields according to the specific structure of your website.

My Web Applica	ition		
Your applications 🕨 My	Web Application 🕨 Essentials		
	Get a new secret key Messe	nger Application Key	
Settings			
Essentials	To enable activities, comp Status page.	olete the information on the Essentials and Text & Logo	s pages and then click <b>Publish</b> on the Application
Text & Logos	Application name (English)*:	My Web Application	The name your users will see in Windows Live. Include your company name in the application
Localization	Client ID:	000000040035500	name. This is a unique identifier for your application
Application Status	Client ID:		This is a unique identifier for your application.
	Secret Key:	t/wwmuelwkgxjv3nXgYk5iyMtSZKgUB	with anyone.
	Domain:	www.mykenticowebsitedomain.com	
	Domain verification:	Not verified   Verify now	Required before you change the application status to Published. Learn more
	Return URL*:	nticowebsited omain.com/CMSPages/liveidlog in.aspx	If you are using only the OAuth WRAP API for Messenger Connect, you can leave this blank.
	Home page URL*:	ttp://www.mykenticowebsitedomain.com/Home.aspx	The URL of your application's home page. Example:
			http://contoso.com/MessengerConnect.html
	Terms of service URL*:	http://www.mykenticowebsitedomain.com/SpecialPag	The URL of your application's terms of service.
	Privacy URL*:	http://www.mykenticowebsitedomain.com/SpecialPag	The URL of your application's privacy statement.
	Support URL*:	http://www.mykenticowebsitedomain.com/SpecialPag	The URL of your application's support page.
		Information that is locked when the application's status is set to Published.	
		Save	

#### Click Save.

5. Now you must verify your ownership of the given domain. Click the Verify now link under the Domain

field and follow the displayed instructions.

6. Switch to the **Text & Logos** tab, enter a description for the application and upload the logo.

7. Switch to Application Status and Publish the application.

W

#### 7.10.12.2.3 Settings

LiveID authentication settings are located in **Site Manager -> Settings -> Windows LiveID**. Before you start making the settings, make sure you have the right site selected using the **Site** drop-down list in the top left part of the page.

- Enable Windows Live ID indicates if Windows Live ID authentication should be enabled.
- Application ID identifier of your website. Enter the *Client ID* that you received when registering your website.
- Application secret secret code that will be used for encryption of messages transferred between your website and the LiveID server. Enter the Secret key that you received when registering your website.
- Security algorithm algorithm used for the encryption of messages transferred between your website and the LiveID server. It is recommended to use *wsignin1.0*.
- Assign new users to roles new users registered via LiveID login will be assigned to the roles specified here.
- **Required user data page** URL of a page containing the *Required LiveID user data* web part. If entered, then when a new LiveID user logs in to the site, their user account is not created automatically, but they are redirected to this page and required to enter some additional data (or merge with an existing account) using the web part.

#### 7.10.12.2.4 Available web parts

After registering your web at <u>https://msm.live.com/app</u> and making the necessary settings, you can use the following two web parts on your website to allow authentication via Windows LiveID. The web parts are located under the **Membership** category in the web part catalog.

# Windows LiveID

This web part can be used to let site visitors sign in to your website using their Live ID. It can be placed on any page of your website. The web part is hidden to authorized users and will be displayed only to unauthorized public site visitors. With default settings, the web part appears as in the following screenshot.

#### 💐 Sign In

Although the web part works fine with default settings, it has the following properties to fine-tune its behavior:

- Sign in text if entered, link with the entered text will be used instead of the default sign in image
- Sign out text if entered, link with the entered text will be used instead of the default sign out image
- Show sign out if checked, sign out link will be displayed after the user logs in
- Show as button if checked, buttons will be used instead of links
- Sign in image if set, the image will be used as sign in link
- Sign out image if set, the image will be used as sign out link

# Live ID required data

In some cases, you may want new users to provide some extra details before their account is created. For example, if your site is configured to require <u>registration approval or double opt-in</u>, all users need a valid e-mail address to help activate their account.

This can be achieved using the *Live ID user data* web part. The web part must be placed on a page specified by the **Required user data page** in **Site Manager -> Settings -> Windows LiveID**.

The following properties of the web part are the most important:

- Allow forms authentication if checked, new users will be able to enter a password for their new account so that they can log in the usual way as well as via LiveID
- Allow existing user if enabled, users are allowed to join their existing account with their LiveID
- **Default target URL** if no return URL is passed, users will be redirected to URL entered here after merging or creating the account
- **Hide for no LiveID** if checked, the web part will be hidden if the page with it is displayed without LiveID logon (e.g. when accessed by entering its URL into the browser)

Other specific web part properties are explained in <u>Kentico CMS Web Parts Reference</u> or after clicking the **Documentation** (**•**) link in the top right corner of the web part properties window.

Existing user	New user
User name:	User name:
Password:	E-mail:
ОК	Password:
	Confirm password:
	ОК

The screenshot above shows how the web part looks with both the **Allow forms authentication** and **Allow existing user** options enabled. In the left part, existing site users can merge their current user account with the LiveID by just entering their user name and password. In this case, the LiveID Token will be added to the LiveID field of the existing user account. New users can enter the required details in the right part of the web part.

#### 7.10.12.3 OpenID

#### 7.10.12.3.1 Overview

<u>OpenID</u> is an open, decentralized standard for authenticating users. It is currently being used by popular websites like <u>Google</u>, <u>Yahoo!</u>, <u>MySpace</u>, <u>Flickr</u> and many more. Logon credentials used on all of these sites can be used to log on to your Kentico CMS site.

# How to start using it

OpenID is the easiest to use of the three supported third-party authentication services. For it to work on your site, you don't need to register your site, all you need to do is take the following two steps:

- 1. Set up Kentico CMS for OpenID authentication learn here
- 2. Use one of the OpenID web parts on any page of your site info here

# How it works

The following diagram shows how the process of OpenID login works:



#### 7.10.12.3.2 Settings

First of all, you need to find the **~/Bin/DotNetOpenAuth.dll.rename** file and rename it to **DotNetOpenAuth.dll**. The library is renamed in the default installation because it doesn't support <u>medium-trust environment</u>. Then you need to configure OpenID settings in the administration interface of the CMS.

OpenID authentication settings are located in **Site Manager -> Settings -> OpenID**. Before you start making the settings, make sure you have the right site selected using the **Site** drop-down list at the top left part of the page.

- Enable OpenID indicates if OpenID authentication is enabled
- Assign new users to roles new users registered via OpenID will be assigned to these roles
- **Required user data page** URL of the page where the *OpenID required data* web part resides; if entered, then when a new OpenID user logs in to the site for the first time, their user account is not created automatically, but they are redirected to this page and required to enter some additional data (or merge with an existing account) using the web part

	Kentico										Switch to CMS Desk
1	CMS Site Manager	Sites	Administra	ition	Settings	Devel	opment	Licenses	Support		
Site:				Oper							
(global)		-	<b>G</b> .	oper							
				Save	Perset the		attings to de	afault			
Sett	ings			Jave	d <u>Reset the</u>	30 30	curiqs to ut	ciduit			
	🕽 Web site										
	🗓 Content management		The	se setti	ings are global,	they	can be o	verridden by	the local site s	settings. Please sele	ct the site to see or cha
	- Files										
	Membership		En	able O	penID	6	2				
	😵 Security							OnenIDUlaar	-	Coloct	Class
	🖥 URLs and SEO		AS	sign ne	ew users to role	S	CIVIS	OpeniDOser	s	Select	Clear
5	Output filter		Re	quired	user data page		2				
	🚽 System										
	🗟 E-mails		Ex	port the	ese settinas						
	Avatars		_								
	🗟 Bad words										
	Blogs										
	🚪 Booking system										
- 8	🚨 Community										
. 4	🖗 MetaWeblog API										
	Content staging		•								
8	🚨 Forums		4								
	👩 Media libraries										
[	Message boards										
	🗟 Messaging										
6	👔 Web analytics										
-4	🔰 Windows LiveID										
····]	Re-commerce										
~ <	OpenID										
	Facebook Connect										

#### 7.10.12.3.3 Available web parts

After configuring the <u>settings</u>, you can use the following two web parts on your website to allow OpenID authentication. The web parts are located under the **Membership** category in the web part catalog.

# **OpenID** logon

This web part can be used to let site visitors sign in to your website using their OpenID. It can be placed on any page of your website. With default settings, the web part appears as in the screenshot below.

It lets you choose from a number of websites which support OpenID and where you might already have an account. If you choose one and click Sign In, you will be redirected to the logon page on that site. After successful logon, you will be redirected back to the Kentico CMS site where you came from, but you will be authenticated and a new account will be created in case this is your first logon.

d∽ https://www.google	.com/accounts/o8/id	g → d> Sign In
👩! Yahoo!	<b>⊖</b> myOpenID	8 Google
•• Flickr	🍉 AOL	Blogger
💊 Livejournal	𝗭 Verisign	\infty Vidoop
<u>[]</u> claimID	💟 Vox	
other OpenID		

Even though the web part works fine with default settings, it has the following specific properties to finetune its behavior:

- **Providers** Providers used for OpenID login. Each provider must be specified on a single line. Total number of 3 parameters should be included for each provider:
- 1 provider display name
- 2 provider login URL
- 3 provider icon name placed in ~/CMSWebParts/Membership/OpenID/OpenID_files/.

Each parameter must be separated by '|'. The third parameter is optional and if not supplied then the default OpenID icon will be displayed. Provided URL must be the login URL of the OpenID provider. If the username (or blog name, user id, etc.) is part of the URL, then use the *##username##* macro to replace the username part of the URL.

Example: myOpenID|http://##username##.myopenid.com/|myopenid.ico

- **Display textbox** indicates if the OpenID provider textbox should be visible; if disabled then only the sign in button will be visible
- Sign in text if entered, a link with the entered text will be used instead of the default sign in image
- Sign out text if entered, a link with the entered text will be used instead of the default sign out image
- Show sign out if checked, the sign out link will be displayed after the user logs in
- Show as button if checked, buttons will be used instead of links
- Sign in image if set, the image will be used as the sign in link
- Sign out image if set, the image will be used as the sign out link
- **Required data for new users** using these settings, you can request additional data from the OpenID provider, which will be added to the newly created user account; in case that you are using the *OpenID required data* web part, the requested data will be pre-filled in the web part; due to the fact that we do not use the latest version of the OpenID library, data may not be obtained successfully from some providers

# **OpenID required data**

In some cases, you may want new users to provide some extra details before their account is created. For example, if your site is configured to require <u>registration approval or double opt-in</u>, all users need a valid e-mail address to help activate their account.

This can be achieved using the *Open ID user data* web part. The web part must be placed on a page specified by the **Required user data page** value in **Site Manager -> Settings -> OpenID**.

The following properties of the web part are the most important:

- Allow forms authentication if checked, new users will be able to enter a password for their new
  account so that they can log in the usual way as well as via OpenID
- Allow existing user if enabled, users are allowed to join their existing account with OpenID
- **Default target URL** if no return URL is passed, users will be redirected to the URL entered here after merging or creating the account
- **Hide for no OpenID** if checked, the web part will be hidden if the page with it is displayed without OpenID logon (e.g. when accessed by entering its URL into the browser)

Other specific web part properties are explained in <u>Kentico CMS Web Parts Reference</u> or after clicking the **Documentation** (**•**) link in the top right corner of the web part properties window.

Existing user	New user
User name:	User name:
Password:	E-mail:
OK	Password:
	Confirm password:
	ОК

The screenshot above shows how the web part looks with both the **Allow forms authentication** and **Allow existing user** options enabled. In the left part, an existing site users can merge their current user account with the OpenID by just entering their user name and password. In this case, the OpenID will be added to the OpenID field of the existing user account. New users can enter the required details in the right part of the web part.

#### 7.10.12.4 Facebook Connect

#### 7.10.12.4.1 Overview

Facebook is one of the most popular social networking sites in the world. With its continuously growing number of registered users, it is quite likely that visitors who come to your site will already have a Facebook account. In this case, it is much more convenient for them to use their Facebook logon details than to go through yet another registration on your site. That's why you should consider using Facebook Connect authentication.

#### How to start using it

For Facebook Connect to work on your site, you need to register the site, all you need to do is take the following two steps:

1. Register your website at <u>http://www.facebook.com/developers/createapp.php</u> - for more info ready

Development	553

### <u>here</u>

- 2. Set up Kentico CMS for Facebook Connect authentication learn here
- 3. Use one of the Facebook Connect web parts on any page of your site info here

# How it works

The following diagram shows how the process of Facebook Connect login works:



© 2011 Kentico Software

#### 7.10.12.4.2 Registering your application

To use Facebook Conntect authentication on your website, you need to register the site at <u>http://www.facebook.com/developers/createapp.php</u>. You need to have a Facebook account to get to the page, so if you don't have one yet, please create it <u>here</u> (you would be prompted to do so otherwise).

The following text describes the registration procedure and points out important information that you obtain during it. Please note that the design of the screenshots below may not be identical as Facebook changes its design quite often.

1. With a facebook account created and logged in, visit <u>http://www.facebook.com/developers/createapp.</u> <u>php</u>. Enter the following details into the form:

• Application Name: enter the name of your website, e.g. Kentico CMS - testing

Read and Agree to the Facebook Terms and click Create Application.

facebook 📲 🛡 🛞	earch Q	Hon	ne I
Create Application Ba	o My Applications		
Essential Information			
Application Na	Kentico CMS - testing	Cannot contain Facebook trademarks or have a name that	
		can be confused with an application built by Facebook.	
Ter	Do you agree to the Facebook Terms?		
	Agree O Disagree		
	Create Application		

2. Retype the CAPTCHA on and click **Submit**.

Security Check	low, separated	by a space.		
Can't read the words b	elow? Try differe	ent words or an a	audio captcha.	
allow	h	ÓP		
Sick of these? Verify y	our account.			
Text in the box:				
allow belo				

3. Your application will be registered and you will see the **Basic** tab of its editing interface. Here, you should focus on the two keys highlighted in the screenshot below, you will need to enter them in **Site Manager -> Settings -> Facebook Connect**:

- API Key this is what you will enter into the API Key field
- Secret this is what you will enter into the Application secret field

Note them down and set them accordingly in your Kentico CMS instance as described in the <u>Settings</u> chapter.

acebook 📌 🗏 🛞 🛛 Iseard	h	Q	Home	Profile Find Friends Account
🐻 Edit Kentico CMS - testing	] Back to My Applications			
	_			
Basic	Essential Information			
Authentication	Application Name	Kentico CMS - testing		Cannot contain Facebook trademarks or have a name that can
Profiles				be confused with an application built by Facebook.
Canvas	Application ID	111556918876797		
Connect	API Key	48b806c9c801d3a3ee63f9a6d3677056	1	Your public API key.
Widgets	Secret	e03e96c584e72fcc74e968d1d497572a	J	Do <b>not</b> share your secret key with anyone.
Advanced	Description			The plaintext description of your application.
Migrations				
	Icon		Change your icon	The image that appears next to your application name throughout Facebook. Limit: 16x16 px

4. Now switch to the **Connect** tab. Here, you need to enter the URL of your website into the **Connect URL** field. Click **Save Changes**.



#### Please note!

Using Facebook Connect authentication on **localhost** may result in incorrect behavior of the authentication. This behavior is by design of the Facebook Connect API. To achieve the required functionality, a standard domain name must be used and the domain name entered in this step must match the domain where your web application is really running.

			De	evelopment	
sobook 1 <mark>2</mark>			Nama	Duefilo Find Friends	
	n	<u>u</u>	ноте	Profile Find Friends	
🖥 Edit Kentico CMS - testing	<b>J</b> Back to My Applications				
Ducie					
Basic	Facebook Connect Settings				
Authentication	Connect URL	http://localhost/KenticoCMS_0416/		Your Connect site's main U	RL.
Profiles	Facebook Connect Logo		Change your logo	The image that appears in t Facebook Connect dialog.	he
Canvas				Limit: 99px wide and 22px t	all.
Connect	Account Preview URL			Facebook pulls the content here and displays it to the u	from ser i
Widgets	Base Domain			Use this to enable your Fac	eboo
Advanced				Connect implementation to multiple subdomains (e.g., u	spar using
Migrations				foo.example.com and bar.example.com).	
	Account Reclamation URL			A URL that will be provided user that deactivates their f account, to allow an indepe account to be set up. See fi	l to a acel nden urthe

Your web application is now registered at Facebook. With proper <u>settings</u> and <u>web parts</u>, users should now be able to authenticate to your site using their Facebook logon details.

#### 7.10.12.4.3 Settings

Facebook Connect authentication settings are located in **Site Manager -> Settings -> Facebook Connect**. Before you start making the settings, make sure you have the right site selected using the **Site** drop-down list at the top left part of the page.

- Enable Facebook Connect indicates if Facebook Connect authentication is enabled
- API key key obtained during registration of your application on Facebook (as described here)
- Application secret key obtained during registration of your application on Facebook
- Assign new users to roles new users registered via Facebook Connect will be assigned to these roles
- **Required user data page** URL of the page where the *Facebook Connect required data* web part resides; if entered, then when a new Facebook Connect user logs in to the site, their user account is not created automatically, but they are redirected to this page and required to enter some additional data (or merge with an existing account) using the web part



7.10.12.4.4 Available web parts

After configuring the <u>settings</u>, you can use the following two web parts on your website to allow Facebook Connect authentication. The web parts are located under the **Membership** category in the web part catalog.

# Facebook Connect logon

This web part can be used to let site visitors sign in to your website using their Facebook username and password. It can be placed on any page of your website. The web part is hidden to authorized users and will be displayed only to unauthorized public site visitors. With default settings, the web part appears as in the screenshot below.



If you click the button, a new pop-up window opens, letting you log on using your Facebook username and password.



After successful logon, you will be redirected back to the Kentico CMS site where you came from, but you will be authenticated and a new account will be created in case that this is your first logon.

Even though the web part works fine with default settings, it has the following specific properties to finetune its behavior:

- Sign in text if entered, link with the entered text will be used instead of the default sign in image
- Size you can choose from 5 pre-defined sizes of the button
- Length specifies which text label to use on a button with size specified as *small, medium, large,* or *xlarge*; specify short for the text label *Connect* only or long for the text label *Connect with Facebook*
- Use latest version check this box if you want to use the latest Facebook Connect login buttons; don't check this box if you need to use the original Facebook Connect login buttons
- Show sign out if checked, sign out link will be displayed after the user logs in
- Sign out text if entered, link with the entered text will be used instead of the default sign out image
- Show as button if checked, buttons will be used instead of links
- Sign out image if set, the image will be used as sign out link

# Facebook Connect required data

In some cases, you may want new users to provide some extra details before their account is created. For example, if your site is configured to require <u>registration approval or double opt-in</u>, all users need a valid e-mail address to help activate their account.

This can be achieved using the *Facebook Connect user data* web part. The web part must be placed on a page specified by the **Required user data page** in **Site Manager -> Settings -> Facebook Connect**.

The following properties of the web part are the most important:

• Allow forms authentication - if checked, new users will be able to enter a password for their new account so that they can log in the usual way as well as via Facebook Connect

- Allow existing user if enabled, users are allowed to join their existing account with their Facebook user ID
- **Default target URL** if no return URL is passed, users will be redirected to the URL entered here after merging or creating the account
- Hide for no Facebook user ID if checked, the web part will be hidden if the page with it is displayed without Facebook Connect logon (e.g. when accessed by entering its URL into the browser)

Other specific web part properties are explained in <u>Kentico CMS Web Parts Reference</u> or after clicking the **Documentation** (**•**) link in the top right corner of the web part properties window.

Existing user	New user
User name:	User name:
Password:	E-mail:
OK	Password:
	Confirm password:
	ОК

The screenshot above shows how the web part looks with both the **Allow forms authentication** and **Allow existing user** options enabled. In the left part, an existing site user can merge their current user account with the Facebook user ID by just entering their user name and password used on your site. In this case, the Facebook user ID will be added to the **Facebook user ID** field of the existing user account. New users can enter the required details in the right part of the web part.

#### 7.10.12.5 Managing imported users

When a user signs in through a third-party authentication service for the first time, Kentico CMS automatically creates a new user account for them. If you edit such an account in **Site Manager -> Administration -> Users**, you can see that it has the following specific settings:

# **General tab**

On the General tab, you can notice that the **User name** and **Full name** fields have been automatically filled with a string in the following format:

#### <u>User name</u>

- Live ID: liveid_<liveidtoken>
- OpenID: openid_<openid>
- Facebook Connect: facebookid_<facebookuserid>

#### Full name

- Live ID: LiveID <liveidtoken>
- OpenID: OpenID <openid>
- Facebook Connect: Facebook ID <facebook userid>

These values can be changed manually without any effects on the functionality.

You can also notice that the **Is external user** check-box is enabled. It indicates that the user account is imported from some external user database and disables forms authentication for the user, i.e. the user can only log in using the third-party authentication service. When merging an existing account with third-party authentication using one of the **<provider> required user data** web parts, the existing account that you want to merge must not have this option enabled (because forms authentication using the web part would not work).

General	Password	Settings	Sites	Roles	Departments	Notifications	Categories
🔏 Log in as	this user						
_							_
User name	e:*	o	penid_b	d7d25fe-o	d9de-442c-a19	5-4307ad0889c	:1
Full name:	*	C	)penID -	bd7d25fe	e-d9de-442c-a1	95-4307ad088	9c1
First name							
Middle nar	me:						
Last name							
E-mail:							
Enabled:			/				
Is editor:							
Is global a	dministrator	:					
Is external	user:	5	7				
Is domain	user:						
Is hidden:							

If you switch to the **Settings** tab, you can notice the **Live ID**, **Facebook user ID** and **OpenID** fields. This is where the user's ID from the particular provider is stored.

You can change the values manually if you need to. You just need to make sure that the entered ID is valid. In such a case, the newly entered ID will be used when the user logs in. You can also delete the value, in which case no ID will be assigned to the user. In this case, please remember to disable the **Is** external user option on the **General** tab so that the user can log in using forms authentication.

General Password	Settings Sites	Roles	Departments	Notifications	Categorie
					Ŧ
URL referrer:					
Campaign:					
Messaging notification e	e-mail:				
Time zone:	(none)				•
Badge:	Member	(Automatic)	)		•
User activity points:	0				-
Live ID:					
Facebook user ID:					
OpenID:	https://w	ww.google	.com/accounts	/o8/id?id=AltO	aw
Activation date:			Nov 🕾	L	
Activated by user:	N/A				
Registration info:	N/A				

# 7.10.13 Membership internals and API

#### 7.10.13.1 Database tables and API classes

562

The the following database tables are used to store membership data:

- CMS_User contains users and their basic properties
- CMS_UserSettings contains user settings
- CMS_Role contains roles and information about them
- CMS_Permission contains permissions and information about them
- CMS_Badge contains badges and their properties

The Membership API is provided by the following CMS.SiteProvider namespace classes:

- UserInfo, UserInfoProvider these classes provide functionality for managing users
- UserSettingsInfo, UserSettingsInfoProvider these classes provide functionality for managing user settings
- UserSiteInfo, UserSiteInfoProvider these classes allow the assigning of users to sites
- RoleInfo, RoleInfoProvider these classes provide functionality for managing roles
- PermissionNameInfo, PermissionNameInfoProvider these classes provide functionality for managing permissions
- RolePermissionInfo, RolePermissionInfoProvider these classes allow the assigning of permissions to roles
- BadgeInfo, BadgeInfoProvider these classes provide functionality for badges

The following topics show examples of how these classes can be used:

- <u>Managing users</u>
- Managing roles and permissions
- <u>Managing badges</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 7.10.13.2 Managing users

The following sample code shows how you can create a new user:

```
using CMS.SiteProvider;
....
// Create new user object
UserInfo ui = new UserInfo();
// Set properties
```

```
ui.UserName = "Username";
ui.FirstName = "John";
ui.LastName = "Jones";
ui.FullName = ui.FirstName + " " + ui.LastName;
ui.UserNickName = "nickname";
ui.IsEditor = false;
ui.IsGlobalAdministrator = false;
ui.Email = "john.jones@localhost.local";
ui.Enabled = true;
// Save object to database
UserInfoProvider.SetUserInfo(ui);
```

The following sample code shows how you can add a user to the current site:

## [C#]

```
using CMS.SiteProvider;
using CMS.CMSHelper;
....
// Get user object
UserInfo ui = UserInfoProvider.GetUserInfo("Username");
// If user exists
if (ui != null)
{
// Add user to site
UserSiteInfoProvider.AddUserToSite(ui, CMSContext.CurrentSite);
}
```

The following sample code shows how you can assign an avatar to a user:

```
using CMS.SiteProvider;
....
// Get user object
UserInfo ui = UserInfoProvider.GetUserInfo("Username");
// Get avatar object
AvatarInfo ai = AvatarInfoProvider.GetAvatarInfoWithoutBinary("custom");
// If both exist
if ((ui != null) && (ai != null))
{
// Add avatar to user settings
```

```
ui.UserSettings.UserAvatarID = ai.AvatarID;
// Update user object in database
UserInfoProvider.SetUserInfo(ui);
}
```

#### 7.10.13.3 Managing roles and permissions

The following sample code shows how you can create a new role and add it to the current site:

#### [C#]

```
using CMS.SiteProvider;
using CMS.CMSHelper;
....
// Create empty role object
RoleInfo ri = new RoleInfo();
// Set properties
ri.DisplayName = "Custom role";
ri.RoleName = "CustomRole";
ri.SiteID = CMSContext.CurrentSiteID;
// Save role object to database
RoleInfoProvider.SetRoleInfo(ri);
```

The following sample code shows how you can add a user to a role:

```
using CMS.SiteProvider;
using CMS.CMSHelper;
...
// Get role object
RoleInfo ri = RoleInfoProvider.GetRoleInfo("CustomRole", CMSContext.CurrentS
// Get user object
UserInfo ui = UserInfoProvider.GetUserInfo("Username");
// If both exist
if ((ri != null) && (ui != null))
{
// Create new user role object
UserRoleInfo uri = new UserRoleInfo();
```

```
// Set properties
uri.UserID = ui.UserID;
uri.RoleID = ri.RoleID;
// Save to database
UserRoleInfoProvider.SetUserRoleInfo(uri);
}
```

The following sample code shows how you can add a permission to a role:

# [C#]

```
using CMS.SiteProvider;
using CMS.CMSHelper;
. . .
        // Get role object
        RoleInfo ri = RoleInfoProvider.GetRoleInfo("CustomRole",CMSContext.CurrentSi
        // Get permission object
        PermissionNameInfo pni = PermissionNameInfoProvider.GetPermissionNameInfo("R
        // If both exist
        if ((ri != null) && (pni != null))
        {
            // Create new role permission object
            RolePermissionInfo rpi = new RolePermissionInfo();
            // Set properties
            rpi.RoleID = ri.RoleID;
            rpi.PermissionID = pni.PermissionId;
            // Save to database
            RolePermissionInfoProvider.SetRolePermissionInfo(rpi);
        }
```

#### 7.10.13.4 Managing badges

The following sample code shows how you can get a badge as a BadgeInfo object:

```
// Get Badge object by badge code name
BadgeInfo bi2 = BadgeInfoProvider.GetBadgeInfo("Admin");
```

The following sample code shows how you can get a DataSet containing badges from the system:

[C#]

```
using System.Data;
using CMS.SiteProvider;
....
string where = "BadgeTopLimit > 50";
string orderby = "BadgeTopLimit DESC";
int topN = 10;
string selectedColumns = "BadgeID, BadgeTopLimit, BadgeImageURL";
// Get dataset of badges according to the given parameters
DataSet ds = BadgeInfoProvider.GetBadges(where, orderby);
DataSet ds2 = BadgeInfoProvider.GetBadges(where, orderby, topN, selectedColumn)
```

The following sample code shows how you can create a new badge:

# [C#]

```
using CMS.SiteProvider;
....
// Create new badge object
BadgeInfo bi = new BadgeInfo();
// Set properties
bi.BadgeDisplayName = "Test badge";
bi.BadgeName = "TestBadge";
bi.BadgeTopLimit = 50;
bi.BadgeImageURL = "~/App_Themes/Default/Images/Objects/CMS_Badge/Default/
siteadmin.gif";
bi.BadgeIsAutomatic = true;
// Save to database
BadgeInfoProvider.SetBadgeInfo(bi);
```

The following sample code shows how you can modify the display name of an existing badge:

```
using CMS.SiteProvider;
....
// Get badge object
BadgeInfo bi = BadgeInfoProvider.GetBadgeInfo("TestBadge");
// If badge exists
if (bi != null)
{
    // Update property
    bi.BadgeDisplayName += " updated";
    // Save changed object to database
    BadgeInfoProvider.SetBadgeInfo(bi);
  }
```

The following sample code shows how you can delete a badge from the system:

### [C#]

```
using CMS.SiteProvider;
....
// Get badge object
BadgeInfo bi = BadgeInfoProvider.GetBadgeInfo("TestBadge");
// If badge exists
if (bi != null)
{
    // Delete from database
    BadgeInfoProvider.DeleteBadgeInfo(bi);
}
```

The following sample code shows how you can update the activity points of a user:

```
// Update activity points of user
BadgeInfoProvider.UpdateActivityPointsToUser(ActivityPointsEnum.
BlogCommentPost, ui.UserID, CMSContext.CurrentSiteName, true);
}
```

The following sample code shows how you can assign a badge to a user:

#### [C#]

568

```
using CMS.SiteProvider;
....
// Get user object
UserInfo ui = UserInfoProvider.GetUserInfo("Username");
// Get badge object
BadgeInfo bi = BadgeInfoProvider.GetBadgeInfo("Member");
// If both exists
if ((ui != null) && (ui != null))
{
// Add badge to user settings
ui.UserSettings.UserBadgeID = bi.BadgeID;
// Update user object in database
UserInfoProvider.SetUserInfo(ui);
}
```

# 7.11 Microsoft Silverlight integration

# 7.11.1 Overview

Kentico CMS comes with native support of **Microsoft Silverlight 2.0**. Microsoft Silverlight is a new cross-browser, cross-platform technology for building and delivering the next generation of media experiences and Rich Interactive Applications (RIA) for the Web.

Silverlight applications run in the internet browser. All you need is a small plug-in installed in your browser. The plug-in is free and in case that users access a site containing a Silverlight application without this plug-in installed, an install banner leading to the download link will be offered automatically.

You can find an example of a Silverlight application on the **E-commerce Site** sample website, in the **Silverlight** section.



# How it works in general

- 1. The developer creates a website with a built-in Silverlight application.
- 2. The site visitor navigates to that site using an internet browser.

3. If the user does not already have the required plug-in installed in the browser, they are automatically prompted to install it.

4. The Silverlight application is executed.

# **Creating Silverlight applications**

Silverlight is a .NET Framework based technology, so if you are familiar with development using Visual Studio and one of the .NET Framework languages like C#, it will be much easier for you to learn Silverlight. For developing Silverlight 2.0 applications, you will need at least Microsoft Visual Studio 2008 SP1 with Silverlight Tools. There is one more powerful tool for designers - Expression Blend, which enables you to create application design in a really comfortable way. We also strongly recommend installing the Silverlight Toolkit, which brings many new controls that can be used in your Silverlight applications.

Visit the <u>Silverlight community</u> site where you can download all the required components. What is more, you can find there valuable tutorials which can help you get started in the development of Silverlight applications.

We also recommend reading the official Microsoft Silverlight documentation.

- To learn how to add a Silverlight application to your site, please refer to the <u>Adding a Silverlight</u> application to your site topic.
- If you would like to learn how to configure Internet Information Services (IIS) to enable Silverlight applications on your site, please refer to the <u>IIS configuration</u> topic.

# 7.11.2 Adding a Silverlight application to your site

To add a Silverlight application to your site, you will need to use the **Silverlight application** web part, which is a container for Silverlight applications. You can find a live example of use of this web part on the **E-commerce Site** sample website, in the **Silverlight** section.

The following steps need to be taken to add a Silverlight application to a website.

1. Go to **CMS Desk** and from the content tree, choose the page where you would like to add your Silverlight application.

2. Switch to the **Design** tab and click the **Add web part** (+) icon at the top right-hand corner of the web part zone where you want to place the application.

3. Choose the Silverlight\Silverlight application web part and click OK.

4. In the web part properties window which pops-up, you can set the following web-part-specific properties:

- Application path path to your Silverlight application; e.g. ~/ClientBin/MyApplication.xap
- Minimum version minimum version of Silverlight required by the silverlight application to run by this web part
- **Container width** width of the application container; can be entered either as an integer value (e.g. *315*) or as a percentage value (e.g. *59%*)
- **Container height** height of the application container; can be entered either as an integer value (e. g. *315*) or as a percentage value (e.g. *59%*)
- **Container background** background of the application container; can be entered in hexadecimal (e. g. #323232) format or selected from a Color picker, which is displayed after clicking the Select button; if no value is entered, white color is used
- Endpoint address web service endpoint address the client application can connect to; if specified, its value is added as parameter with 'endpoint' key to the application parameters collection; you need to handle this parameter in your Silverlight application for it to take effect
- **Parameters** Silverlight application parameters in the following format: <*key1*>=<*value1*>, <*key2*>=<*value2*>,...
- Alternate content custom HTML content which is displayed to users when Silverlight plug-in is not installed; leave blank if you want the default alternate content to be displayed

Click **OK**, switch to the **Live site** and enjoy your Silverlight application running on your Kentico CMS website.

# 7.11.3 IIS configuration

Silverlight introduces two new file extensions:

- .xaml for XAML files
- .xap for the zip-based binary packaging format

For your application to work correctly, you need to add the MIME types for these file extensions to your web server so that it recognizes Silverlight content appropriately:

- Extension: .xaml
- MIME type: application/xaml+xml
- Extension: .xap
- **MIME type**: application/x-silverlight-app

Here is a step-by-step guide on how to do it on IIS 5.1:

1. Open IIS, right-click your website and choose Properties.



2. Switch to the HTTP Headers tab and choose File Types in the MIME Map section.

KenticoCMS_0203_2 Proper	rties	? 🔀		
Virtual Directory	Documents	Directory Security		
HTTP Headers	Custom Errors	ASP.NET		
<u>Content Expiration</u>				
<ul> <li>Expire Immediately</li> </ul>				
Expire after 1	Day(s) 💌			
O Expire <u>o</u> n Saturday	, February 14, 2009 🗸	at 12:00:00 AM 🔶		
Custom HTTP Headers				
X-Powered-By: ASP.NET	X-Powered-By: ASP.NET			
		<u>R</u> emove		
Content Rating				
Ratings help identif content your site pr	y to your users what type of ovides.	Edit Rati <u>n</u> gs		
MIME Map To configure additi Service sends to br Header, click File T	onal MIME types the Web rowsers in the HTTP ypes.	<u>File Types</u>		
	DK Cancel	Apply Help		

- 3. Using the **New Type** button, add the following MIME types:
- Associated extension: .xaml
- Content type (MIME): application/xaml+xml
- Associated extension: .xap
- **Content type (MIME)**: application/x-silverlight-app

File Types	×
Registered file types: .xaml application/x	aml+xml New Type Remove
File Type	
Associated extension:	.xap application/x-silverlight-app OK Cancel
Extension: Content Type (MIME)	.xaml application/xaml+xml OK Cancel

# 7.12 Multilingual and international support

# 7.12.1 Overview

Language settings of Kentico CMS can be performed on two levels: **User interface culture** defines the language of the administration interface (CMS Desk and Site Manager), while **Content culture** is used to define the language of your website content.

# User interface culture

The user interface culture represents language of the administration interface - CMS Desk and Site Manager. UI cultures can be managed and added in **Site Manager -> Development -> UI Cultures**.

Ul cultures can be set for each user in Site Manager -> Administration -> Users -> edit (*l*) a user -> General -> Preferred user interface culture.

The default UI culture can be set by adding the following key to the *<appSettings>* section of your site's *web.config* file:

<add key="CMSDefaultUICulture" value="en-nz" />

If you use this key, you also need to rename the ~\CMSResources\CMS.resx file to CMS.en-us.resx and the CMS.en-nz.resx file to CMS.resx. This is needed because the CMS.resx file is used when the (default) option in selected in users' Preferred user interface culture.

When this key is used and the CMS.resx file contains the en-nz dictionary, for the user who has their **Preferred user interface culture** set to **(default)**, the UI culture will be *en-nz*.

Learn more about configuring multilingual UI here.

# **Content culture**

The content culture determines the actual culture of the website content stored in Kentico documents. In a multilingual site, there are multiple versions of a document for each culture.

The list of all content cultures available in Kentico CMS can be found in **Site Manager -> Development** -> **Cultures**. All major cultures are provided in the list.

The default content culture can be set the following ways:

- Site Manager -> Sites -> Edit -> Default content culture
- Site Manager -> Settings -> (select site from the drop-down list) -> website -> Default culture
  of the content

See the example on this page.

Based on the settings of the user's **Preferred content culture** in the **Site Manager -> Administration** -> **Users ->**edit () a user -> **General** tab the user will either see the content in the default culture - if the setting is to **(default)** - or in the preferred culture. It is also possible to set the default culture separately for anonymous visitors of the site. This again can be set on two levels:

- generally for a site in Site Manager -> Sites -> edit () a site -> General -> Default visitor culture
- for a particular domain alias of a site in Site Manager -> Sites -> edit (*P*) a site-> Domain Aliases
   -> edit (*P*) an alias -> Default visitor culture

It is either set to (Automatic) in which case the user's browser settings will be used, or it can be set manually to one of the available cultures. The list of available cultures can be found in Site Manager -> Sites -> edit () a site -> Cultures.

# 7.12.2 Configuring multilingual content

This chapter explains how to configure website for displaying content in multiple languages. When you create a new website, it uses the culture you specify during the <u>New site wizard</u>.

The following example shows how to add extra language versions to the standard Corporate Site:

1. Go to **Site Manager -> Sites** and click the **Edit site** ( $\checkmark$ ) icon next to the Corporate Site. Go to the **Cultures** tab. Click the **Add cultures** button and add the following cultures: French - France and German - Germany. Click **Save**.



2. Switch to the CMS Desk. You can see there's a new section with language selection in the main toolbar:



3. Click root document and choose **French** culture. Since the French version of the document doesn't exist yet, you're offered with two options:

- create empty document - this option creates a new document of the same type without any content.

- copy content from another language - this option creates a new document of the same type and

copies the content from the English version

Choose to copy content from the English version and click **Create document**:

New culture version (fr-FR)			
The document does not exist in the current culture. Yo	ou can create a new culture version of the document.		
Create empty document			
Copy content from another language			
English - United States			
Create document			

4. You are redirected to the editing form of the new version:

Corporate Site	ð
E Save	Spell check
Document n	iame:

The root cannot have any name, so the box is now disabled. Click **Save**. The new document culture version is created.

5. Now repeat the same for the **Home** page. On the editing form, change the document name to: French Home.

Home	
Save	Spell check
Document name:	French Home
Teaser image:	👍 Upload file
Publish from:	Now
Publish to:	Now Now

#### Click Save.

6. Change the heading text in the **MainContentText** web part to "Welcome to the French version of the Sample Corporate Site".



Click Save.

7. Sign out. Now, you can see the live site in French version:

S'inscrire



This is a sample web site created with Kentico CMS for ASP.NET. You can use it as a starter kit for your own web site and to learn Kentico CMS.

8. As you can see, you can switch between languages using the language selection links at the top. They are displayed automatically using the **Language selection** web part.

9. Now sign in as administrator to **Site Manager and go to Settings -> website**. Choose the Corporate Site in the drop-down list and set the value **Combine with default culture** to **true**. Click **Save**. Sign out and see the French version of the live website now:


Newsletter subscription					
First Name:					
Last Name:					
E-mail:					
	S'incoriro				

# Welcome to the French version of the Sample Corporate Site

This is a sample web site created with **Kentico CMS for ASP.NET**. You can use it as a starter kit for your own web site and to learn Kentico CMS.

As you can see, the documents (menu items) that are not translated to French, are now displayed in the default culture (English).



Every time you create content for another language version, please be sure you "translate" at least the **root** document and the **home page**. Otherwise, the website will not be displayed correctly.

The documents that are not translated yet are displayed with a little cross icon on the right so that you know what needs to be translated.

## 7.12.3 Configuring multilingual and RTL UI

Kentico CMS allows you to manage content in any language, including double-byte (eastern) languages, such as Chinese, and right-to-left languages (such as Hebrew or Arabic). All content is stored and published in UNICODE.

## Translating the administration interface

If you want the administration interface to be displayed in a different language or at least with different culture settings (e.g. calendar and numeric format), go to **Site Manager -> Development -> UI** cultures and create a new UI culture:

- Ul culture name: Hebrew (example you can use any other culture)
- Ul culture code: he-IL (example you can use any other culture code)

Click OK.

Now create a copy of file <web project>\CMSResources\cms.resx under name cms.he-IL.resx

(generally **cms.<culture code>.resx**) in the same folder and translate the strings.

**Please note**: when you make changes to the .resx file, you need to restart the web application using the **Site Manager -> Administration -> System -> Restart application** button so that the changes are updated in the user interface.

## Modifying standard strings

If you want to modify some text in the user interface (including web parts), you can create a **custom**. **resx** file and put your strings to this file. The name of the string must be the same as in the **cms.resx** file. This procedure allows you to modify the strings without worrying that your changes will be overwritten during an upgrade to a newer version.

If you need to customize strings in non-english resource file, your custom file must use a name like **custom.fr-fr.resx** for French.

#### How to add your own strings

If you need to translate your own website strings, such as form labels or other static text into several languages, you can create custom string in **Site Manager -> Development -> UI cultures** either in English or only in some specific language. Please be sure to check the **Custom string** box in this case so that the string is automatically exported with your website.

Then, you can retrieve the string using the **CMS.GlobalHelper.ResHelper.GetString** method in your custom code.

Please see chapter <u>Localization Expressions</u> to see how you can insert localized strings into text values throughout the CMS.

	Priority of the resource strings								
	When looking for a localized strings, the system uses the following priority:								
	<ol> <li>database (Site Manager -&gt; Development -&gt; UI Cultures)</li> <li>custom.resx</li> <li>cms.resx</li> </ol>								
	It means if there are duplicate strings with same name in all three files, the system will use the one stored in the database.								
	To change the priorities, you can add the following key to your web.config:								
	<add key="CMSUseSQLResourceManagerAsPrimary" value="false"></add>								
	When the key is added, the priorities are the following:								
	1. custom.resx 2. cms.resx								

3. database (Site Manager -> Development -> UI Cultures)

## Applying selected culture to the user interface

Now if you want to view the user interface in a different culture, you need to go to **Site Manager -> Administration -> Users ->** edit your user profile and set the **Preferred user interface culture** to the required value:

🌡 Users									
Users Waiting for approval	Mass e-mail	On-line us	sers						
<u>Users</u> ► Mia									
General Password Se	ettings Sites	Roles	Departments	Notifications	Categories				
Log in as this user									
User name:*	Mia								
Full name: *	Mia Lee								
First name:	Mia				7				
Middle name:									
Last name:	Lee	Lee							
E-mail:	mia.lee@n	nydomainX	Y.com						
Enabled:	$\checkmark$								
Is editor:									
Is global administrator:									
Is external user:									
Is domain user:									
Is hidden:									
					_				
Preferred content culture:	English - U	United State	es	-	·				
Preferred user interface cult	ure: Czech			-	•				
Created:	12/8/2009 3	:09:21 PM							
Last logon:	N/A N/A								
Starting alias path:	19075								
2	ОК								
		and the second se							

When you sign out and sign in again, the user interface is displayed with the new culture settings and translated strings (after you translate them):

Sign out v5.0.3644 Global Administrator :User • Corporate Site :Site Switch to Site Manager				<b>T</b> 1		Carbon	
		-	Administration	1 100IS	My desk	Concenc	
0	P			Q		Сору 📄	Up 👔 📄
V	Search	List	Live site	Preview	Edit	Move 🚔	Down 🕹 Delete New
	Other		View	mode		Cont	ent management
0	Prope	ties Mas	terpage Fi	orm Desiç	n Page		Corporate Site 🕑 🖯
							Home 📄
			Spell che	<u>ck 📷 S</u>	ave 📊		Services 📄 😐
Sign in to PMS Back. Sign in to PMS Site Mensager. The default account is administrator with blank password						Products 📄 🕀	
							News 📃 🕞
- <u></u>	Global A	Iministrato	r (administra	tor)	in out		Partners 📃 🕞
Select XClear V OCO							Company 📃 🕢
oompanyLogo	🐺 Shopping cart   My account   My wishlist						Blogs 📃 🕢
a a u hau A ma S a			Your shop	oping cart is	empty		Forums 📃 🕢
	_						Events 📄 🕀
	Se	arch for:			~		Images 📄 🕞
Harra Canicaa Bradusta Navia Badhara Carabani Blave Ferrina Fuenta	Imagina	14614	Tuamalaa				Wiki 📃 🕀
Home Services Froducts News Farthers Company blogs Forums Events	images	VVIKI	zxampies				Examples 📄 🕀
							Special pages 🗐 🕢
							Images 🗐 🛞
						L.	
						•	

## 7.12.4 RTL languages

If the website is displayed in language that uses right-to-left direction of written text (typically arabic languages), the CSS style of the BODY element is set to RTL (<body class="RTL">). You may need to add right-to-left specific CSS styles modifications.



## Example:

Original LTR style:

```
.xxx
{
text-align: left;
float: left;
border-right: solid 1px #cccccc;
}
```

RTL style:

```
.RTL .xxx
{
 text-align: right;
 float: right;
 border-right: none;
 border-left: solid 1px #cccccc;
```

}

#### Adding culture-specific fonts

If your culture uses specific fonts that are not available in the WYSIWYG editor, you need to configure it:

- 1. Open file <web project>\CMSAdminControls\FCKeditor\fckconfig.js in notepad.
- 2. Add your font names on the following line:

FCKConfig.FontNames = 'Arial;Comic Sans MS;Courier New;Tahoma;Times New Roman; Verdana';

#### 3. Save the file.

4. Clear the cache of your web browser (Internet Explorer: Tools -> Internet Options -> General -> Delete files..., check the "delete all off-line content" box and click OK).

5. Close the browser and sign in to Kentico CMS Desk again. Now you should see the new font(s) in the WYSIWYG editor's font list.

## 7.12.5 Languages and URLs

When you're using multilingual support, all language versions of the given document use the same URL (based on the alias path) by default. E.g. the home page always has this URL: /Home.aspx

If you want to see the same page in French, you need to go to: /Home.aspx?lang=fr-fr

Once the language is changed, the selected language is stored in the visitor browser's cookie and when the user comes back to the */Home.aspx* URL (without any parameters), the French version is displayed to them.

## Using custom URL path for different culture versions

If you want the French home page to have different URL than the English version, you need to go to CMS **Desk -> Content** -> choose the French language, select /Home in the content tree and click **Properties** -> General.

Check the Use custom URL path box and set the Document URL Path value to: /frenchhome

582

Page Design	Form Properties
General	
URLs	<b>Save</b>
Template	
Metadata	Path
Categories	Document alias: Home
Menu	Document URL path: //renchhome
Workflow	Vse custom URL path
Versions	
Related docs	Extended properties
Linked docs	URL extensions:
Security	Use custom URL extensions
Attachments	Track campaign:

Now sign out, switch to the English version and go to URL: <web project>/frenchhome.aspx page The website culture is automatically switched to French and you're displayed with French version.

You can also find some information on using Wildcard URLs on multi-lingual sites in this topic.

## 7.12.6 Default language selection

When a user first comes to the website, their content language is selected and stored in a cookie. You can specify for every domain and domain alias which culture should be used by default.

Go to **Site Manager -> Sites** and edit site Corporate Site. On the **General** tab, you can see the **Default visitor culture** field. You can choose either some particular language that will be used by default or you can choose the option **(Automatic)** that displays the content based on the preferred language of visitor's web browser (in Internet Explorer, you can set the default language in Tools -> Internet Options -> Languages). It automatically selects the nearest content culture that is available for the given website.

#### Language selection based on the domain

You can configure the system to use different default languages based on the current domain. If you use the following domains:

- example.com (main domain)
- example.de (domain alias)
- example.fr (domain alias)

you need to set the default cultures English, German and French to the domains/domain aliases (respectively). Now, when a visitor comes first to e.g. *example.fr* domain, the content is automatically displayed in French.

#### 7.12.7 Localization Expressions

If you need to supply a localized value into web part property or to some other setting where localization expressions are supported, you can use expressions in following formats:

Format	Description	Sample Value

Basic format: {\$key\$}	Displays value of the given string specified in the Site Manager -> Development -> UI Cultures section or in the resx files in the CMSResources folder.					
<pre>In-place localization: {\$=default_string </pre>	Displays the strings defined in the expression.	{\$=Hello de-de=Hallo it- it=Ciao\$}				
<pre>culture_code=translati on  culture_code=translati on etc.\$}</pre>	On the left, you can see an example that displays Hallo for German culture, Ciao for Italian and Hello for all other cultures (default value).					

See also: Appendix A - Macro expressions

## 7.12.8 Translation management

#### 7.12.8.1 Overview

The translation management features brings various improvements aimed to facilitate website localization. There is a large number of improvements planned to be implemented. Due to the complexity, only the first implementation phase can be found in this version of Kentico CMS. The full functionality is supposed to be implemented in one of the following versions.

#### What is already available?

- Culture-dependent workflow scopes each language version can have its own workflow defined
- <u>Translation status overview on the List tab</u> you can see which language versions of documents under the selected node are translated, missing or outdated
- <u>New Properties -> Languages tab</u> for each document, this tab displays information about all language versions of the current document
- Language-bound editors you can specify which users can edit particular language versions of documents

#### 7.12.8.2 Culture-dependent workflow scopes

Workflows can now be defined separately for each language version of your documents by using culturedependent workflow scopes. A workflow scope defines which documents should a particular workflow be applied to. If you are not familiar with the workflow functionality of Kentico CMS, please refer to the **Workflow and versioning** chapter of this guide and especially <u>this topic</u>, where the process of defining a workflow is described step-by-step.

When defining a workflow scope, you can now specify the **Culture** property. Using this property, you can specify that the workflow will be applied only to the specific language versions of the documents.

The three workflow scope properties work as the following:

- Starting alias path the workflow will be applied only to documents stored under the entered alias path
- Document type the workflow will be applied only to documents of the selected document type
- **Culture** the workflow will be applied only to the selected language versions of documents specified by the two properties above; choose (all) for the workflow to be applied to all cultural versions

Workflow scopes are applied with the following priorities (from highest to lowest):

- 1. Scope with specified document type and culture
- 2. Scope with specified document type
- 3. Scope with specified culture
- 4. Scope without specified document type and culture

#### 7.12.8.3 Translation status overview

CMS Desk's **List** tab provides a useful overview of language versions of the documents. By selecting a node from the content tree and switching to this tab, you can see a list of documents placed under the selected node.

As you can see in the screenshot below, there is the **Languages** column with flags on different colored backgrounds. This column is displayed only on multi-language sites. The flags represent the particular language versions of each document.

The colors indicate the following translation statuses with respect to the default site culture:

- Green Translated the document is translated and up-to-date
- Orange Outdated the document is translated but outdated, which means that the default language version has been modified (or published when using workflow) more recently than the translated version
- Red Not available the document's version in the language does not exist

If you click a **Translated** or **Outdated** flag, you are redirected to the **Edit -> Page** tab of the appropriate language version of the document. If you click a **Not available** flag, you are redirected to the language

version's creation dialog.

Another thing you may notice in the screenshot below is the **(en-US)** string attached to some document's names. The **Name** column displays names of the documents in the currently edited culture (which is French in the screenshot). If the document in this language version **does not exist**, the column displays the name from the **default culture** with the default culture code appended in brackets.

Kentico CMS Desk Content My desi	c Tools Administr	ation	Switch to Site Manager Site: Corr	oorate Site 💌 User: Gl	obal Administrator v5.0.3	3644 Sign out
New Delete Move Down Content management	Edit Previet	v Live site List Czec	h English French Language			C
Corporate Site # Home  Services# Products News#	Corporate Site Document Document name:	listing				Ø
Partners *     Gompany *     Bogs *     Bogs *     Forums *     Events *	Document type: Language:	LIKE  Translated to  Show	re)			
🖶 📄 Images #	Actions	Document name	Document type	Modified	Published Version	Languages
Examples *		Home	Page (menu item)	12/23/2009 2:16:12 PM	Yes -	
🗉 뉔 Special pages 🕷		Services (en-US)	Page (menu item)	////2009 1:54:05 PM	Yes -	
🕢 🍓 Images 🕷		Products	Page (menu item)	12/23/2009 2:16:18 PM	Yes -	
		News (en-US)	Page (menu item)	9/29/2008 1:59:20 PM	Yes -	
•		Partners (en-US)	Page (menu item)	8/6/2009 12:50:42 PM	Yes -	
		Company (en-US)	Page (menu item)	11/25/2008 5:37:23 PM	Yes -	
	/× 🗈	Blogs (en-US)	Page (menu item)	4/21/2008 3:15:44 PM	Yes -	
	/× 🗉	Forums (en-US)	Page (menu item)	4/21/2008 3:19:08 PM	Yes -	
	/× 🗉	Events (en-US)	Page (menu item)	4/21/2008 3:19:44 PM	Yes -	
	N 🗙 🔲	Images (en-US)	Page (menu item)	4/21/2008 3:20:27 PM	Yes -	
	/ 🗶 🔲	Wiki (en-US)	Page (menu item)	5/21/2009 8:39:40 AM	Yes -	
	N 🗱 🛛	Examples (en-US)	Page (menu item)	9/4/2008 4:16:42 PM	Yes -	
	N 🗙 🔲	Special pages (en-US)	Folder	12/13/2007 11:42:41 AM	Yes -	
	N 🗙 🔲	Images (en-US)	Folder	11/12/2009 4:29:51 PM	Yes -	
	Selected documer	ts 💌 (select some action) 💌	ОК		ŀ	tems per page: 25 💌

If you hover a flag with the mouse cursor, an info box will be displayed, giving additional information about the language version.



#### The Languages tab

The same statuses can be shown separately for each document. You can view them by selecting the document from the content tree and switching to the **Properties -> Languages** tab.

By clicking the **Edit culture version** ( $\checkmark$ ) icon, you can be redirected to the **Edit -> Page** tab of the selected culture version. By clicking the **Add new culture version** ( $\square$ ) icon of a not-available version, you can proceed to creating the new culture version of the document.

Kentico							Switch to S	ite Manager	Site: Corpor	rate Site 💌	User: Global Administrator	v5.0.3644	Sign out
CMS Desk Content	t My desk	Tools	Administratio	n									
New Delete Move 4 Content management	Up Down	Edit	Preview View	Live site	List	Czech	English Language	French	Search Other				0
🖃 🕘 Corporate Site 🕷		Page [	Design Fo	orm Properti	es								0
Home	G	General											0
Services#	U	IRLs											
News*	т	emplate											
Partners #	M	letadata								<b>61</b> 1	A. 110 1		
💼 📄 Company #	C	Categories		Action	Name			Langua	age	Status	Modified	Version	Published
💼 📄 Blogs 🕷	M	1enu			Home			📑 Eng	llish - United Stat	tes Translate	d 12/23/2009 2:17:52 PM	-	Yes
🔁 📄 Forums 🕷	v	Vorkflow		P	Home			🚺 Frer	nch - France	Outdated	12/23/2009 2:16:12 PM	-	Yes
Events*	v	ersions			-			닐 Cze	ch - Czech Repu	blic Not availa	ible -	-	No
🖃 🔄 Images *	R	telated docs											
Examples*	u	inked docs											
🧉 🍓 Special pages *	s	ecurity											
💼 📹 Images 🕷	A	ttachments											
	L	anguages											

#### Hiding the Languages tab

The **Languages** tab can be displayed or hidden to members of particular roles. This can be set up using UI personalization as described <u>here</u>.

#### 7.12.8.4 Language-bound editors

You can also specify who will be able to edit which language versions of documents. This setting can be done separately for each user. If you go to **Site Manager -> Administration -> Users**, choose to **Edit** (  $\checkmark$ ) a particular user and switch to the **Languages** tab, you have the following two options:

- User can edit all languages if selected, the currently edited user can edit documents in all language versions of all sites in the system
- User can edit following languages if selected, you can specify which language versions can be edited by the user by checking the check-boxes in the list of language versions; this can be set separately for each site in the system using the **Select site** drop-down list

CMS Site Manager Sites Administration Settings Development Licenses Support     Administration     Users	
- Administration	
Image: Contract of the contract	25
English - United States      Remove selected Add cultures	

# 7.13 Page processing and URLs

## 7.13.1 Overview

Kentico CMS processes URLs using a **URL rewriting engine**. This engine ensures the displaying of the correct page based on the required friendly (smart) URL. After the page is processed by the URL rewriting engine, it is run through the output filters that ensure additional changes in the rendered HTML code.

The following figure shows the page processing step-by-step:



## 7.13.2 URL rewriting

Kentico CMS uses a system of friendly URL addresses. It allows you to use URLs like:

http://www.example.com/products/kentico-cms.aspx

instead of

http://www.example.com/products.aspx?id=527

Every document has its own URL. When multiple languages are used, the document is recognized either using its **URL path** (if specified) or using a combination of **alias path and preferred culture** that is stored in a cookie.

#### **URL processing**

1. The system gets the incoming request http://www.example.com/products/kentico-cms.aspx and looks up the website based on the domain name (either on the main domain name or domain aliases). If it doesn't find any running website, it displays the page /cmsmessages/invalidwebsite.aspx. If the domain name with the required port number is not found, it also tries to find a site with the same domain name without any port number.

2. Then it looks up a document with alias path equal to /products/kentico-cms and in the current culture. It can optionally also search for the default culture version of the same document in case the required culture version is not available - this can be set in **Site Manager -> Settings -> Web site -> Combine with default culture**.

3. If such a URL path is not found, the system tries to find a document with URL path /products/ kentico-cms.

4. If no document is found for the requested URL, the system doesn't process the request and the web server displays the standard 404 – Page not found error.

5. If the requested document is found, the URL rewriting engine looks up which page template should be used to display it and calls the appropriate page template like this: /products.aspx?aliaspath=/ prodcuts/kentico-cms. The page template is responsible for the displaying of the document. If the document doesn't have any page template specified, the URL rewriting engine tries to find and use the page template of the parent document. If the page is managed by the portal engine, the page called is / cmspages/portaltemplate.aspx, which is a page that renders the page from web parts.

The system of "friendly" or "smart" URLs provides several benefits:

- They are easy to remember and easy to write into the browser address bar.
- They are friendly towards search engines (SEO friendly).
- They show users where they are located on the website.
- You can easily send the URL of the document to your friends and they will see the same page with the particular document.

#### 7.13.3 Multiple document aliases

In versions prior to Kentico CMS 4.0, you could have two URLs leading to one document. Both of these could be set in CMS Desk, on the **Properties -> URLs** tab of each document:

- Document alias this is the unique name of the document in the given section of the website; if Media is the value, then <domain>/Media.aspx is the URL under which the document can be accessed by default
- **Document URL path** this is the URL alias that could be used in the versions preceding 4.0; if you enter */Medialibrary*, the page will also become accessible through *<domain>/Medialibrary.aspx*

Kentico CMS 4.0 brings the possibility of having an unlimited number of aliases for each document. Adding new document aliases can be done the following way: 1. Sign in to CMS Desk, select some document from the content tree and switch to its **Properties -> URLs** tab.

Page	Design	Form	Properties	
General				
URLs			E Save	
Template				
Metadata		1	Path	
Categories	5		Document alias: Media	
Menu			Document URL path: //Media	library
Workflow			🔽 Use	custom URL path
Versions		L		
Related do	ocs	1	Extended properties	
Linked doo	s		URL extensions:	
Security			🔳 Use	custom URL extensions
Attachmer	nts		Track campaign:	
		[	Document aliases	
			Add new alias	
		0.000		

2. Click the **Add new alias** link in the **Document aliases** section.

- 3. Enter the following details:
- URL path URL of the alias
- **Culture** cultural version of the document that will be displayed when accessing the page through this URL
- URL extensions additional supported extensions of the URL; for these to work, you will have to configure the system as described in <u>Configuration of custom URL extensions</u>; optional field
- **Track campaign** name of a web analytics campaign that will be created on the first access through this URL alias and that will be used for tracking access to the document through the alias; optional field

General	URLs   Add new alias
URLs	
Template	
Metadata	URL path: /Mediagallery
Categories	Culture: English - United States -
Menu	URL extensions: asp
Workflow	Track compaign: MuCompaign
Versions	Hack campaign. WyCampaign
Related docs	ОК
Linked docs	
Security	
Attachments	

Click **OK** to create the alias.

4. Now if you switch back to the **Properties -> URLs** tab of the document, you should see the newly

created alias present in the list in the **Document aliases** section, as depicted in the screenshot below. Like this, you can add an unlimited number of aliases.

	.565			
Add new	alias			
Actions	URL path	URL extensions	Track campaign	Language
N 🗙	/Mediagallery	.asp	MyCampaign	English - United States

## Wildcard URLs

Wildcard URLs can also be used in these additional document aliases. For more information on wildcard URLs, please refer to the <u>Wildcard URLs</u> chapter of this guide.

## 7.13.4 URL format and configuration

## Defining the extension of URLs

The URLs can use various extensions. By default, all URLs end with .aspx, such as: http://www.example.com/products/kentico-cms.aspx

You can also use **custom extensions**, such as .htm, .html or any custom extension. Alternatively, you can even use **URLs without extensions**, such as http://www.example.com/products/kenticocms. However, in this case, you need to configure the system as described in <u>Configuration of custom</u> <u>URL extensions</u>.

## **Excluding URLs from the CMS engine**

If you need to add your own pages to the website, you may need to exclude them from CMS engine processing. You can do that by adding the page URL (without extension) to the **Site Manager -> Settings -> URLs and SEO -> Excluded URLs** value (you can enter several URLs separated by a semicolon (;)).

## Forbidden URL characters

The URLs (alias paths and URL paths) cannot contain some special characters. By default, these are the forbidden characters:

/: *? " " < > | & % . ' # [] and the space character.

You can add additional forbidden characters by entering them (without any separator) into the **Site Manager -> Settings -> URLs and SEO -> Forbidden URL Characters** setting field.

The forbidden characters are removed by default. You can specify the character that will replace forbidden characters in the **Site Manager -> Settings -> URLs and SEO -> Forbidden Characters Replacement** setting field.

## **Using URL Prefix**

If you need to add some prefix to all URLs (e.g. for search engine optimization), you can specify it in the Site Manager -> Settings -> URLs and SEO -> Default Url Path Prefix field.

The URLs will then look like this: http://www.example.com/myprefix/products/kentico-cms.aspx

## Automatic creation of new document aliases

If you check the Site Manager -> Settings -> URLs and SEO -> Remember original URLs when moving documents check-box, new document aliases will automatically be created when a new extension or URL path is set.

## **URL** related settings

The above configuration tasks can be performed in Site Manager -> Settings -> URLs and SEO. The following table contains these settings and provides descriptions for them:

Forbidden URL characters	List of additional characters that can't be used in the document alias and in the file system. The following characters are forbidden by default: ' \ /:*? `` <> & %.'#[]+ =
Forbidden characters replacement	Character that will be used as a replacement of forbidden characters in the document alias and in the file system.
Friendly URL extension	Specifies the extension of friendly URLs. The extension should be preceded by a dot when entered, such as: .aspx or .html. When you omit this value, the friendly URLs will be the same as the alias path (e.g. /products/nokia). <b>Please note</b> : The system of "friendly" or "smart" URLs provides several benefits. They are easy to remember and easy to write into the browser address bar. They are search engine friendly (SEO friendly). They show users where they are located on the website. You can easily send the URL of the document to your friend and she will see the same page with the particular document.
Files friendly URL extension	Specifies the extension for files that will be used in friendly URLs, such as ".aspx" or ".html".
	Example: getfile/ <node alias="">/myimage.aspx</node>
	When you omit this value, the file friendly URLs will end with no extension: getfile/ <node alias="">/myimage</node>
Excluded URLs	List of URLs (without domain) that should be excluded from the CMS engine. You can enter several paths separated by a semicolon (;).
Default URL path prefix	Defines a default URL path prefix that will be used for all URLs of the content pages. This prefix is rewritten to 'urlpathprefix' query string parameter.
Use name path for URL path	If checked, this key indicates that a document's name path will automatically be copied to its URL path.

Use permanent URLs	If enabled, URLs of documents and document attachments will be generated in permanent format; if disabled, friendly URLs will be used. Learn more at Linking pages and files.			
Remember original URLs when moving documents	Determines if new document aliases should be created when a new document URL path or extension is set.			
Google sitemap URL	URL that will be automatically rewritten to the physical location of the Google Sitemap. The physical location is ~/ <i>CMSPages/GoogleSiteMap.aspx</i> . More information can be found at <u>Google Sitemap</u> .			
Allow permanent (301) redirection	If enabled, the system uses permanent (301) redirection instead of standard (302) redirection for SEO purposes.			
Use URLs with trailing slash	Specifies how URLs with trailing slash should be handled. Possible options: Leave the URL as is, Always use URLs with trailing slash, Always use URLs without trailing slash.			
Redirect document aliases to main URL	If enabled, every document always has only one valid URL and other aliases are redirected to this main URL, for SEO purposes.			
Redirect invalid case URLs to their correct versions	Checks the URL letter case, and if configured, redirects to their correct version. Options: Do not check the URLs case, Use the exact URL of the document, Redirect all requests to lower case URLs, Redirect all requests to upper case URLs.			

## 7.13.5 Wildcard URLs

592

Wildcard URLs provide a way of loading content dynamically depending on the page URL. You can find an example of how this works on the sample Community starter site. The **Members -> Profile** page uses wildcard URLs to display user profiles. As you can see, it is only one single page that can display profiles of various site users.

How is it achieved? If you go to **CMS Desk**, select the **Members -> Profile** page from the content tree and switch to its **Properties** tab, you should see **/Members/{UserName}** in the **Document URL path** field. The **{UserName}** part of the URL is the actual wildcard.

🖃 🚭 Community Site	Page Design Form	m Properties
Home	General	
	UDI	🔜 Save
🗄 📄 News	URLS	
Media	Template	
🔁 📄 Forums	Metadata	Path
🗄 📄 Groups	Categories	Document alias: Profile
📺 📄 Group pages	Menu	Document URL path: //Members/(UserName}
😑 📄 Members	Workflow	Use custom URL nath
	Versions	
Profile	Related docs	Extended properties
Anagement	Linked docs	URL extensions:
🕘 🔚 Examples	Security	Use custom URL extensions
🗄 🔄 Files	Attachments	Track campaign:
💼 🔄 Special pages		
		Document aliases
Search		
		🙀 Add new alias

If you type <domain>/Members/David.aspx into your browser, the Members -> Profile page will be displayed and the wildcard part of the URL (David) gets translated into a query string parameter, so that the translated URL looks like this: <domain>/Members/Profile.aspx?username=David. As you can see, the name of the parameter is taken from the name of the wildcard, while the value is the matching part of the entered URL. The User public profile web part that is used on the page recognizes the username parameter in the rewritten URL and displays David's profile.

## Using wildcard URLs on multi-language sites

The **Document URL path** is unique for each language version of a document. Because of this fact, you may encounter problems when referring to a page using a wildcard URL on multi-lingual sites. Let's explain the situation using the following example:

On the sample **Community Starter site**, the **Members/Profile** page has its Document URL path set to **/Members/{UserName}**. If you created a version of this page in another language, its Document URL path would get changed to **/Members/{UserName}-1** automatically. This happens because the Document URL paths need to be unique.

Now let's presume that you have the following link leading to the page: <domain>/Members/David. aspx. In the original version, it works fine. But if you tried to click the link in the second language version, you would get an error because the URL in this language version would be <domain>/ Members/David-1.aspx.

If you want to keep such links functional in all language versions, you will need to define the **/Members/ {UserName}** path via the **Document aliases** section, as described in the <u>Multiple document aliases</u> topic. When creating the alias, select **(all)** in the **Culture** drop-down list. At the same time, you must erase the value from the original document's Document URL path. As it has higher priority, URL paths defined in the Document aliases section would have no effect. The result should look as in the following screenshot:

Page Design For	Properties
General	
URLs	T Save
Template	
Metadata	The changes were saved.
Categories	Path
Menu	Document alias: Profile
Workflow	Document URL path:
Versions	Vise custom URL path
Related docs	
Linked docs	Extended properties
Security	URL extensions:
Attachments	Use custom URL extensions
	Track campaign:
	Document aliases
	A AOD NEW dilas
	Actions URL path URL extensions Track campaign Language
	/Members/(UserName) English - United States

## Dots in wildcard URLs

You may encounter problems when a string containing a dot "." gets into the wildcard part of a URL. A typical example of this can be found on the **Members -> Profile** page of the sample Community Starter Site.

The page's Document URL path is set to **/Members/{UserName}**. Let's presume that you have the following user name: **jack.smith**. Then the user's profile page would be located at **http://<domain>/ Members/jack.smith**. As the last part of the URL after the last dot ('smith' in this case) is understood as file extension, this URL would produce the 404 error in your browser.

To prevent this, registration on the sample Community Starter Site doesn't allow user names with dots. This is ensured by a validation of the **UserName** field in the **Registration form** alternative form of the **User** system table.

If you needed to allow dots in user names and use wildcard URLs with user names at the same time, you can achieve this by removing the validation and setting the page's Document URL path to something like **/Members/{UserName}/Profile**. In this case, the dot would be located in the middle of the URL and the URL should work fine.

## 7.13.6 Linking pages and files

## Linking documents (pages)

If you need to create a permanent link to a document, you need to use a URL in the following format:

http://www.example.com/getdoc/016fad52-0d69-46d5-80dc-daec9173c0c7/Products.aspx

It's an equivalent of:

http://www.example.com/company/products.aspx

However, in the first case, the link keeps working even if you move the document to some other place.

The URL consists of the following parts:

<domain>/getdoc/<document GUID>/<document name><extension>

The *<document GUID>* value is a unique identifier of the document. You can find this value at **CMS Desk** -> **Content -> Properties -> General**, in the **Node GUID** field.

The *<document name>* value may contain any value - it's not used by the system and it's only used for search engine optimization. By default, the system uses the document name for this value.

## Linking a specific language version of the document

If you need to link to a specific language version of the document, you need to use a URL in the following format:

http://www.example.com/getdoc/8FG7-84E394-FABD-5678/our-services/fr-fr.aspx

It displays the given document in French (if the document is translated). It's an equivalent of

http://www.example.com/company/our-services.aspx?lang=fr-fr

The URL consists of the following parts:

<domain>/getdoc/<document GUID>/<document name>/<culture code><extension>

## Linking attachments

If you need to create a permanent link to a file uploaded as a document attachment, you need to use a URL in the following format:

http://www.example.com/getattachment/763c8921-be94-4610-99b4-25e8d3be5b08/logo.aspx

The URL consists of the following parts:

<domain>/getattachment/<file GUID>/<filename><extension>

The *<file GUID>* value is not the same as the document GUID. It's a GUID of the file in the *CMS_Attachment* table. You can find this GUID if you display the attachment in **CMS Desk** and view its URL.

The *<file name>* value can contain any text.

You can find more details on available parameters in the following topic: GetFile.aspx parameters.

## 7.13.7 GetFile.aspx parameters

The GetFile.aspx script is used in many cases to retrieve an uploaded file from the database. It is called whenever you use /getdoc, /getattachment or a direct URL based on the alias path of a cms.file

document.

The GetFile.aspx script accepts the following URL parameters:

Parameter Name	Description	Sample Value
guid	Attachment GUID value	
nodeguid	Node GUID value	
versionhistoryid	Version history ID of the attachment. It can only be used together with the <b>guid</b> parameter.	
width	Resizes the image to a specified width (in pixels).	100
height	Resizes the image to a specified height (in pixels).	400
maxsidesize	Resizes the image to the specified size of the longest side (in pixels).	500
disposition	Indicates the output disposition of the file. You can use either <b>inline</b> (opens the file in the browser window if possible) or <b>attachment</b> disposition (opens the "Save or Open" dialog).	inline or attachment

## 7.13.8 Output filters

The output filters are applied to rendered HTML code. They make various changes to the HTML code before it is sent to the browser:

## **Form filter**

The form filter fixes the issue with non-working postbacks on pages that use URL rewriting. It ensures that forms, dialogs and buttons will work correctly on Kentico CMS-managed pages.

You can exclude pages from this filter by adding their alias path to the **Site Manager -> Settings -> Output filter -> Excluded Output Form Filter URLs** field, separated by a semicolon (;).

#### **XHTML** filter

The XHTML filter fixes some XHTML incompatibilities. It closes unclosed tags, invalid <script> tags, etc.

You can exclude pages from this filter by adding their alias path to the **Site Manager -> Settings -> Output filter -> Excluded XHTML Filter URLs** field, separated by a semicolon (;).

XHTML errors may also be fixed in the WYSIWYG editor when they are saved. This can also be configured globally through the CMSWYSIWYGFixXHTML web.config parameter (supported values are "true" and "false").

## **Resolve filter**

The resolve filter changes relative URLs in format ~/mypage1/mypage2.aspx to /application/ mypage1/mypage2.aspx (application running in a sub-folder) or /mypage1/mypage2.aspx (application running in the root). It changes only URLs inside **src** and **href** attributes.

You can exclude pages from this filter by adding their alias path to the **Site Manager -> Settings -> Output filter -> Excluded Resolve Filter URLs** value, separated by a semicolon (;).

## 7.13.9 Google Sitemap

Kentico CMS comes with automatic support of the Google SiteMap Protocol. This is a protocol designed to help search engines with the indexing of your site and can improve your site's position in search engine results. Simply put, a Sitemap is an XML file where URLs of your site are stored. Detailed information about the SiteMap Protocol can be found at <a href="http://en.wikipedia.org/wiki/Site_map">http://en.wikipedia.org/wiki/Site_map</a>.

Kentico CMS creates your site's sitemap automatically. Physically, it is located at *<domain>/ CMSPages/googlesitemap.aspx*. It can also be accessed through the URL specified in **Site Manager -> Settings -> URLs and SEO -> Google sitemap URL**. This value is set to *googlesitemap.xml* by default, which means that the site's sitemap can also be accessed through *<domain>/googlesitemap*. *xml*. This is the URL that you enter into google when registering a new sitemap.

Please note that if you want the sitemap to be accessible via a URL with the **.xml** extension, you need to configure your IIS to handle the **404 error** through Kentico's **handler404**, as described in the Installation and deployment -> Additional configuration tasks -> Custom URL extensions and extensionless URLs chapter. In this case, it is also necessary **not to set** the .xml extension to be processed by .NET.

							Quitet to QM2 Deals	Harry Clabel Adapte
	Kentico						Switch to CMS Desk	User: Global Admin
	CMS Site Manager Sites	Administration	Settings	Development	Licenses	Sup	port	
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		Save	A Reset	these settings to d	lefault			
Sett	tings		T					
	Web site							
	Content management	These setting	gs are glob	al, they can be o	overridden by	the lo	cal site settings. Please select the site to see or chang	e the site settings.
	Files							
	Membership	Forbidden	URL chara	cters		2		
	😵 Security	Forbidden	characters	renlacement		0	-	]
· · · E	URLs and SEO	1 of bladerin	citaractero	replacement		•	-	]
	Output filter	Friendly UF	RL extensio	ins		2	.aspx	
	System	Files friend	lv URL exte	ension		0	asov	1
	E-mails	1100 11010	.,			•	.uopn	]
	4 Avatars	Excluded U	IRLs			?		
	👦 Bad words	Default UR	L path pref	īx		2		]
	Blogs					~	_	]
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	Windows LiveID	Use URLs	with trailing	g slash		?	Leave the URL as is	
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	Payment dateway - Authorizo NET	rteanett ut	reament al	acco to mail Or		0		
	Payment gateway - Authorize.NET	Redirect in	valid case	URLs to their cor	rect versions	2	Do not check the URLs case	
	a raymene gateway - rayrai							
		Export thes	e settinas					

## 7.14 Rebranding

## 7.14.1 Changing a logo in the header

In this topic, you will learn how to change the header logo on the sample Corporate Site.

1. Go to CMS Desk -> Content and select the root of the content tree (Corporate Site).

Kentico CMS Desk Content My desk	Switch to Site Manager Site: Corporate Site - User: Global Administrator v5.0.3844 Sign out Tools Administration
Rew Delete Anove Down Content management	Edit Preview Live site List View mode Other
Corporate Site	Page Design Form Master page Properties
Home     Services     Products     News     Restnere	
Company	
a) - Blogs c) - Forums c) - Events c) - Images c) - Wiki c) - Examples c) - Special pages c) - € Special pages c) - € Images	Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The default account is administrator with blank password.  Global Administrator (administrator)  Sign out  Select Sclear VLOGO  Your shopping cart   My account   My wishlist Your shopping cart is empty Search for.
٩	Home Services Products News Partners Company Blogs Forums Events Images Wiki Examples

2. Click **Select** ... above the logo.

Page Design Form Master page Properties	
R Save Spell check	
🛛 🔄 Source 🖪 🐰 🖥 🛍 👘 📾 🖨 🗠 🖙 🖓 👫 🕅 🖉 🖪 I	∐ 44€   ×₂ ײ   Ξ Ε   ∉ ∉   Ε Ξ Ξ ■   🐁 🐁 🗘
i 📾 🛤 🖽 📇 🕲 🦚 🔚 i 🗉   🐷   🕲   😭 i 👑	
Style Format Font Size	• T ₂ • 4 • 0 • 0
Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The	default account is administrator with blank password.
[	Olahal Administration (administration)
SelectYLOGO	Sign out

3. In the **Select image** dialog that pops up, select **Images** in the content tree and click the **New file** button above the content tree.



4. Find an image you want to upload and click **Open**.

🟉 Choose File to Upload 💽						
🚱 🗢 📕 « Default 🕨	Images 🕨 Design 🕨	👻 🍫 Search Design	Q			
Organize 👻 New folde	r	:= ▼				
🔺 🚖 Favorites	Name	Date modified	Туре			
📃 Desktop 😑	퉬 Backgrounds	22.12.2009 13:25	File folder			
鷆 Downloads 📃	퉬 Buttons	22.12.2009 13:25	File folder			
🔢 Recent Places	퉬 Controls	22.12.2009 13:25	File folder			
	퉬 Forums	22.12.2009 13:25	File folder			
🖉 🥽 Libraries	퉬 Preloaders	22.12.2009 13:25	File folder			
Documents	퉬 Selectors	22.12.2009 13:25	File folder			
🖻 🎝 Music	퉬 Wizards	22.12.2009 13:25	File folder			
Pictures	尾 Logo	21.12.2009 5:03	PNG image			
🖻 🔣 Videos	📭 LogoSiteManager	21.12.2009 5:03	PNG image			
✓ I Computer ▶ ▲ Local Disk (C:)						
a 🙀 Network 🚽	•	III	۴			
File na	me: Logo	<ul> <li>✓ All Files (*.*)</li> <li>Open </li> </ul>	▼ Cancel			

7. The logo should be added to the Images folder. With the logo selected in the content tree, click **Select**.

🧊 Select image		
Attachments Content Media libraries	Web	
New folder 🔒 New file	List Tiles III Thumbhails	0
Site: Corporate Site Corporate Site Home Government Services Company Government Company Government Company Government Company Government Company Government Company Government Company Government Company Government Company C	General   URL: /9644_9682/Images-(1)/Logo.aspx   Witth: I54   Height: A     Height: 43     Image: Complexity of the second seco	
		Select Cancel

8. Now click **Save**.

Page Design For	m Master page Proper	ties				
🔚 Save) 🐺 Sp	<u>ell check</u>					
🛛 🗐 Source 🔂 🖁	h il i i i i i i i i i i i i i i i i i i	o o   🗛 😘 🔳 🖉 🛛	B <i>I</i> <u>U</u> ≜	BC   ×₂ ײ   ⅓Ξ  Ξ	∉ ∉   ≡ ≡ ≡   🍓	<b>\$</b> \$
🗑 📾 📼 🚝 😀	🚳 📇 📳 🔜 🕥	🚖   🚟				
style	▼ Format	▼ Font S	ize	• Ta• 🎥 🔲 🗋	L	
	Sign in to <u>CM</u>	<u>S Desk</u> . Sign in to <u>CMS Site Mar</u>	l <mark>ager</mark> . The defau	It account is administrator	with blank password.	
Colort 💙	Close				Global Administrator (admin	istrator) Sign out
CMS C	esk				) <u>Shopping cart   My</u> Y	account   <u>My wishlist</u> 'our shopping cart is empty
					Search for:	٩
Home Service	es Products News	Partners Company	Blogs	Forums Events	Images Wiki Example	es

You've just publish a new logo on your website.



## 7.14.2 Removing the log-on bar

1. Go to CMS Desk -> Content -> Corporate Site.

Kentico CMS Desk Content My desl	Switch to Site Manager Site: Corporate Site   User: Global Administrator v5.0.3837   Sign out Tools Administration	
New Delete Move Down	Edit Preview Live site List Search View mode Other	0
Corporate Site	Page Design Form Master page Properties	0
Home	Save Spell check	
	図 Source   Q   以 哈 @ @ @ @ @ @ @ A 以   圖 Ø   B Ø 및 A#   ★ ★   日 日   存 存   目 吾 君 〓   優 இ ↓	
🗼 📄 Partners	🗰 🛤 □ 🖶 🥹 🍄 🚝    🔄    💽    🚱    🚰    Style   - Format - Fort - Size - ↓    Tag + Øg +    □ 1702	
Blogs	Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The default account is administrator with blank password.	•
Events	Global Administrator (administrator)	
•··· Images •··· Wiki •··· Examples	Select KCear yLOGO	
🗉 🔄 Special pages	Search for:	
	Home Services Products News Partners Company Blogs Forums Events Images Wiki Examples	
l		=
		_

2. Switch to the **Design** tab and right-clicked the **txtTrialInfo** webpart at the top-left and choose **Remove**.

Page Design Form Master page Properties	🗹 Display web part content 🛛 🕢				
▼ / - page template: Top logo and menu					
▼ zoneTopInfo	÷				
txtTrialInfo      Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The	default account is administrator with blank password.				
<u>Configure</u>					
1 Up	v zone l op				
	▼ languageselectionwithflags				
Move to zone	Sign OutButton 🍪				
a Duplicate web part	CurrentUser 🚳 Global Administrator (administrator)				
X Remove	ShoppingCartMiniPreview Shopping cart   My account   My wishlist				
	Your shopping cart is empty				
	▼ SearchBox 🎯				
▼ zoneMenu	<u>ቀ</u>				
cmsmenu @ces Products News Partners Company Blog	s Forums Events Images Wiki Examples				
▼ zoneContent	÷				
PagePlaceholder 🍪					

3. Click **OK** to remove the bar from your website.



That's how you remove the signing-in bar from your website.



## 7.14.3 Changing logo of CMS Desk and CMS Site manager

You may decide to change a logo displayed at the top-left in CMS Desk and CMS Site manager.

1. Go to <your KenticoCMS directory>\App_Themes\Default\Images\CMSDesk for changing the logo in CMS Desk or to <your KenticoCMS

**directory>\App_Themes\Default\Images\CMSSiteManager** for changing the logo in CMS Site Manager.

2. In either directory, you can find **login.gif** file. All you have to do is to replace this file with your logo image. Please note that your image file has to be named **login.gif** as well.

🖃 🌍 Corporate Site	Page Design Form Master page Properties
📄 Home	
😠 📄 Services	Spell check
🕕 📄 Products	
🔅 📄 News	
🕕 📄 Partners	
💼 📄 Company	▲ Style Format Format Format Size I T _M ~ Q _M · □ T _M
🖲 📃 Blogs	Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The default account is administrator with blank password.
🔁 📋 Forums	
🔁 📃 Events	Global Administrator (administrator)
🕞 📄 Images	Select Scient My vicibilit
🗃 🔚 Wiki	Yaurabania ceti s andr
🖃 🧾 Examples	
🖬 🔟 Special pages	Search for:
🕀 🔌 Images	
	Home Services Products News Partners Company Blogs Forums Events Images Wiki Examples

## 7.14.4 Renaming resource strings

While re-branding Kentico CMS, you might need to check all the resource strings in the **.resx** files stored in the **~/CMSResources** folder and replace the occurrence of word **Kentico** with your own brand.



# 7.15 Scheduler

## 7.15.1 Overview

The Scheduler allows you to define when specified scheduled tasks should be executed. This is useful when you want some functionality to be performed automatically at a specific time or regularly over a certain time period.

In addition to other functions within the system, the scheduler is used to execute tasks for the following modules:

- Content staging
- E-commerce (E-commerce Guide -> Configuration settings -> Deleting old shopping carts)
- E-mail queue
- <u>Newsletters</u>
- On-line users
- <u>Project management</u>
- <u>Smart search</u>
- <u>Time zones</u>
- Web analytics
- Web farm synchronization

## How it works

Individual tasks have a specified time interval that determines when they should be considered as ready to be executed. The exact time when tasks are actually executed depends on the settings of the scheduler.

By default, the scheduler performs a check at the end of standard page requests and runs the tasks that are ready to be executed. This means that tasks are executed only when user activity on your website is generating requests.

Alternatively, the scheduler can be configured to process tasks regularly according to an automatic internal timer, regardless of website activity. This can be done by adding the **CMSUseAutomaticScheduler** key into the **/configuration/appSettings** section of your **web.config** file, as shown below:

<add key="CMSUseAutomaticScheduler" value="true" />

The **Scheduler interval** setting found at **CMS Site Manager -> Settings -> System** determines how often the scheduler checks if there are any tasks ready to be executed. This setting can be useful even if tasks are checked based on page requests, since it sets the minimum interval between checks (e.g. to save resources on sites with high traffic). On the other hand, it is not recommended to set the value too high, since some parts of the system that utilize scheduled tasks work best when executed fairly often.

Additional low-level scheduler settings can be done by adding the keys listed in the <u>Scheduler settings</u> section of Appendix C - Web.config parameters.



Since the scheduling process runs within the ASP.NET process, tasks will not be executed if your website is not running. This happens when the process is recycled without being started again (after a long period of website inactivity).

If you want to run the scheduling reliably, it's necessary to ensure that your website is always running. You can do that by using some utility or an external service that requests the home page of your website on a regular basis.

## Scheduled task administration

You can configure scheduled tasks in Site Manager -> Administration -> Scheduled tasks.

				Bever	opinent	007
					•	
Schedu	uled tasks					2
Site: Corporat	le Site	•		Last timer run: 12/18/2009 8:59:34 AM	Restart timer	Run ASAP
(a) New task	😻 <u>Refresh</u>					
Actions	Task name ▲	Last run	Next run	Last result	Server name	Executions
/ 🗙 🕨	Content publishing	12/18/2009 8:59:35 AM	12/18/2009 9:00:35 AM			93
/ 🗙 🕨	Content synchronization	1/31/2008 3:17:12 PM	10/12/2009 8:01:54 PM			0
🥒 💥 🕨	Delete old shopping carts	12/17/2009 12:06:04 PM	12/18/2009 12:06:04 PM			1
/ 💥 🕨	Users delete non activated user	12/18/2009 8:52:23 AM	12/18/2009 9:52:23 AM			7

Development

607

The **Site** drop-down list is used for selecting a site. After a site is selected, a list of tasks scheduled for the given site will be displayed in the table below. Tasks that are not site-specific can only be viewed when **(Global)** is selected. The tasks of the current site can also be edited in **CMS Desk ->** Administration -> Scheduled tasks.

Next to the site selection drop-down list, you can find the following two buttons:

- **Restart timer** restarts the internal scheduling timer. This button is only available when the scheduler is configured to use the internal timer as described in the section above.
- Run ASAP immediately executes all tasks that are ready to be executed.

The **New task** link allows you to schedule new custom tasks. The process of creating a scheduled task is covered in more detail in the <u>Scheduling a custom code</u> topic. The **Refresh** action updates the information displayed below in the list of tasks.

The three action icons on the left of each task serve the following purpose:

- Zedit allows the properties of the task (e.g. its execution interval) to be modified.
- **X Delete** removes the scheduled task.
- **Execute** immediately runs the task. When a task is executed manually, the scheduled time of its next execution is automatically moved forward according to the scheduling interval.

The <u>Scheduler internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how scheduled tasks can be managed using the API.

## 7.15.2 Scheduling a custom code

The process of scheduling a custom task includes two steps: writing code to perform the required action and creating the scheduled task.

## Writing task code

Task code must be placed into a specific class method.

1. Create a new assembly (Class Library) as a part of your solution and a new class inside this library. The following example uses assembly name **CMS.CustomTasks** and class **ShoppingCartCleaner**, however, you will need to use your own names.

2. References to the following dlls must be added to the newly created project. They can be found by using the **Browse** tab, located in the **Bin** folder of your CMS web project:

```
CMS.Scheduler.dll
CMS.Staging.dll
CMS.DataEngine.dll
CMS.SettingsProvider.dll
```

If your code uses any other dlls, references to them must be added here as well.

3. Add a reference to the new project to the **Bin** folder of your main CMS web project. It can be found under the **Projects** tab.

4. Define the **Execute(TaskInfo task)** method under the newly created class, which will be performed when the task is executed:

[C#]

```
. . .
using CMS.Scheduler;
namespace CMS.CustomTasks
{
    /// <summary>
    /// Provides an ITask interface to delete old shopping carts.
    /// </summary>
    public class ShoppingCartCleaner : ITask
    {
        public string Execute(TaskInfo task)
        {
            try
            {
                // The task code comes here
                return null;
            }
            catch (Exception ex)
            {
                return (ex.Message);
            }
        }
   }
}
```

5. Build the new project.

#### Creating a new task

- 1. Go to Site Manager -> Administration -> Scheduled tasks.
- 2. Select the site the task should be scheduled for.
- 3. Click 🕼 New task.
- 4. Specify the task properties:

Task display name	Name used for the scheduled task shown in the administration

	interface.	
Task name	Scheduled task name used in code.	
Task assembly name	Name of the assembly. This example uses CMS.CustomTasks.	
Task class name	Name of the class. This example uses CMS.CustomTasks. ShoppingCartCleaner.	
Task interval	Sets the time interval between two executions of the task. This does not ensure that the task will be executed at the exact time, only that it will be considered ready to be executed. The precise execution time depends on the general settings of the scheduler.	
Task data	Data which should be provided to the assembly. This field can be accessed from the code of the task, so it can be used as a parameter to easily modify the task without having to edit its implementation.	
Task enabled	Indicates if the task is enabled.	
Delete task after last run	Indicates if the task should be deleted after its final run (applicable if the task is set to run only once).	
Server name	Name of the server where the task is run.	
Create tasks for all web farm servers	If checked, tasks will be created for all web farm servers and the <b>Server name</b> field will be grayed out.	

#### 5. Click OK.

6. The task is now scheduled.

👍 New task				
Scheduled tasks > New task				
Task display name: Task name: Task assembly name: Task class name:	Delete old shopping carts CorporateSite.DeleteOldShoppingCarts CMS.CustomTasks CMS.CustomTasks.ShoppingCartCleaner			
Task interval:	Period: Day Start time: 8/25/2010 14:33:42 Every: 1 Day Days: V Monday Saturday V Tuesday Sunday Vednesday Friday Friday			
Task data:	×			
Task enabled:				
Delete task after last run:				
Server name:	Create tasks for all web farm servers			

## 7.15.3 Scheduler internals and API

#### 7.15.3.1 Database tables and API classes

The following database table is used by the scheduler:

• CMS_ScheduledTask - contains scheduled tasks and their settings

The scheduler API is provided by the following CMS.Scheduler namespace classes:

- SchedulingExecutor this class provides methods for executing scheduled tasks
- SchedulingHelper this class provides functionality for managing the scheduler
- TaskInfo, TaskInfoProvider these classes provide functionality for managing scheduled tasks
- **TaskInterval** this class provides functionality for managing the time intervals used by scheduled tasks

The following topics show examples of how these classes can be used:

- Getting scheduled task data
- Managing scheduled tasks
- Running a scheduled task

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 7.15.3.2 Getting scheduled task data

The following sample code shows how you can get a scheduled task as a TaskInfo object:

[C#]

```
using CMS.Scheduler;
using CMS.CMSHelper;
....
int taskID = 1;
int siteID = CMSContext.CurrentSiteID;
string taskName = "Content.Publish";
string siteName = "CorporateSiteASPX";
// Get object
TaskInfo ti = TaskInfoProvider.GetTaskInfo(taskID);
TaskInfo ti2 = TaskInfoProvider.GetTaskInfo(taskName, siteID);
TaskInfo ti3 = TaskInfoProvider.GetTaskInfo(taskName, siteID);
```

The following sample code shows how you can get a DataSet containing all scheduled tasks in the system:

[C#]

#### 7.15.3.3 Managing scheduled tasks

The following sample code shows how you can modify the Display name of an existing scheduled task:

[C#]

using CMS.Scheduler;

```
string taskName = "TestContentPublishing";
string siteName = "CorporateSiteASPX";
// Get task object
TaskInfo ti = TaskInfoProvider.GetTaskInfo(taskName, siteName);
// If task exists
if (ti != null)
{
    // Update property
    ti.TaskDisplayName += " updated";
    // Save to database
    TaskInfoProvider.SetTaskInfo(ti);
}
```

The following sample code shows how you can create a new scheduled task and add it to the system:

## [C#]

. . .

```
using System;
using System.Collections;
using CMS.Scheduler;
using CMS.CMSHelper;
. . .
        // Create new task object
        TaskInfo ti = new TaskInfo();
        // Set properties
        ti.TaskAssemblyName = "CMS.WorkflowEngine";
        ti.TaskClass = "CMS.WorkflowEngine.ContentPublisher";
        ti.TaskDisplayName = "Test content publishing";
        ti.TaskName = "TestContentPublishing";
        // Create interval
        TaskInterval interval = new TaskInterval();
        // Set interval properties
        interval.Period = SchedulingHelper.PERIOD_DAY;
        interval.StartTime = DateTime.Now;
        interval.Every = 2;
        // Add some days to interval
        ArrayList days = new ArrayList();
        days.Add(DayOfWeek.Monday.ToString());
        days.Add(DayOfWeek.Sunday.ToString());
        days.Add(DayOfWeek.Thursday.ToString());
```
```
interval.Days = days;
ti.TaskInterval = SchedulingHelper.EncodeInterval(interval);
ti.TaskSiteID = CMSContext.CurrentSiteID;
ti.TaskData = "<data></data>";
ti.TaskData = "<data></data>";
ti.TaskEnabled = true;
ti.TaskNextRunTime = SchedulingHelper.GetNextTime(ti.TaskInterval, DateTime."
// Save to database
TaskInfoProvider.SetTaskInfo(ti);
```

The following sample code shows how you can delete an existing scheduled task:

[C#]

```
using CMS.Scheduler;
....
string taskName = "TestContentPublishing";
string siteName = "CorporateSiteASPX";
// Get task object
TaskInfo ti = TaskInfoProvider.GetTaskInfo(taskName, siteName);
// If task exists
if (ti != null)
{
    // Delete from database
    TaskInfoProvider.DeleteTaskInfo(ti);
}
```

# 7.15.3.4 Running a scheduled task

The following sample code shows how you can run an existing scheduled task:

## [C#]

```
using CMS.Scheduler;
....
string taskName = "TestContentPublishing";
string siteName = "CorporateSiteASPX";
     // Get task object
     TaskInfo ti = TaskInfoProvider.GetTaskInfo(taskName, siteName);
     // If task exists
```

```
if (ti != null)
{
    // Run task
    SchedulingExecutor.ExecuteTask(ti);
}
```

# 7.16 SQL import

# 7.16.1 How to use the SQL import utility

The SQL Import utility allows you to import data from a Microsoft SQL Server database as new documents into the Kentico CMS content repository (content tree). If your source data is in a different format, you may need to import them to some Microsoft SQL Server database using Microsoft SQL Server tools.

Before you run the SQL Import utility, you need to configure its parameters. The utility is stored in folder <*Kentico CMS installation in Program Files*>*SQLImport*. Open the **SQLImport.exe.config** file and set the following values:

Кеу	Description	Sample Value
SourceConnectionString	Connection string to the source database.	<add <br="" name="&lt;br&gt;SourceConnectionString">connectionString="Persist Security Info=False; database=mysourcedb; server=myserver;user id=sa; password=mypassword;Current Language=English;Connection Timeout=120;" /&gt;</add>
CMSConnectionString	Connection string to the Kentico CMS database. You can copy this value from the web.config file of your web project.	<add <br="" name="&lt;br&gt;CMSConnectionString">connectionString="Persist Security Info=False; database=mycmsdb; server=myserver;user id=sa; password=mypassword;Current Language=English;Connection Timeout=120;" /&gt;</add>
CMSDefaultUserID	<i>UserID</i> value of the user who will be author of the imported files. The default value is 53 for the administrator user account. You can find other values in the <i>CMS_User</i> table.	<add <br="" key="CMSDefaultUserID">value="53" /&gt;</add>
ImportFilesDiskPath	The physical disk path to the folder	<add key="ImportFilesDiskPath</td>

	with files to be imported (in case you are importing files together with data).	" value="c:\Temp" />
WebApplicationPhysicalPath	Path to the root of the web project folder (in case the target site is set to save files to disk [Site Manager -> Settings -> File -> Store files in filesystem]).	<add <br="" key="&lt;br&gt;WebApplicationPhysicalPath">value="C:\Website" /&gt;</add>

Now you can start the import utility using **SQLImport.exe**. The import wizard starts:

* SQLImport			
Step 1 - Introduction			***
This wizard will help you import data from ex	isting database to t	he new CMS database	
	< Back	Next >	Cancel

Click **Next**. Select the target website:

* SQLImport		
Step 2 - Select Web Site Please select some web site.		*/**
Select target web site: CorporateSite		
	< Back Next >	Cancel

Click Next. Select the target content culture:

¥ SQ∐mport			
Step 3 - Select ( Please select so	C <b>ulture</b> me culture code.		<b>*/</b> **
Select culture:	English - United States		
		< Back Next >	Cancel

Click Next. Enter the SQL query that will retrieve the data to be imported from the source database:

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SQUmport	arv.			-   •   • ×
Enter the SELEC use WHERE clau	Γ query that selects data to se to limit source data.	be imported from th	e source database. You can	
Enter the SELEC	T query:			
select * from CO	NTENT_news			
		< Back	Next >	Cancel

Click Next. Select the type of the imported documents.

* SQLImport				
Step 5 - Select target docu Please select some document	<b>ment type</b> nt template. The in	mported data will be	imported into its table.	*/**
Select document template:	News		T	
		< Back	Next >	Cancel

Click **Next**. Map the source and target fields and check the fields that should be imported. You can add the source fields manually multiple times if you need to import one source field into several target fields.

If the source field contains the path to the file, check the **Import file** box. In this case, the source field must contain a relative path to the path in the *ImportFilesDiskPath* web.config parameter - both values are joined and the file is imported from the specified location.

	a to to to to	1.0		
	Selected	Source /	larget	Import file
		NewsReleaseDate	NewsReleaseDate	
	✓	NewsSummary	NewsSummary	
		NewsTeaser	NewsTeaser 💌	
		NewsText	NewsText 💌	
	~	NewsTitle	NewsTitle 🔹	
▶*			•	

Click Next. Select the field that will be used for the name of the document:

* SQLImport	
Step 7 - Select NodeName Source Field Select the field that will be used as a source for the node (document) name.	***
Select NodeName source field: NewsTitle	
< Back Next >	Cancel

Click Next. Select the target alias path where the documents should be imported:

¥ SQ∐mport				
Step 8 - Target alia Please enter the al You can find it in th	<b>as path</b> ias path of the target paren e Properties (advanced sec	t document. tion) of the target do	ocument.	*/**
Target alias path:	/News			Select path
		< Back	Next >	Cancel

Click Next. Review the import settings:

SQUMPOR		×
Step 9 - Summary Please review your settings before you start	the import.	//*
Summary:		
Source connection string: Persist Security Info=False;database=pavelk_ Language=English;Connection Timeout=240;	50_3629b;server=guru;user id=sa;password=v7&s x8;Curren	t n
Target connection string: Persist Security Info=False;database=pavelk_ Language=English;Connection Timeout=240;	50_3629;server=guru;user id=sa;password=v7&s x8;Current	н
Target site name: CorporateSite		
Target culture: English - United States		
Query: select * from CONTENT_news		
1		

Now the data is imported into the Kentico CMS database.

# 7.17 System tables and custom fields

# 7.17.1 Overview

Kentico CMS allows you to modify some of the system tables and enhance them with custom attributes. You can edit them in **Site Manager -> Development -> System tables**.

When you add a new column to the user profile, it is available on the Custom fields tab of the User

properties dialog.

#### Always allow empty values

When creating a new empty field in a system table, it is highly recommended that you always allow empty values in the newly created field, so that the system procedures and existing dialogs keep working.

• If you would like to learn how to add custom data to all documents, please refer to the <u>Custom</u> <u>document data</u> topic.

# 7.17.2 Custom document data

In some cases, you may need to add custom data to all documents. In this case, you can use the *NodeCustomData* or *DocumentCustomData* (culture specific) fields in the *CMS_Tree* and *CMS_Document* database tables, respectively.

These fields are accessible through the following properties of the document (TreeNode):

- TreeNode.NodeCustomData
- TreeNode.DocumentCustomData

You can use these values in two ways:

#### 1. You can use them as a single ntext block of text:

# [C#]

TreeNode.NodeCustomData.Value = "my value";

2. You can use them as a collection of custom values that are stored as an XML document:

# [C#]

```
TreeNode.NodeCustomData["myproperty1"] = "my value 1";
TreeNode.NodeCustomData["myproperty2"] = "my value 2";
```

# 7.18 Web parts

# 7.18.1 Overview

Web parts represent a block of content or combination of content and functionality. They are the basic building blocks of <u>portal engine</u> page templates. Using existing web parts, users with the appropriate permissions (**Design website** from the **Modules- > Content** permission matrix) can build or modify the

structure of pages directly from a browser by using the CMS Desk -> Content -> Edit -> Design interface. All web parts must be placed into web part zones.

From a developer's point of view, a web part is a user control (ASCX) that inherits from the **CMSAbstractWebPart** class. You can easily create your own web parts as described in the <u>Developing</u> web parts topic.

The Kentico CMS installation contains many built-in web parts, but sometimes it may be necessary to modify the behaviour, design or functionality of one of them. The <u>Modifying web parts</u> sub-chapter covers several ways how this can be done.

All web parts have the option of using an AJAX UpdatePanel. More information can be found in the <u>AJAX</u> <u>support</u> topic.

Also of interest may be <u>Widgets</u>, which provide functionality similar to web parts, but allow further personalization by users.

# Web part management

Web parts can be managed in **Site Manager -> Development -> Web parts**. Here you can see all web parts organized into categories in a tree structure. Each web part has the following properties on the **General** tab:

- Display name name of the web part displayed to the users in the administration interface
- Code name name of the web part used in website code
- Category here you can choose the category of the web part catalog where the web part will be placed
- **Type** type of the web part; the following web part types are available:
  - Standard typical web parts displaying some content
  - Data source do not display any content, only provide data to be displayed by a connected web part
  - Filter can be connected to a data source and enables users to limit the data provided by it
  - Placeholder used for the General -> Layout -> Page placeholder web part; specifies the area where the content of sub-pages should be displayed
  - Invisible are not displayed on the page at all and usually perform some type of background task
  - Basic basic web parts without partial caching and AJAX UpdatePanel support
- File name contains a relative path to the user control that implements the web part; the path starts from the CMSWebParts folder; it's recommended that you organize the web parts on the disk in the same way as in the categories; example: Search/cmscompletesearchdialog.ascx
- Description text describing the web part, it will be displayed in the web part catalog
- Thumbnail image used in the web part catalog

On the **Properties** tab, you can define the web part properties and how they appear in the **Web part properties** configuration dialog.

Each web part has the following **default properties** that are not displayed on this tab. These properties are created automatically when the web part is defined. However, if you define some of these properties via this tab, you can modify its default behaviour and attributes of the property (e.g. for it not to be displayed, etc.).

Default

- Web part control ID serves as an identifier for the web part. This ID must be unique within the context of each page template. The value of this property may only contain alphanumeric characters and the underscore character (_).
- Web part title title of the web part displayed on the *Design* tab of CMS Desk. If empty, the value of the *Web part control ID* property is used for this purpose.
- Disable view state indicates if view state should be disabled for the web part.
- **Disable macros** if checked, macros contained in the values of the web part's properties will no longer be resolved.

#### Visibility

- Visible indicates if the web part should be displayed
- Hide on subpages indicates if the web part should be hidden on sub-pages
- Show for document types the list of document type code names separated with a semicolon (;) for which the web part should be displayed (if they are selected as the current document)
- Display to roles the list of roles the web part should be displayed to

#### Web part container

- Web part container container (box) displayed around the web part; this value contains the name of the container defined in *Site Manager -> Development -> Web part containers*
- **Container title** container title displayed if you specify the container; displayed only if the {% *ContainerTitle*%} macro is used in the code of the container
- Container CSS class CSS class used for the web part container; applied only if the {% ContainerCSSClass%} macro is used as a value of the Class attribute in the code of the container
- **Container custom content** custom content of the web part container; applied only if the {% *ContainerCustomContent*%} macro is used in the code of the container

#### HTML Envelope

- **Content before** HTML content displayed before the web part; you can use it to display a header or add some encapsulating code, such as *<div>* or elements for the required layout
- **Content after** HTML content displayed after the web part; you can use it to display a footer or close the tags contained in the *ContentBefore* value, such as </div> or elements

# AJAX

• Use update panel - indicates if an AJAX UpdatePanel container is used for the web part

#### Time zones

- Time zone time zone used for the web part content
- Custom time zone optional custom time zone that can be used specifically only for this web part

#### **Partial caching**

- **Partial cache minutes** sets the number of minutes for which the output HTML code of the web part should remain cached. This process is similar to full-page caching, but only for the code of the web part specifically. If left empty or set to 0, partial caching will be not be used for the web part.
- **Partial cache dependencies** contains a list of cache keys on which the partial cache of the web part depends. When the specified cache items change, the partial cache of the web part is deleted. Each line may only contain a single item. If the *Use default cache dependencies* box is checked, the default dependencies will be used, which include all possible object changes that could affect the

specific web part.

The structure of a web part, its content before/after sections and a Web part container is the following:

Container
ContentBefore
Web part (ASCX) content
ContentAfter

The containers, unlike the ContentBefore and ContentAfter sections, are re-usable and they can contain dynamically inserted values of web part properties.

Storing files related to web parts
If your web part consists of several files (such as ASCX controls, images, js scripts, etc.), you should place these files in a subfolder under the folder where your main web part ASCX file is placed. If the code name of the web part is <b>MyWebPart</b> , the subfolder name must be <b>MyWebPart_Files</b> . It will ensure that the additional files are exported/ imported correctly when you move your website or when you distribute the web part to other developers.

# Web part documentation

You can add your documentation to the web part on the **Documentation** tab. If you wish to document particular properties, you need to fill in the **Field description** on the **Properties** tab.

You can generate complete web part documentation and print it by going to <website URL>/CMSPages/ Dialogs/documentation.aspx?generate=full in your browser. If you want to print it, it's recommended that you use FireFox for correct formatting and page breaking.

# 7.18.2 Developing web parts

This chapter will guide you through the process of creating a very simple "Hello world" web part that displays a label and a button. When the button is clicked, it updates the current time displayed by the label.

1. Open the web project in Visual Studio (or Visual Web Developer) using the **WebProject.sln** file or using **File -> Open -> Web site...** in Visual Studio.

2. Right-click the CMSWebParts folder in the Solution Explorer window and choose New Folder.

Rename the folder to MyWebParts.

3. Right-click the **MyWebParts** folder and choose **Add New Item**. Choose to create a new **Web User Control** and call it **HelloWorld.ascx**.

Solution Explorer - Solution 'WebProject' (1 project)
🛱   🗾 🗉   🖬 🎽
🖦 🛅 CMSSiteUtils
🖅 🛅 CMSTemplates
🖕 🗁 CMSWebParts
🔠 🗠 🛅 AbuseReport
👜 🔤 Attachments
👜 🖮 🚞 BizForms
👜 🗝 Blogs
🎰 🛅 Community
👜 👘 🛅 CommunityServices
👜 🔤 ContentRating
👜 🖮 🛅 CustomTables
👜 🖮 🛅 DataSources
🔠 ··· 🚞 Ecommerce
🖮 💼 Events
🔠 ··· 🚞 Forums
🎰 🖮 🚞 General
👜 👘 🛅 GoogleServices
🎰 🚞 Media
🎰 🚞 MediaLibrary
🎰 🚞 Membership
🖦 🚞 MessageBoards
👜 🔤 Messaging
🖃 🗁 MyWebParts
🖮 🖶 HelloWorld.ascx
🎰 🛅 Navigation

4. Display the **HelloWorld** control on the Design tab. Drag and drop a new **Button** control and a new **Label** control onto the form:

Button Label

5. Double-click the Button control and add the following code to the **Button1_Click** method:

# [C#]

Label1.Text = DateTime.Now.ToString();

# [VB.NET]

Label1.Text = DateTime.Now.ToString()

6. Add the following line to the beginning of the code:

# [C#]

using CMS.PortalControls;

# [VB.NET]

Imports CMS.PortalControls

7. Change the following line:

# [C#]

```
public partial class CMSWebParts_MyWebParts_HelloWorld : System.Web.UI.UserControl
to
```

public partial class CMSWebParts_MyWebParts_HelloWorld : CMSAbstractWebPart

# [VB.NET]

```
Partial Class CMSWebParts_MyWebParts_HelloWorld
Inherits System.Web.UI.UserControl
to
Partial Class CMSWebParts_MyWebParts_HelloWorld
Inherits CMSAbstractWebPart
```

This ensures that the user control behaves as a web part.

8. Add the following code to the Page_Load method:

# [C#]

```
Button1.Text = (string)this.GetValue("ButtonText");
```

# [VB.NET]

(Visual Basic.NET doesn't create the Page_Load method automatically, so you need to add the whole method:)

```
Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
Button1.Text = CType(My.GetValue("ButtonText"), String)
End Sub
```

It sets the button text to the value configured in Kentico CMS Desk.

9. Save all changes.

10. Open **Site Manager -> Development -> Web parts**, click the root and click **Sector New category**. Enter *My web parts* into the **Category display name** field, *MyWebParts* into the **Category name** field and click **OK**.

11. Click the new category and click *** New web part**. Choose to **create a new web part** and enter the following values:

- Display name: Hello world
- Code name: HelloWorld
- File name: ~/CMSWebParts/MyWebParts/HelloWorld.ascx

Click OK.

12. Switch to the **Properties** tab and add (+) the following property:

- Attribute name: ButtonText
- Attribute type: Text
- Attribute size: 100
- Field caption: Button text
- Field type: Text box

🛷 Web parts						
New web part X Delete selected	-	Web parts + Hello world				
New category 📑 Export selected		General Properties Lavout	Doc	umentation		
Clone web part						
🖃 🔄 All web parts						
🗉 🔄 Abuse report		DutterText				
🗉 🟐 Articles		ButtonText		Database		Â
🕣 🟐 Attachments				Attribute name:	ButtonText	
🕣 🏐 BizForms				Attribute tupe:	<b>T</b> .	
🕕 🔄 Blogs			_	Auribule type.	Text 💌	
🕀 🔄 Booking system			♣	Attribute size:	100	E
🖃 📹 Community				Allow empty value:		
Community services				Attribute default value:		
Content rating			<b>a</b>			
Custom tables						
				Display attribute in the e	diting form	
Events	Ξ			Field		
Forums				Field contion:	Putton tout	
🗑 🏐 Full-text search	1		÷	Field Caption.	Button text	
🗉 🟐 General			$\sim$			
🗉 🄄 Google services			*	Field type:	Text box	
🗉 🔄 Listings and viewers					A	
🗊 🟐 Media						+
🕞 🟐 Media library					ОК	
🖃 🟐 Membership						
🕣 🏐 Message board						
🕣 헼 Messaging						
🖃 📹 My Web Parts						
Hello world						



13. Switch to CMS Desk.

14. Create a new **blank page** using the **Simple** layout (or any other layout) under the root and switch to the **Design** tab.

15. Click **Add web part** in the upper right corner of the web part zone and choose to add the **Hello world** web part:

Blank page	Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples
▼ /Blank page	e - page te	mplate: ad-h	DC									
▼ zoneLeft												
▼ HelloWorld	4											
Label												

16. The Web part properties dialog of the **HelloWorld** web part appears, set the value of the **Button text** field to *Hello world*!

💋 CMS Desk - Web Par	t properties Webpage Dialog	X
鷸 Web part pro	operties (Hello world)	Documentation
General		
Default		_
Visibility	Hide on subpages:	•
Gereral	Show for document types:	Select Clear
HTML Envelope		
Time zones	Display to roles:	Add roles Clear
Partial caching		
	Gereral	
	Button text:	► Hello world!
	HTML Envelope	
	Web part container:	▶ (none)
	Web part container title:	•
	Content before:	•
	Content after:	
Refresh content		OK Cancel Apply
http://localhost/Kentico	CMS/CMSModules/PortalEngine/UI/Web	oparts/WebPartProperties.aspx?alias; 😪 Local intranet   Protected Mode: Off

17. Now switch to the **Live site** mode using the button in the main toolbar. You will see the button with text *Hello world!* When you click it, the label displays the current date and time:



12/15/2009 3:22:25 PM

You have learned how to create a simple web part.

#### Tip: Displaying content on the web part

You can also use Kentico CMS Controls in the web part (in the ASCX control) to display content from Kentico CMS in a customized form.



Error message "The control collection cannot be modified during DataBind, Init, Load, PreRender or Unload phases."

If you get this error message you may need to modify the code of your web part, so that it doesn't display any content on the Design tab - for example:

[C#]

```
using CMS.PortalEngine;
public override void OnContentLoaded()
{
    base.OnContentLoaded();
    if ((this.PagePlaceholder.ViewMode == ViewModeEnum.Design)
        || (this .HideOnCurrentPage) || (!this.IsVisible))
        {
            this.Repeater1.DataSourceID = "";
            this.CMSRepeater1.StopProcessing = true;
        }
    }
```

#### Initializing Kentico CMS controls in your custom web parts

If you are using Kentico CMS controls in your web parts, it is recommended to initialize the controls' properties using a combination of the **OnContentLoaded** and **SetupControl** methods. This is the way it is handled in all Kentico CMS web parts. You can view the code of any of the web parts located in *<project folder*/*CMSWebParts* and use it as an example.

If you are using classic .NET controls or third party controls, this can be handled in the **PageLoad** method.

If a problem occurs (e.g. on postback), try loading the control dynamically. This can be achieved by making a control from the web part and loading it dynamically (e.g. using the **General -> User control** web part).

# 7.18.3 Modifying web parts

# 7.18.3.1 Modifying web parts

If you need to modify the behavior of a standard web part, you have the following options according to your requirements:

#### 1. You only need to set the web part properties dynamically in your code

You can create a user control, add the given web part to it and write additional code. See the <u>Setting</u> web part properties dynamically in your code topic.

### 2. You need to modify the design (layout) of a web part

You can use the custom web part layouts described in the Customizing web part layout topic.

#### 3. You need to modify the code of a web part

You need to create a copy of a standard web part as described in the <u>Modifying the code or design of</u> standard web parts topic.

## 4. You need to create a specialized version of a web part with different default property values

You can use Web part inheritance to easily create a derived web part.

## 7.18.3.2 Setting web part properties dynamically in your code

In some cases, you may need to set the values of web part properties in your code, depending on some particular business rules. In such case, you need to create a new ASCX user control and place the original web part onto this user control. In the user control code, you can implement your custom logic and set the properties appropriately.

# **Example:**

The following example shows how you can dynamically set the **WHERE condition (WhereCondition)** property of the **Repeater** web part based on if the current user is or is not authenticated. It uses the standard *News* document type with a custom boolean type field: **Show to public users** (ShowToPublicUsers).

1. Open the web project in Visual Studio.

2. Create a **New folder** under the project root called *CMSGlobalFiles* (if it doesn't already exist). This location will ensure that your user controls can be exported along with the site when it is deployed to the live server.

3. Create a new Web User Control under the CMSGlobalFiles folder and name it NewsRepeater.

#### ascx.

4. Switch to the **Design** tab and drag and drop **CMSWebParts/Viewers/Documents/cmsrepeater**. **ascx** from the Solution Explorer onto your user control. You could alternatively use the CMSRepeater server control, but this is not the purpose of this example. Set its properties like this:

- **ID:** RepeaterWebPart1
- ClassNames: cms.news (document types)
- Path: /news/%
- TransformationName: cms.news.preview
- SelectedItemTransformationName: cms.news.default

5. Now add the following to the code behind of your user control inside the **CMSGlobalFiles_NewsRepeater** class:

#### [C#]

```
protected void Page_Init(object sender, EventArgs e)
{
    if (CMS.CMSHelper.CMSContext.CurrentUser.IsPublic())
    {
        // public user - show only public news
        this.RepeaterWebPart1.WhereCondition = "ShowToPublicUsers = 1";
        this.RepeaterWebPart1.ReloadData();
    }
}
```

This will set the **WhereCondition** property value dynamically depending on whether the current user is signed in. **Save** all changes.

6. Go to Site Manager -> Development -> Document types -> News, add a New attribute (+) on the Fields tab and set its properties as shown below:

- Attribute name: ShowToPublicUsers
- Attribute type: Boolean (Yes/No)
- Field caption: Show to public users
- Field type: Check box

7. Go to **CMS Desk -> Content**, choose **Home**, switch to the **Design** tab and add (+) a new **General/ User control** web part to the **zoneCenter** zone. Set the **User control virtual path** property value to: ~/ *CMSGlobablFiles/NewsRepeater.ascx* 

8. Edit some news document in the **/News** section of the website on the **Form** tab and check the **Show to public users** checkbox.

9. **Sign out** and view the home page. You should see only news items that you marked as **Show to public users**.

You have learned how to dynamically set web part properties based on your custom logic.

# 7.18.3.3 Customizing web part layout

Kentico CMS comes with many built-in web parts and their appearance and design can easily be modified to fit your specific requirements. The concept of web part layouts allows you to customize the look of a web part by defining a custom HTML layout. So the web part layout is basically a custom skin for the web part.

The layout of a specific web part can be selected by configuring (^(a)) it on the **Design** tab of **CMS Desk** and switching to the **Layout** tab. Here you can select from a list of layouts created for the current web part, or write a new layout. This list of layouts can also be managed at **CMS Site Manager** -> **Development** -> **Web parts** -> **.. select the given web part from the tree ...** -> **Layout**.

# Example: Customizing Newsletter subscription dialog

In this example, we will customize the newsletter subscription dialog layout. The standard layout looks like this (when no user is logged on):

<u>Examples</u> > <u>Webparts</u> > <u>Newsletters</u>	> Newsletter subscription
First name:	]
Last name:	]
E-mail:	
📃 Corporate Newsletter	
Subscribe	

Go to CMS Desk -> Content and navigate to the Examples -> Web parts -> Newsletters -> Newsletter subscription page (if you're using the sample Corporate Site).

Switch to the **Design** tab and configure (⁽⁽⁾⁾) the **Newsletter subscription** web part. Click the **Layout** tab and choose *(New)* from the drop-down list. Enter the following values:

- Display name: Narrow layout
- Code name: NarrowLayout

Enter the following HTML code:

632

```
EnableViewState="false"
       Visible="false" />
   <div class="NewsletterSubscription">
       <asp:PlaceHolder runat="server" ID="plcFirstName">
              <cms:LocalizedLabel ID="lblFirstName" runat="server"
AssociatedControlID="txtFirstName"
                         EnableViewState="false" />
                  <br />
                      <asp:TextBox ID="txtFirstName" runat="server" CssClass</pre>
="SubscriptionTextbox"
                        MaxLength="200" />
                  </asp:PlaceHolder>
           <asp:PlaceHolder runat="server" ID="plcLastName">
              <cms:LocalizedLabel ID="lblLastName" runat="server"
AssociatedControlID="txtLastName"
                         EnableViewState="false" />
                  <br />>
                      <asp:TextBox ID="txtLastName" runat="server" CssClass</pre>
= "SubscriptionTextbox"
                         MaxLength="200" />
                  </asp:PlaceHolder>
           <asp:PlaceHolder runat="server" ID="plcEmail">
              <cms:LocalizedLabel ID="lblEmail" runat="server"
AssociatedControlID="txtEmail"
                         EnableViewState="false" />
                  <br />
                      <asp:TextBox ID="txtEmail" runat="server" CssClass</pre>
= "SubscriptionTextbox"
                        MaxLength="400" />
                  </asp:PlaceHolder>
           <asp:PlaceHolder runat="server" ID="plcNwsList">
              <asp:CheckBoxList runat="server" ID="chklNewsletters"
CssClass="NewsletterList" />
                  </asp:PlaceHolder>
           <asp:PlaceHolder runat="server" ID="plcCaptcha">
              <cms:LocalizedLabel ID="lblCaptcha" runat="server"
AssociatedControlID="scCaptcha"
                         EnableViewState="false" />
                  <br />
                      <cms:SecurityCode ID="scCaptcha" GenerateNumberEveryTime
```

```
="false" runat="server" />
                </asp:PlaceHolder>
          <asp:PlaceHolder ID="pnlButtonSubmit" runat="server">
             <cms:LocalizedButton ID="btnSubmit" runat="server" OnClick</pre>
="btnSubmit_Click"
                       CssClass="SubscriptionButton" EnableViewState="false"
/>
                </asp:PlaceHolder>
          <asp:PlaceHolder ID="pnlImageSubmit" runat="server">
             <asp:ImageButton ID="btnImageSubmit" runat="server"
OnClick="btnSubmit_Click"
                      EnableViewState="false" />
                </asp:PlaceHolder>
      </div>
</asp:Panel>
```

Click **OK**. When you look at the page now, you will see that the dialog looks like this (when no user is logged on):

Examples > Webparts > Newsletters > Newsletter subscription

First name:
Last name:
E-mail:
Corporate Neuraletter
Subscribe

#### Do not remove any controls from the layout

It's important to **keep all the controls** in the layout. If you need to hide some of them, you can add the *Visible="False"* attribute to the control, but the control must stay in the layout to allow the web part to keep working.

This issue **may also cause problems when upgrading to a new Kentico CMS version** - if some of the built-in web parts use a new control and you use your web part layout created in the previous version, the web part may stop working. Please be sure to test your website after an upgrade carefully if you're using web part layouts.

#### 7.18.3.4 Modifying code of standard web parts

This topic explains how you can create a copy of a standard web part and modify its code.

The following example shows how you can send a custom e-mail when a BizForm form is submitted and display a custom confirmation message. It uses the *CMSWebParts\BizForms\BizForm.ascx* web part as its base and adds a custom handler to the *OnAfterSave* event.

1. Create a copy of the BizForm web part in Kentico CMS. Go to Site Manager -> Development -> Web parts -> BizForms -> BizForm. Click **a** Clone web part and enter the following values:

- Display name: BizForm with custom e-mail
- Code name: BizFormWithEmail
- Category: BizForms
- File name: BizForms/bizformwithemail.ascx
- Clone web part files: yes (checked)

Click **Clone**. The system creates a copy of the existing web part using the new name and it also copies the code (ASCX and CS file).

2. Now we will make the modifications to the web part. Open the web project using the **WebProject.sln** file in Visual Studio and edit the **CMSWebParts/BizForms/bizformwithemail.ascx** file.

3. Switch to the **Design** tab and drag and drop a **Label** control onto the page. Set its **ID** to *IbIConfirmationMessage* and clear its **Text** property.

4. Click the BizForm control and choose **Events** in the **Properties** window. Double-click the **OnAfterSave** event, which will create the **viewBiz_OnAfterSave()** method, and modify it to look like this:

### [C#]

Please notice how you can retrieve the form values through the **viewBiz.BasicForm.DataRow** property.

Use valid e-mail addresses and **save** all changes.

5. Go to **CMS Desk -> Content**, choose the **Home** page, switch to the **Design** tab and add the **BizForm with custom e-mail** web part to the **zoneCenter** zone. Set the **Form name** property to the **Contact us** form (if you're using the sample Corporate Site).

6. Sign out and go to the live site. Enter some values into the form and submit it. You will see the additional confirmation message "The e-mail has been sent." and receive the e-mail.

You have seen how to create a modification of a standard web part.

#### 7.18.3.5 Web part inheritance

Web part inheritance allows you to create a web part that has the same properties and uses the same code as the original web part, but has different default property values. It means you can create a specialized web part from a general one.

For example: You can create a news list web part inherited from the Repeater web part that will display a list of news by default. The default values can later be modified to any other value, but the inherited (specialized) web part allows you to do things faster.

# How to create an inherited web part

1. Go to Site Manager -> Development -> Web parts, click Listings and viewers and click New web part.

2. Click Inherit from an existing web part and enter the following values:

- Display name: Custom news list
- Code name: CustomNewsList
- Inherit from: Listings and viewers/Repeater

#### Click OK.

3. Switch to the **Properties** tab of the newly created web part. Here you can see the properties of the parent web part and you can override their default values by clearing the **Inherited** box and entering a new default value. Enter the following default values:

- Path: /%
- Document types: cms.news
- ORDER BY expression: NewsReleaseDate
- Transformation: cms.news.preview
- Selected item transformation: cms.news.default

Click OK.

<u>/eb parts</u> ► Custom news list				2
General Properties Layout	Documentation			
Content				-
Path:	/%	Text	Inherited	-
Data source name:		Text	🗹 Inherited	
Content filter				
Document types:	cms.news	Text	Inherited	
Combine with default culture:		Text	Inherited	
Culture code:		Text	Inherited	
Maximum nesting level:	-1	Integer	🕅 Inherited	
ORDER BY expression:	NewsReleaseDate	Text	Inherited	
Select only published:	$\checkmark$	Boolean	🕅 Inherited	
Select top N documents:		Integer	🗹 Inherited	
Site name:		Text	🗹 Inherited	
WHERE condition:		Text	🗹 Inherited	
Columns:		Text	Inherited	

4. Go to **CMS Desk**, choose the **Home** page in the content tree and switch to the **Design** tab. Add the News list web part to the page. It will now display all site news without any additional configuration.

# 7.18.4 AJAX support

Your web parts can use the UpdatePanel, which wraps the web part into an AJAX UpdatePanel control. This can easily be done by enabling the **Use update panel** property of any web part.

🥖 CMS Desk - Web Part	t properties Webpage Dialog			×
鷸 Web part pro	perties (Drop-down menu)		Docum	<u>entation</u>
General Layout				
Default	Content before:	•	<b>*</b>	-
Visibility				
Content	Content after:		÷	
Content filter				
Design				
Menu item separator	AJAX			
No data behavior	Use update panel:			
HTML Envelope				
XALA	<b>T</b>			
Time zones	Time zones			
Partial caching	Time zone:	► Inherit	•	
	Custom time zone:	(none)	•	
	Partial caching			
	Partial cache minutes:	•		=
	Partial cache dependencies:	Use default cache dependencies	A	
Refresh content			OK Cancel Apply	
http://localhost/KenticoC	CMS/CMSModules/PortalEngine/UI/Webp	arts/WebPartProperties.aspx?aliasr ዒ Local intra	net   Protected Mode: Off	

No further modifications are necessary, but the following rules should be followed:

1. If the web part uses any dynamically loaded controls, their ID must be defined:

Incorrect:

```
Control ctrl = this.LoadControl("~/MyControl.ascx");
if (ctrl != null)
{
    Controls.Add(ctrl);
}
```

Correct:

```
Control ctrl = this.LoadControl("~/MyControl.ascx");
if (ctrl != null)
{
    ctrl.ID = "myControl";
    Controls.Add(ctrl);
}
```

2. When requesting PostBackEventReference, use Kentico's custom function instead of the default one:

Incorrect:

this.Page.ClientScript.GetPostBackEventReference(this, "");

Correct:

CMS.ExtendedControls.ControlsHelper.GetPostBackEventReference(this, "");

# 7.18.5 Web part containers

#### 7.18.5.1 Containers overview

Containers are used as "boxes" for web parts. They consist of content that is displayed before and after the web part which means they are used as an envelope for web part content. They have three advantages over using the **ContentBefore** and **ContentAfter** properties:

- 1. They are re-usable for many web parts.
- 2. They can contain a title and dynamically inserted values of the web part properties.
- 3. They are objects in the system, which means they can be Exported and Imported.

Containers can be assigned not only to web parts, but also widgets and entire web part zones.

The containers can be managed at **Site Manager -> Development -> Web part containers**. The following properties can be defined when editing ( $\mathscr{P}$ ) or creating a web part container:

Display name	The name of the container displayed to the users.
Code name The name of the container used in code.	
Text before web part	HTML content displayed before the web part - the beginning of the envelope.
Text after web part	HTML content displayed after the web part - the closing part of the envelope.

The **Text before/after web part** fields can contain dynamically inserted values of the web part properties. You can insert them using the following expression:

#### {%propertyname%}

You will most often use the following expression to insert the container title:

### {%ContainerTitle%}

These macro expressions are resolved even when macro resolving for the particular web part (**Disable macros** property) is disabled.

Containers are assigned to web parts, widgets or zones simply by configuring (^(a)) them and selecting a container through the **Web part container** property.

Development	639
-------------	-----

arr web part properties (Repeater)				
General Layout				
Default	HTML Envelope		^	
Visibility				
Content	Web part container:	Black box		
Content filter				
Transformations	Web part container title:	▶		
Paging				
Relationships	Content before:	• •		
System settings				
No data behavior				
Editing buttons	Content after:	۰۰		
HTML Envelope				

Here's an example of a web part without a container:



Here's an example of the same web part with a container:



Please see the <u>Creating web part containers</u> topic for a step-by-step guide on how a new container is created.

# 7.18.5.2 Creating web part containers

Here's an example of defining a new web part container:

- 1. Go to Site Manager -> Development -> Web part containers.
- 2. Click **Sev container**.

3. Enter the following values:

- **Display name**: Blue box
- Code name: BlueBox
- Text before web part:

```
="0">
{%ContainerTitle%}
```

#### • Text after web part:

#### 4. Click OK to save.

5. Switch to the **Sites** tab and click the **Add sites** button to assign the new container to the website where you wish to use it.

6. Go to **CMS Desk** and display some page on the **Design** tab. **Configure** () some web part and set its properties like this:

- Use container: Blue box
- Container title: My web part with container

7. View the page in **Live site** mode. The web part will be surrounded by a blue border and it will have the specified title.

# 7.18.6 Data source web parts

#### 7.18.6.1 Using Data source web parts

Data source web parts are designed for retrieving data from the database and sending it to other web parts that display it. This allows you to have separate web parts for retrieving data from the database, displaying data, filtering the displayed data and paging. These web parts can be placed anywhere on the page without any change in functionality and their design can be set separately, which results in higher design flexibility compared with using the original Repeater, Datalist, etc.

The following diagram shows how a Data source web part can be connected with other web parts to form



a functional group of interconnected web parts. Captions of connecting lines show which properties of the web parts have to be set identically for the group to work properly.

<u>Please note:</u> Repeater and Datalist web parts can only be used for documents (provided by the **Documents data source** web part), not for e.g. custom tables etc. You will need to use the Basic repeater or Basic datalist for this purpose.

In the following example, we will create a group of interconnected web parts just as in the diagram above in order to see how the Data source concept works in practice.

1. Sign in to CMS Desk as the administrator (login administrator with blank password).

2. Create a new page under the **Products** section. Name it **DataSource example** and choose to **Create a blank page** using the **Simple** layout. Click **Save**.

3. Add the **Data Sources -> Products data source** web part to the only web part zone on the page. Leave default values for all its properties and click **OK**.

4. Add the Listings & Viewers -> Basic Repeater web part to the same web part zone. Set the following properties:

- Data source name: ProductsDataSource
- Transformation name: CMS.Product.Default

Click **OK**. You should see the repeater displaying products as in the following screenshot.

Kentico CMS Desk Content My desk	Tools Adm	nistration	Switch to Site Manager	Site: Corporate Site 💌	User: Global Administrator v5.0.364	4 Sign out
New Delete Move Down Content management	Edit Pre	view Live site List View mode	Search Other			0
🖃 🌍 Corporate Site	Page Desig	Form Properties			🔽 Display v	web part content 🛛 🕜
Home					Search for:	~ ^
Products     Cell phones	Home	Services Products New	rs Partners Company Bl	ogs Forums Events	Images Wiki Examples	
DataSource example		s/DataSource example - page	e template: ad-hoc			
Laptops	▼ zoneLeft	1 1				
• News	vews		=			
Partners	BasicRe name:	peater 🎯 39				
Blogs	Price:	\$470.00				
• Forums • Events • Images • Wiki	This new Mypal A639 makes every PDA owner drool. It has everything you want and more. This PDA is one of the first with 1 GB FLASH ROM storage for GPS maps or MP3/DIVX. The integrated GPS module (SIRF Star III chip) makes it an excellent travel companion. The battery life is very good and furthermore it has a great screen. In broad daylight it's still very readable. The Intel Xscale CPU runs at 416Mhz, not the fastest around, but still faster than most other PDA's.		LASH ROM attery life is the fastest			
Examples     Description: The two drawbacks are the 64 MB of ram and USB 1.1. With 1 GB FLASH ROM you wan     to the A639. If Asus have choosen for USB 2.0, which is about 40 times faster than USB		GB FLASH ROM you want to 0 times faster than USB 1.1	exchange a lot of data quickly from yo it would make the A639 a real PDA c	our computer hampion.		
🖃 😋 Images		As alternatives also check ou funtionality.	it the Asus Mypal A636N or the Mit	ac Mio P550. Not as much i	nternal memory as the A639 but with t	he same
	Photo:					

5. Now we will add the filter for the users to be able to filter displayed records. Add the **E-commerce -> Product filter** web part to the same web part zone. The web part will be added to the bottom of the page, so you may not be able to see it. You might want to scroll down and move the web part above the repeater. Open the web part's menu and choose to move the web part **Up**.



Set the following property of the filter web part:

• Filter name: ProductFilter

Also open the properties of the Products data source web part and enter the same filter name into its **Filter name** property:

• Filter name: ProductFilter

You have just connected the data source with the filter. Data sent from the DataSource to the repeater can now be filtered using the ProductFilter.

6. To verify the functionality, switch to **Live site** mode. You can for example choose to display only products manufactured by Asus using the **Manufacturer** drop-down list. After selecting, click **Filter** for the changes to take effect. After doing so, you should see only Asus products in the repeater, as you can see in the screenshot below.



7. As the amount of data displayed by the repeater might grow very large in some cases, the next logical step is to add a pager. Add the Listings & Viewers -> Universal pager web part to the web part zone and move it Up above the repeater the same way that you moved the filter in step 5.

Set the following properties:

- Target control name: BasicRepeater
- Page size: 5
- Group size: 5

and make sure the following transformations are set:

- Pages: CMS.PagerTransformations.General-Pages
- Current page: CMS.PagerTransformations.General-CurrentPage
- Previous page: CMS.PagerTransformations.General-PreviousPage
- Next page: CMS.PagerTransformations.General-NextPage
- Layout: CMS.PagerTransformations.General-PagerLayout

Click **OK** to save the changes.

8. Now if you switch to **Live site** mode, the size of the page should be reduced to 5 products and you should be able to switch between pages using the pager.

Co	mpanyLogo			Global Administ 🏹 <u>Shoppin</u>	rator (administrator) Sign out Ig cart   <u>My account</u>   <u>My wishlist</u> Your shopping cart is empty
				Search for:	
Home	Services Products News	Partners Compa	any Blogs Forums	Events Images Wiki	Examples
Status:	(all)	•	Manufacturer:	(all)	Only in stock
< <u>12345</u>	5 ≥ Results 6 - 10 of 126		Sorting:	By name: A to Z	Filter
Product name:	Asus A639				
Price:	\$470.00				
This new Mypal A639 makes every PDA owner drool. It has every storage for GPS maps or MP3/DIVX. The integrated GPS module very good and furthermore it has a great screen. In broad daylight around, but still faster than most other PDA's.			has everything you want an S module (SiRF Star III chij d daylight it's still very read	d more. This PDA is one of the o) makes it an excellent travel o able. The Intel Xscale CPU runs	first with 1 GB FLASH ROM companion. The battery life is at 416Mhz, not the fastest
Descriptior	The two drawbacks are the 64 MB of ram and USB 1.1. With 1 GB FLASH ROM you want to exchange a lot of data quickly from your computer to the A639. If Asus have choosen for USB 2.0, which is about 40 times faster than USB 1.1, it would make the A639 a real PDA champion.				
	As alternatives also check out th funtionality.	e Asus Mypal A636N o	r the Mitac Mio P550. Not	as much internal memory as th	e A639 but with the same
Photo:					

#### 7.18.6.2 Problems with XML data source

OH:

The XML data source web part can be used to provide data from an XML file specified by its XML URL property. It uses the <u>Dataset.ReadXml()</u> method to read the XML files. In some cases, this method can separate data from the source XML file into more than one dataset table. In this case, you need to specify which dataset table is used through the **Table name** property.

Unfortunately, it cannot be explicitly determined into which table the data that you require is loaded. Therefore, we recommend finding this out using the **Debug** function in **Visual Studio**.

If the **Table name** property is not specified appropriately in this case, no data is provided to the connected Repeater. It is therefore advisable to disable the Repeater's **Hide if no record found** property in order to prevent the repeater from being hidden on the page, which may be confusing in some cases.

In some special cases, it may also happen that the required data may be distributed into more than one dataset table. In such a case, the **Table name** property cannot be used to solve the issue and the only workaround is to modify the source XML (if possible).

CMS Desk - Web Part properties Webpage Dialog			
鷸 Web part pro	arian web part properties (XML data source)		
General			
Default	DISADIE VIEW STATE.		
Filter System settings	Disable macros:		
	Filter		
	XML URL:	~/Files/service.xml	
	ORDER BY expression:	•	
	Select Top N items:	▶	
	WHERE condition:		
	Filter name:	١	
	Table name:	► Services	
	System settings		
	Cache item name:	▶	
Refresh content		OK Cancel Apply	
http://localhost/Kentico	CMS/CMSModules/PortalEngine/UI/W	Vebparts/WebPartProperties.asp 🗣 Local intranet   Protected Mode: Off	

## 7.18.6.3 Developing Data source web parts

The code example below shows the creation of a sample custom DataSource web part for providing users from the CMS. The web part consists of two controls, so you need to take the following two steps when developing your custom DataSource web part:

1. Create a user control that inherits from **CMSBaseDataSource**. This will be the control that gets the data.

- The **OnInit** and **DataFilter_OnFilterChanged** methods are necessary for handling the connected filter. If you are not planning to use a filter with the data source web part, you do not need to implement these methods.
- The GetDataSourceFromDB method ensures the loading of the actual data.

# DataSourceControl.ascx

Please keep in mind that the following code is only an example, the actual values of the **CodeFile** and **Inherits** attributes will be different according to the name and location of the user control.

```
<%@ Control Language="C#" AutoEventWireup="true" CodeFile="DataSourceControl.ascx.
cs" Inherits="CMSTestingSite_APIExamples_Controls_DataSourceControl" %>
```

# DataSourceControl.ascx.cs

Please be aware that the name of the class will be different according to the name and location of the newly created user control.

## [C#]

```
using System;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using CMS.Controls;
using CMS.SiteProvider;
/// <summary>
/// Users data source. Loads all users with dependence on specified where
condition
/// </summary>
public partial class CMSTestingSite_APIExamples_Controls_DataSource :
CMSBaseDataSource
{
    #region "Variables"
    private string mWhereCondition = String.Empty;
    private string mOrderBy = String.Empty;
    #endregion
    #region "Properties"
    /// <summary>
    /\,/\,/ Gets or sets the where condition
    /// </summary>
    public string WhereCondition
    {
        get
        {
           return mWhereCondition;
        }
        set
        {
            mWhereCondition = value;
        }
    }
    /// <summary>
    /// Gets the data source
    /// </summary>
    public override object DataSource
    {
         get
         {
```

```
return base.GetDataSource();
     }
}
/// <summary>
/\,// Gets or sets the order by clause
/// </summary>
public string OrderBy
{
   get
    {
       return mOrderBy;
    }
   set
    {
       mOrderBy = value;
    }
}
#endregion
#region "Methods"
/// <summary>
/// Handle filter change event
/// </summary>
protected override void OnInit(EventArgs e)
{
    if (SourceFilterControl != null)
    {
        SourceFilterControl.OnFilterChanged += new ActionEventHandler
              (DataFilter_OnFilterChanged);
    }
   base.OnInit(e);
}
/// <summary>
/// OnFilterChange handler
/// </summary>
void DataFilter_OnFilterChanged()
{
    // Clear old data
   InvalidateLoadedData();
    // Raise change event
    this.RaiseOnFilterChanged();
}
/// <summary>
/// Gets the datasource data
/// </summary>
public override object GetDataSourceFromDB()
{
    // Check whether datasource contains data
```

```
if (base.DataSource != null)
        {
            return base.DataSource;
        }
        // Initialize data and return datasource
        else
            // Initialize properties with dependence on filter settings
            if (SourceFilterControl != null)
            {
                SourceFilterControl.InitDataProperties(this);
            }
            // Load data, in this example nothing is loaded
            base.DataSource = UserInfoProvider.GetFullUsers(this.WhereCondition,
this.OrderBy);
            return base.DataSource;
    }
    #endregion
}
```

2. Create another user control and drop the first control on it. This control will become the actual web part.

- The control must inherit from CMSAbstractWebPart.
- The line of the **SetupControl** method beginning with *this.srcUsers.FilterName* ensures that the inner datasource's name is set the same as the *Web part control ID* property of this web part. Don't get perplexed by the property being called *FilterName*. This is by design, because datasources use the same objects as filters.

# DataSourceWebPart.ascx

```
<%@ Control Language="C#" AutoEventWireup="true" CodeFile="DataSourceWebPart.ascx.
cs" Inherits="CMSTestingSite_APIExamples_Controls_DataSourceWebPart" %>
<%@ Register src="DataSourceControl.ascx" tagname="DataSourceControl" tagprefix
="cms" %>
<cms:DataSourceControl ID="srcUsers" runat="server" />
```

# DataSourceWebPart.ascx.cs

[C#]

```
using System;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
```
```
using CMS.PortalControls;
using CMS.GlobalHelper;
public partial class CMSTestingSite_APIExamples_Controls_DataSourceWebPart :
CMSAbstractWebPart
{
    /// <summary>
    /// Gets or sets WHERE condition.
    /// </summary>
    public string WhereCondition
    {
        get
        {
            return ValidationHelper.GetString(this.GetValue("WhereCondition"), ""
);
        }
        set
        {
            this.SetValue("WhereCondition", value);
            srcUsers.WhereCondition = value;
        }
    }
    /// <summary>
    /// Gets or sets ORDER BY condition.
    /// </summary>
    public string OrderBy
    {
        get
        {
            return ValidationHelper.GetString(this.GetValue("OrderBy"), "");
        }
        set
        {
            this.SetValue("OrderBy", value);
            srcUsers.OrderBy = value;
        }
    }
    /// <summary>
    /\,// Gets or sets the source filter name
    /// </summary>
    public string FilterName
    {
        get
        {
            return ValidationHelper.GetString(this.GetValue("FilterName"), "");
        }
        set
        {
            this.SetValue("FilterName", value);
           srcUsers.SourceFilterName = value;
        }
    }
```

```
/// <summary>
   /// Content loaded event handler
   /// </summary>
   public override void OnContentLoaded()
   {
       base.OnContentLoaded();
       SetupControl();
   }
   /// <summary>
    /// Initializes the control properties
    /// </summary>
   protected void SetupControl()
       if (this.StopProcessing)
       {
           // Do nothing
       }
       else
        {
           this.srcUsers.WhereCondition = this.WhereCondition;
           this.srcUsers.OrderBy = this.OrderBy;
           // Sets the current web part name as datasource name
           this.srcUsers.FilterName = ValidationHelper.GetString(this.GetValue(
"WebPartControlID"), this.ClientID);
           // Sets the name of the extending filter
           this.srcUsers.SourceFilterName = this.FilterName;
       }
   }
}
```

You can now register this control as a web part in Kentico CMS as described in the <u>Developing web</u> parts topic.

#### 7.18.6.4 Developing custom filters

Even though Kentico CMS comes with a built-in set of filter web parts for various different types of data, it may still in many cases be necessary to create a custom filter according to your specific requirements.

This can be achieved by implementing the filter as a *user control* that inherits from one of the following base classes:

- CMSAbstractDataFilterControl works with document data sources.
- CMSAbstractMenuFilterControl works with navigation web parts.
- CMSAbstractQueryFilterControl works with custom table and query data sources.

These base classes can be found in the **CMS.Controls** namespace. The appropriate base class must be selected depending on the type of data to be filtered

When complete, the control can be placed onto your website through the **General -> Filter** web part. All that needs to be done is to specify the path to the *.ascx* file in the **Filter control path** property. The Filter web part can then be attached to data source web parts of the matching type.

Of course, a custom filter can also be used anywhere in your code as a standard user control, for example on ASPX templates or in other web parts. All necessary properties, like the **FilterName** used to connect with the data source are inherited from the used base class.

# Example

The example below demonstrates how a custom filter can be developed. This sample filter will work with *product documents*. It will support filtering according to product departments and allow the selection of several options that determine the order in which products are displayed. Filters for all types of documents or other objects can be created using the same approach.

1. Open the web project in Visual Studio and start by creating a **New folder** under the root called *CMSGlobalFiles* (if it doesn't already exist). The content of this folder can be exported along with your site when it is deployed to the live server.

2. Next, add a new **Web User Control** called *CustomProductFilter.ascx* into the **CMSGlobalFiles** folder and modify it to contain the following code:

```
<%@ Control Language="C#" AutoEventWireup="true" CodeFile="CustomProductFilter.</p>
ascx.cs" Inherits="CMSGlobalFiles_CustomProductFilter" %>
<cms:LocalizedLabel ID="lblDepartment" runat="server" Text="Product</pre>
department" DisplayColon="true">
    </cms:LocalizedLabel>
   <cms:LocalizedDropDownList ID="drpDepartment" runat="server" Width="180" >
     </cms:LocalizedDropDownList>
   <cms:LocalizedLabel ID="lblorder" runat="server" Text="Order by"</pre>
DisplayColon="true">
    </cms:LocalizedLabel>
   <cms:LocalizedDropDownList ID="drpOrder" runat="server" Width="180" >
     </cms:LocalizedDropDownList>
   <cms:LocalizedButton ID="btnFilter" runat="server" Text="Apply Filter" />
```

This creates the design of the filter's user interface. As you can see, it is composed of localized labels, drop-down lists and a button arranged in a simple table layout. Alternatively, it is possible to use a

CSS-based layout applied through HTML elements (e.g. <div>, <span>, etc.).

When developing a filter for actual live deployment, it may be preferable to enter the captions of the child controls using localization strings through the **ResourceString** property, rather than directly as **Text**.

3. Now switch to the code behind file of the user control, add the references shown below and set the control to inherit from the appropriate base class. This example uses the

CMSAbstractDataFilterControl class, since the filter is intended for use with a document data source.

### [C#]

```
using System;
using System.Data;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using CMS.Controls;
using CMS.GlobalHelper;
using CMS.Ecommerce;
public partial class CMSGlobalFiles_CustomProductFilter :
CMSAbstractDataFilterControl
{
....
}
```

The methods described in the following steps of this example will be added as members of this class.

4. Add the following three methods:

### [C#]

```
/// <summary>
/// Setup the inner child controls
/// </summary>
private void SetupControl()
{
    // Hide the filter if StopProcessing is enabled
    if (this.StopProcessing)
    {
        this.Visible = false;
    }
    // Initialize only if the current request is NOT a postback
    else if (!RequestHelper.IsPostBack())
    {
        // Loads product departments as filtering options
        InitializeDepartments();
        // Initialize the order by drop-down list
```

```
IntializeOrder();
    }
}
/// <summary>
/// Ensures that the ordering options are loaded into the order by drop-down list
/// </summary>
private void IntializeOrder()
{
    // Initialize options
    this.drpOrder.Items.Add(new ListItem("Price - Ascending", "priceAsc"));
   this.drpOrder.Items.Add(new ListItem("Price - Descending", "priceDesc"));
   this.drpOrder.Items.Add(new ListItem("Product name", "name"));
}
/// <summary>
/// Loads all existing product departments as filtering options into the
department drop-down list
/// </summary>
private void InitializeDepartments()
    // Get all product departments
   DataSet departments = DepartmentInfoProvider.GetDepartments("",
"DepartmentDisplayName", 0, "DepartmentID, DepartmentDisplayName");
    // Check if there are any product departments
    if (!DataHelper.DataSourceIsEmpty(departments))
    {
        // Bind deparments to the drop-down list
        this.drpDepartment.DataSource = departments;
        this.drpDepartment.DataTextField = "DepartmentDisplayName";
        this.drpDepartment.DataValueField = "DepartmentID";
        this.drpDepartment.DataBind();
        // Add default '(all)' value
        this.drpDepartment.Items.Insert(0, new ListItem("(all)", "##ALL##"));
   }
}
```

These ensure that the correct filtering options are loaded into the child drop-down lists.

5. The most important part of the filter is performed by the **SetFilter()** method. Define it as shown below:

[C#]

```
/// <summary>
/// Generates a WHERE condition and ORDER BY clause based on the current filtering
selection
/// </summary>
private void SetFilter()
{
   string where = null;
}
```

```
string order = null;
    // Generate a WHERE condition based on the selected product department
    if (this.drpDepartment.SelectedValue != null)
    {
        int departmentId = ValidationHelper.GetInteger(this.drpDepartment.
SelectedValue, 0);
        if (departmentId > 0)
        {
            where = "SKUDepartmentID = " + departmentId;
        }
    }
    // Apply the selected ordering direction
    if (this.drpOrder.SelectedValue != "")
    {
        switch (this.drpOrder.SelectedValue)
        {
            case "priceAsc":
               order = "SKUPrice";
               break;
            case "priceDesc":
                order = "SKUPrice Desc";
                break;
            case "name":
               order = "SKUName";
               break;
        }
    }
    if (where != null)
    {
        // Set where condition
       this.WhereCondition = where;
    }
   if (order != null)
    {
        // Set orderBy clause
       this.OrderBy = order;
    }
    // Raise the filter changed event
   this.RaiseOnFilterChanged();
}
```

The custom filter control dynamically generates a WHERE condition and ORDER BY statement based on the current filter selection, which is then used to set the value of the **WhereCondition** and **OrderBy** members inherited from the base class. These members are read by the data source to which the filter is attached and inserted into the SQL query used to load data. Remember that the filter must inherit from the appropriate base class according to the type of the used data source.

6. Finally, add two methods that override the handlers of the **Init** and **PreRender** events as shown below:

### [C#]

```
/// <summary>
/// Init event handler
/// </summary>
protected override void OnInit(EventArgs e)
    // Create child controls
   SetupControl();
   base.OnInit(e);
}
/// <summary>
/// PreRender event handler
/// </summary>
protected override void OnPreRender(EventArgs e)
    // Check if the current request is a postback
    if (RequestHelper.IsPostBack())
    {
        // Apply the filter to the displayed data
        SetFilter();
    }
   base.OnPreRender(e);
}
```

The handlers ensure that the appropriate private methods (defined previously in the example) are called during the correct stages of the page life cycle.

When the *Apply Filter* button is clicked, a postback occurs, which triggers the **SetFilter()** method during the **PreRender** event and the filter is applied to the displayed data. Notice the use of the **CMS**. **GlobalHelper.RequestHelper.IsPostBack()** method in the conditions. The **SetFilter()** method is only called when the current page request is a postback and the child controls are initialized only when this is not the case.

Save the changes to both files.

7. Now that the filter control is finished, you can try out its functionality. It is recommended to test the filter on the **Corporate** or **E-commerce** sample sites, since they already contain examples of product documents. Go to **CMS Desk**, create a new page and place the following web parts on it:

- **Documents data source** configure it to load product documents and fill in its **Filter name** property (e.g. *CustomProductFilter*).
- Filter configure a matching Filter name (*CustomProductFilter*) and enter the path of the .ascx file implementing your custom filter into the Filter control path property (~/CMSGlobalFiles/ *CustomProductFilter.ascx*).
- **Basic repeater** enter the ID of the Documents data source web part into the **Data source name** property and set an appropriate **Transformation name**, for example *Ecommerce.Transformations. Product_SimplePreview.*

💒 Kentico	Go to Live Site Switch to
CMS Desk Content My des	k Tools Administration
New Delete Angle Move Down	Edit Preview Live site List Search
Corporate site	Page Design Form Properties
Home	Sign in to <u>CMS Desk</u> . Sign in to
Products     Filtered products     Outs     Cell phones     PDAs     DAs     Laptops     News	CompanyLogo
Partners     Company     Company	Home Services Products News Partners
⊕ Blogs	▼ /Products/Filtered products - page template: ad-hoc
÷ Events	▼ zoneLeft
	▼ ■ ProductDocumentDataSource
🖶 📄 Wiki	CustomProductFilter
Examples	Resis Personator
	Dasickepeater

Detailed information about how this kind of web part combination works can be found in the <u>Using Data</u> source web parts topic.

8. If you open the page on the live site, you will see a list of products with the custom filter displayed above. The products can be filtered by their department and the order in which they are displayed can be changed.

# CompanyLogo

Home Services	Products	News	Partners
Product department:	PDA & Pocket	t PC	<b>•</b>
Order by:	Price - Descer	nding	•
Apply Filter			
Asus A639 Our price: \$470.00			

HP iPAQ 114 Our price: \$389.00

# 7.19 Widgets

# 7.19.1 Overview

Widgets introduce support for the personalization of pages. This feature allows users and editors to edit the structure of page templates. The personalized settings are saved within the system and can be invoked from the live site by authorized users or through the CMS Desk interface in the case of website editors.

From a designer's point of view, widgets are the basic building blocks of page templates in the same way as <u>web parts</u>. Like web parts, they are placed into zones, which must be configured to contain a certain type of widgets. For more information about web development basics, such as page templates, please refer to the <u>Web development overview -> Portal engine development model</u> chapter of this guide.

There is a predefined set of widgets in the default CMS Kentico installation. As all widgets are based on existing web parts, you can alternatively create your own widgets. Widgets are created and managed at **Site Manager** -> **Development** -> **Widgets**. The details are given in the <u>Developing widgets</u> topic.

As mentioned above, widgets provide the same functionality as ordinary web parts. However, users with appropriate rights can modify widget properties, their placement on the web page, add and remove widgets from their pages and so on. Users are divided into four different groups according to the possible ways they can use widgets:

• <u>Site developers/Administrators</u> - define the placement of widget zones and their default content, select the web part properties available for personalization in widgets and manage all available widgets

- <u>Page editors</u> define the content of widget zones created on the page templates by the site developers/administrators
- Group administrators define the content of widget zones on group page templates
- <u>Website users</u> customize the design of their home page or another page which can be personalized on the live site

Security issues, such as the definition of where individual widgets can be used and permissions for different types of roles are discussed in the <u>Security</u> topic.

The <u>Widget internals and API</u> sub-chapter provides information about the database tables and classes used by widgets and examples of how widgets can be managed using the API.

### 7.19.2 Developing widgets

Every widget is based on an existing web part. As a site developer, you can simply create your own widgets. This topic will lead you through the step-by-step process of creating a widget.

1. As mentioned above, it is not possible to create a widget without a reference to a web part. To start, switch to **Site Manager** -> **Development** -> **Widgets**, for the administration interface where widgets can be created. You should see a screen similar to the following one.



2. Widgets are grouped into categories. It is important to note that categories are used for the sake of organization only. The category under which a given widget is stored has no influence on who can use or modify the widget.

Clicking on a node causes the selected category to open and all widgets stored within that category are listed. You can also change the **Display** and **Code name** of a category. The **Image path** property sets the path to the image which can be used as the category icon in the **Add widget** dialog (the recommended size is 16x16px).

Now select any category where the new widget will be stored and click the **New widget** link. Alternatively, you can create the new widget under any folder and change its location later when the properties of the widget are defined.

Widgets	
New widget         Delete selected           New category         Export widget	illi Widget category properties
Page 2000 Clone widget	Categories   General
All widgets      All widgets      Community      Sorrent      General      O Clock      O Date & time      Rich Text      Static HTML      Text      Media & services      Media & services      Navigation      Newsletters	Display name: General Code name: General Image path: OK

3. A dialog opens, where you can select a web part to be used as a template for the new widget. In the example below the **Editable text** web part from the **Text** category is selected. To confirm the selection click the **OK** button.



4. A new widget has just been created. You can manage widgets using the actions above the tree. A new widget can be created based on an existing one using the **Clone widget** link. If you are about to create a new category use the **New category** link.

To delete a selected widget or the whole category (except the *All widgets* category), click the **X Delete selected** link. Please bear in mind that when a widget is deleted, it is not automatically removed from page templates. Therefore, when pages containing a deleted widget are to be displayed, an error message will be displayed instead of the missing widget.

The example below shows the effect of deleting the **Social bookmarking** widget without removing it from the page templates.

×	Social bookmarking	Poll
	[Error loading the Widget 'SocialBookmarking'] Value cannot be null. Parameter name: virtualPath	<b>Do you</b> Yes, I do
	YouTube video	No, I don I don't kn
	a tericon menolitaria interimite Orazza a contactorea de la contactorea de	
	Caracterization (distance	

A selected widget can also be exported by clicking on the **Export widget** link. For details regarding export see <u>Exporting single objects</u>.

5. For each selected widget there are three tabs available. On the **General** tab there are all the basic settings:

- Display name descriptive name of the widget used in the Kentico CMS user interface
- Code name name of the widget used in website code
- Based on the name of the web part that the widget is derived from
- **Category** defines to which category the widget belongs; you can change it here by selecting a new category from the drop-down list
- **Description** text description of the widget
- Thumbnail graphical representation of the widget in the widget selection dialog

Do any changes required and click the **OK** button.

Widgets		
New widget X Delete selected	Widgets + Edit	able text
New category     Export widget     Clone widget	General Pro	perties Security
⊡·쉨 All widgets 亩·쉨 Community ☆ ➾ Content	Display name: Code name:	Editable text editabletext_1
🗑 🗐 Forms & Surveys	Category:	General
General     General     General     General	Based on:	The Editable text web part  displays an editable region that
<ul> <li>Date &amp; time</li> <li>Editable text</li> </ul>	Description:	enabled content editors to edit page content.
Rich Text     Static HTML		Ţ
💿 💿 Text	Thumbnail:	Vpload: Browse
i 🏐 Navigation i 🏐 🏐 Newsletters		ок

6. The **Properties** tab includes all the properties available for the parent web part. You can notice that all of them are disabled by default. Using the **Display attribute in the editing form** check box you can choose which property should be available to the widget's users. Please bear in mind that any changes must be confirmed by clicking the **OK** button.

Widgets				0
New widget         X         Delete selected           Image: New category         Image: Select selected         Image: Select select	Widgets   Editable text General Properties Security			0
Clone widget	deneral hoperaes security			
All widgets     Community     Softent     General     General	Content SelectOnlyPublished ResolveDynamicControls Design RegionTitle RegionType DialogWidth DialogHeight Behavior HtmlAreaToolbar HtmlAreaToolbarLocation HtmlAreaToolbarLoca	Database Attribute name: Attribute type: Attribute size: Allow empty value: Attribute default value: Display attribute in the e Field Field caption: Field type:	WordWrap Boolean (Yes/No) □ ■ ✓ diting form Word wrap (text area only) Check box Indicates if long lines should be wrapped in the textarea control.	
				ОК

7. On the **Security** tab there are settings specifying where the widget can be used and who will be able to modify it. The details are given in the <u>Widgets security</u> topic.

Widgets		0
New widget X Delete selected	Widgets   Editable text	0
New category Export widget	General Properties Security	
	This widget can be used in group zones This widget can be used in editor zones This widget can be used in user zones Authenticated users Authenticated users Please select the authorized roles (available only when you	Allowed for
🕢 🏐 Media & services	Site: Corporate Site	-
Mavigation		Allowed for
	Authenticated users	
	CMS Basic users	
	CMS Community Administrators	
	CMS Designers	
	CMS Desk Administrators	
	CMS Editors	
	CMS Readers	
	Everyone	
	Gold Partners	
	Live ID users	
	Not authenticated users	
	Silver Partners	

8. When all settings are done the widget is ready for use in a page template.

# 7.19.3 Using widgets

There are different sets of widget related actions that users can perform depending on their role as shown below:

- <u>Site developers/Administrators</u> Can determine which zones are widget zones (and their type) and which ones are standard (static) web part zones, and also define the default content (layout) of these zones. These tasks can be done at **CMS Desk -> Content -> Design**. Can also manage widgets in the administration interface at **Site Manager -> Development -> Widgets**. This includes developing new widgets, determining where and by whom they can be used and selecting the properties which should be personalizable (editable by users).
- <u>Page editors</u> Can define the content of Editor widget zones created on the page templates by the site developers/administrators. This is accessible through **CMS Desk -> Content -> Edit**.
- <u>Group administrators</u> Can define the design of Group administrator widget zones on group page templates. Group administrators can add or remove widgets and set their properties just like page editors. This customization can be done on the live site.
- <u>Website users</u> Authenticated users of the website can customize the design of their home page or another page which can be personalized on the live site. They can add or remove widgets and set the widget properties. Only pages with templates that contain User widget zones can be personalized in this way.

# Site developers/Administrators

The site developers make the decisions regarding the layout of page templates. This also includes the decision whether a zone will be defined as a web part zone (static) or widget zone (customizable).

To change a web part zone into a widget zone, go to **CMS Desk -> Content -> Design**, expand the menu of the selected web part zone (**v**) and click on the **Properties** item.



Using the **Web zone part properties** dialog you can define the **Widget zone type** property. The following options are available:

- None a standard web part zone is used
- User personalization the zone will be a widget zone and website users will be able to personalize it on the live site; the zone will be marked with the User zone ( ) icon
- Customization by page editor the zone will be a widget zone and website editors will be able to customize it; the zone will be marked with the Editor zone (S) icon
- Customization by group administrator the zone will be a widget zone and group administrators of the group that owns the page will be able to customize it; the zone will be marked with the Group administrator zone (&) icon

Please bear in mind that changing the widget zone type removes all current web parts or default widgets placed in that zone.

Development	665
-------------	-----

Webpart zone properti	es
efault	
Zone title:	•
Disable view state:	
Widget zone type:	<ul> <li>None</li> <li>User personalization</li> <li>Customization by page editor</li> <li>Customization by group administrator</li> </ul>
'isibility	
Visible:	
Hide on subpages:	
Show for document types:	Select Clear
Display to roles:	Add roles Clear
ITML Envelope	

Having defined the zone as a widget type zone, you can now add widgets. Simply click on the **Add** widget (+) button on the right side of the zone. You can select any widget available for the given type of widget zone (User, Editor, Group administrator).



A **Widget properties** dialog opens, where you can change any properties available for customization. To save any changes, just click on the **OK** button.

oll settings			
Poll name:	Product Survey	•	
Show graph:	V		
Count type:	Absolute	•	
Show results after vote:			
Check if user voted:			
TML Envelope			
Widget container:	Black box	•	
Widget container title:	Polls		

This way, developers can define the default content of widget zones. It is up to the users to personalize these zones further as is described in the remaining sections of this topic.

# Page editors

As a page editor, you can add, modify or delete any widget placed in editor type widget zones. This can be used to allow editors to quickly customize pages beyond simply entering content into static page templates.

To add a widget, just click on the Add widget ( D ) button in the top left corner of an editor widget zone.

<mark>∎ dd new article</mark> Example article
<u> / Edit</u> <u>Delete</u>
General Packet Radio Service (GPRS)
<u> / Edit</u> <u>Delete</u>

You can modify any widget placed in an editor zone by clicking on the **Configure widget** () button. You can also delete widgets using the **Delete widget** () button. Widgets can be moved between different widget zones by clicking on the **Drag widget** () button and dragging the widget to the desired place.

# **Group administrators**

Group administrators (members of the group who are assigned to a group role that can manage the group) have basically the same options as page editors. They can personalize those pages that belong to their group that contain group administrator widget zones by adding, deleting and configuring widgets in these zones. This is done on the live site, as group administrators won't necessarily have access to the **CMS Desk -> Edit** interface. Other website users who have access to the group pages will be able to see the widgets, but won't be able to manage them.

For specific information about groups, please see the Modules -> Groups chapter of this guide.



# Website users

Authenticated website users can manipulate user widget zones on the live site and thus personalize their pages. A common use is placing user widget zones onto the home page, so that users can create their own personalized version of it.

In order to add a widget to a user widget zone on the live site, click on the Add widget (D) button in the top left corner of the zone.



Any widget can be configured by clicking on the **Configure widget** ( $\checkmark$ ) button. You can also delete widgets using the **Delete widget** ( $\checkmark$ ) button. To move the widgets between zones, click on the **Drag widget** ( $\checkmark$ ) button and drag the widget to the new zone. Any widget can be minimized using the **Minimize** ( $\checkmark$ ) button, or restored using the **Maximize** ( $\checkmark$ ) button.

# Widget actions web part

If there is a **Widget actions web part** on the page, users can add widgets or reset all widget zones on the page to their default setting by clicking on the appropriate links. The web part can only work with the

type of widget zones specified by its **Widget zone type** property. When adding a widget using the **Add widget** link, the widget is placed into the zone specified by its **Widget zone** property. Users can drag the widget into another zone if the default placement is not suitable.



# 7.19.4 Security

When a new widget is created from an existing web part, all the attributes are hidden in the editing form by default. It is up to the widget creator to select attributes which should be available for customization using check boxes on the **Properties** tab.

The security options are defined on the **Security** tab when selecting a widget from the content tree at **Site Manager -> Development -> Widgets**. By default, all widgets are forbidden for all zone types and are allowed for authorized roles only. However, no authorized role is selected by default. It is up to the developers to allow the widget for a specific type of zone and role.

New widget X Delete selected	Widgets      Rich Text	
New category Export widget Clone widget	General Properties Security	
All widgets		Allowed for
🛓 🟐 Content	This widget can be used in group zones	
🔒 🟐 Forms & Surveys	This widget can be used in editor zones	
🖶 😋 Forums	This widget can be used in user zones	
Clock		
Joate & time	Authenticated users	$\odot$
Rich Text     Static HTMI	Authorized roles	۲
Text		
🕫 😋 Media & services	Please select the authorized roles (available only when you	select the "Authorized roles" option above):
ia 🔄 Navigation	Cito: Corporate Site	
📩 🚳 Noweletters	Site; Corporate Site +	
🖲 🟐 Newsletters		Allowed for
⊕ 🏐 Newsletters	Authenticated users	Allowed for
⊡-🏐 Newsletters	Authenticated users CMS Basic users	Allowed for
⊡ 🏐 Newsletters	Authenticated users CMS Basic users CMS Community Administrators	Allowed for
i 🏐 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers	Allowed for
i 🍓 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators	Allowed for
⊡ 崎 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors	Allowed for       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □
⊡ 崎 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors CMS Readers	Allowed for
⊡ 崎 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors CMS Readers Everyone	Allowed for
⊡ 崎 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Readers Everyone Gold Partners	Allowed for
⊡ 崎 Newsletters	Authenticated users Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Readers Everyone Gold Partners Live ID users	Allowed for
⊡ 崎 Newsletters	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors CMS Readers Everyone Gold Partners Live ID users Not authenticated users	Allowed for       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □       □
i	Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors CMS Readers Everyone Gold Partners Live ID users Not authenticated users Silver Partners	Allowed for

Please keep in mind that changing the security settings will affect new widgets only. If a user was allowed to add a widget and an administrator later removes this permission, the user can still see the widget on their page. However, once deleted, the widget cannot be added back to the page without allowing it on the **Security** tab of that particular widget.

# 7.19.5 Widget internals and API

### 7.19.5.1 Database tables and API classes

The following database tables are used to store widget data:

- CMS_Widget contains widgets and their settings
- · CMS_WidgetCategory contains widget categories and information about them
- CMS_WidgetRole assigns roles and their permissions to widgets

The data about the configuration and placement of individual instances of widgets on page templates is stored in the *CMS_PageTemplate* table.

The widgets API is provided by the following CMS.PortalEngine namespace classes:

- WidgetInfo, WidgetInfoProvider these classes provide functionality for managing widgets
- WidgetCategoryInfo, WidgetCategoryInfoProvider this class provides functionality for managing widget categories

The following topics show examples of how these classes can be used:

- Getting widget data
- Managing widgets and their categories
- <u>Setting widget permissions</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

### 7.19.5.2 Getting widget data

The following sample code shows how you can get a widget as a *WidgetInfo* object:

### [C#]

```
using CMS.PortalEngine;
....
// Get widget object by ID
WidgetInfo wi = WidgetInfoProvider.GetWidgetInfo(1);
// Get widget object by code name
WidgetInfo wi2 = WidgetInfoProvider.GetWidgetInfo("TestWidget");
```

The following sample code shows how you can get a DataSet containing widgets from the system:

### [C#]

```
using System.Data;
using CMS.PortalEngine;
...
string where = "WidgetCategoryID = 76";
string orderBy = "WidgetDisplayName";
int topN = 10;
string columns = "WidgetID, WidgetDisplayName, WidgetCategoryID";
// Get dataset of widgets according to the given parameters
DataSet ds = WidgetInfoProvider.GetWidgets(where, orderBy, topN, columns);
```

#### 7.19.5.3 Managing widgets and their categories

The following sample code shows how you can create a new widget category under the root category and add it to the system:

### [C#]

```
using CMS.PortalEngine;
. . .
        // Get parent category
        WidgetCategoryInfo parent = WidgetCategoryInfoProvider.GetWidgetCategoryInfo
        // If parent exists
        if (parent != null)
        {
            // Create new category object
           WidgetCategoryInfo wci = new WidgetCategoryInfo();
            // Set properties
            wci.WidgetCategoryDisplayName = "Example category";
            wci.WidgetCategoryName = "ExampleCategory";
            wci.WidgetCategoryParentID = parent.WidgetCategoryID;
            // Save to database
            WidgetCategoryInfoProvider.SetWidgetCategoryInfo(wci);
        }
```

The following sample code shows how you can create a new widget based on the **Abuse report** web part under an existing category and add it to the system:

### [C#]

```
using CMS.PortalEngine;
using CMS.FormEngine;
```

```
. . .
        // Get parent web part and category for widget
        WebPartInfo wpi = WebPartInfoProvider.GetWebPartInfo("AbuseReport");
        WidgetCategoryInfo category = WidgetCategoryInfoProvider.GetWidgetCategoryIn
        // If parent web part and category exist +
        // Parent web part must not be inherited - widgets cannot be created from an
       if ((wpi != null) && (wpi.WebPartParentID == 0) && (category != null))
            // Create new widget object
            WidgetInfo wi = new WidgetInfo();
            // Set properties from parent web part
            wi.WidgetName = wpi.WebPartName;
            wi.WidgetDisplayName = wpi.WebPartDisplayName;
            wi.WidgetDescription = wpi.WebPartDescription;
            wi.WidgetProperties = FormHelper.GetFormFieldsWithDefaultValue(wpi.
WebPartProperties, "visible", "false");
            wi.WidgetWebPartID = wpi.WebPartID;
            wi.WidgetCategoryID = category.WidgetCategoryID;
            // Save new widget to database
            WidgetInfoProvider.SetWidgetInfo(wi);
        }
```

The following sample code shows how you can delete an existing widget from the system:

# [C#]

```
using CMS.PortalEngine;
...
// Get widget from database
WidgetInfo wi = WidgetInfoProvider.GetWidgetInfo("AbuseReport");
// If widget exists
if (wi != null)
{
// Delete from database
WidgetInfoProvider.DeleteWidgetInfo(wi.WidgetID);
}
```

### 7.19.5.4 Setting widget permissions

The following sample code shows how you can assign a role and permission to a widget:

### [C#]

```
using CMS.PortalEngine;
using CMS.SiteProvider;
using CMS.CMSHelper;
. . .
        string permissionName = "AllowedFor";
        string resourceName = "Widgets";
        string className = null;
        string roleName = "TestRole";
        int siteID = CMSContext.CurrentSiteID;
        // Get role, widget and permission object
        RoleInfo ri = RoleInfoProvider.GetRoleInfo(roleName, siteID);
        WidgetInfo wi = WidgetInfoProvider.GetWidgetInfo("AbuseReport");
        PermissionNameInfo pni = PermissionNameInfoProvider.GetPermissionNameInfo
(permissionName, resourceName, className);
        // If all exist
        if ((ri != null) && (wi != null) && (pni != null))
            // Add role to widget
            WidgetRoleInfoProvider.AddRoleToWidget(ri.RoleID, wi.WidgetID, pni.Permi
        }
```

# 7.20 Workflow and versioning

### 7.20.1 Overview

Kentico CMS allows you to use workflow for all documents, including uploaded files. It includes the following features:

- The **workflow** support allows you to organize the process of content creation, updates and publishing on your website.
- The **versioning** support is tightly bound with workflow and it allows you to store (audit), view and rollback previous versions of the content.
- It is also possible to use **versioning without workflow**, which creates a new version whenever a document is modified, while the whole editing process remains as if the document was using no workflow at all.
- The content locking (check-in/check-out) support allows you to avoid concurrent modifications of the same document by multiple users.
- The **preview** support allows you to see the content in the context of the site before it's published. This feature is only available for documents that use workflow - you can preview the documents before switching them to the following step.
- The **archiving** support allows you to archive a document. Such a document is no longer displayed on the website, but it's kept in the content tree and can be re-published at any time later.

The following figure shows an example of document life cycle with a workflow:



The workflow process consists of any number of custom, sub-sequent steps. Only members of authorized roles are allowed to modify and approve/reject a document in a particular step. The document can be switched to the following step by any authorized role members.

As you can see, the workflow process can be used to ensure quality of content and design. In the following topics, you will learn how to define and apply workflow processes for your documents.

# 7.20.2 Defining a workflow

Workflow settings can be managed in Site Manager -> Development -> Workflows.

In this topic, we will create a sample workflow which will be used in the following topics. The workflow can be described as follows:

- Any editor will be able to create a news item in the /News section of the website.
- Then, the news item must be approved by one of the members of the **PR Managers** role. Users authorized to approve the document in the given step are also authorized to modify the document in the step.
- Approved news item is published on the website.

This a simple example of a typical real-world workflow containing custom steps. It is also possible to configure a workflow so that it contains no custom steps and is used just for versioning purposes. Configuration of such workflow is described in the <u>Versioning without workflow</u> topic.



# Creating testing users and roles

Before we configure the workflow, we will create testing users and testing roles whose members the users will be.

1. Go to **Site Manager -> Administration -> Users** and click **New user (b)**. Create a new user with the following details:

- User name: Alice
- Full name: Alice Murphy
- E-mail: <your e-mail>
- Enabled: yes
- Is editor: yes

Click **OK**. Go to the **Sites** tab and assign the user to your current website. Go to the **Roles** tab and assign the user to the **CMS Editors** role of the given website.

- 2. Create another user with the following details:
- User name: Bob
- Full name: Bob Johnson
- E-mail: <your e-mail you may want to use a different e-mail for testing purposes>
- Enabled: yes
- Is editor: yes

Click **OK**. Go to the **Sites** tab and assign the user to your current website. Go to the **Roles** tab and assign the user to the **CMS Editors** role of the given website.

3. Go to **Site Manager -> Administration -> Roles**, choose the appropriate site from the top dropdown-list and click **New role** (⁴⁴). Enter the following details:

- Role display name: PR Managers
- Role code name: PRManagers

Switch to the **Users** tab and add user *Bob Johnson* to this role.

As you can see, Alice is the news editor (because of the CMS Editors role) and Bob is the PR Manager who will approve the news (*PR Managers* role) and can also edit the news (*CMS Editors* role).

### Please note

The *PR Managers* role has no permissions configured for the purpose of this example. This means that if a user was a member of just this single role, they would not be able to perform a full range of tasks such as creating, editing or deleting documents, etc. In your real website, you would typically need to go to **Site Manager -> Administration -> Permissions** and grant appropriate permissions to the role, especially those in the **Modules -> CMS Content** permission matrix.

Please see the <u>Development -> Membership</u>, permissions and security -> Permissions chapter for detailed information on how to do this.

# Defining a new workflow

With the testing users and roles defined, we may start creating the actual workflow.

4. Go to **Site Manager -> Development -> Workflows**, click **New workflow (**) and enter the following values:

- Display name: News approval
- Code name: NewsApproval
- Automatically publish changes: disabled
- Use check-in/check-out: No

Click **OK** to create the workflow.

### Defining custom workflow steps

If you switch to the Steps tab, you should see that each workflow has three default steps:

- Edit the document was created or modified after it was published.
- **Published** the document is published on the live site. When you edit such a document, it's automatically moved to the **Edit** step.
- Archived the document is not published on the live site, but it remains in the content repository.

We will add one extra custom step to the workflow.

5. Switch to the **Steps** tab and click **Add workflow step ()**. Enter the following details in the displayed dialog:

- Display name: Approval
- Code name: Approval

Click **OK**. In the workflow step editing interface, switch to the **Roles** tab. Choose the appropriate website in the drop-down list and add the **PR Managers** role to the list. Now the *PR Managers* are authorized to edit, approve or reject documents in this step.

When you view the list of workflow steps now, it looks as in the screenshot below. As you can see, the custom steps are placed between the **Edit** and **Published** steps. If there is more than one step, you can change their order using the up ( $\Upsilon$ ) and down ( $\clubsuit$ ) arrows.

✔ Workflow properties						
Workflow   News approval						
General Steps	Scope Documents					
hew workflow step						
Actions	Workflow step name					
P	Edit					
1 🗶 🗶 🖉	Approval					
P	Published					
P	Archived					

### Defining a workflow scope

Workflow scopes define which documents should the workflow be applied to.

6. Switch to the **Scopes** tab, choose the appropriate website from the drop-down list and click **New workflow scope** (⁴). Enter the following details:

- Starting alias path: /news (this is the section of the website for which the workflow will be applied)
- Document type: News
- Culture: (all)

Click OK.

Workflow properties							
Workflow  Mews approval							
General	Steps	Scope	Doc	uments			
🔩 <u>New work</u>	flow scope						
Site: Corpo	rate Site					•	
Actions	Startin	ig path	•	Documer	nt type	Culture	
2 🗙	/News			News		(all)	

You have configured the workflow process for the news documents. In the <u>Using workflow</u> topic, you will learn how the workflow works in our sample scenario.

### Workflow's documents overview

On the **Documents** tab of a workflow's editing interface, you can see a list of documents that are using the workflow. Clicking a document in the list opens it for editing in **CMS Desk -> Edit**.

The following actions can be performed with documents in the list. These actions are also useful if you want to **finish the documents' workflow**:

- Publish and finish workflow the new version of the document will be approved and published
- Remove workflow and keep currently published data the original version of the document remains published and all the changes will be discarded

Based on the selection in the first drop-down list, these actions can be performed for:

- All documents the action will be performed with all documents
- Selected documents the action will be performed with documents selected by the check-boxes (

Workflow properties					0
Workflow   News approval					
General Steps Scope Documents					
Site: (all)  Document name: LIKE Document type: LIKE Show					
Document name	Document type	Step name	Version	Language	Site
My new news	News	Edit	0.1	📑 English - United States	Corporate Site
Selected documents 💌 Publish and finish workflow	ок			Items p	er page: 25 💌

### 7.20.3 Using workflow

This example explains how the workflow process works from the perspective of content editors. It requires the system to be configured as described in <u>Defining a workflow</u>.

### Creating a new document

1. Sign in to CMS Desk as Alice and create a news item in the /News section:

- News title: My first news item
- Release date: <click Now to get the current date>
- News summary: Some summary
- News text: Some text
- Publish from-to: leave the fields blank

Click **Save**. After the document is saved, you can see that there is the **Submit to approval** action displayed in the document menu:

🔚 Save ✔	Submit to approval
Source   🛕	↓       Image: Im
Workflow step: Edit.	
News Title: Release Date:	Your first news 12/22/2009
	Here you can enter the summary of the news item. You can us images. The summary will be used in news item preview.
News Summary:	

2. Before we submit the document to approval, we will preview it for a final check. Click **Preview** in the main toolbar and you will see exactly what the document will look like on the live site. After doing so, go back to the editing form and click the **Submit to approval** button.

The document has been moved to the **Approval** step and it is now waiting for approval by some member of the *PR Managers* role and Alice can no longer edit it. Also, a notification e-mail is sent to all members of the PR Managers role.

# Approving the document

With the document submitted to approval, we can switch to the PR Manager's perspective and approve it.

3. Sign out of **CMS Desk** and sign in again as **Bob**. Go to **My desk -> Waiting for my approval**. You should see the new document listed as in the screenshot below.

Kentico CMS Desk	Content My desk Tools Administration
<ul> <li>My desk</li> <li>Recent documents</li> <li>Outdated docume</li> <li>Waiting for my app</li> <li>Checked out by m</li> <li>My recycle bin</li> <li>My documents</li> </ul>	B Documents waiting for my approval Document name  Document name  My first news item

4. Click the document, which will open it for editing in CMS Desk -> Content -> Edit. You can now preview and optionally edit it.

If you were not satisfied with it and wanted Alice to re-work it, you could click **X Reject** to return it back to the **Edit** step. For the purpose of this example, we will approve it by clicking the  $\checkmark$  **Publish** button. Once you approve the document, it gets published on the live site. A notification e-mail is sent to Alice so that she knows the document has been published if configured as described in <u>E-mail notification in</u> workflow process.



### Tip 1: Approval/rejection comments

When you're approving or rejecting the document, you can go to **Properties -> Workflow**, add additional comments and click **Approve**.

Tip 2: "Documents waiting for my approval" and "Recent documents"
Each user can find a list of documents waiting for their approval in <b>My desk -&gt;</b> Documents waiting for my approval.
Similarly, the user who submitted the document can see the document status in <b>My</b> desk -> Recent documents.

# Archiving the document

If you want to archive the document so that it's no longer displayed on the live site, but it remains in the Kentico CMS database, you can go to **Properties -> Workflow** dialog of the published document and click the **Archive** button.

# Workflow history and workflow comments

Beside the action buttons for approving/rejecting the document on the editing pages, you can also use the advanced interface in **Properties -> Workflow dialog**:

General								0
URLs								
Template								
Metadata	This document is currently	vusina workflow	Default workflow.					
Categories								
Menu	Approve:				Workflo	w steps		
Workflow	Comment:		~			Order	Step name	
Versions						1	Edit	
Related docs						2	Approval	
Security			~			3	Published	
Attachments	Send e-mail: 🔽					4	Archived	
	Approv	e						
	Workflow history:							
	Time	Step name	User	Comment				Action
	12/22/2009 2:56:36 PM	Published	Global Administrator (administrator)					Approved
	12/22/2009 2:56:36 PM	Approval	Global Administrator (administrator)					Approved
	12/22/2009 2:56:32 PM	Edit	Global Administrator (administrator)					Approved

Here you can also track the workflow history of the document and see the current workflow step in the workflow.

Workflow	and	permissions
----------	-----	-------------

Once you enable workflow, the user needs to be authorized to both edit the document and must be authorized to manage the document in the give workflow step.

The users with permission "Manage workflow" can approve/reject any document in any workflow step, even if they are not authorized for the given workflow step. This permission can be set in the **Site Manager -> Administration -> Permissions** section, in the permission matrix called **Module: CMS Content**.

### 7.20.4 E-mail notification in workflow process

The workflow process automatically notifies the members of the authorized roles that there's a document waiting for their approval. It also sends a notification to the document author (the user who last edited the document in the Edit step and sent it to the next workflow step) when the document status changes. Lastly, a notification is also sent to all users who have the **Manage workflow** permission for all content

<u>Please note</u>: notification e-mails are not sent among users who have the same e-mail address, i.e. when user1 and user2 have the same address and user1 sends a document for user2's approval, no notification e-mail is sent

You can turn off e-mail notifications in the workflow process in **Site Manager -> Settings -> Content Management**. Here you can set the following values:

- Send workflow e-mails indicates if workflow e-mails should be sent.
- Send workflow e-mails from the e-mail address from which the e-mails will be sent.



### Tip: Workflow notification e-mail templates

You can customize the workflow notification e-mails in **Site Manager -> Development -> E-mail templates**. The workflow uses the following e-mail templates:

- Document approved
- Document archived
- Document published
- Document ready for approval
- Document rejected

You can use the following macro expressions in the workflow notification templates:

- {%applicationurl%} the URL of the Kentico CMS web project on the server (including protocol and domain name)
- {%nodeid%} NodeID of the current document
- {%documentname%} document name
- {%approvedby%} name of the user who approved/rejected/archived the document or submitted the document to approval
- {%approvedwhen%} date and time of approval/rejection/archivation

- {%originalstep%} original step before approval/rejection/archivation
- {%currentstep%} new step after approval/rejection/archivation
- {%comment%} comment added by the user who changed the status of the document

# 7.20.5 Versioning and rollback

Versioning allows you to store all versions of a document which uses workflow. You can view the versions of a document in **CMS Desk -> Content -> Properties -> Versions**.

General									0
URLs									
Template									
Metadata	Document histo	ry:							Destroy history
Categories	Actions	Modified when / by	Ver.	Comment	Publish from	Publish to	Publish	Published from	Published to
Menu Workflow	R 🔊 💥	12/22/2009 3:08:24 PM Global Administrator (administrator)	3.1						
Versions Related dors	🗟 🔊 💥	12/22/2009 3:08:02 PM Global Administrator (administrator)	3.0					12/22/2009 3:08:07 PM	
Linked docs	a 🔊 💥	12/22/2009 3:07:03 PM Alice Murphy (alice)	2.0			12/22/2009 3:08:07 PM		12/22/2009 3:07:26 PM	12/22/2009 3:08:07 PM
Security Attachments	ā 🔊 🗶	12/22/2009 3:07:03 PM Alice Murphy (alice)	1.0			12/22/2009 3:07:26 PM		12/22/2009 3:07:03 PM	12/22/2009 3:07:26 PM

You can perform the following actions with the listed versions:

- Solution View displays an overview of the document's content with the possibility of <u>side-by-side</u> <u>comparison</u> of versions
- Rollback rolls back any changes made since the particular version of the document
- **X Delete** deletes the old version

You can use the **Destroy history** button to clear the history and restart version numbering. The **Destroy** permission for this document must be granted to the user.

The history also shows when the particular version has been published and when it was replaced with a new version.

The length of the version history can be configured in **Site Manager -> Settings -> Content** management -> Version history length.

### Automatic version numbering

Kentico CMS supports automatic version numbering:

- If you use workflow without content locking, automatic version numbering is used by default.
- If you use content locking, this option is optional and can be configured in Site Manager -> Settings
   -> Content management -> Use automatic version numbering.

The automatic version numbering works like in the following example:

- 0.1 first version of the document when it's created
- 0.2 second modification of the document
- 1.0 first published version of the document
- 1.1 first modification of the published document
- 2.0 second published version of the document

### Side-by-side comparison of versions

If you view click the **View** (a) icon next to a version, the pop-up window allows you to view a side-byside comparison with other document versions.

You only need to select the appropriate version in the **Compare to** drop-down list. Content of the two versions will be displayed side-by-side with the changes highlighted in red font. You can roll back the document to a particular displayed version by clicking the **Rollback** () icon in the top-right column of the version's column.

CODE Document version - Windows Internet Exp	lorer				
G v Attp://localhost/KenticoCl	MS_0930/CMSModules/Content/CMSDesk/Properties/ViewVersio 🝷	See Stand Bing P ▼			
🔶 Favorites 🛛 👍 🏉 Suggested Sites 🕶	🔊 Web Slice Gallery 🕶				
Cocument version		🏠 🕶 🔝 👻 🚍 🖶 🕶 Page 🕶 Safety 🕶 Tools 🕶 🕢 👻			
Document version		0			
Compare to: 2.0 (Sep 30 2010 6:19PM)					
Version number:	1.0 (Sep 30 2010 6:19PM)	2.0 (Sep 30 2010 6:19PM)			
NewsID:	1	1			
NewsTitle:	Your first news	Your first news			
NewsReleaseDate:	1/10/2008 <del>5</del> :00:00 AM	1/10/2008 <u>12</u> :00:00 AM			
News Summary:	Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.				
NewsText:	This is the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image.	This is the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image. This is a cool feature indees!!!			
NewsTeaser:	📧 city.gif (9.8 kB)	📧 city.gif (9.8 kB)			
DocumentName:	Your first news	Your first news			
DocumentNamePath:	/News/Your first news	/News/Your first news			
DocumentShowInSiteMap:	True	True			
DocumentMenultemHideInNavigation:	False	False			
Unsorted attachments:	NewsPhoto2.jpg (38 kB)	NewsPhoto2.jpg (38 kB)			
	NewsPhoto3.jpg (36 kB)	NewsPhoto3.jpg (36 kB)			
	NewsPhoto1.jpg (44 kB)	NewsPhoto1.jpg (44 kB)			
		Close			
Done	🗣 Lo	ocal intranet   Protected Mode: Off 🛛 🖓 👻 🍕 100% 👻 🚊			

# 7.20.6 Versioning without workflow

It is possible to use versioning without actually using any workflow steps. In other words, it is possible to have a new document version created whenever a document is modified and saved.

To enable versioning without workflow, you only need to enable the **Automatically publish changes** option either when creating a new workflow, or when editing ( $\checkmark$ ) a workflow on its **General** tab. With this option enabled, custom steps can not be created on the **Steps** tab. You only need to define appropriate scope(s) so that the workflow affects the required documents.

Kentico		
CMS Site Manager	Sites Administration Settings Development Licenses Support	
Development     Gategories	Workflow properties	
Countries	Workflow  Mews approval	
	General Steps Scope Documents	
Custom tables		-
Document types	Display name: News approval	
🛛 🎯 E-mail templates	Code name: NewsApproval	1
Form controls	Automatically publish changes: 🔽	1
Inline controls	Use check-in/check-out: O Use site settings	
Modules	Yes	
Rade layouts	No	
Page templates	ок	

From the end-user point of view, editing a document using versioning without workflow is the same as if the document was using no workflow at all. The **✓** Submit to approval, **✓** Approve and **×** Reject buttons are not displayed on the document editing form - there is just the standard **a** Save button present.

On the **Properties -> Workflow** tab, you can recognize a document using versioning without workflow by the "*Any change to the document is automatically published.*" sentence, as highlighted below. You may also notice that the document remains in the **Published** step all the time until it gets archived.

Page Design	Form Properties	
General		
URLs		
Template		
Metadata	This document is currently usi	ng workflow News approval Any change to the document is automatically published.
Categories		
Menu	Approve:	Workflow steps
Workflow	Comment:	Order Step name
Versions		1 Edit
Related docs		2 Published
Linked docs	-	3 Archived
Security	Sand a maile	3 Addived
Attachments	Send e-mail: M	

# 7.20.7 Content locking

Content locking allows content editors to lock a document for editing, so that other editors cannot modify the document at the same time.

# Content locking configuration

You can enable content locking for versioned documents at two levels:

- globally in Site Manager -> Settings -> Content management -> Use check-in/check-out
- separately for each particular workflow, in Site Manager -> Development -> Workflows -> edit (
   ) a workflow -> General; here, you can configure the Use check-in/check-out option to either
   inherit from the global settings, or set explicitly if content locking should be used with this workflow

### Example

Here's an example of operations in the document life cycle when content locking is used:

- 1. User Alice creates a news item. The news item is automatically checked out (locked) for her. The other users cannot edit it.
- 2. User Alice finishes the changes and checks in the document.
- Now the other users can modify the document as well. As the document is checked in, Alice can also submit it to approval.

When you try to edit a checked in document, you will get a disabled editing form with Check out button:



You can also use the **Check in/Check out** buttons in **Properties -> Versions dialog**. This dialog allows you to specify custom version numbers and comments for each version when you check in the document:

General       URLs         URLs       The document is currently checked out.         Categories       Check in:         Workflow       Version:         Versions       7.5         Related docs       Comment         Linked docs       Check in:         Versions	
IRIs         Tengles         Metadata         Categories         Menu         Version:         7.5         Comment         New price         Versions         Related docs         Linked docs         Security         Attochmenks         Document history:         Check in:         Undo checkout	C
Tenplate       Metadata       The document is currently checked out.         Categories       Check in:         Workflow       Version:       7.5         Versions       Comment       New price         Versions       Check in:       Undo checkout         Attachments       Document history:       Destrop         Actions       Modified when / by       Ver.       Comment       Publish from       Publish to       Publish dfrom       Published from         Indication       6.1       6.1       Check in:       Check in:       Comment       Publish from       Publish to       Publish from       Publis	
Metadata       The document is currently checked out.         Categories       Check in:         Menu       Version:         7.5       Comment         New price       Image: Comment New price         Version:       Security         Attachmenks       Check in:         Unied docs       Check in:         Check in:       Unido checkout         Attachmenks       Document history:         Octions:       Modified when / lay       Ver. Comment         Publish from       Publish from       Publish to         Publish 2022/009 6:31:28 PM (Global Administrator (administrator) (Global Administrator (administrator) (Check in Unity 2022/009 6:31:14 PM	
Categories       Check in:       Version:       7.5         Workflow       Comment       New price       New price         Version:       Comment       New price       New price         Related docs       Unked docs       Check in       Undo checkout         Security       Check in       Undo checkout       New price         Attachments       Document history:       Destropy         Actions       Modified when / lay       Ver. Comment       Publish from       Publish of the publis	
Menu       Version:       7.5         Workflow       Comment       New price         Versions       Related docs         Security       Check in       Undo checkout         Attachments       Document history:       Destro         Actions       Modified when /lsy       Ver. Comment       Publish from       Publish to       Publish dfrom       Published from         In 222/2009 5:31:28 PM Global Administrator (administrator)       6.1       6.1       Comment       Publish to       Publish 12/22/2009 5:31:28 PM Global Administrator (administrator)       6.1	
Workflow       Comment:       New price         Versions       Related docs       Image: Comment:       New price         Inked docs       Image: Comment:       Image: Comment:       New price         Security       Check in       Undo checkout       Image: Comment:       New price         Attachments       Document history:       Destroit       Destroit         Actions       Modified when / by       Ver. Comment       Publish from       Publish to       Publish ed from       Published from         Image: Comment Picture       Image: Comment Publish from       Publish to       Publish ed from       Published from         Image: Comment Picture       Image: Comment Publish from       Publish to       Publish ed from       Published from         Image: Comment Picture       Image: Comment Publish from       Publish to       Publish ed from       Published from         Image: Comment Picture         Image: Comment Picture       Image: Comment Picture       Image: Comment Picture       Image: Comment Picture         Image: Comment Picture       Image: Comment Picture       Image: Comment Picture       Published from       Published from         Image: Comment Picture	
Versions       Related docs         Linked docs       Security         Security       Check in       Undo checkout         Attachments       Document history:       Destroit         Actions       Modified when / by       Ver.       Comment       Publish from       Publish to       Publish Published from       Published from         Image: Check in the state of administratory of check adminitet adminitet administratory of check administratory of	
Actions       Modified when / by       Ver.       Comment       Publish from       Publish to       Publish d from       Published from         Actions       Modified when / by       Ver.       Comment       Publish from       Publish to       Publish d from       Published from       Published from       Published from       Published from       Publish 12/22/2008 5:31:28 PM Global Administrator (administrator)       6.1	
Lunked docs Security Attachments	
Security Attachments  Check in Undo checkout  Check in	
Attachments  Check in Undo checkout  Document history:  Actions Modified when / by Ver. Comment Publish from Publish to Publish to Publish Published from Pu	
Document history:     Description       Actions     Modified when / by     Ver.     Comment     Publish from     Publish to     Publish d from     Published from     Published from       Image: Comment Public P	
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12/22/2009.5:31:14 PM	
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#### Checking-in any document

Users to whom the **Check in any document** permission was granted can check-in any document, even if they haven't checked-out the document. This permission can be set in the **Site Manager -> Administration -> Permissions** section, in the permission matrix called **Modules -> CMS Content**. However, this check-in can only be performed from the **Properties -> Versions** tab of the selected document, by clicking either the **Check in** or **Undo check-out** buttons.

## 7.20.8 Managing workflow using .NET code (API)

For details on versioning and workflow implementation and their scripting using .NET API, please see chapters <u>Workflow internals</u> and <u>Versioning internals</u>.



Modules

# 8 Modules

## 8.1 Overview

This section provides reference on in-box modules in Kentico CMS. Information on particular modules can be found in the sub-categories.

You can also learn how to develop a simple module and integrate it in Kentico CMS's user interface in this example.

<u>Please note</u>: not all modules might be available in your installation because some modules are available only with certain licenses

## 8.2 Developing custom modules

This chapter describes how you can create a custom module integrated into Kentico CMS administration interface.

You will learn how to create a simple module with a single button that displays the current date and time. The procedure can be used for adding any kind of custom module that you develop. You will also learn how to control access to the module's functions using <u>permissions</u> and integration of this module into the UI using <u>UI personalization</u>.

1. Open Kentico CMS web project in Visual Studio. You can do that either using the *WebProject.sln* file in your website root or using the **File -> Open -> website** menu in Visual Studio.

2. Create a new folder MyModule under the CMSModules folder.

3. Create a new page *default.aspx* under the *CMSModules/MyModule* folder:



4. Switch to code behind of the page and change the following line:

#### [C#]

public partial class CMSModules_MyModule_Default : System.Web.UI.Page

to:

#### [C#]

public partial class CMSModules_MyModule_Default : CMSToolsPage

It ensures that the module can be used only by users with access to Kentico CMS Desk.

5. Add the following code at the beginning of the page:

#### [C#]

```
using CMS.CMSHelper;
using CMS.UIControls;
```

6. Add the following code to the Page_Load method:

```
[C#]
if (!CMSContext.CurrentUser.IsAuthorizedPerResource("cms.mymodule", "read"))
{
    RedirectToAccessDenied("cms.mymodule", "Read");
}
```

It checks if the current user has the Read permission for module myprojects.mymodule.

7. Switch to the **Design** mode and add a **Button** control on the page. Set its properties:

- ID: btnGetTime
- Text: Get time

8. Add a Label control on the page, next to the button. Set its properties:

- ID: IblTime
- Text: (clear the value)

CMSModule	s/MyModule/Default.aspx
Get time	[lblTime]

9. Double-click the button and add the following code inside the btnGetTime_Click method:

[C#]

```
if (CMSContext.CurrentUser.IsAuthorizedPerResource("cms.mymodule", "gettime"))
{
    lblTime.Text = DateTime.Now.ToString();
}
else
{
    lblTime.Text = "You're not authorized to get the current date and time.";
}
```

It checks if the current user has *gettime* permission for a module named *cms.mymodule* and if so, it displays the current date and time.

10. Run the project and sign in to **Site Manager**. Go to **Development -> Modules** and click **Wew module**. Enter the following values:

- Module display name: My module
- **Module code name**: cms.mymodule; for the UI element to be site-related, it is important to enter the value in the *cms.<elementname>* format, where *<elementname>* is the Code name of the UI element created in step 16; see <u>this topic</u> for more details

Click **OK**. The module was registered in the system.

Please note: in the system, modules are represented by ResourceInfo and ResourceInfoProvider

11. Go to the **Permission names** tab and click **4 New permission**. Enter the following values:

- Permission display name: Read
- Permission code name: read
- Display in matrix: enable

Click OK.

- 12. Add another permission:
- Permission display name: Get time
- Permission code name: gettime
- Display in matrix: enabled

Click OK.

13. Go to the **Sites** tab and enable the new module for appropriate sites.

Now that the module is registered, we need to display it in the user interface. We will do it by registering a new UI element as described <u>here</u>. For the purposes of this example, we will place it into the **Tools** menu. The module can also be placed into other sections of the UI as listed <u>here</u>.

14. Go back to **Development -> Modules** and edit ( $\checkmark$ ) the **Tools** module. Switch to its **User interface** tab, select the root of the tree (Tools) and click **B New element**. Enter the following details:

- Display name: My module
- Code name: MyModule
- Element is custom: enabled
- Caption: My module
- Target URL: ~/CMSModules/MyModule/Default.aspx

Click OK.



15. We will use <u>UI personalization</u> to enable access to this module only to members of certain roles. For this to work, UI personalization needs to be <u>enabled</u>. With the new UI element still selected, switch to the **Roles** tab and enable the element for members of the **CMS Basic users** and **CMS Desk Administrators** roles.

	_		Switch to CMS Desk
CIVIS Site Manager	Sites Administration Settings D	evelopment Licenses Support	
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>CSS stylesheets</li> <li>Cultures</li> <li>Custom tables</li> <li>Document types</li> <li>E-mail templates</li> <li>Form controls</li> </ul>	Module properties Modules > Tools General Permission names User inter Wew element 1 Up Delete element Down Tools	face Sites UI elements  My module General Roles	
<ul> <li>Inline controls</li> <li>Modules</li> <li>Notifications</li> <li>Page layouts</li> <li>Page templates</li> <li>Relationship names</li> <li>System tables</li> <li>Tag groups</li> <li>Time zones</li> <li>UI cultures</li> <li>Web part containers</li> <li>Web parts</li> <li>Web templates</li> <li>Web templates</li> <li>Web templates</li> <li>Widgets</li> </ul>	Tools     Abuse report     BizForms     Blogs     Content staging     Content staging     Custom tables     E-commerce     File import     Forums     Groups     Media libraries     Message boards     Newsletter	Site: Corporate Site Authenticated users CMS Basic users CMS Community Administrators CMS Designers CMS Desk Administrators CMS Editors CMS Readers Everyone	•           My module           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •           •
Workflows	Web analytics	Gold Partners Live ID users Not authenticated users Silver Partners	

16. Go to **CMS Desk -> Administration -> Permissions** and choose **Permission type**: Modules with **Permission matrix**: My module. Grant the *Read* permission to the **CMS Basic users** role and both the *Get time* and the *Read* permissions to the **CMS Desk Administrators** role:

💒 Kentico		Switch to Site Manager	2
CMS Desk Content	My desk Tools Administration		
Administration Banned IPs Event log Permissions Roles Control Scheduled tasks UI personalization	Permissions Permission type: Modules Permission matrix: My module		_
San Sers		Get time Read	
	Authenticated users	0 0	
	CMS Basic users	□	
	CMS Community Administrators		
	CMS Designers		
	CMS Desk Administrators	<b>S</b>	
	CMS Editors		

17. Now go to **CMS Desk -> Tools** logged in as *administrator* (with blank password). You can see the **My module** item at the bottom of the left menu. Click it and you will see your form created in steps 3-9. When you click the button, current date and time gets displayed.

🎎 Kentico		Switch to Site Manager
CMS Desk Cont	ent My desk Tools Administration	
<ul> <li>Tools</li> <li>Abuse report</li> <li>BizForms</li> <li>Blogs</li> <li>Booking system</li> <li>Content staging</li> <li>Custom tables</li> <li>Custom tables</li> <li>File import</li> <li>Forums</li> <li>Groups</li> <li>Media libraries</li> <li>Message boards</li> <li>Newsletter</li> <li>Polls</li> <li>Reporting</li> <li>Web analytics</li> <li>My module</li> </ul>	Gettime 11/30/2009 10:35:28 PM	

18. Now try logging in as *andy* (with blank password) and go back to **CMS Desk -> Tools**. Andy is a member of the **CMS Basic users** role. In step 18, you configured that members of this role have only the *Read* permission necessary for the module to be displayed (ensured in step 6), but not the *Get time* permission necessary for the button functionality. Try clicking it, you will see the access denied message that you defined in step 9.

Kentico CMS Desk	My desk	Tools
Tools  Newsletter My module		Get time You're not authorized to get the current date and time.



- ~/App_Data/CMSModules/CMS_Test
- ~/CMSModules/CMS_Test

## 8.3 Abuse report

## 8.3.1 Overview

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The Abuse report module enables site visitors to report various forms of website abuse. This can be anything from flame-type forum posts, rude comments on blog posts or message boards, spamming, links to illegal content or any other form of website abuse coming from user input.

The whole functionality is based on website users reporting these forms of website abuse to website administrators via one of the provided web parts - **Abuse report** and **In-line abuse report**. Both web parts are described in the <u>Available web parts</u> chapter. The <u>Using the In-line abuse report web part in transformations</u> chapter demonstrates how the **In-line abuse report** web part can be used in transformations to provide the abuse report functionality together with dynamically loaded content.

Abuse report functionality is also embedded in web parts of the <u>Forums</u> and <u>Message boards</u> modules. Advice on how to use the embedded functionality can be found in the <u>Integration with other modules</u> chapter.

Report abuse Webpage Dialog	×
Report abuse	
Somebody has just posted a link to illegal content the website forums.	to ^
	~
Report abuse Cano	:el
http 🗣 Local intranet   Protected Mode: Off	

Website administrators can read and manage submitted reports in **CMS Desk -> Tools -> Abuse report**. This is where a list of submitted reports is displayed, with the possibility to get redirected to the source of reported abuse and take an appropriate action. All abuse report management possibilities provided in this part of the administration interface are described in the <u>Abuse reports management</u> chapter. A user who wants to manage abuse reports must be in a role granted with appropriate permissions for the module - please consult the <u>Security</u> chapter for more details on the module's permissions.

The Abuse report internals and API sub-chapter provides information about the database tables and

classes used by the module, as well as examples of how abuse reports can be managed using Kentico CMS API.

The Abuse report module is just one of the modules which can help you deal with unwanted user behavior on your site. If you want to keep your site free of rude language or simply filter user input based on contained keywords, the <u>Bad words</u> module may come in handy. If you are facing a problem with notorious spammers or have another reason why an IP address should be prevented from accessing your site, you can deny access to a particular IP address using the <u>Banned IPs</u> module.

## 8.3.2 Available web parts

This page gives just a brief overview of the Abuse report web parts. Detailed descriptions of each web part and its properties can be found in <u>Kentico CMS Web Parts Reference</u>.

### Abuse report

The **Abuse report** web part gives site visitors the possibility to report website abuse such as using indecent expressions, offensive language, etc. In the web part selection dialog, you can find it under the **Abuse report** folder. It can be placed into any web part zone on any page of your website, while you will typically add it to pages where user input is possible, e.g. pages with <u>forums</u>, <u>message boards</u>, <u>blogs</u>, <u>user contributions</u>, etc.

You only have to set the following two specific properties in order for the web part to work properly:

Confirmation text	Text message that will be displayed to the site visitor after submitting the abuse report.
Title of abuse report	Title of the report that will be displayed in the list of abuse reports in <b>CMS Desk -&gt; Tools -&gt; Abuse report</b> . Using this property, you can distinguish reports submitted at different pages of your website from each other.

In the screenshot below, you can see the web part added below the forum group on the **/Forums** page of the sample Corporate Site. When a user types in some report text and clicks the **Report abuse** button, a report is logged in **CMS Desk -> Tools -> Abuse report**. Read the <u>Abuse reports management</u> topic for information on how reports can be managed in this section of CMS Desk.

Foru	Im	Threads	Posts	Last post
Site	forums			
We	eb site forums			
	Announcements Product announcements come here. Lock	2	6	Frank Stevens (11/16/2008 1:08:41 PM)
	Technical support Sample forum for technical support questions. Lock	3	4	David Fishman (11/16/2008 1:37:45 PM)
Some Rude vulg Tech	None whose user name is The Boy has insulted me with ar expressions in the nical support forum!!!			

### In-line abuse report

If you want to use only a tiny clickable link instead of the whole **Abuse report** web part, you can use the **In-line abuse report** web part. The web part appears only as the *Report abuse* link, as you can see in the screenshot below. Properties of the two web parts are identical.

The **In-line abuse report** web part can also be used in transformations, as explained in the <u>Using the</u> <u>In-line abuse report web part in transformations</u> chapter.

#### Forums

You can set up any number of forum groups and each forum group may have multiple forums on particular topic. The forums are organized into threads. You can also use the Forums module for article comments if you use so called "ad-hoc" forums that are bound to some particular document (article, product, etc.).

orui	n	Threads	Posts	Last post
ite	forums			
Wel	b site forums			
	Announcements Product announcements come here. Lock	2	6	Frank Stevens (11/16/2008 1:08:41 PM)
)	Technical support Sample forum for technical support questions. Lock	3	4	David Fishman (11/16/2008 1:37:45 PM)

Site map | Disclaimer

When a site visitor clicks the link, a dialog pops-up, letting the site visitors report abuse to the site administrators. Reports submitted via this web part are also logged in **CMS Desk -> Tools -> Abuse report** and can be managed there as described in the <u>Abuse reports management</u> topic.

🙋 Report abuse Webpage Dialog	<b>—</b>
a Report abuse	
	_
I feel personally insulted by this message.	^
	*
Report abuse Conce	
	·
http 🛸 Local intranet   Protected Mode: Off	

### 8.3.3 Using the In-line abuse report web part in transformations

The Inline abuse report web part appears as a link with the *Report abuse* text. After clicking the link, a dialog appears, letting the site visitor send abuse report to the site administrators. Apart from using it as a standard web part, you can also use it in transformations to have the *Report abuse* link displayed with dynamically loaded content.

To see how the In-line abuse report web part is used, you can go to the Examples -> Web parts -> Message boards -> Message board page of the sample Corporate Site. As you can see in the screenshot below, the *Report abuse* link is included with each message on the board.

Messages Indiana Jones	
There's a lot of SEO tutorials to read in the internet. You can search it!	
http://www.google.cz/search?q=SEO&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=f 9/8/2008 11:45:28 AM	firefox-a
	Edit <u>Delete Reject</u> Report abuse
Michael Douglas	
These are good points. Ranking number 1 on the search engines can also be a downfall, there are dis several people will copy your work, that sounds bad but I think it only shows that you're popular. On t competitors will try to pull you down and that's really horrible.	sadvantages. If he other hand,
9/8/2008 11:42:23 AM	
	Edit <u>Delete Reject</u> Report abuse

This is achieved using the In-line abuse report web part in the transformation used for displaying board messages. If you go to properties ()) of the **Message board** web part and edit the **Message** 

**transformation** (the *community.transformations.MessageBoard* transformation should be selected by default), you should see the same code as below.

```
*@ Register Src="~/CMSModules/MessageBoards/Controls/MessageActions.ascx" TagName="
<%@ Register Src="~/CMSModules/AbuseReport/Controls/InlineAbuseReport.ascx" TagNam</pre>
<div class="CommentDetail">
  <asp:Panel ID="pnlRating" runat="server" CssClass="CommentRating" />
  >
        <*# IfEmpty(Eval("MessageURL"), Eval("MessageUserName", true), "<a</pre>
href=\"" + Eval("MessageURL", true) + "\" target=\"_blank\">" + Eval
("MessageUserName", true) + "</a>") *>
        <*# CMS.GlobalHelper.TextHelper.EnsureLineEndings(Convert.ToString(Eval</pre>
        <*# GetDateTime(Eval("MessageInserted")) *>
        <cms:MessageActions ID="messageActions" runat="server" />
        <cms:AbuseReport ID="ucInlineAbuseReport" runat="server"
ReportTitle='<%# "Message board abuse report: " + Eval("MessageText") %>'
CMSPanel-SecurityAccess="AuthenticatedUsers" />
        </div>
<hr style="border: 1px solid #CCCCCC;"/>
```

Let's take a closer look at the highlighted parts of the code. The highlighted line at the top is here to register the web part (actually control) so that it can be used in transformation code. As you can see, the web part code file is ~/CMSModules/AbuseReport/Controls/InlineAbuseReport.ascx.

The second highlighted section is the actual web part, identified by the tag name and prefix defined in the *Register* tag. The *ReportObjectType="board.message"* and *ReportObjectID='<%# Eval* ("MessageID") %> parameters ensure that it will be possible to view details of a particular message (source of reported abuse) from the administration interface. These parameters pass the ID of the particular board message along with the report, so that the message can be identified and a link to it created. The *ReportTitle='<%# "Message board abuse report: " + Eval("MessageText") %>* parameter defines the title of the report displayed in the administration interface. The last parameter - *CMSPanel-SecurityAccess="AuthenticatedUsers"* - ensures that the link will be displayed only to authenticated

users.

This way, you can use the web part in transformations of any document types you need. The only limitation is that the <u>object details functionality</u> is available only with **board messages**, **forum posts** and **blog comments**. Abuse reporting is still possible with other object types, but no object details are passed with the report and therefore can not be displayed in the administration interface.

## 8.3.4 Abuse reports management

Abuse reports can be viewed and managed in CMS Desk -> Tools -> Abuse report.

Kentico CMS Desk Conter	nt My desk Tools	Administration	E-commerce	Switch to Site Mar	ager Site: Corporate Site	User: Global Administrate	r v6.0.3866	Sign Out
Tools     Abuse report     BizForms     Biogs     Booking system     Content staging     Custom tables     File import	Report abu  Title: Status: (all) Site: Corporate Show	Se		×				0
Secures 6	Actions	Title				When		Status 🔺
Media libraries	1 🗙 🗸 🖉	Forum post ab	use report: We are	happy to announce web site launc	h. http://www.kentico.com/outsid.	8/2/2010 5:3	6:40 PM	New
Message boards	/ ¥ √ ⊘	Message boar	d abuse report. Th	ere's a lot of SEO tutorials to read ir	n the internet. You can searc	8/2/2010 5:3	6:02 PM Items pe	New rpage: 25 💌

The top part of the page is a filter. By default, you get all reports displayed in the list below it. Using the filter, you can display only those reports that match the specified criteria. Available filtration parameters are **Title**, **Status** and **Site** from which the report was sent. To filter the reports, enter the appropriate parameters and click the **Show** button. A list of reports matching the criteria will be displayed.

The **Status** column shows which status is the report currently in. You can use the statuses to mark reports, so that **New**, **Solved** and **Rejected** reports can be distinguished from each other. By switching a report to a status, only the status changes - no other action happens. In other words, status switching is here just for your convenience, but you need to perform a suitable action manually.

The following actions are available for each of the listed reports:

- **Z** Edit if clicked, the user will be redirected to report properties page, where you can edit the report's properties
- **X Delete -** deletes the report
- **Wark as solved -** switches the report to the *Solved* status; used to mark reports for that the necessary actions have been taken
- O Mark as rejected switches the report to the *Rejected* status; used to mark reports that were not considered being cases of website abuse

If you click a title of a report, you will be redirected to the page that the report was sent from. If you mouse-over it, report description entered by the sender of the report will be displayed in form of a tooltip.

### Editing a report

When editing  $(\mathscr{P})$  a report, the following information is displayed:

Title Title of the abuse report.
----------------------------------

URL	URL of the page from which the report was sent. Click it to get redirected to that page.			
Culture	Website culture from that the report was sent.			
Object type	Type of object that was the cause of this report. If blank, the report was sent from some document.			
Object name	Code name of the object that was the cause of this report.			
Reported by	Site user who submitted the report.			
Reported when	Time when the report was submitted.			
Site	Website from that the report was submitted.			
Status	<ul> <li>Abuse report status, the following are possible:</li> <li>New - the report is new and has not been solved yet</li> <li>Solved - necessary actions have already been taken</li> <li>Rejected - the report was not considered being a case of website abuse</li> </ul>			
Comment	Comment of the report entered by the reporting user.			

## **Object details**

If you edit ( $\checkmark$ ) a report related to a **blog comment**, **board message** or **forum post**, the **Show object details** link is displayed below report comment, as highlighted in the screenshot above.

#### Abuse report properties

Abuse reports + Forum post abuse report. We are happy to announce web site launch. http://www.kentico.com/outsid...

Title:	Forum post abuse report: We are happy to announce web site launch. http://www.kentico.com/outsid	
URL:	/KenticoCMS_0802/Examples/Webparts/Forums/Forum-(threaded-view).aspx?threadid=1⟨=en-US	
Culture:	English (United States)	
Object type:	Forum post	
Object name:	Web site launch	
Reported by:	Sample Gold Partner	
Reported when:	8/2/2010 5:36:40 PM	
Site:	Corporate Site	
Status:	New	
Comment:	This is not very nice. In fact, it's quite rude.	*
		-
1	Show object details	1
	ОК	

Clicking the link opens a new window with details about the source of the report (the board message, blog comment or forum post). This functionality is ensured automatically by the web parts listed in the <u>Integration with other modules</u> topic. You can also achieve it in transformations of these object types using the **In-line abuse report** web part, as described in the <u>Using the In-line abuse report web part in transformations</u> topic.

) v A http://localhost/Kentico	CMS 0802/CMSModules/AbuseReport/AbuseReport ObjectDetails.	2
		_
Object details	🖬 👻 🔝 👻 🗐 🕈 Page 🔻 Sarety 🔻 Tools 🖲 🌘	<b>9</b> •
Object details		
orum post		
Field name	Value	-
Postid	1	٦
PostForumID	1	
PostParentID		
PostIDPath	/0000001	
PostLevel	0	
PostSubject	Web site launch	
PostUserID	53	
PostUserName	administrator	
PostUserMail	admin@localhost.local	
PostText	We are happy to announce web site launch. [url=http://www.kentico.com] [img]http://www.kentico.com/outside/logos/powered_by_button_100x38.git[/img] [/url]	
PostTime	11/26/2007 9:58:25 AM	
PostApprovedByUserID		
PostThreadPosts	3	
PostThreadLastPostUserName	administrator	
PostThreadLastPostTime	10/19/2008 5:45:18 PM	
	Close	
	🚱 Local intranet   Protected Moder Off  🖉 🖷 100%	

### 8.3.5 Integration with other modules

Apart from dedicated web parts described in the <u>Available web parts</u> chapter, the abuse report functionality is also embedded in the following web parts:

- Blogs -> Comment view
- Community -> Group forum list
- Forums -> Forum group
- Forums -> Forum (Single forum General)
- Forums -> Forum (Single forum Tree layout)
- Forums -> Forum (Single forum Flat layout)

Each of these web parts has the **Abuse report** section in its properties, as depicted in the screenshot below. The section contains the following properties:

- Who can report abuse using this property, you can determine to whom will the *Report abuse* link be displayed and who will therefore be able to submit abuse reports; the following options are available:
  - All users the link will be displayed to anyone who views a page with the web part
  - Authenticated users the link will be displayed only to authenticated users
  - Authorized roles the link will be displayed only to users who are members of the roles specified by the *Authorized roles* property
- Nobody the link will not be displayed at all
- Authorized roles if the Who can report abuse option is set to Authorized roles, you can use this

property to specify the roles to whose members the abuse report link will be displayed

For a complete reference on Kentico CMS web parts and their properties, please consult <u>Kentico CMS</u> <u>Web Parts Reference</u>.

🖉 Web part properties	(Forum group) Webpage Dialog		×
🗋 Web part pro	operties (Forum group)		Documentation
General Layout			
Default Visibility	Access denied page URL:		•
Group settings Post options	Abuse report		
Post extended options Behaviour	Who can report abuse:	Authenticated users	
Abuse report Paging	Authorized roles:	Select Clear	
Tree forum properties Web part container	Paging		
HTML Envelope AJAX	Enable thread paging:		E
Time zones Partial caching	Thread paging page size*:	▶ 10	
	Enable posts paging:	• 🖉	
	Posts page size*:	▶ 10	
	Friendly URLs		
Refresh content		OK Cancel	Apply
http://localhost/Kentico	CMS_0802/CMSModules/PortalEngine	/UI/Webparts/WebPartProperti 🗣 Local intranet   Protected Mode: Off	

### 8.3.6 Security

Permissions for the Abuse report module can be set in **Site Manager -> Administration -> Permissions**. Select the **Modules -> Abuse report** permission matrix and grant appropriate permissions to particular roles.

The following permissions can be granted to the roles:

- Manage members of the role are allowed to edit, delete, mark as solved and reject abuse reports
- Read members of the role are allowed to view the abuse reports list

APPermissions				
Site:	Corporate Site			
Permission type:	Modules	•		
Permission matrix:	Abuse report	•		

	Manage	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	ø	ø
CMS Designers		
CMS Desk Administrators	₫	ø
CMS Editors	2	Ś
CMS Readers		ø
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

## 8.3.7 Abuse report internals and API

#### 8.3.7.1 Database tables and API classes

The Abuse report module uses the following database table:

• CMS_Abuse Report - this is the database table used for storing submitted abuse reports

The Abuse report API is provided by the following CMS.SiteProvider namespace classes:

 AbuseReportInfo, AbuseReportInfoProvider - these classes provide functionality for managing abuse reports

The following topics show how methods from these classes can be used to manage abuse reports:

- Submitting an abuse report
- Getting abuse reports from the database
- Updating an abuse report
- Deleting an abuse report

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

Modules	705
---------	-----

#### 8.3.7.2 Submitting an abuse report

The following code example shows how to create an abuse report and store it in the system database.

[C#]

```
using System;
using CMS.SiteProvider;
using CMS.CMSHelper;
using CMS.GlobalHelper;
. . .
        // Create a new abuse report
        AbuseReportInfo abuseReport = new AbuseReportInfo();
        abuseReport.ReportURL = UrlHelper.GetAbsoluteUrl(UrlHelper.CurrentURL);
        abuseReport.ReportCulture = CMSContext.PreferredCultureCode;
        abuseReport.ReportTitle = "Sample abuse report";
        abuseReport.ReportComment = "Sample comment";
        abuseReport.ReportWhen = DateTime.Now;
        abuseReport.ReportStatus = AbuseReportStatusEnum.New;
        abuseReport.ReportSiteID = CMSContext.CurrentSiteID;
        // Save the info object to the database
        AbuseReportInfoProvider.SetAbuseReportInfo(abuseReport);
```

#### 8.3.7.3 Getting abuse reports from the database

The first code example on this page shows how you can get a single abuse report from the system database based on its ID.

#### [C#]

```
using CMS.SiteProvider;
...
// Get abuse report as an info object by AbuseReportID
AbuseReportInfo ari = AbuseReportInfoProvider.GetAbuseReportInfo(1);
```

The following code example shows how you can get a *DataSet* with multiple abuse reports. As you can see, two overrides of the *GetAbuseReports* method are used here. The first one gets the abuse reports based on the WHERE condition and ordered by the ORDER BY part of the SQL query. The second one does the same, while it also selects only the particular columns and retrieves only top N records (based on the order specified by the second parameter).

[C#]

```
using System.Data;
using CMS.SiteProvider;
....
// Set the WHERE condition
string where = "ReportStatus = 1";
// Set the ORDER BY clause
string orderBy = "ReportWhen DESC";
// Set the colums to select
string columns = "ReportID, ReportTitle, ReportURL, ReportComment, ReportSta
// Set the number of rows to select
int topN = 10;
// Get a DataSet of abuse report info objects according to the given paramet
DataSet ds = AbuseReportInfoProvider.GetAbuseReports(where, orderBy);
DataSet ds2 = AbuseReportInfoProvider.GetAbuseReports(where, orderBy, column
```

#### 8.3.7.4 Updating an abuse report

The following code example shows how you can modify details of an existing abuse report.

#### [C#]

```
using CMS.SiteProvider;
....
// First get the abuse report info by its ID
AbuseReportInfo ari = AbuseReportInfoProvider.GetAbuseReportInfo(1);
if (ari != null)
{
    // Set abuse report status to solved
    ari.ReportStatus = AbuseReportStatusEnum.Solved;
    // Edit comment
    ari.ReportComment += " - SOLVED";
    // Save the abuse report info to the database
    AbuseReportInfoProvider.SetAbuseReportInfo(ari);
    }
```

#### 8.3.7.5 Deleting an abuse report

The following code example shows how you can delete an abuse report from the system database.

#### [C#]

using CMS.SiteProvider;

```
...
// First get the abuse report info by its ID
AbuseReportInfo ari = AbuseReportInfoProvider.GetAbuseReportInfo(1);
if (ari != null)
{
    // Delete the abuse report
    AbuseReportInfoProvider.DeleteAbuseReportInfo(ari);
}
```

## 8.4 Alternative forms

### 8.4.1 Overview

The Alternative forms module enables layout and functionality customization of existing **BizForms**, **document types**, **system tables** and **custom tables**. These alternatives can then be easily used instead of the originals when needed.

## 8.4.2 Creating an alternative form

This example shows how to create an alternative form of the existing **Contact us** BizForm on the sample Corporate Site.

Alternative forms of document types, system tables and custom tables can be created in exactly the same way as described in this example. You only need to access the alternative forms tab from the following locations:

- Site manager -> Development -> Custom tables
- Site manager -> Development -> Document types
- Site manager -> Development -> System tables

There, just choose to **Edit** ( $\checkmark$ ) the particular item, switch to its **Alternative forms** tab and follow the instructions below, starting from the second step.

1. Go to **CMS Desk -> Tools -> BizForms**. Choose to **Edit** (*V*) the **Contact us** BizForm. The **BizForm Properties** screen will appear.

2. On **BizForm Properties**, switch to the **Alternative forms** tab and choose to **Create new form**.

3. On the form that will be displayed, enter the following details and click OK.

- Display name: Contact Us Alternative
- Code name: ContactUsAlternative

BizForm Properties							
<u>BizForm</u>	<u>is</u> ► Cor	itact Us					
Data	General	Fields	Form	Notification e-mail	Autoresponder	Security	Alternative forms
Alternati	ive forms	New alt	ernative	iorm			
Display	y name:	Contact Us	s Alterna	tive			
Code n	name:	ContactUs	Alternati	ve			
		OK					

4. Switch to the **Fields** tab. As you can see, all fields present in the original form are present here as well and you can now make modifications to them. Let's disable the **LastName** field as an example. Select the field from the list on the left and on it's properties, uncheck the **Display attribute in the editing form** check-box. Confirm by clicking **OK**. Like this, you can modify any field in the form according to your needs.

General	Fields	Layout			
ContactUsI FormInsert FormUpdat	D ed ted		Database		^
FirstName LastName			Attribute type:	LastName Text	
Email PhoneNum Message	nber		Attribute size:	200	=
message	message		Allow empty value:		
			Aundute delaun value.		
			Display attribute in the	editing form	
			Field		
			Show on public form:	V	
			Field caption:	Last name	
			Field type:	Text box 💌	-
				ОК	

5. Not only the fields, but also the layout of the form can be modified. Switch to the **Layout** tab and check the **Use custom layout** check-box. The layout editor will appear. Notice that the **LastName** field that we disabled in the previous step is not offered in the **Available fields** listbox. Click the **Generate table layout** button. Table layout will be generated in the editing field below. Highlight the \$\$label: FirstName\$\$ text in the first row and change its color to red.

General Fields Layou	it			
Save				
Vuse custom form layout	_			
Generate table layou	La Contra  <ul> <li>▲ ▲ ● ■ ●</li> <li>▲ ●</li> <li>▲ ●</li> <li>▲ ●</li> <li>▲ ●</li> <li>✓ Size ▼</li> </ul>		Available fields: FirstName Email PhoneNumber Message	
Slabel FirstNameSS	\$\$input:FirstName\$\$		*	
\$\$label:Email\$\$	\$\$validation:FirstName\$\$ \$\$input:Email\$\$ \$\$validation:Email\$\$			
\$\$label:PhoneNumber\$\$	\$\$input:PhoneNumber\$\$ \$\$validation:PhoneNumber\$\$			
\$\$label:Message\$\$	\$\$input:Message\$\$ \$\$validation:Message\$\$			Insert label
				Insert input
				Insert validation label
			$\overline{v}$	Insert submit button

Also select the rows of the first table column, right click it and from the context menu, choose **Cell** -> **Cell properties**. In the displayed dialog, choose **Vertical alignment: Top** and click **OK**. This will make the labels to be aligned to their fields. Click **Save**.

	🖂 👪 26日間 🖉	А	valiable lielus.
Cell Proper	ties		$\boxtimes$
Width: Height: Word Wrap:	pixels pixels Yes	Cell Type: Rows Span: Columns Span:	Data
Horizontal Alignment: P Vertical Alignment:	<not set=""></not>	Background Color: Border Color:	Select
p ali			OK Cancel
put:Message\$\$ alidation:Message\$\$			insert label

6. Let's take a look at what we've created. Switch to **CMS Desk -> Content**. From the content tree, select **Examples -> BizForms -> BizForm**. As you can see, there is the original version of the **Contact Us** form present on the page. We will edit the web part's properties so that the alternative from is used instead.

7. In **Edit** mode, switch to the page's **Design** tab and choose to configure the web part properties. We will be concerned about the **Alternative form name** field. Click the **Select** button next to it and from the list, select our **Contact Us Alternative**. Click **OK**.

CMS Desk - Web Part properties Webpage Dialog			Alternative form selection Webpage Dialog		
💐 Web part pr	operties (BizForm (on-line f	orm))	Select alternative form		
General Layout			Class: BizForm.ContactUs		
Default	BizForm settings				
Visibility BizForm settings	Site name:	> Sele			
HTML Envelope	Form name:	ContactUs     Sele	я <b>с</b>		
Time zones	Alternative form name:	BizForm.ContactUs.ContactUsAlte     Sele	ac		
Partial caching	Use colon (:) in labels:	•			
	Validation error message:	•			
	HTML Envelope				
	Web part container:	(none)			
	Web part container title:	•	OK Cancel		
	Content before:	•	See Local intranet   Protected Mode: Off		
Refresh content			OK Cancel Apply		
nttp://localhost/Kentice	oCMS/CMSModules/PortalEngine/UI/W	/ebparts/WebPartProperties.asp 🔦 Local intranet   Protec	ted Mode: Off		

8. Now when you switch to the **Live site** mode, you should see the modified version as in the following screenshot:

<u>Examples</u> > <u>Webparts</u> > <u>BizForms</u> > BizForm	
First name:	
E-mail:	
Phone number: ()	
Your message:	*
	Ŧ
Send message	

You have learned how to create an alternative form to an existing BizForm and use it on your website.

## 8.4.3 Joining two classes into one form

It is also possible to join two classes into one alternative form. This option is currently available only for the **User** and **User - Settings** system tables.

1. When creating an alternative form of the **User** system table, you have the option to check the **Combine with user settings** check-box. This causes that fields contained in the **User - Settings** table will be included in the alternative form.

System table properties				
System tables + User				
Fields Queries Alternation	Fields Queries Alternative forms			
Alternative forms   New alternative form				
Display name:	My alternative			
Code name:	MyAlternative			
Combine with user settings: 📝				
	ОК			

2. Now if you switch to the **Fields** tab, you will see that besides the original fields contained in the **Users** table, fields from the **User - Settings** table are also present, as you can see in the following screenshot:

General	Fields	Layout				
UserLastLo UserIsHidd UserVisibili UserIsDom	ogonInfo en ty ain	•	Database Attribute name:	UserSettingsID		•
UserHasAll	owedCul	tures	Attribute type:	Integer number	-	
UserNickNa	ame		Attribute size:			E
UserSignat	, ure	_	Allow empty value:			
UserURLR UserCamp UserMessa UserCustor	eferrer aign IgingNoti mData	ficationE	Attribute default value:			
UserRegist UserPrefer	rationInfo	)	Display attribute in the ec	liting form		
UserActivat	ionDate edBvLlse	dD	Field			
UserTimeZ	onelD D		Default visibility:	Display to all	•	
UserBadge	ID		Visibility control:	Visibility (drop down list)	•	
UserShows UserActivity UserForum	SplashSc Points Posts	reen +	Allow user to change field visibility:			
			Field cantion:	UserSettingsID		
					OK	

## 8.4.4 Automatically used alternative forms

If you create alternative form and give it one of the following code names, the form will be automatically used when performing the corresponding action. The following table shows the names and actions when the forms are used.

Alternative form Code name	Used when	Supported by
insert	creating a new document	document types, BizForms, system tables, custom tables
update	editing an existing document	document types, BizForms, system tables, custom tables

newculture	creating a new culture version	document types
	of a document	

## 8.5 Avatars

## 8.5.1 Overview

The Avatars module enables users to have an image associated with their account. This image is called an **avatar** and is displayed on the user's public profile, in forum posts, etc. An avatar serves as a graphical representation of a user, and is used to personalize that user's contributions on websites. More information about users in general can be found in the <u>Development -> Membership</u>, permissions and security chapter of this guide.

Users can either choose an avatar from a gallery of pre-defined avatars if this option is enabled or create a custom avatar by uploading their own image from a file on their local disk. All common image formats are supported, including animations.

🖉 Avatars gallery W	ebpage Dialog			×
Rease selection	ct an avatar			
•				۰.
1 <u>2</u>				
			ОК	Cancel
http://localhost/Kentico	oCMS5.0.3641 🕥 Loc	al intranet   Protected	Mode: Off	

Unlike pre-defined avatars, custom avatars can't be selected by other users and they are deleted from the system if the user they were uploaded by changes her avatar.

Groups can also have avatars, these are displayed on the group's profile and can benefit the group by providing a way for it to be identified better and faster, etc. To read more about groups, please refer to the <u>Modules -> Groups</u> chapter of this guide.

There are several ways for users or group administrators to add or change avatars. See the <u>Changing</u> <u>user avatars</u> or <u>Changing group avatars</u> topics for more details.

Site administrators can manage all avatars or change their settings. This is described in the <u>Managing</u> avatars and <u>Settings</u> topics.

The <u>Avatars internals and API</u> sub-chapter provides information about the database tables and classes used by the module, examples of how avatars can be managed using the API and how they can be displayed in transformations.

## 8.5.2 Changing user avatars

When a new user registers on a site, the default avatar will be assigned to them. After that, they can change thier avatar using the **My account** web part. It can be done on its **Personal settings** tab, as you can see in the screenshot below.

### My profile

Personal settings Chan	ge password Notifications
Username:	Turbo
Full name:	Noel Turpin
Email:	noel.turpin@localhost.local
Display my e-mail to:	🔘 Nobody 🔘 (all) 💿 Site members 🔘 Friends
Nickname:	Turbo
	-=T-U-R-B-O=-
Signature:	
	*
Messaging notification e-ma	d:
Time zone:	(none)
Avatar:	Lidead:
	Select ore-defined avatar
Gender:	
Date of birth:	1/3/1975
	ОК

Users can **Delete** (X) the avatar or **Upload** a custom one from a file. If pre-defined avatars are enabled in site settings, users can also click the **Select pre-defined avatar** link, which displays a gallery of pre-defined avatars.



You can find a live example of this on our **Community starter site**. Just log-in as some of the predefined users (e.g. *Turbo* with blank password) and click the **Edit my profile** link in the **Shortcuts** menu on the right.

## Changing user avatar in CMS Desk

Users with access to **CMS Desk** can change their avatars in **My Desk -> My profile**. It can be done the same way as described above. You can **Delete** (**X**) the avatar or **Upload** your own avatar from a file.

If default avatars are enabled in site settings, you can also click the **Select pre-defined avatar** link, which displays a gallery of pre-defined avatars from which you can easily pick one by clicking it and clicking **OK**.

Kentico CMS Desk	My deck Tools Administration		Switch to Site Manage
- My desk		1	
Recent documents			
Outdated documents	Details Change password No	tifications Subscriptions	
Working for my approval     Grecked out by me     Wy recycle bin	User name: Full name:	administrator Global Administrator	
My profile	First name:	Global	
My blogs	Last name:	Administrator	
My messages	Nick name:	Admin	
	E-mail:	administrator@localhost.local	
	Preferred content culture:	(default)	•
	Preferred user interface culture:	English	•
	Messaging notification e-mail:		
	Time zone:	(none)	
·	Signature:		×.
	Gender:	🔘 Male 🔘 Female	
	Date of birth:	Now	
	Avatar:	Upload: Select pre-defined avataf	Browse
	Show splash screen:		
		ОК	

## 8.5.3 Changing group avatars

When a new group is created, the default avatar will be assigned to it. After that, group administrators can change the group's avatar using the **Group profile** web part.

Users can **Delete** (**X**) the avatar or **Upload** a custom one from a file. If pre-defined avatars are enabled in site settings, users can also click the **Select pre-defined avatar** link, which displays a gallery of pre-defined avatars.

You can find a live example of this on the **Community starter site**. Sign-in as some group administrator (e.g. *Josh* with blank password, he is the *Australian travellers* group admin) and click Groups in the main menu. You should see the **Australian travellers** group in the **My groups** section. Click it, and what you can see in the screenshot below will be displayed to you.



## 8.5.4 Managing avatars

The administration interface for avatar management is located in **Site Manager -> Administration -> Avatars**.

You can filter displayed avatars using the filter above the list. Possible filtering parameters are **Avatar name**, **Avatar type** (user or group avatar, avatars of type *all* can be used for both) and **Avatar kind** (shared avatars are the pre-defined ones, while custom avatars are those that users uploaded from a file). Click **Search** to display only avatars matching the selected criteria.

You can Edit (*V*) or Delete (X) listed avatars.

Kentico CMS Site Manager	Sites Adm	inistration Settings Development Licenses Support	<u>S</u>	witch to CMS Desk	User:
Administration	Avatar	s			
Banned IPs ■ E-mail queue ■ E-vent log ■ Permissions ■ Recycle bin ■ Roles	Avatar name: Avatar type: Avatar kind:	LIKE  (all)  Shared  Search			
Scheduled tasks	Actions	Avatar name 🔺	Avatar type	Image preview	
Smart search	/ <b>X</b>	Group	Group	<b>. 1</b>	
📲 🕹 Users 🎝 Web farm	N 🗙	Group 2	Group		
	A 🗙	Group 3	Group		
·	/ <b>X</b>	Group 4	Group		
	/ <b>X</b>	Group 5	Group		
	/ <b>X</b>	Man	User	1	
	/ <b>X</b>	Man 1	User	<b>E</b>	
	/ <b>X</b>	Man 2	User	·E	
	e 🖉	Man 3	User		

## **Creating pre-defined avatars**

1. New **pre-defined avatars** can be created using the **Wew avatar** link at the top part of the page. Click it.

- 2. You will be asked to enter the following details:
- Avatar name name of the avatar
- Avatar type choose if the avatar can be used for users, groups or both
- Upload enter the path to the avatar image on your local machine or click the Browse button to browse and locate the file

When entered, click **OK** to proceed.

🧟 New avatar			
Avatars > New avatar			
Avatar name:	My Avatar		
Avatar type:	All		
Upload:	C:\inetpub\wwwroot\Ker Browse		
	ок		

3. The avatar is now created and if you go back to the list of avatars, you should see the avatar present in the list. However, you can set the following extra properties of the avatar now or any time later when editing the avatar:

- Make it default for user if checked, this avatar will be the default avatar for users
- Make it default for male if checked, this avatar will be the default avatar for male users
- Make it default for female if checked, this avatar will be the default avatar for female users
- Make it default for group if checked, this avatar will be the default avatar for groups

Default avatars will be assigned to newly created users or groups automatically when the user or group is created.

Avatar properties				
Avatars  My Avatar	Avatars > My Avatar			
The changes were saved.				
Avatar name:	My Avatar			
Avatar type:	All			
Image:	2			
Upload:	Browse			
Make it default for user:				
Make it default for male:				
Make it default for female:				
Make it default for group:				
	ОК			

### Administrating users' avatars

Site administrators can change the avatar of any user. If you go to **Site Manager -> Administration -> Users**, choose to **Edit** ( $\checkmark$ ) some of the users in the list and switch to their **Settings** tab, you should see the user's avatar in the **User picture** field, as you can see in the screenshot below. You can **Delete** (**X**) the avatar or **Upload** your own avatar from a file.

If default avatars are enabled in site settings, you can also click the **Select pre-defined avatar** link, which displays a gallery of pre-defined avatars from which you can easily pick one by clicking it and clicking **OK**.



## Changing group avatars in CMS Desk

Site administrators can change the avatar of any group. If you go to **CMS Desk -> Tools -> Groups** and choose to **Edit** ( $\checkmark$ ) some of the groups, you should see the group's avatar in the **Avatar** section, as depicted in the screenshot below. A Group avatar can be **Deleted** ( $\thickapprox$ ), a new one can be **Uploaded** from a file or selected from a gallery of pre-defined avatars (if this is enabled in site settings).



## 8.5.5 Settings

Settings of the Avatars module can be done in **Site Manager -> Settings -> Avatars**. The following settings are available:

- Enable pre-defined avatars if checked, default avatars can be selected when selecting a user's or group's avatar; if unchecked, only custom uploaded avatars can be used
- Avatar max side size maximal size of user avatars; if one or both sides of the image are longer, the image will be resized so that the longer side's size matches the entered value; if 0 is entered, *Avatar height* and *Avatar width* values will be used instead
- Avatar height if Avatar max side size is set to 0, images will be resized to this height
- Avatar width if Avatar max side size is set to 0, images will be resized to this width
- Group avatar max side size maximal size of group avatars; if one or both sides of the image are longer, the image will be resized so that the longer side's size matches the entered value; if 0 is entered, Group avatar height and Group avatar width values will be used instead
- Group avatar height if Group avatar max side size is set to 0, images will be resized to this height
- Group avatar width if Group avatar max side size is set to 0, images will be resized to this width

	Switch to CMS Desk User: Global Admin
CMS Site Manager Sites	Administration Settings Development Licenses Support
Site: (global)	Avatars
<ul> <li>Settings</li> <li>Web site</li> <li>Content management</li> <li>Files</li> <li>Kensership</li> <li>Security</li> <li>URLs and SEO</li> <li>Output filter</li> <li>System</li> <li>E-mails</li> <li>Avatars</li> <li>Body system</li> <li>Booking system</li> <li>Community</li> <li>Forums</li> <li>Media libraries</li> <li>Message boards</li> <li>Messaging</li> <li>Web analytics</li> <li>Windows LiveID</li> <li>E-commerce</li> <li>Payment gateway - Authorize.NET</li> <li>Payment gateway - PayPal</li> </ul>	Save       Preset these settings to default    These settings are global, they can be overridden by the local site settings. Please select the site to see or change the site settings.          Enable pre-defined avatars       Image: Comparison of the set of the se

## 8.5.6 Avatars internals and API

#### 8.5.6.1 Database tables and API classes

The Avatars module uses the following database table:

• CMS_Avatar - this is the database table used for storing avatars

The Avatars API is provided by the following CMS.SiteProvider namespace classes:
• AvatarInfo, AvatarInfoProvider - these classes provide functionality for managing avatars

The following topics show examples of how these classes can be used:

- Getting avatar data
- Modifying and creating avatars

The following topic contains examples of how avatars can be displayed in transformations:

• Displaying avatars in transformations

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.5.6.2 Getting avatar data

The following sample code shows how you can get an avatar as an AvatarInfo object:

#### [C#]

```
using CMS.SiteProvider;
....
// Get avatar object by AvatarID
AvatarInfo ai = AvatarInfoProvider.GetAvatarInfo(1);
// Get avatar object by AvatarName
AvatarInfo ai2 = AvatarInfoProvider.GetAvatarInfo("AvatarName");
```

The following sample code shows how you can get a DataSet containing all avatars from the system with an *ID* greater than 5 ordered by their name:

```
using System.Data;
using CMS.SiteProvider;
....
string where = "AvatarID > 5";
string orderBy = "AvatarName";
     // Get DataSet of avatar objects according to the given parameters
```

DataSet ds = AvatarInfoProvider.GetAvatars(where, orderBy);

#### 8.5.6.3 Modifying and creating avatars

The following sample code shows how you can modify the name of an existing avatar:

### [C#]

```
using CMS.SiteProvider;
....
// Get avatar object by AvatarID
AvatarInfo ai = AvatarInfoProvider.GetAvatarInfoWithoutBinary(avatarID);
// Change avatar name
ai.AvatarName = ai.AvatarName + "_Updated";
// Save avatar object
AvatarInfoProvider.SetAvatarInfo(ai);
```

The following sample code shows how you can create a new pre-defined avatar of type 'All' and add it to the system:

#### [C#]

```
using CMS.SiteProvider;
....
// Create new avatar object
AvatarInfo ai = new AvatarInfo("\\Directory\\custom.jpg");
// Set properties
ai.AvatarName = "New avatar";
ai.AvatarType = AvatarInfoProvider.GetAvatarTypeString(AvatarTypeEnum.All);
ai.AvatarIsCustom = false;
// Save object to database
AvatarInfoProvider.SetAvatarInfo(ai);
```

#### 8.5.6.4 Displaying avatars in transformations

#### **User avatars**

User avatars can also be displayed in transformations by using the <%# GetUserAvatarImage( ... ) %> method. Here are some examples of how it can be used:

The following method returns the image tag of the avatar contained in the AvatarGuid field of the currently

transformed user, with a maximum *sidesize* of 50 px. and *Alt tag* equal to the user's *Nickname* or *Username*. The *AvatarGuid* field must be accessible for this method to work:

```
<*# GetUserAvatarImage(50, HTMLEncode(GetNotEmpty("UserNickname;UserName"))) *>
```

The following method returns the image tag of the avatar with ID UserAvatarID, of user with ID UserID, with a maximum sidesize of 50 px. and Alt tag equal to the user's Username:

```
<%# GetUserAvatarImage(Eval("UserAvatarID"), Eval("UserID"), 50, Eval("UserName"))
%>
```

The following method returns the image tag of the avatar with ID UserAvatarID, of user with ID UserID, with a maximum width of 40 px., maximum height of 45 px. and Alt tag equal to the user's Username:

```
<%# GetUserAvatarImage(Eval("UserAvatarID"), Eval("UserID"), 0, 40, 45, Eval(
"UserName")) %>
```

#### **Group** avatars

Group avatars can by displayed using the <%# GetGroupAvatarImage( ... ) %> method. Here are some examples:

The following method returns the image tag of the group avatar contained in the *AvatarGuid* field of the currently transformed group, with a maximum *sidesize* of 50 px. and *Alt tag* equal to the group's *Display name*. The *AvatarGuid* field must be accessible for this method to work:

<*# GetGroupAvatarImage(50, Eval("GroupDisplayName", true)) *>

The following method returns the image tag of the group avatar with ID *GroupAvatarID*, with a maximum *sidesize* of 50 px. and *Alt tag* equal to the group's *Display name*:

```
<%# GetGroupAvatarImage(Eval("GroupAvatarID"), 50, Eval("GroupDisplayName", true))
%>
```

The following method returns the image tag of the group avatar with ID *GroupAvatarID*, with a maximum *width* of 40 px., maximum *height* of 45 px. and *Alt tag* equal to the group's *Display name*:

```
<*# GetGroupAvatarImage(Eval("GroupAvatarID"), 0, 40, 45, Eval("GroupDisplayName",
true)) %>
```

### Image tag

The following is an example of an image tag generated by the <%# GetUserAvatarImage( ... ) %>

method. As you can see, the method uses the ~/CMSModules/Avatars/CMSPages/GetAvatar.aspx page to get the source image.

```
<img style="border-width: 0px;" alt="Andy" src="/CMSModules/Avatars/CMSPages/
GetAvatar.aspx?avatarguid=42f9d97e-b0c8-43a2-8a35-62dfec5ae64a&maxsidesize=50"
/>
```

## 8.6 Bad words

### 8.6.1 Overview

The Bad words module can be used as a filter for unwanted input from website users. This can be anything from rude language to spam or links to illegal content, basically anything that is detectable by presence of some keyword in input text.

The Bad words module is capable of filtering input submitted via the following modules:

- Forums filters forum posts
- Blogs filters blog comments
- Messaging filters messages sent via the module
- Message boards filters messages posted on particular boards

For the module to work, you first need to enable it as described in <u>Enabling the module</u>. Filtering is then performed based on keywords - so called bad words - defined by site administrators in **Site manager -> Administration -> Bad words**. The procedure of defining bad words is described in the <u>Defining a bad</u> word topic.

Actions	Expression •	Action	Replacement	All cultures
N 🗙	arse	Remove		Yes
N 🗙	asshole	Replace (default)	***** (default)	Yes
N 🗙	assramer	Request moderation	Yes	
N 🗙	bastard	Deny		Yes

If a user inputs some text containing one or more of these words, a predefined action is performed. Available actions range from removing the word, replacing it with a pre-defined string or just reporting abuse to website administrators by means of the <u>Abuse report</u> module. All actions and their effects are described in the <u>Possible actions</u> topic.

By default, input from all users except global administrators is filtered. However, you may grant the **Use bad words** permission to some roles, which will disable filtering of input submitted by its members. More information on this option can be found in the <u>Security</u> topic.

The <u>Bad words internals and API</u> sub-chapter provides information about the database tables and classes used by the module, as well as examples of how bad words can be managed and bad word checks performed using Kentico CMS API.

The Bad words module is just one of the modules which can help you deal with unwanted user input. Besides detecting unwanted input based on keywords, you may also let your site visitors report such content via the <u>Abuse report</u> module. The last resort in dealing with unwanted content may be blocking access to your site from a certain IP address. This can be achieved using the <u>Banned IPs</u> module.

## 8.6.2 Enabling the module

For the module to be functional, you first have to go to **Site Manager -> Settings -> Bad words** and enable the **Check bad words** option.

On this page, you can also define the default action that will be assigned to newly created bad words if the *Use default settings* option is enabled in the bad word creation dialog (see <u>Defining a bad word</u> for more details). The default action can be selected from the **Bad word action** drop-down list.

Default replacement string can be entered into the **Bad word replacement** field. It will be used in case that a bad word is detected, the *Replace* action should be performed on its detection, but has no replacement text defined (i.e. has the *Use default settings* option enabled for the *Replace by* field).

1	Kentico									Switch to CMS Desk	User: Global Admin
1	CMS Site Manager	Sites	Administration	Settings	Develop	ment Licen:	es Suj	pport			
Site: (globa	l)	•	Bad Bad	words							
_ Set	ttings		Save	Rese	t these setti	ngs to default					
	● Web site 划 Content managemen ₩ Files	t	These sett	ings are glol	oal, they c	an be overridd	en by the l	local site settings	. Please selec	t the site to see or chang	e the site settings.
	Membership		Check ba	ad words	2	]					
	URLs and SEO		Bad word	i replaceme	nt 🕜 📩	***					
	🎾 Output filter 🚚 System		Bad word	action	(2) R	eplace			•		
	🗟 E-mails 🔟 Avatars		Export the	ese settings							
	Bad words										
	📕 Blogs 😽 Booking system										
	Second Community										
	m Content staging		Н								

## 8.6.3 Defining a bad word

The Bad words module's user interface is located in **Site Manager -> Administration -> Bad words**. This is where all existing bad words are listed and where new bad words can be defined.

Kentico							Switch to CMS Desi	🔇 User: Global Admin
CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support		
Administration  Administration  Administration  Bad words  Badges Banned IPs  F-mail queue  Event log  Permissions  Recycle bin	Expres	ad words bad word sion: Replace Show						
Sector Roles	Actio	ons Expressio	n 🔺		Action		Replacement	All cultures
Scheduled tasks		🗙 arse			Replace (def	ault)	***** (default)	Yes
System	1	asshole 🕻			Replace (def	ault)	***** (default)	Yes
UI personalization		assramer 🕻			Replace (def	ault)	***** (default)	Yes
web farm		bastard			Replace (def	ault)	***** (default)	Yes
		bitch 🕻			Replace (def	ault)	***** (default)	Yes
		bollock			Replace (def	ault)	***** (default)	Yes
	•	cabron			Replace (def	ault)	***** (default)	Yes
		🗙 cawk			Replace (def	ault)	***** (default)	Yes
		🗙 chink			Replace (def	ault)	***** (default)	Yes

The top part of the page is a filter. Using it, you can display only those bad words that match the specified criteria. You can filter by the **Expression** and by the **Action** that should be taken on its detection. After specifying the filtering criteria and clicking the **Show** button, only those items that match the specified criteria will be displayed in the list.

### Adding a new bad word

1. To add a new bad word, click the **New bad word** () link at the top of the page. You will be redirected to the **New bad word** dialog. The following details can be entered:

- Bad word the string that should not appear in input text
- Bad word is a regular expression if checked, the string entered into the previous field will searched as a regular expression
- Action action that will be taken in case that the bad word is detected; see the <u>Possible actions</u> topic for more details
   <u>Use default settings</u> if enabled, global value will be used as set in *Site Manager -> Settings -> Bad*

words -> Bad word action

• **Replace with** - in case the Replace action is selected, the substitute for the bad word is defined here

<u>Use default settings</u> - if enabled, global value will be used as set in *Site Manager -> Settings -> Bad words -> Bad word replacement* 

Fill in the required details and click **OK**.

🚘 New bad word		
Bad words + New bad word		
Bad word:	eucke	
Bad word is a regular expression:		
Action:	Paplace V	Lies default asttings
Barlass hu		
Replace by.	is not very good	Use default settings
	ок	

2. Let's try the functionality now. Go to the live Corporate Site, enter the Blog section and open some of the blog posts. Enter a comment as in the following screenshot and click **Add**.

Modules	727
---------	-----

Leave comment	Subscr	ibe
Name:		
The rude boy		
E-mail:		_
Your URL:		
Comments:		
Hey man, try to write somet meaningful next time. This article sucks!!!	hing	*
		-
Subscribe me to this blog post		
Enter security code: 739874 7398	874	
Add		

3. As you can see, the last word has been replaced with its polite substitute that has been defined earlier.

The rude boy
Hey man, try to write something meaningful next time. This article is not very good!!!
12/18/2009 9:57:22 AM

4. You can also check the **Event log** in **Site Manager -> Administration**. An event is always logged automatically when user input containing a bad word is detected. The **Event code** is **BADWORD** in such case.

Actions	Туре	Event time 🕶	Source	Event code	User name	IP address	Document name	Site
Q	I.	12/18/2009 9:57:51 AM	Authentication	AUTHENTICATIONSUCC	administrator	::1		Corporate Site
Q	1	12/18/2009 9:57:22 AM	Bad words check	BADWORD		::1		Corporate Site

### 8.6.4 **Possible actions**

In case that a bad word is detected, one of the following actions can be taken:

- Remove the bad word is removed from the entered text with no substitution
- **Replace** the bad word is removed and replaced with a predefined string
- Report abuse a report is created in CMSDesk -> Tools -> Abuse report
- **Request moderation** the post is submitted to approval before being published; this happens even in case that the forum, message board or blog is not moderated by default
- **Deny** a warning message will be displayed to the user when they try to post the inadequate text, listing which words should be removed

The following table shows which actions are available for each of the supported modules:

	Blog comments	Forums	Messaging	Message boards
Remove	•	•	•	•

Replace	•	•	•	•
Report abuse	•	•		•
Request moderation	•	•		•
Deny	•	•	•	•

In case that there is **more than one bad word detected** in input text and the words have **different actions** set, the actions will be taken according to their hierarchy. *Remove, Replace* and *Report abuse* actions are independent, i.e. the actions can be taken simultaneously. *Request moderation* is stronger than *Report abuse* and *Deny* is the strongest of all.

The following list shows which actions will be taken in some specific cases in order for you to easily understand the actions hierarchy:

- Remove and Replace the first one will be removed and the second one will be replaced with the defined substitute
- Remove, Replace and Report abuse the first one will be removed, the second one replaced and an abuse report will be logged
- Remove, Replace and Request moderation the first one will be removed, the second one will be replaced and the post will have to be approved
- Report abuse and Request moderation the post will have to be approved and no abuse report will be logged
- Deny and any other the text is left as it is, but produces an error message

## 8.6.5 Multilingual support

You can define in which cultures will a certain bad word be filtered. If you choose to **Edit** (*P*) a bad word in the list in **Site Manager -> Administration -> Bad words** and switch to its **Cultures** tab (the tab is not available in the **New bad word** dialog), you will be offered with the following two options:

- The word is not allowed in all cultures the bad word will be filtered in all website cultures
- The word is not allowed only in following cultures the bad word will be filtered only in cultures added to the list below

Using the **Add cultures** button, you can add cultures to the list. The **Remove selected button** removes all cultures selected by the check-boxes from the list.

👦 Bad w	👦 Bad word properties				
Bad words	bitch				
General C	ultures				
<ul> <li>The word</li> <li>The word</li> </ul>	<ul> <li>The word is not allowed in all cultures</li> <li>The word is not allowed only in following cultures</li> </ul>				
Cul	Culture name				
Afrikaans - South Africa					
Arabic - Algeria					
Rem	ove selected Add cultures				

## 8.6.6 Security

The Bad words module has only one permission to grant to roles:

• Use bad words - allows members of the role to use bad words, i.e. bad words filtering will not be performed to submissions made by members of the role

This permission can be granted to particular roles in **Site Manager -> Administration -> Permissions**, after selecting the **Modules -> Bad words** permission matrix.

🖑 Permissions					
Site:	Corporate Site	▼			
Permission type:	Modules	▼			
Permission matrix:	Bad words	•			

	Use bad words
Authenticated users	
CMS Basic users	
CMS Community Administrators	đ
CMS Designers	
CMS Desk Administrators	đ
CMS Editors	
CMS Readers	
Everyone	
Gold Partners	
Live ID users	
Not authenticated users	

### 8.6.7 Bad words internals and API

### 8.6.7.1 Database tables and API classes

The Bad words module uses the following database tables:

- BadWords_Word this is the database table used for storing defined bad words
- BadWords_WordCulture this database table is used for assigning bad words to website cultures

The Bad words API is provided by the following CMS.SiteProvider namespace classes:

- BadWordInfo, BadWordInfoProvider these classes provide functionality for managing bad words
- BadWordCultureInfo, BadWordCultureInfoProvider these classes provide functionality for managing assignments of bad words to cultures

The following topics show how methods from these classes can be used to manage bad words:

- Creating bad words
- Getting and updating bad words
- Deleting bad words
- Performing bad word checks

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.6.7.2 Creating bad words

The following code example shows how you can define a new bad word. The bad word will be checked in all website cultures.

### [C#]

```
using System;
using CMS.SiteProvider;
....
// Create a new bad word
BadWordInfo bwi = new BadWordInfo();
bwi.WordExpression = "ass";
bwi.WordAction = BadWordActionEnum.Replace;
bwi.WordReplacement = "xxx";
bwi.WordIsGlobal = true;
bwi.WordIsGlobal = true;
bwi.WordIsRegularExpression = false;
bwi.WordLastModified = DateTime.Now;
// Save the object to the database
BadWordInfoProvider.SetBadWordInfo(bwi);
```

This second code example demonstrates how a culture-specific bad word can be defined. The bad word defined in this code example will be checked only in the Czech (*cs-cz*) culture.

```
bwi.WordLastModified = DateTime.Now;

// Save the object to the database

BadWordInfoProvider.SetBadWordInfo(bwi);

// Get the culture where the bad word should be checked

CultureInfo ci = CultureInfoProvider.GetCultureInfo("cs-cz");

// Create a new bad word culture object

// for assigning the bad word to specified culture

BadWordCultureInfo bwci = new BadWordCultureInfo();

bwci.CultureID = ci.CultureID;

bwci.WordID = bwi.WordID;

// Save the object to the database

BadWordCultureInfoProvider.SetBadWordCultureInfo(bwci);
```

#### 8.6.7.3 Getting and updating bad words

The following code example demonstrates how to get a *DataSet* with all global bad words stored in the system database. Using the WHERE condition, you can specify which particular bad words you want to retrieve.

#### [C#]

```
using System.Data;
using CMS.SiteProvider;
....
// Set the WHERE condition
string where = "WordIsGlobal = 1";
// Set the ORDER BY clause
string orderBy = "WordExpression";
// Get a DataSet of Bad word info objects according to the given parameters
DataSet ds = BadWordInfoProvider.GetBadWords(where, orderBy);
// Get a DataSet of Bad word info objects for given culture by its ID
DataSet ds2 = BadWordInfoProvider.GetBadWords(1);
```

In the code example below, you can see how a single bad word can be retrieved from the system database, updated with some changes and saved back to the database.

```
using CMS.SiteProvider;
using CMS.CMSHelper;
```

```
...
// First get the bad word info by its ID
BadWordInfo bwi = BadWordInfoProvider.GetBadWordInfo(1);
// Set the WordReplacement property to the default value from the current si
bwi.WordReplacement = BadWordInfoProvider.GetReplacementFromSettings(CMSCont
// Save object
BadWordInfoProvider.SetBadWordInfo(bwi);
```

#### 8.6.7.4 Deleting bad words

This sample code explains how a single bad word can be deleted from the system database.

#### [C#]

```
using CMS.SiteProvider;
...
// First get the bad word info by its ID
BadWordInfo bwi = BadWordInfoProvider.GetBadWordInfo(1);
if (bwi != null)
{
    // Delete the bad word
    BadWordInfoProvider.DeleteBadWordInfo(bwi);
  }
```

#### 8.6.7.5 Performing bad word checks

The first sample code on this page illustrates how a bad words check can be performed to a message sent via the <u>Messaging module</u>.

```
using CMS.SiteProvider;
using CMS.CMSHelper;
using CMS.Messaging;
...
 // Get a message object by its ID
 MessageInfo message = MessageInfoProvider.GetMessageInfo(1);
 // Set columns for bad words check
 string columns = "MessageSubject;MessageBody";
```

// Check if the message contains any bad word, perform appropriate bad word
// and return eventual error text
string errorText = BadWordsHelper.CheckBadWords(message, columns, CMSContext
// Save message object
MessageInfoProvider.SetMessageInfo(message);

The second code example shows how a bad words check can be performed to a custom string.

```
using System.Collections;
using CMS.SiteProvider;
using CMS.CMSHelper;
. . .
        // Check if the current user can use bad words
        if (!BadWordInfoProvider.CanUseBadWords(CMSContext.CurrentUser, CMSContext.C
            string cultureCode = "en-us";
            string text = "This is a string containing two bad words, namely asshole
            // Hashtable that will contain found bad words
            Hashtable foundWords = new Hashtable();
            // Modify the string according to found bad words and return which
action should be performed
            BadWordActionEnum action = BadWordInfoProvider.CheckAllBadWords
(cultureCode, CMSContext.CurrentSiteName, ref text, foundWords);
            switch (action)
            {
                case BadWordActionEnum.Deny:
                    // Some additional actions performed here ...
                    break;
                case BadWordActionEnum.RequestModeration:
                    // Some additional actions performed here ...
                    break;
                case BadWordActionEnum.Remove:
                    // Some additional actions performed here ...
                    break;
                case BadWordActionEnum.Replace:
                    // Some additional actions performed here ...
                    break;
                case BadWordActionEnum.ReportAbuse:
                    // Some additional actions performed here ...
```

# 8.7 Banned IPs

### 8.7.1 Overview

The Banned IPs module is useful when you want to prevent users with certain IP addresses from accessing or using your website in a certain way. This typically happens when a user posts offensive material on a website (e.g. on a forum), harasses site members or behaves in some other unwanted way. IP banning can also be used to restrict access to your websites from certain areas of the world. These bans can be set either for individual websites or globally for all websites in the system.

To learn how to enable the Banned IPs module, please see the Enabling IP banning topic.

Adding banned IPs can easily be performed by site administrators. The <u>Banning an IP address</u> topic describes how. To find out how to determine which IP a user you want to ban is using, please see the <u>Finding an IP address</u> topic.

The <u>Banned IPs internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how banned IPs can be managed using the API.

IP banning is usually used as a last resort and there are other modules which can help you deal with offensive content and keep your website clean. Please refer to the <u>Modules -> Abuse report</u> and <u>Modules -> Bad words</u> chapters of this guide to read more. If you only wish to temporarily kick a user from a website, the <u>On-line users</u> module provides a way to do so.

## 8.7.2 Enabling IP banning

For the bans to take effect, go to **Site Manager -> Settings -> Security**, select the appropriate site, check the **Banned IP enabled** check-box and click **Save**. The bans should take effect now.

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CMS Site Manager Sites	Administration Settings Development	Licenses Support	
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(giobal)	- 4		
	Save Reset these settings to	default	
🛛 🕘 Web site			
🔊 💟 Content management	These settings are global, they can be	overridden by the local site settings. Please select the site to see or change the site settings	
- 🔚 Files			
📲 Membership	Send password e-mails from	admin@localhost.local	
- 🎢 Security			
	Password format	SHA1	
🕬 Output filter	Use SSL for administration interface	0	
- 🤳 System			
🖂 E-mails	Check page permissions	Secured areas	
	Website logon page URL	2 ~/cmspages/logon.aspx	
- 👦 Bad words			
	Access denied page URL	0	
📲 Booking system	Enable banned IPs		
- 🔊 Community			
🛶 MetaWeblog API	Redirect banned IPs to URL	?/CMSMessages/BannedIP.aspx	
Manager Content staging	Enable flood protection	0	
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E-commerce			

Users attempting to perform an action from an IP address that is banned should get a page with the following message displayed in their browsers.



This is the default banned IPs redirect page, which can be found at ~/*CMSMessages/BannedIP.aspx*. You can create your own page and set its URL in **Site Manager -> Settings -> Security -> Redirect banned IPs to URL**.

### 8.7.3 Banning an IP address

Banned IPs can be managed in **Site Manager -> Administration -> Banned IPs**. Alternatively, you can access the same page from **CMS Desk -> Administration**, but you can manage banned IPs only for the currently edited site.

From the **Site** drop-down list, choose the site you want to add the IP for and click the **New banned IP** link.

🜺 Kentico							Switch to CMS Desk	User: Global /	dministrator	v5.0.3629	Sign out
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🗋 Event log											
- 🎤 Permissions		Actions	IP address	Ban type					Allowed	Enabled	Site name
🐨 🕑 Recycle bin		N 🗙	124.1.5.68	Registration					No	Yes	CorporateSite
Roles Scheduled tasks		1	222.8.8.66	All user actions					No	Yes	CorporateSite
🔊 🔊 Smart search		N 🗙	88.111.1.*	Login					No	Yes	CorporateSite
System		1 🗙	154.65.8.114	Access to the web site					No	Yes	CorporateSite
users 🖓 Web farm											

Enter the required details:

IP Address	IP address to be banned. Asterisk (*) can be used as a substitute for any number in the IP address, substituting for all values from 0 to 255. Example: 192.168.1.*				
Ban type	<ul> <li>Type of the ban. The following types are available:</li> <li><u>Access to the website</u> - users cannot access the site from the entered address at all</li> <li><u>Login</u> - users cannot log in from the entered address</li> <li><u>Registration</u> - users cannot register from the entered address</li> <li><u>All user actions</u> - users can enter the site from this IP, but specific actions will not be allowed</li> </ul>				
Enabled	If unchecked, the ban takes no effect.				
Ban Reason	Text description of why the IP was banned.				
Ban IP address	If selected, this IP address will be banned.				
Allow IP address for this site if the IP address is banned globally	If selected, this IP address will be allowed for the selected site even if it is banned globally.				
Allow site to override the ban	If checked, this ban can be overridden by bans set for particular sites; can be set only for global bans.				

anned IPs ► New b	anned IP (global)	
IP address:	188.11.85.23	
Ban type:	Login	
Enabled:		
	Notorious forum spammer!!!	*
Ban reason:		
		~
	Ban IP address	Ŧ

Modules

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When you have all details entered, click OK.

Now if you go back to the list of banned IPs, you should see the newly created record present in the list.

## Editing an existing ban

If you want to edit the record in the future, just go to the list and click the **Edit** ( $\checkmark$ ) icon next to the record. The same page will be displayed as when creating a new record, but with details entered. To make the desired changes, just change the appropriate values and click **OK**.

## 8.7.4 Finding an IP address

There are several ways to locate user IP addresses.

If you wish to find the IP address of a user responsible for a certain event, go to **Site Manager -> Administration -> Event log** and find the event you are interested in. The IP address of the user who caused the event has its own column in the displayed table and can also be viewed if you choose to click **Display event** (a). This can also be done at **CMS Desk -> Administration -> Event Log**, but here you can only view events from the currently edited site.

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I         6/14/2010 10:06:52 AM         Site         UPDATEOBJ         administrator         127.0.0.1           I         6/14/2010 9:53:46 AM         Application_Start         STARTAPP         127.0.0.1           Image: Comparison of the start of the			Q	1	6/14/2010 10:06:53 AM	Site	UPDATEOBJ	administrator	127.0.0.1			
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			Q	W	6/14/2010 9:52:07 AM	Application_End	ENDAPP					
In the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se			à	1	6/14/2010 9:23:40 AM	Abuse report	CREATEOBJ	administrator	127.0.0.1		Widget community	y .

For example, if you want to find a user who often uses Bad words, enter *BADWORD* into the **Event code** field of the Event log filter and make sure **LIKE** is selected from the drop-down list. This will display a list of all Bad word violations and all relevant information including user names and their IP addresses.

To find the IP address used by a specific user when they last logged on, go to **Site Manager** -> **Administration** -> **Users**. Alternatively, you can access this information from **CMS Desk** -> **Administration** -> **Users**, but you can only see the users of the currently edited site.

Choose to Edit ( $\checkmark$ ) the user whose IP address you wish to find. It can be seen under **General -> Last logon information**. This can be useful if you get multiple abuse reports about some user and want to quickly find their IP address.

Kentico CMS Site Manager	Sites Administration Sett	ngs Development Licenses	Support		<u>Swit</u>	ch to CMS Des	k User: Global Administrato	or v5.5.3789	Sign Out
Administration     Avatars     Rad words     Badges     Banned IPs	Users Mass e-mail On-line	users							2
e	General Password Setting	s Sites Roles Departments	Notifications	Categories	Friends	Subscriptions	Languages		•
B Roles     C Scheduled tasks     Smart search     System     U personalization     Users     Web farm	User name:* Full name: * First name: Middle name: Last name: E-mail:	David David Silver David Silver david silver@localhost.local							
	Enabled: Is editor: Is global administrator: Is external user: Is domain user: Is hidden:								
	Preferred content culture: Preferred user interface culture Created: Last logon: Last logon information: Starting alias path:	(default) (default) 5/20/2010 10:00:42 AM 6/14/2010 10:15:16 AM 192 168 3.12 Mozilla/4.0 (compatible; MSIE 8.0	Windows NT 6.0	• • ); WOW64; Tri	dent/4.0; SI	LCC1;			

## 8.7.5 Security

To limit access to the Banned IPs module, go to **Site Manager -> Administration -> Permissions** and grant roles with appropriate permissions according to your needs.

The following permissions can be assigned to the roles:

- Modify members of the role are allowed to add, edit and delete banned IPs
- Read members of the role are allowed to view the banned IPs list

A Permissions								
Site:	Corporate Site	•						
Permission type:	Modules	•						
Permission matrix:	Banned IPs	•						

	Modify	Read	
Authenticated users			
CMS Basic users			
CMS Community Administrators	ø	ø	
CMS Designers			
CMS Desk Administrators	ø	ø	
CMS Editors		ø	
CMS Readers		ď	
Everyone			
Gold Partners			
Live ID users			
Not authenticated users			

### 8.7.6 Banned IPs internals and API

#### 8.7.6.1 Database tables and API classes

The Banned IPs module uses the following database table:

• CMS_BannedIP - this is the database table used for storing banned IPs

The Banned IPs API is provided by the following CMS.SiteProvider namespace classes:

 BannedIPInfo, BannedIPInfoProvider - these classes provide functionality for managing banned IPs

The following topics show examples of how these classes can be used:

- Getting banned IP data
- Modifying and creating banned IPs
- <u>Checking if actions are banned</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

### 8.7.6.2 Getting banned IP data

The following sample code shows how you can get a banned IP as a BannedIPInfo object:

### [C#]

```
using CMS.SiteProvider;
...
// Get BannedIP object by IPAddressID
BannedIPInfo bi = BannedIPInfoProvider.GetBannedIPInfo(1);
```

The following sample code shows how you can get a DataSet containing all banned IPs in the system with an *IPAddressID* greater than *5*, ordered by their *IPAddress*:

#### [C#]

#### 8.7.6.3 Modifying and creating banned IPs

The following sample code shows how you can modify the Ban reason of an existing banned IP:

[C#]

```
using CMS.SiteProvider;
....
// Get BannedIP object by IPAddressID
BannedIPInfo bi = BannedIPInfoProvider.GetBannedIPInfo(1);
// Change Ban reason property
bi.IPAddressBanReason = bi.IPAddressBanReason + "_Updated";
// Save object
BannedIPInfoProvider.SetBannedIPInfo(bi);
```

The following sample code shows how you can create a new banned IP of type *All user actions* and add it to the system:

```
using CMS.SiteProvider;
....
// Create new BannedIP object
BannedIPInfo bi = new BannedIPInfo();
// Set properties
bi.IPAddress = "127.0.0.1";
bi.IPAddressBanReason = "Ban reason";
bi.IPAddressAllowed = true;
bi.IPAddressAllowOverride = true;
bi.IPAddressBanType = BannedIPInfoProvider.BanControlEnumString(BanControlEn
bi.IPAddressBanEnabled = true;
// Save object
BannedIPInfoProvider.SetBannedIPInfo(bi);
```

### 8.7.6.4 Checking if actions are banned

The following sample code shows how you can check if the current user action is banned for the current site. It uses a Label control with the ID *IbIError* to display the error message:

### [C#]

```
using CMS.SiteProvider;
using CMS.CMSHelper;
using CMS.GlobalHelper;
....
// Check if current action is allowed
if (!BannedIPInfoProvider.IsAllowed(CMSContext.CurrentSiteName, BanControlEn
{
    // If not error message is shown
    lblError.CssClass = "ErrorLabel";
    lblError.Text = "Requested action was canceled. Banned IP address.";
}
```

## 8.8 BizForms

### 8.8.1 Overview

The BizForms module enables non-technical users (content editors) to easily create and publish <u>on-line</u> <u>forms</u>. These forms can be used to gather structured data from website users. A typical example of such form is the **Contact Us** form, which can be found on the **Company** page of the sample Corporate Site. The form is depicted in the screenshot below.

### Contact Us

If you want to contact us, please use the form below:

First name:		
Last name:		
E-mail:		
Phone number:		
	·	
Your message:		
Ŭ		
	-	-
	Send message	

Administration interface of the module is located in **CMS Desk -> Tools -> BizForms**. This is where new BizForms can be created, as described in the <u>Creating a new form</u> topic. Once a BizForm is created via the user interface, it can be added to a live site page. This can be done either via the WYSIWYG editor, or by means of the **BizForm (on-line form)** web part or widget. Both options are described in the <u>Displaying a form on the live site</u> topic.

Each BizForm has its own separate database table where submitted data is stored. The submitted data can be viewed and managed in **CMS Desk -> Tools -> BizForms**. Data records can even be exported to a **Microsoft Excel** spreadsheet in this part of the user interface. Please refer to the <u>Managing BizForm</u> data topic for more information on which actions can be performed with the submitted data.

You may want to notify the person who is responsible for management of BizForms data when a new record is submitted. For this purpose, you can configure the form to send automatic notification e-mails about new records. The user who submitted the new record may also be notified that the record was submitted successfully and that it will be processed soon. This can be achieved by configuring autoresponder e-mails. Both options are described in the <u>Notification and autoresponder e-mails</u> sub-chapter. Macros can be used largely with notification and autoresponder e-mails, as well as when you want to localize field captions in the form. Please refer to the <u>Using macros with BizForms</u> topic to learn more.

Access to BizForms may be restricted, so that only members of selected roles can perform certain operations with the forms themselves or with the data in them. The <u>Security</u> topic gives you an overview of how to configure BizForms permissions both globally and separately for each particular form.

Layout of each form is fully customizable. The <u>Defining custom form layout</u> topic explains how it can be achieved. You may also customize behavior of the BizForms module with your custom code. These possibilities are explained in the <u>BizForms internals and API</u> sub-chapter, along with an overview of where BizForm records are stored and which API classes contain methods for their management. It also provides a series of code examples showing how methods from these classes may be used in your custom code.

## 8.8.2 Creating a new form

In this topics, we will create a new sample BizForm via the BizForms module's user interface. This topic doesn't explain all options that are available in the user interface. For a detailed description of each option, please refer to the built-in context help, which is accessible by clicking the ⁽²⁾ icon in the top-right corner of the user interface.

1. Go to CMS Desk -> Tools -> BizForms and click the **New form** link. Enter the following details:

- Form display name: Event registration
- Form code name: EventRegistration
- Table name: Form_EventRegistration

Click OK.

2. You will be redirected to the **General** tab of the new BizForm's editing interface. Enter the following values:

- Display text: Thank you for your registration. We will confirm it shortly by e-mail.
- Submit button text: Register

Click OK.

Kentico CMS Desk	tent Mydesk Tools Administration	Switch to Site Manager Site:
Tools     Muse report     BizForms     Blogs	BizForm Properties BizForms   Event registration	
Booking system	Form display name: Event registration	nder Security Alternative forms
File import	Form code name:         EventRegistration           Table name         Form_EventRegistration	
Media libraries	After the form is submitted: O Display text: Thank you for your registration. We w	ill confirm it s
Polls	Redirect to URL:     Clear form     Continue office	
may web analytics	Submit button text: Register	
	Submit button image:	

3. Now we will define the form fields. Go to the **Fields** tab. Add the following fields using the **Add attribute** (+) button. For each field, enter the values, click **OK** and repeat the procedure until you have all the listed fields defined.

- Column name: FirstName
- Show on public form: enabled
- Field caption: First name
- Field type: Text box
- Maximum length: 100
- Allow empty value: disabled
- Column name: LastName

- Show on public form: enabled
- Field caption: Last name
- Field type: TextBox
- Maximum length: 100
- Allow empty value: disabled
- Column name: Phone
- Show on public form: enabled
- Field caption: Phone
- Field type: U.S. phone number
- Maximum length: 14
- Allow empty value: enabled
- Column name: Email
- Show on public form: enabled
- Field caption: E-mail
- Field type: E-mail
- Maximum length: 100
- Allow empty value: disabled
- Column name: Presentations
- Show on public form: enabled
- Field caption: Presentations you want to visit
- Field type: Multiple choice
- Options: ASP.NET;ASP.NET
  - ATLAS;ATLAS

WPF;Windows Presentation Foundation

• Allow empty value: enabled

4. The last item will be used only by site editors to mark the processed registration forms. This will be done exclusively via the user interface. Therefore, it has the **Show on public form** property disabled.

- Column name: RegistrationProcessed
- Show on public form: disabled
- Field caption: Registration processed
- Field type: Check box
- Allow empty value: enabled

Data	General	Fields	Form	Notification e-mail	Autoresponder	Security	Alternative forms	
EventF FirstNa LastNa Phone Email Preser Regist FormU	egistration ame itations rationProce iserted pdated	ID Issed		Column name: Show on public Field caption: Field type: Allow empty val Default value:	c form:	entRegistra entRegistra	tionID	
				Switch to advance	ed mode			OK

5. With all the fields defined, the form is ready to be published on the live site. This can be done several different ways, all of which are described in the <u>Displaying a form on the live site</u> topic.

	Please note
7	If you click the <b>Switch to advanced mode</b> link below the field editor, extended user interface will be displayed. There you can configure additional options such as input validation rules or CSS classes used for the fields.

## 8.8.3 Displaying a form on the live site

In the <u>Creating a new form</u> topic, you have learned how to create a new BizForm via the module's user interface. This topic will give you an overview of how you can add the form to the live site.

Content editors can add a BizForm to any page with editable text regions. It can be done either using the **Insert BizForm** (a) button on the <u>WYSIWYG editor</u> toolbar, or directly by typing a macro in the following format: %%control:BizFormControl?BizFormCodeName%%. The BizFormCodeName part of the macro needs to be replaced with the code name of the particular BizForm.

Website designers or developers can add a BizForm to any web part or widget zone by adding the **BizForm (on-line form)** web part or widget. In this case, code name of the BizForm needs to be entered in the **Form name** property of the web part or widget.

The examples below explain both options of adding BizForms to your live site pages.

## Example 1: Adding a BizForm via the WYSIWYG editor

In this example, we will add the *Event registration* form, created in the <u>Creating a new form</u> topic, to a page using the **Insert BizForm** (I) button on the WYSIWYG editor toolbar. Any other BizForm can be added to a page exactly the same way.

1. Go to **CMS Desk -> Content** and select some page with editable regions (the **Editable text** web part). View the page in the **Edit -> Page** mode.

2. Click **Insert BizForm** (I) button in the WYSIWYG editor toolbar.

Page Design Form	Properties				
Save 🛐 Spell chi	<u>eck</u>				
🛛 🔄 Source 🔂 🕺 🖄	8663	► ○ ▲	1. I II I	BI	<u>U</u> ABC
i 🧊 🖷 🎞 🏪 😀 🖚	19 🗉 🖬 🖉	) 🚖   👑			
🔺 🛛 Style 🔷 🔻 F	Format	▼ Font	-	Size	•

3. The Insert BizForm dialog opens. Click Event registration to insert the form into the text.

Insert BizForm	$\boxtimes$
Form name 🔺	
Contact Us	
Event registration	
Ca	ncel

The following macro will be pasted into the text: %%control:BizFormControl?EventRegistration%%. Typing the macro into the text manually, without using the **Insert BizForm** (I) button, would lead to exactly the same result.

4. Click Save and switch to the Live site mode. You will see the form on the page.

First name:	
Last name:	
Phone:	
E-mail:	
Presentations want to visit:	you ASP.NET I ATLAS Windows Presentation Foundation Register

5. Try entering some values and submitting the filled-in form. After doing that, you may proceed to the <u>Managing BizForm data</u> topic, where management of submitted data is explained.

### Example 2: Adding a BizForm using the BizForm (on-line form) web part

This example demonstrates how to add the *Event registration* form, created in the <u>Creating a new form</u> topic, to a page using the BizForm (on-line form) web part. Any other BizForm can be added to a page exactly the same way. The same applies to using the BizForm (on-line form) widget - the only difference is that the widget can only be added to a widget zone, not a web part zone.

1. Go to **CMS Desk -> Content** and select some page with a web part zone. View the page in the **Edit -** > **Design** mode.

2. Click the Add web part (+) button at the top-right corner of the zone and choose the **BizForms** -> **BizForm (on-line form)** web part. Click **OK**.

3. In the web part properties dialog, you only need to enter *EventRegistration* (the code name of the form) into the **Form name** property and click **OK**.

Web part properties	(BizForm (on-line form)) Webpage D	Dialog		23
🗋 Web part pro	operties (BizForm (on-line fo	orm))		Documentation
General				
Default				
Visibility	BizForm settings			
BizForm settings	[	. EventDe sistertion	Colorad Chara	
HTML Envelope	Form name*:	EventRegistration	Select Clear	
XALA	Site nome:		Select Clear	
Time zones	Site fidille.	•	Select Clear	
Partial caching	Alternative form name:	•	Select	
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	Use colon (:) in labels:			
				E
	Validation error message:	•		
	HTML Envelope			
	Web part container:	(none)	▼	
	web part container title:	•		
	Content before:	•		
				<b>T</b>
Refresh content			OK Cancel	Apply
http://localhost/Kentico	CMS_55/CMSModules/PortalEngine/UI	/Webparts/WebPartProperties. ६ Lo	cal intranet   Protected Mode: Off	

4. Click **Save** and switch to the **Live site** mode. You will see the form on the page.

First name:	
Last name:	
Phone:	
E-mail:	
Presentations want to visit:	ASP.NET you ATLAS Windows Presentation Foundation Register

5. Try entering some values and submitting the filled-in form. After doing that, you may proceed to the <u>Managing BizForm data</u> topic, where management of submitted data is explained.

### 8.8.4 Managing BizForm data

BizForm records (data submitted by website users) can be viewed and managed in **CMS Desk -> Tools** -> **BizForms**. In the list of BizForms, you need to click the **Edit** ( $\checkmark$ ) icon next to a particular BizForm. You will get redirected to the **Data** tab of the BizForm's editing interface, where particular records are listed.

Each of the records listed in the table has the following options:

- Edit record () allows you to alter the record
- Delete record (X) allows you to delete the record

You can also perform the following actions using the links above the listing:

- **I** New record creates a new record in this BizForm
- I Select displayed fields enables you to tell which columns will be displayed in the listing
- **Export data to Excel** exports all records into a new Excel spreadsheet (*.xls* file)
- Export data to Excel 2007 exports all records into a new Excel 2007 spreadsheet (.xs/x file)

BizFo	BizForm Properties								
BizForms •	Contact Us								
Data Ger	neral Fields F	Form Notification e-mail	Autoresponder Security	Alternative form	ns				
New record	d Select displ	layed fields 🛛 📽 Export to Ex	cel Export to Excel 2007	Z					
Actions	ContactUsID	Form inserted	Form updated	First name	Last name	E-mail	Phone number	Your message	
N 💥	1	12/21/2009 10:24:21 AM	12/21/2009 10:54:20 AM	Pavel	Knotek	screenshot.master@localhost.local	(111) 222-3333	Say cheese!	
N 💥	2	12/21/2009 10:29:41 AM	12/21/2009 10:54:27 AM	John	Smith	jsmith@localhost.local	(222) 555-8788	Hi everybody!	

When editing  $(\mathscr{P})$  or creating ( $\mathbb{B}$ ) a record via the administration interface, the BizForm is displayed the same way as on the live site, letting you enter or change the values. On top of it, you can decide if notification and autoresponder e-mails will be sent when you save the record:

- Send notification e-mail if enabled, notification e-mail will be sent when the record is saved (according to configuration on the Notification e-mail tab)
- Send autoresponder e-mail if enabled, autoresponder e-mail will be sent when the record is saved (according to configuration on the Autoresponder tab)

Data Genera	Fields Form Notification e-mail Autorespo	nder
Data ► New rec	ord	
🗷 Send notific	ation e-mail 🛛 🗹 Send autoresponder e-mail	
First name:	John	
Last name:	Smith	
E-mail:	j.smith@localhost.local	
Phone number	(123) 456 -7890	
	Hi there!!!	*
Your message	:	Ŧ
	Send message	

### 8.8.5 Notification and autoresponder e-mails

#### 8.8.5.1 Notification and autoresponder e-mails

The BizForms module allows you to send two types of e-mails automatically when a new record is added:

- <u>Notification e-mail</u> e-mail notifying the person responsible for BizForms data management (content editor, administrator, ...) about the new record
- <u>Autoresponder</u> e-mail to the person who submitted the new record, typically confirming that the record has been received and will be processed

When a record is added on the live site, the e-mails are sent out based on settings described in the following topics. When a record is added or modified via the administration interface, the person who is entering the record can decide whether these e-mails will be sent, as described in <u>Managing BizForm</u> <u>data</u>.

### 8.8.5.2 Notification e-mails

Notification e-mails can be configured on the **Notification e-mail** tab of a form's editing interface. To enable them, you first need to enable the **Send form data to e-mail** option. Then you need to configure the following options:

- From e-mail e-mail address of the user who submitted the form; you will typically use a macro to get a value from a field of the form where users enter their e-mail address, as described in the <u>Using</u> macros with BizForms topic
- **To e-mail -** e-mail address where notification e-mails should be sent; typically address of the person responsible for management of BizForm records
- **Subject** subject of the notification e-mails
- Attach uploaded documents enable this option if you want to attach documents submitted via the form (if there are some) to the e-mails
- Use custom layout if disabled, notification e-mails' body will contain all field names with the entered values, each on a single line; if enabled, the text area is displayed, letting you define custom layout of the e-mail body
- Generate table layout this button generates a table with all field names in the left column and their values in the right column; macros for particular field names and values can also be entered

separately by selecting a field from the **Available fields** listbox and clicking the **Insert label** or **Insert value** buttons

Macros may be utilized in values of these fields, as described in the <u>Using macros with BizForms</u> topic. With all the options configured, click **Save** to save your configuration.



#### 8.8.5.3 Autoresponder e-mails

Autoresponder e-mails can be configured on the **Autoresponder** tab of a BizForm's editing interface. When you navigate to the tab for the first time, just the **Confirmation e-mail source field** drop-down list will be visible. Expand it and choose the field which contains the e-mail address that the automatic response should be sent to. This means that autoresponder e-mails can only be used with forms where such a field is present (however, this is the case of most real-world on-line forms). After choosing the field, the following extra options will be displayed:

- From e-mail e-mail address of the sender of the autoresponder e-mails (the From field of the email message)
- Subject subject of the autoresponder e-mails
- E-mail body the main text area allows you to define the body of the autoresponder e-mails
- Attachments this option allows you to attach a file to each autoresponder e-mail, such as event agenda, white papers, etc.
- Generate table layout this button generates a table with all field names in the left column and their values in the right column; macros for particular field names and values can also be entered separately by selecting a field from the Available fields listbox and clicking the Insert label or

### Insert value buttons

Macros may be utilized in values of these fields, as described in the <u>Using macros with BizForms</u> topic. With all the options configured, click **Save** to save your configuration.

		Switch to Sit	e Manager Site	a: Corporate Site 💌 Use	
CMS Desk Content	My desk Tools Administration				
Tools	BizForm Properties				
BizForms	BizForms  • Event registration				
	Data General Fields Form	Notification e-mail Autoresponder Security	Alternative form	S	
Content staging Custom tables	E Save				
	Confirmation e-mail source field: From e-mail: Subject	Email webmaster@example.com	•		
	Generate table layout			Available fielder	
Seporting	iorting         b analytics         B       I         I       B         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I				
L. L. L. L. L. L. L. L. L. L. L. L. L. L	We confirm that you have submitted website:	the following data via the Event registration for	m on our	RegistrationProcessed FormInserted FormUpdated	
	\$\$label:EventRegistrationID\$\$	\$\$value:EventRegistrationID\$\$	E		
	\$\$label:FirstName\$\$	\$\$value:FirstName\$\$			
	\$\$label:LastName\$\$	\$\$value:LastName\$\$			
	\$\$label:Phone\$\$	\$\$value:Phone\$\$		Insert label	
	\$\$label:Email\$\$	\$\$value:Email\$\$		Insert value	
	\$\$label:Presentations\$\$	\$\$value:Presentations\$\$	•		
	Attachments				
	Add file: res\Logo_3D_TagCMS.jpg	Browse Upload			

## 8.8.6 Using macros with BizForms

Values of the fields that you need to fill in when configuring a BizForm can be obtained dynamically from the submitted forms. The following table shows which macro types can be used for particular values of BizForm configuration.

	Localizati on	Context	QueryStri ng	Cookie	Custom	Path
Fields tab - Default value attribute	•	٠	•	٠	•	•
Notification e-mail and Autoresponder tabs - all fields	•	•	•	•	•	
General tab - Form display name, Display text , Submit button text; Fields	٠					

tab - Field caption; Form tab - Table layout			
General tab - Redirect to URL	٠		

### Context (data) macros

You can use values from current context when configuring a BizForm. This can be achieved using a data macro in the **{%column_name%}** format. The *column_name* part of the macro is the value of the **Column name** property of a particular BizForm filed. When the form is submitted, the macros are automatically resolved and replaced with particular data from the form.

These macros can be used in the following fields:

- General tab
  - Display text
  - · Redirect to URL
- Notification e-mails
  - From e-mail
  - To e-mail
  - Subject
  - E-mail body
- Autoresponder e-mails
  - From e-mail
  - Subject
  - E-mail body

### Example 1

When configuring notification e-mails for the sample BizForm created in the <u>Creating a new form</u> topic, you may use the following values:

- From e-mail: {%Email%};
- Subject: Event registration by {%FirstName%} {%LastName%};

This will result in the e-mail having the user's e-mail address as the sender address, which enables the recipient to easily reply to the e-mail. The subject of the e-mail will have the first and last name of the user, which will help identifying the sender of the e-mail.

### Example 2

If you entered the **Display text** value on the **General** tab of the same form like this:

• Dear {%FirstName%}, thank you for your message. We will contact you shortly.

The text will be resolved as the following when "Jane" was entered in the First name field by the user:

• Dear Jane, thank you for your message. We will contact you shortly.

### Form text localization

If you need to display the form on a multi-lingual website, you can localize field captions and other text strings using localization macros, e.g.:

- {\$myform.fullname\$}
- {\$=Hello|de-de=Hallo|it-it=Ciao\$}

You can find more details in <u>Development -> Multilingual and international support -> Localization</u> expressions.

Detailed overview of all macros in Kentico CMS can be found in Appendix A - Macro expressions.

### 8.8.7 Defining custom form layout

If you're not satisfied with the standard table layout of the form, the BizForms module allows you to define custom form layout. This can be achieved on the **Form** tab of a BizForm's editing interface in **CMS Desk -> Tools -> BizForms**.

### Example

To modify the default layout of the sample *Event registration* form created in the <u>Creating a new form</u> topic, please take the following steps:

1. Go to CMS Desk -> Tools -> BizForms and click the Edit () icon next to the BizForm.

2. In its editing interface, go to the Form tab and check the Use custom form layout check-box.

3. Click **Generate table layout** button. This will quickly generate a table containing all fields of the form, with appropriate labels, input controls and validation controls. Alternatively, you may use the **Insert label**, **Insert input** and **Insert validation label** buttons on the right to achieve the same result. This gives you the option to include just the fields that you want to appear in the form.

4. With the table generated, you may try altering appearance of the form using actions on the <u>WYSIWYG editor</u> toolbar. For the purpose of this example, add a heading saying *Event registration* above the form, select it and choose **Format: Heading 2** in the WYSIWYG editor toolbar. You may also delete the first line of the table (*EventRegistrationID*), which is not wanted to appear on the public form. The result should look as in the screenshot below.

Data	General	Fields	Form	Notification e-mail	Autoresponder	Security	Alternative form	ns
Na Sa	<u>ive</u>							
🗹 Use	custom for Generate ta	m layout Ible layou	t					
B St Even	] Source   2 <u>u</u> : 1 □ := ( yle 2 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1 1 0 - 1	à i % i ↔ i ×2 ② ≪ i ↓ ↓ ↓ Tation	È (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	8 10 10 10 10 10 10 10 10 10 10 10 10 10	~   🚧 🖧   🏢 플 플 📰 📔 🕷	<ul> <li>Size</li> </ul>	•	Available fields: EventRegistrationID FirstName LastName Phone Email Presentations RegistrationProcessed
\$\$lab	el:FirstNan	ne\$\$		\$\$input:FirstName \$\$validation:FirstN	\$\$ lame\$\$		=	
\$\$lab	el:LastNan	ne\$\$		\$\$input:LastName \$\$validation:LastN	\$\$ ame\$\$			
\$\$lab	el:Phone\$\$	6		\$\$input:Phone\$\$ \$\$validation:Phone	=\$\$			Insert label
\$\$lab	el:Email\$\$			\$\$input:Email\$\$ \$\$validation:Email	\$\$			Insert validation label
				©Cinnut-Drocontat	222an		*	moore submit button

5. Click **Save** to save the new layout. Now if you add the form to the live site, it should look as in the following screenshot:

#### Event registration

First name:				
Last name:				
Phone:				
E-mail:				
Presentations want to visit:	ASP.NET  ATLAS  Windows Presentation Foundation			

Register

## 8.8.8 Security

Access to the BizForms module can be managed in **CMS Desk -> Administration -> Permissions**, after you select the **Modules -> BizForms** permission matrix. The BizForms module has the following permissions:

- Create form members of the role are allowed to create new BizForms
- Delete data members of the role are allowed to delete existing BizForm records
- **Delete form including data** members of the role are allowed to delete BizForms including stored records

- Edit data members of the role are allowed to create and edit BizForm records
- Edit form members of the role are allowed to edit BizForm configuration, fields and layout (not the actual records)
- · Read data members of the role are allowed to view BizForm records
- **Read form** members of the role are allowed to view BizForm configuration, fields and layout (not the actual records)

🦧 Permissior		
Site:	Corporate Site	
Permission type:	Modules	
Permission matrix:	BizForms	

	Create form	Delete data	Delete form including data	Edit data	Edit form	Read data	Read form
Authenticated users							
CMS Basic users							
CMS Community Administrators							
CMS Designers							
CMS Desk Administrators	đ	đ	S.	Ś	2	ø	<b>S</b>
CMS Editors	đ	ø		đ	S.	ø	đ
CMS Readers						ø	
Everyone							
Gold Partners							
Live ID users							
Not authenticated users							
Silver Partners							

### Security for particular forms

Roles which are authorized to read and modify a form and its data can also be specified on form level. To do this, edit ( $\checkmark$ ) a particular form and switch to its **Security** tab. The following two options are available there:

- All bizform users all users with access to the Tools -> BizForms section can edit the form
- Only authenticated users only members of roles added to the box will be allowed to edit the form

**Please note:** General module permissions for the BizForms module (described above) must be granted to the role first. Then, you can further customize access to particular BizForms using the form-level settings. The fact that the role is granted with access to a particular form is not sufficient - the form-level settings only define if the particular form will be listed in **Tools -> BizForms**.
ns

Data	General	Fields	Form	Notification e-ma	il Autoresponder	Security	Alternative for
Allow I	nanageme	ent of th	is form	to:			
All	bizform us	ers					
Or	ly authorize	ed roles					
CMSC CMSD CMSE	ommunityA eskAdmin ditor	dmin			Add roles Remove		
	ОК						

# 8.8.9 BizForms internals and API

### 8.8.9.1 Database tables and API classes

The BizForms module uses the following database tables:

- **BizForm_<website code name>_** each BizForm has its own database table with name in this format, e.g. *BizForm_CorporateSite_EventRegistration*; this table contains all fields that you specified on the **Fields** tab and you can modify stored data using direct access to the table (there are no dependencies).
- **CMS_Class** each BizForm has an associated record in this table; you can recognize them by the *BizForm*. prefix in the *ClassName* column

The BizForms API is provided by the following CMS.SiteProvider namespace classes:

• BizFormInfo, BizFormInfoProvider - these classes provide functionality for managing BizForms

The following topics show examples of how these classes can be used:

- <u>Creating a new record</u>
- Updating a record
- Deleting a record
- <u>Customization possibilities</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

### 8.8.9.2 Creating a new record

The sample code below demonstrates how a new record can be added to a BizForm using the API.

[C#]

```
using CMS.FormEngine;
using CMS.SettingsProvider;
using CMS.DataEngine;
using CMS.GlobalHelper;
. . .
        string bizFormName = "TestingSiteContactUs";
        string siteName = "CMSTestingSite";
        // Read BizFrom definition
        BizFormInfo bfi = BizFormInfoProvider.GetBizFormInfo(bizFormName,
siteName);
        if (bfi != null)
        {
            // Read data type definition
            DataClassInfo dci = DataClassInfoProvider.GetDataClass(bfi.
FormClassID);
            if (dci != null)
            {
                GeneralConnection genConn = ConnectionHelper.GetConnection();
                // create a new record in memory (new DataClass object)
                DataClass formRecord = new DataClass(dci.ClassName, genConn);
                // Insert some data
                formRecord.SetValue("FirstName", "Alice");
                formRecord.SetValue("LastName", "Cooper");
                formRecord.SetValue("Email", "alice@email.com");
                formRecord.SetValue("Message", "Hallo world");
                formRecord.SetValue("FormInserted", DateTime.Now);
                formRecord.SetValue("FormUpdated", DateTime.Now);
                // Insert the new record in the database
                formRecord.Insert();
                // Update number of entries in BizFormInfo
                bfi.FormItems++;
                BizFormInfoProvider.SetBizFormInfo(bfi);
            }
        }
```

#### 8.8.9.3 Updating a record

This code example shows how an existing BizForm record can be modified.

```
using CMS.FormEngine;
using CMS.SettingsProvider;
using CMS.DataEngine;
using CMS.GlobalHelper;
. . .
        string bizFormName = "TestingSiteContactUs";
        string siteName = "CMSTestingSite";
        // Read BizForm definition
        BizFormInfo bfi = BizFormInfoProvider.GetBizFormInfo(bizFormName,
siteName);
        if (bfi != null)
        {
            // Read data type definition
            DataClassInfo dci = DataClassInfoProvider.GetDataClass(bfi.
FormClassID);
            if (dci != null)
            {
                // Get all bizform data
                GeneralConnection genConn = ConnectionHelper.GetConnection();
                DataSet ds = genConn.ExecuteQuery(dci.ClassName + ".selectall",
null, null, null);
                if (!DataHelper.DataSourceIsEmpty(ds))
                {
                    // Get ID of the first record
                    int formRecordID = ValidationHelper.GetInteger(ds.Tables[0].
Rows[0][0], 0);
                    // Get the record with ID of the first row record
                    DataClass formRecord = new DataClass(dci.ClassName,
formRecordID, genConn);
                    if (!formRecord.IsEmpty())
                    {
                        // Set new field values
                        formRecord.SetValue("FirstName", "Bob");
                        formRecord.SetValue("LastName", "Marley");
                        formRecord.SetValue("Email", "bob@email.com");
                        formRecord.SetValue("Message", "Good job:)");
                        formRecord.SetValue("FormUpdated", DateTime.Now);
                        // Save updates in the database
                        formRecord.Update();
                        lblInfo.Text = "The first record was updated
successfully.";
                    }
                }
```

```
else
{
    lblInfo.Text = "No data found.";
    }
}
```

### 8.8.9.4 Deleting a record

This code example shows how a BizForm record can be deleted.

[C#]

760

```
using CMS.FormEngine;
using CMS.SettingsProvider;
using CMS.DataEngine;
using CMS.GlobalHelper;
. . .
        string bizFormName = "TestingSiteContactUs";
        string siteName = "CMSTestingSite";
        // Get BizForm definition
        BizFormInfo bfi = BizFormInfoProvider.GetBizFormInfo(bizFormName,
siteName);
        if (bfi != null)
        {
            // Get data type definition
            DataClassInfo dci = DataClassInfoProvider.GetDataClass(bfi.
FormClassID);
            if (dci != null)
            {
                // Get all bizform data
                GeneralConnection genConn = ConnectionHelper.GetConnection();
                DataSet ds = genConn.ExecuteQuery(dci.ClassName + ".selectall",
null, null, null);
                if (!DataHelper.DataSourceIsEmpty(ds))
                {
                    // Get ID of the first record
                    int formRecordID = ValidationHelper.GetInteger(ds.Tables[0].
Rows[0][0], 0);
                    // Get the record with specified ID
                    DataClass formRecord = new DataClass(dci.ClassName,
formRecordID, genConn);
                    if (!formRecord.IsEmpty())
                    {
                        // Delete the first record.
                        formRecord.Delete();
```

```
// Update number of entries in BizFormInfo
    bfi.FormItems--;
    BizFormInfoProvider.SetBizFormInfo(bfi);
    lblInfo.Text = "The record was deleted successfully.";
    }
    else
    {
        lblInfo.Text = "No data found.";
    }
}
```

### 8.8.9.5 Customization possibilities

This topic provides information on how BizForms behavior can be modified with your custom code.

### **Event Handling**

You can run custom actions when a BizForm form record is created, updated or deleted. There are two ways how you can handle these events:

#### 1. Handling BizForm control events

In this case, you place the BizForm control on a user control or web part and specify a code name of the required BizForm in its **FormName** property. Then, you can handle the BizForm events, such as **OnAfterSave**, **OnBeforeValidate**, etc.

In these handlers, you can access form values using the *BizForm.BasicForm.DataRow* property and stop further processing (saving) of the form using the *BizForm.StopProcessing* property. Particular fields, labels and validation error messages can be accessed using the *BizForm.BasicForm.FieldControls*, *BizForm.BasicForm.FieldLabels* and *BizForm.BasicForm.FieldErrorLabels* properties.

Example of this type of customization is located in <u>Development -> Web parts -> Modifying web parts -></u> <u>Modifying code of standard web parts</u>.

#### 2. Handling global data events

You can write a custom data handler as described in the <u>API programming and Kentico CMS internals</u> - <u>> Data handler (CustomDataHandler class)</u> topic. Such a handler will allow you to run custom code whenever a database record is inserted, updated or deleted. You can use the *dataItem.ClassName* property to check if the record being updated is your BizForm code name (you can find it in the **Form code name** field on the General tab of a form's editing () interface).

## **Custom Field Controls**

You can create your own field controls as described in chapter <u>Form controls</u>. If you want to make them available in the BizForms field editor, you need to check the box **Show control in BizForms** in the **Form control properties** dialog (in Site Manager -> Development -> Form controls) and choose the

default data type.

# 8.9 Blogs

# 8.9.1 Overview

The Blogs module allows you to publish a personal or company blog, which is a frequent, chronological publication of one's thoughts and web links. You can publish multiple blogs on the same site and there can be multiple editors for each blog.

Home	Offices	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
Blogs													
Blogs													
This page blog posts running a o	displays a li can be mar corporate blo	st of blogs. Y naged through og.	ou can have a the CMS De	any numbe sk interfac	er of blogs on e any other o	your web site. documents and	Each blo you can	g may be ma set up a worl	anaged by a kflow proces	i chosen per ss for approv	son or ro ing blog	ole members. posts if you're	The 9

#### <u>My blog</u>

This is my new blog with the latest news in the cell phones. I hope you will find valuable information here.

Site map | Disclaimer | Mobile version

The Blogs module fully leverages the standard content management engine, so every blog post you create is a standard document that can be displayed on the website, searched, etc. You can also configure permissions and workflow for every blog as you're used to do with other content.

If you would like to see an example of blog, please refer to a <u>sample blog</u> on the Corporate Site sample website.

- To learn how to create a new blog on the sample Corporate Site, please refer to the <u>Adding a blog to</u> <u>your site</u> topic.
- To learn how to add posts to your blog, please refer to the Adding posts to your blog topic.
- To learn how comments can be moderated, please follow the Moderating comments topic.
- To learn how to configure the layout and design of your blog, please follow the <u>Blog layout and design</u> topic.
- To learn how to enable users to perform selected tasks using the <u>User contributions</u> module web parts, please refer to the <u>On-site management via User contributions</u> topic.
- If you would like to adjust the settings and security of the Blogs module, please refer to the <u>Settings</u> and <u>Security</u> topics respectively.
- To learn how to deal with blog post documents using standard API for documents, please refer to the <u>Managing blogs using Kentico CMS API</u> topic.

Subchapters on <u>trackbacking</u> and on a programming interface enabling co-operation of the Blogs module with external programs, <u>MetaWeblog API</u>, and topics related to Blog comments notifications (<u>Who can</u>

be notified, User subscriptions and E-mail templates) are also available in the Blogs chapter.

If you would like to compare the Corporate Site sample blog with a more detailed example of blogging, please switch to the Community Site sample website where you can find not only blogs with blog posts but also a tag cloud. The <u>Tag cloud web part</u> is used to display key words, called tags that are associated with a document, and is convenient for simple marking of documents according to various criteria, e.g. your interests.

Kentico CMS Community Site Guide contains some additional examples and tutorials related to blogs:

You will learn not only how to create a page on blogs (learn <u>here</u> how to do it) but also how to create a special page where users are redirected when they want to create a new blog (as explained <u>here</u>), a page that displays a list of all blogs on the site (as explained <u>here</u>) or how to create a page where only blog posts corresponding to the selected tag from the tag cloud are displayed (as explained <u>here</u>).

# 8.9.2 Sample blog

To see a sample blog, on the sample Corporate Site switch to the live site and from the **Main menu** choose **Blogs**. The Blogs page displays a list of blogs, each of which can be accessed by clicking on the particular blog link.

Home	Offices	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
nome	Chicco		linoudeto	110110		Company	Diogo	1 or arris	Evento	Intrageo		Examples	

Blogs

#### Blogs

This page displays a list of blogs. You can have any number of blogs on your web site. Each blog may be managed by a chosen person or role members. The blog posts can be managed through the CMS Desk interface any other documents and you can set up a workflow process for approving blog posts if you're running a corporate blog.

<u>My blog</u>

This is my new blog with the latest news in the cell phones. I hope you will find valuable information here.

Site map | Disclaimer | Mobile version

After clicking the chosen blog link, a new page with a list of blog posts and some additional information is displayed. As you can see, the additional information such as blog description, <u>tags</u>, favorite websites, recent posts, RSS feed link and post archive is displayed on the right of the page.

Home Services Products News Partners Company Blogs Forums Events Images W	iki Examples
Blogs > My blog	
Nokia 6120	Title
I am very happy to be one of the Nokia 6120 owners. It wasn't hard to make a decision which cell phone will be my next - it is the smallest and lightest smartphone in the world. Cell phones today have gone far from just being a communication device. They are now used for downloading music, video shooting, browsing the net, receiving mails, and many more. The Nokia 6120 has been designed to support all that. And for those of you who are interested in installing new applications to your cell phones I have a good news, Nokia 6120 is a smartphone, so you can do that	This is my new blog with the latest news in the cell phones. I hope you will find valuable information here.
really easily.	Tags
Posted: 8/15/2007 12:55:04 PM by Global Administrator   with 1 comments	cell phones Nokia poll software Symbian
<u>Symbian S60 3rd realesed</u>	My favourite websites
Symbian series 60 3rd Edition operating system has been realesed. It is much more flexible system than its previous versions. The core of the system was completely rebuild so it takes a lot of changes to Symbian users.	www.Nokia.com
Unfortunatelly, applications for your previous versions of the Symbian operating system are not compatible with the new one.	Recent posts
Posted: 8/10/2007 12:58:04 PM by Global Administrator   with <u>1 comments</u>	<u>Nokia 6120</u> <u>Symbian S60 3rd realesed</u> Which cell phone are you using?
Which cell phone are you using?	Syndication
Today I decided to make a discussion about your cell phones. I would like to know which cell phones my blog	RSS
readers are using, it will nelp me to choose post themes for you in the future. So go for it.	Post archive
Posted: 7/22/2007 12:50:04 PM by Global Administrator   with O comments	July 2007(1)

Finally, when you click on some particular blog post link, you can see the text plus the **Comments** section that allows you to read and add comments to the blog post. Additional information related to the current blog is also available.

		Title
Nokia 6120		This is my new blog with t
I am very happy to be one of the Nokia 6120 owne next - it is the smallest and lightest smartphone i communication device. They are now used for dow and many more. The Nokia 6120 has been desigr	latest news in the cell pho hope you will find valuable information here.	
installing new applications to your cell phones I h really easily.	we a good news, Nokia 6120 is a smartphone, so you can do that	Tags cell phones Nokia poll software Symbian
Posted: 8/15/2007 12:55:04 PM by <b>Global Admin</b> i Filed under: Symbian, Nokia	strator   with <u>1 comments</u>	
		My favourite websites
rackback URL: http://localhost/KenticoCMS_0421/	rackback/016a3521-ea58-4fdb-8680-e02e56b31c74/Nokia-6120.aspx	www.Nokia.com
Comments Global Administrator		Recent posts
Comments <u>Global Administrator</u> This is test comment.		Recent posts Nokia 6120
Comments <u>Global Administrator</u> This is test comment. 12/13/2007 10:28:17 AM	<u>Report abuse</u>	Recent posts Nokia 6120 Symbian S60 3rd realeser Which cell phone are you using?
Comments <u>Global Administrator</u> This is test comment. 12/13/2007 10:28:17 AM Leave comment <u>Subscribe</u>	Report abuse	Recent posts <u>Nokia 6120</u> Symbian S60 3rd realeser Which cell phone are you using? Supplication
Comments Global Administrator This is test comment. 12/13/2007 10:28:17 AM Leave comment Name:	<u>Report abuse</u>	Recent posts Nokia 6120 Symbian S60 3rd realesee Which cell phone are you using2 Syndication RSS
Comments <u>Global Administrator</u> This is test comment. 12/13/2007 10:28:17 AM Leave comment Name: E-mail:	Report abuse	Recent posts         Nokia 6120         Symbian S60 3rd realeser         Which cell phone are you         using?         Syndication         RSS         Post archive
Comments Global Administrator This is test comment. 12/13/2007 10:28:17 AM Leave comment Name: E-mail: Your URL:	Report abuse	Recent posts         Nokia 6120         Symbian S60 3rd realeser         Which cell phone are you         using?         Syndication         Nokia RSS         Post archive         August 2007(2)         July 2007(1)
Comments Global Administrator This is test comment. 12/13/2007 10:28:17 AM Leave comment Name: E-mail: Your URL: Comments:	<u>Report abuse</u>	Recent posts         Nokia 6120         Symbian S60 3rd realeser         Which cell phone are you         using2         Syndication <ul> <li>RSS</li> </ul> Post archive         August 2007(2)         July 2007(1)

# Add

# 8.9.3 Adding a blog to your site

In this example, you will learn how to create a new blog in the sample Corporate Site, under the News section.

1. Sign in to **CMS Desk**. In the **Content** section, click **/News** and click **Bew**. Choose to create a new **Blog**. Enter the following details:

- Blog name: My new blog
- Blog description: This is my new blog on web design.
- Side column text: I like these websites...
- Open comments for: Always
- Send comments to e-mail: enter your e-mail address
- Allow anonymous comments: yes
- Use CAPTCHA for comments: yes (this will require a verification of the number displayed in the picture to avoid spam posts)

#### • Moderate comments: yes

The following fields are also available, but you don't need to enter them for the purpose of this example:

- Blog teaser: blog teaser image displayed in blog lists
- Require e-mail address: indicates if e-mail address is required when adding a blog comment
- **Unsubscription URL:** URL of a page with the Blog post unsubscripiton web part, which handles blog post unsubscription requests from links contained in blog post notifications
- Enable subscriptions: indicates if subscriptions to notifications about new blog comments are enabled
- Blog moderators: users who can moderate blog post comments
- Enable trackbacks: indicates if the trackbacking feature is enabled
- Publish from: date and time from when the blog will be published on the site
- Publish to: date and time until when the blog will be published on the site

Edit Preview Live site	List Search
View mode	Other
Page Design Form Proper	ies
Save Spell check	
Blog name: Blog description:	My new blog
Side column text:	Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source       Image: Source<
Blog Teaser:	Lpload file
Open comments for:	Always 🔻
Send comments to e-mail addres	s: vour.address@youraddress.biz
Allow anonymous comments:	V
Use CAPTCHA for comments:	
Require e-mail addresses:	
Unsubscription URL:	
Enable subscriptions:	
Moderate comments:	
Blog moderators:	Select Clear
Enable trackbacks:	
Publish from:	Now Now
Publish to:	Re Now

Click **Gave**. You have just created your blog. However, there are two additional steps you need to do:

2. Go to the Properties -> Template dialog, click Select and choose the Blog page template. Set the

**Inherit content** value to **Select inherited levels** and choose only the **Root**. It ensures that the page displays the master page and then your blog content.

Page	Design	Form	Properties
General			
URLs			Save
Template			
Metadata		-	Template
Categories	;		Blog Select
Menu			
Workflow			Save as new template
Versions			🙋 Inherit template
Related do	ocs		Clana tamplata as ad has
Linked doc	s		
Security			Edit template properties
Attachmen	its		
			Inherit content Use page template settings Do not inherit any content Inherit only master page Select inherited levels <b>Root</b> News

### Click OK.

3. Choose the root in the content tree and switch to the **Design** tab. Configure the **cmsmenu** web part and set the **Document types** value to this:

### cms.menuitem;cms.blog

Click **OK**. It ensures that the main menu contains a link to your blog.

Sign out and choose the **My new blog** item in the main menu (under the **News** section). You will see an empty blog like this:



### Adding a blog on the live site

You can enable users to create blogs directly on the live site by adding the **New blog** web part to your site. Like this, users can only add the name and description of their new blog. All other blog properties, listed earlier in this article, will be taken from the web part's properties.

Blog name:	My new blog						
	This is my new blog.	*					
Blog description:							
		-					
	OK						

# 8.9.4 Adding posts to your blog

You can add new posts to your blog in two ways:

### 1. From the CMS Desk -> My Desk -> My blogs dialog

This dialog displays the list of blogs you are owner of (you can set the owner in the **Properties** -> **General** dialog of the blog document). Here you can click the **New post** () icon and you will be displayed with form for inserting the post:

My blogs							
Comments	Blogs						
📕 Blogs							
Actions	Name						
Image: A start and a start	My blog						
/ 🔒	My new blog						

### 2. In the Content section

Choose the **Content** tab in **CMS Desk**, select the blog's main document and then click **New**. Choose to create a new **Blog post**:

🎎 Kentico						
CMS Desk	Content My des	sk Tools Administration				
New Delete 🕞 Move Content mana	y 😭 Up e 🦊 Down Igement	Edit Preview Live site List				
⊡· 🕑 Corporate Site		News > My new blog				
🗉 📄 Services						
Products     News	_	Please select new document type:				
Wy new blog		Blog month				
W Your second	news	Blog post				
🗉 📄 Partners						
🕕 📄 Company		Link an existing document				
🕕 📄 Blogs						

Enter the post content and click **a** Save.

### **Document structure**

In both cases, the blog post will be automatically saved under the appropriate month. If the month is not created yet, it's created automatically, so you do not need to care about creating a month. The months allows you to easily organize the blog posts. The structure of **Blog**, **Blog month** and **Blog post** documents looks like this:

🗆 🌍 Corporate Site
🖃 📄 Services
庄 📄 Products
📄 📄 News
😑 划 My new blog
😑 🖳 December 2009
December post
Third blog post
🖃 🖳 November 2009
My first blog post
🖓 Your first news
🦾 🕼 Your second news
🛓 📄 Partners

When you sign out and go to your blog, you will see a page like this:

Home Services Products News	Partners Company	Blogs Forums	Events Image	es Wiki Examples
<u>News</u> > My new blog				
<u>Third blog post</u>				Title
Text				My new blog
Posted: 12/21/2009 10:41:51 AM by Global A	dministrator   with 0 com	nents		
				Tags
<u>December post</u>				Symbian
I wrote this post in December.				My favourite websites
Posted: 12/21/2009 10:40:53 AM by Global A	dministrator   with <u>0 comm</u>	nents		My new blog
<u>My first blog post</u>				Recent posts
My first blog post text.				Third blog post December post My first blog post
Posted: 11/21/2009 10:38:58 AM by Global A	dministrator   with <u>0 comm</u>	nents		Syndication
				N RSS

# 8.9.5 Moderating comments

The comments can be moderated in tree ways:

### 1. In the My Desk -> My blogs section

In this section, currently logged-in users can manage comments at all their own blogs. Neither the **Read** nor **Manage comments** permissions for the Blogs module are necessary for the user to perform blog comments management in this section.

Comments can be approved by clicking the **Approve** ( $\checkmark$ ) icon. More comments can be approved at once when you select them by the check-boxes, choose the **Approve** ( $\checkmark$ ) action in the **Selected items** drop-down list and click **OK**.

Modules	771
modules	

Kentico CMS Desk	Content	My desk	Tools	Administration		Switch to Site	<u>Manager</u>	Site: Community Site 💌
My desk  My desk  My desk  My desk  My decuments  My recycle bin  My documents  My profile  My profile  My proses  My messages  My friends	ients uments y approval by me	My blo Comments Comments Comments Blog: User name: Text: Is approved Is SPAM:	Abi's er (my blc Abi's er (my blc Abi's er Holida; t: No (all)	uropean trip ogs) uropean trip y in Australia	▼ 			
		Actions		User name	Comment text	Approved	Is SPAM	Inserted •
		N 🗙 🗸		Kelly	Your trip must have been great!	No	No	12/21/2009 11:02:20 AM
		/ 💥 🗸		Henry	Too long for me	No	No	12/21/2009 11:02:06 AM
	ľ	(select som	e action)	• ОК				

### 2. In the CMS Desk -> Tools -> Blogs section

In this section, management of blog comments on the site is possible based on the permissions:

**Global administrators** and users with the **Manage comments** permission for the Blogs module can manage comments of all blogs on the current site. Blog **moderators** and blog **owners** can manage comments of their own blogs and blogs for that they are moderators. These permissions are reflected by the **Blog** drop-down list, which displays only those blogs where comments can be managed by the current user.

Comments can be approved by clicking the **Approve** ( $\checkmark$ ) icon. More comments can be approved at once when you select them by the check-boxes, choose the **Approve** ( $\checkmark$ ) action in the **Selected items** drop-down list and click **OK**.

Kentico			Switch to Site M	lanager Si	te: Community Site 💌
CMS Desk Content	t My desk Tools Admir	nistration			
Tools     Abuse report     BizForms	Comments Blogs				
	Give Comments				
Custom tables E-commerce G File import S Forums Groups Media libraries	Blog: (all) User name: (my blogs) Text: Abi's europe Holiday in A Is approved: Two	ean trip ustralia			
- 📋 Message boards - 諭 Newsletter - 🧽 Polls	Show	-			
Reporting	Actions 🔲 U	ser name Comment text	Approved	Is SPAM	Inserted •
······································	🥒 💥 🖌 🔲 К	Your trip must have t	een great! No	No	12/21/2009 11:02:20 AM
	🥒 💥 🖌 🔲 н	lenry Too long for me	No	No	12/21/2009 11:02:06 AM
·	Selected items: (select so	ome action) 💌 OK			

#### 3. On-site management

When you're signed in and are entitled to manage the comments for the given blog, you are displayed with **Edit**, **Delete**, **Approve** and **Reject** buttons. These buttons are displayed to **blog owners**, **moderators** of the current blog, **global administrators** and users with the **Manage comments** permissions for the Blogs module.

Comments	
Henry	
Too long for me	
12/21/2009 11:02:06 AM	Edit Delete Approve Report abuse
<b>Kelly</b> Your trip must have been great!	
12/21/2009 11:02:20 AM	Edit Delete Reject Leport abuse

# 8.9.6 Blog layout and design

You can configure the blog layout and design by changing the page template of the blog document. Locate your blog in the **CMS Desk -> Content** section and choose the **Design** tab. You will see a page like this:

Home Services Products News Partners Company Blogs Forums Events Images W	'iki Examples
▼ /News/My new blog - page template: Blog	
▼ zoneTop	÷
v breadcrumbs @g	
v queryrepeater 🎡	
▼ zoneLeft 🕂	▼ zoneRight
▼ rptMonthPosts 🎡	▼ rptBlogDescription
▼ rptAllPosts 🍪	My new blog
Text	
Posted: 12/21/2009 10:41:51 AM by Global Administrator   with 0 comments	▼ TagCloud
	cell phones Nokia poll software
December post	Symplan
Luzzta this past in December	▼ rptSideColumn
r wide this post in December.	My new blog
Posted: 12/21/2009 10:40:53 AM by Global Administrator   with 0 comments	
	▼ RecentPosts 🎡
<u>My first blog post</u>	Third blog post
M. Feet blue west had	My first blog post
My first blog post text.	
Posted: 11/21/2009 10:38:58 AM by Global Administrator   with 0 comments	▼ BlogPostsRSSFeed
	<u> </u>
💌 CommentView 🎲	▼ PostArchive 🎯
	August 2007(2)
	Site man   Disclaimer

The blog is displayed using the Blog page template. The web parts ensure displaying of the blog content, comments and boxes in the right-hand column.

There are two repeaters to display the posts:

- **rptMonthPosts** this repeater is used to display posts in the given month
- **rptAllPosts** this repeater is used to display the latest N posts when the blog is displayed without selecting a particular month

If you need to modify the layout of the blog posts, you need to modify the transformations. By default, the following transformations are used:

- cms.blog.PostPreview the view in the list of posts
- cms.blogpost.Default the detailed view

# 8.9.7 On-site management via User contributions

You can enable users to perform the following tasks using the User contributions module web parts:

- Edit blog properties
- Edit or delete blog posts

### • Add new blog posts

A live example of this can be found on the sample **Community Starter site**, on the **Blogs** title page. If you go to CMS Desk's **Design** tab and view the page, you will see the following web parts, which enable the above mentioned functionalities:

- EditBlog Edit contribution web part set up for enabling blog properties editing
- EditBlogPost Edit contribution web part set up for enabling blog post editing
- NewBlogPost Contribution list web part set up for enabling adding of blog posts

▼ /Blogs - page template: Community Site - Blogs	
▼ zoneLeft	-
HeaderText posts	
BlogBreadcrumbs 谷	
EditBlog	
EditBlogPost	
VewBlogPost	
▼ rptMonthPosts	

These web parts are inherited by the underlaying pages, which means they will be displayed when a blog or blog post is displayed. The following sections explain how to enable users to perform these tasks on the live site.

### Edit blog properties

1. Create an **alternative form** for the **Blog** document type, which will contain the fields that you want to let users modify. If you are not familiar with the Alternative forms concept, please refer to the <u>Alternative</u> forms chapter first.

2. Add the **Edit contribution** web part to the blogs section title page and set its following properties:

- Show for document types CMS.Blog
- Alternative form name code name of the alternative form created in step 1
- Edit button label Edit blog
- Allow editing by users Document owner; this is the setting that makes the most sense as blog properties should be edited only by the blog's owner

If you go to the live site and display some blog placed under the blogs section title page, you should see the **Edit blog** link as highlighted in the screenshot below. After clicking the link, the alternative form will be displayed, letting blog owners edit the properties of the blog.

### Abi's european trip

<u> Edit blog</u>	
New blog post	
Saying goodbye Europe	
0	

# Add new blog posts

1. Create an **alternative form** for the **Blog post** document type, which will contain the fields that you want to let users to specify when creating the blog post. If you are not familiar with the Alternative forms concept, please refer to the <u>Alternative forms</u> chapter first.

2. Add the **Contributions list** web part to the blogs section title page. You only need to set the following properties, as the web part will not be used for displaying blog posts, but only for their inserting.

- Show for document types CMS.Blog
- Allowed new document types CMS.BlogPost
- Alternative form name code name of the alternative form created in step 1
- New item button label New blog post
- Allow insert enable
- Allow editing by users Document owner; this is the setting that makes the most sense as blog posts should be edited only by the blog's owner

If you go to the live site and display some blog placed under the blogs section title page, you should see the **New blog post** link as highlighted in the screenshot below. After clicking the link, the alternative form will be displayed, letting blog owners add new blog posts directly from the live site.

Abi's european trip	
<u>Edit blog</u>	
New blog post	
Saying goodbye Europe	
0	

## Edit or delete blog posts

1. Create an **alternative form** for the **Blog post** document type, which will contain the fields that you want to let users modify. If you are not familiar with the Alternative forms concept, please refer to the <u>Alternative forms</u> chapter first.

2. Add the Edit contribution web part to the blogs section title page and set its following properties:

- Show for document types CMS.BlogPost
- Alternative form name code name of the alternative form created in step 1
- Edit button label Edit
- Allow delete enable
- Allow editing by users Document owner; this is the setting that makes the most sense as blog posts should be edited only by the blog's owner

If you go to the live site and display some blog post placed under the blogs section title page, you should see the **/** Edit and **X** Delete links as highlighted in the screenshot below. After clicking the **/** Edit link, the alternative form will be displayed, letting blog owners edit the blog post. Using the **X** Delete link, they can delete the blog post.

### Abi's european trip > July 2008

🖉 Edit 💥 Delete	<u>e</u>
Saying goo	odbye Europe
	Paris, our final destination. Be all gone. I have a friend here, to look at pictures we've take

## 8.9.8 Settings

Settings of the Blogs module can be done in **Site Manager -> Settings -> Blogs**. The following settings are available:

- Blog unsubscription URL URL of a page on which the Blog post unsubscription web part is placed; this is a special web part used for handling unsubscriptions from receiving notifications about new blog posts
- Send blog e-mails from e-mail address that will be used as the Sender ('From') address of notification e-mails
- Enable blog post trackbacks If checked, specified blog posts are pinged after the new blog post is saved; turn off this setting if you are creating your site on the production server to avoid creating trackbacks to your production server

	Kentico							Switch to CMS Desk	User: Global Administrator
<b>~i</b> >	CMS Site Manager	Sites	Administration Settin	gs Developm	ment Licenses	Support			
Site: (global	)	•	Blogs						
	tings		Save S	Reset these settin	ngs to default				
	🕘 Web site								
	💐 Content management 🖥 Files	t	These settings are	global, they ca	an be overridden b	y the local site set	ttings. Please select t	the site to see or chang	ge the site settings.
	Membership		Blog unsubscrip	tion URL 🛛 👩	~/BlogUnsubs	crtiption.aspx		]	
····e	🧖 Security 🖷 URLs and SEO		Send blog e-ma	Is from 🛛 🚳	no-reply@my	domainXY.com		]	
	Output filter		Enable blog pos	t trackbacks 🛛 🔞					
	System E-mails Avatars Bad words		Export these set	ings					
	Booking system								
	Community								
	🐴 Content staging								

## 8.9.9 Security

The Blogs module leverages the standard security used for all documents, as blogs are actually documents in the content tree. The Blogs module also has the following permissions in **Site Manager -** > Administration -> Permissions:

- Manage comments allows members of the role to manage blog post comments
- **Read** allows members of the role to view blog posts and blog post comments via the administration interface

A Permissions					
Site:	Corporate Site	•			
Permission type:	Modules	•			
Permission matrix:	Blogs	•			

	Manage comments	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	1	đ
CMS Designers		
CMS Desk Administrators	1	1
CMS Editors	1	đ
CMS Readers		1
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

To manage blog posts, you need to be one of the following:

- global administrator
- owner of the blog
- blog moderator
- granted with the Manage comments permission for the Blogs module in the Administration -> Permissions dialog

The blogs in the My Desk -> My blogs dialog are displayed only to the blog document owner.

# 8.9.10 Managing blogs using Kentico CMS API

Since the blog posts are standard Kentico CMS documents, you can create, modify, read and delete them using standard API for documents. You can find more details and examples in chapter <u>Content</u> <u>management internals</u> and the subsequent chapters.

The following examples show how you can work with comments using the API:

### Adding a new comment

```
using CMS.CMSHelper;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.Blogs;
```

```
. . .
            // Use a valid alias path of a testing post
            string postAlias = "/TestingBlog/October-2007/TestingPost";
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            CMS.TreeEngine.TreeNode postNode = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               postAlias, TreeProvider.ALL_CULTURES, true, null, false);
            if (postNode != null)
            {
               // Add new comment to the post
               BlogCommentInfo commentObj = new BlogCommentInfo();
               commentObj.CommentDate = DateTime.Now;
               commentObj.CommentPostDocumentID = postNode.DocumentID;
               commentObj.CommentText = "Some comment text";
               commentObj.CommentUserID = ui.UserID;
               commentObj.CommentUserName = (ui.UserNickName != "") ? ui.
UserNickName : ui.FullName;
              // Save comment
              BlogCommentInfoProvider.SetBlogCommentInfo(commentObj);
              }
```

# Editing an existing comment

```
using CMS.CMSHelper;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.Blogs;
....
// Use a valid alias path of a testing post
string postAlias = "/TestingBlog/October-2007/TestingPost";
// Prepare the TreeProvider (it must be initialized with user
information when editing
// document structure)
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
TreeProvider tree = new TreeProvider(ui);
DataSet ds = null;
// Get the parent post document
```

```
CMS.TreeEngine.TreeNode postNode = tree.SelectSingleNode(CMSContext.
CurrentSiteName, postAlias, TreeProvider.ALL_CULTURES, true, null, false);
            if (postNode != null)
            {
                // Get all post comments
                ds = BlogCommentInfoProvider.GetPostComments(postNode.DocumentID,
false);
                if (!DataHelper.DataSourceIsEmpty(ds))
                {
                    // Set all post comments as approved
                    foreach (DataRow dr in ds.Tables[0].Rows)
                        // Edit comment and save it
                        BlogCommentInfo commentObj = new BlogCommentInfo(dr);
                        commentObj.CommentApprovedByUserID = ui.UserID;
                        BlogCommentInfoProvider.SetBlogCommentInfo(commentObj);
                    }
                }
            }
```

## **Deleting a comment**

```
using CMS.CMSHelper;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.Blogs;
. . .
        // Use a valid alias path of a testing post
        string postAlias = "/TestingBlog/October-2007/TestingPost";
        // Prepare the TreeProvider (it must be initialized with user information
when editing
        // document structure)
        UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
        TreeProvider tree = new TreeProvider(ui);
        DataSet ds = null;
        // Get the parent post document
        CMS.TreeEngine.TreeNode postNode = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
            postAlias, TreeProvider.ALL_CULTURES, true, null, false);
        if (postNode != null)
        {
            // Get all post comments
            ds = BlogCommentInfoProvider.GetPostComments(postNode.DocumentID,
false);
```

```
if (!DataHelper.DataSourceIsEmpty(ds))
{
    // Delete all post comments
    foreach (DataRow dr in ds.Tables[0].Rows)
    {
        // Delete comment
        BlogCommentInfo commentObj = new BlogCommentInfo(dr);
        BlogCommentInfoProvider.DeleteBlogCommentInfo(commentObj.
CommentID);
    }
}
```

### 8.9.11 Trackbacks

### 8.9.11.1 Trackbacks overview

The **Trackbacks** feature allows sending of blog post links to other blogs when a new blog post is created. The link is typically, but not always, added as a blog comment in the target blog, as implemented in Kentico CMS. This can be performed not only within the same site, but also to completely different sites created not only with Kentico CMS.

Trackbacks are typically used to let readers of a topic-related blog posts know about your new blog post. You can find detailed information on trackbacks on the following Wikipedia page: <u>http://en.</u><u>wikipedia.org/wiki/Trackback</u>

Read here to learn how to enable trackbacks on your site.

### How it works

1. There is a Trackback URL published below the blog post. These URLs can be found on various blogs at sites developed not only with Kentico CMS.



2. When users are creating a new blog post, they can add such URLs into the **Send trackbacks to** field. More than one trackback URL can be entered, each on a new line.

▶ Blogs ▶ Abi's eu	opean trip
🔚 <u>Save</u> 📳	Save and create another Spell check
[] Source   [] [] [] [] [] [] [] [] [] [] [] [] []	※ 哈 電 暗 暗 ● ● ・ ~   桷 100   囲 22   B Z U ABC   ×2 ×2   計 日   評 評   ■ ■ ■   ● ● ● ◆   ■   ■   ●   ◆   巻 ▼ Format Normal ▼ Fort ▼ Size ▼   T _B × 4B ×   ■ 100
Post text:	
Post teaser:	La Upload file
Allow comments:	
Tags:	Enter tags separated with comma. Example: dogs, cats
Send trackbacks to	http://localhost/KenticoCMS/trackback/12e2200f-b40a-4607-b05a- e3204786a158/Destination-Madrid.aspx
Publish from:	Now
Publish to:	Now Now

3. When the blog post is submitted, trackback ping is sent to the trackback URLs. If everything is configured correctly at the other blogs, a blog comment is added with the blog post link, title and summary, as you can see in the screenshot below.



#### 8.9.11.2 Enabling trackbacks

For the trackbacks to be functional in a particular blog, you need to enable the following options on the blog's **Form** tab:

- Enable trackbacks this option enables displaying of the trackback URL with each blog post and inserting of trackbacks as blog comments
- Allow anonymous comments trackback comments are in fact anonymous comments, so this
  option needs to be enabled for the comments to be inserted
- **Open comments for** this option defines how long after the insertion of the blog post will inserting of blog comments be possible; trackbacks can also be inserted only within this period

Kentico CMS Desk Content My der	sk Tools Administration	Switch to Site Manager Site: Community Site User: Global Administrator v5.0.3639	Sign
New Delete 🕞 Move 😽 Down	Edit Preview Live site	List Search	
Content management	View mode	Other	
🖃 🌍 Community Site	Page Design Form Propertie	S	
Home Blogs	Spell check		
Blog posts	E Source   🔌   🐰 🖻 🕮 👘	⑧●● ♀ ♀ ┃ ▲ ☆   Ⅲ 2 ┃ B I 및 ∞   兆 ४   汪 汪   伊 伊   再 吾 君 〓   ● ● ● ↓	
🖃 💐 Abi's european trip	Style Format	🔹 Font 🔹 Size 🔹 Tag 🗸 🌆 🖓	
june 2008 → 嗯 July 2008			-
Pointay in Ausuana     Pointay in Ausuana     Pointay in Ausuana     Pointay in Ausuana     Pointay     Point	Side column text:	Hi, my name is Abigal Woodwarth and I come from LA, California. Me and my friend PJ have recently set off for my very first visit of the old continent. In this blog, you will find posts about the interesting places we are going to visit so that you can follow our footsteps whereever we go even if you don't have the chance to go yourself.	* III
🛨 📄 Examples	•		*
🗑 🏐 Special pages	Blog Teaser:	Lipload file	
Logon page	Open comments for:	Always	
Search	Send comments to e-mail address:		
	Allow anonymous comments:		
	Use CAPTCHA for comments:		
	Require e-mail addresses:		
	Unsubscription URL:		
	Enable subscriptions:		
	Moderate comments:		
	Blog moderators:	Select Clear	
	Enable trackbacks:		
	Publish from:	Now Now	
	Publish to:	Now Now	

The **Allow comments** option must also be enabled on the pinned blog post's **Form** tab so that the comment can be inserted.



### 8.9.12 Blog comments notifications

#### 8.9.12.1 Who can be notified

When a new blog comment is added, notification e-mails can be sent to:

- Blog owners
- Blog moderators
- Subscribers

The text below explains to whom notification e-mails are sent under specific conditions:

#### New comment

1. has been added by the blog owner, blog moderator, user with the **Manage permission** or global administrator

- the comment is marked as APPROVED
- the e-mail is sent to: the blog owner (if their e-mail address is set in blog properties) and the subscribers

2. has been added by anybody else

a) the blog is moderated

- the comment is marked as NOT APPROVED
- the e-mail is sent to: the blog owner (if their e-mail address is set in blog properties) and the

moderators

b) the blog is not moderated

- the comment is marked as APPROVED
- the e-mail is sent to: the blog owner (if their e-mail address is set in blog properties) and the subscribers

#### **Comment editing**

- 1. the comment has been switched from NOT APPROVED to APPROVED
  - the e-mail is sent to: the subscribers
- 2. other comment changes
  - · no e-mails are sent

#### 8.9.12.2 User subscriptions

Users can subscribe to receiving notifications about new blog comments at some blog post. It can be done in two ways:

1. Users can subscribe when leaving a comment, by checking the **Subscribe me to this blog post** check box. In this case, notifications will be sent to the e-mail address specified in the **E-mail** field above.

Leave comment	Subscribe
Name:	
Pavel Knotek	
E-mail:	
pavelk@localhost.local	
Your URL:	_
Comments:	
Sweet dreams, Kelly :-)	~
	-
Subscribe me to this blog post	
Enter security code: 997355 997355	
Add	

2. Users can also subscribe without leaving a comment, by clicking the **Subscribe** link at the top of the **Leave comment** form.

Leave comment	Subscribe
Name:	_
Pavel Knotek	
E-mail:	
navelk@localhost_local	

This displays a subscription form. By entering the e-mail address to the **Your e-mail** field and clicking the **Subscribe** button, users can subscribe too.

Subscribe	Leave comment
Your e-mail:	pavelk@localhost.local
	Subscribe

# **Subscriptions management**

Users can view their subscriptions and eventually **unsubscribe** using the **Delete** (**X**) icon at the following two places:

1. Users with access to CMS Desk can view their subscriptions on the My Desk -> My profile -> Subscriptions tab.

🜺 Kentico		Switch to Site Manager	Site: Community Site 💌			
CMS Desk Conten	t My desk Tools Administration					
	Same Section 2015					
🗟 Outdated documents	Details Change password Notifi	ations Subscriptions				
··· 🎯 Waiting for my approval ··· 🔒 Checked out by me	Waiting for my approval					
My recycle bin	Newsletters subscriptions					
My documents	No newsletters selected.	anostiocal is currently subscribed to receive the following ne	WSIEtters:			
My blogs	Add noweletters					
My messages	Add newsietters	•				
- 🖓 My friends						
	Blog posts subscriptions					
	You are currently subscribed to re	eceive notifications on new comments added to the followin	g blog posts:			
	E-mail	Blog post				
	pavelk@localhost.local	Flying tomorrow				
	Message boards subscriptions					

2. On live site, users can view their subscriptions in the **My account** web part. The **Display my subscriptions** property of the web part must be enabled for this to be possible.

Personal settings	Change password	Notifications	Messages	Friends	Subscriptions			
Newsletters subs Your e-mail add No newsletters Add newsle	criptions ress pavelk@localhost.lo selected. atters	cal is currently sub	iscribed to recei	ve the follow	ving newsletters:			
Blog posts subsc You are current	iptions y subscribed to receive r	notifications on nev	v comments add	led to the fol	llowing blog posts:			
E-m	ail Bl	og post						
💢 pave	k@localhost.local <u>Fly</u>	ing tomorrow						
Message boards	subscriptions							

# **Unsubscription possibilities**

Subscribers can unsubscribe by clicking the unsubscription link, which is present in each notification email.

Cn 🖬 🤊 U 🔺 <	Rew comment was ad	dded to the blog pos	t Flying tomorrow -		<b>X</b>
Message Ad	id-Ins				0
Reply Reply Forward to All Respond	Delete Other Actions * Actions	Block Sender	Categorize ▼ ▼ Follow Up ▼ Mark as Unread Options □	Find	Send to OneNote OneNote
From: no-reply@loc To: Pavel Knotek Cc: Subject: New comme	alhost.local nt was added to the blog post f	Flying tomorrow	Sent: Mon :	12/21/2009	12:24 PM
New comment was add Blog post: <u>Flying</u> Blog: <u>Holida</u> Added by: Pavel I Date and time: 21.12.1 Text: Sweet <u>Click here to unsubscrib</u>	ed to the blog post you are sub tomorrow <u>y in Australia</u> Knotek 2009 12:23:12 dreams, Kelly :-)	bscribed to:			

For this to work, you have to do the following two things:

1. Place the **Blog post unsubscription** web part to some page. It is recommended to create a special page for this purpose, as you can see at **Community site -> Special-pages -> Blog unsubscribe**. You can set only one specific property of the web part - **Confirmation text** - this is the text that will be

displayed after successful unsubscription.

2. Set the URL of the page created in step 1 as the **Unsubscription URL** property of the blog. This can be done two ways:

- In Site Manager -> Settings -> Blogs, by settings the Blog unsubscription URL property. This is the default value that will be used by default, if no other URL is set.
- If some different URL is set in the option mentioned above, you can set the value of the Unsubscription URL property on the blog's Form tab. This value overrides the one set in Site Manager -> Settings -> Blogs.

#### 8.9.12.3 E-mail templates

There are three different e-mail templates that can be used when sending notifications about new blog comments, depending on the recipient of the notification:

- Blog owners e-mails are based on the Blogs Notification to blog owner e-mail template
- Blog moderators e-mails are based on the Blogs Notification to blog moderators e-mail template
- Subscribers e-mails are based on the Blogs Notification to blog post subscribers e-mail template

The following macros can be used in the e-mail templates:

#### Data macros

- Blog.XXX where XXX represents a column of the CONTENT_Blog table or the CMS_View_Tree_Joined view
- BlogPost.XXX where XXX represents a column of the CONTENT_Blog table or the CMS_View_Tree_Joined view
- Comment.XXX where XXX is a column of the CONTENT_BlogComment table
- CommentUser.XXX where XXX is a column of the CMS_User table
- CommentUserSettings.XXX where XXX is a column of the CMS_UserSettings table

Macro type: Item: (all columns) bloglink -Insert Data (all columns) (enter expression) New blog post commer blog r approval: blogpost [url={%comment Blog post: %}[/url] Blog: [url={%BlogIcommentuser Added by: { & Commer Com Date and time: {%Comment.CommentDate%}

#### Source macros

#### a) Links

• BlogPostLink - blog post link

Example: {%CommentUser.Email%}

- BlogLink blog link
- UnsubscriptionLink unsubscription link

b) Others - these macros are present due to backward compatibility purposes

- **UserFullName** the same result as {%Comment.CommentUserName%}
- **CommentUrl** the same result as {%Comment.CommentUrl%}
- **Comments** the same result as {%Comment.CommentText%}
- **CommentDate** the same result as {%Comment.CommentDate%}
- **BlogPostTitle** the same result as {%*BlogPost.BlogPostTitle*%}

#### Example: {%BlogPostLink%}

Macro type:	Item:				
Data 🔹	(all columns)	•	unsubscriptionlink	-	Insert
			bloglink blogpostlink		
New blog post commer	nt was added and now is waiting for y	ou	blogposttitle		
			commentdate		
Blog post: [url={%	<pre>\$BlogPostLink\$}]{%BlogPost.DocumentNa</pre>	me	comments		
Blog: [url={%BlogI	Link%}]{%Blog.DocumentName%}[/url]		commenturl		
Added by: {%Commer	nt.CommentUserName%}		unsubscriptionlink		
Date and time: {%C	Comment.CommentDate%}		userfuliname		

## 8.9.13 MetaWeblog API

### 8.9.13.1 Overview

**MetaWeblog API** is a programming interface that enables external programs to get and set the text and attributes of blog posts. The API uses the XML-RPC protocol for communication between client applications and the blog server.

**MetaWeblog API** integration enables bloggers to write their blog posts using an application like Windows Live Writer (WLW) or Microsoft Word 2007 (or higher) on their local computer, even when they are offline. Then it enables transfer of these blog posts to the Kentico CMS web application, either by publishing them directly on the live site or just saving them as a draft to be published later.

### How it works

The diagram below shows which actions can be performed in both Kentico CMS web application and Windows Live Writer, and the blog post transfer possibilities between the two applications.



The following actions need to be taken in order to use Windows Live Writer to write Kentico CMS blog posts:

- 1. User <u>creates a blog</u> in Kentico CMS (either via CMS Desk or on the live site).
- 2. User installs Windows Live Writer and registers their new blog in it.
- 3. Now the user is ready to create new and modify existing blog posts directly from WLW and transfer the changes into Kentico CMS.

In the **MetaWeblog API** subchapter, you can also learn how to <u>publish</u> a new blog post created with Windows Live Writer to a Kentico CMS Blog, how to manage <u>blog posts</u> and different <u>cultural versions</u> of your blog and finally, how to adjust the <u>settings</u> and <u>security</u> options related to **MetaWeblog API**.

### 8.9.13.2 Windows Live Writer installation

The following steps need to be taken in order to install Windows Live Writer on your machine:

1. Download Windows Live installer from http://download.live.com/writer.

2. Execute the installer. Choose the **Writer** option from the list of available programs. Other options are not directly related to the Windows Live Writer. Choose as you wish and click **Install**.

灯 Windows Live		
Choose the program	s you want to install	
Click each program name for details	is you want to install	
chec caer program name for actansi		
📃 🚢 Messenger	Writer	
🔲 🧔 Mail	Create great-looking blog posts, including photos,	
Photo Gallery	videos, maps, events, and tags, and publish them to almost any blog service—Windows Live.	
🗌 🚦 Movie Maker	WordPress, Blogger, Live Journal, TypePad, and	
Toolbar	many more.	
🗹 🤚 Writer	Installed with this program:	
🔲 🔊 Family Safety	.NET Framework	
📃 😡 Microsoft Office Outlook		
📃   B Microsoft Office Live Ad		
📃 😺 Silverlight		
	Space needed: 15.4 MB	
	Space available: 26.7 GB	
	Install Cancel	
	instan	
1		

3. When the installation finishes, it offers you some additional settings, which are not directly related to Windows Live Writer. Choose as you wish and click **Continue**.



4. You will get to the final screen, where you are offered to sign up for a <u>Live ID</u>. This again is not directly related to Windows Live Writer, so do as you wish and finally click **Close** to finish the installer.

🖉 Windows Live
Mindows Live
Welcome to Windows Live!
Your new programs are in the Windows Live folder on the Start menu.
Do you have a Windows Live ID? To get the most from your new programs, use your Windows Live ID to sign in. If you use Hotmail, Messenger, or Xbox LIVE, you already have a Windows Live ID. If not, it only takes a minute to sign up.
Sign up
Close

### 8.9.13.3 Registering blog account

When you run Windows Live Writer for the first time, a wizard will appear, letting you configure connection to your online web service. After the initial setup, the wizard is still accessible under the **Tools -> Accounts -> Add** or **Blogs -> Add blog account** menu options.

The following text describes how to connect Windows Live Writer to a blog in a Kentico CMS instance.

1. The first step of the wizard is just informational. Besides some very basic info, it offers you the *Learn more about Windows Live Writer* link, which redirects you to some in-depth info about the program. Follow it if you wish and click **Next** to proceed further.

I Windows Live Writer			
Configure Windows Live Writer			
Use Windows Live Writer to blog about whatever interests you. Add photos and videos, and then publish to popular blogging services, including Windows Live Spaces, Blogger, WordPress, and TypePad.			
Learn more about Windows Live Writer			
< Back Next > Cancel			

2. This step requires you to select the type of blog service. Select Other blog service and click Next.

🤌 Windows Live Writer
What blog service do you use?
Windows Live Writer works with most popular blog services. Tell us which one you use.
I don't have a blog; create one on Windows Live for me
Windows Live Spaces
SharePoint blog
Other blog service
Blogger, WordPress, TypePad, all others
< Back Next > Cancel

3. Now you need to enter the URL of the blog and the logon credentials of the blog owner. Enter the following details:

- Web address of your blog: full Live URL of the blog's title page, e.g. http://localhost/ KenticoCMS_0322/Blogs/My-blog-1.aspx
- Username: user name of the blog owner, e.g. administrator
- Password: blog owner's password (blank passwords are not supported), e.g. 12345
- **Remember my password**: enable this option if you don't want to enter the password each time you use the application
Click Next to proceed.

> Windows Live Writer	×
Add a blog account Web address of your blog:	
ttp://localhost/KenticoCMS/Blogs/My-blog-1.aspx	
This is the web address that visitors use to read your	blog.
Username:	
administrator	
Password:	
•••••	
Remember my password	
Set proxy Set proxy	Next > Cancel

4. In the fourth step, you need to select the type of the blog and the posting URL of the blog. Enter the following details:

- **Type of blog that you are using**: *Community Server* or *MetaWeblog API* (the first one provides some extra functionality in WLW)
- Remote posting URL for your blog: URL of the MetaWeblog API handler, which is always in format http://<application path>/CMSModules/Blogs/CMSPages/MetaWeblog.ashx (e.g. http:// localhost/KenticoCMS/CMSModules/Blogs/CMSPages/MetaWeblog.ashx)

Click Next.

🐌 Windows Live Writer
Select blog type
settings. Please select the type of blog that you are using to continue.
Type of blog that you are using:
Community Server 👻
Remote posting URL for your blog:
1SModules/Blogs/CMSPages/MetaWeblog.ash
< Back Next > Cancel

5. Now a dialog pops up, asking you if you want to detect the theme used for the blog so that you can see how the blog post will look like live when you are editing it. Click **Yes** to perform this action. If you click **No**, you can still do it later manually by choosing the **View -> Refresh theme** option from

Windows Live Writer menu.

Create a Te	imporary Post
2	Would you like to allow Writer to detect the theme of your blog by publishing a temporary post? The post will be removed immediately. Allowing this will let you see what your posts will look like online while you are editing.
	Yes No

6. In the final step, you just need to enter the **Blog nickname**, which is just a name under which the blog will appear in WLW user interface. Enter whatever you wish and click **Finish**. You blog is now registered and you can start blogging from within Windows Live Writer.

P Windows Live Writer
Your blog has been set up
Please confirm that you would like to save this blog.
Writer will periodically check for, and download, new configuration information for your blog.
Blog nickname: My blog (en-US)
Share my blog on Windows Live Show updates on Windows Live so people know when I add new posts to my blog.
< Back Finish Cancel

#### 8.9.13.4 Publishing first blog post

In the following example, you will learn how to create a new blog post with Windows Live Writer and publish it to the Kentico CMS blog registered in the <u>previous example</u>.

1. Open Windows Live Writer and select New post from the File menu (or click Ctrl+N).

logical control of the second		
File Edit View Insert Format	Table Tools Blogs Help	
🐮 New post 🛛 Ctrl+N	aft 🝷	🥖 ▾ 🔞 My blog (en-US) ▾
New page Ctrl+G		
Open Ctrl+O	$A A \coloneqq \equiv "" \equiv \equiv \equiv \equiv \equiv$	🍰 🔛 🤍 Insert 🔻
Save local draft Ctrl+S		My blog (en-US)
Post draft and edit online		View Blog
Print Ctrl+P	-	
Print preview		Open
X Delete draft		Drafts (No. Dector)
Publish to blog Ctrl+Shift+P	-	(No Dratts)
Close Alt+F4	-	Recently posted
Altit	7	(No Recently posted)
		E
		Insert
		😞 Hyperlink
		Picture
		Photo album
		I able
		Video
		Add a plug-in
		_
Edit Preview Source		<b>v</b>
Set categories		✓ Set publish date
Draft - Unsaved		My blog (en-US)

2. The gray rectangle at the top (1.) is where you enter the title of the blog post. What you enter here will be used as a value of the **Post title** field in your Kentico CMS blog post.

The text area below (2.) is where you enter the text of the blog post itself. This will be used for the **Post text** field, and in case you enabled the automatic summary (learn <u>here</u> how to do it), its beginning will be used for the **Post summary** field too.

Enter some title and blog post text.

♣ My first WLW blog post - Windows Live Writer	
File Edit View Insert Format Table Tools Blogs Help	
Publish New Open Save draft 🕶	🥖 ▾ 🔞 My blog (en-US) ▾
», ▼ ") Paragraph ▼ B I U A A ⋮ ∷ ", ■ ≡ ≡ ≡ @	Insert 🔻
My first WLW blog post 1.	My blog (en-US) View Blog
Hi there, I'm just trying to create a new blog post in the fabulous Windows Live Writer application. When I finis writing this, I'll dick the <b>Publish</b> button and the post will be transferred to my blog in a <u>Kentico</u> CMS instance. Fabulous, isn't it?	Open Drafts (No Drafts) Recently posted (No Recently posted) E Insert B Hyperlink Photo album Table Map Tags Video Add a plug-in
Edit Preview Source	T
Set categories	✓ Set publish date
Draft - Unsaved	My blog (en-US)

3. Now let's try adding an image. It is quite easy with Windows Live Writer, just click the **Picture...** option in the **Insert** menu on the right and select some image from your local disk. You should achieve that your blog post looks somewhat similar to the screenshot below.

👃 My first WLW blog post - Windows Live Writer				
File Edit View Insert Format Table Tools Blogs Help				
Publish New Open Save draft 🕶	1	• 🕐	My blog (	en-US) 🔻
$\lambda$ ▼ $\square$ Paragraph • B I U A A $\stackrel{i}{=}$ $\stackrel{i}{=}$ "," $\equiv$ $\equiv$ $\equiv$ $\equiv$ $\textcircled{B}$		🛛 🔻 🛛 Ins	sert 🔻	
My first WLW blog post		My blog View Blog	ı (en-US)	
I'm just trying to create a new blog post in the fabulous Windows Live Writer application. When I finis writing this, I'll dick the <b>Publish</b> button and the post will be transferred to my blog in a <u>Kentico</u> CMS instance. Fabulous, isn't it?		Drafts (No Dra Recently p	afts) posted	
And now I will try to add a picture to the blog post:	E	(No Re Insert Hyper Pictur Photo Table. Map Tags Video.	tink e) album 	
As you will see, the picture will be uploaded to the blog post as a new attachment in <u>Kentico</u> CMS.	-	中 Add a	plug-in	
Edit Preview Source				
Set categories	• [	Set publi	ish date	
Draft - Unsaved			My blo	g (en-US)

4. Now that your blog post is ready, we can publish it to the live site. Click the **Publish** button in the top toolbar.

<	👂 Unti	tled - V	Windows Li	ve Wr	iter										
	File	Edit	View	Inse	ert	For	mat	٦	ſable	1	ools		Blogs	Н	elp
	Publ	Publish New Open		en	Save draft 🔻										
	* -	"		-	в	I	U	A	A	1.01	:=	"			

5. When the publishing finishes, your blog will be displayed in your browser and you will see the new post published.



6. If you view the blog post in CMS Desk and switch to its **Properties -> Attachments** tab, you will see that the image has been uploaded as an attachment of the post. There are two versions of the image - the first one is the original full-size image, while the second one is its thumbnail used in the post text (e. g. in the screenshot above).



#### 8.9.13.5 Managing blog posts

This chapter describes some additional options that you have when creating or editing a blog post.

## Save local draft

Current local version of the blog post is saved as blog post local draft; each blog post can have only one

local draft. This action doesn't propagate any changes into the CMS.



# Post draft to blog

Current local version of the blog post is posted to blog, but its local draft is not removed. Depending on <u>workflow</u> settings, the following two situations can occur in the CMS:

- a) Blog post document is under workflow new minor version of the blog post is created (posted version is not published)
- b) Blog post document is not under workflow blog post is published immediately; this means that this action is identical to the *Publish* action, i.e. the *Post draft to blog* action makes sense only in case that workflow is enabled for blog post documents



# Publish

Current local version of the blog post is posted to blog and published immediately. Local draft of the published blog post is automatically removed.

•	Av first WLW blog post - Windows Live Writer											
	File	Edit	View	Insert	For	mat	Т	able	Tools	Blogs	Help	
	Publ	lish	New	Open	Sa	ve dr	aft 🔹					
	* *	5	^p aragraph	• B	I	U	A	Α	<b>!≡                                    </b>	""	≣ ∃	1

# Tagging

The tag selector in WLW enables you to tag the blog post with tags from the parent blog's Kentico CMS tag group. The tag group of the blog post itself is not reflected here at all.

And now I will try to add a picture to the blog post:	Cell phones
	<ul> <li>poll</li> <li>software</li> <li>Symbian</li> </ul>
As you will see, the picture will be uploaded to the blog post as a new doc CMS.	
Edit Preview Source	
Bet categories	

## **Publish date**

You can specify a date here, which will be propagated into the **Publish from** field on the **Form** tab in CMS Desk. The value determines the date and time when the blog post gets published on the live site. It will be converted to the user's <u>time zone</u> before it is set as the **Publish from** property of the blog post in Kentico CMS. If no time is set here, the blog post is published immediately.



#### 8.9.13.6 Multilingual support

In case that your blog exists in more than one cultural version, you will get the following dialog displayed after blog type selection (step 4) when registering your blog account.

P Windows Live Writer
Select blog More than one blog was detected. Please select the blog that you'd like to add from the list below:
My blog (en-US) My blog (cs-CZ)
< <u>B</u> ack <u>N</u> ext > Cancel

In the dialog, you need to choose which cultural version will the account be registered for. This means

that you need to register one dedicated account for each cultural version of your blog.

#### 8.9.13.7 Settings

Settings related to MetaWeblog API can be performed in **Site Manager -> Settings -> MetaWeblog API**. The following settings can be configured:

- Allow automatic summary: if enabled, blog post summary will be created automatically from the beginning of the blog post text, and will be as long as the value of the Summary length property; this is applied only when a post is created when editing an existing post, the summary is not updated
- Summary length: length of automatic blog post summary in characters
- **Delete unused attachments**: if enabled, all blog post attachments which are not used in post text or have not been uploaded via WLW (i.e. have been uploaded via Kentico CMS user interface) will be deleted when an existing blog post is modified and then published from WLW

1	Kentico						Sw	itch to CMS Desk	User: Glo
<b>7</b> 1	CMS Site Manager	Sites	Administration Setti	ings Develop	ment Licenses	Support			
Site: Corpora	ate Site	•	MetaWeb	log API					
- Sett	ings		Save S	Reset these setti	ngs to default				
, <u>,</u>	) Web site Content management Files								
	Membership		Allow automatic	summary 📲				Inherit from glo	bal settings
1	Security		Summary lengt	h 🔮	200			🔲 Inherit from glo	bal settings
5	URLs and SEO Output filter		Delete unused	attachments 🧃				Inherit from glo	bal settings
	System E-mails		Export these se	<u>ttings</u>					
	a Avatars Bad words								
	Blogs MetaWeblog API								
	Booking system								
	Content staging		•						
8	🚨 Forums		Ч						

#### 8.9.13.8 Security

# Managing blog posts

The following text explains what conditions need to be met in order to perform the listed actions in Windows Live Writer. The conditions need to be valid for the user account used to access the blog (as entered in step 3 <u>here</u>).

To view a blog post, the user needs to:

- be the owner of the blog post
- or have the the Read document permission for the blog post granted (as explained here)
- or be a global administrator

To modify a blog post without workflow, or to modify a blog post under workflow without custom workflow steps, the user needs to:

• be the owner of the blog post

- or have the Modify document permission for the blog post granted (as explained here)
- or be a global administrator

To modify a blog post under workflow with custom workflow steps, the user needs to be:

- member of the role which can approve the document in the custom workflow step (see <u>Defining a</u> <u>workflow</u> for more details)
- or a global administrator

To delete a blog post, the user needs to:

- be the owner of the blog post
- or have the **Delete** document permission for the blog post granted (as explained here)
- or be a global administrator

## **Banned IPs**

If the user's IP is on the <u>Banned IPs</u> list, the user will not be able to transfer any data between Kentico CMS and the client application (WLW,Microsoft Word 2007+, ...).

# 8.10 Booking system

# 8.10.1 Overview

The Booking system module allows you to manage events and their attendees. You can use it for both on-line and off-line meetings.

You can find the Booking system module in CMS Desk -> Tools section.

# 8.10.2 Publishing the events

The events managed by the Booking system are actually documents of type **Event (booking system)**. The Event document uses the following fields:

Event name	Name
Event summary	Summary
Event details	Details
Event location	Location
Event date and time	When the event starts
Capacity	Maximum number of attendees
Allow registration over capacity	Indicates if the number of registered attendees can be higher than the capacity.
Open from	Date and time when the registration starts
Open to	Date and time when the registration ends

If you wish to publish events, you can use the page template Events/Event calendar with event

details to display the event calendar and allow users to register or you can build your own page template.

The event calendar is displayed using the **Events -> Event calendar** web part. The registration is ensured by the **Booking system/Event registration** web part. It is displayed when the event details are selected and allows visitors to sign up for the event.

<u>&lt;</u>	December 2009 <u>&gt;</u>					
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
No event	No event	No event	No event	No event	No event	No event
6	7	8	9	10	11	12
No event	No event	No event	No event	No event	No event	No event
13	14	15	16	17	18	19
No event	No event	No event	No event	No event	No event	No event
20 No event	21 <u>December</u> conference	22 No event	23 No event	24 No event	25 No event	26 No event
27	28	29	30	31	1	2
No event	No event	No event	No event	No event	No event	No event
3	4	5	6	7	8	9
No event	No event	No event	No event	No event	No event	No event

# December conference

Here come the details and additional information of December conference.

Event capacity:	10
Event location:	Boston, Massachusetts
Event date:	12/21/2009 9:00:00 AM

Registration	
First name:	
Last name:	
E-mail:	
Phone:	
	Register
Add event to	Outlook

## 8.10.3 Managing attendees

The attendees who register for the event can be managed in the **CMS Desk -> Tools -> Booking system** section. Here you can see the list of all events, their capacity and number of attendees.

- Tools	P	🛃 Event	ts					2
BizForms								
Blogs		Actions	Event	Date -	Capacity	Attendees	Open from	Open to
Booking system		Q	December conference	12/21/2009 9:00:00 AM	10	0		
Content staging		Q	November conference	11/1/2009 1:00:00 PM	100	0		
E-commerce		<u>a</u>	October conference	10/15/2009 4:00:00 PM	30	0		
🕞 File import		Q	September conference	9/27/2009 9:00:00 AM	20	0		
Sorums		à	Example conference	5/7/2009 2:22:09 PM	10	0		
Media libraries								

When you view some event, you can see the registered attendees and edit their details or remove them. You can also resend the invitation e-mail.

## Sending e-mail to all attendees

On the **Send e-mail** tab, you can send an e-mail to all attendees and inform them about event changes, etc.

## 8.10.4 Security

The security is split into two sections:

## Management of events

Since the events are standard documents, the users who manage them need to have appropriate document permissions as described in <u>Permissions for modules and documents</u>.

## **Management of attendees**

The attendees can be managed in the **Tools -> Booking system** module. The permissions for this module in the **Administration -> Permissions** section need to be granted to the users who want to perform the management.

You can assign the following permissions to the roles:

- Modify allows users to modify (add, update, delete) the list of attendees and their details
- Read allows users to read the list of attendees, resend messages and send mass e-mail

A P	ermiss	ions
-----	--------	------

Site:	Corporate Site	•
Permission type:	Modules	-
Permission matrix:	Booking system	•

	Modify	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	ď	Ś
CMS Designers		
CMS Desk Administrators	ø	Ś
CMS Editors	ø	Ś
CMS Readers		đ
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

# 8.10.5 Booking system internals and API

#### 8.10.5.1 Database tables and API classes

The Booking system module uses the following database table:

- CONTENT_BookingEvent the CMS.BookingEvent is a standard Kentico CMS document type, therefore, it has this associated database table where information about particular booking events is stored
- Events_Attendee this table is used to store information about booking event attendees

The Booking system API is provided by the following CMS.EventManager namespace classes:

• EventAttendeeInfo, EventAttendeeInfoProvider - these classes provide functionality for managing of event attendees

The following topics show how methods from these classes can be used to manage event attendees:

- Adding an attendee
- Editing an attendee
- Removing an attendee

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.10.5.2 Adding an attendee

The following code example demonstrates how an attendee can be added to a booking system event.

[C#]

```
using CMS.EventManager;
int eventNodeId = 10;
// Create new attendee object
EventAttendeeInfo eai = new EventAttendeeInfo();
// Set its properties
eai.AttendeeEventNodeID = eventNodeId;
eai.AttendeeFirstName = "John";
eai.AttendeeLastName = "Smith";
eai.AttendeeEmail = "john.smith@example.com";
// Save the object
EventAttendeeInfoProvider.SetEventAttendeeInfo(eai);
```

#### 8.10.5.3 Editing an attendee

This code example explains how attendee details can be modified using the API.

#### [C#]

```
using CMS.EventManager;
int eventNodeId = 10;
string email = "john.smith@example.com";
// Get attendee info object
EventAttendeeInfo eai = EventAttendeeInfoProvider.GetEventAttendeeInfo
(eventNodeId, email);
// Update its properties
eai.AttendeeFirstName += "_Updated";
// Save the object
EventAttendeeInfoProvider.SetEventAttendeeInfo(eai);
```

#### 8.10.5.4 Removing an attendee

This code example shows how an attendee can be removed from a booking system event.

[C#]

```
using CMS.EventManager;
int eventNodeId = 10;
string email = "john.smith@example.com";
// Get attendee info object
EventAttendeeInfo eai = EventAttendeeInfoProvider.GetEventAttendeeInfo
(eventNodeId, email);
// Delete the attendee object
EventAttendeeInfoProvider.DeleteEventAttendeeInfo(eai);
```

# 8.11 Categories

# 8.11.1 Overview

The Categories module enables users to categorize their documents in a similar way like the <u>Tags</u> module does.

Home Offices	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
Webparts		Examples >	Webparts	> Tagging 8	Categories >	Category	List					
<ul> <li>Abuse report</li> </ul>												
<ul> <li>Articles</li> </ul>	/	Cascadir	na Style	Sheets ((	(22)			Catego	ries	_	_	
<ul> <li>BizForms</li> </ul>	(	Cuscuum	ig otyle	Uncera (	<u></u>			Countri	es			
<ul> <li>Booking system</li> </ul>		Czech R	epublic					Develop	oment			
<ul> <li>Community service</li> </ul>	s	General	Packet	Radio Ser	vice (CPR	e)		Networ	k administra	tion		
Content rating		General	achet			<u>a</u>		Program	nming			
Custom tables		Global P	ositioni	ng Systen	<u>n</u>			Techno	logies			
<ul> <li>Data sources</li> </ul>		HyperTe	vt Mark	un Langu	ane (HTMI							
E-commerce		пурстте	AL MAIN	up Langu	age (ITTME	4						
Events		Router										
Forums		Search E	ingine (	Intimizati	on (SEO)							
Full-text search		Search	ingine (	punizau								
<ul> <li>General</li> </ul>		Wide XG	A									

There are two types of categories:

- <u>Global categories</u> categories created by the global administrator; such categories can be used by all users.
- <u>Custom categories</u> categories created by a user; only the user who created such categories can use them.

Please note that there are differences between the Categories module and the Tags module. As mentioned above, user defined categories are available only to the users who created them. However, user defined tags are accessible globally.

Any document in the content tree can be assigned to an unlimited number of categories. The Categories module contains the **Category list** web part. This web part can display a list of categories in the form of clickable links. By clicking on a particular category link, a list of all documents in the selected category is displayed.

Please note that to be able to create a new category, you must be signed in either as a system

administrator or any user granted access to the **Properties** tab in **CMS Desk -> Content -> Edit** section with the **Categories** frame enabled. If you are signed in as user whose UI profile lacks the above mentioned access rights, it is necessary to <u>adjust the respective UI profile</u>. You may need to contact the global administrator to perform this task for you.

- If you would like to add a document to either a global or user defined category, please refer to the <u>Adding a document to a category</u> topic.
- If you would like to learn how to display a list of enabled global and custom categories, please refer to the <u>Using the Category list web part</u> topic.

## 8.11.2 Global categories

Global categories are created by system administrators and all users can add documents to these categories. Administrators can manage global categories in **Site Manager -> Development -> Categories**. On this page, only the **global categories** can be created and managed.

#### Please note

Users without administration privileges can also edit global categories created by system administrators (CMS Desk -> Properties -> Categories); however, with certain limitations compared to editing here.

Kentico CMS Site Manager	Sites Adr	ninistration Settings	Development	Licenses	Support
Development  Categories  Countries  CSS stylesheets  Output	Categ     New categ	lories lory			
Custom tables	Actions	Name 🔺	Enabled	Documents	
Document types	2 X	Countries	Yes	1	
E-mail templates	1 🗙	Development	Yes	6	
Inline controls	2 🗙	Network administration	Yes	2	
	1	Programming	Yes	5	
Notifications     Page layouts     Page templates     Page templates	∕ ¥	Technologies	Yes	4	

To create a new global category, just follow these three easy steps:

1. Click the **A New category** link.

Categories • N	lew category	
Display name:	E-commerce	
Code name:	E-commerce	
Description:	This category contains articles about electronic business and also the way Kentico CMS can be used in this field.	*
		-
Enabled:		
	ОК	

2. Enter the required details:

Display name	Display name of the category.
Code name	Code name of the category.
Description	Description text of the category.
Enabled	Indicates if the category is enabled in the system. Documents cannot be assigned to categories that are not enabled.

3. Click **OK** to save the changes. The category has just been created and should be visible in the categories list.

Kentico CMS Site Manager	Sites	s Ad	ministration Settings	Development	Licenses	Support			
Development	<b>S</b>	Categories							
Countries	æ								
Cultures									
Custom tables	A	ctions	Name 🔺	Enabled	Documents				
- 🗐 Document types - 🌚 E-mail templates - 🍕 Form controls - 🛒 Inline controls	4	/ 🗙	Countries	Yes	1				
	4	/ 🗙	Development	Yes	6				
		/ 🗙	E-commerce	Yes	0				
	4	/ 🗙	Network administration	n Yes	2				
Notifications	4	1 🗙 🖉	Programming	Yes	5				
🛛 📑 Page layouts	4	1	Technologies	Yes	4				

# 8.11.3 Custom categories

There are two ways to create custom categories. However, only users with administration privileges for the particular site can create custom categories both the ways.

# Creating new custom categories

Each user can create their own categories and assign documents to them. This can be done in **CMS Desk**, after selecting a document from the content tree and switching to its **Properties -> Categories** tab.

The current user's **custom categories** are listed in the **My categories** section. These categories can be **Edited** ( $\checkmark$ ) or **Deleted** ( $\preccurlyeq$ ) in this section. Global categories are listed below and can also be edited here with certain limitations compared to editing in **Site Manager**.

To create a new custom category, just follow these three easy steps:

1. Click the **4** New category link.

💒 Kentico		Switch to Site Manager
CMS Desk Content My des	Tools Administration	
📄 📄 📄 Copy 🕆 Up		
New Delete Aver Upown	Edit Preview Live site List Search	
Content management	View mode Other	
🖃 🌍 Corporate Site	Page Design Form Properties	
Home	rige besign rom roperides	
🔁 📄 Services	General Save	
Products	URLS	
🔆 📄 News	Template	
🕕 📄 Partners	Metadata	
Company	Categories My categories:	
⊡ Blogs     □ Enume	Menu Actions Category	
	Workflow	
	Versions	
	Related docs My category 2	
🗄 📄 Examples	Linked docs Global categories:	
🗉 🔄 Special pages	Security	
🔄 🔄 Images	Attachments Actions Category	
	n Countries	
(	n Development	
l	network adminis	stration
	Programming	
	n Technologies	

2. Enter the required details:

Display name	Display name of the category.
Description	Text describing of the category.

And click OK.

Page	Design	Form	Properties	
General				· · · · · · · · · · · · · · · · · · ·
URLs			ategories • N	lew category
Template				
Metadata		Di	splay name:	My category 1
Categories		De	escription:	This is a category of documents
Menu				related to information technology.
Workflow				
Versions				
Related doc	s			
Linked docs				ОК
Security				
Attachments	s			

3. You should be redirected back (CMS Desk -> Properties -> Categories) to the list where your new custom category should be visible. Click **a Save** to confirm the changes you have made.

Page Design	Form Master page	Properties
General		
URLs	Save	
Template	Rew category	
Metadata		
Categories	My categories:	
Menu	Actions	
Workflow		
Versions		My category 1
Related docs		My category 2
Linked docs	Global categories:	
Security		
Attachments	Actions	Category A
		AdminTest Category
		Countries
		Development
		Network administration
		Programming
		Technologies

# Administrating users' custom categories

Administrators can manage custom categories of other users in **Site Manager -> Administration -> Users**. Choose to **Edit** ( $\checkmark$ ) some of the users and switch to their **Categories** tab. You can edit and eventually create the selected user's **custom categories** here. Categories can be created in a similar way as mentioned in the previous examples, by clicking the **4 New category** link and entering the required details.

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support
- Administration	Lisers
Bad words	Users Mass e-mail On-line users
Badges Banned IPs F-mail queue C E-mail queue C E-m	Users   administrator
	General Password Settings Sites Roles Departments Notifications Categories
	Mew category
	Actions Category
	Ny category 1
	My category 2
UI personalization	
🖂 🖏 Web farm	

# 8.11.4 Adding a document to a category

Adding documents to categories is very simple.

- 1. Log in to CMS Desk and in Edit mode, select the document from the content tree.
- 2. Switch to its Properties -> Categories tab.



3. In the categories lists, check the appropriate categories' **Select** check-boxes and click **Jave**.

# 8.11.5 Using the Category list web part

The category list web part is used to display a list of enabled global and custom categories. For each of the categories, there is a number of documents in the category displayed in brackets after the category's name. If the site visitor clicks any of the categories, they will be redirected to a page containing a list of links leading to documents in the category.

Categories
Countries
Development
Network administration
Programming
Technologies

The Category list always works 'in pair' with some repeater web part. When a category is clicked in the category list, a list of articles in the selected category is displayed in the repeater. The repeater can be located either on the same page like the category list, or on some other page to which the site visitor will be redirected. You can find an example of this behavior on the Corporate Site sample website, in section **Examples -> Web parts -> Tagging & Categories -> Category list**.

▼ zoneArticles 🕂	▼ zoneLeft		-
repeater tyle Sheets (CSS)	<ul> <li>Category</li> </ul>	/List 🍥	
	Countries		
Czech Republic	Developme	<u>nt</u>	
General Packet Radio Service (GPRS)	Network ad	ministration	
	Programmi	ng	
Global Positioning System	Technologie	es	
HyperText Markup Language (HTML)			
Router			
Search Engine Optimization (SEO)			
Wide XGA			

For this to work, you have to do the following property settings to the web parts:

#### Category list:

- The placement of the repeater is defined by the Category list's **Category list page** property. In case the repeater is placed on the same page as the category list, the value should be left blank. In case it is placed on some other page, you should enter the **alias path** of that page.
- ID of the clicked tag is transferred to the repeater in form of a query string parameter. The name of the parameter can be set using the **Querystring parameter name** property. The repeater displays the appropriate list of documents based on the value that it gets via this parameter.

#### Repeater:

· Set the value of the Path parameter to the location in the content tree where the documents are

stored.

- Set the value of the **Document types** parameter to the document type(s) that is (are) to be displayed.
- Select the transformations that you want to use for the **Transformation** and **Selected items** transformation.
- Finally, use the following code as a value for the repeater's **WHERE condition** parameter. The **categoryid** value should be replaced by the name set in the Category list's **Querystring parameter name** property.

```
'{?categoryid?}' = '' OR (DocumentID IN ( SELECT DocumentID FROM
CMS_DocumentCategory WHERE CategoryID = '{?categoryid?}' ))
```

# 8.12 Content rating

# 8.12.1 Overview

The content rating module can be used to give users the possibility of rating any document on your website. The module's main part is the Content rating web part. You can place this web part on any page of your website and let site visitors rate the content of the particular page. You can then view the overall rating on the document's Properties tab in CMS Desk.

## 8.12.2 How to enable content rating on the web site

The content rating web part gives users the possibility of rating a document. It has three default appearance modes:

#### Stars

会会会会 Current rating: 3 (1 ratings)

#### **Radio-buttons**

## **Drop-down**

3 -Current rating: 2.5 (2 ratings)

It is also possible to create other appearance modes by creating your **custom controls**. These must be placed in ~/CMSAdminControls/ContentRating/Controls/ and inherit from ExtendedControls. AbstractRatingControl.cs, just like the default ones.

You can place the web part on any page of your website to enable users to rate the content of this particular page. In the following example, we will add the web part to a news item on the sample Corporate site.

1. Sign in to **CMS Desk** as *administrator* (blank password by default). Switch to the **Design** mode and select **News -> Your first news** from the content tree.

2. Click the Add web part (+) icon at the top right corner of the **zoneLeft** web part zone. Select the **Content rating -> Content rating** web part and click **OK**.

3. In the web part properties window, you can set the following specific properties:

- **Rating value** this property can be used to set the displayed rating value explicitly; a value from the <0,1> interval can be used; if blank, the real rating calculated as an average value of particular ratings is displayed
- Rating type appearance of the web part; Stars, Radio-buttons or Drop-down list as depicted above can be chosen
- Max rating value size of the rating scale; e.g. if 7 is entered, rating will be possible on a scale from 1 to 7
- Show results if checked, overall rating results will be displayed; if unchecked, users can rate, but don't see the results
- **Result message** message showing overall rating results; the {0} macro shows overall rating (for one decimal rounding, you can use {0:0.#}); {1} displays the total number of votes
- **Message after rating** text message displayed a user submits their rating; macros that can be used: {0} your rating, {1} overall rating, {2} overall number of votes
- Check permissions if checked, permissions set by the Allow for public and Hide to unauthorized roles properties will be checked
- Allow for public if checked, rating will be allowed to public unauthorized users; if unchecked, all users will be allowed to rate
- Check if user rated if checked, users will be allowed to vote only once; to indicate that the user already voted, Kentico CMS stores a DocRated cookie in your web browser, the cookie contains NodeIDs of the rated documents divided by vertical bars (e.g. |4|61|229|230|228|369|)
- Hide to unauthorized users if checked, the web part will be hidden to unauthorized users

For the purposes of this example, it is also advisable to set the value of the **Show for document types** property to **cms.news**. This ensures that the web part will be displayed only for the particular news items and not for the list of news on the News section title page.

Enter the values and click **OK**.

4. Sign out of the administration interface and view the **Your first news** news item. You should see the web part below the news text as in the screenshot below. Now try rating!

Home Services	s Products News Partners Company Blogs Forums Events Images Wiki Examples								
<u>News</u> > Your second	d news								
Your second	d news								
	1/15/2008 Here you can enter the summary of the news item. You can use WYSIWYG editor to format the text, insert links and images. The summary will be used in news item preview.								
This is the news te may be displayed i	This is the news text. It's displayed in combination with news title and summary. Depending on transformation chosen by the web developer, the news item may be displayed in various formats, with or without teaser image.								
RSS									
Current rating: 0 (0 rat	atings)								
	Site map   Disclaimer								
	Kentico								

5. If you switch back to **CMS Desk** and view **Properties** of the news item, you should see the **Rating** property on the **General** tab. This property reflects the current rating of the selected document. All ratings are recalculated to 10 step scale and displayed as stars here, no matter what the settings of the web part are. You can reset the value using the **Reset** button.

Kentico			Switch to Site Manager Site: Corporate Site 🗨 User: Global			
Content My des Content My des Content Move Down Content management	k Tools Administrat	Live site List	Search Other			
Corporate Site	Page Design f	Form Properties				
	URLs Template	Save				
Your first news Wour second news Partners	Metadata Categories Menu	Design CSS stylesheet:	(default) Edit			
• Company • Blogs • Forums	Workflow Versions Related docs	Other properties Document name:	Your first news			
i - ☐ Events i - ☐ Images i - ☐ Wiki i ☐ Evamples	Linked docs Security	Type: Created by: Created: Last modified by:	News Global Administrator 11/26/2007 8:03:32 AM Global Administrator			
torial pages terial mages terial mages	Attachments	Last modified: Rating:	12/22/2009 8:34:02 AM ★★★★★★★★★			
l		Node ID: Node GUID: Alias path: Culture: Name path: Live URL: Published:	27 4170b5eb-ba11-445a-a2a4-3848a68906dc /News/Your-first-news English - United States /News/Your first news /KenticoCMS/News/Your-first-news.aspx Yes			
		Owner Owner: Owned by group:	Global Administrator Select Clear Clear			

## 8.12.3 Other involved web parts

The **Message board** and **Group message board list** web parts enable content rating too. For both of them, you have to set the following three properties:

- Enable content rating if checked, content rating will be enabled by the web part
- Rating type appearance of the web part; Stars, Radio-buttons or Drop-down list can be chosen
- Max rating value size of the rating scale; e.g. if 7 is entered, rating will be possible on a scale from 1 to 7

When leaving a board message, the rating control (determined by the Rating type property) will be displayed above the Name field. Users can select their rating and after sending the message, the rating will be applied.

# Leave message Your rating: Admin Name: Admin Your URL: http:// Your e-mail: administrator@localhost.local Message: Yeah, I like this! Enter security code: 299618 Add

## 8.12.4 Displaying ratings in transformations

Content rating results can also be displayed in transformations. To do that, the following code needs to be placed in your transformation:

```
<%@ Register Src="~/CMSAdminControls/ContentRating/RatingControl.ascx" TagName
="RatingControl" TagPrefix="cms" %>
<cms:RatingControl ID="elemRating" runat="server" Enabled="false" RatingType
="Stars" ExternalValue='<%# Convert.ToString(CMS.GlobalHelper.ValidationHelper.
GetDouble(Eval("DocumentRatingValue"), 0)/((CMS.GlobalHelper.ValidationHelper.
GetDouble(Eval("DocumentRatings"), 0) == 0?1:CMS.GlobalHelper.ValidationHelper.
GetDouble(Eval("DocumentRatings"), 1))) %>' />
```

## 8.12.5 Content rating internals and API

#### 8.12.5.1 Content rating database tables and API classes

The Content rating module uses the following database table:

 CMS_Document - this table is used for storing information about documents in the content tree; its DocumentRatingValue column stores the total sum of all ratings of a particular document, while the DocumentRatings column stores the total number of ratings of the document

The Content rating API is provided by the following **CMS.TreeEngine** namespace classes:

 TreeProvider - among other methods for document manipulation, this class provides methods for management of documents' ratings

The following topics show how methods from these classes can be used to manage abuse reports:

- Adding document rating
- Getting document rating
- Modifying document rating
- Resetting document rating

The API programming and Kentico CMS internals section of this guide contains more API related

information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.12.5.2 Adding document rating

The following code example explains how content rating can be added to a document using the API.

[C#]

```
using CMS.TreeEngine;
using CMS.CMSHelper;
int nodeId = 241;
double rating = 0.5f;
// Get the document
TreeProvider tree = new TreeProvider(CMSContext.CurrentUser);
CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(nodeId, CMSContext.
PreferredCultureCode);
// Add rating
// If the 3rd parameter is true, information that the document has been rated is
stored in a cookie. It is possible to check if the user rated the document.
TreeProvider.AddRating(node, rating, false);
```

#### 8.12.5.3 Getting document rating

The following code example demonstrates how you can get rating of a document using the API.

## [C#]

```
using CMS.TreeEngine;
using CMS.CMSHelper;
int nodeId = 241;
double rating = 0.0f;
// Get the document
TreeProvider tree = new TreeProvider(CMSContext.CurrentUser);
CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(nodeId, CMSContext.
PreferredCultureCode);
// Get its rating
rating = node.DocumentRatingValue / node.DocumentRatings;
```

#### 8.12.5.4 Modifying document rating

The following code example shows how rating of a document can be modified using the API.

[C#]

```
using CMS.TreeEngine;
using CMS.CMSHelper;
int nodeId = 241;
double rating = 1.0f;
int numOfRatings = 2;
// Get the document
TreeProvider tree = new TreeProvider(CMSContext.CurrentUser);
CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(nodeId, CMSContext.
PreferredCultureCode);
// Modify its rating
TreeProvider.SetRating(node, rating, numOfRatings);
```

#### 8.12.5.5 Resetting document rating

The following code example shows how to reset content rating of a document using the API.

[C#]

```
using CMS.TreeEngine;
using CMS.CMSHelper;
int nodeId = 241;
// Get the document
TreeProvider tree = new TreeProvider(CMSContext.CurrentUser);
CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(nodeId, CMSContext.
PreferredCultureCode);
// Reset its rating
TreeProvider.ResetRating(node);
```

# 8.13 Content staging

#### 8.13.1 Overview

The **Content staging** module allows you to easily transfer changes made to documents or objects in a Kentico CMS instance on one server to another instance on another server. It is also possible to perform complete synchronization of all documents and objects this way. This is particularly useful if you need to separate website content in development, editing (staging) and live (production) environment.

All documents stored in CMS Desk's content tree can be synchronized using the module. However, not

all objects in a Kentico CMS system can be synchronized this way. The <u>What can be synchronized</u> topic gives you an overview of which data can be synchronized using the module.



For the synchronization to be possible, you need to configure Kentico CMS instances on particular servers as described in the <u>Content staging configuration</u> topic. Each instance can be configured as a source server or as a target server. Changes from the source server are transferred to the target servers, as depicted in the diagram above. Every site can use different target servers for content staging. You can even synchronize between different sites in the same Kentico CMS instance (in the same database).

It is also possible to have servers configured as both a target and a source server at the same time, so that changes can be transferred in both directions. This possibility and the configuration required for it is described in the <u>Bi-directional staging</u> topic.

Once all instances are configured, you can start synchronizing the changes. All changes are logged as staging tasks in **CMS Desk -> Tools -> Content staging**. The <u>Synchronizing the content</u> topic explains how staging tasks can be transferred to the other servers, as well as all other operations possible in this section of the user interface. Synchronization can also be performed automatically, based on a predefined scheduled task named **Content synchronization**. The <u>Automatic synchronization</u> topic explains this scheduled task can be enabled.

The synchronized data is transferred over a secured web service. Management of content staging tasks and performing of the actual synchronization can be allowed only to certain roles. The <u>Security</u> topic provides more information about permissions that need to be granted to roles in order to perform these actions.

Another way of transferring your content from one Kentico CMS instance to another is to export the data from one instance and import them to another one. The <u>Managing sites -> Export and import</u> chapter of this guide gives you an extensive overview of the built-in export and import functionality.

# 8.13.2 What can be synchronized

The Content staging module **supports** synchronization of the following data:

- Document data documents in the content tree
- <u>Document attachments</u> if a document contains document attachments or file fields, the files are synchronized together with the document
- <u>Document relationships</u> if specified relationship and related document exist on the target server, the relationship is also synchronized
- <u>Workflow process</u> only published document versions are synchronized to the target server and both servers need to have the same workflow schemas defined
- Custom tables and data stored in them
- Media libraries and the files and folders in them
- Global objects all global objects except the ones listed in the list of not-supported data below

The Content staging module **does not support** synchronization of the following data:

- <u>BizForms data</u>, the forms themselves are synchronized
- Forum posts, the forums themselves are synchronized
- <u>Message board messages</u>, the boards themselves are synchronized
- Blog comments, the blogs and blog posts are synchronized
- Friends
- <u>Messaging module messages</u>
- ACLs (document-level permissions)
- <u>Abuse reports</u>
- Web analytics
- Export history
- Event log
- · Web templates

## **Staging of Media libraries content**

Kentico CMS supports staging of the **physical files and folders** stored in the file system in a <u>Media</u> <u>library</u>. Staging tasks related to Media library files are logged in <u>CMS Desk -> Tools -> Content Staging -</u> <u>> Objects</u>.

You can limit the maximal size of synchronized media library files by adding the following key to the *appSettings* section of you *web.config* file. The value is entered in **kiloBytes** and files larger than the value will not be synchronized.

<add key="CMSMediaFileMaxStagingSize" value="1024" />

#### Please note:



Changes in media library files and folders are logged as content staging tasks only when performed via the UI. If you make some changes directly in the library folder in the file system (e.g. upload or update some files via FTP), the changes are not logged.

Also, if you make some change to a file via the UI and then update the file via FTP, the current file (the one updated via FTP) will be transferred to the target server, even if the staging task was created before the file upload. This happens because binary data of the files are loaded in synchronization time, not when the synchronization task is logged.

# 8.13.3 Content staging configuration

Configuration of the Content staging module consists of the following three parts:

- 1. <u>Microsoft WSE configuration</u> renaming of a .dll library on all servers
- 2. Source server configuration configuration of the server from which changes will be transferred to the

target servers

3. <u>Target server configuration</u> - configuration of the server to which changes will be transferred from the source servers

Apart from this configuration, you also need to ensure that all instances use the same settings (document types, templates, web parts ...), code files and that both servers use the same version of Kentico CMS.

# Microsoft WSE configuration

To enable Content staging, you first need to open the **bin** folder under your web project and rename the **Microsoft.Web.Services3.dll.rename** file to **Microsoft.Web.Services3.dll**. This needs to be done on both source and target servers.

## Source server configuration

1. To configure a Kentico CMS instance as a source server, you first need to enable logging of content staging tasks using the following settings in **Site Manager -> Settings -> Content staging**.

- Log content changes if enabled, synchronization tasks are automatically logged when content (a document) is modified
- Log data changes if enabled, synchronization tasks are automatically logged when custom tables data are modified
- Log object changes if enabled, synchronization tasks are automatically logged when an object is modified
- Log staging changes if enabled, synchronization tasks are logged for changes made by synchronization from another server to this server; see <u>Bi-directional staging</u> for more details
- Log export tasks if enabled, synchronization tasks are logged when an object is deleted (incremental update support)

With these settings enabled, all changes to the corresponding content are logged as content staging tasks. These tasks can then be transferred to the target servers and performed there to synchronize the content.

*	Kentico							Switch to CMS Desk
	CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	
Site: (global)	)	•	Cont	ent stagin	Ig			
- Sett	ings		Save	Reset t	these settings to	default		
	Web site Content management Files		These sett	ings are globa	I, they can be	overridden by	r the local site setti	ngs. Please select the site to see or ch
	Membership		Log conte	ent changes	0			
	🖶 URLs and SEO Dutput filter		Log objec	changes t changes	0	<ul> <li>✓</li> </ul>		
····[	🚽 System 🗟 E-mails		Log stagi	ng changes	0			
	🛿 Avatars 👦 Bad words		Enable st	t tasks aging service	0 0			
	📕 Blogs 餐 Booking system		Staging s	ervice authen	tication 🕐	User name a	nd password	•
4	월 Community 🏹 MetaWeblog API		Staging s	ervice user na	ame 🕐			
	🏷 Content staging		<ul> <li>Staging s</li> </ul>	ervice passw	ord 🕜			

2. Then you need to specify the target server(s). Go to **CMSDesk -> Tools -> Content staging -> Servers**.

This is where you can manage the list of target servers. To add a new server, click **New server** (**I**), enter the server properties and save them:

- Server display name server display name displayed to the users in the administration interface
- Server code name server name used in website code
- Server URL staging service URL that points to the content staging web service of the target server; the web service page is located at ~/CMSPages/syncserver.asmx, so the URL should look like this: http://www.example.com/CMSPages/syncserver.asmx
- **Enabled** if checked, the target server is enabled, it means that synchronization tasks are automatically generated for the server and that synchronization is enabled for this server; you can temporarily disable the server by un-checking the box, e.g. in case of server maintenance
- Server authentication server authentication settings; you should set the same parameters that are configured for your target server (described below); the default user name is admin and the default password is **pass**; if you want to use X509 authentication, please consult the <u>Using X.509</u> authentication topic

		a for the second s	
Content	My desk Tools	Administration	
<ul> <li>Tools</li> <li>Abuse report</li> <li>BizForms</li> <li>Blogs</li> <li>Booking system</li> <li>Content staging</li> <li>Custom tables</li> <li>Custom tables</li> <li>File import</li> <li>File import</li> <li>Forums</li> <li>Groups</li> <li>Media libraries</li> <li>Message boards</li> <li>Newsletters</li> <li>Polls</li> <li>Reporting</li> <li>Web analytics</li> </ul>	Content stag All tasks Documents Server display name: Server code name: Server service URL: Enabled: Server authentication: © User name / pas: User name: Password: © X509 Client key ID: Server key ID:	ing Data Objects Servers w server example example http://www.example.com/CMSPages/syncserver.as ✓ sword admin pass	

Please note

Tasks are logged only when there is at least one target server created and enabled. If there is no server created or if no server is running, no tasks are logged.

# **Target server configuration**

On the target server, the staging service is disabled by default. For it to work, you need to set the following values in **Site Manager -> Settings -> Content staging**:

- Enable staging service if checked, the staging service is enabled for the given site;
- Staging service authentication staging service authentication type; it is recommended that you choose USERNAME authentication to configure staging first, test synchronization and then optionally configure the site for X509 certificates
  - USERNAME username/password authentication (fast, recommended for the data without high security requirements)
  - *X509* X509 certificate authentication (more secure, slower, requires certificates); more details can be found in the <u>Using X.509 authentication</u> topic
- Staging service username and password username and password for the USERNAME authentication
- Server key ID and Client key ID certificate keys for the X509 authentication



# 8.13.4 Bi-directional staging

If you want to perform content staging bi-directionally between **two servers**, i.e. you want to transfer changes made on Server 1 to Server 2 and also in the other direction from Server 2 to Server 1, you need to to configure both servers as a source and a target server at the same time, as described in the <u>Content staging configuration</u> topic.

On top of it, you also need to **disable** the **Log staging changes** option in **Site Manager -> Settings -** > **Content staging** on both servers.

If this option is enabled, changes made to the system via content staging synchronization (i.e. transferred from Server 1 to Server 2) are logged as new synchronization tasks on the target server (on Server 2). Now if you perform synchronization in the reversed direction, i.e. back from Server 2 to Server 1, these tasks are also performed and logged back on Server 1 as new staging tasks. This goes on and on in a never-ending loop, which results in the tasks remaining and not being deleted on both servers.

In order to prevent this behavior, you need to disable the **Log staging changes** option on both servers so that the staging changes are not logged as new synchronization tasks.



# 8.13.5 Synchronizing the content

All changes made to the documents and objects are tracked in the database, in the synchronization log. You can view the changes in **CMS Desk -> Tools -> Content Staging**.

The interface for viewing changes and performing synchronization is divided into the following tabs:

## All tasks tab

On the **All tasks** tab, you can see a list of all content staging tasks, i.e. all changes made to the system that can be synchronized on the target server.

Using the **Server** drop-down, you can choose the target server that you want to synchronize. By choosing **(all)**, you perform synchronization for all available target servers. Then you can perform one of the following actions using the buttons at the bottom:

- Synchronize selected performs synchronization for all tasks selected by the check-boxes (IV) on the target server;
- Synchronize all performs synchronization for all listed tasks on the target server; in case you made any changes to content on the target server in the meantime, these changes will be overwritten
- Delete selected deletes all tasks selected by the check-boxes (IV) on the target server
- Delete all deletes all listed tasks on the target server

You can also perform the following actions separately with particular staging tasks:

- **Q** View opens a new window with detailed information about the staging task
- Synchronize performs the synchronization task on the target server

• **X Delete** - deletes the synchronization task from the list

Kentico	2	witch to Site Manager Site: Corporate Site 💌 U	ser: Global Administrator v5.0.3638	Sign out
CMS Desk Content	My desk Tools Administration			
Tools     Abuse report     BizForms     Bigs     Booking system     Booking system     Custom tables	Content staging			
	All tasks Documents Data Objects Servers			
	😢 All tasks			0
	Server: (all)			
E-commerce				
<ul> <li>↓ File Import</li> <li>↓ Forums</li> <li>↓ Groups</li> <li>↓ Media libraries</li> <li>↓ Message boards</li> <li>↓ Newsletter</li> <li>↓ Polis</li> <li>↓ Reporting</li> <li>↓ Web analytics</li> </ul>	Actions Task title		Task type Task time +	Result
	🗟 😻 💢 🔲 Update document Home		UPDATEDOC 12/19/2009 12:36:33 PM	ок
	🗟 🦃 💢 🔲 Create document My first news		CREATEDOC 12/19/2009 12:37:57 PM	ок
	🗟 😻 💢 🔲 Update document Partners		UPDATEDOC 12/19/2009 12:38:27 PM	ок
	🗟 🦃 💢 🔲 Update Poll 'Product Survey'		UPDATEOBJ 12/19/2009 12:39:27 PM	ок
	🗟 💱 💢 🔲 Create Newsletter issue 'My first newsletter issue		CREATEOBJ 12/19/2009 12:41:02 PM	ок
	🗟 🦃 💢 🔲 Update Media file 'Penguins'		UPDATEOBJ 12/19/2009 12:41:30 PM	ок
	🗟 😻 💢 🔲 Create Media file 'Desert'		CREATEOBJ 12/19/2009 12:41:38 PM	ок
	🗟 🕸 💢 🔲 Create custom table item Sample table - Text of th	e new item	CREATEOBJ 12/19/2009 12:43:50 PM	ок
	🗟 🥨 💢 🔲 Create custom table item Sample table - Testing	custom table record	CREATEOBJ 12/19/2009 12:44:01 PM	ок
	🗟 🕸 🗶 🔲 Update custom table item Sample table - Sample	text 23	UPDATEOBJ 12/19/2009 12:44:11 PM	ок
	Sunchroniza selected Sunchroniza all		Items per page	ie: 15 💌

#### **Documents tab**

In the screenshot below, you can see the **Documents** tab. By clicking the website root in the content tree on the left, you can view a list of all changes (synchronization tasks) made to all the documents of your website. By clicking a particular document, you can view only the changes made to it.

You can perform the same actions as on the All tasks tab, as described above.

You can also perform the following manual actions. These actions are manual because they are not related to the listed tasks and they can be performed even if there are no synchronization tasks logged:

- Since the synchronization performs complete synchronization of all documents in the content tree
- Synchronize current document synchronizes the currently selected document
- Synchronize current sub-tree synchronizes all documents in the selected sub-tree

The following types of tasks are logged for documents. You can see the type in the **Task type** column:

- CREATEDOC document was created
- UPDATEDOC document was modified
- **DELETEDOC** document was deleted
- DELETEALLCULTURES all cultural versions of the document were deleted
- PUBLISHDOC document was published
- ARCHIVEDOC document was archived
- REJECTDOC document was rejected
- MOVEDOC document was moved to another location in the content tree
| Content staging                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------|
| All tasks Documents Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Objects Servers                       |                                                    |
| <b>Ocument tasks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       | 0                                                  |
| Server: (all)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ×                                     | 🔯 Run complete synchronization                     |
| Corporate Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Synchronize current document          |                                                    |
| Home<br>Services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                       |                                                    |
| 💿 📄 Products                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Actions Task title                    | Task type Task time Result                         |
| 🕢 📄 News                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 🗟 🧐 💥 🔲 Update document Home          | UPDATEDOC 12/19/2009 12:36:33 PM                   |
| Partners     Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 🗟 🦃 💢 🔲 Create document My first news | CREATEDOC 12/19/2009 12:37:57 PM                   |
| Blogs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 🗟 🧐 💥 🔲 Update document Partners      | UPDATEDOC 12/19/2009 12:38:27 PM                   |
| Forums     Fvents     Fvents | Synchronize selected Synchronize all  | Items per page: 15 💌<br>Delete selected Delete all |

## Data tab

In the screenshot below, you can see the **Data** tab. This is where changes made to data in **custom tables** are logged.

You can perform the same actions as on the All tasks tab, as described above.

You can also perform the following manual actions. These actions are manual because they are not related to the listed tasks and they can be performed even if there are no synchronization tasks logged:

- Signature with the synchronization performs complete synchronization of all data in all custom tables
- Synchronize current sub-tree synchronizes all data in the selected custom table

The following types of tasks are logged for custom tables data. You can see the type in the **Task type** column:

- CREATEOBJ new item was added to a table
- UPDATEOBJ an item in a table was updated
- DELETEOBJ an item in a table was deleted

**Please note**: Staging tasks for custom table items are logged based on their *ItemGUID* column. Items which do not have this column (typically in custom tables imported from older versions of Kentico CMS), changes made to them are not logged. However, you can edit the custom table in CMS Desk -> Tools -> Custom tables. You will see a warning message with a link letting you to generate the GUIDs for the table.

Content staging					
All tasks Documents Data Object	ts Servers				
🔞 Data tasks					0
Server: (all)	•			🔇 Run complete synchroniz	zation
- Custom tables	Synchronize currer	nt subtree			
	Actions	Task title	Task type	Task time 🔺	Resi
	a 🧐 💥 🔲	Create custom table item Sample table - Text of the new item	CREATEOBJ	12/19/2009 12:43:50 PM	
	🗟 🥸 🗶  🗉	Create custom table item Sample table - Testing custom table record	CREATEOBJ	12/19/2009 12:44:01 PM	
	a 🥸 🗶 🗉	Update custom table item Sample table - Sample text 23	UPDATEOBJ	12/19/2009 12:44:11 PM	
				Items per page: 15	•
	Synchronize selecte	ed Synchronize all	Delete selected	Delete all	

### **Objects tab**

In the following screenshot, you can see the **Objects** tab. This is where changes made to objects are logged.

The main categories are **website** and **Global objects**. The first category contains object changes connected to the current website, whilst the second one contains object changes for global objects.

You can perform the same actions as on the All tasks tab, as described above.

When you select a particular object category, you get also the following manual action offered. This action is manual because it is not related to the listed tasks and can be performed even if there are no synchronization tasks logged:

• Synchronize current sub-tree - synchronizes all objects in the selected category

The following types of tasks are logged for objects. You can see the type in the Task type column:

- CREATEOBJ new object was created
- UPDATEOBJ object was modified
- DELETEOBJ object was deleted
- ADDTOSITE object was assigned to a site; applicable only to site-related objects
- REMOVEFROMSITE object was removed from a site; applicable only to site-related objects

The following types of tasks are logged for folders in media libraries:

- CREATEFOLDER folder was created
- RENAMEFOLDER folder was renamed
- COPYFOLDER folder was copied
- MOVEFOLDER folder was moved
- DELETEFOLDER folder was deleted

#### Please note

Global metadata changes such as changes to document types, custom tables and system

tables produce staging tasks for all staging servers of all sites. In such case, it is recommended to synchronize such changes to all servers of all sites at the same time to prevent overwriting of such metadata and loosing the data by synchronizing the older tasks later.

You can use the *<add key="CMSStagingTreatServerNamesAsInstances" value="true" />* key to make sure that once the global task is synchronized, it is deleted from all other servers with the same name to prevent such possibility. The default value is false since staging can use multiple target instances targeted with the same names.

Content staging					
All tasks Documents Data Objects	Servers				
🔞 Object tasks					0
Server: (all)	•				
- All objects					
🖃 🅘 Web site	Actions	Task title	Task type	Task time 🔺	Result
🖃 🚭 Tools	a 🕸 💥 🔲	Update Poll 'Product Survey'	UPDATEOBJ	12/19/2009 12:39:27 PM	
Settings	🗟 💱 💢 🔲	Create Newsletter issue 'My first newsletter issue'	CREATEOBJ	12/19/2009 12:41:02 PM	
🗉 🖷 Development	a 💱 🗶 🔳	Update Media file 'Penguins'	UPDATEOBJ	12/19/2009 12:41:30 PM	
🖃 🎘 E-commerce	🗟 🤤 💥 🔲	Create Media file 'Desert'	CREATEOBJ	12/19/2009 12:41:38 PM	
Global objects Global object	Synchronize sele	cted Synchronize all	Delete sel	Items per page: ected Delete al	15 💌

## 8.13.6 Automatic synchronization

Automatic synchronization is available **only for document changes**. Object changes cannot be synchronized this way. Manual synchronization remains the only way to perform object synchronization tasks.

If you want the changes to be synchronized from the staging to the live site on a regular basis without waiting for the administrator's approval, you can configure the scheduled task called **Content synchronization** in **Site Manager -> Administration -> Scheduled tasks**. This task is disabled by default, so you need to enable it and configure the synchronization interval.

Kentico CMS Site Manager	Sites Admin	istration Settings [	Development Dashboard	Licenses Support
Administration  Avatars  Sad words  Badges  Banned IPs  C-P E-mail queue  C E-mail queue  C Event log	Site: Corporate	e Site	×	
2 Permissions	Actions	Task name 🔺	Last run	Next run
M Recycle Din	/ 🗶 🕨	Content publishing	8/27/2010 3:24:	35 PM 8/27/2010 3:25:35 PM
Scheduled tasks	/ × Þ	Content synchronizatio	n 1/31/2008 3:17:	12 PM 10/12/2009 8:01:54 PM
🔊 Smart search		Delete old shopping ca	arts 8/27/2010 1:57:	43 PM 8/28/2010 1:57:43 PM
		Users delete non activa	ated user 8/27/2010 3:24:	35 PM 8/27/2010 4:24:35 PM

More information about the built-in scheduler in Kentico CMS can be found in the <u>Development -></u> <u>Scheduler</u> chapter of this guide.

## 8.13.7 Using X.509 authentication

In order to use **X.509** authentication, you need to install your own certificates, or you may use our sample ones.

#### Using the sample certificates

Kentico CMS is delivered with sample client and server private certificates. In order to install them, you need to do the following on the source server and on the target server:

- 1. Choose Start -> Run, type mmc and press Enter.
- 2. In the console window, choose File -> Add/Remove Snap-in.
- 3. Click Add and choose Certificates.
- 4. Choose **Computer account** in the next step.
- 5. Choose Local computer in the next step. Finish adding the Certificates snap-in.

6. Unfold Certificates (Local Computer) under the console root, right-click Personal and choose All Tasks -> Import... The Certificate Import Wizard starts.

7. Import the appropriate certificate from the appropriate **.pfx** file in **C**: **\Program Files\Kentico CMS\<version>\SampleCertificates**. Use *Client private.pfx* for the client certificate and *Server private.pfx* for the server certificate.

8. Enter the following password for the sample certificates (it is the same for the client and the server certificate): **wse2qs** 

9. Now you need to grant the **READ** permissions for the certificate file to the ASP.NET account (names of the account under different operating systems are described in the <u>Disk permissions problems</u>

chapter). You can do that using the **WseCertificate3.exe** tool that can also be found in **C:\Program Files\Kentico CMS\<version>\Sample Certificates** 

- 10. Run the WseCertificate3.exe tool.
- 11. Choose Local Computer in the Certificate Location field.
- 12. Choose Personal in the Store Name field.
- 13. Click Open Certificate and choose either the client or the server certificate.

14. Click **View Private Key File Properties...** and grant the **READ** permission for this file to the ASP. NET account (names of the account under different operating systems are described in the <u>Disk</u> permissions problems chapter).

## Using your own certificates

If you're using your own certificates (highly recommended), you will need to update the following values in the **Site Manager -> Settings -> Content Staging**:

- Client key ID
- Server key ID

To get these IDs, you can use the **WseCertificate3.exe** tool located in **C:\Program** files\KenticoCMS\<version>\SampleCertificates.

- 1. Run the WseCertificate3.exe tool.
- 2. Choose Local Computer in the Certificate Location field.
- 3. Choose Personal in the Store Name field.

4. Click **Open certificate** and select either client or the server certificate. In the **Key identifiers group** you can now see the certificate key, **Windows key identifier (Base64)** should be used within Kentico CMS settings.



#### **Important: Sample certificates**

Using the sample certificates is not secure and it's also very slow. It's highly recommended that you use your own certificate issued by a certification authority.

#### Тір

If you encounter problems with content staging when using SLL (X.509), you may try adding the following key to your *web.config* file:

<add key="CMSStagingAcceptAllCertificates" value="true" />

This key ensures that all certificates will be accepted. If set to false, only certificates issued by a certification authority will be accepted.

## 8.13.8 Security

You can control the access to the Content staging module in **Administration -> Permissions**. You need to select:

- Site: your site
- Permission type: Modules
- Permission matrix: Content staging

In the permission matrix, you can grant the following permissions to the particular roles:

- Manage all tasks displays the All tasks tab and allows synchronization and management of synchronization tasks on it
- Manage data tasks displays the Data tab and allows synchronization and management of synchronization tasks on it
- Manage document tasks displays the Documents tab and allows synchronization and management of synchronization tasks on it
- Manage object tasks displays the Objects tab and allows synchronization and management of synchronization tasks on it
- Manage servers allows members of the roles to manage target server configurations on the Servers tab

#### A Permissions

Site:	Corporate Site	-
Permission type:	Modules	•
Permission matrix:	Content staging	•

	Manage all tasks	Manage data tasks	Manage document tasks	Manage object tasks	Manage servers
Authenticated users					
CMS Basic users					
CMS Community Administrators					
CMS Designers					
CMS Desk Administrators	đ	đ	đ	<b>S</b>	đ
CMS Editors					
CMS Readers					
Everyone					
Gold Partners					
Live ID users					
Not authenticated users					
Silver Partners					

0

# 8.13.9 Synchronization using API

In special cases, you may need to use Kentico CMS API to perform your own synchronization process. There are several methods you can use to work with synchronization.

WorkflowEngine.DocumentHelper. LogSynchronization	Creates a synchronization task for the specified document. This method does not actually perform the synchronization, it only creates the task which can be later synchronized. By default, the method creates the task for all the enabled servers. You can use the overriden version with serverId parameter to specify the particular server.
CMSStaging.StagingHelper. RunSynchronization	Runs the synchronization of specified task for the specified server or servers.

Here is an example code how to synchronize the content of the document "/Home" to server "Staging. Target1":

## [C#]

```
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.Staging;
using CMS.WorkflowEngine;
TreeProvider tree = new TreeProvider(CMSContext.CurrentUser);
// Get the base document record
TreeNode node = tree.SelectSingleNode(CMSContext.CurrentSiteName, "/Home", "en-us"
, false, null, false);
if (node != null)
  // Get full document record (required for synchronization logging)
 node = tree.SelectSingleNode(CMSContext.CurrentSiteName, node.NodeAliasPath,
node.DocumentCulture, false, node.NodeClassName, false);
 if (node != null)
    // Get the server
    ServerInfo si = ServerInfoProvider.GetServerInfo("Staging.Target1",
CMSContext.CurrentSiteID);
    if (si != null)
      // Log the synchronization task for the given server
     TaskInfo ti = DocumentHelper.LogSynchronization(node, TaskTypeEnum.
UpdateDocument, tree, si.ServerID);
     if (ti != null)
        // Run the task synchronization
        StagingHelper.RunSynchronization(ti.TaskID, si.ServerID);
      }
    }
  }
}
```

You can also use low level operations from TaskInfoProvider, SynchronizationInfoProvider and ServerInfoProvider to achieve synchronization, but previous methods should be enough to perform any

simple synchronization actions.

The following example shows how you can synchronize the administrator user account. Synchronization of any other objects is done the same way using the API, as all objects implement the **IInfoObject** interface.

[C#]

```
using CMS.SiteProvider;
using CMS.Staging;
using CMS.CMSHelper;
// Gets the object
UserInfo userObj = UserInfoProvider.GetUserInfo("administrator");
 if (userObj != null)
 {
  // Gets the server
  ServerInfo si = ServerInfoProvider.GetServerInfo("Staging.Target1", CMSContext.
CurrentSiteID);
   if (si != null)
   {
    // Creates the synchronization task
    TaskInfo ti = TaskInfoProvider.LogSynchronization(userObj, TaskTypeEnum.
UpdateObject, null, null, si.ServerID);
     if (ti != null)
     {
      // Runs the synchronization task
       StagingHelper.RunSynchronization(ti.TaskID, si.ServerID);
     }
   }
 }
```

# 8.14 Custom tables

## 8.14.1 Overview

The Custom tables module allows users to create their own tables in the system database and manage data in them via Kentico CMS user interface, without the need to use Microsoft SQL Server Management Studio or any other database management tool. This may come in handy in many scenarios, typically when you need to store a large number of structured data items, for which standard Kentico CMS documents are not efficient. Another typical scenario may be development of your custom modules, as you can store module data in custom tables and access them conveniently from your code using the provided API.

User interface of the module can be found at two locations, while each of them is intended for different purposes. Custom tables themselves can be created and managed in **Site Manager -> Development - > Custom tables**. This section is intentionally located in Site Manager, so that only global administrators can create the tables. The <u>Creating custom tables</u> topic describes creation of custom tables by means of the **New custom table wizard**, which is accessible from this part of the user interface. Once a custom table is created, its configuration (not the actual data stored in it) can be managed in the same section of the user interface, as described in the <u>Managing custom tables</u> topic.

The other user interface related to this module can be found in CMS Desk -> Tools -> Custom tables.

This is where new data records can be inserted into the tables and where existing data records can be viewed, modified or deleted. It is located in CMS Desk, so that manipulation with data in custom tables is available to content editors with appropriate permissions, as described in the <u>Security</u> topic. Management of the actual data items is described in <u>Managing data in custom tables</u>.

Actions	Item ID It	Item created by	Item created when	Item modified by	Item modified when	Item order 🔺	Item text
🥒 💥 🖻 🕯 🦊	6 5	53	10/20/2008 1:42:52 PM	53	10/7/2009 2:54:26 PM	1	Sample text 2
/ 🗙 🗟 🕆 🦊	7 5	53	10/20/2008 1:43:01 PM	53	10/7/2009 2:54:34 PM	2	Sample text 3
/ 🗙 🖻 🕯	5 5	53	10/20/2008 1:42:40 PM	53	12/18/2009 9:59:18 AM	3	Sample text 1
🥒 💥 🖻 🕯 🦊	8 5	53	3/5/2010 6:51:55 PM			4	Sample text 4
							Items per page: 25 🔻

The module comes with three web parts that can display data from custom tables on the live site. They are described in the <u>Available web parts</u> topic. Use of transformations is essential with these web parts, so we have prepared the <u>Transformations for custom tables</u> topic. There, you can find information on how to modify the default transformations in order to change the way the data items are displayed.

Finally, the module comes with an API, which enables you to handle custom table data in your custom code. Code examples, along with a list of database tables and API classes related to the module, can be found in the <u>Custom tables internals and API</u> sub-chapter.

The Custom tables module interacts with two other Kentico CMS modules. Data stored in the tables can be searched using the <u>Smart search</u> module. You can also create <u>Alternative forms</u> for the tables. These forms can be used instead of the default forms for creating or editing a custom table in the administration interface, as described in <u>Modules -> Alternative forms -> Automatically used alternative forms</u>.

## 8.14.2 Creating custom tables

In the following example, we will create a new custom table using the **New custom table wizard**. It will be a simple table for storing information about people. Each data record in the table will contain a person's first name, last name and date of birth.

1. Go to Site Manager -> Development -> Custom tables and click the New custom table (Ham) link.

2. The **New custom table wizard** starts. In the first step, you are asked to fill in the custom table's display name (used in Kentico CMS user interface) and code name (used in website code). The code name is always preceded by a namespace, which allows you to have different tables of the same name used in different contexts. Enter the following details:

- Custom table display name: People
- Custom table code name: customtable.People

and click Next to continue.

Step 1 Gen	e <b>ral</b> se enter custom table display name (for users) and co	ode name (it will be used in your code when necessary).	
Custom table display name:	People		
Custom table code name:	customtable	People	
	namespace	custom table	
			Next>

3. In the second step, you are asked to fill in the database table name, i.e. the actual name of the table in the system database. A name in the *<namespace>_<code name>* format is pre-filled automatically. The primary key name can not be changed by default. Using the check-boxes below, you can determine which of the default fields should be included in the table:

- ItemCreatedBy user name of the user who created the item
- ItemCreatedWhen date and time of when the item was created
- ItemModifiedBy user name of the user who last modified the item
- ItemModifiedWhen date and time of last modification
- ItemOrder order of the item when table content list is displayed; the lower number, the earlier position in the list

For the purposes of this example, leave default values for all options and click **Next** to continue.

Step 2 Data type Please supply	name of the new database table and included fields.
Database table name: Primary key name: Include ItemCreatedBy field: Include ItemCreatedWhen field: Include ItemModifiedBy field: Include ItemOrder field:	customtable_People ItemID V V V V V V
	Next>

4. In the third step, the field editor is displayed. It lets you define which columns will be included in the database table. Create three fields with the following attributes:

- Attribute name: FirstName
- Attribute type: Text
- Attribute size: 100
- Field caption: First name
- Field type: Text box
- Attribute name: LastName
- Attribute type: Text
- Attribute size: 100
- Field caption: Last name
- Field type: Text box
- Attribute name: DateOfBirth
- Attribute type: Date and Time
- Field caption: Date of birth
- Field type: Calendar
- Edit time: unchecked

When you are finished, click **Next** to proceed to the following step.

ItemID   FirstName   LastName   DateOfBith   ItemCreatedBy   ItemCreatedWhen   ItemCreatedWhen   ItemCodifiedWhen   d< th=""><th>Step 3 Fields Please d</th><th>lefine (</th><th>custom fields of the custom</th><th>n table and their appearance in the editing form.</th></td<>	Step 3 Fields Please d	lefine (	custom fields of the custom	n table and their appearance in the editing form.
	ItemID FirstName LastName DateOfBirth ItemCreatedBy ItemModifiedBy ItemModifiedWhen ItemModifiedWhen ItemOrder ItemGUID		Database Attribute name: Attribute type: Attribute size: Allow empty value: Attribute default value: Attribute default value: Time zone Time zone type: Custom time zone: IDisplay attribute in the Field Field caption: Field type:	DateOfBirth Date and time

5. In Step 4, you only have to select in which sites will the custom table be available. Click **Add sites** and choose **Corporate Site** in the pop-up dialog. Finally click **Next** to proceed to the following step.

Flease select sites where	this document type c	an be used:		
s Add sites	-			
	e I Add sites	e 1 Add sites	e Add sites	e Add sites

6. Step 5 offers you to configure indexing of data in the custom table by the <u>Smart Search</u> module. The four drop-downs at the top determine which fields of the table will be displayed in search results. Change

the values to the following:

- Title field: LastName
- Content field: FirstName
- Image field: none
- Date field: ItemModifiedWhen

Leave the rest of the settings at default values and click **Next**. For more information about settings in this step, please refer to <u>Modules -> Smart search -> Object settings</u>.

Step 5	Search Please se	<b>options</b> It search fields fi	or Smart search	n module.	
Title field: Las Content field: Firs Image field: (no Date field: Iter Set automatically	stName stName ne) mModifiedWhen				
ItemID					
FirstName	<b>V</b>		<b>V</b>		
LastName	V		<b>V</b>		
DateOfBirth		<b>v</b>			

7. The fifth step gives you an overview of what has been done automatically by the wizard. To finish the wizard, click **Finish**. You will be redirected back to the list of custom tables in **Site Manager -> Development -> Custom tables**.

Step 6	The wizard has finished	
The setup has finis The new custom The sites were s The default quer The default ASC) The default perm	shed the following steps: table was created. iselected where this custom table can be used. ises were created. X transformation was created. hission names were created.	
	Finish	

# 8.14.3 Managing custom tables

The administration interface for management of custom tables is located in **Site Manager -> Development -> Custom tables**.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	
Development Categories	Cu	stom tables					
Countries	New o	ustom table					
Cultures							
Custom tables	Action	ns Display na	me - Cod	le name	1	able name	
Document types	/ X	People	cust	tomtable.Peopl	e c	ustomtable_People	
		Sample tab	ole cust	tomtable.Samp	leTable o	ustomtable_Sample	Table

In this section, you can create new custom tables as described in the <u>Creating custom tables</u> topic. You can also **Edit** ( $\checkmark$ ) or **Delete** ( $\thickapprox$ ) existing tables in the list. If you choose to edit ( $\checkmark$ ) an existing custom table, you will be displayed with the user interface depicted in the screenshot below.

Custom table pro	perties			
Custom tables  Sample tab	ble			
General Fields Form	Transformations Queries	Sites	Alternative forms	Search fields
Custom table display name:	Sample table			
Custom table code name:	customtable			. SampleTable
	namespace			custom table
Table name:	customtable. SampleTable			
Table Hame.	customable_bample rable			
New page:				
Editing page:				
View page:				
List page:				
	OK			

As you can see, the interface is divided into the following tabs:

- **General** this is where you can modify the display and code name of the custom table, as well as define URLs of custom pages that can be used instead of the default pages for adding, editing, viewing and listing of data items stored in the table
- Fields on this tab, you can find the field editor that can be used to manage fields (columns) of the table
- Form this tab allows you to create a custom form layout that will be used for adding and editing data items
- Transformations this is where transformations for the custom table can be created and managed
- Queries database queries for manipulation with data in the table can be created and managed on this tab
- Sites on this tab, you can define websites for which the custom table will be available
- Alternative forms alternative forms for adding and editing custom table data can be created on this tab; more info can be found in <u>Modules -> Alternative forms -> Automatically used alternative forms</u>
- Search fields on this tab, you can define how data stored in the custom table will be indexed by the Smart search module

More information on the particular tabs can be found in **Kentico CMS Context Help**, which is accessible by clicking the **2** icon in the top right corner of each tab.

## 8.14.4 Managing data in custom tables

The administration interface for management of data items stored in custom tables is located in CMS **Desk -> Tools -> Custom tables**.



In the following example, you will learn how to add data into the sample **People** custom table we have created in the <u>Creating custom tables</u> chapter. The procedure is the same for any other custom table (except for the fields, which are always specific for a particular table):

1. Click the **Edit** ( $\checkmark$ ) icon next to the **People** table. A blank page with a header as in the following screenshot will be displayed. The page is blank because there is no data in the custom table yet.

Custom table properties					
Custom table	s      People				
🛃 <u>New item</u>	Select displayed fields				

2. Click the **New item** link. The form that you can see in the following screenshot will be displayed. Enter some testing data and click **OK**.

📑 New ite	m						
<u>Data</u> ► New item							
ItemID:							
First Name:	Kelly						
Last Name:	Taylor						
Date of birth:	2/23/1983						
	ОК						

3. The data you entered has been saved into the custom table. Now you can either edit it or use the **Greate another** link to create another data record. Try creating at least two other records.

4. When you're finished, switch back to the **Custom tables** listing in **CMS Desk -> Tools** and choose to **Edit** ( $\checkmark$ ) the **People** custom table. You should see a list of entries where the blank page was in step 1, before entering the records.

The data records can be **Edited** ( $\checkmark$ ) or **Deleted** ( $\divideontimes$ ). You can also re-order records in the listing using the **Up** ( $\uparrow$ ) and **Down** ( $\clubsuit$ ). The order is be stored in the **ItemOrder** property of each data record.

	Custom table properties										
C	Custom tables + People										
	] <u>Ne</u>	w ite	m	8	<u>Sele</u>	ct displayed f	ield <u>s</u>				
	Acti	ons				ItemID	First name	Last name	Date of birth	Created by	Created when
	P	×	Q	î	₽	1	Mike	Farrell	3/20/1979 12:00:00 AM	53	3/24/2010 12:43:00 AM
	P	×	Q	î	♣	2	Kelly	Taylor	2/23/1983 12:00:00 AM	53	3/24/2010 12:43:23 AM
	P	×	Q	î	₽	3	Jack	McDonald	3/5/1980 12:00:00 AM	53	3/24/2010 12:43:47 AM
	P	×	Q	î	♣	4	fdsaf	dsfs	3/24/2010 12:00:00 AM	53	3/24/2010 12:44:59 AM

5. You can choose which fields should be displayed in the listing by clicking the **Select displayed** fields link. The window depicted in the following screenshot will be displayed. Using the check-boxes, you can determine which fields are to be displayed in the listing. When you make the selection and click **OK**, you should see the result immediately.

🖉 Custom table data - Select Fields Webpage Dialog	x
Select displayed fields	
Select all	
<ul> <li>✓ ItemID</li> <li>✓ First Name</li> </ul>	
<ul> <li>✓ Last Name</li> <li>✓ Date of birth</li> </ul>	
Created by Created when	
Modified by	
☑ Order	
OK Cancel	

6. If you click the **View** (a) icon next to any of the data records, detailed information about the record will be displayed in a pop-up window. All details will be displayed, no matter which fields are selected to be displayed in the listing.

Item detail         Name       N         ItemID       1         Created by       5         Created when       1         Modified by       1         Modified when       1         Order       1         GUID       5         First Name       1         Date of Birth       2	/alue 1 53 12/22/2009 8:40:16 AM 1 1 bb6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Faylor
Name Name Name Name Name Name Name Name	/alue         1         53         12/22/2009 8:40:16 AM         1         1         0b6b7f87-870f-4ce9-bef4-1766e54b8f54         Kelly         raylor
Name     N       ItemID     1       Created by     5       Created when     1       Modified by     1       Modified when     1       Order     1       GUID     1       First Name     1       Date of Birth     2	/alue         1         53         12/22/2009 8:40:16 AM         12/22/2009 8:40:16 AM         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1
ItemID 1 Created by 5 Created when 1 Modified by 1 Modified when 1 Order 1 GUID 1 First Name 1 Date of Birth 2	I 33 12/22/2009 8:40:16 AM 1 1 0b6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Faylor
Created by 5 Created when 1 Modified by 1 Modified when 1 Order 1 GUID 5 First Name 1 Last Name 2 Date of Birth 2	i3 12/22/2009 8:40:16 AM 1 1 1006607f87-870f-4ce9-bef4-1766e54b8f54 Kelly raylor
Created when 1 Modified by Modified when Order 1 GUID 1 First Name 4 Last Name 1 Date of Birth 2	12/22/2009 8:40:16 AM I I Ib6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Faylor
Modified by Modified when Order 1 GUID 2 First Name 4 Last Name 1 Date of Birth 2	I bb6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Taylor
Modified when Order 1 GUID 1 First Name 4 Last Name 1 Date of Birth 2	l bb6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Taylor
Order 1 GUID 5 First Name 4 Last Name 1 Date of Birth 2	I bb6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly faylor
GUID th First Name H Last Name 1 Date of Birth 2	bb6b7f87-870f-4ce9-bef4-1766e54b8f54 Kelly Taylor
First Name F Last Name 1 Date of Birth 2	Kelly Taylor
Last Name 1 Date of Birth 2	Taylor
Date of Birth 2	
	2/23/1983 12:00:00 AM
	2/23/1983 12:00:00 AM
	Close

## 8.14.5 Available web parts

The Custom tables module comes with three web parts that can be used for displaying custom table data. This page gives just a brief overview of these web parts. Detailed description of each web part and its properties can be found in <u>Kentico CMS Web Parts Reference</u>. Live site examples of these web parts can be found on the sample Corporate Site, under **Examples -> Webparts -> Custom tables**.

## Custom table datagrid

This web part displays a grid with selected columns of data records from a custom table. Design of the web part can be modified using standard ASP.NET skins. If you want to handle the data by transformations, use one of the web parts below.

FirstName 🔺	LastName	DateOfBirth
Jane	Doe	6/8/1970 12:00:00 AM
Kelly	Taylor	2/23/1983 12:00:00 AM
Mike	Farrel	12/18/1973 12:00:00 AM

## Custom table datalist

In the screenshot below, you can see the basic appearance of the Custom table datalist web part. The appearance can be changed using transformations. You can find more information about using

transformations with custom tables web parts in the Transformations for custom tables topic.

First name:	Kelly	First name:	Mike
Last name:	Taylor	Last name:	Farrel
Date of birth:	2/23/1983 12:00:00 AM	Date of birth:	12/18/1973 12:00:00 AM

## **Custom table repeater**

In the screenshot below, you can see the basic appearance of the Custom table repeater web part. The appearance can be changed using transformations. You can find more information about using transformations with custom tables web parts in the <u>Transformations for custom tables</u> topic.

First name:	Kelly
Last name:	Taylor
Date of birth:	2/23/1983 12:00:00 AM
First name:	Mike
Last name:	Farrel
Date of birth:	12/18/1973 12:00:00 AM
First name:	Jane
Last name:	Doe
Date of birth:	6/8/1970 12:00:00 AM

## 8.14.6 Transformations for custom tables

Use of transformations is essential for web parts of the custom tables module. In the following example, you will learn how to modify the way data is displayed by modifying default transformation code.

We will use the **Examples -> Webparts -> Custom tables -> Custom table repeater** example on the sample Corporate Site. We will also use the **People** custom table that we have created in the <u>Creating</u> <u>custom tables</u> topic and populated with some data items in the <u>Managing data in custom tables</u> topic.

1. Go to **CMS Desk**, switch to **Edit** mode and select **Examples -> Webparts -> Custom tables -> Custom table repeater**. By default, the repeater is bound to the **Sample table**, which is a sample custom table contained in the Corporate site. It should look as in the following screenshot:

Examples > Webparts > Custom tables > Custom table repeater

```
Item text: Sample text 1
Item text: Sample text 2
Item text: Sample text 3
```

2. Switch to the **Design** tab and choose to **Configure** () the repeater's properties. First, use the **Custom table** drop-down list to select the custom table from which the data will be displayed - it should be the **People** table in our case.

3. Now it's time to choose a transformation via the **Transformation name** property. If you click the **Select** button next to the mentioned field, you will get the pop-up window as depicted in the following screenshot. There are two default transformations generated by default for each custom table - **Default** 

and **Preview**. Choose the **Default** transformation and click **OK**. Click **OK** again to close the **Web part properties** window.

Select transfo	ormation Webpage Dialog			-X
Select	transformation			
Class type:	Custom table		-	
Custom table:	People		•	
ouotonn table.	1 copie			
ransformatio	n name or its part.			Search
Transforma	tion name			
customtable	People.Default			
customtable	People.Preview			
				Items per page: 10 💌
				Cancel
p://localhost/	KenticoCMS/CMSAdmir 😪 I	Local intranet   Protect	ed Mode: Off	

4. Now if you switch to the **Live site** mode, you should see that the repeater is displaying something like the following:

Examples > Webparts > Custom tables > Custom table repeater

First name: Kelly Last name: Taylor Date of birth: 2/23/1983 12:00:00 AM ItemCreatedBy: 53 ItemCreatedWhen: 10/28/2008 4:47:02 PM ItemModifiedBy: ItemModifiedWhen: ItemOrder: 2 First name: Jack Last name: McDonald Date of birth: 3/5/1980 12:00:00 AM 53 ItemCreatedBy: ItemCreatedWhen: 10/28/2008 4:48:21 PM

5. As you probably wouldn't want to have all the empty fields displayed and the table to be unformatted on your real website, you will need to edit the transformation code. To do it, switch to the **Edit** mode again, switch to the **Design** tab, choose to **Configure** () the web part's properties and click the **Edit** 

button next to the **Transformation name** property. Now you can edit the transformation code according to your specific needs.

For the purpose of this tutorial, please replace the transformation code with the following code example. You can notice that it is just a modification of the former **Default** transformation, with the unwanted fields deleted and the highlighted tags and properties added:

6. Click **Save**. Now if you go to the live site, you should see that the data is displayed in a formatted way, as depicted below.

Examples > Webparts > Custom tables > Custom table repeater

First name:	Kelly
Last name:	Taylor
Date of birth:	2/23/1983 12:00:00 AM
First name:	Mike
Last name:	Farrel
Date of birth:	12/18/1973 12:00:00 AM
First name:	Jane
Last name:	Doe
Date of birth:	6/8/1970 12:00:00 AM

# 8.14.7 Security

Permissions of the Custom tables module can be configured on two levels - globally for all custom tables belonging to the current site and separately for each particular custom table. The first, global level is configuration via the **Modules -> Custom tables** permission matrix in **Site Manager -> Administration -> Permissions**.

The following permissions can be granted to particular roles on this level:

• Create - members of the role are allowed to create data in any custom table

- Delete members of the role are allowed to delete data in any custom table
- Modify members of the role are allowed to modify data in any custom table
- Read members of the role are allowed to read any custom table data

#### A Permissions

Site:	Corporate Site	•
Permission type:	Modules	•
Permission matrix:	Custom tables	•

	Create	Delete	Modify	Read
Authenticated users				
CMS Basic users				
CMS Community Administrators				
CMS Designers				
CMS Desk Administrators	Ś	ď	S.	đ
CMS Editors	Ś	ø	đ	Ś
CMS Readers				Ś
Everyone				
Gold Partners				
Live ID users				
Not authenticated users				
Silver Partners				

You can also configure these permissions separately for particular custom tables. This can also be done in **Site Manager -> Administration -> Permissions**, but in this case, you have to select **Custom tables** from the **Permission type** drop-down list. The **Permission matrix** drop-down list will then offer you all custom tables assigned to the selected site.

The permissions have the same names and meanings as the global ones, but this time, they are related only to the one selected custom table:

- Create members of the role are allowed to add new records into the selected table
- Delete members of the role are allowed to delete records from the selected table
- Modify members of the role are allowed to modify existing records in the selected table
- Read members of the role are allowed to read data stored in the selected table

### A Permissions

Site:	Corporate Site	-
Permission type:	Custom tables	•
Permission matrix:	Sample table	•

	Create	Delete	Modify	Read
Authenticated users				
CMS Basic users				
CMS Community Administrators				
CMS Designers				
CMS Desk Administrators	<b>S</b>	Ś	Ś	Ś
CMS Editors	<b>S</b>		Ś	Ś
CMS Readers				
Everyone				
Gold Partners				
Live ID users				
Not authenticated users				
Silver Partners				

# 8.14.8 Custom tables internals and API

#### 8.14.8.1 Database tables and API classes

The Custom tables module uses the following database tables:

- CMS_Class custom tables are stored as classes in the system database, this database table is used for storing information about classes
- CMS_ClassSite this table is used to assign classes (and therefore also custom tables) to particular sites in the system
- **CMS_Query** SQL queries for operations with data in the custom table are stored in this table, along with other queries used by the system
- CMS_Transformation transformations for custom tables data are stored in this table, as well as other transformations used by the system
- **CMS_AlternativeForm** alternative forms for particular custom tables are stored in this table, together with all other alternative forms used by the system
- <prefix>_ particular custom tables are stored as standard tables in the system database; you can distinguish them by giving them a descriptive prefix, while the customtable_ prefix is used by default

The Custom tables API is provided by the following CMS.SiteProvider namespace classes:

• CustomTableItem, CustomTableItemProvider - these classes provide functionality for managing data items stored in custom tables

The following topics show how methods from these classes can be used to manage custom tables data:

- Adding an item into a custom table
- <u>Getting items from a custom table</u>
- Editing a custom table item

- <u>Deleting a custom table item</u>
- <u>A complete example</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.14.8.2 Adding an item into a custom table

The following code sample shows how a new data item can be added to an existing custom table.

[C#]

```
using CMS.CMSHelper;
using CMS.SettingsProvider;
using CMS.SiteProvider;
using CMS.DataEngine;
. . .
        string customTableClassName = "customtable.SampleTable";
        // Get data class using custom table name
        DataClassInfo customTableClassInfo = DataClassInfoProvider.GetDataClass(cust
        if (customTableClassInfo == null)
        {
            throw new Exception("Given custom table does not exist.");
        }
        // Initialize custom table item provider with current user info and
general connection
        CustomTableItemProvider ctiProvider = new CustomTableItemProvider(
CMSContext.CurrentUser, ConnectionHelper.GetConnection());
        // Create new custom table item for given class of custom table
        CustomTableItem item = new CustomTableItem(customTableClassInfo.ClassName, c
        // Set value of a custom table item field
        item.SetValue("ItemText", "Sample item text");
        // Insert the item
        item.Insert();
```

#### 8.14.8.3 Getting items from a custom table

The following code example shows how a *DataSet* with data items stored in a custom table can be retrieved.

```
using System.Data;
using CMS.CMSHelper;
using CMS.SiteProvider;
...
...
string customTableClassName = "customtable.SampleTable";
string where = "ItemID > 5";
string orderBy = "ItemOrder";
int topN = 10;
string selectedColumns = "ItemID, ItemCreatedBy, ItemModifiedBy";
// Create an instance of the Custom table item provider
CustomTableItemProvider tableProvider = new CustomTableItemProvider(CMSConte
// Get a list of custom table items according to a WHERE condition
DataSet ds = tableProvider.GetItems(customTableClassName, where, orderBy);
DataSet ds2 = tableProvider.GetItems(customTableClassName, where, orderBy, t
```

#### 8.14.8.4 Editing a custom table item

The code example below demonstrates how an existing item in a custom table can be edited.

```
using CMS.CMSHelper;
using CMS.SettingsProvider;
using CMS.SiteProvider;
using CMS.DataEngine;
. . .
        string customTableClassName = "customtable.SampleTable";
        // Get data class using custom table name
        DataClassInfo customTableClassInfo = DataClassInfoProvider.GetDataClass(cust
        if (customTableClassInfo == null)
        {
            throw new Exception("Given custom table does not exist.");
        }
        // Initialize custom table item provider with current user info and
general connection
        CustomTableItemProvider ctiProvider = new CustomTableItemProvider(
CMSContext.CurrentUser, ConnectionHelper.GetConnection());
        // Provide ID of item you want to edit
        int itemId = 1;
```

```
// Get custom table item with given ID
CustomTableItem item = ctiProvider.GetItem(itemId, customTableClassInfo.Clas
// Set value of the custom table item field
item.SetValue("ItemText", "Sample item");
// Update item
item.Update();
```

#### 8.14.8.5 Deleting a custom table item

The code example on this page shows how an existing item can be deleted from a custom table.

```
using CMS.CMSHelper;
using CMS.SettingsProvider;
using CMS.SiteProvider;
using CMS.DataEngine;
. . .
        string customTableClassName = "customtable.SampleTable";
        // Get data class using custom table name
        DataClassInfo customTableClassInfo = DataClassInfoProvider.GetDataClass(cust
        // Check if data class info exists
        if (customTableClassInfo != null)
        {
            // Initialize custom table item provider with current user info and gene
            CustomTableItemProvider ctiProvider = new CustomTableItemProvider(
CMSContext.CurrentUser, ConnectionHelper.GetConnection());
            // Provide ID of item you want to delete
            int itemId = 1;
            // Get custom table item with given item ID
            CustomTableItem item = ctiProvider.GetItem(itemId, customTableClassInfo.
            // Check if item exists
            if (item != null)
            {
                // Delete item
                item.Delete();
            }
        }
```

Modules	855
---------	-----

#### 8.14.8.6 Getting custom tables

In the following code example, you can see how to get a DataSet with all custom tables in the system.

[C#]

```
using CMS.CMSHelper;
using CMS.SettingsProvider;
using CMS.SiteProvider;
using CMS.DataEngine;
...
// Retrieve all custom tables from the database
DataSet customTables = DataClassInfoProvider.GetCustomTableClasses();
```

This second code example demonstrates how only custom tables matching the specified criteria can be retrieved and saved in a *DataSet*.

### [C#]

#### 8.14.8.7 A complete example

The following code example consists of a sequence of custom table data item management operations. A data item is first created and inserted into a custom table. After that, one of its columns is modified with different data. Next, the order of the item is modified. Finally, the item is deleted from the table and in the very end, all items in the custom table are deleted as well.

```
using System;
using System.Data;
using CMS.SiteProvider;
using CMS.CMSHelper;
```

856

```
using CMS.GlobalHelper;
. . .
        string tableName = "customtable.sampletable";
        // Create an instance of the Custom table item provider
        CustomTableItemProvider tableProvider = new CustomTableItemProvider(CMSConte
        // Create a custom table item object
        CustomTableItem cti = new CustomTableItem(tableName, tableProvider);
        // Set the ItemText field value
        cti.SetValue("ItemText", "Sample text");
        // Insert the item object into the database
        cti.Insert();
        // Get an item from a specified custom table
        cti = tableProvider.GetItem(1, tableName);
        if (cti != null)
            // Get names of the custom table columns
            string[] columns = cti.ColumnNames;
            // If the table contains the ItemText column, get its value
            if (cti.ContainsColumn("ItemText"))
            {
                string text = ValidationHelper.GetString(cti.GetValue("ItemText"), "
                // Modify the column value
                text += " modified";
                cti.SetValue("ItemText", text);
                // Update the database record
                cti.Update();
            }
            // Check if the custom table items can be ordered
            if (cti.OrderEnabled)
            {
                // Move the item down
                tableProvider.MoveItemDown(cti.ItemID, tableName);
                // Move the item up
                tableProvider.MoveItemUp(cti.ItemID, tableName);
            }
            // Delete the custom table item from the database
            cti.Delete();
        }
        // Delete all items from a specified custom table
        tableProvider.DeleteItems(tableName);
```

# 8.15 Document library

## 8.15.1 Overview

The Document library module enables live site users to upload and manage files stored in a pre-defined location in the <u>content tree</u>. The module has no dedicated user interface. Its whole functionality is provided by two web parts: **Document library** and **Group document library**. Both web parts and their specific properties are described in the <u>Document library web parts</u> topic. The module also comes with the <u>Document library widget</u>, which is based on the **Document library** web part.

🙀 New document 🛛 😹 Library permissions

Document name 🔺	Modified	Workflow step
▼ Image: The second se	18/11/2010 17:02:56	Published
▼ Image: with the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco	18/11/2010 17:03:02	Published
▼ Intellectual Property Policy	15/10/2010 14:50:56	Published
▼ Intwork and Software Use	18/11/2010 17:03:09	Published
▼ I Our Core Values	18/11/2010 17:03:18	Published
▼ 1 Travel Expense Report	15/10/2010 14:51:09	Published
▼ Iravel Expense Reporting	18/11/2010 17:03:49	Published

Document library files are stored in the <u>content tree</u> as standard *CMS.File* documents. This means that even though the module has no dedicated user interface, actions made on the live site are reflected in the content tree. Like this, the uploaded documents can also be managed by website editors or administrators in **CMS Desk -> Content**. Only flat file structure of document libraries is currently supported, i.e. you can not store files in sub-folders but only under the main document. More information about *CMS.File* documents, as well as other ways how files can be stored in Kentico CMS, can be found in <u>Content management -> File management</u>.

A live example of use of this module can be found on the **Intranet Portal** sample website, specifically on its */Documents* page. The process of creating a similarly structured document library can be found in the <u>Creating a document library</u> topic. The <u>Managing files in document libraries</u> topic explains how the module can be used from the live site user's point of view. Finally, the <u>Security</u> topic explains how standard <u>document-level permissions</u> are applied to documents in the library and how they can be configured.

# 8.15.2 Document library web parts

The whole functionality of the Document library module is ensured by the following two web parts:

- **Document library -> Document library** designed for general use anywhere on your website; it displays all documents from a specified location except those whose *Owner* is a community group
- **Community -> Group document library** designed for use within a context of a community <u>group</u>; displays documents whose *Owner* is the specified community <u>group</u> along with other documents stored under the specified path

The web parts have the following specific properties:

• Library path - path to the document under which the library documents are stored, e.g. /Mydocument-library/My-images; only CMS. File documents from the first level under the entered path are displayed; using the **Set permissions** button, you can directly configure the document's permissions, as described in Security

- Page size number of documents listed by the web part on a single page
- Document form <u>Alternative form</u> that will be used for document properties editing (after choosing **Properties** from the context menu); if blank, the CMS. File. DocumentLibrary form will be used; if this form is not available, the CMS. File document type's default form will be used
- **Group name** available only with the *Group document library* web part; documents owned by the specified group stored under the *Library path* will be displayed along with other documents under the same path
- **Combine with default culture** if *No*, only documents from the current culture that are stored under the *Library path* will be displayed; if Yes, documents from the default culture will be displayed along with documents from the current culture, while default culture documents will be marked with the culture's flag (as can be seen in the screenshot below) and the **Translate** option will be available in their context menu
- **Check permissions** if enabled, only documents for which the current user has the **Read** <u>permission</u> are displayed by the web part; if disabled, all documents are displayed

#### New document Market Library permissions

Document name A	Modified	Workflow step
▼ In Dress Code	18/11/2010 17:02:56	Published
▼ I Equal Opportunities	18/11/2010 17:03:02	Published
Intellectual Property Policy	15/10/2010 14:50:56	Published
▼ In the second	18/11/2010 17:03:09	Published
▼ ^I Our Core Values	18/11/2010 17:03:18	Published
▼ 1 Travel Expense Report	15/10/2010 14:51:09	Published
▼ Iravel Expense Reporting	18/11/2010 17:03:49	Published

## 8.15.3 Document library widget

The module also comes with the **Document library** widget. The widget is stored under the **Document library** widget category and it is an editor widget, i.e. it can only be added to editor widget zones of page templates by website editors in CMS Desk.

Compared to the <u>Document library web parts</u>, the **Document library** widget only has a limited set of properties to configure:

- Library path path to the document under which the library documents are stored, e.g. /Mydocument-library/My-images; only CMS.File documents from the first level under the entered path are displayed; using the **Set permissions** button, you can directly configure the document's permissions, as described in <u>Security</u>
- Page size number of documents listed by the web part on a single page
- **Combine with default culture** if *No*, only documents from the current culture that are stored under the *Library path* will be displayed; if Yes, documents from the default culture will be displayed along with documents from the current culture, while default culture documents will be marked with the culture's flag (as can be seen in the screenshot below) and the **Translate** option will be available in their context menu

Besides the fact that only a limited set of properties is available with the widget, its functionality is identical to the **Document library** web part.

	<i>l</i> odules	859
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N

New document J Library permissions

Document name *	Modified	Workflow step
▼ Image: The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se	18/11/2010 17:02:5	9 Published
▼ I Equal Opportunities	18/11/2010 17:03:0	2 Published
▼ Intellectual Property Policy	15/10/2010 14:50:5	6 Published
▼ Intwork and Software Use	18/11/2010 17:03:0	Published
▼ I Our Core Values	18/11/2010 17:03:1	B Published
▼ 1 Travel Expense Report	15/10/2010 14:51:0	Published
▼ Image: Travel Expense Reporting	18/11/2010 17:03:4	Published

## 8.15.4 Creating a document library

This topic explains how a document library can be created on your website. We will create a sample page with two **Document library** web parts, each of which will display files from a separate folder. Like this, we will actually have two document libraries on a single page, each for storing different types of files. The example is based on the **Intranet Portal** sample website. However, the procedure is analogical when performed on any other website.

The first step when creating a document library is to choose a location in the content tree where the files will be stored. A single document library web part can display documents from only a single location. As we want two separate libraries on a single page, we will create a page in the content tree where two **Document library** web parts will be placed. Under the page, we will create two separate folders where the actual files will be stored.

1. Go to **CMS Desk -> Content**, select the root of the content tree and click **New**. Choose the **Page** (menu item) document type. In the following dialog, enter *My document library* into the **Page name** field and choose to **Create a blank page** using the **Simple** layout. Click **Save**.

With the new document selected in the content tree, click **New** again. This time, choose the **Folder** document type and enter *My images* as its **Document name**. Repeat the same once again to create another folder, while this one should be called *My Office documents*. The final result should look as in the screenshot below.



2. Now that you have the page and folders created, we may proceed to adding the **Document library** web parts. Select the **My document library** document, switch to the **Design** mode and click the **Add web part** (+) icon of the only web part zone on the page. In the **Select web part** pop-up dialog, choose the **Document library** web part, which is stored in the **Document library** web part category. Configure its properties as follows:

- Library path: /My-document-library/My-images
- Page size: 15
- **Document form**: leave the field blank
- Web part container: Intranet simple container (with header line)
- Container title: My images
- Content after: <br/>

Click OK.

3. Repeat step 2 and add another **Document library** web part to the page. This time, use the following values of its properties:

- Library path: /My-document-library/My-Office-documents
- Page size: 15
- Document form: leave the field blank
- Web part container: Intranet simple container (with header line)
- Container title: My Office documents

Click **OK**. The web part zone should now look as in the following screenshot if viewed in the **Design** mode.

▼/My document library - page template: ad-hoc	
▼ zoneLeft	-
DocumentLibrary	
🙀 New document 🛛 🛃 Library permissions	
No data found	
▼ DocumentLibrary1 🛞	
🙀 New document 🛛 🛃 Library permissions	
No data found	

4. The document libraries are now configured and ready to be used by live site users. If viewed on the live site after uploading some files into the libraries, the page should look as in the screenshot below.

My document library Home	Company	Departments	Workgroups	Documents	News	Events	Media	Blogs	Forums	Employees	
My document library											P
My images											
🙀 New document 🛛 😹 Library perr	nissions										
Document name 🔺									Mod	ified	Workflow step
▼ 🔤 Jellyfish									11/1	5/2010 5:40:59 PN	-
▼ 🖺 Penguins									11/1	5/2010 5:40:56 PM	-
My Office documents											
New document	nissions										
Document name 🔺									Mod	ified	Workflow step
▼ 🗐 <u>Book1</u>									11/1	5/2010 5:40:21 PM	-
Document1									11/1	5/2010 5:40:28 PM	-
Presentation1									11/1	5/2010 5:40:34 PN	-

Please proceed to the <u>Managing files in document libraries</u> topic to learn more about how live site users can upload and manage document library files.

## 8.15.5 Managing files in document libraries

This topic explains particular actions that can be performed by live site users in a document library.



#### Permissions for particular actions

All of the actions listed below **are not always available**. They are displayed based on <u>document permissions</u> granted to the current user or their roles. Please consult the <u>Security</u> topic for more details on which permissions are required for each of the listed actions.

When a new document library is created, there are no files in it, so live site users can only see the web part with the following two links at the top.

- Lew document
- 📓 Library permissions

Once some files are uploaded in the document library, live site users can perform the following actions with the documents:

- 📄 Edit
- 횐 Update
- 🔘 Localize
- Copy
- 🗟 Delete
- **(** Open
- Properties
- <u>Permissions</u>
- Queresion history
- Workflow actions

These actions can be executed from a context menu, which is accessible by right-clicking anywhere in a document's row, or by left-clicking the down-arrow to the left of a document's name (as highlighted in the screenshot below).

#### New document J Library permissions

Document name 🔺							
A Complete Guide for New Employees							
Understanding Our Values							
Edit							
Jpdate							
Dcalize							
рару Сору							
Delete							
Dpen Open							
Properties							
Rermissions							
Q Version history							
beck in							
Provide the checkout Index of the checkout I							

The following text explains particular actions that can be performed in a document library:

## **New document**

Clicking the **New document** link in **Internet Explorer** or **Mozilla Firefox** directly opens the browser's file selection dialog. By selecting a file from a local disk and clicking **Open**, the file will be uploaded into the document library.



When uploading new files in **Opera** or **Apple Safari**, there is one extra step in the procedure: the **Upload file** dialog gets displayed first after clicking the **Aew document** link. Clicking the **Choose** button in the dialog opens the browser's file selection dialog, which can be subsequently used as described above. The screenshot below shows the **Upload file** dialog viewed in **Opera**. In **Apple Safari**, the dialog may look slightly different.

Upload file _ 🗆 🗙
localhost
📊 Upload file
Choose
OK Cancel

# Library permissions

Clicking the **District Permissions** link opens a dialog for document library permissions configuration. Please refer to the **Configuring document-level permissions on the live site** section of the <u>Security</u> topic for more details.

🚀 Document permissions								
Users and Roles:	Access rights:							
Authenticated users		Allow	Deny					
Collin Douglas (ColinD) Company Management	Full control							
	Read	<b>V</b>						
	Modify							
	Create							
	Delete							
	Destroy							
	Browse tree	<b>V</b>						
	Modify permissions							
Add users Add roles Remove								
	Apply		Close					

## Edit

The **Edit** action is only available if <u>WebDAV integration</u> is enabled. It opens the file in a client application for direct editing (for example, *.docx* documents get opened in *MS Word*, as you can see in the screenshot below). WebDAV editing is only possible if there is an application installed on the client machine that supports WebDAV editing of the particular file type.

Document name 🔺		) 🖬 🤊	<b>()</b> =	Un	lerstanding-Our	-Values -	Microsoft Wo	ord				x
▼ 🗐 <u>A Complete Guide f</u>	for Ne	Home	Insert Page Layo	ut Refere	nces Mailin	gs R	eview Vie	w				
Understanding Our	Value Pa	Cal B ste board	ibri (Body) ▼ 2 <i>I</i> <u>U</u> ▼ abe x ₂ x Y <u>A</u> ▼ Aa ▼ Aa ▼ Font		<ul> <li>* \$= * *; *</li> <li>* = = = \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* = * \$</li> <li>* \$</li> <li>* = * \$</li> <li>* \$</li> <li< td=""><td></td><td>AaBbCcDc ¶Normal</td><td>AaBbCcDc I No Spaci Styles</td><td>AaBbC Heading 1</td><td><ul> <li>▲</li> <li>Change Styles *</li> </ul></td><td>Editing</td><td></td></li<></ul>		AaBbCcDc ¶Normal	AaBbCcDc I No Spaci Styles	AaBbC Heading 1	<ul> <li>▲</li> <li>Change Styles *</li> </ul>	Editing	
Dopy						-					_	Ca.
Delete											- 1	
Dpen Open											- 1	
Properties											- 1	
Rermissions		Sample	empty document								- 1	
Q Version history		oumpie	empty documenta								- 1	
beck in											- 1	
a Undo checkout											- 1	-
												± 0 ∓
	4		~									
	Pag	e:1 of 1 Wo	rds: 3 🧐 🌑 English (l	United States)				🗐 🕮 🗳 💯	100% (-	9		9 .::

# Update

Selecting the 횐 Update action opens the browser's file selection dialog. Selecting a file from a local

disk and clicking **Open** in the dialog replaces the original file with the selected one. In **Apple Safari** and **Opera**, there is one extra dialog displayed before the browser's file selection dialog. Please refer to the <u>New document</u> paragraph above for more details.



## Localize

The S Localize option is only displayed with documents from the default culture when the Combine with default culture property of the web part is enabled. Clicking the action opens the dialog depicted in the screenshot below, which serves for creation of a new language version of the selected document in the current culture.
Localize	document		
🔚 Save	Spell check		
File name:	Understanding Ou	r Values	
			*
Description:			
			Ŧ
File:	Actions Update	Name	Size
	* •	Understanding-Our-Values.docx	9.7 kB
Publish from:		® <u>Now</u>	
Publish to:		® <u>Now</u>	
		Save & close	Close

## Сору

The Copy action creates a copy of the file in the same document library. As only flat structure of document libraries is currently possible, a different file name needs to be entered for the copy, while the " - Copy" suffix is offered to be added to the file name automatically. When copying a linked document (marked with the flag), the copy will be a standard document, not a linked one.

Copy do	cument		
Document name:	Understanding Our Values -	Сору	
		Save	Cancel

## Delete

Clicking the **Delete** action opens the dialog depicted below. Using the dialog, you can remove the document from the document library. On multilingual websites where more that one language version of the document exists, the **Delete all culture versions of the specified document** check-box is displayed in the dialog. If you delete the document with the check-box enabled, all cultural versions of the document will be deleted.



## Open

The **Open** action works similarly as a standard file download link. The web browser's standard file download dialog is displayed and you can either open the document or save it to a local disk. The same behavior can be expected when you click the document's name in the library listing.

File Down	iload
Do уоц	u want to open or save this file?
	Name: Understanding-Our-Values.docx Type: Microsoft Office Word Document, 9.68KB From: <b>localhost</b>
	Open Save Cancel
2	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <u>What's the risk?</u>

## **Properties**

The **Properties** action opens a dialog where properties of the *CMS*. *File* can be configured the same way as in **CMS Desk -> Content -> Edit -> Form**. The dialog uses the <u>Alternative form</u> form specified in the **Document form** property of the web part. If no form is specified, the *CMS*. *File*. *DocumentLibrary* form is used. If even this form is not available, *CMS*. *File* document type's default form is used.

Docume	nt properties	
<u> Save</u>	Undo checkout 🛯 🏭 Check in 🛛 🗱 Spell check	
You need to che	$\mathbf{k}$ in the document before submitting to approval. Workflow step: $\mathbf{k}$	Edit.
File name:	Understanding Our Values	
Description:		•
File:	Actions Update Name	• Size
Publish from:	V X • W Understanding-Our-Values.docx	9.7 kB
Publish to:	© Now	
	Save & close	Cancel

## Permissions

The *Permissions* action opens a dialog for configuration of permissions for the particular document, similarly as in **CMS Desk -> Content -> Edit -> Properties -> Security**. Please refer to the **Configuring document-level permissions on the live site** section of the <u>Security</u> topic for more details.

🚀 Document permissions			
Users and Roles:	Access rights:		
Authenticated users		Allow	Deny
Collin Douglas (ColinD) Company Management	Full control		
	Read	<b>V</b>	
	Modify		
	Create		
	Delete		
	Destroy		
	Browse tree	<b>v</b>	
	Modify permissions	$\checkmark$	
Add users Add roles Remove			
	Apply		Close

### Version history

Clicking the Section Version history action displays an overview of the document's versions, similarly as in CMS Desk -> Content -> Edit -> Properties -> Versions. The following actions are available with each of the listed versions:

- Solution View displays an overview of the document's content with the possibility of <u>side-by-side</u> <u>comparison</u> of versions
- Rollback rolls back any changes made since the particular version of the document
- 🗱 Delete deletes the old version

Clicking the **Destroy history** button deletes all versions of the document except the current one.

	a Versio	on history							
Document history: Destroy history							Destroy history		
	Actions	Modified when / by	Ver.	Comment	Publish from	Publish to	Publish	Published from	Published to
	🗟 🔊 💥	19/11/2010 13:43:24 Petr Penicka (office-petrpe)	3.1						
	a 🔊 💥	19/11/2010 13:43:17 Petr Penicka (office-petrpe)	3.0					19/11/2010 13:43:17	
	a 🔊 X	19/11/2010 13:42:58 Petr Penicka (office-petrpe)	2.0			19/11/2010 13:43:17		19/11/2010 13:42:58	19/11/2010 13:43:17
	a 🔊 💥	19/11/2010 13:41:47 Petr Penicka (office-petrpe)	1.0			19/11/2010 13:42:58		19/11/2010 13:41:47	19/11/2010 13:42:58
								ltems	per page: 25 💌
									Close

## Workflow actions

If there is a workflow configured for documents in a document library, standard workflow actions are displayed at the bottom of the context menu, depending on workflow configuration and the current workflow step of the document:

- **V** Submit to approval submits the document for approval to the sub-sequent workflow step
- **Approve**¹ approves the document and switches it to the sub-sequent workflow step
- X Reject¹ rejects the document and switches it back to the previous workflow step
- **Archive** switches the document to the Archived step
- Check out² checks the document out for editing; while checked out, the document can not be edited by other users; checked-out documents are marked with the icon in the document library listing (as can be seen in the screenshot below)
- b Check in² checks the modified document in after editing, so that other users can edit it again
- A Undo checkout² takes back the check-out, while changes made to the document are not saved

¹ for these actions to be available, the user must also be in one of the roles that are allowed to approve/ reject the document in the current workflow step or have the **Manage workflow** permissions for all content

² these actions are only available if the workflow applied to the document is configured to use check-in/ check-out

Document libraries are typically used with <u>Versioning without workflow</u>. In this case, document in the libraries are in the **Published** workflow step all the time and a new version of the document is created

with each modification. Please refer to <u>Development -> Workflow and versioning</u> for more information on workflows in Kentico CMS.

🙀 New document 🛛 🛃 Library permissions		
Document name ×	Modified	Workflow step
▼	11/4/2010 2:23:36 PM	Published
▼ I Understanding Our Values	11/23/2010 10:57:07 PM	Edita

## 8.15.6 Security

The Document library module leverages standard <u>document permissions</u>. The following table explains which permissions are required to perform particular actions in the document library. These permissions can be granted to roles globally for all content or for the *CMS*. *File* document type, or to particular users or roles on document-level of the library's parent document or each particular document in the library.

Action	Read	Modify	Create	Delete	Destroy	Manage workflo w	Modify permissi ons
👍 New document	•	•	•				
Library permissions	•						•
Edit	•	•					
Update	•	•					
Localize	•	•	•				
🗟 Сору	•	•	•				
🗟 Delete	•			•			
Open	•						
Properties	•	•					
Rermissions	•						•
Q Version history	•	•			1		
✓ Submit to approval	•	•					
✓ Approve ²	•	•				2	
X Reject ²	•	•				2	
Archive	•	•				•	
Check out ³	•	•					
b Check in ³	•	•					
Undo checkout ³	•	•					

¹ The **Destroy** permission is required for the user to be able to delete particular versions or the whole version history.

² For these actions to be available, the user must also be in one of the roles that are allowed to approve/ reject the document in the current workflow step or have the **Manage workflow** permissions for all content.

³ These actions are only available if the workflow applied to the document is configured to use check-in/ check-out.

## Configuring document-level permissions on the live site

Document-level permissions can be configured directly on the live site. They can be configured either globally for the document library's parent document, which results in the permissions being inherited by the child documents in the library, or separately for each particular document in the library. Permissions can be granted to users or roles. Permissions for group document libraries can also be granted to group members and group roles.

The **S** Library permissions action opens a dialog for configuration of the library's parent document permissions, i.e. the permissions that can be inherited by its child documents (the actual documents stored in the library). This dialog is identical to the **Permissions** section of the **CMS Desk -> Content -> Edit -> Properties -> Security** dialog for the document. Permissions configured via the web part on the live site will be reflected in this dialog.

By choosing the **Permissions** action from the context menu of a document in the library, the same dialog gets displayed, while this time, permissions are configured just for the particular document. Here again, the permissions configured on the live site will be reflected in the **CMS Desk -> Content -> Edit - > Properties -> Security** dialog for the document.

A Document permissions			
Users and Roles:	Access rights:		
Authenticated users		Allow	Deny
Company Management	Full control		
	Read	$\checkmark$	
	Modify		
	Create		
	Delete		
	Destroy		
	Browse tree	1	
	Modify permissions	V	
Add users Add roles Remove			
	Apply	(	Close

## Permissions and workflow

Document libraries reflect workflows applied to documents stored in them. Unless the current user has the **Modify** permission for a document, the currently published version of the document is always displayed to the user. If the document is currently archived or not published, the document is not

displayed to the user at all. If the current user does have the **Modify** permission, the current version of the document (in the current workflow step) is displayed to them.

Please refer to <u>Development -> Workflow and versioning</u> for more information on workflows in Kentico CMS.

## Allowed file extensions

When uploading a new document into the document library using the **New document** link or updating a document using the **Dupdate** action (both in the context menu and in the **Properties** dialog), only files with extensions defined in **Site Manager -> Settings -> Files -> Upload extensions** or in the **Allowed extensions** property of the *FileAttachment* field of the *CMS*. *File* document type can be uploaded.

Each attempt to upload a file with an extension that is not allowed will result in the error message as displayed in the screenshot below.

Message fr	om webpage
<b></b>	You cannot upload files with extension 'xxx'. Allowed extensions: pdf, doc, docx, ppt, pptx, xls, xlsx, htm, html, xml, bmp, gif, jpg, jpgg, png, wav, wma, wmv, mp3, mp4, mpg, mpeg, mov, avi, swf, rar, zip, txt, rtf.
	ОК

## 8.16 E-commerce

### 8.16.1 Overview

For more information about the E-commerce module please refer to Kentico CMS E-commerce Guide.

## 8.17 E-mail queue

## 8.17.1 Overview

The E-mail queue module was designed to enable the sending of large amounts of e-mails, e.g. when sending newsletter issues to subscribers, without the risk of losing any of the e-mails due to errors. If an e-mail is not delivered successfully, it remains in the queue so that it can be resent later. The e-mails in the queue are sent **automatically**, no manual sending is necessary as this is handled by the **Send queued e-mails** <u>scheduled task</u>.

E-mails in the queue can be monitored or manually managed through the administration interface. Please see the <u>Administrating the e-mail queue</u> topic for more information.

To utilize the e-mail queue, authorized users have the option of <u>Sending mass e-mails</u> to large amounts of users. Certain other modules, such as <u>Newsletters</u>, also make use of the e-mail queue. All other e-mails sent by the system can be configured to either use the e-mail queue or be sent directly to the SMTP server, as is described in the <u>Settings</u> topic.

### 8.17.2 Administrating the e-mail queue

The e-mail queue administration interface is located in Site Manager -> Administration -> E-mail queue. Using the Site drop-down list, you can choose which site you want to display the e-mail queue for. If (global) is selected, e-mails sent from the administration interface will be displayed. If (all) is selected, all e-mails in all queues will be displayed. The administration interface is divided into three tabs:

## E-mail queue tab

This tab displays the actual e-mail queue. E-mails that are waiting to be sent or that haven't been sent successfully (displayed with an Error message) are displayed here. You can **Resend** (ig) the mail, **Delete** (**X**) it or **View** (**a**) its details. There is also a number of links above the list:

- *A* Resend all failed resends all e-mails in the queue that were unsuccessfully sent; new e-mails that have not yet been sent will not be resent
- A Resend selected resends all e-mails selected by the check-boxes in the list
- Resend all resends all e-mails in the list
- **A Delete all failed** deletes all e-mails in the queue that were unsuccessfully sent; new e-mails that have not yet been sent will not be deleted
- **@ Delete selected** deletes all e-mails selected by the check-boxes in the list
- Image: Second state of the second

• 10 Refresh - 1	erresnes the content of the e-mail queue
Mentico	Switch to CMS Desk User: Global Administrator V5.5.3749
CMS Site Manager	Sites Administration Settings Development Licenses Support
Administration	Temail queue
Bad words	Site: (all)
Banned IPs	E-mail queue Sent e-mail Send e-mail
Event log	🔗 Resend all failed 🥔 Resend selected 🥔 Resend all 🛷 Delete all failed 🛷 Delete selected 🛷 Delete all 😵 Refresh
······································	The following list contains e-mails that are waiting for being sent or whose sending failed.
C Scheduled tasks	
System	Actions         Subject         To         Priority -         Error message         Last send attempt
UI personalization	The second secon

...

### Sent e-mails tab

🔒 Users

🐐 Web farm

This tab displays a list of e-mails that have been successfully sent via the e-mail queue. You can set how long the e-mails will stay in this list through the Site Manager -> Settings -> E-mails -> Archive e-mails (days) property.

You can **Resend** (Wa) the mail, **Delete** (**X**) it or **View** (a) its details. There are also three links at the top of the page:

- Image: Second state of the second
- Image: selected deletes e-mails selected by the check-boxes in the list
- Sefresh refreshes the content of the list of sent e-mails

Status Waiting

Items per page: 25 💌

Kentico CMS Site Manager	Switch to CMS Desk User: Global Administrator v5 Sites Administration Settings Development Licenses Support	5.3749 Sign out
Administration     Administration     Avatars     Gead words     Badges     Banned IPs     Fimail queue     Event log     Fermissions     Recycle bin     Skoles     Acheduled tasks	E-mail queue Site: (all)      E-mail queue Sent e-mais Send e-mail      Dekts all @ Dekts sekscted @ Refresh  The following lst contains archived e-mails which have been successfully sent.      Display filter	0
Shart Search System II UI personalization Users Web farm	Actions     Subject     To     Priority     Last send attempt +       Image: Send State State State State State State State State State State State State State State State State State State State State State State State State State State State State	Items per nane: 25

## E-mail filter

When there is a large number of e-mails in the e-mail queue, you can easily limit which e-mails will be displayed using the filter. It can be displayed by clicking the **Display filter** link above the e-mail lists on both tabs.

E-mail qu	ueue Sent e-mails	Send e-mail
or Delete	e all 🛛 🛷 Delete selec	<u>cted</u> 😵 <u>Refresh</u>
The follo	wing list contains arc	chived e-mails which have been successfully sent.
From:	LIKE	
To:	LIKE	
Subject:	LIKE	
Body:	LIKE	
Priority:	(all)	•
	Show	
▲ Hide f	filter	

## Send e-mail tab

From this tab, you can easily send a single e-mail to a specified recipient (not only the site users). For sending e-mails to multiple users, we recommend using <u>mass e-mails</u> instead of this tab.

## 8.17.3 Sending mass e-mails

As the e-mail queue allows the sending of massive amounts of e-mails, we've implemented the Mass email feature. This feature enables you to send the same e-mail to a large amount of users.

You can do this at Site Manager -> Administration -> Users -> Mass e-mail.

Using the **Site** drop-down list, you can select which site the recipients are related to. Based on this choice, users can be selected either directly, or according to the roles or groups they belong to by using the **Add users** buttons in the **Recipients** section. If you choose **(all)** from the site drop-down list, only the users section will be displayed as roles and groups are always site-related.

You can also add an attachment to the mail using the *Attach file* link.



This tab is also available at CMS Desk -> Administration -> Users -> Mass e-mail, but only users of the current site can be selected.

In the e-mail queue, you will see the **Show details** link instead of a recipient's e-mail address for mass e-mails, as you can see in the screenshot below.

Actions	Subject	То	Priority	Last send attempt -
la 💥 🗟	Merry Christmas	Show details	Normal	12/21/2009 2:32:23 PM
🗟 💥 🗟	Subscription confirmation.	administrator@localhost.local	Normal	12/21/2009 2:27:44 PM

After clicking the link, a window will appear as in the screenshot below. You can delete recipients from the list, so that the mass e-mail will not be delivered to them. This can be done using the **Delete** (**X**) icons or by selecting more recipients using the checkboxes and clicking the **elete selected** link.

MassEmails - Rec	cipients Webpa	age Dialog	
Recipient	s list		
Delete selected			
Actions		Recipient	Error message
×		administrator (administrator@localhost.local)	
×		silver ()	
×		gold ()	
×		Andy ()	
			Items per page: 25
			Close
//localboct/Kap	ticoCMS/CMSMc	dules/EmailQueue/MassEmails Recipients aspy?emailid=6	😪 Local intranet   Protected Mode: Off

## 8.17.4 Settings

E-mail settings are located at **Site Manager -> Settings -> E-mails**. Among other e-mail related settings, the following two can be used to enable the e-mail queue and configure some of its functionality:

- Enable e-mail queue if checked, the e-mail queue will be used when sending e-mails. There are certain exceptions for priority e-mails, like those containing forgotten passwords for example, that skip the queue and are sent directly
- Archive e-mails (days) the number of days for which e-mails sent via the e-mail queue will remain stored on the Sent e-mails tab; if set to 0, e-mails will not be archived



## 8.18 Event calendar

## 8.18.1 Overview

The Event calendar web part is used for displaying documents ordered by date in a calendar. Its appearance is similar to the ordinary Calendar web part. You can scroll through months by using the two arrow links in the top left and right corners of the calendar.

The web part can be used for displaying documents of various types, but only one type can be displayed at the same time.

<u>&lt;</u>			December 2009			2
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
No event	No event	No event	No event	No event	No event	No event
6	7	8	9	10	11	12
No event	No event	No event	No event	No event	No event	No event
13	14	15	16	17	18	19
No event	No event	No event	No event	No event	No event	No event
20 No event	21 <u>December</u> <u>conference</u>	22 No event	23 No event	24 No event	25 No event	26 No event
27	28	29	30	31	1	2
No event	No event	No event	No event	No event	No event	No event
3	4	5	6	7	8	9
No event	No event	No event	No event	No event	No event	No event

## 8.18.2 Using the web part

You can add the Event calendar web part to any web part zone on any page on your website. Go to **CMSDesk -> Edit**, switch to the page that you want to add the Event calendar to and switch to the **Design** tab. Click the **Add web part** icon of the target web part zone and from the web part list that appears, select **Events -> Event calendar** and click **OK**.

The web part properties dialog appears. Here is a list of properties specific for this web part:

Content			
Path	Path in the content tree to the displayed documents.		
Day field	Field with the date that the document will be displayed on in the calendar.		
Content filter			
Document types	Document types that will be displayed in the calendar. If there is a document in the location set in the <b>Path</b> parameter that is not of a type entered here, it will not be displayed in the calendar.		
Combine with default culture	Indicates if the default language version of a document should be displayed if the document is not available in the current language.		
Culture code	Culture code of the displayed versions of documents.		
Maximum nesting level	Specifies the number of sub-levels in the content tree from that the documents will be displayed.		
ORDER BY expression	The ORDER BY part of the SQL SELECT query used for selecting the documents.		
Select only published	Indicates if only published documents should be displayed.		
Site name	Code name of the website from that you want to display the content. If left empty, the current website is used.		
WHERE condition	The WHERE part of the SQL SELECT query. If multiple links to the same document are displayed, this can be used to display only one of them.		

Click **OK**. The Event calendar should be displayed in the selected web part zone and should be displaying documents from the selected location in the content tree.

## 8.18.3 Design and Styles

The design is controlled by CSS styles included in your CSS stylesheet for the given site. The following figure shows CSS classes used in the Event Calendar web part:

<u> </u>	_	_	December 2009	_	_	≥
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
No event	No event	No event	No event	No event	No event	No event
6	7	8	9	10	11	12
No event	No event	No event	No event	No event	No event	No event
13	14	15	16	17	18	19
No event	No event	No event	No event	No event	No event	No event
20 No event	21 <u>December</u> <u>conference</u>	22 No event	23 No event	24 No event	25 No event	26 No event
27	28	29	30	31	1	2
No event	No event	No event	No event	No event	No event	No event
3	4	5	6	7	8	9
No event	No event	No event	No event	No event	No event	No event

## 8.19 File import

## 8.19.1 Overview

The file import module allows you to import files including their entire folder structure from the disk to the Kentico CMS content repository (content tree). When files are uploaded this way, they are stored as **CMS.File** (or **CMS.Folder**) documents. The module allows large amounts of files to be selected, which eliminates the need to create documents and upload files in the content tree manually one-by-one.

The module's user interface can be found in **CMS Desk -> Tools -> File import**. The label at the top shows the path to the file import folder, which is where all files that you wish to import must be located. If the folder doesn't exist, you may need to create it on the disk. The default file import folder is ~/ **CMSImportFiles**. You can define your custom file import path in **Site Manager -> Settings -> Files -> File import folder**.

For a more specific example of using this module to import files, please continue in the <u>Importing files</u> topic.

The <u>Security</u> topic shows how permissions can be set for this module. The use of this module should usually only be allowed for site administrators, as it doesn't check certain security settings from **Site Manager -> Settings -> Files**, such as allowed file extensions.

The file import module isn't the only way files can be uploaded to the Kentico CMS system. For other options and information about general file management, please refer to the <u>Content management -> File</u> <u>Management</u> chapter of this guide.

### 8.19.2 Importing files

The following is a step-by-step guide through the process of importing files:

1. Copy your files into the specified import folder on your local disk.

2. Go to CMS Desk -> Tools -> File import. You should see a list of files that are currently in the

import folder.

3. Choose which files should be imported using the checkbox next to each file and specify the following properties:

- Target alias path: path within the content tree where the files will be imported
- Culture: culture to which the uploaded files (documents) will be assigned
- Delete imported files from disk: if enabled, files in the import folder will be deleted after a successful import
- Include file extension in name: if enabled, the file extension is included in the *Document name* of the newly imported files

Click Start Import.

Kentico		Switch to Site Manager Site:
CMS Desk Content	My desk Tools Administrati	on
Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Conten	My desk       Tools       Administration         File import         Select files to be imported from         V       Name         V       Name         V       cms_blog.png         V       cms_job.png         V       cmsproduct_pda.png         Total:       3       Selected:       3         Target alias path:       Culture:       Delete imported files from disk:         Include file extension in name:       Culture file extension in name:       Culture file extension in name:	on c:\Inetpub\wwwroot\KenticoCMS\cmsimportfiles\:  Result c:\Inetpub\wwwroot\KenticoCMS\cmsimportfiles\cms_blog.png c:\Inetpub\wwwroot\KenticoCMS\cmsimportfiles\cms_job.png c:\Inetpub\wwwroot\KenticoCMS\cmsimportfiles\cmsproduct_pda.png //mportedFiles Select English - United States
I Reporting	Delete imported files from disk: Include file extension in name:	Start import

4. Now if you switch to the **Content** tab and locate the alias path that you specified in the previous step, you should see the files uploaded.



## 8.19.3 Security

Access rights to the file import module can be configured in CMS Site Manager -> Administration -> Permissions, after you select the Modules -> File import permission matrix. This can also be done in CMS Desk -> Administration -> Permissions, but only for the current site. The File import module only has one single permission:

• Import files - members of the specified roles are allowed to import files using the File import module

#### A Permissions

Site:	Corporate Site	•
Permission type:	Modules	•
Permission matrix:	File import	•

	Import files
Authenticated users	
CMS Basic users	
CMS Community Administrators	
CMS Designers	
CMS Desk Administrators	ď
CMS Editors	ď
CMS Readers	
Everyone	
Gold Partners	
Live ID users	
Not authenticated users	
Silver Partners	

# 8.20 Forums

## 8.20.1 Overview

This module allows you to integrate full-featured forums into your website. The forums are highly configurable and allow you to:

- Organize forums into forum groups
- Open/lock forums
- Perform SQL or index-based full-text searches of forum content
- Manage all forum posts and threads of a particular forum
- Create <u>moderated forums</u> (posts needs to be approved before they are displayed on-line)
- Choose to require and/or display e-mails of the forum users
- Subscribe to receive notifications about all posts added to a forum or thread by e-mail
- Configure standard forum functions such as <u>post attachments</u>, <u>BBCode support</u>, adding posts to <u>favorites</u>, user avatars and more
- Set forums to use Friendly URLs
- Use your own custom forum layouts
- Enable a forum only for authenticated users
- Specify user roles that are allowed to use various forum functions via <u>Security</u> settings

Modules	881

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
Forums												

#### Forums

Search forums:

You can set up any number of forum groups and each forum group may have multiple forums on particular topic. The forums are organized into threads. You can also use the Forums module for article comments if you use so called "ad-hoc" forums that are bound to some particular document (article, product, etc.).

	Advanced search			
Forum		Threads	Posts	Last post
Site forum	15			
Web site for	rums			
Annou Produ Lock	uncements uct announcements come here.	2	6	Frank Stevens (11/16/2008 1:08:41 PM)
Techn Samp Lock	nical support ole forum for technical support questions.	3	4	David Fishman (11/16/2008 1:37:45 PM)

Site map | Disclaimer

There are two basic types of forums:

- Pre-defined forums created by the administrator and then displayed on the website.
- <u>Ad-hoc forums</u> (article comments) created for a single document when a visitor posts the first comment to the given document.

The Message boards module provides another option that allows users to post comments on your website. Please refer to the <u>Modules -> Message boards</u> chapter to learn more about it.

The Forums module can be managed in **CMS Desk -> Tools -> Forums**. Further settings can be found at **Site Manager -> Settings -> Forums** and are described in more detail in the <u>Settings</u> topic.

The <u>Forums internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how forums can be managed using the API.

Kentico CMS Community Site Guide contains some additional forum examples and tutorials:

- Part 1 -> Forums: Examples of the functionality and customization of groups.
- Part 2 -> Creating the Forums section: A step-by-step tutorial on how to create a sample forum section of a website.

You will need to have the sample Community Site installed to follow Kentico CMS Community Site Guide.

## 8.20.2 Creating a forum group

All forums are a part of some forum group. Pre-defined forums need to be created within some particular forum group and ad-hoc forums are automatically placed into the **AdHoc forum group** upon creation. A **forum group** usually contains forums related to the same topic. For example:

- Computers (forum group)
  - Announcements (forum)
  - Technical questions (forum)
  - FAQ's (forum)
- Web design (forum group)
  - CSS (forum)
  - XHTML (forum)

#### Creating a new forum group

Go to CMS Desk -> Tools -> Forums and click Se New forum group. Fill in the following fields:

- Group display name: the forum group name displayed on your website
- Group code name: the forum group name used in your code
- Description: description of the forum group displayed on your website
- Forum group base URL: URL displayed when the user accesses the forum; eq. ~/MyForums.aspx
- Forum group unsubscription URL: URL of a page where users can unsubscribe from the given forum group

Click OK to save.

New forum group		
<u>oroups</u> + New Iordin group		
Group display name:		
Group code name:		
Description:		•
		-
Forum group base URL:	~/Forums.aspx	Inherit from settings
Forum group unsubscription URL:	~/SpecialPages/Unsubscribe.aspx	Inherit from settings
	ОК	

Continue to the <u>Creating a pre-defined forum</u> topic to learn how to create individual forums within a forum group or the <u>Adding an ad-hoc forum to the web</u> topic to find out more about ad-hoc forums..

### 8.20.3 Creating a pre-defined forum

**Pre-defined forums** need to be created within a forum group before you can publish them on the website. See the <u>Creating a forum group</u> topic to learn how to create a forum group.

#### Creating a new forum

Go to **CMS Desk -> Tools -> Forums** and click **Edit** (*P*) for some forum group. Go to the Forums tab and click **Add forum**. Enter the following details:

- Forum display name the name of the forum displayed on your website
- Forum code name the name of the forum used in your code
- **Description** the description displayed on your website

- Forum base URL URL displayed when the user accesses the forum; e.g. ~/MyForums.aspx
- Forum unsubscription URL URL of the page where users can unsubscribe from the given forum
- Require e-mail address indicates if e-mail address should be required from the post author
- Display e-mail addresses indicates if e-mail address of the post author should be displayed to other site visitors
- Enable WYSIWYG editor indicates if the visitors can use the WYSIWYG editor for entering text
- Use security code (CAPTCHA) indicates if the user needs to retype the security code displayed as an image this feature helps you avoid spam in the forums
- Forum is open indicates if the forum is visible and can be accessed
- Forum is locked if checked, new posts can't be added to the forum, while the forum is still accessible for viewing
- Forum is moderated indicates if the posts need to be approved by a forum moderator

The **Inherit from forum group** checkboxes displayed next to most properties are used to automatically load values from the settings of the parent forum group. To configure unique properties for a forum, simply clear the appropriate checkbox and enter the desired value.

Click **OK** to add the forum.

Forums General View		
Forums   New forum		
Forum display name:		
Forum code name:		
Description:		
Forum base URL:	~/Forums.aspx	Inherit from forum group
Forum unsubscription URL:	~/SpecialPages/Unsubscribe.aspx	🗹 Inherit from forum group
Require e-mail addresses:	🗌 🗹 Inherit from forum group	
Display e-mail addresses:	Inherit from forum group	
Enable WYSIWYG editor:	🗌 🗹 Inherit from forum group	
Use security code (CAPTCHA):	🗌 🗹 Inherit from forum group	
Forum is open:		
Forum is locked:		
Forum is moderated:		
	ОК	

Now that the forum is created, it can be configured in more detail. Switch to its **General** tab, where you can edit the options that were entered when the forum was created, as well as the following additional properties:

- Forum type determines the overall type of the forum. The following three types may be selected:
  - User can choose when creating a new thread, users can choose from the following two types.
  - **Discussion forum** news threads use a standard discussion format where users reply to previous posts.
  - Question-Answer forum in forums of this type, the initial post of a thread is usually a question

and the replies are attempts to answer it. The forum includes a voting feature that allows users to mark individual replies as helpful answers. Once a post receives the amount of votes specified in the *Minimum votes to mark post as answer* property, it will be designated as a valid answer and displayed accordingly.

- Minimum votes to mark post as answer determines the minimum amount of votes that a post must receive before it is marked as an answer in *Question-Answer* type forums.
- **Maximum image side size** sets the maximum side size in pixels of images inserted into forum posts. If a larger picture is included in a forum post, it will be resized so that its larger side is equal to the entered value.
- Attachment max. file size (kB) sets the maximum file size of forum post attachments in kB.
- User can edit own posts indicates whether users are allowed to edit their own existing posts.
- User can delete own posts indicates whether users are allowed to delete their own existing posts.

The properties at the bottom determine which BB code macros may be used by forum users to format the text of forum posts. Further details may be found in the <u>BBCode support</u> topic.

Forums General View		
Forums  Sample forum		
Posts General Subscriptions Mod	derators Security View	
Use security code (CAPTCHA):		🔲 Inherit from forum group
Forum type:	<ul> <li>User can choose</li> <li>Discussion forum</li> <li>Question-Answer forum</li> </ul>	🔲 Inherit from forum group
Minimum votes to mark post as answer:	5	Inherit from forum group
Maximum image side size:	400	🗷 Inherit from forum group
Attachment max. file size (kB):	0	Inherit from forum group
User can edit own posts: User can delete own posts:		<ul> <li>✓ Inherit from forum group</li> <li>✓ Inherit from forum group</li> </ul>
Enable links in posts:	No Simple dialog Advanced dialog	🗹 Inherit from forum group
Enable images in posts:	No Simple dialog Advanced dialog	
Enable quotes in posts:	$\checkmark$	
Enable code snippets in posts :		
Enable bold font in posts:		
Enable italics font in posts:		
Enable underline font in posts:		
Enable strike font in posts:		
Enable font colors in posts:		
	OK	

For information about the remaining tabs, please refer to the following topics:

- Managing forum posts
- Subscriptions
- Forum moderation
- Security

Once everything is configured as necessary, the forum can be placed on a website. The Publishing a

pre-defined forum on the website topic describes how.

## 8.20.4 Publishing a pre-defined forum on the website

When you want to publish a forum on your website, you can use the built-in web parts in your page templates. You can find more details on each web part in <u>Kentico CMS Web Parts</u> reference.



#### Web parts and ASPX page templates

If you're using ASPX page templates, you simply drag and drop the Forum web parts located in the CMSWebParts/Forums folder to your page and use them in a similar way.

## Publishing a forum group on the website

You can publish the whole forum group on the website using the **Forum group** (ForumGroup.ascx) web part. All you need to do is to select the appropriate **Group name** value in the web part properties. The default forum looks like this:

Forum	Threads	Posts	Last post
Site forums			
Web site forums			
Announcements Product announcements come here. Lock	2	6	Frank Stevens (11/16/2008 1:08:41 PM)
Technical support           Sample forum for technical support questions.           Lock	3	4	David Fishman (11/16/2008 1:37:45 PM)

The forum threads in the selected forum can be displayed in two ways:

#### 1. As a list of threads

- set the Forum layout property to Flat

Announcements						
Product announcements come here.						
New thread   Subscribe to forum   Site forums > Announcer	ments					
Thread	Created by	Posts	Views	Last post		
Web site launch Unlock Unstick thread Move down Move up	administrator	3	362	administrator (10/19/2008 5:45:18 PM)		
New products Lock Stick thread	administrator	3	74	Frank Stevens (11/16/2008 1:08:41 PM)		
	1					

#### 2. As a tree of threads and posts

- set the Forum layout property to Tree

Announcements
Product announcements come here.
New thread   Subscribe to forum   Site forums > Announcements
B- Announcements
RE:Web site launch
ia- New products ia- RE:New products

### 8.20.5 Adding an ad-hoc forum to the web

Ad-hoc forums are useful if you want to enable users to add comments to some page or article, but you do not want to create the forum for each document manually. You may also consider using <u>Message</u> <u>boards</u> for this purpose if you don't need a structured forum.

Ad hoc forums can be added using the Forum (Single forum - General) web part.

If you place the **Forum (Single forum - General)** web part to a page and set its **Forum name** property to *ad-hoc forum* (or *ad_hoc_forum* if you are using ASPX templates), the forum will be displayed on the website, but it will be actually created after some visitor adds a first post to the forum. After that, the forum will be created in the **AdHoc forum group** forum group in **CMS Desk -> Tools -> Forums**.

Ad-hoc forums are uniquely identified by the document they belong to.

The following two web parts are **deprecated**, and they are available only because of **backward compatibility** with versions prior to 4.0:

- Forum (Single forum Flat layout) this web part ensures backward compatibility with the former Forum thread list web part
- Forum (Single forum Tree layout) this web part ensures backward compatibility with the former Forum tree web part

## 8.20.6 Adding forum searching

If you want to let users search forum posts for some given text, you can use the **Forum search box** (ForumSearch.ascx) and **Forum search results** (ForumSearchResults.ascx) web parts. You will typically place them both on the same page. However, if you need to place the forum search box on a different page, you can set its **Redirect to URL** property to the page where you have the **Forum search results** web part, such as ~/SearchForum.aspx.

887

Search forums:	computer Go Advanced search
Search results	for computer : 3 occurrences found.
View thread	Jack Johnson - 11/26/2007 10:01:12 AM How do I switch on my computer? Please help!!!
View thread	administrator - 11/26/2007 10:01:35 AM RE:How do I switch on my computer? Use the big red button.
View thread	David Fishman - 11/16/2008 1:37:45 PM My computer is running slow Why is my computer running slowly. What steps can I do to fix it? Thanks for any advice!

You can also use the **Forum search - advanced dialog** (ForumExtendedSearchDialog.ascx) web part, which offers a larger dialog that allows users to specify multiple search parameters.

Search keywords: computer          Written by:       Jack Johnson         Site forums       Announcements         Announcements       Technical support         Search in forums:       Image: Search within:         Subject and text       Image: Search         Sort results by:       Post time         Search       Image: Search         Search       Image: Search	Examples > Webpa	arts > <u>Forums</u> > Forum search box	
Written by:       Jack Johnson         Site forums       Announcements         Technical support       Technical support         Search in forums:       Image: Search within:         Subject and text       Image: Search         Sort results by:       Post time         Search       Image: Search         Search       Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Search       Image: Search         Sea	Search keywords:	computer	0
Site forums         Announcements         Technical support         Search within:         Subject and text         Sort results by:         Post time         Search    Search results for computer : 1 occurrences found.   View thread	Written by:	Jack Johnson	]
Search within: Subject and text Sort results by: Post time Search Search Search results for computer : 1 occurrences found. View thread	Search in forums:	Site forums Announcements Technical support	
Sort results by:       Post time <ul> <li>Ascending</li> <li>Descending</li> </ul> Search            Search results for computer : 1 occurrences found.         View thread	Search within:	Subject and text	
Search Search results for computer : 1 occurrences found. View thread	Sort results by:	Post time 💌	Ascending
Search results for computer : 1 occurrences found. View thread	Search		
View thread	Search results for	or computer : 1 occurrences found.	
	View thread		
Guest Jack Johnson - 11/26/2007 10:01:12 AM How do I switch on my computer? Please help!!!	Guest	Jack Johnson - 11/26/2007 10:01:12 AM How do I switch on my computer? Please help!!!	
1		1	

If you wish to use the basic search box by default, but want to let users have the option of using the

advanced dialog as well, you can do so by entering the path to the page containing the **Forum search** - advanced dialog web part into the **Advanced search path** property of the **Forum search box** web part. The **Advanced search** link will then be displayed as seen in the first image.

These web parts use the SQL search engine.

If you prefer index-based searching, this can be provided by various Smart search web parts from the **Full-text search** category if they have a forums type search index set. Please refer to the <u>Modules -></u> <u>Smart search</u> chapter for more details.

## 8.20.7 Managing forum posts

Threads and posts can be managed on the **Posts** tab when editing the forum that contains them.

#### Creating a new thread

When you navigate to the tab, you can initially see the **New thread** page, letting you add a new thread to the current forum group. The following details need to be filled in:

- User name: user name which will be used for the thread author
- E-mail: e-mail of the thread author
- Subject: subject of the initial post of the thread
- Post: text of the initial post of the thread
- **Signature**: signature under the initial post
- Subscribe to post: if enabled, notification e-mails about new posts in the thread will be sent to the email address specified in the *E-mail* field

🥦 Forum group properties		
Forum groups   Back-packer forums		
Forums General View		
Forums + General discussion		
Posts General Subscriptions Modera	tors Security View	
General discussion     African travellers	New thread	l de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de
<ul> <li>Arican travellers</li> <li>⇒ European travellers</li> <li>⇒ ⇒ Asian travellers</li> <li>⇒ ⇒ Asian travellers</li> <li>⇒ ⇒ click here for more</li> </ul>	User name: E-mail: Subject: Post: Signature: Subscribe to post:	administrator administrator@localhost.local
		OK Cancel Preview

## Managing particular posts

If you select a post from the tree on the left, you can perform the following actions:

- 🔽 Edit opens the post for editing you can edit the post text, user's name, signature, etc.
- **X Delete** deletes the post
- P Reply opens a dialog using which you can send a reply to the post
- Stick thread sticks this thread so that it will be displayed at the beginning of the forum
- Split thread moves the post and its replies to a new thread
- Lock thread locks the thread so that no more posts can be added to it
- **O** Reject rejects the post so that it is not displayed and needs approval to be displayed
- **O** Reject sub-tree performs the Reject action for the current posts and all its children
- Move moves a thread to a new forum

Posts General Subscriptions Modera	tors Security View
General discussion	Forum post
European travellers	🔀 Edit 💥 Delete 🔘 Reply 🧭 Stick thread 🤷 Lock thread 🧭 Reject 🧭 Reject sub-tree 🌘 Move
click here for more	
	Mikky (10/25/2008 /: 42:54 PM)         European travellers         Hi everybody, are there some Europeans around?         Member       Nikky :
	Ø Post attachments
	Upload: Browse Upload

## Forum post listing

In case that there are too many threads in the forum, you can limit the number of displayed threads using the **Max forum post nodes** settings key in **Site Manager -> Settings -> Forums**. If you use this key and there are more threads in the forum than the set value, the **Click here for more...** link is displayed at the bottom of the tree. After clicking this link, the **Forum post listing** page is displayed in the main area.

The **Forum posts listing** page initially displays all threads in the forum, while the following actions can be performed:

- **View** displays the thread's initial post in the main area (this action is identical to clicking the post in the tree)
- **X Delete** deletes the whole thread including all child posts
- 👒 Sub-posts displays sub-posts of the post in the grid in the main area
- Parent post displays a list of sub-posts of the parent post in the main area (goes up one level)

General discussion     General discussion     General discussion     General discussion     General discussion		Forum post	listing			
Asian travellers		Actions	Post subject	User	Approved	Modified
click here for more		1 🗟 💥 🤅	African travellers	Turbo	Yes	10/25/2008 7:31:30 PM
		🛛 🗟 💥 🤅	European travellers	Nikky	Yes	10/25/2008 7:42:54 PM
		1 🗟 💥 🦷	Asian travellers	Mia	Yes	10/26/2008 11:43:27 AM
		🛛 🗟 💢 🤅	Could somebody recommend a backpack?	Mia	Yes	1/7/2009 2:38:09 PM
		1 🖻 💥 🤅	Hostels in London	Nikky	Yes	2/4/2009 5:38:54 PM
						Items per page: 25 💌
	Sele	cted posts: (se	ect some action) 💌 OK			items per påge: 25

## 8.20.8 Forum moderation

You can configure a forum so that it is moderated. It means that all posts must be approved by one of the forum moderators before they are published in the forum.

## **Configuring forum moderation**

You can enable forum moderation and configure the list of moderators under the **Forum properties -> Moderators** tab. Even when this option is disabled, approval of posts might be required, e.g. when a <u>Bad word</u> is detected or when a post has been rejected.

🚨 Forum group properties						
<u>Forum gro</u>	Forum groups + Site forums					
Forums	General	View				
Forums •	Technical	support				
Posts	General	Subscriptions	Moderators	Security	View	
Forum is moderated Moderators:						
User User						
Global Administrator (administrator)						
Remove selected Add users						

If you're a moderator, you can moderate the forum posts either **directly on the website** or on the **Forum properties -> Posts** tab:

Search and the second s
Forum groups   Site forums
Forums General View
Forums
Posts General Subscriptions Moderators Security View
Technical support
Forum rules     Delete Provide Point and
Andy(12/22/2009, 9:20 AM) RE:My computer is running Member Andy(12/22/2009, 9:20 AM) RE:My computer is running slow Have you tried turning it off and on again? Post attachments
Upload: Browse Upload

... or you can find the list of all posts waiting for your approval on the **Forum groups** dialog:

🧏 Forum groups				
Sa New forum group				
Actions	Group name	e		
N 🗙 🕆 🦊	AdHoc forum	n group		
N 🗙 🕆 🦊	Site forums			
Posts waiting for my approval				
Actions Forum name Post content				
💥 🗹 🛛 Tech	nical support	Andy: RE:My computer is running slow Have you tried turning it off and on again?		

The moderators automatically receive an e-mail notification when a new item is waiting for approval. The e-mail template can be modified in **Site Manager -> Development -> E-mail templates -> Forums -Moderator notification**.

## 8.20.9 Subscriptions

Subscriptions allow users to receive e-mail notifications when a new post is added to the selected forum.

There are several ways how a user can subscribe for receiving e-mail notifications:

1. The forum administrator can subscribe users to the whole forum and manage all subscriptions at **Forum edit -> Subscriptions**.

🥦 Forum group properties						
Forum groups   Site forums	Forum groups + Site forums					
Forums General View						
Forums  Announcements						
Posts General Subscriptions M	Moderators Security View					
A New subscription						
Actions E-mail •	Thread					
2 Subscriber@localhost.loc	al					

Send confirmation e-mail when deleting a subscription

After clicking the **A** New subscription link, the following dialog depicted in the screenshot below will be displayed. You only need to enter the user's e-mail address and click OK. If you do it with the **Send confirmation e-mail to subscriber** check-box checked, the user will receive a confirmation e-mail, telling them that they have been subscribed. These confirmation e-mails are sent automatically when the user subscribes on-site, as described in the following two points.

Posts	General	Subscriptions	Moderators	Security	View			
Subscripti	Subscriptions + New subscription							
E-mail: subscriber@localhost.local								
	ОК							

Send confirmation e-mail to subscriber

2. The user clicks the **subscribe to forum** link at the top of the forum:

Ann	Announcements						
Pro	Product announcements come here.						
Nev	New thread   Subscribe to forum   Site forums > Announcements						
1101							
<u>nev</u>	Thread	Created by	Posts	Views	Last post		

3. The user subscribes to a particular post and sub-posts:

Announcements					
Product anno	ouncements come here.				
Site forums >	Announcements > New products	View modes: Threaded			
Reject Reje	ect all Move thread				
1	administrator - 11/26/2007 9:59:30 AM New products New products were added to our web site.				
Site admin 3 3 3	Administrator signature				
	Reply   Quote   Subscribe to post	Edit Delete Report abuse			
Rejec	<u>t Reject all Split thread</u>				
	Matthew - 11/26/2007 9:59:53 AM RE:New products Where can I find them?				
Guest	Reply   Quote   Subscribe to post	Edit Delete Report abuse			

The e-mails are sent to the subscribed users based on the **Forums - New post** e-mail template that can be edited in the **Site Manager -> Development -> E-mail templates** dialog.

The user can unsubscribe using the link in the e-mail.

Forum base URL and forum e-mails It's important to set a correct Forum base URL value in the forum properties so that the notification e-mails contain valid links to the forum. Use URL in format http:// localhost/kenticocms/forums.aspx - enter the full URL of the page with the forum, including the domain.
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 8.20.10 Forum post attachments

Users can attach files to forum posts. To enable users to do this, you have to assign the **Attach files** permission on the forum's **Security** tab to the desired user roles or all authenticated users. See the <u>Security</u> topic for more details. There are also some additional settings related to attachments:

In Site Manager -> Settings -> Forums, you can make the following setting:

• Forum attachments allowed extensions - you can specify extensions of files that can be attached to forum posts; extensions should be entered without dots and separated by semicolons; if blank, all extensions are allowed

In web part properties of the Forum group web part, you can make the following settings:

- **Display attachment image** if checked, attached images will be displayed as images, not only as links
- Attachment image maximal side size if an attached image is larger than the entered value, it will be resized so that its larger side's size is equal to the entered value

When editing a forum in CMS Desk -> Tools -> Forums, you can set the following property on the

General tab:

• Attachment max. file size (kB) - you can define the maximal size of an attached file in kB

#### Adding attachments to a forum post

When adding a post to a forum, users can check the **Attach file(s)** check box at the bottom of the post adding dialog.

Security code:	580741	580741	(please enter the numbers on the image)
Subscribe to post:			
Attach file(s):			
	ОКСа	ncel Preview	]

After clicking **OK**, a new dialog will be displayed, where users can upload the attachments. When all desired images are uploaded, users can click the **Back** button, which will take them back to the forum.

#### Attachments

Maximum allowed file size is 1024 kB.

Filename	File size	
computer.png	21330 B	<u>Delete</u>
Blue-hills.jpg	28521 B	Delete
Desert.jpg	845941 B	<u>Delete</u>
	Browse Upload	Back

Back in the forum thread, links to uploaded attachments will be displayed with the post, as you can see in the screenshot below.

Reject Reje	ct all <u>Split thread</u>
Site admin	Admin - 12/22/2009 9:58:44 AM RE:New products I am so smart!
	Post attachments: <u>computer.png Blue-hills.jpg Desert.jpg</u>

Reply | Quote | Subscribe to post

Edit Delete Attachments Report abuse

## 8.20.11 BBCode support

<u>Bulletin Board code</u> (the *BBCode* abbreviation is commonly used) is a lightweight markup language designed to let users format text of their messages. It is used in many forums on the web, not just on websites crated with Kentico CMS. Its tags are similar to HTML tags and are entered in square brackets.

Users can use BBCode in their forum posts only if it is enabled. You have to allow use of BBCode when editing ( $\mathscr{P}$ ) a forum or forum group, on the **General** tab of its editing interface in **CMS Desk -> Tools ->** 

#### Forums.

The following table explains particular BBCode tags. The first column shows icons on the BB editor toolbar. Clicking one of these icons encloses text selected in the text within the respective tags. The second column shows examples of text enclosed within the tags. The **Description** column explains what effects the tags have on the formatting. The last column lists respective properties on the **General** tab that have to be enabled in order for the tags to be functional.

lco n	Example	Description	Property on the General tab
	[url]http://example.org[/url] [url=http://example.com]Example [/url]	Makes the text a link leading to the URL.	Enable links in posts
	[]	One of the following three options can be selected:	
9		No - the macros are not functional and the icon is not displayed Simple dialog - clicking the icon displays a simple dialog where the URL of the link can be entered manually Advanced dialog - clicking the icon displays the Insert link dialog where the URL can be selected in various ways	
	[img]http://www.imagesxy.com/ img.bmp[/img] [img=200x50]http://www. imagesxy.com/img.bmp[/img] [img=200]http://www.imagesxy. com/img.bmp[/img]	Displays an image located at the URL. The optional parameter resizes the image. It can be added either in format <i><width>x<height></height></width></i> or <i><max< i=""> <i>side size&gt;</i>.</max<></i>	Enable image macros in posts
		One of the following three options can be selected:	
		No - the macros are not functional and the icon is not displayed Simple dialog - clicking the icon displays a simple dialog where the URL of the link can be entered manually Advanced dialog - clicking the icon displays the Insert image dialog where the image can be selected in various ways	
	[quote]quoted text[/quote] [quote=Administrator]quoted text [/quote]	Displays text in a grey box; used for quotations. The optional parameter displays <i>Administrator wrote:</i> and the quoted text on a new line.	Enable quote macros in posts
F	[code]code example[/code]	Displays text in monospaced format;	Enable code snippet

896

		used for code snippets.	macros in posts
b	[b]bold text[/b] [strong]bold text[/strong]	Makes the text bold.	Enable bold font macros in posts
i	[i]italicized text[/i] [em]italicized text[/em]	Makes the text italic.	Enable italics font macros in posts
u	[u]underlined text[/u]	Underlines the text.	Enable underline font macros in posts
ŧ	[s]strikethrough text[/s]	Strikes the text through.	Enable strike font macros in posts
	[color=red]Red Text[/color] [color=#f00]Red Text[/color] [color=f00]Red Text[/color] [color=#ff0000]Red Text[/color] [color=ff0000]Red Text[/color]	Sets the text color.	Enable font color macros in posts

### URLs in BBCode macros

All URLs in macros (URL, IMG) are validated as a URL to avoid XSS and resolved into their absolute URL equivalents. The following URL formats can be used:

- www.google.com URL starting with www.
- http://devnet.kentico.com URL starting with protocol
- ~/CMSDesk/default.aspx Virtual path
- ../default.aspx Relative URLs
- /KenticoCMS/default.aspx Server relative URL

## API for BBcode macros

There is an easy way to resolve macros in ASPX or codebehind code. To resolve all the macros (recommended), use the following method:

string CMS.CMSHelper.CMSContext.ResolveDiscussionMacros(string inputText)

Or you can use the **CMS.GlobalHelper.DiscussionMacroHelper** class to resolve macros with particular settings using the **ResolveMacros** method from an object of this class.

### 8.20.12 Forum favorites

If you enable the **Enable favorites** web part property of the **Forum group** web part, forum posts will be displayed with the **Add post to favorites** link, as you can see in the screenshot below.

Reject Reje	ect all Move thread
Site admin	administrator - 11/26/2007 9:58:25 AM Add post to favorites Web site launch We are happy to announce web site launch.
	Administrator signature

If a user clicks this link, the post will be added to their favorite posts.

If you place the **Forum favorites** web part to some page, the web part will display links to favorite posts of the current user. You can see the appearance of the web part with two favorite posts in the screenshot below.



## 8.20.13 Friendly URLs

Forums display content based on the current values of the **forumid** and **threadid** query string parameters. By default, the URL of a forum thread might look like the following:

• <domain>/Forums.aspx?forumid=3&threadid=12

A friendly URL of the same forum thread looks like the following:

<domain>/Forums/f4/t13/Frequently-asked-questions.aspx

Having your forum URLs in this format is a good practice when it comes to SEO (Search Engine Optimization).

### **Enabling friendly URLs**

For this to be enabled, you have to do the following two tasks:

1. Set the following properties of the Forum group web part:

- Use friendly URLs check to enable the Friendly URLs feature
- Friendly base URL enter the base part of the URL, which is displayed after the domain name; e.g. /Forums for the example above and for the document aliases listed below
- URL extension extension that will be used at the end of the friendly URL;

2. Assign the following <u>document aliases</u> to the document containing the Forum group web part. The *I* **Forums** part of each alias must be equal to the value in the **Friendly base URL** property of the Forum group web part:

- /Forums/f{forumid}/{whatever}
- /Forums/f{forumid}/fp{fpage}/{whatever}

- /Forums/f{forumid}/t{threadid}/{whatever}
- /Forums/f{forumid}/fp{fpage}/t{threadid}/{whatever}
- /Forums/f{forumid}/t{threadid}/tp{tpage}/{whatever}
- /Forums/f{forumid}/fp{fpage}/t{threadid}/tp{tpage}/{whatever}

#### Single forum friendly URLs

If you want to enable friendly URLs for a <u>single forum</u>, the **Forum (Single forum - General)** web part should be set the same way as described in step 1, but only the following two document aliases need to be added to the document:

- /Forums/t{threadid}/{whatever}
- /Forums/t{threadid}/tp{tpage}/{whatever}

## 8.20.14 Customizing forum design

Forum layouts are stored in **<web project>\CMSModules\Forums\Controls\Layouts**. The folder contains three sub-folders by default.

↑ Name	Ext	Size
金[]		<dir></dir>
🗀 [Custom]		<dir></dir>
🗀 [Flat]		<dir></dir>
🗀 [Tree]		<dir></dir>

The **Flat** and **Tree** folders contain controls for the identically named layouts. The **Custom** folder can be used for defining custom layouts.

To **create a custom layout**, you need to create a sub-folder inside the **Custom** folder. The name of this sub-folder will be used as the name of the layout. The sub-folder has to contain controls with the same names as included in the Flat or Tree folders. You can see a screenshot of these files below. When writing the controls' code, make sure that they inherit from **ForumViewer**.



## 8.20.15 Security

The security model of the Forums module has two parts:

- 1. Security of the Forums module administration interface.
- 2. Security of the forums published on the website.

## Forums module administration interface

Access to the Forums module administration interface in CMS Desk -> Tools can be managed in the Modules -> Forums permission matrix at CMS Site Manager -> Administration -> Permissions (or CMS Desk -> Administration -> Permissions; only applies to the current site):

- Modify allows users to modify forum settings
- Read allows users to only read forum settings

Users without any permissions who are moderators of at least one forum are allowed to access the **Posts waiting for my approval** dialog only.

A Permissions						
Site:	Corporate Site	•	]			
Permission type:	Modules	•	]			
Permission matrix:	Forums	•	]			
			_			

	Modify	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	ď	ď
CMS Designers		
CMS Desk Administrators	ď	Ś
CMS Editors		Ś
CMS Readers		ď
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

## Security of forums published on a website

If you **Edit** ( $\checkmark$ ) some forum and switch to its **Security** tab, the permission matrix displayed in the screenshot below will be displayed.

Columns of the matrix represent the following actions:

- Access to forum defines who can enter the forum and view posts
- Attach files defines who can attach files to forum posts
- Mark as answer defines who can mark posts as answers in Question Answer forums
- **Post** defines who can add posts to the forum

- Reply defines who can reply to forum posts
- Subscribe defines who can subscribe for receiving notifications about new posts in the forum

Rows in the top part of the matrix have the following meanings:

- Nobody the action can not be performed by anyone
- All users anybody can perform the action
- Authenticated users only signed-in registered users can perform the action
- Authorized roles only members of roles specified in the lower part of the matrix can perform the action

Below the permission matrix, there is one more check-box:

**Allow user to change the name** - if checked, users can change their name displayed with a forum post when entering the post; if unchecked, their user name will be used

Posts	General	Subscriptions	Moderators	Security	View					
				Access to	forum	Attach files	Mark as answer	Post	Reply	Subscribe
Nobody				$\bigcirc$		$\odot$	$\odot$	$\odot$	O	$\odot$
All users				۲			۲	۲	0	۲
Authenti	cated user	S		0		0	$\odot$	$\odot$	O	$\odot$
Authoriz	ed roles			0		۲	0	Ô	۲	$\odot$
Please s	elect the au	thorized roles (a	vailable only w	/hen you sele	ect the "Aut	thorized roles" option	n above):			
				Access to	forum	Attach files	Mark as answer	Post	Reply	Subscribe
Authenti	cated user	5				đ			đ	
CMS Bas	ic users								đ	
CMS Cor	nmunity Ad	ministrators								
CMS Des	igners								đ	
CMS Des	k Administ	rators				đ				
CMS Edit	ors									
CMS Rea	iders					đ			ഷ്	
Everyone										
Gold Par	tners									
Live ID u	sers					đ				
Not auth	enticated u	sers								
Silver Partners										

Allow user to change the name

The following properties of the Forum group web part are also related to forum security:

- Hide forum to unauthorized users indicates whether forums for which the user has no permissions are visible for them in the list of forums in a forum group
- Redirect unauthorized users determines whether to redirect unauthorized users to the logon page or whether to display only an info message
- Access denied page URL URL where the user is redirected when trying to access forum for which they are not authorized

#### 8.20.16 Settings

Settings of the Forums module are located in **Site Manager -> Settings -> Forums**. The following settings are available:
- Forum unsubscription URL URL that will be used for unsubscriptions from receiving notifications about new forum posts. Can be inherited by forum groups and further by particular forums. The Forum unsubscription web part must be placed on the page for the unsubscriptions to work correctly.
- Send forum e-mails from e-mail address that will be used as the sender address of forum notification e-mails.
- Forum base URL URL that will be displayed when viewing a forum and in forum notification emails. e.g. ~/Forum.aspx
- Forum attachments allowed extensions you can specify extensions of files that can be attached to forum posts; extensions should be entered without dots and separated by semicolons; if blank, all extensions are allowed
- Max forum post nodes maximum number of forum post nodes displayed in the forum post tree when editing a forum in CMS Desk -> Tools -> Forums; when more nodes are in the forum group than this value, the *click here for more* ... link will be displayed at the bottom of the tree, letting you display a list of all nodes in the main area

1	Kentico								Switch to CMS Desk
<b>7</b> 1	CMS Site Manager	Sites	Administration	Settings	Development	Licen	ises	Support	
Site: (global)	)	•	🧏 Foru	ms					
- Sett	ings		Save	Reset	t these settings to a	<u>lefault</u>			
-	Web site								
	💐 Content management		These sett	ings are glot	oal, they can be	overridd	en by t	the local site sett	ings. Please select the site to see or cha
	Files								
	Membership		Forum ur	subscriptio	n URL	2			
	Y Security		Send foru	ım e-mails f	rom	2	no-rep	olv@localhost.lo	cal
	URLs and SEO					~			
	System		Forum ba	ISE URL		2			
	🗑 E-mails		Forum at	tachments a	llowed extension	s 🕜	jpg;gif	f;png	
	Avatars		Max forur	n post node	s	0	100		
	Bad words				-		100		
	Blogs		Export the	ese settinas					
. 4	🖗 MetaWeblog API								
	暑 Booking system								
-	Community								
	Content staging		٩						
	Forums		Т						
	Media libraries								

## 8.20.17 Forums internals and API

#### 8.20.17.1 Database tables and API classes

The Forums module uses the following database tables:

- Forums_Forum contains forums and their settings
- Forums_ForumGroup contains forum groups and their settings
- · Forums ForumModerators contains information about forum moderators
- Forums ForumPost contains forum posts and information about them
- Forums ForumRoles contains information about forum permissions
- Forums_ForumSubscription contains information about forum subscriptions
- Forums_Attachment contains forum post attachments and information about them
- Forums_UserFavorites contains favorite posts of users

The Forums API is provided by the following **CMS.Forums** namespace classes:

- ForumInfo, ForumInfoProvider these classes provide functionality for managing individual forums
- ForumGroupInfo, ForumGroupInfoProvider these classes provide functionality for managing forum groups
- ForumPostInfo, ForumPostInfoProvider these classes provide functionality for managing forum posts and threads

The following topics show examples of how these classes can be used:

- Creating forums
- <u>Creating threads</u>

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.20.17.2 Creating forums

The following sample code shows how you can create a new forum group and forum and add them to the system:

[C#]

```
using CMS.Forums;
using CMS.CMSHelper;
using CMS.SiteProvider;
. . .
        // Create new forum group info
        ForumGroupInfo fgi = new ForumGroupInfo();
        // Set properties
        fqi.GroupName = "CustomForumGroup";
        fgi.GroupDisplayName = "Custom forum group";
        fgi.GroupSiteID = CMSContext.CurrentSiteID;
        fgi.GroupAuthorDelete = true;
        fgi.GroupAuthorEdit = true;
        fgi.GroupDisplayEmails = true;
        // Save object to database
        ForumGroupInfoProvider.SetForumGroupInfo(fgi);
        // Get Forum group object
        fgi = ForumGroupInfoProvider.GetForumGroupInfo("CustomForumGroup", CMSContex
```

```
// If forum group exists
if (fgi != null)
{
    // Create new forum object
    ForumInfo fi = new ForumInfo();
    // Set properties
    fi.ForumName = "CustomForum";
    fi.ForumDisplayName = "Custom forum";
    fi.AllowAccess = SecurityAccessEnum.AllUsers;
    fi.AllowAttachFiles = SecurityAccessEnum.AuthenticatedUsers;
    fi.AllowPost = SecurityAccessEnum.AllUsers;
    fi.AllowReply = SecurityAccessEnum.AllUsers;
    fi.AllowSubscribe = SecurityAccessEnum.AllUsers;
    fi.ForumGroupID = fgi.GroupID;
    fi.ForumOpen = true;
    fi.ForumModerated = false;
    fi.ForumThreads = 0;
    fi.ForumPosts = 0;
    fi.ForumSiteID = fgi.GroupSiteID;
    // Save new forum to database
    ForumInfoProvider.SetForumInfo(fi);
}
```

#### 8.20.17.3 Creating threads

The following sample code shows how you can create a new thread and add it to a forum:

#### [C#]

```
using System;
using CMS.Forums;
using CMS.CMSHelper;
. . .
        // Get forum object
        ForumInfo fi = ForumInfoProvider.GetForumInfo("CustomForum", CMSContext.Curr
        // If forum exists
        if (fi != null)
        {
            // Create new thread object
            ForumPostInfo fpi = new ForumPostInfo();
            // Set properties
            fpi.PostUserID = CMSContext.CurrentUser.UserID;
            fpi.PostUserMail = CMSContext.CurrentUser.Email;
            fpi.PostUserName = CMSContext.CurrentUser.UserName;
            fpi.PostForumID = fi.ForumID;
```

```
fpi.PostTime = DateTime.Now;
fpi.PostApproved = true;
fpi.PostText = "This is a forum post";
fpi.PostSubject = "Post subject";
// Save thread to database
ForumPostInfoProvider.SetForumPostInfo(fpi);
}
```

# 8.21 Friends

## 8.21.1 Overview

The Friends module is one of the social-networking features of Kentico CMS. It allows you to add the Facebook-style friendship functionality to your site. The module enables registered website users to request another user's friendship. When the friendship gets approved by the second user, the two users become friends. The process of requesting a friendship is described in the <u>Requesting friendships</u> topic.



Management of friendships can be performed either by the users themselves, or by the site administrators. Both options are described in the <u>Friends management</u> topic. Users can manage only their own friendships, while users with appropriate permissions (described in the <u>Security</u> topic) can manage friendships of all users in the system.

The module comes with several web parts. Using these, you can add the friendship management functionality to the live site. All web parts related to the module are listed in the <u>Available web parts</u> topic.

By default, becoming friends brings just some improvements to the way the users can communicate and publish details about themselves, as described in the <u>Examples of use</u> topic. However, the friendship functionality may be leveraged largely in your custom code, enabling you to use these relationships between users for your specific purposes.

## 8.21.2 Requesting friendships

#### How to make the request?

There are several ways how users can request other users' friendship:

#### Context menus

As described in Development -> Document types and transformations -> Context menus in

<u>transformations</u>, the **Users viewer** web part may be equipped with a context menu when an appropriately written transformation is used. This context menu contains the **Add as friend** option, enabling registered website users to request this user's friendship.



## Request friendship and My friends web parts

The **Request friendship** web part is just a tiny link with customizable text. Clicking it opens the **Add a new friend** pop-up dialog.

#### Request friendship

Requesting friendships on the live site is also possible via the **My friends** web part. It contains the **Add a friend** link, which opens the same **Add a new friend** dialog mentioned above.

My friends	My pendi	ng requests R	ejected friends				
Add a friend	Add a friend						
My curren	My current friends						
Reject all select	<u>cted friends</u>	Remove all select	ed friends				
Actions		User name 🔺	Full name	Nickname	Comment	Approved	
		Abi	Abigail Woodwarth	Abi		12/22/2009 10:19:46 AM	
0 🗙		Abi Kelly	Abigail Woodwarth Kelly Taylor	Abi Kelly		12/22/2009 10:19:46 AM 12/18/2008 6:42:46 PM	
0 X 0 X		Abi Kelly Tessie	Abigail Woodwarth Kelly Taylor Iman Teshome	Abi Kelly Tessie		12/22/2009 10:19:46 AM 12/18/2008 6:42:46 PM 11/21/2008 3:41:16 PM	

#### CMS Desk -> My Desk -> My friends

Users with access to **CMS Desk** can request friendships from within **My desk -> My friends**. Here again, they can find the **Add a friend** link, which opens the **Add a new friend** dialog.

Kentico	C				Switch to Site Manager	Site: Community	Site 💌 User:
CMS Desk	Conten	t My desk	Tools Administratio	n			
	cuments	🌉 Frier	nds				
🛛 🗟 Outdated	documents	My friends	Friends waiting for m	y approval Rejected friends	My pending requests		
··· 🥪 Waiting fo	or my approval out by me	Add a fri	end				
	e bin onto						
& My docum	encs	<u>Reject all s</u>	elected friends <u>Remo</u>	ve all selected friends			
🔲 My blogs			Actions	User name 🔺	Full name	Nickname	Comment
🖄 My messa	ges		Ø 🗙	David	David Silver	David	
- 🦥 My friends	;		0 🗙	Kelly	Kelly Taylor	Kelly	

#### Add a new friend dialog

After clicking one of the options mentioned above, the **Add a new friend** dialog appears. After selecting a user (not possible in case of request from context menu) and filling in a comment explaining your request, there are two important options defining how the user will be notified about the request:

- Send e-mail the user will be notified by a standard e-mail message
- Send message the user will be notified by a Messaging module message
- Automatically approve global administrators and users with the Manage permission for the Friends module can use this check-box, which creates the requested friendship without the other user's approval; not available on the live site

In both cases, the **Friend request** e-mail template mentioned in the section below is used as the body of the message.

🕖 Add a nev	w friend Webpage Dialog
🌉 Add	a new friend
User: Comment:	Mia Lee (Mia) Select Clear
	<ul> <li>✓ Send e-mail</li> <li>✓ Send message</li> <li>✓ Automatically approve</li> </ul>
http://localho	Request Cancel

#### **Related e-mail templates**

In **Site manager -> Development -> E-mail templates**, you can find the following e-mail templates related to the Friends module:

- Friend approval template for e-mail or message confirming that a user approved your friendship request
- Friend rejection template for e-mail or message confirming that a user rejected your friendship request
- Friend request template for e-mail or message notifying you about the fact that some user requested your friendship

If you choose to **Edit** (*V*) some of the templates, you will see two large text fields:

- Text text of the template used for e-mails
- Plain text text of the template used for Messaging module messages

Links in these e-mails need to be handled by a special page containing the **Friendship management** web part, which is a special web part that ensures handling of these requests.

David wants to be your friend - Message (HTML)							
Message Ad	ld-Ins			۲			
Reply Reply Forward to All Respond	Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second conditions       Image: Second						
From: David [david.	silver@localhost.local]		Sent:	Tue 9/7/2010 12:31 PM			
To: Petr Penicka							
Subject: David wants	Subject: David wants to be your friend						
David Silver (David	) wants to be your friend.						
Comment: Hi, I like	your profile. You have th	e same interests as I h	nave, can we be friends?				
Sent: 9/7/2010 12:31	1:17 PM						
Choose one of the following actions:							
Accept or reject							
Open user profile							

## 8.21.3 Friends management

Users with access to **CMS Desk -> My desk -> My friends** can manage their own friendships from within this section of the administration interface.

Site administrators can manage all users' friends in both **CMS Desk** and **Site Manager**, in the **Administration -> Users** section, after choosing **Edit** () next to some user and switching to their **Friends** tab.

In both cases, the four tabs described below are available. On the live site, the same functionality can be provided by the web parts described in the <u>Available web parts</u> topic.

## Friends (My friends)

On this tab, you can see a list of all your current friends. New friendships can be requested using the **Add a friend** link. You also can **Remove** (**X**) or **Reject** (**2**) friends in the list. The difference between the two is that rejected friends can't request your friendship anymore while they are in the rejected status, while removed friends can request the friendship again. By checking some of the check-boxes and clicking one of the **Reject all selected friends** and **Remove all selected friends** buttons, you can reject or remove more friends at once.

🜺 Kentico								Switch	to CMS Desk	User: Global	
CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support					
Administration	🚨 U:	sers									
Bad words	Users	Mass e-mail	On-line users	1							
- 🛃 Badges 	<u>Users</u>	<ul> <li>administrator</li> </ul>									
E-mail queue	Genera	al Password	Settings	Sites Roles	Departments	Notifications	Categories	Friends	Subscriptions	Languages	
Permissions	🌉 Fi	2 Friends									
- Security of the security of	Friends	Friends Friends waiting for approval Rejected friends Pending requests									
···(2) Scheduled tasks ···(2) Smart search	Add 🚳	Add a friend									
System UI personalization	<u>Reject</u>	all selected frien	ds <u>Remove a</u>	all selected friend	<u>ds</u>						
web farm		Actions	-	User name 🔺		Full name	N	ickname	Cor	nment	
		. 0 🗙		David		David Silver	D	avid			
		. 0 🗙		Kelly		Kelly Taylor	K	elly			
	•										

#### Friends waiting for approval (Friends waiting for my approval)

On this tab, you can see a list of all users who requested your friendship. You can either **Approve** (**v**) or **Reject** (**v**) their request. By checking some of the check-boxes and clicking one of the **Approve all selected friends** and **Reject all selected friends** links, you can approve or reject more requests at once.

<u>.</u>	Kentico								Swite	to CMS Desk	User: Global
<b>~i</b> ~	CMS Site Manager	Sites	Administrati	on Settings	Development	Licenses	Support				
⊡ Adn	ninistration Avatars	🧕 L	Jsers								
	🗟 Bad words	User	Mass e-ma	I On-line use	rs						
8	🕹 Badges 🛃 Banned IPs	Users	• administra	tor							
	E-mail queue	Gene	ral Passwor	d Settings	Sites Roles	Departments	Notifications	Categories	Friends	Subscriptions	Languages
L	Permissions	20. F	riends								
···· {	🛿 Recycle bin 🚨 Roles	Frien	ds Friends v	aiting for approv	al Rejected frie	nds Pending r	equests				
Q	Scheduled tasks										
	a Smart search	Appro	ve all selected	friends Reject	t all selected frien	ds					
	UI personalization		Actions	User name 🔺	Full name	Nickname	Comment				
- (	Users		🗸 🖉	Josh	Joshua O'Nei	l Josh					
<b>U</b>	🕽 Web farm		<b>V</b>	Turbo	Noel Turpin	Turbo					

#### **Rejected friends**

On this tab, you can see a list of all users whose friendship you rejected. Once in the rejected status, the user can't request your friendship anymore. You can either **Approve** ( $\checkmark$ ) some user's friendship,

which makes them your friend, or **Remove** (**X**) the user from the list of rejected, which enables them to request your friendship again. By checking some of the check-boxes and clicking one of the **Approve all selected friends**, you can approve or remove more users at once.

Kentico CMS Site Manager	Sites Administration	on Settings I	Development	Licenses	Support		<u>Switc</u>	h to CMS Desk	User: Global
Administration     Administration	area Users								
Bad words	Users Mass e-ma	I On-line users							
📲 Badges 😹 😹	Users + administra	tor							
E-mail queue	General Passwor	d Settings Site	es Roles	Departments	Notifications	Categories	Friends	Subscriptions	Languages
Permissions	Friends								
🧐 Recycle bin 🥵 Roles	Friends Friends v	aiting for approval	Rejected friend	s Pending re	quests				
···⑦ Scheduled tasks ···泂 Smart search	Approve all selected	friends Remove all	selected friend	<u>ls</u>					
UI personalization	Actions	User name 🔺 🖡	ull name	Nickname	Comment				
Users	🔲 🖌 💥	Josh J	loshua O'Neil	Josh	I don't like yo	u			
	□	Turbo N	loel Turpin	Turbo	you are my e	nemy, not my	friend!!!		

# Pending requests (My pending requests)

On this tab, you can see a list of friends whose friendship you requested. New friendships can be requested using the **Add a friend** link. You can cancel a request by clicking the **Remove** (**X**) icon or you can select more users using the check-boxes and click the **Remove all selected friends** link, which cancels more friendship requests at once.

🜺 Kentico		Switch to CMS Desk User: Global
CMS Site Manager	Sites Administration Settings Development Licenses Support	
Administration  Avatars  Bad words  Badges  Banned IPs  Complete E-mail queue  Complete Event log  Complete Permissions  Complete Event log  Administration  Complete Event log  Complete	Sites     Administration     Settings     Development     Licenses     Support       Users     Users     Mass e-mail     On-line users       Users     Mass e-mail     On-line users       Users     > administrator       General     Password     Settings       Sites     Roles     Departments       Notifications     Categories       Sites     Friends	Friends Subscriptions Languages
Soles     Color Scheduled tasks     Color Scheduled tasks     Color Scheduled tasks     Sole Scheduled tasks     So	Friends     Friends waiting for approval     Rejected friends     Pending requests	
Sers	Actions User name - Full name Nickname Comment	
	Guru     Ratan Gupta     Guru     Nikky     Nicole Dubois     Nikky	

# 8.21.4 Available web parts

The Friends module comes with the following web parts. All of them are located in the **Community -> Friends** web part category. This page brings just a brief overview of them. For a detailed description of each web part's properties please see <u>Kentico CMS Web parts reference</u>.

### **Friends viewer**

This web part can typically be used on user's profile page for viewing their friends. If you right-click the user's avatar image, you will be offered several tasks, as you can see in the screenshot below.



The following web parts are actually on-site equivalents of the friends management administration interface described in the <u>Friends management</u> topic:

#### Friends list

This web part displays a list of all friends of the current user.

Reject all selected friends Remove all selected friends

Actions	User name 🔺	Full name	Nickname	Comment	Approved
0 🗙	Kelly	Kelly Taylor	Kelly		12/18/2008 6:42:46 PM
0 🗙	Tessie	Iman Teshome	Tessie		11/21/2008 3:41:16 PM
					Items per page: 25 💌

#### Friends waiting for approval

This web part displays a list of all users waiting for the current user's friendship approval.

Approve all selected friends	Reject all selected friends
------------------------------	-----------------------------

Actions	User name 🔺	Full name	Nickname	Comment	Requested
I 🖉	Mia	Mia Lee	Mia		9/13/2010 12:44:49 PM
🗸 ⊘	Tessie	Iman Teshome	Tessie		9/13/2010 12:44:36 PM
					Items per page: 25 💌

## **Rejected friends**

This web part displays a list of all users whose friendship the current user rejected. These users can't request the current user's friendship while they are in this list.

Approve all selected friends R	temove all selected friends
--------------------------------	-----------------------------

Actions	User name 🔺	Full name	Nickname	Comment	Rejected
🗸 🗶	Josh	Joshua O'Neil	Josh	I don't like you	9/13/2010 12:30:40 PM
🖌 🗶	Turbo	Noel Turpin	Turbo	you are my enemy, not my friend!!!	9/13/2010 12:31:26 PM
					Items per page: 25 💌

#### My pending requests

This web part displays a list of all users whose friendship the current user requested.

Remove all selected miends										
	Actions	User name 🔺	Full name	Nickname	Comment		Status			
	×	Guru	Ratan Gupta	Guru			Waiting			
	×	Nikky	Nicole Dubois	Nikky			Waiting			
						Items per page:	25 💌			

## **Request friendship**

This web part displays only a link that, when clicked, opens the Add a new friend dialog.

Request friendship

#### My friends

This web part combines the five previously mentioned web parts in one single web part. It's functionality is fully equal to the UI in CMS Desk -> My Desk -> My friends.

My friends	Rejected fri	ends My pending	requests							
Add a friend										
My current friends										
Reject all sel	Reject all selected friends Remove all selected friends									
	Actions	User name 🔺	Full name	Nickname	Comment	Approved				
	Ø 🗙	Kelly	Kelly Taylor	Kelly		9/6/2010 5:10:23 PM				
	0 🗙	Steevie	Jack Stevenson	Steevie		9/13/2010 12:41:36 PM				
						Items per page: 25 💌				

# 8.21.5 Examples of use

#### Messaging module

When selecting a recipient of a messaging module message, you can conveniently switch to the **Friends** tab and select one of your friends just by clicking their user name.

Ø Select user Webpage Dialog	×							
& Select user								
Contact list Friends Search								
User name 🔺								
Kelly								
Steevie								
	Items per page: 25 💌							
http://localhost/KenticoCMS_55/cms 💊 Local intranet   Protected Mode: Off	h.							

#### **Fields visibility**

Users can set the visibility of some fields on their public profile to **Display to friends**, which makes the field visible only to their friends. For more information on this feature, please refer to <u>Development -></u> <u>Membership</u>, security and permissions -> Custom fields visibility.

#### 8.21.6 Security

Permissions of the Friends module can be set in both **Site manager** and **CMS Desk**, in the **Administration -> Permissions** section. There, you need to select the **Modules -> Friends** permission matrix.

The following permissions can be assigned to particular roles:

- **Manage** members of the role can manage Friends of particular users in CMS Desk -> Administration -> Users
- Read members of the role can view friends of particular users in CMS Desk -> Administration -> Users

#### A Permissions

Site:	Corporate Site	•
Permission type:	Modules	•
Permission matrix:	Friends	•

	Manage	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	đ	đ
CMS Designers		
CMS Desk Administrators	ď	ď
CMS Editors		đ
CMS Readers		ø
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

#### 8.21.7 Settings

The following two settings available in **Site Manager -> Settings -> Community** are related to the Friends module:

Enable friends	Indicates if the Friends functionality should be available in other modules on
	the live site.

Friend management path	Node alias path of the page on that the <b>Friendship management</b> web part is placed. This is a special web part that handles friendship management actions from friendship request e-mails.
	If some user receives an e-mail with friendship request, there are links for friendship approval or rejection included in the mail. When the user clicks one of the links, they are redirected to this page and the user guid and type of action is transferred in form of querystring parameters. The <b>Friendship management</b> web part processes the received parameters and performs the necessary tasks for friendship approval or rejection.
	On the <b>Community Starter Site</b> , the <i>Special-pages/Friend-management</i> page serves exactly this purpose. More information on how such page can be created can be found in <u>Community Site Guide -&gt; Part 2 -&gt; Creating the</u> <u>Special pages -&gt; Creating the friend management page</u> .



# 8.22 Geo mapping

# 8.22.1 Overview

The Geo mapping module allows you to display maps on your site and also display content on these maps. The module has no administration interface and consists only of 3 web parts and 3 widgets derived from these web parts. The web parts or widgets can be found under the **Maps** category in the web part or widget selection dialog.



You can see these web parts configured and working on the sample Corporate Site, under the *I* **Examples/Webparts/Maps** node of the content tree.

# What it is good for

The module can be used for many scenarios in which a geographical position is the key information:

- show your offices
- show your stores
- show your partners
- · show real estates you offer
- etc.

You can use it to display virtually any content that has a location. The only requirement is that you tag your content with <u>longitude and latitude</u>.

An example of how to display content on the map can be found in this topic.

## How to get longitude and latitude for a given place

You can use some on-line service that allows you to enter the country, city and street and shows you its longitude and latitude. One such service is available for example at <a href="http://world.maporama.com">http://world.maporama.com</a>.

#### Available providers

You can choose from three different map providers:

- Bing Maps (originally Live Maps)
- Google Maps
- Yahoo Maps

Each of these providers has its dedicated web part and widget. Click on the particular map provider to learn more.

# 8.22.2 Bing maps

The **Bing maps** web part enables displaying of a map with defined location markers using the Bing maps service. It uses **Bing maps API**, which is described in detail in the following location: <u>http://www.microsoft.com/maps/isdk/ajax/</u>.

The **Bing maps** widget is derived from the web part. It provides the same functionality and look, while only a limited set of properties can be configured.

You can find an example of use of the web part on the Corporate Site sample website, on the *I* **Examples/WebParts/Maps/Bing maps** page. In the screenshot below, you can see how the web part looks on page load. It shows the location markers (learn <u>here</u> how to display them on the map). The map is zoomed according to the settings made by the **Large view scale** property and its middle point is on the coordinates specified by the **Default latitude** and **Default longitude** properties.



The screenshot below shows how the web part looks when one of the location markers is clicked. The map gets zoomed according to the value of the **Detailed view scale** property and a tooltip is displayed, showing the heading loaded from the document type field specified in the **Tooltip field** property and the rest of the content loaded using the transformation specified in the **Transformation** property.



If you enable the **Enable keyboard shortcuts** property, the following shortcuts can be used to control the map:

- R switch to Road view
- A switch to Aerial view
- H switch to Aerial view with labels
- O switch to Bird's eye view
- B switch to Bird's eye view with labels
- Plus Sign (+) zoom in
- Minus Sign (-) zoom out

Detailed descriptions of all properties of the web part can be found in <u>Kentico CMS Web Parts Reference</u> or directly in the Web part properties dialog after clicking the **Documentation** link at the top right corner of the dialog.

## 8.22.3 Google maps

The **Google maps** web part enables displaying of a map with defined location markers using the Google maps service. It uses **Google maps API v3**, which is described in detail in the following location: <u>http://</u>code.google.com/intl/cs-CZ/apis/maps/documentation/v3/controls.html.

The **Google maps** widget is derived from the web part. It provides the same functionality and look, while only a limited set of properties can be configured.

You can find an example of use of this web part on the Corporate Site sample website, on the *I* **Examples/WebParts/Maps/Google maps** page. In the screenshot below, you can see how the web part looks on page load. It shows the location markers (learn <u>here</u> how to display them on the map). The map is zoomed according to the settings made by the Large view scale property and its middle point is on the coordinates specified by the Default latitude and Default longitude properties.



The screenshot below shows how the web part looks when one of the location markers is clicked. The map gets zoomed according to the value of the **Detailed view scale** property and a tooltip is displayed, showing the heading loaded from the document type field specified in the **Tooltip field** property and the rest of the content loaded using the transformation specified in the **Transformation** property.



If you enable the **Enable keyboard shortcuts** property, the following shortcuts can be used to control the map:

- Up Arrow move a little north
- Down Arrow move a little south
- Left Arrow move a little west
- Right Arrow move a little east
- Page Up move a large step north
- Page Down move a large step south
- Home move a large step west

- End move a large step east
- Plus Sign (+) zoom in
- Minus Sign (-) zoom out

Detailed descriptions of all properties of the web part can be found in <u>Kentico CMS Web Parts Reference</u> or directly in the Web part properties dialog after clicking the **Documentation** link at the top right corner of the dialog.

### 8.22.4 Yahoo maps

The **Yahoo maps** web part enables displaying of a map with defined location markers using the Yahoo maps service. It uses **Yahoo maps API**, which is described in detail in the following location: <u>http://</u><u>developer.yahoo.com/maps/ajax/</u>

The **Yahoo maps** widget is derived from the web part. It provides the same functionality and look, while only a limited set of properties can be configured.

For Yahoo maps to work, you need to have a **Yahoo AppID** for your application and enter it into the **Yahoo AppID** property of the web part. You can obtain the AppID at <u>http://developer.yahoo.com/</u><u>wsregapp/</u>. Yahoo account is needed in order to obtain the AppID. However, if you don't have one, you will be offered to create it after going to the link above.

You can find an example of use of this web part on the Corporate Site sample website, on the *I* **Examples/WebParts/Maps/Yahoo maps** page. In the screenshot below, you can see how the web part looks on page load after clicking the **Map** button. It shows the location markers (learn here how to display them on the map). The map is zoomed according to the settings made by the **Large view scale** property and its middle point is on the coordinates specified by the **Default latitude** and **Default longitude** properties.



The screenshot below shows how the web part looks when one of the location markers is clicked. The map gets zoomed according to the value of the **Detailed view scale** property and a tooltip is displayed, showing the heading loaded from the document type field specified in the **Tooltip field** property and the rest of the content loaded using the transformation specified in the **Transformation** property.



If you enable the **Enable keyboard shortcuts** property, the following shortcuts can be used to control the map:

- Left Arrow pan the map west
- Right Arrow pan the map east
- Up Arrow pan the map north
- Down Arrow pan the map south
- Page Up zoom the map in
- Page Down zoom the map out

Detailed descriptions of all properties of the web part can be found in <u>Kentico CMS Web Parts Reference</u> or directly in the Web part properties dialog after clicking the **Documentation** link at the top right corner of the dialog.

# 8.22.5 Example: Displaying offices on the map

This example will show you how to display a list of offices and their location on the map. We will use the **Google maps** web part in this example. However, the procedure is identical for **Bing maps** and **Yahoo maps**, too.

We will use the Corporate Site sample website for this example, and create a page for offices directly under the website root. The page will follow the same concept as the **Company/Offices** page on this site. We will create the new one only so that we can see the step-by-step procedure of creating such a page from scratch.

## How to do it in general

To display content on a map, you need to have this content stored in the content tree as standard documents. These documents can be of any document type as long as the **document type contains two fields for the geographical coordinates** - one for **longitude** and one for **latitude**.

Then you need to configure the properties of the maps web part to display documents of this document type stored within the desired location, and specify which fields of the document type contain the coordinates. This ensures displaying of the location markers. Finally, you need to choose a field for the heading and a transformation for the content of the tooltip displayed when a location marker is clicked.

# Step 1 - Creating a new page with offices

1. Sign in as an administrator to CMS Desk -> Content and click the root of the content tree.

2. Click New and choose to create a new Page (menu item). Enter Offices for Page name and choose to Create a blank page using the Two columns layout. Click Save.

3. First we need to add a list of offices. Switch to the **Design** tab and add the **Listings and viewers/ Repeater** web part to the **zoneLeft** web part zone. Set the following properties:

- Path: /{0}/%
- Document types: CMS.Office
- Transformation: CMS.Office.Simple
- Selected item transformation: CMS.Office.Simple
- Item separator: <br />
- Content before: <div class="GeneralList">
- Content after: </div>

Click OK.

#### Step 2 - Geo-coding your information

4. Now we will create two documents of the **Office** type. Click the **Offices** page and click **New**. Choose to create a new **Office** and enter the following values:

- Office name: New York Office
- Address line 1: 1290 Avenue of the Americas
- City: New York
- ZIP code: 10104
- State: NY
- Country: USA
- Phone: 123456789
- E-mail: ny@example.com
- Latitude: 40.76
- Longitude: -73.98
- Office photo: choose some image from your local disk

#### Please note

The Office document type already contains the **Latitude** and **Longitude** fields. These are the fields that you will specify later in the map web part properties as the **source for the geographical position** of the location markers. If you're using a custom document type, you will need to define these fields manually. They must be of the **Decimal number** type. You can call them as you need, you only need to specify the appropriate name in the web part properties.

Values are valid in the following intervals:

- Latitude: from -90 to 90
- Longitude: from -180 to 180

Click **🖬 Save**.

5. Create another office:

- Office name: San Francisco Office
- Address line 1: 835 Market Street
- City: San Francisco
- **ZIP code**: 94103
- State: CA
- Country: USA
- Phone: 123456789
- E-mail: sf@example.com
- Latitude: 37.78
- Longitude: -122.41
- Office photo: choose some image from your local disk

Click 🔜 Save.

## Step 3 - Displaying the content on the map

When you see the page now, it displays only a list of offices. Switch to the **Design** tab and add the **Maps/Google maps** web part to the **zoneRight** web part zone.

First, we will configure which documents should be displayed on the map. Set the following properties:

- **Path:** /{0}/%
- Document types: CMS.Office

It ensures that all offices in the current site section will be shown. Now we specify the transformation used for the text displayed in the balloon:

• Transformation: CMS.Office.Preview

Now we set the following values that specify how the map is displayed:

- Large view scale: 3 (the zoom used on page load)
- Detailed view scale: 10 (the zoom used a location marker is clicked)
- Width: 500 (in pixels)
- Height: 400 (in pixels)
- Default latitude: 39.27 (latitude of the map center when the overview map is displayed on page load)
- **Default longitude:** -98.20 (longitude of the map center when the overview map is displayed on page load)
- Latitude field: OfficeLatitude (the field of the document containing the latitude position)
- Longitude field: OfficeLongitude (the field of the document containing the longitude position)

- Tooltip field: OfficeName (the field used for the heading of the tooltips)
- Content before: <div class="Map">
- Content after: </div>

Click OK.

Sign out and see the page. It will look like this:



You can see two baloons on the map - these are the location markers. When you mouse-over a balloon, you will see the office name. When you click a balloon or an office link in the list, you will see the detailed view:



# 8.23 Groups

# 8.23.1 Overview

The groups module allows site members who share an interest in a certain topic or field to access related information and share their own experiences on a subsection of your website. Site users can create new groups or join already existing ones. Groups may contain their own documents section, forums, message boards, media libraries, polls and projects and have the option of defining group roles. Groups can also be useful for managing access control.

#### **Recently added groups**



Site administrators can manage groups of a given site through the CMS Desk interface. Learn more in the <u>Groups management</u> topic.

Both site administrators and users who are in authorized roles can edit the content and various settings of groups. Learn more about this in the <u>Editing a group</u> topic. Further settings available only to global administrators are described in the <u>Settings</u> topic.

To allow users to interact with the groups module, you have to place some group web parts, which can be found in the **Community** web part category, somewhere on your site. An example of this that describes how to enable users to create groups can be found in the <u>Enabling users to create groups</u> topic. A full list of group web parts and their function and properties can be found in the <u>Web Parts</u> reference.

The <u>Groups internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how groups can be managed using the API.

Kentico CMS Community Site Guide contains some additional group examples and tutorials:

- Part 1 -> Groups: Examples of the functionality and customization of groups.
- Part 2 -> Creating the Groups section: A step-by-step tutorial on how to create a sample group
  pages section of a website.

You will need to have the sample Community Site installed to follow Kentico CMS Community Site Guide.

## 8.23.2 Groups management

In the screenshot below, you can see the groups management interface located in **CMS Desk -> Tools -** > **Groups**. On this page, you can see a list of all groups on the site. You can filter displayed groups using the filter above the list. Filtration is possible by the group's **display name** and approval **Status**.

Even though groups are typically created by site users on the live site, you can create new groups in

this section of the administration interface too. It can be done by clicking the & New group link at the top part of the page. Groups in the list can be **Edited** ( $\checkmark$ ) or **Deleted** ( $\thickapprox$ ). The <u>Editing a group</u> topic describes editing in more detail.

If an administrator's approval is needed after a user creates a new group, the approval can be done by clicking the **Approve** ( $\checkmark$ ) icon. By clicking the **Reject** ( $\oslash$ ) icon, groups can be switched back to the state they were in before they were approved. If you do this to an existing group, the group will not be displayed on the live site.

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CMS Desk Conte		My desk	Tools	Administration			
⊡ Tools		🚴 Grou	ips				
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Booking system Content staging Custom tables E-commerce	g Group name: Status:		ne: LIKE (all)	ELIKE			
Forums		Actions		Display name 🔺		Approved	
Media libraries		1 🗶 🖉	V 🖉	African travellers		Yes	
🔋 Message boards	6	/ 💥 (	V 🖉	American travellers		Yes	
💮 🔊 Newsletters		/ 🗶 V	V 🕗	Asian travellers		Yes	
Polls		/ 🗶 V	V 🖉	Australian travellers		Yes	
Web analytics		1	I 🖉	Czech Republic fans		Yes	
		/ 🗶 🖉	V 🕗	European travellers		Yes	

## 8.23.3 Editing a group

There are two ways how group properties can be edited:

- On-site management using the **Group profile** web part; this is typically used by group administrators
- Administration interface in CMS Desk -> Tools -> Groups, after choosing to Edit () a group; this is typically used by site administrators

Both of the two approaches provide the same tabs layout, with the difference that there are some extra settings in the administration interface compared to on-site management. These will be marked as **AI only** in the descriptions below.

#### **General tab**

On this tab, you can set the general properties of the group:

- Display name name of the group displayed on the site and in the administration interface; Al only
- Code name name of the group used in site code; Al only
- **Description** text describing the group
- Group pages location node alias path of the location where group pages of the group are stored
- Theme allows the selection of one of the website <u>CSS stylesheets</u> that will be used by the pages of the group

- Avatar group avatar image
- Approve members determines if users can join the group with or without a group admin's approval; the last option allows invited members to join without approval
- Content access determines who can view content of the group pages
- Notify group admins when a user joins/leaves if checked, group administrators will receive a notification e-mail when a user joins/leaves the group
- Notify group admins on pending members if checked, group administrators will receive a notification e-mail when a user requests to join the group and admin's approval is needed
- Created by displays who created the group
- Approved by displays who approved the group to be created on the site

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General Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects			
Display name:	Asian trave	ellers								
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Description:	This is travelle Asia, pl group. 1 you to o travelle	a gro ers. I lease It is get in ers fr	up of As f you an registen a great touch w om your	sia-based re living in r to the chance for with other region. The	E Y					
Group pages location:	/Group-pag	ges/Asia	an_travelle	's Sele	ct Clear					
Theme:	(default)				•					
Avatar:	Upload: Select pre-	defined	evatar	Brows	e					
Approve members:	<ul> <li>Any sit</li> <li>Only a</li> <li>Only a</li> <li>Anybox</li> </ul>	e memb pproved pproved dv can vi	er can join members members ew the con	can join can join except fo tent	r invited members					
Content access:	<ul> <li>Site m</li> <li>Only g</li> </ul>	embers roup me	can view th mbers can	e content view the content						
Notifications: Created by:	Notify gr Notify gr administrat	<ul> <li>Notify group admins when a user joins/leaves</li> <li>Notify group admins on pending members administrator</li> </ul>								
Approved by:	administrat OK	or								

# Security tab

On this tab, you can use the matrix to set permissions for group pages. The following permissions can be assigned:

- Create pages users can create group pages
- **Delete pages** users can delete group pages
- Edit pages users can edit group pages

These permissions can be assigned to:

- Nobody nobody can perform the action
- All users all users can perform the action
- Authenticated users only signed-in users can perform the action, i.e. anonymous public users cannot perform it
- **Group members** only group members can perform the action, i.e. authenticated non-group members and anonymous users cannot perform it
- Authorized roles only members of the group roles selected below can perform the action



#### Group admin's permissions

Group administrators can perform any of these actions, even if they don't have the permissions assigned.

#### 🜆 Group properties

#### Groups + Asian travellers

General	Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects	

	Create pages	Delete pages	Edit pages
	Create pages	Delete pages	Eult pages
Nobody	$\odot$	$\odot$	$\bigcirc$
All users	0	0	0
Authenticated users	0	0	0
Group members	0	0	0
Authorized roles	۲	۲	۲
Please select the authorized roles (available only when	you select the "Authorized roles" op	tion above):	
	Create pages	Delete pages	Edit pages
Group admin	<b>S</b>	ď	₫

#### **Members tab**

On this tab, you can see a list of all members of the group. You can **Edit** ( $\checkmark$ ) or **Delete** ( $\bigstar$ ) users in the list. You can also **Approve** ( $\checkmark$ ) members' requests for joining the group or **Reject** ( $\heartsuit$ ) them from the group. Once rejected, the user cannot request to join the group until they are approved again.

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Projects										
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Clicking the **Add member** link, you can add users to the group directly, without sending an invitation to them. This is possible only in the administration interface. On the live site, only the **live invite member** link is displayed. When adding a user to a group, you have the following options:

- User select an existing site user who you want to add to the group
- **Comment** text comment that you can add to the user; this comment is not sent to the user, it is only displayed in the administration interface
- Approve if checked, the user will be automatically approved; if not, a user will need a group admin's approval before they become members of the group
- Add roles you can use this button to assign the user to group roles; a dialog where you can select from a list of available group roles is opened

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General	Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects		
Members )	New mer	mber								0
User:	Joshua ( Josh f	D'Neil (Josh rom Aust	) ralia.		Select	Clear			Add member to roles No roles selected. Add roles	
Comment Approve:					-					
	O	< C								

After clicking the **Solution** Invite member link, the dialog displayed in the screenshot below will be displayed. There are two ways of invitation:

- Invite existing site member after selecting an existing site user in the User name field, an e-mail will be sent to the user's e-mail address based on the Groups member invitation e-mail template; text entered to the Comment field will be included in the e-mail; the user can join the group either by clicking a link in the e-mail, or via the My sent invitations web part
- Invite via e-mail this way, you can send the invitation to any e-mail address that you enter into the E-mail field; in this case, user will be required to register to the site after clicking the join link in the e-mail; text entered to the Comment field will be included in the e-mail

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Croup pro	perties						
Groups + Asian tra	avellers						
General Securit	y Members	Roles	Forums	Media libraries	Message boards	Polls	Projects
Members  Invite	member						
Invite:	existing s	site memi	ber 🔘 via	e-mail			
User name:	Jack Stevens	son (Stee	vie)	Select	Clear		
Comment:	Hi, do yo	u want	to join	our group?	~		
					-	-	
	Invite						

#### Roles tab

On this tab, you can see a list of roles defined for the group. These roles are applicable only in the context of the group. Don't confuse them with website roles, which can be set in **Site Manager -> Administration -> Roles**.

Roles in the list can be **Edited** ( $\checkmark$ ) and **Deleted** ( $\thickapprox$ ).

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Groups •	Asian trave	ellers						
General	Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects
🥦 <u>New rol</u>	<u>e</u>							
Actions	Role na Group a	admin						

If you click the **New role** link above the list, you can define a new role for the group. The following properties can be entered:

- Role display name name of the role that will be used on the live site and in the administration interface
- Role code name name of the role used in your code; Al only
- Role description text description of the role
- Can manage the group indicates if members of the role can manage the group by means of the Group profile web part

a Group properties										
Groups + Asian travellers										
General Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects			
Roles  New role										
Role display name: Role code name: Role description:	Group C GroupC Some c	content ec ontentEd lescrip	ditor itor tion.							
Can manage the group	:	K			Ŧ					

When **Editing** (*P*) a role, two tabs are offered. On the **General** tab, you can change the details entered when creating the role, as described above. On the **Users** tab, you can see a list of all members assigned to the role. These can be removed from the role by selecting the checkbox to the left of users in the list and clicking the **Remove selected** button. New users can be added to the role using the **Add users** button.

🇞 Gro	up prop	erties						
Groups •	Asian trave	ellers						
General	Security	Members	Roles	Forums	Media libraries	Message boards	Polls	Projects
Roles +	Group conte	ent editor						
General	Users							
Followin	g users are	assigned t	o the rol	e:				
	User name							
	Ratan Gupta	a (Guru)						
Ren	nove selecte	ed	Add us	ers				

## Forums tab

On this tab, you can create and manage the group's forums. As these forums are standard Kentico CMS forums set into the context of the group, please refer to the <u>Modules -> Forums</u> chapter of this guide for more information on their management.

## Media libraries tab

On this tab, you can create and manage the group's media libraries. As these are standard Kentico CMS media libraries set into the context of the group, please refer to the <u>Modules -> Media libraries</u> chapter of this guide for more information on their management.

#### Message boards tab

On this tab, you can manage the group's message boards. As these are standard Kentico CMS message boards set into the context of the group, please refer to the <u>Modules -> Message boards</u> chapter of this guide for more information on their management.

#### Polls tab

On this tab, you can manage the group's polls. As these are standard Kentico CMS polls set into the context of the group, please refer to the <u>Modules -> Polls</u> chapter of this guide for more information on their management.

#### **Projects tab**

On this tab, you can manage the group's projects. As these are standard Kentico CMS projects set into the context of the group, please refer to the <u>Modules -> Project management</u> chapter of this guide for more information on their management.

#### 8.23.4 Enabling users to create groups

You can enable site users to create new groups by placing the **Community -> Group registration** web part on your site. You have to set the following properties of the web part:

- Template source alias path alias path of the document that will be used, together with the documents stored under it, as a template for groups created by the web part; if left empty, the value of the *Site Manager -> Settings -> Community -> Group template path* field will be used here
- **Template target alias path** alias path where the documents copied from the *Template source* alias path will be loaded when a group is created
- Automatically create forum if checked, a forum group and a General discussion forum are automatically added under the created group
- Automatically create media library if checked, a media library is automatically added under the created group
- Automatically create smart search indexes if checked, a smart search index is automatically created for the documents of the created group, as well as for the new forum if the *Automatically create forum* property is enabled
- **Group profile URL path** alias path of the page containing the group profile; the {groupname} wildcard can be used to substitute for the name of the current group
- **Combine with default culture** if checked, default culture will be used when creating group pages under a culture where the source or target nodes were not found
- Group name label text text that will be displayed in the form before the field where the group name is entered
- Text after successful registration text displayed when a group is successfully created
- Text after successful registration with approving text displayed when a group is successfully created, but requires an administrator's approval to be published on the web
- Require approval if checked, the group will have to be approved by a site administrator before it is
  published on the site
- Redirect to URL URL where the user will be redirected after creating the group
- Hide form after registration if checked, the form will be hidden after creating the group

#### Group pages templates

Each group has its own section on the website where its content is stored - so called group pages.

When adding the **Group registration** web part to your site, you have to specify the **Template source alias path** and **Template target alias path** properties. These two properties are essential when creating the **group pages section** of each group.

The page specified by the **Template source alias path** and all its sub-pages are copied to the location specified by the **Template target alias path**.

To get a better idea of how this works, you can take a look at our sample **Community Starter site**. On the site, the **Group registration** web part is configured the following way:

- Template source alias path: /Groups/Template
- Template target alias path: /Group-pages

As you can see in the screenshot below, there is the **/Groups/Template** page with one sub-page: **Pages**. When a new group is created, its title page is created under **/Group-pages** and the **Pages** page is created under it. As you have probably noticed, the web parts placed on the title page are identical to those placed on the **Template** page. Web parts on the **Pages** page are also identical to the source **Pages** page. Under **Pages**, all group documents will be stored.



All Kentico CMS documents can be set to be owned by a group. This can be done by signing into CMS Desk, selecting a document from the content tree, switching to **Edit** mode and going to **Properties -> General -> Owned by group** and choosing a group from the drop-down list displayed after clicking the **Change** button. This property is used to identify which group a document belongs under and is used by various group context sensitive web parts to display the correct content. It also influences the editing permissions of Group administrator widget zones.



Please refer to <u>Community Site Guide -> Part 2 -> Creating the Groups section</u> for a step-by-step tutorial on how to create a sample group pages section of a website.

## 8.23.5 How site users create a new group

When a user wants to create a new group on the live site using the **Group registration** web part, they have to fill in the following details:

- Group name name of the group displayed on the site and in the administration interface
- Description text describing the group
- Approve members determines if users can join the group with or without group admin's approval; the last options allows invited members to join without the approval
- Content access determines who can view content of the group pages

After clicking **OK**, the group will be created and group pages added to the site. In case that site administrator's approval is needed, these actions will be performed after the approval.



#### Create new group

By entering the details into the form below, you can create your new user group. Make sure you give the group a name and description according to the group's field of interest. It is a good way of attracting site users with the same interest to join your group.

Group name:	My new group	
	This is my first group.	*
Description:		
		-
	O Any site member can join	
Approve members:	Only approved members can join	
	$\bigcirc$ Only approved members can join except for invited members	
	Anybody can view the content	
Content access:	Site members can view the content	
	Only group members can view the content	
	OK	

# 8.23.6 Security

Permissions of the Groups module can be set in **Site Manager -> Administration -> Permissions**. The following permissions can be assigned to members of the particular roles:

- Manage allows managing of groups via the administration interface
- Read allows viewing group settings, but does not allow any changes to be made to them

🦧 Permissior	IS	
Site:	Corporate Site	•
Permission type:	Modules	
Permission matrix:	Groups	

	Manage	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	đ	ď
CMS Designers		
CMS Desk Administrators	ø	Ś
CMS Editors		đ
CMS Readers		ď
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

## Group pages permissions

- Create pages users can create group pages
- **Delete pages** users can delete group pages
- Edit pages users can edit group pages

These permissions can be assigned to:

- **Nobody** nobody can perform the action
- All users all users can perform the action
- Authenticated users only signed-in users can perform the action, i.e. anonymous public users can not perform it
- **Group members** only group members can perform the action, i.e. authenticated non-group members and anonymous users can not perform it
- Authorized roles only members of the group roles selected below can perform the action



#### Group admin's permissions

Group administrators can perform any of these actions, even if they haven't the permissions assigned.

🙎 Group properties										
iroups   Asian travellers										
General Security Members Roles Forums	Media libraries Message boards	Polls Projects								
	Create pages	Delete pages	Edit pages							
Nobody	0	$\odot$	0							
All users	0	0	0							
Authenticated users	$\odot$	$\odot$	$\odot$							
Group members	$\bigcirc$	$\odot$	0							
Authorized roles	۲	۲	۲							
Please select the authorized roles (available only when	you select the "Authorized roles" o	ption above):								
	Create pages	Delete pages	Edit pages							
Group admin	đ	đ	đ							

# 8.23.7 Settings

Settings of the groups module are located in **Site Manager -> Settings -> Community**. The following settings can be done:

- **Group template path** alias path of the document that will be used, together with the documents stored under it, as a template for newly created groups; e.g. /*Groups/Template*
- Groups security access path alias path of a document to which users will be redirected when they try to access pages of a group to which they don't have permissions; this page should contain the Group security message web part; e.g. /Groups/{GroupName}/Access
- Group management path alias path of the group management page, containing the Group profile web part; e.g. /Groups/{GroupName}/Management
- Group profile path alias path of the group profile page; e.g. /Groups/{GroupName}
- Invitation acceptation path alias path of the document containing the Group invitation web part; this is a special web part handling requests for joining a group when a user clicks the joining link in group invitation e-mail; e.g. /Special-pages/Invitation-acceptation
- Group invitation expires after (days) when some user receives a group invitation e-mail, the link for joining the group included in the e-mail will be active for the number of days entered here; after the specified duration, the link will no longer be functional; when 0 is entered, the link will be functional permanently



#### 8.23.8 Groups internals and API

#### 8.23.8.1 Database tables and API classes

The Groups module uses the following database tables:

- Community_Group contains groups and their settings
- Community_GroupMember contains information about group members
- Community_GroupRolePermission contains group role permissions
- Community_Invitation contains information about invitations to groups

The Groups API is provided by the following CMS.Community namespace classes:

- GroupInfo, GroupInfoProvider these classes provide functionality for managing groups
- GroupMemberInfo, GroupMemberInfoProvider these classes provide functionality for managing group members
- InvitationInfo, InvitationInfoProvider these classes provide functionality for managing group invitations

The following topics show examples of how these classes can be used:

- Getting group data
- <u>Modifying and creating groups</u>
- <u>Managing group members</u>
- <u>Managing group roles</u>
- Creating a group invitation
The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.23.8.2 Getting group data

The following sample code shows how you can get a group as a GroupInfo object:

[C#]

```
using CMS.Community;
...
string groupName = "customGroupName";
string siteName = "CommunitySite";
      // Get group object by GroupID
      GroupInfo gi = GroupInfoProvider.GetGroupInfo(1);
      // Get group object by group code name and site name
      GroupInfo gi2 = GroupInfoProvider.GetGroupInfo(groupName, siteName);
```

The following sample code shows how you can get a DataSet containing all groups in the system with a *GroupID* greater than 5, ordered by their *Display name*:

[C#]

#### 8.23.8.3 Modifying and creating groups

The following sample code shows how you can modify the Display name of an existing group:

```
using CMS.Community;
...
// Get group object by GroupID
GroupInfo gi = GroupInfoProvider.GetGroupInfo(1);
// Change group display name
gi.GroupDisplayName = gi.GroupDisplayName + "_Updated";
// Save object
GroupInfoProvider.SetGroupInfo(gi);
```

The following sample code shows how you can create a new group and add it to the system:

[C#]

```
using System;
using CMS.Community;
using CMS.SiteProvider;
using CMS.UIControls;
using CMS.CMSHelper;
. . .
        // Create empty group object
        GroupInfo gi = new GroupInfo();
        // Set properties
        gi.GroupDisplayName = "New group";
        gi.GroupName = "NewGroup";
        gi.GroupSiteID = 2;
        gi.GroupDescription = "";
        gi.GroupApproveMembers = GroupApproveMembersEnum.AnyoneCanJoin;
        gi.GroupAccess = SecurityAccessEnum.AllUsers;
        gi.GroupApproved = true;
        gi.GroupApprovedByUserID = CurrentUser.UserID;
        gi.GroupCreatedByUserID = CurrentUser.UserID;
        gi.AllowCreate = SecurityAccessEnum.GroupMembers;
        gi.AllowDelete = SecurityAccessEnum.GroupMembers;
        gi.AllowModify = SecurityAccessEnum.GroupMembers;
        gi.GroupNodeGUID = Guid.Empty;
        // Save object to database
        GroupInfoProvider.SetGroupInfo(gi);
```

#### 8.23.8.4 Managing group members

The following sample code shows how you can add the user *gold* as a member of the group:

```
using System;
using CMS.Community;
using CMS.SiteProvider;
using CMS.UIControls;
using CMS.CMSHelper;
. . .
        string groupName = "customGroupName";
        string siteName = "CommunitySite";
        // Get group object
        GroupInfo gi = GroupInfoProvider.GetGroupInfo(groupName, siteName);
        // If group exist
        if (gi != null)
        {
            // Get user object
            UserInfo ui = UserInfoProvider.GetUserInfo("gold");
            // If user exists
            if (ui != null)
            {
                // Create new group member object
                GroupMemberInfo gmi = new GroupMemberInfo();
                //Set properties of member
                gmi.MemberGroupID = gi.GroupID;
                gmi.MemberApprovedByUserID = CurrentUser.UserID;
                gmi.MemberApprovedWhen = DateTime.Now;
                gmi.MemberInvitedByUserID = CurrentUser.UserID;
                gmi.MemberUserID = ui.UserID;
                gmi.MemberJoined = DateTime.Now;
                // Save object to database
                GroupMemberInfoProvider.SetGroupMemberInfo(gmi);
            }
        }
```

The following sample code shows how you can remove the user *gold* from the group:

```
using CMS.Community;
using CMS.SiteProvider;
...
 // Get user object
    UserInfo ui = UserInfoProvider.GetUserInfo("gold");
```

```
// If user exists
if (ui != null)
{
    int userID = ui.UserID;
    int groupID = 13;
    // Get group member object by UserID and GroupID
    GroupMemberInfo gmi = GroupMemberInfoProvider.GetGroupMemberInfo(userID,
    // Delete group member object from database
    GroupMemberInfoProvider.DeleteGroupMemberInfo(gmi);
    // Delete group member object from database by GroupMemberID
    GroupMemberInfoProvider.DeleteGroupMemberInfo(1);
}
```

The following sample code shows how you can modify the *Comment* property of a group member:

#### [C#]

```
using CMS.Community;
...
// Get group member object by GroupMemberID
GroupMemberInfo gmi = GroupMemberInfoProvider.GetGroupMemberInfo(1);
// Change member comment property
gmi.MemberComment = gmi.MemberComment + " Updated";
// Save object
GroupMemberInfoProvider.SetGroupMemberInfo(gmi);
```

The following sample code shows how you can get a DataSet containing all group members in the system with a *GroupMemberID* greater than 2, ordered by their *GroupMemberID*:

```
using System.Data;
using CMS.Community;
....
string where = "MemberID > 5";
string orderBy = "MemberID";
// Get DataSet of group member objects
DataSet ds = GroupMemberInfoProvider.GetGroupMembers(where, orderBy);
```

#### 8.23.8.5 Managing group roles

The following sample code shows how you can add a role to a group:

[C#]

```
using CMS.Community;
using CMS.SiteProvider;
using CMS.CMSHelper;
. . .
        string groupName = "customGroupName";
        string siteName = "CommunitySite";
        // Get group object
        GroupInfo gi = GroupInfoProvider.GetGroupInfo(groupName, siteName);
        // If group exists
        if (gi != null)
        {
            // Create role object
            RoleInfo ri = new RoleInfo();
            // Set role properties
            ri.RoleName = "CustomGroupRole";
            ri.DisplayName = "Custom group role";
            ri.RoleGroupID = qi.GroupID;
            ri.SiteID = CMSContext.CurrentSiteID;
            // Save role to database
           RoleInfoProvider.SetRoleInfo(ri);
        }
```

The following sample code shows how you can add a group member to a group role:

```
if ((ri != null) && (ui != null))
{
    // Add user to role
    UserRoleInfoProvider.AddUserToRole(ui.UserID, ri.RoleID);
}
```

#### 8.23.8.6 Creating a group invitation

The following sample code shows how you can create an invitation to a group:

[C#]

942

```
using System;
using CMS.Community;
using CMS.UIControls;
using CMS.CMSHelper;
. . .
        // Create new invitation object
        InvitationInfo ii = new InvitationInfo();
        // Set properties
        ii.InvitationComment = "Invitation comment";
        ii.InvitationGroupID = 1;
        ii.InvitationUserEmail = "admin@localhost.local";
        ii.InvitedByUserID = CurrentUser.UserID;
        ii.InvitationCreated = DateTime.Now;
        ii.InvitationValidTo = DateTime.Now.AddDays(1);
        // Save object
        InvitationInfoProvider.SetInvitationInfo(ii);
```

# 8.24 Image gallery

### 8.24.1 Overview

The Image gallery module is used for effortless creating of image gallery pages. By means of this module, you can display images which are saved in the content tree as documents. The module encompasses four page templates and three web parts suitable for creating image galleries.



However, using the Image gallery module is not the only way to display images on your web pages. You can achieve similar functionality by using the <u>Media libraries</u> module. The Media libraries module provides an alternative way of creating a gallery and is suitable if large numbers of stored images are to be displayed or if you want to make audio, video and other file types accessible from your web pages. Another option consists in attaching an image to a document using the <u>Attachment image gallery</u> web part.

In the Image gallery chapter, you can learn what web parts are available in the Image gallery module (learn <u>here</u> how to do it), what page templates can be used (as explained <u>here</u>), you can learn how to import files or even the whole folder structure from the disk to Kentico CMS content repository (as referenced <u>here</u>) and you can also learn how to use transformations to alter the appearance of your gallery (as explained <u>here</u>).

### 8.24.2 Available web parts

There are three web parts suitable for creating image galleries. From the **Select web part** dialog window, you can select the **Image gallery**, **Lightbox gallery** and **Content slider** web parts in the **Listings and viewers** category.

### Image gallery

This is the basic web part for image galleries. In its initial view, it displays a set of picture thumbnails:



After clicking one of the thumbnails, the detail view will be displayed:



Besides the usual parameters common to all web parts, these properties can be set to customize the appearance of the gallery:

Transformations			
Detail transformation	Transformation used for displaying a selected image.		
Thumbnail transformation	Transformation used for displaying gallery thumbnails.		
Layout			

<u>Next</u>

Number of columns	Number of thumbnail columns in the thumbnail view.	
Rows per page	Number of thumbnail rows per page in the thumbnail view.	
Paging		
Paging mode	Paging parameter transfer type: <u>Query string</u> - the paging parameter is transferred through URL <u>Postback</u> - the actual page is transferred through ViewState, no URL parameter is used	
Query string key	Name of the URL parameter containing the page number.	
Show first and last buttons	If checked, buttons leading to the first and last pages of the gallery will be displayed.	
Show buttons on top	If checked, paging buttons will be shown above the thumbnails. Otherwise, they will be displayed below them.	

# Lightbox gallery

This web part's thumbnail view is similar to that of the Image gallery web part:



Displaying results 1-8 (of 28)

 $| < < 1 - \underline{2} - \underline{3} - \underline{4} \ge \ge |$ 

After clicking one of the thumbnails, the whole page will be grayed out and a lightbox with the selected image will be displayed on the top of it, as you can see in the screenshot below:



Here is a list of properties specific to the Lightbox gallery web part:

Transformations	
Transformation	Transformation used for displaying the list of thumbnails.
Alternating transformation	Transformation used for even items in the thumbnail view.
Selected item transformation	Transformation used in the detail view mode.
Item separator	Separator displayed between thumbnails.
Nested controls ID	Sets the nested controls IDs. Use ';' as a separator; Example: myRepeaterID;myDatalistID;myRepeaterID2
	This property replaces the previously used NestedRepeaterID and NestedDataListID properties. If you are still using these properties, no changes to functionality will occur, but it is advisable to rewrite your code to use the new property instead.
Paging	
Enable paging	Indicates if paging is enabled. If unchecked, all thumbnails in the gallery will be displayed on a single page.
Paging mode	Paging parameter transfer type: <u>Query string</u> - the paging parameter is transferred through URL <u>Postback</u> - the actual page is transferred through ViewState, no URL parameter is used
Pager position	Determines position of the pager. Available options are <i>Bottom</i> , <i>Top</i> and <i>Top</i> and <i>bottom</i> .
Page size	Number of thumbnails displayed per page.

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Query string key	Name of the URL parameter containing the page number.
Show first and last buttons	If checked, buttons leading to the first and last page of the gallery will be displayed.
LightBox Configuration	
Always visible navigation buttons	Indicates whether the navigation buttons are always visible, not only on mouse over.
Frame width	Width of the LightBox frame.
Frame height	Height of the LightBox frame.
Path to external CSS file	URL path to the external CSS file required by LightBox.
Overlay opacity	Opacity of LightBox background. Enter values ranging from 0 (transparent) to 1 (opaque black).
Animate	Enables LightBox animation.
Load delay	Load delay time (in miliseconds). If you are using automatic resizing, this value indicates how long the lightbox will take to reach the element size. If you have problems with displaying lightbox content, try to use a higher value.
Resize speed	Defines the speed of resizing images. Choose values ranging from 1 (slowest) to 10 (fastest).
Border size	Size of the image border.
Loading image	Image displayed while loading the LightBox image.
Close button image	Image of the Close button.
Previous button image	Image of the Previous button.
Next button image	Image of the Next button.
Group name	Name of the LightBox group.

### **Content slider**

The **Content slider** is a web part that can be used for displaying various document types, hence it is also very suitable for displaying images. Contrary to the previous two web parts, the **Content slider** provides no thumbnail view. It displays a full sized image slide show with a pager below. The pager allows for browsing through the images using the numbered buttons. After clicking any of these buttons, the slide show stops and the **Start** button appears. This button launches the slide show again.



Specific properties of the Content slider web part:

Transformations	
Transformation	Transformation used for displaying the list of thumbnails.
Alternating transformation	Transformation used for even items in the thumbnail view.
Item separator	Separator displayed between thumbnails.
Nested controls ID	Sets the IDs of nested controls as specified in the transformation code.
Div options	
Width (px)	Width of the scrolling text area in pixels.
Height (px)	Height of the scrolling text area in pixels.
Style	Style assigned to the DIV tag of the area.
JavaScript options	
Fadeln time (milliseconds)	Fade in time of the image.
FadeOut time (milliseconds)	Fade out time of the image.
Break time (milliseconds)	Time for which the image will be displayed.
Auto start	If checked, the slide show will automatically start from the beginning.

# 8.24.3 Available page templates

There are three basic page templates that can be used for image galleries. In **CMS Desk -> Content**, create a new **Page (menu item)** using a page template. From the **Use page template** dialog window, you can select the **Image gallery**, **Lightbox gallery**, **Sliding gallery** and **List of galleries** templates in the **Images** category.

### List of galleries

This page template is used for displaying a list of all galleries under a selected path. For each gallery, it displays a thumbnail with a gallery name above it. By clicking one of the thumbnails, you will be redirected to the main page of the gallery.

The **Teaser image** of each gallery's menu item is used as the thumbnail in the list of galleries. To change some of the thumbnails, select the appropriate gallery's menu item in the content tree and switch to **CMSDesk -> Edit -> Form**. On the displayed page, select a new **Teaser image** and click **Galleries**. The selected image will now be displayed as a thumbnail of the gallery in the list of galleries.

Images



### Image gallery

This is a basic page template used for displaying image galleries. It uses the **Image gallery** web part for displaying images under a given path in the content tree. See the <u>Available web parts</u> chapter for detailed info.

### Lightbox gallery

This page template uses the **Lightbox gallery** web part for displaying images. See the <u>Available web</u> <u>parts</u> chapter for detailed info.

### Sliding gallery

Displays images using the Content slider web part.

#### List of galleries

Displays list of galleries.

### 8.24.4 Importing images

Images used in galleries are imported the same way as any other files, as described in the File import chapter.

### 8.24.5 Transformations

Use of transformations is essential for all **Image gallery** web parts. You can view and alter transformations in the **Transformations** section of a web part properties window. For each transformation, you can **Select** a predefined transformation from a list, **Edit** the current transformation or create a **New** one by means of the respective buttons.

Here are some examples of how you can alter the appearance of the **Image gallery** web part. This is the default thumbnail transformation code of the **Image gallery** web part:

And this is how the gallery created using this transformation looks like:



 $|< < 1 - \underline{2} - \underline{3} - \underline{4} \ge \ge$ 

In the following example, we will add a red border around each thumbnail.



This is how the result looks like:



 $| < < 1 - \underline{2} - \underline{3} - \underline{4} \ge \ge |$ 

This example shows how to display the file name and date and time of creation for each thumbnail in the gallery:





PICT01.jpg 8/13/2007 10:47:37 AM





PICT03.jpg 8/13/2007 10:47:37 AM

 $|< < 1 - \underline{2} - \underline{3} - \underline{4} \ge \ge$ 



PICT04.jpg 8/13/2007 10:47:38 AM



PICT05.jpg 8/13/2007 10:47:38 AM



PICT06.jpg 8/13/2007 10:47:38 AM



PICT07.jpg 8/13/2007 10:47:38 AM



PICT08.jpg 8/13/2007 10:47:38 AM



PICT09.jpg 8/13/2007 10:47:39 AM



### Transformations for the Lightbox gallery web part

When writing a custom transformation for the **Lightbox gallery** web part, it is necessary to use the 'rel' and 'rev' parameters as highlighted in the transformation code below. The 'title' parameter is used to determine the description of the image displayed in the lightbox.

```
<a href="<%# GetDocumentUrl() %>" rel="lightbox[group]" rev="<%# Eval
("NodeAliasPath") %>"
title="<%# Eval("FileDescription") %>"><img src="<%# GetFileUrl
("FileAttachment") %>?maxsidesize=150"
alt="<%# Eval("FileName") %>" /></a>
```

# 8.25 Media libraries

# 8.25.1 Overview

The Media libraries module enables storing of various files, such as photos, sound, videos, package files, presentation files, etc. This means that not only media files, but also other types of files can be stored in media libraries. Media libraries can either be global or related to a particular group.

🙀 Media library properties		0
Media libraries   Czech cities		
Files General Security		
New folder 4 New file	List 📰 Tiles Thumbnails	↓ Full screen
Delete      Gopy      Move	Name: Search	
	M002595.JPG M002595.JPG M002601.JPG M002601.JPG M002601.JPG	
	Selected files (select some action) CK	Items per page: 10 💌
	a	
	General	
	Folder name: CzechCities	
	C)K	

Main features of the Media libraries module:

- Support for storage of large amount of files (photo galleries)
- Support for storage of large files (video files)
- Each group of users can have any number of libraries
- Files can be uploaded to the libraries externally, e.g. using FTP

However, the Media libraries module is not the only way to store files of various kinds within the system. Kentico CMS allows you to upload files (such as GIF, JPG, SWF, PDF, XLS, DOC, etc.) to the Kentico CMS database or file system and manage them as any other content as described in <u>here</u>. Another way to achieve similar functionality is to make use of the Image gallery module (as explained <u>here</u>). Finally, you can attach files directly to documents and thus bind them to a document's life cycle (as explained <u>here</u>). Please note that both image galleries and document attachments can only be used with image file types.

- If you would like to learn how to create media libraries, please refer to the <u>Creating media library</u> topic.
- If you would like to learn how to upload files into them, please refer to the <u>Uploading files</u> topic.
- If you would like to learn how to manage files stored in a media library, please follow the <u>Files and</u> <u>folders management</u> topic.
- If you would like to read a brief overview of supported file types that can be played or displayed on your site by default, please refer to the <u>Supported file types</u> topic.
- If you would like to learn about the supported file size in media libraries, please refer to the <u>Supported file size</u> topic.
- If you would like to learn about names of files uploaded to a media gallery and their thumbnails, please refer to the File naming conventions topic.
- If you would like to learn how to display media gallery content on your site, please follow the <u>Using</u> <u>Media library web part</u> topic.
- · If you would like to learn about integration of media library files into text using the built-in WYSIWYG

editor, please refer to the Using WYSIWYG editor topic.

- If you would like to adjust the settings of the Media libraries module, please refer to the <u>Media library</u> <u>settings</u> topic.
- If you would like to learn how to customize the location of all libraries of a particular site, please refer to the <u>Configuring custom storage for media library</u> topic.
- If you would like to read a more detailed explanation of how to enable any media types to be recognized by the system, please refer to the <u>Configuring custom file types</u> topic.
- If you would like to learn how to configure maximal uploaded file size, please refer to the <u>Configuring</u> maximal uploaded file size topic.
- If you would like to learn how to deal with secured and non-secured libraries on your site, please refer to the <u>Secured vs. Non-secured libraries</u> topic.
- If you would like to learn how to set media library permissions, please refer to the <u>Media library</u> <u>permissions</u> topic.

Please note that media library files are stored directly in the file system, organized in folders. The default location of all libraries of a particular site is **~/<sitename>/media**. Each media library is either global in the context of a particular site or belongs to a group.

More examples of the use of the Media libraries module are available in Kentico CMS Community Site Guide; please note that these practical examples do not concern the whole functionality of the module but focus on its use in a broader context of the Community Site sample website:

- See <u>Part 1 -> Media libraries -> Current functionality</u> in Kentico CMS Community Site Guide: A brief description of the functionality of the Media libraries module.
- See <u>Creating custom media libraries</u> in the same section of the Community Site Guide: An example of creating a new global media library and publishing it on the site.
- See <u>Publishing more than one global media library</u> in the same section of the Community Site Guide: An example of how to publish more than one global media library on the site.
- See <u>Community Site Guide -> Part 2 -> Pre-development tasks -> Creating a sample Media library</u> in Kentico CMS Community Site Guide: An example of creating a sample media library.
- See <u>Creating the Blogs section -> Creating the Media page</u> in the same section of the Community Site Guide: An example of creating the Media page using the **Media gallery** web part under the Blogs section.
- See <u>Creating the Groups section -> Creating the Media page</u> in the same section of the Community Site Guide: An example of creating the Media page using the **Media gallery** web part under the Groups section.

### 8.25.2 Creating media library

There are two ways how media libraries can be created:

- Live site: group administrators can create group media libraries on the live site using the Group profile web part
- Administration interface: site administrators can create global media libraries in CMS Desk -> Tools -> Media libraries or group media libraries in CMS Desk -> Tools -> Groups -> Edit (2) -> Media libraries

1. In all of these cases, media libraries can be created by clicking the **New media library** link above the list of libraries, as you can see in the screenshot below.

CMS Desk Co	ontent	My desk	Tools Administ	ration	
Tools     Abuse report     BizForms     Bigs     Booking system		🧊 Media 減 <u>New me</u> di	a libraries a library		
M Content staging		Actions	Name 🔺	Folder	Description
Custom tables		/ 🗶	Czech cities	CzechCities	Czech cities are amazing.
- III E-commerce		N 🗙	Czech nature	CzechNature	Czech nature is nice.
File Import					
Modia librarios					
Media libraries					
Reporting					
Web analytics					

- 2. After clicking the link, the following details need to be entered:
- **Display name** name of the media library displayed in the administration interface and on the live site
- Code name name of the media library used in site code
- **Description** text describing the media library
- Teaser image image used as the media library teaser
- Folder name name of the folder where files will be stored; this folder will be created under <web project><site name>\media\ or a custom location set in Site Manager -> Settings -> Media libraries -> Media libraries folder

Kentico CMS Desk Content	My desk Tools Administration
Content Content Content Content Content Content Content Content Content Content staging Custom tables Custom tabl	My desk       Tools       Administration         Image: New media library       Media libraries       New media library         Display name: My first media library       Code name: MyFirstMediaLibrary         Code name:       MyFirstMediaLibrary         This is my first media library.       Image: This is my first media library.         Description:       Image: Upload: C:\Users\Public\Pictures\{ Browse         Folder name:       my library1
Reporting Web analytics	ОК

3. Click **OK** to create the library. After doing so, you will be redirected to the media library's editing interface - just as if you clicked the **Edit** ( $\swarrow$ ) icon in the list of libraries.



### 8.25.3 Media library content

#### 8.25.3.1 Uploading files

There are three ways how files can be uploaded into a media library:

- By means of the administration interface
- On the live site using the Media gallery or Media file uploader web parts
- Externally, directly into the file system e.g. via FTP

In the following examples, you will learn how to add files into media libraries via the administration interface, on the live site and using FTP.

#### Uploading files via the administration interface

If you choose to **Edit** (*P*) a media library in **CMS Desk -> Tools -> Media libraries**, you can manage files in the library on the **Files** tab.

1. It is a good idea to keep your files organized in folders within the media library. To create a new folder, click the **New folder** button in the top left corner of the page.

			Modules	957	
_	_			-	

New folder	List Tiles Thumbnails	<≞+ Full screen
😪 Delete 🎯 Copy 🚭 Move	Name: Search	
my_library1 (0)	There are no files to display.	
•		
	General	
	Folder name: my_library1	
	OX	

2. Enter the name of the folder, e.g. *pictures*, and click **OK**.

Files General Security

🔊 New folder Webpage Dialog			X
🙀 New folder			
Folder name: pictures			
ĺ	ОК	Can	cel
htt 🗣 Local intranet   Protected Mode: Of	f		æ

3. The folder is now created. You can upload files into the selected folder by clicking the **Avew file** button.

Files General Security	
New folder	List Tiles Thumbnails
🙀 <u>Delete</u> 🎒 <u>Copy</u> 🕞 <u>Move</u>	Name: Search
⊡ my_library1 (0)	There are no files to display.

4. A dialog appears, letting you upload the file. Just select the right folder and the file to be uploaded, then click the **Open** button.

5. Now if you go to the site folder in your file system, you will find the media library under the **media** folder, as you can see the screenshot below. The location of the folder may be customized as

described here.

<ul> <li>CMSPages</li> <li>CMSResources</li> <li>CMSScripts</li> <li>CMSSiteManager</li> <li>CMSSiteUtils</li> <li>CMSTemplates</li> <li>CMSWebParts</li> <li>CommunitySite</li> <li>CorporateSite</li> <li>CczechCities</li> <li>CzechCities</li> <li>CzechCities</li> <li>CzechNature</li> <li>Media</li> <li>Me</li></ul>	Organize 🔻 🛛 🔀 Open 🛛 Include in library 🔻	Share with 🔻 Slide show E-mail Burn New folder
AND IN A REAL AND	<ul> <li>CMSPages</li> <li>CMSResources</li> <li>CMSScripts</li> <li>CMSSiteManager</li> <li>CMSSiteUtils</li> <li>CMSTemplates</li> <li>CMSWebParts</li> <li>CommunitySite</li> <li>CorporateSite</li> <li>CorporateSite</li> <li>CcechNature</li> <li>Media</li> <li>CzechNature</li> <li>Media</li> <li>Explored SiteAspx</li> <li>FlvPlayer</li> <li>Lib</li> <li>Old_App_Code</li> <li>Old_App_Code</li> <li>Old_App_WebReferences</li> <li>Properties</li> </ul>	<ul> <li>thumbnails</li> <li>Desert</li> <li>Hydrangeas</li> <li>Chrysanthemum</li> <li>Jellyfish</li> <li>Lighthouse</li> <li>Penguins</li> <li>Tulips</li> </ul>

### On-site upload via the Media gallery and Media file uploader web parts

The Media gallery web part has the following two properties enabling on-site file upload:

- Allow upload enables on-site upload of files
- Allow upload thumbnail enables on-site upload of file previews

If these properties are enabled, the controls highlighted in the screenshot below will be displayed in the web part, letting users upload files and thumbnails:



### **External upload**

Files can also be uploaded **externally**, without any use of Kentico CMS administration interface or onsite web parts, e.g. using **FTP**. To do this, you simply need to copy the files into the appropriate folder of the media library. 1. For the purposes of this example, try uploading another file into the **pictures** folder by copying it using Windows Explorer or any other file manager.

Organize 🔻	Include in library 🔻	Share with 🔻		Slide show	Burn	New folder
Þ 🍌	CMSPages		*	<u> t</u> humbn	ails	
	CMSResources			sert 🔤		
Þ 鷆	CMSScripts			🔤 Hydrange	as	
⊳ 퉲	CMSSiteManager			E Chrysanth	nemum	
⊳ 퉲	CMSSiteUtils			🚬 Jellyfish		
⊳ 퉲	CMSTemplates			🔄 Koala		
⊳ 鷆	CMSWebParts			Lighthous	e	
⊳ 퉲	CommunitySite			📉 Penguins		
4 👪	CorporateSite			📉 Tulips		
4	🛓 media					
⊳	CzechCities					
	CzechNature					
	🃗 Media					
4	<pre>ibrary-1</pre>					
	pictures					
N 💷						
	EuDipuer		=			
	Lib					
	Old App Code					
	Old App WebReferences					
	Properties					
Þ 퉲 a	spnet_client					

2. If you go back to the Media library administration interface, you will see the file present in the list. As you can notice, this file is marked with the warning ((A)) icon indicating that the file has not been imported yet. This means that the file has not yet been registered in the database. Such files can not be used on the site and have to be registered first. This happens only to externally uploaded files, files uploaded via the administration interface are registered in the database automatically.

Files General Security						
New folder 🔒 New file	List 📰 T	iles 🔳 1	humbnails			I Full screen
😪 Delete 🏼 👌 Copy 🔄 Move	Name:		Search			
• my_library-1 (0)	Actions	Update Name		Туре	Size	Modified
	🗉 👌 🗟 🖉 🗱	🛐  🖺	/santhemum	.jpg	859 kB	9/21/2010 6:03:40 PM
	📄 👌 🗟 🥒 🗱	🔊  🖹 🔁	ert	.jpg	826 kB	9/21/2010 6:03:13 PM
	🔲 🜔 🗟 🥒 💥	🔊 🛛 🔛 <u>Hyd</u>	rangeas	.jpg	581 kB	9/21/2010 6:03:28 PM
	🔲 👌 🗟 🥒 💥	Jell	fish	.jpg	758 kB	9/21/2010 6:03:47 PM
	🔲 🔼 🖻 🗶 🗶	🔊  📔 Koa		.jpg	763 kB	9/21/2010 6:03:25 PM
	🔲 💫 🗟 🖉 💥	🔄 🔛 Liat	thouse	.jpg	548 kB	9/21/2010 6:03:37 PM
	🔲 🜔 🗟 🖉 💥	🔊 🔊 📔 📔	quins	.jpg	760 kB	9/21/2010 6:03:43 PM
	🔲 🜔 🗟 🥒 🗱	Tuli	<u>95</u>	.jpg	606 kB	7/14/2009 7:32:31 AM
	•				Ite	ms per page: 10 💌
(	Selected files	(select some actio	n) 🔽 OK			

To register the file, you have to click the **Import** button, which creates the file's record in the database. Please note that the files are not physically copied into the database, they remain in the file system only and a record linking to the physical file is created in the database.

Files General Security							_
Rew folder . New file	List	- E TI	les	Thumbnails			Image: Full screen
😪 <u>Delete</u> 🗿 <u>Copy</u> 🕞 <u>Move</u>	Name:			Search			
■ my_library-1 (0)	- Acti	iono	Undata	Nome	Timo	Cine	Modified
may pictures (8)	ACU				Type	Size	
			2	Chrysanthemum	.jpg	859 KB	9/21/2010 6:03:40 PM
			P.	Desert	.jpg	826 KB	9/21/2010 6:03:13 PM
			•	Hydrangeas	.jpg	581 kB	9/21/2010 6:03:28 PM
			•	Jellyfish	.jpg	758 kB	9/21/2010 6:03:47 PM
			<u>1</u>	<b>Koala</b>	.jpg	763 kB	9/21/2010 6:03:25 PM
		a 🥢 🗙	•2	🔤 Lighthouse	.jpg	548 kB	9/21/2010 6:03:37 PM
		a 🖉 🗙	•	E Penguins	.jpg	760 kB	9/21/2010 6:03:43 PM
		a 🧪 💥	<b>₽</b> ]	E <u>Tulips</u>	.jpg	606 kB	7/14/2009 7:32:31 AM
•						Ite	ms per page: 10 💌
Ϋ́	Selected file	s 💌	(select se	ome action) 💌 OK			
	Import						
	🕂 Media	file record does	sn"t exist in	database. You can import the file by filling out the followi	ng form:		
	File name:	Koala					
	Title:	Koala					
	Description:			A			
				-			
		Import					

Multiple files can also be imported conveniently as a batch. See <u>Batch operations</u> in the **Files and folders management** topic for more details.

#### 8.25.3.2 Files and folders management

To manage files stored in a media library, you need to go to CMS Desk -> Tools -> Media libraries and click the Edit ( $\checkmark$ ) icon next to the appropriate media library.



The library editing interface will be displayed on the Files tab where the files can be managed.

# **Folder operations**

The following actions can be performed with the folders in the media library:

- Several New folder creates a new folder under the currently selected folder
- 🗟 Delete deletes the currently selected folder
- @ Copy uploads the folder and its content to another location and keeps the original folder
- Solution and deletes the original folder

### Single file operations

You can perform the following operations by clicking the icons next to particular files:

- L New file uploads a file from the local or network file system to the currently selected folder
- **Select** selects the file and opens its editing interface in the bottom section
- **I** View downloads the file and opens it in your default application for the file type
- **Z** Edit this icon appears only with images and when clicked, the image gets opened in the built-in image editor
- X Delete deletes the file
- Deputy one Update replaces the file with another file; the original file gets deleted and replaced by the new one
- **A Import** this icon is displayed only with files that have been uploaded to the library folder externally (e.g. via FTP) and have not yet been registered in the database; by clicking the icon, you register the file in the database as described <u>here</u>

Files General Security						
🤪 New folder 🛛 🔒 New file	List	Tiles	Thumbnails			Full screen
😪 Delete 🛛 🚭 Copy 🛛 🔩 Move	Name:		Search			
⊡- Media (0) 	- Action	s Update	Name 🔺	Туре	Size	Modified
		× ×	[™] <u>IM001775</u>	.jpg	26 kB	5/18/2010 7:04:44 AM
Video (3)		2 🖉 🗱  🖻 👘	[™] <u>1M002595</u>	.jpg	35 kB	5/18/2010 7:04:44 AM
		2 🖉 🗱  🖻 👘	🔤 <u>IM002601</u>	.jpg	31 kB	5/18/2010 7:04:44 AM
		2 🖉 🗶  🖻 📃	🔊 <u>IM002628</u>	.jpg	42 kB	5/18/2010 7:04:44 AM
			E <u>Penquins</u>	.jpg	760 kB	7/14/2009 7:32:31 AM
					Ite	ms per page: 10 💌
	Selected files	▼ (select select se	ome action) 💌 OK			
ł	•					
	General					
	Folder name: F	ictures				
		ок				

### **Batch file operations**

You can also perform the **Gropy**, **Move**, **Qroptice** and **A Import** operations for multiple files at once. To perform a batch operation, take the following steps:

1. Use the first drop-down list (1. in the screenshot) to select if you want to perform the operation for:

- All files performs the operation for all files in the current folder
- Selected files performs the operation only for files selected by the check-boxes (

2. If you selected **Selected files** in the previous step, use the check-boxes (**2.** in the screenshot) to select the files to perform the operation with.

3. Choose the operation to perform using the second drop-down list (3. in the screenshot) and click OK.

	Actions	Update	Name 🔺	Туре	Size	Modified
	🛆 🖻 🖉 💥	Þ	<mark>™ Desert</mark>	.jpg	826 kB	7/14/2009 7:32:31 AM
	> 🗟 🖉 🗙	Notes	🔤 <u>IM002595</u>	.jpg	35 kB	5/18/2010 7:04:44 AM
2.	> 🗟 🖉 🗙	•	🔤 <u>IM002601</u>	.jpg	31 kB	5/18/2010 7:04:44 AM
	> 🗟 🖉 🗙	Þ	[™] 1M002628	.jpg	42 kB	5/18/2010 7:04:44 AM
V	🛆 🖻 🖉 💥	Þ	E Penquins	.jpg	760 kB	7/14/2009 7:32:31 AM
_	, 				Ite	ms per page: 10 💌
Selecte	ed files 📘 🔻	Import	3. 🖃 ок			

4a. If you are performing the **Copy** or **Move** operation, the following dialog is displayed. Choose the target folder (or create a new one using the **New folder** button if needed) and click the **Copy**/ **Move** button.

🕖 Copy / Move Webpage Dialog			×
Copy files			
New folder			
Media	Name: Search		錔 Parent folder
🖃 😋 Music	Actions Name -	Туре	Modified
Pictures	> 🖷 🗇 <u>My new folder</u>	<dir></dir>	12/16/2009 9:02:25 PM
🛶 省 Video			Items per page: 10 💌
	4		
	Target folder:		
	Music/My new folder		
	Files to copy:		
	Pictures/M001775.JPG Pictures/M002601_IPG		*
			Ŧ
		Co	opy Cancel
http://localhost/KenticoCMS_1216/CMSMod	lules/MediaLibrary/Tools/FolderActions/SelectFolder.aspx?action=copy&folderpath=Pictures&lik 🔩 Local intranet   Protected Mode	: Off	

4.b If you are performing the **Selete** operation, you will be prompted to confirm the deletion. Click **OK** to delete the files.

Message from webpage	×
Are you sure you wa	nt to delete the selected items?
	OK Cancel

4.c If you are performing a batch A **Import** operation, the dialog as in the following screenshot will appear for each imported file. You need to specify the following details for each imported file:

- File name: name of the file displayed in the administration interface
- Title: name of the file displayed on the live site
- **Description**: text describing the image

Click the Import file button to proceed to the following file.

You can also enable the **Apply description to all files** option, which imports all files in one click on the **Import all files** button. All files will have the entered **Description** and the **File name** and **Title** fields will contain the names of the physical files without extension.

🙀 Media library properties		0
Media libraries 🕨 Media		
Files General Security		
New folder . New file	List Tiles Thumbnails	<≞ Full screen
🩀 <u>Delete</u> 🎒 <u>Copy</u> 🕞 <u>Move</u>	File import	(1/2)
e Media (0)	File list > Desert.jpg	
Video (3)	File name: Desert   Title: Desert   Description: This is an imported Windows 7   picture. Import all files   Import all files Cancel   Open in full size	
Please	note	
Becaus	se of ASP.NET architecture, site restart will occur when:	
• a m • a g • one <b>To</b>	nedia library is deleted group containing a media library is deleted e of the following actions is performed when editing a library in <b>CMS</b> ols -> Media libaries -> Files or on the live site:	Desk ->

- folder is deleted
- folder is renamed
- folder is moved
- large number of files is deleted (100 by default, this can be set in the *<system.* web> section of your web.config by the following key: *<compilation debug="true"* numRecompilesBeforeAppRestart="100">)

Because of this, it is highly recommended to allow performing of these actions only to system administrators or to the least possible number of users. The recommended practice is for the site administrators to pre-define the folder structure of the libraries when they are created and not to allow users to further modify it.

#### 8.25.3.3 Supported file types

The following file types are supported and can be played or displayed on your site by default:

- Images: bmp, gif, png, wmf, jpg, jpeg, tiff, tif
- Audio: wav, wma, mp2, mp3, mid, midi, mpga
- Video: avi, mp4, mpg, mpeg, wmv, qt, mov, rm
- Flash: swf

Custom file types can also be defined, as described in this chapter.

#### Please note

All other file types will be recognized as **documents**, which means that they can not be played as videos, displayed as pictures, etc., but they can still be stored in the library and downloaded by users on the live site.

#### 8.25.3.4 Supported file size

If you would like to learn how to configure maximal uploaded file size, please refer to this topic.

#### 8.25.3.5 File naming conventions

When a file is being uploaded to a media library, users can upload the file itself and its thumbnail. The **thumbnail** will be displayed in the file list in the **Media gallery** web part. Thumbnails are typically used if you want to upload some non-image file and attach an image which will be displayed as the file's thumbnail in the file list. For image files, the thumbnail can but doesn't have to be done, as the image itself will be used for this purpose.

When the thumbnail image or the image itself is larger than the required thumbnail image size, its resized copy will be created with the required size. Both thumbnails and resized copies are stored in a **hidden folder** in the root of the media library folder. Name of the hidden folder can be set in **Site** 

### Manager -> Settings -> Media libraries -> Media file hidden folder.

#### Format of media library files on the disk

- File: <file name>.<file extension>
- Resized file: <hidden folder>/<file name>_<file extension>_<width>_<height>.<extension>
- Thumbnail: <hidden folder>/<file name>_<file extension><thumbnail suffix>.<thumbnail extension>
- **Resized thumbnail**: <hidden folder>/<file name>_<file extension><thumbnail suffix>_<width>_<height>.<thumbnail extension>

#### **Example**

If you upload the following files:

- Uploaded file: Mylmage.jpg
- Uploaded thumbnail: MyPhoto.bmp

with the following settings defined in Site Manager -> Settings -> Media libraries:

- Media file hidden folder: __thumbnails
- Media file thumbnail suffix: _preview

the uploaded files will be stored in the following locations in the media library folder, with the following names:

- File: Mylmage.jpg
- Resized file: __thumbnails/MyImage_jpg_100_200.jpg
- Thumbnail: __thumbnails/MyImage_jpg_preview.bmp
- Resized thumbnail: __thumbnails/MyImage_jpg_preview_20_30.bmp

### 8.25.4 Displaying files from media library

#### 8.25.4.1 Using Media library web part

The **Media gallery** web part can be used to display content of media libraries on the live site. In the following example, you will learn how to let site visitors view content of a media library using this web part. We will use the sample **Community Starter site** as the base for our example.

1. Go to **CMS Desk**. Create a new **Page (menu item)** document in the root of the content tree and name it *Media gallery*. Choose to **Create a blank page** and use the **Simple** layout.

Kentico CMS Desk Content My desi	k Tools Administration		Switch to Site Manager	Site: Community Site 💌	User: Global Administrator	v5.0.3642 Sign out
Conv Up Delete Move Down Content management	Edit Preview Live View mode Community Site	site List Search Other	heck			0
Biogs     Mews     Media     Groups     Group pages     Members	Page name: Media gr	Illery	<ul> <li>Create a blank page</li> </ul>	Search		
<ul> <li>a Examples</li> <li>a Special pages</li> <li>b Special pages</li> <li>c Special page</li> <li>c Special page</li> <li>c Special page</li> <li>c Special page</li> </ul>	Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple	E
	Three columns	Three columns (CSS)	Top row, three columns,	Top row, two columns,	Two columns	
	1 2 Simple Simple layout with one we	p part zone.	Jordanii I UW	JOLOHI I UV		

2. Click the Add web part (+) icon at the top right corner of the only web part zone on the page and select Media library -> Media gallery. Click OK.



3. In the web part properties window, you only have to choose the media library that you want to display:

#### • Media library - Media

#### Click OK.

4. And that's it! If you switch to the live site, and select **Pictures** for instance, you should see the web part displaying content of the selected media library.



#### 8.25.4.2 Using WYSIWYG editor

Media library files can be inserted into text using the WYSIWYG editor's **Insert image or media** and **Insert link** dialogs. You can find more information in the <u>WYSIWYG editor</u> chapter.

### 8.25.5 Settings

### 8.25.5.1 Media library settings

Settings related to the Media libraries module are located in **Site Manager -> Settings -> Media libraries**. The following settings are related to the module:

Media file hidden folder	Name of the folder where thumbnails of media files will be stored; this folder is hidden in the file system by default and thumbnails are generated within it.
Media file thumbnail suffix	Suffix added to thumbnail files; thumbnail files' names are in the following format: <file name="">_<file extension=""><thumbnail suffix="">.<thumbnail extension=""></thumbnail></thumbnail></file></file>
Media file allowed extensions	Extensions of files which can be uploaded to media libraries; should be entered divided by semicolons.
Check files permissions	Indicates if the "See media library content" permission is checked when retrieving media files using permanent URLs.
Use permanent URLs	If true, URLs of medial library files will be generated in permanent format (~/getmedia/ <file guid="">/<file name="">.<file extension="">.<files extension="" friendly="" url="">), otherwise direct path to the file will be used (e.g.: ~/ MySite/Media/MyLibrary/MyImage.jpg).</files></file></file></file>
Media libraries folder	<ul> <li>Folder where media library files are stored. You can use:</li> <li>physical disk path - e.g. c:\myfiles\mysite</li> <li>virtual path - ~/UploadedFiles</li> <li>UNC path - \\server\folder</li> <li>If no value is entered, the default location is: ~/<site code="" name="">/ media</site></li> </ul>
Max subfolders	Maximal number of folders that can be displayed under an expanded folder node in the tree view.

### Please note

If the **Media libraries** folder settings are inherited from global settings, the whole folder is deleted after deletion of the site. This may result in deletion of various files from other sites.



#### 8.25.5.2 Configuring custom storage for media library

The default location of all libraries of a particular site is **~/<sitename>/media**. You can customize the location by entering a path in **Site Manager -> Settings -> Media libraries -> Media libraries folder**.

You can enter the folder location in the following formats:

- physical path: e.g. c:\Libraries
- virtual path: e.g. ~/Libraries
- UNC path: e.g. \\<server name>\Libraries



#### 8.25.5.3 Configuring custom file types

You can allow custom media types by a simple modification to the site's **web.config** and **MediaControl.ascx** inline controls. Any media types can be enabled to be recognized by the system in case that you have the right player for the file type.

The following example shows how to enable .flv videos in the system.

1. Add the following keys into the **appSettings** section of your **web.config** file. Add your custom extensions for the particular document types here for the files to be recognized as image/audio/video by the system, as you did with the highlighted **flv** extension.

```
<add key="CMSImageExtensions" value="bmp;gif;ico;png;wmf;jpg;jpeg;tiff;tif" />
<add key="CMSAudioExtensions" value="wav;wma;mp2;mp3;mid;midi;mpga" />
<add key="CMSVideoExtensions" value="avi;mp4;mpg;mpeg;wmv;qt;mov;rm;flv" />
```

2. Add the flv extension to the enumeration in Site Manager -> Settings -> Media libraries -> Media file allowed extensions, which will allow upload of these files into media libraries, and click the Save button.

You may also want to add the extension to the **Site Manager -> Settings -> Files -> Upload extensions** enumeration, which will allow upload of these files as CMS.File documents and document attachments, and click the **Save** button.

3. Download a player for your media type. In this example, you will use the JW FLV Player available here: <u>http://www.longtailvideo.com/players/jw-flv-player/</u>.

4. Extract the **swfobject.js** and **player.swf** files and put them in a folder under your website folder, e.g. **~/FlvPlayer**. This path will be used in the **CreateFlvObject()**, which you will create in step 6.

5. Open the ~/CMSInlineControls/MediaControl.ascx.cs inline control in Visual Studio and replace the Page_PreRender method with the following code. It is the original code of the method with the first condition added. The added code ensures that when the file extension is .flv, the CreateFlvObject() method is called.

```
protected void Page_PreRender(object sender, EventArgs e)
{
    if ((this.Type != null) && (this.Type.TrimStart('.').ToLower() == "flv"))
    {
        CreateFlvObject();
    else if (MediaHelper.IsFlash(this.Type))
    {
        CreateFlash();
    }
    else if (ImageHelper.IsImage(this.Type))
    {
        CreateImage();
    }
    else
    {
        CreateMedia();
    }
}
```

6. Now you need to add the **CreateFlvObject()** private method to the control. In this example, it looks like the code sample below.

The method creates a new DIV tag for the FLV player, with ID generated in the divID variable. It also handles the player URL in a special way - the URL must be absolute and must end with *flv*. Support for the Autoplay and Loop properties of the player is also ensured.

[C#]

```
private void CreateFlvObject()
ł
    string playerID = Guid.NewGuid().ToString("N");
    string flvUrl = UrlHelper.GetAbsoluteUrl(this.Url)
                .Replace("?", "%3F")
                .Replace("=", "%3D")
                .Replace("&", "%26");
    string flashVars = "file=" + flvUrl + "&provider=video&";
    flashVars += "controlbar=" + (AVControls ? "bottom" : "none") + "&";
    flashVars += "autostart=" + (AutoPlay ? "true" : "false") + "&";
    flashVars += "repeat=" + (Loop ? "always" : "none");
    string player = "";
    player += "<object id=\"" + playerID + "\"";</pre>
    player += "classid=\"clsid:D27CDB6E-AE6D-11cf-96B8-444553540000\"";
   player += "codebase=\"http://download.macromedia.com/pub/";
   player += "shockwave/cabs/flash/swflash.cab#version=9.0.115\"";
   player += "width=\"" + Width + "\" height=\"" + Height + "\">";
   player += "<param name=bgcolor value=\"#FFFFFF\">";
   player += "read name=movie value=\"" + ResolveUrl("~/FlvPlayer/player.swf")
+ "\">";
    player += "<param name=allowfullscreen value=\"true\">";
    player += "<param name=allowscriptaccess value=\"always\">";
    player += "<param name=\"flashvars\" value=\"" + flashVars + "\">";
    player += "<embed name=\"" + playerID + "\" ";</pre>
   player += "type=\"application/x-shockwave-flash\" ";
    player += "pluginspage=\"http://www.macromedia.com/go/getflashplayer\" ";
    player += "width=\"" + Width + "\" height=\"" + Height + "\" ";
    player += "bgcolor=\"#FFFFFF\" ";
    player += "src=\"" + ResolveUrl("~/FlvPlayer/player.swf") + "\" ";
   player += "allowfullscreen=\"true\" ";
   player += "allowscriptaccess=\"always\" ";
   player += "flashvars=\"" + flashVars + "\">";
   player += "</embed>";
   player += "</object>";
    this.ltlMedia.Text = player;
}
```

7. To make this work also on the live site using media libraries transformations, you now need to open the ~/CMSModules/MediaLibrary/Controls/LiveControls/MediaFilePreview.ascx.cs file and replace the following line of code:

```
else if (CMS.GlobalHelper.MediaHelper.IsVideo(mfi.FileExtension))
```

with this piece of code:

```
else if (mfi.FileExtension.TrimStart('.').ToLower() == "flv") {
    this.ltlOutput.Text = CreateFlvObject(url);
}
else if (CMS.GlobalHelper.MediaHelper.IsVideo(mfi.FileExtension))
```

8. Similarly, you will need to add the **CreateFlvObject(string url)** private method to the control. In this example, it looks like the code sample below.

The method creates a new DIV tag for the FLV player, with ID generated in the divID variable. It also handles the player URL in a special way - the URL must be absolute and must end with *flv*. Please note that the Autoplay and Loop properties of the player are defined firmly in the code.

```
private string CreateFlvObject(string url)
{
    string playerID = Guid.NewGuid().ToString("N");
    string flvUrl = UrlHelper.GetAbsoluteUrl(url)
                .Replace("?", "%3F")
                .Replace("=", "%3D")
                .Replace("&", "%26");
    bool avControls = true;
    bool autoPlay = false;
    bool loop = false;
    string flashVars = "file=" + flvUrl + "&provider=video&";
    flashVars += "controlbar=" + (avControls ? "bottom" : "none") + "&";
    flashVars += "autostart=" + (autoPlay ? "true" : "false") + "&";
    flashVars += "repeat=" + (loop ? "always" : "none");
    string player = "";
    player += "<object id=\"" + playerID + "\"";</pre>
    player += "classid=\"clsid:D27CDB6E-AE6D-11cf-96B8-444553540000\"";
    player += "codebase=\"http://download.macromedia.com/pub/";
    player += "shockwave/cabs/flash/swflash.cab#version=9.0.115\"";
    player += "width=\"" + Width + "\" height=\"" + Height + "\">";
    player += "<param name=bgcolor value=\"#FFFFFF\">";
   player += "read name=movie value=\"" + ResolveUrl("~/FlvPlayer/player.swf")
+ "\">";
    player += "<param name=allowfullscreen value=\"true\">";
    player += "<param name=allowscriptaccess value=\"always\">";
    player += "<param name=\"flashvars\" value=\"" + flashVars + "\">";
    player += "<embed name=\"" + playerID + "\" ";</pre>
    player += "type=\"application/x-shockwave-flash\" ";
    player += "pluginspage=\"http://www.macromedia.com/go/getflashplayer\" ";
    player += "width=\"" + Width + "\" height=\"" + Height + "\" ";
    player += "bgcolor=\"#FFFFFF\" ";
```
```
player += "src=\\" + ResolveUrl("~/FlvPlayer/player.swf") + "\" ";
player += "allowfullscreen=\"true\" ";
player += "allowscriptaccess=\"always\" ";
player += "flashvars=\"" + flashVars + "\">";
player += "</embed>";
player += "</embed>";
player += "</object>";
return player;
}
```

If you need to change the behavior of the player, please modify these lines of code of the added method.

```
bool avControls = true;
bool autoPlay = false;
bool loop = false;
```

9. Now .flv files are recognized as videos by the system. The custom player is used for the files on the live site and also in the **Insert image or media** dialog, as you can see in the screenshot below.

Insert Webpage Dialog			×
🙀 Insert image or media			
Attachments Content Media libraries Web	eb		
New folder . New file	List		0
Site: Corporate Site  Nam	me: Search		
Group: (global libraries)	ctions Name -	Type Size	Modified
Citerary. Czech chies	▶ Q // N002595	.jpg 35 kB	1/14/2009 3:37:48 PM
CzechCities	▶ <a> </a> <a> <a> <a> </a> <a> <a> <a> </a> <a> <a> <a> </a> <a> <a> <a> <a> <a> <a> <a> <a> <a> &lt;</a></a></a></a></a></a></a></a></a></a></a></a></a></a></a>	.jpg 31 kB	1/14/2009 3:38:23 PM
<b>8</b>	👂 🗟 🖉 📑 <u>video</u>	.flv 211 kB	11/30/2009 11:18:38 AM
			Items per page: 10 💌
4 Ger	ineral		
	/Kentico/MS/CornorateSite/media/Czech/ities/video fly		
Widt	tth: 300		v
Heig	ght. 200		
Auto	oplay:		
Loop			
Show	ow controls: 🔽		
	► <b>■</b> 00:00 00:00		
		li	nsert Cancel
http://localhost/KenticoCMS/CMSFormControls/Se	electors/InsertImageOrMedia/Default.aspx?output=html& < 🗣 Local intranet   Protec	ted Mode: Off	

#### 8.25.5.4 Configuring maximal uploaded file size

The default maximal uploaded file size setting on IIS6/7 is 30MB. To enable uploads of larger files, which is essential for the functionality that the media libraries were designed for, you need to add the following keys to your **web.config** file:

## <u>IIS 6</u>

All you need to do is to set the value of the following property, which is already present in your **web**. **config**, to the desired value, while the value is entered in **kiloBytes**:

```
<httpRuntime maxRequestLength="2000000" />
```

## <u>IIS 7</u>

You need to do the same setting as described above for IIS 6. Besides, you also need to add the following highlighted code to the end of your **web.config**. The value of the **maxAllowedContentLength** property is entered in **Bytes**:

<system.webserver></system.webserver>
<security></security>
<requestfiltering></requestfiltering>
<pre><requestlimits maxallowedcontentlength="2147483648"></requestlimits></pre>
<validation validateintegratedmodeconfiguration="false"></validation> <modules></modules>
<pre><add name="ScriptModule" precondition="integratedMode" type="System.Web.&lt;/pre&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Handlers.ScriptModule, System.Web.Extensions, Version=3.5.0.0, Culture=neutral,&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;PublicKeyToken=31bf3856ad364e35"></add></pre>
<add name="XHtmlModule" type="CMS.CMSOutputFilter.OutputFilterModule, CMS.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;OutputFilter"></add>
<handlers></handlers>
<remove name="WebServiceHandlerFactory-Integrated"></remove>
<add name="ScriptHandlerFactory" path="*.asmx" precondition="&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;integratedMode" type="System.Web.Script.Services.ScriptHandlerFactory, System.Web.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Extensions, Version=3.5.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35" verb="*"></add>
<pre><add <="" name="ScriptHandlerFactoryAppServices" path="*_AppService.axd" td="" verb="*"></add></pre>
precondition="integratedMode" type="System.web.Script.Services.
DublicKowTokon=21bf28E6ad264o2E# />
<pre>rubilckeyloken-sibisosoddsodess //  cadd name="GarintBesource" preCondition="integratedMode" werh="CET WEAD" nath-</pre>
"ScriptResource avd" type="System Web Handlers ScriptResourceHandler System Web
Extensions Version=3.5.0.0 Culture=neutral PublicKevToken=31bf3856ad364e35" />
<pre></pre>

# 8.25.6 Security

#### 8.25.6.1 Media library permissions

On the Security tab of each media library, you can assign permissions for particular actions to:

- **Nobody** nobody can perform the action
- All users all users including anonymous site visitors can perform the action
- Authenticated users only signed-in site members can perform the action
- Authorized roles only members of roles selected by the check-boxes below can perform the action

Files General Security							
	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content
Nobody	0	0	$\odot$	0	0	0	0
All users	۲	۲	۲	۲	۲	۲	۲
Authenticated users	0	$\odot$	0	Ô	0	$\odot$	$\odot$
Authorized roles	Ô	0	0	Ô	0	0	0

Please select the authorized roles (available only when you select the "Authorized roles" option above):

	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content
Authenticated users							
CMS Basic users							
CMS Community Administrators							
CMS Designers							
CMS Desk Administrators							
CMS Editors							
CMS Readers							
Everyone							
Live ID users							
Not authenticated users							

When editing media library of some group, permissions for particular actions can be assigned to:

- **Nobody** nobody can perform the action
- All users all users including anonymous site visitors can perform the action
- Authenticated users only signed-in site members can perform the action
- Group members only members of the group can perform the action
- Authorized roles only members of group roles selected by the check-boxes below can perform the action

Groups •	Czech Rep	ublic fans									
General	Security	Members	Roles	Forums	Media libraries	Message boards	Polls				_
<u>Media libr</u>	aries 🕨 Cze	ch cities									2
Files	General	Security									_
			Cre	ate file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content	
Nobody				$\bigcirc$	۲	۲	۲	۲	۲	$\odot$	
All users	5			$\bigcirc$	0	0	0	0	0	$\odot$	
Authenti	icated users	3		$\bigcirc$	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	$\odot$	
Group m	embers			۲	O	0	Ô	0	0	۲	
Authoriz	ed roles			$\bigcirc$	$\odot$	$\bigcirc$	$\bigcirc$	$\odot$	0	0	
Discos	alaatika aut	We arise of sole	e (eveileb)	la anhuuda	n unu natantika "	Authorized set of "	ation chous):				
Please s	erect the aut	monzed role:	s (avallab	ie only whe	en you select the "	Authonized roles" (	option above):				
			Cre	ate file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content	
Group a	dmin										

The following table shows which permissions need to be assigned to allow users to perform particular actions. Global administrators can perform all of these actions for all general and group media libraries on the site. Group administrators can perform all of these actions for group media libraries of groups where they are group administrators.

A oti on (				File						
Permission	Rea d	Ma nag e		Creat e	Delet e	Modif y	Creat e	Delet e	Modif y	See library content
Media library content administration - files										
upload		Х	or	Х						
rename / change title and description		Х	or			Х				
delete		Х	or		Х					
сору		Х	or	Х						
move		Х	or			Х				
Media library content administration - folders										
create		Х	or				Х			
rename		Х	or						Х	
delete		Х	or					Х		

сору		Х	or			Х		
move		Х	or				Х	
CMSDesk administration								
See media libraries Ul	Х							
Modify media libraries Ul		Х						
Live site administration								
See media libraries Ul	Х							
Modify media libraries Ul		Х						
CMSDesk & Live site								
Select image/flash/ media dialogs in WYSIWYG editor	Х							
Live site								
See and browse library content (Media gallery webpart)	х		or					Х
Upload file (Media file uploader webpart)		Х	or	Х				

Modules

977

# **Module permissions**

The following permissions can be set in **Site Manager -> Administration -> Permissions**, when you choose the **Modules -> Media libraries** permission matrix:

- **Manage** allows creating, deleting and editing media libraries and managing media library content via the administration interface
- **Read** allows seeing media library content and its properties when editing a media library, but does not allow to make any changes to it

	Manage	Read	
Authenticated users			
CMS Basic users			
CMS Community Administrators	Ś	ø	
CMS Designers			
CMS Desk Administrators		ø	
CMS Editors		ø	
CMS Readers		ø	
Everyone			
Gold Partners			
Live ID users			
Not authenticated users			
Silver Partners			

#### 8.25.6.2 Secured vs. Non-secured libraries

Media libraries on your site can be secured or non-secured. To ensure the required functionality, several settings need to be done as described below.



#### Please note!

By default, files in media libraries are NOT secured and can be accessed directly by anybody who knows the exact link to the file. If you want to prevent this behavior, please set up your media library as a secured one.

## **Secured libraries**

Secured media libraries allow viewing of their content only to members of authorized roles or only to authenticated users, based on the settings made on the library's **Security** tab. Secured libraries are also slower than the non-secured ones as permission checking involves some processing overhead.

To set up a media library to behave as a secured library, you have to take the following steps:

#### 1. IIS setup

You have to **set up your IIS** so that files can not be downloaded directly from the library by typing the link to the file like *<site url>/media/file.jpg* into the browser.

# a) Go to Start -> Control Panel -> Administrative Tools and start the Internet Information Services (IIS) Manager.

🔾 🗢 🗟 « All Contro 🕨 Adı	ninistrative Tools Search Administrative Tools	م
Organize 🔻 Burn	8≡ ▼	
☆ Favorites	Name	Date r 📤
📃 Desktop	E Component Services	14.7.2
📕 Downloads	🛃 Computer Management	14.7.2
🖳 Recent Places	Data Sources (ODBC)	14.7.2
	🛃 Event Viewer	14.7.2
🥽 Libraries	Internet Information Services (IIS) 6.0 Manager	2.11.2  ≡
Documents	📷 Internet Information Services (IIS) Manager	2.11.2
🚽 Music	iSCSI Initiator	14.7.2
Pictures	🛃 Local Security Policy	23.10.
📑 Videos	Microsoft .NET Framework 2.0 Configuration	27.10.
	Performance Monitor	14.7.2
n Computer	🕞 Print Management	23.10.
🚢 Local Disk (C:)	😹 Services	14.7.2
	🛃 System Configuration	14.7.2
🗣 Network	<b>▼</b>	P.
17 items		

b) Locate and select the media library folder in the IIS tree, then click on the Authentication icon.



c) Disable the **Anonymous Authentication** by clicking the **Disable** link in the **Actions** list. If enabled, disable also the **Windows Authentication**.

#### 2) Media library security settings

You have to assign the **See library content** permission to the appropriate roles or all authenticated users on the media library's **Security** tab.

Modules	981
modules	301

П ď

R

#### 👩 Media library properties

Media libraries	۲	Media	
-----------------	---	-------	--

Everyone

Live ID users

Not authenticated users

Files General Security							
	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content
Nobody	$\odot$	Ô	O	0	0	0	0
All users	۲	۲	۲	۲	۲	۲	O
Authenticated users	O	O	O	0	0	0	0
Authorized roles	O	0	O	0	0	0	۲
Please select the authorized roles (a	vailable only whe	n you select the "/	Authorized roles" o	ption above):			
	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content
Authenticated users							
CMS Basic users							
CMS Community Administrators							đ
CMS Designers							
CMS Desk Administrators							
CMS Editors							
CMS Readers							

You also have to make sure that the Check files permissions option is enabled in Site Manager -> Settings -> Media libraries. With this option disabled, permission checks would not be performed.

#### 3) Media gallery web part settings

a) You need to enable the Use secure links web part property.

b) When writing your transformations for the Media gallery web part, you should stick to the following rules:

File previews and file details should be displayed using the following control:

<ccl:MediaFilePreview ID="filePreview" runat="server" maxsidesize="117" />

**Download links** should be obtained using the following method:

```
<*# MediaLibraryFunctions.GetMediaFileUrl(Eval("FileLibraryID") ,Eval("FilePath"),</pre>
Eval("FileGUID"), Eval("FileName"), GetDataControlValue<bool>("UseSecureLinks")) %
>
```

You can see an example of a real-world use of this web part, including the defined transformations, on the Community Site sample website, in the Media section.

## **Non-secured libraries**

Content of non-secured media libraries is accessible to all site users or visitors. These libraries are also

0

faster than the secured ones, as no permissions need to be checked.

#### 1. IIS setup

You have to set up your IIS so that files in the library can be accessed directly by anonymous users.

a) Go to Start -> Control Panel -> Administrative Tools and start the Internet Information Services (IIS) Manager.



b) Locate and select the media library folder in the IIS tree, then click on the Authentication icon.



c) Enable the Anonymous Authentication by clicking the Enable link in the Actions list.



#### 2) Media library security settings

You have to assign the **See library content** permission to **All users** on the media library's **Security** tab.

🙀 Media library properties	i -							6
Media libraries 🕨 Media								
Files General Security								
	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content	
Nobody	Ô	0	0	0	0	0	0	
All users	۲	۲	۲	۲	۲	۲	۲	
Authenticated users	0	0	0	0	$\bigcirc$	0	0	
Authorized roles	0	0	0	0	$\bigcirc$	0	0	
Please select the authorized roles (a	available only wher	n you select the "A	uthorized roles" o	ption above):				
	Create file	Delete file	Modify file	Create folder	Delete folder	Modify folder	See library content	
Authenticated users								
CMS Basic users								
CMS Community Administrators								
CMS Designers								
CHIC Deals Administration		_	_	_		_		
CMS Desk Administrators								
CMS Editors								
CMS Editors CMS Readers								
CMS Desk Administrators CMS Editors CMS Readers Everyone								
CMS besk Administrators CMS Editors CMS Readers Everyone Live ID users								

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Alternatively, if all media libraries on the site are non-secured, you can disable the **Check files permissions** option in **Site Manager -> Settings -> Media libraries**. This disables all permission checks for all media libraries on the site, which enables all users to see the libraries' content.

1	Kentico								Switch to CMS Desk	User: Global Administrator
~	CMS Site Manager	Sites A	dministration	Settings	Developm	ent Licens	ses Support	t		
Site:			Medi	a libraries						
(global	)	-	-Ja mou	ambranet						
			Save	A Reset	these setting	is to default				
Set	tings									
	🥥 Web site									
	Content management		These sett	ings are globa	al, they can	be overridde	en by the local	site settings. Please select	the site to see or chang	ge the site settings.
	📊 Files									
	🚨 Membership		Media file	hidden folde	er 🔮	thumbi	nails			
	🧖 Security		Modia file	proviow cuff	iv 6	proviour				
	URLs and SEO		metria me	preview suit		_preview				
	Output filter		Media file	allowed exte	ensions 🔞	pdf;doc;d	ocx;ppt;pptx;x	ds;xlsx;htm;html;xml;bm	o;g	
	System		Check file	e normiecio	ne 🖉					
	🗟 E-mails		Checking	ea permisaro	113					
	Avatars		Use pern	nanent URLs	6					
	👦 Bad words		Media lib	raries folder	e					
	📕 Blogs									
	陽 Booking system		Max subfe	olders	(C)	100				
	Second Community									
	Content staging		Export the	ese settings						
	🕺 Forums	•	(							
	🐅 Media libraries	4	-							
	📴 Message boards									
	lessaging 🏾									
	🗊 Web analytics									
	💱 Windows LiveID									
	E-commerce									
· · · A	🐺 Payment gateway - Auth	horize.NET								
	🐺 Payment gateway - Payl	Pal								

#### 3) Media gallery web part settings

a) The Use secured links web part property should be disabled for the file requesting to be faster.

b) When writing your transformations for the **Media gallery** web part, you should stick to the following rules:

**Image previews** and **image details** should be obtained using the following method because they need to be resized:

<cc1:MediaFilePreview ID="filePreview" runat="server" maxsidesize="117" />

Other file types' previews and details can be obtained using direct links. Download links can be obtained directly too.

# 8.26 Message boards

# 8.26.1 Overview

The Message boards module enables site visitors to comment on the content of a particular page. It means you can insert comments on specific document content, on a specific user or a group of users etc.

Abi Hello Guru... 12/22/2009 1:34:21 PM

Report abuse

Leave me	ssage	Subscribe
Name:	Abi	
Your URL:	http://	
Your e-mail:	abigail.woodwarth@localhost.local	
Message:		*
	Subscribe me to this message board	~
	Add	

Among web parts that come with the Message boards module are the following web parts:

- Message board displays messages on the board and allows adding new messages; used for general documents or for user profiles
- · Group message board similar to Message board, but optimized for group profiles
- Message board viewer displays messages from all message boards on the specified site, but doesn't allow adding new messages
- Group message board viewer similar to Message board viewer, but optimized for group profiles
- **Message board unsubscription** displays a confirmation that the user has been successfully unsubscribed from the message board

The Message boards module provides similar functionality like the <u>Forums</u> module. However unlike structured forums, message boards are flat and more straightforward. They are created automatically after the first comment is inserted or on subscribing without leaving a comment.

Each message board is related to a document on which it is placed, and optionally to a user or a group. Board messages can be moderated by board moderators. Users can also subscribe to receiving notifications about new messages and rate the content of the document the same way as when using the <u>Content rating</u> web part.

In the Message boards chapter, you can learn how to use the **Message board** web part (learn <u>here</u> how to do it), manage message boards (as explained <u>here</u>), edit message boards (as explained <u>here</u>) and how to set Board base URL (as explained <u>here</u>). Topics on the <u>settings</u> and <u>security</u> of the the Message boards module can be found in this chapter, too. Finally, the Message board notifications subchapter will guide you through the process of setting up the module to receive notifications about new messages added to the message board (for reference, see the following topics: <u>Who can be notified</u>, <u>User subscriptions</u>, <u>E-mail templates</u>).

If you would like to see Message boards module sample sites, please switch to the Corporate site sample website and in the content tree go to **Examples -> Web parts -> Message boards** to display the showcase of the Message boards module functionality. If you would like to see an example of managing a message board and its messages on Live site using the **Group profile** web part, please switch to the Community site sample website and choose **Groups -> <some group>** from the main menu.

Another example of the use of the Message boards module is available in Kentico CMS Community Site Guide; please note that these practical examples do not concern the whole functionality of the module but focus on its use in a broader context of the Community Site sample website:

- See <u>Community Site Guide -> Part 2 -> Creating the Special pages -> Creating the Board</u> <u>unsubscribe page</u>: An example of handling message board unsubscription requests.
- See <u>Creating the Members section -> Creating the Profile page</u> in the same section of the Community Site Guide: An example of adding and setting up two **Message board** web parts.
- See <u>Creating the Groups section -> Creating the Profile page</u>: An example of adding and setting up a **Group message board** web part.

# 8.26.2 Using the Message board web part

Message board can be placed on any page (document) on your website. It allows site visitors to send instant comments on the content of the particular page. You can have unlimited number of message boards on one page.

In the following example, you will see the basic process of adding a message board to your site. Our goal will be to add a Message board to the **Your first news** document on the sample **Corporate site**.

1. Log in to CMS Desk as *administrator* with blank password. From the content tree, select **News** -> **Your first news**.

2. Click the **Add web part** (+) icon at the top right corner of **zoneLeft** web part zone and in the web part selection window, choose **Message board -> Message board** and click **OK**.

3. In the web part properties window, you can set a number of properties. As there is quite a lot of them, we will leave default values and set only those listed below. If you want exact explanation of the meanings of each of the properties, please refer to <u>Kentico CMS Web Parts Reference</u> or click the **Documentation** () link at the top right corner of the web part properties window.

- **Message transformation** transformation used for displaying board messages; you can use *Community.Transformations.MessageBoard*, which is a default predefined transformation for board messages
- No messages text text message that will be displayed to site visitors when there are no messages in the board
- **Display name** display name of the message board, it will be used in the administration interface to identify the message board, so it is advisable to use some well-descriptive name under that you will recognize the message board; it is useful to use macros, such as {%SiteName%} my first message board

Click **OK** when you are finished entering the values.

#### !! Board default settings !!

Properties in the **New board settings** section will be used when the message board is created (after first message or subscription). Thereafter, changes made to the web part properties will take no effect. To change some of these properties, you will have to edit the message board in **CMS Desk -> Tools -> Message boards -> Boards** tab.

4. If you switch to the **Live Site** mode, you should see the form for entering board messages and the 'No messages text' displayed above it, as you can see in the following screenshot.

Home Se	ervices Products	News Pa	artners Compa	ny Blogs	Forums	Events	Images	Wiki	Examples	
<u>News</u> > Your	first news									
Your firs	t news									
	1/10/2008 Here you cai images. The	n enter the sum summary will b	mary of the news it e used in news iter	em. You can n preview.	use WYSIW	YG editor to	) format the t	text, inse	rt links and	
This is the may be dis	news text. It's display alayed in various form	ed in combinati ats, with or with	on with news title a out teaser image.	nd summary.	Depending o	n transform	ation choser	n by the v	veb developer, th	ne news item
RSS										
☆☆☆☆☆ Current rating:	4 (1 ratings)									
Leave mer	( ( radingo)									
Name	saye									
Your URL:	http://									
Your e-mail:										
Message:	Add		~							

5. If you go to the administration interface located in **CMS Desk -> Tools -> Message boards**, you won't see the message board yet as message boards are created in the administration interface section **after first message is added** to it, **not after adding the web part** to the site. Try adding some message now. After doing so, go to **CMS Desk -> Tools -> Message boards**. You should see the new message board in the list as in the following screenshot.

				Switch	to Site Manage	r Site:	Corporate Site 💌 Use	er: Global Administrat	or v5.0.3642	Sign out
CMS Desk Conten	nt My desk	Tools Administration								
- Tools	🙆 Messa	age boards								
BizForms	Messages	Boards								
Blogs										-
Booking system	Board	ds								0
Content staging										
Custom tables	Message bo	pards are document related, you need to pla	re a Messan	e board w	eb part to your pa	ine to crea	te a new message board. I	t will be created automa	tically after first r	comment is
🕅 E-commerce	inserted.		ioo a mooody	o board m	oo parto joar pa	.go to 0.00	to a non moodage board.		active and a second	
🕞 🛱 File import	D									
- 🥦 Forums	Board name									
🖓 🖓 Groups		Show								
📲 Media libraries										
Message boards	Actions	Board name 🔺	Enabled	Open	Moderated	Posts	Last post	Document		
Newsletters	2 X	Corporate Site - sample message board	Yes	Yes	No	3	9/8/2008 11:45:28 AM	/Examples/Webparts	Message board	s/Message board
Reporting	A 🗶	My first message board	Yes	Yes	No	1	12/22/2009 1:42:22 PM	/News		
Web analytics									Items per	page: 25 💌

# 8.26.3 Managing message boards

Message boards management can be performed in CMS Desk -> Tools -> Message boards. The section is divided into two tabs.

## Messages tab

On this tab, moderators can manage board messages. By default, there are only messages requiring approval displayed when you access the page, so that the moderator sees only new messages that need to be approved or rejected. Until the messages are approved, they won't be displayed on the message board. Rejected messages won't be displayed either.

Using the filter above the list, you can determine which messages you want to display. The following filtering parameters are available:

- Site name only messages from the selected site will be displayed
- Board name only messages from the selected message board will be displayed
- User name only messages posted by the user specified here will be displayed; you can also enter only a part of the user name
- Text only messages containing the entered text will be displayed
- **Is approved** you can choose whether to display only approved or disapproved messages
- Is SPAM you can choose whether to display only messages marked or not marked as SPAM

Kentico CMS Desk Content	My desk 🗍	Fools Ad	ministration			Switch t	o Site Manager	Site: Corporate Site 💌	User: Global Administrator	v5.0.3642 Sign out	
<ul> <li>Tools</li> <li>Abuse report</li> <li>BizForms</li> <li>Blogs</li> <li>Booking system</li> <li>Content staging</li> <li>Coutom tables</li> <li>File import</li> <li>Forums</li> <li>Groups</li> <li>Media libraries</li> <li>Message boards</li> <li>Newsletters</li> <li>Folls</li> <li>Desorting</li> </ul>	Messaes Messaes Messaes Site name: Board name User name: Text: Is approved: Is SPAM:	ge boar Boards ges Corporat (all) (all) Sho	ds e Site	•						ć	2
Web analytics	Actions		User name	Text	Approved	Is SPAM	Message board	Inserted -			
	/ X 🗸		Jane	Some text	No	No	new board	12/22/2009 1:50:58 PM			
	1 🖉 💥 🗸		Henry	Oh yeah!	No	No	new board	12/22/2009 1:50:16 PM			
	2 🗙 🗸		David	Hello world!	No	No	new board	12/22/2009 1:49:13 PM			
	Selected iten	ns: (select	some action)	• ок						Items per page: 25 💌	

Messages in the list can be **Approved** ( $\checkmark$ ), **Rejected** ( $\oslash$ ), **Deleted** ( $\thickapprox$ ) or **Edited** ( $\checkmark$ ). If you choose to edit a message, the following window pops up, letting you make changes to it. You can also select more messages using the check-boxes and perform one of these actions for all of them using the **Selected items** drop-down list and clicking the **OK** button.

🤌 Message - E	dit Webpage Dialog	x
🗩 Edit m	essage	0
Name:	Henry	]
Your URL:		]
Your e-mail:		]
Message:	Oh yeah!	
	_	
Is approved:		]
Is SPAM:		
Inserted:	12/22/2009 1:50:16 PM	
	OK Cancel	
ht 👊 Local intr	anet   Protected Mode: Off	H

# **Boards tab**

On this tab, you can see a list of all message boards on the current site. Using the **Board name** field above the list, you can filter the displayed message boards. You don't need to enter the exact name, you can enter only a part of it and the list will display all message boards with name containing the entered expression. It is a good idea to give your message boards well-descriptive names so that you can tell one from another and search efficiently.

Message boards can be **Edited** ( $\swarrow$ ) and **Deleted** ( $\thickapprox$ ) on this tab.

Kentico CMS Desk	My desk	Tools Administration		Switch	to Site Manage	Site:	Corporate Site 💌 Use	er: Global Administrator V	5.0.3642 Sign out
-	iniy ucak	Administration							
- Tools  Abuse report	Messa	age boards							
BizForms	Messages	Boards							
Blogs	-								-
📲 Booking system	Board	is							
Custom tables The Commerce Car File import Forums Croups Media libraries	Message bo inserted. Board name	pards are document related, you need to places	e a Message	e board we	b part to your pa	ge to creat	te a new message board. I	t will be created automatical	y after first comment is
Message boards	Actions	Board name -	Enabled	Open	Moderated	Posts	Last post	Document	
Polls	2 🗙	Corporate Site - sample message board	Yes	Yes	No	3	9/8/2008 11:45:28 AM	/Examples/Webparts/Mes	sage boards/Message board
Reporting	2 🗙	My first message board	Yes	Yes	No	1	12/22/2009 1:42:22 PM	/News	
Web analytics	1 🗙	new board	Yes	Yes	Yes	2	12/22/2009 1:50:58 PM	<u>/News</u>	
	1								Items per page: 25 💌

# 8.26.4 Editing message boards

You can edit message board properties at **CMS Desk -> Tools -> Message boards**, on the **Boards** tab. If you click the **Edit** ( $\checkmark$ ) icon next to some message board, its editing interface will be displayed.

The administration interface reflects the **Message board** web part properties. When you add the web part to a page, you can set its properties in the web part properties dialog. When the first message is added to the board, the message board is created in this section of the administration interface. At this point, changes made to the web part properties have no effect and you have to make all changes only in this section!

The administration interface for editing message boards is divided into five tabs:

## Messages tab

This tab displays a list of all messages on the message board. Using the **New message** link, you can add new messages to the board directly from the administration interface. Below is a filter, letting you display only messages matching specified criteria. The following filtering parameters are available:

- User name only messages posted by the user specified here will be displayed; you can also enter only a part of the user name
- Text only messages containing the entered text will be displayed
- Is approved you can choose whether to display only approved or disapproved messages
- Is SPAM you can choose whether to display only messages marked or not marked as SPAM

Messages can be **Edited** ( $\checkmark$ ), **Deleted** ( $\thickapprox$ ), **Approved** ( $\checkmark$ ) or **Rejected** ( $\oslash$ ). You can also select more messages using the check-boxes and perform one of these actions for all of them using the **Selected items** drop-down list and clicking the **OK** button.

Messages	General	Subscriptions	Moderators	Security						
Rew messad	<u>ee</u>									
Heernome										
Text:										
Is approved:	(all)									
Is SPAM:	(all)	-								
	Show	N								
Actions		User name	Text	Approved	Is SPAM	Inserted -				
1 🗙 🖉		Andy	1st message	Yes	No	12/22/2009 1:58:30 PM				
1 🗶 🖉		Admin	Hello	Yes	No	12/22/2009 1:42:22 PM				
									ltems per pa	age: 25 💌
Selected item	ns: (select	some action)	▼ OK							

## **General tab**

On the general tab, you can specify the following properties of the message board:

- Display name display name of the message board
- Code name code name of the message board
- **Description** text describing the message board
- Enable if unchecked, the message board will be hidden; if checked, the message board works normally
- **Open** if checked, adding messages is enabled; if unchecked, messages are displayed but cannot be added
- Open from / to using these fields, you can define the time interval during that new messages can be added to the board
- Enable subscriptions if checked, users can subscribe to receiving notifications about new messages on the board
- Base URL URL used as the URL base of links to message boards in notification e-mails; if empty, value from Site Manager -> Settings -> Message boards -> Board base URL will be used; if that property is empty too, message boards cannot be placed on pages with wildcard URLs
- Unsubscription URL URL of the page containing the Message board unsubscription web part; the web part handles notification unsubscription requests; if not set, value in Site Manager -> Settings -> Message boards -> Board unsubscription URL will be used
- Require e-mail addresses if checked, users are required to enter their e-mail address when posting board messages

Messages General	Subscriptions Moderators Security	
Board owner:	Public message board	
Display name:	My first message board	
Code name:	MessageBoard	
		*
Description:		
Enable:		· ·
Open:		
Open from:	E Now	
Open to:		
Enable subscriptions:		
Page LIPL:		Inherit from optingo
Dase ORL.		
Unsubscription URL:	~/SpecialPages/BoardUnsubscribe.aspx	Innerit from settings
Require e-mail addresses		
	ОК	

# **Subscriptions tab**

On this tab, you can see a list of subscriptions to receiving notifications about new board messages. You can create new subscriptions using the **New subscription** link. Displayed subscriptions can be filtered by **E-mail** address and **User name**. You can also **Edit** ( $\checkmark$ ) or **Delete** ( $\Join$ ) subscriptions in the list.



# **Moderators tab**

On this tab, you can make the message board moderated by checking the **Message board is moderated** check-box. In such case, new messages will be displayed only after approval by some of the moderators listed in the **Moderators** list-box below. Moderators can be **Added** or **Removed** using the corresponding buttons.

Messa	ages	General	Subscriptions	Moderators	Security					
Mess	age bo	oard is mod	erated							
Modera	Moderators:									
	User									
	Globa	al Administ	trator (administ	rator)						
Re	move s	selected	Ado	lusers						

# Security tab

On this tab, you can set security-related properties of the message board.

If the **Use security code (CAPTCHA)** check-box is checked, users will have to retype the CAPTCHA security code before adding a new message.

The **Allow comments to** section can be used to define which users can add new messages to the board. The following options are available:

- All users everyone can add messages to the board
- Only authenticated users only signed-in users can add messages to the board
- Only authorized roles only members of the roles in the list-box below can add messages to the board

The following two options can be set only for group message boards:

- Only group members only members of the group can add messages to the board
- Only group admin only administrators of the group can add messages to the board



# 8.26.5 Setting Board base URL

Board base URL is the URL which will be used as the URL base for unsubscription links in notification emails. It can be set in two ways:

- In Site Manager -> Settings -> Message boards -> Board base URL; from here, it can be inherited by the web parts.
- Directly in Message board web part properties.

The following rules should be followed when creating user and group message boards placed on these pages in order for the unsubscription links to work correctly:

1. When you create a **user message board**, which is a message board placed on a user's profile, it is recommended to set the **Board base URL** directly in web part properties, for example like this:

~/Members/Profile.aspx

You can find a live example of this setting on the Community Site sample website.

2. When you create a **group message board**, which is a board placed on a group's profile, it is recommended to set the **Board base URL** directly in web part properties, for example like this:

~/Groups/Profile.aspx

3. When you create a public message board, which is a board placed on any document without a wildcard URL, the Board base URL property needn't be set.

## 8.26.6 Settings

Settings of the **Message boards** module are located in **Site Manager -> Settings -> Message boards** . Among other community-related settings, the following settings are related to the **Message boards** module:

- Board unsubscription URL URL of the site on which the Message board unsubscription web
  part is placed; this web part handles requests for unsubscription from notifications about new
  message board messages
- Send message board e-mails from e-mail address that will appear in the From field of notification messages about new message board messages
- **Board base URL** global board base URL that can be inherited by message boards; it can be used by board notification e-mails and message board viewers



# 8.26.7 Security

## Message board

Based on the **Access** and **Message board owner** properties of the **Message board** web part, you can determine who will be allowed to add new messages to the board.



## Changing the values

Remember that once the message board is created (after first message or subscription), you cannot make changes to these settings in the **New board settings** section of web part properties. You can only modify values of the **Access** property on the **Security** tab when editing the corresponding message board in **CMS Desk -> Tools -> Message boards**.

The following table explains **who can add messages to the board** under particular configurations. The difference between **User** and **Public boards** is that **Public boards** are always related to a document, while **User boards** are always related to a document and a user.

Public boards are typically used when you want multiple users to post messages to it. User boards are typically used on user profiles, as you can see on the **Community starter site** sample website, on the **Members -> Profile** page.

Message board owner Access	Anonymou s user	Authentica ted user	Authorize d role	Owner	Owner in authorize d role
-------------------------------	--------------------	------------------------	---------------------	-------	---------------------------------

Public board	All users	Yes	Yes	Yes	Yes	Yes
Public board	Authenticated users		Yes	Yes	Yes	Yes
Public board	Authorized roles			Yes		Yes
Public board	Owner				Yes	Yes
User	All users	Yes	Yes	Yes	Yes	Yes
User	Authenticated users		Yes	Yes	Yes	Yes
User	Authorized roles			Yes		Yes
User	Owner				Yes	Yes

When a board is in the **User x Owner** configuration, the following conditions need to be met in order for the current user to be able to post messages:

- the page must be accessed with userid or username parameter in querystring
- the current user must be the same as the one whose userid or username is passed in querystring
- the current user must not be hidden (configured by the *Is hidden* option when editing the user)

This can be typically used on user profiles, where messages to such board can be posted only by the owner of the profile, while other users can only read these messages. An example of such board is the **MessageBoardAnnouncements** board on the **/Members/Profile** page of the sample Community Site.

## Group message board

The Group message board is always related to some group, hence only the **Access** property can be set. You can see a typical usage of this web part on the **Community starter site** sample website, on the **Groups -> Profile** page.

Access	Anonymou s user	Authenticat ed user	Authorized role	Group member	Group member in authorized role	Group admin
All users	Yes	Yes	Yes	Yes	Yes	Yes
Authenticated users		Yes	Yes	Yes	Yes	Yes
Authorized roles			Yes		Yes	Yes
Group members				Yes	Yes	Yes
Group admin						Yes

When the **Group members** option is set, the following conditions need to be met in order for the current user to be able to post messages:

- the page must be accessed with groupid parameter in querystring
- the current user must be member of the group whose groupid is in the querystring
- the current user must not be hidden (configured by the Is hidden option when editing the user)

This can be typically used on group profiles, where messages to such board can be posted only by

members of the group, while other users can only read these messages. An example of such board is the **GroupMessageBoard** board on the **/Group-pages/<group name>** page of the sample Community Site.

## Permissions

Permissions for access to **Message boards** administration interface can be set in **Site Manager** -> **Administration** -> **Permissions**. You have to select the **Modules** -> **Message boards** permission matrix.

- Modify members of the roles are allowed to edit message board settings, delete the boards and manage message board posts
- Read selected role members are allowed to read the records and configuration of particular message boards, but are not allowed to modify them

A Permissions					
Site:	Corporate Site	•			
Permission type:	Modules	•			
Permission matrix:	Message boards	•			

	Modify	Read
Authenticated users		
CMS Basic users		
CMS Community Administrators	đ	Ś
CMS Designers		
CMS Desk Administrators	Ś	đ
CMS Editors		Ś
CMS Readers		Ś
Everyone		
Gold Partners		
Live ID users		
Not authenticated users		
Silver Partners		

## 8.26.8 Message board notifications

## 8.26.8.1 Who can be notified

When a new board message is added or during message editing, notifications can be sent to:

- Board moderators
- Subscribers

The following text explains to whom notifications are sent under specific conditions:

#### New message

1. has been added by the board moderator, global administrator, board owner (in case of a user board), user with the **Modify** permission or group administrator (in case of group boards)

- the message is marked as APPROVED
- the e-mail is sent to subscribers

2. has been added by anybody else

- a) board is moderated
- the message is marked as NOT APPROVED
- the e-mail is sent to moderators

b) board is not moderated

- the message is marked as APPROVED
- the e-mail is sent to subscribers

#### Message editing

- 1. the message is switched from NOT APPROVED to APPROVED
- the e-mail is sent to subscribers
- 2. other message changes
- no e-mail is sent

#### 8.26.8.2 User subscriptions

## Message board notifications

You can let users subscribe to receiving notifications about new messages added to the message board. You need to check the **Enable subscriptions** check-box in **Message board** web part properties. Alternatively, when the message board is already created, you can allow subscriptions in **CMS Desk -> Tools -> Message boards -> Boards**. If you choose to **Edit** ( $\checkmark$ ) the message board and switch to the **General** tab, you can check the same **Enable subscriptions** check-box here, which enables the subscriptions.

The subscription itself can be done two ways. Users can either check the **Subscribe to message board** check-box, which subscribes them along with adding the message. They can also click the **Subscribe to board** link, which displays only one **E-mail** field. After entering their address and clicking the **Subscribe** button, they can subscribe to notifications about this board without leaving any message.

Leave mes	sage S	<u>ubscribe</u>
Name:	Admin	
Your URL:	http://	
Your e-mail:	administrator@localhost.local	
Message:		*
(	☑ Subscribe me to this message board Add	

## Subscriptions management

Users can view their subscriptions and eventually **unsubscribe** using the **Delete** (**X**) icon at the following two places:

1. Users with access to **CMS Desk** can view their subscriptions on the **My Desk -> My profile -> Subscriptions** tab.

							Switch to Site Manage	ar Site: Corporate Site 💌
CMS Desk	Content	My desk	Tools Administ	ration				
	nts	🚨 Му р	orofile					
🛛 🗟 Outdated docur	nents	Details	Change password	Notifications	Subscriptions	1		
Waiting for my a Checked out by My recycle bin My documents My profile My blogs My messages	approval me	Newslet Your e No nev	tters subscriptions -mail address adm vsletters selected. Add newsletters	inistrator@loca	lhost.local is cu	rrently subso	ribed to receive the foll	owing newsletters:
🤐 🏭 My friends		Blog po You are	sts subscriptions — en't currently subsc	ribed to receive	e notifications or	n any blog c	omments.	
		Message You are	e boards subscriptic a currently subscrib	ons ed to receive n	otifications on n	new posts ad	lded to the following n	nessage boards:
			E-mail		Message boa	ard		
	Ĺ	×	administrator@l	ocalhost.local	<u>temp</u>			

2. On live site, users can view their subscriptions in the **My account** web part. The **Display my subscriptions** property of the web part must be enabled for this to be possible.

Personal settings Change password	Notifications Messages	Subscriptions		
Newsletters subscriptions Your e-mail address administrator No newsletters selected. Add newsletters	@localhost.local is currently s	ubscribed to receiv	e the following newsletters:	
Blog posts subscriptions You aren't currently subscribed to	receive notifications on any blo	og comments.		
Message boards subscriptions You are currently subscribed to re	ceive notifications on new post	s added to the follo	wing message boards:	
E-mail	Message board			
administrator@localhost.	ocal <u>New message board</u>			

# **Unsubscription links configuration**

Each message board notification e-mail contains an unsubscription link. By clicking the link, users can unsubscribe from receiving notifications about new messages.

C	🕞 🗧 New messa	age was added to the bo	• • • ×		
Message Ac	id-Ins		۲		
Reply Reply Forward to All Respond	Delete	Categorize ▼ ▼ Follow Up ▼ Mark as Unrea Options	d Find Send to OneNote OneNote		
From: no-reply@loc	alhost.local	Sent:	Tue 12/22/2009 2:41 PM		
To: Pavel Knotek Cc:					
Subject: New messag	e was added to the l	board temp			
New message was added to the board you are subscribed to:         Board:       temp         Added by:       administrator         Date and time:       22.12.2009 14:40:41         Text:       Hello					
Click here to unsubscrit	<u>16</u>				

For the unsubscription links to work, you have to do the following tasks:

1. Place the **Message board unsubscription** web part to a page. It is recommended to create a special page for this purpose, as you can see at **Corporate site -> Special pages -> Board unsubscribe** or **Community site -> Special-pages -> Board unsubscribe**. You can set only one property of the web part - **Confirmation text**. This is the text that will be displayed after successful unsubscription.

2. Set the URL of the page created in step 1 as the **Unsubscription URL** property of the message board. This can be done three ways:

- Enter the URL into the Board unsubscription URL field in Site Manager -> Settings -> Message boards. This URL will be used by default when no URL is entered in web part properties of the message board.
- When adding the **Message board** web part, you can set set its **Unsubscription URL** property. This setting overrides the option in **Site Manager -> Settings -> Message boards**.
- When the message board is created, you can edit the Unsubscription URL property on the CMS
   Desk -> Tools -> Message boards -> Boards tab -> Edit (2) the message board -> General tab.

#### 8.26.8.3 E-mail templates

There are two different e-mail templates that can be used when sending notifications to subscribers and board moderators:

- Subscribers e-mails are based on the Boards Notification to board subscribers template
- Moderators e-mails are based on the Boards Notification to board moderators template

The following macros can be used in the notification e-mails:

#### Data macros

- **Board.XXX** where XXX are columns of the *Board_Board* table
- Message.XXX where XXX are columns of the Board_Message table
- MessageUser.XXX where XXX are columns of the CMS_User table
- MessageUserSettings.XXX where XXX are columns of the CMS_UserSettings table

#### Example: {%Message.MessageEmail%}

Macro type: Item:				
Data 💌 board	-	boardaccess	-	Insert
(all columns)				
(enter expression)				
New message was addeboard		:		
message				
Board: [url={%Documessageuser		/url]		
Added by: {%Messageusersettings				
Date and time: {%Message.MessageInserted%}				
Text: {%Message.MessageText%}				

#### Source macros

- DocumentLink link to the document where the board is placed
- UnsubscriptionLink unsubscription link

Example: {%DocumentLink %}

Macro type: Item:						
Data (all columns)		•	documentlink	•	Insert	
			documentlink			
			unsubscriptionlink			
New message was added and now is	3 waiting for your approva	al				
Board: [url={%DocumentLink%}]	[%Board.BoardDsiplayName%]	}[/	/url]			
Added by: {%MessageUser.FullNa	ame%}					
Date and time: {%Message.MessageInserted%}						
Text: {%Message.MessageText%}						

# 8.27 Messaging

# 8.27.1 Overview

The **Messaging** module allows users of your website to communicate via text messages. Its purpose is to provide an internal way of communication with other users of the website, both on the live site and in the user interface.

Inbox	Outbo	ox Con	tact list	Ignore list	
<u>New r</u>	nessag	<u>pe</u> <u>Delete</u>	all mes	sages	
Act	ions	From	Subjea	ct	Date ~
0	×	<u>Andy</u>	<u>Too la</u>	te	<u>12/22/2009 3:05:34 PM</u>
	×	<u>Andy</u>	<u>l'm stil</u>	I wainting!	<u>12/22/2009 3:05:13 PM</u>
	×	Andy	<u>I'm wa</u>	iting	12/22/2009 3:04:45 PM
					3 unread message(s) of 3 total

Users with access to Kentico CMS user interface can send, receive and manage their messages in **CMS Desk -> My desk -> My messages**. Functionality provided by this section of the user interface is described in the <u>My messages</u> topic. On the live site, identical functionality can be provided by a single **My messages** web part, or separately by other web parts which come with the module. All Messaging module web parts are described in the Adding the messaging functionality to the live site topic.

It is possible to let Kentico CMS notify users about new messages by means of automatic notification emails. Information related to this topic can be found in the <u>E-mail notifications</u> topic. The <u>Security</u> topic explains messaging possibilities of unregistered anonymous website visitors.

The <u>Messaging internals and API</u> sub-chapter provides an overview of database tables and API classes used by the module. It also provides examples of how methods from the classes can be used to handle messaging in your custom code.

There are other ways how you can enable users of your website to communicate with each other. The <u>Forums</u> module enables you to add standard discussion forums to the live site. The <u>Message boards</u> modules provides similar functionality as the forums, with the difference that message boards are not structured and are typically used to let users add comments on the content of a particular page.

# 8.27.2 My messages

The **CMS Desk -> My desk -> My messages** section of the administration interface is divided into the following four tabs:

## Inbox

On this tab, the current user can see all their received messages. A particular message can be displayed by clicking its **Subject**, **Date** or sender in the **From** column. The following two actions are available for each message:

- Reply opens a dialog where a reply to the message can be written and sent out
- X Delete deletes the particular message

The Delete all messages link deletes all messages in the list.



# Outbox

This tab lists all messages sent out by the current user. A particular message can be displayed by clicking its **Subject**, **Date** or recipient in the **To** column. You can delete particular messages using the **Delete** (**X**) icon, or delete all listed messages using the **Delete all messages** link. The **New message** link opens a dialog where a new message can be written and sent out.

🜺 Kentico					Switch to Site Man	ager Site:	Community Site 💌
CMS Desk Co	ntent	My desk	Tools	Administration			
My desk     Becent documents		My messages					
Waiting for my approval     Checked out by me     Writing for my approval     Checked out by me     Wy recycle bin		Inbox 🔽	Outbox	Contact list Ignore list			
		New message Delete all messages					
		Actions	То	Subject	Data -	Doad data	
My documents		ACUOIIS	10	Subject	Date +	Reau uale	
My blogs		×	David	Your account has been re-activated	<u>9/15/2010 12:50:19 PM</u>	-	
My messages		×	Mia	Your new password	<u>9/15/2010 12:49:22 PM</u>	-	
My friends							

# **Contact list**

This tab represents the current user's contact list, i.e. a list of users they communicate with. Having a user in the contact list makes it easier to select the user as a recipient when creating a new message.

The **Add users** button opens a pop-up dialog where you can select users to be added to the list. The **Remove selected** button removes users selected by the check-boxes from the list.

Modules	1005
---------	------

Kentico CMS Desk Content	My desk Tools Administration	Switch to Site Manager	Site: Community Site 💌
	My messages		
Outdated documents	Inbox Outbox Contact list Ignore list		
Waiting for my approval	Following users are in your contact list:		
My documents	User name		
🦀 My profile	David Silver (David)		
My blogs	Kelly Taylor (Kelly)		
Wy friends	Mia Lee (Mia)		
	Remove selected Add users		

# Ignore list

This tab represents the current user's ignore list, i.e. a list of users from which no messages will be received. If a user who is in your ignore list sends you a message, the message will simply not be delivered.

The **Add users** button opens a pop-up dialog where you can select users to be added to the list. The **Remove selected** button removes users selected by the check-boxes from the list.

Mentico		Switch to Site Manager Site: Community Site
CMS Desk Content	My desk Tools Administration	
My desk     Recent documents	My messages	
🗟 Outdated documents	Inbox Outbox Contact list Ignore list	
Waiting for my approval	Following users are in your ignore list:	
My documents	User name	
🔏 My profile	Abigail Woodwarth (Abi)	
My blogs	Jack Stevenson (Steevie)	
My friends	Joshua O'Neil (Josh)	
	Remove selected Add users	

## New message

On the **Inbox** and **Outbox** tabs, you can find the **New message** link. Clicking the link opens the **New message** dialog where new messages can be created and sent out. The **New message** dialog is depicted in the screenshot below.

When creating a message, you first need to select its recipient by clicking the **Select** button next to the **To** field. Clicking the button opens a pop-up dialog where the recipient can be selected from the contact list, from the user's <u>friends</u>, or searched from all visible website users.

Then you need to fill in the **Subject** field and the actual text of the message into the large text area. Entered text can be formatted using BBCode. This is possible either by entering BBCode tags directly, or using the icons above the main text area. Supported BBCode tags are listed and explained in <u>Modules -> Forums -> BBCode support</u>.



Finally, the message can be sent out using the **Send** button.

New message	
From: administrator To: Guru Select	
Subject: Testing message	
Image: Big Big Big Big Big Big Big Big Big Big	*
I'm just sending a testing message to see how this Messaging module works.	
Please reply if you receive this message.	
Thanks, admin	
	-
Send	

## 8.27.3 Adding the messaging functionality to the live site

The same functionality that is described in the <u>My messages</u> topic can be added to the live site as well. It is possible using the web parts stored under the **Messaging** web part category. This page gives just a brief overview of the messaging web parts. Detailed descriptions of each web part and its properties can be found in <u>Kentico CMS Web Parts Reference</u>.

Inbo	x Out	ox Cor	tact list	Ignore list		
Ne	New message Delete all messages					
ļ	Actions	From	Subjec	:t	Date ∽	
	i 💥 😹	Andy	<u>Too la</u>	<u>te</u>	<u>12/22/2009 3:05:34 PM</u>	
1	la 💥	<u>Andy</u>	<u>l'm stil</u>	l wainting!	<u>12/22/2009 3:05:13 PM</u>	
	le 💥 😹	<u>Andy</u>	<u>l'm wa</u>	iting	12/22/2009 3:04:45 PM	
					3 unread message(s) of 3 total	

The **My messages** web part, shown in the screenshot above, is an all-in-one messaging web part. It provides exactly the same functionality as the user interface in **CMS Desk -> My Desk -> My messages**. This web part encapsulates the rest of the messaging web parts in one web part. If you need to add just a particular part of the messaging functionality, you can use one of the other messaging web parts:

- Contact list allows users to add other users into their contact list or remove them from the list
- Ignore list allows users to define which users they don't want to receive any messages from
- Inbox shows a list of received messages and allows replying to them and deleting them
- Messaging info panel displays links to inbox, outbox, etc.
- Outbox shows a list of sent messages and allows deleting them
- Send message allows users to send messages

These web parts can be used separately on any page of the website, providing the same functionality as when the **My messages** web part is used. You can also choose which of these web parts will be included in the **My messages** web part. This can be done using its **Display inbox**, **Display outbox**, **Display contact list** and **Display ignore list** properties.

# 8.27.4 E-mail notifications

Users can be notified about new messages received via the Messaging module by means of notification e-mails. The e-mails are based on the **Messaging - Notification email** e-mail template.

For this to work, the target e-mail address must be filled into a user's **Messaging notification e-mail** field. This can be done several ways:

- On the live site, it can be entered via the My profile web part.
- Users with access to the system's user interface can enter it in CMS Desk -> My desk -> My profile.
- Global administrators can edit this field of each user in Site Manager -> Administration -> Users > edit (2) a user -> Settings.

When the e-mail address is entered into the field, a notification e-mail is sent to the address whenever the user receives a new message. This does not apply to messages received from users in the recipient's **Ignore list**.



## Please note

Your instance of Kentico CMS must be configured to use an SMTP server in order for emails to be sent, as described in <u>Installation and deployment -> Additional configuration</u> tasks -> SMTP server configuration.

# **Related settings**

In **Site manager -> Settings -> Messaging**, you can find the following settings related to the notification e-mails:

- **Messaging sender e-mail** e-mail address that will be used as the sender address (*From* field) of the notification e-mails
- **Messaging e-mail subject** entered text will be used as content of the *Subject* field of notification e-mails



# 8.27.5 Security

Even **unregistered anonymous users** can send messages to registered users of your website. This is possible only from the **Send message** web part, the **My messages** web part can be used only by registered users.

To allow this functionality, go to properties of the **Send message** web part and check the **Allow anonymous users** check-box. By checking the **Allow anonymous users to select recipient** check-box below, you can give anonymous users permission to view a list of all registered users and select a user from this list.

# 8.27.6 Messaging internals and API

#### 8.27.6.1 Database tables and API classes

The Messaging module uses the following database table:

- Messaging_Message this is the database table used for storing messages
- Messaging_ContactList this database table is used for storing contact lists; each record in the table contains an ID of a contact list owner in the first column and an ID of a user in the contact list in the second column
- **Messaging_IgnoreList** this database table is used for storing ignore lists; each record in the table contains an ID of a ignore list owner in the first column and an ID of a user in the ignore list in the second column

The messaging API is provided by the CMS.Messaging namespace classes:

• MessageInfo, MessageInfoProvider - these classes provide functionality for managing messages

The following chapters show how to use methods from these classes in your custom code:

- Creating a new message
- Deleting all messages
- Adding a user to contact list
#### • Removing a user from ignore list

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.27.6.2 Creating a new message

The following sample code shows how you can create a new message, edit its text and finally delete it, all using the API.

[C#]

```
using CMS.Messaging;
using CMS.CMSHelper;
using CMS.SiteProvider;
using CMS.GlobalHelper;
. . .
        // Creates a new message from CurrentUser to administrator
        MessageInfo message = new MessageInfo();
        message.MessageSubject = "Subject";
        message.MessageBody = "Hello world!";
        message.MessageSenderUserID = CMSContext.CurrentUser.UserID;
        message.MessageRecipientUserID = UserInfoProvider.GetUserInfo(
"administrator").UserID;
       message.MessageSent = DateTime.Now;
        MessageInfoProvider.SetMessageInfo(message);
        // Gets the previously created message and edits its body
        MessageInfo messageToEdit = MessageInfoProvider.GetMessageInfo(message.
MessageID);
        messageToEdit.MessageBody += " This message was edited";
        MessageInfoProvider.SetMessageInfo(messageToEdit);
        // Deletes the previously created and edited message
        MessageInfoProvider.DeleteMessageInfo(message.MessageID);
```

#### 8.27.6.3 Deleting all messages

The following sample code shows how you can delete all messages in current user's outbox using the API.

[C#]

```
using CMS.Messaging;
using CMS.CMSHelper;
using CMS.SiteProvider;
using CMS.GlobalHelper;
....
// Deletes all messages in CurrentUser's outbox
MessageInfoProvider.DeleteSentMessages(CMSContext.CurrentUser.UserID);
```

#### 8.27.6.4 Adding a user to contact list

The following sample code shows how you can add a user to current user's contact list using the API.

#### [C#]

```
using CMS.Messaging;
using CMS.CMSHelper;
using CMS.SiteProvider;
using CMS.GlobalHelper;
....
// Adds administrator to CurrentUser's Contact list
UserInfo user = UserInfoProvider.GetUserInfo("administrator");
ContactListInfoProvider.AddToContactList(CMSContext.CurrentUser.UserID, user.
UserID);
```

#### 8.27.6.5 Removing a user from ignore list

The following sample code shows how you can remove a user from current user's ignore list using the API.

#### [C#]

```
using CMS.Messaging;
using CMS.CMSHelper;
using CMS.SiteProvider;
using CMS.GlobalHelper;
....
// Removes administrator from CurrentUser's Ignore list
UserInfo user = UserInfoProvider.GetUserInfo("administrator");
IgnoreListInfoProvider.RemoveFromIgnoreList(CMSContext.CurrentUser.UserID,
user.UserID);
```

# 8.28 Newsletters

# 8.28.1 Overview

The Newsletters module allows the creation and management of highly configurable newsletters. Newsletters are used to regularly send e-mails about a certain topic to users who agree to receive them by subscribing.

When a newsletter issue is sent, e-mails are created and personalized (if applicable) for every individual subscriber. This procedure is performed by the Newsletter queue and any e-mails lost due to errors are automatically resent. This is handled by the **Send queued newsletters** <u>scheduled task</u>. Once this process is complete, the e-mails are sent either directly to the SMTP server or to the <u>E-mail queue</u> if the given newsletter is configured to do so (later topics in this chapter describe how this can be done). Using the e-mail queue is recommended for newsletters with large amounts of subscribers to ensure that all e-mails are delivered correctly.

The newsletters can be of two types:

- <u>Static newsletters</u> every issue is edited and sent manually. The newsletters are based on predefined templates.
- <u>Dynamic newsletters</u> issues are sent out to all subscribers automatically at a specified interval. The content is dynamically taken from a specified page, which is usually updated between newsletter issues.

Users can find information about newsletters and manage their subscriptions directly on the pages of a website if it contains the appropriate web parts. Please refer to the <u>Integrating newsletters into the site</u> topic to see what web parts are available.

Newsletters use templates to give all issues and related e-mails a unified appearance by using elements such as a company logo or footer. Templates may also contain various macros that are resolved into data matching individual recipients during the mail merge. For more details, please see the <u>Newsletter</u> templates topic.

The subscribers of all newsletters are stored in the system and can be monitored and managed as shown in the <u>Subscriber management</u> topic. The <u>Subscriber import and export</u> topic describes how tasks affecting large amounts of subscribers can be performed.

The <u>Troubleshooting</u> topic contains a list of solutions that can be used to resolve common problems with newsletter e-mails.

# 8.28.2 Creating a static newsletter

In this topic, you will learn how to create a static newsletter:

- 1. Go to CMS Desk -> Tools -> Newsletter and click 🗟 New newsletter. Enter the following details:
- **Newsletter display name**: My newsletter (this is the name displayed to the users)
- Newsletter name: MyNewsletter (this is the code name used in web parts and code)
- Subscription confirmation: Subscription confirmation template
- Unsubscription confirmation: Unsubscription confirmation template
- Sender name: enter your full name
- Sender e-mail: enter your e-mail address

Choose **Template based newsletter** and use the **Newsletter issue template.** Click **OK**. The following three additional options can now be entered:

- Base URL: the base URL of your website used to convert relative links to absolute; It's necessary to set this property in order for the unsubscription links to work properly. It's also useful if you encounter any issues with links in newsletter e-mails e.g. if you're using a different URL for your editing environment than for the live website. Example: https://www.example.com
- Unsubscription page URL: ~/SpecialPages/Unsubscribe.aspx (the page with a Newsletter unsubscription web part)
- Send issues via e-mail queue: if enabled, newsletter issues are sent to the SMTP server via the <u>E-mail queue</u>; this is recommended for newsletters with a large number of recipients; if disabled, the issues are sent directly to the SMTP server

Newsletters module							
Newsletters Subscribers T	emplates Newsletter queue Import subscribers I	Export subscriber					
Newsletters  My newsletter							
Issues Configuration Su	bscribers						
Newsletter display name:	My newsletter						
Newsletter name:	MyNewsletter						
Sender name:	Admin						
Sender e-mail:	admin@localhost.local						
Base URL:							
Unsubscription page URL:		]					
Subscription confirmation:	Subscription confirmation template						
Unsubscription confirmation:	Unsubscription confirmation template						
Send issues via e-mail queue:		_					
Template-based newsletter configuration:							
Newsletter template:	Newsletter issue template						

ОК

Click OK.

2. Now we will create a new subscriber. Go to the main **Subscribers** tab (in the top tab menu) and click **Wew subscriber**. Enter the following details:

- E-mail: subscriber's e-mail address
- First name: subscriber's first name
- Last name: subscriber's last name

Rewsletters module							
Newsletters	Subscribers	Templates	Newsletter queue	Import subscribers			
Subscribers  • New subscriber							
r							
E-mail:	E-mail: john@localhost.local						
First name: John							
Last name: Smith							
ОК							

Click **OK**. The subscriber has been created. Now we will assign this subscriber to our previously created newsletter.

3. Go to the **Subscriptions** tab, click the **Add newsletters** button, check the **My newsletter** checkbox and click **OK**.

Subscribers + john@localhost.local					
General Subscriptions					
Selected subscriptions					
Newsletter					
My newsletter					
Remove selected	Add newsletters				

Send e-mail confirmation to the subscriber

If you check the **Send e-mail confirmation to the subscriber** checkbox, the subscriber will also receive an e-mail confirmation informing them of their subscription.

4. Your newsletter is configured. You can now create new issues as is described in the <u>Authoring static</u> <u>newsletter issues</u> topic.

## 8.28.3 Authoring static newsletter issues

Now that you have created a static newsletter with a subscriber as described in the <u>Creating a static</u> <u>newsletter</u> topic, it is possible to write and send individual issues. The following steps describe how this can be done:

1. Go to the **Newsletters** tab and edit ( $\checkmark$ ) **My newsletter**. Click **Greate new issue** on the **Issues** tab. The wizard will guide you through the process of creating a new newsletter issue.

2. Enter the following Subject: Welcome to issue #1 of My newsletter

3. Now enter the following text into the **content** editable region:

Dear,

welcome to the first issue.

Place the cursor after the word Dear, choose **First name** from the **Insert field** drop-down list below the region and click the **Insert** button. The macro expression {*%FirstName%*} will be placed into the text. This macro is automatically replaced with the subscriber's first name during the mail merge.

The issue now looks like this:

Step 1 Edit the content			
Subject: Welcome to issue #1 of My newsletter		Show newsletter issue	in archive: 🔲
I 🔄 Source   🛕 II 🐰 🗈 💼 📾 📾 I 🖨 II ∽ II Style 💽 Format   Nomal 💌	○     ▲     ▲     ↓     B     I     U     ABC     ×2     x ² ↓     ↓     ↓       Font     ▼     Size     small     ▼     I     I     ↓     ↓	¢   ■ = = =   & & ↓   = □ := 9 ♦ #	
Comp	anyLogo		E
Dear (%FirstNar welcome to the	ne%}, e first issue.		
Yours, Me		Ŧ	Ţ
Insert field: First name • Insert	Macro type: Item: Context value   (general context)	Application path     Insert	
Attachments If you wish to add attachments, please click Save first.			
		Save	Next>



## Newsletter templates

The structure of the newsletter text is defined by the newsletter issue template that can be edited on the **Templates** tab. Templates are described in the <u>Newsletter templates</u> topic.

4. Click **Next**. Now you can preview the content of the newsletter for each subscriber. You can click **Back** and modify the text if necessary.

Step 2	Preview newsletter		
Subscriber: < Back Subject: Welcome to issue	john@localhost.local a #1 of My newsletter	Next >	
	Company	yLogo	
	Dear John,		
	welcome to the first issu	sue.	
	Yours,		
	Më Company, address, state All rigi	ights reserved. You can unsubscribe here: <u>Unsubscribe</u>	
			< Back Next >

5. Click **Next** again. Now you can choose when the newsletter issue should be sent out:

- Send now the newsletter issue is sent out immediately to all subscribers
- Schedule newsletter mail-out the newsletter issue is sent out on a specified date and time
- Send the newsletter manually later the newsletter is not sent and you can decide on the mailout time later

Step 3 Send the newsletter
© Send now
Schedule newsletter mail-out     Date and time:
Send the newsletter manually later
Finish

Choose **Send now** and click **Finish**. On the Issues tab, you can see how many e-mails have already been sent out and how many subscribers unsubscribed after receiving this issue:

Rewsletters									
Newsletters Subscribers Templates Newsletter queue Impo	t subscribers Export subscribers								
Newsletters  My newsletter	Newsletter 📀								
Issues Configuration Subscribers									
Create new issue									
Actions Issue subject	Send on Sent e-mails Unsubscribed								
🖉 💢 🛛 Welcome to issue #1 of My newsletter	9/24/2010 1:33:32 PM 5 0								
	Items per page: 25 💌								

6. If you experience problems with receiving the newsletter issue e-mail, please follow the instructions in the <u>Troubleshooting</u> topic.

# 8.28.4 Creating a dynamic newsletter

Dynamic newsletters contain the content of a given page and they are sent out automatically on a regular basis, using the built-in scheduling system. The following steps will guide you through the creation of a dynamic newsletter:

1. Go to CMS Desk -> Tools -> Newsletter and click **New newsletter**. Enter the following details:

- Newsletter display name: My dynamic newsletter
- Newsletter name: MyDynamicNewsletter
- Subscription confirmation: Subscription confirmation template
- Unsubscription confirmation: Unsubscription confirmation template

- Sender name: enter your full name
- Sender e-mail: enter your e-mail address

Choose Dynamic newsletter and enter the following details:

- Source page URL: http://www.kentico.com/home.aspx (this is the URL of the page the newsletter takes its content from)
- Schedule mail-outs: enabled
  - Period: Minute
  - Start time: use the date-time picker to select the current date and time (click S Now)
  - Every: 1 minute
  - Between: 00:00 and 23:59
  - Days: check all days

Click **OK**. The following three additional options can now be entered:

- Base URL: the base URL of your website used to convert relative links to absolute; It's necessary to set this property in order for the unsubscription links to work properly. It's also useful if you encounter any issues with links in newsletter e-mails - e.g. if you're using a different URL for your editing environment than for the live website. Example: https://www.example.com
- Unsubscription page URL: ~/SpecialPages/Unsubscribe.aspx (the page with a Newsletter unsubscription web part)
- Send issues via e-mail queue: if enabled, newsletter issues are sent to the SMTP server via the <u>E-mail queue</u>; this is recommended for newsletters with a large number of recipients; if disabled, the issues are sent directly to the SMTP server

Rewsletters module	•	
Newsletters Subscribers 1	emplates Newsletter queue Import subscribers	Export subscribers
Newsletters  My dynamic new	sletter	
Issues Configuration Su	bscribers Send	
Newsletter display name:	My dynamic newsletter	
Newsletter name:	MyDynamicNewsletter	
Sender name:	Jack Sender	
Sender e-mail:	jack.sender@localhost.local	
Base URL:		
Unsubscription page URL:		
Subscription confirmation:	Subscription confirmation template	•
Unsubscription confirmation:	Unsubscription confirmation template	
Send issues via e-mail queue:		
Dynamic newsletter configura	tion:	
Dynamic nonoiottor comigare		
Subject:	Ose page title for subject	
Source page URL:	http://www.kentico.com	
Schedule mail-outs:		
	Deried: Minute	
	Period: Minute	
	Start time. 12/22/2009 16:09:07	
	Every: 1 Minute	
	Between: 00 : 00 and 23 : 59	
	Days: 📝 Monday 📝 Saturday	
	🛛 Tuesday 🖾 Sunday	
	Wednesday	
	🗹 Thursday	
	🗹 Friday	
	ок	

Click OK.

2. Now go to the **Subscribers** tab of this newsletter and add the subscriber created in the <u>Creating a</u> <u>static newsletter</u> topic to this newsletter.

Rewsletters module						
Newsletters	Subscribers	Templates	Newsletter queue			
Newsletters	<ul> <li>My dynamic n</li> </ul>	ewsletter				
Issues Configuration Subscribers Send						
🙀 Add subscribers 🛛 🔒 Add users 🛛 🖓 Add roles						
Actions Subscriber name • E-mail						
X John Smith john@localhost.local			hn@localhost.local			

Send e-mail confirmation to the subscriber

To do this, click the **4 Add subscriber** link, the following window will appear:

Select subscribers Webpage Dialog	×
http://127.0.0.1/KenticoCMS_5.5/CMSAdminControls/UI/UniSelector/Sele	ectionDialog.aspx?SelectionMode=Mul
Select subscribers	
Subscriber name:	Search
Select all Deselect all	
Subscriber	
John Smith	
	Items per page: 10 💌
	OK Cancel
http://127.0.0.1/KenticoCMS_5.5/CMSAd 🌍 Internet   Protected Mode: On	i.

This window can be used for selecting from the subscribers of all newsletters. Alternatively, the **Add users** or **Add roles** links can be used to select from the users or roles of the current website. Make the selection and click **OK**. If you do this with the **Send e-mail confirmation to the subscriber** checkbox checked, a notification e-mail will be sent to the selected users, informing them about the changes in their subscriptions.

3. Go to the **Issues** tab. Here, you will see the list of sent issues. You may need to wait up to 2 minutes until the first issue is sent out. You can refresh the page by clicking the **Issues** tab again.

Issues	Configuration	Subscribers	Send				
Actions	Issue subject		Send o	n	Sent e-mails	Unsubscribed	
N 🗙	ASP.NET CMS .NET open content management system portal C# free - Home			12/22/2	009 4:10:44 PM	1	0
N 🗙	ASP.NET CM	S .NET open o	content management system portal C# free - Home	12/22/2	009 4:13:15 PM	1	0

4. Check your mail box, you should receive the content of the given page by e-mail:





In this way, you can send out any page from your website. You can create a new page only for newsletter purposes that will display e.g. new articles added to your website during the last month.

# Blocking dynamic newsletter mail-out

If you want to block the mail-out of the page (e.g. if there are no new articles), you can either disable the **Schedule mail-outs** property of the dynamic newsletter on its **Configuration** tab or you can set the title of the source page to ##DONOTSEND## and the newsletter will not be sent. The title of a page can easily be changed at **CMS Desk -> Content -> Edit -> ... select a page from the content tree ... -> Properties -> Metadata -> Page title**.

# 8.28.5 Integrating newsletters into the site

You can integrate newsletters into your website using the following web parts:

- Newsletter subscription displays the newsletter subscription dialog
- Newsletter unsubscription unsubscribes users and displays a confirmation message when the user clicks the "Unsubscribe" link in the newsletter issue
- Newsletter archive displays archived issues of a specified newsletter
- Unsubscription request this web part allows newsletter subscribers to request an unsubscription

e-mail (based on the **Newsletters - Unsubscription request** e-mail template) by submitting their email address

- My subscriptions this web part can be used by users to add or remove their newsletter subscriptions
- My account if configured to display newsletter subscriptions, this web part can be used by users to add or remove their subscriptions

You can find more details on the properties of these web parts in Kentico CMS Web Parts Reference.

## 8.28.6 Newsletter templates

The e-mails sent by the Newsletter module are defined by templates. These templates can be managed at **CMS Desk -> Tools -> Newsletters -> Templates**.

Newsletters module							
Newsletters	Subscribers Templates Newsletter que	ue Import subscribers	Export subscribers				
New template							
Actions	Template 🔺	Туре					
N 💥 📄	Newsletter issue template	Newsletter issue					
N 💥 问	Subscription confirmation template	Subscription					
N 💥 📄	Unsubscription confirmation template	Unsubscription					

There are three types of templates:

- **Newsletter issue** this is a template that defines the layout and design of static newsletter issues. It contains editable regions where newsletter authors can enter the content.
- Subscription template of the e-mail message sent when a user subscribes to the newsletter.
- Unsubscription template of the e-mail message sent when a user unsubscribes.

All types of newsletter templates can contain the following macro expressions anywhere in the text:

- {%Email%} resolves into the e-mail address of the subscriber
- {%FirstName%} resolves into the first name of the subscriber
- {%LastName%} resolves into the last name of the subscriber
- {%UnsubscribeLink%} resolves into a link to the unsubscription page

Additionally, other types of macro expressions as seen in <u>Appendix A - Macro expressions</u> can be entered into templates.

## Editing newsletter issue templates

The issue templates consist of:

- Header (HTML) the leading HTML code including the <html> element.
- **Body** the layout of the e-mail here you can enter static text, use the WYSIWYG editor and insert macros and editable regions. Editable regions allow users to enter the content of the particular newsletter issue. They can be inserted using the **Insert editable region** section:

■ E Source   🐧   从 🖻 🛍 🛗 👘   🚑   🌳 🐃   構 🎼   🏢 🖉   B I 🙂 🚟   ×₂ 😒   注   注   注 =	
王 王 王   🍓 🐘 🕁   📾 🖽 😓 🥹 🦚 📇	
Style Format Font Size 🛛 🖓 🖓 🖬	
\$\$body:700:500\$\$	*
{%UnsubscribeLink%}	
	Ŧ
Insert field:	
Macro type: Item:	
Context value (general context) Application path Insert	
Insert editable region: Width: Height:	
Insert	

The region is inserted as a macro expression in format: *\$\$regionName:width:height\$\$* 

- Footer (HTML) the closing HTML code.
- **CSS stylesheet** the CSS styles used for the newsletter; these styles are used by the newsletter issue editors and they are included in the e-mails.

File attachments can be added to the template at the bottom of the page.

# 8.28.7 Subscriber management

You can manage subscribers at CMS Desk -> Tools -> Newsletters -> Subscribers.

Rews	letters				
Newsletters	Subscribers	Templates	Newsletter queue	Import subscribers	Export subscribers
🙀 <u>New subsc</u>	riber				
Subscriber r E-mail:	name: LIKE LIKE Sho	V N			
Actions	Subscriber na	ime 🔺 🛛 E-	mail		
N 🗙	David Scott	da	wid.scott@compan	y.com	
1	Frank Maguire	fra	nk.maguire@web.	com	
N 🗙	John Smith	jol	hn@localhost.local		
N 🗙	Mary Jones	m	ary.jones@mail.cor	n	
N 💥	Role 'CMS De:	signers'			

On this page, you can see a list of all subscribers of all of the website's newsletters. You can filter these by name or e-mail, by entering the desired value into the appropriate filter field and clicking the **Show** button.

By clicking the **Delete** (**X**) icon next to a subscriber record, you can remove the subscriber from the list and consequently from all newsletters they are subscribed to.

By clicking the **Edit** ( $\mathscr{P}$ ) icon next to a subscriber record, you can change the subscriber's details on the **General** tab. You have the same options here as when creating a new subscriber.

General	Subscriptions
E-mail:	john@localhost.local
First name:	John
Last name:	Smith
	ОК

On the **Subscriptions** tab, you can select which newsletters this subscriber will be subscribed to. If you check the **Send e-mail confirmation to the subscriber** check-box, a notification e-mail will be sent to the user, informing them about the subscription changes.

General	Subscriptions	
Selected su	bscriptions	
Ne Ne	wsletter	
My	newsletter	
Ren	nove selected	Add newsletters

Send e-mail confirmation to the subscriber

Alternatively, subscribers of individual newsletters can be managed at CMS Desk -> Tools -> Newsletters -> Newsletters -> ... edit (*P*) Newsletter ... -> Subscribers. This tab displays a list

similar to the one on the main Subscribers tab, but it only contains subscribers of the current newsletter. Clicking the **Delete** (**X**) icon here doesn't completely remove a subscriber from the system, only from the current newsletter.

Rews	etters			
Newsletters	Subscribers	Template	s Newsletter queue	Import subscribers
<u>Newsletters</u>	<ul> <li>My newslet</li> </ul>	ter		
Issues Co	onfiguration	Subscribers		
M Add subscr	ibers 🔒 🥼	Add users	Add roles	
Actions	Subscriber	name 🔺	E-mail	
×	Frank Magui	re	frank.maguire@web.	com
×	John Smith		john@localhost.local	I
×	Mary Jones		mary.jones@mail.co	m
×	Role 'CMS D	esigners'		
×	User 'Andrey	v Jones'	andy@localhost.loca	I

Send e-mail confirmation to the subscriber

If you need to add or modify a large amount of subscribers, the **Import subscribers** tab described in the <u>Subscriber import and export</u> topic provides an easier way.

# 8.28.8 Subscriber import and export

When handling a large amount of subscribers, creating or modifying them one by one would be very slow and inefficient. The import and export functionality provides a way to perform mass actions or get subscriber data using specially formatted text.

## Importing subscribers

The importing or modification of subscribers can be carried out using the **CMS Desk -> Tools -> Newsletters -> Import subscribers** dialog.

wsletters	Subscribers	Templates	Newsletter queue	Import subscribers	Export subscribers	
Import	subscribe	ers				
vailable actio	ons:					
Subscribe	e imported use	rs to selected	newsletters			
🔲 Do no	t subscribe exi	sting users to	selected newslette	rs		
) Unsubscr	ibe the users f	from selected	newsletters			
) Delete tł	ne subscribers					
st of subscri	bers to be pro	cessed:				

List of newsletters:

	Newsletter	
	Corporate Newslet	tter
Re	move selected	Add newsletters
Send	d e-mail confirmation	to the subscriber
	Import	

A list of subscribers needs to be prepared in the following format:

#### • email;firstname;lastname

Copy it to the 'List of subscribers to be processed' text area. Each line should contain one record in the mentioned format. The following examples are all valid:

```
david.scott@company.com;David;Scott
mary.jones@mail.com;;Jones
frank.maguire@web.com;Frank
monica@italy.com
```

Clicking **Import** adds the subscribers from the list and performs the selected action. If one of the lines contains an invalid entry, the import is not processed for any of the records and an error is displayed. If a subscriber e-mail address already exists, the first name and last name are updated instead of creating a new subscriber.

By selecting one of the three radio buttons above the text area and adding some newsletters using the **Add newsletters** button below, the following actions can be done:

- Subscribe imported users to the selected newsletters subscribes imported users to the selected newsletters
  - Do not subscribe existing users to selected newsletters if checked, users with already existing e-mail addresses will not be subscribed to the selected newsletters, only their names will be updated
- Unsubscribe the users from selected newsletters entered users will be unsubscribed from the newsletters selected below
- Delete the subscribers entered users will be deleted from the list of subscribers

## Exporting subscribers

If you need to export the list of subscribers to some other application, you can export them using the **CMS Desk -> Tools -> Newsletters -> Export subscribers** dialog.

You can choose if you want to export all subscribers (do not specify any newsletter) or only subscribers of chosen newsletter(s). The subscribers are exported in format:

#### • email;firstname;lastname

Then you can copy and paste the list of subscribers from the textbox to your application.

# 8.28.9 Troubleshooting

## Problems with e-mails

If you are not correctly receiving newsletter e-mails, please check the following:

1. The newsletter issues are sent out using a <u>scheduled task</u> that is executed every 1 minute by default. You may need to wait for up to 2 minutes before you receive newsletter issue e-mail. The scheduled task status can be checked at **CMS Desk -> Administration -> Scheduled tasks**.

2. Go to **CMS Desk -> Tools -> Newsletter -> Newsletter queue**. If some e-mail failed, you will find the error message here. After you resolve the technical issue, you can resend all failed e-mails by clicking **APRESENT ALL FAILED**.

3. If your newsletters are configured to use the e-mail queue, go to **CMS Site Manager -> Administration -> E-mail queue**. Any e-mails lost due to errors can be monitored and resent here.

4. Make sure you're using correct e-mail addresses.

5. Make sure the newsletter issues aren't being blocked by some anti-spam software.

6. Go to **Site Manager -> Settings -> E-mails** and make sure your SMTP server is configured correctly You can find some additional details on SMTP server configuration in the <u>SMTP server configuration</u> topic. You can also test e-mail settings at **Site Manager -> Administration -> System -> E-mail**.

7. Newsletter e-mail debugging might be helpful when solving problems with newsletter e-mails. To enable it, add the following keys to the *web.config* file of your web project:

```
<add key="CMSLogEmails" value="true"/><add key="CMSDebugEmails" value="true"/>
```

The first key enables logging of all sent e-mails to <web root>/AppData/logemails.log. The second key ensures that all sent e-mails are logged, but not actually sent. This is helpful when you need to test the functionality but do not want the testing e-mails to actually be sent.

## Problems with unsubscription links

If you encounter problems with unsubscription link resolving, you should check that the **Base URL** property of the newsletter is set. This property can be set at **CMS Desk -> Tools -> Newsletter**, choose to **Edit** ( $\checkmark$ ) the newsletter and switch to its **Configuration** tab.

## Problems with role subscribers

If you have a user role set as a subscriber for your newsletter, it is highly recommended to send the newsletter issues via the <u>e-mail queue</u> in order for the issues to be successfully sent to all members of the role. To set the newsletter to use the newsletter queue, go to **CMS Desk -> Tools -> Newsletter**, choose to **Edit** ( $\checkmark$ ) your newsletter, switch to its **Configuration** tab and enable the **Send issues via e-mail queue** property.

# 8.28.10 Security

You can control access to the Newsletters module from CMS Site Manager (or CMS Desk) -> Administration -> Permissions, after selecting the Modules -> Newsletter permission matrix. The Newsletter module has the following permissions:

- Author newsletter issues members of the selected roles are allowed to create and edit newsletter issues
- Configure newsletters members of the selected roles are allowed to configure newsletter settings
- Manage subscribers members of the selected roles are allowed to add and remove newsletter subscribers
- Manage templates members of the selected roles are allowed to create, edit and delete newsletter templates
- Read members of the selected roles are allowed to view all data in the Newsletter module interface

#### APPrmissions

Site:	Corporate Site	•
Permission type:	Modules	•
Permission matrix:	Newsletter	•

	Author newsletter issues	Configure newsletters	Manage subscribers	Manage templates	Read
Authenticated users	0				
CMS Basic users					<b>S</b>
CMS Community Administrators	1	đ	1	1	1
CMS Designers					
CMS Desk Administrators	ď	S.	1	1	<b>S</b>
CMS Editors	1	S.	1	1	<b>S</b>
CMS Readers					1
Everyone					
Gold Partners	•				
Live ID users					
Not authenticated users					
Silver Partners					

# 8.29 Notifications

# 8.29.1 Overview

The Notifications module enables sending of notification messages using notification providers. Kentico CMS comes with a built-in e-mail notification gateway. However, you can create your own custom gateway such as an SMS or ICQ provider.



After <u>creating a notification message template</u>, site visitors or CMS Desk administrators can <u>subscribe</u> to receiving notifications about specific events, <u>manage users' notifications</u> and choose the providers from which they would like to receive notification messages.

Please note that for one event, users can obtain notification messages from multiple providers. There are three built-in events (document created, document updated, document deleted) and only the first of the three events is enabled by default. However, you can create and use your custom ones.

To create your own notification gateway, please refer to the <u>Overview</u> of the Custom notification gateway subchapter and learn how to:

- create a custom notification gateway form,
- create a custom notification gateway class,
- register a custom gateway,
- use the gateway on your site.

Finally, you can adjust the settings of the Notifications module and learn on its security possibilities.

Please note that you will need to have the Corporate Site sample website installed to follow examples in this chapter.

Kentico CMS Community Site Guide contains another example of the use of the Notifications module. You can find an example of signing up for receiving notifications on the occasion of news items publishing on the site in <u>Community Site Guide -> Part 2 -> Pre-development tasks -> Creating the</u> <u>News notifications template</u>.

Please note that you will need to have the Community Site sample website installed to follow Kentico CMS Community Site Guide.

# 8.29.2 Creating a notification message template

1. Go to **Site Manager -> Development -> Notifications** and switch to the **Templates** tab. Using the **Sites** drop-down list, you can select which site will be the template used by. If you choose **(global)**, the template will be available for all sites. When selected, click the **Available** link. You will be redirected to the **New template** form.

Kentico CMS Site Manager	Sites Administration Settings Development Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Ocuntries</li> </ul>	Gateways Templates	
<ul> <li>CSS stylesheets</li> <li>Cultures</li> <li>Custom tables</li> </ul>	Site: (global)	
IDocument types Carrow E-mail templates Carrow Form controls	New template	
Modules	Actions     Display name ▲	
Notifications     Page layouts     Page templates		

2. On the **New template** form, enter the following details:

- **Display name** display name of the template
- Code name code name of the template

Click **OK**. The template will be created.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>Countries</li> <li>CSS stylesheets</li> <li>Cultures</li> <li>Custom tables</li> <li>Document types</li> <li>E-mail templates</li> <li>Form controls</li> <li>Inline controls</li> <li>Modules</li> <li>Notifications</li> <li>Page layouts</li> </ul>	Gatev Templ Displ Code	Iotifications ways Templates ates > New temp ay name: My tem name: My Tem	late plate plate			

3. Now you should see the same form that you've just filled, but in the **General** tab, while another tab called **Text** is also available. Switch to the **Text** tab.

On this tab, the text of the notification message can be defined. You should see **sections for each of the defined gateways**. Texts can be set separately for each gateway, so that for one event, you can have different texts sent via e-mail and via SMS. Each of the sections contains the gateway name and some of the following three fields, depending on the gateway settings:

- Subject message subject text
- HTML text text of the message in HTML format
- Plain text text of the message in plain text format

The following macros can be used in your notification templates:

- {%notificationsubscription.SubscriptionID%} displays the value of specified data column from the *Notification_Subscription* table; this represents subscription information
- {%notificationgateway.GatewayID%} displays the value of the specified data column from the Notification_Gateway table; this represents the notification gateway which performs the sending of the notification message
- {%notificationuser.UserID%} displays the value of the specified user data column from the CMS_Usertable table; this represents the user the notification message is being sent to
- {%notificationcustomdata.XXX%} displays the value of the specified data column from a custom data source. Columns from View_CMS_Tree_Joined and the document type's table can be used (e. g. CONTENT_article for CMS.article document type).
- {%documentlink%} displays the link to the document (for content event notifications only)

🜺 Kentico						Switch to CMS Desk	User:
CMS Site Manager	Sites Administ	ration Settings	Development	Licenses	Support		
Development     -	Notificat Gateways Te Templates + Na General Te Save	mplates w product					
Modules	Click here for te	mplate macro examp	ples				
<ul> <li>Page layouts</li> <li>Page templates</li> <li>Page templates</li> <li>Page templates</li> <li>System tables</li> <li>Tag groups</li> <li>Time zones</li> <li>UI cultures</li> <li>Web part containers</li> <li>Web parts</li> <li>Web templates</li> <li>Widgets</li> <li>Workflows</li> </ul>	Gateway: Ema Subject: HTML text:	Il gateway New product has I i there, New product in '{9 This is automatic:	been added!	cription.sub: tification. Pl	scriptioneventdata1 ease do not reply t	%}' section has been added. o this e-mail.	*
	Plain text:	Hi there, New product i section has b This is autom e-mail.	in '{%notific peen added. natically ger	ationsub: nerated no	scription.subs	criptioneventdata1%)' lease do not reply to this	*

When you have entered appropriate text for each available gateway, click **available** 

# 8.29.3 Subscribing users to content changes notifications

The **Content subscription** web part is a pre-configured version of the **Notification subscription** web part. It can be conveniently used to let site visitors subscribe to notifications about the following three events:

- Document has been created
- Document has been updated
- Document has been deleted

Subscribe	for new	product	notificatio	n-
Oubscribe	IOI HEW	product	nouncauo	п.

E-mail:		
Subscribe		

In the following example, you will learn how to add the **Content subscription** web part to your site and set it up. We will use the Corporate site sample website as the starting point. Let's presume that we want to enable site visitors to receive an e-mail whenever a new product is added.



1. Sign in to **CMS Desk** as the global administrator (login *administrator* with blank password by default). From the content tree on the left, select the **Products** title page and switch to the **Design** tab.

2. Add the **Content subscription** web part to the **zoneLeft** web part zone, below the **Left tree menu**. In the **Web part properties** dialog, set the following properties:

- Site name (current site)
- Path /Products/%
- Document type CMS.Product
- Event description Enter your e-mail address to receive notifications about new products:
- Gateway names CMS.EmailGateway
- Notification preferred format HTML
- Create event enabled true
- Create event display name New product notification
- Create event template name MyTemplate

and click OK.



### Please note

It is important that the template you have recently created according to the *Creating a notification message template* topic is global or assigned to the current site.

men pair pic	perces (concent subscriptic	Documentat
General		
Default	Event settings	
Visibility	Site name:	► (current site)
Notification settings		
Seate document	Path:	/Products/% Select
Indate document		
Delete decument		CMS.Product Select
Vob port container	Document types:	Clear
HTML Envolges		
		ve notifications about new products:
Sime report	Event description:	•
Deutial application		4
	Notification settings	
	Gateway names*:	CMS.EmailGateway Select
	Notification preffered format:	► HTML
	Create document	
	Create event enabled:	• 🗸
	Create event display name:	New product notification
	Create event template name:	MyTemplate Select
Pefresh content		OK Cancel Annly

### 3. Let's switch to the site visitor's perspective now. Sign out of CMS Desk.

As notifications are available only for registered users, the web part is not visible unless you log in. Use the **My account** link at the top of the page to display a logon form and sign in; use e.g. user name *Gold* with blank password. Once signed in, switch to the **Products** page. You should see the **Content subscription** web part underneath the tree menu as highlighted in the screenshot below.

If you want to receive notifications about new products on this page, you can just type in your e-mail address into the **E-mail** field and click **Subscribe**. In case that you want to verify the functionality later on, enter your own e-mail address so that you can check your inbox for notification e-mails.

Company∟	ogo	Sample Gold Partner (gold) Sign out Shopping cart My account My wishlist Your shopping cart is empty				
			Search for:	Q		
Home Services Products	News Partners Cor	npany Blogs Forums	Events Images Wiki E	Examples		
Cell phones     PDAs     Laptops	Products					
Enter your e-mail address to receive notifications about new products: E-mail:						
gold@iocalnost.iocal Subscribe	Samsung SGH E250         Our price:       \$249.00         Add to shopping cart	HP iPAQ 114 Our price: \$389.00 Add to shopping cart	Nokia N73           Our price:         \$399.00           Add to shopping cart	Asus A639       Our price:     \$470.00       Add to shopping cart		
	Acer Aspire 3105WLMi Our price: \$490.00	Asus F3U AP059C Our price: \$999.00				
	Add to shopping cart	Add to shopping cart		<u>Site map   Disclaimer</u>		
		Kentico				

verify your subscription by going to the **My account** section

4. You can immediately verify your subscription by going to the **My account** section again. If you switch to the **Notifications** section of the **My account** web part, you should see the notification subscription present.

CompanyLogo							<b>P</b>	Sample ( Shopping	Gold Partner (gold a cart <u>My accour</u> Your shop	d) Sign out <u>My wishlist</u> pping cart is empty	
								Sea	arch for:		٩
Home	Services Products	News Pa	artners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
My Ac	count										
Personal	settings Change passw	ord Notificati	ions Mes	ssages Sul	bscriptions						
	Event name	Contact		Subscribe	d ^						
×	New product notification	gold@locall	host.local	12/23/2009	8:45:14 A	M					

5. Now you can verify that the whole setup works. Log in to **CMS Desk** as the *administrator* again. From the content tree, select **Products** and click the **New** icon above the content tree. Choose to create some new product, e.g. a Cell phone, enter some sample data about the cell phone and click **G Save**. Check your e-mail inbox in a few minutes. You should have received a new notification message about

the newly added product.

# 8.29.4 Managing users' notifications

Site administrators can manage subscriptions of particular users in **Site Manager -> Administrator -> Users**. If you choose to **Edit** ( $\checkmark$ ) a user and switch to the **Notifications** tab, you will see all notifications that the current user is subscribed to. You can unsubscribe the user from a notification by clicking the **Delete** ( $\stackrel{\bigstar}{\Rightarrow}$ ) icon next to it.

Kentico								<u>Swi</u>	tch to CMS Desk
CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support			
Administration     Markage Avatars	💄 U:	sers							
- 🗑 Bad words	Users	Mass e-mail	On-line users	;					
- 🔏 Badges - 🌏 Banned IPs	<u>Users</u>	administrator							
E-mail queue Event log	Gene	ral Password	Settings	Sites Roles	Departments	Notifications	Categories	Friends	Subscriptions
Rermissions									
		Event name		Contact		Subscribe	d •		
- 🥵 Roles	×	New product n	otification	administrator@r	nydomainXY.cor	m 12/8/2009 6	5:06:19 PM		
C Scheduled tasks Smart search System U personalization									

CMS Desk users can manage their own subscriptions the same way in CMS Desk -> My Desk -> My profile -> Notifications.

	Nudade Tasla Administration	Switch to Site Manager
My desk     Recent documents	My profile	
Outdated documents     Waiting for my approval	Details Change password Notifications Subscriptions	
Checked out by me Wy recycle bin	Event name Contact	Subscribed *
My documents My profile My blogs My messages My friends	X New product notification administrator@localhost.local	12/23/2009 8:49:05 AM

Site visitors registered to the site can manage their subscriptions the same way using the **My account** web part, on its **Notifications** tab.

ersonal	settings Change passwo	rd Notifications Messages	Subscriptions	
	Event name	Contact	Subscribed ~	
×	New product notification	administrator@localhost.local	12/23/2009 8:49:05 AM	

My Account

# 8.29.5 Custom notification gateway

#### 8.29.5.1 Overview

In this chapter, you will get familiar with the process of creating a custom notification gateway and using it on your site. The general description is supplied by code examples of a sample e-mail notification gateway.

## **General steps**

Here is a general overview of the steps that need to be taken when implementing a custom notification gateway:

- 1. <u>Create a custom notification gateway form</u> with your custom inner control(s) for entering the target where the notification messages should be sent.
- 2. <u>Create a custom notification gateway class</u> which handles loading of correct notification gateway form and sending notification messages.
- 3. <u>Register the custom notification gateway</u> in **Site Manager -> Development -> Notifications** and <u>create a template</u> for notification messages.
- 4. Use the gateway with the Content subscription web part on the live site.

#### 8.29.5.2 Custom notification gateway form

In the picture below, you can see how the default **E-mail notification gateway form** is contained within the **Content subscription** web part.



The following steps need to be taken to create a custom notification gateway form:

- Create a new web user control (*.ascx) and place it into your site folder which is located in the root of your web project. You can place it anywhere in your web project, but since the control is located in the site folder, it will be included in your site's export packages.
- 2. Set the control's class to inherit from the CMS.Notifications.CMSNotificationGatewayForm class.

3. There are two methods and one property you will need to override to reach the required functionality:

- **object Value** gets or sets the value from the custom inner control (e.g. gets or sets the text of the inner TextBox in the picture above)
- string Validate() validates the inner control's value and returns an error message if the value doesn't meet the requirements of the notification gateway (e.g. the TextBox value is validated for email address format for the E-mail notification gateway)
- void ClearForm() your custom code inside this method should set the inner control to the default state; example: text of the TextBox should be cleared (set to the empty string)

# Example - E-mail notification gateway form

The following code samples show how a custom e-mail notification gateway form can be implemented:

#### EmailNotificationForm.ascx

<u>Please note</u>: If you installed the Kentico CMS project as a web application, you need to rename the *CodeFile* property on the first line to *Codebehind* for the code example to be functional.

```
<%@ Control Language="C#" AutoEventWireup="true" CodeFile="EmailNotificationForm.asc
Inherits="CMSModules_Notifications_Controls_NotificationSubscription_EmailNotifi
<asp:Label ID="lblEmail" runat="server" />
<asp:TextBox ID="txtEmail" runat="server" CssClass="EmailNotificationForm" EnableVie</pre>
```

#### EmailNotificationForm.ascx.cs

## [C#]

```
using System;
using System.Data;
using System.Configuration;
using System.Collections;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Web.UI.HtmlControls;
using CMS.Notifications;
using CMS.GlobalHelper;
using CMS.CMSHelper;
using CMS.EventLog;
public partial class
CMSModules_Notifications_Controls_NotificationSubscription_EmailNotificationForm :
CMSNotificationGatewayForm
{
    #region "Variables"
    private bool mEnableMultipleEmails = false;
    #endregion
    #region "Properties"
    /// <summary>
    /// Gets or sets the e-mail(s) from/to textbox.
    /// </summary>
    public override object Value
```

```
{
        get
        {
            return this.txtEmail.Text.Trim();
        }
        set
        {
            this.txtEmail.Text = ValidationHelper.GetString(value, "");
        }
    }
    /// <summary>
    /// Gets or sets the value which determines whether to allow multiple e-mails
separated with semicolon.
    /// </summary>
    public bool EnableMultipleEmails
    {
        get
        {
            return this.mEnableMultipleEmails;
        }
        set
        {
            this.mEnableMultipleEmails = value;
        }
    }
    #endregion
    protected void Page_Load(object sender, EventArgs e)
    ł
        this.lblEmail.Text = (this.EnableMultipleEmails ? ResHelper.GetString(
"general.emails") : ResHelper.GetString("general.email")) + ResHelper.Colon;
        // Fill in the default e-mail
        if ((!RequestHelper.IsPostBack()) && (CMSContext.CurrentUser != null) &&
(!String.IsNullOrEmpty(CMSContext.CurrentUser.Email)))
        {
            this.txtEmail.Text = CMSContext.CurrentUser.Email;
        }
    }
    #region "Public methods"
    /// <summary>
    /// Checks whether the input is correct e-mail address (or multiple e-mail
addresses).
    /// </summary>
    public override string Validate()
    {
        if (this.EnableMultipleEmails)
```



### 8.29.5.3 Custom notification gateway class

The following steps need to be taken to create a custom notification gateway class:

- 1. Create a new library (assembly) as a part of your solution and a new class inside this library.
- 2. Set your class to inherit from the CMS.Notifications.CMSNotificationGateway abstract class.
- 3. There are two methods you will need to override to reach the required functionality:
- void SendNotification() sends a single notification; it is automatically called after the specified event is raised
- CMSNotificationGatewayForm GetNotificationGatewayForm() loads and returns notification gateway form for the notification gateway
- 4. Compile the library.
- 5. Ensure the library file (*.dll) is included in the **/Bin** directory.

## Example - E-mail notification gateway class

The following code sample shows how a custom e-mail notification gateway class can be implemented:

## EmailNotificationGateway.cs

[C#]

```
using System;
using System.Collections.Generic;
using System.Text;
using System.Web.UI;
using CMS.EventLog;
using CMS.EmailEngine;
using CMS.GlobalHelper;
using CMS.SiteProvider;
using CMS.SettingsProvider;
using CMS.Notifications;
namespace EmailNotification
{
    /// <summary>
    /// Base class for e-mail notification gateway.
    /// </summary>
    public class EmailNotificationGateway : CMSNotificationGateway
    {
        /// <summary>
        /// Returns the e-mail gateway form.
        /// </summary>
        public override CMSNotificationGatewayForm GetNotificationGatewayForm()
        {
           try
            {
                Control ctrl = this.NotificationSubscriptionControl.Page.
LoadControl("~/CMSModules/Notifications/Controls/NotificationSubscription/
EmailNotificationForm.ascx");
                ctrl.ID = ValidationHelper.GetIdentificator("notif" + this.
NotificationGatewayObj.GatewayName);
                return (CMSNotificationGatewayForm)ctrl;
            }
            catch (Exception ex)
            {
                try
                {
                    // Log the event
                    EventLogProvider eventLog = new EventLogProvider();
                    eventLog.LogEvent("EmailGateway", "EXCEPTION", ex);
                }
                catch
                {
                    // Unable to log the event
                }
            }
            return null;
        }
        /// <summary>
        /// Sends the notification via e-mail.
```

```
/// </summary>
        public override void SendNotification()
        {
            try
            {
                if (this.NotificationSubscriptionObj != null)
                {
                    // Get template text
                    NotificationTemplateTextInfo templateText =
NotificationTemplateTextInfoProvider.GetNotificationTemplateTextInfo(this.
NotificationGatewayObj.GatewayID, this.NotificationSubscriptionObj.
SubscriptionTemplateID);
                    if (templateText != null)
                        // Get the site name
                        string siteName = null;
                        SiteInfo si = SiteInfoProvider.GetSiteInfo(this.
NotificationSubscriptionObj.SubscriptionSiteID);
                        if (si != null)
                         {
                             siteName = si.SiteName;
                        // Create message object
                        EmailMessage message = new EmailMessage();
                        // Get sender from settings
                        message.From = SettingsKeyProvider.GetStringValue(siteName
+ ".CMSSendEmailNotificationsFrom");
                        // Do not send the e-mail if there is no sender specified
                        if (message.From != "")
                         {
                            // Initialize message
                            message.Recipients = this.NotificationSubscriptionObj.
SubscriptionTarget;
                            // Body
                            if ((this.NotificationSubscriptionObj.
SubscriptionUseHTML) &&
                                 (this.NotificationGatewayObj.
GatewaySupportsHTMLText) &&
                                (templateText.TemplateHTMLText != ""))
                            {
                                 // HTML format, set Body property, resolve macros
if possible
                                message.EmailFormat = EmailFormatEnum.Html;
                                if (this.Resolver != null)
                                 {
                                    message.Body = this.Resolver.ResolveMacros
(templateText.TemplateHTMLText);
                                 }
                                else
                                 {
```

```
message.Body = templateText.TemplateHTMLText;
                                 }
                             }
                             else
                             {
                                 // Plaintext format, set PlainTextBody property,
resolve macros if possible
                                 message.EmailFormat = EmailFormatEnum.PlainText;
                                 if (this.Resolver != null)
                                 {
                                     message.PlainTextBody = this.Resolver.
ResolveMacros(templateText.TemplatePlainText);
                                 }
                                 else
                                 {
                                     message.PlainTextBody = templateText.
TemplatePlainText;
                                 }
                             }
                             // Subject, resolve macros if possible
                             if (this.Resolver != null)
                             {
                                 message.Subject = this.Resolver.ResolveMacros
(templateText.TemplateSubject);
                             }
                             else
                             {
                                 message.Subject = templateText.TemplateSubject;
                             }
                             // Send email via Email engine API
                             EmailSender.SendEmail(siteName, message);
                        }
                    }
                }
            }
            catch (Exception ex)
            {
                try
                {
                    // Log the event
                    EventLogProvider eventLog = new EventLogProvider();
                    eventLog.LogEvent("EmailGateway", "EXCEPTION", ex);
                }
                catch
                {
                    // Unable to log the event
            }
       }
   }
}
```

## 8.29.5.4 Registering a custom gateway

When you have developed a custom notification gateway, you need to take the following steps to register your gateway in the system:

1. Go to **Site Manager -> Development -> Notifications**. On the **Gateways** tab, you can find the **Mew gateway** link at the top of the page. Click it, the **New gateway form** will be displayed.

Kentico						
CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>CSS stylesheets</li> <li>CUltures</li> <li>Custom tables</li> <li>Document types</li> <li>E-mail templates</li> <li>Form controls</li> <li>Inline controls</li> <li>Modules</li> <li>Notifications</li> <li>Page layouts</li> </ul>	Gatew	otifications ays Templates gateway ons Display n K Email gat	ame • En eway Yo	nabled 95		

2. Enter the following details into the New gateway form:

- **Display name** display name of the notification gateway
- **Code name** code name of the gateway
- **Description** text describing the gateway
- **Enabled** if unchecked, the notification gateway is not functional this can be useful if you want to temporarily disable the gateway so that no messages will be sent, e.g. when you are performing some administration tasks; if checked, the gateway works normally
- Assembly name name of the assembly in that the gateway code is stored
- **Class name** name of the class containing the gateway code; must be entered including the assembly name, as you can see in the screenshot below
- Supports message subject enable if the gateway's message format supports message subjects
- Supports HTML text enable if the gateway supports messages in HTML format (e.g. for e-mails)
- Supports plain text enable if the gateway supports plain text format (e.g. for SMS)



3. After entering all the details, click **OK** to confirm the changes you have made.

## 8.29.5.5 Using the gateway on your site

On the live site, you can enable users to subscribe using the **Content subscription** web part, just as described <u>here</u>. You only need to enable your gateway in the **Gateway names** property of the web part.
🥖 CMS Desk - Web Par	rt properties Webpage	Dialog	X				
鷸 Web part pro	operties (Content s	subscription)	itation				
General Layout	(	🔊 Select gateways Webpage Dialog	x				
Default		Select gateways					
Visibility	Document types:	Gateway name or its part. Search					
Event settings							
Create document	Event description	Select all Deselect all					
Update document		Gateway name En	nable				
Delete document	Notification setti	Custom e-mail gateway Ye	es				
HTML Envelope		Email gateway Ye	es				
XALA			_				
Time zones	Gateway names:	Items per page: 10	-				
Fai bai Cat iing	Partial caching Notification preffe						
	Create documer						
	Create event ena	OK Cancel http://localhost/KenticoCMS/CMSAdmir 😪 Local intranet   Protected Mode: Off					
	Create event disp	ay name:   New product notification					
Refresh content OK Cancel Apply							
http://localhost/Kentico	CMS/CMSModules/Portal	Engine/UI/Webparts/WebPartProperties.asp 😪 Local intranet   Protected Mode: Off					

On the live site, the web part displays a check-box for each gateway when multiple gateways are selected. If you enable a particular check-box, the gateway's form is displayed, as you can see in the screenshot below.



## 8.29.6 Settings

The Notifications module has only one setting to be done in Site Manager -> Settings -> System:

• Send e-mail notifications from - sets the e-mail address that will be used as the sender address (the From field) of notification e-mails



### 8.29.7 Security

The Notifications module has no permissions to be set in CMS Desk/Site Manager -> Administration -> Permissions.

Subscription to notifications is allowed only for registered users. This is why the Content subscription and Notification subscription web parts are hidden to public anonymous users by default.

# 8.30 On-line users

## 8.30.1 Overview

The On-line users module allows you to monitor users currently connected to the website. This can be useful for various site administration purposes. In addition to providing information, the module also provides a way to temporarily kick a specific user off the website.

Users																								
Users Mas	ss e-mail	On-line u	sers																					
🛃 On-line	e users																							2
(all) A	В	C D	E	F	G	н	Т	J	К	L	М	N	0	р	Q	R	S	т	U	v	w	х	Y	z
												Search												
	ranced filt	er																						
Actions	User	name 🔺		Full na	me			En	nail						Nickna	ame	-	Created	1			-	Enable	d
B 🔊	admi	nistrator		Global	Admini	strator		ad	Iministr	rator@I	ocalho	st.local											Yes	
<b>B</b> 🔊	gold			Sampl	e Gold I	Partner		go	ld@loc	alhost	local							10/21/2	008 4:3	7:52 PI	N		Yes	
																					ltems p	oer pag	je: 28	5 💌

3 user(s) on-line: 2 registered and 1 guest(s)

The module identifies a new user when a new session between the client browser and the server is started. The user is considered off-line if the session expires or when the user logs off. This means that a user is still considered on-line for some time when they close their web browser without signing off.

To utilize the module on your site, you need to perform the following simple steps:

1. Enable and configure on-line user monitoring in the system. Learn how in the <u>Enabling the On-line</u> users module topic.

2. Keep track of users on the <u>On-line users tab</u> or display information about them on your website using the <u>On-line users web part</u>.

The <u>On-line users internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how on-line users can be managed using the API.

For more general information about users and site membership, please refer to the <u>Development -></u> <u>Membership</u>, <u>permissions and security</u> chapter of this guide.

### 8.30.2 Enabling the On-line users module

The On-line users module can be enabled in **Site Manager -> Settings -> Membership** by checking the **Monitor online users** check-box.

If you are running the system on a <u>web farm</u>, you also have to check the **Store online users in database** check-box. This causes information about on-line users to be saved in the database.

The **Deny login interval** property determines how long users will not be able to log-in after they are kicked. The value is entered in minutes.

Finally, the **Update online users (minutes)** property defines how often information about users accessing the site is reloaded. The value is entered in minutes. When running the system on a web farm, you need to enter the same value which is set for the **Remove expired sessions** scheduled task (you can read the value in **Site Manager -> Administration -> Scheduled tasks -> edit (**) **Remove expired sessions -> Task interval -> Every: X minute**).



### 8.30.3 On-line users tab

If you go to **Site Manager/CMS Desk -> Administration -> Users** and switch to the **On-line users** tab, you can see a list of all users that are currently accessing the website. By clicking some of the letters at the top of the page, you can view only those users whose user names begin with the clicked letter.

Below the letters, you can find a filter. This filter can further limit displayed users according to the specified criteria. The filter can work in two modes between which you can switch by clicking the **Display advanced filter** or **Display simplified filter** links respectively.

### **Simplified filter**

This option offers only one field. The expression entered into the field will be searched in users' **User Name**, **Full Name**, **E-mail Address** and **Nickname** properties.

8	Use	ers																									
Use	ers	Mass e	e-mail	On	-line use	ers																					
	On-	line (	iser	s																							0
(all)	)	A	в	с	D	E	F	G	н	Т	J	к	L	м	N	0	р	Q	R	S	т	U	v	w	х	Y	Z
															Search	1											
- <u>D</u>	isplay	/ advan	ced fi	<u>lter</u>																							
Ac	ctions	3	Use	r nam	ne 🔺		Full na	me			En	nail						Nickn	ame		Created	i				Enable	d
ŀ		1	adn	ninistr	rator		Global	Admini	strator		ad	Iministi	ator@I	ocalho	st.local											Yes	
Į			golo	t			Sampl	e Gold I	Partner		go	ld@loc	alhost	local							10/21/2	008 4:3	7:52 P	м		Yes	
																								Items	per pa	ge: 2	5 💌

3 user(s) on-line: 2 registered and 1 guest(s)

### Advanced filter

The advanced filter offers searching by User Name, Full Name, E-mail Address and Nickname.

You can also filter on-line users by the roles they belong to. You can specify which roles the listed users are (**In roles**) or are not (**Not in roles**) members of by using the **Add roles** button to open the role selection dialog. Click **OK** to confirm the selection.

Select roles Webpage Dialog	X							
Select roles								
Site: Corporate Site								
Role name or its part Search								
Select all Deselect all								
Role name								
CMS Basic users								
CMS Community Administrators								
CMS Designers								
CMS Desk Administrators								
CMS Editors								
CMS Readers								
Gold Partners								
Live ID users								
Silver Partners								
	Items per page: 10 💌							
	OK Cancel							
http://localhost/KenticoCMS/CMSAc 👊 Local intranet   Protected Mode: Off								

If you have selected more than one user role, you can also select if the displayed users should (not) be members of **All** or **Any** of the selected roles.

When you have entered all search criteria, click the **Search** button.

Only those users that match the specified criteria will be listed.

Users																							
Users Mass e	-mail On-line	e users	1																				
🕵 On-line u	isers																						0
(all) A I	вси	DE	F	G	н	I.	J	к	L	м	N	0	Р	Q	R	s	т	U	v	w	х	Y	z
User name:	LIKE	•																					
Full name:	LIKE	•																					
E-mail address:	LIKE	•																					
Nickname:	LIKE	•																					
In roles:	(all)	•						Add ro	les	С	lear												
Not in roles:	(all)	•						Add ro	les	С	lear												
	Search																						
<ul> <li>Display simplif</li> </ul>	ied filter																						
Actions	User name -	•	Full na	me			Em	nail						Nickna	me	с	reated				E	nabled	
<b>B (n</b> )	administrato	r	Global	Admini	strator		ad	ministr	ator@I	ocalho	st.local										١	'es	
<b>B</b> 🔊	gold		Sampl	e Gold F	Partner		gol	ld@loc	alhost	local						1	0/21/20	08 4:3	7:52 PN	1	١	'es	
																			-	ltems p	er pag	e: 25	•

3 user(s) on-line: 2 registered and 1 guest(s)

### Kicking a user

If you click the **Kick** (**I**) icon next to one of the listed users, you can kick the user off of the website, which means that the user will be logged from of the website and won't be able to log in for the duration specified in the **Site Manager -> Settings -> Membership -> Deny login interval** setting. After doing so, there will be a label (kicked) written in red letters after the user's user name. If you want to take back the kick, you can do so easily by clicking the **Take back** (**P**) icon.

Actions	User name 🔺	Full name
B 🔊	administrator	Global Administrator
P 🔊	gold (kicked)	Sample Gold Partner

If the reason for kicking a user is serious enough, you may want to consider using the <u>Banned IPs</u> module to permanently block the user from accessing the website.

### 8.30.4 On-line users web part

The module comes with the **On-line users** web part. In the web part selection dialog, you can find the web part in the **Membership** category. In the screenshot below, you can see the web part enclosed in the **Orange box** web part container.

1 user(s) on-line: 0 registered and 1 guests

The web part displays a summary defined by the **Additional info text** property, followed by a list of online users that is displayed based on the transformation defined by the **Transformation name** property.

The web part has the following related properties:

Transformation name	Name of the transformation that will be used to display on-line users.
---------------------	------------------------------------------------------------------------

	If you choose to <b>Select</b> the transformation, you can find the default transformation that has been used in the screenshot above at <b>Site Manager -&gt; Development -&gt; Document types -&gt; CMS.Root -&gt; Transformations -&gt; CMS.Root.OnLineUsers</b> .
Path	If you specify an alias path here, only users that are accessing locations found under the specified path will be displayed.
Select top N	Number of listed users.
Additional info text	Text of the additional information that will be displayed above the list of users. You can use the following formatting macros that will be substituted by the appropriate number: {0} - number of all connected users {2} - number of connected registered users {1} - number of connected anonymous users
No users on-line text	Text that will be displayed if no users are currently online.
Columns	Enumeration of columns of the <b>CMS_User</b> or <b>CMS_UserSettings</b> tables that should be loaded - useful for performance optimization. Column names need to be separated by commas (, ).

## 8.30.5 On-line users internals and API

### 8.30.5.1 Database tables and API classes

The On-line users modules uses the following database table:

 CMS_Session - stores information about on-line users when the Site Manager -> Settings -> Membership -> Store on-line users in database settings is enabled; this is necessary when running the system on a web farm

The On-line users API is provided by the following CMS.CMSHelper namespace class:

• **SessionManager** - this class provides functionality for managing sessions, which includes the monitoring of on-line users

The following topics show examples of how this class can be used:

- <u>Getting on-line user data</u>
- Checking if a user is on-line
- Kicking a user

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.30.5.2 Getting on-line user data

The following sample code shows how you can get a DataSet containing on-line users filtered by various parameters:

[C#]

```
using System.Data;
using CMS.CMSHelper;
. . .
        string where = "UserID > 53";
        int topN = 10;
        string orderBy = "UserName";
        string columns = "UserName, Email";
        // Only users accessing the specified location (alias path) will be selected
        string location = "/Home";
        string siteName = "CorporateSite";
        bool includeHidden = true;
        bool includeKicked = false;
        // Get DataSet of online users according to the given parameters
        DataSet ds = SessionManager.GetOnlineUsers(where, orderBy, topN, location,
siteName, includeHidden, includeKicked);
        DataSet ds2 = SessionManager.GetOnlineUsers(where, orderBy, topN, columns,
location, siteName, includeHidden, includeKicked);
```

#### 8.30.5.3 Checking if a user is on-line

The following sample code shows how you can check if a user specified by their ID is on-line on a given site; the *IsUserOnline(...)* method returns a boolean value:

#### [C#]

```
using CMS.CMSHelper;
using CMS.SiteProvider;
...
string siteName = "CorporateSite";
int userID = 10;
bool includeHidden = true;
// Get user and site objects
UserInfo ui = UserInfoProvider.GetUserInfo(userID);
SiteInfo si = SiteInfoProvider.GetSiteInfo(siteName);
```

```
// If both exist
if ((ui != null) && (si != null))
{
    // Check if user is online
    SessionManager.IsUserOnline(siteName, userID, includeHidden);
}
```

### 8.30.5.4 Kicking a user

The following sample code shows how you can kick a user specified by their ID:

### [C#]

```
using CMS.CMSHelper;
using CMS.SiteProvider;
....
int userID = 10;
// Get user object
UserInfo ui = UserInfoProvider.GetUserInfo(userID);
// Check if user exists
if (ui != null)
{
// Kick user
SessionManager.KickUser(userID);
}
```

# 8.31 Polls

## 8.31.1 Overview

The Polls module allows you to create, edit and publish polls on the web site created with Kentico CMS. The module can display voting statistics in the form of a graph, which represents either the absolute number of votes or percentage. Besides, the module enables you to control whether single or multiple answers will be allowed on the page and you have the possibility to deny multiple votes for one site visitor.

## Do you like our product?



By placing the Polls module on the pages of your website, you give site visitors the chance to vote for certain options. These options can be related directly to the current page, to the contents of the whole website or simply to anything you would like the visitors of your web pages to express their opinion on. Polls in Kentico CMS are customizable and the module supports integration with the built-in <u>WYSIWYG</u> editor.

The polls can be managed in the **CMS Desk -> Tools -> Polls** dialog. To ensure that the same visitor (using the same browser) cannot vote twice in the same poll, the Polls module uses a cookie.

- To learn how to perform administrative tasks related to polls, please refer to the Managing polls topic.
- To learn how to make your polls available from your web pages, please refer to the <u>Publishing polls</u> topic.
- If you would like to see an example of how to integrate polls on your site, please refer to the <u>Adding</u> a poll to your site topic.
- To learn how to make polls in more than one cultural version, please refer to the <u>Multilingual support</u> topic.
- If you would like to learn about the security possibilities of the Polls module, please refer to the <u>Security</u> topic.

Kentico CMS E-commerce Guide contains another example of the use of the Polls module. You can find a brief description of the module in <u>E-commerce Guide -> Integration with your existing Kentico CMS</u> web site -> Tools -> Polls.

You will need to have the E-commerce Site sample website installed to follow Kentico CMS E-commerce Guide.

A practical example of the use of the Polls module can be found in Kentico CMS Personal Site Guide . You can find a step-by-step tutorial on how to add a poll to your personal website in <u>Personal Site Guide</u> -> Adding web parts -> Adding a poll.

You will need to have the Personal Site sample website installed to follow Kentico CMS Personal Site Guide.

Several more practical examples of the use of the Polls module are available in Kentico CMS Community Site Guide; please note that these examples do not concern the whole functionality of the module but focus on its use in a broader context of the Community Site sample website:

- See <u>Community Site Guide -> Part 1 -> Getting started -> First sight</u>: A general outline of the Community Site and its features; a brief reference to polls is made in paragraph 3.
- See <u>Part 2 -> Pre-development tasks -> Creating a sample poll</u> in Kentico CMS Community Site Guide: You will learn how to create a sample poll that you will publish on the Home page of you website later on.
- See <u>Creating the Home page</u> in the same section of Kentico CMS Community Site Guide: Here you will learn how to publish the previously created sample poll on the Home page your website.

You will need to have the Community Site sample website installed to follow Kentico CMS Community Site Guide.

## 8.31.2 Managing polls

You can manage polls in CMS Desk -> Tools -> Polls.

## Creating a new poll

Click the **we poll** link and enter the following values:

🥏 Polls							
Mew poll							
Actions	Display name 🔺	Total votes					
2 X	Continents	7					
N 🗙	How did you find this site?	31					
N 🗙	Product Survey	37					

Display name	The name of the poll displayed to the poll administrators.
Code name	The name of the poll used in the code.
Title	The title of the poll displayed in the poll view (optional).
Question	Poll question displayed in the poll view.

### 存 New poll

Polls ► New po	II		
Display name:			
Code name:			
Title:			
			*
Question:			
			$\nabla$
	OK		

After you have entered the required values, click **OK** to save the changes you have made.

## **Editing poll properties**

By entering the following values, you can now define more poll details on the General tab:

Display name	The name of the poll displayed to the poll administrators.
Code name	The name of the poll used in the code.
Title	The title of the poll displayed in the poll view (optional).
Question	Poll question displayed in the poll view.
Open from	When the visitors can start voting.
Open to	When the voting is closed.

### 1056 Kentico CMS 5.5 R2 Developer's Guide

Message after	vote	Message displaye	ed afte
Allow multiple of	choices	Indicates if visitor	can s
🦱 Poll properti	es		
Polls  Continents			
General Answers	Security Sites	View	
Display name:	Continents		
Code name:	Continents		
Title:			
	Which contin to visit dur	ent are you planning ing your next trip?	*
Question:			
Open from:		Now.	Ŧ
Open to:		Now	
	Thank you fo	or your answer.	*
Magaaga affar yata:			
wessage aller VULP.			
			-

Click **OK** to save the changes you have made to the poll.

OK

## **Defining answers**

Allow multiple choices: 📃

Then you can define a list of available answers on the **Answers** tab. Poll answers can be **Edited** ( $\checkmark$ ), **Deleted** ( $\checkmark$ ) or **Moved Up** (1) and **Moved down** ( $\clubsuit$ ). To create a new answer, click the 1 **New answer** link and enter the answer text.

🥏 Poll prop	Poll properties					
Polls  Continer	nts					
General Answ	ers Security	Sites	View			
🗣 <u>New answer</u>	🍢 <u>Reset answe</u>	ers				
Actions	Text	Count	Enabled			
Z 🗙 🕆 🦊	Africa	1	Yes			
🥒 🗱 🕯 🦊	, Asia	2	Yes			
🥒 💥 🕆 🦊	America	1	Yes			
🥒 💥 🕆 🦊	Australia	2	Yes			
🥖 💥 🕆 🦊	Europe	1	Yes			

You can also choose if the given answer should be enabled, which means it is displayed in the list of

options. This is useful if you need to remove an answer from the poll while keeping the number of votes in the history. The disabled option is then not calculated into the displayed results.

General	Answers	Security	Sites	View			
Answers  Answer 1							
🎭 <u>New ans</u>	New answer						
The changes were saved,							
Text:	Africa						
Votes:	1						
Enabled: 🔽							
	OK						

You can also reset answers in your poll by clicking the Sect answers link.

## Defining who can vote

On the Security tab, you can choose which users can vote:

- all users
- only authenticated users (site members)
- only authorized roles that you specify

🥟 Poll	🥟 Poll properties						
Polls + Co	Polls  Continents						
General	Answers	Security	Sites	View			
Who can All us Only : Only :	vote: ers authenticate authorized ro	d users oles:			Aulu roles Remove		
OK							

### Sharing the poll between sites

On the **Sites** tab, you can choose on which sites the poll can be used. The poll will be offered to content editors of the websites so that they can put the poll into the text by means of the WYSIWYG editor. By default, the site where you created the poll is added.



### Previewing the poll

You can preview the poll on the **View** tab. The actual poll on your website may use a different design depending on the design of your website and may behave differently depending on the web part settings (in case you publish it using a web part).

🥏 Poll proper	ties			
Polls  Continents				
General Answers	Security	Sites	View	
Which continent ar next trip?	e you plannin	g to visit	during you	ır
Africa			14%	
💿 Asia				
<ul> <li>America</li> </ul>			28%	
Australia			14%	
			28%	
Europe			14%	
Vote				

### 8.31.3 Publishing polls

There are two ways how you can publish a poll on the website:

- Content editors can place the poll on the page using the Insert Poll button in the WYSIWYG editor toolbar
- Developers can place the poll on the page using the Polls\Poll web part; this options provides more configuration options

## Publishing polls for content editors

After defining the poll, you need to go to the **CMS Desk -> Content** section and edit the page where you want to display the poll. Edit the page content using the built-in WYSIWYG editor and click the **Insert Poll** button in the editor toolbar. Then you can choose the poll you want to display from the list of polls.

The editor inserts special expression like this at the cursor position:

• %%control:PollControl?ProductSurvey%%



## Publishing polls for developers

If you are a developer, you can go to **CMS Desk -> Content ->** ... choose the page where you want to put the poll ... -> click **Design** and add the **Polls\Poll** web part on the page.

You need to enter the name of the poll. Then you can configure some additional settings of the poll that are described in the <u>Kentico CMS Web Parts</u> reference.

Web part properties (	(Poll) Webpage Dialog	
懞 Web part pro	perties (Poll)	Documentation
General		
Default Visibility	Default	
Poll settings	Web part control ID*:	► poll
HTML Envelope	Web part title:	•
Time zones	Disable view state:	•
Partial caching	Disable macros:	•
	Visibility	
	Visible:	•
	Hide on subpages:	•
	Show for document types:	Clear Select
	Display to roles:	Add roles
Refresh content		OK Cancel Apply

If you are using **ASPX page templates**, you need to drag-and-drop the user control (web part) *CMSWebParts\Polls\Poll.ascx* on your ASPX page.



#### Tip: Poll not showing up in the list

If the poll is not showing up in the list of polls and you cannot insert it, you may need to enable the poll for the given website. You can do that in **CMS Desk -> Tools -> Polls**. Click the **Sites** tab and assign the poll to the required site.

## 8.31.4 Adding a poll to your site

Here you will learn how to create a new poll and publish it on a page on your website. Please note that you will have to have the Corporate Site sample website installed in order to follow these steps.

1. First of all you will need to create a new poll. Go to CMS Desk -> Tools -> Polls and click the New poll link.

1	CMS Desk	Content	My desk	Tools	Administration	E-commerce	
			_				
	ls		🥭 Polls				
	Abuse report	· · · ·		•			
	🛿 BizForms		or New poll				
	🛛 Blogs			<b>,</b>			
	🌡 Booking system	า					
	Content stagin	g	Actions	Displa	ay name 🔺	Total votes	
	🗿 Custom tables		N 💥	Conti	nents	7	
	a File import		/ 🗙	How	did you find this sit	te? 31	
	a Forums			Produ	ict Survey	37	
- 4	🛿 Groups		~ ~	Tiode	ici odivey	51	
	🛽 Media libraries						
	🛿 Message board	ls					
	Newsletters						
	Polls						
	Reporting						
	Web analytics						

- 2. Enter the following information for the new poll.
  - Display name: Services poll
  - Code name: ServicesPoll
- Title: Services poll
- Question: Do you like our services?

Click **OK** to save the changes. If you switch back to the **CMS Desk -> Tools -> Polls** tab, the poll you have just created will be displayed in the list.

Actions	Display name 🔺	Total votes
N 🗙	Continents	7
N 🗙	How did you find this site?	31
N 🗙	Product Survey	37
N 🗙	Services poll	

3. Now you need to define some answers for your new poll. In the **Poll properties** dialog, switch to the **Answers** tab and click the **Poll new answer** link. Enter Yes, *I do*. into the **Text** text box and click **OK**.

🥭 Poll properti	es			
Polls      Services poll				
General Answers	Security	Sites	View	
Answers  New answ	/er			
🎭 <u>New answer</u>				
Text: Yes, I do.				
ОК				

To make the answer available on the live site, check the **Enabled** check box. Besides, you can also enter the initial value for votes. For the purpose of this example, enter 7. Click **OK** to save the changes.

🥭 Poll	🥪 Poll properties					
Polls • S	ervices poll					
General	Answers	Security	Sites	View		
Answers	Answer 1					
🎭 <u>New ar</u>	iswer					
The chan	ges were sav	/ed.				
Text:	Yes, I do.					
Votes: 7						
Enabled:	Enabled: 🔽					
	OK					

Repeat this step entering *No, I don't.* as an alternative answer and 3 as its initial value for votes. Optionally you can define more answers for your poll.

4. Now you are ready to publish your new poll on the website. Go to **CMS Desk -> Content -> Corporate Site -> Services** and switch to the **Design** tab. Click **Add web part** (+) in the **zoneLeft** web part zone

Page Design Form Properties	On-line marketing	🗹 Display web part content
5	Sign in to <u>CMS Desk</u> . Sign in to <u>CMS Site Manager</u> . The default account is admini	istrator with blank password.
Company	000	Text size: 🗖 🗖
Company	ogo	Global Administrator (administrator) Sign Out
		Shopping cart   My account   My wishlist Your shopping cart is empty
		Search for:
Home Services Products	s News Partners Company Blogs Forums Eve	ents Images Wiki Examples
▼/Services - page template: He	adamind text with left menu	
🔻 zoneLeft 🛛 🚟		💌 zoneHeader 💠
💌 LeftTreeMenu 🎯	▼ zoneContent	4
Web Development	🔻 breadcrumbs 🏟	
<ul> <li>Network Administration</li> </ul>	HeaderText @	
	ContentText and services in the following areas:	
	<ul> <li>Web development</li> <li>Web design</li> <li>Network administration</li> </ul>	
	This is a simple page with left menu and content on the right. You Insert/Edit Link button in the editor toolbar.	can create links similar to those above using the

and in the **Select web part** dialog choose the **Polls\Poll** web part.

ខ Select web part Webpage Dialog		<b>×</b>
🛷 Select web part		
All web parts     All web parts     All web parts     All web parts     All web parts     Articles     A	Web part name: Poll Polls Polls	Search
http://localhost/6.0.3917.21722/CMSModules/Pr	artalEngine/II 😪 Local intranet   Protected Mode: Off	OK Cancel

5. In the **Web part properties** dialog, make sure *Services poll* is selected as **Poll name** and click **OK**. Please note that in this dialog you can also configure some additional settings of the poll that are described in the <u>Kentico CMS Web Parts</u> reference.

Web part properties (Po	oll) Webpage Dialog			×
🕷 Web part prop	erties (Poll)			Documentation
General				
Default Visibility	Poll settings			Í
Poll settings Web part container	Poll name*:	Services poll		
HTML Envelope	Show graph:	•		
Time zones Partial caching	Count type*:	► None	×	
	Show results after vote:			E
	Button text:	•		L
	Check permissions:			
	Check if user voted:	•		
	Hide to unauthorized users:			
	Hide if closed:			
	Web part container			
🗹 Refresh content			OK Cancel	Apply

Congratulations, you have just learned how to add a new poll to your website.

CompanyL	Text size:
	Search for:
Home Services Product	s News Partners Company Blogs Forums Events Images Wiki Examples
<ul> <li>Web Design</li> </ul>	Services
<ul> <li>Web Development</li> </ul>	
<ul> <li>Network Administration</li> </ul>	Our Services
Do you like our services?	We provide professional services in the following areas:
© Yes, I do. 70% © No, I don't. 30% Vote	<ul> <li>Web development</li> <li>Web design</li> <li>Network administration</li> </ul> This is a simple page with left menu and content on the right. You can create links similar to those above using the Insert/Edit Link button in the editor toolbar.

Please note



You can also add a poll to you web page using the WYSIWYG editor as described in the <u>Publishing polls</u> topic. However, this option gives you fewer possibilities of further adjustment of your poll.

## 8.31.5 Multilingual support

When you use the Polls module on a multilingual website, you can choose from two options:

• You can create a new poll for every language - this is useful if you wish to track votes for different cultures/countries of your website.

🥟 Polls		
@ New poll		
Actions	Display name 🔺	Total votes
2 🗙	Continents	7
1	Kontinens	7
1	Kontinente	7
1	Světadíly	7

or

• You can create **a single poll for all languages** using in-place localization expressions - in this case, all votes are tracked together. In order to learn how to localize strings of the poll, please refer to the Localization Expressions topic. More detailed information on these expressions can be found in the Appendix A - Macro expressions topic.

If you want to create a single localized poll (or adjust an existing one to create a single localized poll), you will have to take steps similar to those described in the <u>Managing polls</u> topic. The main difference consists in entering localization expressions into the corresponding text fields. For example, if you would like to have your poll both in the website default language and in Czech, the macro must be entered in the {\$=Default string|cs-cz=Czech string\$} format.

On the General tab of the Poll properties dialog, use localization expressions for the following fields:

- Display name
- Question
- Message after vote

🥟 Poll propertie	S	
Polls  Continents		
General Answers	Security Sites View	
Display name: Code name:	{\$=Continents cs-cz=Světadíly\$}" Continents	
Title:	(f-Whigh continent are you	
Question:	<pre>planning to visit during your next trip? cs-cz=Který světadíl se chystáte navštívit během své příští cesty?\$}</pre>	*
Open from:	Solution Now	
Open to:	Now	
Message after vote:	(\$=Thank you for your answer. cs- cz=Děkujeme Vám za odpověď.\$}	*
Allow multiple choices		~
	UN	

Click **OK** to save the changes. Now switch to the **Answers** tab to localize the answers of your poll. You will use the localization expression only in the **Text** text field.

🥟 Poll properties							
Polls + C	ontinents						
General	Answers	Security	Sites	View			
Answers	Answer 5						
🍫 <u>New an</u> :	swer						
Text: Votes: Enabled:	{\$=Europe 1	lcs-cz=Evro	opa\$}				

When you have entered the new value, click **OK** again.

#### Please note

To culturally localize your polls, you can also use basic localization macros. These are entered in the {*\$string.key*\$} format. The system uses the *ResHelper.GetString("string. key"*) method and replaces the macros with the appropriate resource strings. To learn more about this type of localization, please refer to the <u>Configuring multilingual and RTL</u><u>UI</u> topic.

## 8.31.6 Security

## Access to the Polls module

The access to the Polls module can be configured in CMS Desk -> Administration -> Permissions -> ... select the Modules -> Polls permission matrix.

The following permissions can be assigned to particular roles:

- Modify members of the role can create, edit and delete polls
- **Read** members of the role can view polls and their configuration, but are not allowed to make any changes to them

Site:	Corporate Site	•	
Permission type:	Modules	•	
Permission matrix:	Polls	-	

	Modify	Read	
Authenticated users			
CMS Basic users			
CMS Community Administrators	ď	2	
CMS Designers			
CMS Desk Administrators	ø	ø	
CMS Editors		đ	
CMS Readers		đ	
Everyone			
Gold Partners			
Live ID users			
Not authenticated users			
Silver Partners			

### Access to voting

You can configure the poll and specify which users are authorized to vote on the **Security** tab of the **Poll properties** dialog. Here you can choose one of the following options:

- All users any visitor can vote
- Only authenticated users only site members who sign in can vote
- Only authorized roles only authenticated members of chosen roles can vote

🥟 Poll properties								
Polls • Se	ervices poll							
General	Answers	Security	Sites	View				
Who can All us Only a Only a	<b>vote:</b> ers authenticate authorized ro	d users bles:						
					Add roles Remove			
ок					1			

The developers can also customize the behavior of the **Polls** web part using the following web part properties:

- Check permissions indicates if permissions for voting specified for the given poll should be checked
- Hide to unauthorized users hides the web part if the user is not authorized to vote

## 8.31.7 Polls internals and API

#### 8.31.7.1 Database tables and API classes

The Polls module uses the following database tables:

- Polls_Poll polls
- Polls_PollAnswer answers for polls (1:N)
- Polls_PollRoles roles authorized to vote (M:N)
- Polls_PollSite sites where the poll can be used (M:N)

The polls API is provided by the **CMS.Polls** namespace classes:

- **PollAnswerInfo, PollAnswerInfoProvider** these classes provide functionality for managing answers
- PollInfo, PollInfoProvider these classes provide functionality for managing polls

The following topics show examples of how these classes can be used:

- Creating a new poll
- Updating an existing poll
- Add a new answer
- Change the number of votes

- Add authorised roles
- <u>Deleting a poll</u>
- Deleting a poll answer

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.31.7.2 Creating a new poll

The following sample code shows how you can create a new poll using the API:

### [C#]

```
using CMS.Polls;
. . .
       // Create new poll info
       PollInfo pollObj = new PollInfo();
        // Set the fields
       pollObj.PollCodeName = "testingSitePoll";
       pollObj.PollDisplayName = "Testing site poll";
       pollObj.PollTitle = "Your free time";
       pollObj.PollQuestion = "What do you do in your free time?";
       pollObj.PollResponseMessage = "Thank you for your vote.";
       pollObj.PollAllowMultipleAnswers = false;
        pollObj.PollAccess = SecurityAccessEnum.AllUsers;
        pollObj.PollOpenFrom = DateTime.Now;
       pollObj.PollOpenTo = DateTime.Now.AddMonths(1);
       // Save the object
       PollInfoProvider.SetPollInfo(pollObj);
        // Add poll to current site
        PollInfoProvider.AddPollToSite(pollObj.PollID, CMSContext.CurrentSiteID);
```

#### 8.31.7.3 Updating an existing poll

The following sample code shows how you can modify poll properties using the API:

#### [C#]

```
using CMS.Polls;
```

```
string pollName = "testingSitePoll";
// Get poll info
PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
if (pollObj != null)
{
    // Set the field values
    pollObj.PollResponseMessage = "Thank you for your time.";
    pollObj.PollAllowMultipleAnswers = true;
}
// Save the object
PollInfoProvider.SetPollInfo(pollObj);
```

#### 8.31.7.4 Add a new answer

The following sample code shows how you can create a new answer for an existing poll using the API:

### [C#]

```
using CMS.Polls;
. . .
        string pollName = "testingSitePoll"; // Poll code name
        // Get poll info for the specified code name
        PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
        if (pollObj != null)
        {
            // Create a new answer object
            PollAnswerInfo pollAnswerObj = new PollAnswerInfo();
            // Set the fields
            pollAnswerObj.AnswerOrder = PollAnswerInfoProvider.GetLastAnswerOrder(po
            pollAnswerObj.AnswerCount = 0;
            pollAnswerObj.AnswerPollID = pollObj.PollID;
            pollAnswerObj.AnswerEnabled = true;
            pollAnswerObj.AnswerText = "Yes, I love it.";
            // Save the answer
           PollAnswerInfoProvider.SetPollAnswerInfo(pollAnswerObj);
        }
```

#### 8.31.7.5 Change the number of votes

The following sample code shows how you can increase the number of votes for a given answer using the API. It's useful if you want to create your own voting dialog.

### [C#]

```
using CMS.Polls;
. . .
       string pollName = "testingSitePoll"; // Poll code name
        // Get poll info for the specified code name
        PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
        if (pollObj != null)
        {
            // Get all answers of the poll
            DataSet ds = PollAnswerInfoProvider.GetAnswers(pollObj.PollID);
            if (!DataHelper.DataSourceIsEmpty(ds))
            {
                // Get first pollanswerinfo object
                PollAnswerInfo pollAnswerObj = new PollAnswerInfo(ds.Tables[0].Rows[
                if (pollAnswerObj != null)
                {
                    // Increment votes by 1
                    pollAnswerObj.AnswerCount++;
                    // Save the data
                    PollAnswerInfoProvider.SetPollAnswerInfo(pollAnswerObj);
                }
             }
          }
```

#### 8.31.7.6 Add authorized roles

The following sample code shows how you can add roles authorized for voting.

#### [C#]

```
using CMS.Polls;
....
string pollName = "testingpoll"; // Poll code name
string roleName = "cmseditor"; // Role code name
string siteName = "CMSTestingSite"; // Role's site code name
// Get poll info for the specified code name
PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
// Get role info for specified role name and site name
```

```
RoleInfo roleObj = RoleInfoProvider.GetRoleInfo(roleName, siteName);

if ((pollObj != null) && (roleObj != null))
{
    // Change poll access to access for specified roles only
    pollObj.PollAccess = PollInfoProvider.ACCESS_ROLES;

    // Save the object
    PollInfoProvider.SetPollInfo(pollObj);

    // Check if the role has already been added
    if (!PollInfoProvider.IsRoleAllowedForPoll(pollObj.PollID, roleName))
    {
        // Add role to the poll
        PollInfoProvider.AddRoleToPoll(roleObj.RoleID, pollObj.PollID);
    }
}
```

### 8.31.7.7 Deleting a poll

The following sample code shows how you can delete a poll including its answers.

#### [C#]

```
using CMS.Polls;
....
string pollName = "testingSitePoll";
// Get poll info for the specified code name
PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
// Delete the poll
PollInfoProvider.DeletePollInfo(pollObj);
```

#### 8.31.7.8 Deleting a poll answer

The following sample code shows how you can delete a poll answer.

[C#]

```
using CMS.Polls;
...
string pollName = "testingSitePoll";
// Get poll info for the specified code name
```

```
PollInfo pollObj = PollInfoProvider.GetPollInfo(pollName);
if (pollObj != null)
{
    // Get all poll answers
   DataSet answers = PollAnswerInfoProvider.GetAnswers(pollObj.PollID);
   if (!DataHelper.DataSourceIsEmpty(answers))
    {
        // Create pollanswerinfo object from datarow
        PollAnswerInfo pollAnswerObj = new PollAnswerInfo(answers.Tables[0].
        if (pollAnswerObj != null)
        {
            // Delete poll answer
            PollAnswerInfoProvider.DeletePollAnswerInfo(pollAnswerObj);
        }
     }
  }
```

# 8.32 Project management

## 8.32.1 Overview

Project management is a module that provides a system that helps organize work and keep track of its progress. This is achieved by creating objects within the Kentico CMS system called **projects**, that represent a certain segment of work with a specific goal, time frame, set of conditions or various other properties. Individual assignments called **tasks**, which are usually (but not necessarily) categorized under a certain project, can be given to users within the system.

Microsoft C	Office Upgrade								
Project goal:	Project goal: Upgrade Microsoft Office on all our network computers to version 2010.								
Deadline:	11/30/2010 7:41:33 PM								
Progress:	52%								
Project status:	🚳 On track								
Owner:	Brad Summers (BradS)								
Created by:	Brad Summers (BradS)								
Edit project									
🚭 <u>New task</u>									
Actions	Title	Assigned to	Progress	Estimate (hours)	Owner Prior	ty Status			
1 🖌 🎇 🖉	Verify installed Office versions	Ruth Baker (RuthB)	68%	4	Brad Summers (BradS) Norm	al 论			
1 🗙 🗟 🕆 🗸	Consult budget limit with Mr. Hillman	Collin Douglas (ColinD)	100%	2	Brad Summers (BradS) High	<b>v</b>			
1 🖌 🗶 🖉 🖉	Send out the New Office Guide	Ruth Baker (RuthB)	0%	1	Brad Summers (BradS) Norm	al 🔘			
1 🗙 🖓 🕯 🗸	Purchase licenses	Collin Douglas (ColinD)	100%	0	Brad Summers (BradS) Norm	al 🖋			

Items per page: 25 💌

Projects can be created, monitored and managed on any page (document) in the site content tree that contains the appropriate project management web parts. The document where a project is created is important, as the project is bound to that page and can only be viewed or edited on that specific page. This functionality can be used to categorize projects by having several different pages with project management web parts, which can then be individually configured.

All projects and their tasks can be administered at **CMS Desk -> Tools -> Project Management**, regardless of the document where they were created. Here, administrators can also implement custom priority and status options to be used by projects and tasks. More detailed information about administering and using projects and tasks is given in the <u>Managing projects and tasks</u> topic.

Project management is also integrated into the <u>groups</u> module. Group projects function just as described above, but they belong to a certain group in addition to being bound to the specific group page where they were created. Group projects only operate within the scope of their group, which means that tasks can only be assigned to group members, project security settings can be configured for group roles instead of site roles etc. This can be used to create groups for handling certain types of projects. Projects associated with a group are not displayed in the **CMS Desk -> Tools -> Project Management** interface. They can instead be managed by group or global administrators under the **Projects** tab when editing a group.

Users can manage tasks that they own or those that are assigned to them on pages containing specific project management web parts or widgets. Tasks are displayed without regard to the project they belong under or the page or group where they were created, the only thing that matters is that they are relevant to the current user (and that any permission requirements are fulfilled). If the displaying web part/widget is configured to do so, even tasks from other sites can be viewed. These web parts and widgets also allow users to create new personal tasks that aren't categorized under any group or project.

To ensure that users are aware of task assignments or any changes in tasks related to them, project management uses a system of notification e-mails based on templates, that are automatically sent when required.

An overview of the web parts and widgets that allow users to interact with the project management module on the live site can be found in the <u>Project management web parts and widgets</u> topic.

Permissions for project/task management are determined by many factors. Please refer to the <u>Security</u> topic for more information.

## 8.32.2 Managing projects and tasks

There are several ways how projects and their tasks can be used and managed:

### Using the main project management interface

All projects that do not belong to a group can be managed by users with sufficient permissions at CMS **Desk -> Tools -> Project management -> Projects**.

袾	Kentico CMS Desk	Content	My desk	Tools	Administration	<u>Go to Live</u>	<u>Site</u>	Switch to Site Ma	nager S	Site: Intranet portal	•
] Tool	s Abuse report BizForms		Projects	e <b>ct ma</b> i Tasks	nagement Configuration						
····	Blogs   Booking system   Content staging		🙀 <u>New proj</u>	<u>ect</u>							
··· 🟥	Custom tables		Actions	Name	•	Deadline	Owner		Status	Progress	
··· (;;	File import Forums			Netwo	ork Upgrade		Brad Su	ummers (BradS)		38%	
8	Groups Media libraries										
	Message boards										
	Polls										
	Project managem Reporting	ent									
🔄	Web analytics										

Here, existing projects are displayed in a list where they may be **Edited** ( $\checkmark$ ) or **Deleted** ( $\updownarrow$ ).

Create a new project using the **New project** link and fill in the following properties:

- Display name Name of the project that is displayed on the live site and in the user interface.
- Code name Code name of the project.
- Project goal Text description of the purpose of the project.
- Start date Specifies the date and time when work on the project should start.
- Deadline Specifies the date and time before which the project should be complete.
- **Owner** Allows the selection of the user who will be set as the project owner. The owner is usually the user who ensures that the project is completed successfully. By default, the user who created the project is entered.
- **Status** Allows one of the predefined project statuses to be selected. Statuses are used to indicate which life cycle step the project is currently in and can be managed on the *Configuration* tab of this interface.
- **Project page** Allows the selection of a document from the current site to which the project will be bound.
- Allow task ordering If enabled, the order of tasks under the project can be changed using arrow buttons.



#### Click the OK button.

This will open the editing interface of the new project, where three tabs are available. The **General** tab allows the properties that were set when the project was created to be modified and the **Security** tab is where permissions for the project can be configured (learn more in the <u>Security</u> topic).

The **Tasks** tab contains a list of all tasks under the project, which will currently be empty.

Project management							
Projects Tasks Configuration							
Projects	Projects   Sample project						
Tasks	General	Security					
New task							

No tasks found.

Click the **New task** link and enter the following properties:

- Title Name of the task that is displayed on the live site and in the user interface.
- **Owner** Allows the selection of the user who will be set as the task owner. The owner is usually the user who checks that the task was completed correctly. By default, the user who created the task is entered.
- Progress A percentage representing the amount of progress that has been made on the task.
- Estimate Is used to set an approximate amount of hours that the completion of the task should take.
- Deadline Specifies the date and time before which the task should be complete.
- Status Allows one of the predefined task statuses to be selected. Statuses are used to indicate which life cycle step the task is currently in.
- Priority Allows one of the predefined task priorities to be selected.

- **Is private** If enabled, the task will only be displayed to its owner, the user to whom it is assigned and to users who have permissions to manage the project that the task belongs under (if applicable).
- Assigned to Allows the selection of the user who should complete this task. A notification e-mail is automatically sent to the specified user when the task is created or modified.
- **Description** Text containing the goal of the task and any other relevant information.

#### Click OK.

🛐 Project mai	nagement							
Projects Tasks	Configuration							
Projects  Sample	project							
Tasks General	Security							
🙀 <u>New task</u>								
Actions	Title	Assigned to	Progress	Estimate (hours)	Owner	Priority	Status	
1 🖌 🎇 🌶	Sample task	Brad Summers (BradS)	0%	2	Global Administrator (administrator)	Normal	۲	
						Items p	er page:	25 🔻

You can manage existing tasks using the appropriate action buttons on the left side: **Edit** ( $\checkmark$ ) or **Delete** ( $\thickapprox$ ). The **Send reminder** ( $\bowtie$ ) button allows an e-mail to be sent to the user to whom the task is assigned, reminding them about the task. If the **Allow task ordering** property of the edited project is enabled, the **Move up** (1) and **Move down** ( $\clubsuit$ ) buttons can be used to change the order of the tasks.

The **Tasks** tab on the top level of the project management interface is very similar to to the list of tasks shown when editing a project, except that all tasks are displayed regardless of the project they belong under, including personal tasks without any project.

S Project management											
Projects Tasks Configuration											
A New personal task											
Actions	Title	Assigned to	Progress	Estimate (hours)	Owner	Deadline	Project -	Priority	Status		
N 🗙 🖉	New Network Design	Ruth Baker (RuthB)	100%	0	Brad Summers (BradS)		Network Upgrade	Normal	۲		
1	Review of network design	Sharon Evans (SharonE)	30%	0	Brad Summers (BradS)		Network Upgrade	Normal	۲		
1	RFP preparation	Brad Summers (BradS)	50%	0	Brad Summers (BradS)		Network Upgrade	Normal	۲		
1	Vendor Selection	Brad Summers (BradS)	10%	0	Brad Summers (BradS)		Network Upgrade	Normal	۲		
N 💥 🖉	Implementation of changes	Sharon Evans (SharonE)	0%	0	Brad Summers (BradS)		Network Upgrade	Normal	۲		
N 💥 🖉	Sample task	Brad Summers (BradS)	0%	2	Global Administrator (administrator)		Sample project	Normal	۲		
									age: 25 🔻		

The **Configuration** tab is where the statuses and priorities that can be set for projects or tasks may be defined. It may only be accessed by users belonging to roles with the **Manage configuration** permission for the project management module (more information can be found in the <u>Security</u> topic). All the usual actions such as **Edit** ( $\checkmark$ ) and **Delete** ( $\thickapprox$ ) are available.

Project management										
Projects Tasks	Configuration									
Project statuses Project statuses										
Task statuses										
Task priorities New project status										
	Actions	Name	Color Icon	Is not started status	Is finish status	Enabled				
	🖉 🗶 🕆 🦊	Not started		Yes	No	Yes				
	🖉 💥 🕆 🦊	On track		No	No	Yes				
	🖉 🗶 🕆 🦊	Atrisk		No	No	Yes				
	🖉 🗙 🕆 🦊	Critical		No	No	Yes				
	🖉 💥 🕆 🦊	Canceled	*	No	No	Yes				
	🖉 🗶 🕆 🦊	Finished		No	Yes	Yes				

When creating or editing a status, the following properties can be set:

- **Display name** Name of the status that is used in the status selection list.
- Code name Code name of the status.
- Status color Determines the color of projects/tasks that have this status selected. The color selector can be used here.
- Status icon Contains the path to an image used as the icon of the status.
- Is not started status If enabled, projects/tasks with this status are marked as not yet started.
- Is finish status If enabled, projects/tasks with this status are marked as finished. A status cannot be both *not started* and *finished*.
- Enabled If enabled, the status can be selected for projects.

The not started or finished flag given to a project or task by its status can have an effect on whether it is displayed by certain project management web parts or widgets, depending on their configuration.

The **Task priorities** tab is where priorities, which can be selected to determine how urgent a task is, may be managed.

Project management											
Projects Tasks	Configuration										
Project statuses Task statuses	🟴 Task priorities										
Task priorities	Rew task priority										
	Actions	Name	Default	Enabled							
	1 🖌 🎽 🖗	High	No	Yes							
	1 🗶 🗶 🖉	Normal	Yes	Yes							
	🖉 🗙 î 🦊	Low	No	Yes							

The following properties are available for task priorities:

• Display name - Name of the priority that is used in the task priority selection list.

- Code name Code name of the task priority.
- **Default** If enabled, the priority is selected by default when a new task is created. Only one priority can be set as default.
- Enabled If enabled, the priority can be selected for tasks.

### E-mail notifications

As mentioned above, there are several types of notification e-mails that are sent to users informing them about events related to tasks that they are involved in. These e-mails are sent from the address specified in the value of the **Site Manager -> Settings -> Project management -> Send project management e-mails from** setting and their format can be customized at **Site Manager -> Development -> E-mail templates**. The following e-mail templates are available:

- Project Management New task Sent when a new task is assigned to the user.
- Project Management Changed task Sent when an assigned or owned task is in some way modified.
- **Project Management Overdue task** Sent when an assigned task reaches its deadline before it is finished.
- **Project Management Task reminder** Sent when the **Send reminder** (Mathematical button is used for an assigned task.

## Using the Group management interface

Group projects can be administered by users, who have permissions to manage a given group, by editing the group on its **Projects** tab either at **CMS Desk -> Tools -> Groups** or on-site using the **Group profile** web part. Exactly the same options are available as when using the **Projects** tab of the main project management interface described above, except that the context of the current group is used e.g. for selecting users to whom a task should be assigned.

## Using CMS Desk -> My Desk

Users with access to CMS Desk can use the My Desk -> My projects and tasks interface to manage projects and tasks that they are involved in.

							<u>Go</u>	to Live Site Site	Intranet Portal	User: Brad St	ummers v5	.5.3978 R2	
CIVIS DESK CO	ontent	My desk	Tools	Administration									
My desk		Ny projects and tasks											
My blogs		My tasks My projects Tasks owned by me											
- 🎯 My messages - 🏙 My friends		🙀 New personal task											
🔤 My projects and task	ks												
			Actions		Title	Progress	;	Estimate (hours)	Owner	Deadline	Project	Priority	Status
		1 🎢 🗶 1	14	RFP preparation		50%	0	Brad Summers (Bra	idS)	Network Upgrade	Normal	۲	
		/ 🗶 í	4 1	Vendor Selection		10%	0	Brad Summers (Bra	idS)	Network Upgrade	Normal	۲	
												Items pe	

The current user can see a list of all tasks assigned to them on the **My tasks** tab, all the projects that they have permissions to access on the **My projects** tab and all tasks that they own on the **Tasks owned by me** tab. Projects and tasks can be managed using the actions described above.

## 8.32.3 Project management web parts and widgets

The <u>web parts</u> described in this topic can be placed on pages to create an interface that allows users to work with projects and tasks directly on the live site. They can all be found in the **Project management** web part category. Additional information about using these web parts on the live site is given in the <u>Using project management on the live site</u> topic.

## **Project list**

The Project list web part displays all projects that are bound to the document it is placed on and allows new ones to be created. If the document is owned by a group, only projects that belong under that group are shown.

Specific properties:

- Show finished projects If enabled, projects that have a status designating a finished project are also displayed.
- **Project can be managed by** Can be used to set the *Create*, *Modify* and *Delete* permissions for the displayed projects. The selection made here overrides the security settings of individual projects. The following options can be selected:
  - · Module administrators each displayed project uses its individual security settings
  - · All users all site users receive permissions for the displayed projects
  - Authenticated users only signed-in users receive permissions for the displayed projects
  - *Group members* only members of the group that the current document belongs to receive permissions for the displayed projects
  - Authorized roles only members of the roles selected in the Authorized roles property receive permissions for the displayed projects
- Authorized roles Can be used to select the roles that should have permissions for the displayed projects if *Authorized roles* is selected in the *Project can be managed by* property.

# Projects

🛃 New project



Users with the appropriate permissions can manage the displayed projects and their tasks directly on the live site using this web part.
Modules	1081
---------	------

Projects 

Network Upgrade

Network Upgrade									
Project goal:	st goal: Plan for a major upgrade of our network infrastructure.								
Deadline:									
Progress:	38%								
Project status:	🍪 On track								
Owner:	Brad Summers (BradS)								
Created by:	Brad Summers (BradS)								
Edit project									
<table-of-contents> <u>New task</u></table-of-contents>									
Actions	Title	Assigned to	Progress	Estimate (hours	) Owner	Priority	Status		
🧪 💥 🗟 🕆 -	New Network Design	Ruth Baker (RuthB)	10	0% 0	Brad Summers (BradS)	Normal	۲		
🧪 💥 📓 👚	Review of network design	Sharon Evans (SharonE)	30	% 0	Brad Summers (BradS)	Normal	٢		
🧪 💥 📓 👔 -	RFP preparation	Brad Summers (BradS)	50	% 0	Brad Summers (BradS)	Normal	۲		
🥖 💥 📓 👔 ·	Vendor Selection	Brad Summers (BradS)	10	% 0	Brad Summers (BradS)	Normal	٢		
2 👾 🔯 🚸	Implementation of changes	Sharon Evans (SharonE)	09	0	Brad Summore (BradS)	Normal			

Items per page: 25 💌

## My projects

This web part displays a list of all projects that the current user has access permissions for. Only projects that are bound to an existing document are shown, since the projects in the list also serve as links to that document. Documents that have projects bound to them usually also contain the **Project list** web part and if this is the case, the editing interface of the linked project is automatically opened.

Specific properties:

MY PROJECTS

• Show finished projects - If enabled, projects that have a status designating a finished project are also displayed.

Progress	Name 🔺	Deadline	Owner	Status
52%	Microsoft Office Upgrade	11/30/2010 7:41:33 PM	Brad Summers (BradS)	÷
38%	Network Upgrade		Brad Summers (BradS)	÷

The **My projects** <u>widget</u> based on this web part is included in the project management module by default.

## **Project tasks**

This web part displays a list of tasks from a selected set of projects. Users can only view tasks from those projects that they have access permissions for. Depending on the security settings of the selected projects, tasks can also be edited directly by clicking on their title.

Specific properties:

- **Projects** Allows the projects whose tasks should be displayed to be selected. All projects from the current site that do not belong under any group are available.
- Show overdue tasks If enabled, tasks that have passed their deadline are displayed.
- Show on time tasks If enabled, tasks that haven't yet reached their deadline are displayed.
- Show private tasks If enabled, private tasks are displayed. They are only visible to those users who are allowed to see them.

- Show finished tasks If enabled, tasks that have a status designating a finished task are displayed.
- Show status as Allows the way that task statuses are displayed to be selected. Possible options are *lcon*, *Text* and *lcon* & *Text*.
- Allow task actions If enabled, users with the appropriate permissions are allowed to delete the displayed tasks.

PROJEC	T TASKS				
	-				
Actions	litte	Deadline	Project	Priority	Status
×	New Network Design		Network Upgrade	Normal	$\checkmark$
×	Review of network design		Network Upgrade	Normal	<i>*</i> }
×	RFP preparation		Network Upgrade	Normal	۲
×	Vendor Selection		Network Upgrade	Normal	۲
×	Implementation of changes		Network Upgrade	Normal	۲

## Tasks owned by me / Tasks assigned to me

These two web parts display a list of tasks that are either owned by or assigned to the current user. Personal tasks (those not belonging to a project) are always displayed, but project tasks are only shown if the user has permissions to access the given project. The tasks in the list can be edited directly by clicking their title.

Specific properties:

- Show overdue tasks, Show on time tasks, Show private tasks, Show finished tasks, Show status as Are the same as for the *Project tasks* web part described above.
- Allow task actions If enabled, the displayed tasks can be deleted and new personal tasks (not categorized under any project) can be created using the web part.
- Site Can be used to select if tasks should be displayed from (all sites), or only the (current site).

TASKS ASSIGNED TO ME

鸀 <u>New personal task</u>

Actions	Title	Deadline	Owner	Project	Priority	Status
🗙 🕆 🦊	RFP preparation		Brad Summers (BradS)	Network Upgrade	Normal	۲
🗙 👚 🦊	Vendor Selection		Brad Summers (BradS)	Network Upgrade	Normal	۲

TASKS OWNED BY ME

#### 🚭 <u>New personal task</u>

Actions	Title	Deadline	Project	Priority	Status
×	Verify installed Office versions	11/15/2010 10:00:00 AM	Microsoft Office Upgrade	Normal	
×	Send out the New Office Guide	11/12/2010 5:00:00 PM	Microsoft Office Upgrade	Normal	۲
×	New Network Design		Network Upgrade	Normal	۲
×	Review of network design		Network Upgrade	Normal	٢
×	RFP preparation		Network Upgrade	Normal	۲
×	Vendor Selection		Network Upgrade	Normal	۲
×	Implementation of changes		Network Upgrade	Normal	٢

The **Tasks owned by me** and **Tasks assigned to me** <u>widgets</u> based on these two web parts are included in the project management module by default.

## Task info panel

The Task info panel can be used to display a message containing task related information, usually showing the amount of tasks that are assigned to the current user serving as a link to a document where the details of the tasks can be viewed.

Specific properties:

- Task detail page URL Contains the URL of the document that is linked when the displayed message is clicked. If left empty, the value is taken from the *Site Manager -> Settings -> Project management -> Task detail page* field. In the case that neither of these locations contain a value, the message will not work as a link.
- Info text Contains the text of the displayed message. It may contain the {0} formatting macro expression, which will be resolved into the number of tasks assigned to the current user. Sample value: {0} active task(s)
- **Include not started tasks** If enabled, tasks that have a status designating a task that has not been started yet are counted by the web part.
- **Include finished tasks** If enabled, tasks that have a status designating a finished task are counted by the web part.

## 8.32.4 Using project management on the live site

Users can work with projects and tasks on the live site through <u>Project management web parts and</u> <u>widgets</u>. The actions that are available to users depend on project security settings and the configuration of specific web parts or widgets.

The **Project list** web part allows projects, that are bound to the document it is placed on, to be managed in a similar fashion as in the administration interface, which is described in the <u>Managing projects and</u> tasks topic.

### **Projects**

New project						
Actions	Name 🔺	Deadline	Owner	Status	Progress	
1	Network Upgrade		Brad Summers (BradS)	<b>*</b>	38%	

When a project is edited ( $\checkmark$ ), its details and the tasks it contains are displayed. Configuration of the project itself can be achieved by clicking the **Edit project** button.

Projects 

Network Upgrade

Network U	ograde						
Project goal:	Plan for a major upgrade of our	network infrastructure.					
Deadline:							
Progress:	38%						
Project status:	On track						
Owner:	Brad Summers (BradS)						
Created by:	Brad Summers (BradS)						
Edit project	ו						
🗟 <u>New task</u>	-						
Actions	Title	Assigned to	Progress	Estimate (hours)	Owner	Priority	Status
1 🖌 🎇 🖌	New Network Design	Ruth Baker (RuthB)	100%	0	Brad Summers (BradS)	Normal	۲
1 🗙 🕅 🕆 🗸	Review of network design	Sharon Evans (SharonE)	30%	0	Brad Summers (BradS)	Normal	۲
🧪 💥 🗟 🕆 🗸	RFP preparation	Brad Summers (BradS)	50%	0	Brad Summers (BradS)	Normal	۲
1 🖌 🎽 🖉	Vendor Selection	Brad Summers (BradS)	10%	0	Brad Summers (BradS)	Normal	۲
🧪 💥 🗟 🕆 🗸	Implementation of changes	Sharon Evans (SharonE)	0%	0	Brad Summers (BradS)	Normal	۲

Items per page: 25 🔻

This causes the following dialog to appear:

🛐 Edit project					
<u>General</u> Security					
Display name:	Network Upgrad	le			
Project goal:	Plan for a minfrastruct	major upgn ure.	rade of our	network	*
Start date:		0	PNow		
Deadline:		0	P <u>Now</u>		
Owner:	Brad Summers	(BradS)	Select	Clear	
Status:	On track		-		
Allow task ordering:					
		OK	Cancel	Apply	

Editing ( $\mathscr{P}$ ) a task on the live site is done through the dialog depicted below:

Edit ta	sk				
Title:	New Network Design				
Owner:	Brad Summers (BradS)	Select	Clear		
Progress:	100	%			
Estimate:	0	(hours)			
Deadline:		® <mark>Now</mark>			
Status:	Not started	•			
Priority:	Normal	•			
Is private:					
Assigned to:	Ruth Baker (RuthB)	Select	Clear		
	BI ABC	• • • •	∅   🚝 🗄   🍢 -	ð <u>s</u> -   🔳	
Description:					- III
Task URL:	http://portal/preview55_20	10-11-22_05-52-16	6/Departments/IT/P	1	
			ОК		Cancel

In addition to the task properties described in the <u>Managing projects and tasks</u> topic, the **Task URL** is shown, which can be used to link to the edited task.

Certain other web parts and widgets, such as **Tasks assigned to me**, may be used to edit displayed tasks in the same way.

## 8.32.5 Security

Permissions for administering the project management module can be set by going to CMS Site Manager (or CMS Desk) -> Administration -> Permissions and selecting the *Project Management* Permission matrix.

### 🧖 Permissions

Permission type:	Modules	•
Permission matrix:	Project Management	-

Search	Manage	Manage configuration	Read
Authenticated users			
CEO			
CFO			
CIO	đ	đ	đ
CMS Basic users			
CMS Community administrators			
CMS Designers			
CMS Desk Administrators	<b>S</b>	ď	đ
CMS Editors			
CMS Readers			đ
Company Management			
Everyone			
Facebook users		п	

The following permissions can be assigned to members of the selected roles:

- Manage members of the selected roles are allowed to create, modify and delete data in the project management interface, except for the *Configuration* tab
- **Manage configuration** members of the selected roles are allowed to view and modify data, such as statuses and priorities, on the *Configuration* tab of the project management interface
- **Read** members of the selected roles are allowed to view all data in the project management interface, except for the *Configuration* tab

To access and use the management interface for group projects, users must either have the **Read** and **Manage** permissions from the *Groups* **Permission matrix**, or belong to a group role that can manage the given group.

## **Project permissions**

Permissions for individual projects can be configured on the **Security** tab when editing a project. This affects which users can view and manage the project and its tasks using project management web parts.

Project management			
Projects	Tasks	Configuration	
Projects +	Network U	pgrade	
Tasks G	General	Security	

	Access to project	Create	Modify	Delete
Nobody	0	0	0	$\odot$
All users	0	0	0	0
Authenticated users	۲	0	0	0
Authorized roles	0	۲	۲	۲

Please select the authorized roles (available only when you select the "Authorized roles" option above):

Search	Access to project	Create	Modify	Delete
Authenticated users				
CEO				
CFO				
CIO		đ	<b>S</b>	ø
CMS Basic users				
CMS Community administrators				
CMS Decimere	-			

The following permissions are available:

- Access to project users with this permission can view and access the project
- Create users with this permission can create new tasks under the project
- Modify users with this permission can modify the tasks under the project
- Delete users with this permission can delete the tasks under the project

These permissions can be assigned to:

- **Nobody** nobody can perform the action
- All users all users can perform the action
- Authenticated users only signed-in users can perform the action, i.e. anonymous public users cannot perform it
- Group members only members of the group can perform the action; this option is only available for projects that belong under a group
- Authorized roles only members that are assigned to the roles selected below can perform the action; for group projects, only the roles defined for the given group can be selected

#### **Project security exceptions**

1. The user who is set as the owner of a project automatically has full permissions for that project.

2. A task can be modified by users that it is assigned to or owned by regardless of the security settings of the project that the task belongs under.

3. Users who belong to roles that have the **Manage** permission for the project management module have full permissions for all projects that do not belong to a group.

4. Users who belong to roles that can manage a group have full permissions for all projects under the given group.

5. The **Project list** web part has its own security properties that can be used to override the permissions set for the projects that it displays.

## 8.32.6 Settings

Additional settings of the project management module are located in **Site Manager -> Settings -> Project management**. The following can be configured:

- **Task detail page** URL of a page that displays detailed information about the tasks assigned to users. This page should contain the *Tasks assigned to me* web part. The value of this setting is used for generating links to personal tasks in project management e-mail notifications and as the URL that is linked to by the *Task info panel* web part if its *Task detail page URL* property is empty. Sample value: ~/*Employees/Management/My-Projects-and-tasks.aspx*
- Send project management e-mails from Sets the e-mail address from which automatic project management notification e-mails are sent when tasks are created or modified.

31	Kentico									Switch to CMS De	<u>esk</u>	User: Global Adm	ninistra
1	CMS Site Manager Sites	Ad	ministration	Settings	Development	Lice	inses	Support	Buy				
Site:													
Intranet	Portal			ectmana	igement								
			<b>—</b> .	ß.									
Sett	ings		Save	S <u>Rese</u>	et these settings to o	erault							
	🕽 Web site												
	Content management												
	Files		Took dat	oil pogo		0	. ( <b>F</b>	-	n a na na na na hAha D	in the second teacher			
	Membership		Task det	ali paye			~/Em	bioyees/ivia	inagement/wy-P	Tojects-and-tasks.	i In	nerit from global se	eπings
	😵 Security		Send pro	ject manage	ement emails fror	n 🕜	no-rep	ly@localho	ost.local		🔲 In	herit from global se	ettings
	URLs and SEO												
	Output filter		Export the	ese settings	1								
	🚽 System												
	E-mails												
	Avatars												
	Bad words												
	Blogs												
	🚽 Booking system												
- 1	🚨 Community												
4	🏹 MetaWeblog API												
	Content staging												
- 1	🚨 Forums	U											
	🕫 Media libraries												
	🖥 Message boards												
	🗟 Messaging												
	🛐 Web analytics												
	🛛 Windows LiveID												
J	E-commerce												
	🗠 OpenID												
	💱 Payment gateway - Authorize.NET												
	F Facebook Connect												
	😺 Payment gateway - PayPal												
	B Microsoft SharePoint												
	🖕 Intranet portal												
	Project management												
	🗟 WebDAV												

# 8.33 Reporting

## 8.33.1 Overview

The Reporting module allows you to create internal reports to watch the activity in the Kentico CMS system and on websites, such as recently created documents, expired documents, website visits, user registration etc. The data the module uses is gathered from the database by using SQL queries and can be displayed in highly customizable reports including tables and graphs.

Report categories are used to group related reports together. See the <u>Managing report categories</u> topic for more details.

The following topics provide more details and examples on how reports can be created and used:

- Creating a new report
- Defining report parameters
- Saving a report
- Displaying a report on a web site

The <u>Security</u> topic describes how permissions can be set for the module.

The <u>Reporting internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how reports can be accessed using the API.

Reports are also used by the Web analytics module, which you can learn more about at <u>Modules -></u> <u>Web analytics</u>.

Reports can be managed in CMS Desk -> Tools -> Reporting.

## 8.33.2 Managing report categories

All reports are organized into categories. It is recommended to keep reports that monitor related actions in one category. You can manage the categories in **CMS Desk -> Tools -> Reporting**.



## **Example:**

The following steps describe how to create a sample report and how to display it on your website:

To start, you need to create a report category. Go to **CMS Desk -> Tools -> Reporting**, click **> New report category** and enter the following values:

- Category display name: User reports
- Category code name: UserReports

Click OK.

Continued in the example section of the <u>Creating a new report</u> topic.

## 8.33.3 Creating a new report

### 8.33.3.1 Creating a new report

New reports can be created at **CMS Desk** -> **Tools** -> **Reporting** -> **Edit report category** under the **Reports** tab by using the **New report** link. Here you can also see a list of all the reports in this category and **Edit** ( $\checkmark$ ), **Delete** ( $\thickapprox$ ), **Clone** ( $\square$ ) or **Export** ( $\blacksquare$ ) them if you wish.

When editing a report on its **General** tab, you can configure its properties, alter its layout using the built-in <u>WYSIWYG editor</u> and add file attachments. To retrieve and display data from the system in the report, some of the following objects must be added to the layout:

- <u>Tables</u>
- Graphs
- Values

Additionally, all types of macro expressions, as described in <u>Appendix A - Macro expressions</u>, can be used in the report layout.

The output of the report can be seen on the View tab.



### Localizing strings in reports

If you need to create a single report in multiple languages, please use <u>Localization</u> <u>Expressions</u>.

## **Example:**

1. Click **New report** and enter the following values:

- **Report display name:** Pages by page template
- Report code name: PagesByPageTemplate

Click **OK**. Now you can edit the layout of the report and insert tables, graphs and values.

2. You will be redirected to the **General** tab of the report editing interface. Enter the following text in the **Layout** text area: *Pages by page template*. Select the text and use the WYSIWYG editor to set its **Format** to *Heading 1*.

Reports + Pages by page template		0
View General Parameters Saved reports		
R Save		A
Report display name:       Pages by page template         Report code name:       PagesByPageTemplate         Report category:       User reports         Allow public users to see this report:       Image: Complex		
Layout		Graphs
I I Source   Q, I X II K III (C) I A C (C) I	•	Add Edit Delete Insert
Pages by page template		
	ш	Tables Add Edit Delete Insert Values
		Add

Continued in the example section of the Creating a new Table topic.

### 8.33.3.2 Creating a new Table

A table can be placed into the layout of a report and can be used to display data retrieved from the Kentico CMS database by a query.

Display name	The name of the table shown in the user interface.			
Code name	Name used in your code.			
Query	Here you can add the SQL query used to retrieve data to be displayed by the table.			
Is stored procedure	Indicates if the query is a stored procedure or not.			
Skin ID	ID of the .NET skin (stored in the <i>.skin</i> files in ~/AppThemes/ <theme name="">) which will be used for the table.</theme>			
Enable paging	If enabled, paging will be enabled when the report table is displayed. The paging can be configured by the two properties below.			
Page size	Number of table rows per page.			
Page mode	<ul> <li>Type of paging controls displayed below the table. The following options are available:</li> <li>Previous-next buttons - displays buttons leading to the previous and next page</li> <li>Page numbers - displays page numbers leading to the corresponding pages</li> <li>Previous-next first-last buttons - displays buttons leading</li> </ul>			
	<ul> <li>Previous-next-inst-last buttons - displays buttons leading to the first, last, previous and next page</li> <li>Page numbers-first-last buttons - displays page numbers leading to the corresponding pages and buttons leading to the first and last page</li> </ul>			

The following properties can be used to configure tables:

Tables are entered into the report layout editor as an expression in the following format:

%%control:ReportTable?<report code name>.%%

This is done automatically when the **Insert** button is used.



#### Writing queries for tables

The queries you write for tables are standard SQL queries that pull data from the Kentico CMS database. You can find the description of Kentico CMS database tables and views in **Kentico CMS Database Reference** that is a part of the standard installation.

For information about documents, you can use the *View_CMS_Tree_Joined* table that returns published versions of all documents.

## Table column names

The table column names use the same names as the column names from the returned

data set. If you need to use user friendly names, you can use the following syntax in the query:

SELECT PageTemplateDisplayName as [Template Name], ...

## **Example:**

- 1. Click Add in the Tables section on the right. Enter the following values:
- Display name: Pages by Page Template
- **Code name:** PagesByPageTemplate
- Query:

```
SELECT PageTemplateDisplayName as [Template Name], DocumentNamePath as [Document]
FROM view_CMS_Tree_Joined
LEFT JOIN cms_pagetemplate
ON cms_pagetemplate.pagetemplateid = view_CMS_Tree_Joined.DocumentPageTemplateID
WHERE pagetemplatedisplayname IS NOT NULL AND PageTemplateIsReusable = 1
ORDER BY PageTemplateDisplayName
```

- Is stored procedure: no
- SkinID: leave empty
- Enable paging: enabled
- Page size: 10
- Page mode: Page numbers

Click OK.

2. Now place the cursor in the layout editor on a new line under the title, choose the table in the **Tables** section and click **Insert**. A string like %%control:ReportTable?PagesByPageTemplate. PagesByPageTemplate%% will be added to the text area.

Click Save to save the changes and switch to the View tab. You will see a report like this:

view General Parameters Saved reports						
a Save Print						
Pages by page template						
Template Name	Document					
Community Site - Access Denied	/Special pages/Access denied					
Community Site Blag creation	(Place/Croate					

Community Site - Blog creation	/Blogs/Create
Community Site - Blog posts	/Blogs/Blog posts
Community Site - Blog unsubscribe	/Special pages/Blog unsubscribe
Community Site - Blogs	/Blogs
Community Site - Board Unsubscribe	/Special pages/Board unsubscribe
Community Site - Forum Unsubscribe	/Special pages/Forum unsubscribe
Community Site - Forums	/Forums
Community Site - Forums advance search	/Forums/Forum search
Community Site - Friend Management	/Special pages/Friend management
1 2 3 4 5	

Continued in the example section of the Creating a new Graph topic.

### 8.33.3.3 Creating a new Graph

A graph can be placed into the layout of a report and can be used to display data retrieved from the Kentico CMS database by a query.

The following properties can be used to configure graphs:

Display name	Display name of the graph
Code name	Code name of the graph
Query	Database query that extracts a dataset that will be displayed in the graph; it must return at least two columns - first one for categories, the other columns are used for values.
Is stored procedure	Determines if the specified query is a stored procedure.
Graph type	The following graph types are available:
	<b>Pie</b> - pie graph, accepts only one column for values, the value in the third column is used for setting the 'pie pieces' offset
	<b>Bar</b> - bar graph, accepts multiple values and displays them next to each other
	<b>Bar overlay</b> - bar graph, accepts multiple values and displays them behind each other with the lower values in the front
	<b>Bar stacked</b> - bar graph, accepts multiple values and displays them on top of each other
	<b>Bar percentage</b> - bar graph, accepts multiple values, displays one column for each category and divides it by percentage determined by

	the values
	Line - line graph, accepts multiple values and displays them as separate lines
Use vertical bars	If checked, the bars are displayed vertically instead of horizontally; used only for bar graphs
Reverse y-axis	Reverses the vertical axis; used only for bar and line graphs
Use ten powers	If large values are present in the graph, they are divided by appropriate ten powers and the division ratio is displayed with the y-axis title
Show grid	Displays a thin dotted line grid in the graph chart area; used only for bar and line graphs
Fill curves	Fills the space under the curves with a color; used only for line graphs
Smooth curves	Smooths the lines of the line graph
Title	Title of the graph
X axis title	Title of the horizontal axis of the graph
Y axis title	Title of the vertical axis of the graph
Width	Width of the graph image
Height	Height of the graph image
Legend position	Position of the legend in the graph
Title font	Determines the font properties of the graph title
Axis font	Determines the font properties of axis titles
X-axis angle	Determines the declination angle of X-axis descriptions; setting this parameter to 90 causes upright descriptions
Y-axis angle	Determines the declination angle of Y-axis descriptions
Scale min	Determines the minimum value that is required for an X axis category to be displayed
Scale max	Determines the maximum value that will be displayed on the Y axis of the graph
Use colors	Determines the colors used for graph items; accepts standard HTML color names or hexadecimal color codes divided by a semicolon; if it contains a lower number of colors than required, the remaining colors are generated automatically
Use symbols	Determines the symbols used for values in line graphs; accepts: <i>Circle, Diamond, HDash, Plus, Square, Star, Triangle, TriangleDown, VDash, XCross</i> ; if <i>None</i> is entered, no symbols will be used
Graph gradient	Gradient of the graph background color; The <b>From</b> and <b>To</b> fields accept standard HTML color names or hexadecimal color codes, the <b>Angle</b> field sets gradient declination

Chart gradient	Color gradient of the graph chart; The <b>From</b> and <b>To</b> fields accept standard HTML color names or hexadecimal color codes, the <b>Angle</b> field sets gradient declination; used only for line and bar graphs			
Item gradient	Color gradient of the items in the graph; The <b>From</b> field accepts standard HTML color names or hexadecimal color codes, the <b>Angle</b> field sets gradient declination; the <b>To</b> field is disabled here			

Graphs are entered into the report layout editor as an expression in the following format:

%%control:ReportGraph?<report code name>.<graph code name>%%

This is done automatically when the **Insert** button is used.



## Example:

1. Switch back to the **General** tab. Click **Add** in the **Graphs** section on the right. Enter the following values:

- Display name: Most Favorite Page Templates
- **Code name:** MostFavoritePageTemplates
- Query:

```
SELECT PageTemplateDisplayName AS [Template Name], count(PageTemplateDisplayName)
AS [Usage]
FROM view_CMS_Tree_Joined
LEFT JOIN cms_pagetemplate
ON cms_pagetemplate.pagetemplateid = view_CMS_Tree_Joined.DocumentPageTemplateID
WHERE pagetemplatedisplayname IS NOT NULL AND PageTemplateIsReusable = 1
GROUP BY PageTemplateDisplayName
ORDER BY count(PageTemplateDisplayName) DESC
```

- Is stored procedure: no
- Graph type: Pie

- **Title:** Most favorite page templates
- Width: 600
- Height: 600
- Legend position: (No legend)

Click OK.

2. Now place the cursor in the layout editor on a new line under the table, select the new graph in the **Graphs** section and click **Insert**. A string like %%control:ReportGraph?PagesByPageTemplate. MostFavoritePageTemplates%% will be added to the text area.

Click Save to save the changes and switch to the View tab. You will see a graph like this in the report:



Continued in the example section of the <u>Creating a new Value</u> topic.

### 8.33.3.4 Creating a new Value

A value is an object that can be placed into the layout of a report, which can be used to display a single scalar value returned by a query in a specified string format.

Display name	The name of the item in the list
Code name	Name used in your code
Query	Here you can add the SQL query used to retrieve data to be displayed by the value.

The following properties of a value can be configured:

Is stored procedure	Indicates if the query is a stored procedure or not.
Formatting string	You can format the displayed value using the standard .NET expressions. Examples:
	<ul> <li>{0} - displays the value</li> <li>{0:F1} - displays the value as a floating point number with one digit displayed after the decimal point</li> </ul>
	You can find more details in .NET Framework documentation.

Values are entered into the report layout editor as an expression in the following format:

%%control:ReportValue?<report code name>.<value code name>%%

This is done automatically when the Insert button is used.

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### Writing queries for scalar value

The queries for scalar values may return any number of columns and rows, but the only value that will be displayed is the value in the first column of the first row of the result set.

## **Example:**

1. Switch back to the **General** tab. Click **Add** in the **Values** section on the right. Enter the following values:

- Display name: Number of pages with page template
- Code name: PagesWithTemplate
- Query:

```
SELECT count(DocumentID)
FROM view_CMS_Tree_Joined
WHERE documentpagetemplateid IS NOT NULL
```

- Is stored procedure: no
- Formatting string: Pages with template: {0}

## Click OK.

2. Place the cursor in the layout editor under the graph, choose the new value in the **Values** section and click **Insert**. A string like %%control:ReportValue?PagesByPageTemplate.PagesWithTemplate%% will be added to the text area.

Click Save to save the changes and switch to the View tab. You will see a text like this:

Pages with template: 20

Continued in the example section of the **Defining report parameters** topic.

## 8.33.4 Defining report parameters

Reports may be filtered using parameters. You can define custom parameters on the **Parameters** tab of the **Report properties** dialog.

### **Context Parameters**

In your queries, you can use parameters that provide information about the current context when the report is viewed, such as current user, current site, etc. Here's a list of all available context variables:

- @CMSContextCurrentUserID
- @CMSContextCurrentUserName
- @CMSContextCurrentUserDisplayName
- @CMSContextCurrentSiteID
- @CMSContextCurrentSiteName
- @CMSContextCurrentSiteDisplayName
- @CMSContextCurrentDomain
- @CMSContextCurrentTime
- @CMSContextCurrentURL
- @CMSContextCurrentNodeID
- @CMSContextCurrentCulture
- @CMSContextCurrentDocumentID
- @CMSContextCurrentAliasPath
- @CMSContextCurrentDocumentName
- @CMSContextCurrentDocumentNamePath

For example, if you want to display a list of all expired documents of the current website, you can use a query like this:

```
SELECT DocumentNamePath as [Document path]
FROM View_CMS_Tree_Joined
WHERE documentpublishto < @CMSContextCurrentTime and nodesiteid =
@CMSContextCurrentSiteID</pre>
```

## **Displaying Parameter Values in the Report**

If you need to display the parameter values in the report, you can place the following macro expression in the report text:

#### {%parametername%}

For example:

### List of documents expired on or before {%CMSContextCurrentTime%}

displays:

#### List of documents expired on or before 8/12/2007 12:06:49 PM

You can use this syntax for both custom report parameters and context parameters.

### **Example:**

1. Switch to the **Parameters** tab, click **New attribute** (+) and enter the following values:

- Attribute name: UserID
- Attribute type: Integer number
- Attribute default value: 53
- Field caption: Created by user
- Field type: User Selector

### Click OK.

2. Now we need to add this parameter to our queries. For the purposes of this example, we will modify only the table query. Switch to the **General** tab, select the **Pages by page template** table and click edit. Now modify the table SQL query like this:

```
SELECT PageTemplateDisplayName as [Template Name], DocumentNamePath as [Document]
FROM view_CMS_Tree_Joined
LEFT JOIN cms_pagetemplate
ON cms_pagetemplate.pagetemplateid = view_CMS_Tree_Joined.DocumentPageTemplateID
WHERE pagetemplatedisplayname IS NOT NULL AND DocumentCreatedByUserID = @UserID
ORDER BY PageTemplateDisplayName
```

As you can see we added the parameter to the WHERE condition of the query. All parameters that you define can be used in the query using the @<parametername> expression. Click **OK** and go to the **View** tab. You will see that the report now has a filter like this:

Created by user: Global Administrator (administrator	Select	Clear
Update		
Pages by page template		
Template Name	Docur	nent

The table now only displays template names of documents that were created by the user specified in the filter.

Continued in the example section of the Saving a report topic.

## 8.33.5 Saving a report

When you view some report on the **View** tab of the **Report properties** dialog, you can save it into the report history using the **Save** button. You can view the saved reports on the **Saved reports** tab. When

the data changes, the saved reports are not affected.

## **Example:**

Click the **Save** button on the **View** tab. Now switch to the **Saved reports** tab. Here you can see a list of saved reports, it should look something like this:

Kentico					Switch to Site Man	nager Site: Commu	nity Site 💌	User: Global Administrator
CMS Desk	Content	My desk	Tools	Administration				
Tools  Abuse report BizForms Blogs Content stagin Custom tables File import File import Forums Media libraries Newsletters Polls Reporting Web analytics	n g	Reports Reports Reports Reports View Ge Save	apri cate apri cate General Pages by eneral d repo Title Pages	y page template - 6/28/2010 9:40:29 AM	<b>Created ~</b> 6/28/2010 9:40:29 AM	Created by Global Administrator		

Concluded in the example section of the Displaying a report on a web site topic.

## 8.33.6 Displaying a report on a website

If you want to display some report on the website or include it in some custom page in the CMS administration interface, you can use the **Reporting -> Report** web part. All you need to configure are the following properties:

- Report name select the required report
- **Display filter** indicates if a filter should be displayed on the page (if the report has some parameters specified)

## Example:

1. To display this report on your website, switch to the **Content** tab of CMS Desk. Select the root of your website and create a new **Page (menu item)** type document. Name it *Reports*, select **Create a blank page**, choose the **Simple** layout and click **Save**.

2. Now add the **Reporting/Report** web part to the page's web part zone and set its properties to the following:

- Report name select Pages by page template
- Display filter enabled
- 3. Now go to Live site mode and you should see something similar to the following:

'reated by use		Media	Forums	Groups
a cated by ase	er: Global Administ	ator (adm	Select	Clear
	Undate			
		-+-		
ages by	y page tempi	ate		
Tem	unlate Name		Document	
Ad-hoc: Add to	bookmark service	/Examples/Web	parts/Social bool	kmarking
Ad-hoc: Examp	oles	/Examples		
Ad-hoc: Friend	ls list	/Examples/Web	parts/Friends list	c .
Ad-hoc: Friend	ls list to approval	/Examples/Web	parts/Friends list	to approval
Ad-hoc: Friend	ls rejected list	/Examples/Web	parts/Friends rej	jected list
Ad-hoc: Friend	ls requested list	/Examples/Web	parts/Friends re	quested list
Ad-hoc: Friend	ls viewer	/Examples/Web	parts/Friends vie	wer
Ad-hoc: Friend	lship request	/Examples/Web	parts/Request fr	iendship
Ad-hoc: Group	board message viewer	/Examples/Web	parts/Group mes	sage board viewe
Ad-hoc: Group	forum list	/Examples/Web	parts/Group foru	ım list
1 <u>23456789</u>	1			

As you can see, the report is displayed just like on the **View** tab of the **Report Properties** dialog and the parameter filter can be used by site visitors.

Group forums: 1

Group

nagemen

Group media:

- Group media

list Site - G

## 8.33.7 Security

Profile Mana

unity Site

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ommunity

- Online

Community Site -Profile Invitations

You can configure access to the Reporting module in CMS Desk -> Administration -> Permissions. Choose the permission matrix for Modules -> Reporting.

You can assign roles with the following permissions:

- · Modify allows users to create, modify and delete reports
- Read allows users to read existing reports
- Save reports allows users to save reports

A Permissions								
Site:	Corporate Site	•						
Permission type:	Modules	•						
Permission matrix:	Reporting	•						
		Modify	Read	Save reports				
Authenticated users								
CMS Basic users								
CMS Community A	dministrators							
CMS Designers								
CMS Desk Admini	strators	ď	đ	đ				
CMS Editors	CMS Editors		đ	đ				
CMS Readers								
Everyone								
Gold Partners								

## Making reports available on the live site

The Allow public users to see this report property, which can be found on the **General** tab when **Editing** ( $\checkmark$ ) a report, indicates if the report can be displayed on the live site to non-authenticated (public) users. If it's set to false, the report and its graphs will be hidden from public users.

## 8.33.8 Reporting internals and API

Live ID users

Silver Partners

Not authenticated users

### 8.33.8.1 Database tables and API classes

The Reporting module uses the following database tables:

- Reporting_Report contains reports and their settings and layout
- Reporting_ReportCategory contains report categories
- Reporting_ReportGraph contains report graphs and their settings
- Reporting_ReportTable contains report tables and their settings
- Reporting_ReportValue contains report values and their settings
- Reporting_SavedGraph contains graphs saved with saved reports (in binary format)
- Reporting_SavedReport contains saved reports

The Reporting API is provided by the following **CMS.Reporting** namespace classes:

- ReportCategoryInfo, ReportCategoryInfoProvider these classes provide functionality for managing report categories
- ReportGraphInfo, ReportGraphInfoProvider these classes provide functionality for managing report graphs
- ReportInfo, ReportInfoProvider these classes provide functionality for managing reports
- **ReportTableInfo, ReportTableInfoProvider** these classes provide functionality for managing report tables

- ReportValueInfo, ReportValueInfoProvider these classes provide functionality for managing report values
- SavedGraphInfo, SavedGraphInfoProvider these classes provide functionality for managing saved graphs (for saved reports)
- SavedReportInfo, SavedReportInfoProvider these classes provide functionality for managing saved reports

The following topics show examples of how these classes can be used:

- Getting report data
- Managing reports and their categories
- Creating graphs, tables and values
- Editing the layout of a report
- Saving the current status of the report
- Getting HTML code of a saved report

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

### 8.33.8.2 Getting report data

The following sample code shows how you can get a report category as a *ReportCategoryInfo* object and a report as a *ReportInfo* object:

#### [C#]

```
using CMS.Reporting;
...
// Get report category object by category code name
ReportCategoryInfo rci = ReportCategoryInfoProvider.GetReportCategoryInfo("W
// Get report category object by category ID
ReportCategoryInfo rci2 = ReportCategoryInfoProvider.GetReportCategoryInfo(1
// Get report category object by report ID
ReportInfo ri = ReportInfoProvider.GetReportInfo(1);
// Get report category object by report code name
ReportInfo ri2 = ReportInfoProvider.GetReportInfo("TestReport");
```

The following sample code shows how you can get a DataSet containing report categories or reports from the system:

```
using System.Data;
using CMS.Reporting;
...
string where = "CategoryID > 10";
string orderby = "CategoryDisplayName";
int topN = 10;
string selectedColumns = "CategoryID, CategoryDisplayName";
// Get dataset of report categories according to the given parameters
DataSet ds = ReportCategoryInfoProvider.GetCategories(where, orderby);
DataSet ds2 = ReportCategoryInfoProvider.GetCategories(where, orderby, topN,
string where2 = "ReportCategoryID = 12";
// Get DataSet of reports with a specified where condition
DataSet ds3 = ReportInfoProvider.GetReports(where2);
```

#### 8.33.8.3 Managing reports and their categories

The following sample code shows how you can create a new report category and add it to the system:

### [C#]

```
using CMS.Reporting;
....
// Create new report category object
ReportCategoryInfo rci = new ReportCategoryInfo();
// Set properties
rci.CategoryDisplayName = "Test category";
rci.CategoryCodeName = "TestCategory";
// Save to database
ReportCategoryInfoProvider.SetReportCategoryInfo(rci);
```

The following sample code shows how you can create a new report under an existing report category and add it to the system:

```
using CMS.Reporting;
```

```
// Get parent category for the new report
ReportCategoryInfo parent = ReportCategoryInfoProvider.GetReportCategoryInfo
// If parent exists
if (parent != null)
{
   // Create new report object
   ReportInfo ri = new ReportInfo();
   // Set properties
   ri.ReportDisplayName = "Test report";
   ri.ReportName = "TestReport";
   ri.ReportCategoryID = parent.CategoryID;
   ri.ReportAccess = ReportAccessEnum.All;
   ri.ReportLayout = "";
   ri.ReportParameters = "";
    // Save to database
   ReportInfoProvider.SetReportInfo(ri);
}
```

The following sample code shows how you can delete an existing report:

### [C#]

#### 8.33.8.4 Creating graphs, tables and values

The following sample code shows how you can create a new graph under an existing report:

```
using CMS.Reporting;
...
// Get report object by report code name
```

```
ReportInfo ri = ReportInfoProvider.GetReportInfo("TestReport");
// If report exists
if (ri != null)
{
    // Create new graph object
    ReportGraphInfo rgi = new ReportGraphInfo();
    // Set properties
    rgi.GraphDisplayName = "Test graph";
    rgi.GraphName = "TestGraph";
    rgi.GraphQuery = "SELECT TOP 10 DocumentName, DocumentID FROM CMS_Docume
    rgi.GraphReportID = ri.ReportID;
    rgi.GraphQueryIsStoredProcedure = false;
    rgi.GraphType = "bar";
    // Save to database
    ReportGraphInfoProvider.SetReportGraphInfo(rgi);
}
```

The following sample code shows how you can create a new table under an existing report:

[C#]

```
using CMS.Reporting;
. . .
        // Get report object by report code name
        ReportInfo ri = ReportInfoProvider.GetReportInfo("TestReport");
        // If report exists
        if (ri != null)
        ł
            // Create new table object
           ReportTableInfo rti = new ReportTableInfo();
            // Set properties
            rti.TableDisplayName = "Test table";
            rti.TableName = "TestTable";
            rti.TableQuery = "SELECT TOP 10 DocumentName, DocumentID FROM CMS_Docume
           rti.TableReportID = ri.ReportID;
            rti.TableQueryIsStoredProcedure = false;
            // Save to database
            ReportTableInfoProvider.SetReportTableInfo(rti);
        }
```

The following sample code shows how you can create a new value under an existing report:

[C#]

```
using CMS.Reporting;
. . .
        // Get report object by report code name
        ReportInfo ri = ReportInfoProvider.GetReportInfo("TestReport");
        // If report exists
        if (ri != null)
        {
            // Create new value object
            ReportValueInfo rvi = new ReportValueInfo();
            // Set properties
            rvi.ValueDisplayName = "Test value";
            rvi.ValueName = "TestValue";
            rvi.ValueQuery = "SELECT COUNT(DocumentName) FROM CMS_Document";
            rvi.ValueReportID = ri.ReportID;
            rvi.ValueQueryIsStoredProcedure = false;
            // Save to database
            ReportValueInfoProvider.SetReportValueInfo(rvi);
        }
```

### 8.33.8.5 Editing the layout of a report

The following sample code shows how you can insert items into the layout of a report:

```
using CMS.Reporting;
....
// Get report object by report code name
ReportInfo ri = ReportInfoProvider.GetReportInfo("TestReport");
// If report exists
if (ri != null)
{
    // Get graph object by code name
    ReportGraphInfo rgi = ReportGraphInfoProvider.GetReportGraphInfo("TestGr
    if (rgi != null)
    {
        ri.ReportLayout += "<br/>%%control:ReportGraph?" + ri.
    ReportName + "." + rgi.GraphName + "%%<br/>>";
```

```
}
            // Get table object by code name
            ReportTableInfo rti = ReportTableInfoProvider.GetReportTableInfo("TestTa
            if (rti != null)
            {
                ri.ReportLayout += "<br/>%control:ReportTable?" + ri.
ReportName + "." + rti.TableName + "%%<br/>br/>";
            }
            // Get value object by code name
            ReportValueInfo rvi = ReportValueInfoProvider.GetReportValueInfo("TestVa
            if (rvi != null)
            {
                ri.ReportLayout += "<br/>>%%control:ReportValue?" + ri.
ReportName + "." + rvi.ValueName + "%%<br/>br/>";
            }
            // Save to database
            ReportInfoProvider.SetReportInfo(ri);
        }
```

#### 8.33.8.6 Saving the current status of the report

The following sample code shows you how to execute a report and save its status into a saved report. You will need to create an ASCX user control where you place the **CMSReporting\DisplayReport.ascx** user control with ID set to *displayReportControl*. The code behind will look like this:

```
using System.Data;
protected void Page_Load(object sender, EventArgs e)
{
    // Create a new data table with parameters
    DataTable dtp = new DataTable();
    dtp.Columns.Add("ModifiedSince", typeof(DateTime));
    object[] parameters = new object[1];
    parameters[0] = new DateTime(2010, 1, 1);
    dtp.Rows.Add(parameters);
    // Disable loading parameters from basic form
    displayReportControl.LoadFormParameters = false;
    // Choose a report to save by code name
    displayReportControl.ReportName = "RecentlyModifiedDocuments";
    // Set custom parameters
    displayReportControl.ReportParameters = dtp.Rows[0];
    // Set custom parameters
    displayReportControl.ReportParameters = dtp.Rows[0];
```



#### 8.33.8.7 Getting HTML code of a saved report

The following code sample shows how to read the HTML code of a saved report and display it on a page. It uses a **Literal** control with ID set to *ItrReportHTML* to do so:

### [C#]

```
using CMS.Reporting;
...
// Saved report id
int mSavedReportId = 10;
// Saved report info object
SavedReportInfo sri = null;
// Get saved report info by id
sri = SavedReportInfoProvider.GetSavedReportInfo(mSavedReportId);
// If saved report exists
if (sri != null)
{
// Set saved report HTML to the literal control text
ltrReportHTML.Text = sri.SavedReportHTML;
}
```

## 8.34 Syndication (RSS, Atom, XML)

## 8.34.1 Overview

The Syndication module allows you to create <u>syndication feeds</u> of your site's content. The whole functionality is provided by a set of web parts stored under the **Syndication** web part category. These web parts generate feeds which conform to the <u>RSS</u>, <u>Atom</u> or general <u>XML</u> format. The name of the feed format generated by each web part is included in the name of the web part.

Detailed overview of the web parts can be found in the <u>Syndication web parts and widgets</u> topic. Use of transformations is essential with these web parts. Information related to use of transformations in syndication web parts can be found in the <u>Syndication transformations</u> topic.

We have also prepared three examples of typical usage:

- Example 1: Creating a document RSS feed using the CMS RSS feed web part.
- Example 2: Creating an object RSS feed using the RSS feed web part and a data source.
- Example 3: Creating a dedicated page with an RSS feed using the RSS repeater web part and a data source.

Live usage examples of these web parts can be found on the sample **Corporate Site**, under the **/ Examples/Web-parts/Syndication/** node.

All specific web part properties are explained in <u>Kentico CMS Web Parts Reference</u> or after clicking the **Documentation** (**a**) link in the top right corner of the *Web part properties* dialog.



## **Creating RSS feeds manually**

Due to backward compatibility with Kentico CMS versions prior to 5.5, it is still possible to create a page with an RSS feed manually. Even though it is not recommended to take this approach, you can learn

more about it in this chapter.

## 8.34.2 Syndication web parts and widgets

Syndication web parts are stored under the **Syndication** category in the web part catalog. There is a large number of them, but most of them are similar and can be grouped into several categories:

From the functional point of view, there are two basic types of syndication web parts - repeaters and feeds:

- **Syndication feeds** show the feed icon with an optional text. The icon and text are clickable and when clicked, a querystring parameter with the feed ID is appended to its URL and the page renders the feed.
- **Syndication repeaters** change the page on which they are placed to a feed. If you place one of the syndication repeaters on a page, it changes the page response type to *application/xml*, transforms retrieved data to the required feed format and uses the transformed data as the content of the feed. This means that the page is no longer a standard HTML page it becomes a syndication feed.

The web parts can also be divided in terms of what data they are used for. From this perspective, you can divide them as follows:

## **Basic feed web parts**

These are universal web parts which can create a feed of data provided by a connected <u>data source</u>. Without a data source, the web parts are not functional. The data provided by the data source can be of any type, it just needs to be handled properly by the used transformation.

- XML repeater
- RSS repeater
- Atom repeater
- RSS feed
- Atom feed

## **Document feed web parts**

These web parts are based on the **RSS feed** web part, but have a built-in data source for the **document types** in their names. This means that you don't need a connected data source - all you need is included in a single web part. They are a kind of "all-in-one" solutions for frequently used document types.

- CMS RSS Feed
- Articles RSS Feed
- Blog posts RSS Feed
- Events RSS Feed
- News RSS Feed

The **CMS RSS Feed** can even be used for **documents of any type**, which makes it a universal web part for any document feed.

## **Object feed web parts**

Similarly to object feeds described above, object feeds also have a built-in data source, letting you create feeds from **Kentico CMS objects** by adding just a single "all-in-one" web part.

- Blog comments RSS feed
- Custom tables RSS feed
- Media files RSS feed
- Message board RSS feed
- Products RSS feed
- Forum posts RSS feed

### Other syndication web parts

Custom feeds can be created using the following two web parts:

- Query RSS feed generates a feed based on a custom database query and transformation
- Web service RSS feed transforms a dataset provided by a web service into an RSS feed

The last web part does not crate any feed, but can be used as a link to a feed:

• Feed link - displays the RSS icon with a link leading to a URL set in its web part properties; typically used for links to feeds created by syndication repeaters

## Syndication widgets

The default installation of Kentico CMS contains a set of widgets which are derived from the web parts listed above. They provide the same functionality and look, while only a limited set of properties can be configured. The following widgets are available:

- Articles RSS Feed
- Blog comments RSS feed
- Blog posts RSS Feed
- Events RSS Feed
- Forum posts RSS feed
- Media files RSS feed
- News RSS Feed
- Products RSS feed

## **Further information**

All specific properties of these web parts or widgets are explained in <u>Kentico CMS Web Parts Reference</u> or after clicking the **Documentation** (a) link in the top right corner of the *Web part (widget) properties* dialog.

## 8.34.3 Syndication transformations

Use of transformations is of the highest importance when creating feeds, as all syndication web parts render the feeds using them. They need to be set in the **Transformation** property of each feed web part.

## **Default transformations**

All document types in Kentico CMS have the **RSSItem** and **AtomItem** transformations. When you create a new document type, these transformations are created for it automatically.

1	Kentico									Switch to CM	IS Desk Us
~	CMS Site Manager	Sit	es	Administration	Settings	Development	Licenses	Support			
⊡ · De\ i¢	velopment Scategories		] Doo	cument type	propert	ies					
	Countries	D	ocumen	i <u>t types</u> 🕨 Article							
	🖌 CSS stylesheets D Cultures	0	General	Fields Form	Transfo	ormations Queri	es Child ty	pes Sites	Alternative forms	Search fields	Documents
	Custom tables Document types	3	New tr	ansformation							
	E-mail templates										
	🖇 Form controls	-	Actions	Transforma	ntion name	•					
	🗐 Inline controls		1 🗙	ArticleText							
- d	b Modules	(	/ X	Atomitem	]						
[	🖥 Page layouts		1	Default	-						
	🖥 Page templates		1 🗙	DefaultWith	outTeasers						
<b>e</b>	🖥 Relationship names 🚽		/ X	PreviewWith	nTeasers						
	Tag groups		1	RSSItem							
	👌 Time zones			SimplePrev	iew						
	📄 VI cultures			Teaser							
	Web part containers	۰ _	~ ~	100361							
	ኛ Web parts										

The default RSS, Atom and XML transformations can also be generated when editing or creating transformations of a document type or a custom table. To do this, you only need to select the required format from the **Code** drop-down list and click the **Generate default transformation** button.

					Switch to CMS Desk	User: Global Administra
CMS Site Manager	Sites Administration	Settings Development	Dashboard License	s Support		
Development	Document type	properties				
Countries	Document types + Article					
CSS stylesheets Olltures	General Fields Form	Transformations Quer	ies Child types Sites	Alternative forms	Search fields Documer	nts
Custom settings	Transformations + RSSIte	em				
Custom tables      Document types      F-mail templates	E Save	out to file				
Section 2 - Annu Completes	You can check out the tra	ansformation to file c:\Inet	pub\wwwroot\Kentic	oCMS_0804_2\CM	STransformations\CMS	Article\RSSItem.ascx t
Modules	Transformation name:	RSSItem				
Page layouts	Transformation type:	490X -		_		
📲 Page templates	Code:	Default 💌 Ger	nerate default transform	ation		
		Atom agPrefix	="C#" AutoEventWireup=" ="cc1" Namespace="CM	true" Inherts="CMS.C S.Controls Assembly	ontrols.CMSAbstractTrans ="CMS.Controls" %>	sformation" %>
💜 Tag groups		XML	ink="false"≻<%± Fi	zal ("NodeGUTD")	\$≻	
🛛 🚷 Time zones	·	<title>&lt;%# Eva</title>	LCDATA("ArticleNar	ne") %>		
💮 UI cultures	1	<description>&lt;</description>	<pre>\$# EvalCDATA("Art:</pre>	cleTeaserText"	) %>	-
Web part containers		<pre><pubdate>&lt;%# Ge <li><pre>int</pre></li></pubdate></pre>	etRSSDateTime(Eval	("DocumentCreat	tedWhen")) %> <td>Date&gt;</td>	Date>
🚀 Web parts			<pre>[<s# gecadsoiute0]<="" pre=""></s#></pre>	rr(GetbodumentU	rirorreeu(), Eval(	("Dicename")) <pre>s&gt;]]&gt;</pre>
Web templates						

## **RSS** transformations document type

Other feed transformations are found in a special document type called **RSS transformations (CMS. RSSTransformations)**. This is a special document type used just to store transformations for **Kentico CMS objects**. Transformations for blog comments, board messages, forum posts, media library files and products are contained in the document type.

Select transform	Select transformation Webpage Dialog								
Select tra	ansformation								
Class type: Document type:	Document type  RSS transformations (CMS.RSSTransformations)								
Transformation r	name or its part:	Search							
Transformatio	n name								
CMS.RSSTran	sformations.BlogComments								
CMS.RSSTrans	sformations.BoardMessages								
CMS.RSSTran	sformations.ForumPosts								
CMS.RSSTran:	sformations.MediaFiles								
CMS.RSSTran	sformations.Products								
		Items per page: 10 💌							
		Cancel							
http://localhost/Ke	nticoCMS_0421/CMS/ 🗣 Local intranet   Protected Mode: Off								

## 8.34.4 Usage examples

## 8.34.4.1 CMS RSS feed

The **CMS RSS feed** web part can be used to easily create RSS feeds from documents in the content tree. It has a **built-in Documents data source**, which means that the web part can work separately without any connected data source and that it can be used to create feeds from documents of any type.

Apart from this universal web part, there are other web parts in the **Syndication** category which are preconfigured for one particular document type. See the listing in the <u>Syndication web parts and widgets</u> chapter.

In the following example, you will learn how to use this web part to create a feed link on the **/Products** page of the sample **Corporate site**. We will configure it so that it provides an RSS feed with products stored in all three categories under the page. The same procedure can be used on any other page and for documents of any other type, you just need to specify your required path, document type and transformation in the web part properties.

1. Sign in to CMS Desk and select the **/Products** page from the content tree. Switch to the **Design** tab and click the **Add web part** (+) icon of the *zoneLeft* web part zone.

Kentico		Switch to Site Ma	nager Site: Corporate Site 💌	User: Global Administrator	v5.5.3763 Sign Out	
CMS Desk Content My desk T	Tools Administration					
New Delete Move Down Content management	Edit Preview Live site List View mode	Search Other				
🖃 💮 Corporate Site 🛛 🛛 🗛	age Design Form Properties			V	Display web part content	
Home     Services	/Products - page template: Product	ct multicolumn view with left m	enu			
• • News	▼ zoneLeft 📪 ▼	zoneRight			*	
Partners	▼ LeftTreeMenu ● PDAs	ProductBreadcrumbs W				
Company     Plogs	Laptops	PrintLink 😻				
Forums		ProductDataList 🎡				
Events     Images     Wik     Examples     Mobile*     Special pages						
🕕 📹 Images		Samsung SGH E250	HP iPAQ 114	Nokia N73	Asus A639	
•		Our price: \$249.00 C	ur price: \$389.00 Our p	price: \$399.00 Our	price: \$470.00	
Ī		Add to shopping cart	Add to shopping cart	dd to shopping cart	Add to shopping cart	

2. In the **Select web part** dialog, select the **Syndication** category. Choose the **CMS RSS feed** web part and click **OK**.



3. The **Web part properties** dialog opens. To achieve the required behavior, use the following configuration:
- Link text: Products RSS feed
- Feed name: MyProductsFeed
- Feed title: Corporate Site Products
- Feed description: This is a sample RSS feed of products on the Corporate Site.
- Path: /Products/%/
- **Transformation name**: CMS.RSSTransformations.Products
- Document types: CMS.CellPhone;CMS.Laptop;CMS.Pda

Leave default values for the rest of the properties and click OK.

4. Sign out of CMS Desk and browse to the **Products** page. You should see the RSS icon and link as highlighted in the screenshot below.



5. Click the icon or link, your browser will detect that you are accessing an RSS feed and display its content. As you can see, the URL of the feed is actually the URL of the page where the web part is placed with the **?rss=MyProductsFeed** querystring appended (this can be modified using the *Feed querystring key* and *Feed name* web part properties). The same URL can be used to access the feed directly both from a browser or a dedicated RSS reader program.



### 8.34.4.2 RSS feed + data source

By connecting the **RSS feed** web part to a **data source**, you can create an RSS feed of the data provided by the data source. The **Atom feed** web part can be used exactly the same way, but the rendered feed is in the *Atom* format.

In the <u>previous example</u>, we have demonstrated how to use the *CMS RSS Feed* web part to create an RSS feed of **documents** stored in the content tree. The approach that we will explain now can also be used for that purpose, but you will typically use it to create feeds from Kentico CMS **objects** (forum posts, board comments, media files, ...).

In the following example, you will see how to create an RSS feed of forum posts in the site forums on the sample Corporate site. We will achieve this using the **RSS feed** and **Forum posts data source** web parts. The same procedure can be used for any other data, you only need to use a properly configured data source and handle the provided data by a suitable transformation.

### Please note

The result of the following example can also be achievable using a single web part - the **Forum posts RSS feed** web part, which has a built-in *Forum posts data source*. Similarly, there are all-in-one web parts for other frequently used document types and objects (see the listing <u>here</u>).

The following example uses two separate web parts for educational purposes only.

1. Sign in to CMS Desk and select the **/Forums** page from the content tree. Switch to the **Design** tab and click the **Add web part** (+) icon of the *zoneLeft* web part zone.

Kentico CMS Desk Content My des	Switch to Site Manager Site: Corporate Site 🗨 User: G	Slobal Administrator v5.5.3763 Sign Out
New Delete Move Down Content management	Edit Preview Live site List View mode Other	
Corporate Site  Home  Services  Products	Page Design Form Properties Home Services Products News Partners Company Blogs Forums Events Image	Display web part content     Wiki Examples
e-     Partners     c-     Company     c-     Bogs     Former		<b>•</b>
e - Events e - Images e - Wiki e - Wiki e - Examples	editabletextHeader     editabletextHeader     of forum groups and each forum group may have multiple forums on particular topic. The     also use the Forums module for article comments if you use so called "ad-hoc" forums that are bound to some partic	e forums are organized into threads. You can cular document (article, product, etc.).
ġ- 📄 Mobile ♥ ġ- 🈋 Special pages ⊕- 🈋 Images	ForumSearch Go Advanced search	
	ForumGroup      Threads P     Site forums     Wob site forums	osts Last post
	web site fordins	

2. Select the **Data sources/Forum posts data source** web part and click **OK**. Leave all its properties at the default values, which will result in the data source providing all forum posts from all forum groups on the site. Click **OK**. The data source will be added to the bottom of *zoneLeft*.

3. Click the Add web part (+) icon again and select the Syndication/RSS feed web part. Click OK and enter the following in the *Web part properties* dialog:

- Link text: Forum posts RSS feed
- Feed name: MyForumPostsFeed
- Feed title: Corporate Site Forum Posts
- Feed description: This is a sample feed of all forum posts on the Corporate Site.
- Data source name: ForumPostsDataSource
- Transformation name: CMS.RSSTransformations.ForumPosts

Leave defaults for the rest of the properties and click **OK**. The two web parts should now be at the bottom of the web part zone and fully configured for the required behavior.

6	Technical support           Sample forum for technical support questions.           Lock	3	4	David Fishman (11/16/2008 1:37:45 PM)
▼ Fo	orumSearchResults			

4. Sign out of CMS Desk and browse to the **Forums** page. You should see the RSS icon and link as highlighted in the screenshot below.

Home Services Products News Partners Company Blogs Forums Ev	ents Im	ages V	Viki Examples						
Forums									
Forums									
You can set up any number of forum groups and each forum group may have multiple forums on particular topic. The forums are organized into threads. You can also use the Forums module for article comments if you use so called "ad-hoc" forums that are bound to some particular document (article, product, etc.). Search forums: Go Advanced search									
Forum	Threads	Posts	Last post						
Site forums									
Web site forums									
Announcements     Product announcements come here.	2	6	Frank Stevens (11/16/2008 1:08:41 PM)						
Technical support     Sample forum for technical support questions.	3	4	David Fishman (11/16/2008 1:37:45 PM)						
Login	_	_							
Username Log on									
Forum posts RSS feed									
		5	Site map   Disclaimer   Mobile version						

5. Click the icon or link, your browser will detect that you are accessing an RSS feed and display its content. As you can see, the URL of the feed is actually the URL of the page where the web part is placed with the **?rss=MyForumPostsFeed** querystring appended (this can be modified using the *Feed querystring key* and *Feed name* web part properties). The same URL can be used to access the feed directly both from a browser or a dedicated RSS reader program.

Corporate Site Forum Posts - Windows Internet Explorer		
🚱 🔾 🗢 🙋 http://localhost/KenticoCMS_0421/Forums.aspx?rss=MyForumPostsFeed 🔹 4 🗙 b Bing		+ م
😭 Favorites 🛛 🙀 🏉 Suggested Sites 🔻 🖉 Web Slice Gallery 👻		
🏉 Corporate Site Forum Posts 👌 🔻 🖾 👘	🔋 💌 Page 🕶 Safety 🕶	Tools 🔻 🔞 👻 🦥
		A
Corporate Site Forum Posts	Displaying	10/10
You are viewing a feed that contains frequently updated content. When you subscribe to a feed, it is added		
to the Common Feed List. Updated information from the feed is automatically downloaded to your computer and can be viewed in Internet Explorer and other programs. Learn more about feeds.	• All	10 ≡
🕸 Subscribe to this feed	Sort by:	
	▼ Date	
My computer is running clow	Title	
Sunday, November 16, 2008, 3:37:45 PM		
David Fishman		
Why is my computer running slowly. What steps can I do to fix it?		
Thanks for any advice!		
Forum rules		
Sunday, November 16, 2008, 3:16:39 PM 🔶		
administrator		
While we don't want you to be bothered by too many restrictions, there are always some golden rules to be followed in order for the forum to fully serve its purpose, so here they are:		
<ol> <li>Read up before asking! There might already be an answer to your question, so please use the Search function before creating new threads.</li> </ol>		
Derore creating new unreads.		
2) Behave! Profanity and insults will not be tolerated, just as vulgar expressions and all that kind of stuff. Be nice, it's just		-
Done Protected Mode: Off		• 🔍 100% 👻 💡

### 8.34.4.3 RSS repeater + Data source

The **RSS repeater** web part can be used to transform a page into an RSS feed. This means that when a page containing the web part is accessed, its response type is changed to *application/xml* and the content of the feed is rendered. This is useful typically if you want your feed to have a dedicated URL (i. e. not a URL of a page with a querystring parameter). The **Atom repeater** and **XML repeater** web parts can be used exactly the same way, but the rendered feed is in the *Atom* or *XML* format.

In the following example, we will create an RSS feed with forum posts, the same as in the <u>previous</u> example. But this time, we want the feed URL to be *<application path>/Forums/RSS.aspx*. Therefore, we will create a **dedicated page** with this URL which will contain the **RSS repeater** web part and which will be linked from the **/Forums** page.

### Please note

The result of the following example can also be achieved using a single web part - the **Forum posts RSS feed** web part, which has a built-in *Forum posts data source*. Similarly, there are all-in-one web parts for other frequently used document types and objects (see the listing <u>here</u>).

The following example uses two separate web parts for educational purposes only.

1. Sign in to CMS Desk and select the **Forums** page from the content tree. Click **New** and choose the **Page (menu item)** document type.

Kentico CMS Desk Content My des	k Tools Administration						
New Delete Move Down	Edit Preview Live site List						
Concernance and Second and Secon							
• ··· Products • ··· News • ··· Partners • ··· Company	Please select new document type:						
Blogs     Forums     Forum search	📄 <u>Article</u> 🕥 <u>Bloa</u>						

2. Choose to **Create a blank page** using the **Simple** layout. Enter *RSS* for **Page name** and click **Save**.

### 🔚 Save 🔚 Save and create another 🧱 Spell check

Page name: RSS					
💿 Use page template	🕥 Inherit from parent page 🧔	) Create a blank page			
Layout name:			Search		
Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple	E

3. The page opens in **Design** mode. Click the **Add web part** (+) icon of the only web part zone on the page. Select the **Data sources/Forum posts data source** web part and click **OK**. Leave all its properties at the default values, which will result in the data source providing all forum posts from all forum groups on the site. Click **OK**.

4. Click the **Add web part** (+) icon again and select the **Syndication/RSS repeater** web part. Click **OK** and enter the following in the *Web part properties* dialog:

- Feed name: MyForumPostsFeed
- Feed title: Corporate Site Forum Posts
- Feed description: This is a sample feed of all forum posts on the Corporate Site.
- Data source name: ForumPostsDataSource
- Transformation name: CMS.RSSTransformations.ForumPosts

Leave defaults for the rest of the properties and click **OK**.

▼ /Forums/RSS - page template: ad-hoc	
▼ zoneLeft	
▼ J ForumPostsDataSource	
RSSRepeater 🎲	

5. Now we have the RSS feed created, but without the knowledge of the page's URL, site visitors have no chance to access it. This is exactly when the **Feed link** web part comes in handy. It is a simple web part which displays the RSS icon with a link leading to a URL specified in its properties. We will add it to the */Forums* page.

Select the **/Forums** page in the content tree, switch to the **Design** mode and click the **Add web part** ( **+**) icon of the *zoneLeft* web part zone. Select **Syndication/Feed link** and click **OK**. Enter the following properties:

- Link text: Forum posts RSS feed
- **Feed URL**: ~/Forums/RSS.aspx
- Feed title: My Forum Posts Feed

Leave defaults for the rest of the properties and click **OK**.

6. Sign out of CMS Desk and browse to the **Forums** page. You should see the RSS icon and link as highlighted in the screenshot below.

Home Services Products News Partners Company Blogs Forums Ev	ents Im	ages V	viki Examples
Forums			
Forums			
You can set up any number of forum groups and each forum group may have multiple forums on partic also use the Forums module for article comments if you use so called "ad-hoc" forums that are bound	ular topic. T to some pa	The forums articular do	are organized into threads. You can cument (article, product, etc.).
Search forums: Go Advanced search			
Forum	Threads	Posts	Last post
Site forums			
Web site forums			
Announcements     Product announcements come here.	2	6	Frank Stevens (11/16/2008 1:08:41 PM)
Technical support     Sample forum for technical support questions.	3	4	David Fishman (11/16/2008 1:37:45 PM)
Login	_	_	
Username Log on			
Forum posts RSS feed			
		<u>S</u>	ite map   <u>Disclaimer</u>   <u>Mobile version</u>

7. Click the icon or link, your browser will detect that you are accessing an RSS feed and display its content. As you can see, the URL of the feed is actually the URL of the page where the web part is placed. The same URL can be used to access the feed directly both from a browser or a dedicated RSS reader program.

🍘 Corporate Site Forum Posts - Windows Internet Explorer					X
🚱 🕞 👻 🛃 http://localhost/KenticoCMS_0421/Forums/RSS.aspx	Bing				• ۹
🐈 Favorites 🛛 🚔 🏉 Suggested Sites 🔻 🖉 Web Slice Gallery 👻					
🍘 🗸 🖉 🖉 🖉 🖉	<b>-</b>	🔻 Page 🕶 🤮	Safety 👻 🛛	Fools 🔻 🧕	)•
					-
Corporate Site Forum Posts		Displaying		10/10	
You are viewing a feed that contains frequently updated content. When you subscribe to a feed, it is added					
can be viewed in Internet Explorer and other programs. Learn more about feeds.		• All		10	Ш
🏟 Subscribe to this feed		Sort by:			
		▼ Date			
My computer is running slow		Title			
Sunday, November 16, 2008, 3:37:45 PM 🔶					1
David Fishman Why is my computer running slowly. What steps can I do to fix it?					
why is ny compact running slowly. What steps can rule to nx it.					
Thanks for any advice!					
Forum rules					
Sunday, November 16, 2008, 3:16:39 PM 🔶					
administrator While we don't want you to be bothered by too many restrictions, there are always some golden rules to be followe order for the forum to fully serve its purpose, so here they are:	d in				
<ol> <li>Read up before asking! There might already be an answer to your question, so please use the Search function before creating new threads.</li> </ol>					
2) Behave! Profanity and insults will not be tolerated, just as vulgar expressions and all that kind of stuff. Be nice, it's	just				-
Done Protected Mode: Off			- @ •	🔍 100%	•

## 8.34.5 Creating RSS feed pages manually (obsolete)

Due to backward compatibility with Kentico CMS versions prior to 5.5, it is also possible to create a dedicated page with an RSS feed. This way of creating RSS feeds is **obsolete** now, as syndication web parts provide a much more convenient way of creating RSS feeds.

The default installation contains a simple **CMSPages\NewsRss.aspx** page which shows how to build your own RSS feed. It works with news items, but you can modify the code so that it displays a different type of documents.

The following code example shows the code of the *NewsRss.aspx* page.

<u>Please note</u>: If you installed the Kentico CMS project as a web application, you need to rename the *CodeFile* property on the first line to *Codebehind* for the code example to be functional.

```
<%@ Page Language="C#" AutoEventWireup="true" CodeFile="RSS.aspx.cs"
Inherits="RSSNews" %>
<%@ Register Assembly="CMS.Controls" Namespace="CMS.Controls"
TagPrefix="ccl" %><?xml version="1.0" encoding="utf-8" ?>
<rss version="2.0">
<channel>
<title>News RSS</title>
<link><![CDATA[<%=HttpContext.Current.Request.Url.AbsoluteUri.Remove
(HttpContext.Current.Request.Url.AbsoluteUri.Length - HttpContext.Current.Request.
```

```
Url.PathAndQuery.Length) + HttpContext.Current.Request.ApplicationPath%>]]></link>
        <description>News RSS Feed</description>
        <ccl:cmsrepeater ID="NewsRepeater" runat="server" OrderBy="NewsReleaseDate DESC"
        ClassNames="cms.news"
        TransformationName="cms.news.rssitem" SelectedItemTransformationName="cms.news.
rssitem"
        Path="/news/%">></ccl:cmsrepeater>
        </channel>
        <//rss>
```

As you can see, the page contains only RSS elements with dynamic code. The RSS items are rendered using a *CMSRepeater* control with appropriate transformation.

The code behind looks like this:

### [C#]

```
protected void Page_Load(object sender, EventArgs e)
{
    Response.ContentType = "text/xml";
}
```

This code changes the output content type to XML.

## How to create an RSS feed page for a different document type

If you want to display articles instead of news in your RSS feed, you will need to follow these steps:

- 1. Create a new ASPX page called articles_rss.aspx.
- 2. Copy and paste all code from the NewsRss.aspx file except for the <%@ Page %> directive.
- 3. Change the following properties of the CMSRepeater control:
- **OrderBy**: DocumentModifiedWhen DESC
- ClassName: cms.article
- TransformationName: cms.article.rssitem
- SelectedItemTransformationName: cms.article.rssitem
- Path: /%
- WhereCondition: leave empty
- 4. Add the same line of code as used in the *NewsRss.aspx.cs* code behind file (*Response.ContentType* = "*text/xml*") to articles_rss.aspx.cs.
- Create the trasformation cms.article.rssitem like this in Site Manager -> Development -> Document Types -> ... edit Article ... -> Transformations:

<item>

This code renders the particular items.

# 8.35 SharePoint integration

## 8.35.1 Overview

Kentico CMS allows you to access data stored on a SharePoint (Windows SharePoint Services 3.0 (WSS) or MOSS - Microsoft Office SharePoint Server) server and display them on your site. This can be done using the <u>web parts</u> of the Sharepoint module.

The <u>Usage examples</u> sub-chapter contains sample tutorials on using the SharePoint web parts for various tasks.

Default logon settings, used to access a SharePoint server, can be configured as described in the <u>Settings</u> topic.

## What it can do

- Get list and list item data from SharePoint and provide it to Kentico CMS.
- Download documents or images.

## What it can't do

- Modify SharePoint data.
- Display Kentico CMS data in SharePoint.

## How it works

SharePoint web parts use pre-generated proxy classes of selected SharePoint web services to get data from the server. The following services are used:

- http://server/_vti_bin/Lists.asmx methods for working with lists
- http://server/_vti_bin/Imaging.asmx methods for working with picture libraries
- http://server/_vti_bin/Copy.asmx methods for retrieving file content

The returned data is in CAML (XML) format, which needs to be further processed to display the data in a meaningful way. XSLT or ASCX transformations may be used for this purpose. For ASCX, the CAML response must be transformed to an ASP Dataset.

## 8.35.2 Web parts

Web parts for connecting to SharePoint are stored in the **Microsoft SharePoint** category in the web part catalog. This includes the following four web parts:

- SharePoint datasource
- SharePoint datagrid
- SharePoint datalist
- SharePoint repeater

In this text, you can find information about the specific properties of these web parts.

## SharePoint

The following properties can be configured in the **SharePoint** section. All the web parts listed above have these settings in common.

- **Mode**: determines what the web part will do (what data will be retrieved from the SharePoint server) and therefore which web service should be used
- SharePoint site URL: URL of the SharePoint site; based on the *Mode* settings, the full URL of the required web service is determined by this option (it is not configured directly)
- Username, password: you can specify the username and password for authentication directly in the web part properties, or you can inherit global values from Site Manager -> Settings -> Microsoft SharePoint; if you want to use Site Manager <u>settings</u>, leave the fields empty
- List name: if you use the *Display list items* or *Display list of pictures options*, you must specify the list from which the items should be loaded; in the other two modes, you can leave it empty; <u>please</u> <u>note</u>: the field is case sensitive

Just these settings should make the **SharePoint datagrid** display data or the **SharePoint datasource** to provide them. The other two web parts still need to have a transformation specified.

Web part properties	(SharePoint datalist) Webpage Dialog		
	operties (SharePoint datalist)		Occumentatio
General			
Default Visibility	Sharepoint		
Sharepoint Transformations	SharePoint site URL*:	http:// <site_url></site_url>	
Display	Username:	•	
Advanced Debug	Password:	•	
Layout No data behaviour	List name:	Customers	
Pager Pager design	Mode*:	Display list items     Display ist items Display rist items Display rist items	
Web part container	Transformations	Display picture libraries Display list of pictures	
AJAX Time zones	Transformation name:	Select	Edit
Partial caching	Alternating transformation name:	Select	Edit
	Item separator transformation name:	▶ Select	Edit
	Header transformation name:	Select	Edit
Refresh content		ок	Cancel Apply

## Transformations

The **SharePoint datalist** and **SharePoint repeater** need to have a transformation specified in order to display the retrieved data.

There is a number of pre-defined transformations which you can use almost right-off and of course modify them according to your needs. The transformations are stored under the **SharePoint - Transformations** document type (can be edited in **Site Manager -> Development -> Document types**). Their names are self-explaining - they correspond to what they should be used for.

The only thing you need to do to get them to work is edit ( $\checkmark$ ) them and **replace the sample server or** field names with the real names used on the SharePoint server.

## Advanced

In the **Advanced** section, you can specify (limit) in more detail what you want to be retrieved. These settings are applied only in the "Get list items" mode.

- Row limit: sets the maximum number of retrieved items
- Query: filters or sorts returned items; it is similar to WHERE conditions in SQL, but it has totally different syntax based on CAML; for more information on how to construct such queries, search SharePoint documentation or use Google with keywords like "sharepoint query".
- View fields: specifies directly which fields (columns) of a SharePoint list should be retrieved

# Display

In this section, you can control how the retrieved data will be processed and displayed.

- Selected item querystring key name: name of the querystring key by whose presence the items will be selected
- Selected item field name: allows you to specify by which field you want the items to be selected; the default approach is to select items by ID the web part tries to get query parameters with the name specified in the Selected item querystring key property and uses its value, e.g. .aspx?id=2 will select the item with the value of its ID field equal to 2 if you entered *id* into the property above; note: the original field name is used here without the ows_ prefix; the field is case sensitive
- Selected item field type: provides information about the type of the *ItemID* field; for IDs, you should use the *Counter* type; for strings, use the *Text* type; these two should be sufficient for most cases, but you can search SharePoint documentation for other types
- Use dataset: switches between the usage of ASCX and XSLT transformations; if enabled, retrieved XML is converted to a dataset which serves as a data source for a classic ASP repeater; using XSLT, you can convert XML to HTML directly
- **Dataset fields**: if you want to use the dataset, but you don't need all fields, you can enumerate the fields which should be included in the dataset, separated by semicolons; this property can be particularly useful if you want to use cache

<u>Please note</u>: Properties in the **Display** section are not available for the **SharePoint datagrid** web part.

## Debug

Because it is sometimes hard to tell or remember how SharePoint addresses list fields, we implemented the **Show raw response** function. It displays all retrieved SharePoint data in its raw XML form. You can look for fields which contain valuable information and can be displayed. Note: if the data is fetched from cache, the response can't be printed.

## 8.35.3 Usage examples

## 8.35.3.1 Site hierarchy

In this example, you will see how to display site lists which resemble the site hierarchy panel in the SharePoint site. It is quite simple. In fact, it only requires setting the *Display site lists* mode.

Site Hierarchy
B 🏰 Meeting 1
🗄 💕 site2
🗄 👩 Word
Company documents
Forms
3 Shared Documents
Team Discusion
1 Images
My Pictures
🛄 sites
Announcements
Calendar
Customers
CustomList
🖂 Links
2 Tasks
🛄 wiki
🗟 🔂 Team Discussion
🔄 Recycle Bin

This can be done by adding one of the SharePoint web parts (e.g. **Microsoft SharePoint -> SharePoint repeater**) and configuring them the following way:

- SharePoint site URL: URL of your SharePoint server
- Mode: Display site lists
- Username, password: enter your username and password or leave the fields empty if you have them configured in Site manager -> Settings -> Microsoft SharePoint
- **Transformation**: there is a prepared transformation for displaying a site hierarchy called **SiteHierarchy** under the **SharePoint – Transformations** document type. For correct behavior, you must only change the name of the SharePoint server.

Leave default values for the rest of the properties and click **OK**. You should see a result similar to the screenshot below - it simply creates a link to each of the lists on the SharePoint server.

Announcements(2) <u>Calendar(3)</u> <u>Company documents(7)</u> <u>CustomErs(51)</u> <u>CustomList(4)</u> <u>Empty(0)</u> <u>EmptyList(0)</u> <u>Forms(0)</u> <u>Images(5)</u> <u>Kentico Annual Reports(4)</u>  $|\leq \leq 1 \ 2 \ge 2|$ 

### 8.35.3.2 List items

The Display list items mode enables you to display items from any list from the SharePoint server.

harepoint testing site							Welcome TE	STER4\administrator •
•						This List	~	1
Se KENT	ICO Sharepoi	nt testing site						
Home Word site2								Site Actions
	Sharepoint testing sit	e > Customers						
	Customers							
View All Site Content	Our customers.							
Pictures	New • Actions •	Settings •					Viev	v: All Items
<ul> <li>Images</li> </ul>	CustomerNum	CustomerName	Company	Street	City	State	ZipCode	Phone
<ul> <li>sites</li> </ul>	101 I NEW	Mr. Walter Reed		150 Hall Road	Brooklyn	NY	03038	(603) 124-1824
Documents	102 I NEW	Mr. Toby Stein		431 North Philips Road	Brooklyn	NY	03038	(603) 332-4847
<ul> <li>Shared Documents</li> </ul>	103 I NEW	Mr. Donald Bench		409 King Street	Brooklyn	NY	03053	(603) 336-2046
• wiki	104 I NEW	Ms. Joan Hoffman		350 Garfield Avenue	Westchester	NY	03036	(603) 461-8899
Forms	105 I NEW	Ms. Barbara Pasaco	Pasaco Premiums	230 South Philips Road	Brooklyn	NY	03038	(603) 332-9870
Company documents	106 I NEW	Mr. Herb Merritt	Herb's Heaven	130 Willow Street	Stamford	СТ	03036	(603) 336-1114
<ul> <li>Team Discusion</li> </ul>	107 I NEW	Ms. Doris Reaume	Green Glory	82 Seneca Street	Flushing	NY	01913	(508) 643-8821
Lists	108 I NEW	Mr. Douglas Viereck		40 West 41st Street	Brooklyn	NY	03038	(603) 816-2456
Calendar	110 I NEW	Mr. Gilbert Scholten		391 Hawthorne Avenue	Bedford	NY	03110	(603) 332-2681
Customist	111 NEW	Ms. Julie Pfeiffer	Petals and Baskets, Inc.	6 Bayberry Pointe Drive	Brooklyn	NY	03038	(603) 331-7388
CustomList	112 I NEW	Ms. Jennifer Lewis		915 South Creek Drive	Hudson	NY	03051	(603) 755-1736
Discussions	114 NEW	Ms. Gretchen Fletcher		28 East 10 Street	Brooklyn	NY	03053	(603) 336-0900
<ul> <li>Team Discussion</li> </ul>	115 I NEW	Mr. Matthew Lim	Freshwater Gifts	10 Sycamore Street	Bedford	NY	03110	(603) 762-9144
Sites	117 NEW	Mr. Gregory Olsen	Olsen's General Store	192 Bridge Street	Brooklyn	NY	03053	(603) 336-4192
• Word	122 I NEW	Ms. Shirley Woodruff	Rockingham Acres	84 E. Fletcher Road	Queens	NY	01827	(508) 966-8651
site2	123 ! NEW	Mr. Wayne Bouwman		400 Salmon Street	Queens	NY	01827	(508) 966-9827
People and Groups	124 I NEW	Mr. Ken Hodge	Ken's House	3 Gateway Boulevard	Hampton	NY	03842	(603) 361-1137
Site Hierarchy	125 NEW	Ms. Pam Leonard	P & K Gift Center	50 North Cliff Avenue	Hampton	NY	03842	(603) 339-1264
B 🚰 Meeting 1	129 I NEW	Ms. Michele Yasenak		95 North Bay Boulevard	Boxford	NY	01921	(508) 111-9148
B Sta site2	131 NEW	Mr. Curtis Maher	Grapevine Center	15 Old Bedford Trail	Brooklyn	NY	01810	(508) 895-2041
Sign Company damages in	133 NEW	Mr. Ronald Kooienga		287 Western Avenue	Hartford	ст	02810	(508) 111-3260
Company documents	142 NEW	Ms. Nancy Mills	Mills Gardens	15 Warner Drive	Albany	NY	03079	(603) 336-2333
Shared Dog ments	145 I NEW	Ms. Shannon Petree		193 Snow Street D24	Bayside	NY	01876	(508) 575-6731
Team Discusion	148 I NEW	Ms. Dawn Parker	Sundial Florist & Things	109 East Monroe Avenue	Hudson	NY	03051	(603) 334-3980
a Images	154 ! NEW	Ms. Betty Shevlin	Betty's B8B	37 Queue Highway	Queens	NY	01827	(508) 966-5364

Let's say that in SharePoint, there is a custom list called *Customers*, storing information about company customers in fields like *Customer name*, *Street*, *City*, *Phone*, etc. Let's say that we want to display data from this list on our Kentico CMS website.

1. This can be done by adding one of the SharePoint web parts (e.g. **Microsoft SharePoint -> SharePoint repeater**) and configuring them the following way:

- SharePoint site URL: URL of your SharePoint server
- Mode: Display list items
- Username, password: enter your username and password or leave the fields empty if you have it configured in Site manager -> Settings -> Microsoft SharePoint
- Transformation: there is a prepared transformation for item lists called ListItems under the SharePoint – Transformations document type; for correct behavior, you must only change the name of the SharePoint server
- Show raw response: enabled; this is because we will need to inspect the retrieved data and change the transformation to suit our needs

Leave default values for the rest of the properties and click **OK**. You should see a result similar to the screenshot below.

(2009-06-26 13:24:54) (2009-06-26 13:24:54) (2009-06-26 13:24:54) (2009-06-26 13:24:54) (2009-06-26 13:24:54)	
<pre>crs:data ItemCount="40" xmlns:rs="urn:schemas=microsoft=com:rowset"&gt;</pre>	

2. That's not exactly what we want. We would like to see the customers' name and city. We must look into the raw output and search for those fields. We find them there under the *ows_CustomerName* and *ows_Street* attributes.

Now that we know the names of the attributes, we need to edit the transformation code or create a new

transformation.

Replace the original Transformation:

```
<%# Eval("ows_Title") %> (<%# Eval("ows_Created")%>) <br />
```

With something like this:

```
<%# Eval("ows_CustomerName") %> - <%# Eval("ows_City")%> <br />
```

The output looks better now, it displays the desired values.

3. Now we would like to be able to click each item and see more detail about it. We must prepare the **Selected item transformation**. The transformation may look like the following code sample:

```
<strong><%# Eval("ows_CustomerName") %></strong><br/><%# Eval("ows_City")%> <br/><%# Eval("ows_Street")%> <br/><br/><%# Eval("ows_Phone")%> <br/><br/>>
```

4. In web part properties, we must enter the field name of the field by which we want to select items. In this case, it is the *ID* field. In raw response output, it can be seen as *ows_ID*. So enter the following values:

- · Selected item querystring key name: id
- Selected item field name: ID
- Selected item field type: Counter

Finally we must alter the original **Transformation** to suit the values we just entered, i.e. to create a link to customer details using the *id* parameter in query string. It can look like this.

```
<a href="<%# CMS.GlobalHelper.UrlHelper.AddParameterToUrl(CMSContext.RawUrl,"id",
(string)Eval("ows_ID")) %>">
<%# Eval("ows_CustomerName") %> - <%# Eval("ows_City")%> </a><br />
```

The final result looks like this - a simple text list of customers with links:

Mr. Gregory Olsen - Brooklyn Ms. Shirley Woodruff - Queens Mr. Wayne Bouwman - Queens Mr. Ken Hodge - Hampton Ms. Pam Leonard - Hampton Ms. Michele Yasenak - Boxford

After clicking a customer name, a detail of the customer is displayed.

5. Now let's configure the **Advanced** settings. We will want a maximum of 10 customers to be displayed and we want to display only customers from *Queens*.

Enter number 10 into the Row limit field and use this code as the Query:

```
<Query>
<Where><Eq><FieldRef Name="City" /><Value Type="Text">Queens</Value></Eq></Where>
</Query>
```

The <*Eq*> tag means equals; field name is *City*, and its value of type *Text* should be equal to *Queens*.

Click **OK**, you should see the filtered output now as in the following screenshot:

Ms. Shirley Woodruff - Queens Mr. Wayne Bouwman - Queens Ms. Betty Shevin - Queens Ms. Betty Shevin - Queens Ms. Kelly Smith - Queens Mr. Paul Griffin - Queens Mr. Joe Markovicz - Queens Mr. Lee Guazzo - Queens Ms. Kim Hajek - Queens Ks. Kim Hajek - Queens <rs:data ltemCount="10" xmlns:rs="urn:schemas=microsof <s:row ows_Attachments="0" ows_LinkTitle="122" <s:row ows_Attachments="0" ows_LinkTitle="122"

### 8.35.3.3 Picture libraries

In this example, we use SharePoint to retrieve only a picture library type list. For setup, you must only set the following properties:

- SharePoint site URL: URL of your SharePoint server
- Mode: Display picture libraries
- Username, password: enter your username and password or leave the fields empty if you have it configured in Site manager -> Settings -> Microsoft SharePoint
- Transformation: there is a prepared transformation for picture libraries called PictureLibLists under the SharePoint – Transformations document type. For correct behavior, you must only change the name of the SharePoint server.

Leave default values for the rest of the properties and click **OK**. You should see a result similar to the screenshot below - it shows a list of picture libraries with links to the SharePoint server.

Empty Images My Pictures sites

### 8.35.3.4 List of pictures

The *Display list of pictures* mode enables you to display pictures from picture libraries on a SharePoint server.

Sharepoint testing site			
KENT	<b>CO</b> Sharepoint testin	g site	
Home Word site2			
	Sharepoint testing site > Images Images		
View All Site Content	Picture library		
Pictures	New • Upload • Actions •	Settings •	
<ul> <li>Images</li> </ul>			
<ul> <li>sites</li> </ul>			
Documents			
Shared Documents		A 14	
• wiki		Charles and	
Forms		- 123	
<ul> <li>Company documents</li> </ul>		States of Concession, Name	
<ul> <li>Team Discusion</li> </ul>			
Lists			
Calendar		Support	Water lilion
<ul> <li>Tasks</li> </ul>			
CustomList			
Discussions			
Team Discussion			

On the SharePoint server, we have a picture library named *Images* and 3 pictures in it. We want to display these pictures in our Kentico CMS site. For setup, you must enter the following properties of the web part (e.g. SharePoint repeater):

- SharePoint site URL: URL of your SharePoint server
- Mode: Display list of pictures
- Username, password: enter your username and password or leave the fields empty if you have it configured in Site manager -> Settings -> Microsoft SharePoint
- List name: Images
- Transformation: there is a prepared transformation for picture lists called Pictures under the SharePoint – Transformations document type. For correct behavior, you must only change the name of the SharePoint server.

Leave default values for the rest of the properties and click **OK**. You should see a result similar to the screenshot below.



The transformation code looks like this:

```
<%# SharePointFunctions.SplitSharePointField((string)Eval("ows_FileLeafRef"),1) %>
<br/><br/><img src="<%# SharePointFunctions.GetSharePointFileUrl("tester4",
SharePointFunctions.SplitSharePointField((string)Eval("ows_FileRef"),1)) %>
&maxsidesize=200" /> <br />
```

The images are downloaded through the **GetSharePointFile.aspx** page, same as documents. So we create *<img>* tags with *src* attributes pointing to this page in the transformation. For ease of use, there is the **GetSharePointFileUrl** function in the **SharePointFunctions** class, which takes two parameters and returns the URL which downloads the file. The first parameter is server name (or site url), the second parameter is the location of the file in SharePoint. The final URL looks like this:

 ~/ CMSModules/Sharepoint/CMSPages/GetSharePointFile.aspx? server=server_name&name=Images/Sunset.jpg

<u>Please note</u>: Credentials from settings are always used for downloading the file when the **GetSharePointFile** page is used.

There is another useful function in the **SharePointFunctions** class called **SplitSharePointField**. SharePoint for some reason creates combined attribute values for some fields. It looks like this *ows_FileLeafRef="2;#Blue hills.jpg"*. We would often like to use only a part of such a value. The **SplitSharePointField** function serves this purpose. The first argument is a combined value and the second one is the index of the part we want in the output.

## 8.35.3.5 GetSharePointFile page

The **GetSharePointFile.aspx** page is a special page located under the **~/CMSModules/Sharepoint/ CMSPages** directory. The correct URL to access the page looks like the following:

• ~/ CMSModules/Sharepoint/CMSPages/GetSharePointFile.aspx?

server=server_name&name=Images/Sunset.jpg

It downloads the specified file from the SharePoint server and sends it further to the user. Credentials configured in **Site Manager -> Settings -> Microsoft SharePoint** are used for authentication by the web service. You can control the Content-Disposition HTTP header using the *disposition* query parameter.

For images, it supports *maxsidesize*, *width* and *height* parameters to control the image size. Kentico CMS cache is used for images, you can configure it in **Site Manager -> Settings -> website -> Cache images (minutes)**.



### Important!

Because the settings configured in **Site Manager -> Settings -> Microsoft SharePoint** are automatically used for authentication by the **GetSharePointFile.aspx** page and since the URL to access the page can be entered manually, it is highly recommended to enter the credentials of a user that is authorized to access only the files you want to display on your website.

## 8.35.4 Settings

Default logon credentials used to access the SharePoint server can be configured in **Site Manager** -> **Settings** -> **Microsoft SharePoint**. If you configure a **Username** and **Password** here, it will be used by default if you leave the *Username* and *Password* fields **blank** in the properties of SharePoint web parts.

If you enable the **Use Windows Authentication** option, the current user's windows domain credentials will be used to access the SharePoint server.

The address of the SharePoint server itself needs to be specified in the properties of SharePoint web parts.





## Important!

The settings configured here are automatically used for authentication by the <u>GetSharePointFile.aspx page</u> and since the URL to access the page can be entered manually, it is highly recommended to enter the credentials of a user that is authorized to access only the files you want to display on your website.

# 8.36 Smart search

## 8.36.1 Overview

The Smart search module enables index-based search of the content of your website. It is based on <u>Lucene.Net</u>, version 2.1.0, which is a source code, class-per-class, API-per-API and algorithmatic port of the Java <u>Lucene</u> search engine to the C# and .NET platform.

The module uses **indexes** to store information about the content of your site. When a search request is sent to the system by a user, it is the index that gets searched, which results in **significantly better performance** compared to linear SQL query search. For more information on **how the module works**, please refer to the <u>How it works</u> topic.

To enable the smart search functionality on your site, you need to perform the following three steps:

1. Enable Smart search indexing in the system. Learn how in the Enabling Smart search indexing topic.

2. Create an index. Assign it to a site (and culture) and define content that will be indexed. Learn how in the <u>Managing indexes</u> sub-chapter.

3. Use some of the Smart search web parts on your site.

The module comes with several **web parts**. You can find an overview of these web parts, including explanations of the most important web part properties, in the <u>Available web parts</u> and <u>Using the Smart</u> <u>search filter</u> topics.

The following topics provide additional information about search related issues:

- Search syntax
- <u>Related scheduled tasks</u>
- Searching attachments
- <u>Security</u>

In the past, Kentico CMS supported only linear SQL search functionality. To keep the system backward compatible, this functionality is still available. It is now referred to as **SQL Search** and you can find further information about it in the <u>SQL Search overview</u> topic.

The <u>Smart search internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how smart search indexes can be managed using the API and how search results can be displayed in transformations.

## 8.36.2 How it works

Information about the content specified for an index is stored in a physical **index file** on the local disk. The index files are located in **~/App_Data/CMSModules/SmartSearch/<Index code name>** within your web project's folder.

Documents, forums and other objects in Kentico CMS are reflected in the index file as **index documents**. The data structure of the index documents is much more suitable for being searched through, resulting in significantly higher search performance compared to linear SQL search.

The index documents may contain fields that the corresponding Kentico CMS objects contain, based on the settings made on each object type's **Search fields** tab. Depending on these settings, a representation of the object is created in the index file by the **Index writer**. When an object included in the index is created, removed or has one of its fields modified, the index document is updated. The **Index searcher**, on the other hand, searches through the index file and returns the relevant results from it.

## Brief example

Let's take the following model scenario to explain the life cycle of a document in the index file:

1. A new document is created and stored in the database. When the fields to be indexed are defined for the document type, a new indexing task is logged in the database upon the document's creation.

2. The Smart search checks the database automatically on a regular basis for the presence of indexing tasks.

3. When the Smart search module finds the task, it processes it and the new document is added to the index.

4. Now a user comes to the site and sends a search request via some Smart search web part.

5. The request gets passed to the Smart search module.

6. It modifies the request into a searchable form, searches the index and returns results based on what was found in the index.

## 8.36.3 Enabling Smart search indexing

To enable Smart search indexing, go to Site Manager -> Settings -> Web site, check the Enable smart search indexing check-box and click Save.

	Kentico							Switch to CMS De	sk User: Global Admin
1	CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support		
Site:			Web:	site					
(global	)	•							
- Sett	tings		Save	Rese	t these settings to de	<u>efault</u>			
	Web site								
	Content management		These setti	ngs are glot	bal, they can be o	verridden by	the local site settings. Please	e select the site to see or ch	ange the site settings.
	Membership		Cache co	ntent (minu	tes)	0	10		
	Y Security		0			~	10		
6	🖶 URLs and SEO		Cache im	ages (minu	ites)	2	10		
	Output filter		Cache pa	ge info (mir	nutes)	2	10		
	System		Combine	with default	t culture	2			
	🛛 E-mails		Combine	files with de	efault culture	2			
	Bad words					~			
	Blogs		Default ali	ias path		2		Select	
	😽 Booking system		Default cu	lture of the	content	2	English - United States	▼	
	Sommunity		Page des	cription pre	fix	2			
	Sortent staging		- Dogo kow	wordo profi					
	Media libraries		- Fage Key	words preil.					
	🗿 Message boards		Page title	format		2	{%prefix%} - {%pagetitle_o	orelse_name%}	
(	🗟 Messaging		Page title	prefix		2			
	Web analytics		Page not f	found for no	on-published docu	ments 🙆	$\checkmark$		
	E-commerce		Page not	found LIPI					
	🐳 Payment gateway - Aut	horize.NET	ragenou			•			
	🐺 Payment gateway - Pay	/Pal	Exclude d	ocument typ	pes from SQL sea	rch 🕜		Select	Clear
			Exclude d	ocuments f	rom SQL search	2			
			Enable sr	nart search	indexing	0			
			Control el	ement		0	div	•	
			Export the	se settinas					

You also need to have the **write permission** assigned to the **~/AppData** folder. Indexes are stored within this folder, so the permission is necessary for the system to work with them. The procedure of granting a folder with the write permission is described in the <u>Disk permission problems</u> topic.

## 8.36.4 Managing indexes

### 8.36.4.1 Creating an index

Information about the content of your site is stored in indexes. You need to have the content of your site indexed in order for it to be searchable using the Smart search module.

There are four types of indexes, click the link to learn about how indexes of the type can be configured:

- Documents index stores information about the content of documents in your content tree
- Forums index stores information about the content of discussion forums on your site
- Custom table index stores information about data stored in custom tables
- User index stores information about website users

The following example shows the general procedure how an index can be created and what options you have when creating it. The procedure is applicable for both document and forum indexes, while differences between the two are noted in the text.

1. Go to Site Manager -> Administration -> Smart search and click the A New index link. The New search index dialog will be displayed. You will be asked to enter the following details:

- **Display name**: name of the index displayed in the administration interface
- **Code name**: name of the index used in website code (the fully qualified file name must be less than 260 characters long, the directory name must be less than 241 characters long)
- **Analyzer type**: type of analyzer that will be used when indexing the content of your site, the following types are available:
  - Standard grammar-based analyzer (stop-words, shortcuts, ...), very efficient for English, but may not produce satisfactory results with other languages
  - Simple divides text at non-letter characters
  - Stop contains a collection of stop-words at which it divides the text
  - White space divides text at whitespace characters
  - *Keyword* tokenizes the entire stream as a single token; this is useful for data like zip codes, ids, and some product names
- **Stop words** dictionary containing words which will be omitted from indexing (e.g. 'and', 'or', ...) when a *Stop* or *Standard* analyzer is used; the dictionaries are stored in ~\App_Data\CMSModules\SmartSearch_StopWords
- **Index type**: type of content to be indexed
  - Documents indexes content of documents in the content tree
  - Forums indexes content of discussion forums
  - Users indexes details about system users fields of the CMS_User system table
  - · Custom tables indexes records in custom tables
- Assign index to site <sitename> if checked, the index will be assigned to the site whose name is displayed

Click OK.

Kentico CMS Site Manager	Sites Admini	stration	Settings	Development	Licenses	Support
Administration     Avatars     Bad words     Badges     Banned IPs     F-mail queue	New sea	arch in ► New in My new	dex ndex site			
Event log Permissions Recycle bin	Code name: Analyzer type: Stop words:	MyNewS Standard (Default)	Site d			•
Roles Roles Scheduled tasks Smart search System II personalization	Index type:	Docume Assig	ents n index to we	ebsite Corporate	Site	•
📲 Users 🖏 Web farm						

2. You will be redirected to the index's editing interface. The **General** tab, which you will be redirected to, shows the same details that you just entered. Notice the info box on the right, which shows general information about the index.

The following two actions can also be performed on this tab, but it would make no sense to perform them at this stage of creating a new index:

- Sebuild deletes the original index and the specified content gets indexed again; clicking this action button does not always guarantee that the index will be rebuilt immediately, the process may be delayed if e.g. another index is already being rebuilt or if the rebuilding tasks are configured to be handled by the scheduler; the index is automatically optimized after a successful rebuild
- **Optimize** de-fragments the index, which results in better search performance, particularly in the case of large indexes

Kentico						Switch to CMS Desk User: Global Administrator v5.5.3789 Sign O
CMS Site Manager	Sites Admin	nistration Setti	ings Development	Licenses	Support	
Administration     Administration     Advatars     G Bad words     Badges     Banned IPs     F-mail queue     Fernisions     Recycle bin     Recycle bin     Roles     Soleduled tasks     Soleduled tasks     System     System     Upersonalization     Users     Web farm	Smart search i Smart search i General In Search In Rebuild Display name Code name: Analyzer type: Stop words: Index type:	search indexs indexes > My ner dex Sites C C Continize My New Site Standard (Default) Documents OK	es w site ultures			Index info Number of indexed items: 0 Index file size: 0 B Index status: New Index is optimized: No Last rebuild time: N/A

3. Switch to the **Index** tab. This is where you define what document content, forums, custom tables or users will be indexed. The content of this tab depends on the type of index that you are creating. Detailed information about defining index content is given in <u>Defining document index content</u>, <u>Defining forums index content</u>, <u>Defining custom tables index content</u> and <u>Defining user index content</u>.

Kentico CMS Site Manager	Sites Administration	Settings Development	Licenses Support
Administration  Avatars  Bad words  Badges  Banned IPs  F-mail queue  Event log  Permissions	Smart search Smart search indexes	indexes Corporate site - default tes Cultures	
Recycle bin     Roles     Scheduled tasks     Smart search     System     Il personalization	ActionsDocumeImage: State of the state o	nt types Path /% /SpecialPages/%	Index type Allowed Excluded
🖣 Web farm			

4. Now switch to the **Sites** tab. Make sure that the index is assigned to the appropriate website. You may also want to optionally assign the index to some other site in order to have multi-site search results.

Kentico CMS Site Manager	Sites	Administration	ו נ	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> <li>Femail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> <li>Roles</li> <li>Scheduled tasks</li> <li>System</li> <li>System</li> <li>U personalization</li> <li>Users</li> <li>Web farm</li> </ul>	Smart s Smart s Genera The se	mart searc earch indexes I Index I arch index is Site name <u>Community</u> <u>Corporate S</u>	h ind h ind Sites availa Site Site Bite ed	lexes new site Cultures able for th	he following w Add sites	eb sites:	

5. Switch to the **Cultures** tab (only available for document indexes). This is where you can choose which cultural versions of the site will be indexed by this index. Choose the cultural version(s) that you want to be indexed. If you have a multi-site index, you can select the cultures separately for each site chosen by the **Select site** drop-down list.

Kentico CMS Site Manager	Sites	Administrati	on	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> <li>Femail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> <li>Roles</li> <li>Scheduled tasks</li> <li>Smart search</li> <li>System</li> <li>U personalization</li> <li>Users</li> <li>Web farm</li> </ul>	Smart s Smart s Genera The fo	mart sear search index al Index llowing cult Culture na English - emove selec	ch in sites ture v ame United	Adexes Ay new site Cultures ersions are States	e included in th	e index:	

6. Finally, go back to the **General** tab and choose to **B Rebuild** the index. This needs to be done only for the first time. Any further changes made to the site will be indexed automatically.

### 8.36.4.2 Defining document index content

On the **Index** tab of a **document index**, you can define which documents on the site will be indexed. This is done by defining allowed and excluded content.

Excluded content is subtracted from the allowed content. So for example if you allow **/%** and exclude **/ Special-pages/%** at the same time, it means that all pages on the site will be indexed, except of all pages found under the **/Special-pages** node.

The dialogs for defining new allowed/excluded content can be accessed using the  $\square$  Add allowed content and  $\square$  Add excluded content links.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> <li>Badges</li> <li>Banned IPs</li> <li>F-mail queue</li> <li>Event log</li> <li>Permissions</li> <li>Recycle bin</li> <li>Roles</li> <li>Scheduled tasks</li> <li>Smart search</li> </ul>	Smart s Smart s Genera Q Add	mart search in earch indexes > I Index Site allowed content ons Documen (all) (all)	ndexes Corporate si s Cultures Add exclu t types I	ite - default s Ided content Path /% /SpecialPages/%	Index type Allowed Excluded	
System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System System						

## Adding allowed content

In this dialog, you are defining what part of the website will be indexed. You can specify this by choosing **Path** to the indexed documents, **Document types** of the indexed documents or a combination of both. The following options can be specified:

- Path: path to the documents that should be indexed
- Document types: document types that should be included in indexing
- **Including ad-hoc forums**: if checked, ad-hoc forums attached to documents specified by the properties above (if there are any) will be indexed too
- **Including blog comments**: if checked, blog comments attached to blog posts specified by the properties above (if there are any) will be indexed too
- Including message boards: if checked, message boards attached to documents specified by the properties above will be indexed too

Other objects or documents displayed on the specified documents by web parts will not be indexed. E. g. the content of news documents displayed by a Repeater web part on a specified document will not be added to the index etc.

#### Examples:

- Path: /%
- Document types: empty

In this case, all documents on the site will be indexed.

- Path: /Partners
- Document types: empty

In this case, only the /Partners page will be indexed, without the pages under it.

- Path: empty
- Document types: CMS.News

In this case, all documents of the CMS.News document type on the whole site will be indexed. Please note that in this case, empty path field is equal to *I*%.

- **Path**: /Products/%
- Document types: CMS.CellPhone;CMS.Pda

In this case, all documents of the CMS.CellPhone and CMS.Pda document types found under /Products will be indexed.

Kentico CMS Site Manager	Sites Adr	ninistration	Settings	Development	Licenses	Support			
Administration     Avatars     Bad words     Badges     Banged Ips	Smart search indexes         Smart search indexes         Corporate site - default         General       Index         Sites       Cultures								
<ul> <li>E-mail queue</li> <li>Event log</li> <li>Permissions</li> </ul>	Item list  N	ew allowed i	tem						
🐨 🗑 Recycle bin 🕬 Roles	Path: Document ty	pes:	/%			Select Select	Clear		
<ul> <li>Scheduled tasks</li> <li>Smart search</li> <li>System</li> <li>UI personalization</li> <li>Users</li> <li>Web farm</li> </ul>	Including ad Including blo Including me	-hoc forums og comment: essage boar	Leave th s: ds:	e field empty if yo	ou wish to cho	ose all documei	nt types.		

## New excluded content

In this dialog, you are defining what part of the website will be excluded from indexing.

Excluded content is excluded allowed content. So for example if you allowed **/%** and excluded **/Special-pages**/% at the same time, it means that all pages on the site will be indexed, except of all pages found under the **/Special-pages** node.

The following options can be specified:

- Path: path to the documents that should be excluded from the index
- Document types: document types that should be excluded from the index

### Examples:

- Path: /Partners
- Document types: empty

In this case, only the /Partners page will be excluded from indexing, not the pages under it.

- Path: empty
- Document types: CMS.News

In this case, all documents of the CMS.News document type on the whole site will be excluded from indexing. Please note that in this case, empty path field is equal to **/%**.

- Path: /Products/%
- Document types: CMS.CellPhone;CMS.Pda

In this case, all documents of the CMS.CellPhone and CMS.Pda document types found under /Products will be excluded from indexing.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	
Administration     Avatars     G Bad words	Smart s	nart search in earch indexes	<b>ndexes</b> Corporate sit	te - default			
- 🧟 Badges 	Genera	Index Site	s Cultures				
··· 🥏 E-mail queue ··· 📋 Event log	Item list	New excluded	item				
	Path:	/Produ	icts/%		Select		
🥵 Roles 🕑 Scheduled tasks	Docum	ent types: CMS. Leave	CellPhone the field emp	ty if you wish to cl	Select	Clear Iment types.	
🔊 Smart search 🤳 System			ОК				
📲 UI personalization 🔒 Users							
🧤 Web farm							

### 8.36.4.3 Defining forums index content

On the **Index** tab of a **forum index**, you can define which documents on the site will be indexed. This is done by defining allowed and excluded forums.

The dialogs for defining new allowed/excluded content can be accessed using the  $\square$  Add allowed forums and  $\square$  Add excluded forum links.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	Buy					
Administration     Avatars	🔊 Sma	art search ir	ndexes									
- 👦 Bad words	Smart sea	Smart search indexes  My forums index										
🛃 Badges 🌄 Banned IPs	General Index Sites											
E-mail queue E-mail queue	Add allo	wed forums	Add exclude	d forum								
2 Permissions												
🐨 🗑 Recycle bin	Actions	Forums		Site nam	e Inc	lex type						
- 🕺 Roles	2 X	Groupsann	ouncements	Communi	tySite Exc	duded						
🖓 Scheduled tasks 🖓 Smart search	1 🗙	GeneralDis	cussionGrou	ips Communi	tySite Allo	wed						
🔍 🚚 System												

## Adding allowed forums

1. Click the **Add allowed forums** link.

2. In the following dialog, first use the **Site name** drop-down to choose the site whose forums will be indexed. If you select **(all)**, all forums on all sites in the system will be indexed.

🎎 Kentico												
CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support	Buy					
Administration	🔊 Sn	nart search ii	ndexes									
Bad words	Smart s	earch indexes 🕨	My forums in	dex								
🛃 Badges 	General	Index Site	s									
Z E-mail queue	Item list	Item list   New allowed item										
······································	Site na	me: Community	Site		•							
- 🥵 Roles 	Forums	E Leave the fie	ld empty if yo	ou wish to choose	Select all forums or	n the selecte	d site					
Smart search												
		ОК										

3. If you selected a particular site in the previous step, click the **Select** button next to the **Forums** field. The dialog depicted in the screenshot below will be displayed.

Use the **Forum group** drop-down to select a forum group. Its child forums will be listed below. To include a forum in the index, enable ( $\blacksquare$ ) the appropriate check-boxes. Click **OK** to save the settings.

🖉 Select forums Webpage Dialog	×
Select forums	
Forum group: Community forums	
Forum name or its part.	Search
Select all Deselect all	
Forum name	
Announcements	
Community FAQ	
General discussion	
Members discussion	
	Items per page: 10 💌
	OK Cancel
http://localhost/KenticoCMS_1216/CMS/ 🗣 Local intranet   Protected Mode	: Off

Alternatively, the code names of forums, separated by semicolons, can be entered manually into the **Forums** field. All forums on the selected site can be added to the index this way, including group forums. The asterisk character (*) can be used as a wildcard for any number of characters.

For example, entering *community* would add all forums that contain the string *community* in their code name to the index.

## Adding excluded forums

Excluded forums make sense only when you have all forums defined as allowed. By defining a forum as excluded, it will not be indexed and all forums except for the excluded one will be indexed.

You can define an excluded forum using the **Add excluded forums** link, while the procedure is the same as when adding allowed forums.

### 8.36.4.4 Defining custom tables index content

When editing ( $\checkmark$ ) a custom table index on the **Index** tab in **Site Manager -> Administration -> Smart search**, you can see a list of custom tables indexed by the index. Custom tables can be added to the index using the **Add custom table** link. You can also **Edit** ( $\checkmark$ ) the way listed custom tables are indexed or **Delete** ( $\clubsuit$ ) them from the list.

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support										
<ul> <li>Administration</li> <li>Avatars</li> <li>Bad words</li> </ul>	Smart search indexes Smart search indexes  Corporate site - Custom table										
	General Index Sites										
Permissions Recycle bin Boles Scheduled tasks	Actions     Custom table              X										

When adding a new custom table to the index or editing an existing one, you have the following options:

- Custom table: custom table to be indexed
- Where condition: WHERE part of the SELECT SQL query retrieving data from the table; using this, you can limit which items (rows) in the table will be indexed

Kentico CMS Site Manager	Sites Administration Settings Development Licenses Support
- Administration	Smart search indexes
Bad words	Smart search indexes  Corporate site - Custom table
	General Index Sites
e-mail queue	Item list  Current item
Permissions	
Recycle bin	Custom table: Sample table (custom table. Sample Table)
- 🥵 Roles	Where condition: ItemID > 23
···② Scheduled tasks ···졟 Smart search	ОК

### 8.36.4.5 Defining user index content

When editing (*P*) a user index on the **Index** tab in **Site Manager -> Administration -> Smart search**, you can limit which users will be indexed. The following limitations can be set:

- Include hidden users: if enabled, hidden users will be indexed
- Enabled users only: if enabled, only enabled users will be indexed
- Index users from all sites: if enabled, users from all sites will be indexed; if disabled, only users from the sites assigned on the Sites tab will be indexed
- Users in roles: if entered, only users from the entered roles will be indexed
- Users not in roles: if entered, only users who are not in the entered roles will be indexed
- Where condition: WHERE part of the SELECT query on the View_CMS_User view used to retrieve users

<u>Please note</u>: you can define which fields will be indexed in **Site Manager -> Development -> System** tables -> edit (*V*) the **CMS_User** system table -> **Search fields**.

Kentico CMS Site Manager	Sites Administration	Settings Development	Licenses Support							
Administration     Avatars     Bad words	Smart search in Smart search indexes + C	Smart search indexes Smart search indexes Corporate site - Users								
Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison Banned IPs Comparison	General Index Sites									
Permissions Recycle bin Secocle Secocle	Enabled users only: Index users from all sites									
Scheduled tasks	Users in roles: Users not in roles:	CMSEditor CMSDeskAdmin	Select Select	Clear Clear						
UI personalization	Where condition:	ОК	v							

## 8.36.5 Settings for particular object types

The following text describes the possible settings for particular object types which can be indexed and subsequently searched.

## **Document types, Custom tables and Users**

Settings for <u>document types</u>, <u>custom tables</u> and <u>users</u> are almost identical. You can find them on the **Search fields** tab in the editing interfaces for document types, custom tables and users.

In the top part of the tab, you can specify how the objects will be displayed in search results:

- Title field specifies which field will be used as the title of the result item
- Content field specifies which field will be used for the content extract of the result item
- Image field specifies which field will be used for the image of the result item (not available for users, <u>Avatar</u> image is used for users by default)
- Date field specifies which field will be used for the date and time displayed with the result item

Lines of the table in the bottom part of the page represent fields defined on the **Fields** tab, while columns define the following:

- Content if checked, content of the field will be indexed and searchable the standard way
- Searchable if checked, the content of the field will be searchable by entering an expression in

format: *<field code name>:<searched phrase>*. Please refer to the <u>Search syntax</u> topic for more information about field searches.

- **Tokenized** indicates if the content of the field should be processed by the analyzer when indexing; the general rule is to use this for Content fields and not for Searchable fields
- Custom search name relevant for Searchable fields; substitutes field code name in the <field code name>:<searched phrase> expression; if entered, the original code name can't be used

							Switch to	CMS Desk	User: Global Administrator
CMS Site Manager	Sites Administration	Settings Deve	lopment Li	censes Sup	pport				
<ul> <li>Development</li> <li>Categories</li> </ul>	Document type	properties							
Countries CSS stylesheets	Document types   Page (	menu item)		at 11.		ali i f			
Cultures	General Fields Form	Transformations	Queries	Child types	Sites	Alternative forms	Search fields	Documents	
Document types	Title field: Document	Name		•					
Form controls	Image field: Menultem	easerImage		•					
	Date field: Document	CreatedWhen		•					
Notifications	Set automatically								
Page templates	Field name	Content Se	earchable	Tokenized	Custom	search name			
Relationship names	MenultemID		V						
System tables	MenultemName	<b>V</b>							
Tag groups Time zones	MenultemTeaserImage								
Web part containers	ок								
····@ Web templates ····@ Widgets ····@ Workflows									

## E-commerce SKUs

Similar settings are available for E-commerce SKUs. The settings can be done in Site Manager -> Development -> System tables -> Edit () Ecommerce - SKU -> Search fields tab. In this case, only the following settings are available:

- **Content** if checked, content of the field will be indexed and searchable the standard way
- Searchable if checked, content of the field will be searchable in format <field code name>: <searched phrase>, which searches only through the fields and not through the other fields
- **Tokenized** indicates if the content of the field should be processed by the analyzer when indexing; the general rule is to use this for Content fields and not for Searchable fields

#### Important!

It is highly recommended that you do not modify settings other than those of your custom fields. If you modify the settings of some of the default fields, the functionality of searching through SKUs may get broken.

Kentico CMS Site Manager	ci	tas Administra	tion	Sattings	Developm	ant	Licenses	Support			Switch to	CMS Desk	User: Global	Administrator
Development     Categories		System ta	ble pr	operties	Developin		LICENSES	Support						
Countries	s	ystem tables 🕨 E	comme	erce - SKU										
GS stylesheets		Fields Queries	Alter	native forms	Search	ields								
Uustom tables	ľ	is highly recomm	ended	not to chang	je default	field set	tings. If y	ou remove	or change so	me of manda	itory fields,	smart search	module can sto	op working.
Sorm controls		Field name				Conte	nt Sea	rchable	Tokenized					
Inline controls	Шſ	SKUID						V						
Modules		SKUNumber						<b>V</b>						
Page layouts		SKUName				1								
📕 Page templates		SKUDescription				<b>V</b>								
Relationship names		SKUPrice						<b>V</b>						
Tag groups		SKUEnabled						<b>V</b>						
Time zones		SKUDepartment	ID					V						
🕼 UI cultures	41	SKUManufacture	rID					V						
Web part containers	1	SKUInternalStatu	ISID											
Web templates		SKUPublicStatus	sID											
Widgets		SKUSupplierID												
		SKUAvailableInE	ays					<b>V</b>						

## 8.36.6 Available web parts

The Smart search module comes with the web parts mentioned in the text below. Only the most important web part properties are mentioned here. For a complete list and explanations of web part properties, please refer to <u>Kentico CMS Web Parts</u> reference or click the **Documentation** link at the top right corner of the web part properties window.

Smart search web parts are located in the Full-text search web part category.



The following web parts come with the Smart search module:

## Smart search dialog with results

This is the all-in-one web part for both searching and displaying search results.

Search for:	Example					
Search mode:	Any word					
	Search					

Example conference

Here come the details and additional information of Example conference.

http://localhost/KenticoCMS/Examples/Webparts/Booking-system/Event-registration/Exampleconference.aspx 5/7/2009 2:22:09 PM

#### Silver partners

Silver partners section This is an example of a secured site section available only to Silver partners. http://localhost/KenticoCMS/Partners/Silver-partners.aspx 11/28/2007 10:35:25 AM

#### Gold partners

Gold partners section This is an example of a secured site section available only to Gold partners. http://localhost/KenticoCMS/Partners/Gold-partners.aspx 11/28/2007 10:35:38 AM
### Smart search dialog

This web part needs to be placed on a page together with the **Smart search results** web part. The functionality of the two web parts will be identical to Smart search dialog with results, with the difference that these two web parts can be placed at different sections of the page. You can also connect the web part to a Smart search filter.

Search for:			
Search mode:	Any word	•	]
	Search		

## Smart search box

This web part is similar to the Smart search dialog, with the difference that users can not select the Search mode, which is hard-set in its web part properties. It is useful where limited space is available for the web part, e.g. in menus, etc.

Search for:	Search
-------------	--------

## Smart search results

This web part can be used to display results of a search request sent from a **Smart search box** or **Smart search dialog** web part. It can be placed either on the same or on a different page as one of the two web parts. In case that it is placed on a different page, the page needs to be specified by their **Search results page URL** property.

#### Example conference

Here come the details and additional information of Example conference.
http://localhost/KenticoCMS/Examples/Webparts/Booking-system/Event-registration/Exampleconference.aspx 5/7/2009 2:22:09 PM

#### Silver partners

Silver partners section This is an example of a secured site section available only to Silver partners. http://localhost/KenticoCMS/Partners/Silver-partners.aspx 11/28/2007 10:35:25 AM

#### Gold partners

Gold partners section This is an example of a secured site section available only to Gold partners. http://localhost/KenticoCMS/Partners/Gold-partners.aspx 11/28/2007 10:35:38 AM

### Smart search filter

This web part can be used to enable users to search only documents of a specific type. You can find a detailed description of how this works in the <u>Using the Smart search filter</u> topic.

```
Filter product type: Filter

● All 

Cell phones 
Laptops 
PDAs
```

The following properties of **Smart search dialog with results** and **Smart search results** web parts are the most important:

Property Name	Description
Indexes	Determines which index will be searched; multiple indexes can be entered and then searched at the same time.
Transformation name	Name of the transformation used to display search results; there are two default transformations: CMS.Root.SmartSearchResults and CMS.Root.SmartSearchResultsWithImages.
Search options	Sets the level of conditions which users can enter: <b>None</b> : Users can specify only keywords, everything in the text box is escaped. <b>Basic</b> : Users can input special characters (such as +,-,) but cannot filter by document field name (field:value). <b>Full</b> : All search options can be used. More information can be found in the <u>Search syntax</u> topic.
Search condition	Using this property, you can limit which documents will be searched using the search syntax (e.g. articleid:[(int)25 TO (int)150]).
Search results order	Defines sorting of the search results. You can specify one or more document fields (separated by commas). Search result will be sorted by them. You can input the ##SCORE## macro which means that results will be sorted by score. Default direction of sorting is ascending. You can change direction to descending by DESC keyword (e.g. articleid DESC). If you encounter the "field <fieldname> does not appear to be indexed" error when using multiple indexes, try specifying the type of the field in the following syntax: (date)documentcreatedwhen</fieldname>

# 8.36.7 Using the Smart search filter

The **Smart search filter** web part can be used to allow users to limit the range of objects that will be searched (conditional filter), or define how the search results will be sorted. It is designed to be connected to the **Smart search dialog** or **Search dialog with results**. You can connect more than one filter to these web parts.

You can see an example of how this works on the sample Corporate Site, on the **Examples -> Web** parts -> Full-text search -> Smart search filter page. You can see three Smart search filters connected to a Smart search dialog, which is connected to Smart search results.

The behaviour of the smart search filter is mainly defined by the properties explained in the table below. You can find descriptions of all the web part's properties in the <u>Kentico CMS Web Parts</u> reference or after clicking the **Documentation** link at the top right corner of the web part properties window.

Property Name	Description
Search webpart ID	ID of the Smart search dialog or Smart search dialog with results web part to which the filter should be connected.

Values	Using this property, you can specify the possible filtering options that can be selected. You enter one option per line in format: <i><index field="" name="">;<value field="" of="" the="">;<displayed text=""></displayed></value></index></i>
	When creating a conditional filter, the logical value of each filtering option can be specified. If the + symbol is added before the option, then only objects whose value in the given field matches the specified value will be included in the search. If the - symbol is added, only results that do <b>not</b> match the value will be returned.
	Please note, when entering integer or double type fields as filter options, the type of the value needs to be specified in the following way: +DocumentCreatedByUserID;( <i>int</i> )53;Administrator
	<ul> <li><u>Examples</u>:</li> <li>;;All</li> <li>+classname;cms.cellphone;Cell phones</li> <li>+_created;[{%CurrentTime (add)-10080 (tosearchdatetime)%} TO {% CurrentTime (tosearchdatetime)%}];Past week</li> <li>##SCORE##;;Score</li> <li>documentcreatedwhen;;Creation date</li> </ul>
Query name	Name of the query which can be used instead of the <i>Values</i> property to dynamically create the filter options. The query must return three columns, which will be used in the following order: <i><index field="" name="">, <value field="" of="" the="">,<displayed text=""></displayed></value></index></i>
	Sample query to load all document types as the filter options:
	SELECT TOP 1000 '+classname', ClassName, ClassDisplayName FROM CMS_Class WHERE ClassIsDocumentType = 1
Filter clause	Sets a clause that overrides the logical values specified for filtering
	options. Possible choices are:
	<ul> <li>None - no clause is added and the original logical values set for individual filtering options are used.</li> <li>Must - indicates that the conditions in all filtering options must be fulfilled (adds the + symbol).</li> <li>Must not - indicates that the conditions in all filtering options must not be fulfilled (adds the - symbol). Conditions are inverted compared to the Must option.</li> </ul>
Filter is conditional	If true, the filter limits the searched documents (where condition). If false, the filter determines the sorting of search results (order by condition).

#### 8.36.8 Search syntax

A detailed description of Lucene query parser syntax can be found at <u>http://lucene.apache.org/java/2_1_0/queryparsersyntax.html</u>.

Based on the level of allowed syntax specified by the **Search options** property of **Smart search dialog** with results or **Smart search results** web parts, users can enter search queries with restriction as described below:

- **Basic** all Lucene search query syntax (as described on the page linked above) will be recognized except for field searching.
- None no query syntax will be recognized. All text entered by users will be processed as a part of the searched for expression.
- Full all search query syntax will be processed, including field searching.

#### **Field search**

By default, field searching can only be used to define an additional condition in a search expression. All conditions must start with either the + or - symbol. The + symbol indicates that only results which fulfill the field condition should be returned. The - symbol has the opposite meaning, only results that do **not** contain the specified value in the given field will be retrieved.

For example:

network +NewsReleaseDate:[20080101 TO 20091231]

When searching for this expression using a document index, only news documents containing the word *network*, released in the year 2008 or 2009 will be returned.

If you wish to allow direct field searches, you must add the following key into the **/configuration/ appSettings** section of your **web.config** file:

<add key="CMSSearchOnlyWhenContentPresent" value="false" />

Once this is done, expressions containing only search syntax can be used. This allows users to find records directly by entering an exact field value:

- DocumentNodeID:(int)17 the document with a nodeID equal to 17 will be returned.
- News Title: "New features" the news document titled New features will be returned.

Keep in mind that only fields that are set as **Searchable** in the field configuration of the given object type may be included in field searches. Information about the search field configuration of objects can be found in the <u>Settings for particular object types</u> topic.

#### Searching numeric fields

When performing field searches, the values specified are understood as strings by default. If you know that you are searching in **integer** or **double** fields, you will need to specify the type of the field the following way:

NewsID:(int)22

- SKUPrice:(double)255.0
- DocumentNodelD:[(int)1 TO (int)100]

### Searching date and time fields

Due to the same reason, search in **DateTime** fields also requires special syntax in format **<field name>:yyyymmddhhmm**. So for example:

- DocumentCreatedWhen:200812230101
- DocumentCreatedWhen:[200902020101 TO 200906020101]

If you need to specify date and time using a macro, you will need to use the **(tosearchdatetime)** parameter to convert the returned value to a format suitable for Lucene.

• {%CurrentDateTime|(tosearchdatetime)%}

You can also use the (add) parameter, which adds the specified amount of minutes to the value.

• {%CurrentDateTime|(add)-1440|(tosearchdatetime)%}

### Field search with Stop and Simple analyzers

Indexes created by Stop and Simple analyzers cannot be searched using the standard field search format. This is by design, but you can use a workaround with a range query containing identical boundaries:

• newsid:[(int)22 TO (int)22]

# 8.36.9 Related scheduled tasks

The following two scheduled tasks are related to the Smart search module:

- **Optimize search indexes** performs index optimization (defragmentation resulting in better performance, particularly in case of large indexes); by default once per week
- Execute search tasks executes indexing tasks (created and executed automatically on content changes) that were not completed successfully on their automatic execution; by default every 4 hours

💒 Kentico				<u>s</u>	witch to CMS Desk	User: Global Administrator
CMS Site Manager	Sites Admi	nistration Settings Development	Licenses Support			
Administration     Administration     Avatars	Schedu	uled tasks				
😡 😡 Bad words 🔹 🛃 Badges	Site: (global)		•			
😹 Banned IPs	Q New task	💱 <u>Refresh</u>				
E-mail queue						
Permissions	Actions	Task name 🔺	Last run	Next run	Last result	Ser
Recycle bin	/ 🗙 🕨	Clean e-mail queue	12/18/2009 10:48:48 AM	12/19/2009 10:48:48 AM		
Roles	🥒 💥 🕨	Clean unused memory	10/29/2009 1:25:15 PM	10/29/2009 2:25:15 PM		
Smart search	🥒 🗱 🕨	Delete old temporary attachments	12/18/2009 4:03:57 PM	12/18/2009 5:03:57 PM	_	
reference System	/ 🗶 🕨	Execute search tasks	12/18/2009 3:50:33 PM	12/18/2009 7:50:33 PM		
UI personalization	/ 🗶 🕨	Optimize search indexes	12/18/2009 1:32:55 PM	12/25/2009 1:32:55 PM		
web farm	** *	Process analytics log	12/18/2009 4:03:57 PM	12/18/2009 4:04:57 PM		
	/ 🗶 🕨	Process forum thread views	12/18/2009 4:03:57 PM	12/18/2009 4:05:57 PM		
	🥒 💥 🕨	Recalculate time zone	9/17/2009 12:56:10 PM	1/1/2010 12:00:00 AM		
	/ / 🗶 🕨	Remove expired sessions	12/18/2009 4:03:57 PM	12/18/2009 4:04:57 PM		
	🎽 🥒 💥 🕨	Send queued e-mails	12/18/2009 4:03:57 PM	12/18/2009 4:04:57 PM		
	/ 🗶 🕨	Send queued newsletters	12/18/2009 4:03:57 PM	12/18/2009 4:04:57 PM		
	N 💥 🕨	Synchronize web farm changes	11/10/2009 3:12:35 AM	11/5/2009 4:44:10 AM		
	A 🗙 🕨	Update database session	12/18/2009 4:03:57 PM	12/18/2009 4:05:57 PM		

Please refer to the <u>Development -> Scheduler</u> chapter for more information about scheduled tasks.

## 8.36.10 Searching attachments

Document attachments uploaded to the database can be searched as well. This is done using the original SQL search. You need to have your SQL server configured properly as described in the Installation and deployment -> Additional configuration tasks -> Configuration of full-text search in files chapter in order for attachment searching to be functional.

If you have the SQL server configured, you need to enable attachment searching by using the following properties of the **Smart search dialog with results** or **Smart search results** web part:

Property Name	Description
Search in attachments	If enabled, document attachments will be searched.
WHERE condition	WHERE condition specifying documents whose attachments will be searched.
ORDER BY expression	ORDER BY expression ordering documents. The attachments will be displayed according to this order in the search results.

The results are interlaced with regular search results, which is by design and cannot be modified.

## 8.36.11 Security

Smart search web parts have the **Check permissions** property. If this option is enabled, pages for which the user does not have permissions will not be displayed to them in the search results.

Web part properties	(Smart search dialog with results) We	bpage Dialog		X
http://127.0.0.1/Kent	ticoCMS_5.5/CMSModules/PortalEngine	/UI/Webparts/WebPartProperties.aspx?alias	path=%2fExamples%2fWebpart	s%2fFull-text-search%2fSmarl
欁 Web part pro	perties (Smart search dialog	g with results)		Occumentation
General Layout				
Default	Search settings			-
Visibility Search dialog settings	Indexes:	CorporateSite.Default	Select Clear	-
Search settings Transformations	Path:	•	Select	
Attachment search settings Pager settings	Document types:	▶	Select Clear	
Pager design HTML Envelope AJAX Time zones	Combine with default culture:	<ul> <li>⊘ Yes</li> <li>⊘ No</li> <li>@ Use site settings</li> </ul>		
	Culture code:	•	Select Clear	-
	Check permissions:			
	Search options*:	Full		
	Search condition:	•		
Refresh content	Search sort	•	ОК Са	incel Apply
http://127.0.0.1/KenticoC	MS_5.5/CMSModules/PortalEngine/UI/	Webparts/WebPartProperties. 😜 Internet	Protected Mode: On	

# 8.36.12 SQL Search overview

The SQL Search engine is kept in the system for backward compatibility with older versions and for attachment searching. It uses standard SQL queries to search for the given expression. It runs a separate query for each document type. You can find the search query for a document type at **Site Manager -> Development -> Document types -> ... select document type ... -> Queries -> Edit** (*/*) the **searchtree** query.

Common fields (such as document name) are searched using the **cms.root.searchdocuments** query.

Uploaded files are searched using the **cms.root.searchattachments** query. If you want to search uploaded files, you need to configure the system as described in the <u>Installation and deployment -></u> Additional configuration tasks -> Configuration of full-text search in files topic. In this case, the files are searched using the Microsoft SQL Server Search Engine.

### Web parts and controls

The search dialog can be easily integrated into the website using the web parts in the Full-text search category (SQL search dialog, SQL search box, etc.) or using the CMSSearchDialog and CMSSearchResults server controls (in your ASP.NET code).

# Excluding documents from search

You can **exclude document types** by setting the **Exclude document types from SQL search** value in **Site Manager -> Settings -> Web site** dialog. You need to enter the code name, such as cms. article. You can enter multiple document types separated with a semicolon (;).

You can exclude website sections from search by setting the Exclude documents from SQL search in Site Manager -> Settings -> Web site dialog. You need to enter the alias path of the section that should be excluded. A single document can be excluded using e.g. /news/news1, whole website section can be excluded using e.g. /news/%. You can enter multiple values separated by semicolons (;).

### Modifying the search result format

If you only need do modify the search results format, you can do that by modifying the transformation searchresults in Site Manager -> Development -> Document Types -> edit () Root -> Transformations.

## **Development of Custom Search Provider**

If you need to integrate a custom search engine or make additional modifications to the search results returned by the standard search engine, you can develop your own search provider. You can find more details in the <u>API programming and Kentico CMS internals-> Custom providers -> Custom Search</u> <u>Provider</u> topic.

## 8.36.13 Smart search internals and API

#### 8.36.13.1 Database tables and API classes

The Smart search module uses the following database tables:

- CMS_SearchIndex contains smart search indexes and their settings
- CMS_SearchIndexCulture assigns smart search indexes to the cultures they should index
- CMS_SearchIndexSite assigns smart search indexes to the sites they should index
- CMS_SearchTask contains smart search indexing tasks

The Smart search API is provided by the following CMS.SiteProvider namespace classes:

- SearchIndexInfo, SearchIndexInfoProvider these classes provide functionality for managing smart search indexes
- SearchTaskInfo, SearchTaskInfoProvider these classes provide functionality for managing smart search indexing tasks

As well as the following CMS.SettingsProvider namespace classes:

• SearchIndexSettings, SearchIndexSettingsInfo - these classes provide functionality for managing smart search index settings

The following topics show examples of how these classes can be used:

- Getting search index data
- Managing search indexes
- Performing a search
- Creating an indexing task

The following topic shows how search results can be displayed in transformations:

• Search results in transformations

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.36.13.2 Getting search index data

The following sample code shows how you can get a search index as a SearchIndexInfo object:

#### [C#]

```
using CMS.SiteProvider;
...
// Get search index object from database by searchIndexID
SearchIndexInfo sii = SearchIndexInfoProvider.GetSearchIndexInfo(1);
```

The following sample code shows how you can get a DataSet containing search indexes from the system:

#### [C#]

```
using System.Data;
using CMS.SiteProvider;
....
string where = "IndexID < 10";
string orderby = "IndexDisplayName";
int topN = 10;
string selectedColumns = "IndexID, IndexName, IndexSettings, IndexType";
// Get dataset of search indexes according to the given parameters
DataSet ds = SearchIndexInfoProvider.GetSearchIndexes(where, orderby);
DataSet ds2 = SearchIndexInfoProvider.GetSearchIndexes(where, orderby, topN,
```

#### 8.36.13.3 Managing search indexes

The following sample code shows how you can modify the Display name of an existing search index:

```
using CMS.SiteProvider;
...
// Get index object from database by index code name
SearchIndexInfo sii = SearchIndexInfoProvider.GetSearchIndexInfo("TestIndex"
// If index exists
if (sii != null)
{
    // Update some property
    sii.IndexDisplayName += " updated";
    // Save to database
    SearchIndexInfoProvider.SetSearchIndexInfo(sii);
}
```

The following sample code shows how you can create a new search index, assign a site and culture to it and add it to the system:

```
using System;
using CMS.SiteProvider;
using CMS.SettingsProvider;
using CMS.CMSHelper;
. . .
        // Create empty index object
        SearchIndexInfo sii = new SearchIndexInfo();
        // Set properties
        sii.IndexIsCommunityGroup = false;
        sii.IndexName = "TestIndex";
        sii.IndexDisplayName = "Test index";
        sii.IndexType = PredefinedObjectType.DOCUMENT;
        sii.IndexAnalyzerType = AnalyzerTypeEnum.StandardAnalyzer;
        sii.StopWordsFile = "";
        sii.CustomAnalyzerName = "";
        // Create new index settings
        SearchIndexSettingsInfo sisi = new SearchIndexSettingsInfo();
        // Set setting properties
        sisi.IncludeBlogs = true;
        sisi.IncludeForums = true;
        sisi.IncludeMessageCommunication = true;
        sisi.ClassNames = ""; // for all document types
        sisi.Path = "/%";
        sisi.Type = SearchIndexSettingsInfo.TYPE_ALLOWED;
```

```
sisi.ID = Guid.NewGuid();

// Save index settings
SearchIndexSettings sis = new SearchIndexSettings();
sis.SetSearchIndexSettingsInfo(sisi);
sii.IndexSettings = sis;

// Save to database
SearchIndexInfoProvider.SetSearchIndexInfo(sii);

// Add current culture to index
SearchIndexCultureInfoProvider.AddSearchIndexCulture(sii.IndexID,
CMSContext.CurrentDocumentCulture.CultureID);

// Add current site to index
SearchIndexSiteInfoProvider.AddSearchIndexToSite(sii.IndexID, CMSContext.Cur
```

The following sample code shows how you can rebuild an existing search index:

#### [C#]

The following sample code shows how you can delete an existing search index:

1164

SearchIndexInfoProvider.DeleteSearchIndexInfo(sii);

#### 8.36.13.4 Performing a search

}

The following sample code shows how you can perform a search and get the results into a DataSet:

```
using System.Data;
using CMS.SiteProvider;
using CMS.CMSHelper;
using CMS.GlobalHelper;
. . .
        // Get index object from database by index code name
        SearchIndexInfo sii = SearchIndexInfoProvider.GetSearchIndexInfo("TestIndex")
        int numberOfResults;
        // If index exists
        if (sii != null)
        {
            // Set properties
            string searchText = "Search text";
            string path = "/%";
            string classNames = "";
            string cultureCode = "EN-US";
            string defaultCulture = CultureHelper.DefaultCulture.IetfLanguageTag;
            Lucene.Net.Search.Sort sort = SearchHelper.GetSort("##SCORE##");
            bool combineWithDefaultCulture = false;
            bool checkPermissions = false;
            bool searchInAttachments = false;
            string searchIndexes = sii.IndexName;
            int displayResults = 100;
            int startingPosition = 0;
            int numberOfProcessedResults = 100;
            UserInfo userInfo = CMSContext.CurrentUser;
            string attachmentWhere = "";
            string attachmentOrderBy = "";
            // Get search results
            DataSet ds = SearchHelper.Search(searchText, sort, path, classNames,
cultureCode, defaultCulture, combineWithDefaultCulture, checkPermissions,
searchInAttachments, searchIndexes, displayResults, startingPosition,
numberOfProcessedResults, userInfo, out numberOfResults, attachmentWhere,
attachmentOrderBy);
            // If at least one item is found
            if (numberOfResults > 0)
```

```
{
    // Perform some action with result dataset
  }
}
```

#### 8.36.13.5 Creating an indexing task

The following sample code shows how you can create a task to update a search index:

[C#]

```
using CMS.SiteProvider;
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.TreeEngine;
. . .
        string siteName = CMSContext.CurrentSiteName;
        string aliasPath = "/News";
        string cultureCode = "En-us";
        // Tree provider
        TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMSContext.CurrentUs
        // Get document of specified site, aliaspath and culture
        TreeNode node = provider.SelectSingleNode(siteName, aliasPath, cultureCode);
        // If node exists
        if (node != null)
        {
            // Edit and save document node
            node.DocumentName += " changed";
            node.Update();
            // Create update task
            SearchTaskInfoProvider.CreateTask(SearchTaskTypeEnum.Update,
PredefinedObjectType.DOCUMENT, SearchHelper.ID_FIELD, node.GetSearchID());
        }
```

#### 8.36.13.6 Search results in transformations

You can use the following default transformations to display search results using the **Smart search dialog with results** and **Smart search results** web parts:

- CMS.Root.SmartSearchResults
- CMS.Root.SmartSearchResultsWithImages

Search results are returned in a so-called **search dataset**. No matter what the field names in the found documents are, the search dataset always contains the following fields that are mapped to the real

documents' fields:

score	Expresses the relevance of the found document in a numeric value ranging from 0 to 1, where higher values indicate higher relevance.
title	This field is mapped to the field specified by the <b>Title field</b> drop-down list on the <b>Search fields</b> tab of the particular document type.
content	This field is mapped to the field specified by the <b>Content field</b> drop- down list on the <b>Search fields</b> tab of the particular document type.
created	This field is mapped to the field specified by the <b>Date field</b> drop-down list on the <b>Search fields</b> tab of the particular document type.
image	This field is mapped to the field specified by the <b>Image field</b> drop-down list on the <b>Search fields</b> tab of the particular document type.

In transformations, you can get the values from the dataset by using the **Eval("<field name>")** function: Eval("score"), Eval("title"), ...

You can also use the following methods in your transformations:

- SearchResultUrl(bool absolute) returns the URL to the document; the parameter indicates if the returned URL should be absolute
- SearchHighlight(string text, string startTag, string endTag) wraps the text entered in the first attribute by the tags specified by the other two attribute
- GetSearchImageUrl(string noImageUrl, int maxSideSize) returns the URL of the current search result image; the first attribute specifies the URL returned if no image is found, the second one specifies the maximal side size to which the image will be resized
- GetSearchValue(string columnName) returns the value of the specified column for the current search result

# 8.37 Tags

# 8.37.1 Overview

The Tags module enables users to tag documents with key words, called tags, depending on the content of a particular document. Tags are associated with a document and are convenient for simple marking of documents according to various criteria, e.g. your interests.

Posted to <u>Holiday in Australia</u> by Kelly Taylor on 10/26/2008 3:05:12 PM   with <u>0 comments</u>	Tag cloud airoott Australia Austria bus cuisine <u>Caech Republic filight</u> France Germany
Hi everybody, my name is Kelly Taylor and I come from Brno, Czech Republic. Tomorrow is my big day. Finally, after six months of hard everyday work, I decided to have some nice time and go on holiday. Australia has always been one of the places I had wanted to visit one day, and now, with my great new job and the wage I get for it, it is finally affordable for me to get there.	hitchhiking holday hostel Italy luqqaqe sacher torte Spalin subway tourism traffic train

The **Tags** module functions in a similar way like the <u>Categories</u> module as tags are organized in **tag groups**. However, categories can be defined by both the global administrator in Site Manager and user in CMS Desk whereas tag groups can only be defined by the global administrator. Besides, user-defined categories are available only to the user who created them.

Tag groups are related to a particular site as defined by the global administrator in Site Manager.

In order for the user to be able to tag documents, at least one tag group must be defined for the system by the global administrator. That is why the default tag group **Content** is available for all Kentico CMS sample sites, which is inherited and should not under standard circumstances be deleted from the system.

All tags created in CMS Desk by the user are available globally and can be used by any other user.

The Tags module comes with the **Tag cloud** web part that can display all tags within one tag group. The tags are displayed in the form of links by the web part. Clicking a link in the tag cloud redirects you to another page, where a repeater displays a list of all documents tagged with the given tag.

- To learn how to create, alter or delete a tag group, please refer to the Managing tag groups topic.
- To learn how to tag individual documents, please refer to the Tagging documents topic.
- To learn how to display documents associated with the selected tag, please refer to the <u>Using the</u> <u>Tag cloud web part</u> topic.

Kentico CMS Community Site Guide contains another example of the use of **Tag groups** as a part of the Tags module. You can find a step-by-step tutorial on how to create tag groups in <u>Community Site</u> <u>Guide -> Part 2 -> Pre-development tasks -> Creating the tag groups</u>.

Several more examples of the use of the Tags module are available in Kentico CMS Community Site Guide; please note that these practical examples do not concern the whole functionality of the module but focus on its use in a broader context of the Community Site sample website:

- See <u>Creating the Blogs section -> Creating the Blogs page</u> in the same section of Kentico CMS Community Site Guide: A concise example of the use of the **Tag cloud** web part in the context of blogs.
- See <u>Creating the Blog posts page</u>: A further example of the use of the **Tag cloud** web part in the context of blogs.
- See <u>Creating the News page</u>: A concise example of the use of the **Tag cloud** web part in the context of news.

You will need to have the Community Site sample website installed to follow Kentico CMS Community Site Guide.

## 8.37.2 Managing tag groups

Tags are divided into tag groups, which are topic-related groups of tags. No global tag groups are defined and each tag group is bound to a particular site. Tag groups can be created and managed by the global administrator in **Site Manager -> Development -> Tag groups**. You can **Edit** ( $\checkmark$ ) or **Delete** ( $\thickapprox$ ) the listed tag groups in this section.

Kentico CMS Site Manager	Sites Ac	ministration	Settings	Development	Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>CSS stylesheets</li> <li>Cultures</li> <li>Custom tables</li> <li>Document types</li> <li>E-mail templates</li> <li>Form controls</li> <li>Inline controls</li> <li>Modules</li> <li>Notifications</li> <li>Page layouts</li> <li>Page templates</li> <li>System tables</li> <li>System tables</li> </ul>	Site: Corpo Site: Corpo New tag	rate Site aroup Name - Content My blog Products				

 Please note

 At least one tag group must be defined in order to tag documents.

The default tag group **Content** is available for all Kentico CMS sample sites. It is inherited and should not under standard circumstances be deleted from the system.

# Creating tag groups

In this example, you will learn how to create a new tag group.

1. To create a new tag group, go to **Site Manager -> Development -> Tag groups** and click the **A New tag group** link. The following properties will have to be entered:

- Display name display name of the tag group
- Code name code name of the tag group
- Description description text of the tag group

Tag group properties	
Tag groups + Content	
General Tags	
Display name: Code name: Description: Main content group	•
ОК	

2. Click **OK** to confirm the values you have entered. The tag group will be created and become visible in the list.

# **Editing tag groups**

In this example, you will learn how to edit an existing tag group.

1. To edit an existing tag group, go to **Site Manager -> Development -> Tag groups** and choose to **Edit** ( $\checkmark$ ) one of the listed tag groups.

Actions	Name 🔺
1	Content
N 🗙	My blog
N 🗙	Products

2. If you would like to change some of its properties, go to the **General** tab and change either the **Display name**, **Code name** or **Description** of the tag group.

General Tag	js	
Display name:	Content	
Code name:	content	
Description:	Main content group	*
		_

3. If you would like to display the list of all tags in the selected tag group, switch to the **Tags** tab:

Genera	al Tags	
	Tag •	Count
Q	CSS	1
Q	Czech republic	1
Q	GPRS	1
Q	GPS	1
Q	HTML	3
Q	router	1
Q	SEO	2
Q	wide XGA	1
Q	WXGA	2

4. If you would like to display a list of links to documents tagged with a tag, click the a icon next to the particular tag.

General Tags				
Tags + HTML				
Site: (all) Document name: LIKE	v			
Show				
The tag is used in the following documents:				
Document name		Document type	Language	Site
Cascading Style Sheets (CSS)		Article	📑 English - United States	Corporate Site
HyperText Markup Language (HTML)		Article	📒 English - United States	Corporate Site
Search Engine Optimization (SEO)		Article	📑 English - United States	Corporate Site
			Items per	page: 25 💌



#### Please note

The global administrator cannot delete a tag from the document in **Site Manager**. This must be done by the user in **CMS Desk**.

# 8.37.3 Tagging documents

If you need to learn how to tag a document, the following examples describe this process. There are two ways of tagging documents:

- You can add tags to a document either by using the **Properties** tab of the **CMS Desk -> Content ->** Edit interface (as described <u>here</u>).
- Or you can use the Fields tab in Site Manager -> Development -> Document types -> Edit (*P*) < document_type> (as described here).

# **Tagging documents using Properties**

1. Go to **CMS Desk**, switch to the **Edit** mode and select the document that you wish to tag from the content tree.

2. Switch to its **Properties -> Metadata** tab.

Kentico CMS Desk Content My desk	Tools Administration		Switch to Site Manager	Site: Corporate Site 💌 User: Global
Content uny des Content management Content m	Page     Design     Form       General     URLs     Image: Complete the second se	e site List Solution Properties Properties Page settings Page title Page description:	earch Dther	
i Special pages i M Images	Security Attachments	Page keywords: (separated by comma) Tags Page tag group: Page tags: (separated by comma)	Inherit Inherit Content Inherit home, introduction Enter tags separated with comma.	

3. Choose a tag group using the **Page tag group** drop-down list. If you check the **Inherit** check-box, tag group will be inherited from the document's parent.

#### Please note

There needs to be **at least one tag group defined** for you to be able to tag a document. If there are no tag groups created, you will not be able to tag a document as each tag needs to belong to some tag group. You can learn about creating tag groups in the <u>next chapter</u>.

It is also recommended to select a tag group for the root of the content tree so that it could be inherited by the pages located under it.

4. Enter the tags into the **Page tags** field. Tags can be entered either manually or can be selected using the **Select** button. This button displays a list of all tags in the selected tag group. Check the appropriate tags' check-boxes and click **OK**.

🦲 Metad	data - Select tags Webpage Dialog	×
🥥 Se	elect tags	
Bellow	is a list of tags that have been used before:	
	CSS (1)	
	Czech republic (1)	
	GPRS (1)	
	GPS (1)	
V	home (1)	
	HTML (3)	
<b>V</b>	introduction (1)	
	router (1)	
	SEO (2)	
	wide XGA (1)	
	WXGA (2)	
	ОК Салс	el
http://loc	alho 🗣 Local intranet   Protected Mode: Off	

5. Click **Save**. The entered tags will be saved and attached to the document.





# **Tagging documents using Fields**

1. Go to **Site Manager -> Development -> Document types** and choose to **Edit** (*P*) a document type.

CMS Sit	e Manager	Sites	Administration	Settings	Development	Dashboard	Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>CSS stylesheets</li> <li>Cultures</li> <li>Custom settings</li> <li>Custom tables</li> <li>Document types</li> </ul>	Displa Code	ocument type v document type ay name: LIKE name: LIKE SI						
Sorm co	ntrols	Acti	ons Displa	ay name 🔺	(	Code name		
Modules	ontrois		🗶 📑 Article		(	CMS.Article		
Notificat	ions		X 📑 🛛 Blog		(	CMS.Blog		
Page la	youts mplates		💥 📑 🛛 Blog r	month	(	CMS.BlogMonth		
Relation	ship names		👗 📑 🛛 Blog p	oost	(	CMS.BlogPost		
System	tables		💢 📑 🛛 Cell p	hone	(	CMS.CellPhone		
- 🖓 Tag gro	ups	Ø	💢 📑 🛛 Comr	nunity - Transt	formations (	Community.Tran	sformations	
Time zo	nes		💢 📑 🛛 E-con	nmerce - Tran	sformations I	Ecommerce.Trai	nsformations	

CMS Site Manager	Sites	Administration	Settings	Development	Dashboard	Licenses	Support
<ul> <li>Development</li> <li>Categories</li> <li>Countries</li> <li>Countries</li> <li>Countries</li> <li>Countries</li> <li>Cultures</li> <li>Cultures</li> <li>Custom settings</li> <li>Custom tables</li> <li>Document types</li> </ul>	Displa Code r	document type document type y name: LIKE name: LIKE Sh	es v				
	Actio	ns Displa	v name 🔺		Code name		
🖙 📰 Inline controls Angle Modules		K 🔂 Article	,		CMS.Article		
··· 🖟 Notifications ··· 📑 Page layouts		K 📑 🛛 Blog K 📑 🛛 Blog n	nonth		CMS.Blog CMS.BlogMonth		
··· 鸀 Page templates ··· 🖷 Relationship names	1	K 📑 🛛 Blog p	ost	(	CMS.BlogPost		
··· 🌐 System tables ··· 🌍 Tag groups		K 📑 Cell pl	ione iunity - Transfo	rmations	CMS.CellPhone Community.Tran	nsformations	
Time zones		E-com	merce - Transf	ormations I	Ecommerce.Tra	nsformations	3

2. Switch to the **Properties** tab, click the **New system attribute** () icon to create a new system attribute and from the corresponding drop-down lists select the following values:

- Group: Document attributes
- Attribute name: DocumentTags
- Field type: Tag selector

BloalD*					-
New attribute		Group:	Document attributes	-	
BlogName* BlogDescription*		Attribute name:	DocumentTags	-	וכ
BlogSideColumnText	1	Attribute type:	Long text	-	
BlogIeaser BlogOpenCommentsFor*	Л	Attribute size:			
BlogSendCommentsToEmail BlogAllowAnonymousComments		Allow empty value:			Ξ
BlogUseCAPTCHAForComment BlogRequireEmails BlogUnsubscriptionUrl BlogEnableSubscriptions	4	Attribute default value:			
BlogModerateComments*					
BlogEnableTrackbacks	_	Display attribute in the ed	liting form		
		Field			
	♣	Field caption:	DocumentTags		
	×	Field type:	Tag selector	•	ַכ
Document name source field: BlogName	• •			ОК	
(Document name)					

Click **OK** to save the changes.

Please note		



If you need to create a custom document type with a tag selector, the tag selector must be bound to a system field.

# 8.37.4 Using the Tag cloud web part

The **Tag cloud** web part is used to display tags that are associated with the current document. Tags are displayed in the form of links and those with higher occurrence are displayed in higher font size. If the site visitor clicks on some of the links, a list of all documents tagged with the given tag will be displayed.

Tag cloud - Products				
Acer Asus Cell phone GPRS GPS HP laptop				

The web part has the following specific properties:

Tag filter	
Site name	Code name of the website from which you want to display the tags. If you leave the value empty, the content is retrieved from the current website.
Tag group name	Name of the tag group from which the tags will be displayed.
Select top N tags	Number of tags which will be displayed. Top tags according to the order specified by the ORDER BY expression property will be displayed.
ORDER BY expression	ORDER BY part of the SQL query used to retrieve the tags.
Tag cloud settings	
Document list URL	URL of the page on which the documents list will be displayed after clicking some of the tags (see below for an example).
Query string parameter name	Name of the parameter by means of which the tag ID will be transferred.
Tag separator	Separator that will be placed between tags in the tag cloud.
Minimal tag font size	Size of tags with the lowest occurrence.
Maximal tag font size	Size of tags with the highest occurrence.
Document filter	
Use document filter	Indicates if the document filter will be used. If true, the web part will display only tags used in the documents specified by the properties below.
Path	Path of the documents the tags of which will be displayed by the web part.
Combine with default culture	Indicates if tags from the default language version of the document

	should be displayed if the document is not translated to the current language.
Culture code	Culture version of the displayed tags.
Maximum nesting level	Maximum nesting level. It specifies the number of sub-levels in the content tree of the document specified by the <i>Path</i> property that should be included in the displayed content (i.e. whose tags will be displayed).
Select only published	Indicates if only tags from published documents should be displayed. Applied only when 'Site name' or 'Alias path' property is defined. If disabled, all tags from the selected tag group will be displayed.
Where condition	WHERE part of the SQL query used to retrieve tags.

## Common usage

The Tag cloud is designed to "work in pair" with some repeater web part. When a tag link is clicked in the tag cloud, a list of all documents tagged with this tag is displayed in the repeater. The repeater can be placed either on the same page as the tag cloud or on some other page to that the site visitor will be redirected. You can see an example of this behavior on the Corporate Site sample website under **Examples -> Web parts -> Tagging & Categories -> Tag cloud**.

▼ zoneArticles ♣	▼ zoneLeft 🕂
repeater1	▼ TagCloudArticles
<u>Cascading Style Sheets (CSS)</u> <u>Czech Republic</u> <u>General Packet Radio Service (GPRS)</u> <u>Global Positioning System</u> <u>HyperText Markup Language (HTML)</u>	CSS Czech republic GPRS GPS       HIML router         SEO wide XGA WXGA         ▼ TagCloudProducts         Acer Asus Cell phone       GPRS GPS         Nokia PDA Samsung wide XGA WXGA XGA
Router Search Engine Optimization (SEO)	
Wide XGA	
▼ repeater	
Acer Aspire 3105WLMi	
Asus A639	
Asus F3U AP059C	
HP iPAQ 114	
Nokia N73	
Samsung SGH E250	

In order for the two web parts to cooperate correctly, you have to correctly set some of their properties:

#### Tag cloud:

• The placement of the repeater is defined by the Tag cloud's **Document list URL** property. In case that the repeater is placed on the same page as the tag cloud, the value should be left blank. In case that it is placed on some other page, you should enter the **alias path** of that page.

• ID of the clicked tag is transferred to the repeater in form of a query string parameter. The name of the parameter can be set using the **Query string parameter name** property. The repeater displays the appropriate list of documents based on the value that it gets by via this parameter.

#### Repeater:

- Set the value of the **Path** parameter to the location in the content tree where the documents are stored.
- Set the value of the **Document types** parameter to the document type(s) that is (are) to be displayed.
- Select the transformations that you want to use for the **Transformation** and **Selected items** transformation.
- Finally, use the following code as a value for the repeater's **WHERE condition** parameter. The **tagid** value should be replaced by the name set in the Tag cloud's **Query string parameter name**:

```
({?tagid|(toint)?} = 0 AND '{?tagname?}'='')
OR (DocumentID IN (SELECT DocumentID FROM CMS_DocumentTag WHERE TagID = {?tagid|
(toint)?}))
OR (DocumentID IN (SELECT DocumentID FROM CMS_DocumentTag WHERE TagID IN (SELECT
TagID FROM CMS_Tag WHERE TagName = '{?tagname?}' AND TagGroupID = {?groupid|
(toint)?})))
```

The first line ensures displaying of all documents when **no query string parameters** (tagid nor tagname nor taggroupid) are received. The second line ensures displaying of documents based on the received **tagid** (or differently named parameter) from a **Tag cloud** web part. The third line ensures displaying of documents based on the received **tagname** and **groupid** from a **blog post's** Filed under section.

Posted by Abigail Woodwarth on 6/4/2008 1:43:34 PM Filed under: <u>France</u>, <u>hitchhiking</u>, <u>Spain</u>, <u>cuisine</u>

If you would like to learn more on the use of the **Tag cloud** web part, please refer to <u>Community Site</u> <u>Guide -> Part 2 -> Pre-development tasks -> Creating the tag groups</u>. This is a step-by-step tutorial on how to create a tag group.

If you would like to see examples of how the **Tag cloud** web part is added to the site, please refer to:

- Creating the Blogs section -> Creating the Blogs page in the same section of Community Site Guide
- Creating the Blog posts page
- Creating the News page

You will need to have the Community Site sample website installed to follow Kentico CMS Community Site Guide.

# 8.38 Time zones

# 8.38.1 Overview

The Time zones module enables the configuration of time zones for the physical location of the <u>server</u>, for particular <u>websites</u> and even for particular <u>users</u>. This can be useful if your site has an international audience and you want the date and time displayed on your site to be correct for users from across the world.

Before it can be used, the module must be enabled as described in the Enabling the module topic.

To learn how to configure individual time zones in the system, please see the <u>Managing time zones</u> topic. Time zones can also be set to adjust their time according to <u>Daylight saving time</u>.

Time zones are currently supported in:

- CMS Desk -> Content
- CMS Desk -> My desk
- CMS Desk -> Tools -> Booking system
- Web parts of the <u>Blogs</u>, <u>Forums</u>, <u>Message boards</u>, <u>Messaging</u> and <u>Smart search</u> modules; more information can be found in the <u>Use in web parts</u> topic

The <u>Time zones internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how time zones can be managed using the API and how correct time can be displayed by your code.

A typical example of use is displaying the time of forum posts when you have a global community – while the server may be located in New York (GMT -5:00), visitors coming from Paris (GMT +1:00) may see their new posts were added at 8am, while they would expect to see 2pm according to their current time.

Another example is a website of a global company that runs on a server in New York, but contains content for a French office. In this case, French visitors may wonder why the current time displayed by the server is 8am while it's 2pm in Paris. That's when you use the built-in support for multiple time zones.

# 8.38.2 Enabling the module

To enable the Time zones module, go to **Site Manager -> Settings -> System** and check the **Enable time zones** check-box. Below it, you can find the following two drop-down lists:

- Server time zone time zone of the physical server location
- Site time zone default time zone of the website selected by the Site drop-down list in the top-left part of the page; this time zone can also be set globally and inherited by sites that don't have it set differently



# 8.38.3 Setting user's time zone

Each user can have their own time zone settings. Where applicable, these time zone settings are used instead of the website's default time zone. A user's time zone can be set in both **CMS Desk** and **Site Manager**, on the **Administration -> Users -> Edit user -> Settings** tab. On the tab, the selection can be done using the **Time zone** drop-down list.

Users		
Users Mass e-mail O	line users	
Users + Abi		Ô
General Password	ettings Sites Roles Departments Notifications Categories	Friends Subscriptions Languages
User nick name:	Abi	
User picture:	Upload: Browse	
User signature:	-= A B 1 =-	
Description:		
URL referrer: Campaign: Messaging notification e-r	ail:	
Time zone:	(GMT-09.00) Alaska	
Badge:	Advanced member (Automatic)	
User activity points: Live ID:	30	
Activation date: Activated by user: Registration info:	9/26/2008 08:49:33 Global Administrator N/A	
Gender: Date of birth:	© Unknown ⊚ Male ⊚ Female 9/14/1983 [®] Now	
Waiting for approval: Show splash screen		
Forum posts: Blog posts: Blog comments: Message board posts:	2 19 0 1	

Users can also select their time zone on the live site if you place the **My Account** or **My Profile** web part on one of your pages. If they have access to **CMS Desk**, they can do this in **My Desk -> My profile** 

-> Details. This is done the same way as above, by using the Time zone drop-down list.

				<b>C</b> -1	
M١	/	nı	٢O	tı	ρ
	<b>r</b> 1	~	-		

Personal settings	Change password	Notifications	
Username:	Abi		
Full name:	Abigail Wo	odwarth	
Email:	abigail.woo	dwarth@localho	st.local
Display my e-mail to	: ONNODODY	🔘 (all) 💿 Site mer	bers 🔘 Friends
Nickname:	Abi		
	-= A B 1	=-	
Signature:			
-			
Messaging potificat	on e-mail:		
Time zone:	(GMT-09.0	0) Alaska	
Avatar:	Upload:		× Browse
Gender:	Select pre-de	fined avatar	
Date of birth:	9/1//1983	E L	
	3/14/1303		VV

# 8.38.4 Managing time zones

Time zones can be managed in **Site Manager -> Development -> Time zones**.

💒 Kentico						Switch to CMS Desk	User: Global Administrator
CMS Site Manager	Sites Adm	inistration Setting	s Development	Licenses	Support		
Development	Time 2	zones					
Categories	-						
Countries	New time z	one					
Cultures							
Custom tables	Time zone n	ame: LIKE	•				
Document types		Show					
E-mail templates							
Form controls	Actions	Time zone name		GMT 🔺	DST		
	A 🗶	International Date I	ine West	-12	No		
Notifications	1	Midway Island, Sar	noa	-11	No		
Page layouts	N 💥	Hawaii		-10	No		
Page templates	N 🗙	Alaska		-9	Yes		
System tables	N 🗙	Pacific Time (US &	Canada)	-8	Yes		
ag groups	N 🗙	Tijuana, Baja Calif	ornia	-8	Yes		
Time zones	N 🗙	Arizona		-7	No		
UI cultures	/ X	Chihuahua, La Paz	, Mazatlan - New	-7	Yes		
Web part containers	2 X	Chihuahua, La Paz	, Mazatlan - Old	-7	Yes		
• Web templates	N 🗙	Mountain Time (US	& Canada)	-7	Yes		
Widgets	2 🗙	Central America		-6	No		
····· Vorkflows	/ 🗙	Central Time (US &	Canada)	-6	Yes		
	2 X	Guadalajara, Mexic	o City, Monterrey - N	ew -6	Yes		
	/ X	Guadalajara, Mexic	o City, Monterrey - Ol	d -6	Yes		
	2×	Saskatchewan		-6	No		
	/ X	Bogota, Lima, Quit	D	-5	No		
		Eastern Time (US	& Canada)	-5	Yes		
	/ X	Indiana (East)		-5	Yes		
		Caracas		-4.5	No		
		Atlantic Time (Can	ada)	-4	Yes		
		Georgetown, La Pa	z, San Juan	-4	No		
		Manaus		-4	No		
		Santiago		-4	Vec		
	Ø 🐢	Ganago		-4	105		

On this page, you can see a list of defined time zones. All time zones are displayed by default, but you can filter displayed items using the filter above the list. The only possible filtering parameter is the time zone **Display name**. If you type in the searched value and click the **Show** button, only those items that match the entered expression will be displayed in the list.

Time zones in the list can be **Edited** ( $\nearrow$ ) or **Deleted** ( $\divideontimes$ ). You can also create new time zones by clicking the **New time zone** link.

# Creating a new time zone

In the following example, you will learn how to create a new time zone:

1. Go to Site Manager -> Development -> Time zones and click the S New time zone link.

2. Fill in the details that you can see in the following screenshot:

New time zone						
Time zones ► New time zone						
Time zone name:	Nowhere land					
Code name: GMT difference:	NowhereLand -12					
Use daylight saving time:						
Daylight saving time start rule:	Month January	Condition	Day Sunday	▼ 1 ▼	Time 2 : 00	Value
Daylight saving time end rule:	Month	Condition	Day		Time	Value
	OK	FIK51	Sunday		2:00	U

3. Click **OK**. You have just created the time zone. Now if you switch back to the time zones list, you should see the new time zone present among the records.

Actions	Time zone name	GMT 🔺	DST
1	International Date Line West	-12	No
1 🗙	Nowhere land	-12	Yes
N 🗙	Midway Island, Samoa	-11	No
/ 🗙	Hawaii	-10	No

# 8.38.5 Daylight saving time

When creating a time zone or modifying some of the existing ones, you may come across the need to specify the daylight saving time (DST). This is a convention of setting clocks so that afternoons have more daylight and mornings have less of it. The amount of time advance and dates of change vary from country to country, however, it is usually a one hour advance at the beginning of spring and the advance is rolled back in autumn.

For more information about DST, please read this Wikipedia article: <u>http://en.wikipedia.org/wiki/</u> Daylight saving time

Daylight saving time can be set separately for each of the time zones. It can be set when creating a new time zone or when editing an existing one.

🌏 Time zone properti	es			
Time zones  Nowhere land				
Time zone name:	Nowhere land			
Code name:	NowhereLand			
GMT difference:	-12			
Use daylight saving time: Daylight saving time starts at: Daylight saving time ends at: Daylight saving time start rule: Daylight saving time end rule:		Condition <ul> <li>FIRST</li> <li>Condition</li> <li>FIRST</li> </ul>	Day Sunday Day Sunday	Time     Value       1     2     :00     1       Time     Value       1     2     :00     0
	OK-			

1. The first thing you need to do is to check the **Use daylight saving time** check-box. This enables DST for the time zone.

2. Now when you have DST enabled, you have to set the **DST start rule** and **DST end rule** for the current time zone. First, select the month in which the change will be carried out using the **Month** drop-down list.

3. Here comes the complicated part. You have to specify on which day of the selected month the change will be carried out. This is done by the **Condition** drop-down list and the two **Day** drop-down lists.

FIRST	Day of the week can be selected. If you select Monday, the time advance will occur on the first Monday of the selected month.
LAST	Day of the week can be selected. If you select Monday, the time advance will occur on the last Monday of the selected month.
>=	Day of the week and day number can be selected. If you select Monday and 15, the time advance will occur on the first Monday after the 15th day of the selected month.
<=	Day of the week and day number can be selected. If you select Monday and 15, the time advance will occur on the last Monday before the 15th day of the selected month.
=	Day number can be selected. If you select 15, the time advance will occur on the 15th of the selected month.

The following table explains the meanings of possible options for the **Condition** parameter:

4. Set the time when the change will occur on the specified date using the **Time** fields.

5. The last thing is to set the time difference between the standard time and DST. It should be entered into the Value field and represents the difference from standard time in hours. Use this value for the DST start rule and '0' for the DST end rule.

6. Click **OK** to save the settings.

# 8.38.6 Use in web parts

Web parts of the <u>Blogs</u>, <u>Forums</u>, <u>Message boards</u>, <u>Messaging</u> and <u>Smart Search</u> modules have the **Time zones** section in their **web part properties**, where the applied time zone can be set. The section contains the following two properties:

Time zone	<ul> <li>Inherit - inherits the time zone setting from the Page placeholder in which it is displayed (typically the one on the master page)</li> <li>Server - server time zone settings will be used by the web part</li> <li>Web site - website time zone settings will be used by the web part</li> <li>User - time zone settings of individual users will be used by the web part</li> <li>Custom - some other time zone will be used based on the selection done in the <i>Custom time zone</i> property</li> </ul>
Custom time zone	If you select one of the time zones, it will be used by the web part, regardless of user or website time zone settings.

In the case of the **Calendar** and **Event calendar** web parts, these web part properties take no effect. Instead, displaying of the correct time zone needs to be ensured in the used transformation, as described in the <u>Displaying correct time in your code</u> chapter.

# 8.38.7 Time zones internals and API

#### 8.38.7.1 Database tables and API classes

The Time zones module uses the following database table:

• CMS_TimeZone - contains time zones and their settings

The Time zones API is provided by the following CMS.SiteProvider namespace classes:

- **TimeZoneInfo**, **TimeZoneInfoProvider** these classes provide functionality for managing time zones
- TimeZoneHelper this class contains further static methods for performing time zone related tasks

The following chapters show examples of how these classes can be used:

- Getting time zone data
- <u>Managing time zones</u>
- Converting time according to a time zone

The following chapter shows how correct time converted according to time zone settings can be displayed in transformations and by user controls:

• Displaying correct time in your code

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.38.7.2 Getting time zone data

The following sample code shows how you can get a time zone as a *TimeZoneInfo* object:

[C#]

```
using CMS.SiteProvider;
...
// Get time zone object by time zone code name
TimeZoneInfo tzi = TimeZoneInfoProvider.GetTimeZoneInfo("Hawaii");
// Get time zone object by ID
TimeZoneInfo tzi2 = TimeZoneInfoProvider.GetTimeZoneInfo(1);
```

The following sample code shows how you can get a DataSet containing time zones from the system:

[C#]

```
using System.Data;
using CMS.SiteProvider;
....
string where = "TimeZoneID > 10";
string orderBy = "TimeZoneDisplayName";
int topN = 10;
string columns = "TimeZoneID, TimeZoneDisplayName, TimeZoneGMT";
// Get dataset of time zones according to the given parameters
DataSet ds = TimeZoneInfoProvider.GetTimeZones();
DataSet ds2 = TimeZoneInfoProvider.GetTimeZones(where, orderBy);
DataSet ds3 = TimeZoneInfoProvider.GetTimeZones(where, orderBy, topN, column
```

#### 8.38.7.3 Managing time zones

The following sample code shows how you can create a new time zone and add it to the system:

```
using CMS.SiteProvider;
....
// Create new object
TimeZoneInfo tzi = new TimeZoneInfo();
// Set properties
tzi.TimeZoneName = "TestTimeZone";
tzi.TimeZoneDisplayName = "Test time zone";
tzi.TimeZoneGMT = 2;
tzi.TimeZoneGMT = 2;
tzi.TimeZoneRuleStartRule = "MAR|SUN|1|LAST|3|0|1";
tzi.TimeZoneRuleStartRule = "OCT|SUN|1|LAST|3|0|0";
tzi.TimeZoneRuleEndRule = "OCT|SUN|1|LAST|3|0|0";
tzi.TimeZoneRuleStartIn = TimeZoneInfoProvider.CreateRuleDateTime(tzi.TimeZone
tzi.TimeZoneRuleEndIn = TimeZoneInfoProvider.CreateRuleDateTime(tzi.TimeZone
// Save to database
TimeZoneInfoProvider.SetTimeZoneInfo(tzi);
```

The following sample code shows how you can modify the Display name of an existing time zone:

### [C#]

```
using CMS.SiteProvider;
....
// Get time zone object
TimeZoneInfo tzi = TimeZoneInfoProvider.GetTimeZoneInfo("TestTimeZone");
// If time zone exists
if (tzi != null)
{
    // Update property
    tzi.TimeZoneDisplayName += " updated";
    // Save to database
    TimeZoneInfoProvider.SetTimeZoneInfo(tzi);
}
```

The following sample code shows how you can delete an existing time zone:

## [C#]

using CMS.SiteProvider;

•••

1188

```
// Get time zone object
TimeZoneInfo tzi = TimeZoneInfoProvider.GetTimeZoneInfo("TestTimeZone");
// If time zone exists
if (tzi != null)
{
    // Delete from database
    TimeZoneInfoProvider.DeleteTimeZoneInfo(tzi);
}
```

#### 8.38.7.4 Converting time according to a time zone

The following sample code shows how to get the current time according to a user's time zone settings:

#### [C#]

```
using CMS.SiteProvider;
...
// Get user
UserInfo ui = UserInfoProvider.GetFullUserInfo("administrator");
// If user exist
if (ui != null)
{
// Get converted time
System.DateTime convertedTime = TimeZoneHelper.ConvertUserDateTime(Syste
}
```

#### 8.38.7.5 Displaying correct time in your code

The following methods can be used in transformation code to display the correct time according to time zone settings.

<%# GetDateTime (DateTime.Now) %>	Returns date-time value according to web part time zone settings.
<%# GetSiteDateTime (DateTime.Now) %>	Returns date-time according to site time zone settings.
<%# GetUserDateTime (DateTime.Now) %>	Returns date-time according to the current user's time zone settings.
<%# GetCustomDateTime (DateTime.Now, "GreenwichMeanTime") %>	Returns date-time according to the time zone given in the second parameter.

In the following example, you will learn how to use the **General -> User control** web part to display the current date and time on your site, which will reflect the time zone settings of the web part.
1. Open the web project in Visual Studio and create a new subfolder in the project folder. Name it *mycontrols*. Right click the folder and click Add new item.



2. Create a new WebUserControl in the mycontrols folder, name it datetime.ascx.

<u>T</u> emplates:				
Visual Studio i	nstalled templates			
🛅 Web Form		🔲 Master Page	😑 Web User Control	
🗓 ADO.NET Da	ata Service	🍓 ADO.NET Entity Data Model	AJAX Client Behavior	
🗿 AJAX Client	Control	<table-of-contents> AJAX Client Library</table-of-contents>	🔲 AJAX Master Page	
🛅 AJAX Web Fe	orm	🞇 AJAX-enabled WCF Service	🕺 Browser File	
省 Class		뢿 Class Diagram	al Crystal Report	
🛃 DataSet		胟 Dynamic Data Field	🖹 Generic Handler	-
🖻 HTML Page		🔊 JScript File	🚇 LINQ to SQL Classes	
🔝 Report		🔊 Report Wizard	🗔 Resource File	
🚵 Site Map		📴 Skin File	🧾 SQL Server Database	
Al Style Sheet		📄 Text File	ତ WCF Service	
🕒 Web Config	uration File	🚵 Web Service	🔮 XML File	
🛃 XML Schema	a	🖉 XSLT File		L
My Templates				
An ASP.NET ser	ver control created usi	ng the visual designer		
<u>N</u> ame:	datetime.ascx			
	Viewel C#		de in cenarate file	
anguage:	visual C#	Select m	aster page	

- 3. Edit the user control on the Design tab. Drag and drop a Label control onto the form.
- 4. Add the following code to the PageLoad method of the user control:

[C#]

```
Label1.Text = CMS.CMSHelper.CMSContext.ConvertDateTime(DateTime.Now, this).
ToString();
```

5. Add the **General -> User control** web part somewhere to some page of your website. Set the following properties of the web part:

- User control virtual path: ~/mycontrols/datetime.ascx
- Time zone: Custom
- Custom time zone: any time zone of your choice

and click **OK**. If you switch to the live site now, you should see the web part displaying the current date and time in the selected time zone. Now you can also try changing the value of the **Custom time zone** property and verify that the time displayed on the live site changes according to it.

## 8.39 User contributions (Wiki)

## 8.39.1 Overview

The User contributions module allows you to create content editing interface for site members. It means that chosen website visitors can create, edit and delete content, even if they are not editors and cannot access CMS Desk.

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
<u>My first n</u>	ews											
Summary												
New doo	ument											

There are several scenarios where you can use this module, for example:

#### 1. Community news

You can create a list of news and allow community members to add news without going to CMS Desk.

#### 2. Partner directory

Your business partners can manage their profile on your website and the list of their reference project.

#### 3. Business directory

You can create a business directory for some town or industry and let the business owners to manage their own profile.

## Implementation

You can use the following web parts to implement user contributions:

• Contribution list - this web part allows you to display a list of contributions (documents) and the New document link.

• Edit contribution - this web part allows you to edit an existing document.

You can find the description of both web parts in the Kentico CMS Web Parts reference.

- If you would like to see an example of how to create a new section for publishing community news, please refer to the Example: Publishing community news topic.
- If you would like to see an example of how to create a list of partners who will be able to edit their profile on a special page after they have signed in, please refer to the Example: Editing partner profile topic.
- If you would like to learn about the security possibilities of the User contributions (Wiki) module, please refer to the <u>Security</u> topic.
- A brief reference on the relationship between the User contributions (Wiki) module and API can be found in the <u>User contributions and API</u> topic.

Several more practical examples of the use of the User contributions (Wiki) module are available in Kentico CMS Community Site Guide; please note that these examples do not concern the whole functionality of the module but focus on its use in a broader context of the Community Site sample website:

- See <u>Community Site Guide -> Part 2 -> Creating the Blogs section -> Creating the Blogs page</u>: An
  example of the use of the User contributions (Wiki) module web parts in the context of creating the
  Blogs section.
- See <u>Creating the Groups section -> Preparing the Group pages section -> Creating the Pages page</u> in the same section of Kentico CMS Community Site Guide: An example of the use of the User contributions (Wiki) module web parts in the context of creating the Groups section.

## 8.39.2 Example: Publishing community news

In this example, you will create a new section for publishing community news. Each registered site member can create new news items and edit/delete their previously posted news. The example assumes that you are using the Corporate Site sample website. In this topic you will learn how to:

- Create the community news section
- Add the New document button
- Add the editing support
- Create a testing user
- <u>Create your first news item</u>
- Approve the news

## Creating the community news section

1. Sign in as administrator to **CMS Desk**, go to the **Content** section and click **Examples** in the content tree. Click **New** and choose to create a new **Page (menu item)**. Enter the name **Community** and choose to create a blank page using the **Simple** layout:



🔚 <u>Save</u> 🔚 <u>Save an</u>	d create another 🛛 🗱 Spell	<u>check</u>			
Page name: Commu	nity				
💿 Use page template	🔿 Inherit from parent page	Oreate a blank page			
Layout name:			Search		
Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple	
					E
Three columns	Three columns (CSS)	Top row, three columns, bottom row	Top row, two columns, bottom row	Two columns	
[]	[]	[ <b>——</b> ]	[]	[]	-
1 <u>2</u>					
Simple layout with one we	b part zone.				
📝 Copy this layout to my p	age template				

2. Click **Save**. Switch to the **Design** tab of the newly created page and add the **Listings and Viewers/Repeater** web part. Set the following properties:

- Web part control ID: repeaterNews
- Document types: cms.news
- Transformation: CMS.News.preview
- Selected item transformation: CMS.News.default

🖉 Web part properties	s (Repeater) Webpage Dialog			×
🍓 Web part pr	operties (Repeater)			<b>Ocumentation</b>
General				
Default	Transformations			<b>^</b>
Visibility				
Content	Transformation:	<ul> <li>CMS.News.preview</li> </ul>	Select Edit	New (E)
Content filter				
Transformations	Alternating transformation:	•	Select Edit	New
Paging				
Relationships	Selected item transformation:	<ul> <li>CMS.News.default</li> </ul>	Select Edit	New
Refresh content			OK Cano	cel Apply
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.a ६ Local intr	anet   Protected Mode: Off	

3. Click **OK**.

Adding the New document button

1. Add a new web part **User contributions/Contribution list**. It will display the **New document** link. Set the following values:

• Show for document types: cms.menuitem

- this ensures that the web part is displayed only when the list of news is displayed, not on the news detail page.

- Allowed new document types: CMS.News - this means that the users will be allowed to create only news items under this section.
- Display list of documents: no (unchecked)
   this ensures that the web part displays only the New document link, without displaying the list of documents.
- Allow editing by users: Authenticated - this means that only authenticated users will be able to edit/delete the document. Authenticated users are those who are signed-in to the website (not to the administration interface).
- 2. Leave the other values as they are by default.

🖉 Web part propertie	s (Contribution list) Webpage Dialog			×
ன Web part pr	operties (Contribution list)			Documentation
General				
Default	User contributions			<b>^</b>
Visibility Content	Path for new documents:	•	Select	-
User contributions Content filter	Allowed new document types:	CMS.news	Select Clear	
Security Web part container	Alternative form name:	•	Select	
AJAX	Validation error message:	•		
Partial caching	Display list of documents:			-
Refresh content			OK Cancel	Apply
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.a 🕥 Local	intranet   Protected Mode: Off	

#### 3. Click **OK**.

## Adding the editing support

1. Add a new web part **User contributions/Edit contribution**. It will display the **Edit/Delete** icons when some news item is chosen.

- Show for document types: cms.news
  - this ensures that the web part is displayed only on the news detail page.
- · Allow editing by users: Document owner

Please note that the Edit contribution web part is missing the Allow insert/edit properties.

Web part properties	s (Edit contribution) Webpage Dialog	X
鷸 Web part pr	operties (Edit contribution)	Documentation
General		
Default	Security	·
Visibility Content	Check permissions:	•
Security Web part container	Allow delete:	
HTML Envelope AJAX	Allow editing by users*:	Document owner
Refresh content		OK Cancel Apply
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI/V	Vebparts/WebPartProperties.a 🔍 Local intranet   Protected Mode: Off

## 2. Click **OK**.

## Creating a testing user

1. Go to **Site Manager -> Administration -> Users** and click the **Wew user** link to create a new user with user name **test1**. Please note that to create a user, at least the values of the following two compulsory fields: **User name** and **Full name** must be entered.

CMS Site Manager	Sites	Admini	istration	Set	ttings	De	velopme	nt	License	es	Suppor	rt															
Administration	Users	sers Mass	e-mail	On-lin	ne users																						
🕌 Badges 😸 Banned IPs 🛷 E-mail queue	🏭 <u>Nev</u>	v user																									0
Event log	(all)	Α	В	с	D	E	F	G	н	Т	J	к	L	м	N	0	Ρ	Q	R	s	Т	U	v	w	х	Y Z	2
······································	✓ Disp	olay adva	inced filt	ter											Searc	:h											
🧔 Smart search 🚽 System	Actio	ons	User	r name	▲ Fi	ull nar	ne								- 1	Email				Nicl	kname	Cre	eated			Enable	be
🔠 UI personalization		🗙 🎉	Tess	sie	In	nan T	eshom	е							1	man.tes	home	@locall	nost.local	Tes	sie	9/9	/2010	5:38:2	3 PM	Yes	
Users		🗙 🎉	test1	1	te	st1																10/	8/201	0 6:59:	14 PM	Yes	
web faill		💥 🎎	Turb	0	N	oel Tu	Irpin									noel.turp	oin@loo	calhost	local	Tur	00	9/9	/2010	5:38:2	3 PM	Yes	
																							li	tems p	er page	: 25	-

2. For the purpose of this example, choose no (uncheck the box) in the **Is editor** field - **test1** is a common site member without access to Kentico CMS Desk.

General	Password	Settings	Sites	Roles	Departments	Notifications	Categories
a Log in a	s this user						
Usernam	16:*	t	est1				
Full name	2.*	te	est1				
First nam	e:						
Middle na	me:						
Lastnam	e:						
E-mail:							
Enabled:		8	<b>v</b>				
Is editor:		[					
Is global a	administrator	: [					
ls externa	l user:						
Is domain	user:						
Is hidden:	:						
	General User nam Full name First nam Middle na Last nam E-mail: Is editor: Is global i Is externa Is domair Is hidden	General Password Carl Log in as this user User name:* Full name: * First name: Middle name: Last name: E-mail: Enabled: Is global administrator Is global administrator Is external user: Is domain user: Is hidden:	General       Password       Settings         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         User name: *       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Viser name: *       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Middle name: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Is global administrator:       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Is global administrator:       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Is domain user:       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Is hidden:       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system	General       Password       Settings       Sites         Log in as this user       User name:*       test1         Full name: *       test1         Full name: *       test1         First name:	General       Password       Settings       Sites       Roles         Image: Contract of the set of the s	General       Password       Settings       Sites       Roles       Departments         Log in as this user	General       Password       Settings       Sites       Roles       Departments       Notifications         Log in as this user

Click **OK** to save the changes.

## Creating your first news item

1. Sign out and go to the **Examples -> Community** section. You will see a blank page since the user contributions are now enabled only for site members. In order to sign in, click the **My account** link at the top and sign in as user **test1**. Then go back to the **Examples -> Community** section. You will see the **New document** link:

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	
New doo	<u>cument</u>											

2. Click this link and you will be displayed with the news editing form:

Home	Services	Products	News	Partners	Company	Blogs	Forur	ns Ev	ents	Images	Wiki	Examp	les	Comr	nunity
Docume	ents														
	New docu	ment: Nev	vs												
	Save 🐺 S	pell check													
	Source 🔒 🐧	X 🖻 🛍		5 N N	M 🕼 🔳	<i>0</i> B	ΙÜ	ABC X2	x ²	: :=   ∰	t =   =	= =			\$
_ S	tyle	Sormal	: E   🗔   : [	🔍 😒 🖁		▼ Size		• T ₉ •	<b>A</b> -	<b>a</b>					
Ne	ws Title:			<b>B</b> O.1											
Re	lease Date:			I Now										1	
													^		
No															
Ne	ws Summary.														

3. Enter some content and click **G** Save. Now select **Examples -> Community** from the main menu at the top. You will see the **Community** page with your first news item:

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	Community
<u>My first n</u>	ews											
Summary												
New doc	ument											

4. Click the news item link to see the details page. The *P* Edit and *X* Delete links are be displayed below the news item:

Home Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	Community
My first news											
12/23/2009 Summary											
Text											
<u>∥Edit</u> ¥Delete											

5. Choose to *P* Edit the news item and you will be displayed with the editing form where you can edit its content:

Home Services	s Products	News	Partners	Company	Blogs	Foru	ums	Events	Image	s Wik	i Exar	mples	Com	nmunity
My first new	S													
12/23/2009 Summary														
Text														
Close edit mode														
📄 <u>Save</u> 🐺 S	<u>Spell check</u>	Delete												
🛛 🗐 🖾 Source	1 % <b>B B C</b>	6	ю α <b> </b>	🌢 🕼 🔳 d	🧷 В	<u> </u>	ABC X2	ײ ∦ §Ξ	目目					Ф
	😐 🚳 📇 🛽		) 🚖   👑						_					
Style	▼ Format		▼ Font		▼ Size		• T	• 🌆 • 🛛	i 🖄					
News Title:	My first news													
Release Date:	12/23/2009		™ <u>Now</u>											
	Summary		J									*		
News Summary:														

6. Make some modifications and click **G** Save. Click the **Close edit mode** link to see the updated page.

## **Approval process**

If you need to enforce some approval process for published news, you can simply set up workflow for the given site sections and all news will need to be approved by a site manager. You can find more details on workflow configuration in the <u>Workflow overview</u> chapter.

In this example, you have learned how to create a site section where community members can create and edit content without having access to Kentico CMS Desk.

## 8.39.3 Example: Editing partner profile

In this example, you will create a list of partners who will be able to edit their profile on the **My profile** page after they have signed in. This example assumes that you are using the Corporate Site sample website.

- Create the partner document type
- Create the partner list
- Create the partner user account
- <u>Create the partner profile document</u>
- Create the partner profile editing page
- <u>Test the profile editing page</u>

## Creating the partner document type



Before you create the page, it is necessary that you create a new document type **Partner**. Sign in to **Site Manager** and go to **Development -> Document types** where you need to click the **I** New document type link.

CMS Site Manager	Sites	Administratio	n Settings	Development	Dashboard	Licenses	Support
Development  Categories  Countries  CSS stylesheets  Cultures  Cutom settings  Custom tables  Document types  E-mail templates	Disp Code	lay name: LIKE	ypes				
Sort Form controls	Act	ions Dis	splay name 🔺		Code name		
Inline controls		🗶 📑 🛛 Art	icle		CMS.Article		
Notifications	Ø	🎁 🕺 Blo	og		CMS.Blog		
Page layouts		🗱 📑 🛛 ВІс	og month		CMS.BlogMonth	n	
Page templates	Ø	🗱 📑 👘 Blo	og post		CMS.BlogPost		

#### Step 1: General

Enter the following values and click the **Next** button.

- Document type display name: Partner (this name will be displayed to the users)
- Document type code name: custom.Partner

Step 1       General Please enter document type display name (for users) and code name (it will be used in your code when necessary).         Document type display name:       Partner         Document type code name:       custom         namespace       document type
Document type display name: Partner Document type code name: custom partner namespace document type
Document type display name:     Partner       Document type code name:     custom       namespace     document type
Document type code name: custom Partner document type
namespace document type

Please note that *custom* in the **Document type code name** field is your namespace to distinguish your document types from system types that use the *cms* namespace. You will use this value in web part properties later.

## Step 2: Data type

You need to choose the name of the database table that will be used for storing partner details. You also need to enter the name of the primary key in this table. Choose the option **The document type has custom fields** and enter the following values:

- Table name: custom_Partner
- Primary key name: PartnerID

	Step 2	Data type Please choose document data type. If you choose a document type with custom attributes you will also need to supply names of the new database table and its primary key.
0	<ul> <li>The document typ Table name: Primary key nam</li> <li>The document typ</li> </ul>	e has custom fields custom_Partner e: PartnerID e is only a container without custom fields

Click Next.

#### Step 3: Fields

Now you need to define the columns of the table or fields. Click **New attribute** (+) to create a new field, enter the following values and click **OK**.

- Attribute name: PartnerName
- Attribute type: Text
- Attribute size: 100
- Field caption: Partner name
- Field type: TextBox
- Attribute name: PartnerProfile
- Attribute type: Long Text
- Field caption: Partner profile
- Field type: HTML area (Formatted Text)

When you have defined both the fields, click Next again.

Step 3	Fields Please de product n	efine c umbei	ustom attributes of the docu r, product weight, press rele	ument type and their appearance in the ed ase text, etc.	iting form. You can define att	ributes, such as
PartneriD New attribute		↑ ↓ ♀ ↓ ↓	Database Attribute name: Attribute type: Attribute size: Allow empty value: Attribute default value: Display attribute in the Field Field caption: Field type: Eleld.description:	PartnerName Text 100 C editing form Partner name Text box		
						Novts

#### Step 4: Additional Settings

Now you need to choose the field that will be used as document name. Choose the *PartnerName* field option from the **Document name source** drop-down list and click **Next**.

## • **Document name source:** PartnerName

Step 4       Additional settings         Please choose the source field that will be used as a document name. You can choose either one of the custom fields or you can choose to use document name as a separate field.
Document name source: PartnerName
Nexts

#### Step 5: Parent types

In this step, you need to select the document types under which the partner documents will be displayed. Check only the **Page (menu item)** value, which means the users will be able to create computer documents only under some page, not under article or news document in the content tree. Click the **Next** button.

Step 5	Parent types Please select document types under which this document template can be placed.		
Documen	t type name		
Page (me	nu item) (CMS.Menultem)		
		Items per page:	10 💌
Remove selec	ted Add document types		
			wet a

### Step 6: Sites

Here you need to choose which websites will use this document type. Choose your current website and

click Next.

Step 6	<b>Sites</b> Please select sites where this document type can be used:	
Site nam <u>Corporat</u> Remove sele	ne t <u>e Site</u> ected Add sites	Items per page: 10 💌
		Next >

## Step 7: Search options

In this step, you are asked to specify how documents of this type will be indexed and displayed in the search results. For more information on these settings, please refer to the <u>Settings for particular object</u> types topic. Make your choice and click **Next**.

Step 7

Search options Please set search fields for Smart search module.

Title field:	DocumentNam	ie		-	
Content field:	DocumentCont	tent		-	
Image field:	(none)			-	
Date field:	DocumentCrea	tedWhen		•	
Set automatic	ally				
Field name	Content	Searchable	Tokenized	Custom search name	
PartnerID		<b>V</b>			
PartnerNam	e 🔽		<b>V</b>		
PartnerProfi	le 🔽		<b>V</b>		

#### Step 8: The wizard has finished

Step 8 is the last step in the process of creating the partner document type - the wizard has finished the configuration of the this document type.

Next >

Modules	1203

# Step 8 The wizard has finished The setup has finished the following steps:

The new document type was created. The new editing form was created. The document types were added among allowed child types of the new document type. The sites were selected where this document type can be used. The default queries were created. The default ASCX transformations were created. The default permission names were created. The default icon was created. Document smart search specification was created.

## Finish

## Creating the partner list

1. Go to **CMS Desk -> Content**, choose **Examples** from the content tree, click **New** and choose to create a new **Page (menu item)** document. Call the page **Partner directory** and choose the **Create a blank page** option. Select the **Simple** layout and click **Save**.

Page name: Partner directory									
💿 Use page template	Inherit from parent page	Oreate a blank page							
Layout name:			Search						
Grid 2x2 cells	Grid 2x2 cells (CSS)	Grid 3x2 cells	Grid 3x2 cells (CSS)	Simple	E				
Three columns	Three columns (CSS)	Top row, three columns, bottom row	Top row, two columns, bottom row	Two columns					
1.2					<b>•</b>				
Simple									
Simple layout with one web part zone.									
Copy this layout to my p	Copy this layout to my page template								

2. Switch to the **Design tab** of the newly created page and add the **Listings and viewers/Repeater** web part. Set the following properties:

- **ID:** repeaterPartners
- Document types: custom.partner
- Transformation: custom.Partner.Default
- Selected item transformation: custom.Partner.Default

🖉 Web part properties (Repeater) Webpage Dialog								
鷸 Web part pr	operties (Repeater)			<b>Occumentation</b>				
General								
Default	Transformations			*				
Visibility Content	Transformation:	▶ custom.Partner.Default	Select Edit	t New				
Content filter Transformations	Alternating transformation:	•	Select Edit	t New E				
Paging Relationships	Selected item transformation:	▶ custom.Partner.Default	Select Edit	t New				
System settings No data behavior								
Editing buttons Web part container	Item separator:	•						
HTML Envelope	Nested controls ID:	•		*				
Refresh content	Refresh content OK Cancel Apply							
http://localhost/6.0.396	i1.18194/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.a 🕥 Local in	tranet   Protected Mode: Off					

Please note that the default transformation generated by the system will be used. You can later modify the transformation so that it meets your design and layout requirements.

3. Click **OK**. Switch to the **Page** view and you will see an empty page now.

## Creating the partner user account

1. Go to **CMS Desk -> Administration -> Users** and by clicking the **Sew user** link create a new user with user name **AAAWebDesign**. Set the **Is editor** property to no (unchecked) and assign the user to the **CMS Basic users** role.

CMS Desk Content	: My desk	Tools	Admir	nistration																						
Administration	💄 Use	rs																								
Event log	Users	Mass e-	mail O	n-line use	ers																					
Permissions & Roles	🌡 <u>New use</u>	<u>er</u>																								?
UI personalization	(all) A	В	с	D	E	F	G	н	I.	J	к	L	М	N	0	Ρ	Q	R	S	T	U	v	w	х	Y	z
														Search	h											
		advanc	ed filter																							
	Actions		User nar	ne 🔺	Full	name								Em	nail				Nick	name	Crea	ated			Enat	bled
	/ X	28	AAAWebl	Design	AAA	Web Des	sign														10/1	2/2010	0 12:11:	18 PM	Yes	
	1 🗙	<u>9</u>	administ	trator	Glo	oal Admir	nistrato	r						ad	Iministi	ator@l	ocalhos	t.local							Yes	
	1	22	Andy		And	rew Jone	s							an	dy@lo	calhost.	local				8/30	/2010	3:37:26	PM	Yes	
	1	2	gold		San	nple Gold	Partne	ər						go	ld@loc	alhost.	local				9/9/2	2010 5	:35:57 F	PM	Yes	
	/ 🗡 🗙	<u>9</u> 2	public		Pub	lic Anony	mous	Jser																	Yes	
L	- 🖉 🗙	2	silver		San	nple Silve	r Partn	er						sih	ver@lo	calhost	Llocal				8/30	/2010	3:37:26	PM	Yes	
																							ltems p	er page	: 25	•

2. For the purpose of this example, choose no (uncheck the box) in the **Is editor** field - **AAA Web Design** is a common site member without access to Kentico CMS Desk. Click **OK** to save the changes.

General	Password	Settings	Sites	Roles	Departments	Notifications	Categories
🐍 Log in a	<u>s this user</u>						
Usernam	10:*	A	AAWeb	Desian			
Full name	*	-	AA We	b Desian			
First nam	e:	Г Г					
Middle na	me:	Γ					
Last nam	e:	Γ					
E-mail:							
Enabled:		5	/				
Is editor:		[					
Is global a	administrator	: [					
Is externa	luser:	[					
Is domain	user:						
Is hidden	:						

## Creating the partner profile document

1. Go to **CMS Desk -> Content**, from the content tree, choose **/Examples/Partner directory** and click **New**. Choose to create a new **Partner** and enter the following values:

- Partner name: AAA Web Design Inc.
- Partner profile: We provide web development services.

CMS Desk Content My desk	Tools Administration
New Delete 🕞 Move 🕹 Down	Edit Preview Live site List Search
Content management	View mode Other
🖃 🕘 Corporate Site	Examples      Partner directory
Home	ave Rave and create another Spell check
Products	図Source   Q   X 函 @ @ @ @ @ / Y / A Q   B J U ARE   X X   注 注 读 读 言言言言 @ @ @ & &
🖳 📄 News	
	Style V Format V Font V Size smaller V Tar V Ar I To V
Blogs	
🗄 📄 Forums	PartneriD:
Events	Partner name: AAA Web Design Inc.
📄 📄 Images	We provide web development services
Wiki     Examples     Gommunity     Partner directory     Webparts     My home page     Mobile*     Special pages     Mages	Partner profile:
	Publish from:
	Publish to:

2. Click **Save**. Go to the **Properties -> URLs** tab of the newly created document, set the **Document** 

alias to **AAAWebDesign** and click **Save**. You need to use the same alias as the user name since you will be using them to match the users to their user profiles. The alias path of the document will always be /Examples/Partner-directory/<user name>.

🖃 🌍 Corporate Site	Page Design	Form Properties On-line marketing	6
Home     Services     Products	General URLs	Save	0
a) Products a) Partners a) Partners a) Company b) Blogs a) Forums b) Events b) Events b) B) B) B) B) B) B) B) B) B) B) B) B) B)	Template Metadata Categories Menu Workflow Versions	Path Document alias: AAAWebDesign Document URL path: Use custom URL path	
Images     Wiki     Examples     Community     My home page	Related docs Linked docs Security Attachments	Extended properties URL extensions: Use custom URL extensions Track campaign:	
My prome     Partner directory     AAA Web Design Inc.     Mobile *		Document allases	
i 🏐 Special pages i 🏐 Images		Actions URL path           V         Kamples/Partner-directory/AAA-Web-Design-Inc-	URL extensions Track campaign Language Items per page: 25 💌

3. When you display the page in the **Live site** mode now, you will see a page like this:

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	

Partner name: AAA Web Design Inc.

Partner profile: We provide web development services.

## Creating the partner profile editing page

Now you will create a page that will be available only to partners and that will allow them to edit their partner profile.

1. Go to **CMS Desk -> Content**, from the content tree, choose **/Examples** and click **New**. Choose to create a new **Page (menu item)**. Call the page **My profile** and choose the **Create a blank page** option. Choose the **Simple layout** and click **Save**.

2. Switch to the **Design tab** of the newly created page and add the **Listings and viewers/Repeater** web part. It will display the current user's partner profile. Enter the following values and click **OK**.

- **ID:** repeaterPartners
- Path: /Examples/Partner-directory/{%UserName%}
   this ensures that the page displays the profile that matches the current user. The {%UserName%} macro is resolved as the user name of the current site visitor.
- **Document types:** custom.partner
- Transformation: custom.Partner.Default
- Selected item transformation: custom.Partner.Default
- Hide if no record found: no (unchecked)
- No record found text: No partner profile was found for your user account.
- Content before: <h1>Your Partner Profile</h1>

🕖 Web part properties	s (Repeater) Webpage Dialog			x
💏 Web part pr	operties (Repeater)			Documentation
General				
Default	Transformations			^
Visibility Content	Transformation:	► custom.Partner.Default	Select Edit	New
Content filter				(E)
Transformations Paging	Alternating transformation:	•	Select Edit	New
Relationships	Selected item transformation:	custom.Partner.Default	Select Edit	New
System settings No data behavior	Item separator:	•		
Web part container				-
Refresh content			OK Canc	el Apply
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI/W	ebparts/WebPartProperties.a 🕥 Local int	tranet   Protected Mode: Off	in.

- 3. Add the User contributions/Edit contribution web part, enter the following values and click OK.
- Path: /Examples/Partner-directory/{%UserName%}
   this ensures that the form edits the profile that matches the current user. The {%UserName%} macro is resolved as the user name of the current site visitor.
- Allow delete: no (unchecked) - this option hides the Delete button since you do not want the partners to delete their profile accidentally.
- Allow editing by users: Authenticated

- you want to allow editing only to authenticated users; at the same time, you do not require the user to be a document owner.

riease note that the <b>cuit contribution</b> web part is missing the <b>Anow inserveuit</b> properties	Please note that	the Edit contribution	web part is mi	issing the <b>Allow</b>	insert/edit propertie
---------------------------------------------------------------------------------------------------------	------------------	-----------------------	----------------	-------------------------	-----------------------

Web part properties	s (Edit contribution) Webpage Dialog	X
💏 Web part pr	operties (Edit contribution)	Documentation
General		
Default	Security	A
Visibility		
Content	Check permissions:	• •
Security	Allow deleter	
Web part container	Allow delete:	
HTML Envelope		A discributed
AJAX	Allow editing by users*:	
Refresh content		OK Cancel Apply
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI/V	Vebparts/WebPartProperties.a 🗣 Local intranet   Protected Mode: Off

4. As the last step, go to the **Properties -> Security** dialog, set the **Requires authentication** value to **Yes** and click **OK** - the reason is that you want to allow access to this page only to authenticated partners so that you know their user name and can display their profile.

Page Design	Form Properties On-line marketing			
General				
URLs				
Template				
Metadata	Permissions			
Categories	This document inherits permissions from the parent doo	cument.		
Menu	Change permission inheritance			
Workflow	Users and Roles:	Access rights:		
Versions Related docs	Authenticated users		Allow	Deny
Linked docs		Full control		
Security		Read		
Attachments		Modify		
		Create		
		Delete		
		Destroy		
		Browse tree		
		Modify permissions		
	Add users Add roles Remove			OK
	Access Requires authentication: Pes No Inherits No No No No No No No No No No	L:		ОК

## Testing the profile editing page

1. Sign out and go to **Examples -> My profile**. You will be displayed with logon form.

Home	Services	Products	News	Partners	Company	Blogs	Forums	Events	Images	Wiki	Examples	_
	Log on User na Passwo Forgotte	nme: ord: Cog or n password	ember me					Not a membe First name: Last name: E-mail: Password: Confirm pas	er yet? Sign	up now! Register	r	

2. Sign in as user **AAAWebDesign** and you will see your partner profile with the *P* Edit link.



#### Your Partner Profile

Partner name: AAA Web Design Inc.

Partner profile: We provide web development services.

Edit

3. Click 🖉 Edit to open the edit dialog window, modify some values and click 🖥 Save.



## Your Partner Profile

Partner name: AAA Web Design Inc.

Partner profile: We provide excellent web development services.

<u>Close edit mode</u>			
🔚 Save 🧱	Spell check		
📲 🔄 Source   🗋		<i>0</i> В	1
Style	Format     Font	▼ Size	
The changes w	ere saved.		
PartnerID:	1		
Partner name:	AAA Web Design Inc.		
	We provide <u>excellent</u> web development services.		
Partner profile:			

4. Go to **Examples -> Partner directory** and you will see the updated profile.



Your Partner Profile

Partner name: AAA Web Design Inc.

Partner profile: We provide excellent web development services.

<u>Edit</u>

In this topic, you have learnt how to allow users (partners) to edit a single document that matches their user name. It was a little different in comparison to the previous example (Example: Publishing community news), since in this case, you created the document first and only then you mapped it to the user by matching the document alias path and user name. In this example, the partner was not allowed to create new documents and you did not use the document owner security option.



#### Hint 1: Simplifying the process of creating a new partner

In such cases, it is useful to create a custom module (see <u>Custom modules</u>) that will contain a custom form for creating new partners. Your code will ensure creating the user, the default partner profile and setting the document alias path and user name to the same value. You will need to use Kentico CMS to create the user account (see <u>Managing users</u>) and the partner profile document (see <u>Create document</u>).

#### Hint 2: Assigning multiple users to the same partner profile

If the user name/document alias path mapping does not fit your needs or if you need to assign multiple users to the same partner profile, you can use another option: Go to **Site Manager -> Development -> System tables -> User** and create a custom text field **PartnerProfileAliasPath**. You will use this custom field in the user profile to specify the partner profile that can be edited by the given user. Then, the **Path** property in the **Edit contribution** web part will be set to value *{%PartnerProfileAliasPath%*}. Please note that you will find your new custom field on the **Custom Fields** tab, not on the **General** tab as the default attributes.

## 8.39.4 Security

The User contributions (Wiki) web parts use the following properties to configure their security options:

- **Check permissions** if you choose this option, appropriate permissions to read/modify/create/ delete documents using the User contributions (Wiki) web parts need to be granted to the users. See the <u>Permissions</u> chapter for more details on document permissions.
- Insert requires doc.type permission indicates if document type permissions are required to create a new document.
- Allow insert/edit/delete indicates if the respective buttons should be displayed.
- Allow editing by users you can choose between:
  - All any user who comes to the page with the web part can use it to edit documents
  - Authenticated any authenticated user (site member) can edit the documents; you can use this value in combination with the NodeOwner = {%CMSContext.CurrentUser.UserID%} value in the WHERE condition property for the web part to display only documents created by the current user (and therefore allow editing of these documents only to them)
  - **Document owners** only owner of the parent document under which the user contribution documents are stored can edit them

🖉 Web part propertie:	s (Contribution list) Webpage Dialog		
鷸 Web part pr	operties (Contribution list)	Documentatio	n
General			
Default	Security		*
Visibility Content	Check permissions:	•	
User contributions Content filter	Insert requires doc.type permission:		
Security Web part container	Allow insert:	• 📝	
HTML Envelope	Allow edit:		II
Time zones Partial caching	Allow delete:	▶ 📝	
	Allow editing by users*:	► Authenticated	Ŧ
Refresh content		OK Cancel Apply	
http://localhost/6.0.396	1.18194/CMSModules/PortalEngine/UI	/Webparts/WebPartProperties.a 🔍 Local intranet   Protected Mode: Off	

## 8.39.5 User contributions and API

User contributions (Wiki) rely on standard Kentico CMS content management features. As such, they do not have a special programming interface and you need to use the document management API described in the <u>Content management internals</u> chapter.

## 8.40 Web analytics

## 8.40.1 Overview

The Web Analytics module allows you to track and analyze website visits, page views, file downloads and other metrics of the website. The module runs in the background of the website collecting all statistics information.

The Web analytics module can be accessed in **CMS Desk -> Tools -> Web Analytics**. As you can see in the screenshot below, when you select a report on the left, the corresponding statistics are displayed on the right. You can choose the year, month, week and day. The screenshot shows a detailed report with graphs and a table.



## How it works

When an event (page view, file download, etc.) occurs, it is saved in a file in the ~/App_Data/ CMSModules/WebAnalytics/ folder. The format of the file name is:

#### <event type code name>_<date>_<time>.log

Every minute, a new file is created. A scheduled task reads the closed files every minute (or other scheduled interval) and imports the data into the database. This data is then displayed by means of the reports defined in the Reporting module.

The name of the scheduled task is *Process analytics log* and you can control its status and settings in **Site Manager -> Administration -> Scheduled tasks**.

## Enabling the Web analytics module

The Web Analytics module is disabled by default. You can enable it in **Site Manager -> Settings -> Web Analytics** by checking the **Enable Web Analytics** check-box.

#### **Disk Permissions**

Please note that the Web Analytics module requires that the Modify permission for the



~/app_data folder on your disk is granted to the ASP.NET account (see the <u>Disk</u> <u>permissions problems</u> chapter for names of the account under various operating systems).

## Limitations

The Web Analytics module tracks only content and events related to pages managed by Kentico CMS. It doesn't track other content, such as html files or media files (jpg, gif, etc.) that are not served by the CMS.

#### Delay in displaying results

All the events are stored in temporary files and need to be processed on regular basis, by a scheduled task. Please note that there can be a delay between the event (such as page view) and its displaying in the reports.

- To learn with which pre-defined reports the Web analytics module comes, please refer to the <u>Available reports</u> topic.
- To learn about the campaign tracking support in the Web analytics module, please refer to the <u>Tracking marketing campaigns</u> topic.
- To learn about the conversion tracking support in this module, please refer to the <u>Tracking</u> <u>conversions</u> topic.
- To learn how to configure the module, please refer to the Configuration options topic.
- If you would like to learn about the security possibilities of the module, please refer to the <u>Security</u> topic.
- To learn how to create custom reports, please refer to the Creating custom reports topic.

## 8.40.2 Available reports

The Web Analytics module comes with the following pre-defined reports:

- Aggregated views this report tracks access to pages via links in RSS or Atom feeds created using the Syndication module. All cultural versions of a document are tracked together as one document.
- Aggregated views multilingual this report tracks access to pages via links in RSS or Atom feeds created using the Syndication module. Each cultural version of a document is tracked separately.
- Browser types this report shows what types of browsers your website visitors use. It recognizes the major and minor version e.g. FireFox 2.1.
- **Campaigns** this report helps you track your marketing campaigns when a visitor comes with a particular URL parameter to your website, you can track the visit from the particular campaign (typically from e-mail or banner campaigns). See <u>Tracking marketing campaigns</u> for more details.
- Conversions this report helps you track conversions on your website. See <u>Tracking conversions</u> for more details.
- **Countries** this report shows the countries the visitors come from. The countries are recognized by IP address, which may not be a 100% reliable method in all cases, but the overall statistics should

provide correct results for a high number of visits.

- File downloads this report summarizes the number of files downloaded by the website visitors and the most downloaded files. Please note that it tracks only the files managed by the CMS and served using the Kentico CMS scripts (GetFile.aspx). All cultural versions of a file are tracked together as one file.
- File downloads multilingual this report summarizes the number of files downloaded by the website visitors and the most downloaded files. Please note that it tracks only the files managed by the CMS and served using the Kentico CMS scripts (GetFile.aspx). Each cultural version of a file is tracked separately.
- Invalid pages this report summarizes the number of ASPX pages that were not found on the website and the most often requested invalid URLs.
- **Page views** this report summarizes the number of displayed pages (served by Kentico CMS) and the most often requested pages. All cultural versions of the page are tracked together as one page.
- **Page views multilingual** this report summarizes the number of displayed pages (served by Kentico CMS) and the most often requested pages. Each cultural version of a page is tracked separately.
- **Referrals** this report summarizes the number of visits coming from external websites and the websites from which the visitors come to your website most often.
- Visits this report summarizes the number of visits of your website and the number of new versus returning visitors. The tracking is ensured by a cookie.

## 8.40.3 Tracking marketing campaigns

In many cases, tracking referring website URLs may not be possible or a reliable way of tracking your on-line marketing campaigns. Then, you may want to use the campaign tracking support in the Kentico CMS Web Analytics module.

## How it works

You need to include a special parameter to the link in your campaign that will allow you to identify the campaign name. If your current link that you use for banner advertisement looks like this:

```
http://www.mywebsite.com
```

your new URL with campaign tracking will look like this:

```
http://www.mywebsite.com/?campaign=banner1
```

As you can see, you have added a parameter *campaign* with the name of the campaign (banner1).

## How to configure campaign tracking

All you need to do is to specify the campaign tracking URL parameter name in **Site Manager -> Settings -> Web analytics**. Choose your website and set the value of the **Campaign tracking URL parameter** key to: *campaign*  Then, modify the links to your website so that they contain the parameter campaign like these links do:

```
http://www.mywebsite.com/?campaign=banner1
http://www.mywebsite.com/?campaign=newsletterJune
http://www.mywebsite.com/?campaign=pressrelease
```

## How to evaluate campaigns

Go to the **CMS Desk -> Tools -> Web Analytics** module and choose the **Campaigns** report. You will see how many hits your received from your campaigns in the chosen time period:

#### Campaigns

(from 12/20/2009 12:00:00 AM to 12/27/2009 12:00:00 AM)



Campaign Views banner1 1

## 8.40.4 Tracking conversions

The conversion tracking allows you to track the behavior of visitors on your website and adjust the website for better results.

## Tracking conversions in registration form, newsletter subscription and shopping cart

Kentico CMS comes with built-in support for tracking conversions in the following situations:

## User registration

When the user registers, you can track it as a conversion by setting the value **Track conversion name** of the **Registration form** web part to some custom name - e.g. "registration".

## Newsletter subscription

When the user registers, you can track it as a conversion by setting the value **Track conversion name** of the **Newsletter subscription** web part to some custom name - e.g. "subscription".

#### Purchase in the shopping cart

When the user registers or makes a purchase, you can track it as a conversion by setting the value **Registration conversion name** or **Order conversion name** of the **Shopping cart** web part to some custom name - e.g. *cart_registration* or *cart_order*.

## Tracking conversions and their campaign or referring websites

If you wish to track the conversion together with campaign name or referring URL, you need to use the conversion name in the following format (for example):

order_{%campaign%}
or
order_{%urlreferrer%}
or
order_{%campaign%}_{%urlreferrer%}

## Tracking conversions using your custom code

Using your custom code, you can track a conversion when a visitor makes some action on your website, such as registration, sign up, etc. Then, you can see what changes made to the website helped you increase your conversion rate.

To track a conversion, you need to add a piece of code to your page, web part or to some global event handler:

[C#]

```
string siteName = CMS.CMSHelper.CMSContext.CurrentSiteName;
if (CMS.WebAnalytics.AnalyticsHelper.AnalyticsEnabled(siteName)
   && !CMS.WebAnalytics.AnalyticsHelper.IsIPExcluded(siteName, HttpContext.Current.Re
{
    // log conversion, the conversion name is "order"
    CMS.WebAnalytics.HitLogProvider.LogHit("conversion", siteName, null, "order", 0);
}
```

Then, the conversion is tracked and you can see the statistics in the Conversions report.

You may want to use the following properties of the current user that provide information on the website and/or campaign from which the user came:

[C#]

```
using CMS.CMSHelper;
// the following values provide the information from user's cookie
CMSContext.CurrentUser.URLReferrer //website URL from which the visitor came
CMSContext.CurrentUser.Campaign //campaign from which the visitor came
// after the user registers, the information is available in the following database-
```

CMSContext.CurrentUser.UserURLReferrer //website URL from which the visitor first car CMSContext.CurrentUser.UserCampaign //campaign from which the visitor first came

## 8.40.5 Configuration options

You can configure several options of the Web Analytics module in **Site Manager -> Settings -> Web Analytics** dialog:

Enable web analytics	If true, the web analytics module logs the events.
Exclude search engines	Indicates if search engine robots should be excluded from tracking.
Excluded URLs	URLs of your websites that will not be tracked. All underlying pages will not be tracked either. You can specify multiple URLs (or site sections) separated by a semicolon (;).
Excluded file extensions	Types of files managed by Kentico CMS that will not be tracked and shown in the File downloads report. You can use several extensions separated with a semicolon (;) (e.gjpg;.gif). Please note: it's necessary to include the dot in the extension name.
Excluded IP addresses	Client IP addresses the access of which will not be tracked by the analytics module separated by a semicolon (;). You can use it to exclude your own IP address so that your visits do not influence the results. Please note that you can use * in IP addresses as a wildcard character that stands for any digit.
Remember visitors by IP (minutes)	If the entered value is higher than 0, the visitors' IP addresses are used for smarter visits logging. IP addresses are stored in memory for the specified amount of time.
Track browser types	Enables browser types tracking.
Track campaigns	Enables campaigns tracking.
Campaign tracking URL parameter	URL parameter name to identify the campaign.
Track conversions	Enables conversions tracking.
Track countries	Enables countries tracking.
Track file downloads	Enables file downloads tracking.
Track invalid pages	Enables invalid pages tracking.
Track page views	Enables page views tracking.
Track referrals	Enables referrals tracking.
Track visits	Enables visits tracking.
Track registered users	Enables registered users tracking.

Please note: These options are applied at the moment when the event occurs. A later change will

modify only future events.

## 8.40.6 Security

You can configure access to the Reporting module in CMS Desk -> Administration -> Permissions. Choose the permission matrix for Modules -> Web Analytics.

The following permissions can be given to the listed roles:

- Manage data allows members of the role to manage Web Analytics data (use the Manage data button)
- Read allows members of the role to read Web Analytics reports
- Save reports allows members of the role to save Web Analytics reports; the saved reports can be viewed in the **Reporting** module

A Permission	าร				
Site:	Corporate Site	•			
Permission type:	Modules	•			
Permission matrix:	Web analytics	•			
		Manage data	Read	Save reports	
Authenticated use	ers				
CMS Basic users					
CMS Community A	Administrators				
CMS Designers					
CMS Desk Admini	strators	đ	đ	đ	
CMS Editors					
CMS Readers					
Everyone					
Gold Partners					
Live ID users					
Not authenticated	users				
Silver Partners					

## 8.40.7 Creating custom reports

This example describes in detail how to log custom events and how to display result statistics. A button click event will be logged for this purpose.

## Logging the event

To log custom events for web analytics, use the following code from *CMS*.*Analytics* namespace: *HitLogProvider*.*LogHit*(*string codeName, string siteName, string culture, string objectName, int objectId* [, int count]);

- codeName statistics code name, it is also used in report's code names
- siteName site name
- culture culture code

- objectName / objectId it is possible to specify the log either by name or by ID
- count it is weight of the log, default value is 1

An example of logging a button click event follows:

[C#]

```
using CMS.WebAnalytics;
using CMS.CMSHelper;
protected void Buttonl_Click(object sender, EventArgs e)
{
    if (AnalyticsHelper.AnalyticsEnabled(CMSContext.CurrentSiteName))
    {
        HitLogProvider.LogHit("buttonclicked", CMSContext.CurrentSiteName, null, CMSCont
    }
}
```

The statistics code name is *buttonclicked* and the logged value is user name of the current user who clicked the button. Now logs will be created and stored in the database after clicking the button. Before you can see your statistics in **CMSDesk -> Tools -> Web Analytics**, the reports have to be done in **CMSDesk -> Tools -> Web Analytics**, the reports have to be done in **CMSDesk -> Tools -> Reporting**. The next step is creation of reports which display statistics in a graph or table form.

## **Creating reports**

Go to **CMSDesk -> Tools -> Reporting** and choose to **Edit** ( $\checkmark$ ) the **Web Analytics** category. There are some reports already in the list. These reports belong to default statistics like page views, visits, campaigns, etc. Each statistics has four reports: daily, weekly, monthly and yearly report. Code names of the reports have to be in a specific form:

- <statisticscodename>.yearreport
- <statisticscodename>.monthreport
- <statisticscodename>.dayreport
- <statisticscodename>.hourreport

In our example <statisticscodename> is *buttonclicked*, as defined above.



Now you will create a daily report for the new statistics. Click the **New report** link and enter the values as displayed in the screenshot below. Please do not forget to check the **Allow public users to this report** checkbox.

Reporting  Meb Analytics  New report			
	Report display name:	Button clicked - daily report	
	Report code name:	buttonclicked.dayreport	
	Allow public users to see this report:		
		OK	

Go to the **Parameters** tab and by clicking the **New attribute** (+) icon create three essential parameters which will be used in queries:

- FromDate Date and Time attribute type
- **ToDate** *Date and Time* attribute type
- CodeName Text attribute type; statistics code name as attribute default value

Report category properties			
Report categories + Web Analytics			
Reports General			
Reports  Button clicked - daiy report			
View General Parameters Saved reports			

Parameters for the report filtering form (to parametrize the report queries):

FromDate ToDate		Database		•
CodeName		Attribute name:	CodeName	
		Attribute type:	Text 👻	
	-	Attribute size:	20	
		Allow empty value:		E
	4	Attribute default value:	buttonclicked	
		🔲 Display attribute in the	editing form	
		Field		
	+	Field caption:		
	×	Field type:	Label	
			×	-
			ОК	

Disable the Display attribute in the editing form for all parameters.

Go to the **General** tab and click the **Add** button in the **Tables** section to create a report table:

Display name:	table	
Code name:	TableDayButtonClicked	
	<pre>SELECT StatisticsObjectName as 'User', SUM(HitsCount) as 'Hits' FROM Analytics_Statistics, Analytics_DayHits WHERE (StatisticsSiteID = @CMSContextCurrentSiteID) AND (StatisticsCode = @CodeName) AND (StatisticsID = HitsStatisticsID) AND (HitsStartTime &gt;= @FromDate) AND (HitsEndTime &lt;= @ToDate) GROUP BY StatisticsObjectName ORDER BY SUM(HitsCount) DESC</pre>	*
Query:		
		Ŧ
Is stored procedure:		
Skin ID:		

Please note that there are six important database tables used in the web analytics module.

The *Analytics_Statistics* table contains general information about statistics, other five tables store statistics hit records for a specific time period – *Analytics_HourHits, Analytics_DayHits, Analytics_WeekHits, Analytics_MonthHits* and *Analytics_YearHits.* As the report is a daily report, the *Analytics_DayHits* table is used together with the *Analytics_Statistics* table. See the diagram below to understand the database structure of web analytics:



Now click **OK** and use the **Insert** button in the **Tables** section to insert a macro into the layout of the report. Click **OK** again - the daily report is now ready.

- 1. Other reports are similar, the only difference is in queries where you should use the appropriate tables like *Analytics_YearHits* in the yearly report, *Analytics_MonthHits* in the monthly report, etc.
- 2. The last thing you should do is insert a string into resources, which will be used in the statistics list in CMSDesk -> Tools -> Web Analytics. The form of the resource key has to be as follows analytics_codename.
  analytics_codename.
  codename>; it is analytics_codename.buttonclicked for the purpose of this example. You may also add a specific icon for new statistics. Icons are stored in -\App_Themes\<used theme>\Images\CMSModules\WebAnalytics\Icons\. The name should be in form <codename>.gif. If there are any '.' in codename, replace them with '_'.

And finally the result:



## 8.41 WebDAV integration

## 8.41.1 Overview

**WebDAV** stands for *Web-based Distributed Authoring and Versioning*. It is a set of extensions to the HTTP protocol which allows users to collaboratively edit and manage files on remote web servers. Detailed information, specifications and documentation related to this technology can be found on its official website: <u>http://www.webdav.org/</u>. Other valuable information is located on its Wikipedia page: <u>http://en.wikipedia.org/wiki/WebDAV</u>.

WebDAV integration in Kentico CMS enables users to open, edit and save <u>document attachments</u> or documents using the <u>File field</u> (e.g. *CMS.File* document type) in a client application installed on their local computer (e.g. *Microsoft Office Word, Excel, PowerPoint, MS Paint*, etc.). The advantage of this approach is that no local copy of the edited document needs to be created and uploaded to the server manually after editing. Saving the document in the client application uploads the new version to the server automatically. This provides a much more straightforward process of editing attached documents, especially for non-experienced or non-technical end users.

The <u>Requirements</u> topic gives an overview of which software and configuration is required for WebDAV integration to be functional both on the server- and the client-side. The <u>Configuration for WebDAV</u> topic explains how a website needs to be installed and configured in order to meet these requirements.The <u>Editing files using WebDAV</u> topic explains the process of WebDAV editing in a simple example.

WebDAV editing has been integrated into the <u>User contributions</u> and <u>Document library</u> modules, which provides WebDAV editing even to users on the live site. This possibility is explained in the <u>Integration</u> with <u>User contributions</u> and <u>Integration with Document library</u> topics. <u>WYSIWYG editor</u> dialogs also provide built-in WebDAV editing support, as described in <u>Integration with WYSIWYG editor dialogs</u>.

WebDAV editing also fully integrates with <u>workflow and versioning</u>. When there is a workflow defined for a document and it or its attachment is edited using WebDAV, new version of the document is created, check-in/check-out is performed, etc., based on settings of the particular workflow.

## 8.41.2 Requirements

The following requirements must be met on the server- and the client-side in order for WebDAV integration to be functional in Kentico CMS:

## Server-side requirements

- Windows authentication must be enabled in IIS and the CMS must be configured to use this type of authentication.
- If you are using an older version of IIS than 7.0, the Kentico CMS website must be **installed in the root** of the server. This is necessary because Microsoft Office submits configuration requests to the site root and requires the server to respond properly. If the website is not installed to the root, Microsoft Office will open its associated documents as read-only.
- If you are using IIS 7.0 or higher, the website needn't be installed in the root it can also be installed in a virtual directory.

## **Client-side requirements**

- WebDAV can be used only in Internet Explorer 6 or higher. No other web browsers are currently supported.
- Client applications with WebDAV support for a particular file types need to be installed on the client machine. E.g. *Microsoft Office 2003* or higher or *Paint* and *Notepad* in *Windows 7* support editing of associated file types using WebDAV.
- Matching (x86) or (x64) versions of both *Internet Explorer* and *Microsoft Office* must be installed. In other words, to be able to open documents using WebDAV in *Internet Explorer (x86)*, *Microsoft Office (x86)* must be installed on the client computer. For *Internet Explorer (x64)*, you need to have *Microsoft Office (x64)* installed.

The <u>Configuration for WebDAV</u> topic explains how the required configuration can be achieved.

## 8.41.3 Configuration for WebDAV

The following steps need to be taken in order to install a Kentico CMS website with WebDAV support enabled. The beginning of the procedure is different for IIS 7.0 or higher and the previous versions of IIS.

## Step 1 on IIS versions prior to 7.0

Before you start, it is necessary to have a website created in the IIS root (i.e. not in a virtual directory). The website should have *Windows authentication* enabled in IIS.

1. Launch <u>Kentico CMS Web installer</u>. In step 2, choose **I want to use local IIS server**. In step 3, use the following configuration:

- Choose web site: choose the website that you have prepared in the IIS root
- Choose target folder: enter the path to the website's physical folder
- This is an installation to the root (do not create virtual directory): enabled

Click **Next** and proceed through the rest of the wizard.
🔆 Kentico CMS Web Ins	taller	X
Step 3	- Local IIS	
Please choose the IIS	S location:	
Choose web site:	WebDAV	
Choose target folder:	C:\WebDAV	Browse
	✓ This is an installation to the root (do not create virtual directory)	
	he WebDAV feature the project must be installed to the root of the web site	
No re. ii you planto user		C
	<pre></pre>	Close

When using IIS versions older than 7.0, it is also necessary to correctly map the **aspnet_isapi.dll** file in IIS. The process of performing this configuration is described below.

#### Configuration for IIS 5 and earlier versions

Open the IIS Management console, right-click on your Kentico application in the tree and select **Properties**. On the **Virtual Directory** tab, click **Configuration** and then **Add** to create a new application extension mapping. Enter the following details into the dialog:

- **Executable**: <Windows install directory>\Microsoft.NET\Framework\<.Net framework version>\aspnet_isapi.dll
- Extension: .*
- Verbs: All Verbs

'DS Propertie Virtual Directory	s Documents	Dire	ctory Security HTTP Headers Custom Errors
When c			
Ap	plication C	onfi	
	appings Op	tions	Debugging
	-		
	Cache ISA	VPI ap	oplications Status
Local Pa	Application	Mann	ings
	- approvident		
Script	Exten	Ex	recutable Path Verbs 🛆
Head	.asa	C:\	WINDOWS\system32\inetsrv\asp.dl GET,HEA
Write	.asax	C:)	WINDOWSMicrosoft NET/Erame GET HEA
Direct	.ascx	C:	Add/Edit Application Extension Mapping
Applicatio	.ashx	C	
	.asmx	- 12	Everytable: C:\WINDOWS_\aspnet_isapi.dl Rouse
Applicatio	.asp	6	
Starting d	axd	C.	Extension:
	.cdx	C:	
Execute	.cer	C:	Verbs
Anntanti	.config	C:	() All Verha
Applicatio	<	- ^	C Plu Aeros
	Law and the second		C Limit to:
	Add		
		_	Control operation
			A Politic engine
			Check that file exists OK Cancel Help
	_		
		0	DK Cancel Apply Help

Click **OK** and return to the main management console. Now right-click the website under which your application is stored and select **Properties**. Switch to the **Home directory** tab, ensure that the **Read** box is checked and set the **Execute permissions** field to *Scripts only*.

#### Configuration for IIS 6

Open the IIS 6 Management console, right-click on your Kentico application in the tree and select **Properties**. On the **Virtual Directory** tab, click **Configuration** and then **Insert** to add a new wildcard application map. Enter the following details into the dialog:

• **Executable**: <Windows install directory>\Microsoft.NET\Framework\<.Net framework version>\aspnet_isapi.dll

WDS Properti Virtual Directo The con	es ?X NY Documente Directory Security HTTP Headere Custom Errore Application Configuration
Logal pal	Mappings       Options       Debugging         Image: Cache ISAPI extensions       Application extensions         Extens       Executable Path       Verbs
Scrip Reac Write Direc Applicati	Add/Edit Application Extension Mapping       X         Executable:       ET\Framework\v1.1.4322\aspnet_isapi.dll       Browse         Verify that file exists       OK       Cancel       Help
Starting Execute Applicati	Wildcard application maps (order of implementation):         Insert         Edt         Remove         Move Up       Move Down
	OK Cancel Help

Click **OK** and return to the main management console. Now right-click the website under which your application is stored and select **Properties**. Switch to the **Home directory** tab, ensure that the **Read** box is checked and set the **Execute permissions** field to *Scripts only*.

#### Step 1 on IIS 7.0 or higher

On IIS 7.0 or higher, you do not need to have the website created in the IIS root - it can also be installed in a virtual directory.

1. Launch <u>Kentico CMS Web installer</u> and proceed through the steps with configuration according to your needs.

If you wish to run the website using an application pool set for *Classic* managed pipeline mode, the two lsapi extension handlers highlighted below must be added to your **web.config** file once the **Web installer** finishes:

```
<add name="aspnet_isapi 32-bit" path="*" verb="*" modules="IsapiModule"
      scriptProcessor="%windir%\Microsoft.NET\Framework\v2.0.50727\aspnet_isapi.
     dll" resourceType="Unspecified" requireAccess="Script" preCondition="
     classicMode,runtimeVersionv2.0,bitness32" />
      <add name="aspnet_isapi 64-bit" path="*" verb="*" modules="IsapiModule"
      scriptProcessor="%windir%\Microsoft.NET\Framework64\v2.0.50727
      \aspnet_isapi.dll" resourceType="Unspecified" requireAccess="Script"
     preCondition="classicMode,runtimeVersionv2.0,bitness64" />
      <add name="CMSWebDAVHandler" path="*" verb="*" type="CMS.WebDAV.
WebDAVHandler, CMS.WebDAV" />
   </handlers>
    <security>
     <requestFiltering>
       <requestLimits maxAllowedContentLength="2147483648" />
     </requestFiltering>
   </security>
 </system.webServer>
</location>
<!-- WebDAV location END -->
. . .
```

If necessary, adjust the path in the **scriptProcessor** attributes of the handlers according to your current . Net framework version.

#### The rest of the configuration - common for all IIS versions

2. When the web installation is complete and the appropriate configurations have been made according to your IIS version and application pool mode, open the website using the link in the last step of the **Web installer**. When you access the URL, **Kentico CMS Database Setup** will be displayed. Follow the wizard as described in Installation and deployment -> Installation procedure -> Database setup.

3. After finishing the Database Setup, go to **Site Manager -> Settings -> WebDAV** and configure the settings as described in the <u>Settings</u> topic.

4. The last step is to enable **Windows authentication** for your website. Please follow the instructions in <u>Development -> Membership -> Authentication -> Windows authentication -> Configuring Windows authentication</u>.

With all these steps performed, WebDAV editing should be possible. Please refer to the Editing files using WebDAV topic to learn more about the editing possibilities.

#### 8.41.4 Editing files using WebDAV

After configuring your server as described in <u>Configuration for WebDAV</u>, users who meet the client-side requirements listed in the <u>Requirements</u> topic may start editing <u>document attachments</u> or documents using the <u>File field</u> (e.g. *CMS.File* document type) using WebDAV.

1. WebDAV editing of document attachments is possible in **CMS Desk -> Content -> Edit**, after selecting a document in the content tree and switching to its **Properties -> Attachments** tab. The **Edit** in client application ()) should be displayed next to each attachment whose extension is included in Site Manager -> Settings -> WebDAV -> Supported file extensions.

For the icon to be enabled, the **Modify** permission for the current document must be granted to the current user (or one of their roles) on one of the three levels described in <u>Development -> Membership -></u> <u>Permissions -> Document permissions</u>.

Kentico		Switch to Site Manager
CMS Desk Content My de	sk Tools Administrat	ion E-commerce
📄 📄 📄 Copy 🕆 Up		
New Delete 🚔 Move 🛛 🕹 Down	Edit Preview	Live site List Search
Content management	View	mode Other
🖃 🍪 Corporate Site	Page Design Fo	rm Properties On-line marketing
Home	General	
	URLs	
	Template	
Wews	Metadata	
W Your second news	Categories	Actions Update Name
🗄 📄 Partners	Menu	🖉 🛠 🛖 🛛 🕞 💽 NewsPhoto1 ing
🔁 🤷 Company	Workflow	
🕕 📄 Blogs	Versions	
	Related docs	🖉 🗱 🕆 🔹 🛐 🖹 <u>NewsPhoto3.jpg</u>
	Linked docs	
i Wiki	Security	
Examples	Attachments	
🗄 📄 Mobile 🏓		

2. The same **Edit in client application** ()) icon is displayed on the **Form** tab of documents using the <u>File field</u> (e.g. *CMS.File* document type), where a file with a supported extension is uploaded.

Kentico	Swite	ch to Site Manager
CMS Desk Content My des	esk Tools Administration E-commerce	
New Delete 🕞 Move 🕹 Down	Edit Preview Live site List Search	
Content management	View mode Other	
Corporate Site	Page Design Form Master page Properties On-line marketin	ng
Gervices     Fonducts	Save Spell check	
🖶 📄 News 🗐 崎 Images	File name: People	
🗆 🔝 Default product image	Description:	
Services_webdevelop	File:	Size
Services_network	🥒 🗱  🔊 🔛 homepage.jpg	37 kB
CompanyLogo  People  Dattoors	File tags: Enter tags separated with comma. Example: dogs, cats	Select

3. Clicking the icon opens the document in a client application associated with the particular file extension (e.g. images are opened in MS Paint in Windows 7 by default). Try editing the opened file and save your changes using the **Save** button.

#### 1230 Kentico CMS 5.5 R2 Developer's Guide



4. Now when you access the live site, you should see that the file that you modified has been saved to the server and that the updated version is used on the live site.

🏉 Corporate Site - Home - Windows Internet Ex	plorer					×
COO			• 🛛 4 🗙 🕒	Bing		• ٩
🙀 Favorites 🛛 🚔 🏉 Suggested Sites 🔻 🖉	Web Slice Gallery 👻					
* Corporate Site - Home			🏠 🔻 🔝 👻	🖃 🖶 🔻 Page 🕶 Sa	fety 🔻 Tools 👻 (	<b>?</b> ▼ [≫]
			Se	earch for:		^ پ
Home Services Products New	vs Partners Compa	any Blogs Forums	Events Images	Wiki Examples		
This is a sa	nple mod	ification of	this im			E
Newsletter subscription First Name: Last Name: E-mail: Subscribe	Welcome to the This is a sample web s You can use it as a s Kentico CMS.	te Sample Corpo site created with Kentico of tarter kit for your own we	CMS for ASP.NET. b site and to learn	Latest news Your first news 1/10/2008 Here you can enter the su- news item. You can use U editor to format the text, if	ummary of the MYSIWYG Isert links and	
	Default user name and	l password		images. The summary will	be used in	-
			🚂 Local intranet   Protec	ted Wode: Uff	AU 🔺 🚽 100%	•

You have learned how document attachments or documents using the File field can be edited using a client application when WebDAV integration is enabled. Editing of any other file types in any other client application (e.g. *Microsoft Office Word, Excel*, etc.) can be performed exactly the same way - all you need to do is click the **Edit in client application** () button, edit the file and save it in the client application. Transfer of the updated file to the server is handled by the CMS automatically.

### 8.41.5 Integration with User contributions

WebDAV editing is integrated into the the <u>User contributions</u> module, which brings WebDAV editing to the live site. If a document type used for user contributions contains a field of the **File** or **Document attachment** type, the **Edit in client application** () icon is displayed with files uploaded into these fields. Clicking the icon opens the document for editing in a client application (if there is an application for the particular file type installed on the client machine and if the application supports WebDAV).

For the icon to be displayed in the **Contribution list** or **Edit contribution** web parts, the **Check permissions** property of the web part needs to be enabled and the current user must have appropriate permissions to edit the document, as described in <u>Modules -> User contributions -> Security</u>. When using the <u>Groups module</u> versions of the web parts, the icon is displayed either under the same conditions as described above or when the current user is the administrator of the respective group.

Documents						
🔚 Save 🧱	Spell check	s 💥 Del	lete			
Source C	<b>à</b> i X 🗈		🎒 🗠 🖂 🛤 🕼 🔳 🏼	7 B I U	ABC X2 X2	
	₽∣≡≡		🍓 🏨 🕁 🗐 🖬 🚍 🚍 🚝	) 🚳 📇 🗉	🗔   📀   🚖   👑	
Style	▼ Fo	ormat	▼ Font	- Size	- Tar 🆓 - 🔲	Ö,
Article title:	My arcitle					
f	This is a san	nlpe article v	with an attached file.		~	
Article text:						
					*	
File:	Actions	Update	Name		Size	
					TOO KB	
Publish from:			Now			
Publish to:			≌′ <u>Now</u>			

#### 8.41.6 Integration with Document library

Files stored in a <u>Document library</u> can also be edited in a client application using WebDAV directly on the live site. There is the **Edit** action available in their drop-down menu, as can be seen in the screenshot below. Clicking the icon opens the document for editing in a client application (if there is an application for the particular file type installed on the client machine and if the application supports WebDAV).

For this action to be enabled, the document must have one of the supported extensions (see <u>Settings</u> for more details) and the **Modify** permission for the particular document must be granted to the current user. Please refer to <u>Modules -> Document library -> Security</u> for more details on permissions in document libraries.

🔒 <u>New document</u> 🛛 🛃 Library	<u>/ permissions</u>		
Document name 🔺		Modified	Workflow step
A Complete Guide for New Employees		11/4/2010 2:23:36 PM	Published
V Dunderstanding Our Values		10/15/2010 2:54:36 PM	Published
Edit			
Update			
<u>Сору</u>			
Delete			
Dpen Open			
Properties			
Permissions			
Kersion history			
Archive			

#### 8.41.7 Integration with WYSIWYG editor dialogs

WebDAV editing is also integrated in the <u>Insert/Edit image or media</u> and <u>Insert/Edit link</u> dialogs of the <u>WYSIWYG editor</u>. In these dialogs, the **Edit in client application** ()) icon is displayed on the **Content** and **Attachments** tabs, next to files with the supported file extensions (see <u>Settings</u> for more details).

For the icon to be displayed on the **Attachments** tab, the **Modify** permission for the current document needs to be granted to the current user. On the **Content** tab, the icon is displayed only with document for which the **Modify** permission is granted to the current user. Please refer to <u>Development -></u> <u>Membership -> Permissions -> Document permissions</u> for more details on the three-level document permissions hierarchy in Kentico CMS.



#### 8.41.8 Settings

Settings related to WebDAV integration can be found in **Site Manager -> Settings -> WebDAV**. The following settings are available:

- Enable WebDAV support this options enables/disables WebDAV editing
- Supported file extensions list of file extensions that should be editable using WebDAV (with or without the leading dots, separated by semicolons; e.g. .docx;.xlsx;.pptx;jpg;jpeg); appropriate client application with WebDAV support must be installed on the client machine for each listed extension in order for WebDAV editing of these files to be possible



# 8.42 Web farm synchronization

#### 8.42.1 Overview

Native web farm support in Kentico CMS provides the following features:

- It synchronizes the changes made to the site settings on one of the servers to all the other servers.
- It synchronizes the files uploaded to the site to all other servers. This is used only if you store the uploaded files on the disk or on both disk and in the database.

The following image shows the structure of the web farm and how the synchronization works:



# load-balanced web farm



If you change some settings or upload a file using server 192.168.1.2, the other servers do not know about it in a standard scenario. However, if you're using the **Web farm synchronization** module, the module automatically creates a new synchronization task in the database and notifies the other servers once per request so that they process their synchronization task.

To learn how to add web farm servers into the system and configure them, please see the <u>Defining web</u> farm servers topic.

The <u>Web farm synchronization internals and API</u> sub-chapter provides information about the database tables and classes used by the module and examples of how web farm synchronization can be managed using the API.



# Using Kentico CMS on a web farm without the Web farm synchronization module

You can use Kentico CMS on a web farm even if you do not use the web farm synchronization module, especially if you do not store uploaded files in the file system. Then, the only limitation is that if you change the settings or page content on one of the servers, the other servers may keep using the old version of the settings in their memory/cache until the web application is restarted or cache content expires.

Please note: The web farm support **doesn't replace any load-balancing or web** farm management tools.

#### 8.42.2 Defining web farm servers

You need to enter the **internal** URLs of all your servers into the system so that the web farm synchronization module knows which servers should be synchronized.

Go to Site Manager -> Administration -> Web farm and click **Server**, enter the values:

- Server display name: some descriptive name displayed to the users
- Server code name: code name of the server that will be used in the server's configuration file
- Server root URL: the URL of the root of the website, such as http://192.168.1.2/KenticoCMS

Click **OK** to save and repeat the process for every server in your web farm.

Kentico CMS Site Manager	Sites	Administration	Settings	Development	Licenses	Support
Administration     Administration     Administration     Bad words     Badges     Banned IPs     F-mail queue     E-mail queue     Permissions     Recycle bin     Roles     O Scheduled tasks	Sites	Administration (eb farm s Tasks ew web farm rm servers  Ne display name: code name: s root URL:	Settings	Development	Licenses	
	Server	enabled: [	ок			

Now you need to update the web.config file on each server and add the following keys into the *I* configuration/appSettings section:



Where server1 is the appropriate code name of the given server. Every server must contain only one such key with its own name.

Additional low-level settings of web farm synchronization can be done by adding the keys listed in the <u>Web farm synchronization settings</u> section of Appendix C - Web.config parameters into the *I* **configuration/appSettings** section of your *web.config* file.

If the synchronization doesn't work as expected, you can check the failed synchronization tasks on the **Tasks** tab. Processed tasks are automatically removed from the list and failed tasks are displayed with an error message.

License keys



Please be sure to enter an appropriate license key for the internal URL of the server.

E.g. if the web farm servers are used for domain name *example.com* and you access them internally through URLs like *http://192.168.1.2*, *http://192.168.1.3*, etc., you need to enter separate license keys for *example.com*, *192.168.1.2* and *192.168.1.3* in **Site Manager -> Licenses** dialog (you need to do that on one server only and restart the other instances using **Site Manager -> Administration -> System -> Restart application**).

#### Configuring the server synchronization interval

By default, web farm servers are updated with changes made on other servers once per request. Synchronizing this frequently may however be impractical for high-traffic websites. The synchronization interval can be changed by setting the value of the **CMSWebFarmUpdateWithinRequest** web.config key to *false* and using the **Synchronize web farm changes** <u>scheduled task</u> instead, which has a configurable execution interval. To do this, go to **Site Manager -> Administration -> Scheduled tasks**, select (*global*) from the **Site** drop-down list at the top of the page, edit ( $\checkmark$ ) the mentioned task, set the required **Task interval**, check the **Task enabled** property and click **OK**.



The task must also be created for each server in the web farm, so return to the list of scheduled tasks, click the **Wew task** link, fill in the same properties as those of the **Synchronize web farm changes** task (the **Task name** must be different) and check the **Create tasks for all web farm servers** box below the **Server name** property. Click **OK** to complete the process.

#### 8.42.3 Web farm synchronization internals and API

#### 8.42.3.1 Database tables and API classes

The Web farm synchronization module uses the following database tables:

- CMS_WebFarmServer contains web farm servers and information about them
- CMS_WebFarmServerTask assigns web farm synchronization tasks to the servers that should process them
- CMS_WebFarmTask contains web farm synchronization tasks and information about them

The Web farm synchronization API is provided by the following classes:

• CMS.SettingsProvider namespace:

- WebSyncHelperClass this class provides functionality for performing synchronization related tasks
- CMS.WebFarmSync namespace:
  - WebFarmServerInfo, WebFarmServerInfoProvider these classes provide functionality for managing web farm servers
  - WebFarmTaskInfo, WebFarmTaskInfoProvider these classes provide functionality for managing web farm synchronization tasks
- CMS.WebFarmSyncHelper namespace
  - WebSyncHelper this class provides further functionality for performing synchronization related tasks

The following chapters show examples of how these classes can be used:

- Getting web farm synchronization task data
- Managing web farm server
- Managing web farm synchronization tasks

The <u>API programming and Kentico CMS internals</u> section of this guide contains more API related information, so please refer to it if required.

For detailed API documentation, such as a list of all methods from the classes above, please refer to <u>Kentico CMS API Reference</u> that is a part of your Kentico CMS installation and can be accessed through the programs folder in Windows Start menu.

#### 8.42.3.2 Getting web farm synchronization task data

The following sample code shows how you can get a web farm synchronization task as a *WebFarmTaskInfo* object:

#### [C#]

```
using CMS.WebFarmSync;
...
// Get web farm task object by ID
WebFarmTaskInfo wfti = WebFarmTaskInfoProvider.GetWebFarmTaskInfo(10);
```

The following sample code shows how you can get a DataSet containing synchronization tasks from the system:

```
using System.Data;
using CMS.WebFarmSync;
```

```
...
string where = "";
string orderby = "";
// Get DataSet of web farm tasks by where condition and orderby
DataSet ds = WebFarmTaskInfoProvider.GetWebFarmTasks(where, orderby);
```

#### 8.42.3.3 Managing web farm servers

The following sample code shows how you can create a new web farm server and add it to the system:

#### [C#]

```
using CMS.WebFarmSync;
....
// Create new web farm server object
WebFarmServerInfo wfsi = new WebFarmServerInfo();
// Set properties
wfsi.ServerDisplayName = "Test server";
wfsi.ServerDisplayName = "Test server";
wfsi.ServerName = "TestServer";
wfsi.ServerEnabled = true;
wfsi.ServerURL = "http://localhost/KenticoCMS";
// Save to database
WebFarmServerInfoProvider.SetWebFarmServerInfo(wfsi);
```

The following sample code shows how you can modify the display name of an existing web farm server:

```
using CMS.WebFarmSync;
...
// Get web farm server
WebFarmServerInfo wfsi = WebFarmServerInfoProvider.GetWebFarmServerInfo("Tes
// If server exists
if (wfsi != null)
{
// Update property
wfsi.ServerDisplayName += " updated";
// Save to database
```

WebFarmServerInfoProvider.SetWebFarmServerInfo(wfsi);

The following sample code shows how you can delete an existing web farm server:

[C#]

}

```
using CMS.WebFarmSync;
....
// Get web farm server
WebFarmServerInfo wfsi = WebFarmServerInfoProvider.GetWebFarmServerInfo("Tes
// If server exists
if (wfsi != null)
{
// Remove from database
WebFarmServerInfoProvider.DeleteWebFarmServerInfo(wfsi.ServerID);
}
```

#### 8.42.3.4 Managing web farm synchronization tasks

The following sample code shows how you can create a new web farm synchronization task of a predefined task type and add it to the system:

#### [C#]

```
using CMS.SettingsProvider;
...
// Set parameters
string taskTarget = "";
string taskTextData = null;
byte[] taskBinaryData = null;
WebFarmTaskTypeEnum webfarmTaskType = WebFarmTaskTypeEnum.ClearHashtables;
// Create web farm task
WebSyncHelperClass.CreateTask(webfarmTaskType, taskTarget, taskTextData, tas
```

The following sample code shows how you can process an existing web farm synchronization task:

```
using CMS.WebFarmSync;
using CMS.WebFarmSyncHelper;
```

```
...
// Get web farm task
WebFarmTaskInfo wfti = WebFarmTaskInfoProvider.GetWebFarmTaskInfo(10);
// If task exists
if (wfti != null)
{
    // Process task
    WebSyncHelper.ProcessTask(wfti.TaskGUID);
}
```

The following sample code shows how you can process all web farm synchronization tasks assigned to the current server (the server that is specified by code name in the web.config file):

#### [C#]

The following sample code shows how you can delete an existing web farm synchronization task:

```
using CMS.WebFarmSync;
....
// Get web farm task
WebFarmTaskInfo wfti = WebFarmTaskInfoProvider.GetWebFarmTaskInfo(10);
// If task exists
if (wfti != null)
{
    // Remove from database
    WebFarmTaskInfoProvider.DeleteWebFarmTaskInfo(wfti.TaskID);
  }
```

# Part IX

**API programming and Kentico CMS internals** 

# **9** API programming and Kentico CMS internals

# 9.1 Overview

Kentico CMS allows you to script any action that you normally make through the user interface, such as:

- content management (select/create/update/delete documents)
- workflow management
- security (create users, roles, set permissions, etc.)
- and many others

This allows you to create customized features and add them to the user interface or write procedures for integration with external systems.

# 9.2 CMSContext class

CMS.CMSHelper.CMSContext class provides useful methods that allow you to access information about the current page, user, etc. All methods are static, which means you can access them directly like CMS.CMSHelper.CMSContext.CurrentAliasPath, without instantiating the CMSContext class.

CurrentAliasPath	Alias path of the currently required document.
CurrentDocument	Currently processed document. This object contains all document data including the product data. Please note that retrieving this property is time consuming because it may need to access the dabatase to get the data. You can use the property CurrentPageInfo to get basic document data without additional operations required. It is cached when Content caching is enabled.
CurrentPageInfo	Currently processed page info. This property provides only basic document fields, such as <i>NodeID</i> , <i>NodeName</i> , <i>AliasPath</i> , <i>ClassName</i> , etc. It is cached if Page info caching is enabled.
CurrentSite	Provides information on the current site.
CurrentSiteName	Provides code name of the current site.
CurrentUser	Provides information on the current user and their preferences. Beside the standard UserInfo properties, it also provides the following ones: <b>PreferredCultureCode</b> – gets/sets user's preferred content culture. You can
	use this property to change the culture of the displayed content.
	<b>PreferredUICultureCode</b> – gets/sets user's preferred UI culture. It's used mainly by Kentico CMS webparts, controls and in the administration interface.
	<b>IsAuthorizedPerResource</b> – returns true if the current user is authorized with given permission for given module (resource).
	<b>IsAuthorizedPerClassName</b> – returns true if the current user is authorized with given permission for the given document type (class name). It checks the global document permissions.

	<ul> <li>IsAuthorizedPerTreeNode – returns true if the current user is authorized with given permission for given document (node).</li> <li>IsPublic – returns true if the current user is the Public user account used for anonymous visitors.</li> </ul>
ViewMode	The view mode in which the documents are displayed (edit, design, form, live site, preview).
ResolveCurrentPath	Returns current path or its part according to the provided formatting string. You can use it to get only the first N levels of the path – e.g.: /{0}/{1} applied on "/products/computers/ibm" results in: "/products/computers"

# 9.3 TreeHelper class

CMS.CMSHelper.TreeHelper class provides useful methods that allow you to access documents. All methods are static, which means you can access them directly like CMS.CMSHelper.TreeHelper.SelectNodes.

SelectSingleNode	Returns single node (document) specified by given NodelD or path.
SelectSingleDocu ment	Return single node (document) specified by given DocumentID (culture-specific document version).
SelectNodes	Returns a DataSet object containing nodes (documents) of given path.

# 9.4 Managing documents

#### 9.4.1 Content management internals

This chapter describes the structure of the content stored in the Kentico CMS repository and how they can be accessed.

#### Database structure of the documents

Document data is stored in several joined tables that are used for the tree structure, multilingual support and custom document fields. The document record consists of the following tables:

- **CMS_Tree** a table with basic document data shared between different language versions of same document. This table determines the tree structure of the website document content. Table contains **one record for all culture versions** of the document. The table does not contain any versioned data.
- **CMS_Document** a table with document data of specified language version of the document. Table contains **several records** for every document, each one representing one language version of the document. Some of the document columns are versioned columns.
- Coupled table a table that contains document-type specific fields defined by the developer. For

example the News document type has a Content_News coupled table that contains NewsTitle, NewsSummary, NewsText and other fields specific for news. Coupled table primary key is referenced by the value of **DocumentForeignKeyValue** column and the table is determined by type of the document. Container document types, such as folder, do not have any coupled table. All columns from coupled tables are versioned. Each culture version of the coupled document contains one record in the coupled table.

The following figure shows how the tables are connected:



See Kentico CMS Database Reference or the database structure for details on the table columns.

#### TreeNode Class

The **CMS.TreeEngine.TreeNode** class encapsulates the tables described above. You can work with the document values using the TreeNode class properties (if available) or using the **SetValue** and **GetValue** methods with column name from either CMS_Tree, CMS_Document or coupled table. There are following methods to make the changes to the database:

- Insert Inserts complete document record to the database, creates new record in CMS_Tree, CMS_Document and coupled table. Use this method for first culture version of the document.
- InsertAsNewCultureVersion Inserts a new language version of the document. Creates new record in CMS_Document and coupled table bound to the existing CMS_Tree record. Use for the new language versions of the same document if some language version of the document already exists.
- Update Updates the document record (all three tables) in the database
- **Delete** deletes the document record from the database. It deletes the CMS_Document and coupled table record. If the document is the last culture version of the document, it deletes also the CMS_Tree record.

The next chapters contain code examples of working with documents.

See also: Managing attachments, Versioning internals, Workflow internals

#### 9.4.2 Select document(s)

Select single node by NodelD

```
using CMS.SiteProvider;
// Tree node
CMS.TreeEngine.TreeNode node = null;
// Tree provider
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
CMS.TreeEngine.TreeProvider tree = new CMS.TreeEngine.TreeProvider(ui);
// Get Single node specified by it`s ID
node = tree.SelectSingleNode(nodeId);
// Get node name
string result = "The node name is: " + node.NodeName;
```

#### **Reading document properties**

Once you retrieve the TreeNode instance representing a document, you can use the GetValue method to retrieve the document properties:

#### [C#]

```
// Get NewsTitle value of the News document
string newsTitle = (string) node.GetValue("NewsTitle");
```

#### Reading/setting editable region content

Once you retrieve the TreeNode instance representing a document, you can use the DocumentContent property to retrieve or set the document properties:

#### [C#]

```
// Get mainText region content of the node representing a page
string mainText = (string) node.DocumentContent["mainText"];
// Set mainText region content of the node representing a page (for portal engine
pages)
node.DocumentContent.EditableWebParts["mainText"] = "my text";
// Set mainText region content of the node representing a page (for ASPX page
templates)
node.DocumentContent.EditableRegions["mainText"] = "my text";
```

Please note: if you need to retrieve these values for the currently displayed page, you can use the CMSContext.CurrentPageInfo.EditableItems property.

#### Select single node by AliasPath

[C#]

```
using CMS.SiteProvider;
// Tree node
CMS.TreeEngine.TreeNode node = null;
// Tree provider
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
CMS.TreeEngine.TreeProvider tree = new CMS.TreeEngine.TreeProvider(ui);
// Get Single node specified by it`s site name, aliaspath And culture code
node = tree.SelectSingleNode("CorporateSite", "/Products/Notebooks/FS-V2030", "en-
us");
string result = "The node name is: " + node.NodeName;
```

#### Select single document by DocumentID

Please note: the difference between DocumentID and NodelD is that DocumentID is specific for particular language version of the document.

#### [C#]

```
using CMS.SiteProvider;
// Tree node
CMS.TreeEngine.TreeNode node = null;
// Tree provider
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
CMS.TreeEngine.TreeProvider tree = new CMS.TreeEngine.TreeProvider(ui);
// Get Single document node specified by it`s ID
node = tree.SelectSingleDocument(documentId);
string result = "The name of the document (node) is: " + node.DocumentName;
```

#### Select multiple documents

```
using CMS.SiteProvider;
DataSet ds = null;
// create a TreeProvider instance
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
CMS.TreeEngine.TreeProvider tree = new CMS.TreeEngine.TreeProvider(ui);
// get dataset of tree nodes specified by alias path and class names (separated by
semicolon),
```

// the second parameter says whether to return default culture documents if the
required
// document language version is not available
ds = tree.SelectNodes("CorporateSite","/Products/%", "en-us", True, "cms.menuitem;
cms.products");
// do something with dataset ...

#### 9.4.3 Create document

Creating a new document

[C#]

```
string newsName = "My first news";
// create tree provider instance
CMS.TreeEngine.TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMS.
CMSHelper.CMSContext.CurrentUser);
// get parent node for new document
CMS.TreeEngine.TreeNode parent = provider.SelectSingleNode(CMS.CMSHelper.
CMSContext.CurrentSiteName, "/News", "en-us");
// create a new tree node
CMS.TreeEngine.TreeNode node = new CMS.TreeEngine.TreeNode("cms.news", provider);
if (parent != null)
{
    // set document properties
   node.NodeName = newsName;
   node.NodeAlias = newsName;
   node.SetValue("DocumentCulture", "en-us");
   node.SetValue("NewsTitle", newsName);
   node.SetValue("NewsSummary", "Some summary.");
   node.SetValue("NewsText", "Some text.");
   node.SetValue("NewsReleaseDate", DateTime.Now);
    // create New document
   node.Insert(parent.NodeID);
}
```

#### 9.4.4 Update document

Update an existing document

```
// tree provider
CMS.TreeEngine.TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMS.
CMSHelper.CMSContext.CurrentUser);
// get document with specified site, alias path and culture
```

```
CMS.TreeEngine.TreeNode node = provider.SelectSingleNode(CMS.CMSHelper.CMSContext.
CurrentSiteName, "/News/MyFirstNews", "en-us");
if (node != null)
{
    // change some values
    node.SetValue("NewsSummary", "Some changed summary.");
    node.SetValue("NewsText", "Some changed text.");
    // Update the document
    node.Update();
}
```

#### 9.4.5 Delete document

#### **Deleting a document**

[C#]

```
// Tree provider
CMS.TreeEngine.TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMS.
CMSHelper.CMSContext.CurrentUser);
// Get document with specified site, aliaspath and culture
CMS.TreeEngine.TreeNode node = provider.SelectSingleNode(CMS.CMSHelper.CMSContext.
CurrentSiteName, "/News/MyFirstNews", "en-us");
if (node != null)
{
    // Delete the document
    node.Delete();
}
```

#### 9.4.6 Copy document

#### **Copying a document**

```
// Tree provider
CMS.TreeEngine.TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMS.
CMSHelper.CMSContext.CurrentUser);
// Get document (node) which will be copied
CMS.TreeEngine.TreeNode node = provider.SelectSingleNode(CMS.CMSHelper.CMSContext.
CurrentSiteName, "/Products/PDAs/ItemA", "en-us");
// Get target node under which the document will be copied
CMS.TreeEngine.TreeNode target = provider.SelectSingleNode(CMS.CMSHelper.
CMSContext.CurrentSiteName, "/Products/Notebooks", "en-us");
if ((target != null) && (node != null))
{
```

```
// copy the document under the specified target,
    // the third parameter says that document`s child nodes (if any) will not be
    copied
    provider.CopyNode(node, target.NodeID, false);
}
```

#### 9.4.7 Move document

#### Moving a document

[C#]

```
// Tree provider
CMS.TreeEngine.TreeProvider provider = new CMS.TreeEngine.TreeProvider(CMS.
CMSHelper.CMSContext.CurrentUser);
// Get document (node) which will be moved
CMS.TreeEngine.TreeNode node = provider.SelectSingleNode(CMS.CMSHelper.CMSContext.
CurrentSiteName, "/Products/PDAs/ItemA", "en-us");
// Get target node under which the document will be moved
CMS.TreeEngine.TreeNode target = provider.SelectSingleNode(CMS.CMSHelper.
CMSContext.CurrentSiteName, "/Products/Notebooks", "en-us");
if ((target != null) && (node != null))
{
// Move the document under the specified target
provider.MoveNode(node, target.NodeID);
}
```

#### 9.4.8 Using transactions when managing documents

This chapter explains how to work with transactions in Kentico CMS API. Transactions are usually used to ensure database consistency.

#### **Native transactions**

Kentico CMS uses SQL transactions to ensure the system database consistency when performing complex operations consisting of multiple steps. In such cases the whole operation forms a single block of SQL commands that can be rolled back when an error occurs or committed if the complete operation was successful. Transaction handling is provided by **CMS.DataEngine** library, in the **GeneralConnection** class.

Please note that you should always use single connection for every operation within the open transaction to avoid deadlocks.

The transactions flow in Kentico CMS looks like this:



**Please note:** Always pass the existing connection as a method parameter if you call the method that uses DB access within transaction.

#### Example

Please use following example as a template in all the methods that work with transactions:

```
using CMS.DataEngine;
using CMS.TreeEngine;
using CMS.FileManager;
using CMS.WorkflowEngine;
/// <summary>
/// Sample method
/// </summary>
/// <param name="conn">Data connection to use</param>
public void DoSomethingInTransaction(GeneralConnection conn)
{
    // Process within transaction
    using (var tr = new CMSTransactionScope(conn))
    {
        // --- HERE YOU CAN USE YOUR DATABASE ACCESS CODE LIKE: -
       DataSet ds = conn.ExecuteQuery("cms.user.selectall", null, null, null);
       // --- IF YOU NEED TO USE TREEPROVIDER, ALWAYS INSTATIATE IT WITH EXISTING
CONNECTION
       TreeProvider tree = new TreeProvider(null, conn);
        // --- ALWAYS USE METHOD OVERRIDES THAT USE CONNECTION (TREEPROVIDER)
```

You may also work with **TreeProvider** class instead of connection object. In that case, use its **Connection** property the same way like the **GeneralConnection** in this example and use the same connection object in all operations inside the transaction.

#### 9.4.9 Create linked document

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
. . .
            // Prepare the TreeProvider
            // it must be initialized with user information when editing document
structure
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName, "/TestingNews", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Update the data
                node.SetValue("NodeAlias", "TestingNewsLink");
                // Insert new culture version of the document in the same site
section
                node.InsertAsLink(node.NodeParentID);
                this.lblInfo.Text = "New link '" + node.NodeAliasPath + "' to the
document '/TestingNews' has been created.";
            }
```

#### 9.4.10 Delete linked document

#### [C#]

1254

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider
            // it must be initialized with user information when editing document
structure
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the linked document by alias path (any culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName, "/TestingNewsLink", TreeProvider.ALL_CULTURES, false, null, false
);
            if (node != null)
            {
                // Always delete the document with DocumentHelper
                // it handles all the dependencies
                DocumentHelper.DeleteDocument(node, tree, true, true, true);
                this.lblInfo.Text = "Link '" + node.NodeAliasPath + "' has been
deleted.":
            }
```

# 9.5 Managing attachments and files (cms.file)

#### 9.5.1 Managing attachments

The documents may contain a custom field of type "file". The field itself does not contain attachment data. Only **AttachmentGUID** (unique identifier) value is stored in the document field referencing the record within separate table.

The attachments are stored in the table **CMS_Attachment** which contains the attachment metadata (file name, size, type, etc.) and optionally the attachment binary data (depending on <u>where the files are</u> <u>stored</u>). Attachment file may also be stored in the filesystem if the system is configured for storing files in the database. You can work with the attachments using the **AttachmentManager** class methods.

Here are some examples how to work with attachments:

#### Adding a new attachment to a document

To add a new attachment to a document, you need to save the attachment and store its GUID (unique identifier) to the document field.

[C#]

```
using CMS.SiteProvider;
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.FileManager;
// Always work with some user when editing documents
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
TreeProvider tree = new TreeProvider(ui);
// First, get the document
CMS.TreeEngine.TreeNode node =
tree.SelectSingleNode(CMSContext.CurrentSite.SiteName, "/Files/home", "en-us");
if ( node != null )
  // Create the attachment manager
  AttachmentManager am = new AttachmentManager(tree.Connection);
  // Create the attachment
  Guid attachmentGuid = Guid.NewGuid();
  AttachmentInfo ai =
   new AttachmentInfo("c:\\home.gif", node.DocumentID, attachmentGuid, tree.
Connection);
 am.SetAttachmentInfo(ai);
  // Set the attachment reference
 node.SetValue("FileAttachment", attachmentGuid);
  node.Update();
}
```

#### Removing an attachment from a document

To remove an existing attachment from a document, you need to delete the attachment and remove the document field reference to it. You should always remove the old attachment if you insert a new one.

```
using CMS.GlobalHelper;
using CMS.FileManager;
using CMS.CMSHelper;
// ... this code continues from the previous example
// Get current attachment GUID
Guid existingGuid = ValidationHelper.GetGuid(node.GetValue("FileAttachment"), Guid
.Empty);
if (existingGuid != Guid.Empty)
{
  // Get the attachment
  AttachmentInfo existingAttachment =
    am.GetAttachmentInfo(existingGuid, CMSContext.CurrentSite.SiteName);
  if ( existingAttachment != null )
  {
```

```
// Delete the attachment
am.DeleteAttachmentInfo(existingAttachment.AttachmentID);
}
// Clear the attachment reference from the document field
node.SetValue("FileAttachment", null); ;
node.Update();
}
```

Please note: if you use workflow and versioning, see <u>Versioning internals</u> and the related chapters for more details how to work with attachments in the versioned documents.

#### 9.5.2 Managing files (cms.file)

The File document type (cms.file) is actually just another document type and you can modify it using the same methods that you use for other document types. The actual file (uploaded image, Word document or other file type) is stored as an attachment in field **FileAttachment**.

# 9.6 Managing documents with workflow

#### 9.6.1 Versioning internals

For versioned documents (with workflow assigned), only the published data is stored in the tables described in chapter <u>Content management internals</u>. Document versions and its history are stored in separate tables:

- CMS_VersionHistory Table containing the document versions. Each version of the document is represented by one record that contains the complete document data in XML.
- CMS_AttachmentHistory Table containing the attachment version records. Each attachment version is bound to one or more document versions. Every record contains binary data of the attachment.
- CMS_VersionAttachment Table containing the bindings of the attachment versions to the document versions.



When the document is **published**, version history record is taken and the document data are saved to the regular database structure (CMS_Tree, CMS_Document, coupled table) and current attachments are replaced by the attachment versions corresponding to the published document version.

#### Working with the versioned documents

Since the **TreeNode** methods can work only with the published records, there is an interface provided to work with the versioned documents. This interface is provided by classes **DocumentHelper**, **WorkflowManager** and **VersionManager** in the **CMS.WorkflowEngine** library. You should always use **DocumentHelper** for the document operations if not sure whether the document is versioned or not, the DocumentHelper methods will choose the proper actions for you. Basic methods to work with documents are:

- InsertDocument Inserts a new document; versioned equivalent to TreeNode.Insert method.
- InsertNewCultureVersion Inserts a new culture version of the document; versioned equivalent to TreeNode.InsertAsNewCultureVersion method.
- UpdateDocument Updates a document; versioned equivalent of the TreeNode.Update method. If the document is versioned, it updates the latest (checked out) version of the document.
- **DeleteDocument** Deletes a document. Versioned equivalent to the **TreeNode.Delete** which also deletes the depending records from the version history and attachment tables. You should always use this method to delete a document which is (was) versioned or contains any attachment fields.
- **GetDocument(s)** Gets the latest version of the document(s) from the version history record(s). Equivalent to **TreeProvider.SelectSingleNode** and **TreeProvider.SelectNodes**.

#### 9.6.2 Workflow internals

The workflow process is managed by the methods of the **WorkflowManager** class. Document uses workflow if there is a workflow scope defined for the document type and document location (SiteManager -> Development -> Workflow). If the document is in the middle of the workflow process and the workflow has been removed from the given group of documents, the current workflow must be finished (document must be published) in order to disable the workflow for the document.

There are three default workflow steps that are always used in the workflow process:

- Edit A new version of the document is edited.
- **Published** Document version was approved to be published and is either published or waiting to be published (if it's a scheduled document).
- Archived Document is archived, it is no longer published but it's stored for archive purposes.

You add your own workflow steps between the Edit and Published steps.

Here are some examples on how to use the workflow API:

#### Getting the document

You always need to get the proper document version first in order to keep the document data consistent if working with the versioned data. You can use both published and latest document version of the document for the basic workflow operations since it affects only the not-versioned data.

```
using CMS.SiteProvider;
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.WorkflowEngine;
// Always work with some user when editing documents
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
TreeProvider tree = new TreeProvider(ui);
// First, get the document
CMS.TreeEngine.TreeNode node =
tree.SelectSingleNode(CMSContext.CurrentSite.SiteName, "/News/Your-first-news",
"en-us");
```

#### Getting the document workflow information

You can use the **WorkflowManager.GetNodeWorkflow** method to get the workflow information for the document node.

#### [C#]

```
using CMS.WorkflowEngine;
// Create the workflow manager instance
WorkflowManager wm = new WorkflowManager(tree);
WorkflowInfo wi = wm.GetNodeWorkflow(node);
if (wi != null)
{
    // Document is using workflow
}
else
{
    // Not using workflow
}
```

You can also use the **WorkflowManager.GetNodeWorkflowScope** method to check whether there is some workflow scope defined for the given document.

#### Getting current workflow step

The current workflow step ID is stored in the document field **DocumentWorfklowStepID**. Please note: if the workflow is defined and step ID is missing, the document is in the "edit" step.

```
using CMS.WorkflowEngine;
if (wi != null)
{
    // Document is using workflow, get current step information
```

```
WorkflowStepInfo si = wm.GetStepInfo(node);
if (si != null)
{
    // Use the workflow step information
}
```

#### Changing the workflow step

You should always follow the workflow definition and use the built-in methods only to move between the workflow steps to ensure the system consistency. Workflow process moves one step at a time, you can move through several steps by calling the methods several times. You should not attempt to move before the "edit" step and after the "archived" step. Use **WorkflowManager.MoveToNextStep** (the "approve" action) and **WorkflowManager.MoveToPreviousStep** (the "reject" action).

[C#]

```
if (si != null)
{
    // Use the workflow step information to approve the document until it is
published
    while (si.StepName.ToLower() != "published")
    {
        si = wm.MoveToNextStep(node, "");
        if (si == null)
        {
            break;
        }
    }
}
```

Or

[C#]

```
if (si != null)
{
    // Use the workflow step information to reject the document until it is in the
edit step
    while (si.StepName.ToLower() != "edit")
    {
        si = wm.MoveToPreviousStep(node, "");
        if (si == null)
        {
            break;
        }
    }
}
```

To move the document to the Archived step, use WorkflowManager.ArchiveDocument method.

#### 9.6.3 Updating a versioned document

This example shows how to update a versioned document (document with workflow). Workflow and the versioning are very closely connected, there should be always a new document version created if you edit a document that is under workflow.

The basic version management operations are provided by the class DocumentHelper in the methods mentioned in the previous chapter (InsertDocument, ...). In order to manage the document versions, use VersionManager class methods.

Here are some examples how to work with versioned documents:

#### Getting the document

You always need to work with the latest document version, use DocumentHelper.GetDocument instead of just simple TreeProvider.SelectSingleNode.

#### [C#]

```
using CMS.SiteProvider;
using CMS.TreeEngine;
using CMS.CMSHelper;
using CMS.WorkflowEngine;
// Always work with some user when editing documents
UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
TreeProvider tree = new TreeProvider(ui);
// First, get the base document
CMS.TreeEngine.TreeNode node =
tree.SelectSingleNode(CMSContext.CurrentSite.SiteName, "/News/Your-first-news",
"en-us");
if ( node != null )
{
  // Get latest version of the document
  node = DocumentHelper.GetDocument(node, tree);
}
```

#### Checking out the document

If you edit the document, you should check it out to create a new document version and lock the document to avoid editing by someone else. Use VersionManager.CheckOut method to check out the document.

```
using CMS.WorkflowEngine;
// Check out the document
VersionManager vm = new VersionManager(tree);
vm.CheckOut(node);
```
#### Updating current document version

Use DocumentHelper.UpdateDocument method to update current document version.

#### [C#]

```
using CMS.WorkflowEngine;
// Update the document
node.SetValue("DocumentName", "New name");
DocumentHelper.UpdateDocument(node, tree);
```

### Check in the document

After you edit the document, you should check it in to allow other users to edit it or allow the workflow process to continue. Use VersionManager.CheckIn to do so.

#### [C#]

```
// Check in the document
vm.CheckIn(node, null, null);
```

## 9.6.4 Managing workflow schema

The following code samples show how to create a new schema Testing workflow with following steps:

Edit -> Article Approval (custom step) -> Publish -> Archive

It also creates a workflow scope that applies this workflow to all articles in the /TestingWorkflow section.

#### Creating a new workflow schema

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
...
// Prepare the data
WorkflowInfo wi = new WorkflowInfo();
wi.WorkflowDisplayName = "Testing workflow";
wi.WorkflowDisplayName = "TestingWorkflow";
// Insert the workflow
WorkflowInfoProvider.SetWorkflowInfo(wi);
```

// Create default steps (required for proper operation)
WorkflowInfoProvider.CreateDefaultWorkflowSteps(wi.WorkflowID);

#### Creating a workflow step

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Get the workflow
            WorkflowInfo wi = WorkflowInfoProvider.GetWorkflowInfo(
"TestingWorkflow");
            if (wi != null)
            {
                // Init new step
                WorkflowStepInfo wsi = new WorkflowStepInfo();
                wsi.StepDisplayName = "Article approval";
                wsi.StepName = "ArticleApproval";
                // Get published step info for the proper position
                WorkflowStepInfo psi = WorkflowInfoProvider.GetPublishedStep(wi.
WorkflowID);
                if (psi != null)
                {
                    // New step has the previous published step order
                    wsi.StepOrder = psi.StepOrder;
                    // Move the published step down
                    psi.StepOrder += 1;
                    WorkflowInfoProvider.SetWorkflowStepInfo(psi);
                    // Move the archived step down
                    WorkflowStepInfo asi = WorkflowInfoProvider.GetArchivedStep
(wi.WorkflowID);
                    if (asi != null)
                    {
                        asi.StepOrder += 1;
                        WorkflowInfoProvider.SetWorkflowStepInfo(asi);
                    }
                }
                // Insert the step to the database
                wsi.StepWorkflowID = wi.WorkflowID;
                WorkflowInfoProvider.SetWorkflowStepInfo(wsi);
            }
```

## Defining a workflow scope

[C#]

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Get the workflow
            WorkflowInfo wi = WorkflowInfoProvider.GetWorkflowInfo(
"TestingWorkflow");
            if (wi != null)
            {
                // Init new workflow scope
                WorkflowScopeInfo wsi = new WorkflowScopeInfo();
                wsi.ScopeStartingPath = "/TestingWorkflow";
                // Assign the document type article
                DataClassInfo ci = DataClassInfoProvider.GetDataClass("CMS.
Article");
                if ( ci != null )
                {
                    wsi.ScopeClassID = ci.ClassID;
                }
                wsi.ScopeSiteID = CMSContext.CurrentSite.SiteID;
                wsi.ScopeWorkflowID = wi.WorkflowID;
                // Save the scope to the database
                WorkflowInfoProvider.SetWorkflowScopeInfo(wsi);
            }
```

## **Deleting a workflow**

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
....
// Get the workflow
WorkflowInfo wi = WorkflowInfoProvider.GetWorkflowInfo(
```

"TestingWorkflow");

// Delete the worfklow
WorkflowInfoProvider.DeleteWorkflowInfo(wi.WorkflowID);

#### 9.6.5 A complete example

The following samples show you how to create, approve, publish, reject, archive and delete a document. It uses the sample workflow created in chapter <u>Managing workflow schema</u>:

Edit -> Article Approval (custom step) -> Publish -> Archive

#### Creating a new document

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
           // Prepare the TreeProvider (it must be initialized with user
information
            // when editing content)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the parent document
            CMS.TreeEngine.TreeNode parentNode = tree.SelectSingleNode(CMSContext.
                                   TreeProvider.ALL_CULTURES, true, null, false);
CurrentSiteName, "/",
            if (parentNode != null)
            {
                // Create new document
                CMS.TreeEngine.TreeNode node = new CMS.TreeEngine.TreeNode("CMS.
Article", tree);
                node.DocumentName = "TestingWorkflow";
                node.DocumentCulture = CMSContext.CurrentUser.
PreferredCultureCode;
                // Set document fields
                node.SetValue("ArticleName", "Testing workflow");
                node.SetValue("ArticleTeaserText", "Testing article for workflow"
);
                node.SetValue("ArticleText", "Testing article for workflow text");
                // Although article contains the attachment field, the attachment
can be added only
                                     // after the document has been created (see
below)
```

## **Editing a document**

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Get the latest version of the document (always use
DocumentHelper when using
                // workflow)
                node = DocumentHelper.GetDocument(node, tree);
                // Check out the document
                VersionManager vm = new VersionManager(tree);
                vm.CheckOut(node);
                // Update the document fields the regular way
                node.SetValue("ArticleName", "Edited testing workflow");
                node.SetValue("ArticleTeaserText", "Edited testing article for
```

```
workflow");
node.SetValue("ArticleText", "Edited testing article for workflow
text");
// Update the attachment if present
if (FileUpload.PostedFile != null)
{
// Add the attachment
DocumentHelper.AddAttachment(node, "ArticleTeaserImage",
FileUpload.PostedFile,
tree);
}
// Update the document
DocumentHelper.UpdateDocument(node, tree);
// Check in the document
vm.CheckIn(node, null, null);
}
```

## Approving the document

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Get the latest version of the document (always get the document
with DocumentHelper
                // when using workflow)
                node = DocumentHelper.GetDocument(node, tree);
                // Move the document to the next step (approve)
                WorkflowManager wm = new WorkflowManager(tree);
                wm.MoveToNextStep(node, "");
```

}

## **Rejecting the document**

#### [C#]

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Get the latest version of the document (always get the document
with DocumentHelper
                // when using workflow)
                node = DocumentHelper.GetDocument(node, tree);
                // Move the document to the next step (approve)
                WorkflowManager wm = new WorkflowManager(tree);
                wm.MoveToPreviousStep(node, "");
            }
```

#### Publish the document

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
....
```

```
// Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Get the latest version of the document (always get the document
with DocumentHelper
                // when using workflow)
                node = DocumentHelper.GetDocument(node, tree);
                // Move the document to the next step (approve)
                WorkflowManager wm = new WorkflowManager(tree);
                // Approve until the step is publish
                WorkflowStepInfo currentStep = wm.GetStepInfo(node);
                while ((currentStep != null) && (currentStep.StepName.ToLower() !
= "published"))
                {
                    currentStep = wm.MoveToNextStep(node, "");
                }
             }
```

#### Archive the document

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
```

```
false, null, false);
    if (node != null)
    {
        // Get the latest version of the document (always get the document
with DocumentHelper
        // when using workflow)
        node = DocumentHelper.GetDocument(node, tree);
        // Archive the document
        WorkflowManager wm = new WorkflowManager(tree);
        wm.ArchiveDocument(node, "");
    }
```

## Delete (destroy) the document

[C#]

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.TreeEngine;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
            // Prepare the TreeProvider (it must be initialized with user
information when editing
            // document structure)
            UserInfo ui = UserInfoProvider.GetUserInfo("administrator");
            TreeProvider tree = new TreeProvider(ui);
            // Get the document (current culture)
            CMS.TreeEngine.TreeNode node = tree.SelectSingleNode(CMSContext.
CurrentSiteName,
               "/TestingWorkflow", CMSContext.CurrentUser.PreferredCultureCode,
false, null, false);
            if (node != null)
            {
                // Always delete the document with DocumentHelper, it handles all
the dependencies
                DocumentHelper.DeleteDocument(node, tree, true, true);
            }
```

# 9.7 Security management

# 9.7.1 Security Internals Overview

The security information is stored in the following tables:

• CMS_User - user information. If you need to import users from an existing database, you can import

them directly into this table, there are no special dependencies.

- CMS_Role roles
- CMS_UserRole assigns users to roles
- CMS_UserSite assigns users to sites
- CMS_Resource contains modules
- CMS_ResourceSite assigns modules to sites
- CMS_Permission permissions (permission names, such as "read", "modify", etc.) used for modules (CMS_Resource) and document types (CMS_Class)
- CMS_RolePermission assigns permissions to user roles
- · CMS_Class contains definitions of data classes and document types

Most of these settings can be managed by the classes available in the CMS.SiteProvider namespace. The following chapters contain API examples of some common actions.

## 9.7.2 Managing users

#### Creating a new user

[C#]

```
using CMS.SiteProvider;
// Create UserInfo
UserInfo user = new UserInfo();
// Set some properties
user.UserName = "Alice";
user.FirstName = "Alice";
user.LastName = "Cooper";
user.LastName = "Alice Cooper";
user.FullName = "Alice Cooper";
user.Email = "alice.cooper@domain.com";
user.IsEditor = true;
user.IsEditor = true;
user.PreferredCultureCode = "en-us";
// Create new user
CMS.SiteProvider.UserInfoProvider.SetUserInfo(user);
```

# Selecting and updating a user

```
using CMS.SiteProvider;
// Get UserInfo of the specified name
UserInfo user = CMS.SiteProvider.UserInfoProvider.GetUserInfo("Alice");
if (user != null)
{
    // Change some values
    user.Enabled = false;
```

```
// Update the UserInfo
CMS.SiteProvider.UserInfoProvider.SetUserInfo(user);
}
```

#### **Deleting a user**

#### [C#]

CMS.SiteProvider.UserInfoProvider.DeleteUser("Alice");

## Getting the list of sites the user belongs to

#### [C#]

```
using CMS.SiteProvider;
// Get UserInfo of the specified name
UserInfo user = CMS.SiteProvider.UserInfoProvider.GetUserInfo("Alice");
if (user != null)
{
    // Get table with user's sites
    DataTable table = CMS.SiteProvider.UserInfoProvider.GetUserSites(user.UserID);
    if (table != null)
    {
        // Process table ...
    }
}
```

#### Adding user to a site

#### [C#]

```
// Use UserName and SiteName to add user to site
CMS.SiteProvider.UserInfoProvider.AddUserToSite("Alice", CMS.CMSHelper.CMSContext.
CurrentSite.SiteName);
```

### Removing user from a site

```
// User UserName and SiteName to remove user from site
CMS.SiteProvider.UserInfoProvider.RemoveUserFromSite("Alice", CMS.CMSHelper.
CMSContext.CurrentSite.SiteName);
```

## 9.7.3 Setting user password

#### [C#]

```
using CMS.SiteProvider;
...
UserInfoProvider.SetPassword("testinguser", "newpassword");
```

# 9.7.4 Managing roles

### Creating a new role

[C#]

```
using CMS.SiteProvider;
// Create new RoleInfo
RoleInfo role = new RoleInfo();
// Set RoleInfo properties except RoleID
role.RoleName = "DocumentEditor";
role.DisplayName = "Document editor";
role.Description = "some description...";
role.SiteID = CMS.CMSHelper.CMSContext.CurrentSiteID;
// check if the role name is unique in the given site
if (!CMS.SiteProvider.RoleInfoProvider.RoleExists(role.RoleName, CMS.CMSHelper.
CMSContext.CurrentSiteName))
ł
   // Insert new RoleInfo for current site
  CMS.SiteProvider.RoleInfoProvider.SetRoleInfo(role);
}
else
{
   // Role with the same name already exists in specified site
}
```

# Selecting and updating a role

```
using CMS.SiteProvider;
// Get role of specified name from current site
RoleInfo role = CMS.SiteProvider.RoleInfoProvider.GetRoleInfo("ArticleEditor",
CMS.CMSHelper.CMSContext.CurrentSiteName);
if (role != null)
{
```

```
// Make some changes
role.Description = "Changed description.";
// Update the role
CMS.SiteProvider.RoleInfoProvider.SetRoleInfo(role);
}
```

#### **Deleting a role**

#### [C#]

```
// Delete the role
CMS.SiteProvider.RoleInfoProvider.DeleteRole("ArticleEditor", CMS.CMSHelper.
CMSContext.CurrentSiteName);
```

## 9.7.5 Managing user roles

Getting users who belong to the given role

## [C#]

```
using CMS.SiteProvider;
// Get role of specified name from current site
RoleInfo role = CMS.SiteProvider.RoleInfoProvider.GetRoleInfo("ArticleEditor",
CMS.CMSHelper.CMSContext.CurrentSiteName);
if (role != null)
{
    // Get datatable of the role members
    System.Data.DataTable users = CMS.SiteProvider.RoleInfoProvider.GetRoleUsers
(role.RoleID);
    if (users != null)
    {
        // the table now contains the users that belong to the given role ...
    }
}
```

#### Get user's roles

```
using CMS.SiteProvider;
// Get UserInfo of the specified name
UserInfo user = CMS.SiteProvider.UserInfoProvider.GetUserInfo("Alice");
if (user != null)
{
```

```
// Get table with all user roles
System.Data.DataTable table = CMS.SiteProvider.UserInfoProvider.GetUserRoles
(user);
if (table != null)
{
    // the table now contains the roles the user is member of...
}
```

## Adding user to role

[C#]

```
// Use UserName, RoleName and SiteName to add user to role
CMS.SiteProvider.UserInfoProvider.AddUserToRole("Alice", "DocumentEditor", CMS.
CMSHelper.CMSContext.CurrentSiteName);
```

# Removing user from role

## [C#]

```
// Use UserName, RoleName and SiteName to remove user from role
CMS.SiteProvider.UserInfoProvider.RemoveUserFromRole("Alice", "DocumentEditor",
CMS.CMSHelper.CMSContext.CurrentSiteName);
```

# Checking if user is member of a given role

See Checking user permissions for more details.

# 9.7.6 Authenticating user

Checking user name and password

```
using CMS.SiteProvider;
// UserInfo
UserInfo user = null;
user = CMS.SiteProvider.UserInfoProvider.AuthenticateUser("Alice", "******", CMS.
CMSHelper.CMSContext.CurrentSiteName);
if (user != null)
{
    // Authentication was successful
}
```

## 9.7.7 Checking user permissions

Getting current user's name

[C#]

string currentUserName = CMS.CMSHelper.CMSContext.CurrentUser.UserName;

### Checking if user is authenticated

[C#]

bool isAuthenticated = HttpContext.Current.User.Identity.IsAuthenticated;

## Checking if user is member of a role

[C#]

```
if (CMS.CMSHelper.CMSContext.CurrentUser.IsInRole("CMSEditor", CMS.CMSHelper.
CMSContext.CurrentSiteName))
{
    //the current user is member of the CMSEditor role
}
```

# Checking if a permission for a document is granted to a user

[C#]

```
if (CMS.CMSHelper.CMSContext.CurrentUser.IsAuthorizedPerTreeNode(nodeId, CMS.
TreeEngine.NodePermissionsEnum.Read) ==
        CMS.TreeEngine.AuthorizationResultEnum.Allowed)
{
        // the current user is authorized to read the document
}
```

# Checking if a permission for a module (resource) is granted to a user

```
if (CMS.CMSHelper.CMSContext.CurrentUser.IsAuthorizedPerResource("CMS.Forums",
    "Modify"))
{
    // the "Modify" permission in the "CMS.Forums" module in the current website is
```

granted to the current user
}

Checking if a permission for a document type or custom table (class name) is granted to a user

[C#]

```
if (CMS.CMSHelper.CMSContext.CurrentUser.IsAuthorizedPerClassName("CMS.File",
    "Delete"))
{
        // the "Delete" permission for all documents of type "CMS.File" in the current
    website is granted to the current user
}
```

# 9.8 Site management, import and export

## 9.8.1 Creating a new website

The following example shows how you can create a new website based on the Blank website template:

```
using CMS.SettingsProvider;
using CMS.CMSHelper;
using CMS.GlobalHelper;
using CMS.SiteProvider;
using CMS.CMSImportExport;
. . .
        // Site name
        string siteName = "testAPIsite";
        try
        {
            // Create site import settings
            SiteImportSettings settings = new SiteImportSettings();
            //Initialize the settings
            settings.SiteName = siteName;
            settings.SiteDisplayName = "Test API site";
            settings.SiteDescription = "Site for testing the API examples";
            settings.SiteDomain = "127.0.0.254";
            // Get 'Blank site' web template
            WebTemplateInfo template = WebTemplateInfoProvider.GetWebTemplateInfoByC
            // Template exists
            if (template != null)
            {
```

```
// Set source file path
                string templatePath = template.WebTemplateFileName;
                settings.SourceFilePath = Server.MapPath(templatePath.TrimEnd('\\')
                // Load default selection to preselect the objects
                settings.LoadDefaultSelection();
                // Create new site using 'Blank' template
                ImportProvider.ImportObjectsData(settings);
                // Run site
                SiteInfoProvider.RunSite(siteName);
                this.lblInfo.Text = string.Format("New site with code name '{0}' has
                return;
            }
           else
            {
                this.lblInfo.Text = string.Format("Failed to create new site
'{0}'.<br />Web template 'Blank site' doesn't exist.", siteName);
               this.lblInfo.CssClass = "ErrorLabel";
            }
       }
       catch (RunningSiteException)
        {
           this.lblInfo.Text = string.Format("Failed to run site '{0}'.", siteName)
           this.lblInfo.CssClass = "ErrorLabel";
        }
       catch (Exception ex)
        ł
           this.lblInfo.Text = string.Format("Failed to create new site '{0}'.<br
/>Original exception: " + ex.Message, siteName);
           this.lblInfo.CssClass = "ErrorLabel";
        }
```

## 9.8.2 Import and export of a website

You can export and import a website using Kentico CMS API, using the CMS.CMSImportExport. ImportProvider/ExportProvider classes. You can use the following methods:

- public static void ImportSite(string siteName, string siteDisplayName, string siteDomain, string fullSourcePath, string websitePath)
  - siteName code name of the newly created website
  - siteDisplayName display name of the newly created website
  - siteDomain domain name of the newly created website
  - fullSourcePath physical disk path of the package with exported site
  - · websitePath physical disk path of the website root
- public static void ExportSite(string siteName, string fullExportFilePath, string websitePath, bool template)
  - · siteName code name of the website to be exported
  - fullExportFilePath physical disk path of the export package
  - · websitePath physical disk path of the website root
  - template if false, a .zip file containing the site will be created under fullExportFilePath (should be

the full path including the .zip file name). Otherwise, the whole site will be exported to the same location (should be the full path without any file name in this case)

### 9.8.3 Getting website data

The following sample code shows how you can get a website as a SiteInfo object:

#### [C#]

```
using CMS.SiteProvider;
....
string domainName = "localhost";
string applicationPath = "/KenticoCMS";
// Get site object by ID
SiteInfo si = SiteInfoProvider.GetSiteInfo(1);
// Get site object by site name
SiteInfo si2 = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
// Get running site by domain name and application path
SiteInfo si3 = SiteInfoProvider.GetRunningSiteInfo(domainName, applicationPa
```

The following sample code shows how you can get a DataSet containing all websites from the system:

#### [C#]

```
using System.Data;
using CMS.SiteProvider;
....
string where = "";
string orderby = "";
// Get dataset of websites by where condition and order by
DataSet ds2 = SiteInfoProvider.GetSites(where, orderby);
// Get dataset of all websites
DataSet ds = SiteInfoProvider.GetAllSites();
```

## 9.8.4 Updating website properties

The following example shows you how to modify website properties in your code:

```
using CMS.CMSHelper;
using CMS.SiteProvider;
using CMS.WorkflowEngine;
. . .
        // Get current site name (you can use code name of the required site instead
        string siteName = CMSContext.CurrentSiteName;
        // Check if the site name is available
        if (siteName != null)
        {
            try
            {
                // Stop the site because we will change the domain of the site
                SiteInfoProvider.StopSite(siteName);
                // Get site info
                SiteInfo si = SiteInfoProvider.GetSiteInfo(siteName);
                if (si != null)
                {
                    si.DisplayName = "New display name";
                    si.Description = "New description";
                    // Change domain of the site
                    si.DomainName = "mynewdomain.com";
                    // Set new domain alias with default content language set to en-
                    SiteInfoProvider.AddDomainAlias(siteName, "newdomainalias", "en-
                    // Save the changes
                    SiteInfoProvider.SetSiteInfo(si);
                }
                // Run the site
                SiteInfoProvider.RunSite(siteName);
                lblInfo.Text = string.Format("Site '{0}' has been edited.", siteName
            }
            catch (RunningSiteException ex)
            {
                lblError.Text = "Site cannot be started.<br />Original exception: "
            }
            catch (Exception ex)
            {
                lblError.Text = "Error when modifying site properties.<br />Original
            }
        }
```

The following sample code shows how you can add a new content culture to an existing website:

```
using CMS.SiteProvider;
...
// Get site and culture objects
SiteInfo si = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
CultureInfo ci = CultureInfoProvider.GetCultureInfo("AR-Sa");
// If both exists
if ((si != null) && (ci != null))
{
    // Add culture to site
    CultureSiteInfoProvider.AddCultureToSite(ci.CultureID, si.SiteID);
}
```

The following sample code shows how you can add a new domain alias to an existing website:

#### [C#]

```
using CMS.SiteProvider;
....
// Get site object by site code name
SiteInfo si = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
// If site exists
if (si != null)
{
    // Create new domain alias object
    SiteDomainAliasInfo sdai = new SiteDomainAliasInfo();
    // Set properties
    sdai.SiteDomainAliasName = "127.0.0.1";
    sdai.SiteID = si.SiteID;
    // Save to database
    SiteDomainAliasInfoProvider.SetSiteDomainAliasInfo(sdai);
    }
```

## 9.8.5 Starting and stopping websites

The following sample code shows how you can start a website:

```
using CMS.SiteProvider;
...
// Get site object by code name
SiteInfo si = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
```

```
// If site exists
if (si != null)
{
    // Run site
    SiteInfoProvider.RunSite(si.SiteName);
}
```

The following sample code shows how you can stop a website:

### [C#]

```
using CMS.SiteProvider;
...
// Get site object by code name
SiteInfo si = SiteInfoProvider.GetSiteInfo("CorporateSiteASPX");
// If site exists
if (si != null)
{
    // Stop site
    SiteInfoProvider.StopSite(si.SiteName);
}
```

## 9.8.6 Deleting websites

The following example shows how you can delete an existing website; it uses a label control with ID IbIInfo to display t

```
using CMS.SiteProvider;
using CMS.CMSHelper;
using CMS.WorkflowEngine;
....
// Code name of the site
string siteName = "mysitecodename";
// Delete records in CMS_Tree and CMS_Document
DocumentHelper.DeleteSiteTree(siteName, null);
// Delete other dependencies and the site
SiteInfoProvider.DeleteSite(siteName);
lblInfo.Text = string.Format("Site '{0}' has been deleted.", siteName);
```

# 9.9 Custom Providers

# 9.9.1 Custom Providers Overview

Kentico CMS allows you to develop the following custom providers and use them instead of the standard ones:

- <u>Custom Data Provider</u>
- <u>Custom Search Provider</u>
- <u>Custom E-mail Provider</u>
- <u>Custom E-commerce Provider</u> (the link leads to dedicated chapter in *Kentico CMS E-commerce guide*)

You can also use <u>global event handlers</u> to customize the system behavior, such as document modifications, authentication process, etc.

# 9.9.2 Custom Data Provider

The Custom Data Provider can be used to implement your own database connector.

**Please note:** The Custom Data Provider is NOT intended for accessing a non-Microsoft SQL Server database engines. It's only intended for minor modifications of the way the queries are executed against the Microsoft SQL Server.

1. Open the web project in Visual Studio.

2. Copy the **CustomDataProvider** project from *<installation directory>/CodeSamples* to your Solution directory.

- 3. Add the project **CustomDataProvider** to the solution.
- 4. Add the reference to the new project to the website project.

5. Add the reference to the **IDataConnectionLibrary**, **SettingsProvider**, **DirectoryUtilities** a **GlobalHelper** libraries located in the website project to the CustomDataProvider project.

6. Build the solution.

7. Add the following key to the AppSettings section of your web.config file:

<add key="CMSDataProviderAssembly" value="CMS.CustomDataProvider"/>

8. Run the website, it should use the CustomDataProvider library now.

9. If everything works fine, you can modify the code of the Custom Data Provider as needed.

# 9.9.3 Custom E-mail Provider

The custom e-mail provider allows you to use third-party e-mail components for sending e-mails or add custom actions when an e-mail is sent (e.g. logging the sent e-mails to some file for auditing purposes). All e-mails sent by Kentico CMS and its modules will use your custom e-mail provider.

# Example

In this example, we will create a custom e-mail provider that will log every e-mail into a file.

1. Copy the **CustomEmailProvider** project from Kentico CMS installation (typically *C:\Program Files\KenticoCMS\<version>\CodeSamples\CustomEmailProvider*) to some development folder (not under the web project).

2. Open the **CMS** web project using the **WebProject.sln** file. Click **File -> Add -> Existing Project** and select the **CustomEmailProvider.csproj** file in the folder where you copied the **CustomEmailProvider** project. Your Solution Explorer window will look like this:

Solution Explorer - Custo 👻 🕂 🗙
🛅   🔂 🛃   🖧
😡 Solution 'WebProject' (2 projects
🗄 🖙 🚰 CustomEmailProvider
🗄 🔤 Properties
🗄 🔤 References
🔤 EmailProvider.cs

3. Unfold the **References** section of the **CustomEmailProvider** project and delete invalid references.

4. Right-click the **CustomEmailProvider** project and choose **Add Reference**. Choose the **Browse** tab and locate the **bin** folder of your CMS web project on the disk. Choose to add a reference to the following libraries:

- CMS.EmailProvider.dll
- CMS.IEmailEngine.dll
- CMS.SettingsProvider.dll

5. Unfold the **bin** folder in the **CMS web project**. Right-click the **bin** folder and choose **Add Reference**. Choose the **Projects** tab and click **OK** to add the **CustomEmailProvider** project reference:

.NET COM Projects Browse Recent
Project Name Project Directory
CustomEmailProvider C:\Temp\CodeSamples\CustomEmailPr
۲ ( III ) ۲
OK Cancel

6. Now you can modify the **CustomEmailProvider** library and place your code to the **SendEmail** method. Enter the following code into the **EmailProvider.SendEmail** method:

[C#]

```
// send the e-mail using the standard e-mail provider
CMS.EmailProvider.EmailProvider standardEmailProvider = new CMS.EmailProvider.
EmailProvider();
standardEmailProvider.SendEmail(siteName, message);
// log e-mail in the log file
System.IO.StreamWriter sw;
sw = System.IO.File.AppendText("C:\\_test\\EmailLogFile.txt"); // use a custom
valid path
sw.WriteLine(DateTime.Now.ToString() + ": " + message.Subject);
sw.Close();
```

7. Set the following value in your web.config file:

<add key="CMSEmailProviderAssembly" value="CMS.CustomEmailProvider" />

8. Click **Build -> Rebuild solution**. Go to the site and subscribe to a newsletter or use some other email-related feature. When the e-mail is sent, it's logged in the file **EmailLogFile.txt** located in the path you specified in your code.

# 9.9.4 Custom Search Provider

Kentico CMS allows you to write your own search provider that can use some third-party search engine. You can also write a custom search provider when you need to modify or filter search results returned by the standard search engine.

The following example explains how you can limit the standard search path to a subsection of your

website.

Tip: This is only an example to show how the standard search engine can be modified. The search path can easily be modified by setting the **Path** property of individual search web parts or controls.

1. Copy the **CustomSearchProvider** project from Kentico CMS installation (typically *C:\Program Files\KenticoCMS\<version>\CodeSamples\CustomSearchProvider*) to some development folder (not under the web project).

2. Open the **CMS** web project using the **WebProject.sln** file. Click **File -> Add -> Existing Project** and select the **CustomSearchProvider.csproj** file in the folder where you copied the **CustomSearchProvider** project. Your Solution Explorer window will look like this:



3. Unfold the **References** section of the **CustomSearchProvider** project and delete invalid references.

4. Right-click the **CustomSearchProvider** project and choose **Add Reference**. Choose the **Browse** tab and locate the **bin** folder of your CMS web project on the disk. Choose to add a reference to the following libraries:

- CMS.ISearchEngine.dll
- CMS.SearchProviderSQL.dll
- CMS.DataEngine.dll
- CMS.IDataConnectionLibrary.dll

5. Unfold the **bin** folder in the **CMS web project**. Right-click the **bin** folder and choose **Add Reference**. Choose the **Projects** tab and click **OK** to add the **CustomSearchProvider** project reference:

Mad Reference	2 ×
.NET COM Projects	Browse Recent
Project Name	Project Directory
CustomSearchProvider	C:\Temp\CodeSamples\CustomSearchP
	OK Cancel

6. Now you can modify the **SearchProvider.cs** library and place your code into the Search method. Modify the code of the SearchProvider.Search method to look like this:

#### [C#]

```
public DataSet Search(string siteName, string searchNodePath, string cultureCode,
string searchExpression, SearchModeEnum searchMode, bool searchChildNodes, string
classNames, bool filterResultsByReadPermission, bool searchOnlyPublished, string
whereCondition, string orderBy, bool combineWithDefaultCulture)
{
    //limit searchNodePath to the /Products section of the website only
    searchNodePath = "/Products/%";
    CMS.SearchProviderSQL.SearchProvider standardSearchProvider = new CMS.
SearchProviderSQL.SearchProvider.Search(siteName, searchNodePath,
cultureCode, searchExpression, searchMode, searchChildNodes, classNames,
filterResultsByReadPermission, searchOnlyPublished, whereCondition, orderBy,
combineWithDefaultCulture);
    return ds;
}
```

7. Add the following value to the /configuration/appSettings section of your web.config file:

<add key="CMSSearchProviderAssembly" value="CMS.CustomSearchProvider" />

8. Click **Build -> Rebuild solution**. Go to the live site and try to search for some text using the SQL Search engine, for example on the **Corporate Sample site** at **Examples -> Web Parts -> Full-Text Search -> SQL Search dialog with results**. You will notice that the search now only returns results

from the /Products section of the website.



# 9.10 Data layer

## 9.10.1 Overview

Kentico CMS has its own data layer components that ensure unified access to the database. Each entity, such as "user", "site", "document", has its own "data class". The data class represents the data structure of the entity (using the XML schema) and SQL queries for INSERT, UPDATE, SELECT and DELETE operations. The data layer is currently working only with Microsoft SQL Server, but it's designed for use with other data engines in future.

## How it Works

When you need to create a new user record, you create a new instance of DataClass type and specify its class name as "cms.user", which is a code name of this entity. The system automatically creates a new DataRow based on the user entity XML Schema. Then you set the values of its attributes, such as UserName or FullName and call the Insert method. The system uses pre-defined INSERT query to insert the values into the appropriate table that is also stored in the definition of the cms.user entity.

## **Related Namespaces**

CMS.DataEngine CMS.DataProviderSQL CMS.IDataConnectionLibrary CMS.SettingsProvider

## **Related Tables**

CMS_Class CMS_Query

# 9.10.2 Code examples

The following examples show how you can use the CMS.DataEngine library for low-level data manipulation.

#### Only for illustration

The code is used only for illustration. It's recommended that you use the CMS.

SiteProvider.UserInfoProvider class for manipulation of the user data.

#### Creating a new user

[C#]

```
using CMS.DataEngine;
...
DataClass userObj = new DataClass("cms.user");
userObj.SetValue("username", "johns");
userObj.SetValue("fullname", "John Smith");
userObj.Insert();
```

#### Selecting and updating an existing user

#### [C#]

```
using CMS.DataEngine;
...
DataClass userObj = new DataClass("cms.user", 10);
string userName = (string) userObj.GetValue("username");
userObj.SetValue("fullname", "John Smith Jr.");
userObj.Update();
```

#### Deleting a user

[C#]

```
using CMS.DataEngine;
...
DataClass userObj = new DataClass("cms.user", 10);
if (! userObj.IsEmpty())
{
    userObj.Delete();
}
```

#### Running a custom query

You can run a custom query if you first create it either manually in the CMS_Query table or through the administration interface (if it's supported for the chosen entity).

#### [C#]

using CMS.DataEngine;
...

```
GeneralConnection cn = ConnectionHelper.GetConnection();
DataSet ds = null;
object[,] parameters = new object[1, 3];
parameters[0, 0] = "@UserName";
parameters[0, 1] = "johns";
ds = cn.ExecuteQuery("cms.user.selectbyname", parameters);
```

## 9.10.3 Pre- and post-processing queries

You can pre-process database queries and post-process query results using the OnBeforeExecuteQuery and OnAfterExecuteQuery events in the SqlHelperClass.

#### **Pre-processing queries**

The **OnBeforeExecuteQuery** event is executed before any query is executed. Using it, you can influence the behavior of the query and its code on the fly.

The code below is the delegate definition for the event:

```
/// <summary>
/// Query execution event handler
/// </summary>
/// <param name="query">Executed query</param>
/// <param name="conn">Connection</param>
public delegate void BeforeExecuteQueryEventHandler(QueryParameters query,
IDataConnection conn);
```

And this code example shows how you can use the event. You need to register the event in the **AfterApplicationStart** method in ~/*App_Code/Global/CMS/CMSApplication.cs*. This particular example replaces 'CMS_User' with 'View_CMS_User' in case that the processed query is *cms.user.selectall*.

```
///
/// Fires after the application start event
///
public static void AfterApplicationStart(object sender, EventArgs e)
{
    // Add your custom actions
    CMS.SettingsProvider.SqlHelperClass.OnBeforeExecuteQuery += new CMS.
SettingsProvider.SqlHelperClass.BeforeExecuteQueryEventHandler
(BeforeExecuteQuery);
}
static void BeforeExecuteQuery(CMS.SettingsProvider.QueryParameters query, CMS.
IDataConnectionLibrary.IDataConnection conn)
{
    if (query.Name != null)
        {
        switch (query.Name.ToLower())
        {
```

```
case "cms.user.selectall":
    query.Text = query.Text.Replace("CMS_User", "View_CMS_User");
    break;
  }
}
```

## Post-processing queries

The **OnAfterExecuteQuery** event is raised after any query is executed and you can use it to modify the result of the query. It can handle only a *DataSet*, thereby only calls using the *ExecuteQuery* method can be post-processed this way.

The code below is the delegate definition for this event:

```
/// <summary>
/// Query execution event handler
/// </summary>
/// <param name="query">Executed query</param>
/// <param name="conn">Connection</param>
public delegate void BeforeExecuteQueryEventHandler(QueryParameters query,
IDataConnection conn);
```

And this code example shows how you can use the event. You need to register the event in the **AfterApplicationStart** method in ~/*App_Code/Global/CMS/CMSApplication.cs*. This particular example basically gives dynamically generated full name instead of the one that is set in the user settings. This will not be reflected in the UI as you are only processing the result of the query, so please take this just as an example of how you can use the event.

```
/// Fires after the application start event
public static void AfterApplicationStart(object sender, EventArgs e)
{
    // Add your custom actions
   CMS.SettingsProvider.SqlHelperClass.OnAfterExecuteQuery += new CMS.
SettingsProvider.SqlHelperClass.AfterExecuteQueryEventHandler(AfterExecuteQuery);
}
static void AfterExecuteQuery(CMS.SettingsProvider.QueryParameters query, CMS.
IDataConnectionLibrary.IDataConnection conn, ref DataSet result)
ł
    if (query.Name != null)
    {
        switch (query.Name.ToLower())
            case "cms.user.selectall":
                if (result != null)
                {
                    DataTable dt = result.Tables[0];
                    foreach (DataRow dr in dt.Rows)
                    {
```

# 9.11 Global events and their handling

## 9.11.1 Event handling overview

Global events allow you to execute custom actions when some CMS event occurs. For example, if a document is created in the CMS system, you can handle the corresponding event, get information about the new document and send its content by e-mail or use a third-party component to generate a PDF version of the document.

## Events that can be handled

- Data updates insert/update/delete actions for all data items.
- Exceptions
- <u>Security events</u> authentication and authorization.
- Document events TreeNode insert/update/delete operations.
- <u>Workflow events</u> document approval/rejection/publishing/archiving operations.

Similar topics: Writing custom search engine provider

# Enabling custom event handling

If you want to use custom event handlers, make sure the *<appSettings>* node of your web project's *web.config* file contains the following key:

<add key="CMSUseCustomHandlers" value="true" />

#### Default event handler library

The default custom event handler library is **CMS.CustomEventHandler**. Its name can be changed by means of a parameter in the *<appSettings>* node of your project's *web. config* file.

If the following line is inserted in the *<appSettings>* node, the library name will be changed to *CMS.CustomEventHandlerVB*:



## How to write your own event handler

1. Copy the **CustomEventHandler** project from Kentico CMS installation (typically *C: \ProgramFiles\KenticoCMS\<version_number>* CodeSamples\CustomEventHandler) to any custom folder that is not under the root of your web project (e.g. *C:\customhandler*).

2. Open the **CMS** web project using the **WebProject.sln** file. Click **File -> Add -> Existing Project** and select the **CustomEventHandler.csproj** file located in the folder where you copied the **CustomEventHandler** project. Your Solution Explorer window should look like this:



3. Unfold the **References** section under the **CustomEventHandler** project and remove all invalid references (marked with the yellow exclamation icon).

4. Now you need to update the references. Unfold the **bin** folder in the Kentico CMS web project and delete the standard CMS.CustomEventHandler.dll library.

5. Right-click the **bin** folder and choose **Add Reference**. Choose the **Projects** tab and click **OK** to add a reference to the **CustomEventHandler** project:

👌 Add Re	ference		]		? <mark>x</mark>
.NET	COM	Projects	Browse	Recent	
Proje	ect Name	*		Project Directory	
Cust	omEvent	Handler		C:\Temp\CodeSamples\Co	ustomEventHa
•					F.
				ОК	Cancel

6. Now right-click the **CustomEventHandler** project and choose **Add Reference**. Choose the **Browse** tab and locate the **bin** folder of your CMS web project on the disk. Choose to add a reference to the following libraries:

- CMS.GlobalEventHelper.dll
- CMS.TreeEngine.dll
- CMS.GlobalHelper.dll
- CMS.SiteProvider.dll
- CMS.CMSHelper.dll
- CMS.SettingsProvider.dll
- CMS.Staging.dll
- CMS.DataEngine.dll
- CMS.EmailEngine.dll
- CMS.WorkflowEngine.dll

You can also navigate to the **bin** folder on the **Browse** tab and copy&paste the following string into the **Add Reference** dialog to add all the libraries.

```
"CMS.GlobalEventHelper.dll" "CMS.TreeEngine.dll" "CMS.GlobalHelper.dll" "CMS.
SiteProvider.dll" "CMS.CMSHelper.dll" "CMS.SettingsProvider.dll" "CMS.Staging.dll"
"CMS.DataEngine.dll" "CMS.EmailEngine.dll" "CMS.WorkflowEngine.dll"
```

If you needed to use another library in your custom handlers, please add a reference to it the same way as described in this step.

## 7. Click Build -> Rebuild solution.

Now you can modify the libraries under the **CustomEventHandler** project and add your own code to handle the appropriate events. The places where you should place the code are marked with upper-case comments.

You can find more details on particular events in the following chapters.

1294 Kentico CMS 5.5 R2 Developer's Guide

# 9.11.2 Data handler (CustomDataHandler class)

This handler allows you to add custom actions to the following events:

- OnBeforeUpdate
- OnAfterUpdate
- OnBeforeInsert
- OnAfterInsert
- OnBeforeDelete
- OnAfterDelete
- OnGetContent

The events are applied to all data items that are stored to the database. It includes documents, user information or any other settings. They receive the data object of type **DataClass** that can be modified. In case of delete handlers, the class name and ID is provided.



#### Handling document events

For handling document events, please use the *CustomTreeNodeHandler* class instead of the *CustomDataHandler* class. Every document uses up to 3 tables, which leads to three separate events in the *CustomDataHandler* class.

# Example

The following example shows how to handle the **OnAfterUpdate** event and send the password to the user whenever their profile is updated:

1. Open the **CustomDataHandler** class and put the following code at the beginning of the file. It adds the reference to the namespaces we will use to handle the event:

#### [C#]

```
using CMS.DataEngine;
using CMS.GlobalHelper;
using CMS.EmailEngine;
```

2. Put the following code inside the **OnAfterUpdate** method.

#### [C#]

```
// type the data object as DataClass
IDataClass dataItem = (IDataClass)dataObj;
// we want to handle only updates of user objects
if (dataItem.ClassName.ToLower() == "cms.user")
{
    // we will use the CMS.EmailProvider to send e-mails
EmailMessage email = new EmailMessage();
email.From = "admin@domain.com";
```

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```
// get the user's e-mail address
email.Recipients = ValidationHelper.GetString(dataItem.GetValue("Email"),
"admin@domain.com");
email.Subject = "Your password";
// get the user's password
email.Body = "Your password is:" + ValidationHelper.GetString(dataItem.GetValue(
"UserPassword"), "");
EmailSender.SendEmail(email);
}
```

Please note: getting user's password in the example above is only possible when passwords are stored in Plain text format; the setting is located in Site Manager -> Settings -> Security.

3. Set the From and Recipients e-mail addresses to your e-mail address.

4. If you don't have refference to CMS. EmailEngine in your CustomEventHandler, add it there.

5. Compile and run the project. Edit some user profile that uses your e-mail address. You should receive the e-mail message with your password.

## 9.11.3 Exception handler (CustomExceptionHandler class)

This class processes all **exceptions** that occur in the web application. You can use it to handle all exceptions and run custom actions, such as sending e-mail to administrator or logging the exception to you helpdesk or monitoring system.

The class has only one method: OnException(Exception e)

## Example

The following example shows how to handle the OnException event and send the password to the administrator whenever an error occurs:

1. Open the **CustomExceptionHandler** class and put the following code at the beginning of the file. It adds the reference to the namespaces we will use to handle the event:

#### [C#]

using CMS.EmailEngine;

2. Put the following code inside the **OnException** method.

```
// we will use the CMS.EmailProvider to send e-mails
EmailMessage email = new EmailMessage();
email.From = "admin@domain.com";
email.Recipients = "admin@domain.com";
email.Subject = "Exception";
```

```
email.Body = e.Message + "<br />" + e.StackTrace + "<br />" + e.Source;
EmailSender.SendEmail(email);
```

- 3. Set the From and Recipients e-mail addresses to you e-mail address.
- 4. Compile and run the project. Now, when some exception occurs or is raised by your code, the e-mail with exception details are sent.

## 9.11.4 Security handler (CustomSecurityHandler class)

The security handler allows you to integrate external user databases and modify the authentication and authorization process.

Any code added to the handlers is executed after the standard authentication or authorization checks performed by the system.

The class contains handlers for the following events:

- OnAuthentication triggered when a user attempts to sign in with a name and password.
- OnResourceAuthorization triggered when the system checks if a user is authorized to access a module.
- OnUlElementAuthorization triggered when the system checks if a <u>UI element</u> should be displayed to a user.
- OnClassNameAuthorization triggered when the system checks if a user is authorized to access a
  particular document type.
- OnTreeNodeAuthorization triggered when the system checks if a user is authorized to access a
  document in the content tree.
- OnFilterDataSetByPermissions triggered when a DataSet is filtered according to the permissions
  or custom personalization rules of the current user.

## Example

In the following example, you will learn how to integrate external user authentication using the custom security handler.

The handler of the **OnAuthentication** event will be used for this purpose. It has the following parameters:

- **object userInfo** an object representing the user attempting to log in. This object is returned as the result of the standard authentication check performed by the system. It is *null* if the default authentication failed.
- string username a string containing the username entered during the login attempt.
- string password a string containing the password entered during the login attempt.

The handler must return an object representing the user if external authentication using the entered credentials is successful, or *null* to indicate that authentication failed.

Now modify the code of the **OnAuthentication** handler according to the following:
```
public override object OnAuthentication(object userInfo, string username, string
password)
ł
    // Check if the user was authenticated by the system
    if (userInfo != null)
    {
        return userInfo;
    }
    // Sample external user credentials
    UserInfo usr = null;
    // Authenticate against the external source
    if ((username.ToLower() == "externaluser") && (password == "pass"))
        // Create base user record if external authentication is successful
        usr = new UserInfo();
        usr.IsExternal = true;
        usr.UserName = username;
        usr.FullName = "externaluser fullname";
        usr.Enabled = true;
        // Initialize a hash table mapping roles to sites for the user
        Hashtable rolesTable = new Hashtable();
        // Get the code name of the current site
        string siteName = CMSContext.CurrentSite.SiteName;
        // Assign the user to the current site
        usr.SitesRoles[siteName.ToLower()] = rolesTable;
        // Add new role "external role" to the hash table to assign it to the user
        rolesTable["external role"] = 0;
    }
   // Return the user info object
   return usr;
}
```

For simplicity, the example does not use any particular database. Instead, it only checks if the current user name and password are equal to some constants. In a real-world scenario, you would need to replace this condition with code that checks if the user name with the given password is authenticated against your external database. Also, instead of simply assigning the user to a role named *external role*, you would have to implement code that checks the external database for any roles that the authenticated user is a member of and assigns them dynamically.

Once this is done, save the changes and **Build** the **CustomEventHandler** project. The system will now be able to perform authentication according to user data from an external source.

The roles created during this external authentication will not have any permissions assigned by default, so they will not authorize the user to perform any actions. You can programmatically check if a user belongs to a role using the CMS.CMSHelper.CurrentUserInfo.IsInRole(string roleName, string siteName) method and implement your own security logic in the other event handlers under the CustomSecurityHandler class.

However, we recommend importing all external roles into the CMS_Role table of the website's Kentico

database. Then you can configure the appropriate permissions for these roles. This way, you will be able to fully use the built-in security model of Kentico CMS together with external users.

# 9.11.5 TreeNode handler (CustomTreeNodeHandler class)

The CustomTreeNodeHandler class allows you to execute custom actions when a document (TreeNode) is created, updated or deleted. It's useful if you need to synchronize changes to external systems, generate off-line version of the document in PDF, etc.

It handles the following events:

- OnBeforeInsert
- OnAfterInsert
- OnBeforeUpdate
- OnAfterUpdate
- OnBeforeDelete
- OnAfterDelete
- OnBeforeMove
- OnAfterMove
- OnBeforeCopy
- OnAfterCopy
- OnBeforeInsertNewCultureVersion
- OnAfterInsertNewCultureVersion

#### Example

The following example shows how to handle the OnAfterInsert event and send the newly added news item by e-mail:

1. Open the **CustomTreeNodeHandler** class and put the following code at the beginning of the file. It adds the reference to the namespaces we will use to handle the event:

#### [C#]

```
using CMS.TreeEngine;
using CMS.GlobalHelper;
using CMS.EmailEngine;
```

2. Put the following code inside the **OnAfterInsert** method.

```
// type the document as TreeNode
TreeNode newsDoc = (TreeNode)treeNodeObj;
// handle the event only for news items
if (newsDoc.NodeClassName.ToLower() == "cms.news")
{
// get content of the inserted news item and send it by e-mail
EmailMessage email = new EmailMessage();
email.From = "admin@domain.com";
```

```
email.Recipients = "admin@domain.com";
email.Subject = ValidationHelper.GetString(newsDoc.GetValue("NewsTitle"), "");
email.Body = ValidationHelper.GetString(newsDoc.GetValue("NewsSummary"), "");
EmailSender.SendEmail(email);
}
```

- 3. Set the From and Recipients e-mail addresses to you e-mail address.
- 4. Compile and run the project. Create a new document of type News. You should receive the e-mail message with it text.



#### How to avoid neverending loops

If you need to call TreeNode.Update in the event handler (e.g. in the OnAfterUpdate event), you need to set **TreeProvider.UseCustomHandlers** property to false before calling the Update method.

# 9.11.6 Workflow handler

The workflow handler allows you to handle the following events:

- OnBeforeCheckOut before document is checked out
- OnAfterCheckOut after document is checked out
- OnBeforeCheckIn before document is checked in
- OnAfterCheckIn after document is checked in
- OnBeforeApprove before document is approved
- OnAfterApprove after document is approved
- OnBeforeReject before document is rejected
- OnAfterReject after document is rejected
- OnBeforePublish before document is published
- OnAfterPublish after document is published

When the document is published, the order of the events is following:

- 1. OnBeforeApprove
- 2. OnBeforePublish
- 3. OnAfterPublish
- 4. OnAfterApprove

#### Example

The following example shows how to send an e-mail with news document content when it's published:

1. Open the **CustomWorkflowHandler** class and put the following code at the beginning of the file. It adds the reference to the namespaces we will use to handle the event:

```
using CMS.TreeEngine;
using CMS.GlobalHelper;
using CMS.EmailEngine;
using CMS.WorkflowEngine;
```

2. Put the following code inside the OnAfterPublish method:

#### [C#]

```
// type the document as TreeNode
TreeNode newsDoc = (TreeNode)treeNodeObj;
// handle the event only for news items
if (newsDoc.NodeClassName.ToLower() == "cms.news")
{
    // get content of the inserted news item and send it by e-mail
    EmailMessage email = new EmailMessage();
    email.From = "admin@domain.com";
    email.Recipients = "admin@domain.com";
    email.Subject = ValidationHelper.GetString(newsDoc.GetValue("NewsTitle"), "");
    email.Body = ValidationHelper.GetString(newsDoc.GetValue("NewsSummary"), "");
    EmailSender.SendEmail(email);
}
```

- 3. Set the From and Recipients e-mail addresses to you e-mail address.
- 4. Compile and run the project.
- 5. Configure your project so that it uses workflow for news items and create and publish a news item. You should receive the content of the news item by e-mail.

#### Getting the workflow step name

If you need to get the name of the workflow step (for example in the OnAfterApprove event), you need to use code like this:

#### [C#]

```
CMS.WorkflowEngine.WorkflowStepInfo previousStep = (CMS.WorkflowEngine.
WorkflowStepInfo) previousStepObj;
string stepCodeName = previousStep.StepName;
```

# 9.12 Customizing system objects with custom data or objects

In the example below, you will learn how to extend system objects with your own fields or data.

This extending is possible thanks to the **IRelatedData** interface and the **RelatedData** (object) property. If an object implements the **IRelatedData** interface, you can use its **RelatedData** (object) property to connect just about any object to it. The connected object is then shipped as a part of the system object.

On top of it, you can also make the related object behave as a native part of the system object and retrieve its properties as if they were properties of the system object. If the connected object implements the **IDataContainer** interface, it gets automatically connected to the system object's **GetValue** and **SetValue** methods.

# Example

Let's presume that you want to customize the **SiteInfo** object with two additional properties and one method:

- SiteOwner String, just the name of the site owner
- SiteValidUntil DateTime until which the site is valid
- bool IsValid() Returns true if the site is valid at the current time

1. First, you will need to create a custom class in the solution, containing the properties and the method as you can see in the code example below:

#### SiteRegistration.cs

```
using System;
using CMS.SettingsProvider;
/// <summary>
/// Summary description for SiteRegistration
/// </summarv>
public class SiteRegistration : IDataContainer
{
    #region "Variables"
   private string mSiteOwner = null;
    private DateTime mSiteValidUntil = DateTime.MinValue;
   #endregion
    #region "Properties"
    /// <summary>
    /// Gets or sets the site owner
    /// </summary>
    public string SiteOwner
    {
        get
        {
            return mSiteOwner;
        }
        set
        {
            mSiteOwner = value;
        }
    }
```

```
/// <summary>
/// Gets or sets the date until which the site is valid
/// </summary>
public DateTime SiteValidUntil
{
    get
    {
       return mSiteValidUntil;
    }
   set
    {
       mSiteValidUntil = value;
    }
}
#endregion
#region "IDataContainer members"
/// <summary>
/// Gets the column names
/// </summary>
public string[] ColumnNames
{
   get
    {
      return new string[] { "SiteOwner", "SiteValidUntil" };
    }
}
/// <summary>
/// Returns true
/// </summary>
/// <param name="columnName"></param>
public bool ContainsColumn(string columnName)
{
    switch (columnName.ToLower())
    {
       case "siteowner":
        case "sitevaliduntil":
           return true;
        default:
           return false;
    }
}
/// <summary>
/// Gets the object value
/// </summary>
/// <param name="columnName">Column name</param>
public object GetValue(string columnName)
```

```
{
    switch (columnName.ToLower())
    {
        case "siteowner":
           return mSiteOwner;
        case "sitevaliduntil":
           return mSiteValidUntil;
        default:
           return null;
    }
}
/// <summary>
/// Sets the field value
/// </summary>
/// <param name="columnName">Column name</param>
/// <param name="value">New value</param>
public bool SetValue(string columnName, object value)
{
    switch (columnName.ToLower())
    {
        case "siteowner":
           mSiteOwner = (string)value;
            return true;
        case "sitevaliduntil":
           mSiteValidUntil = (DateTime)value;
            return true;
       default:
          return false;
    }
}
/// <summary>
/// Tries to get the value from the object
/// </summary>
/// <param name="columnName">Column name</param>
/// <param name="value">Returns the value</param>
public bool TryGetValue(string columnName, out object value)
{
    switch (columnName.ToLower())
    {
        case "siteowner":
           value = mSiteOwner;
           return true;
        case "sitevaliduntil":
            value = mSiteValidUntil;
            return true;
        default:
           value = null;
```

```
return false;
}
#endregion
#region "Methods"
/// <summary>
/// Returns true if the site is valid
/// </summary>
public bool IsValid()
{
    return this.SiteValidUntil > DateTime.Now;
}
#endregion
}
```

2. Now that you have the class ready, you will want to bind it to the Sitelnfo object. The binding will be dynamic, which means that the data will be loaded when it is requested. We will use the **OnLoadRelatedData** event which you can use for specific object types, including our Sitelnfo objects. The event is part of the type information object referenced from the object info class.

What you need to do is to create the event and register it in the AfterApplicationStart event, both in the ~/App_Code/Global/CMS/CMSApplication.cs class as you can see below:

[C#]

```
///
/// Fires after the application start event
///
public static void AfterApplicationStart(object sender, EventArgs e)
{
    // Add your custom actions
    CMS.SiteProvider.SiteInfo.TYPEINFO.OnLoadRelatedData += new CMS.
SettingsProvider.TypeInfo.ObjectLoadRelatedDataEventHandler
(SiteInfo_OnLoadRelatedData);
}
static object SiteInfo_OnLoadRelatedData(CMS.SettingsProvider.IInfoObject infoObj)
{
    // Get the related data from your external storage (make sure it implements
IDataContainer. Here are just some data created on-the-fly.
    SiteRegistration sr = new SiteRegistration();
    sr.SiteOwner = "Martin Hejtmanek";
    sr.SiteValidUntil = DateTime.Now.AddDays(1);
    return sr;
}
```

3. Now try to paste the following code to the layout of some page on your site. Notice the bold parts of the code. As you can see, data stored in the custom properties are retrieved using the GetValue method

as if they were a native part of the SiteInfo object.

#### [C#]

```
<asp:Label runat="server" id="lblSiteInfo" />
<script runat="server">
protected void Page_PreRender(object sender, EventArgs e)
{
    CMS.SiteProvider.SiteInfo currentSite = CMSContext.CurrentSite;
    this.lblSiteInfo.Text = String.Format("Site '{0}' is valid until {1} and owned
by {2}.", currentSite.DisplayName, currentSite.GetValue("SiteValidUntil"),
currentSite.GetValue("SiteOwner"));
    }
</script>
```

As a result, you should see the following text on the page:

#### Site 'Corporate Site' is valid until 9/15/2009 1:09:50 PM and owned by Martin Hejtmanek.

4. It is also possible to get the values of the custom properties using macros. Try adding the **Text** -> **Static text** web part to your page and paste the following text to its **Text** property. The same text as in the previous example should be displayed on the live site.

```
Site '{%CMSContext.CurrentSite.SiteDisplayName%}' valid until {%CMSContext.
CurrentSite.SiteValidUntil%} and owned by {%CMSContext.CurrentSite.SiteOwner%}
```

# 9.13 Customizing the administration interface and web application events

This chapter describes how to customize the administration interface and website functionality in the way which is safe for future system updates and compatible with the import/export functionality.

Please note that a certain level of user interface customization can be achieved using UI personalization.

# System events (Groups)

There are several groups of system events that can be handled by your custom code. There are predefined custom methods that allow you to influence default page cycle of the system pages/controls and customize the administration interface. These classes are located in ~/*App_Code/Global/CMS* folder.

There are following system events that can be customized:

- CMSApplication.cs Global application events (Start, End, ...)
- CMSSession.cs Session events (Start, End, ...)
- CMSRequest.cs Request events (Start, End, ...)
- CMSPageEvents.cs Page events (Init, Load, ...)
- CMSUserControlEvents User control events (Init, Load, ...)

These events are fired on standard Application (Session, Request, Page, Control) cycle and provide you with the methods that are fired before and after each of these events.

• CMSCustom.cs – Common custom events. Special events that are raised from the system. Binding of these events is initialized within the Init method of this class.

#### Available methods to customize

#### CMSApplication.cs

- BeforeApplicationStart Fires before the application start event
- AfterApplicationStart Fires after the application start event
- BeforeApplicationEnd Fires before the application end event
- AfterApplicationEnd Fires after the application end event
- BeforeApplicationError Fires before the application error event
- AfterApplicationError Fires after the application error event

#### CMSSession.cs

- BeforeSessionStart Fires before the session start event
- AfterSessionStart Fires after the session start event
- BeforeSessionEnd Fires before the session end event
- AfterSessionEnd Fires after the session end event

#### CMSRequest.cs

- BeforeBeginRequest Fires before the request start event
- AfterBeginRequest Fires after the request start event
- BeforeEndRequest Fires before the request end event
- AfterEndRequest Fires after the request end event
- BeforeAcquireRequestState Fires before the acquire request state event
- AfterAcquireRequestState Fires after the acquire request state event
- BeforeAuthorizeRequest Fires before the request authorization event
- AfterAuthorizeRequest Fires after the request authorization event
- BeforeAuthenticateRequest Fires before the request authentication event
- AfterAuthenticateRequest Fires after the request authentication event

#### CMSPageEvents.cs

- BeforePagePreInit Fires before page PreInit event
- AfterPagePreInit Fires after page PreInit event
- BeforePageInit Fires before page Init event
- AfterPageInit Fires after page Init event
- BeforePageLoad Fires before page Load event
- AfterPageLoad Fires after page Load event
- BeforePagePreRender Fires before page PreRender event
- AfterPagePreRender Fires after page PreRender event
- BeforePageRender Fires before page Render event
- AfterPageRender Fires after page Render event

#### CMSUserControlEvents.cs

• BeforeUserControlInit – Fires before UserControl Init event

- AfterUserControlInit Fires after UserControl Init event
- BeforeUserControlLoad Fires before UserControl Load event
- AfterUserControlLoad Fires after UserControl Load event
- BeforeUserControlPreRender Fires before UserControl PreRender event
- AfterUserControlPreRender Fires after UserControl PreRender event
- BeforeUserControlRender Fires before UserControl Render event
- AfterUserControlRender Fires after UserControl Render event

# **Examples**

Following examples just briefly show how to customize the solution with your own functionality. If you need to customize certain page of the interface, you should see the code of the page so the customization matches the page structure.

Using the Page event to add tab (CMSPageEvents.cs) – This custom code will add a new tab to the main page of the E-commerce module:

#### [C#]

```
using CMS.UIControls;
using CMS.Controls;
/// <summary>
/// Fires before page Load
/// </summary>
/// <returns>Returns true if default action should be performed</returns>
public static bool BeforePageLoad(object sender, EventArgs e)
  // Add your custom actions
  CMSPage page = (CMSPage)sender;
  switch (page.RelativePath.ToLower())
   {
       case "/cmsdesk/tools/ecommerce/header.aspx":
          BasicTabControl tabControl = (BasicTabControl)page["TabControl"];
           // Add tabs
           string[,] tabs = BasicTabControl.GetTabsArray(1);
           tabs[0, 0] = "Google";
           tabs[0, 2] = "http://www.google.com";
           tabControl.AddTabs(tabs);
           break;
   }
   // Return true to allow the default Page_Load event
   return true;
}
```

Using the Custom event to resolve custom macro (CMSCustom.cs) – This custom code will handle the macro {#CurrentTime#} in all the modules that support custom macros.

```
/// <summarv>
/// Custom macro handler
/// </summary>
/// <param name="sender">Sender (active macro resolver)</param>
/// <param name="expression">Expression to resolve</param>
    <param name="match">Returns true if the macro matches (was resolved)</param>
public static string ResolveCustomMacro(MacroResolver sender, string expression,
out bool match)
{
    match = false;
    string result = expression;
    // Add your custom macro evaluation
    switch (expression.ToLower())
    {
        case "currenttime":
           match = true;
           result = DateTime.Now.ToString();
        break;
    }
        return result;
}
```

# 9.14 Using API and CMS Controls outside CMS project

You can use Kentico CMS API and Kentico CMS Controls also outside the standard CMS website project. This chapter explains how you can configure your ASP.NET application so that it can use Kentico CMS API and Kentico CMS Controls.

Start Visual Studio and create a new ASP.NET application or open your existing ASP.NET web project.

# **Kentico CMS Initialization**

**Please note**: you may need to initialize the application to be able to use all the features of Kentico CMS API. To do that, call the method **CMSContext.Init()** before any other calls to the API. You can do that at the time your project starts or anytime later, the method handles all necessary initializations of the environment.

# Configuring the web.config file

Add the connection string for the Kentico CMS database with name CMSConnectionString into the configuration/connectionStrings section of the web.config. The section will look like this:

```
<configuration>
<connectionStrings>
<add name="CMSConnectionString" connectionString="Persist Security
Info=False;database=KenticoCMS;server=myserver;user id=sa;
password=mypassword;Current
Language=English;Connection Timeout=120;" />
```

It's recommended that you copy the exact connection string line from the web.config file of the CMS web

project.

# Adding a reference to Kentico CMS API libraries

Now we will add a reference to Kentico CMS libraries. Right-click your web project in the **Solution Explorer** and and choose **Add reference...** Choose the **Browse** tab and locate the CMS web project's bin folder. Choose all libraries and click OK:

Add Reference
INET       COM       Projects       Browse       Recent         Look jn:       im       im       im       im       im       im         Image: CMS.CMSSHelper.dll       image: CMS.CMSSiteMapProvider.dll       image: CMS.CMSSiteMapProvider.dll       image: CMS.CMSSiteMapProvider.dll       image: CMS.CMSSiteMapProvider.dll       image: CMS.CMSControls.dll       image: CMS.CMSControls.dll       image: CMS.CMS.CMSControls.dll       image: CMS.CMS.CMSControls.dll       image: CMS.CMSControls.dll       image: CMSControls.dll       image: CMSControls.dlll       image: CMSControls.dlll       image: CM
File name: "CMS.CMSHelper.dll" "CMS.CMSSiteMapProvider.dll" "CMS.Con 💌
Files of type:         Component Files (".dll,".tlb;".olb;".ocx;".exe)
OK Cancel

# Adding Kentico CMS Controls to your toolbox

Now we will add Kentico CMS Controls to your toolbox so that you can easily drag-and-drop the controls on the web forms. Right-click the toolbox and choose **Add tab**. Use the name **CMS** and press Enter.

Right-click the new tab and click **Choose Items...** Click **Browse...** and locate the **CMS.Controls.dll** library in the **bin** folder of your application. Click **Open** and click **OK** on the **Choose Toolbox Items** dialog.

Maintenance Tasks	SSIS Data Flow Items	SSIS Control Fl	ow Items
.NET Framework Components		COM Components	
Name	Namespace	Assembly Name	Directory 🔨
AppearanceEditorPart     AssemblyInstaller     AttributeBinding     AttributePermission     AttributeRelationship     AttributeTranslation     BackgroundWorker     BasicCalendar     BasicCalendar	System. Web. UI. WebControls System. Configuration. Install Microsoft. AnalysisServices Microsoft. AnalysisServices Microsoft. AnalysisServices Microsoft. AnalysisServices System. ComponentModel CMS. Controls CMS. Controls	System. Web (2.0.0.0) System. Configuration. I Microsoft. AnalysisServi Microsoft. AnalysisServi Microsoft. AnalysisServi System (2.0.0.0) CMS. Controls (2.0.252 CMS. Controls (2.0.252	Global Ass Global Ass Global Ass Global Ass Global Ass Global Ass Global Ass C:_Test\ C:_Test\
Filter:			Clear
Language: Invar Version: 2.0.2	iant Language (Invariant Country) 524.39723 (Retail)		Browse

The controls are added to your tab:

Θ	IMS
k	Pointer
6	BasicDataGrid
÷,	QueryDataGrid
<u> </u>	CMSEditModeButtonAdd
ê	CMSEditableRegion
ê	BasicTabControl
1	CMSEditModeButtonEditDelete
6	CMSSearchDialog
<b>8</b>	CMSDataGrid
8	CMSListMenu
8	CMSPageManager
10	ImageSelector
ð	BasicCalendar

# Configuring your project for transformations (virtual path provider)

The transformations used by Kentico CMS Controls are retrieved using a virtual path provider. You need to add the following line to the Application_Start method in the *app_code\global.asax.cs/vb* file:

#### [C#]

CMS.VirtualPathHelper.VirtualPathHelper.RegisterVirtualPathProvider();

# [VB.NET]

CMS.VirtualPathHelper.VirtualPathHelper.RegisterVirtualPathProvider()

If you cannot use the virtual path provider (e.g. in the medium trust environment), you may need to save the virtual objects to disk using the **Site Manager -> Administration -> System -> Deployment -> Save all virtual objects to disk** button and copy the folder **~/CMSTransformations** to the root of your own web project.

# Using Kentico CMS Controls to display content from Kentico CMS database

Now that we have configured the web project for Kentico CMS, we will create a testing page that will display news items from Kentico CMS.

Create a new web form (ASPX page) in your custom project using Visual Studio. Drag and drop the CMSRepeater control on your page and set the following properties:

- ClassNames: cms.news
- CultureCode: en-us (or other language version)
- SiteName: CorporateSite (or other site code name)
- TransformationName: cms.news.preview
- SelectedItemTransformationName: cms.news.default

Run the project and navigate to the newly created page. You should see a page like this:

<u>Your first news</u> (11/5/2006) Here comes your news summary. <u>Your second news</u> (11/6/2006) Here comes your news summary.

However, the links may not work at this moment since they are using the Kentico CMS web friendly URLs by default. So we need to modify the transformation cms.news.preview so that it points the user to same page, but with URL parameter **aliasPath** that will contain the page aliasPath. You can alternatively use your own URL parameters and set the Path property appropriately.

Go to Kentico CMS Site Manager -> Development -> Document types -> edit News -> Transformations -> edit preview. Change the following line of the transformation code:

<b><a href="<%# GetDocumentUrl() %>">

Like this:

<b><a href="?aliasPath=<%# Eval("NodeAliasPath") %>">

Save the changes. Since the transformations are cached, you need to restart (rebuild) your custom web application now so that the change is applied to your website.

Now you need to add a short code to the page code behind:

```
protected void Page_PreInit(object sender, EventArgs e)
{
    if (Request.QueryString["aliaspath"] != null)
    {
        CMSRepeater1.Path = Request.QueryString["aliaspath"];
    }
    else
    {
        CMSRepeater1.Path = "/%";
    }
}
```

# [VB.NET]

```
Protected Sub Page_PreInit(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.PreInit
    If Not Request.QueryString("aliaspath") Is Nothing Then
        CMSRepeater1.Path = Request.QueryString("aliaspath")
    Else
        CMSRepeater1.Path = "/%"
    End If
End Sub
```



#### Setting CMS control properties

Kentico CMS Controls load the content at early stage of the page life cycle. It means that if you want to set the properties programmatically, you need to set them in the Page_PreInit event.

If you need to set them for some reason later in the page life cycle, you need to call the CMSRepeater1.ReloadData(true) method so that the data is reloaded and the changes are applied.

# Using Kentico CMS API to retrieve content from Kentico CMS database

Kentico CMS API can be used to script any action in Kentico CMS, including content retrieval and modification. The following example explains how you can retrieve documents from Kentico CMS database as a DataSet and display them using standard ASP.NET repeater control (instead of using the CMSRepeater control).

Add a new web form (ASPX page) to your web project. Drag and drop the Repeater control on the web form. Switch to the **Source** mode of the page and add the Following item template code inside the <asp:Repeater> control element:

```
<$# Eval("NewsTitle") $></a></b> (<$# ( (DateTime) Eval("NewsReleaseDate")).
ToString("d") $>)<br />
<i><$# Eval("NewsSummary") $></i>
<br />
</ItemTemplate>
```

#### [VB.NET]

```
<ItemTemplate>
    <b><a href="?aliasPath=<%# Eval("NodeAliasPath") %>">
        <$# Eval("NewsTitle") %></a></b> (<%# ( (DateTime) Eval("NewsReleaseDate")).
ToString("d") %>)<br />
        <i><i><%# Eval("NewsSummary") %></i>
        <br />
        </ItemTemplate>
```

Switch to the code behind and add the following code to the beginning of the page:

#### [C#]

```
using CMS.TreeEngine;
using System.Data;
```

#### [VB.NET]

```
Imports CMS.TreeEngine
Imports System.Data
```

Add the following code inside the Page_Load method of the page:

#### [C#]

```
TreeProvider tp = new TreeProvider();
DataSet ds = tp.SelectNodes("CorporateSite", "/news/%", "en-us", true, "cms.news",
    " NewsReleaseDate <= GetDate() ", " NewsReleaseDate DESC ", -1, true);
Repeater1.DataSource = ds;
Repeater1.DataBind();
```

#### [VB.NET]

```
Dim tp As New TreeProvider
Dim ds As DataSet = tp.SelectNodes("CorporateSite", "/news/%", "en-us", True,
"cms.news", " NewsReleaseDate <= GetDate() ", " NewsReleaseDate DESC ", -1, True)
Repeater1.DataSource = ds
Repeater1.DataBind()
```



Run the website and navigate to your new page. You should see a page like this:

<u>Your second news</u> (11/6/2006) Here comes your news summary. <u>Your first news</u> (11/5/2006) Here comes your news summary.

As you can see, you can use Kentico CMS API to retrieve content as a DataSet and display it with your custom .NET code.

# 9.15 Customizing providers from the App_Code folder

Custom providers (e.g. scheduled tasks) can be defined in *App_Code*, without the need to be compiled into an assembly. This can be achieved by defining a new class implementing the **ITask** interface in **App_Code/Global/CMS/CMSCustom.cs** and handle it in the **GetCustomClass** method.

You can find an example of a very simple *MyTask* class in *CMSCustom.cs*. The code of the task is displayed below.

```
/// <summary>
/// Gets the custom class object based on the given class name. This handler is
called when the assembly name is App_Code
/// </summary>
/// <param name="className">Class name</param>
public static object GetCustomClass(string className)
{
    // Provide your custom classes
    switch (className)
    {
        // Define the class MyTask implementing ITask and you can provide your
scheduled tasks out of App_Code
        case "Custom.MyTask":
            return new MyTask();
```

```
}
   return null;
}
/// <summary>
/// Sample task class
/// </summary>
public class MyTask : ITask
{
   /// <summary>
   /// Executes the task
   /// </summary>
   /// <param name="ti">Task info</param>
   public string Execute(TaskInfo ti)
    {
        EventLogProvider ev = new EventLogProvider();
       ev.LogEvent("I", DateTime.Now, "MyTask", "Execute", null, "This task was
executed from '~/App_Code/Global/CMS/CMSCustom.cs'.");
       return null;
    }
}
```

To register the task in Kentico CMS, you need to create a new task in **Site Manager ->** Administration -> Scheduled tasks.

To ensure the required functionality, *App_Code* must be entered into the **Task assembly name** field and the class name handled in the *GetCustomClass* method needs to be entered into the **Task class name** field. With this task created, the code in the *MyTask* class is executed repeatedly after the set interval.





Appendix A - Macro expressions

# 10 Appendix A - Macro expressions

This appendix describes macros that can be used within the Kentico CMS system. Macros are strings that are automatically resolved into their value equivalents and they represent a powerful option that ca often eliminate writing custom .NET code.

# Types of macros

The macro type is determined by the character at the beginning and end of the macro. Macros look like:

{<type character><expression><parameters><type character>}

Where the type character can be one of:

- <u>\$ Localization macro</u>
- <u>% Context (data) macro</u>
- <u>? QueryString macro</u>
- <u>@ Cookie macro</u>
- <u># Custom macro</u>
- <u>^ Control macro</u>
- <u>& Path macro</u>

Macros of the same type can be nested using the "index parentheses" syntax, e.g. {(1)%FullName| (default){(2)%Username%(2)}%(1)}. Click particular macro types in the listing above to get redirected to their detailed explanation.

# **Coverage of macros**

The following table shows where particular types of macros can be used:

	Localizati on	Context	Query	Cookie	Custom	Path
BizForms	please s	see <u>Modules</u>	-> BizForms	s -> Using m	acros with B	izForms
Document metadata	•	•	•	•	•	•
E-commerce	•	•	٠	•	•	
Editable regions	•	•	•	•	•	
Forums	•					
Newsletters	•	•		•	•	•
Polls	•					
Reporting	•	•	٠	•	•	•
Web part containers	•	٠	٠	•	•	•
Web part properties	•		•		•	

.NET code	Supported by API
Page layouts	Supported by API
Transformation s	Supported by API

# **Entering macros**

Macros can either be entered manually, or you can use the macro selector dialog, which allows entering of macros via drop-down lists and offers a complete range of available macros.

In web part properties, it can be accessed by clicking the little black arrow icon next to fields in web part properties, as you can see in the screenshot below. The expression can be selected by the highlighted drop-down lists, inserted into the field above using the **Insert** button and finally added as a value of the property using the **Save** button.

🖉 CMS Desk - Web Par	t properties Webpage Dialog
鷸 Web part pro	pertice SimpleMasterPage Webpage Dialog
General Layout	Edit value
Default Visibility Content Design	A {%currentuser.userid%}
Behavior Security HTML Envelope AJAX Time zones Partial caching	Sec Macro type: Item: Context value Current user UserID UserID Derault Cunture. Format. HTT
	Remove macro value     Save     Cancel       http://localhost/KenticoCMS_2212/CMSAdminCol & Local intranet   Protected Mode: Off
	Content after:
Refresh content	OK Cancel Apply
http://localhost/Kentico	CMS_2212/CMSModules/PortalEngine/UI/Webparts/WebPartPropertin 🗣 Local intranet   Protected Mode: Off

The same drop-downs are also available when creating or editing:

- E-mail templates
- Newsletter issues
- Newsletter templates
- E-commerce invoice templates

ML version:	<html><head></head><body></body></html>	
		E
	>	
	<span style="font-size:&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;18pt;">New order</span>	
	<span style="font-&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;family: Garamond, Times, serif; font-size: 24pt; font-style: italic; ">Company logo</span>	
		-
	212	
	Macro type: Item:	
	Context value (general context)	

# **Localization macros**

These macros are usually used on multilingual websites to help localize system strings. There are two types of locatization macros:

#### Basic

H.

Basic localization macros are entered in the {\$string.key\$} format. The system uses the ResHelper. GetString("string.key") method and replaces the macro with the appropriate resource string.

Example: "The weather is {\$General.OK\$}" will be resolved as "The weather is OK".

#### In-place locatization

The string and its localized equivalents are included within the entered macro. The macro is entered in the {*\$=Default string|cs-cz=Czech string|de-de=German string*} format. It uses a localized string in case it is available or the default (first) string if it is not.

<u>Example</u>: "The weather is {\$=OK|cs-cz=dobre|de-de=gut\$}" will be resolved into "The weather is dobre" in Czech culture, "The weather is gut" in German culture and "The weather is OK" in any other culture.

# Context (data) macros

This type of macros evaluates data based on current context. These macros can be used for example to parametrize web parts' parameters with current document or user values.

The format of the macro is {%ColumnName%} and the value is replaced with the appropriate value of the column based on current context. You can use all column names from **current site** data, **current user** data and **current document** data.

<u>Example</u>: "Welcome {%FullName%}" will be resolved as "Welcome Global administrator" when administrator is the current user.

There are also data macros with selectors to precisely identify the source of the data, these macros look like {%*CurrentDocument.DocumentName*%} and can be used for accurate determination of the data source. Availability of the selectors depends on the context where the macros are evaluated.

# **QueryString macros**

These macros evaluate the query parameters information. These macros can be used for example to dynamically parametrize the controls by the querystring parameters.

The macros are entered in the {?<querystring key>?} format and it is replaced by the query parameter value.

Example: "Current node ID: {?nodeid?}" will be resolved as "Current node ID: 10" for a URL like "default. aspx?nodeid=10"

# **Cookie macros**

These macros evaluate the cookie values. These macros can be used for example to parametrize the web parts with client-based persistent values like styles or user options.

The macro is entered in the {@<cookie name>@} format and it is replaced by the cookie value.

Example: "Current style: {@StyleCookie@}" will be resolved as "Current style: Red" if StyleCookie value is set to "Red"

# **Custom macros**

These macros can be used to define your own macro. The macro is in the {#*Expression*#} format. When the macro is needed to be resolved, it calls the **ResolveCustomMacro** method located in the ~/ *App_Code/Global/CMS/CMSCustom.cs* if you installed the project as a web application).

Example: "Current time: {#CurrentTime#}" will be resolved to "Current time: 1/1/2008 10:30" with following custom macro handler:

```
/// <summary>
/// Custom macro handler
/// </summary>
/// <param name="sender">Sender (active macro resolver)</param>
/// <param name="expression">Expression to resolve</param>
/// <param name="match">Returns true if the macro matches (was resolved)</param>
public static string ResolveCustomMacro(MacroResolver sender, string expression,
out bool match)
{
       match = false;
       string result = expression;
       // Add your custom macro evaluation
       switch (expression.ToLower())
       ł
              case "currenttime":
              match = true;
              result = DateTime.Now.ToString();
              break;
```

```
}
return result;
}
```

# **Control macros**

These macros can be used to resolve parts of text to the inline controls. The macro is in format {*^BizFormControl*^} and can (usually must) contain parameters for the control in a standard way of parametrized macros, such as {*^BizFormControl*/(*FormName*)*ContactForm*^}. It will be resolved to inline control which will get those parameters to initialize itself.

#### Path macros

These macros are entered in the {&path&} format. They can be used to resolve current document *Alias path* the same way as the *Path* property of controls. The macro is replaced by the resolved path.

<u>Example</u>: WhereCondition: *NodeAliasPath LIKE* {&../%&}. In this case, the macro will be resolved as parent document path and will result in selecting all siblings of the current document and their child documents. This macro is intended mostly for including the document structure context into the controls WHERE condition, but can be used for many more purposes.

See <u>Appendix B - Path expressions</u> for more details on how paths can be entered.

#### Macro parameters

It is possible to create macros with parameters to get better or specific functionality, especially for data (context) macros. Each parameter of the macro is separated with the "|" character located after the macro expression. You can use multiple macro parameters.

#### Examples: {%SKUPrice/(culture)en-us%}, {%SKUPrice/(culture)en-us/(format){0:f1}%}

The "|" character can be escaped using the "\|" sequence, e.g. {%*SKUPrice*|(*default*)*N*|*A*%} will display "N|A", i.e. the "|A" sequence will not be interpreted as a new parameter.

Currently available parameters are:

- Culture "(culture)<code>" saying that the specified culture should be used for the e.g. {%SKUPrice|(culture)en-us%} writes the product price in an English culture formatting
- Format "|(format)<format>" saying how the value should be formatted e.g. {%SKUPrice|(format){0:f1}%} writes the product price with precision for one decimal place
- Default value "|(default)<value>" or "|<value>" saying what should be returned when the value is not found.
   e.g. {%SKUPrice|N/A%} writes product price or N/A if the document is not a product
- Encode "|(encode)<true/false>" sprocesses the result with HTMLHelper.HTMLEncode e.g. {%DocumentName|(encode)true%} or {%DocumentName|(encode)%} writes the HTML encoded document name, such as Black & amp; white; the default encoding settings can be enabled, in that

case, the settings may be |(encode)false to disable it

- URLEncode "|(urlencode)<true/false>" processes the result with HttpUtility.UrlEncode e.g. {%DocumentName|(urlencode)true%} or {%DocumentName|(urlencode)%} writes the URL encoded document name, such as All%20items; the default encoding settings can be enabled, in that case, the settings may be |(urlencode)false to disable it
- ToLower "|(tolower)<true>" converts the result to lowercase e.g. {%DocumentName|(tolower)true%} or {%DocumentName|(tolower)%} writes black & white
- ToUpper "|(toupper)<true>" converts the result to uppercase
   e.g. {%DocumentName|(toupper)true%} or {%DocumentName|(toupper)%} writes BLACK & WHITE
- ToInt "(toint)<default value>" converts the result to integer, if not successful, uses the default value
   e.g. {?tagid|(toint)0?} writes the valid tagid from guerystring or 0 if not valid
- ToBool "(tobool)<default value>" conversion to Boolean, uses the (truevalue), (falsevalue) settings as a result, see below
   e.g. {?onlyvalid|(tobool)true?} writes false if onlyvalid querystring parameter is false, else returns true
- ToGuid "(toguid)<default value>" conversion to GUID e.g. {?userguid|(toguid)?} converts the userguid query parameter to *Guid* or *Guid*.*Empty*
- **ToDouble "(todouble)<default value>"** conversion to Double, uses the (culture) settings e.g. {?price|(todouble)10.2?} converts the price query parameter to double or 10.2
- **ToDateTime -** "(todatetime)<default value>" conversion to DateTime, uses the (culture) settings e.g. {?targettime|(todatetime)?} converts the targettime query parameter to date time or DateTime. MinValue
- ResolveBBCode "(resolvebbcode)<true/false>" resolves the BB code in the result of the macro e.g. {%MessageText|(resolvebbcode)true%} or {%MessageText|(resolvebbcode)%} writes the resolved BB code such as conversion of [url]... to <a href="...
- Equals "(equals)<value>" returns "true" if the resolved value matches the given value, else returns "false"; uses the (truevalue), (falsevalue) settings for the output e.g. {%UserName|(equals)administrator%} writes true if the user is administrator
- NotEquals "(notequals)<value>" returns "false" if the resolved value matches the given value, else returns "true"; uses the (truevalue), (falsevalue) settings for the output e.g. {%UserName](notequals)administrator%} writes false if the user is administrator
- **TrueValue** "(**truevalue**)<**value**>" Output settings for the positive output of the comparison e.g. {%UserName|(equals)administrator|(truevalue)Yes|(falsevalue)No%} writes Yes if the user is administrator
- FalseValue "(falsevalue)<value>" Output settings for the negative output of the comparison
  e.g. {%UserName|(equals)administrator|(truevalue)Yes|(falsevalue)No%} writes No if the user is not
  administrator

# API methods for evaluating macros

There is an easy way to resolve macros in .NET code. To resolve all the macros (recommended), use the following static method:

string CMS.CMSHelper.CMSContext.CurrentResolver.ResolveMacros(string inputText)

To resolve just the localization macros, use another static method:

string CMS.GlobalHelper.ResHelper.LocalizeString(string inputText)



# **Appendix B - Path expressions**

# 11 Appendix B - Path expressions

Many web parts and controls use a **Path** property that allows you to specify which documents should be displayed. This is the **AliasPath** property of the document. You can use either an exact path or you can use special characters for specifying multiple selection or relative paths:

# Leaving the Path value empty

In many cases, **you can leave the Path value empty**. In this case, the Path value is set to the alias path of the currently displayed document.

In case of list controls/web parts, such as CMSRepeater/Repeater or CMSDataGrid/Grid, the path is set to *<current alias path>/%* if the current document is not of the same type as the required document in the **ClassNames** (document types) property. Otherwise, the path is set to the current alias path, which leads to automatic selection of the current document.

# Using wildcard characters % and _

You can use % as a wildcard character for any number of characters, which allows you to select all documents under specified site section.

#### Examples:

/ - only root/% - all documents

/Products - only the Products document. /Products/% - all documents under the Products document.

You can also use _ as a wildcard character for a single character.

#### **Examples:**

/Product_ - selects documents /ProductA, /Product1, etc.

# Using formatting string to get parts of the path

You can also use special expressions that extract parts of the current path, such as this.

#### Examples:

 $(0){1}/\infty$  - all documents under the second level of the current path  $(0){1}/\text{details}$  - document Details under the second level of the current path

# Using relative paths

You can use relative paths expressions to specify sub-documents or parent documents:

#### Examples:

./Product - document Product under the current path

../Product - document Product under the parent document of the current path

- . current path
- .. parent document of the current path

./% - all documents under the current path

../% - all documents under the parent document of the current path



Appendix C - Web.config parameters

# 12 Appendix C - Web.config parameters

The system settings include appSettings keys and other settings, such as a connection string placed in appropriate sections of the web.config file. AppSettings keys are stored in the **/configuration/ appSettings** section.

The following setting categories are available:

- General settings
- <u>Assembly settings</u>
- Forbidden character settings in user and role names
- <u>Content staging settings</u>
- <u>WYSIWYG editor settings</u>
- <u>E-commerce settings</u>
- Event log settings
- File export settings
- Item listing settings
- Query string parameter name settings
- Transaction isolation settings
- <u>Scheduler settings</u>
- <u>Security settings</u>
- Ul culture settings
- Web farm synchronization settings

# **General settings**

Кеу	Description	Sample Value
CMSProgrammingLanguage	Indicates the programming language used in transformations and in custom code added to web parts.	<add <br="" key="&lt;br&gt;CMSProgrammingLanguage">value="C#" /&gt;</add>
	The default value is C#.	or
		<add <br="" key="&lt;br&gt;CMSProgrammingLanguage">value="VB" /&gt;</add>
CMSTrialKey	Contains a temporary trial license key. You can remove this value after installation.	<add <br="" key="CMSTrialKey">value="true" /&gt;</add>
	The default value is "" (empty string).	
CMSUseCustomHandlers	Indicates if custom handlers should be executed to process system events. See the <u>Global events and their handling</u> chapter for more details.	<add <br="" key="&lt;br&gt;CMSUseCustomHandlers">value="true" /&gt;</add>
	The default value is <i>false</i> .	
CMSUseVirtualPathProvider	Indicates if the virtual path provider should be used (true by default). Before you	<add key=" CMSUseVirtualPathProvide

	switch off the virtual path provider, please read the <u>Pre-compilation (Publish</u> <u>function)</u> chapter.	r" value="false" />
	The default value is <i>true</i> .	
CMSShowWebPartCodeTab	Indicates if the <u>Code tab</u> is displayed in web part properties dialog in CMS Desk. This parameter can be used for backward compatibility purposes. Otherwise, using the <b>Code</b> tab is now obsolete.	<add <br="" key="&lt;br&gt;CMSShowWebPartCodeTab">value="true" /&gt;</add>
	The default value is <i>false</i> .	
CMSShowWebPartBindingTab	Indicates if the <u>Binding tab</u> is displayed in web part properties dialog in CMS Desk. This parameter can be used for backward compatibility purposes. Otherwise, using the Binding tab is now obsolete.	<add key="&lt;br&gt;CMSShowWebPartBindingTab&lt;br&gt;" value="true"></add>
	The dafault value is false.	
CMSFullClientCache	Indicates if full client cache is enabled. If enabled, CSS styles and images will be cached in the client's browser. It is not recommended to use this option in non- live-site mode, as changes made to the pages would not be displayed due to the caching.	<add <br="" key="&lt;br&gt;CMSFullClientCache">value="true"/&gt;</add>
	The default value is <i>false</i> .	
CMSRenderGeneratorName	Indicates if the 'generator' meta tag stating that the page was generated by Kentico CMS is generated in the header of each page.	<add <br="" key="&lt;br&gt;CMSRenderGeneratorName">value="true"/&gt;</add>
	The default value is <i>false</i> .	
CMSClearFieldEditor	Determines field editor behavior when creating new fields. If true, new fields will have empty values of attributes. If false, new fields will have pre-defined values, the same as the previously selected field.	<add <br="" key="&lt;br&gt;CMSClearFieldEditor">value="true"/&gt;</add>
	The default value is <i>true</i> .	
CMSShowTemplateASPXTab	Indicates if ASPX code tab is displayed when editing a page template. Using this tab, ASPX code of a page template created using the Portal engine can be exported.	<add <br="" key="&lt;br&gt;CMSShowTemplateASPXTab">value="true"/&gt;</add>
CMSDatabaseCulture	Specifies the default culture of the system's database.	<add <="" key="&lt;br&gt;CMSDatabaseCulture" td=""></add>

		<pre>value="cz-cs"/&gt;</pre>
	The default value is <i>en-us</i> .	
CMSDisposeConnectionAfterC lose	If true, database connection is automatically disposed (allocated resources released) when a database connection is closed.	<add key="&lt;br&gt;CMSDisposeConnectionAfte&lt;br&gt;rClose" value="true"></add>
	The default value is <i>false</i> .	
CMSUseSessionCookies	Indicates if session cookies are used or not.	<add <br="" key="&lt;br&gt;CMSUseSessionCookies">value="false"/&gt;</add>
	The default value is true.	
CMSImportWindowsRoles	When Windows authentication is used and this key set to true, roles available in the Active Directory will be imported into the system.	<add <br="" key="&lt;br&gt;CMSImportWindowsRoles">value="true"/&gt;</add>
	The default value is <i>true</i> .	
CMSFileScriptTimeout	The maximum number of seconds a script can run before the server terminates it.	<add <br="" key="&lt;br&gt;CMSFileScriptTimeout">value="7200"/&gt;</add>
	The default value is 7200.	
CMSUseExtensionOnPostbac k	When using friendly URL extensions, postback doesn't work in some cases. If you enable this setting, <i>.aspx</i> extension is attached to the URL in the form tag, which prevents the postback problems.	<add key="&lt;br&gt;CMSUseExtensionOnPostbac&lt;br&gt;k" value="false"></add>
	The default value is true.	
CMSUseSQLResourceManag er	If true, SQL Resource manager is used to retrieve strings used in the user interface.	<add key="&lt;br&gt;CMSUseSQLResourceManager&lt;br&gt;" value="true"></add>
	The default value is <i>true</i> .	
CMSAllowChecklOPermission s	If true, write permissions on the site folder are checked when necessary and produce an error message when they are insufficient.	<add key="&lt;br&gt;CMSAllowCheckIOPermissio&lt;br&gt;ns" value="true"></add>
	The default value is <i>true</i> .	
CMSWorkflowSendEmailToMo derator	If true, workflow notification e-mails will be sent to the user who is performing the current workflow step along with other users involved in the workflow.	<add key="&lt;br&gt;CMSWorkflowSendEmailToMo&lt;br&gt;derator" value="true"></add>
	The default value is <i>false</i> .	
CMSControlElement	If present in the web.config, the tag entered in the value will be used instead of the SPAN tag when generating pages.	<add key="&lt;br&gt;CMSControlElement" value<br="">="div"/&gt;</add>

	The default value is <i>span</i> .	
CMSUseParsedSelfClose	Indicates if parsed self closing tags operations (faster) are used instead of standard self close filter.	<add <br="" key="&lt;br&gt;CMSUseParsedSelfClose">value="false"/&gt;</add>
	The default value is <i>true</i> .	
CMSGetFileEndRequest	If true, ApplicationInstance. CompleteRequest() is used instead of Response.End() in the CompleteRequest method.	<add <br="" key="&lt;br&gt;CMSGetFileEndRequest">value="true"/&gt;</add>
	The default value is <i>true</i> .	
CMSDefaultUserID	Specifies default user ID.	<add key="&lt;br&gt;CMSDefaultUserID" value="&lt;/td"></add>
	The default value is <i>0.</i>	"53"/>
ImportFilesDiskPath	Specifies path to attachments that should be attached to documents imported via the SQL Import windows application.	<pre><add key=" ImportFilesDiskPath" value="C:\Temp"></add></pre>
	The default value is "" (empty string).	
CMSDeleteTemporaryAttachm entsOlderThan	Specifies how old should be attachments deleted by the 'Delete old temporary attachments' scheduled task. The value is entered in hours. Attachments older than the entered value will be deleted when the scheduled task is executed.	<add key="&lt;br&gt;CMSDeleteTemporaryAttach&lt;br&gt;mentsOlderThan" value="&lt;br&gt;12"></add>
	The default value is 24.	
CMSAllowGZip	Enables Gzip compression of output HTML code.	<add <br="" key="CMSAllowGZip">value="true" /&gt;</add>
	The default value is <i>false</i> .	
CMSDisableAdministrationInte rface	Disables the administration interface. The 'Access denied' screen is displayed on each attempt to access CMS Desk or Site Manager.	<add <br="" key="&lt;br&gt;CMSDisableAdministration&lt;br&gt;Interface" value="true">&gt;</add>
	The default value is <i>false</i> .	
CMSMaxNodeAliasLength	Maximal length of a document's node alias. The default value is 50 characters and larger names are trimmed. This key can be used to increase the length - useful for long node aliases. If you use the key, you also need to set the size of the 'NodeAlias' column in the 'CMS_Tree' database table to the same value. However, the maximal length of 'Node alias path' is 450 characters, so documents deep in the tree will have the	<add <br="" key="&lt;br&gt;CMSMaxNodeAliasLength">value="120" /&gt;</add>
	'Node alias path' trimmed anyway.	
----------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------
	The default value is 50.	
CMSMaxNodeNameLength	Maximal length of a document's node name. The default value is 100 characters and larger names are trimmed. This key can be used to increase the length - useful for long node names. If you use the key, you also need to set the size of the 'NodeName' column in the 'CMS_Tree' database table to the same value.	<add <br="" key="&lt;br&gt;CMSMaxNodeNameLength">value="150" /&gt;</add>
	The default value is 100.	
CMSWebAnalyticsSlidingIPExp iration	This key is used when the Site Manager - > Settings -> Web Analytics -> Remember visitors by IP (minutes) key has a value higher than 0. If enabled (by default), users who are active on the site but have disabled cookies are not logged as new visitors after the set time. If disabled, even an active user with disabled cookies is logged as a new site visitor after the set time.	<add key="&lt;br&gt;CMSWebAnalyticsSlidingIP&lt;br&gt;Expiration" value="false&lt;br&gt;"></add>
CMSAuthenticationType	<ul> <li>This key overrides the values returned by the <i>IsFormsAuthentication</i> and <i>IsWindowsAuhentication</i> methods in <i>CMS.GlobalHelper.RequestHelper.</i></li> <li>You will typically use this if you are using a custom authentication provider whose authentication type is a nonstandard one (e.g. Federated authentication) to make Kentico CMS handle it as if it was windows or forms authentication.</li> <li>The following values are available:</li> <li>default: standard behavior</li> <li>forms: <i>IsFormsAuthentication</i> always returns <i>true</i>, <i>IsWindowsAuthentication</i> always returns <i>false</i></li> <li>windows: <i>IsFormsAuthentication</i> always returns <i>true</i></li> <li>both: <i>IsFormsAuthentication</i> always returns <i>true</i>, <i>IsWindowsAuthentication</i> always returns <i>true</i>, <i>IsWindowsAuthentication</i> always returns <i>true</i></li> </ul>	<add <br="" key="&lt;br&gt;CMSAuthenticationType">value="windows" /&gt;</add>

The default value is <i>default</i> .	

## Special settings for assemblies

You can use the following keys to specify which assemblies are used:

Кеу	Description	Sample Value
CMSDirectoryProviderAssembl y	<ul> <li>Name of the assembly that should be used for operations in the file system. You can choose from the following options:</li> <li>CMS.DirectoryProviderDotNet - this is a managed code library that uses System.IO methods for disk operations. It is useful for environment that allows only managed code.</li> <li>CMS.DirectoryProviderWin32 - this is an unmanaged code library that uses Win32 API for disk operations. It is useful for environment that requires Win32 API calls.</li> <li>The default assembly is CMS. DirectoryProviderDotNet.</li> </ul>	<add <br="" key="&lt;br&gt;CMSDirectoryProviderAsse&lt;br&gt;mbly" value="CMS.&lt;br&gt;DirectoryProviderDotNet">/&gt; or <add <br="" key="&lt;br&gt;CMSDirectoryProviderAsse&lt;br&gt;mbly" value="CMS.&lt;br&gt;DirectoryProviderWin32">/&gt;</add></add>
CMSSearchProviderAssembly	Name of the assembly that is used for full- text search. The default assembly is <i>CM</i> S. <i>SearchProviderSQL</i> .	<add key="&lt;br&gt;CMSSearchProviderAssembl&lt;br&gt;y" value="CMS.&lt;br&gt;CustomSearchProvider"></add>
CMSDataProviderAssembly	Specifies custom data provider assembly used as the database connector for the CMS. See <u>this topic</u> for more details. The default assembly is <i>CMS.</i> <i>DataProviderSQL.</i>	<add <br="" key="&lt;br&gt;CMSDataProviderAssembly">value="CMS. CustomDataProvider"/&gt;</add>
CMSEmailProviderAssembly	Specifies custom email provider assembly. Read <u>this topic</u> for more information. The default assembly is <i>CMS.</i> <i>EmailProvider</i> .	<add key="&lt;br&gt;CMSEmailProviderAssembly&lt;br&gt;" value="CMS.&lt;br&gt;CustomEmailProvider"></add>
CMSCustomHandlersAssembl y	Specifies custom event handler assembly. Read <u>this topic</u> for more information. The default assembly is <i>CM</i> S. <i>CustomEventHandler</i> .	<add key="&lt;br&gt;CMSCustomHandlersAssembl&lt;br&gt;y" value="CMS.&lt;br&gt;CustomEventHandler"></add>
CMSVirtualPathProviderAssem	Specifies the Custom virtual path provider	<add key="</td>

bly	assembly. See <u>this topic</u> for more details. The default assembly is <i>CMS.</i> <i>VirtualPathProvider.</i>	CMSVirtualPathProviderAs sembly" value="CMS. CustomVirtualPathProvide r"/>
CMSCustomEcommerceProvid erAssembly	Specifies the custom e-commerce provider assembly. See <u>this topic</u> for more details.	<add <="" key="&lt;br&gt;CMSCustomEcommerceProvid&lt;br&gt;erAssembly" td="" value="CMS.&lt;br&gt;CustomECommerceProvider"></add>
	The default assembly is <i>CM</i> S. EcommerceProvider.	/>

## Special settings for forbidden characters in user and role names

Кеу	Description	Sample Value
CMSEnsureSafeUserNames	Indicates if forbidden characters in user names imported from AD should be replaced. If turned off by setting the value to <i>false</i> , you may experience problems when editing users imported with forbidden characters. Therefore, it is NOT RECOMMENDED to turn it off. The default value is <i>true</i> .	<add <br="" key="&lt;br&gt;CMSEnsureSafeUserNames">value="false" /&gt;</add>
CMSEnsureSafeRoleNames	Indicates if forbidden characters in role names imported from AD should be replaced. If turned off by setting the value to <i>false</i> , you may experience problems when editing roles imported with forbidden characters. Therefore, it is NOT RECOMMENDED to turn it off. The default value is <i>true</i> .	<add <br="" key="&lt;br&gt;CMSEnsureSafeRoleNames">value="false" /&gt;</add>
CMSForbiddenUserNameChar actersReplacement	Sets the character by which forbidden characters in user names imported from AD should be replaced. If not set, value from <i>Site Manager -&gt;</i> <i>Settings -&gt; URLs -&gt; Forbidden</i> <i>characters replacement</i> is used.	<add key="&lt;br&gt;CMSForbiddenUserNameChar&lt;br&gt;actersReplacement" value<br="">="-" /&gt;</add>
CMSForbiddenRoleNameChar actersReplacement	Sets the character by which forbidden characters in role names imported from AD should be replaced. If not set, value from <i>Site Manager -&gt;</i> <i>Settings -&gt; URLs -&gt; Forbidden</i> <i>characters replacement</i> is used.	<add key="&lt;br&gt;CMSForbiddenRoleNameChar&lt;br&gt;actersReplacement" value<br="">="-" /&gt;</add>

You can use the following keys to configure forbidden characters in user and role names:

#### Special settings for Content staging

Кеу	Description	Sample Value
CMSStagingAcceptAllCertificat es	Causes all certificates will be accepted when performing content staging tasks through SSL (X.509). If false, only certificates generated by a certification authority will be accepted.	<add key="&lt;br&gt;CMSStagingAcceptAllCerti&lt;br&gt;ficates" value="true"></add>
	The default value is <i>false</i> .	
CMSStagingUseTreeCustomH andlers	Ensures that events will be raised in <i>CustomTreeNodeHandler</i> when performing content staging synchronization. The <i>CMSUseCustomHandlers</i> key needs to be enabled too for this to work.	<add key="&lt;br&gt;CMSStagingUseTreeCustomH&lt;br&gt;andlers" value="true"></add>
	The default value is <i>false</i> .	
CMSMediaFileMaxStagingSize	Sets the maximal file size of synchronized media files in kiloBytes. Files in media libraries that are larger than the entered value will not be synchronized using the Content staging module. The default value is 2147483647 (int. MaxValue).	<add key="&lt;br&gt;CMSMediaFileMaxStagingSi&lt;br&gt;ze" value="1024"></add>
CMSStagingTreatServerName sAsInstances	Global metadata changes such as changes to document types, custom tables and system tables produce staging tasks for all staging servers of all sites. In such case, it is recommended to synchronize such changes to all servers of all sites at the same time to prevent overwriting of such metadata and loosing the data by synchronizing the older tasks later. You can use this key to make sure that once the global task is synchronized, it is deleted from all other servers with the same name to prevent such possibility. The default value is <i>false</i> since staging can use multiple target instances targeted with the same names.	<add key="&lt;br&gt;CMSStagingTreatServerNam&lt;br&gt;esAsInstances" value="&lt;br&gt;true"></add>

You can use the following keys to achieve specific behavior of the Content staging module:

#### Special settings for the WYSIWYG editor

You can use the following keys to configure the <u>WYSIWYG editor</u>:

Кеу	Description	Sample Value
CMSWYSIWYGFixXHTML	Indicates if the WYSIWYG editor should automatically try to fix XHTML incompatibilities in the code it generates.	<add <br="" key="&lt;br&gt;CMSWYSIWYGFixXHTML">value="true" /&gt;</add>
	default value is <i>true</i> .	
CMSLoadHTMLEditorBylFrame	If true, the WYSIWYG editor is loaded in an iFrame.	<add key="&lt;br&gt;CMSLoadHTMLEditorByIFram&lt;br&gt;e" value="true"></add>
FCKeditor:BasePath	Specifies the location of the WYSIWYG editor (FCK editor).	<add key="FCKeditor:&lt;br&gt;BasePath" value="/&lt;br&gt;FCKeditor/"></add>
	By default, it is located in ~/ CMSAdminControls/FCKeditor.	
FCKEditor:UserFilesPath	Specifies path to user files.	<add key="FCKEditor:&lt;br&gt;UserFilesPath" value="/&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;The default path is /UserFiles/.&lt;/td&gt;&lt;td&gt;UserFiles/"></add>
FCKEditor: PersonalizeToolbarOnLiveSite	Indicates if the FCK toolbar can be personalized on the live site. See <u>this</u> topic for more details.	<add key="FCKEditor:&lt;br&gt;PersonalizeToolbarOnLive&lt;br&gt;Site" value="true"></add>
	Supported values are <i>true</i> and <i>false</i> . The default value is <i>false</i> .	

## **Special settings for E-commerce**

You can use the following keys when you need to achieve specific behavior of the <u>E-commerce</u> module. The keys are also explained in <u>E-commerce guide -> Configuration settings -> Web.config settings</u>.

Кеу	Description	Sample Value
CMSShoppingCartExpirationPe riod	Number of days after which E-commerce shopping cart content is deleted from the database. It's used for deleting unused shopping carts of anonymous users that are stored in the database with ID stored in the browser cookie. The default value is <i>30</i> .	<add key="&lt;br&gt;CMSShoppingCartExpiratio&lt;br&gt;nPeriod" value="60"></add>
CMSUseCurrentSKUData	Indicates if the E-commerce module should use the price from the existing order items or from the current SKU data when re-calculating the order. The default value is <i>false</i> .	<add <br="" key="&lt;br&gt;CMSUseCurrentSKUData">value="true"/&gt;</add>
CMSEnableOrderItemEditing	If true, order item parameters, such as order item name and order item unit price, can be modified when editing an existing order.	<add key="&lt;br&gt;CMSEnableOrderItemEditin&lt;br&gt;g" value="true"></add>

	The default value is <i>false</i> .	
CMSUseMetaFileForProductI mage	Indicates if meta files should be used for product images in E-commerce.	<add key="&lt;br&gt;CMSUseMetaFileForProduct&lt;br&gt;Image" value="true"></add>
	The default value is true.	
CMSUseCustomEcommerce Providers	Specifies whether to use custom E- commerce provider handlers. See <u>this</u> <u>topic</u> for more details.	<add key="&lt;br&gt;CMSUseCustomEcommercePro&lt;br&gt;viders" value="true"></add>
	The default value is false.	

## Special settings for event logging

You can use the following keys when you need to achieve specific behavior of the Event log:

Кеу	Description	Sample Value
CMSLogEvents	Indicates if logging events in the Event log is enabled.	<add <br="" key="CMSLogEvents">value="true"/&gt;</add>
	The default value is <i>true</i> .	
CMSLogMetadata	Indicates if logging of metadata events in the Event log is enabled.	<add key="CMSLogMetadata&lt;br&gt;" value="true"></add>
	The default value is <i>false</i> .	
CMSLogKeepPercent	Coefficient for Event log deletion, keeps the specified percentage of log items alive and deletes the log by batch when the set percentage is exceeded.	<add key="&lt;br&gt;CMSLogKeepPercent" value<br="">="15"/&gt;</add>
	The default value is 10.	
CMSLogEventsToFile	If true, events are also logged into the ~\App_data\logevents.log file.	<add <br="" key="&lt;br&gt;CMSLogEventsToFile">value="true"/&gt;</add>
	The default value is <i>false</i> .	
CMSLogFieldChanges	If true, details about particular object changes are logged with the changes in Event log.	<add <br="" key="&lt;br&gt;CMSLogFieldChanges">value="true"/&gt;</add>
	The default value is <i>false</i> .	
CMSLogDocumentFieldChang es	If true, details about particular document changes are logged with the changes in Event log.	<add key="&lt;br&gt;CMSLogDocumentFieldChang&lt;br&gt;es" value="true"></add>
	The default value is <i>false</i> .	

## Special settings for file exporting

You can use the following keys when you want to configure file exporting:

Кеу	Description	Sample Value
CMSExportExcludedFolders	Specifies which folders will be filtered from being included in Files folder of the export package.	<add key="&lt;br&gt;CMSExportExcludedFolders&lt;br&gt;" value="test*;cms*"></add>
	<b>.svn</b> folders are excluded by default, even without this key added. More info <u>here</u> .	
CMSExportExcludedFiles	Specifies which files will be filtered from being included in the Files folder of the export package.	<add <br="" key="&lt;br&gt;CMSExportExcludedFiles">value="test*;cms*" /&gt;</add>
	<b>.scc</b> files are excluded by default, even without this key added. More info <u>here</u> .	

#### Special settings for item listing

Кеу	Description	Sample Value
CMSDefaultListingFilterLimit	Required number of items listed in a listing across the whole UI for a filter to be displayed. If the number of listed items is lower than this value, the filter is not displayed. If it is larger, the filter is displayed. The default value is 25.	<add key="&lt;br&gt;CMSDefaultListingFilterL&lt;br&gt;imit" value="40"></add>
CMSDefaultListingPageSize	Initial page size (the <i>Items per page</i> setting) of listings across the whole UI. The default value is <i>25</i> .	<add key="&lt;br&gt;CMSDefaultListingPageSiz&lt;br&gt;e" value="50"></add>
ShowFirstLastButtons	If enabled, the first and last page buttons are included in pagers of listings with large numbers of items in the UI. If disabled, the control is hidden in the listings. If both this and the <i>ShowDirectPageControl</i> keys are disabled, only <i>TopN</i> items are loaded, while <i>TopN</i> = <i>PageSize</i> * <i>(currentPageIndex</i> + <i>CurrentPagesGroupSize)</i> . The default value is <i>true</i> .	<add <br="" key="&lt;br&gt;ShowFirstLastButtons">value="false" /&gt;</add>
ShowDirectPageControl	If enabled, direct page control is included in pagers of listings with large	<add <="" key="&lt;br&gt;ShowDirectPageControl" td=""></add>

You can use the following keys when you want to configure item listing:

numbers of items in the UI. If disabled, the control is hidden in the listings. If both this and the <i>ShowFirstLastButtons</i> keys are disabled, only <i>TopN</i> items are loaded, while <i>TopN</i> = <i>PageSize</i> * ( <i>currentPageIndex</i> + <i>CurrentPagesGroupSize</i> ).	<pre>value="false" /&gt;</pre>
The default value is true.	

#### Special settings for query string parameter names

You can use the following keys to change certain query string parameter names:

Кеу	Description	Sample Value
CMSLanguageParameterNam e	Changes the name of the <i>lang</i> query string parameter so that you get <i>Home?</i> <i>sprache=de-de</i> instead of the default <i>Home?lang=de-de</i> . The default value is <i>lang</i> .	<add key="&lt;br&gt;CMSLanguageParameterName&lt;br&gt;" value="sprache"></add>
CMSAlias PathParameterName	Changes the name of the <i>aliaspath</i> query string parameter so that you get <i>products</i> . <i>aspx?ap=/products/myproduct</i> instead of the default <i>products.aspx?aliaspath=/</i> <i>products/myproduct</i> . The default value is <i>aliaspath</i> .	<add key="&lt;br&gt;CMSAliasPathParameterNam&lt;br&gt;e" value="ap"></add>

#### Special settings for transaction isolation

You will use the following settings only in special cases when you encounter problems with deadlocks when updating a document:

Кеу	Description	Sample Value
CMSTransactionIsolationLevel	Isolation level for explicit transactions. The default value is <i>ReadUncommitted</i> .	<add key="&lt;br&gt;CMSTransactionIsolationL&lt;br&gt;evel" value="&lt;br&gt;ReadCommitted"></add>
CMSDefaultIsolationLevel	Isolation level for all queries, even without transactions. The default value is <i>ReadUncommitted</i> .	<add key="&lt;br&gt;CMSDefaultIsolationLevel&lt;br&gt;" value="ReadUncommitted&lt;br&gt;"></add>
CMSUseDefaultIsolationLevel OnlyWithOpenTransactions	If true, the default isolation level is used only when some transaction is already running. The default value is <i>true</i> .	<add key="&lt;br&gt;CMSUseDefaultIsolationLe&lt;br&gt;velOnlyWithOpenTransacti&lt;br&gt;ons" value="true"></add>

CMSAllowSimultaneousTransa ctions	If false, there can be only one transaction running at the same time. The default value is <i>true</i> .	<add <br="" key="&lt;br&gt;CMSAllowSimultaneousTran&lt;br&gt;sactions" value="true">&gt;</add>
CMSMaxTransactionWaitTimeo ut	Indicates how many seconds a transaction should wait for completion of another running transaction if simultaneous transactions are not allowed. The default value is <i>1</i> .	<add key="&lt;br&gt;CMSMaxTransactionWaitTim&lt;br&gt;eout" value="5"></add>

## Special settings for the scheduler

By adding the following keys to your web.config, you can configure the <u>Scheduler</u>:

Кеу	Description	Sample Value
CMSUseAutomaticScheduler	Indicates if automatic scheduling should be used. Automatic scheduler periodically requests the <b>cmspages/scheduler.aspx</b> page which ensures that scheduled tasks are processed automatically. If turned off ( <i>false</i> - by default), the tasks are processed at the end of page requests. If it's <i>true</i> , the <i>cmspages/</i> <i>scheduler.aspx</i> page is requested periodically.	<add key="&lt;br&gt;CMSUseAutomaticScheduler&lt;br&gt;" value="false"></add>
CMSRunSchedulerWithinRequ est	If <i>true</i> (the default value), the scheduler is executed within the standard EndRequest of a page. If <i>false</i> , the scheduler is executed via the cmspages/scheduler. aspx page.	<add key="&lt;br&gt;CMSRunSchedulerWithinReq&lt;br&gt;uest " value="false"></add>
CMSSchedulerURL	URL of the physical location of the scheduler.aspx page. The default value is <i>~/cmspages/</i> <i>scheduler.aspx</i>	<add key="&lt;br&gt;CMSSchedulerURL" value="&lt;br&gt;https://domain/cmspages/&lt;br&gt;scheduler.aspx"></add>
CMSSchedulerAcceptAllCertific ates	If true, all security certificates (including not valid ones) will be accepted when accessing the scheduler.aspx page via a secured protocol. The default value is <i>false</i> .	<add <br="" key="&lt;br&gt;CMSSchedulerAcceptAllCer&lt;br&gt;tificates" value="true">/&gt;</add>
CMSSchedulerUserName	User name under which scheduler.aspx should be accessed (e.g. when using windows authentication). The default value is "" (blank username).	<add <br="" key="&lt;br&gt;CMSSchedulerUserName">value="office\myname" /&gt;</add>
CMSSchedulerPassword	Password for the user name under which	<add key="</td>

scheduler.aspx should be accessed.	CMSSchedulerPassword" value="mypassword123" />
The default value is "" (blank password).	

#### Special settings for security

By adding the following keys to your web.config, you can configure certain <u>Security</u> options:

Кеу	Description	Sample Value
CMSCheckParameters	Indicates if parameter checking is allowed. Read <u>this topic</u> for more details. The default value is <i>false</i> .	<add <br="" key="&lt;br&gt;CMSCheckParameters">value="true"/&gt;</add>
CMSReportCheckParameters	If true, an exception reporting the parameters is thrown when the parameters do not match. Read <u>this topic</u> for more details. The default value is <i>false</i> .	<add key="&lt;br&gt;CMSReportCheckParameters&lt;br&gt;" value="true"></add>

#### Special settings for user interface cultures

By adding the following keys to your web.config, you can configure UI cultures:

Кеу	Description	Sample Value
CMSDefaultSpellCheckerCultu re	Specifies the default culture of the built-in spell-checker. This culture is used when the dictionary for the currently selected content culture is not found. The default value is <i>en-us</i> .	<add key="&lt;br&gt;CMSDefaultSpellCheckerCu&lt;br&gt;lture" value="en-US"></add>
CMSShowLogonCultureSelect or	Indicates if the user interface logon page should display a drop-down list with available user interface languages. The default value is <i>true</i> .	<add key="&lt;br&gt;CMSShowLogonCultureSelec&lt;br&gt;tor" value="false"></add>
CMSDefaultUICulture	Specifies the default UI culture. If you use this key, you also need to rename the ~\CMSResources\CMS.resx file to CMS.en-us.resx and the CMS.en-nz. resx file to CMS.resx. This is needed because the CMS.resx file is used when the (default) option is selected in users' Preferred user interface culture. The default value is en-us.	<add <br="" key="&lt;br&gt;CMSDefaultUICulture">value="en-nz"/&gt;</add>
CMSUseSQLResourceMana	Changes the priority of used localization	<add key="</td>

gerAsPrimary	resource strings to: 1. custom.resx 2. cms.resx 3. database (Site Manager -> Development -> UI Cultures) The default value is <i>true</i> .	CMSUseSQLResourceManager AsPrimary" value="false" />
UICulture	Specifies the default user interface culture. The default value is <i>en-us</i> .	<add <br="" key="UICulture">value="en-us"/&gt;</add>

#### Special settings for file synchronization on web farms

By adding the following keys to your web.config, you can enable or disable <u>web farm synchronization</u> of certain kind of files stored in the file system:

Кеу	Description	Sample Value
CMSWebFarmEnabled	Indicates if Web farms are enabled (true) or not (false).	<add key="&lt;br&gt;CMSWebFarmEnabled" value<br="">="true"/&gt;</add>
	The default value is false.	
CMSWebFarmServerName	Code name of the web farm server. This value is used for native web farm synchronization support.	<add <br="" key="&lt;br&gt;CMSWebFarmServerName">value="server1" /&gt;</add>
	The default value is "" (empty string).	
CMSWebFarmSynchronizeFile s	General key determining if files should be synchronized (true) or not (false). This key enables synchronization of:	<add key="&lt;br&gt;CMSWebFarmSynchronizeFil&lt;br&gt;es" value="true"></add>
	<ul> <li>Attachments</li> <li>Meta files</li> <li>Media files</li> <li>BizForm files</li> <li>Avatars</li> <li>Forum attachments</li> </ul>	
CMSWebFarmSynchronizeAtta chments	Enables/disables synchronization of atachments. The default value is <i>true</i> .	<add <br="" key="&lt;br&gt;CMSWebFarmSynchronizeAtt&lt;br&gt;achments" value="true">&gt;</add>
CMSWebFarmSynchronizeMet aFiles	Enables/disables synchronization of meta files. The default value is <i>true</i> .	<add key="&lt;br&gt;CMSWebFarmSynchronizeMet&lt;br&gt;aFiles" value="true"></add>
CMSWebFarmSynchronizeMed iaFiles	Enables/disables synchronization of media files.	<add key=" CMSWebFarmSynchronizeMed

		<pre>iaFiles" value="true" /&gt;</pre>
	The default value is true.	
CMSWebFarmSynchronizeBizF ormFiles	Enables/disables synchronization of BizForm files.	<add <="" key="&lt;br&gt;CMSWebFarmSynchronizeBiz&lt;br&gt;FormFiles" td="" value="true"></add>
	The default value is <i>true</i> .	/>
CMSWebFarmSynchronizeAvat ars	Enables/disables synchronization of Avatars.	<add key="&lt;br&gt;CMSWebFarmSynchronizeAva&lt;br&gt;tars" value="true"></add>
	The default value is true.	
CMSWebFarmSynchronizeForu mAttachments	Enables/disables synchronization of forum attachments.	<add key="&lt;br&gt;CMSWebFarmSynchronizeFor&lt;br&gt;umAttachments" value="&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;The default value is &lt;i&gt;true&lt;/i&gt;.&lt;/td&gt;&lt;td&gt;true"></add>
CMSWebFarmSynchronizeDel eteFiles	Enables/disables synchronization of deleted files.	<add <="" key="&lt;br&gt;CMSWebFarmSynchronizeDel&lt;br&gt;eteFiles" td="" value="true"></add>
	The default value is <i>true</i> .	>
CMSWebFarmMaxFileSize	If the <b>CMSWebFarmSynchronizeFiles</b> key is enabled, you can limit the maximal size of synchronized files using this key. The value is entered in kiloBytes and files larger than this value will not be synchronized.	<add <br="" key="&lt;br&gt;CMSWebFarmMaxFileSize">value="1024" /&gt;</add>
	The default value is 2147483647 (int. MaxValue).	
CMSWebFarmUpdateWithinRe quest	If true, web farm servers are updated with changes made on the other servers once per request. If false, web farm servers will be updated based on the Synchronize web farm changes scheduled task - recommended for high-traffic sites. The default value is <i>true</i> .	<add key="&lt;br&gt;CMSWebFarmUpdateWithinRe&lt;br&gt;quest" value="false"></add>

#### **Connection string**

The database used by Kentico CMS engine is specified by the connection string CMSConnectionString in the **/configuration/connectionStrings** section. Here's an example of such connection string:

```
<add name="CMSConnectionString" connectionString="Persist Security Info=False;
database=CMS;server=myserver;user id=sa;password=mypassword123;Current
Language=English;Connection Timeout=120;" />
```

# Index

# - 3 -

3rd party authentication 541

# - A -

About this guide 24 Abuse report management 699 694 overview security 703 transformations 697 using the web parts 695 Alternative forms 711 automatically used creating 707 710 joining classes overview 707 announcement 1028 API CMSContext class 1244 1282 Custom providers Customizing system objects 1300 Customizing the administration interface 1305 Data layer 1287 Global events and their handling 1291 1254 Managing attachments Managing documents 1245 Managing documents with workflow 1256 overview 1244 Security internals 1269 TreeHelper class 1245 Using API snd CMS Controls oudside CMS project 1308 Appendices 1318 Macro expressions Path expressions 1326 1329 Web.config parameters Application pools 78 ASPX combining with portal engine templates 375 custom code 374 external database 377

integration with ASP.NET 376 master page 372 new template 366 ASPX page templates overview 364 1110 atom Attachments examples: grouped attachments 228 examples: unsorted attachments 225 File field 239 inline controls 234 names 241 224 overview temporary 241 transformations 235 web parts 233 audio 952 inserting 188 authentication 541 integrating with external systems 536 mixed mode 535 overview 517 personalized content 538 single sign-on 537 Windows authentication 518 605 automatic tasks **Avatars** changing group avatar 715 changing user avatar 713 716 managing 712 overview

## - B -

settings

Backup and recovery 158 Bad words defining 725 enabling 725 overview 724 possible actions 727 729 security Badges activity points 508 assigning to users 507 defining 507 form controls 509 506 overview

720

Banned IPs banning an IP address 735 overview 734 security 739 bing maps 915 **BizForms** 743 creating a new form custom layout 754 displaying a form 746 749 managing data overview 742 security 755 sending e-mails 750 blocking users 734 Blogs adding 765 adding posts 768 e-mail templates 788 enabling tracbacks 782 layout and design 772 managing usnig Kentico CMS API 777 moderating 770 784 notifications on-site management 773 overview 762 security 776 settings 776 subscriptions 785 trackbacks overview 780 Booking system 803 managing attendees overview 802 publishing events 802 security 804 bulletin board 880, 985

# - C -

Caching 379 Categories adding a document 812 creating new 809 807 overview using the Category list web part 813 class 807 classification 807 communication 1003 community 923

configuration application pools 78 custom URL extensions 123 full-text search in files 107 languages 574 Medium Trust Level 76 **MSSQL 2005** 108 MSSQL 2005 Express Edition 110 overview 72 SMTP server 81 72 virtual directorv connected users 1046 638 containers Content culture 573 content customization 411 Content management organization 162 overview 160 scheduling 252 Content rating enabling 814 other involved web parts 817 overview 814 transformations 818 Content staging 76 automatic synchronization 831 822 configuration overview 820 security 834 synchronizing the content 827 using API for synchronization 835 using X.509 authentication 832 controls in text 438 CSS 385 App themes 383 overview print page 387 printer friendly styles 386 Culture content 573 UL 573 573 user interface Custom document data 620 custom document type 411 Custom fields visibility configuring web parts 516 enabling 511 509 overview

Custom fields visibility using 515 Custom modules developing 687 Custom providers custom data provider 1282 1282 custom e-mail provider custom search provider 1284 overview 1282 Custom tables adding items into 843 **API** examples 855 managing 842 overview 836 849 security transformations 847 web parts 846 custom URL extensions 114

## - D -

Data layer code examples 1287 1287 overview pre- and post-processing queries 1289 Data source web parts developing 645 filter development 650 problems with XMLDataSource 644 using 640 database external data 352, 377 database import 614 database tables 836 daylight saving time 1178 Debugging 402 SQL queries system error notifications 410 threads 401 discussion 880 document 167 creating 170 linked previewing 169 document properties attachments 222 categories 217 general 213

languages 222 220 linked docs menu 217 metadata 216 overview 213 related docs 220 221 security template 215 URLs 214 219 versions workflow 219 document type 415 new overview 411 transformations 422

## - E -

E-commerce overview 871 E-mail queue administrating 872 overview 871 sending mass e-mails 873 settings 875 E-mail templates 428 enquiry 1053 Event calendar design and styles 877 overview 876 using web parts 877 Examples API 300 Export and import configuration on W2008/IIS7 280 excluding files of folders 280 exporting a single object 268 exporting a site 260 exporting objects 264 folder structure 278 importing a site or object 270 overview 259 extension-less URLs 114

## - F -

Facebook Connect 541

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**FCKeditor** 174 feed 1110 File import overview 878 879 security File management attachments 224 file storage 244 images 242 media selection 247 overview 223 settings 246 Flash inserting 186 Form controls developing 431 overview 430 forms 742 Forums 886 adding ad-hoc forum BBCode support 894 creating a new forum 882 customizing design 898 favorites 896 friendly URLs 897 managing posts 888 moderation 890 overview 880 post attachments 893 publishing pre-defined forum 885 security 899 settings 900 subscriptions 891 Friends 911 examples management 907 overview 904 security 912 web parts 909 full-text search files 107 **MSSQL 2005** 108 MSSQL 2005 Express Edition 110 Office 2007/2010 documents 114 PDF files 111 Further information 24

## - G -

gadgets 657 Geo mapping 913 example 919 geographic location 913 geo-positioning 913 Global events and their handling data handler 1294 1295 exception handler overview 1291 security handler 1296 treenode handler 1298 workflow handler 1299 global mapping 913 google maps 916 graph 1089 807 grouping Groups creating a new group by site users 932 editing 924 enabling users to create groups 930 management 923 overview 923 933 security 935 settings

## - H -

Help 24

## - | -

illegal content 694, 724, 734 image 712, 952 automatic resizing 243 editor 242 file sources 177 insert from Web 189 insert in WYSIWYG editor 175 inserting 183 quickly insert 190 view modes 181 image collection 942 Image gallery importing images 949

Image gallery overview 942 page templates 948 transformations 949 web parts 943 942 images indecent user input 694, 724, 734 indexing 1137 Inline controls developing 438 overview 438 installation 51 database setup deployment 70 medium-trust environment 84 new site wizard 58 overview 37 39 setup shared hosting server 83 uninstallation 71 web installer 40 Windows 7 85 Windows Server 2008 R2 85 internal data 1089 internal messaging 1003 International support default language 582 languages and URLs 581 localization expressions 582 overview 574 RTL support 577 Introduction 22

# - K -

Kentico CMS benefits 27 content editing 32 content storage 30 overview 27 principles 28 web site development 34 key words 1166 keyword filtering 724 kicking users 1046

## - L -

Licence management 283 734 limiting access link insert in WYSIWYG editor 192 mailto 199 properties 193 to anchor 198 to CMS content 194 to Web 197 linked document 170 Live ID 541 local time 1178 logging changes 820

# - M -

mailing list 1011 mailto link 199 Managing attachments managing files 1256 overview 1254 Managing documents content management 1245 1250 copy document 1249 create document create linked document 1253 delete document 1250 delete linked document 1254 move document 1251 select documet(s) 1246 1249 update document 1251 using transactions Managing documents with workflow a complete example 1264 managing workflow schema 1261 updating a versioned document 1260 versioning internals 1256 workflow internals 1257 mass e-mails 871 mass file uploading 878 master page ASPX 372 concept 320 editing 321

master page 323 visual inheritance measuring metrics of the website 1211 media 952 file sources 177 insert from Web 189 insert in WYSIWYG editor 175 view modes 181 Media library 974 configuring custom file types 969 custom media libraries folder 969 displaying content 965 names of files 964 overview 952 secured vs. non-secured libraries 978 security 975 settings 968 support in WYSIWYG editor 968 supported file types 964 uploading files 956 Medium Trust Level 76 Message board administrating 989 editing 991 e-mail templates 1002 998 notifications overview 985 security 996 setting base URL 995 settings 995 subscriptions 999 using web part 987 Messaging adding a user to contact list 1010 adding the functionality 1006 anonymous users 1008 creating a new message 1009 database tables and API classes 1008 deleting all messages 1009 overview 1003 removing a user from ignore list 1010 security 1008 metaweblog API 789 Microsoft SharePoint 1126 Microsoft Silverlight adding application 570 570 **IIS** configuration

introduction 568 mobile 354 moderation 880 Modules Abuse report 694 Alternative forms 707 Avatars 712 Bad words 724 Banned IPs 734 BizForms 742 Bloas 762 Booking system 802 Categories 807 Content rating 814 Content staging 820 Custom tables 836 871 E-commerce E-mail queue 871 Event calendar 876 File import 878 Forums 880 Friends 904 Geo mapping 913 Groups 923 942 Image gallery Media library 952 985 Message boards 1003 Messaging Newsletters 1011 Notifications 1028 1046 On-line users Polls 1053 Project management 1073 Reporting 1089 RRS feeds 1124 Sharepoint integration 1126 Smart search 1137 Tags 1166 Time zones 1178 Users contributions 1190 Web analytics 1211 Web farm synchrionization 1234 monitoring users 1046 MOSS 1126 multiple servers 820

# - N -

new page creating 165 new site 259 creating Newsletters creating a dynamic newsletter 1016 creating a static newsletter 1011 integrating into the site 1020 overview 1011 1027 security subscriber import and export 1024 subscriber management 1022 templates 1021 troubleshooting 1026 notice 1028 Notifications creating template 1029 custom notification gateway 1036 1039 custom notification gateway class custom notification gateway form 1036 1035 managing overview 1028 registering custom notification gateway 1043 security 1046 settings 1045 subscribing users 1031 using custom gateway 1044

# - 0 -

online discussion 985 on-line forms 742 On-line users enabling 1047 overview 1046 1048 tab 1050 web part OpenID 541 opinion survey 1053

# - P -

page layouts 317 page personalization 657 Page processing 595 GetFile.aspx parameters Google Sitemap 597 linking pages and files 594 588 multiple doc aliases output filters 596 overview 587 URL format and configuration 590 URL rewriting 587 wildcard URLs 592 page template ad-hoc 314 ASPX 366 catalog 329 cloning 331 combining with ASPX 375 327 content tree custom code 349 modifying 331 310 new re-using 314 316 scopes PDF full-text search 111 Performance 378 photos 942 picks 942 952 picture pictures 942 Polls 1070 add a new answer add authorized roles 1071 change the number of votes 1070 creating a new 1069 database tables and API classes 1068 deleting a poll 1072 deleting an answer 1072 managing 1054 multilingual support 1065 1053 overview publishing 1058 1067 security updating an existing poll 1069 Portal engine 308 overview Portlets 620 Project management 1073 overview

publication 88

## - Q -

questions and answers880Quickly insert image190

## - R -

Rebranding changing CMS Desk and Site Manager logo 603 598 changing logo in the header removing log-on bar 601 renaming resource strings 604 replication 88 Reporting creating a new report 1090 database tables and API classes 1103 defining parameters 1099 1101 displaying report 1110 getting HTML code managing categories 1089 overview 1089 saving current status 1109 saving report 1100 security 1102 requirements 38 overview shared web hosting 38 38 SQL server 38 web client web server 38 1110 rss RSS feeds overview 1124

# - S -

Scheduler custom code 607 overview 605 search index 1137 Security configuration 459 cross site scripting (XSS) 458 managing using .NET code (API) 460

overview 442 permissions 449 role management 448 secured site areas 454 SSL (HTTPS) support 457 user management 443 WYSIWYG edito dialogs 211 Security API internals autheticating user 1274 checking user permissions 1275 managing roles 1272 managing user roles 1273 1270 managing users overview 1269 setting user password 1272 1234 server farm Settings files 246 Sharepoint integration overview 1126 Silverlight application 568 simple document marking 1166 Site management **API** examples 300 285 configuring multiple sites configuring nested files 296 creating a new site 259. 1276 creating web templates 282 delete web site 1281 deleting files 281 import and export of the site 1277 licence 283 options 258 overview 257 284 settings single domain 295 starting and stopping sites 259 update web site properties 1278 Smart search basics 1138 creating an index 1140 defining index content 1143 document-level search settings 1149 enabling indexing 1139 overview 1137 related scheduled tasks 1157 search syntax 1156 searching attachments 1158

Smart search security 1158 SQL search overview 1159 transformations 1165 using filter 1154 1151 web parts smartphone 354 81 SMTP server social networking 904, 923 807 sort spam 694, 724, 734 Spell-checker 253 SQL import utility 614 SQL search 1137 staging 820 standard time 1178 statistics 1089 stored media 952 subscription 88 Support 22, 24 synchronization of data 820 synchronization task 1234 1110 syndication system e-mails 428 System requirements 38 System tables 619

# - T -

table 1089 Tags managing tag groups 1167 overview 1166 tag cloud web part 1175 tagging document 1170 taxonomy 807 Team development 137 Technical support 22, 24 316 template scope text messages 1003 third-party authentication 541 time conversion 1178 Time zones daylight saving time 1183 displaying correct time 1188 enabling 1178 in web parts 1185 1181 managing

overview 1178 setting user's time zone 1179 Trackbacks enabling 782 780 overview transformations 426 context menu 425 custom functions document type 422 Translation management culture-dependent workflows 583 language-bound editor 586 583 overview status 584 tree hierarchy 162 Troubleshooting ASP.NET on Windows Server 2003 143 disk permissions 144 export and import 280 Internal server error when using Integrated managed pipeline mode 143 overview 138 SQL server connection 139 807 type

## - U -

Uninstallation 71 694.724 user input filter User interface culture 573 user personalization 712 User registration approval 500 custom form 497 form 497 504 shared accounts User registrations web parts 496 user relationships 904 Users contributions editing partner profile 1197 overview 1190 publishing community news 1191 security 1210 user contributions and API 1211

# - V -

video 952 inserting 188 Virtual path provider 76 323 Visual inheritance visual representation 712 Visual Studio adding Kentico CMS controls 130 debugging 132 open project 127 opening VS2005 project in VS2008 137 pre-compilation 133 Visual Source Safe 136

## - W ·

warez 694, 724, 734 Web analytics available reports 1213 configuration options 1217 creating custom reports 1218 overview 1211 security 1218 tracking conversions 1215 tracking marketing campaigns 1214 Web development portal vs ASPX templates 306 roles 305 templates 305 Web farm synchronization defining servers 1236 overview 1234 web log 762 Web part containers creating 639 overview 638 Web parts AJAX support 636 binding (obsolete) 335 common properties 343 custom code (obsolete) 341 custom filter development 650 customizing layout 631 data source 640 development 623

inheritance 635 629 modifying behavior modifying code 634 overview 620 path and macro expressions 349 setting properties dynamically 629 using and configuring 333 Web site settings overview 302 Web templates creating 282 introduction 305 694, 724, 734 website abuse website commentaries 762 762 website diary website monitoring 1089 website statistics 1211 Widgets overview 657 Windows Live Writer 789 Windows LiveID overview 542 registering application 544 settings 546 web parts 547 WISYWIG editor dialogs configuration 209 WLW 789 Workflow content locking 683 defining 673 e-mail notifications 680 managing using .NET code (API) 685 overview 672 using 677 versioning and rollback 681 WSS 1126 WYSIWYG editor copy and paste from MS Word 204 custom toolbars 205 dialogs security 211 203 editing inserted items FAQ 255 insert image or media 175 insert link 192 insert YouTube video 200 inserting audio or video 188 inserting flash 186

WYSIWYG editor inserting images 183 inserting images or media from web 189 inserting link to CMS content 194 inserting links to anchors 198 inserting links to Web 197 inserting mailto links 199 link properties 193 overview 174 permissions and security 255 quickly inserting images 190 spell-checker 253 styles 207 toolbar 174 using .NET code 255

# - X -

xml 1110

- Y -

yahoo maps 918 YouTube insert video in WYSIWYG editor 200