Guide to Web Testing Using Kentico CMS 7

If you've ever wondered why your digital marketing efforts haven't panned out, the fault may be in your lack of testing. Successful digital marketers live and die by the meticulous testing and tweaking of every aspect of their digital campaigns, until they find the combination of words, backlinks, media, and tone that draws the biggest returns. If you treat every marketing campaign as an experiment, you may find the success you've been missing. There are two basic forms of testing used in digital marketing analysis, and both have something to offer any individual or company looking for the best way to sell their products or services.

A/B Testing

A/B testing, which is also called split testing, is a method of website optimization that compares the conversion rates of two versions of a page using live traffic. When implemented, site visitors are distributed across the two different page versions. By tracking the way a visitor interacts with the page you can determine which version is the most effective. A/B testing helps you measure the impact of a single change in relation to your page goals. Though called A/B testing, the marketer can widen the scope of the experiment by adding a third page version, a fourth, and so on.

The following is an example of A/B testing at work:
Walt has decided to jumpstart his baseball website's success by creating a Google Adwords account. He chooses his keywords through careful research and bids enough so his ads will get some front page exposure. But Walt realizes that no matter how much time he spends perfecting his ad, he will never know how effective the ad is without an A/B test. To that end, he creates a second ad, changing only a single word. Once he's measured the impact of the two ads, he creates a third one, again changing only that single word. Everything else – the keywords, the bid price, the rest of the phrasing – remains the same.

A/B Testing is the least complex method of evaluating a page design, and is useful in a variety of situations. One of the most common ways A/B testing is utilized is to test two very different design directions against one another. For example, the current version of a company's home page might have in-text calls to action, while the new version might eliminate most text but include a new banner advertising the latest product. After enough visitors have been funneled to both pages, the number of clicks on each page's version of the call to action can be compared. It's important to note that even though many design elements are changed in this kind of A/B test, only the impact of the design as a whole on each page's business goal is tracked, not individual elements.

A/B testing is also useful as an optimization option for pages where only one element is up for debate. For example, a pet store running an A/B test on their site might find that 85% more users are willing to
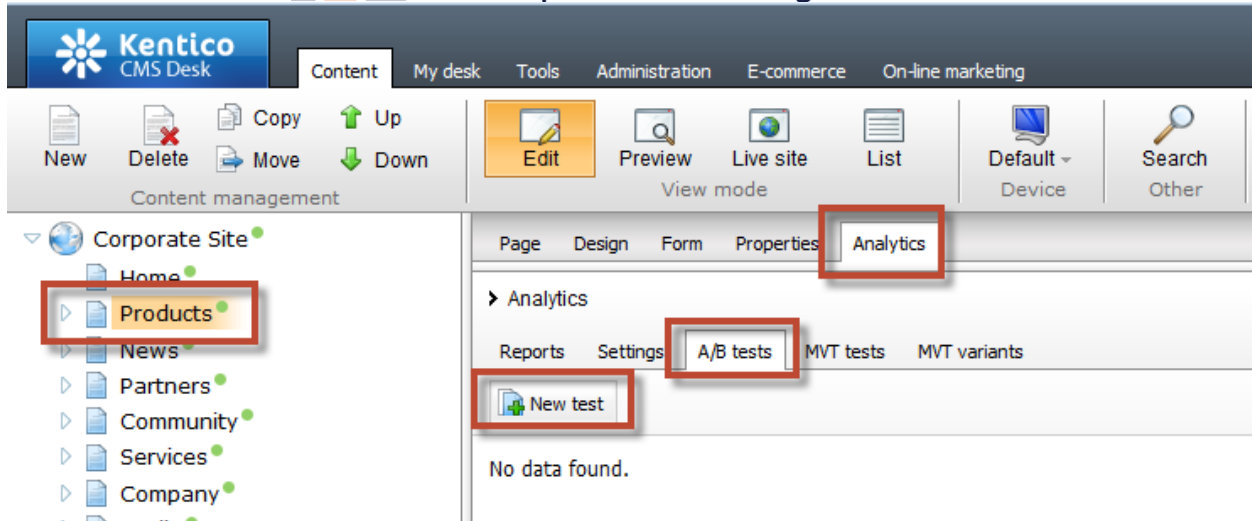
sign up for a newsletter held up by a cartoon mouse than they are for one emerging from the coils of a boa constrictor. When A/B testing is used in this way, a third or even fourth version of the page is often included in the test, which is sometimes called an A/B/C/D test. This of course means that traffic to the site must be split into thirds or fourths, with a lesser percentage of visitors visiting each site.

Simple in concept and design, A/B testing is a powerful and widely used testing method. Keeping the number of tracked variables small means these tests can deliver reliable data very quickly, as they do not require a large amount of traffic to run. This is especially helpful if your site has a small number of daily visitors. Splitting traffic into more than three or four segments would make it hard to finish a test. In fact, A/B testing is so speedy and easy to interpret that some large sites use it as their primary testing method, running cycles of tests one after another rather than more complex multivariate tests. A/B testing is also a good way to introduce the concept of optimization through testing to a skeptical marketing team, as it can quickly demonstrate the quantifiable impact of a simple design change.

A/B testing is a versatile tool, and when paired with smart experiment design and a commitment to iterative cycles of testing and redesign, it can help you make huge improvements to your site. However, it is important to remember that the limitations of this kind of test are summed up in the name. A/B testing is best used to measure the impact of a two to four variables on interactions with the page. Tests with more variables take longer to run, and in and of itself, A/B testing will not reveal any information about interaction between variables on a single page. If you need to test the interactions of multiple elements within a page, multivariate testing may be the best approach.

Creating an A/B Test with Kentico CMS 7

In Kentico CMS 7, an A/B test is created based on a modified version of an existing page, and then running a test. There is virtually no limitation to the modifications that can be made to a page, which may include simple changes or using a completely different page. The first step to creating an A/B test is to determine which page of Kentico CMS 7's content tree you want to test. Then you need to create the test object, which is performed at the document level, and then by clicking the Analytics tab, selecting the A/B test, and then by clicking the "New test" link as shown in the following screenshot.
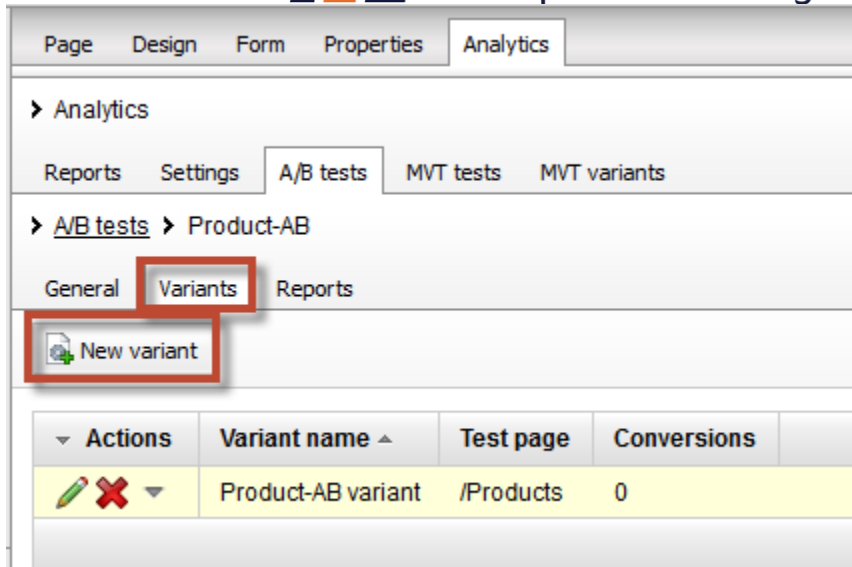
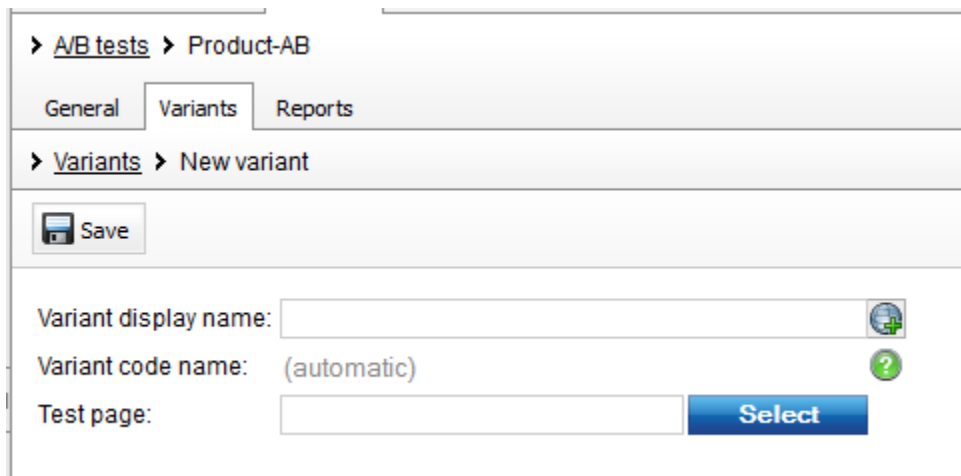In the New test page update the following fields and then select Save.

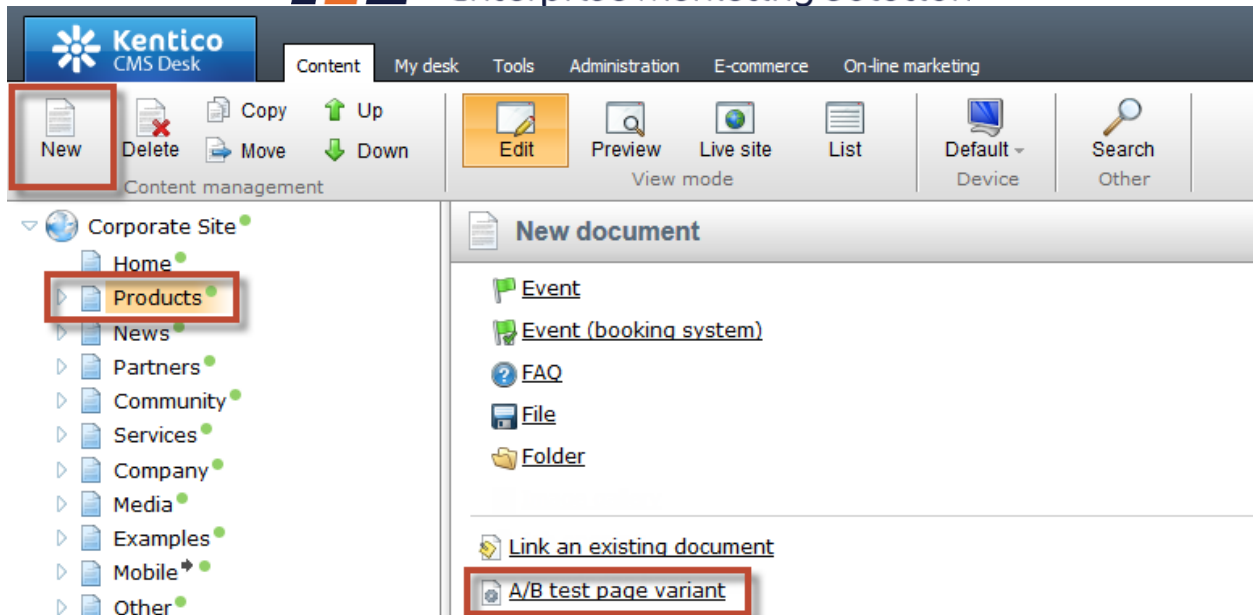| Field	Value
Display name	ProductAB
Target number of conversions	100
Test from	Now
Test to	Now + 2 weeks
Test enabled	Checked

Creating A/B Test Variants

A/B tests are based on page variants. An A/B test variant is simply another page in CMS Desk that is created in the content tree. This allows A/B test variants to leverage any feature in the Kentico CMS page designer. If you have an existing page that you want to select as part of the test, click the Variants tab and then select the "New variant" link, as shown in the following screenshot.
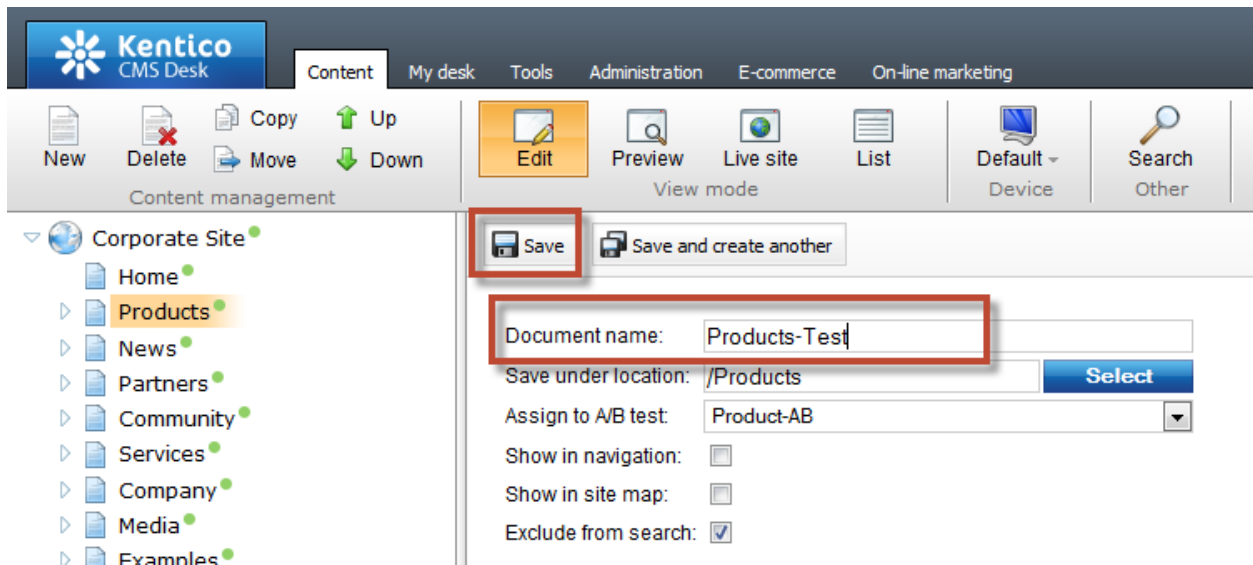
Within the new variant screen, you can name the new variants and select the existing page from the content tree:
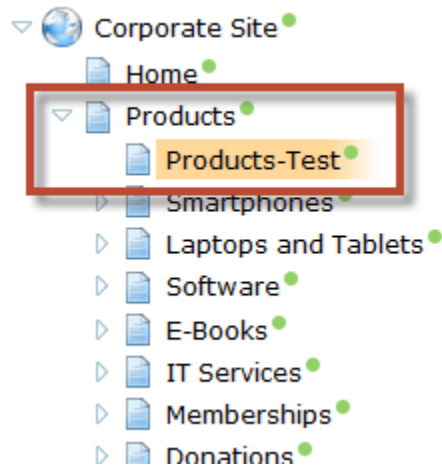

Another way to create an A/B test variant is to have the page selected in the content tree and then selecting the "New" option and click the A/B test page variant, as shown in the following screenshot.

In the A/B test page variant, update the "Document name" field with "Products-Test," and click Save.

This will create the page variant that you can see in the content tree.

Conversions

Valid A/B test results are based on conversions. They provide the tracking of behaviour and actions for website visitors. When you set up an A/B test, the system load balances (or randomizes) the incoming requests such that each page variant essentially receives equal distribution. For example, if you set up two page variants (Variant A and Variant B), and 200 visitors request the page subsequently, then the ensuing page distribution results in approximately 100 visitors for page Variant A, and 100 visitors for page Variant B. Therefore, you cannot determine which page variant performs better since each variant gets approximately the same number of requests.
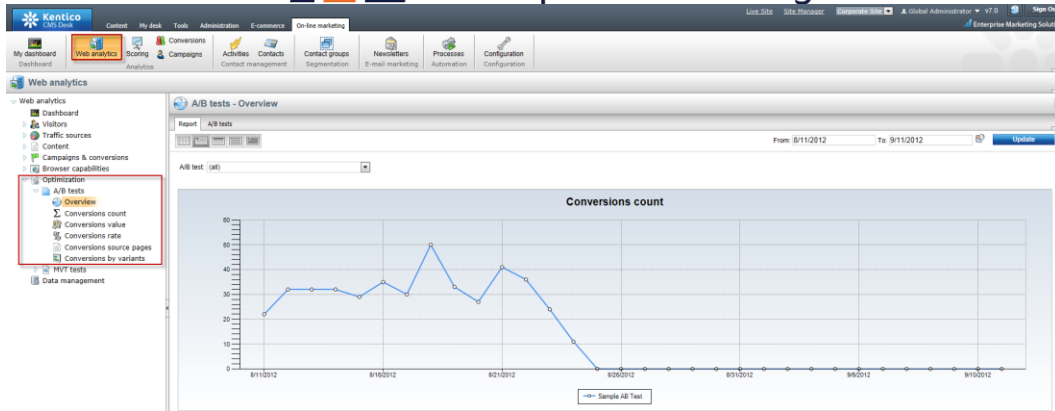
For A/B testing, you need to configure conversions at the page or web part level. This allows the system to identify and track which variant led to the subsequent conversion(s). For example, let's suppose a user visits a page and the system displays Variant B. The system creates a tracking cookie for the visitor identifying which variant was displayed. Then any subsequent conversions logged on the site (not only for the specific page) are attributed to Variant B, essentially connecting Variant B to the subsequent conversion(s). In other words, Variant B influenced the visitor and led to the actions/conversions performed. You can create conversions at the web part and widget level as part of the Web part or widget properties, as shown in the following screenshot.
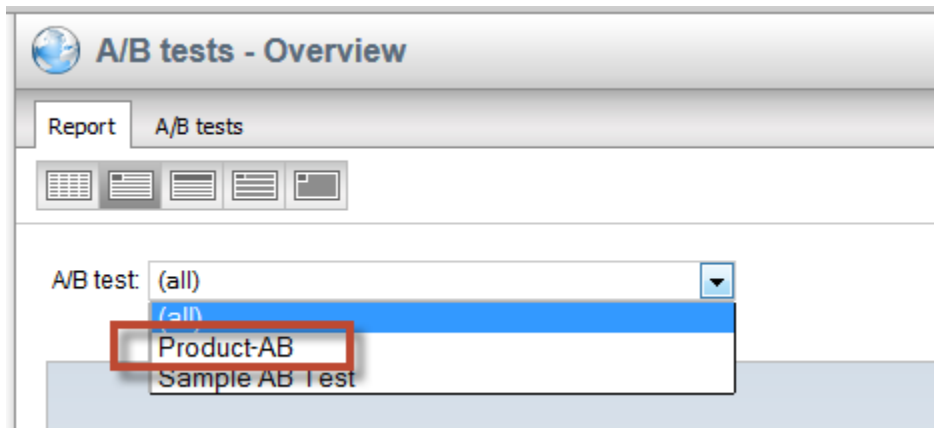

Analyzing A/B Test Results

In Kentico the data gathered during the course of an A/B test is viewed on the Web analytics tab, then selecting Optimization and A/B test reports.

You can also select the individual test using the A/B test drop-down list:.

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Multivariate Testing (MVT)

Multivariate testing uses the same core mechanism as A/B testing, but looks at multiple variables within a single page. In multivariate testing, live traffic is sent to a single page and is then split between the different versions of the design. The purpose of a multivariate test is to measure the effectiveness each design combination has on a single page. Once a site has received enough traffic to run the test, the data from each variation is compared to find not only the most successful design, but also to determine which page elements have the greatest positive or negative impact on a visitor's interaction.

Multivariate testing allows a greater range of freedom in your marketing hypotheses. For marketers who like to optimize their campaigns in as little time as possible, MVT can be among the best ways to do so. Instead of changing a single variable, multivariate testing allows you to change as many as you want.

The following is an example of multivariate testing at work:
Jesse is gearing up to roll out a new campaign page. There has been a lot of discussion in the marketing department about the new fall campaign landing page. The page contains a campaign header, sign-up form, newsletter sign-up, and footer. Unfortunately, many people are concerned that the campaign header won't resonate with the target audience and the sign-up form is way too long. Jesse realizes that no matter how much time she spends on perfecting the page she will never know how effective the page is without an MVT test. To that end, she simply modifies the page design to create variants that include two different lengths of a sign-up form, three different headers, two newsletter sign-up variants and two footers. During the test all visitors are funneled to all the possible combinations of these elements with the same page. Jesse is also running a full factorial test and this is one reason why multivariate testing is often recommended only for sites that have a substantial amount of daily traffic — the more variations that need to be tested, the longer it takes to obtain meaningful data from the test.
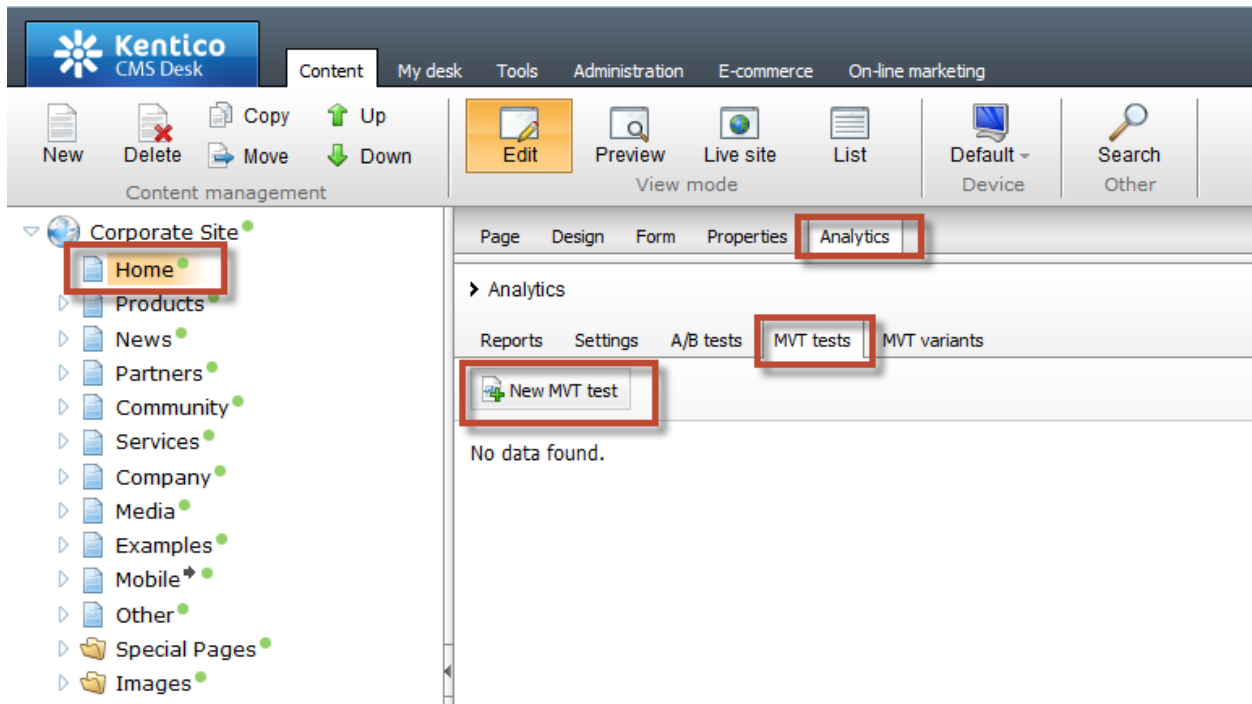
After the test has been run, the variables on each page variation are compared to each other, and to their performance in the context of other versions of the test. What emerges is a clear picture of which variations are best performing, and which elements are most responsible for this performance. For example, varying page footer may be shown to have very little effect on the performance of the page, while varying the length of the sign-up form has a huge impact. Multivariate testing is a great way to help you target redesign efforts to the elements of your page where they will have the most impact. This is especially useful when designing landing page campaigns, for example, as the data about the impact of a certain element's design can be applied to future campaigns, even if the context of the element has changed.

When using multivariate tests, it's also important to consider how they will fit into your cycle of testing and redesign as a whole. Even when you are armed with information about the impact of a particular element, you may want to do additional A/B testing cycles to explore other radically different ideas.

Also, sometimes it may not be worth the extra time necessary to run a full multivariate test when several well-designed A/B tests will do the job well.

Creating an MVT Test with Kentico CMS 7

The first step in creating an MVT test with Kentico CMS 7 is to define the test object at the document level. In the content tree select the page you want to test, click the Analytics tab, then click the MVT tests tab, and then choose the New MVT Test link, as shown in the following screenshot.

In the New test page, update the following values and then click Save.

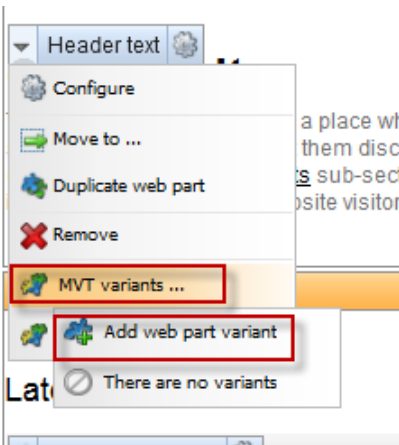| Field	Value
Display name	HomeMVT
Target number of conversions	100
Test from	Now
Test to	Now + 2 weeks
Test enabled	Checked

Creating MVT Test Variants

After the MVT test is created, you can begin creating the content options that will be evaluated. This creation is performed by defining variants for the elements that comprise the content of the page.

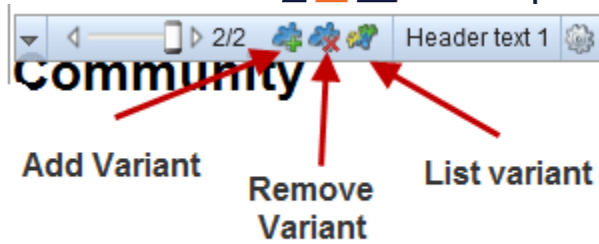With Kentico CMS 7, the following objects can be used to create content variations.

Name	Description
Web parts	Each variant is another instance of the original web part. Variant properties may be configured differently, and an alternate web part can be specified.
Web part zone	Each variant is another instance of a web part zone. Variant zones may contain any type or number of child web parts. The basic properties of the zone may also be set differently. When a new variant is added to a zone, the content of the original zone is automatically copied into it.
Editor widgets	Each variant is a widget of the same type as the original widget, and provides the option to set different values for its properties.

For example, to add an MVT variant to a web part, select the Design tab, then select the MVT variants, and then click Add web part variant, as shown in the following screenshot.
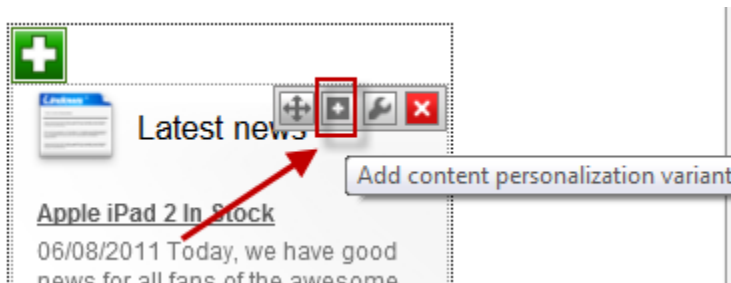

Then the configuration dialog box opens. Similar to creating a standard web part or widget, you can set the available properties so that the variant generates the expected content. By default, the values set for the original object are available, so you only have to change the configurations that are unique to the particular variant.

Once the variant is created, a slider becomes available to allow switching between the available variants, as shown in the following screenshot.

Add Variant
Remove Variant
List variant

In the case of Editor widgets, MVT testing is handled using a similar approach. The only difference is that editing is performed on the **Page** tab..

After a variant is created, the slider becomes available in the **Page** window, as shown in the following screenshot.

MVT variants are either stored in the page template used by the document (in the case of web parts and zones) or bound to the document itself (editor widget variants), so existing variants may be used by other MVT tests performed on the page at another time. Also, you can export an MVT test to another web site. Variants automatically transfer along with document and page templates.

Setting Up Testing Combinations

With an MVT test, the individual testing scenarios are represented by combinations of the MVT variants on the page. By default, all possible combinations of the page content are included in an MVT test. With an active MVT test, the Combinations toolbar becomes available to organize these, as shown in the following screenshot.
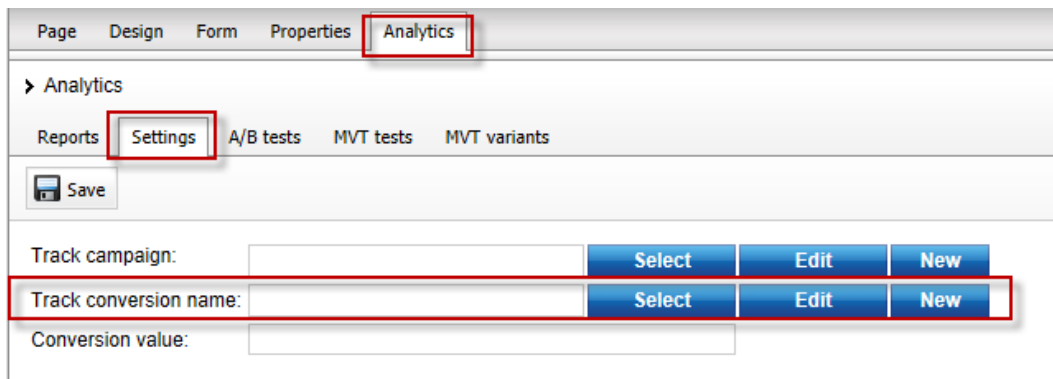
You can choose any of the available combinations through the combination selector, which causes the page to display the content defined by the variants that comprise the specified combination. The selection made through the combination panel is linked with the positions set on the MVT slider on the variable objects.

The "Set as result" action is used at the conclusion of the test, after the data is analyzed and the winning combination is identified. This action allows you to set the winning combination as the permanent content on the page. When selected, this combination replaces the original web parts, zones, and widget with the variants included in the currently selected combination, and removes all other MVT variants from the page.

Configuring Conversions

Valid MVT test results are based on conversions. They provide the tracking of behaviours and actions for web site visitors. As we have seen earlier, they can be used site-wide and are not directly assigned to a specific MVT test.

They can be created at the page level by clicking the Analytics tab, and then clicking the Settings tab, and updating the Track conversion name box, as shown below.

For many web parts and widgets, they are available as part of the properties:.

Analyzing MVT Test Results

The data gathered during the course of an MVT test can be viewed on the Web Analytics tab, and expanding the Optimization and MVT test report, as shown below.

Conclusion

Noah Kagen, the creator of appsumo.com, has some words of advice for anyone unhappy with their A/B testing. According to Kagen, only one in eight tests produce results of any significance. Is this a strike against testing? Not at all – it's a definite call for more testing. Assuming your tests provide insight at the same frequency, you'll need to run eight times as many as you otherwise would to start seeing regular improvements. This is a digital marketing fact and if you aren't willing to bear down and do the hard work, you may as well stop now. As a final thought, remember to treat testing as a process. Take your time. Learn to enjoy the testing process, if you want to take it on yourself. If you don't, then find a good company or successful marketing strategist to do it for you. But make sure it gets done, because it's probably the only thing standing between you and the success you desire.