YOTTAA

Content Optimization

Yottaa provides the capability to manage and manipulate website content to improve functionality and performance using built-in, automatic features and customizable forms. The features can be switched on or off as required, can operate on any page and across the site, and require no code changes.

No code modifications are required to be able to make improvements. Optimization can be applied to both static and dynamic webpages. Cookie management preserves and protects PII.

Using content optimization features in Yottaa to deliver Front End Optimization can speed up the browser when rendering a website. There is a set of defined content optimization features that are easily configured and implemented using embedded templates. Yottaa includes the transformer feature for more configurable optimizations. These have more flexible forms and allow any content to be changed on any page by creating specific rules. Content optimization does not require any code changes. It increases functionality and improves performance while providing complete control over how content is rendered on your web pages.

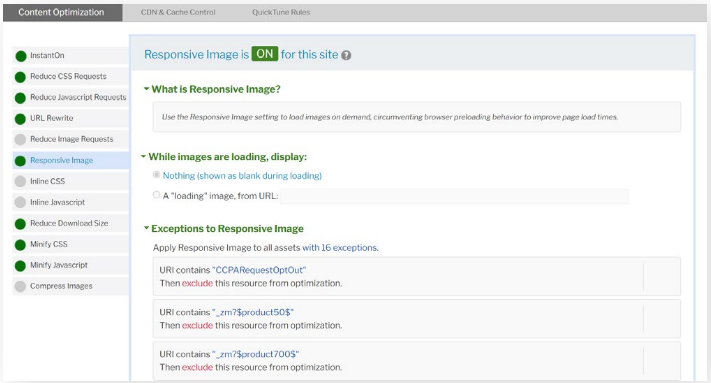
Content optimization features may be enabled or disabled as required. Often a feature is available on the platform being used or has been created by developers and can therefore be switched off.

Key Features

- **InstantOn:** Is Yottaa's patented technology for accelerating non-cacheable objects such as HTML pages. It has the flexibility to identify static and dynamic elements in an HTML page and remove the dynamic elements from the cache. This allows it to instantly serve the static portion of the HTML to speed up the browser processing and user experience. In parallel, InstantOn retrieves the full object from the origin server and delivers the delta later. More information regarding InstantOn is in the Edge Acceleration datasheet.
- **URL Rewrite:** Rewrites asset URLs on web pages to fetch static assets from the CDN rather than the origin server. By offloading requests it accelerates page performance and enables version control. URL rewrite includes URL versioning and hostname rewrite. URL versioning is a smart asset versioning mechanism for managing client side and edge caches.
- **Inline CSS:** Calls to any external CSS files can be put directly into the HTML. Inlining CSS optimizes page rendering by preemptively retrieving and concatenating CSS classes and embedding them into HTML code. Enabling this option will result in fewer round trips, faster load times and better overall site performance.
- **Inline Javascript:** Calls to any external JavaScript files can be put directly into the HTML. Inlining (also known as inline expansion) optimizes program execution by replacing function calls in JavaScript with the actual body of the function being called. Yottaa inlining reduces the overhead associated with function calls and returns without affecting your code. Enabling this option will result in faster scripts and better site performance.
- **Reduce Download Size:** This network level function automatically applies compression to files before transferring them from the website to the browser. Both GZIP and Brotli lossless compression methods are supported.
- **Minify CSS and Minify Javascript:** Minify is the removal of white space, comments and extra characters in a file. While additional lines and indents and new lines are better for code readability, it does add many more bytes to the code. Minification reduces the byte count for faster load.
- **Reduce Image Requests*:** This takes the character streams that make up individual images and embeds them into the HTML. Most web apps contain lots of small images that are used to draw the user interface, menus, and icons across all the pages. If your page uses lots of images, the browser needs to download each of those images separately. If you enable this feature, Yottaa will apply a technique called "Data URI" to encode those images into the CSS and HTML directly without changing how your page appears. Often, this would not be enabled as it can cause the HTML to get larger.
- **Responsive Image*:** (also called image lazy loading) Does not load an image unless it is needed. Typically, the browser sees an image and goes to load it, which is great for above the fold, but not good below the fold. Yottaa can modify web page content to delay image loading, and when this is done to load the image only when needed it can significantly improve the user experience.
- **Compress Images*:** The Compress Images setting can shrink PNG and JPEG images to improve page load times without visually impacting quality. This can be configured to specify lossless and lossy image compression.

**More details on Image Optimization are contained in the Image Optimization datasheet.*

The majority of the above are best practice techniques. Some of these features may now be incorporated in the platform being used and can be switched off in Yottaa. Once enabled each feature can be configured for specific situations, and a list of exceptions can be specified.



Responsive Image is ON for this site ?

What is Responsive Image?

Use the Responsive Image setting to load images on demand, circumventing browser preloading behavior to improve page load times.

While images are loading, display:

● Nothing (shown as blank during loading)

○ A "loading" image, from URL:

Exceptions to Responsive Image

Apply Responsive Image to all assets with 16 exceptions.

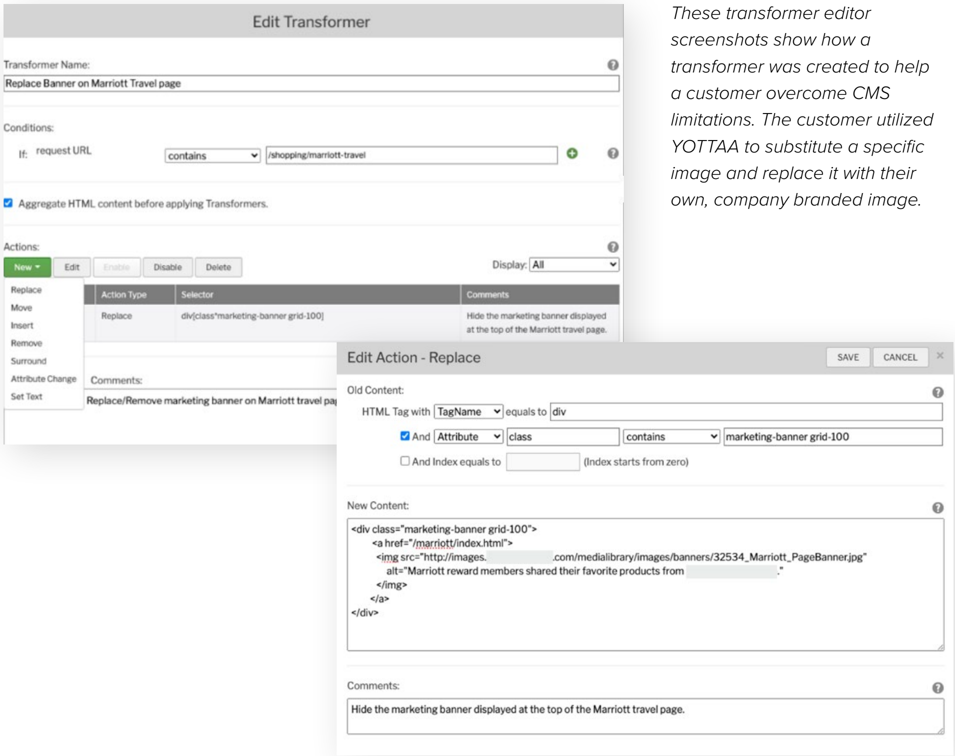
URI contains "CCPARequestOptOut"
Then exclude this resource from optimization.

URI contains "_zm?$product50$"
Then exclude this resource from optimization.

URI contains "_zm?$product700$"
Then exclude this resource from optimization.

Content optimization options showing Responsive Image and some of the controls that can be set for it.

- **Transformers:** allow content to be added to or removed from a page or set of pages, by inserting after, before, appending, or prepending to existing elements. While there are many automated optimizations for content, transformers are very flexible in their application, allowing the creation of specific actions to be taken on specific elements of a page or site. As no code changes are required transformers provide a quick way to add content, such as scripts, images, CSS, etc, and are often used as a micro-CMS where CMS limitations may be encountered.
- **Attribute manipulation:** can be performed using transformers which can automatically determine the attributes of an original image. The transformer will then copy it to a Yottaa attribute and can then lazy load it. This provides an additional performance improvement over the standard feature set and can be performed on images, video, audio, footers, etc. Anything that can be lazy loaded can have attribute manipulation applied and will improve Core Web Vitals measures.



Edit Transformer

Transformer Name: Replace Banner on Marriott Travel page

Conditions:

If: request URL contains /shopping/marriott-travel

☑ Aggregate HTML content before applying Transformers.

Actions:

Display: All

Action Type	Selector	Comments
Replace	div[class*marketing-banner grid-100]	Hide the marketing banner displayed at the top of the Marriott travel page.

Comments: Replace/Remove marketing banner on Marriott travel pa

Edit Action - Replace

Old Content:

HTML Tag with TagName equals to div

☑ And Attribute class contains marketing-banner grid-100

□ And Index equals to (Index starts from zero)

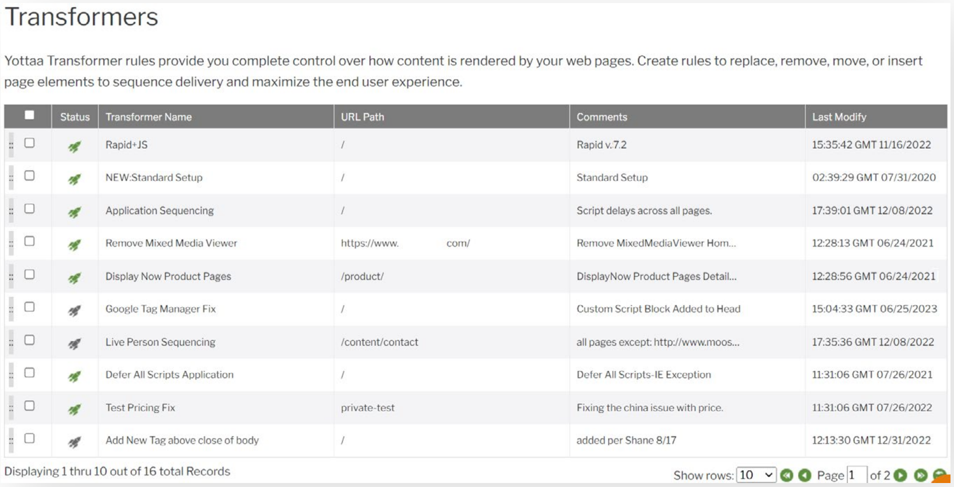
New Content:

```
<div class="marketing-banner grid-100">
    <a href="/marriott/index.html">
     <img src="http://images.[redacted].com/medialibrary/images/banners/32534_Marriott_PageBanner.jpg"
       alt="Marriott reward members shared their favorite products from [redacted]."
     </img>
    </a>
</div>
```

Comments: Hide the marketing banner displayed at the top of the Marriott travel page.

These transformer editor screenshots show how a transformer was created to help a customer overcome CMS limitations. The customer utilized YOTTAA to substitute a specific image and replace it with their own, company branded image.

A customer was getting 404 errors from a third-party application due to a missing font. As the third party was not available to implement a fix for several days, Yottaa was able to create and apply a transformer to redirect the call and fix the issue in 5 minutes, no code changes required.



Transformers

Yottaa Transformer rules provide you complete control over how content is rendered by your web pages. Create rules to replace, remove, move, or insert page elements to sequence delivery and maximize the end user experience.

□	Status	Transformer Name	URL Path	Comments	Last Modify
□		Rapid+JS	/	Rapid v.7.2	15:35:42 GMT 11/16/2022
□		NEW:Standard Setup	/	Standard Setup	02:39:29 GMT 07/31/2020
□		Application Sequencing	/	Script delays across all pages.	17:39:01 GMT 12/08/2022
□		Remove Mixed Media Viewer	https://www. com/	Remove MixedMediaViewer Hom...	12:28:13 GMT 06/24/2021
□		Display Now Product Pages	/product/	DisplayNow Product Pages Detail...	12:28:56 GMT 06/24/2021
□		Google Tag Manager Fix	/	Custom Script Block Added to Head	15:04:33 GMT 06/25/2023
□		Live Person Sequencing	/content/contact	all pages except: http://www.moos...	17:35:36 GMT 12/08/2022
□		Defer All Scripts Application	/	Defer All Scripts-IE Exception	11:31:06 GMT 07/26/2021
□		Test Pricing Fix	private-test	Fixing the china issue with price.	11:31:06 GMT 07/26/2022
□		Add New Tag above close of body	/	added per Shane 8/17	12:13:30 GMT 12/31/2022

Displaying 1 thru 10 out of 16 total Records

Show rows: 10 Page 1 of 2

Several examples of transformers configured in a customer's system.

Improving performance and functionality without making code changes, by enabling automated features or creating specific rules saves time and development resources. It allows content changes to be applied quickly to improve appearance and function, or fix operational issues, and gives flexibility for using different browsers or changing platforms.

The Next Step

Don't just assume that your eCommerce site is performing as fast as it needs to – be sure with a free, no obligation YOTTAA trial. Start the process today with a FREE Performance Snapshot. **Click HERE for more information. You can't afford not to.**