

DATA SHEET

Application Sequencing

Accelerate the time to meaningful shopper interaction with all third-party features of your online store loading in the most efficient way. Application Sequencing provides a single ruleset to manage all the third parties, whether they are loaded via a tag manager or website source. Based on observed performance of over 1,000 third party tags across over 1,500 sites, fine-tune controls are available to schedule and prioritize when and how third parties load. This minimizes common performance impacts from third party tags slowing down the intended customer experience with features beyond what tag managers or common DIY patterns can provide.



The Internet has very inconsistent performance and every third party loaded is an opportunity for stalling or blocking a site visitor from browsing and purchasing your products. Yottaa optimizes third parties on the critical load path beyond what tag managers or simple lazy loading approaches can do, accelerating your shopping experience.

Rule Types

Rule Types can be applied to both third party tags and any other custom resource your site leverages.

Sequence Resource Rule

Source Script Sequencing (source injection) includes the ability to support different resource types including HTML source script, XHR, images, js scripts etc as resource objects.

- **After First Interaction** - Sets the resource to load after the shopper clicks, scrolls, types, or moves the mouse and can include a set number of milliseconds delay after the interaction. This can be combined with the Onload event such that the tag is loaded after the first interaction after onload.
- **After Onload** - Sets the resource to load a specified number of milliseconds after onload browser event.
- **Lazy Load** - Sets the resource to load when an element of the site has been rendered. For example, you can delay product reviews until the shopper scrolls to the reviews section.
- **After UI Event** - Sets the resource to load when a customer interacts with a specific element of your site.
- **After Pubsub Event** - Sets the resource to load based on a prompt from the Rapid Publish or Subscribe APIs. This allows for an external event to drive when a third party tag loads.
- **Chaining** - Loads the resource in a manner where dependencies among different resources are not impacted. Ensures that elements are executed sequentially, preserving the order of the script loads and guaranteeing that non-essential first-party scripts do not interfere with page load times.
- **Load Normally** - Sets the resource to load normally.

To illustrate the Chaining rule, consider the following example:

Sequential Loading of Scripts with Dependencies

In a typical eCommerce environment, multiple JavaScript libraries are used to handle key functionalities. To ensure proper site performance, these libraries must load in a specific sequence:

- 1. Load Lodash.js:** This utility library provides powerful functions to manipulate product data, such as sorting, filtering, and formatting product attributes. It must load first, as other scripts depend on its data manipulation capabilities.
- 2. Load Axios.js:** Frequently used to make API calls, Axios is essential for pulling real-time product data, inventory levels, and pricing from backend services. It should load second, after Lodash, so that any data fetched can be processed efficiently.
- 3. Load Custom Scripts:** These eCommerce-specific scripts might rely on Lodash for data manipulation and Axios for fetching product information. They should load last to ensure that all necessary data is available and formatted correctly for the user interface.

Using Yottaa's Chaining rule, you can enforce this sequence by setting up a chain that loads each resource in the correct order, ensuring that dependencies are met and that non-essential scripts do not interfere with page load times.

JavaScript Injection

Ability to immediately add new features to your site without a release via a specified JavaScript. JavaScript injection can also be used to track custom performance or business metrics, and to fire tags appropriately based on the metric. For example, firing off specific configurations based on if a SPA Page is in a transition or a clean load page. Use JavaScript injections when you need to immediately add JavaScript and cannot wait for the next release cycle.

Dynamic Sequencing Rule

- **Priority** - Critical, High, Medium, Low – Tags can be assigned to a priority group to accommodate desired order for key vendor solutions such as analytics beacons or personalization tags that need browser data to inform their response.
- **Spread** - The spread rule loads each third party with a configurable millisecond lag consistently even if a specific third party tag's response is slow or not responding.

Catch-all

Sequence Resource rules and the Spread rule in Dynamic Sequencing rule can be a catch-all rule for remaining tags. This will automatically catch new tags added to site without a specific rule for each third party.

Block Resource Rule

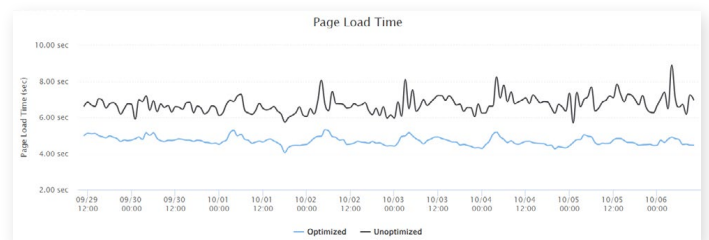
Third party or custom resources can be blocked regardless of whether source has the request embedded or not (a fast way to turn something off without an update to your website storefront).

Split Tests

Split tests are a useful feature for website optimization. A split test can be applied to test individual performance rules, security rules, or third parties. Split tests allow assigning a percentage of traffic to any specific rule in order to test its impact compared to other settings. Data gathered from split tests can be fed into customers' Adobe/Google/analytics platform. Examples of split test applications include:

- Load app A before onload and defer app A until after onload. This helps determine sequencing.
- Assign x% of traffic to app A and y% of traffic to app B, to determine which application may be better to install based on their performance impact.

Split tests are different from the Continuous Impact split A/B test which is used to show the impact of an optimized versus unoptimized site. Split tests can also help in the creation of User Profile rules or use different Profiles to run split tests.



Example of website showing fully sequenced (optimized) versus non-sequenced (unoptimized).

Profile Rules

User profiles can be created and defined based on the context of the site visitor. They can be created to apply different configurations to different segments of customers for a better, more tailored visit experience. This includes changing the sequencing or enabling/disabling features and applications based on customer context. This is expanded upon in the Context Intelligence datasheet.

Example applications of the profile rules could include:

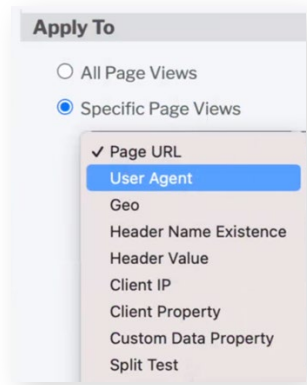
- Setup tests for comparing different load orders by assigning different sequencing rules to different profiles.
- Using in-store monitors to display the company website would load

the storefront and turn off most of the third-party applications such as social media apps.

- A Profile which detects mobile visitors by looking for the connection type and screen resolution could load different image resolutions or video. It could remove, move, or change some apps, such as ads or promotions, to versions that are better suited to a small screen, low bandwidth mobile device.
- Reduce bounce rate off of landing pages from an Ad or campaign by increasing performance by not loading some applications.

Apply To

Profiles can be applied to individual conditions or can be built to be more complex and use several different conditions. Some conditions (User Agent, Header Value, Custom Data Property) simply look for a match of some sort (contains, equals, doesn't equal, in, starts with, etc.), others have a more defined list of options available as shown in the tables.



Category options.

Page URL	Geo	Client Property
Pathname	Country Name	Language
Full URL	Country Code	Page Title
Pathname	Region/State	Color Depth
Hostname	Region/State Code	Browser Resolution
Extension	Metro	Screen Resolution
Protocol	City	Connection Type
URL Parameters	Zipcode	Round Trip Type
	Longitude	
	Latitude	
	Continent	

Context segment options for 'Apply To' for Profile creation.

Patent: [US9282145B2](#) Systems and methods for managing loading priority or sequencing of fragments of a web object

Yottaa's patented Application Sequencing allows you to optimize your shopper experience and the intent behind Google's Core Web Vitals. The shopper has the experience you intend more consistently while you maintain fine-tune control over the features delivered by third parties such as product recommendations, ratings, reviews and the plethora of capabilities you've added to your site.

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.