

YOTTAA RAPID CTRL

Optimize the
loading of all
digital elements
on your site

Due to the complexity of today's eCommerce websites, brands and online retailers are experiencing significant site performance issues, and it's killing sales. Why? Because every second that shoppers have to wait after the 3 second loading mark costs them 7% in conversion.

But why are eCommerce sites getting hit particularly hard with performance issues versus other industries? Shoppers expect a lot from their online experience, and in an effort to meet those expectations, brands are adding all types of digital elements to their already complex sites.

For example, the average eCommerce site has 40-60 3rd party technologies. While

these elements greatly enhance online experience for shoppers, they also have been proven to significantly slow down page speed, accounting for 70% of load time.

RAPID CTRL is a robust eCommerce acceleration solution that optimizes the loading of browser-based site elements, enabling online brands to speed up their sites in a matter of hours. The end result is reduced 3rd party performance impacts, a super fast eCommerce site, and increased online conversions.

With a faster site through RAPID CTRL, your shoppers will stay on pages longer, leading to increased online sales.



 BOLL & BRANCH™ + YOTTA

Through Yottaa RAPID CTRL, luxury linens brand, Boll & Branch, experienced a **21% improvement in site speed**. Most importantly, Boll & Branch saw an **increase in conversion rates of 11%**.

How does RAPID CTRL work?

RAPID CTRL is easy-to-install through two lines of Javascript, and enables online brands to optimally identify, manage, and sequence the loading of all elements on their sites.

Once RAPID CTRL is injected onto a site, YOTTAA's acceleration technology takes control over how and

when all digital elements are loaded by optimally sequencing the loading of 1st and 3rd party technologies. RAPID CTRL also includes image optimization and lazy load to provide unparalleled visibility into site errors and UX violations to improve site performance and create a consistent shopper experience.

Key features include:



Application Sequencing of 3rd Parties and Other Assets

Optimally schedule the execution of 3rd parties and other assets on your site to ensure the fastest time to shopper interaction.



Visibility and 3rd Party Knowledge Base

Gain visibility into your site's performance through YOTTAA's analytics and 3rd Party Knowledge Base to create optimizations based on machine learning and AI.



Context Intelligence

Deliver content to shoppers based on their device, browser, and location for personalized and more efficient page loads.



Anomaly AI

YOTTAA's Anomaly AI uses machine learning to help online brands detect delays from individual page elements, so they can make their pages load faster, more consistently, and avoid costly site outages.



Benchmark Community Data

Compare the performance of your site to a community of over 1,500 optimized eCommerce sites by eCommerce platform, device, browser, and much more.



Portal Analytics

Take action on site performance, 3rd parties, Javascript, anomalies, and anything else related to site performance optimization based on RAPID CTRL's deep analytics. Compare yourself to a community of peers to benchmark your results.



Image CTRL

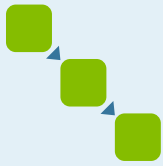
Enable the optimization of all images on your site through transcoding, image compression, and caching. This includes browser-based sites, single page applications, and other cutting-edge UX approaches.



Open APIs

Leverage YOTTAA functionality through our documented API to extract data from the YOTTAA portal to use in your own analytics/dashboard solution. Current integrations include Grafana, PerimeterX, Slack, and many more.

Capabilities Overview



Application Sequencing: Gain 3rd party control

According to YOTTAA's 2019 3rd Party Index, 3rd party technologies cause over 70% of site performance issues. As a key driver to speeding up page load times and allowing your organization to scale, YOTTAA's patented Application Sequencing is utilized on over 1,500 eCommerce sites to optimally sequence and control the loading of 3rd parties. YOTTAA's Application Sequencing automatically inventories all 3rd parties on your site and applies detailed knowledge of each 3rd party for recommended optimization options.

The RAPID CTRL engine builds a layer between the application and web browser, allowing YOTTAA to control all aspects of loading digital elements. The digital elements could be 1st parties, such as images, or 3rd and 4th parties.

YOTTAA captures all the digital elements that are initiated by the application to prioritize and then schedules when they will execute. YOTTAA does this by setting the priority and schedule of these elements, using our performance control list API. This is implemented with a simple Javascript API that is sent via the RAPID CTRL engine or coded by customers.

Additionally, our 3rd Party Service Scheduler groups the individual resources by service, and schedules the full 3rd party service over the optimal time. This enables the ability to set the maximum scheduling period and eliminate unnecessary delays.

YOTTAA's Application Sequencing can capture 100% of the resources being loaded, whether they are injected via HTML, Javascript, or even Tag Managers. This gives you a single location to control 3rd parties, no matter who or how they are being implemented.

Application Sequencing also has the ability to optimize mobile devices differently from other devices by sequencing the delivery and rendering of mobile-specific

content in real-time. This way, retailers don't need to sacrifice dynamic content on mobile, and shoppers can enjoy their online experience on-the-go.

After the page is loaded, YOTTAA provides deep analytics on page performance, 3rd party performance, and what we call violations (things that impacted the page's user experience). Violations can be slow loading 3rd parties, resources that are too big in size, or resources that fail to load.

This information can be used to further improve site performance by pointing out further optimizations, or simplify debugging a new performance issue by quickly finding the offending 3rd party.

Application Sequencing enables you to:

- Automatically inventory all digital elements on your eCommerce site
- Optimize the order that 3rd parties are executed on your site
- Control 3rd party performance and manage compliance for each browser, device, and personalized interaction
- Bypass 3rd parties when anomalies occur
- Automatically optimize new 3rd parties added to your site to improve scalability
- Maintain alignment with the YOTTAA 3rd Party Knowledge Base
- Prevent site downtime and loss of sales
- Provide a customized approach to 3rd party control through seven types of sequencing: Defer, Event, Observe, Lazy, Script, By-pass, and 3rd Party Service Scheduler



Context Intelligence: Personalizing experiences

Great online shopping experiences require personalization. RAPID CTRL enables brands to provide additional personalized experiences for their shoppers by identifying and delivering the right content at the optimal time based on the specific context of the shopper.

As the heart of YOTTAA's optimization capabilities, Context Intelligence is a rules engine and machine-learning platform that automates optimization and drives the actions of our acceleration solutions. Context Intelligence is implemented through a cloud-based service that collects information about the context of site visitors and automatically tunes optimization rules in real-time to maximize the user experience.

After detecting and reacting to device type, screen size, browser information, and browser size, Context Intelligence knows when to stream HTML responses to the user device rather than waiting to render the entire HTML file, and transfer CSS data to the user as quickly as possible to speed the “painting” of the page, and eliminating Javascript that can delay page rendering.

As a result, Context Intelligence powers Application Sequencing and ensures in real-time when and how all site elements are going to be delivered for the best user experience.



Visibility and 3rd Party Knowledge Base

The average eCommerce site has over 40 3rd party technologies, and brands often have little or no visibility into their 3rd party inventory or how they are impacting site performance.

YOTTAA has the industry's only database that collects real-time performance data from over 1,500 eCommerce sites and on more than 1,000 3rd parties every time a page is viewed.

YOTTAA's 3rd Party Knowledge Base enables:

- Brands to review and evaluate existing and new 3rd parties to ensure they have the right mix of technologies both in terms of shopper functionality and performance impact.
- Identification and resolution (through machine learning and deep 3rd party data) of all 3rd party performance

issues whether they are specific to your site or impacting the entire eCommerce ecosystem.

- Deep visibility into the performance of over 1,000 3rd parties including recommended optimizations to automatically provide the best approach for loading each 3rd party, resulting in significantly fast sites that meet shopper expectations.

But the data doesn't stop with 3rd parties. In addition to 2nd and 3rd party visibility, RAPID CTRL users also have the ability to see additional technologies — like 4th and 5th parties — that otherwise would be invisible. Retailers need to be able to monitor and mitigate the risks associated with these elements too, as 4th and 5th parties are just as vulnerable to performance anomalies and can impact site performance and shopper experience when something goes wrong.



RAPID Portal and Analytics

RAPID CTRL also includes comprehensive analytics that can be utilized via the RAPID Portal, our user performance dashboards. By compiling all data gathered by the RAPID Engine, RAPID CTRL breaks it down and displays the data on interactive dashboards, including sections for inventories, performance, and community analytics. This data can be used to identify optimization opportunities and problematic scripts, and provides suggestions on how to correct potential issues.

RAPID Portal enables users to:

- Discover any digital element that might impact site performance.
- Determine the negative impact of that element on overall performance and user experience.
- Inventory 3rd parties and isolate violations/errors.
- Investigate JS errors and track trends.
- Identify performance anomalies and determine root cause errors.
- Compare your site to others and trend 3rd parties across the 1,500+ eCommerce sites optimized by YOTTAA.
- Apply performance optimizations and resolve anomalies without any custom development or heavyweight code release.



Dashboard Overview

There are multiple dashboards available in the RAPID Portal which show:

- A view of **overall website performance** over the past 5 days, including site speed, violations, and Javascript errors.
- Data to troubleshoot and identify **3rd party performance problems**. There are three graphs corresponding to the three types of 3rd Party Performance Violations.
- **JS (javascript) error rates** by browser and device. It also contains information for troubleshooting like the last hour's Top Messages and Top URL's.
- A summary of **Anomaly Activity**. For the past 5 days, you can see what types of performance anomalies fired and when.
- A complete **inventory of all 3rd parties** living on your site and visibility into how each one is performing in real-time.



Anomaly AI

As an important capability to the success of our customers' brand sites, YOTTAA's Anomaly AI uses machine learning to help online retailers and brands improve how quickly and precisely they detect and remediate delays from individual page elements. This way, they can make their pages load even faster and more consistently while avoiding costly site outages.

Anomaly AI automatically assigns performance thresholds to the behavior of an eCommerce page, and machine learning

algorithms adjust those thresholds based on historical trends and variations. Once performance thresholds are exceeded, Anomaly AI sends an alert that an optimization is needed, and can integrate with your communication channels (like Slack and email alerting) to streamline that information.

Anomaly AI may also recommend specific optimization techniques based on the nature of the performance violation.

Optimally delivered for your unique environment

YOTTAA's acceleration solutions are deployed to support the unique combinations of eCommerce technologies used by online brands, including all eCommerce platforms, CMS technologies, and 3rd parties.

RAPID CTRL is delivered through a Javascript insert and provides optimization and control capabilities to ensure all the assets in the browser are loading quickly resulting in improved shopper experience and conversions.

About YOTTAA

Leading retailers, brands and publishers, such as LOFT, Ralph Lauren, Carter's, Lenovo, e.l.f. Cosmetics, GNC, and Allbirds rely on YOTTAA's Cloud platform to accelerate and optimize the loading of 3rd party eCommerce technologies, high resolution images, and other website elements, resulting in up to 40% web performance improvements and up to 20% increases in online conversion. With over 15 patents and a continuing commitment to innovation, YOTTAA's mission is to help brands improve shopper experience and increase conversions through fast-loading sites and offer engaging functionality.

Process to a FAST site

Want to get started? YOTTAA suggests the following process to increasing site speed and conversions:

1. Install RAPID inSITE, YOTTAA's free performance evaluation tool, which is going to collect real-time information of what's happening on your site.
2. Once you have RAPID inSITE installed, our platform will collect data for 5 days. With this information, we will provide a comprehensive data enriched site evaluation that is personalized for your team.
3. The outcome of this evaluation and meeting will determine which YOTTAA product is best for you, and will be followed with a deep dive into all functionality and benefits.
4. We then prove our optimization results with a free proof of concept trial based on the success criteria to meet your needs.

Visit www.yottaa.com for more information on RAPID CTRL how to get started.