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Core Web Vitals Diagnostics

Discover what your real users are experiencing with diagnostic insights that pinpoint the exact element or elements that are the root cause of your Core Web Vitals scores.

What are Core Web Vitals?

Core Web Vitals were designed and introduced by Google to illuminate web performance challenges impacting the user experience and improve search results. Three Core Web Vitals metrics are measured: Largest Contentful Paint (LCP), Interaction to Next Paint (INP), and Cumulative Layout Shift (CLS). Each of these metrics is automatically assigned a rating of Good, Needs Improvement, or Poor based on the methodology defined by Google.

Monitor Core Web Vitals with Yottaa

Real-world user experience data is captured from site traffic in real-time without sampling. Calculation of Google Core Web Vitals uses the browser's Performance API[1], which is a group of standards used to measure the performance of web applications. This API provides built-in metrics and enables Yottaa's analytics engine to also calculate variations with high precision timestamps. A variation example is inclusion of average and median results in addition to Google's recommended statistic 75th percentile of page loads segmented across mobile and desktop devices. For each core web vital, Google's defined range — such as Good, Needs Improvement, Poor - is also provided both as a raw number and visual.

Key insights for LCP, INP, and CLS include:

- Percentage change against prior reporting period
- Score
- Range (Good, Needs Improvement, Poor)
- Site score by device (desktop, mobile, tablet, other)
- Site score by Page Category

Trend data for LCP, INP, and CLS include:

- Rollup ability for Hourly, Daily, Weekly, Monthly
- Filterable by Device Types, Browsers, Page Categories
- 75th percentile of page loads statistic along with the Average, Median (50th), 85th, 90th, and 95th percentiles

Anomaly AI

Yottaa's Anomaly AI closely monitors each metric in real-time, providing timely alerts for any performance changes that may impact SEO or conversion rates. These alerts enable faster resolution compared to standard reporting from Google, allowing you to address issues well in advance. Alerts can be received via various endpoints, including email addresses or Slack channels.

Filter insights by key attributes

Context intelligence is built-in to each metric, analytics and dashboard that provides the ability for filtering Google Core Web Vitals insights by device type (Desktop, Mobile, Tablet, Other), Browser, and Page Category (e.g., product detail pages, category pages). The impact by device type includes Google's recommended target 75th percentile statistic of page loads along with Average, Median (50th), 85th, 90th, 95th percentiles. Additionally, a summary of how the site is meeting the Core Web Vitals can be rolled up Hourly, Daily, Weekly, Monthly and real-time data is included for the last 24 hours.

Lab (Synthetic) vs. Field (Real User) Data

Web Vitals can be determined by lab or field data from synthetic tests or Real User Metrics (RUM). Google uses anonymized data from Chrome browser users to feed their Chrome User Experience Report (CrUX), a moving average of the last 28 days. That data is what they are using to measure these three metrics for search rankings. CrUX data is available in several tools, including Google Search Console.

While RUM data is used to influence a site's search ranking, some of the metrics are available in synthetic or "lab-based" web performance tools from Google like Lighthouse or PageSpeed Insights, which run page loads on simulated networks and devices.

Yottaa provides real user monitoring or field data to best reflect what shoppers experience in the real world and allow site owners to find areas for improvement and optimization with data up to thirteen months.

> "While testing in the lab is a reasonable proxy for performance, it isn't necessarily reflective of how all users experience your site in the wild."
>
> – Google

Diagnose performance issues

Uncover where improvement opportunity exists across your entire site from performance analytics dashboards or feeds that can inform other business intelligence tools.

Diagnostic insights are provided for each metric by page category (e.g., product detail page, category page) with the recommended statistical analysis. A summary of performance impact by page category and metric is also provided with the ability to identify specific resources slowing down pages and impacting specific web performance metrics.

- Identify problematic pages by metric and its associated score and quality range (e.g., Pages that have a Interaction to Next Paint (INP) of greater than 200 milliseconds)
- View hourly insights for last 24 hours of real-user activity on site
- Review resources (URL) negatively affecting each metric by Page Category

Additional insights are provided for LCP and CLS web vitals that include a specific breakdown of the metric calculation.

- **LCP** - Resource render time, load order, and events
- **CLS** - Resource CLS value, vertical, horizontal and area changes
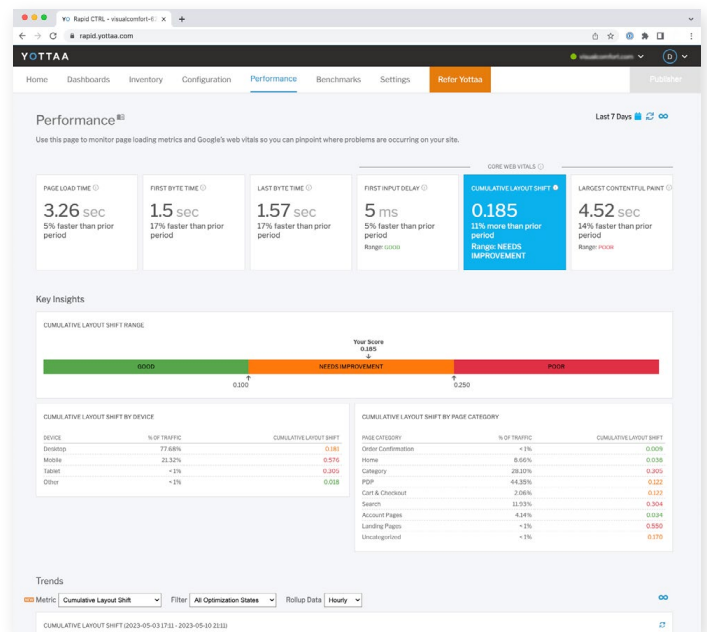
Site Performance Dashboard

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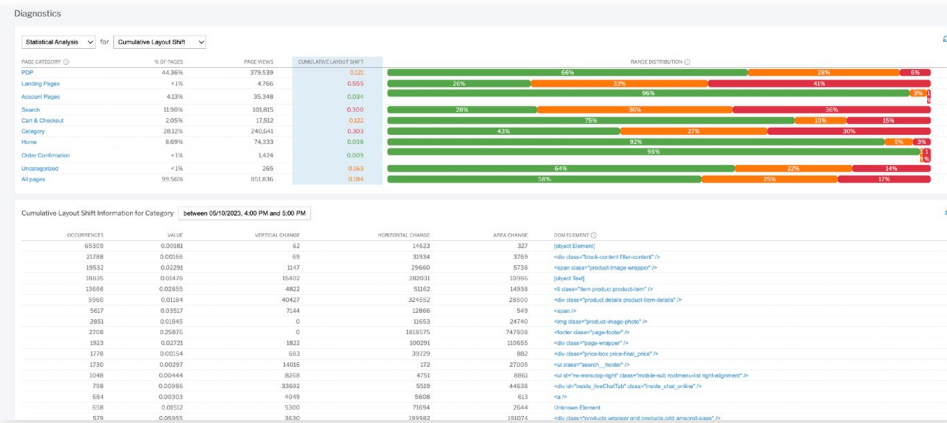
DOM Element Root Cause View

Share the results with your development team

A breakdown of resources and pages exposes what specifically is contributing to core web vitals results. This data can then be used to prioritize development efforts to resolve issues contributing to poor scores.

Important metrics to measure beyond Core Web Vitals

In addition to the Google Core Web Vitals, there are a number of industry defined web performance metrics that provide valuable insight into the digital experience of a real customer. Many of these are defined and published by the [W3C Web Performance Working Group](#). Yottaa also measures and monitors site performance for additional metrics that cover perceived and actual load responsiveness: DNS Lookup Time, Connect Time, Time to First Byte (TTFB), DOM Content Loaded, DOM Complete, DOM Interactive, Time to Interactive (TTI), First Contentful Paint (FCP), Time to Last Byte (TTLB), Load event, Last Byte Time.

1 https://developer.mozilla.org/en-US/docs/Web/API/Performance_API

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.