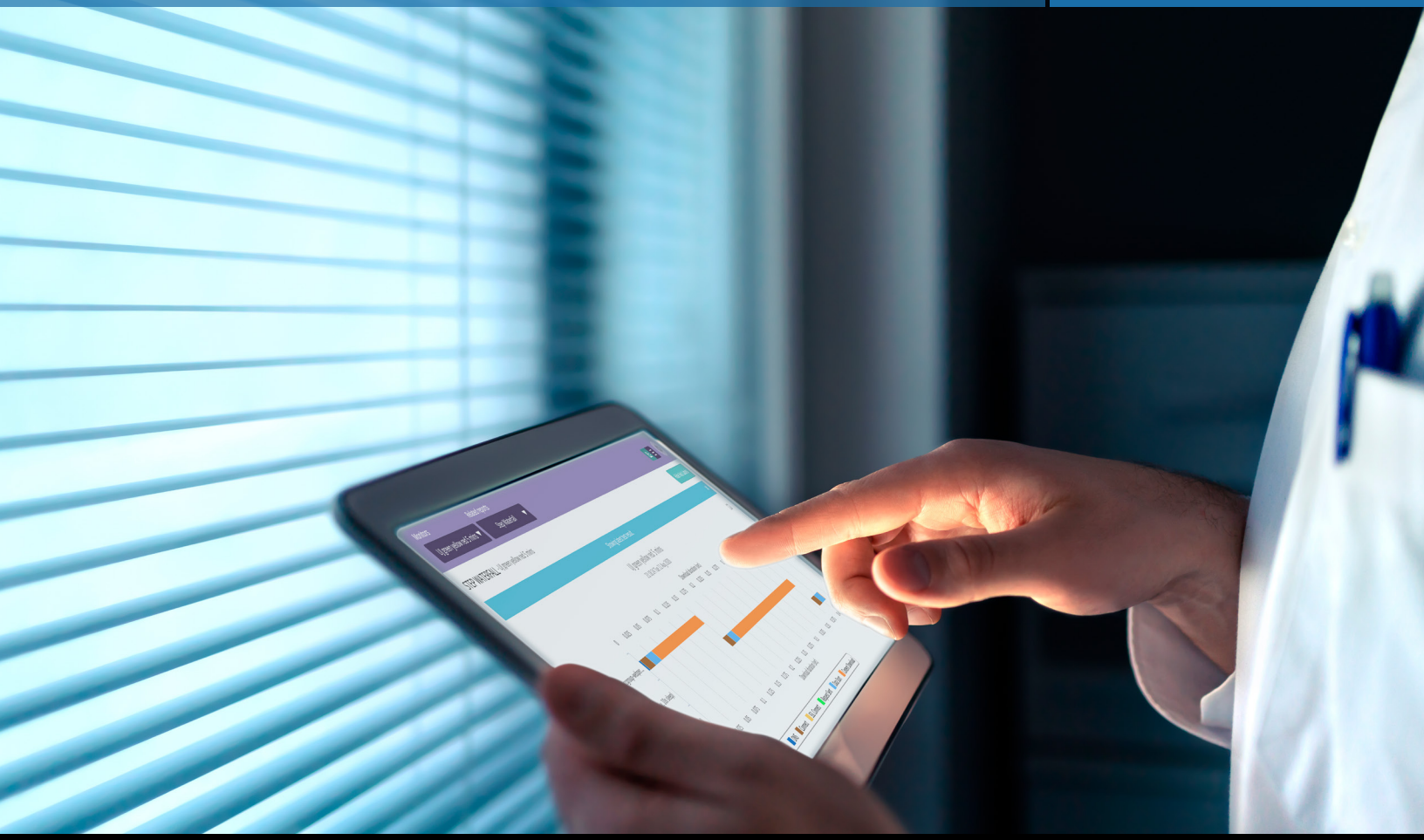
SOLUTION BRIEF



Monitoring Websites for Optimal Performance

KEYSIGHT

Monitoring Websites for Optimal Performance

Websites that load slowly are bad for business because you have a limited time to make a good impression.

With user experience a significant differentiator between you and your competitors, your website must be fast to load, visually enticing, and easy to use. However, large JavaScript files, uncompressed images, and videos can slow down performance. The digital assets necessary to set your website apart can negatively impact your conversion rates. Mobile devices, application programming interfaces (APIs), file transfer protocol (FTP), and email servers all contribute to the user experience to further affect performance.

With the stakes so high and many factors that impact optimal performance, you must continuously monitor your website. You need a reliable performance alert system to quickly identify the problem, when and where it occurred, and how to fix it.

Optimize Web Performance

Keysight's Eggplant Monitoring is a SaaS synthetic monitoring tool that simulates and monitors key interactions along user journeys. The software solution navigates your website and replicates your visitor's exact behavior, gathers performance data, and identifies any errors in real-time. Running periodical checks for your website's availability captures granular data underlying each synthetic monitor. Figure 1 is an example of the results that enable you to diagnose user journeys issues efficiently.

Testing and Monitoring Capabilities

Eggplant Monitoring uses a methodology for emulated and real Chrome browser testing. The software introduces Chrome's latest features using the most recent browser version to maintain accurate monitoring.

As more people use websites while on the go, Eggplant Monitoring can monitor performance when accessed via mobile devices. By simulating throttle upload, download speed, and network latency, you can analyze webpage load times and the impact of accessing your website from different geographical locations.

Regardless of desktop or mobile use, analysis of user interactions and dynamic actions occurs outside your environment from the client-side to monitor the actual user experience. Flexible user journey scripting includes dynamic parameterization of variables, retry logic, dynamic date selection, item selection from lists, and much more. The dynamic data presentation is highly customizable, enabling efficient diagnosis of issues for each test.

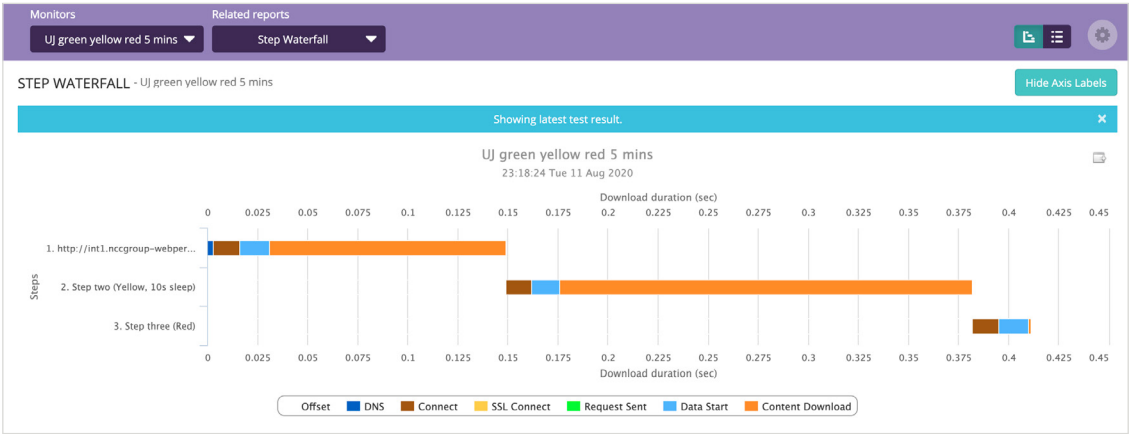


Figure 1. Timeline of performance breakdown to pinpoint slow steps and total duration of a user journey

However, user journeys rely on multiple technology layers beyond the front-end website experience. As a result, Eggplant Monitoring can monitor connections for APIs, FTP and email servers.

Monitoring these connections is essential when a user completes a transaction and the website-under-test sends a confirmation email. By checking a unique reference within the email, such as an order number, Eggplant Monitoring displays the time taken to reach the email server. This solution can also track user journeys involving two-factor authentication using short message service (SMS) and emails to maintain a seamless experience throughout the entire user journey.

Alerts and Reporting

Alerts and notifications

Error notifications are color-coded depending on the severity of the problem. Clear screenshots provide the precise location so you can accelerate resolution.

Eggplant Monitoring has customizable webhook features to optimize alert notifications so you can filter based on monitors, result codes, and schedules. Webhook alerts will integrate with

various test management tools, including Jira, ServiceNow, and Slack. Alerts are sent via email, SMS, and voice, depending on your preferred method.

Alert escalation policies are available to help you identify persistent or severe issues. The policies are entirely customizable, so you can determine the number of times an error occurs before the escalation process begins and who should receive notifications.

Other alerts include:

- Intelligent retest logic monitors possible carrier issues and removes any false positive alerts.
- Exact issue detection with network conditions, such as domain name system (DNS), transmission control protocol (TCP), or secure sockets layer (SSL) certification.
- Fast identification of problems with client-side interactions, such as “elements not visible.”

In addition, you can receive notifications, view monitor status, identify errors, and run manual tests with the free Eggplant Monitoring mobile app for iOS and Android.

Eggplant Monitoring portal reports

The tool’s portal contains summaries of reports that you can configure to suit your specific needs — within the portal, you can access a range of reports.

Performance Breakdown, Distribution, and Trends

Figure 2 is an example of a report that provides download duration, distribution, and performance over time along with central processing unit (CPU) and user experience (UX) metrics. The report provides data such as core web vitals of a monitor for a specific period and the speed of consistency improvements to see how performance changes over time.

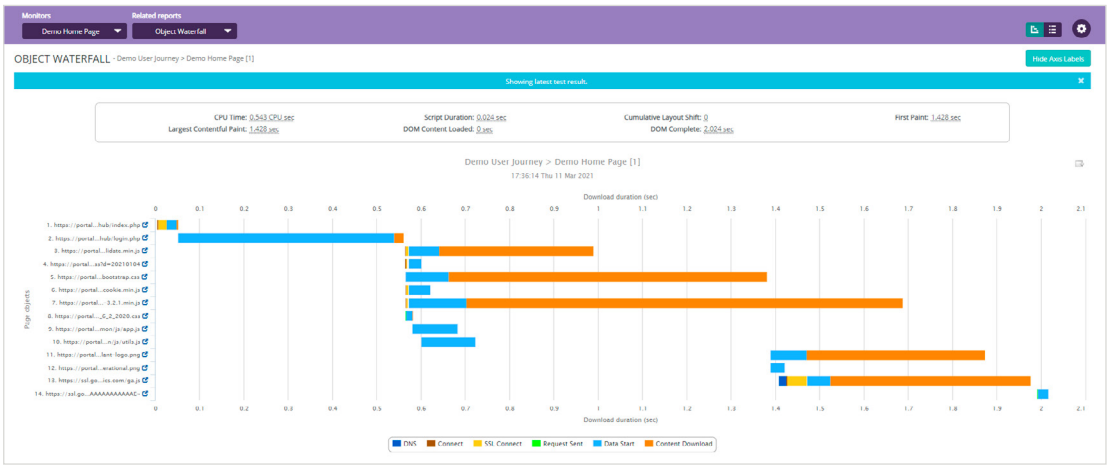


Figure 2. Object performance waterfall report to help you pinpoint problems

Errors and Trends

The Figure 3 report results provide an error distribution list across all or specific monitors within a specified time frame. You can analyze any error patterns and volume to determine if errors have increased or decreased over a given period.

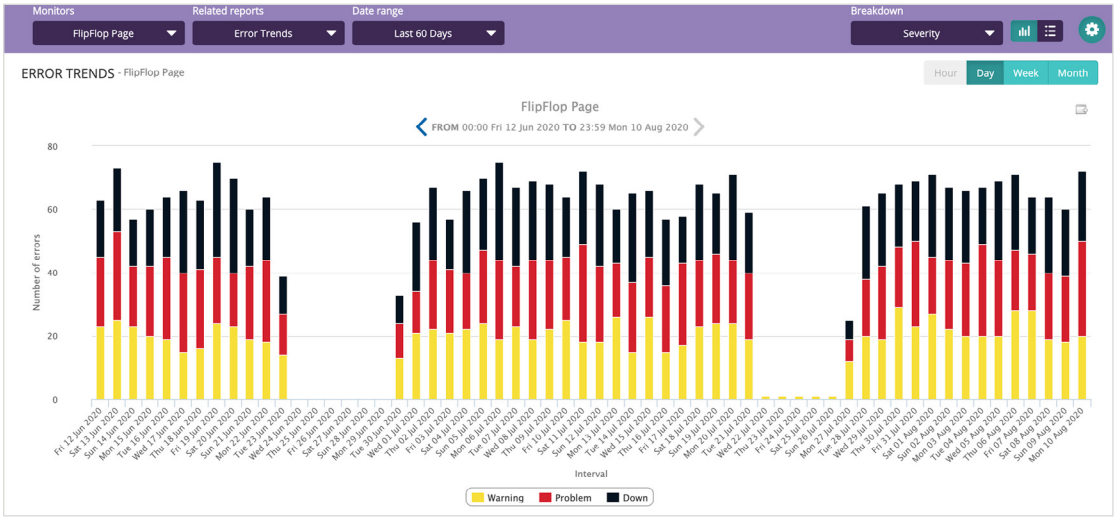


Figure 3. Example of an error trend report

User Journey Availability

For a specified user journey, test results for each step show the severity level over time, as shown in Figure 4. This report helps identify problem areas in a user journey while identifying which steps are available.



Figure 4. User journey step availability report

Please visit Eggplant Monitoring Portal Report Summaries for a complete list of reports.

The Eggplant Advantage

Eggplant Monitoring offers reliable monitoring and testing to give you comprehensive data unaffected by connectivity issues. By monitoring from the client-side, you understand how performance affects your users every time they visit your website. Eggplant Monitoring can monitor FTP servers, APIs, and email servers with access to various libraries, so your entire user journey remains fully operational.

If issues do arise, our rapid alert systems deliver valuable information in real time so you can make the necessary fixes to maintain a quality user experience. Creating an escalation process ensures time does not involve resolving low-level problems that have minimal impact on your customers.

Specific error codes, screenshots, and comprehensive reporting deliver accurate data highlighting exactly where and what the issue is so quick fixes can occur. In-depth reporting helps testers, developers, and SEO marketing improve website performance, maintains your most critical user journeys, and prevents conversion rates from dropping.

Discover how Eggplant Monitoring can keep your website online and user journey optimized by contacting Keysight's Eggplant team today.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

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