sumo logic | Continuous Intelligence Platform™

How to deliver reliable and secure digital experiences

Six strategies to prevent unwanted obstacles from impacting end-user journeys.

What's inside

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Introduction

Customers today demand exceptional, seamless digital experiences. [65% of all consumers](#) find a positive experience with a brand to be more influential than great advertising. This adds pressure on organizations to build secure, reliable and frictionless digital customer experiences.

As more and more applications rely on complex, interdependent components, like microservices, traditional monitoring approaches are no longer able to keep pace.

Modern applications need a better way to detect and respond to performance and security incidents quickly by:

→ Identifying root causes and pre-empting disruptive events that affect the digital experience.

→ Troubleshooting complex environments and understanding how an application's usability correlates to business goals.

→ Having reliable analytics, from browser to infrastructure, to innovate faster and release secure new digital services with agility.

Whether customers are engaging with your application via their mobile device, physical store HMI (human-machine interface) devices, or online channels, every digital touchpoint matters when it comes to increasing customer acquisition, loyalty and brand trust.

This guide will show you how to resolve points of friction, identify opportunities for greater customer satisfaction and strengthen your bottom line by delivering exceptional digital experiences that protect your users—and their data—in real-time.

Delivering reliable and secure user experiences is hard

To keep serving customers with the latest features they expect, today's apps are built using dozens of interdependent microservices and application programming interfaces (APIs) spanning multi-cloud environments and multiple teams. As of now, any breakdown in the distributed, interdependent system of services or leakage of sensitive customer information can damage the customer experience. While most understand not everything is perfect, 46% of users don't revisit poorly performing websites.

As customer loyalty hangs in the balance, organizations are addressing these challenges by taking newer approaches to manage the reliability and security of their applications and overall digital customer experience.
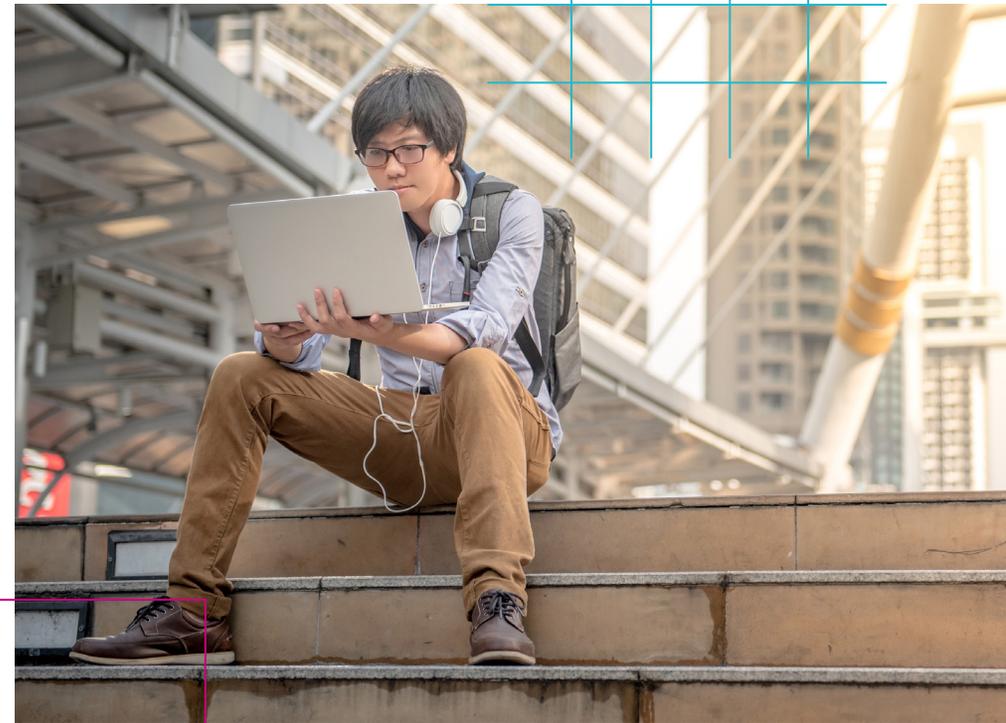
Enter observability

While monitoring tells you something is broken, observability is an approach to finding out why it's broken. Observability allows you to interrogate the data and surface the relevant signals in the noise of alerts. Consider that every level of the application stack emits logs, metrics and traces:

→ **Event logs:** Records all the events that have happened in a system, including additional metadata about the system state when the event occurred.

→ **Metrics:** Numerical representations of system performance (e.g., application service level indicators [SLIs], like how much memory or processing power is being used or latency).

→ **Traces:** Especially critical for modern digital architecture, traces record a series of related events on a network; these events can transcend applications but follow the same request flow.

The collection of data is the first step to having an integrated observable system that can reduce downtime and help solve customer-impacting issues faster.

By layering a strong analytics engine on top of data, organizations empower developers to bring distributed, unstructured data together in a meaningful way to quickly identify the root cause of alerts through real-time visibility and advanced alert analytics. With end-to-end analysis of all relevant data, teams can increase diagnosis speed, manage operability across multiple geographies, mitigate expanding threats and reduce churn through a more seamless digital experience.
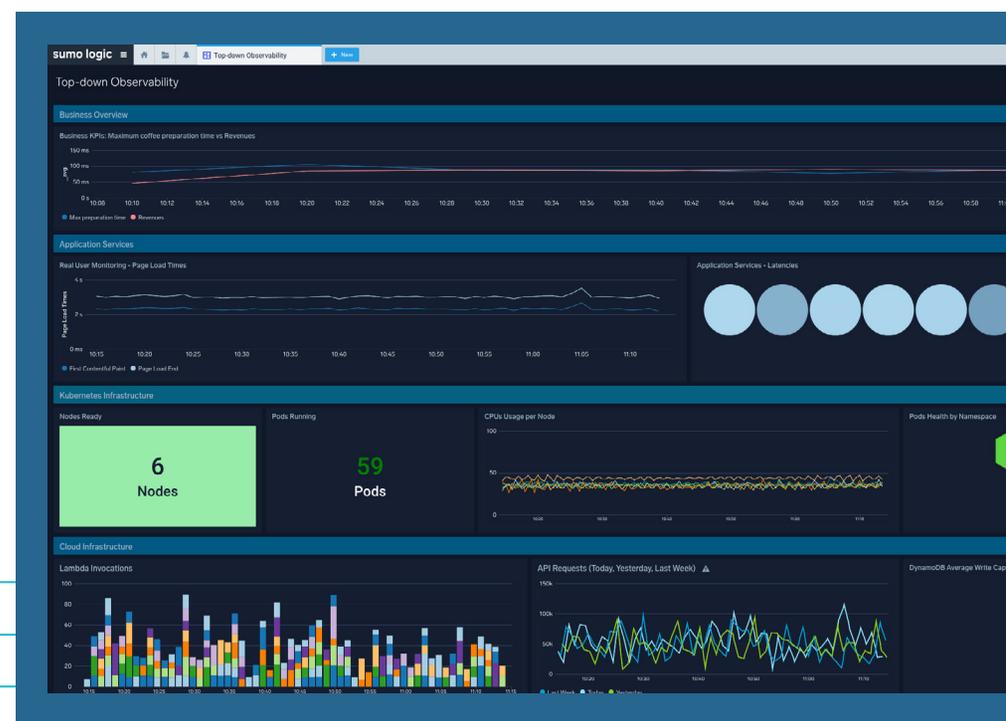
A modern approach to security

Secure experiences are crucial to a great digital experience. To address the ever-present risk of data breaches, financial fraud, ransomware and [DDoS (Distributed Denial of Service) attacks](#) security must be considered in the digital experience. Not to mention, security risks continue to rise with omnichannel retailers seeing a 50% spike in fraud across their digital networks in 2020 compared to 2019, according to security solutions firm [Sift](#).

A modern approach to securing digital applications is needed. [Modern SecOps](#) captures, analyzes and correlates much of the same machine data used for observability use cases, providing actionable insights for a more customer-centric strategy. With a unified approach, DevOps and security teams can leverage the same tool and data to provide even faster context when security or performance incidents occur.

Taking this preventative, cyber resilient approach to stay ahead of early stage attacks can lead to the following key outcomes:

→ End-to-end visibility into the security of your customers' digital journey.

→ Protected and secure customer data to prevent credit card fraud and identity theft.

→ Modern threat handling and real-time responsiveness to actively defend against the malicious nature of ransomware, malware and phishing attacks.

How to deliver exceptional digital experiences using an observability mindset

Observability is much more than a buzzword. It's a whole new way of looking at things.

It means viewing applications more holistically, including security concerns, and defining the quality of users' interactions with apps by the attributes they experience instead of only by what's easily measurable from a subsystem level.

If this approach makes so much sense, why haven't product and engineering teams been doing it this way from the beginning?

In many cases, application complexity is growing faster than the tools used to manage them. And, legacy tools are often too cumbersome and add little value. So how do technical teams make this pivot with the least friction?

6 Strategies to get started →

Identify disruptive digital experiences before your customer does

End users care about a snappy and responsive web page or app. Still, a whole chain of events needs to happen to get to that point: domain name system (DNS) resolution, secure sockets layer (SSL) handshake, request, response, downloading all various elements of the page, and finally, the rendering of UI in the browser.

By using an observability platform, the product organization can implement Real User Monitoring (RUM), also called browser monitoring, which allows developers and SREs to track end-user experiences at the web level while traversing the application in real-time.

Measuring user experiences at the web application level, allows product leads to know when users encounter slow page load and server response times, high service latency, traffic bottlenecks, request timeouts, DNS delays and a host of other issues that wouldn't be visible with traditional monitoring metrics.
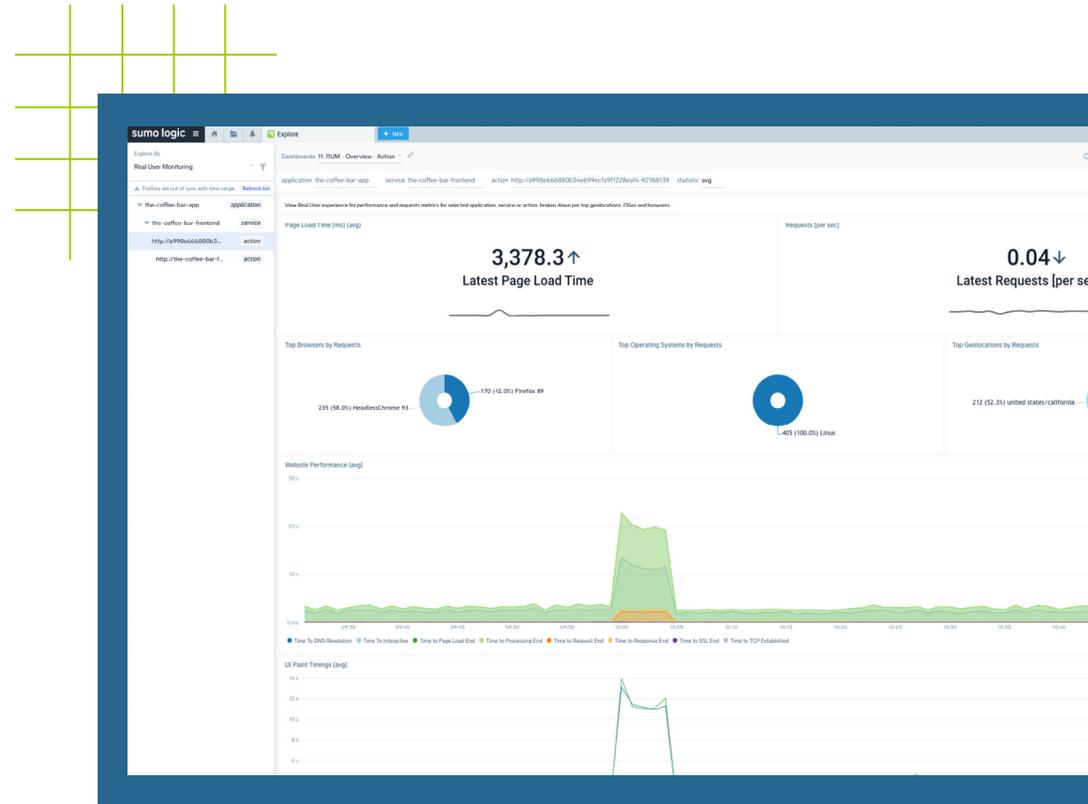
Additionally, RUM allows technical teams to drill down past the higher-level metrics, like page load time, to understand which processes or microservices produce the lag, and how app performance varies by location, browser or OS. That way, product owners can optimize their services and ensure users get the best experience regardless of the type of browser or version they're running or their physical locations.

Align your digital experience metrics with business metrics and global benchmarks

Most teams understand that failures, such as page load errors, are unacceptable, but it's often harder to determine what levels of performance are acceptable for softer user experience requirements like latency.

Published specs, best practices and targets often contain generally accepted values, but these can vary by industry and application. It's not always easy to tell what's best-in-class or what's minimally acceptable for a specific application.

By tying latency and other application KPIs to business results like conversion or transaction volume, teams can make adjustments and influence key digital experiences to bolster your competitive advantage.

To help users set more realistic KPIs, Sumo Logic offers global intelligence benchmarking, which compares local application performance KPIs to other (anonymized and aggregated) customers.
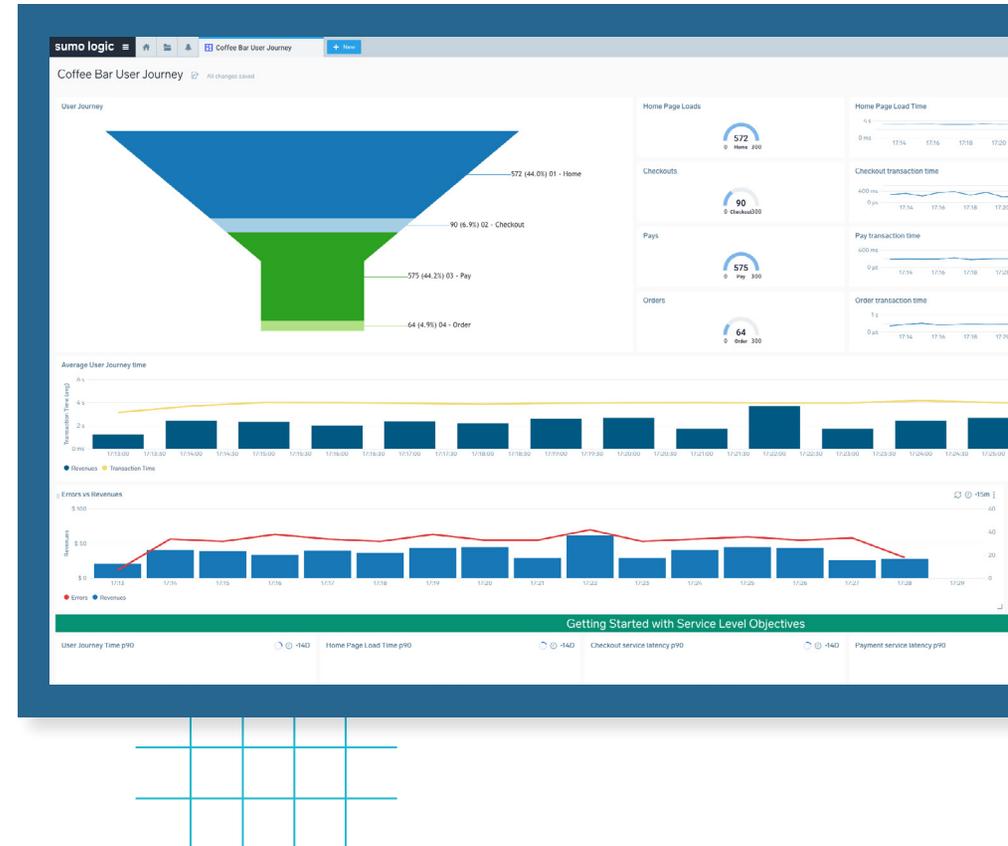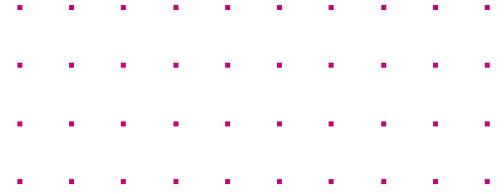
Troubleshoot complex customer journeys and distributed systems

Given that applications are now broken up into collections of smaller, interconnected modules, troubleshooting methods need to adapt to keep up. It's no longer enough just to implement deep core instrumentation, code profiling or stack dumps. Now, it's also critical to track how transactions flow across tiers and monitor these elements' health, dependencies and behaviors.

For true end-to-end visibility, Sumo Logic's distributed tracing maps dependencies for every service and every user click. With service maps and real-time dashboards, technical teams can visualize all service dependencies with open standard compatible distributed tracing data. Application and service dashboards break down latency, load and errors to identify services contributing to application slowdowns.

100GB of data
4+ billion searches

Goibibo, India's leading online travel booking brand, struggled to deliver a unified user experience with a severely distributed ecosystem.

Each of their major microservices generated over 10GB of data each day, had its own logging system and debugging approach and had no unified alarm monitoring system, making it impossible for Goibibo to keep up with their 4+ billion daily searches.

Since unifying with Sumo Logic for their logging, debugging, alarming, monitoring and analytics functions, Goibibo has reduced its turnaround time for resolution of production issues by 33%.

goibibo

Identify root causes for alerts negatively impacting your digital experience

Digging through terabytes of data and looking for definitive answers can prove to be difficult for product and developer teams, especially when things go sideways in your customers' digital journey. Observability is about being able to interrogate and explore data quickly with embedded analytics that correlate all application telemetry. With a strong unified analytics back end, Sumo Logic's Alert Response simplifies the work required to validate the issue, so observers and on-call engineers can monitor, diagnose and troubleshoot new alerts. Additionally, using Sumo Logic's search language, teams can:

→   Quickly detect application performance
     and security incidents.

→   Analyze cloud data using our parse, format,
     merge, timeslice and log reduce operators.

→   Run detailed queries to understand the root
     cause fast and prevent future incidents.

1500 brands 300K users

LeadSquared provides a cutting-edge, end-to-end CRM and marketing automation platform. With a successful SaaS offering that delights its customers, the company has been experiencing rapid growth.

Learn how getting the right insights fast helped LeadSquared's Chief Product Officer and his rapidly expanding team push the pedal on growth.

leadsquared
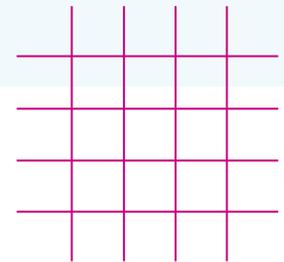
Deliver secure digital customer experiences with real-time threat detection

The security of your digital customer experience is critical to the future health, longevity and success of your business. Product and engineering teams need an automated cloud security monitoring and analytics platform that provides the flexibility to manage all your data analysis use cases from a single, unified view.

Sumo Logic's Cloud Security Monitoring and Analytics solutions support technical teams in:

→ Extending granular visibility with a unified view of all security events for managing security posture.

→ Providing a cost-effective, efficient solution for collecting and analyzing log and event data.

→ Leveraging advanced machine learning algorithms to prevent threats to the digital experience.

19,000+ customers

More than 19,000 customers across the globe rely on PagerDuty to deliver a better digital experience by identifying issues and opportunities in real-time and bringing together the right people to fix problems faster and prevent them in the future.

Click here to learn how Sumo Logic's monitoring and custom dashboards provide PagerDuty with visibility across developers, support, and security teams and help them understand how code changes are impacting the platform and the customer experience.

Strike the right balance between innovation and application reliability

When you maximize reliability, you minimize the time systems or applications are unavailable.

A reliability management approach maintains the balance between releasing new features and maintaining an acceptable level of reliability. It defines the right signals that impact the end-user and provides feedback mechanisms to ensure innovation doesn't happen at the expense of the digital experience.

Service Level Objectives (SLOs), Service Level Indicators (SLIs), and Error Budgets are key measurements in a reliability management practice. This practice helps teams understand the end-user experience and creates a feedback mechanism between the technical teams and the business. Imagine if you could build, test and scale while minimizing glitches and failures.

Alaska

"Sumo Logic helps us continually review how our microservices and microsites are performing in Kubernetes and to plan our go-forward strategies. The data insights it provides on applications that are running below thresholds give us an important early warning before anything impacts the customer experience."

Bryce Lindsey
Principal Site Reliability Engineer (SRE)
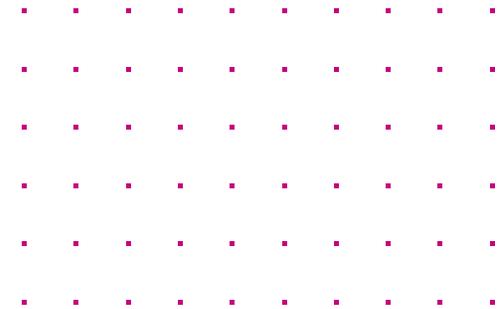
The Sumo Logic difference

1.7 exabytes of data

3.24 quadrillion records

60.7M searches per day

That's a lot of data, and a lot of analytics.

Sumo Logic is on a mission to make the billions of digital interactions carried out by users today reliable and secure. With Sumo Logic's cloud-native SaaS analytics platform, product and engineering teams can breathe easy knowing that they can monitor, secure and grow their digital applications at scale.

From tracking every user interaction across all your application and infrastructure layers, to helping you understand which services are impacting your new and future customers—Sumo Logic provides an end-to-end view of your application's performance to consistently deliver reliable digital experiences throughout the user journey.

[
Contact us to learn more.

`Sumo Logic. Championing your digital experience.`
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About Sumo Logic

sumo logic

Sumo Logic, Inc. (NASDAQ: SUMO) empowers the people who power modern, digital business. Through its SaaS analytics platform, Sumo Logic enables customers to deliver reliable and secure cloud-native applications. The Sumo Logic Continuous Intelligence Platform™ helps practitioners and developers ensure application reliability, secure and protect against modern security threats, and gain insights into their cloud infrastructures. Customers around the world rely on Sumo Logic to get powerful real-time analytics and insights across observability and security solutions for their cloud-native applications. For more information, visit: sumologic.com

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