

Bank Accelerates Cloud Modernization with Datadog's Support for Cutting-Edge Technologies at Scale

Cloud Migration and Platform Redesign Aim to Unify Lines of Business

At one of the nation's top retail banks, executives were struggling to deliver a cohesive online experience to their customers. Their customer-facing applications had been cobbled together from various acquisitions and disparate development teams—and users could tell. Customers experienced a disjointed, clunky digital journey as they moved between lines of businesses, often redirected through a maze of different webpages to meet their banking needs. Executives knew that the bank's online presence had the power to delight current customers, attract new ones, and serve as a major differentiator from other retail banks, if only they could get it right.

With the goal of delivering an innovative online customer experience, the bank chose to undergo a wide-scale digital transformation. They decided to migrate nearly all of their assets from on-premise infrastructure to the Amazon public cloud (AWS), establish a toolkit of cloud-native technologies for engineers to use, and re-architect their mobile and web applications from the ground up. In addition to the value this major overhaul would provide to customers, it had the potential to create technical and financial efficiencies at scale for the bank by allowing them to shut down costly data centers, consolidate tools in use across the organization, and fuel engineering productivity.

Legacy Monitoring Tools Undermine Effort to Create a Cohesive Customer Experience

Executives quickly found their plans for a unified customer experience under threat, as poor visibility made making routine changes, like deploying code into production, a feared event that inevitably led to long hours of troubleshooting for on-call engineers. Meanwhile, customer-facing assets lay in disarray. Although customers enjoyed a more integrated experience on the new cloud platform, each back end application still relied on separate monitoring tools from their legacy environment, making it difficult to get the visibility needed to detect and resolve issues across the bank's enormous infrastructure. Whereas one tool often failed when engineers needed it most, another provided metrics but no dashboards, and even their costliest enterprise tool couldn't monitor the new technologies that developers were experimenting with, such as AWS Lambda. Operators were thus left without a single source of truth, nor a cohesive way to connect all of the fractured data living on various screens from the conglomerate of monitoring tools that different teams employed. For the bank to continually optimize the digital customer experience and deliver innovative new features without undermining their platform's stability, they needed a cohesive approach to monitoring their cutting-edge infrastructure as it operated at massive scale.

Gaining Visibility Across Applications, Tools, and Regions to Ensure Platform Reliability

Upon moving to the cloud, the bank went all in on AWS services, so they needed a single monitoring platform that would provide engineers with visibility across these cloud technologies and allow them to resolve issues that arose in their complex environment. For instance, a single sign-on error had continually cut into the bank's traffic and plagued its engineers. Datadog's anomaly detection revealed the root cause of the error within the first phases of the Datadog trial. Datadog's deep integrations with AWS and ability to monitor dynamic infrastructure as it scales allowed the bank to immediately track and visualize their enormous AWS infrastructure, providing a single-pane-of-glass view that spans regions, technical components, and lines of business (LOBs).

Datadog's focus on supporting cutting-edge infrastructure technologies, such as AWS Lambda, further strengthens the bank's ability to experiment, evolve, and continually improve the customer experience. This visibility encouraged developers to adopt more innovative technologies, and allowed them to release customer-facing code into production with confidence. This meant that as the bank's underlying infrastructure changes, its platform reliability and quality of customer experience would not waver.

Ensuring Security in all Phases of IT Operations, Including Monitoring

Before standardizing on a monitoring platform, the bank had to be sure that their customers' financial and personally identifiable information (PII) was secure. External audits, such as Datadog's SOC 2 Type 2 certification, demonstrated to the bank that Datadog took a proactive stance on security and compliance and could confidently meet the financial industry's stringent requirements. Upon recognizing that their customers' privacy would be well preserved in all phases of operations with Datadog—from data collection, to transit, to storage—the bank chose to standardize on Datadog as their organization-wide monitoring solution.

Automating Compliance Processes with Datadog

Datadog allows the bank to automate compliance checks and updates throughout their infrastructure, mitigating security risk across their environment while also greatly reducing the operational cost of compliance. For example, regulations mandate that hosts' configuration images must be refreshed every 60 days to include the latest security patches. By translating compliance requirements into measurable Datadog metrics for monitoring and alerting, the bank's compliance team can see at any time which hosts are compliant and which will soon need updating. The bank is able to visualize all of their 10,000+ hosts across regions and teams through a single platform, with each host's compliance status clearly visible to engineers and executives. A single custom script in Datadog removed the guesswork and costly manual overhead of keeping the bank's sprawling, dynamic infrastructure compliant and secure.

Streamlining Tools for a Consolidated View of Platform and Business

By consolidating numerous monitoring tools into a single platform, the bank has reduced its operational complexity and overhead, and executives now have a single source of truth about the health of their business and IT environment. Datadog's visually appealing, easy-to-create dashboards offer executives a centralized view of their environment, allowing them to monitor KPIs for primary infrastructure components, map traffic as it moves through virtual private clouds, and compare cloud costs and usage across LOBs. The ability to see across their business and infrastructure allows executives to confidently manage their decentralized operations, and ensure their customers' cohesive user experience. By aligning themselves with Datadog as their organization-wide monitoring solution, this retail bank has future-proofed itself and enabled its engineers for secure innovation on the cloud.