sumo logic

CASE STUDY

Applying Sumo Logic to machine data ensures the highest service levels for the world's biggest financial institutions

Challenge

Maintaining separate, dedicated information processing environments for financial institutions is an exceptionally intricate endeavor that generates massive amounts of machine data. Cardlytics sought a comprehensive, technology-backed strategy to aggregate and manage this information across the entire organization. The new solution would need to enable users to correct defects without requesting extensive hand-holding; it would also need to satisfy stringent support and service level obligations for the company's most important clients.

Solution

Cardlytics replaced an internally maintained open source Elasticsearch, Logstash, and Kibana (ELK) stack with cloud-native machine data analytics platform Sumo Logic. The company immediately began ingesting machine data for billions of API transactions per day. With the upgraded application in place, Cardlytics then granted access to Sumo Logic to multiple teams within the organization.

Results

Sumo Logic's pervasive data collection and dashboards have provided instant visibility into all aspects of the company's technology environment. Users are now able to derive value from machine data without needing assistance from IT. This has equipped customer support, developers, and operational staff with the tools they need to more quickly resolve problems - often even before customers are aware of any issues.

Cardlytics is an advertising platform built within the banks' digital channels. Through its partnership with financial institutions worldwide, the company has insight into purchase data from more than 100 million monthly active users, representing two in five card swipes, or roughly $2.3 trillion in annual spend. Each night the company ingests all of this raw data. This then serves as the source for deep analytics carried out by a team of 70 specialists to identify which consumers may be interested in receiving certain rewards based on their past spend.

Industry

Marketing

Headquarters

Atlanta, Georgia, United States

Size

400 employees

Use cases

Monitoring and Troubleshooting

"Sumo Logic has given us the data insights needed to confidently serve the largest and most complex financial solutions."

Biju Samuel
VP, IT and Operations

Once the detailed analysis is complete, Cardlytics uses this purchase intelligence to create offers and target marketing campaigns for a broad array of advertisers within the banks' digital channels. These programs are more widely known as 'Chase Offers' or 'BankAmeriDeals' as two examples. Consumers activate the advertisers' offers within their bank's online banking site or mobile app. Later, when they shop at those merchants using their credit or debit card, they will see the reward credit on their next bank statement. Through this process, Cardlytics has saved consumers more than $245 million to date.

What makes Cardlytics' services so compelling is that the financial institutions and advertisers alike can see the precise outcome of each promotion — both in terms of clicks and purchases. Closing this loop means that Cardlytics requires no guesswork to deliver its metrics: instead, it uses verified data to back its conclusions.

Cardlytics fields a highly complex technology portfolio to support such a large and diverse client base. The company has developed its own platform of approximately 30 applications fine-tuned for its business, such as publishing and presenting campaigns, processing inbound data, maintaining data warehouses, and conducting data analytics. These applications are deployed on a hybrid-computing infrastructure, with most assets residing on-premise within the company's primary data center. Additionally, Cardlytics employs Amazon Web Services (AWS) to host web application tiers that must be available for all of its applications. Cardlytics is assessing opportunities to further embrace cloud technology, but must coordinate adoption in alignment with the risk tolerance of its bank partners.

One unique complication that Cardlytics confronts is that the financial institutions that it serves will not accept a shared, multi-tenant environment, as would normally be the case in other industries. Instead, each client receives its own dedicated servers and associated software. With so many distinct resources, it's no surprise that the company generates enormous amounts of machine data from its applications, along with logs from associated system components such as Web servers and networks. Amassing all of this information system-by-system was difficult, time-consuming, and error-prone. Additionally, correlation proved to be problematic, making it nearly impossible to get an accurate picture of the company's current operational status.

Initially, Cardlytics attempted to remedy its machine data management challenges by rolling out a local instance of the open source ELK stack. However, this approach had a number of shortcomings, primarily related to the log consumption process along with training difficulties: getting new users up to speed often required personalized attention from a handful of overworked mentors. It soon became apparent that Cardlytics needed a dedicated, external application.

Cardlytics asked a cross-functional evaluation team to examine the most prominent machine data management technologies, including Splunk and Sumo Logic. It was essential that the new solution be highly scalable, offer powerful administrative capabilities, and provide an intuitive user interface. It was particularly vital for new team members to become productive without appealing for inordinate amounts of external assistance. The assessment itself took less than a week's worth of concentrated effort spread over the course of several weeks. Upon completion, Cardlytics selected Sumo Logic's machine data analytics platform, based on how well it addressed its requirements, along with its more compelling economics.

Cardlytics rolled out Sumo Logic by ingesting 75 GB of log information per day. This machine data was the outcome of 2 billion daily API calls: approximately 4,000 transactions per second generated by consumers as they navigated their tailored offers. A substantial and diverse user community quickly adopted Sumo Logic. Over 100 people — representing software development, DevOps, product support, and administrators — soon incorporated Sumo Logic into their daily activities.

> **"Sumo Logic is a key component in our 'war room' and one of the resources our team uses to address and remedy issues in real-time."**
>
> **Steven Ferraro**
> Director, Hosting Operations

From the start, the company defined two primary use cases for Sumo Logic: dashboard visualization and alerting. Cardlytics created individual dashboards for each financial institution. These dashboards monitor client-specific key metrics, such as:

- Load per Web server
- Response times for Web servers
- Error rates
- Response times that exceed certain thresholds
- SLA compliance

To power its extensive alerting needs, Cardlytics configured several Sumo Logic alerts that run against log files. These alerts create notifications if there's a deviation from normal response times and traffic patterns. Should a priority 1 support incident arise, Sumo Logic features prominently in the company's 'war room' and is one of the key resources that the team consults when trying to address the issue. In many cases, Cardlytics has been able to leverage Sumo Logic to find and fix flaws before customers even notice that something has gone awry.

Over time, Cardlytics has discovered that correlating machine data from multiple sources reveals previously unknown insights into the state of their ongoing system and software activities. For example, bringing all logs into Sumo Logic has made it possible to cross-reference various events, such as how underlying database latencies impact Web server response time and overall service level agreements (SLA). Regardless of the specific scenario, Sumo Logic's ease-of-use has meant that anyone can be effective with the product. Once a dashboard has been set up, less experienced staff are frequently able to pinpoint and rectify problems without needing to understand the intricacies of the underlying application or summoning their colleagues for assistance. In summary, the awareness and guidance supplied by Sumo Logic has boosted the company's confidence that it can meet the response time and quality mandates of even the largest prospective customers.

About Cardlytics

Cardlytics (NASDAQ: CDLX) uses purchase intelligence to make marketing more relevant and measurable. We partner with financial institutions to run their banking rewards programs that promote customer loyalty and deepen banking relationships. In turn, we have a secure view into where and when consumers are spending their money. We use these insights to help marketers identify, reach, and influence likely buyers at scale, as well as measure the true sales impact of marketing campaigns. Headquartered in Atlanta, Cardlytics has offices in London, New York, San Francisco and Visakhapatnam. Learn more at www.cardlytics.com.

About Sumo Logic

Sumo Logic is the leading cloud-native, machine data analytics platform that delivers continuous intelligence across the entire application lifecycle and stack. More than 1,600 customers around the globe rely on Sumo Logic for the analytics and insights to build, run, and secure their modern applications and cloud infrastructures. With Sumo Logic, customers gain a service-model advantage to accelerate their shift to continuous innovation, increasing competitive advantage, business value, and growth. For more information, visit www.sumologic.com.

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