

# Alaska Airlines charts smooth app modernization journey with Sumo Logic Application Observability



## Challenge

Alaska Airlines and its regional partners serve more than 120 destinations across the U.S., Mexico, Canada, and Costa Rica. The airline emphasizes next-level care for its guests along with providing low fares, award-winning customer service, and sustainability efforts. As part of its ongoing commitment to high-quality customer experience, Alaska Airlines embarked on a major initiative that—when fully completed—would entail moving its monolith website and supporting applications from running on servers in data centers to the cloud.

Essential to this initiative was the need for the company to maintain observability data and insights on application performance to ensure the migration was smooth and didn't negatively impact customers as they searched for flights and made their online purchases. However, in pursuing cloud migration to Microsoft Azure and Kubernetes, it became apparent that the company's incumbent application performance management solution would be cost-prohibitive and wasn't a good fit to work in those environments.



## Solution

As a longtime customer, Alaska Airlines standardized on Sumo Logic as a natural to provide observability and real-time data insights as the company made its strategic investments in new Kubernetes infrastructure.

Leveraging the Sumo Logic Continuous Intelligence Platform™, Alaska Airlines is empowered to accelerate innovation while ensuring application reliability and concurrently adopting a far-reaching set of supporting procedures and best practices for application performance.



## Results

### Tracking website application reliability

At any given time, Alaska Airlines has high volumes of traffic on the website with customers looking for a flight to visit a family member or plan their next vacation or business trip. With constant usage demands put on the site, the SRE team must ensure its reliable performance.

Company



Industry

**Transportation**

Environment

**Microsoft Azure  
Azure Kubernetes Service**

Sumo Logic Products

**Application Observability  
Software Delivery Optimization**

Use cases

**Application modernization  
Cloud migration**

Results

**Realized a smooth migration to Kubernetes**

**Optimized performance and costs of cloud-hosted systems**

**Developed response playbooks from chaos engineering days**

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**“Sumo Logic has come a long way since we just used it as a log aggregator. By flipping on all the switches, the logs, metrics and traces, we’re now getting all the information that we need in Kubernetes. So in Kubernetes, Sumo is our go-to.”**

**Bryce Lindsey**

Principal Site Reliability Engineer (SRE), Alaska Airlines

Using Sumo Logic, the team tracks how web pages are performing against established service level objectives (SLOs) for availability and response times. If a page drops below a minimum threshold, the team receives an alert and consults Sumo Logic’s dashboards to gather essential details on what is happening. Supported by these data insights, the team makes the required adjustments to address the issue and get the page back into an acceptable performance range.

### Using data analytics to run chaos engineering games

The increasing complexity in Alaska Airlines’ technology stack was leading to a lack of understanding of how systems work. The SRE team pursued a proactive approach using data insights from Sumo Logic to pursue chaos engineering to fill the knowledge gap. During a chaos engineering exercise, the SRE team chooses to force a failure in a defined part of a system running in a test environment as a planned experiment. This allows the team to understand how it fails, the impact of that failure, and how to best remediate it.

Recently, they ran a chaos game day that targeted the Kubernetes platform. Teams learned a lot about how Kubernetes works, how issues impact their systems, and how to leverage Sumo Logic to troubleshoot a variety of incidents. “Sumo Logic’s observability tools are critical for our chaos engineering exercises. If we can’t observe the chaos, it doesn’t do any good. Sumo Logic allows us to make note of what happens and closely monitor the results of our response efforts,” said Lindsey. Their first chaos game day was focused on the website home page and evaluated what would happen if the Redis cache wasn’t available. The result: when the Redis cache goes down, the whole home page goes down.

“Just three weeks after running our chaos engineering exercise, the exact scenario occurred: the Redis cache for our website went down, which took down our site. The team got the alert and went straight to the runbook they’d built from the chaos day

experiment. They addressed the incident within 10 minutes, which was really impressive. Without the knowledge we’d gained from our chaos engineering experiment, it would’ve taken hours to bring the website back online. That would’ve had a significant impact on customers and the business,” said Lindsey.

### Managing reliability and cloud costs with application optimization

The company’s many website applications must make resource requests in the Kubernetes environment. When an application requests more resources than required, it creates cost inefficiency for Alaska Airlines, and when it doesn’t ask for enough, such as CPU, it can potentially stop an application from running. Using Sumo Logic, application optimization is another tool in the SRE team’s toolbox.

Sumo Logic produces custom intelligence dashboards that detail application performance and make it easy for the SRE team to choose the recommended setting adjustments that make the most sense for their goals. For example, when an application is using more CPU than required, Sumo Logic provides the team with recommended settings to optimize cost savings and reliability, as well as a setting to strike the best balance between the two.

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**“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), Alaska Airlines

“We used Sumo Logic to gather data on our flight search application before we put it in production. The Global Intelligence dashboards showed us it was asking for 40% more CPU than needed, which would have been a waste of money. On the other hand, it was asking for 40% less memory than needed, which could’ve created a big problem. We optimized the application settings using this observability data and now have confidence that our system is dependable under these conditions,” said Lindsey.

Sumo Logic has been a reliable, trusted partner for Alaska Airlines on its journey to app modernization in the cloud. It has empowered the SRE team to track website reliability and to adopt chaos engineering, as well as Global Intelligence dashboards to proactively prevent issues from occurring.

## About Sumo Logic

Sumo Logic Inc., (NSDQ: SUMO) is the pioneer in continuous intelligence, a new category of software, which enables organizations of all sizes to address the data challenges and opportunities presented by digital transformation, modern applications, and cloud computing. The Sumo Logic Continuous Intelligence Platform™ automates the collection, ingestion, and analysis of application, infrastructure, security, and IoT data to derive actionable insights within seconds. More than 2,100 customers around the world rely on Sumo Logic to build, run, and secure their modern applications and cloud infrastructures. Only Sumo Logic delivers its platform as a true, multi-tenant SaaS architecture, across multiple use-cases, enabling businesses to thrive in the Intelligence Economy. For more information, visit [www.sumologic.com](http://www.sumologic.com).

