ScienceLogic OTEEMO

CASE STUDY

ScienceLogic's Transformation into a Cloud Native and DevOps Organization

BUSINESS NEED

ScienceLogic is recognized as a leader in AIOps by industry analyst firms, including Forrester and Enterprise Management Associates. Their flagship application, ScienceLogic SL1, allows clients to monitor extremely diverse and complex IT environments using agent and agentless technology, contextualize complex sensor data through service relationship mapping and ML-driven behavioral correlation, and act on the data through integration and workflow automation. SL1 was originally designed to be deployed as an appliance on client premises, pulling data from collectors for processing and analysis.

To address increasing client demand for cloud-based deployment, scalability, and elasticity, ScienceLogic introduced the first phase of a rearchitected SL1 platform, including agent-based monitoring in May 2018. SL1 offered the features, scale, and performance eagerly sought by managed service providers and enterprise clients alike, both in on-premise and cloud installations. However, the new architecture made it more complicated to deploy — it had agents, collectors, VM-based components, services running in a Kubernetes cluster, multiple external databases, and many other operational complexities. The application was in transition to a microservices based architecture. ScienceLogic needed a seamless automated deployment architecture and workflow that could install this increasingly complex application in both cloud and on-premise environments. The initial target of this effort was a SaaS use case, followed by custom deployment workflows into Amazon Web Services (AWS).

APPROACH

The Oteemo team began the engagement with an assessment of the current state of deployment for the SL1 platform. An AWS-specific reference cloud architecture was formulated, proposed, and guided through the architecture review board to acceptance. Partnering with ScienceLogic's internal DevOps team and applying Oteemo's co-delivery model, the Oteemo team proceeded to create an end-to-end deployment automation workflow using Ansible, AWX, rke, and Helm. Managed services such as EKS, Aurora, RDS, and CodeCommit were leveraged to maximum effect, drastically reducing operational overhead. Oteemo's tiered automation methodology helped to make the workflow adaptable to multiple use cases and environments, and quickly enough, was adapted to install bespoke deployments for clients and internal customers. This not only provided the agility required for addressing evolving SaaS customer needs, but also became a framework that their DevOps team leveraged to target on-prem deployments.

Oteemo assisted in the automation of internal IT resource management using tools and technologies such as ManageIQ, VMWare, AWX, Ansible, and Jenkins.

Oteemo also contributed significantly to the release engineering process in ScienceLogic, designing and implementing an artifact versioning and promotion process and building reusable shared pipeline libraries that built, deployed, and promoted artifacts across multiple repositories, that could readily be adopted by their development teams to reduce errors and track artifact versions through release cycles.

A comprehensive roadmap was created to evolve the cloud architecture to match the ongoing development of ScienceLogic's multi-tenant SaaS offering, starting from current state to fully microservice-based multi-tenant application. Hybrid "extension" environments were also roadmapped in this exercise. Resource consolidation and optimization were key drivers, with managed services such as AWS Managed Cassandra Service (MCS) and Managed Streaming for Apache Kafka (MSK) being suggested for incorporation into the evolving architecture design.

"As part of our journey to AIOps, we were in the process of transitioning our product platform to a microservices architecture. This transformation involved quite a bit of orchestration using containers, kubernetes and other cloud native services. We engaged Oteemo to provide that expertise and help accelerate our transformation. We are extremely pleased to have Oteemo as our strategic partner."

Narayan Partangel, Vice President of Engineering, ScienceLogic

RESULTS

A powerful suite of automation tools and workflows allows ScienceLogic to deploy the SL1 platform in as little as 40 minutes, compared to days or weeks required pre-automation.

The Oteemo team continues to be key resources and trusted advisors in day-to-day operations in the cloud and on-premises environments.

The artifact versioning and promotion process is finding increasing adoption among development teams and is demonstrably reducing technical debt and operational costs where used.

In the transformation of re-architecting SL1 to a multi- tenant capable microservice-based application, Oteemo is proud to have contributed their knowledge and experience in evolving the cloud infrastructure necessary at each stage of development.