

Sierra-Cedar Implements DevOps to Increase Agility and Operational Efficiency for Large Professional Services Company

Client Overview

The Client's goals included cost reduction using cloud-native services, improved operational efficiency, and increased response velocity to requests from product and security teams.

Faced with a rapid on-premises data center migration requirement, the Client's transition to the public cloud leveraged Infrastructure-as-Code (IaC) technologies like Terraform to facilitate some operations automation, though without the hindsight of know-how and best practices.

The resulting operational environment leveraged numerous products, tools, and solutions to interact with AWS but generated significant technical debt that led to reduced client response velocity, inefficient use of cloud resources, and additional hurdles to accomplishing engineering tasks. Additionally, high attrition rates created knowledge gaps and slowed the maturity of the organization's governance, security, and operational standards for cloud adoption.

Project Summary

The Client engaged Sierra-Cedar DevOps Services to implement and migrate to a Terraform Automation and Collaboration (TACO) product, Scalr. The Client used Terraform open source for automation and established Infrastructure-as-Code best practices with the intent of accelerating strategic AWS projects. However, project momentum stalled due to a lack of centralized operational, security, and cost controls.

Sierra-Cedar and the Client jointly achieved the project goals, to the benefit of the Client's constituents and mission. Through the implementation of a TACO product, deployment of a developer-friendly cloud infrastructure 'vending machine', and standardization of IaC best practices, the Client regained control and governance of its distributed cloud infrastructure platform. This enabled improved development team velocity and reinforced trust with security and governance functions who were previously nervous about the lack of visibility and controls across a sprawling cloud platform deployment.

Sierra-Cedar's commitment to the Client and expertise in AWS, Scalr, Terraform, and IaC helped to bridge the Client's knowledge gaps. Sierra-Cedar became a trusted partner of the Client and has been able to help the Client with multiple other issues since the migration to Scalr.

Results

Sierra-Cedar successfully migrated the Client's Terraform Open Source modules to Scalr, deployed a Terraform infrastructure vending machine, and configured new AWS network Firewalls. Sierra-Cedar DevOps also provided the following:

- Standardized deployment method with integrated state management and GitOps
- Implementation of a Policy-as-Code solution to enforce standards
- Established a standard module library for the most common application patterns
- Improved firewall management with a centralized GitOps deployment pipeline
- Established OPA deployment rules to enforce security standards and help reduce costs



Objectives

- Implement Terraform Automation and Collaboration product Scalr
- Migrate Terraform open-source modules to Scalr with minimal Terraform code changes
- Update CI/CD pipelines to allow cross-account deployments
- Configure private module registry for standard code patterns
- Design and implement automated testing for both development pipelines and SAST
- Establish compliance framework with Open Policy Agent (OPA) policies and AWS IAM policies
- Design and deploy an AWS Network Firewall

