United States Coast Guard

FinOps – Agency Case Study

Office of Government-wide Policy (OGP)

"Coast Guard access to Cloud Services and the resulting Cloud capabilities are vital to the success of modernization efforts"

Chief Data Officer and Chief Enterprise Architect, Mark Bortle

Agency	US Coast Guard
Resources	Three-person team with some contract support
Start of FinOps Effort	FY23
Spend in Cloud	$7M
Point of Contact	Rhett Rothberg
FinOps Progress as of	April 2024

Background

The US Coast Guard (USCG) spent the last year standing up a cloud financial management program to support its multi-cloud environment, which includes Amazon Web Services (AWS) and Microsoft Azure. In order to best manage this cloud environment, the USCG set up a Cloud Center of Excellence (CCoE) to meet the demands and needs required for mission execution. The CCoE began working with the Army Cloud Account Management Optimization (CAMO) team to procure cloud under their umbrella contract vehicle. It was within this relationship that USCG was introduced to cloud cost management concept, the FinOps framework, and the Army's cloud tracking software that helps to find optimization opportunities.

With security, easy access, and response time in mind, the USCG migrated from the aging VDI infrastructure to a Microsoft Azure virtual desktop platform they refer to as the Manta Virtual Desktop (MVD), a system designed to transform daily workflow and productivity. A "game-changer" for active-duty USCG members, civilians, and contractor staff, MVD allows for unparalleled user experience and flexibility.

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FinOps Implementation

Having executive sponsorship has helped with the mission of the CCoE: driving oversight of cloud, focusing on budget, and collaborating with DHS and DoD. Its primary objective is procuring and managing cost for cloud contracts and cloud resources, implementing the FinOps Foundation framework to improve our ability to understand cloud usage and cost, quantifying the business value of cloud, and optimizing our cloud usage and cost. We are expecting all procurement through CAMO so that it can be managed under a single umbrella.

The USCG approach is multifaceted to accommodate a variety of needs for migrating existing systems, creating hybrid cloud environments, refactoring for cloud, and net new cloud native systems and applications. They expect to be operating in a hybrid cloud environment for the foreseeable future.

As part of standing up a FinOps practice, USCG used the GSA FinOps assessment tool to better understand their current state maturity and plan for higher levels of maturity and better cloud optimizations.

Tracking spend dynamically through the Army CAMO tool has added business intelligence and analytics to help tell the story. The systems in place are designed so that customers can track spend within their service center.

Challenges

Like most agencies, the USCG budgets in advance of actually utilizing cloud resources, so forecasting and estimating are critical to using its funding in the most efficient and effective manner. It is difficult to know your application migration schedule along with new system deployment when budgeting two years ahead.

Currently, the USCG is funded centrally, which has some good characteristics, but also presents some challenges in that it is difficult to provide the correct level of performance at the best cost when you don't know or have any control of the demand side of the equation. USCG hopes to be able to leverage a "unit economics" concept to help understand the value of cloud. There isn't any current mechanism for sharing costs across the organization, but showing the relationship between performance and cost may be useful for collaboration.

Accomplishments and Lessons Learned

The previous virtual desktop login method would take 15-20 minutes and 20-30 minutes of idle time and would completely log out of your session, requiring another login and another15-20 minutes. MVD logins are 10-15 times faster every time, regardless of whether I was logged in recently.

The US Coast Guard's cloud migration and cost management efforts exemplify the benefits and challenges associated with adopting cloud technologies in a mission-critical environment. By leveraging cloud-native solutions, implementing robust security measures, and adopting cost management strategies, the USCG successfully modernized its IT infrastructure, improved operational efficiency, and enhanced data security and compliance.

Next Steps

Our approach has mostly focused on successful operations in the cloud and our upcoming initiatives intend to move to optimizations. Another future initiative would be to better meter service so that we can move to a showback and chargeback model.

We are only about 5% in cloud currently, and while there is expected to always be some on prem and hybrid elements, we are just scratching the surface, with so much more to manage in the cloud.