GENERAL DYNAMICS
Information Technology

WHITE PAPER

# Optimizing Cloud Spend

Adopting a FinOps Governance and Culture

In partnership with

APPTIO

# Executive Summary

In the rapidly evolving landscape of cloud computing, financial operations (FinOps) have emerged as a pivotal strategy for optimizing cloud service provider (CSP) costs and maximizing IT value. The integration of strategic cost oversight, a collaborative FinOps culture, and the leveraging of enterprise-level negotiations and reserved instances are essential for achieving significant cost savings. Additionally, empowering stakeholders with advanced reporting, budgeting, and forecasting tools, coupled with exploring third-party software opportunities in the CSP marketplace, enables organizations to enhance operational efficiencies. These practices not only drive financial accountability but also ensure that organizations can effectively manage their cloud investments, leading to a more efficient and cost-effective cloud management framework.

## 1

### A CRITICAL STRATEGY FOR CLOUD COST MANAGEMENT

FinOps bridges the gap between technology and financial accountability, enabling organizations to optimize cloud costs through real-time adjustments and strategic governance.

## 2

### STRATEGIC COST OVERSIGHT AND EFFICIENCY

Implementing rigorous oversight on CSP usage, along with leveraging enterprise-level negotiations and reserved instances, can significantly reduce cloud expenditures.

## 3

### EMPOWERING ORGANIZATIONS WITH ADVANCED TOOLS AND COLLABORATIVE CULTURE

A collaborative FinOps culture, supported by advanced reporting and forecasting tools, empowers stakeholders to make informed decisions, driving cost-efficiency and maximizing IT value.

## 4

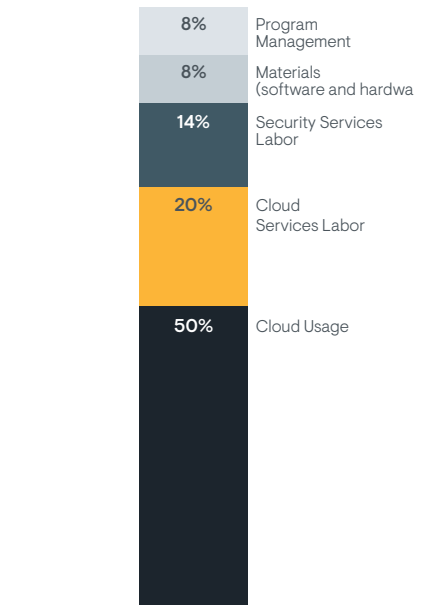### NAVIGATING SAVINGS AND OPERATIONAL EFFICIENCIES

Active configuration management and exploring third-party software opportunities in the CSP marketplace are key strategies for achieving additional savings and operational efficiencies.

# Introduction

Today, the management of cloud service provider costs and usage through financial operations (FinOps) is critical for driving financial accountability and maximizing IT value. Traditional on-premises data center costs are shaped by two simple factors: first, fixed, stepwise capital investments, and second, long procurement and budget cycles aligning hardware procurement with future resource requirements. CSP costs are exactly the opposite: first, service costs are based on-demand pricing, and second, application owners can spin up an environment immediately. Cloud services have completely upended traditional financial planning for procuring IT infrastructure services. FinOps is required to achieve a balance between performance and real-time cost adjustment. A significant amount of money can be saved by directly tying an application's processing requirements to CSP service costs, making real-time adjustments.

A substantial chunk of the overall cost in larger client cloud hosting environments, approximately 50 to 60%, is consumed by cloud service provider (CSP) usage, e.g., AWS, Microsoft Azure, Google Cloud Platform, and more recently, Oracle Cloud Infrastructure (OCI). Additional costs may include costs for migration, financial and operational management of the cloud hosting environment, and particularly for the federal market, security services, and cyber protection software. CSP costs are the single largest cost element and are highly visible. There is a one-to-one correlation between CSP service usage costs and individual applications. And application owners have been focused on technology and performance, not financials. A GDIT survey indicated that fifty percent of application owners never see their cloud usage costs. Providing oversight on CSP usage and costs is critical. Enabling a data-driven FinOps governance and culture is the key to eliminating waste, reducing inefficiencies, and improving performance.



TYPICAL FEDERAL CLOUD HOSTING ENVIRONMENT COSTS

| 8% | Program Management |
| 8% | Materials (software and hardwa |
| 14% | Security Services Labor |
| 20% | Cloud Services Labor |
| 50% | Cloud Usage |

*GDIT internal data*

# Building a High-Impact FinOps Culture

Teams across the organization need to collaborate and assume ownership of their cloud usage and cost management, from the cloud program executive to the finance department, application and business owners, and the cloud engineering and operations team. The cloud FinOps team plays a particularly pivotal role. Coordination and mutual responsibility for cloud usage and costs are imperative. Reselling is merely a piece of the puzzle. Cost and usage performance management necessitate tools for daily and monthly tracking, benchmarking, cloud configuration and utilization analysis, optimization of reserved instances and savings plans (RI/SP) across workloads, and forecasting for budgetary and reselling negotiations.

A comprehensive FinOps approach drives savings and performance by investing in robust financial operations teams and direct operational connections to the application owners. Establishing a successful FinOps involves the execution of multiple underlying activities involving key stakeholders throughout the organization.

KEY STAKEHOLDERS IN STREAMLINING CSP USAGE AND COSTS

- Cloud program executive and oversight team
- Cloud engineering and operations
- Finance and budgeting team
- Application and business owner(s)
- Cloud financial operations team

**GDIT**

# Unlocking Savings Through Strategic Enterprise-Level CSP Negotiations

An enterprise-level strategic resell discount agreement with cloud service providers is invaluable when optimizing savings.

The agency's cloud program lead usually spearheads this negotiation with CSP resellers. Each CSP offers substantial discounts based on the volume of expected workloads. Resellers are vital in assuming volume commitment risks in return for deeper agency client discounts. This action establishes the initial resell discount baseline, which needs continuous renegotiation as CSP usage expands. There are several specialty discount programs each vendor offers, such as S3 storage plans, the AWS MAP 2.0 and Azure AMMP programs for migration, and data egress discounts. Typically, agencies can negotiate CSP resell discounts in the range of 15 to 25% based on commitment volumes.

> Resellers play a crucial role in absorbing the risk of annual cloud usage commitments.

# Maximizing Efficiency: Harnessing the Power of Reserved Instances and Savings Plans

Leveraging the full potential of reserved instances (RI) and savings plans (SP), plays an integral role in our approach to maximizing efficiency and cost savings. These plans usually account for 30 to 40% of the overall spend and are typically bought in June, aligning with the government's fiscal year-end. For instance, a client might purchase $30M worth of RI and SPs in June and make adjustments in November as part of the spending cycle. This necessitates careful planning, approval, and continual monitoring to ensure efficient utilization of pre-purchases. A custom AWS Partner Solution for analytics, or   other third-party tools, keeps tabs on RI and SP purchase efficiency and presents savings in real-time via readily accessible dashboards.

When purchased at the enterprise level, RI and SP yield higher cost-effectiveness due to cross-account and subscription sharing. Usually, RI and SP plans provide savings of 5 to 8% off the overall monthly expenditure, and with better cross-account management can achieve savings of 25 to 35% or greater.

Effective discount management is also enabled by tools that can aggregate and segregate usage according to a cloud management office's requirement, not to how the CSP presents usage saving by default. Multi-cloud dashboards can aggregate total savings from discount plans from AWS, Google Cloud Platform, Microsoft Azure and Oracle OCI while showing the individual accounts where those savings are being applied. The cloud financial operations team can use this data for planning purposes to perform those adjustments to each CSP discount plan, perhaps deciding to allocate more funding to a discount plan for AWS to realize more savings, as the Savings by vendor widget indicates that the Azure discount is outperforming the AWS discount plan.

# Empowering Stakeholders with Cutting-Edge Reporting, Budgeting, and Forecasting Tools

Sophisticated software tools for regular reporting, budgeting, and forecasting are essential for providing the critical linkage of enterprise CSP resell costs to application owners. Regrettably, cloud resell expenditures are not often directly reported to the application owner. In fact, account ownership often changes among employees. A recent inventory of 2,447 CSP accounts revealed that 258 accounts lacked a known owner and were consequently closed after accruing costs for months. Both native and third-party tools exist for analyzing cloud usage and costs. Examples of native tools include AWS Cost Explorer, Trusted Advisor, and Budgets; Microsoft Azure Cost Management; and Google Cost Management. Third-party tools include Apptio's Cloudability, NetApp's CloudCheckr/Spot.io, Kion, and Kubecost Tool selection is dependent upon the number of hybrid multi-cloud CSP providers and cloud security environments. Our experience indicates that mature financial operations teams utilize multiple tools to manage their usage and costs.

Budgeting and forecasting CSP expenditures occur at both the account/subscription and enterprise levels. Establishing budgets for accounts and subscriptions is a standard procedure when opening new accounts, with targets set in cost reporting tools. Forecasting future expenditure is a frequently overlooked process. With 30-40 accounts, annual forecasting is relatively straightforward. However, as cloud operations scale to 1,000 plus accounts and subscriptions across multiple environments, federal clients require a cohesive budget forecasting process and a supporting software tool that gathers information at the account level and aggregates the forecasted spending each year.
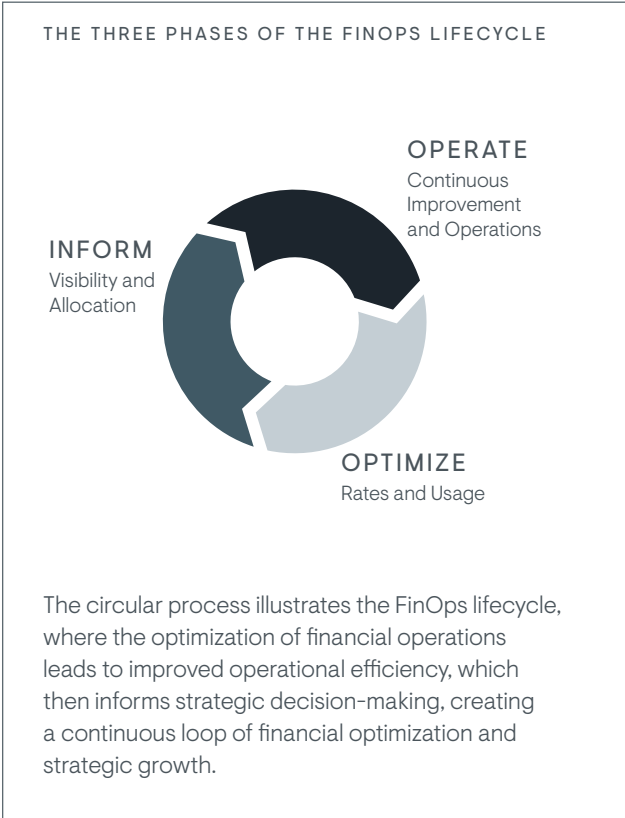
> A recent survey found that nearly 20% of cloud-based application owners do not validate cloud usage budgets.
>
> *FinOps Foundation 2023 State of FinOps Survey*

# Driving Cost-Efficiency and Active Configuration and Cost-Management

Undertaking active and continuous configuration management as a way to balance cost, performance, and service availability is a proven method to reduce overspending and optimize resource utilization. FinOps teams must continuously evaluate CSP usage patterns to identify oversized or under-utilized resources. FinOps is a set of principles, processes, and tools that enable collaboration between IT, finance, and the business to maximize the business value of an organization's public cloud deployment. Teams need to collaborate and optimize directly with application owners, making recommendations on their configurations, including identifying under-utilized EC2 instances, and operational efficiencies. Benchmark operations log anomalies into the client's ticketing system to track application owner follow-up on recommendations. Oftentimes in the Federal government, application program budgets are separate from the cloud CSP budget, reducing the prioritization of cost reduction activities. Soft techniques for raising the profile of cost savings opportunities include developing cost comparison reports among application program owners and quarterly financial review discussions help to drive interest. While in the early stages of adoption in the Federal environment, clients are evaluating automation tools for actively managing resources based upon resource costs. In GDIT's experience, active cost management can typically save an additional 5 to 10% on overall usage costs.

**THE THREE PHASES OF THE FINOPS LIFECYCLE**



OPERATE
Continuous Improvement and Operations

INFORM
Visibility and Allocation

OPTIMIZE
Rates and Usage

The circular process illustrates the FinOps lifecycle, where the optimization of financial operations leads to improved operational efficiency, which then informs strategic decision-making, creating a continuous loop of financial optimization and strategic growth.

# Exploring Third-Party Software Opportunities in the CSP Marketplace

Capitalizing on the burgeoning opportunities within the CSP marketplace services for third-party software can lead to new avenues for cost savings and operational efficiencies. AWS, Azure, and Google offer a new private marketplace service that allows enterprises to provide an approved array of third-party software packages for their application teams. A key advantage of cloud computing is the swift account setup and cloud environment configuration. CSP-offered marketplace services afford application owners the same rapid software installation in their environments, circumventing a lengthy procurement process. Private marketplace services can be configured to provide multiple private marketplaces with software selection portfolios tailored to individual application owners. By bundling CSP usage and third-party software acquisitions, clients can negotiate deeper discounts based on their overall CSP consumption.

> Application owners often over configure their virtual machines because of performance worries.

## Accelerate Cloud Cost Efficiency

Managing cloud spending effectively and realizing potential cost savings requires a fresh perspective on CSP usage and costs. IT organizations have a long tradition of managing application performance and infrastructure performance. Managing CSP cost and usage performance is equally important. As we look to the future, optimizing application, infrastructure, and cost performance as an inter-related system is critical to mission success. This evolution introduces increasing complexity, but also offers agencies substantial improvements in mission IT value. FinOps practices and models are evolving to fully capture this potential.

Transitioning to a dynamic FinOps organization supported by market-leading cloud cost optimization tools offers both a comprehensive and practical approach to cloud. This approach (and the FinOps framework) aligns with the needs of multiple stakeholders involved in cloud consumption and helps organizations to maximize the efficiency of their cloud spending.

For federal agencies embracing a FinOps approach would mean expanding the scope of cloud management activities acquiring billing analytics software, engaging professional services for financial operations and software development, and accessing third-party software catalogs. Given the complexity of monitoring usage and spending, the implementation of diverse tools has become a necessity in 2024 and beyond.

**GDIT**

## About GDIT Digital Consulting

General Dynamics Information Technology (GDIT) stands at the nexus of digital consulting and mission-centric innovation in the public sector. As the pace of technology changes and as mission demands accelerate, GDIT's Digital Consulting Practice supports agencies navigating intricate landscapes and harnessing the transformative potential of AI, cybersecurity, and cloud solutions. Partnering with visionary leaders across the public domain, we craft strategies that catalyze digital evolution, drive sustainable modernization, and position our clients at the forefront of excellence.

## About GDIT

GDIT is a global technology and professional services company that delivers consulting, technology and mission services to every major agency across the U.S. government, defense and intelligence community. Our 30,000 experts and consultants extract the power of technology to create immediate value and deliver solutions at the edge of innovation. We operate across 30 countries worldwide, offering leading capabilities in digital modernization, AI/ ML, Cloud, Cyber and application development. Together with our clients, we strive to create a safer, smarter world by harnessing the power of deep expertise and advanced technology. More information about GDIT is available at www.gdit.com.

### Contact

_____

**GENERAL INQUIRIES**

Christopher Aiello
Senior Marketing Manager
GDIT
Email: christopher.aiello@gdit.com

Jay Srinivasan
Senior Public Relations Manager
GDIT
Email: jayendran.srinivasan@gdit.com

## About Apptio

Apptio, an IBM company, is the leading technology spend and value management software provider. Apptio's AI-powered data insights empower leaders to make smarter financial and operational decisions across Information Technology (IT), multi-cloud FinOps, and digital product development. Apptio's mission is to deliver business value with every technology investment and team. Powered by Apptio's cloud platform, Apptio's SaaS applications translate technology spend into clear business outcomes and financial ROI. As a pioneer and category leader in Technology Business Management (TBM), FinOps, and Agile Portfolio Management, Apptio works with thousands of customers, partners, and community members worldwide. For more information, please visit www.apptio.com.