

eBook

3 Best practices for a cloud cost and infrastructure optimized organization

A guide to operationalizing FinOps



Introduction

In today's dynamic business landscape, organizations face relentless pressure to cut their cloud costs. Many organizations are therefore embracing Cloud Financial Operations (FinOps) to help them reduce and manage their cloud spend. Typically, FinOps leaders focus their practices and processes on gaining a snapshot of their cloud environment and the associated cost of their cloud resources. They then utilize these reports to take cost-cutting actions, such as right-sizing instances, removing unused resources, adjusting instance uptime, purchasing commitment plans etc.



Enterprise teams are embracing FinOps

Nearly all (96%) cloud decision makers believe implementing FinOps practices is essential to their cloud strategy.

Source: [State of CloudOps Report](#)

However, without a clear understanding of the impact on cloud resources and the performance and reliability of the business applications they run, many cost management projects lead to short-sighted decisions without understanding the long-term impact on the business. These include:

- Unanticipated cloud costs and spend drift
- Resource inefficiencies and compute waste
- Friction between Finance and DevOps teams
- Application performance problems and deployment delays

This eBook explores the critical need for organizations to look beyond cost cutting measures and drive more value from their FinOps practices by implementing processes that align cloud cost efficiencies with resource efficiencies. Through such an approach, **organizations can operationalize FinOps to deliver a cloud cost and resource efficient organization that can help support and grow their businesses in the long term.**

The limitations of tactical cost management

The benefits of focusing solely on cloud cost management tactics are limited. While they may cut cloud costs in the short term, this approach cannot scale to support the long-term growth and efficiency goals of the business.



Lack of multi-cloud visibility: The sheer scale and complexity of today's multi-cloud environment make it extremely difficult to gain holistic visibility and be able to accurately plan, manage, and optimize cloud spend and resources. Moreover, visibility for visibility's sake doesn't solve very much. All you get is a point-in-time siloed perspective, without context, and little intelligence to make informed long-term cost management decisions or provide ROI metrics. As a result, the actions taken may be skewed or wrong.



Overlooking the symbiotic relationship between cost and infrastructure: Many organizations overlook the direct correlation between cloud costs, usage and allocation of infrastructure resources. Yet, changes in infrastructure, such as scaling resources up or down, have a direct impact on spend, as well as application performance and reliability. Conversely, fluctuations in cost may influence decisions regarding the allocation and optimization of infrastructure components.



Friction with DevOps: Most cost management tasks are typically implemented by the DevOps teams who are deploying the cloud resources that are generating the spend. However, imposing cloud cost management tasks on these often under-resourced and overstretched DevOps teams—and potentially requiring them to compromise on application innovation, performance, and reliability to lower cloud costs—can lead to friction and frustration and hamper time to market as well as divert their focus from innovation.



Lack of flexibility: To cut spend many organizations will purchase commitments such as Reserved Instances (RIs) and Savings Plans. However, with this lock in they may not be able to offload their commitments if business plans or resource usage changes.



Relying on manual analysis: Cloud vendor billing reports are incredibly complex, detailed, and long — often spanning tens of millions of lines. Experienced, highly skilled, and highly paid analysts often must comb through vast quantities of disparate cloud data, only to gain a partial snapshot of cloud spend.

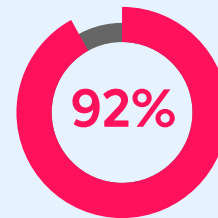
Moreover, each cloud provider has its own portfolio of resource types, pricing models and tiers, and purchasing packages. Attempting to merge, manage, and optimize the different and inconsistent hodgepodge of entities for each cloud makes any attempt at data analysis even more complex, time-consuming, and prone to error. As a result, the cost management actions taken based on this analysis, such as removing idle resources or buying certain types of reserved instances (RIs) may be misguided or out of date.



Evolving the approach to FinOps

Given the scale and complexity of the average organization's cloud environment, not to mention the interdependence between cloud costs and infrastructure, organizations need a more strategic, more proactive, and agile approach that goes well beyond providing basic visibility and cost-cutting tactics.

They need a solution that truly operationalizes FinOps — that embeds the critical components of multi cloud visibility, cost management, and infrastructure optimization into operational processes — so they can drive greater cost savings together with resource and process efficiencies that can support business growth in today's dynamic business environment.

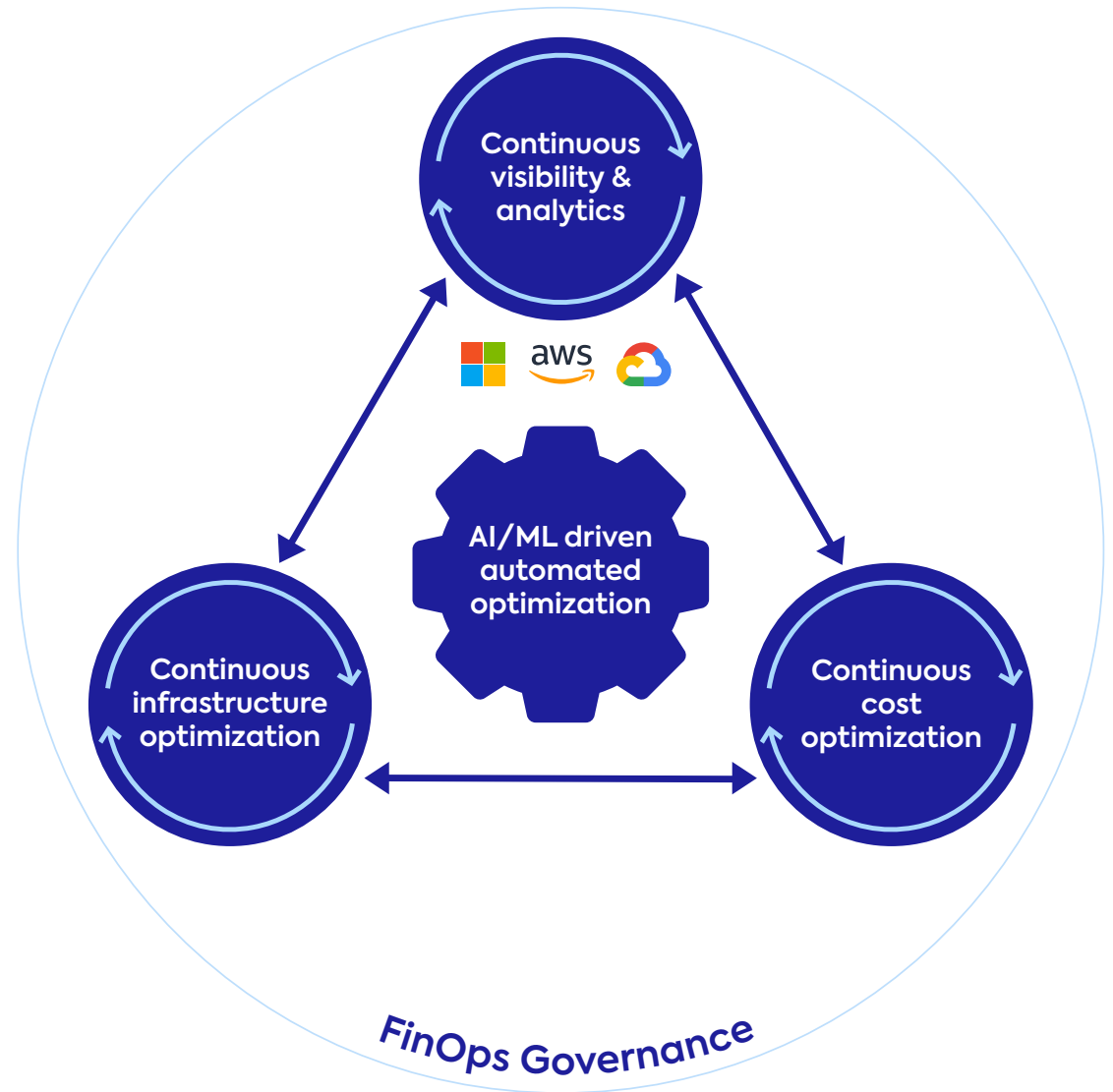


Cloud stakeholders acknowledge FinOps is a complicated business problem

Source: [State of CloudOps Report](#)

3 Best practices for FinOps to drive a more cloud efficient business

Operationalizing FinOps requires three key interlinked best practices: **continuous visibility, continuous cost optimization, and continuous cloud infrastructure optimization**—all driven by automation that utilizes artificial intelligence (AI) and machine learning (ML) that can predictively identify and deploy the optimal resources at the right time and at the right cost.



Best practice 1: Continuous, actionable visibility

Visibility must continuously provide a single source of truth for the organization's multi-cloud environment and its costs. Delivered through dashboards and consumable reports this visibility must synthesize data from all cloud providers, while understanding and reflecting the nuances of each provider's pricing models as well as the different billing formats. Beyond that, it should align cloud spend to their applications, business units, and/or other defined cost centers, and be able to identify meaningful opportunities for cost optimization and infrastructure efficiencies.



Driving results with a robust FinOps solution

Cloud: AWS

Challenge: As Engineering teams were moving more applications to Kubernetes, TuneIn increasingly needed more visibility into spending data to better understand how much their workloads were costing. However, the task of calculating these metrics took significant time and effort, and with no dedicated FinOps team to track it, costs were quickly growing.

Solution: Spot by NetApp solutions for FinOps enabled TuneIn to deliver the savings they were looking for by using spot instances, the reliability they needed with an enterprise-grade SLA, and in-depth visibility into the cost of workloads running in their Kubernetes clusters.

[Find out](#) how Spot can help you cut your cloud spend.



Best practice 2: Continuous cost optimization

Cost optimization aims to manage and reduce cloud spend efficiently while maximizing business value. These processes should include terminating or adjusting sources of wasted spend (e.g., unutilized, underutilized, or unattached resources), right-sizing instances, as well as migrating older generation resources to more cost-effective ones. It can also include moving storage resources to more economical options and/or to more cost-effective regions while still meeting failover and data recovery requirements.

Beyond the traditional processes, cost optimization should also incorporate continuous optimization of commitments, including Reserved Instances (RIs) and Savings Plans – all without sacrificing flexibility and risking financial lock.

Many of these processes should be automated, triggered by policy-based alerts. And, given the constant changes in both cost and compute, they must be performed continuously to deliver accurate, impactful, and measurable results that drive greater cost efficiencies.

tecRACER
Cloud Enabling Your Business

“Managing RIs manually is prone to human error. It’s much easier and more cost-effective to outsource those RI decisions to Spot Eco. You talk with the Spot team about your savings strategy and then, after the initial technical onboarding, Eco goes on autopilot and that’s it!”

– Sven Ramuschkat, founder of tecRacer

[Read how](#) techRacer drives FinOps with RI management.



Best practice 3: Continuous cost-efficient cloud infrastructure optimization

Infrastructure optimization ensures that the optimal cloud resources are used to support an application workload. This should include auto-scaling resources (VMs, containers, and Kubernetes) based on real-time analysis of workload requirements and automatically optimizing for capacity, utilization, availability, and performance, while using the most cost-efficient purchasing options and compute types—including on-demand, Reserved, and spot instances.

finova

In practice, Azure compute cannot be optimized without a third-party solution – let alone stateful single VM workloads like ours. With Spot Elastigroup, we exceeded our extremely ambitious savings target of 25% in just two months – further than we even thought was possible.”

– Richard Marsh, director of operations, finova

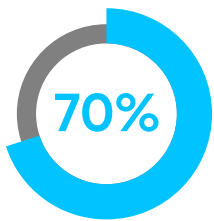
[Learn how](#) finova saved 70% on Azure cloud spend by optimizing their infrastructure.



Predicting the unpredictable with AI and Machine Learning

Driving these best practices, and aligning the different teams involved requires a technology solution that reduces manual efforts, human error, and friction while delivering optimal outcomes for all stakeholders and the everchanging needs of the business.

This requires automated optimization technology that utilizes realtime monitoring and analytics together with AI and ML, to continuously learn the usage patterns, resources and processes for application workloads, and correlate insights learned from them. It should also leverage industry best practices and user-driven insights, and then create data-driven models that accurately predict the optimal cloud resources needed to support a specific workload's requirements at the optimal cost and the exact moment they are needed. To be effective, this technology should also incorporate organizational policies around acceptable instance types, cost, and other parameters as well as guardrails to address anomalous usage spikes resulting from, for example, misconfigurations or workloads left on by mistake, which can lead to runaway spending and drift.



By 2027 AI-enabled automation will ensure consistent digital infrastructure configuration, performance, cost, and security by reducing the need for human operations intervention by 70% and improving service level objectives.

Source: [IDC FutureScape: Worldwide Future of Digital Infrastructure 2023 Predictions](#)





One Spot for FinOps

Most organizations would agree that FinOps enhances the value of cloud investments; however, cost management tactics alone are insufficient for a long-term FinOps strategy. Delivering a successful FinOps strategy within the realities of complex, continuously evolving multi-cloud environments requires cost management to be inherently aligned with cloud infrastructure management processes and practices.

To truly gain value, organizations must operationalize their FinOps practice utilizing best practices of continuous visibility, continuous cost optimization, and continuous cloud infrastructure optimization.

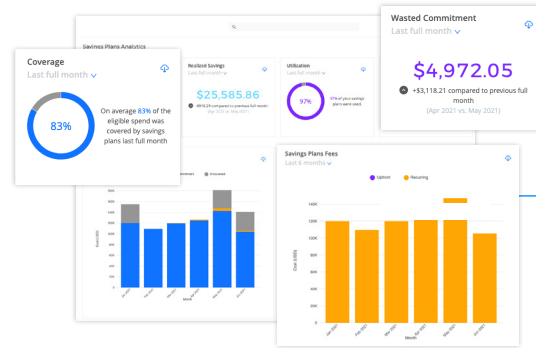
With these practices, organizations will be able to:

- ✔ Cut cloud spend, remove waste immediately, and continuously optimize savings over time
- ✔ Gain a continuously cost and resource-optimized cloud infrastructure
- ✔ Give stakeholders actionable visibility and intelligence to drive informed business decisions
- ✔ Reduce risk and complexity without sacrificing flexibility and reliability or risking financial lock-in
- ✔ Reduce friction and remove the burden of cost management from DevOps teams, freeing them to focus on product delivery
- ✔ Build a culture of financial accountability and cross-functional collaboration while aligning cloud spend with business priorities

Operationalize your FinOps practice with Spot by NetApp

The Spot by NetApp portfolio of solutions for FinOps provides holistic, scalable and repeatable cloud cost and infrastructure visibility and insights, with AI/ML driven automated resource optimization embedded directly into operations processes and workflows. By operationalizing FinOps organizations can generate immediate and increasing cost savings, gain a continuously efficient cloud infrastructure and benefit from actionable intelligence that drives impactful business decisions.

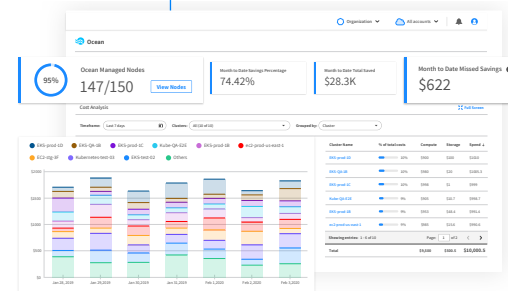
Find out more at www.spot.io/finops



Continuous, holistic visibility

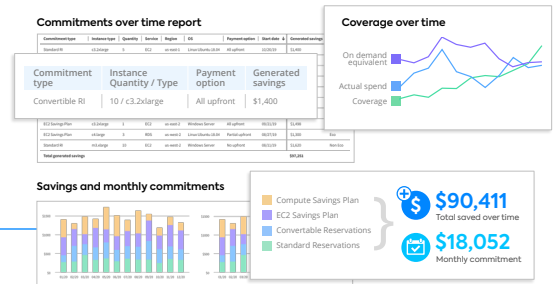
- Get actionable intelligence into cloud spend, resource utilization and waste to continuously identify and address optimization opportunities.
- Easily allocate cloud consumption by business unit, projects, teams or services to drive better accountability across stakeholders and make informed business decisions.

AI/ML driven automated optimization



Continuous infrastructure optimization

Auto-scale cloud infrastructure based on real-time analysis of VMs, containers and Kubernetes workload requirements — maximizing utilization, performance and availability while using a cost optimized balance of resource types and purchasing options (on-demand, reserved, spot).

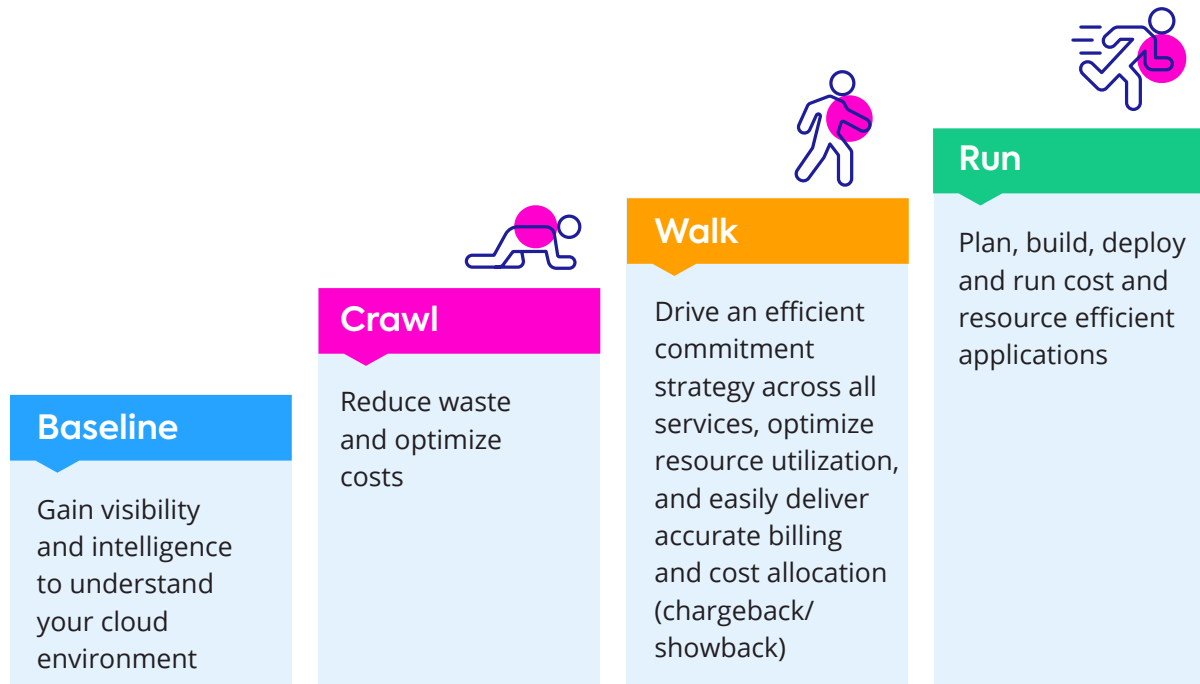


Continuous cost optimization

Continuously optimize cloud commitment purchasing (reserved instances and savings plans) to achieve maximum savings, utilization and flexibility, while reducing risk and the time spent on capacity planning.

Support for every step of your FinOps Journey

As the industry leader for FinOps, Spot by NetApp has extensive experience partnering with thousands of customers over many years. From innovative startups to global enterprises, Spot by Net App has delivered billions of dollars in actual realized savings for live running workloads. So, whether you are just starting out on your FinOps journey, or are ready to build deploy and run applications that are infrastructure and cost efficient from the get-go, Spot by NetApp can scale with you to support you and your business wherever you are on your FinOps journey, at a pace that works for you.



[Learn more](#) about how Spot by NetApp can help you realize the true value of FinOps today.