



FinOps 101: A Comprehensive Guide to Cloud Cost Optimization & Management

And how Stratusphere™ can help you get there

— If you're considering moving, are in the process of moving, or have recently moved your company's apps and data to the cloud, be aware that there are two sides to such a decision—platform and people.

The platform portion is what most people think about when moving to the cloud. It covers the migration itself, the transformation from on-premises servers, apps, and data to cloud-based on-demand apps and storage such as Amazon Web Services (AWS).

Done right, your company can save significant amounts of time and money. In fact, AWS reports average **infrastructure cost savings of 31%** from cloud computing versus on-premises. And a **69% reduction in unplanned downtime**.

It's the people part that you may have to address at some point. Specifically, how your team members will need to adapt processes and their methods of collaboration to take advantage of all the cloud has to offer.

Current standards, processes, and team responsibilities are no longer properly aligned and configured in a system that delivers results while making efficient use of resources. Without proper planning, accounting, and oversight, cloud costs can very easily outpace budgets.

There is, however, a remedy to the situation that can allow you to unlock the secrets of efficient cloud spending and master cloud cost optimization.

FinOps.

FinOps explained

Simply put, FinOps (short for Financial Operations) is the practice of cloud financial management. It's the coming together of engineering, finance, product, and executive levels to design cost-efficient cloud operations. All to reduce budget overruns and unnecessary cloud spending.

As the [FinOps Foundation](#) puts it: FinOps allows engineering and business teams to make trade-offs between speed, cost, and quality in cloud architecture and investment decisions.

It's about getting the most value out of the cloud to drive efficient growth.

Why FinOps

As businesses increasingly rely on cloud infrastructure and services, the costs associated with these resources continue to rise. Without proper visibility and integration into the organization's management framework, cloud costs will not be properly prioritized and can quickly spiral out of control. FinOps is the mechanism that allows organizations to incorporate financial concerns into their management frameworks to ensure their teams are not only delivering but ensuring they are doing so cost-efficiently..

As a multifaceted discipline, FinOps requires a focused approach to truly understand and alleviate any obstacles that prevent cloud cost optimization and management. Here are some of the key issues that FinOps helps address:

Lack of clear guidance on what good looks like

Like anything you want to manage, you need to be able to set realistic goals and understand what "good" performance actually looks like. The complexity of the cloud provider billing and misaligned names currently require a lot of domain knowledge and time to sort through.

Cloud-cost chaos and lack of visibility

Cloud environments also allow for lots of environmental separation and scaling. This is great for implementing security boundaries and logically structuring resources, but current cloud provider tooling is much better at allowing you to dig into individual expenses instead of informing overall directional performance.

Accountability & governance

On-premise scaling was all managed through capital spending processes in budget cycles and purchase orders. Scaling was not efficient, but it was very easy to control. Scaling in the cloud is intentionally very easy and can be done rapidly, even automatically, without any approval processes. This requires a fundamental rethinking of the relationship between finance and technology organizations and different tools and processes to facilitate proper management.

The FinOps team composition

Welcoming FinOps into your organization is not as simple as ramping your storage capacity up or down or adding new software licenses. It requires a team of people. You may wonder if financial management is the goal, why not assign the responsibility to a member of your existing finance or accounting department?

Good question. To gain a better understanding, think of a football team. A quarterback cannot win the game on his own. Neither can running backs, linemen, or defensive players. Only by working together and taking advantage of each member's complementary skill set can a team achieve victory.

So too with your FinOps team. You need to have members from all parts of the organization who will be needed to correctly rebuild the processes and management structures to make FinOps successful inside of your organization. Typically, a FinOps team is composed of anywhere from three to nine members, each with a particular specialized expertise. Per the FinOps Foundation, [team members](#) might come from the following:

Executives

Sample titles: C-Suite (CEO, CTO, CIO, CFO) or Heads of Infrastructure or Cloud Center for Excellence.

Responsibilities: Drive accountability, build transparency, monitor compliance and governance, and ensure teams are being efficient and not exceeding budgets. This level of authority is often needed to successfully prosecute organizational changes in multi-organization processes.

Business/Product Owner

Sample titles: Product Manager, Product Owner

Responsibilities: Quickly bring to market new products and features to deliver more value to customers and the business.

Engineering and Operations

Sample titles: Lead Software Engineer, Principal Systems Engineer, Cloud Architect, Service Delivery Manager, Engineering Manager, Director of Platform Engineering

Responsibilities: Deliver faster and more high-quality services to the organization while meeting organizational standards and requirements.

Finance

Sample titles: Financial Planner, Financial Analyst, Financial Business Manager/Advisor

Responsibilities: Accurately budget, forecast, and report cloud costs.

Procurement

Sample titles: Procurement Analyst, Sourcing Analyst, Vendor Manager

Responsibilities: Identify sourcing and purchasing of products and services within a Cloud Platform Vendor. Ensure prices and terms are fulfilled. Negotiate private pricing agreements and other discounts with cloud platform vendors. Streamline procurement process.

FinOps

Sample titles: FinOps Practitioner

Responsibilities: Provide tooling, training, and guidance needed to make teams successful at transforming their processes. Enable evidence-based decisions in near-real time. Optimize cloud use and increase business value.

Sustainability

Sample titles: Sustainability Practitioner

Responsibilities: Integrate green initiatives and principles within IT operations.

Each stakeholder must work to champion their discipline's cause yet also be willing to collaborate with others. In a siloed environment, engineers would strive to make the best product possible, while finance's goal would be to maximize cost efficiency. In the FinOps world, team members would work together to find the optimum solution.

Cultivating a financially optimized cloud culture

As mentioned, FinOps involves a team of people being held responsible for cloud costs. It also may involve a cultural shift in how your team members work with each other. Pre-cloud, typically each discipline was responsible for its own budget. Post-cloud, the individuals of the FinOps team work together to optimize costs and budgets for the entire organization. Before a FinOps team can bring about this cultural change, they need to align behind a clear set of goals and principles to achieve them that will make that possible. We expand on some of what should be considered below.

The 6 principles of FinOps

Once a FinOps team is in place, it helps to have a set of guidelines under which all participants agree to function. Developed by the FinOps Foundation, these six core principles go a long way in fostering a collaborative and viable cloud optimization culture.

01 Seek a collaborative effort

- Finance, technology, product, and business teams work together in near real-time as the cloud operates on a per-resource, per-second basis.
- Teams work together to continuously improve efficiency and innovation.

02 Require accessible and timely reports

- Have a source of truth that bridges the gap between team members with varying levels of domain knowledge to keep information accessible and up to date.
- Process and share cost data as soon as it becomes available.
- Drive better cloud utilization with autonomous real-time visibility.
- Rely on fast feedback loops for more efficient behavior.
- Provide consistent visibility into cloud spend to all organization levels.
- Explain cost increases with trend and variance analysis.

- Assess your company's performance with industry peer-level benchmarks.

03 Form a centralized FinOps team

- Require executive buy-in for FinOps and its practices and processes.
- Take advantage of economies of scale by centralizing rate, commitment, and discount optimization.
- Remove the need for engineer and operation teams to think about rate negotiations. Allow them to stay focused on usage optimization of their own environments.
- Encourage, evangelize, and enable best practices in a shared accountability model.

04 Take advantage of variable cloud costs

- Embrace just-in-time prediction, planning, and purchasing of capacity.
- Prefer agile, iterative planning over static, long-term plans.
- Embrace proactive system design with continuous adjustments in cloud optimization over infrequent, reactive cleanups.

05 Take personal ownership of cloud usage

- Accountability of usage and cost is paramount with engineers taking ownership of costs from architecture design to ongoing operations.
- Individual feature and product teams are empowered to manage their own usage of cloud against their budget.
- Decentralize decision-making around cost-effective architecture, resource usage, and optimization.
- Technical teams must consider cost as a new efficiency metric from the beginning of the software development cycle.
- This requires clear metrics to optimize for and the appropriate elevation of visibility and priority in the organization's management framework to ensure success.

06 Make value-driven business decisions

- Make conscious trade-off decisions among cost, quality, speed, and developmental and support effort.
- Think of the cloud as a driver of innovation.

Financial approaches to consider

In addition to core principles of engagement, several decisions will need to be made on practical issues. Key among them are:

Cloud cost commitment models

Choosing the right pricing model for cloud resources is a crucial decision that directly impacts cost. On-demand instances offer flexibility but come at a premium, while reserved instances provide cost savings for predictable workloads but can lead you to unintentionally restrict elasticity and innovation. Compute Savings Plans are very flexible and do a great job of providing discounts while allowing you to modernize your workloads, but their maximum discount is not usually as high as reservations. Spot instances, on the other hand, offer significant cost reductions while maintaining flexibility but come with many architectural considerations and are not useful for all workloads.

Keep in mind that beyond the base costs of cloud resources, there are often hidden expenses that can catch organizations off guard. These may include data transfer fees, storage costs, and charges for premium support. Being aware of these potential costs is crucial for accurate budgeting and forecasting.

At this point, it makes sense to introduce an actual provider of cloud services: Amazon Web Services or AWS. As the world's most comprehensive and broadly adopted cloud, AWS offers more than 200 fully featured services and serves millions of customers from startups to government agencies to leading brands such as BMW, Coca-Cola, and Netflix. By looking at AWS, we're able to bring some real-life definitions to the discussion.

AWS On-demand Instances

You pay for computing capacity by the hour or second (with a minimum of 60 seconds) with no long-term commitment. You pay only for what you use, and the instance automatically scales up or down with changing workloads.

AWS Reserved Instances (RIs)

You receive a discounted rate and an optional capacity reservation for your instances. You rent the Reserved Instance for a fixed period at a lower per-second or per-hour rate than the equivalent On-Demand Instance.

AWS Compute Savings Plans (SPs)

You receive a discounted rate across the costs of multiple forms of compute. This is very helpful when modernizing your EC2 workloads to use Fargate or Lambda since it removes expiration of EC2 reservations as a primary concern in the modernization planning.

AWS Spot Instances

Request Spot Instances for increased savings. They will be interrupted if a request for a Reserved or On-Demand Instance exceeds the current Availability Zone capacity. Spot Instances may be preferred over other instances in specific use cases due to their low cost. Spot Instances can be combined with other instance types for further savings.

Private Pricing Addendum (PPA)

Private Pricing Addendums (PPAs), such as an Enterprise Discount Program (EDP), are a necessary consideration for any organizations that are spending in the realm of \$1M/yr or more and can bring broad savings in addition to cost reductions from other commitment based mechanisms like Reserved Instances and Compute Savings Plans.

On-demand and Reserved Instances are the most requested. Here's a summary comparison of the two:

Cost

On-demand

Charged per time unit of use

Reserved

Fixed for one- or three-year period

Cost variability

On-demand

Cost fluctuates with usage

Reserved

Cost is fixed for a set capacity of usage

Availability

On-demand

Guaranteed only with On-demand Capacity reservation

Reserved

Optionally guaranteed if an Availability Zone is selected

Reselling

On-demand

Unnecessary; switch off if no longer required, no further charges apply

Reserved

Buy and sell these on the AWS Instances Marketplace but beware of lifetime limits in your account

Cost allocation methods

Choosing between showback (informing internal teams of costs) and chargeback (billing internal teams for their usage) is a strategic decision that impacts how cloud costs are distributed and understood within an organization.

Chargebacks

- Make departments responsible for their usage
- Deter from departments asking for resources they're not going to use
- Provide visibility to FinOps on the reasons for the cost of cloud usage
- Allow for balance between finding money to pay from other areas

Showbacks

- Provide FinOps with analysis of costs due to each department without cross-charging costs
- Pressure on departments for usage is less direct but FinOps has data to question overspending



Ramping up your FinOps approach

As with the adoption of any new process, optimizing the integration of the team and its subsequent success may take time. Per the FinOps Foundation, taking a “Crawl/Walk/Run” approach enables organizations to start small, and grow in scale, scope, and complexity. Below are examples of each phase of FinOps growth:

FinOps Maturity Level	Maturity Level Characteristics	Sample Goals/KPI
Crawl	<ul style="list-style-type: none"> • Very little reporting and tooling • Measurements only provide insight into benefits of maturing FinOps capability • Basic KPIs set for measurement of success • Capability is understood but not followed by all major teams within organization • Plans to address low-hanging fruit 	<ul style="list-style-type: none"> • Should be able to allocate at least 50% of spend • Forecast spend to actual spend variance is 20% • New efficiency potential savings findings are still occurring regularly and are not addressed proactively.
Walk	<ul style="list-style-type: none"> • Capability is understood and followed within organization • Difficult edge cases are identified but decision made not to address them • Automation and/or processes cover most of capability requirements • Most difficult edge cases that threaten financial well-being of organization are identified; effort to resolve them has been estimated • Medium to high goals/KPIs set on measurement of success 	<ul style="list-style-type: none"> • Should be able to allocate at least 80% of spend • Forecast spend to actual spend variance is 15% • New efficiency potential savings findings are infrequent and are visible to teams to address proactively.
Run	<ul style="list-style-type: none"> • Capability is understood and followed by all teams within organization • Difficult edge cases are addressed • Very high goals/KPIs set on measurement of success • Automation is the preferred approach 	<ul style="list-style-type: none"> • Greater than 90% of spend can be allocated • Forecast spend to actual spend variance is 12% • New efficiency potential savings findings are very rare and handled quickly.

Introducing Stratusphere™ FinOps: Take control of your cloud spending

To this point, the focus has been on what FinOps is and how in theory it can help organizations reduce cloud costs and optimize cloud operations. Now is the time to introduce how that can be done. With Stratusphere™.

Stratusphere™ from StratusGrid is custom built for large enterprises and private equity firms to take control of their cloud spending. With Stratusphere™, companies can rapidly gain insights into their AWS environments and inform optimal focuses for value creation. This is done with prebuilt dashboards to drive your management framework and unique features to help bridge the gap between technology and finance like actionable insights ranked by level of effort.

Stratusphere™: How it works

Stratusphere™ provides a unified platform for FinOps excellence. By focusing on specific problems and providing the visuals needed for a robust management framework, Stratusphere™ allows enterprises and private equity firms to achieve unparalleled financial efficiency.

Integrated into your management framework, Stratusphere™ brings clarity and accountability to your team's performance with:

Get the value out of your multi-organization data

Private Equity Firms, large Enterprises, and Government entities with broad cloud adoption all have immense amounts of data segmented across the many environments of different portfolio companies, divisions, and departments. Stratusphere™ is the only product on the market meant to help you harness that data to understand what good looks like so that you can plan for and monitor cost optimization effectively.

Financial metrics for evaluation

Quantifying success is crucial. Stratusphere™'s financial metrics become the yardstick for performance evaluation. Metrics like "captured discount percent", "potential discount percent", "coverage percent", and "commitment utilization percent" offers tangible benchmarks for success.

The benefits of using Stratusphere™

Stratusphere™ was created to help companies quickly grasp the intricacies of their multi-organization landscape and pinpoint areas with the greatest potential savings. Recommendations are ranked based on the level of effort required, making sure you see returns quickly and get value faster. With Stratusphere™ you get:

Rapid ROI and immediate time-to-value

Get immediate time-to-value with our cloud solutions. We understand the urgency of building business-critical features, that's why our services are designed to deliver cost-optimization results without delay. With prebuilt dashboards and unique views allowing efficient cost management

and streamlined processes, our expertise ensures you reap the benefits right from the start. Achieving your cloud goals has never been more attainable.

On average, Stratusphere™ FinOps users get 15X ROI

Complete visibility into complex AWS environments

Confidently navigate your AWS infrastructure with unparalleled visibility into complex cloud environments with no impact on first-party data ownership. Eliminate blind spots and gain visibility into all cloud environments, enhancing trust, efficiency, and performance. Stratusphere highlights the places to focus for value creation out of the noise and complexity so you can focus your expertise on harnessing the full potential of your AWS environments.

For instance, you can get total potential savings:

- over time
- by level of effort (LoE)
- to target by company and/or account reports
- to target by service

Actionable insights driving execution

Gain exceptional insights and skilled execution in one comprehensive package. Our integrated product and services offering combines cutting-edge technology and premium service expertise to deliver savings while your teams focus on delivering features. Benefit from data-driven insights that identify opportunities and potential pitfalls.

Watch as our team executes optimizations, migrations, or modernizations to drive optimal cloud utilization. Benefit from our Advanced AWS Partnership as evidenced by nine badges:



Precise breakdown down to the dollar of cost optimization

Always ensure your cloud spending is optimized. Get the data-driven insights you need to make well-informed financial decisions for your organization. See a full breakdown of your cloud usage costs—down to the dollar—so you can understand trends and uncover opportunities to maximize your savings.

- **Dashboard View:** Saving estimates broken down for managing organizations by company or service and for operating organizations by account or service.
- **Findings View:** Filter your findings by service, account, and Level of Effort while seeing total potential savings for your filtered data set in addition to each finding.
- **Analysis View:** P&L style reports; exporting capabilities for forecasting model updates.

The Stratusphere™ dashboard: Seeing is believing—and saving

What makes Stratusphere™ such an indispensable FinOps tool is the easy-to-read, prebuilt, insight-filled dashboards. With them you can:

Get contextual guidance for decision-making

Get pre-built insights that offer the data and context you need to drive decisions. There is no need for creating and maintaining custom dashboards or large complex data projects. We guide you with essential focus areas and expand as needed.

Prioritize action items by level of effort (LoE)

Instantly see what you should focus on and prioritize your to-do list for more potential savings. Get accurate stack rankings of action items categorized by level of effort, verified by a team who has seen and done it before.

Know exactly what you're saving

See your true performance for savings, taking into account gaps in commit utilization and other variables that are keeping you from achieving your plan for cloud spend.

Easily share your data while protecting first-party data ownership

Simplify data sharing across organizations and get flexibility and control without any cumbersome legal processes. Operating companies can now create separate instances within our app, get valuable insights, and maintain full data ownership while sharing data with managing organizations to allow unique insights and better understand relative performance.

How Crunchyroll was able to identify 18X potential ROI with Stratusphere™

Background

Crunchyroll is the leading destination for anime fans, anchored by a global streaming service that supports anime theatrical films, games, manga, events, e-commerce, collectibles, home entertainment, and merchandising.

Challenge

Over the past few years, they've experienced massive user growth and higher demand. Correspondingly, the complexity of their operation has increased, creating infrastructure among many platforms spread across over 40 accounts in multiple AWS organizations without consolidated visibility.

Solution

To address this issue, they partnered with StratusGrid to utilize Stratusphere™. The goal? To gain visibility and rapidly identify ways for Crunchyroll to optimize their cloud infrastructure and reduce operational expenses across all their AWS Cloud environments.

Using Stratusphere™'s CloudFormation deployment method, our team successfully onboarded Crunchyroll onto Stratusphere™ in less than one hour per organization.

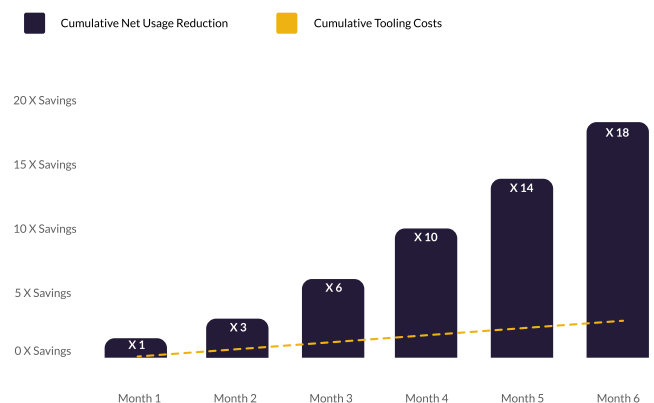
Once onboarded, Stratusphere™ provided a consolidated view of AWS usage costs and potential cost optimization findings across all AWS organizations. StratusGrid was able to use the findings and Level of Effort categorization, along with other tooling and team member expertise, to identify significant cost optimization potential.

StratusGrid presented the assessment results and a prioritized plan to resolve the most impactful findings across the environment based on the potential savings, platform, and Level of Effort (LoE) required for the remediation of each finding.

Results and outcomes

- 5X actual monthly savings compared to month one
- 1.5X total actual monthly savings compared to month one in commitment-based findings
- 3X total actual monthly savings compared to month one in configuration-based findings
- 4X net monthly savings projected compared to month one

Estimated Usage Reductions Over Time



Note: The order of magnitude of cumulative net usage saving MoM is 100% accurate with Crunchyroll's potential savings

“

“The StratusGrid team is always professional, knowledgeable, and friendly. They are a great team to work with, provide solid solutions, and educate the rest of the team with documentation when something new is implemented.”

Levon Petrosyan
IT Engineer at Crunchyroll

Learn how Stratusphere™ can help your company optimize its cloud costs

Visit our [website](#) for ROI calculators, educational videos, and more. Or book a free AWS [consultation](#) with a StratusGrid expert.

Better yet, enjoy a 30-day free trial!

Free Trial

About StratusGrid

StratusGrid is a cloud-native engineering and DevOps firm that provides AWS Cloud Services, Software Engineering, and Technology Consulting. We help our customers build and operate mission-critical platforms and applications in the cloud.

We created Stratusphere™ to address the visibility challenges faced by large organizations with multiple, independent cloud environments. With Stratusphere™, you gain the ability to quickly grasp the intricacies of your multi-company landscape and pinpoint areas with the greatest potential savings. We help you bring the right targets out of the noise and into focus, making sure you are able to spend your high-value cycles on doing the real work so you can deliver results to the business more quickly.