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A SMARTER WAY

# The enterprise architect's guide to cloud expense management tools

Smarter FinOps  
solutions for successful  
digital transformation





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# Introduction



## Introduction

There's little doubt that enterprises have accelerated their digital transformations to cater to higher levels of digital commerce and remote collaboration in the wake of the COVID-19 crisis. As part of this thrust, organisations around the world have stepped up the pace of their migration from on-premises data centers toward the cloud during the pandemic.

According to a recent global survey from Spiceworks Ziff Davis, enterprises have increased the percentage of total IT budgets they spend on hosted and cloud-based services from 22% in 2020 to 26% in 2022. The report suggests that 50% of business workloads are expected to run in the cloud by 2023, up from 40% in 2021. Gartner, meanwhile, reports that more than 70% of companies have now migrated at least some workloads into the public cloud.

While the benefits of moving to the cloud are undeniable, many businesses are finding it difficult to keep cloud costs under control. Gartner predicts that through 2024, 60% of infrastructure and operations leaders will encounter public cloud cost overruns that negatively impact their on-premises budgets. Another survey found that 82% of IT decision-makers have incurred unnecessary cloud costs.

The reason for this? The migration to the cloud is a new way of paying for IT. The way that the cloud transforms IT from capital expenditure—purchasing, depreciating, and amortising IT assets—to variable operational expenditure is one of its major benefits. But it can also be a pitfall for the unwary. When using cloud infrastructure and platform as a service (IaaS/PaaS), organisations are billed continuously as consumption occurs.

## Variable spending can get out of hand

It is easy for this variable spending to get out of hand if it is not carefully tracked and monitored. Enterprises are often hit with bills comprising thousands of line items that they can't completely explain. With cloud services often bypassing traditional procurement, lines of business and departments can easily rack up significant bills, without knowing about it or being held accountable.

Waste is commonplace among enterprise cloud users, in the form of overprovisioned, redundant, or underused cloud resources. In other cases, companies are losing out on significant discounts because they are unnecessarily splitting usage across multiple departmental bills or missing out on the opportunity to consolidate more spending with a strategic partner to get better pricing.

Much of the complexity arises from the fact that organisations are running hybrid and multi-cloud strategies. When working with a mix of local cloud service providers and hyperscale cloud companies, companies may struggle to get a complete view of the costs and performance of the IT environment. Further complicating matters is the reality that public cloud services are not architected to work together and may have different billing models or service levels.

To turn this situation around, businesses cannot rely on a mixture of their own spreadsheet calculations and data from their cloud providers. They need to embrace Financial Operations (FinOps) culture, processes, and tools to get ahead of the complexity, unpredictability, and dynamism of IaaS and PaaS pricing and billing models, especially in multi- and hybrid cloud environments.

A cutting-edge, automated cloud-based solution that gives an enterprise visibility into—and control over—cloud expenses is a cornerstone of this move to FinOps. Such a solution provides the IT department with the tools it needs to track the real cost of the cloud environment as well as to identify cost-effective ways to maximise cloud usage and efficiency. With a better handle on costs, IT can focus on working with the business to innovate.



[The 2022 State of IT \(swzd.com\)](#)

[Cloud Migration Costs and Avoiding Overspend \(gartner.com\)](#)

[Virtana Survey: 85% Of Organizations Feel Confident Managing Cloud Bills Yet 82% Have Incurred "Unnecessary" Cloud Costs - Virtana](#)



**Simplify cloud  
management with  
the right tools for the job**

# Simplify cloud management with the right tools for the job

Whether an enterprise hopes to bring wasteful cloud spending under control, optimise spend based on historical usage data, or simply gain better visibility of costs, there are FinOps solutions to help. Some enable an enterprise to see the big picture, including how much each line of business spends on the cloud or how much it spends with different cloud providers. Others are designed to highlight nitty-gritty issues such as underutilised instances.

Solutions on the market can be divided into two broad categories—the tools natively available from the cloud providers and tools from third-party vendors. According to the FinOps Foundation, 46% of FinOps practitioners use cloud-native tooling as their primary technology, 43% use a third-party platform, and 11% use homegrown tools or spreadsheets.

## Tools from the hyper-scale cloud providers

Cost management and optimisation is one of the pillars of the major cloud providers' well-architected frameworks. The top three hyper-scale providers accordingly offer basic tools that businesses can use to get visibility into their spending and resource usage.

### AWS Cloud Financial Management

Amazon Web Services (AWS) has a set of solutions for cost management and optimisation. This includes services, tools, and resources to organize and track cost and usage data, enhance control through consolidated billing and access permission, enable better planning through budgeting and forecasts, and further lower costs with resources and pricing optimisations.

### Azure Cost Management

Microsoft's Azure platform offers the Azure Cost Management and Billing tools for financial governance, which are free to use within the Azure environment. This includes basic functionality for tracking resource usage, allocating costs, and implementing governance policies. The company claims that organisations that use these tools can reduce total Azure spending by 20 to 34%.

### Google Cloud Cost Management

Google also offers tools for monitoring, controlling, and optimising costs within its cloud environment. It enables enterprises to reduce the risk of overspending with strong financial governance policies and permissions that let IT managers control who can do the spending and view costs across the organisation.

# Simplify cloud management with the right tools for the job

Third-party FinOps and cloud expense management solutions

As an organisation migrates deeper into the cloud, smarter cost management tools from independent providers start to become essential. They are designed to work across multiple clouds and simplify cost reporting across different providers. These tools also offer a provider-independent view of cloud costs, so that the business can make informed decisions about which providers to use for different workloads. Let's take a closer look.

Third-party FinOps and cloud management tools are a relatively new but fast maturing category of software. Per Gartner, they can be divided into a few sub-categories:

**Cost management and optimisation:** These are purpose-built, best-of-breed tools for end-to-end cloud expense management (CEM). Their functionality includes budget management, cost tracking, allocation, reporting, and optimisation.

**Cloud governance:** These tools aim at broader governance and cloud security and networking functionality. They may offer features such as policy-based management across the domains of identity and access management, security, configuration, and cost management.

**Monitoring;** Tools focused first of all on availability and performance monitoring.  
**Cloud management platforms (CMPs):** Tools with broader coverage of the cloud management space that incorporate aspects of cost management. According to Gartner, their cost management coverage tends to be not as featureful as other cost management tools.

## The benefits of CEM

CEM solutions enable a business to:

- Forecast and budget cloud spending more accurately.
- Enable engineers and developers to understand the cost of the resources they use.
- Identify applications that could be re-platformed or rearchitected to reduce costs.
- See how much different departments, applications and lines of business are spending on the cloud and hold them accountable with accurate charge-back.
- Evaluate where to take advantage of cloud providers' discount and savings plans.
- Uncover wasteful spending.
- Match different workloads to the optimal cloud platform.





# What to look for in a CEM solution



## What to look for in a CEM solution

As their reliance on the cloud and the complexity of their environments rises, organisations will find it increasingly difficult to keep a handle on costs using the native functionality from their cloud providers or manual methods such as spreadsheets. As they search for third-party CEM or FinOps solutions, the first order of business should be to ensure that their tool of choice offers real added value over the cloud providers' toolsets.

### **Three core benefits to look out for include the following:**

**The ability to manage a multi-cloud estate within the business's own context:** A powerful, cutting-edge CEM solution should give a business full visibility over its cloud cost, with integrated baseline reporting, live dashboards, and complete tagging and cost allocation to the correct departments and cost centres. It should provide a full view of cloud usage and costs across all cloud accounts and cloud providers.

**All-in-one cloud management:** A smarter CEM platform will offer a single and complete view of the cloud environment, resources, and spend allocation.

**Automated operations and seamless integration:** Today's best CEM platforms offer automated data collection, enrichment and verification of enterprise usage, spending, and resource allocation. They integrate with third-party business applications as well as with the cloud service providers to take the complexity out of managing multi-cloud environments.

With such a platform in place, enterprise architects are well placed to help their organisations to predict costs and eliminate bill shock across the cloud environment. Such a tool also vastly reduces the manual processes that organisations once needed to carry out to monitor, verify and allocate costs from different providers to the various cost centres and resource groups within the business.



**Cost optimisation:  
a pillar of the  
well-architected  
frameworks**

# Cost optimisation: a pillar of the well-architected frameworks

The hyperscale cloud providers are moving fast to introduce new services and features to their offerings. While this gives companies more choice and flexibility in how they design and architect applications and workloads, it adds to the complexity of managing and optimising a cloud environment. Amazon, Google, and Microsoft have introduced well-architected frameworks to help companies design and manage cloud deployments in a consistent way.

Their architectural guidance documents provide useful information on how to build and simplify cloud infrastructures and applications on their platforms. There are many similarities between these well-architected frameworks, which provide architectural guidance, design principles, best practices, and additional tools and resources covering common pillars such as operational excellence, security, reliability, and performance.

Each of them offers some practical advice around cost optimisation as well as the ability to assess a company's environment against the well-architected framework:



## AWS Well-Architected:

AWS Well-Architected helps cloud architects build secure, high-performing, resilient, and efficient infrastructure for a variety of applications and workloads. It provides a consistent approach for customers and partners to evaluate architectures and implement scalable designs. Cost optimisation encompasses topics such as understanding spending over time and controlling fund allocation, selecting resources of the right type and quantity and scaling to meet business needs without overspending.



## Google Cloud Architecture Framework:

The Google Cloud Architecture Framework provides recommendations and describes best practices to help cloud practitioners design and operate a cloud topology that's secure, efficient, resilient, high-performing, and cost-effective. Cost optimisation provides design recommendations and describes best practices to help architects, developers, administrators, and other cloud practitioners optimise the cost of workloads in Google Cloud.



## Microsoft Azure Well-Architected Framework:

The Azure Well-Architected Framework is a set of guiding tenets that can be used to improve the quality of a workload. It applies the principles of Build-Measure-Learn to accelerate time to market while avoiding capital-intensive solutions. The topics it covers include reviewing cost principles, developing a cost model, creating budgets and alerts, and reviewing the cost optimisation checklist.

### **A note about culture**

While cloud expense management and optimisation tools are essential for enterprises that want to control and optimise cloud spend, they are not enough on their own to embed best practices in the business. FinOps is as much about creating a culture of financial accountability across the business, along with the correct processes and people to increase an organisation's ability to understand cloud costs and make business trade-offs.

A photograph of a modern, multi-story building with a white facade. The word "nebuta" is mounted on the wall in a stylized, lowercase, sans-serif font. The building has large windows and a balcony with a metal railing. A decorative graphic overlay, consisting of a diagonal band with a teal-to-purple gradient and a network of light green lines and dots, is positioned in the lower right foreground.

nebuta

**Accelerate your FinOps  
journey with OneView  
CEM**

# Accelerate your FinOps journey with OneView CEM

OneView from 1Nebula is a leading CEM platform for companies that are looking to simplify operations and take control over cloud expenses. Our platform enables FinOps within an enterprise by giving architects and finance teams tailored visibility across their multi-cloud environment to track and forecast their cloud spend. OneView helps businesses to optimise cloud spending and implement best practices aligned to the cloud providers' well-architected frameworks.

Using smarter advanced analytics in OneView, enterprises are assured they can:

- Compare budget and actual spend, per month and year to date.
- Perform detailed analyses of cloud spend per cost centre and resource group or account.
- Accurately allocate cloud spend per billing period.
- Identify unnecessary and redundant cloud resource costs.
- Tag specific cost centres, resource groups, or projects allowing the enterprise to see exactly where cloud resources are being spent.

OneView is a cutting-edge multi-vendor solution that collects and verifies data directly from multiple cloud service providers. Our solution integrates seamlessly with leading service providers and vendors, as well as with service request and enterprise resource planning software systems. With the ability to provide an assessment of an entire technology environment within 40 hours, it offers a path to rapid return on investment (ROI).

# Innovate with 1Nebula: Smarter ways to unlock your potential

1Nebula is an independent and knowledgeable guide that helps organisations navigate the challenges and opportunities of digital transformation. We help large and complex enterprises to automate complex IT and telecoms tasks, simplify management of heterogeneous technology environments and modernise apps as they shift towards the cloud.

At a time of multi-cloud deployment, remote and distributed workforces, and relentless cost pressure, we can help your organisation gain better control over its IT spending. Our OneView solution can enable your business to reduce wastage caused by overbilling, redundant infrastructure, unoptimised usage management, governance gaps, and an inability to monitor spending. 1Nebula can work with your team to analyse existing technology and processes, propose solutions that will help digitise systems and automate processes, and implement and integrate the correct business solutions, including cloud services and platforms. In so doing, we can help you to mitigate the risks and deliver assured ROI in your transition from legacy systems to the cloud.

Contact us to learn more about how we can partner with you in building innovative technology solutions that accelerate digital transformation and unlock human potential.



# For More Information

To find out more about OneView®, please send an email to [ContactUs@nebula.co.za](mailto:ContactUs@nebula.co.za) with "OneView" in the subject line, and a 1Nebula staff member will contact you. You can also visit any of these platforms for more information and latest company news.



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