APPTIO
an IBM Company

How to Deliver the Cloud Cost Visibility You Need

Implementing FinOps for visibility: The first step on your cloud journey

Cloud cost management is complicated, but fortunately, FinOps can help. On AWS alone, there are hundreds of thousands of unique SKUs for a single hour (or partial hour) of Amazon Web Services EC2. And that's only one service on one cloud provider.

If that weren't enough, most organizations have multiple teams using cloud resources. All rolled together, your cloud spend can look like a twisted mass of charges that you'll never get straight. Spreadsheets might help at first, but once you get beyond a certain critical mass, they become almost impossible to maintain and analyze.

That's why the first step to cloud cost management is visibility. With the right visibility — fueled by the FinOps framework — you'll be able to start making sense of your cloud spend and usage. But to gain visibility you need data — a lot of it. The trick is to find the perfect balance of information. When done correctly, you'll have all the data you need processed and arranged in a way that helps you make strategic decisions.

What is FinOps?

FinOps is an industry-standard approach to cloud financial management that provides an operating model for cloud cost management. It is a combination of systems, best practices, and culture that enables a shift that increases an organization's ability to understand cloud costs and make data-driven decisions on trade-offs. FinOps increases the business value of cloud by bringing together a disparate set of teams from across an organization. It breaks down silos across an organization to increase agility so that technology, business, and finance professionals are now armed with a new set of processes that enable cloud leaders to master the unit economics of cloud and drive a competitive advantage for their business.

FinOps is a continuous, iterative journey that organizations moving to the cloud should consider adopting with the goal of balancing cost, speed, and quality to gain cloud efficiencies and keep reinvesting in innovation.

For more details on FinOps, read our eBook: FinOps: A New Approach to Cloud Financial Management.

How to use this checklist and worksheet

IBM Cloudability has helped thousands of companies manage a combined billions of dollars of cloud costs, processed over 7 trillion monthly cloud billion records, and saved companies hundreds of millions of dollars a month from AWS alone.

Pulling on this experience and the enormous amount of data processed over the years, we've assembled these key pillars of cloud visibility.

Each pillar is broken down into specific items essential to any cloud cost visibility system. As you go through this checklist, we recommend taking the time to note how each item could be used by your team.

Our goal is to show you what's needed for true visibility into your cloud costs and give you a chance to envision how it fits into your organization. Once you complete this checklist, we hope that you'll be able to see how the right level of visibility will help you become more efficient and do more with your cloud.

Cloud cost visibility checklist

Company culture

Visibility starts with a company culture that takes full advantage of your tools and systems. With cloud becoming more and more important to businesses, managing its costs must be a group effort. At Apptio, an IBM company, we refer to this as a cloud cost management culture that leverages FinOps practices.

Ask these key questions to see where you stand:

1 **Do you have a dedicated person overseeing cloud discounts?**
These roles are focused on making the most out of cloud provider discounts like savings plans, RIs, or committed use discounts.

2 **Do you have a list of people who need visibility?**
Cloud cost control is a cross-team effort, and you should try to involve as many people as possible. That said, too many cooks can spoil the soup. Take the time to make a comprehensive list of the decision-makers to find that perfect balance. Be sure to include people from a variety of teams, including finance, ITOps, DevOps, etc.

3 **Do you encourage complete tag coverage?**
Tags and labels are the foundation of cloud visibility. They form the bridge between random resource IDs, actual teams, products, and uses. Building a culture of tagging and labeling is extremely important (more on that below).

4 **Are your finance and technical teams working together?**
Cloud cost management is a cross-departmental effort. Only by working together can technical and finance teams get the most out of their cloud spend. This, in turn, allows them to better accomplish the goals of the business.

Data

Any visibility system is only as strong as the data it shows. Think about it like a house. You can paint it, add designed touches, and fill it with smart technology, but it will still collapse in bad weather if you don't have strong support walls and a good foundation.

How do you know your data is strong enough? Use these points to find out:

1 **Are you pulling all data from your cloud service providers?**
$100k/month of AWS billing produces 4 million line items of billing data, with each line including 100+ unique pieces of information. A small sample just isn't going to cut it — you need all of it to make an informed decision.

2 **Is your data current?**
If you want to spot situations before they spiral out of control, then you need your data to be as current as possible. After all, an unnecessary surge in the wrong place can easily cost you thousands a day, so even a 24-hour delay in your data can add up quickly.

3 **Is your data granular enough?**
When you dig into your data, you need to get more definition, not a picture that's bigger and even blurrier. This is especially important with the increased use of containers, microservices, and serverless architectures. The more granular the data, the better decisions you can make.

4 **Is your data normalized and enriched?**
A pile of billing data and pricing data is one thing. An ordered arrangement of pricing data applied to billing data takes your data to a whole other level. Normalization and enrichment bring everything together, including amortization, custom pricing, credits, and more, in a way that makes data analysis possible.

5 **Do you have access to historical data?**
If you're going to compare historical spend, then you're going to need historical data. It might sound elementary, but with billions of bytes created every day, storing, analyzing, and accessing all that data every day is a bigger task than it sounds. But resist the urge to cut corners. You'll thank us when you can do year-over-year comparisons.

Tagging

Tagging is one of the most proactive things you can do to increase cloud visibility. Tags and labels tie your cloud resources to your company structure or development architecture. Think of them as the link that connects your organizational structure to your cloud.

These points can help you examine your approach to tagging and determine how much effort you need to commit to it.

1 Have you built a solid tagging strategy and policy?
Organizing the millions of lines of billing data in a meaningful, organization-aligned way is critical. Having a carefully outlined plan for your approach is the first step.

2 Are your tags based on your company's structure?
Any tagging system should tie directly to your company's organizational structure. Whether you tag by business unit, development team, product, or feature, you'll get the most visibility out of your system when it matches your setup.

3 Is your tagging system automated?
Development teams are constantly spinning instances up and down. Manually tagging them can be exhausting. Even if it only seems that way, the perception can make development teams avoid manual tagging. Automating tagging can make a big difference in adoption.

4 Are you pulling tag and usage data automatically?
Tagging is most useful when you have a tool that gives you visibility into your cloud usage and automatically ties that usage to tags. If you're mapping tags to usage using cloud provider exports and spreadsheets, then the right tool could save you a lot of time.

5 **Can you quickly sort and group tagged data based on your business?**
Let's say all your instances are tagged by their feature team; can you then group several feature teams together to aggregate their usage and allocate costs? Once your resources are tagged, you need to be able to manipulate that tagged data.

6 **Can you get 100% of your cloud cost allocated?**
One hundred percent allocation is a combination of visibility and tagging strategy. When you have both in place, you can spot untagged/unallocated resources and make sure they're tagged appropriately. It can be tricky to keep track of everything on a spreadsheet, so a tool that visualizes your tags can be incredibly helpful here.

7 **Can you manage your tags after the fact?**
It's best when instances are tagged as they are spun up but that's not the only time you can tag. With the right visibility, you're able to see untagged resources and tie them back to the accounts that spun them up to ensure they get tagged.

Dashboards and reports

You've got a strong culture of cloud cost management, and you've got good, dependable data. Now its time to build your core insights with dashboards and reports. When you're looking at dashboards and reports, the gold standard is usability. It's not just that the data is visible, it's that the data is arranged in a way that you can use it.

These points will help make sure you're getting the most from your dashboards and reports:

1 **Can you control what you see?**
A preset dashboard is only useful if you perfectly fit its use case, which is rare. Truly effective dashboards are modular so you can choose the displays and data that are the most important to your analysis.

2 **Can you view the same data through different lenses?**
Different reports are crucial to getting actionable insights. For example, cost per feature team is useful, but can you then drill deep into the specific usage of instance types by hour? The best reports are flexible, so you can always access the data you need.

3 **Are your reports built for analytics instead of metrics?**
Metric reporting is static and only gives you one way to look at the data. In analytic reporting, the data retains its dimensions, allowing you to move it around, analyze it from different perspectives, and do more with it.

4 **Can you create as many dashboards as you need?**
Different teams need different types of data. For true visibility, you need to be able to make as many dashboards as you need — and you need to be able to control the data in them by team.

5 **Do your dashboards and reports enable allocation and chargebacks?**
Dashboards are just pretty graphics if you can't make actionable decisions based on the data they present. If you can't tie cost usage back to the respective teams, then you're not getting enough visibility.

6 **Can you get updates sent to you?**
Regularly logging into your tool is always a good idea, but you shouldn't be limited by when you log in. True visibility reaches out, sending you updates daily, pinging you with alerts, and proactively bringing your data to you.

Team views

A team view offers a different perspective on the same core data types, tailored to the specific needs of each team. At Apptio, an IBM company, our views capability is integrated with dashboards. This means the dashboards define the type of data, while the specific data that's viewable changes depending on the view. This approach helps ensure all teams can look at data on the same terms but only see data that applies to them.

We've put together these points to help you evaluate your system:

1 **Are your teams getting all the cloud data they need?**
Trying to limit the data specific teams can access sometimes means they're not getting all the data they need. For example, limiting pricing data to teams not authorized to make RI and/or committed use discount purchases means they're not able to make recommendations for purchases that could free up much-needed resources.

2 **Are your teams getting more cloud data than they need?**
Giving teams cloud data they don't need is a good way to cause confusion and make it even harder to manage your cloud. You need a way to easily control the data they get, so it's specifically focused on what they need to manage their cloud resources.

3 **Can you create as many views as you need?**
Views should adapt to your company, your teams, and your organization, so you should never have any limit on the amount that you can create.

4 **Is your team view system scalable?**
A good system needs to allow new team views to be set up with a few clicks. Each view should get the same data buckets populated with data specific to their team.

Anomaly detection

True visibility lets you see what's going on with your cloud even when you're not looking at it. That may sound a little odd, but let's face it — you're not going to spend every hour of the day staring at your reports. Anomaly detection, driven by AI and the latest in machine learning, keeps an eye on things when you can't. And it tells you when you should jump in and take action.

If you're not checking every item on this list, then you might get hit with some big surprises:

1 **Does your anomaly detection notify you when something's wrong?**
There are a bunch of different ways to leverage tools so they can automatically reach out to you, from email to Slack. But it's vital that they do. If there's a spike that starts Friday evening, you need to know then, not when you log in Monday morning.

2 **Can you set up your anomaly detection easily and quickly?**
You shouldn't have to carefully define what qualifies as an anomaly in every possible instance. It's a huge amount of time, and you still might miss defining a parameter. Anomaly visibility needs to be quick and easy to set up so you can get back to work.

3 **Does it know what your normal usage is?**
Anomaly detection learns what normal means for your team; you're alerted to potential problems but not to valid usage spikes. For example, our AI-driven algorithms pull in your past usage data and leverage machine learning to predict an expected range of use. Anomalies are then defined as any activity falling outside of that range.

4 **Is your anomaly detection timely?**
The faster an anomaly is detected, the faster it can be solved. Even a delay of a single day can become very expensive, very quickly. If you want accurate visibility, then the data should be pulled frequently enough that you are notified as soon as an anomaly is detected.

5 **Can you detect anomalies across all your systems?**
Complete visibility into anomalies should not be limited to specific systems or products. For comprehensive coverage, your anomaly detection should extend as far as possible. The goal is for you to have complete confidence that your cloud is running correctly.

Budgets and forecasts

By now, you should have a good idea of all the different components that go into an accurate cloud cost visibility system. This last section adds the remaining part of the FinOps framework that focuses on cost management. You should be able to see the past, present, and future of your budgets: what you've spent, what you're currently spending, and forecasts of what you will spend.

Anything less, and you're only getting partial cost visibility.

1 Are you getting accurate daily tracking?
You need to be able to trust the cost data you get and ensure it's up to date. Yesterday's data or last week's data is not, by definition, current. Aim to see the most current data possible.

2 Can your budgets and analysis adapt to different teams?
By tying costs and budgets into team views and dashboards, you're able to analyze costs by specific teams. This takes cost measures out of reporting and into actionable strategies for teams.

3 Are you able to set up as many budgets as you need?
You should be able to get visibility into budgets using the same tool you use to get visibility into your cloud usage — on your terms.

4 Is your budgeting and cost allocation built for finance?
Financial professionals don't just think about daily or monthly spend. They live in a world of amortization, allocation, chargeback, and other accounting conventions. Your budget visibility should be built with finance in mind to make their lives easier.

5 **Are there budget alerts in place?**
Just as true visibility requires anomaly detection, true cost visibility requires budget alerts. These can either be automatic or manual, but the capability for alerts and notifications needs to be there.

6 **Does it incorporate AI to predict future spend?**
Accurately predicting future spend is a job for AI. Algorithms need to be in place that consider past usage and use rich data to predict future spend. Most importantly, there should be a track record of accurate predictions so you have confidence in your algorithms.

7 **Does your forecast provide a viable range?**
Even the best algorithms can't predict the unpredictable, but they can certainly try. Ranged forecasts can solve this problem by giving you increased visibility via a range of possibilities instead of tying the forecast to a specific number.

8 **Is your budgeting system proactive?**
You need to be able to set up summaries and notifications that can be delivered right to your inbox. Just as importantly, you also need to be able to set up deliveries with different data to different people to give your whole team visibility.

9 **Does it keep track of your purchased discounts?**
The worst time to find out a discount has expired is when you get the bill. A true cost visibility system will keep track of when your discounts are expiring — and notify you so you're not caught off guard.

Do you have true visibility?

If you checked all the boxes above, congratulations! You're getting the visibility that you need.

If your current cloud cost management solution doesn't check all the boxes, then you don't have full visibility. And that means you could be leaving a lot of money on the table, money you could be using to fund your next great innovation, to get your current projects on schedule, or to expand your team.

It's time to get the data you need on your cloud usage. It's time to use that data to build real, effective strategies. It's time to do more with your cloud.

About IBM Cloudability

IBM Cloudability helps IT, Finance, and Business teams manage the variable spend model of cloud with a FinOps platform that uses AI, machine learning, and automation. With billions in cloud spend managed, we enable customers to create a FinOps culture that delivers on financial accountability and lowers the unit economics of cloud.

Learn more about FinOps

https://www.apptio.com/resources/ebooks/finops-new-approach-cloud-financial-management/

APPTIO
an IBM Company

Get Started

Apptio, an IBM company, is the leading technology spend and value management software provider. Its AI-powered data insights empower leaders to make smarter financial and operational decisions. A pioneer and category leader in TBM, FinOps, and Agile Portfolio Management, Apptio works with thousands of customers, partners, and community members worldwide. Visit www.apptio.com

Start your free trial

© 2024 Apptio, Inc. All rights reserved. Trademarks and logos are the property of their respective owners. A1639 V2407-1