The no-frills guide to optimizing your cloud

As public cloud usage grows across your organization, total monthly costs can spiral out of control. But who in your organization should be responsible for keeping an eye on storage costs? To stop the spiral before it turns into a whirlpool, we've drafted a list to help you identify rogue cloud storage spending. This list will also help you collaborate across your company (because we all need support) to put basic controls in place.

Before you start down the road to cloud storage optimization:

- Talk to your chief information officer (CIO), chief financial officer (CFO), and other senior leaders to obtain firm commitment for a cloud storage cost optimization initiative.
- When speaking with your CIO and CFO, establish what level of annual savings or increased efficiency would justify a permanent cloud storage cost management initiative.
- Talk with stakeholders in the business, in finance, and in procurement to raise awareness of the effort. While you're at it, identify key contacts at any vendor with authority to purchase public cloud services on your company's behalf.

Questions to ask around the water cooler:

1. **Does your firm have a full inventory of all its cloud accounts? Are they governed to ensure that spending is within budgets? To find out:**
   - Obtain part-time support from an analyst in finance to pull reports on all company spending with cloud vendors (public cloud platform providers, independent cloud vendors, and services partners).
   - Partner with a senior cloud administrator who has the technical ability to implement configuration changes and generate budget and spending reports for cloud accounts.

2. **Is anyone using cloud expense and budget reporting tools—either from your provider or a third party—to analyze your bill?**

   Cloud expense tools typically aggregate billing by service type, region, time, and other properties. Look for unexpected services and regions in use. If you aren't using some form of cloud expense reporting tool to understand your monthly cloud bills, you should be. But fear not! There are plenty of open-source and paid tools to help out.

3. **Do your cloud administrators use cost tags so that reports can be generated in business-relevant categories?**

   Bills from major public clouds run into the thousands of lines, and include many service names, instance types, and regions that aren't self-explanatory. So, how the storage is used might not be obvious. To help you track who's spending what, consider "tagging" your storage pools by categories relevant to your business, such as user, team, activity, and project.

4. **Do you scrutinize and cross-check expenses to ensure that they're approved?**
   - If tagging isn't in place and you identify regular spending that no one can explain, you'll need to consider revisiting your tracking processes.
   - Most cloud vendors don't charge for bringing data into their cloud (ingress), but they do charge fractions of a cent for transmitting it out (egress), which typically requires no approval. Those cents really add up, particularly at the enterprise level.

5. **Do you scrutinize and limit data egress?**

   Frequently, you'll see unnecessary egress charges when your workloads communicate with other workloads in the private data center or on other clouds. You can incur charges even within the same cloud over the public internet.

6. **Do you have a process for reclaiming orphaned resources?**

   For example, it's quite common to create Amazon Elastic Block Store (EBS) volumes as persistent backing stores for Amazon Elastic Compute Cloud (EC2) instances. However, when an Amazon EC2 instance is destroyed, the EBS volume remains—unless it's explicitly destroyed, too. The remaining EBS volume will continue to cost you.

What to do once you've gotten answers:

Now you're ready to build an actionable report. You can use the information you've gathered about your cloud storage to break down expenses into three groups:

- **Untraceable costs:** costs found in the vendor reports from finance that you are unable to trace to a business activity, and costs that are too small to bother tagging.
- **Optimizable costs:** traceable costs that can be tagged to a legitimate business activity, are ongoing, and are large enough to be relevant.
- **Protected costs:** costs that account owners want to control themselves, in their own way. For example, a team might have a pending plan for cost control that has yet to be fully implemented.

After assembling your initial report, you're at high risk of overspending if:

- Over 10% of spending is untraceable.
- Total companywide untraceable and optimizable costs are more than three times the annual savings threshold established by executive management (see 'Before you start').
- Untraceable and optimizable costs are increasing exponentially month over month.
- Spending deviates substantially from the initiative. (Some areas are significantly under the consumption they expected, whereas others are over forecast or constrained by insufficient budget).

Have you got a cloud storage spending problem?

For a fuller picture of 5 cloud storage spending problems you might have and 10 ways to solve them, see our Guide to Cloud Optimization. If you'd like to learn how several companies have used NetApp® cloud storage to get their spending back on track, just grab some popcorn, sit back, and watch our video.

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