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ADDING UP THE COSTS BEFORE YOU SIGN

Multi-cloud offers many benefits to the enterprise, but going it alone can be a costly proposition. These environments can be complex. Hiring, training, and retaining a team with all the skills to run them is expensive, and time-consuming. Putting in some time upfront to determine the total cost of ownership (TCO) of multi-cloud acquisition can pay big dividends.

Rackspace CTO John Engates spelled out the benefits of multi-cloud last year in his blog:

- Best-of-breed infrastructure. Choosing the best-suited cloud service for each workload allows you to satisfy the unique requirements for each specific use case.
- Reduced risk of vendor lock-in. Investing in multiple cloud providers gives you more choice as to where you run cloud workloads, which gives you leverage to minimize price hikes and other risks related to vendor lock-in.
- Disaster mitigation. Properly utilizing multiple clouds can help minimize the risk of widespread data loss or application downtime due to a localized failure in a cloud-computing environment.
- Added geographical data flexibility. Although the leading cloud providers all have data centers across the globe, companies that require that data for specific workloads reside within particular national boundaries can more easily satisfy those requirements through a multi-cloud strategy.

IT CAN BE COMPLICATED

But Engates also noted the challenges of dealing with multiple vendors and interfaces, accessing highly specialized expertise across a larger range of cloud technologies, integration challenges, and more complicated tracking and billing management, among others.

Moving IT costs from a capital expense basis to an operating expense basis can seem exhilarating.

"Many IT organizations see the ability to avoid the cost and headache of acquiring hardware and software in their own datacenter as the primary benefit to move to the cloud," Gina Longoria of Moor Insights & Strategy writes in a Forbes blog. "But acquisition cost is only one small piece of the puzzle."

Longoria ticks off a long list of savings and benefits from leveraging the managed services of a cloud services or hosting provider, compared with running an on-premises data center.

ACHIEVING BALANCE

So, if one cloud is good, multiple clouds must be even better, right? As Andrew Froehlich asserts in a column for SearchNetworking, "For many organizations, leveraging multiple public cloud services, along with their in-house offerings, provides the best balance of flexibility and capability for companies that must be prepared to rapidly pivot their business toward new and emerging markets."

But, Froehlich adds, "The transition to a multi-cloud environment is not as easy as one might think. Those who have already made the decision to operate hybrid cloud architectures will tell you it can be a real challenge to uniformly configure and maintain workloads, traffic flows, and security policies across multiple providers."

DO YOU HAVE THE EXPERTISE IN-HOUSE?

RightScale's 2016 State of the Cloud Report reveals that the lack of resources and expertise is now the number one challenge, surpassing security for the first time. According to the survey, 85% of enterprises have a multi-cloud strategy, with the average enterprise using three public and three private clouds. Usage is almost evenly split between actually running applications in those clouds, and experimenting.

It's clear from those data points that organizations are still trying to determine the best way to manage their clouds, and the relative merits of private versus public clouds.

According to 451Research, the largest factors in total cost of ownership are labor efficiency and infrastructure utilization. "Private clouds, however, possess a real risk – end users that fail to meet expected utilization and labor-efficiency thresholds can plummet into a black hole where each VM can cost thousands," writes Owen Rogers of 451Research. "The public cloud does not generally suffer from this financial risk."

Hidden costs, such as the labor involved in managing clouds can offset some anticipated savings that may have justified moving to the cloud in the first place. Labor costs in particular seem to be increasingly problematic.

DIFFICULT TO PIN DOWN

In an article for Logistics Management, supply chain experts from Michigan State University and Arizona State University analyzed survey data on the experiences of procurement professionals in sourcing cloud services. Among the findings, they note that it is often difficult to make apples-to-apples comparisons of cloud solutions from multiple suppliers.

"That is because pricing is often a la carte and depends on usage levels of the service," they write. "Service level standards are also difficult to pin down, and thus are a source of risk. In particular, penalties on suppliers against service failures are among the most difficult to quantify."

Furthermore, the authors caution that "to evaluate the total cost of ownership, organizations need to think beyond the cost of training and post-adoption to the hidden costs of transitioning to a cloud solution based on the total time it might take to move existing physical processes to the cloud and the consequent business disruption that might be caused."

Datamation cautions that enterprises need to be careful about hidden costs of cloud management. "With multi-cloud environments becoming commonplace for many enterprises, it's easy to overlook the work involved in managing all those vendor relationships," writes Susan Nunziata. "Who handles all the bills? Which members of your team will you appoint to monitor usage across your organization? How much training is required? These are all questions to consider before you even begin your move to cloud services."

UNSOPHISTICATED BILLING SYSTEMS

Billing seems to be a persistent issue that enterprises run into with cloud providers, especially as many rely on the cloud suppliers for cost management tools, writes Paul Korzeniowski in SearchVMware.

"These billing systems are relatively new and often unsophisticated. The bills the cloud vendors provide are often difficult to read; they resemble a consumer utility or telephone bill. Rather than being written to help the customer monitor their costs, they are designed so the vendor understands its operation."

With all these complexities, enterprises need to determine if they're sufficiently equipped to manage multiple cloud providers, or whether they'd be better served offloading that task to a managed cloud provider that is focused on getting the maximum value out of each cloud service.