

MULTI-CLOUD LANDMINES: DON'T GET BOGGED DOWN ON THE PATH TO MULTI-CLOUD

Whether by design or happenstance, your organization is taking the multi-cloud path. But the multi-cloud path often means relying on multiple service providers, and that often means additional challenges to overcome. Take the time to learn from the mistakes and best practices of the early pioneers.

Odds are you arrived at multi-cloud before you even realized it – and some of you may not even be fully aware as of yet.

“Organizations have never said, ‘We need to adopt a multi-cloud architecture,’” [writes Carl Lehmann, research manager with 451Research](#). “Rather, in most cases, multi-cloud approaches just happened, the result of pioneering lines of business and a few IT renegades.”

BUSINESS BYPASSING IT?

The awkward reality is that business managers and individual users have long realized they can bypass IT rules and processes to self-provision cloud services. An Accenture [global survey of more than 1,800 executives](#) finds that six out of 10 respondents say IT does not have a significant influence on their choice of as-a-service provider. Remarkably, 70% of the survey respondents were in CIO and CTO roles, so many in IT agree.

Enterprises encompass many functions and disciplines. And with today's premium on agility, it's no surprise that businesses are unwilling to wait for IT to act on their requests, particularly as initial costs can easily be hidden within department-level budgets.

EYES WIDE SHUT?

“For years, organizations pondered whether (and where) they should move to the cloud. Today they are simply doing so, sometimes without knowing it,” [says European media and consulting firm i-SCOOP](#). “However, they are not just moving to the cloud. They are de facto having a multi-cloud reality whereby they have a range of clouds for various purposes.”

So those business groups are able to act fast to quickly fill a need. But, [says The Register's Danny Bradbury](#), “whatever their reason for using multi-cloud, companies often aren't doing it particularly intelligently. They don't manage it in a uniform way, and will find themselves maintaining different tools and juggling workloads across different cloud-based services.”

Tools, as well as metrics, are often unique to particular cloud services, which can make it really tough to manage multiple clouds. One survey finds that [54% of those using multiple clouds are using tools from various providers](#) and 80% indicate their cloud management tools lack critical functionality.

LOOK BEYOND INITIAL COSTS

It's especially important to get a handle on the operational costs of new cloud services being brought into the enterprise. According to Gartner's [Top Predictions for IT Organizations and Users in 2017 and Beyond](#), “For every \$1 spent on the digital innovation/ideation phase, enterprises will spend on average \$7 for deploying the solution.” Designing, implementing, integrating, operationalizing, and managing the ideated solution can be significantly more than the initial innovation costs, Gartner says.

[Rackspace CTO John Engates' blog](#) offers insights into the challenges of becoming multi-cloud adept, noting that the "chief obstacles introduced by multi-cloud relate to additional complexity." These include:

- The need to access highly specialized expertise across a larger range of cloud-related technologies
- Additional vendor relationships and admin interfaces to manage
- Integration challenges between public clouds built with different technologies (e.g., Microsoft® Azure® is built around Windows whereas AWS is more Linux-centric)
- More complicated cost tracking and billing management
- The need for additional planning around security and governance, due to additional complexity and distribution
- Ensuring that you're choosing the right cloud provider for the right workload, often across large application portfolios

COUNT ON INTEGRATION COSTS

The multi-cloud approach, [says CIO contributor Joe Weinman](#), "can be most valuable when a company uses multiple providers that are integrated in some way." Integration examples include backing up data from one cloud to another, using one for risk analysis that is integrated with another for mobile app enablement, or leveraging microservices such as the Google geocoding API. Weinman disavows using a collection of disconnected providers focused on areas such as email, presentations, sales automation, CRM, or billing, "or, worse yet, multiple providers offering similar capabilities, bought by different divisions without even minimal coordination."

Integration doesn't come naturally, and enterprises can end up absorbing added costs they may not have anticipated. "The bulk of the cost and effort for any IT project is typically consumed by integration, and cloud computing is no different. If anything, cloud integration may be even more challenging, as it requires web APIs that may be unfamiliar to the technical [says Seth Robinson, senior director, technology analysis, CompTIA, in a CIO article](#)."

CAN YOU PULL IT OFF?

In order to simplify management of multiple cloud providers, you want to make them look like a single provider, [writes Tom Nolle, president](#), founder, and principal consultant/analyst of CIMI Corporation. "Cloud services have APIs that let users deploy and manage their applications, and also formats through which applications and data can be loaded and extracted. Look at your potential providers' APIs and formats and see whether they offer at least one compatible subset. That way, you can control all of your clouds with the same tools."

But cloud vendors aren't noted for encouraging tight integration with competitors, nor are they necessarily inclined to make it easy for their customers to move workloads back and forth between different vendors. So, unless you've got some spare API expertise lying around, you may be in for some challenges in that regard, or

you can turn to a managed cloud services provider to make sure it goes smoothly.

Whether managed internally or externally, when done right, the multi-cloud effort is well worth it. But, Engates notes, "To make the best decisions, you need cloud experts who understand the wide array of services offered by the leading providers, their strengths and weaknesses, and how they map to your specific needs."