



Over the next 3 years how will the enterprise evolve to meet the greater needs for efficiency, scale, and execution?

Can Enterprises Really Have It All? Federated Cloud Architectures and the Ecosystem Needed to Support It

Just two years ago for this publication I wrote about how over the next few years enterprise IT organizations would learn more about private, public and hybrid clouds, and that they would better understand their application architecture needs. I felt that a real trend was building toward hybrid clouds and eventually federated clouds, and that it would happen not overnight, but in evolved stages. Now two years later I will venture that my discussion then was pretty accurate given the growth in hybrid cloud adoption. Last year I wrote about how business and applications are indistinguishable and the critical need to align IT and business. This year let's take a look at where the enterprise is now and how it is evolving to satisfy the seemingly endless need for efficiency, scale and execution.

For the most part, enterprises have still not completely standardized on all things public cloud be it SaaS, PaaS or IaaS across their entire portfolio. Fundamentally, large enterprises continue to be run by IT departments tucked behind a firewall. However, these IT shops are realizing the value in becoming the service providers of private cloud offerings: they can provide the agility that their departments require, while ensuring that their security and governance standards are being met. There has also been a push for these groups to bring value add benefits around some of the business selected cloud products such as Salesforce automation, marketing systems and HR SaaS ranging from providing data integration services, adding security and governance technology to ensuring that the entire portfolio of applications is living up to their firms' standards. In the modern IT enterprise there is a need for agility, efficiency, being more responsive to the business, and achieving scale not just going up to handle spikes in business activity, but scaling down so that departments can pay for just what they use. These benefits are darn attractive. So while two years ago we talked about how enterprises will be embracing the cloud in stages, now they've embraced a lot of great things about the cloud and are ready for technical execution of the benefits.

This has now raised the bar of what the enterprise requires of their partners that supply them with solutions for datacenter management. Today IT organizations are delivering the service levels of private computing in their enterprises, but wanting to manage how it interacts with public resources like SaaS applications and infrastructure. They are working on and managing in parallel what's in their control, and what's not. Has the ecosystem evolved far enough in the last two years to fully empower enterprises to build their private clouds? To leverage where appropriate public cloud solutions? And have an end to end clarity on how to perform the best combination possible to the business' benefit?

These enterprises are looking for more from the ecosystem – various tools that didn't exist a few years ago – to help them better manage and govern all of this. Unlike a business that can run entirely on a public cloud pretty painlessly, many large enterprise IT organizations have a responsibility not just for service levels inside and outside the company, but also for staying in compliance, staying within policy and staying auditable. So they really want the best of all worlds: the efficiency and cost benefits of the cloud along with the compliance, the ability to manage interaction with public resources, and the security of maintaining their own data center.

So is any one company offering a silver bullet for enterprises to have it all? Absolutely not – and my prediction is it won't happen. Gone are the days where monolithic software packages are purchased and adopted. Just because a large company has the resources to snap together different technologies for one giant solution, does not mean that they can make it all work together seamlessly. I feel pretty solid about this because I continue to engage daily with CIOs and the folks in enterprise IT shops – and I hear it over and over.

I believe the solution will lie in partnerships of companies that work together, weaving technologies together into an integrated, elegant, best-of-breed solution. For example, the role of my company AppFirst is to provide visibility into what's going on inside every application within every physical or virtual machine across multiple datacenters, public and private clouds, and then deliver actionable visual awareness of what's happening where and why, and how it's impacting business. This then evolves to event-driven knowledge based on this knowledge what actions are required to be support the business? To accomplish this for the largest enterprises you need to leverage sophisticated policy engines, which also provide the auditing and reporting against those policies to ensure that organizations are staying within compliance. When it's clear what drives certain actions, they often require automation which then drives remediation requirements: This could include setting up new server(s) or establishing a recovery of an entire stack in the case of a disaster, and these needs fall to a different set of players. There are several different sub categories of important solutions all from different companies that need to play nicely with each other through well-written API's.

The ultimate goal is for the companies of all these solutions to partner together to automate the process so no one has to call anyone, or even fill out an online form. The systems are all integrating with each other across the ecosystem and in an autonomic fashion, ensuring that everything is running at its best no matter where the applications are running. It's a closed loop system from an alert in a monitoring system creating a help desk ticket, to problem resolution and then validating that the resolution is complete. These requirements are not met by one large provider (and probably won't ever be, in my opinion), but by best-in-class solutions working better together by providing complementary value. This is not a dream state it's the expectation of every modern enterprise that wants to leverage the best of cloud platforms, be they public, private or hybrid.

It will be interesting to see how this all shakes out. One company could eventually step up to be the 'ecosystem csar' – ensuring quality and integration. Or, and I think this will be more likely, it will be self-policing and worked out partnership-by-partnership. We're not there yet today, but we're darn close. And just like enterprises moving to the cloud, we're getting there in stages. I think the key to success is for all of us is to work together – with the customer and their needs always at the center. All of us need to step up to the challenge of being a good partner – both with another company and to our customers. When the dust clears, who will still be standing? It's going to be an interesting journey. But one thing is clear: the winners will be the companies committed to successful partnerships, and the customers who will achieve that control, efficiency and scale they need.

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