



Data Centre and Virtualization

Managing Hybrid and Multi-Clouds

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Biography

Sumeet Sabharwal is the Group Vice President and General Manager for Navisite (www.navisite.com). In this role, Sabharwal is responsible for managing the overall performance of the Navisite business and directing its evolution. Prior to this, Sabharwal held the position of Group Vice President, Business Services Strategy where he was responsible for long-term strategy, planning, strategic partnerships, and corporate development activities aimed at sustaining TWC's aggressive growth in Business Services.

Sabharwal joined Navisite in 2004 and was responsible for leading various aspects of the business including SMB, indirect channels, and global operations. Prior to Navisite, Sumeet held key leadership positions in the IT services industry and was also the co-founder of a small, bespoke applications development company.

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Abstract

In the landscape of cloud computing, using only one cloud provider and its products is becoming less popular with customers due to potential problems such as scalability of services, and compliance and regulatory issues. In recent years, there has been a move towards “multi-cloud”, “intercloud” or “cloud-of-clouds”, and while the ability to run multi-cloud systems (for instance, applications on multiple clouds) allows businesses to exploit the advantages of each cloud solution, these cloud solutions and the provided features are typically complex environments to manage. This diversity in turn hinders the proper exploitation of the full potential of cloud computing. In this paper, the author discusses how highly tailored, hybrid and multi-cloud deployments are becoming an essential element for businesses looking to make full use of cloud computing, and why hybrid management must be a part of any business' cloud management strategy.

Introduction

This is a cloud world. Increasingly, that means it's a hybrid and multi-cloud world as well. While the benefits of cloud computing are clear, it's important to find an exact fit for your business needs. Most often, meeting specific needs requires a combination of different environments. For hybrid cloud deployments, this means



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using a combination of any two types of cloud and/or on-premise hosting infrastructure. For multi-cloud, it means creating a solution where different cloud vendors' products are used for different tasks. It's not always the case, but often a hybrid cloud will also be a multi-cloud one, and a multi-cloud may incorporate a hybrid cloud.

What they always have in common is they should both be tailored solutions, built to suit individual enterprises' needs. They can also both result in very complex environments.

Why a tailored approach?

It is evident that the number of both hybrid and multi-cloud deployments are growing rapidly. Gartner expects¹ multi-cloud strategies to be part of the IT mix in 70% of organizations by 2019, and MarketsandMarkets research² projects that the hybrid cloud market will grow at a compound annual rate of 22.5% till 2021.

While full public cloud infrastructures have worked well for some pure-play digital companies, such as Netflix, most enterprises are finding that despite the benefits, not all workloads and data should move to a single cloud environment. In fact, not all workloads can.

Compliance and governance restrictions in some sectors and/or geographies continue to preclude 100% cloud infrastructures, and we still see software licenses that are not cloud-friendly. Equally, there are certain applications that have performance characteristics that just aren't well-suited to public cloud. The appeal of hybrid and multi-cloud models is therefore the ability to match specific workloads and storage requirements to their best-suited environments and/or vendor offering.

Indeed, different cloud providers have different strengths, which are suited to the various demands of different customers and applications. Some cloud environments are built to deploy Platform-as-a-Service, Infrastructure-as-a-Service or Software-as-a-Service models. Others offer specific cloud products such as Disaster-Recovery-as-a-Service, Database-as-a-Service, Desktop-as-a-Service and so on. At its core, multi-cloud allows organizations to pick the specific services, models and providers that best fit their needs.

For some applications, obtaining the lowest possible latency might be the priority, so organizations will pick a provider based upon physical proximity to their nearest data centre. Another might offer considerably lower costs. A third may have a unique technical capability that isn't available elsewhere. Then, perhaps, there are data governance regulations that require hosting to be physically situated within specific borders, leading to the choice of a fourth provider. With diverse sets of needs such as these, it becomes apparent that a mix of providers with different strengths is what may best meet the specific needs of an organization.

By not requiring an 'all or nothing' approach, hybrid and multi-cloud can also make outsourcing simpler. With greater control over their different cloud services, IT managers can choose which processes need to be controlled locally and which can



be outsourced to save costs or to deliver a better fit for requirements. This gives clients the flexibility to choose the best-suited option for each application, without compromising on the control required for specific ones.

Further complicating data hosting decisions, broader 2016 events – including Brexit, the European Court of Justice’s invalidation of the Safe Harbor agreement and the imminent introduction of the EU’s General Data Protection Regulation – are likely to have a substantial effect on the compliance and regulatory landscape for years to come.

In light of this, the move towards hybrid and multi-cloud IT environments makes a lot of sense. By creating a tailored cloud strategy, organizations can store more sensitive data on-premise or in private cloud environments and, in turn, move other workloads to public cloud environments to take advantage of their scalability, cost effectivity and compute capabilities – all while retaining the flexibility to move data as legislation develops. However, these mixed cloud models also often create complex cloud environments.

The management catch

Whether adopting a hybrid or multi-cloud model, the challenge for any complex environment is its management. With approximately 70% of IT decision makers in a Forrester study³ stating that cloud security and managing complexity was already challenging, it is clearly one of the most common issues facing IT teams.

While even just some cloud hosting has advantages that are well-understood, the care and feeding of infrastructure, or even operating systems, is not normally one of a businesses’ core functions. In these complex deployments, patches, security updates and upgrades must all be monitored and controlled across multiple products and services – as well as multiple vendors – to ensure the environment runs smoothly. Transferring information between different pots and avoiding unintended duplication of data storage add their own challenges.

Reducing the number of portals required or the number of software services connecting to different providers is one way to alleviate this. Some cloud providers are addressing this through clearer, consolidated monitoring portals for clients. Another solution is consolidation and partnerships, with for example, managed service and mid-sized cloud providers partnering with hyperscale providers to help organizations create a simplified, managed multi-cloud strategy. Such partnerships bring together valuable expertise in building and delivering a tailored solution that fits, and, from an internal IT team perspective, being able to manage multiple service providers in one place can halve the management overhead, or more.

Businesses must ensure that they choose the right partner to help manage their IT environment and establish a clear delineation of responsibilities for what will be managed by each partner and what will be managed in-house. This is equally true for the initial migration to a new environment as it is for the ongoing management of it.



The right managed partner

The right partner to help manage a complex hybrid or multi-cloud environment will not only provide the best-fit cloud platforms and services, but also the skills and expertise to proactively assist the business with developing a strategy that keeps the IT department aligned with overall business goals.

Deciding on a service provider is thus not only a question of the products they can offer, but also how they will work with you to manage the complexities of the infrastructure that best-fit solution requires. More so than other cloud models, hybrid and multi-cloud provide fewer natural delineations and areas of ownership between in-house teams and third-party providers.

You should therefore look for evidence of an appropriate level of service robustness, the SLAs, and the amount of customization and integration that can be done between your own environment and the recommended cloud environment(s).

A desirable service provider should also be able to demonstrate a long term track record of success and provide references regarding their OS and application management capabilities. Not because they will necessarily be managing your applications, but because a provider that has a history and a legacy of managing applications, all the way up through the application stack, means that their OS management practices have been highly optimized and tuned. After all, infrastructure doesn't exist to be just infrastructure: it exists to develop, test and deploy applications.

At the end of the day, your cloud solution, no matter how complex, should free up your in-house teams to allow them to focus on creating solutions for your business instead of managing complex environments.

A business's hybrid and multi-cloud management strategy is all about selecting the combination of management options that allows flexibility and the level of customization required for your applications, while at the same time reaping the benefits – both financial and business agility – of hosted services. With the mentality surrounding cloud computing having shifted from “why cloud?” to “what cloud?”, tailored multi-cloud and hybrid cloud solutions can undoubtedly help businesses create robust platforms that are scalable, stable, cost-effective and which help meet the challenges of increasingly complex enterprise IT needs.

Reference

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