A closer look at today's multi-cloud reality and what the future holds

The multi-cloud approach is clearly on top of the list for enterprises and cloud experts alike. According to IDC, a multi-cloud strategy will become the norm for over 60% of enterprise IT organizations by the end of 2018[1]. At a time when simplicity is the name of the game, why are enterprises favoring the multi-cloud approach? The answer lies in multi-cloud's ability to manage the supply-demand challenges prevalent in today's business environment with flexibility, agility, and on-demand scalability, while enabling cost and performance advantages.

There's also another significant advantage to a multi-cloud approach—it affords enterprises freedom from vendor lock-in—a big concern for over 80% of enterprises[2]. However, the picture is far from rosy on the integration front. Aggregating multiple non-linear, non-coherent, and non-aggregated cloud services into single console to enable seamless data sharing, without compromising integrity, is a big challenge for system integrators and managed services providers.

Let's deep-dive into the benefits of multi-cloud approach, the enterprise-wide changes it warrants, and the role an effective managed services provider can play in making multi-cloud strategy a success.

Multi-cloud in practice: The foundation of digital transformation

Today, platform services (PaaS) and server-less compute services coupled with cloud native services deliver workloads that interface with data in a non-traditional manner to deliver outcomes aligned with consumer expectations. APIs, in turn, help integrate different workloads with complex cloud offerings as well as data from varied sources. In this increasingly complicated environment, enterprises are realizing that one cloud is not sufficient to meet all their myriad needs. Different workloads achieve optimal performance and cost utilization on different cloud platforms and a multi-cloud strategy enables enterprises to create the optimal solution from various best-in-class technologies and services. A majority of enterprises favor AWS for features, scale, and ecosystem, while those that are Microsoft-centric opt for Azure. Google Cloud Platform is the go-to choice for enterprises when better storage, technology and network are their key requirements.

Here are the three key advantages of using a multi-cloud strategy:

1. High availability, low latency: Multi-cloud works perfectly with edge computing. Modern businesses and consumers expect real-time availability, and the latency that is inherent in cloud services delivered from remote servers is simply unacceptable. With a multi-cloud infrastructure, the datacenter at the edge, i.e., the one closest to end-users can serve the requested data with minimal server backflows, enabling a seamless and unified end-user experience.

2. Superior ROI from competitive offerings: The hyper-competitive market, spells good news for enterprises, with the likes of AWS, Google Cloud and Microsoft Azure battling for customer mindshare through innovation in the form of services, tools and pricing packages. Arbitrage, a previously a remote expectation, is becoming a reality today.

3. Superior capacity planning with on-demand flexibility and agility: To address frequent spikes in business and end user traffic, organizations need a load-balanced environment that can support automated scaling while enabling on-demand flexibility to access either a public or private cloud infrastructure, without any IT intervention. A multi-cloud approach offers scalability and throughput that far exceed traditional options.

[1]IDC, Delivering Enterprise Digital Transformation : ,Multi-cloud for Agile IT in the Digital Era, Aug 2017 (accessed May 2018), https://www.idc.com/getdoc.jsp?containerId=prAP43008417

[2]Stratoscale, Hybrid Cloud Survey Reveals 8 out of 10 Enterprises Fear Vendor Lock-in and Avoid Running Sensitive Data in the Public Cloud, July 2017 (accessed Apr 2018), https://www.stratoscale.com/press/stratoscale-hybrid-cloud-survey-reveals-8-10-enterprises-fear-vendor-lock-avoid-running-sensitive-data-public-cloud/

The big question is: How to tie the different environments together to ensure seamless integration across an organization?

Multi-cloud is not without its share of challenges

While the benefits of multi-cloud are well-established, the big question is: how to tie the different environments together to ensure seamless integration across an organization? Besides integration, the SLA challenge is also a big hurdle. Maintaining application SLAs becomes an issue as IT does not have the same control over resources in public cloud architecture as compared to private cloud. Further, multi-cloud SLAs are not standardized as each provider selects their own metrics, restrictions, and exceptions with regards to infrastructure availability. Lack of standards and ambiguity over ownership of responsibilities is a potent mix for disaster—as enterprises cannot easily pin-point which service failed, why, and who is responsible for compensation.

Other challenges include app sprawl, managing multiple compliance requirements and unique vendor portals, ensuring seamless workflow migration across clouds, and maintaining tight security.

Solving the multi-cloud jigsaw: Top nine enterprise focus areas

Multi-cloud environments are enabling disruptive IT delivery models that demand enterprises think afresh, not just in terms of infrastructure and operations, but also in exploring new solutions. Here are the top nine aspects enterprises should focus on to build the right multi-cloud strategy:

1. Foundation: A robust multi-cloud strategy must allow access to web services and APIs supplied by cloud providers to enable enterprises to expose and utilize the full functionality of the provider.

2. Marketplace: This is the console or the glue that enables enterprise users to consume the required services and share across multiple cloud platforms. The console also connects with existing enterprise IT systems to ensure seamless operational integrity.

3. Fulfilment: Cloud services should tie back into the automation engine and be accessible across layers such as user access, infrastructure, application and so on.

4. Financial transparency: Multi-cloud is complex environment not just technically, but also financially. It needs holistic visibility and transparency to ensure accurate service consumption wise billing.

5. Cloud governance: Enterprises should focus on putting into place policies and decision frameworks that ensure single pane of glass monitoring of the entire multi-cloud

environment through simplification and consolidation. This is fundamental to ensuring uninterrupted service availability, freedom from service avoidance, and total compliance.

6. Operational visibility: 360-degree visibility into the operational state of a multi-cloud environment is key to realizing its promised benefits in terms of agility, cost, and network performance.

7. Ongoing optimization: This results from holistic visibility and leads to accurate capacity planning for superior cost benefits, as well as service and response level excellence.

8. Phasing out legacy applications: Enterprises should, over time, be able to replace legacy apps and infrastructure with the latest in technology to enable true digital transformation—without interrupting business continuity.

9. Technology investments: Each cloud platform comes with different pros and cons and the right multi-cloud strategy can help enterprises plan their technology investments or refreshes in sync with evolving business goals.

With the help of Cloud Management Platforms (CMPs) and proprietary tools, MSPs help enterprises effectively manage a multi-cloud environment. They consolidate non-linear, non-coherent, and non-aggregated cloud services into single console and enable data sharing across multiple cloud platforms, without compromising on integrity.

The right cloud MSP brings the expertise to: assess workloads, match workloads to cloud types, ensure application readiness and glitch-free migration, and finally supervise execution through managed services delivery. The goal is to enable IT teams to operate seamlessly across cloud platforms, easily managing, securing, governing, and self-provisioning workloads.

Navigating multi-cloud of the future: Artificial Intelligence comes to the rescue

AI holds tremendous potential for powering the next wave of innovation in a multi-cloud world. For instance, a next-generation multi-cloud AI platform will be intelligent enough for workloads to self-orchestrate themselves and deploy programs developed using Machine Learning (ML) algorithms across multiple nodes, provisioned on-demand.

With tech behemoths such as Google, Amazon, and Microsoft leading the way, many Platform-as-a-Service (PaaS) solutions have started incorporating AI capabilities. Cloud AI services and platforms enable enterprises to leverage AI or cognitive computing capabilities via simple API calls, eliminating the need to invest in sophisticated AI infrastructure. The new era of the AI-first cloud is upon us and forward-looking organizations are prepping for new computing infrastructure to support next-gen cloud programming paradigms and frameworks.

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