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Weave your cloud

with a data fabric

The advent of cloud brings great promise for IT organizations to meet increasingly demanding business and operational objectives.
By Brad Nisbet, SNIA Ethernet Storage Forum member, NetApp.

A cloud-based IT delivery model can speed up application development and provide flexible environments to accommodate the dynamic and unpredictable needs of the organization and its customers. It's easy to see why there is so much interest among companies to learn more about how they can benefit from cloud.

Despite the allure, however, many businesses are still reluctant to fully embrace a cloud model due to the perceived risks. As cloud services continue to evolve and become increasingly vital for success, it's critical to properly understand the inhibitors that are leaving many unsure about how to jump into the cloud.

When thinking of cloud, the issue of security is often top-of-mind for many organizations, and rightfully so. As any organization needs to carefully consider the security of their environment, whether on or off-premises. However, there are other common inhibitors to enterprise cloud adoption that are just as significant and increasingly top-of-mind, including: managing complexity, creating or

preserving IT agility, and maintaining control of valuable business data. These risks aren't necessarily new to cloud computing, but as the cloud continues to change and take shape, so do the risks.

Complexity

Dealing with complexity is often a significant inhibitor for businesses that are considering incorporating public cloud into their IT environment. Companies often struggle with the idea of 'how do I get started?' Choosing from the sheer variety of services offering different service levels, different virtualization and compute platforms, and different data management frameworks can be a daunting task for any CIO's team. In addition, many organizations are perplexed with how to manage elements of IT across a blend of private and public cloud resources, particularly the intricacies of managing data across disparate locations and platforms in a hybrid environment.

Developing a clear strategy, identifying which workloads can be moved off-premises and setting concrete performance requirements is a great way to begin identifying services

the capability to fine-tune architecture and solutions over time in a dynamic environment.   Although choosing a cloud service provider to complement a set of IT services is indeed a means to deliver a flexible and dynamic environment, it doesn't necessarily mean there is ongoing flexibility among the cloud providers.

Many organizations perceive cloud provider lock-in a significant hurdle to adopting a public cloud model and without the right set of tools, it is. The ability to choose best-of-breed solutions has been a cornerstone of agility in the datacenter, and so it will be for the cloud.

In addition, data is most valuable when it's in the right place at the right time. Being able to leverage a desired cloud resource often means moving the data closer to where it needs to be, whether it's supporting the needs of certain applications, analytics, or data protection. What CIOs and their teams really want is the ability to be innovative and to choose among cloud services knowing that, for whatever reason, change in business needs, policies, governance, location, etc.,

services, without dismantling the data control they've worked so hard to achieve.

Weave in the data fabric

The concept of a data fabric addresses these challenges head on. By taking a data fabric approach, IT organizations can have consistent and efficient storage and data management capabilities across a choice of resources spanning the datacenter and the cloud.

Much like a woven piece of cloth, a fabric essentially ties together disparate elements into one, cohesive whole. What the IT industry needs is a data fabric that ties together the disparate cloud environments and the data environments in those clouds into one well-woven, seamless, integrated entity.

An effective data fabric provides:
- A common operational model for data in hybrid cloud that provides consistency through the cloud environment. This provides massive improvements in efficiency and maintaining control.
- A common data format which will save re-writing at scale. Re-writing data to

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and providers that can assist in this transition.   Additionally, taking a piecemeal approach at the start will allow organizations to experiment with different solutions to find the best combination of services that meets their needs. To further minimize the fear associated with such a daunting and seemingly complex shift to public cloud, it's also important for organizations to feel comfortable that once they take the leap, they have options to fine-tune and adjust over time (if not right away!)

IT Agility

Delivering IT is about meeting the needs of the business. As these needs change, IT needs to adapt, and fast. Immediate responsiveness is paramount. For years organizations have been working toward delivering agility within the datacenter, and now as public cloud is folded into the strategy, the ability to move applications, workloads and data among cloud resources will be critical to extend this agility to the cloud. However, this is easier said than done. In short, IT agility means having

they can make adjustments with minimal pain and impact to the business.

Data control

For years, large organizations have built their own virtualized data centers and private clouds as a means to ensure control of not only their IT environment, but perhaps more importantly, control of their data. Talk to just about any IT organization and they will tell you about the pains they've gone through to support the business with the right levels of data performance, cost security, access, protection and governance.

As the popularity of the clouds grows, more and more IT organizations are drawn to exploring public cloud options. More than ever before, mandates from the C-level are being issued to "go figure out how to use the cloud", whether it be from a regional cloud service provider or a hyperscale provider such as Amazon Web Services. The IT organization is now faced with bringing public cloud into the mix, often managing across both private and public cloud

conform to multiple platforms can be inefficient and costly. A common data format allows you to bring workloads to the cloud faster in more innovative ways.
- A common method for data portability – extract the value of data where it's needed most, at the right time.

By employing a data fabric, organizations can ensure they retain control of their data among a blend of otherwise disparate cloud resources, with the interoperability and data movement needed to realize the full potential of hybrid cloud.

To learn more about how organizations can weave together cloud resources, I encourage you to watch this example regarding cloud file services in a recent SNIA ESF Webcast "Cloud File Services: SMB/CIFS and NFS…in the Cloud" https://www.brighttalk.com/webcast/663/125427

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