CREATING A CLOUD EXTENSION INSTEAD OF A CLOUD MIGRATION STRATEGY

by George Crump
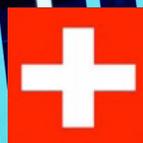
Storage Switzerland, LLC

As data centers consider the role cloud compute and storage will have in their organization's IT strategy, they look for solutions to extend what they already have, not solutions that require them to start over in the cloud. One of the first use cases is unstructured data, both user data and machine data. The growth in this dataset combined with the reality of a distributed enterprise makes the cloud an ideal target. But, how do organizations leverage cloud storage for this use case through extension, instead of starting all over?

THE CLOUD NAS CHALLENGES

Many so-called Cloud NAS solutions ignore the fact that most organizations already have an investment, typically a large one, in storing unstructured data. These organizations already have on-premises storage systems that are storing this data. Most Cloud NAS systems force the users to copy all their data to a cloud cache, which then replicates all the data to the cloud. While this method may work for "greenfield" data, it can create challenges for data centers with hundreds of terabytes of data or more.

The first challenge is that a caching type of solution doesn't typically leverage the on-premises storage,

which the organization already owns, so not using it means a wasted investment. Second, it forces the IT team to learn a new management interface and new ways of accomplishing tasks, which probably means breaking existing processes. Third, the organization may not want some of its data in the cloud; a Cloud NAS assumes that all data is better in the cloud which is not always the case. Fourth most Cloud NAS, ironically, don't support the other aspects of the cloud. They don't allow the organization to use cloud compute to process that data and they don't allow the organization to use the file system to migrate legacy applications to the cloud.
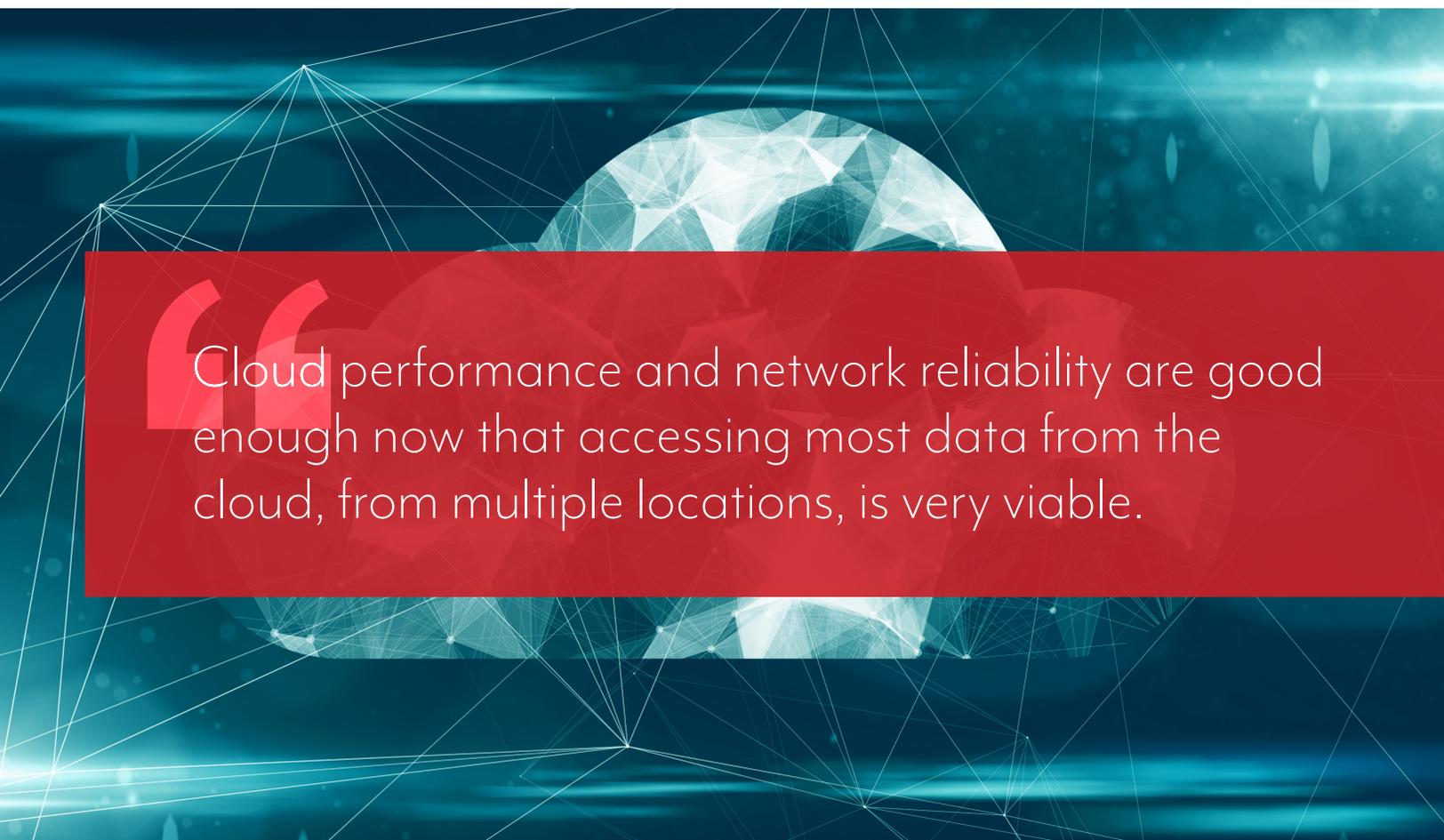
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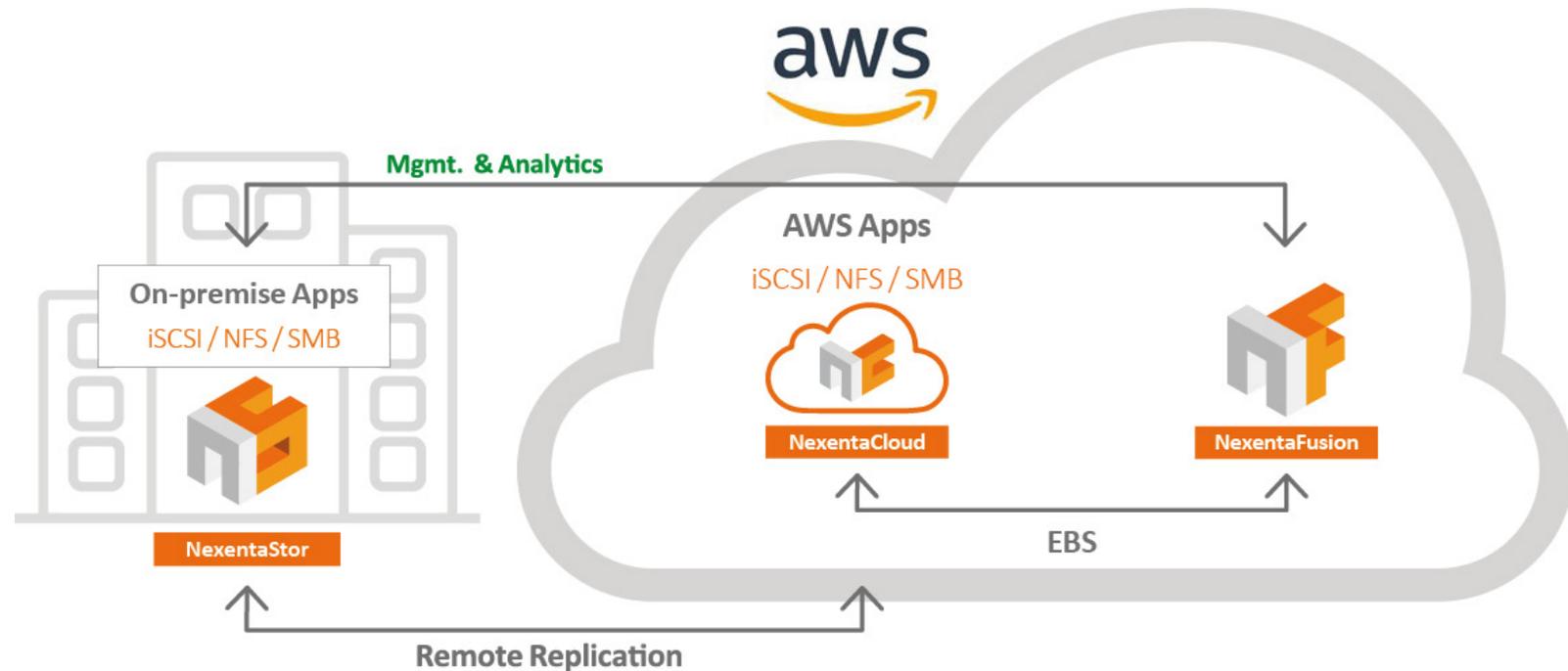
INTRODUCING NEXENTACLOUD

Nexenta is a software-defined storage (SDS) provider. An organization can load the Nexenta software on virtually any server, attach drives and create storage systems that provide universal data services (SMB, NFS, Block and Object). It can leverage existing storage assets to provide a more cost-effective way to meet future storage performance and capacity demands. NexentaStor, their flagship storage software, can support a wide variety of workloads including virtual machines, backup and archive, dedicated application platforms that need cost effective flash performance and even containerized environments.

NexentaCloud is Nexenta's newest solution. It essentially recreates the Nexenta experience in Amazon AWS smoothing an organization's cloud adoption strategy while leveraging on-premises

investments. It provides a cloud based storage system running on Amazon Elastic Block Storage (EBS) but delivering NFS, SMB and iSCSI protocols. The cloud version, like the on-premises version, has all the same features, including capabilities like data reduction, thin provisioning, snapshots and clones. It provides IT with a standard interface to data services across on-premises and cloud-based data sets.

The use cases for NexentaCloud are numerous. The most obvious, and a great place to start, is using NexentaCloud as a replication target for disaster recovery purposes. The on-premises NexentaStor sees the NexentaCloud instance as another Nexenta storage appliance, so establishing replication is no more complicated than setting up replication to a more traditional DR site.

Having a second copy of data in the cloud also provides a powerful option for the DevOps team. They can leverage the cloud copy of data, create a clone of it and then leverage cloud compute to perform development or test activities on a near-production copy of data.

The second use case is to use NexentaCloud as an archive. While no automatic data movement is currently available, leveraging Nexenta's excellent analytics capabilities enables an IT professional to easily identify old data and move it to NexentaCloud, freeing up on-premises storage.

The third use case stems from the reality that this is a full-blown storage software solution running in the Amazon cloud. That means that distributed organizations can use it to provide a centralized set of enterprise file services. Cloud performance and network reliability are good enough now that accessing most data from the cloud, from multiple locations, is very viable.

Using NexentaCloud for file services eliminates the need for Enterprise Sync and Share as well as costly caching solutions, simply present replicated file systems to multiple NexentaCloud instances in multiple AWS regions. The cloud-based storage solution also means that legacy applications can move to the cloud without having to re-write their file access protocols.

STORAGESWISS TAKE

Many organizations are looking to create a cloud migration strategy when they should actually consider a cloud extension strategy. They already have an investment in on-premises compute and storage, and they have procedures and best practices that have served them well for years. While migrating some applications may be part of a cloud extension strategy, it also entails leveraging the cloud to complement on-premises capabilities instead of replacing them. The extension concept will be a more cost-effective and more practical path for most organizations to follow. NexentaCloud and the Nexenta portfolio of products are a key driver in that process.

ABOUT US

Storage Switzerland is an analyst firm focused on the storage, virtualization and cloud marketplaces. Our goal is to educate IT Professionals on the various technologies and techniques available to help their applications scale further, perform better and be better protected. The results of this research can be found in the articles, videos, webinars, product analysis and case studies on our website storageswiss.com

Nexenta is the market creator and leader in Open Software-Defined Storage (OpenSDS) software solutions for Hybrid and Multi Cloud enterprise environments via Nexenta AnyCloud vision; with nearly 6,000 customers, 300 partners, 50 patents, and more than 2,000 petabytes of storage capacity under management; disrupting and democratizing one of the largest and most oligopolistic IT market segments nearing $100B in size by 2020. Nexenta uniquely integrates its hardware-agnostic software-only enterprise OpenSDS innovation with deep "open source" collaboration via some of the most active communities with 45,000+ members. Nexenta enables a wide variety of workloads from legacy enterprise to next-gen cloud-native apps, on any cloud platform, any protocol and any hardware infrastructure to power the largest and most cost/performant data centers globally. Nexenta OpenSDS solution portfolio is 100% software-based for both on and off premise settings. Nexenta provides organizations with Total Freedom protecting them against punitive legacy storage hardware vendor practices including, long term "vendor-lock-in", "vendor-bait-n-switch", and "vendor-rip-n-replace." Beyond its industry-leading software innovation and multi-channel distribution, Nexenta also provides comprehensive enterprise-class support and services 24x7, globally.

George Crump is President and Founder of Storage Switzerland. With over 25 years of experience designing storage solutions for data centers across the US, he has seen the birth of such technologies as RAID, NAS and SAN. Prior to founding Storage Switzerland he was CTO at one the nation's largest storage integrators where he was in charge of technology testing, integration and product selection.