



Software-Defined Storage: 5 Issues Defining the SDS Market

Finding the missing (datacenter) link

Storage technology is beginning to wake up and follow the software-defined path of servers and networks. Software-defined storage (SDS) allows both vendors and IT staff to apply virtualization principles to legacy storage systems. As datacenter spend continues to rise, and virtualization continues to expose legacy systems, SDS is poised to disrupt the storage market.

Many IT experts view storage as the final piece of the software-defined datacenter (SDDC) puzzle. However, the technology is still raw and the buyers of SDS have a mixed bag of options to choose from. Once known as the datacenter straggler, storage has escaped its physical infrastructure and is on the loose, searching for an identity. The chase for SDS revenue could be a wild one.

This push toward virtual resources has inspired, and in some cases ambushed the storage community working with infrastructure decades old. Legacy storage for physical environments has been slow to change. Now virtual machines have caused enough performance issues and system overloads for enterprise to rethink storage technology.

But how should SDS act? Both administrators and end users want to see storage mimic the qualities of virtualized servers: flexible, efficient and elastic.

IDC reports over 50 percent of enterprise applications run on virtual servers, and software-defined networking has established itself as a worthy datacenter component. Compute and networking are on board the SDDC. Now the buzz has shifted to storage and a clearer picture needs to be painted of SDS.

Read below for five key issues shaping the SDS market:

1.) Abstract, pool, automate...storage gets the server treatment

The same virtualization principles that govern the software-defined datacenter – abstraction, pooling and automation – apply to SDS.

We'll call storage a subset of the ultimate IT goal, the virtual datacenter.

Abstraction virtualizes physical storage resources and delivers them as software. SDS enables replication, distribution and pooling in the same manner as virtualized compute. Pooling centralizes resources for easier management, or better control and visibility. End users and administrators can then automate the storage layer to meet application needs.

IDC states, "...advanced datacenters are moving a larger and larger portion of datacenter resources into pooled collections that enable administrators to deploy resources centrally."

2.) Don't buy software from a hardware company.

Although storage systems start with hardware, it's unlikely a hardware company – in business to sell more storage equipment – would just roll over after decades of dominance. Why? Locked-in it's profitable. Silos make fat revenue streams. So beware of the software trap.

Storage hardware vendors have tossed around "software-defined" in an attempt to sell more proprietary storage. In fact, commodity servers represent all that is good with virtualization. And remember: The SDDC is all about replacing physical resources with virtual ones.

In the end, SDS should allow IT to peacefully coexist with different makes and models of storage systems.

3.) If the hypervisor fits, wear it.

Don't we want the same savings, agility and efficiency from storage we've gotten from compute? The storage hypervisor hopes to repeat the glory of the server hypervisor.

Like virtual machines, space efficient storage needs to be spun up in seconds, not days or weeks. Storage is holding enterprise hostage. According to IDC, converged datacenter resources help organizations, "...accelerate the delivery of reliable IT services to support corporate business goals." Storage must keep up with the needs of business.

Together, storage virtualization and the storage hypervisor can eliminate the hardware dependence that threatens datacenter performance.

4.) SLA conformance is a must

Storage must inherit SLA requirements from compute for SDS to work. SLA requirements must pass through the entire stack, and the storage layer should deliver policy-based provisioning through automation.

SLAs aren't glamorous, but they do matter.

And IDG Research reminds us that prized SDDC benefits – elasticity, self-service and on-demand resources – must also meet established policies. In other words, we're now engaging many components of the datacenter and SDS must oblige.

5.) What do we call it?

SDS is still a buzzword in many circles. Some are calling it the year of the SDS, and others, including hardware vendors, are out measuring the hype. Both vendors and IT press may have tried to capture in words how storage should function in an SDDC. The results are inconclusive.

Defining SDS is difficult because so many products are competing in this market. Depending on your agenda, SDS is less a product and more a concept, maybe even a strategy. SDS is part of a new delivery model that IDG says will help IT roles become more strategic than tactical. Storage should follow a similar path to compute and network: abstract, pool and automate. Keep it sleek and simple, like the SDDC is designed to be.