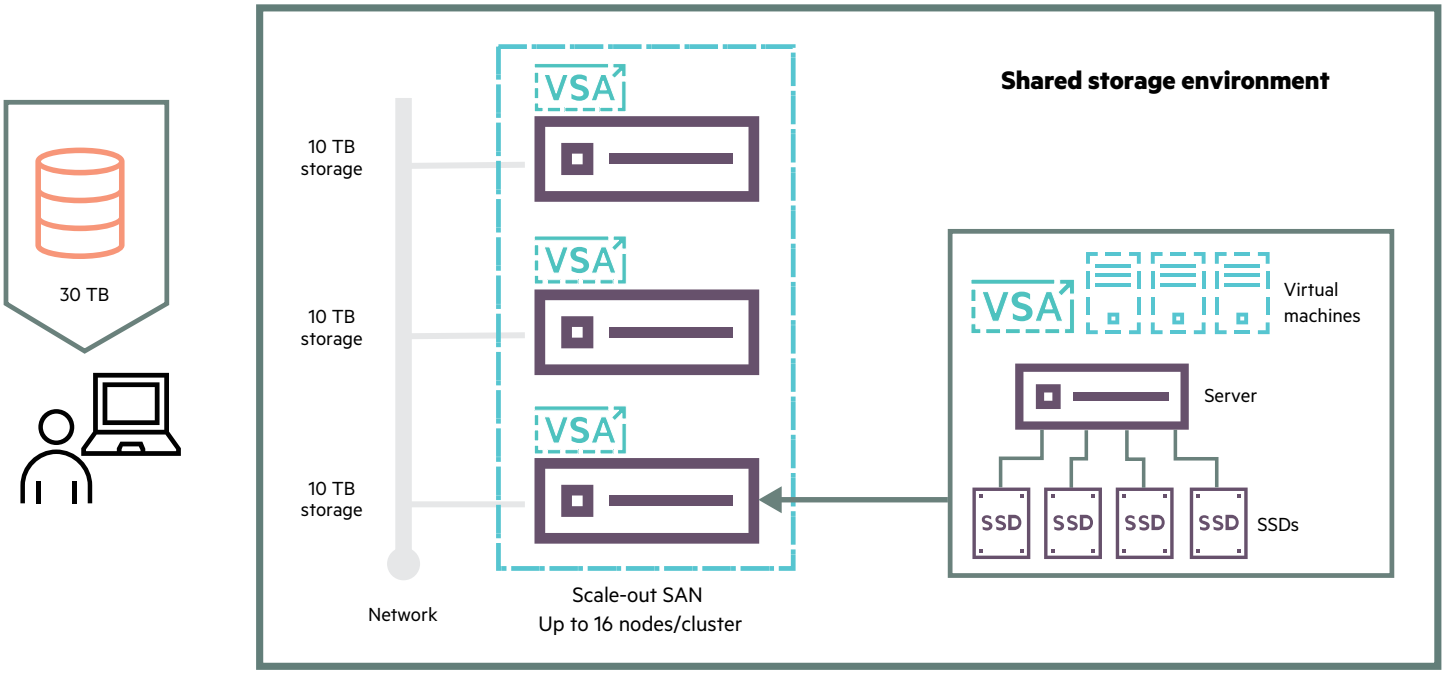
Hewlett Packard Enterprise

Technical brief

Create a high performance virtual storage array with HPE StoreVirtual VSA

Blueprint 4: Scalable HA storage for virtualized environments



Target customer
Businesses focused on:

- Performance improvement
- Simplified infrastructure management
- Server and storage consolidation
- Compliance issues
- Investment protection in mixed-vendor environments

Capacity range

- 30 TB to 160 TB[1]
- Upgradable for up to 800 TB

Software-defined storage products

- HPE StoreVirtual Virtual Storage Array (VSA)

[1] Actual usable capacity may vary

Challenges: deadlines and unpredictable workloads

Businesses in global markets continually integrate new technology into existing mixed-vendor IT environments, and they need to do it within tight deadlines, without jeopardizing their data or impacting performance. Seasonal businesses and those with compliance requirements have the added challenge of ensuring sufficient storage capacity without over-provisioning or paying too much to store data that is rarely accessed. IT administrators who neglect their storage infrastructure can create performance and efficiency bottlenecks that negate the return on investment that they are trying to achieve.

SDS blueprint for high performance

On the plus side, virtualization technology has been widely adopted, and many virtualized servers have room to grow. Empty drive bays and under-utilized processing power provide an excellent opportunity to host applications and storage together in a

Resources

HPE StoreVirtual VSA design and configuration guide

User Support Community Forum for VSA

Solution briefs

Reduce complexity in the virtualized data center: Server virtualization with HPE software-defined storage

Consolidate servers and storage at remote locations with HPE SDS: Fault-tolerant software-defined storage

Boost enterprise application performance with HPE SDS: Avoid downtime and overprovisioning of Microsoft applications

Scaling up performance and VDI management with HPE SDS: Streamline virtual desktop environments

Simple cloud storage deployment and management: HPE Storage for OpenStack cloud environments

Product information

Servers

HPE ProLiant Tower Servers
HPE Rack Servers
HPE BladeSystem

Storage

HPE StoreVirtual VSA Software QuickSpecs

Hyper-converged appliances

HPE Hyper-converged Systems

Applications

VMware® virtualization software QuickSpecs

Microsoft Windows Server 2012 R2 QuickSpecs

converged solution. Install HPE StoreVirtual VSA on three servers to create an all-flash, low-cost performance tier. Solid-state drives (SSDs) boost application performance, and the open-standards environment delivers cost savings and scalability. This highly available resource pool of virtualized servers and storage delivers:

- Increased uptime, with decreased capital expenses and operating expenses
- Real-time response to unpredictable workloads
- Inherent data protection and rapid data recovery

As an option, you can build out this blueprint configuration with a combination of SSDs and hard disk drives (HDDs) in the servers to take advantage of StoreVirtual technology sub-volume automated tiering feature: Adaptive Optimization (AO). Using AO, you can store the active part of your volume on SSDs to make it readily accessible, and store the remainder on less expensive and typically slower HDDs. The data is balanced automatically between tiers, in real time.

Example configuration

This simple blueprint can be configured using the components listed below. Your environment and workload may require a modified set of components.

Storage software

- Three software licenses: HPE StoreVirtual VSA 2014 Software 10TB 3-year E-LTU (TC486AAE)
- HPE StoreVirtual VSA software (version 12.5 or higher)
- HPE StoreVirtual Centralized Management Console (CMC)
- Virtual machines (VMs) to support storage capacity

Hardware

Three x86 industry-standard servers, each including (minimum requirements):

- Four virtual CPUs with 2 GHz
- 8 GB memory
- One or more SSD disk drives (or a combination of HDD and SSD)

Configuration options

VMware vSphere®	VMware vSphere 5.0 update 1 and higher, vSphere 5.1, vSphere 5.5, and vSphere 6.0
Microsoft® Hyper-V	Microsoft Windows Server® 2008, 2008 R2, 2012, and 2012 R2 Datacenter Edition Reseller Option Kit licenses
Linux® KVM	Linux CentOS 6.6, 6.7, 7.0, Red Hat® Enterprise Linux 6.6, 6.7, 7.0, Ubuntu 14.04
Scale-out storage	**For increased VSA storage capacity, select from the following software licenses:** • HPE StoreVirtual VSA 2014 Software 10TB 3-year E-LTU (TC486AAE) • HPE StoreVirtual VSA 2014 Software 10TB 500 Pack 3-year E-LTU (TC497AAE) • HPE StoreVirtual VSA 2014 Software 50TB 3-year E-LTU (TC499AAE) Additional multi-packs, five-year licenses, and license upgrade kits also available. Contact your sales representative or refer to **HPE StoreVirtual VSA software QuickSpecs** for details.

Learn more at
hpe.com/storage/sds

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