Software-Defined Storage

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APJ Storage Summit
25 June 2014
The world is moving to a New Style of IT

**Required Business Outcomes**

- Support growth without complexity
- Respond to unpredictable demand
- Provide instant access to information
- Deliver high service levels at xSP costs
- Reduce and manage business risk
- Deliver investment protection

Legacy storage infrastructure has not kept up
We have had a clear vision and made the right bets

HP Converged Storage

Since 2011:

• HP Intellectual Property
• Modern architecture for unpredictable demands
• Designed for convergence, cloud and software-defined datacenters
• Abstraction at all levels enables speed, control and efficiency

Converged control and orchestration

Programmable automation to speed provisioning

Federated data services

Rich data services decoupled from hardware to boost agility

Standard platform foundation
HP Converged Storage was born software-defined

**Polymorphic Simplicity:** Many shapes & sizes. Modern architecture. Shared Foundation.

- **Converged control and orchestration**
- **Federated data services**
- **Standard platform foundation**

**Open APIs and Application Aware Orchestration**

- HP Helion & HP OneView

**Software-Defined Storage**

- Software-Only Hypervisor and Hardware agnostic

  **Cost Optimized VSA**

  HP VSA

**Service-Refined Storage**

- Optimized for unpredictable multi-tenancy

  **SLA Optimized Systems**

  HP 3PAR & StoreOnce
Software-Defined Storage

Gartner®

Symposium
October 2013

#2
Hottest Trend
for 2014

“Server SAN is poised to disrupt traditional storage architectures over the next decade”

#2
Hottest Trend
for 2014

“Software-defined storage will displace legacy dual-controller architectures for cost-optimized workloads.”

2.5 Exabytes
Deployed Worldwide

884,000
HP VSA Licenses

“Software-based storage will slowly but surely become a dominant part of every datacenter”

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What is software-defined storage?

**Cost-Optimized** via Application and Storage Co-Location

**Hardware agnostic:** Any x86 server or storage platform

**An open pool of shared capacity**

**Hypervisor independent:** VMware and Microsoft Hyper-V

**Span multiple hypervisors**

**Federated and Autonomic:** Scale-out and move data easily

**Non-disruptive response to demands**
What’s driving the rise in market adoption?

- More Powerful x86 Servers
- Disk Performance & Capacity
- Highly Virtualized
- Latency Tolerant Workloads

Percentage of revenue by Hypervisor requirement
Source: Wikibon Server SAN Research Project 2014

SDS vendors and customers agree on multi-hypervisor as a requirement
Where does software-defined storage fit?

- **SMB**
  - Single-Tenant
  - CI ‘In-a-Box’

- **Enterprise**
  - Remote Office
  - Consolidation

- **Cloud Services**
  - Multi-Tenant
  - Storage Services
HP is leading in software-defined storage

Enterprise Server SAN 2013 Revenue by Vendor

- Nutanix, $75, 28%
- SimpliVity, $30, 11%
- Scale Computing, $10, 4%
- Nexenta, $5, 2%
- Sanbolic, $5, 2%
- Maxta, $1, 0.4%
- EMC, $1, 0%
- Red Hat, $0, 0%
- VMware, $0, 0%
- Other, $41, 15%

#1 Market Leader
HP, $100M, 37%
Storage for the Software-Defined Datacenter

- Service-Refined Storage
- SDS and SRS Directions
- Orchestration in the SDDC
What is service-refined storage?

**SLA-Optimized** for unpredictable multi-tenancy

**Accelerated:** Mixed-workload optimization & QoS assurance

**Massive consolidation with sustained performance**

**Efficient:** ASIC based compaction – thin & deduplication

**Lowest possible transaction cost**

**Federated and Autonomic:** Instant response and transparent mobility

**Non-disruptive response to demands**
Interoperability for seamless data management across the Software-Defined Enterprise

TODAY
- Federated mobility across StoreOnce VSA and StoreOnce PBBA via Catalyst

Software-Defined COST

Federation

Service-Refined SLA
Open orchestration and application based control is what truly defines software-defined datacenters

- Converged control and orchestration
- Federated data services
- Standard platform foundation

**TODAY**
- Deploy and manage via HP Helion through OpenStack integration
- HP OneView automated provisioning for HP and Hypervisor environments
Thank You!

For more information go to
www.hp.com/go/SDS
Additional Software-Defined Storage Resources

Sales Enablement:

• HP StoreVirtual VSA Customer deck: HP StoreVirtual VSA
• Free VSA program: Unlock your Storage with HP ProLiant
• Taneja Competitive Landscape: VSA Market Landscape
• HP Storage for VMware Brochure
• HP Software-Defined Storage Strategy Video: Strategy Video
• VSA Design and Configuration Guide
• Adaptive Optimization auto-tiering white paper
• What’s New guide for 11.0
• ESG software-defined brief and video
• Sign up for oneHP (HP Internal) Software-Defined Storage group for latest news!