NEC Storage HYDRAstor HS

Virtual Appliance

At a Glance

- Cost-effective virtualized backup for SMB and remote Branch offices
- Easy deployment on existing hardware infrastructure
- Well suited in virtualized datacenter platforms
- Higher performance and storage efficiency with deduplication and compression
- Efficient multi-site replication minimizing data transfer

Overview

NEC Storage HYDRAstor HS Virtual Appliance (HS VA) is a virtual data protection appliance that combines the flexibility of virtual machines with the rich functionality of the NEC Storage HS Series. HS VA provides low cost data protection at remote branch offices, replicating data to HS VA or HS3/HS8 appliances. As software defined storage, HS VA also enables datacenters to provide cloud based data protection services.

Solution

Why choose HS VA?

Maximize storage efficiency

Inline Deduplication & Compression

HS VA leverages inline deduplication and compression to achieve maximum storage efficiency for backup and archiving workloads without impacting performance. With a data reduction ratio of 20:1[1], savings can be made on infrastructure and operational costs.

Speed up writes with client side dedupe

OST, Universal Express I/O & Deduped Transfer

As data is deduplicated before it is written, only new data is copied to HS VA, dramatically increasing performance. An OST plugin and an application agnostic module are provided for use with any client application.

Multi-site replication for DR

Replication

Supports replication with other HS VA instances as well as HS3 and HS8 appliances, enabling flexible configuration of replication between multiple sites. When replicating, data is deduplicated between sites to minimize data transfer.
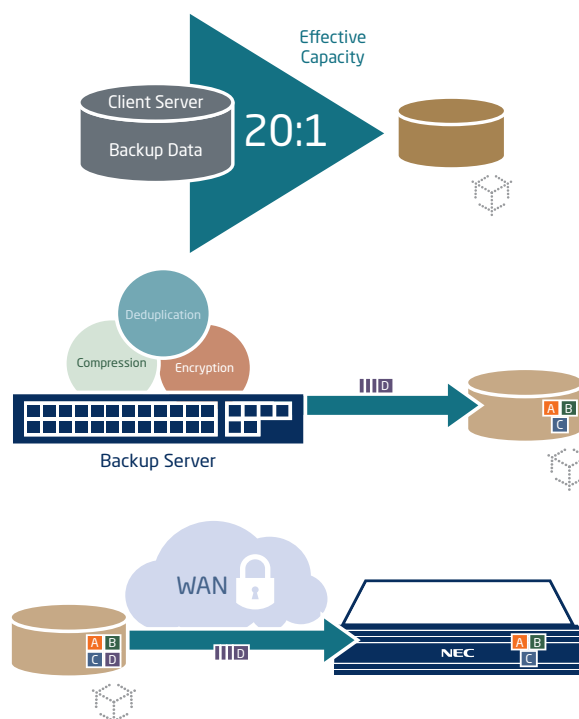
Differences between HS VA and HS3&HS8

HS VA

- Flexible deployment on custom hardware.
- Can be used in virtual environments.

Suited for small and remote branch offices, virtualized datacenter platforms.

HS3 & HS8

- Data resiliency far exceeding RAID
- High scalability
- HA clustering
- High performance and resilience ensured with optimized hardware

Suited for highly reliable central backup and archiving systems.

Specifications

Product		NEC Storage HS Virtual Appliance
Capacity[2]	Usable	890GB to 15.1TB
	Effective[4]	17.8TB to 302TB
Maximum throughput (2 vCPU)[3]	Standard	0.8 TB/h
	Deduped Transfer	5 TB/h
Maximum throughput (4 vCPU)[3]	Standard	1.6 TB/h
	Deduped Transfer	10 TB/h
Supported Protocols		NFS, CIFS, Universal Express I/O, OST(OpenStorage)
Supported Backup Software		Veritas NetBackup, Veritas BackupExec, Arcserve Backup, EMC NetWorker, HP Data Protector Software, NetVault Backup, IBM Spectrum Protect, CommVault Simpana, Oracle Recovery Manager, Veritas System Recovery, Acronis Backup & Recovery, Veeam Backup & Replication
Supported Hypervisors		VMware ESXi 5.5, 6.0, Windows Server 2012 R2 Hyper-V

Software features

- Inline data deduplication and compression, Replication,
- Universal Express I/O with Deduped Transfer (client side compression and deduplication),
- Management GUI/CLI, OST integration, Encryption (for both data at-rest and in-flight),
- WORM data protection, SNMP reporting

Host hardware requirements for an HS VA instance

Hypervisor	VMware ESXi	Hyper-V
CPU[5]	2 to 4 cores for HS VA, 1 or more cores for the host server	
Memory[6]	20GiB (for hypervisor: 4GiB, for single VA: 16GiB)	
Disk capacity (system)[6]	296GB	326GB
Disk capacity (data)[6]	200GB to 16TB	200GiB to 16TiB

1 Typical data reduction ratio for backup workloads. Ratio depends on data type.

2 Capacity values are calculated based on 1 GB = 1,000,000,000 bytes, 1 TB = 1,000 GB.

3 Measured with HS VA running on a VMware ESXi host server with 2x Intel Xeon E5-2470 @2.30GHz (8 cores each), 96GB memory, 6x SATA HDD (7,200RPM 4TB) in RAID6.

4 Assumes 20:1 data reduction ratio.

5 CPU type must be Nehalem-C(Westmere) or above (e.g. Intel Xeon Processor E56xx/L56xx/X56xx) with a frequency of 1.5GHz or above.

6 Capacity values are calculated based on 1GiB = 1,073,741,824 bytes, 1 GB = 1,000,000,000 bytes, 1 TB = 1,000 GB.