

NEC Storage HYDRAsTOR Virtual Appliance

NEC Storage HYDRAsTOR 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 HYDRAsTOR 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.

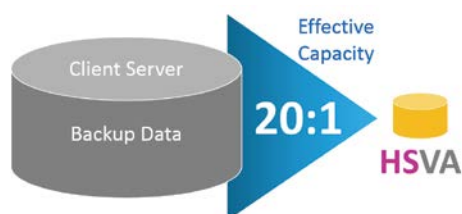


Why choose NEC Storage HYDRAsTOR Virtual Appliance?

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*, savings can be made on infrastructure and operational costs.

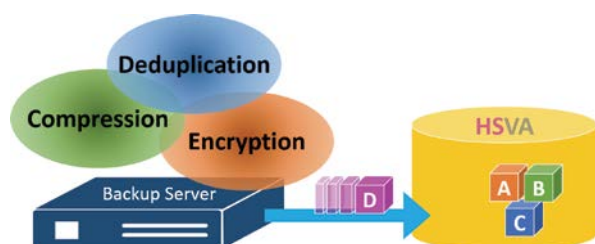


* Typical data reduction ratio for backup workloads. Ratio depends on data type.

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 and reducing the cost of WAN bandwidth.



Differences between HS3&HS8 and HS VA

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.

HS VA

- > Software only
- > Flexible deployment on custom hardware
- > Used in virtual environments

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

Specifications NEC Storage HS Virtual Appliance

Capacity¹	Usable	890 GB to 15.1 TB
	Effective ³	17.8 TB to 302 TB
Maximum Throughput (2 vCPU)²	Standard	0.8 TB/h
	Deduped Transfer	5 TB/h
Maximum Throughput (4 vCPU)²	Standard	1.6 TB/h
	Deduped Transfer	10 TB/h
Supported Protocols		NFS, CIFS, Universal Express I/O, OST (Open Storage)
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

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

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

³ Assumes 20:1 data reduction ratio.

Host hardware requirements for a single HS VA instance

Hypervisor	VMware ESXi	Hyper-V
CPU⁴	2 to 4 cores for HS VA, 1 or more cores for the host server	
Memory⁵	20 GiB (for hypervisor: 4 GiB, for each VA: 16 GiB)	
Disk Capacity (System)⁵	296 GB	326 GB
Disk Capacity (Data)⁵	200 GB to 16 TB	200 GiB to 16 TiB

⁴ 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.

⁵ Capacity values are calculated based on 1GiB = 1,073,741,824 bytes, 1 GB = 1,000,000,000 bytes, 1 TB = 1,000 GB.

About NEC Corporation - NEC Corporation is a leader in the integration of IT and network technologies that benefit businesses and people around the world. By providing a combination of products and solutions that cross utilize the company's experience and global resources, NEC's advanced technologies meet the complex and ever-changing needs of its customers. NEC brings more than 100 years of expertise in technological innovation to empower people, businesses and society. For more information, visit NEC at <http://www.nec.com>

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