

NEC Storage HYDRAsstor Virtual Appliance

In Pursuit of Perfection

NEC Storage HYDRAsstor 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 HYDRAsstor 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 Data Centres to provide cloud-based data protection services.

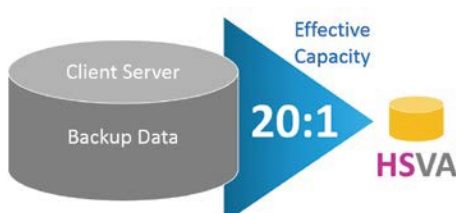


Why choose NEC Storage HYDRAsstor Virtual Appliance?

Maximise 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.

Multi-site replication for DR

Replication

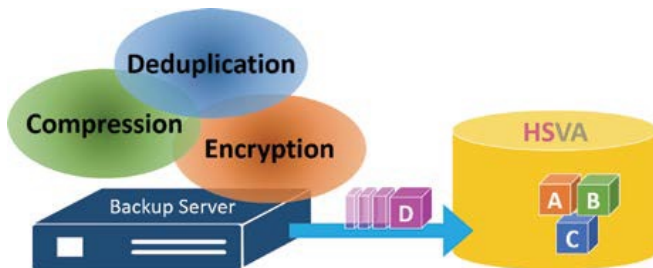
Supports replication with other HS VA instances, HS3 and HS8 appliances, enabling flexible configuration of replication between multiple sites. When replicating, data is deduplicated between sites to minimise data transfer, reducing the cost of WAN



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.



Differences between HS3 & HS8 and HS VA

HS3 & HS8

- > Data resiliency far exceeds RAID
- > High scalability
- > HA clustering
- > High performance and resilience ensured with optimised 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, virtualised data centre platforms.

Specifications NEC Storage HS Virtual Appliance

Capacity ¹	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
CPU ⁴	2 to 4 cores for HS VA, 1 or more cores for the host server	
Memory ⁵	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 Kaizen Technologies Kaizen Technologies, rooted in the Japanese philosophy of continuous improvement, embodies its mission, *"In Pursuit of Perfection,"* in every facet of its operations. This guiding principle shapes our approach to distributing the cutting-edge NEC HYDRAsstor product range globally and underpins our vision for the future of technology distribution and support. For more information, visit Kaizen Technologies at: <https://www.kaizentechnologies.online/about-us/>

