NEC Storage HS3

Product		NEC Storage HS3 Single-Node Model
Number of Nodes[*1]		1
Capacity[*2*3]	Raw Capacity	8 TB (up to 24 TB)
	Effective Capacity	104 TB (up to 312 TB)
Maximum Performance[*4]		32.4 TB/h
Network Interface	Standard	1000BASE-T$_5$ (Copper;RJ-45)
	Optional	10GBASE-SR (Optical;LC) or 10GBASE-T (Copper;RJ-45)
Number of Network Interface Portds	Standard	1000BASE-T$_5$ x 6
	Optional (10GbE NIC x 1)	10GBASE-SR x 2 + 1000BASE-T$_5$ x 4 or 10GBASE-T x 2 + 1000BASE-T$_5$ x 4
	Optional (10GbE NIC x 2)	10GBASE-SR x 4 + 1000BASE-T$_5$ x 2 or 10GBASE-T x 4 + 1000BASE-T$_5$ x 2
Disk Drive Specifications	Disk interface	3.5 inch SATA (6Gbps)
	Capacity[*3]/Rotations/Units	2 TB/7,200 rpm/12
Supported Protocols		NFS, CIFS, NetBackup OpenStorage, Universal Express I/O[*9]
Supported Backup Software[*6]		Veritas NetBackup, Veritas BackupExec, Veritas System Recovery, ARCserve Recovery, NetWorker, Data Protector software, NetVault Backup, Tivoli Storage Manager, CommVault Simpana, Oracle Recovery Manager, Acronis Backup & Recovery
Supported Archive Software[*6]		Enterprise Vault, StorageForce, NEC Information Assessment System
Ambient Operating Conditions	Temperature	10 to 40°C (while operating), -10 to 55°C (on standby)
	Humidity[*7]	20 to 80% RH (while operating), 20 to 80% RH (on standby)
Power Supply		AC 100-240V, 50/60Hz
Weight		32 kg
Dimentions (W x D x H)[*8]		448 x 684 x 87 mm
Maximum Power Consumption (HN:10GBASE-T x 4 configuration)		476 W

*1: Number of nodes cannot be expanded.
*2: Capacity value based on 3 parities. The effective capacity is calculated assuming a compression ratio of 20:1. (The compression ratio varies with the type of data.)
*3: Capacity values are calculated based on 1 GB = 1,000,000,000 bytes, 1 TB = 1,000 GB, and 1 PB = 1,000 TB.
*4: Maximum ingest rate when using OpenStorage - Deduped Transfer or Universal Express IO - Deduped Transfer feature.
*5: Can also be used with 100BASE-TX and 10BASE-T.
*6: Information of verified software is periodically updated. Contact us for details on supported software.
*7: There should be no water condensation either when operating or when shut down.
*8: Not including the front bezel, slide rails, and protrusions.
*9: Proprietary protocol optimized for NEC Storage HS.

Optional Software	
Replication	Software product for replicating (copying) stored data to a remote site via a network. (Encryption scheme: AES-256bit)
DirectDataShadow	Software product that enables direct backup of data from NEC Storage M series.
WORM	Software product for preventing a file from being changed or deleted for a given period of time.
Encryption	Software product for preventing data leakage in case of theft or disposal of the HDD and/or node. (Encryption scheme: AES-256bit, Encryption Module: FIPS 140-2 validated)
OpenStorage	Software product for optimizing Symantec NetBackup. - Copies backup data from a main site to a remote site at a high speed, consolidating the management of both sites. - Offers original protocol for performing high-speed backup and restore. - Makes new full backup data from the existing full backup and incremental/differential backup, and saves in the storage unit.
Universal Express I/O	- Performs backup/restore at fast speed by unique protocol. - Increases backup speed by deduplicating the data to be transferred on the backup server and reduces network load.

Environmental Compliance

● Eco Symbol — The Eco Symbol is a label placed on products that meet NEC's prescribed environmental soundness standards. Eco Symbol products must be environmentally superior and assure transparency.

● RoHS Compliance — This product complies with the European Union's directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

⚠ Safety Notice — Before using this product, please read carefully and comply with the cautions and warnings in manuals such as the Installation Guide and Safety Precautions. Incorrect use may cause a fire, electrical shock, or injury.

For further information please contact your local NEC representative or:

Corporate Headquarters (Japan)
NEC Corporation
www.nec.com

North America (USA, Canada)
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www.necam.com

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sg.nec.com

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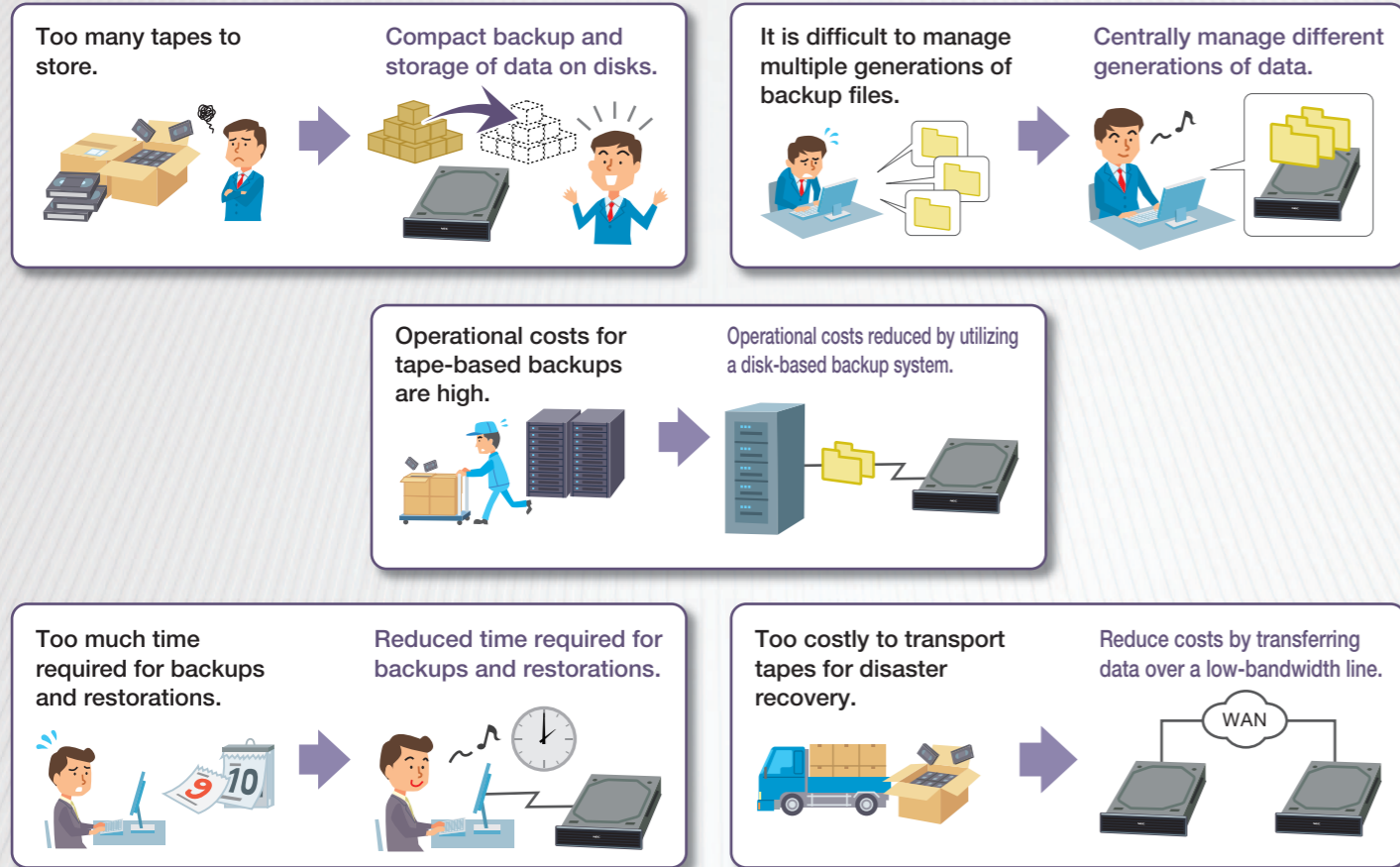NEC Enterprise Solutions
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Specifications and designs in this catalog are subject to change for improvement without notice.
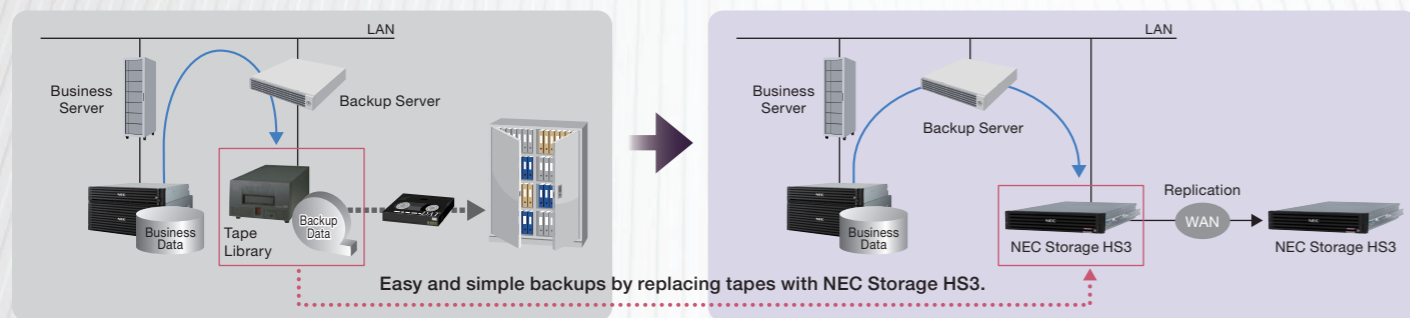
Backup/Archive Storage

NEC Storage HS3

Simple & Smart Backup/Archive

Too many tapes to store. → **Compact backup and storage of data on disks.**

It is difficult to manage multiple generations of backup files. → **Centrally manage different generations of data.**

Operational costs for tape-based backups are high. → **Operational costs reduced by utilizing a disk-based backup system.**

Too much time required for backups and restorations. → **Reduced time required for backups and restorations.**

Too costly to transport tapes for disaster recovery. → **Reduce costs by transferring data over a low-bandwidth line.**

NEC Storage HS3 solves these problems.

The volume of data to be backed up and archived is increasing exponentially day by day. Storage capacity and efficiency needs to evolve with this growing demand. The NEC Storage HS3 ensures that these ever growing demands are met. Completely different from tape backup solutions, the NEC Storage HS3 provides efficient storage of large amounts of data using a propriatery deduplication feature.

Easy and simple backups by replacing tapes with NEC Storage HS3.

Improved performance and reliability with the use of disk-based backup.
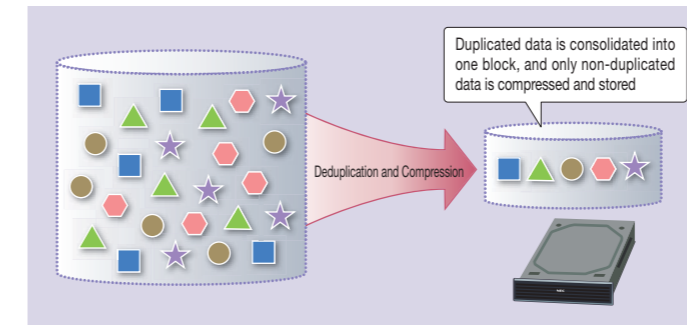
NEC Storage HS3

Economical, efficient, and reliable. NEC Storage HS3 will revolutionize all your backup and archival work.
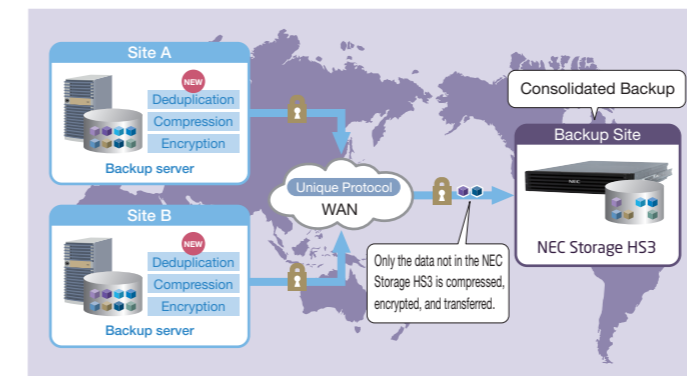
Drastic Reduction of Backup Costs

Using NEC's proprietary technology, backup data is compressed on an average ratio of 20:1 of its original size and efficiently stored in the NEC storage HS3, achieving lower per-unit capacity costs than that of tapes. Not only per-capacity costs but also operational costs and space requirements are reduced when compared to tape-based backup solutions. Therefore, the total cost for backups can be reduced comprehensively. *Varies according to the type of data being stored.

Duplicated data is consolidated into one block, and only non-duplicated data is compressed and stored

Deduplication and Compression

Easy Installation for Beginners

Even unfamiliar users can smoothly install and set up the NEC Storage HS3 simply by entering the information required at each step of the configuration utility.
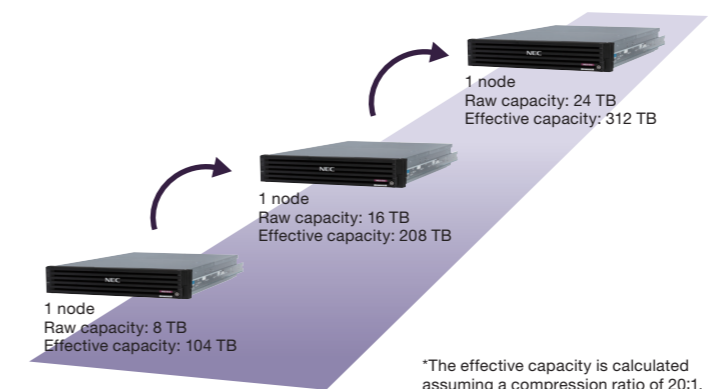

Consolidated Backup

The NEC Storage HS3 provides safe and secure backups from multiple sites and consolidates them all into one location. As the data will be deduplicated prior to setup, bandwidth demands are also reduced, cutting down the cost of expensive bandwidth. The NEC Storage HS3 can even be used effectively on a low cost WAN connection*.

*Whether the backup can be performed through WAN depends on the operational requirement and the circumstances.

Site A
Deduplication
Compression
Encryption
Backup server

Site B
Deduplication
Compression
Encryption
Backup server

Unique Protocol
WAN

Only the data not in the NEC Storage HS3 is compressed, encrypted, and transferred.

Consolidated Backup

Backup Site

NEC Storage HS3

Reduced File Server Backup Time

NEC Storage HS3 eliminates the need for regular full backups. By performing only daily incremental backups, a full backup is automatically synthesized by combining these incremental backups and the full backup taken upon installation of the NEC Storage HS3. This reduces the load on the business servers and network, as well as significantly reducing the backup time.

Conventional Backup
(Regular full backups are required.)

High-Speed Synthetic Backup
(Incremental backups are performed for 2nd and subsequent backups.)

Weekends: Regular full backup
Weekdays: Incremental backup

1st time: Full backup
2nd and subsequent times
(Weekends and weekdays): Incremental backups

Easily Expandable up to 24 TB
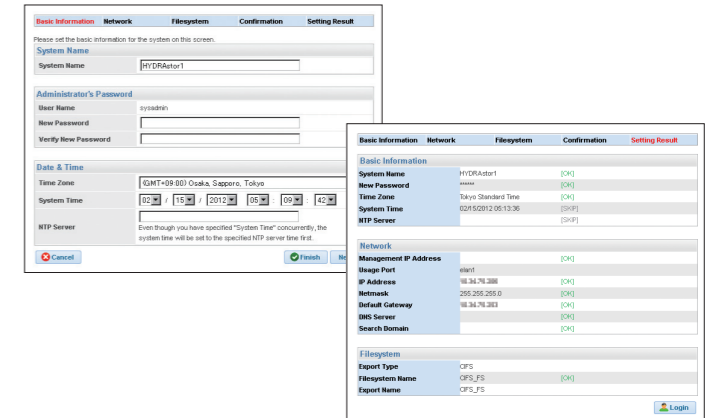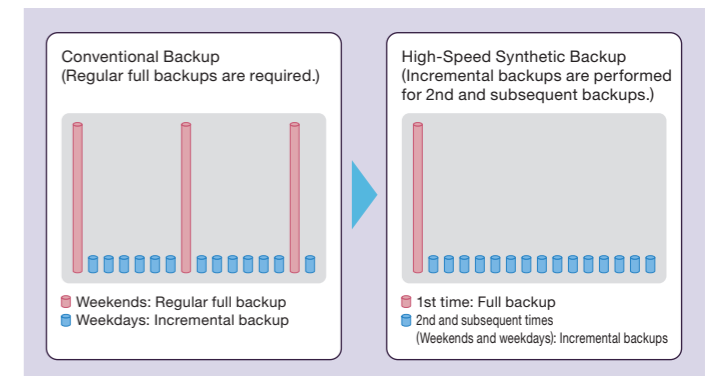
NEC Storage HS3 is a self-contained backup storage device consisting of a single node. The capacity can be expanded flexibly as needed.

1 node
Raw capacity: 24 TB
Effective capacity: 312 TB

1 node
Raw capacity: 16 TB
Effective capacity: 208 TB

1 node
Raw capacity: 8 TB
Effective capacity: 104 TB

*The effective capacity is calculated assuming a compression ratio of 20:1.

Reliably Withstand 3 Simultaneous Drive Failures

The NEC Storage HS3 provides robust fault tolerance to prevent data loss even if three disks fail concurrently. The NEC Storage HS3's automatic repair function can restore the redundancy performing a full rebuild in as little as one hour, resulting in higher reliability than RAID6.

Protection of Sensitive Data

NEC Storage HS3 is equipped with various advanced security functions: An encryption function available for both stored data and data to be transferred, a tamper-proof function to protect the stored data from malicious code and erroneous operations, and a complete physical data erasure function ensuring that it is impossible to restore data.