Petabyte-scale Solutions Customer Stories

See how our customers consolidate petabyte-class data with Synology's HD & SA series products.

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SBS

SBS reduced data recovery time by over 50% using Synology backup solutions

The Challenge

SBS's storage requirements suddenly surged when they needed to repurpose existing program content from terrestrial broadcasting to online digital video production. They considered the original SAN architecture, but encountered cost issues.

The Solution

SBS implemented **Synology's HD6500** and 20 units of **Synology RS4021xs+** for data storage requirements amounted to multiple petabytes.

- Efficiently accessed and edited audio and video files by using Synology devices for archival purposes and file serving.
- Substantially reduced storage costs compared to traditional SAN storage.
- Saved snapshots every five minutes and performed restoration in seconds using Synology **Snapshot Replication**.

"Synology storage solutions are optimized for digital production environments that require flexibility and speed, enabling us to store and process data quickly. The flexible backup system has also helped us reduced data recovery time by more than half."

—— Inwook Park, Deputy Director, IT Team, SBS Media

About

Founded in 1990, SBS is South Korea's largest private broadcaster, known for its role as a terrestrial broadcasting company and a global cultural content provider.

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Discuss your needs

Imperial War Museum acquires up to 5 PB of data storage for footage archives

The Challenge

Imperial War Museum are processing a project to bring the taped films of the last 100 years to future audiences by capturing thousands of film reels into their digital library. In addition, the museum are facing massive data growth with the recent 4k raw recording without compression.
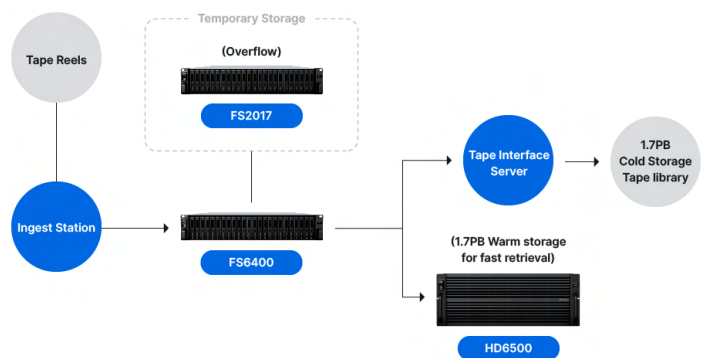
The Solution

Imperial War Museum utilized Synology's **FS2017** and **FS6400** for ultra-fast write from their ingest station, and deployed Synology **HD6500** for longer term video storage.

- The high speed storage and networking of **FS2017** and **FS6400** allowed the maximum throughput of the museum's ingestion workflow.
- Deployed **HD6500** as warm storage, allowing access times to the archive footage be brought down from days to near-instant access.
- Easily managed and monitored their systems across multiple sites with **Active Insight**, Synology's own cloud based monitoring tool.

"Not many NAS devices support what we need. Having the option and flexibility to be able to contact Synology with feature requests, knowing that they will be read, researched with a strong chance they will be put into production is fantastic and reassuring."

—— Rob Tyler, IT DAMS Manager

About

The Imperial War Museum is a leading museum in the UK founded in 1917. Imperial War Museum had built up the largest collection of aircraft in Europe, from the First World War to the present day.

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Discuss your needs

Taiwan's top AI collective innovates with the support of Synology's multi-petabyte storage solutions

The Challenge

Building advanced AI at Taiwan AI Labs presents a range of challenges, including the need for extensive data storage, varying infrastructure demands across projects, data processing requirements during AI model training, and ensuring robust data security and privacy protection.

The Solution

The Taiwan AI Labs IT team deployed Synology all-flash systems to support the data warehouse infrastructure and quickly move data from the primary storage repository to high-performance AI accelerator clusters. They also deployed Synology **SA series** as primary backup servers, providing unmatched scalability, cost-effectiveness, and ease of management.

- Allowed for the provisioning, management, and mirroring of storage volumes across Synology systems directly by Kubernetes (K8s).
- Set up **Synology High Availability (SHA)** clusters to eliminate single points of failure in K8s environments.
- Leveraged **Hyper Backup** and **C2 Storage** to complete its 3-2-1 backup architecture. **C2 Storage** offers excellent data protection features and AES-256 encryption to align with Taiwan AI Labs' high privacy standards.

"Synology's unmatched performance, scalability, and reliability are exactly what we needed to build our petabyte-scale data warehouse."

—— AI and HPC Team, Taiwan AI Labs

About
Taiwan AI Labs was established in 2017 as Asia's first non-profit artificial intelligence research organizations.

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Discuss your needs

Korea's leading shipping company reduced over 10x data recovery time with Synology's built-in snapshot feature

The Challenge

SK Shipping previously relied on an x86-based file server for storing critical data. Their backup solution involved moving existing files to a SAN by using third-party software and then backing up to tapes. This process resulted in time-consuming and labor-intensive data restoration. Additionally, the annual maintenance cost for this approach amounted to approximately **7 million Korean Won (~6000 USD)**.
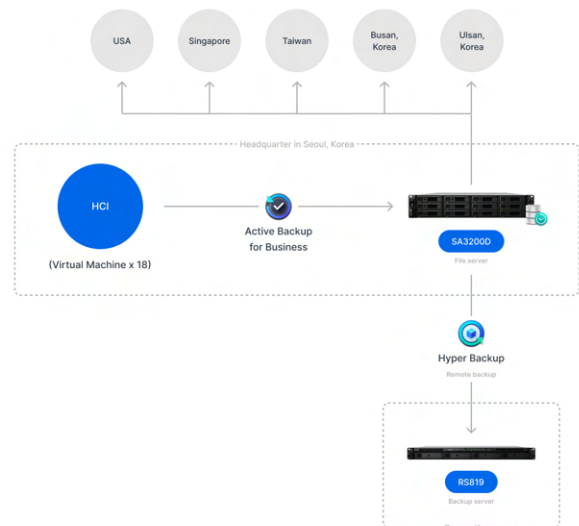
The Solution

SK Shipping uses a Synology **SA3200D** as the primary file server and a Synology **RS819** as the backup server.

- Designed for high availability, the **SA3200D** ensured service continuity for critical services.
- In place of tape backup, Hyper Backup automatically backed up data from **SA3200D** to **RS819**, reducing IT expenses.
- Synology Snapshot Replication provided point-in-time backups of shared folders, making it **10 times faster** than before.

"The (Synology) units have helped reduce human resources and maintenance costs, while streamlining management, backup, and data restoration operations."

—— Kwak Ho-Dong, IT Planning Team Leader of SK Shipping

About

Established in 1982, SK Shipping is one of the top 10 companies in the world supplying crude oil, LNG, LPG, coal, iron ore, and other natural resources to all corners of the world.

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Discuss your needs

Synology's solution has reduced Tourism Australia's file transfter times by 70% and is more cost effective than alternatives

The Challenge

Tourism Australia's previously used a combination of tape for archiving, external hard drives for ongoing projects, and public cloud storage to share files externally. As their data demands grew, they were unsatisfied with the costs and slow data transfer and retrieval speed.

The Solution

Tourism Australia implemented **three 12-bay Synology servers** for local and remote file sharing, and deployed a 60-bay **Synology HD6500** as their new archiving and warm storage solution to boost their storage capability.

- Allowed staffs to edit large files more efficiently thanks to fast on-premises SMB and AFP support, while providing convenient and secure access to remote partners.
- Reduced IT expenses due to savings on cloud storage and transfers, as well as a superior cost-performance proposition for on-premises storage.
- Improved data scalability to match evolving data needs, thanks to an on-demand expansion pathway to multi-petabyte storage.

"Thanks to Synology, we were able to effortlessly expand our storage to the petabyte level. It has improved our daily operations by reducing file transfer times by up to 70%, while being more cost-effective than alternatives."

—— George Tzikas, Infrastructure & Operation Lead, Tourism Australia

About
Tourism Australia aims to make Australia the most desirable destination on Earth for travelers abroad while maximizing the positive economic impact of tourism for Australia.

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Discuss your needs

Dutch school community saved €21,000 annually with Synology's data backup solutions

The Challenge

Het Streek needed reliable and high-speed storage to host Microsoft FSLogix Profile Containers and other critical data. Additionally, they need a comprehensive backup solution for their 3,000 Microsoft 365 accounts. The backup solution needed to be highly scalable in order to accommodate future storage demands.
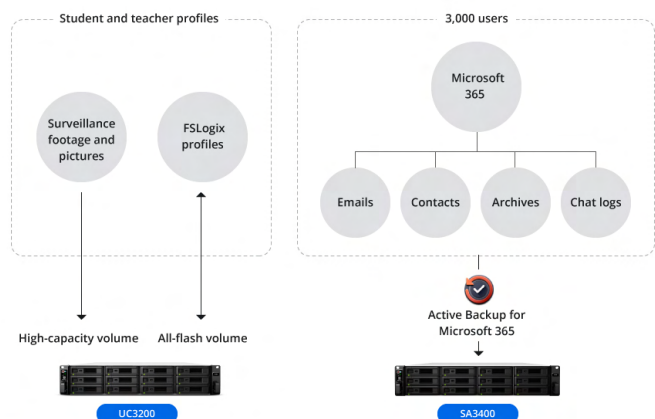
The Solution

Het Streek chose Synology's active-active SAN solution, **UC3200**, to store critical data including surveillance footage, and deployed Synology **SA3400** as backup server.

- **UC3200** delivered FSLogix profiles to workstations, cutting loading time and presenting tangible improvements for students and staff.
- **SA3400** and Active Backup for Microsoft 365 backed up its 3,000 Microsoft 365 accounts without license fees, which reduced backup times by **16 times**, from 8 hours to about 30 minutes, at no additional cost.

"Synology solutions have helped us save €21,000 annually and our backup speeds have improved 16 times. The reliable UC3200 and SA3400 units and Active Backup for Microsoft 365 are all we need to safely back up all 3,000 of our Microsoft 365 accounts and the account data for our students and teachers."

—— Wim Hendriks, Head of ICT, Het Streek

About

Founded in 1995, Het Streek is a comprehensive school with a total of more than 3,000 students and staff spread across two locations and one head office.

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Discuss your needs

Intercommunal Hospital Center of Créteil managed over 100 VMs efficiently with no license fee

The Challenge

The hospital has faced the challenge of modernizing its internal backup infrastructure. Their server backup system relied on Microsoft tools, requiring excessive intervention and inefficient allocation of resources. They initially tried various companies, from Philips for radiotherapy to IBM and Microsoft, each with its own hardware. However, these backup systems required frequent human monitoring and interventions.
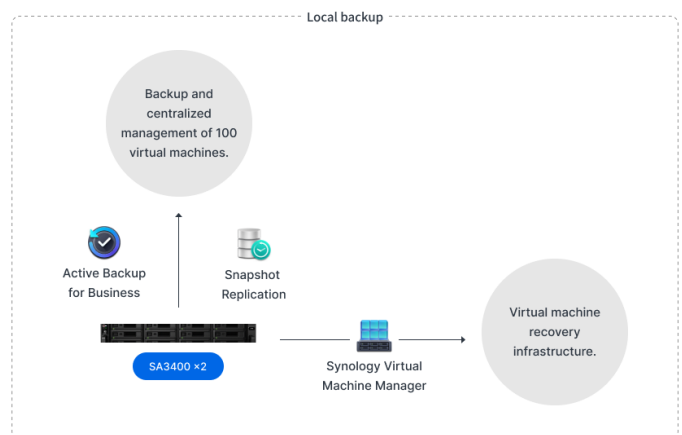
The Solution

The hospital deployed two Synology **SA3400** to build their backup system for virtual machines and two Synology **HD6500** servers to build an image storage system (PACS) with a backup server.

- Provided flexible backup management and storage space and saved administration time.
- Simplified backup and centralized management for over 100 virtual machines with the license-free **Active Backup for Business**.
- Ensured business continuity with **Snapshot Replication** to provide near-instant data protection.

"Synology's tools are simple and reliable. We've all saved an enormous amount of time that we can devote to other tasks."

—— Eric Nguessan, CISO and Infrastructure Project Manager, CHI Créteil.

About
The Centre Hospitalier Intercommunal de Créteil (CHIC) is a local hospital in Créteil, France, with 2,660 employees.

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Discuss your needs

Products at a glance

Storage systems
Rackmount servers

		SA Series					HD Series
		SA6400	**SA3610**	**SA3410**	**SA3400D (2 Controllers)**	**SA3200D (2 Controllers)**	**HD6500**
Performance(1)		Read: 6,259.12 MB/s Write: 4,032.83 MB/s	Read: 6,197.03 MB/s Write: 3,054.16 MB/s	Read: 6,283.92 MB/s Write: 3,020.29 MB/s	Read: 3,540.47 MB/s Write: 2,941.47 MB/s	Read: 3,540.72 MB/s Write: 2,183.12 MB/s	Read: 6,474.51 MB/s Write: 6,678.65 MB/s
Processor		AMD EPYC™ 7272	Intel® Xeon® D-1567	Intel® Xeon® D-1541	Intel® Xeon®D-1541 (per controller)	Intel® Xeon® D-1521 (per controller)	Intel® Xeon® Silver 4210R
Memory/Max. Memory		32 GB DDR4 ECC, up to 1,024 GB	16 GB DDR4 ECC, up to 128 GB	16 GB DDR4 ECC, up to 128 GB	8 GB DDR4 ECC, up to 64 GB (per controller)	8 GB DDR4 ECC, up to 64 GB (per controller)	64 GB DDR4 ECC, up to 512 GB
Drive Bays(3)	SAS/SATA LFF/SFF(2)	12/108(10) SATA LFF/SFF	12/96(9) SATA/SAS LFF/SFF	12/96(9) SATA/SAS LFF/SFF	12/36(8) SAS LFF/SFF		60/300(11) SAS LFF / SATA SFF
	NVMe	–			–		–
External Ports		2 × USB 3.2 Gen 1 8 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	1 × Expansion port (per controller)		2 × USB 3.2 Gen 1 2 × Expansion port
PCIe Slots(4)		2 × PCIe Gen 3 ×8		2 × PCIe Gen 3 ×8	1 × PCIe Gen 3 ×8 (per controller)		2 × PCIe Gen 3 ×16, 2 × PCIe Gen 3 ×8
Network Ports		2 × 10GbE, 5 × 1GbE (1 for OOB management)		2 × 10GbE, 5 × 1GbE (1 for OOB management)	1 × 10GbE, 2 × 1GbE (per controller)		2 × 10GbE, 3 × 1GbE (1 for OOB management)
Supported File Systems (Internal Drives)		Btrfs, ext4			Btrfs, ext4		Btrfs
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel			SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1			Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10
File Sharing	Max. Number of User Accounts	16,000			16,000		
	Max. Concurrent Connections (SMB, FTP, AFP)	8,000	4,000	4,000	1,200		10,000
Synology Surveillance Station	Max. IP Cameras(5)	128		128	100		150
	Total Frames Per Second (H.264)	3,840 FPS at 720p		3,840 FPS at 720p	3,000 FPS at 720p		4,500 FPS at 720p
Synology Productivity Suite	Max. Concurrent MailPlus Users	2,200	1,600	1,100		500	800
	Max. Synology Office Users	3,400		3,400		2,800	3,400
Power Consumption(6)	Access	180.50 W	137.54 W	136.15 W	257.78 W	417.48 W	1,025.20 W
	HDD Hibernation	88.56 W	58.23 W	58.48 W	–		418.00 W
Appearance	Dimensions (H × W × D)	88 × 482 × 724 mm			88 × 482 × 724 mm		176 × 482 × 1020 mm
	Weight	16.50 kg	14.50 kg	14.50 kg	19.70 kg		37.90 kg
Warranty		5 years			5 years		

Product pages
HD&SA

NAS selector
sy.to/nas_select

Where to buy
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Discuss your needs
sy.to/inquiry

Need more information?
Visit **www.synology.com** to find out more about our solutions, calculate your storage and performance requirements, check where to buy, and get in touch with us.

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