Synology®

Data Backup

Data is not only the core of any business but also the significant asset for general users. Important files — like your critical work documents or personal photos — deserve a great backup strategy to protect against unexpected hardware failure, natural disasters, or simple accidental deletion. Let DSM help with robust and flexible backup solutions.

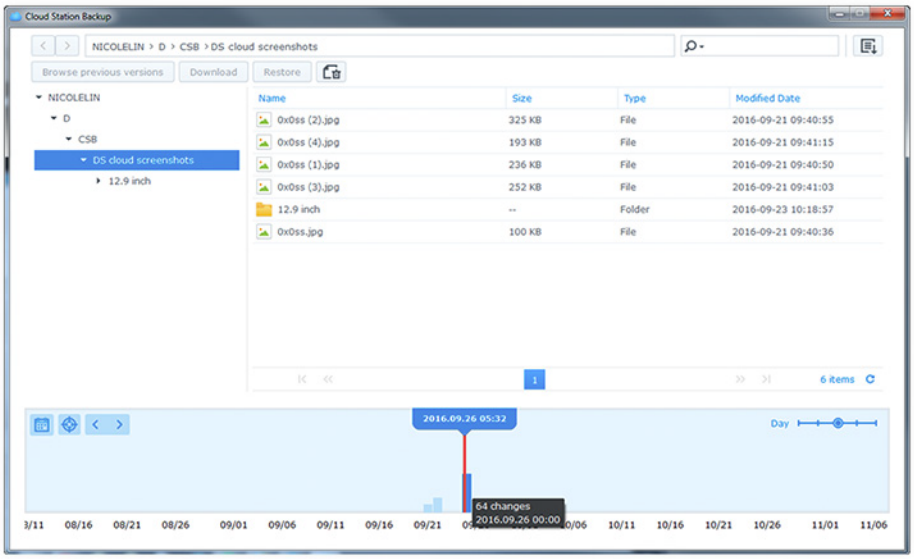
Data Backup

For Windows, Mac, and other devices

With customizable and expandable storage space, Synology NAS is a perfect choice for backing up any device, whether it's a Windows computer, Mac, or other devices.

Cloud Station Backup

Whether it's your collection of vacation photos or important business documents, it's always a good idea to back up files on your computer, so data is never lost due to hardware failure or other accidents. With the Cloud Station Backup application, Synology makes it even easier to back up files from your Windows or Mac OS X computer to Synology NAS.



Back up exactly what you want with filters

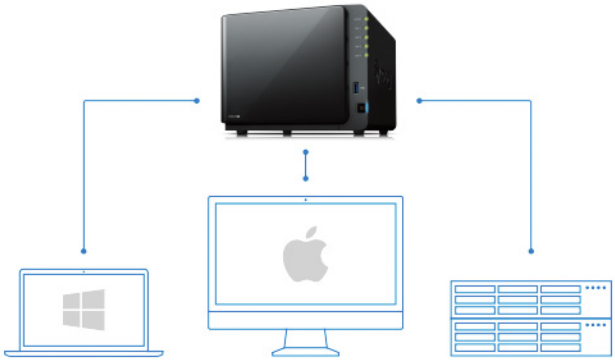
Cloud Station Backup lets you choose exactly what files and folders are backed up to your Synology NAS according to a wide range of filters, such as file type, name, or size.

Realtime, incremental backup

Once initial backup is complete, Cloud Station Backup makes incremental updates as files are added or modified, so the latest version is always safe and sound, without impacting system performance.

Go back in time with file history

Customizable file version history saves up to 32 point-in-time copies of each file, allowing you to go back in time and recover files that were overwritten or accidentally deleted.

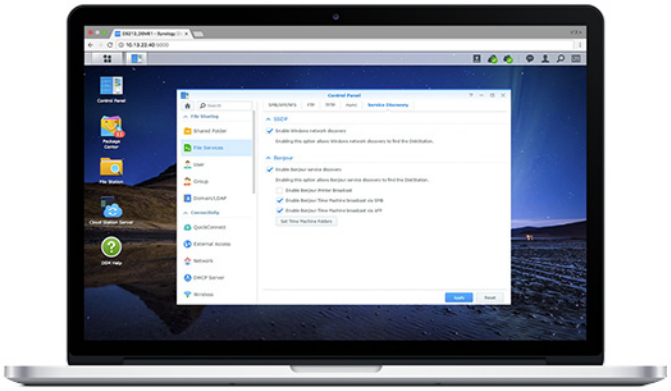


Time Machine, Windows File History, and more

Synology DSM provides additional features allowing you to backup files through various applications, such as Apple's Time Machine, Windows File History, or other third party backup services.

Time Machine on macOS

You can now set up quota limitation on multiple shared folders (on Btrfs volumes only) for use as backup destinations, preventing unauthorized access or excess space usage. In addition, the SMB3 protocol is also supported to further strengthen reliability and integrity of data backup.



USB Copy 2.0

Copy between DSM and USB/SD devices

With minimal configuration, USB Copy auto-copies files and folders from your Synology NAS to attached USB/SD storage or reversely for efficient data exchange and backup.

Simple and smooth

Hot-plug a USB/SD device to auto-run a matched copy task, and remove it when receiving completion beeps and LED alerts.

Customize copy behavior by device

Customize each device's backup destination, copy mode, file-type filter, and conflict policies. All the settings will be remembered for instant application upon hot plug-in.

Optimize photo/video backup

Sort a large number of photos and videos imported to your Synology NAS into time-named folders, making files easy to locate and organize.

Active Backup for Server

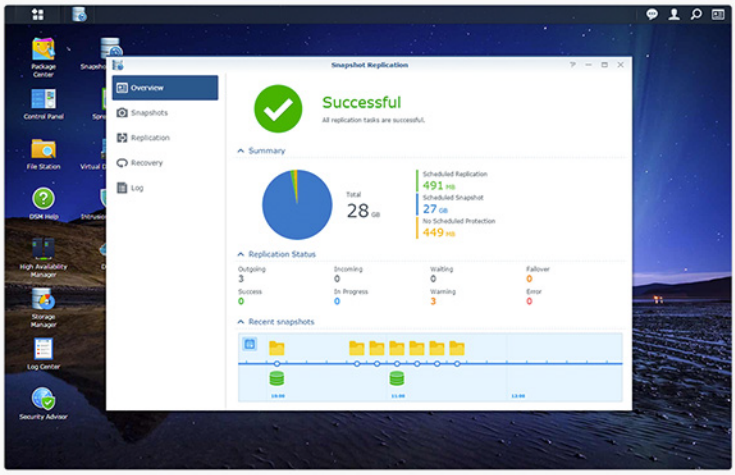
For Windows, Mac, and other devices

Active Backup for Server is an agentless backup solution that centralizes Windows and Linux server protection, minimizing deployment and management cost. Learn more about Active Backup for Server.

Snapshot Replication

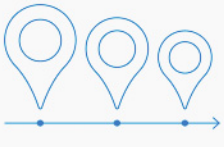
The ultimate disaster recovery solution for your business

Snapshot Replication1 provides schedulable, near-instantaneous data protection, ensuring business documents in shared folders, virtual machines in iSCSI LUNs, or DDSM data remain safe and available in the event of disaster.



Instant protection with snapshot technology

By extending the availability of Btrfs file system to more models1, the Synology NAS includes state-of-the-art data snapshot technology, allowing for flexible point-in-time recovery of files, while only using a fraction of the storage space compared to traditional backup. Use File Station or Windows File Explorer, and take advantage of self-service recovery to restore files and folders.

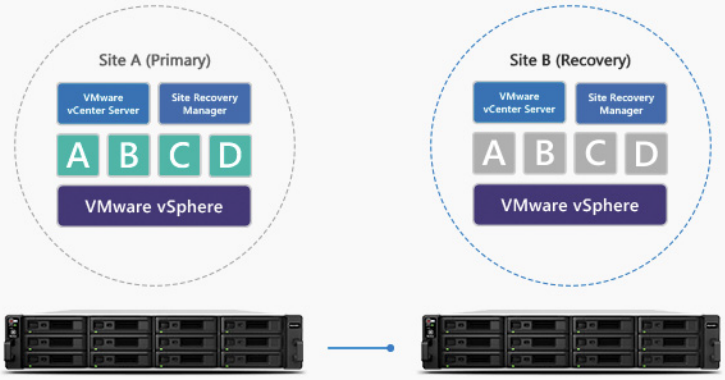


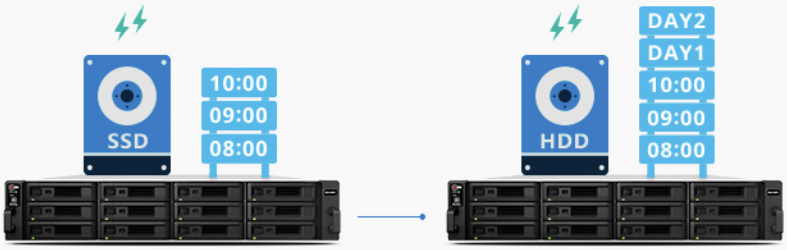
Extended Replication

For distributed enterprises, keeping multiple copies in different places can ensure data availability when a disaster happens. In addition to the local data replication, Snapshot Replication offers businesses more possibilities for their disaster recovery plan. For higher protection, you can replicate data saved at the primary site, such as headquarters server, to one branch, which in turn replicates data to another branch again.

Disaster recovery for virtualization environments

Application-aware snapshots for virtualized workloads running on VMware and Hyper-V are supported, so data consistency of virtual machines is guaranteed. In addition, support for VMware Site Recovery Manager allows for starting disaster recovery directly via VMware vCenter Server, thus simplifying the recovery process.





Define retention policies for each server

It's also possible to customize different retention policies for servers at the primary site and recovery site in order to reduce storage costs. For example, you can keep fewer snapshots on the primary site server equipped with expensive SSD storage, while retaining more versions on the server at recovery site equipped with cheaper HDD storage.

Export/import initial replication

Making the initial replication of data between the primary server and recovery server might take a few weeks and consume a large amount of bandwidth. Snapshot & Replication allows for admins to export the replicated data to external devices and then deliver it to the recovery site to import — reducing bandwidth usage in your production environment.

Self-service recovery

When using File Station or Windows File Explorer, your employees can take advantage of self-service recovery to go back and restore previous versions of files and folders.

Assured recovery by running test failover

After making a copy of data to the recovery site, you can test all recovery procedures, such as changing domain name settings, or the file path and iSCSI targets of applications.

Reports for data transmission over WAN

For each replication task, a report including the connection status, transfer speed, statistics of transferred data size, and sync duration lets IT administrators evaluate the bandwidth requirement for replicating data over WAN and pinpoint network congestion problems if replication speed is not satisfying.

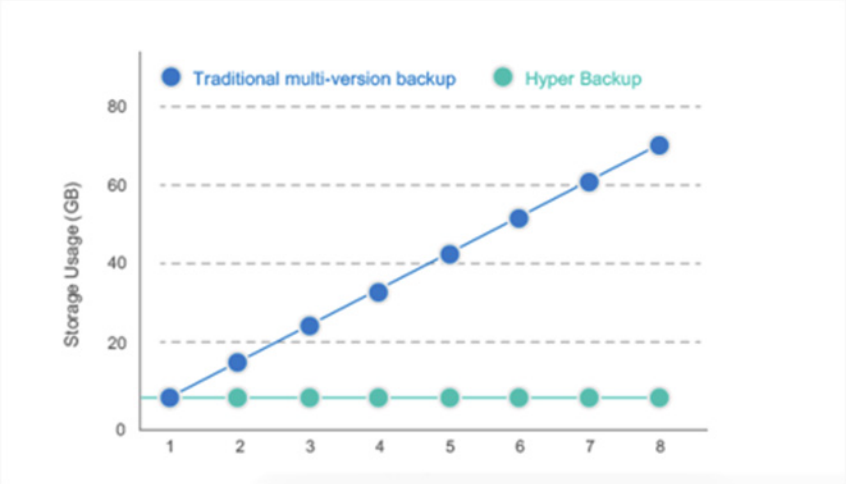
Synology Hyper Backup

Your backup plan, stronger than ever

Backup always comes with a big challenge — how can an enterprise keep multiple versions of backups while minimizing storage consumption? To solve this dilemma, Synology Hyper Backup provides multi-version backup, while offering friendlier experience and more public cloud support.

Comprehensive multi-version backup optimizes storage utilization

With block-level incremental backup and cross-version deduplication, Synology Hyper Backup minimizes the storage required for backing up data in multiple versions. Compared to traditional backup and other NAS backup services that are yet limited to file-level incremental backup, Synology multi-version backup drastically reduces required storage, while preserving as many recovery points as your data might need.

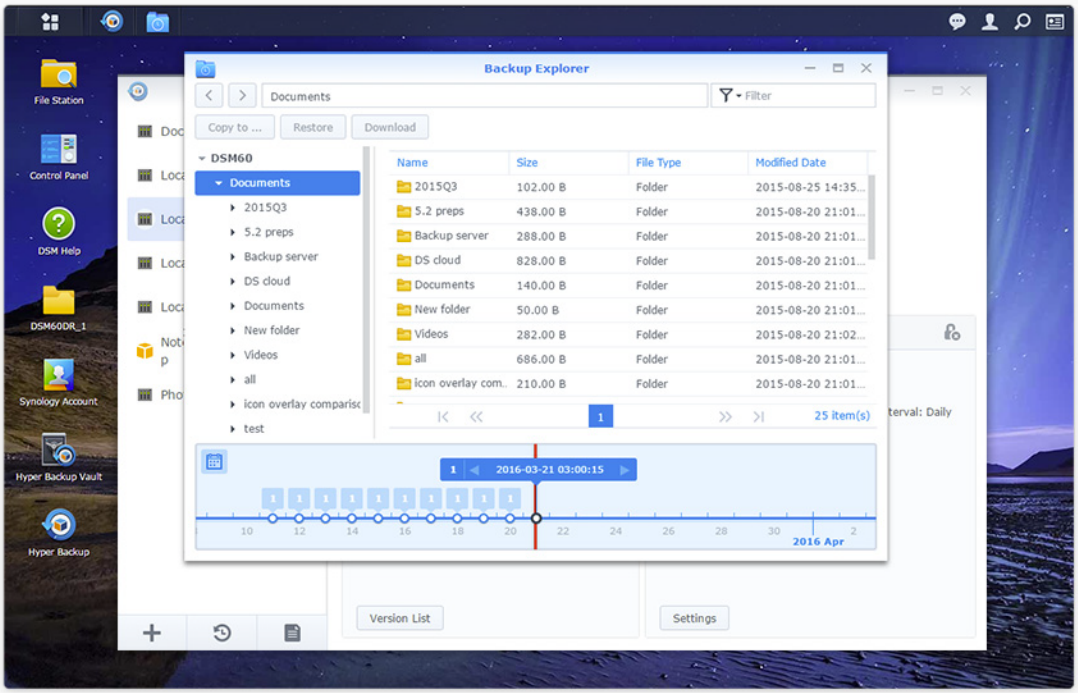


Enjoy a full range of multi-version backup destinations

Back up data to local shared folder and external hard drives, network shared folders, rsync server, and public cloud services, and take advantage of multi-version backup — save up to 65535 versions of data and rotate backups with Smart Recycle.

Browse backup versions easily using multiple platforms

When it comes time to restore a version of a file or folder, Synology makes it easy to browse previous versions using the File Station application built into DSM or the Hyper Backup Explorer tool for Windows and Linux computers.



Schedulable backup tasks

The best backup strategy requires the least effort.You can schedule backup tasks to run automatically at a specific time, or repeat according to a desired schedule.

Encryption

To ensure files are protected from unauthorized access when stored on the backup destination, you can encrypt files before transmitting them
to a backup target and also back upfiles from
encrypted shared folders.

Configuration backup

Back up system configurations, like user accounts,shared folders, file sharing, and other settings.This allows important settings to remain consistent
with backed up data, even after moving to another server.

Rotate backups and conserve space with Smart Recycle

When performing scheduled data backups, Smart Recycle can simplify version control by automatically deleting older, unnecessary backup versions, saving you time and effort. If a certain version is particularly important, you can lock it and prevent it from being automatically deleted.

Hyper Backup Vault

Hyper Backup Vault is an independent package designed for administrators to examine all the repositories from different backup clients — providing a bird's-eye view of the storage consumption and backup history of each task.

Cloud Backup

Bulletproof backup with diverse cloud integration

Cloud storage is playing an essential role in many home and business backup strategies, allowing users to strengthen disaster resiliency and reduce hardware footprint.

Synology Hyper Backup

Businesses can leverage the block-level, multi-version backup tools of Synology Hyper Backup to back up files and system settings on Synology NAS to public cloud services, such as Amazon S3, Microsoft Azure, HiDrive, or IBM SoftLayer, RackSpace, and other OpenStack Swift compatible servers.

Cloud Sync

The Cloud Sync package lets you synchronize folders and files on your DiskStation with a variety of public cloud services, such as Amazon Drive, Dropbox, Google Drive, Google Cloud Storage, Microsoft OneDrive, OpenStack Swift, and many more. Options for one-way or two-way sync allow you to copy files from the DiskStation to cloud services, the other way around, or both ways.

Glacier Backup

With the Glacier Backup package, it's easy to back up data from your Synology NAS to the low-cost Amazon Glacier service. File-based deduplication checks for and removes redundant files before uploading a backup task, saving you money and reducing clutter. Additionally, the Explore feature allows you to look inside each archive, fetch single files, or delete unneeded files without having to restore the entire archive.

How to choose between Snapshot Replication, Cloud Station, and Hyper Backup?

	Snapshot Replication	Cloud Station Backup	Synology Hyper Backup
Backup location	• Local • Remote Synology NAS	• Local • Remote Synology NAS	• External drives • Local shared folder • Remote Synology Server • rsync server • Public clouds
Backup topology	• NAS-to-NAS	• PC-to-NAS • NAS-to-NAS	• NAS-to-NAS • NAS-to-server • NAS-to-cloud
Usage	• Application-aware backup • Back up various kinds of files, including database and virtual machines	• Personal computer backup • Cross-platform file sharing an collaboration • NAS-to-NAS realtime replication	• Archive data into multiple versions while minimizing storage resources. • Back up data to the public cloud. • Back up Synology applications including Photo Station, MariaDB Surveillance Station, and others.
Schedule	Shared folders up to every 5min LUNs up to every 15 min	Files are backed up in realtime upon modification	Backup tasks can be scheduled according to day and hour
Versioning	Yes, • Shared folders: up to 1024 • LUNs: up to 256 • Up to 65000 snapshots system-wise	Yes, up to 32 per file	Yes, incremental forever
Retention policy	First-in-first-out or custom retention policy per shared folder/LUN	First-in-first-out or Intelliversioning per file	First-in-first-out or Smart Recycle per task
What is backed up	• Shared folders • LUNs	• Files	• Shared folders • System configurations • Supported Synology apps
Consistency	Shared folder or LUN	File-level	File-level (shared folder level if on btrfs volume)
Storage reduction technology	• Shared folder: Btrfs snapshot • LUN: Advanced file LUN	•Synology Point Recovery (block-level file verisioning)	• Synology deduplication
Transferred data	Shared folder or LUN	•Modified bytes	Deduped data chunks
Transfer encryption	Yes, SSL/TLS	Yes, SSL/TLS	Yes, SSL/TLS
Data compression	No	No	Yes

Data encryption	• Encrypted shared folder	• Encrypted shared folder	• Client-side encryption • Encrypted shared folder
Recovery Options	• Single file recovery • Point-in-time recovery	• File-based version history	• Single file recovery • Point-in-time recovery
Self-service recovery	Yes, via web interface and Windows File Explorer	Yes, via web interface and	No
Recovery Speed	Very Fast	Fast	Moderate
Recovery File System	Btrfs	Any file systems supported by Synology internal volume	Any file systems supported by Synology internal volume
Required hardware	Synology NAS with Btrfs support	Synology NAS running DSM 6.0 onwards	Synology NAS running DSM 6.0 onwards
TCO for creating local recovery points	One Synology NAS with Btrfs support	One Synology NAS	One Synology NAS
TCO for creating toffsite backups	Two Synology NAS with Btrfs support	Two Synology NAS	One Synology NAS plus another Synology NAS, rsync server or public cloud storage
Strength	• Fast backup and recovery • Most frequent backups • Low system resource impact during backup	• Real-time difference replication • Allows two-way sync • Recovery points by file modification	•Supports a variety of destinations •Incremental forever •Highest storage efficiency