Synology

DiskStation Manager

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How to migrate between Synology NAS (DSM 6.0 and later)

When you purchase a new Synology NAS, your existing data can be moved from the old Synology NAS to the newly acquired one. This simple process is called "migration" but needs to be performed with care, so please read the instructions below to avoid any accidental data loss due to human error.

Synology®

Contents

1. Before you start

1.1 Source and target Synology NAS

Performing migration moves data or drives from one Synology NAS to another. In this article, the original Synology NAS from which data or drives are moved shall be called the **source Synology NAS** or **source server**, while the new one shall be called the **target Synology NAS** or **target server**.

1.2 Always back up your data

The migration procedures mentioned in this article allow you to keep most of your data. However, to prevent any accidental data loss, we strongly recommend backing up the following items:

Item	Backup Method
Shared folders and selected	Go to **Hyper Backup** and click the **Create** icon > **Data backup task**.

	- User and Group - Workgroup, Domain, and LDAP - File sharing services (i.e. SMB, AFP, NFS, and FTP) - Network Backup - Others (i.e. Shared Folder, User Home, Password Settings, Password Expiration, SNMP, and Task Scheduler)
License keys	Licensed packages may have different migration policies. Please visit our **license page** for more details.
Photo Station Blog posts	Go to the **Settings** page of Photo Station. In the **Backup** section under the **Blog** tab, click **Start**.

> **Important:**
>
> - Performing migration requires Synology Assistant 6.0 and DSM 6.0 or above. If you are using an older version of DSM, please see **How to migrate between Synology NAS (DSM 5.x)** for instructions on performing migration.
>
> - Hyper Backup can be downloaded from Package Center. You need to install **Hyper Backup Vault** on your target NAS to perform backup related tasks.

1.3 Check the hardware and DSM specifications of the target Synology NAS

Some advanced system services are not supported on all Synology NAS models. You will not be able to use the following services if they're not supported by the target Synology NAS, including:

- iSCSI LUN/virtualization support

- SSD cache/TRIM support

- HFS+ read/write support on external drives

- Packages which are designed for specific Synology NAS

Therefore, we recommend migrating to a Synology NAS with better hardware specification to ensure all packages and services will work properly after migration. You can also refer to the target Synology NAS's **product datasheet** to learn more details about DSM specifications.

2. Choosing the right migration method for you

when choosing the suitable migration method.
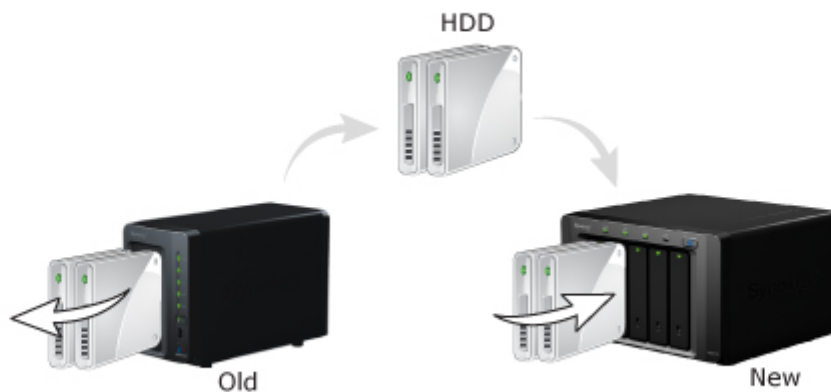
2.1 HDD migration

HDD migration allows you to migrate data through migrating HDDs on the source Synology NAS to the target one directly. Therefore, if you wish to keep using the same hard drives on the new Synology NAS, refer to **HDD migration**. However, this migration method have restriction on the model of the source and target Synology NAS as well as system requirements. Please see the following rules:

- You are unable to use HDD migration if your source Synology NAS is one of the following models:
  - 18-series: DS418, DS418j, DS218, DS218play, DS118
  - 17-series: DS1817, DS1517
  - 16-series: DS416, DS416play
  - 15-series: DS2015xs, DS1515, DS715, DS415play, DS215+
  - 14-series: DS214, DS214play
  - 13-series: DS413, DS213+
  - 12-series: DS212+, DS112+
  - 11-series: DS211+
  - 10-series: DS410, DS210+, DS110+
- If your source Synology NAS is not listed above, refer to the table below to see whether your source and target Synology NAS are able to migrate through **HDD migration**. An "O" means that HDD migration works, and a "X" means that HDD migration between the

j series	O	O	X	X	X
Value Series	O	O	X	X	X
Plus Series	X	X	O	O	X
XS/XS+ Series	X	X	O	O	X
FS Series	X	X	X	X	O

- If any of the following is applicable, please migrate via **Migration Assistant** or **Hyper Backup**.

  - **File system** : Please make sure the target Synology NAS supports the required file system. If the target Synology NAS does not support the file system you are using, the volumes cannot be mounted and data stored on the volumes cannot be accessed.

  - **Number of drive slots** : The target Synology NAS must have enough drive slots to accommodate all of the drives belonging to the RAID volume on the source Synology NAS. For example, if you have a DS214 with a RAID 1 volume consisting of two hard drives, then your target Synology NAS must have at least two hard drive slots.

  - **Single-bay and multiple-bay models** : Due to differences in the disk partition system, single-bay models cannot migrate hard drives to multiple-bay models and vice versa. For example, hard drives from a DS114 cannot be migrated to a DS214 or DS414. Likewise, you cannot migrate hard drives from a DS214 or DS414 to a DS114.

  - **DSM version** : If the target Synology NAS is not in the brand-new out-of-the-box status, the DSM version running on the target Synology NAS must be the same or newer than the version on the source Synology NAS. For example, you cannot perform migration from a DS411 running DSM 5.1 to a DS411 running DSM 5.0.

  - **SSD cache** : If your SSD cache fits any of the following conditions, you will need to remove it on the source Synology NAS before migrating its data to the target Synology NAS to proceed. Otherwise, the SSD cache can be migrated directly.
    - The target Synology NAS does not support SSD cache
    - The SSD read/write cache was built before DSM 5.2 and the target Synology NAS runs on an Alpine CPU

2.2 Migration via Migration Assistant

If you wish to replace all hard drives along with replacing your old Synology NAS, Migration Assistant simplifies the migration process by allowing you to migrate data (volumes and block-level LUNs), packages, and system configurations, without the hassle of manually moving hard drives to your new Synology NAS. However, there are some restrictions for this migration method:

- Please refer to **this article** for the list of models that are supported by Migration Assistant. If the models of your source and target Synology NAS are not supported, we recommend migrating via **Hyper Backup**.
- The DSM version on the target server will remain unchanged.
- Migration Assistant does not support High Availability cluster, SSD cache, MailPlus cluster, and Time Backup. Please remove those services on the source Synology NAS before migration.

2.3 Migration via Hyper Backup

This migration method allows you to migrate data, packages, and system configurations with several backup tools and has less restrictions. Therefore, this method is recommended if you are unable to use the above two migration methods.

3. HDD migration

This section explains steps to migrate data via HDD migration. You may choose to either migrate between **different Synology models** or **identical models**. Before you attempt this procedure, please make sure you have read through the requirements and limitations in Section 1.2 **Always back up your data** and Section 2 **Choosing the right migration method for you** to avoid any accidental data loss. If you have any questions, please contact **Synology Technical Support** before proceeding. Additionally, please note that this method requires reinstalling DSM and all packages on the target Synology NAS, which will result in losing the following data:

- Directory Server database
- Photo Station/blog content
- Auto-block settings

All media files will be re-indexed after migration.

Before you start:

- Make sure both Synology NAS models are plugged into a power outlet and connected to the same network as your computer.


3.1 Migrating between different Synology NAS models

This section explains how to perform migration between different Synology NAS models.

1. Log in to the source Synology NAS.

2. Go to **Control Panel** > **Update & Restore**.

3. Make sure the source Synology NAS is running the newest version of DSM. If a newer version is available, please download and install before continuing.
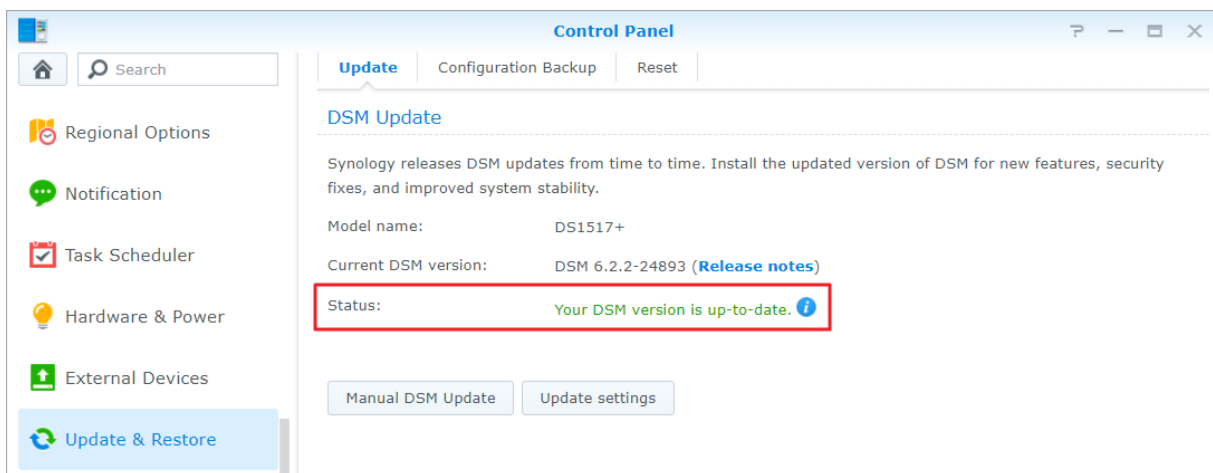
4. Go to the **Configuration Backup** tab and click **Back up configuration**. A configuration file named **[DiskStation Name]_[Created Date].dss** will be downloaded to your computer. Keep this file in a safe place.
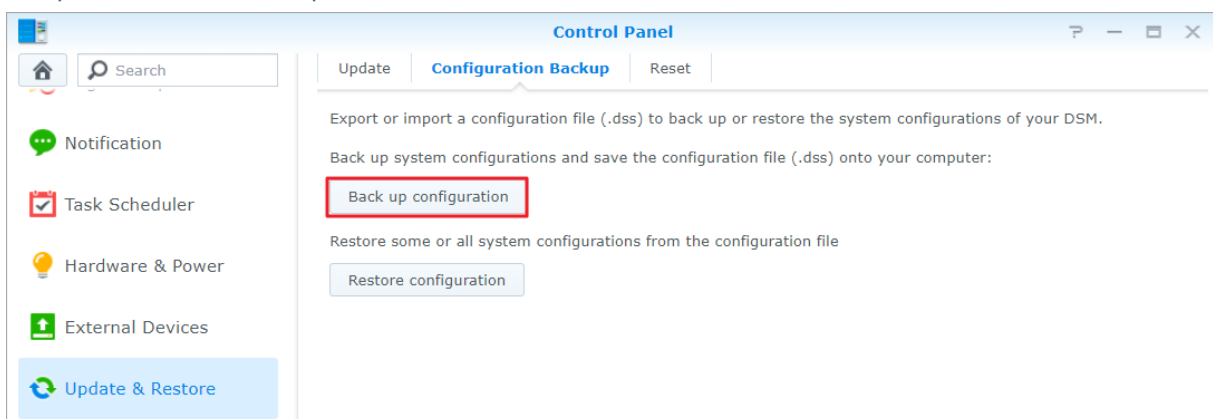
5. If you need to back up any data mentioned above, please go to **Hyper Backup** and click the **Create** icon > **Data backup task**. Follow the wizard instructions and continue to the
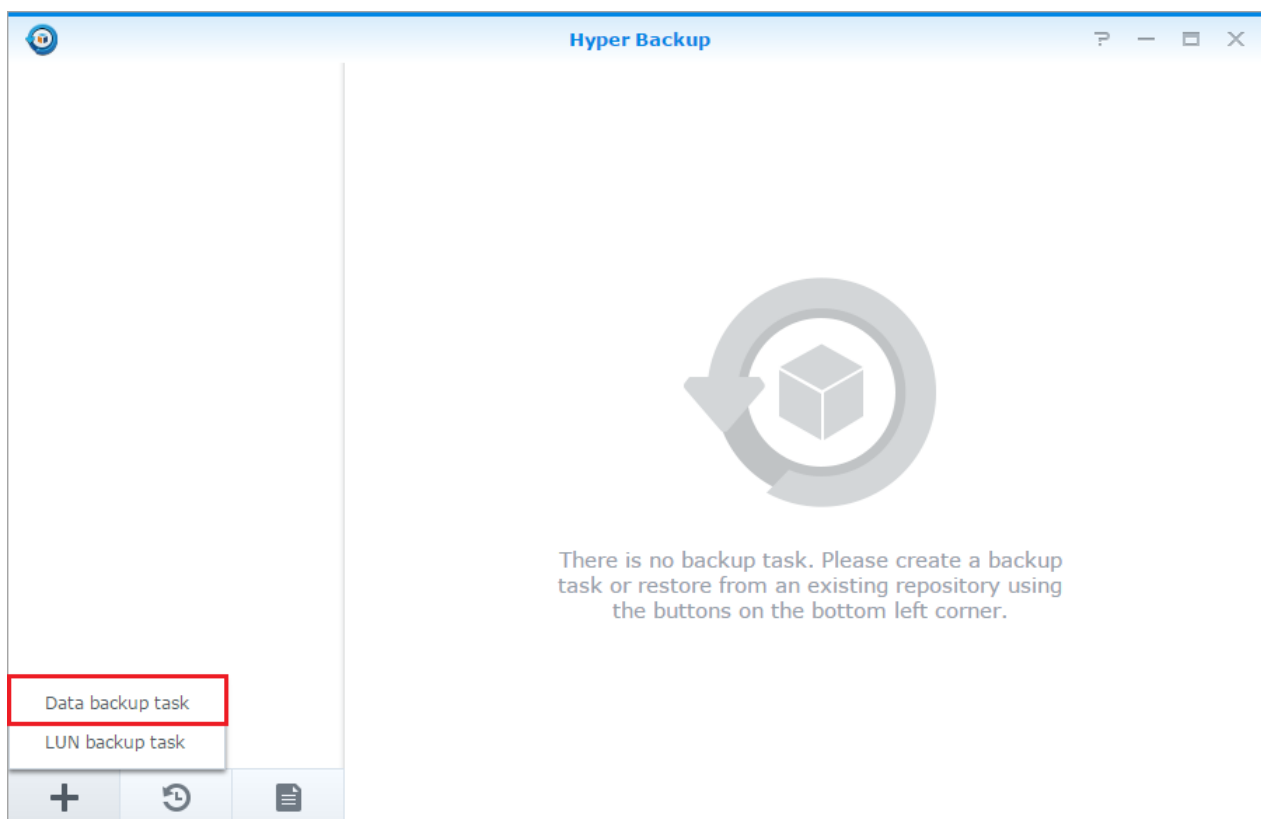
6. Shut down both Synology servers. Wait for both Synology servers to shut down completely.

7. Remove the hard drives from the source Synology NAS. **Please take note of the order each hard drive was installed in** .

drive slot numbering, please refer to the *Quick Installation Guide* available in Synology's **Download Center**, or try checking on the drive slots of your Synology NAS.
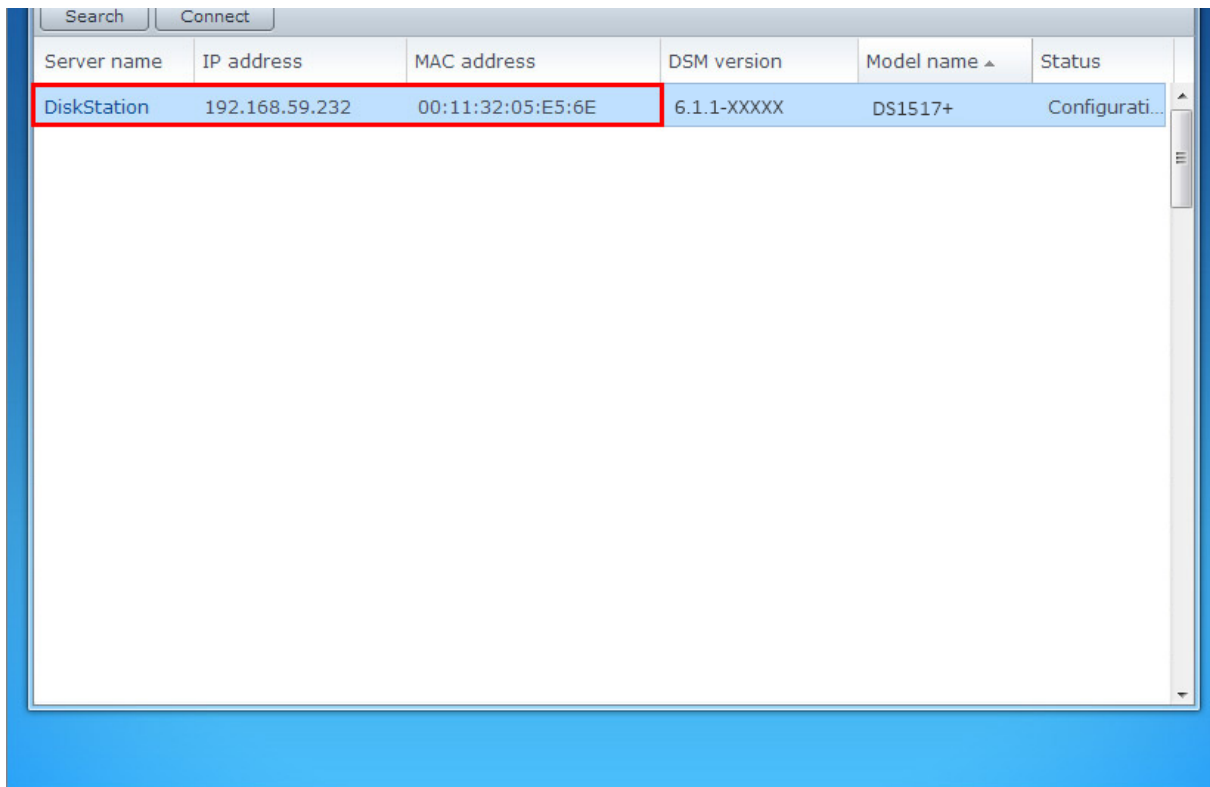

9. Turn on the target Synology NAS and wait for it to boot up.

10. Open a web browser on your computer and go to **find.synology.com**.

11. Find the target Synology NAS and double-click it.
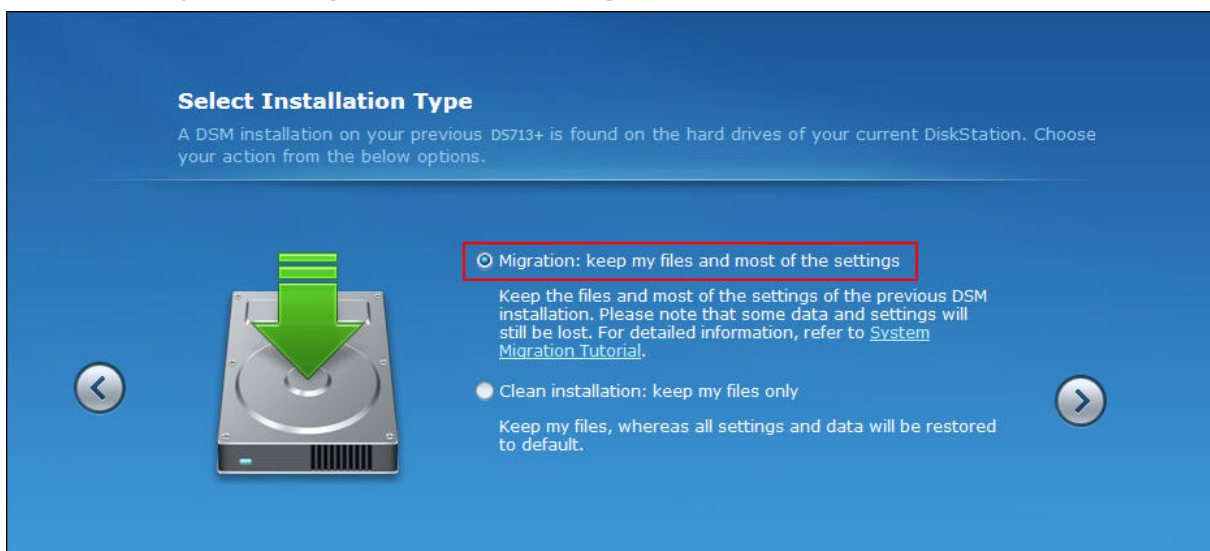
12. The status of the target Synology NAS should be **Migratable**. Click **Install** to continue.

> **Important:**
>
> If you see a warning message, similar to **Note: All data on the hard drive(s) will be deleted**, this means data on the installed hard drives will be deleted. In this case, please stop, close the browser, and make sure you have installed hard drives in the same order as they were installed in the source Synology NAS.

13. Choose the option to migrate files and settings.

16. Once installation is complete, log in to the target Synology NAS.

17. Go to **Control Panel** > **Update & Restore**.

18. Go to the **Configuration Backup** tab and click **Restore configuration**.
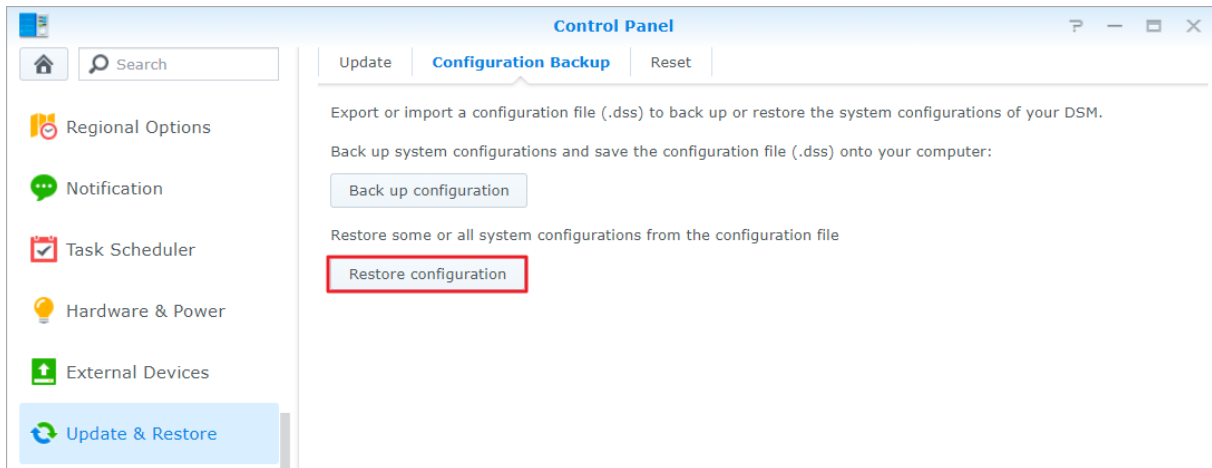
19. Click **Browse** and choose the backup file that you saved on your computer earlier. Click **OK**.
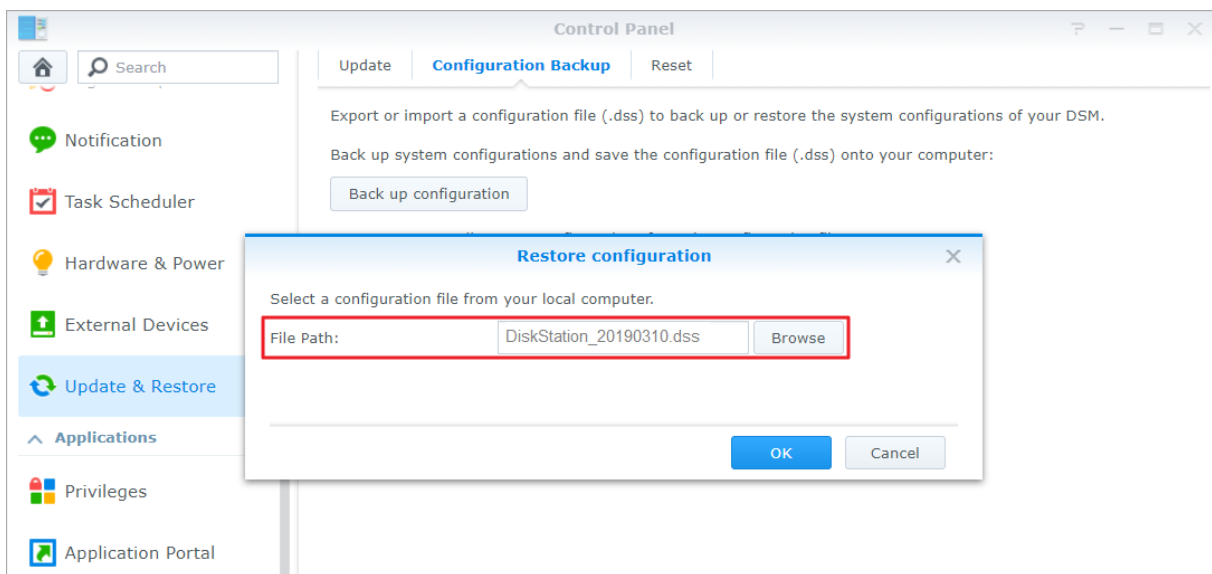
20. Choose the **All System Configurations** option. Click **OK**.

21. A warning message will appear. Click **YES** to confirm.

22. Wait for system configurations to be restored. When finished, your data will be successfully migrated to the target Synology NAS.

Note:

- During the migration procedure described above, you might encounter a warning message when using Synology Assistant to install DSM on the target Synology NAS.

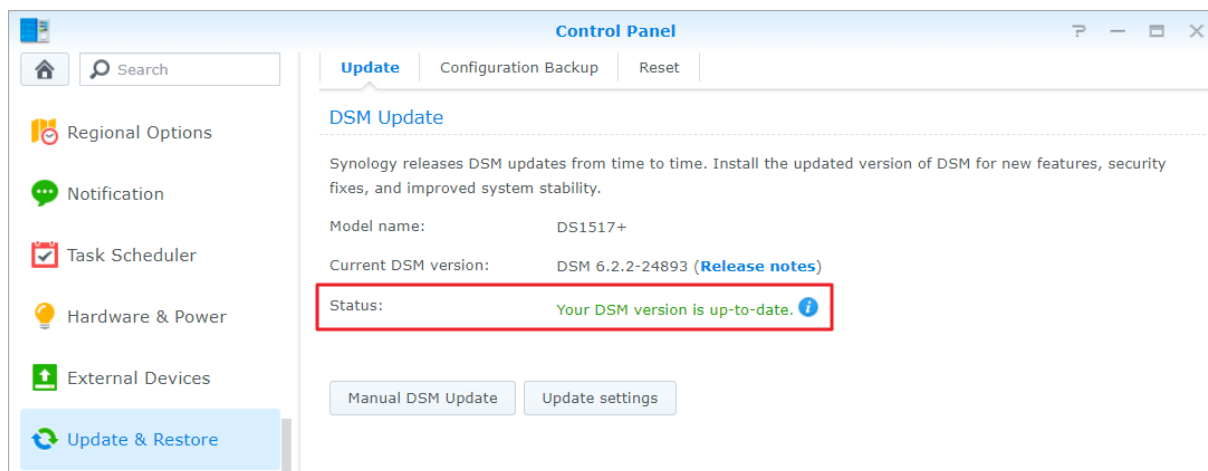procedure immediately, and try performing **migration via Hyper Backup**.

3.2 Migrating between two identical Synology NAS models

This section explains how to perform migration between two identical Synology NAS models, for example, migrate from an old DS713+ to a new DS713+.

Before you start:

- Prepare a temporary SATA hard drive. This temporary hard drive will be used to update DSM on the target Synology NAS.
- Make sure both Synology NAS are plugged into a power outlet and connected to the same network as your computer.
- Make sure the source Synology NAS is running and the target Synology NAS is turned off.

1. Log in to the source Synology NAS.

2. Go to **Control Panel** > **Update & Restore**.

3. Make sure the source Synology NAS is running the newest version of DSM. If a newer version is available, please download and install before continuing.

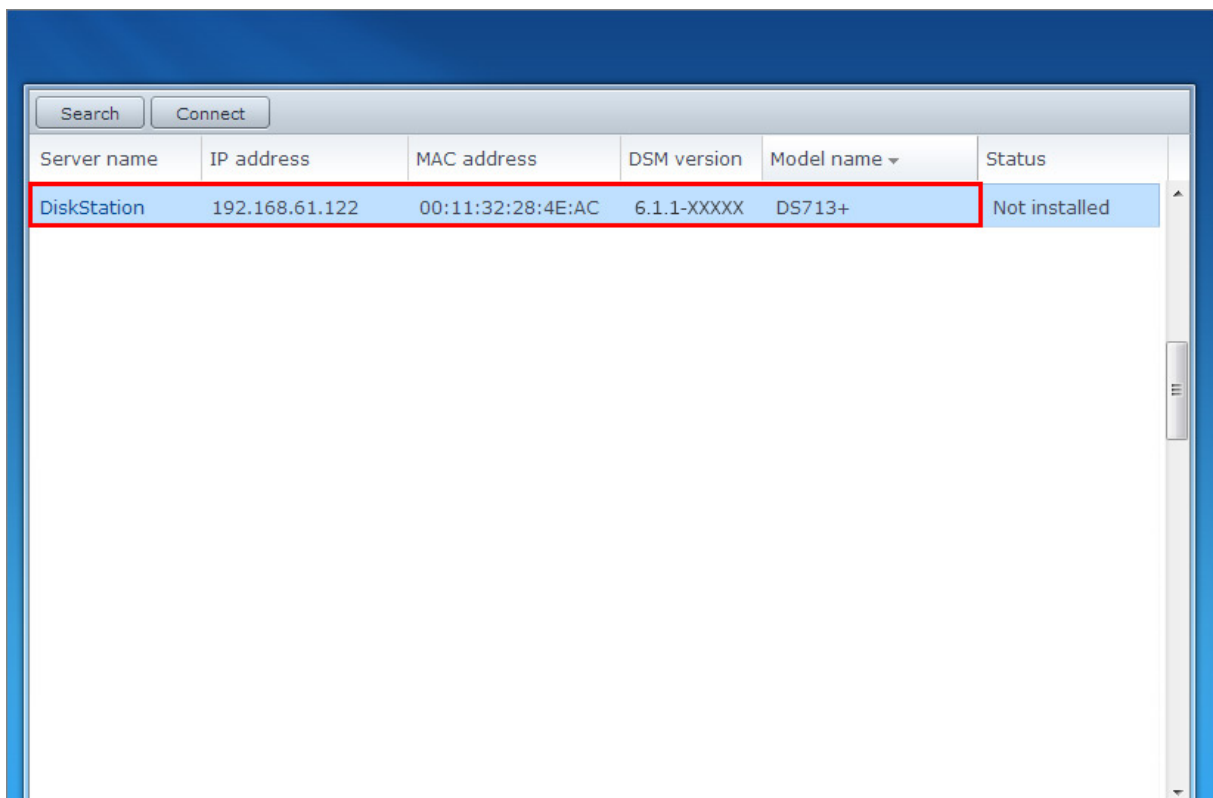4. Install the temporary hard drive in the target Synology NAS.

5. Turn on the target Synology NAS and wait for it to boot up.

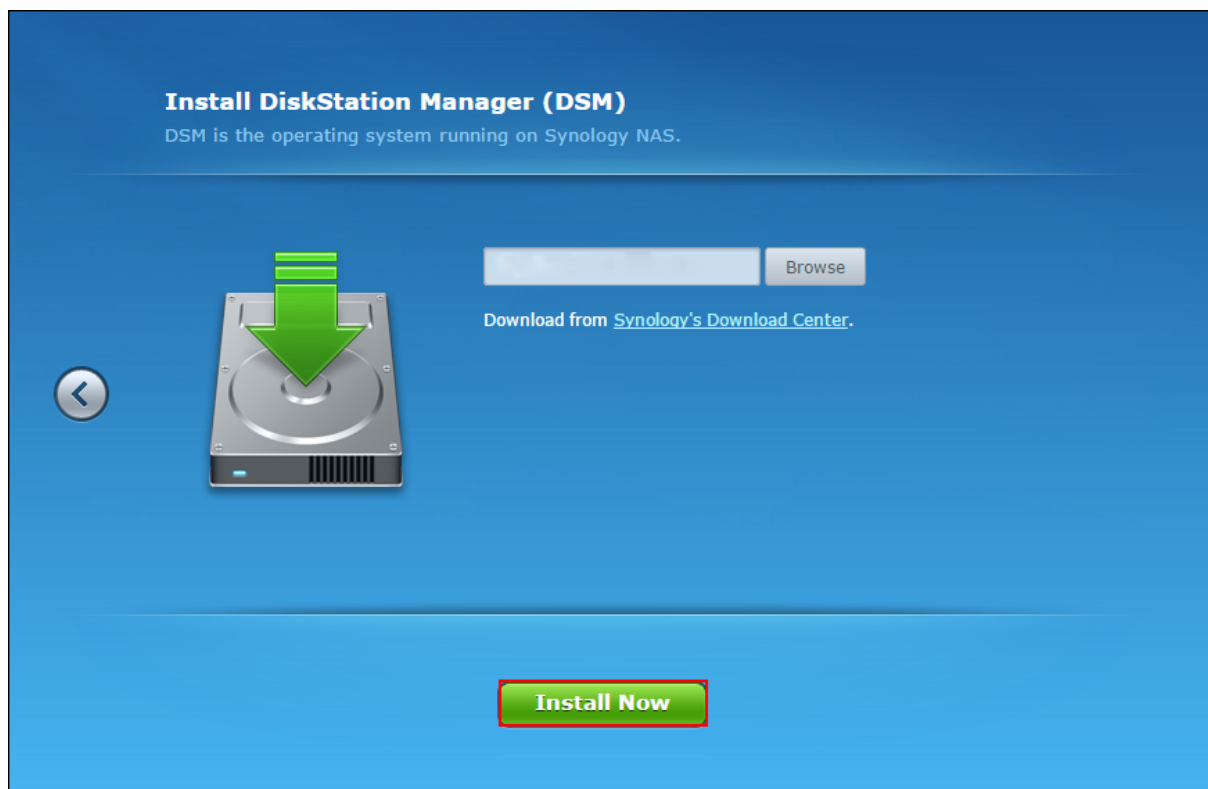6. Open a web browser on your computer and go to **find.synology.com**.

7. Find the target Synology NAS and double-click it.

We gebruiken cookies om onze webpagina te verbeteren. Raadpleeg ons cookiebeleid.

Oké

10. Continue installation by creating an administrator account. Click **Next** to continue.

11. When installation is complete, shut down both Synology servers. Wait for both Synology servers to shut down completely.

12. Remove the temporary hard drive from the target Synology NAS.

14. Install the hard drives in the target Synology NAS. **Hard drives must be installed in the same order as they were installed in the source Synology NAS**.

15. Turn on the target Synology NAS and wait for it to boot up. Log in to DSM and your data will be successfully migrated to the target Synology NAS now.

4. Migration via Migration Assistant

This section explains how to migrate your Synology NAS via **Migration Assistant**. The simple setup wizard in Migration Assistant will guide you through the processes of copying volume / LUNs, data and settings of packages, and system configurations from one Synology NAS to another without migrating hard drives. Before you attempt to migrate via Migration Assistant, we recommend checking the **conditions** for this method again and paying special attention to **Before you start** and **Important** sections below to prevent accidental data loss.

Before you start:

- **On the source server**:
  - The DSM version on the source server must be DSM 6.0 or above. However, we recommended upgrading to DSM 6.0.3, 6.1.7, or 6.2.2.

version must be DSM 6.2.2 or above.

- Set up storage pool(s) in Storage Manager first, as data will be migrated on a volume/block-level basis. The total capacity of storage pool(s) must be larger than the total capacity of all volumes on the source server. For more information on how to create storage pool, please refer to **this page**.

- We recommend setting up the target server in the same local network as the source server.

- To learn more about the requirements and limitations of Migration Assistant, please refer to **online help**.

Important:

- The following items will be migrated by Migration Assistant:

  - Data (migrated on a volume/block-level LUN basis)

  - Packages, package settings, and package data

  - System configuration

- The following items will NOT be migrated:

  - The DSM version on the target server will remain unchanged

  - Synology Account settings

  - Licenses

  - Network settings in Control Panel

    - Server name, Default gateway, IPv6 default gateway in General tab

    - Network Interface (except for VPN profile, IPv6 Tunneling, MTU value in IPv4 settings, and 802.1X)

    - Static Route

  - Wireless settings in Control Panel

  - External Access settings in Control Panel

  - Push Service settings in Control Panel > Notification

  - Log Center's un-archived local logs

  - Security Advisor (except for Advanced setting)

 - OAuth Service (except for Common Settings)

- Performance Alarm logs in Resource Monitor
    - Desktop widget and taskbar settings
    - Virtual Machine Manager's settings
    - File or folder's sharing links. These will become invalid after migration
- To ensure all services (especially the following ones) on the target Synology NAS can take over the services on the source Synology NAS, and will work properly on the target Synology NAS, manual configuration will be required after migration. Please refer to **this article** to manually configure them after migration is complete:
    - **Services** such as QuickConnect, DDNS, DHCP Server, SSO Client, domain clients
    - **Server-related packages** such as CMS, Directory Server for Windows Domain, VPN Server, MailPlus
    - **Sync-related and backup-related packages** such as Synology Drive Server, Cloud Station Server, Active Backup for Business, Hyper Backup, Shared Folder Sync, Snapshot Replication, Cloud Sync, Glacier Backup
    - **Other packages** such as Surveillance Station, Docker, Virtual Machine Manager

To copy data across the Synology NAS:

1. Log in to the target Synology NAS.
2. Open **Package Center**. Find and install the package **Migration Assistant**.
   Note: To see packages in Beta version, go to **Package Center** > **Settings** > **Beta**, and tick **Yes, I want to see beta versions!**.
3. The Migration Wizard will be automatically launched the first time you open Migration Assistant, and it will guide you through the migration task setup process.
4. Please read through the information on the welcome and Before you start pages, and then click **Next**.

Welcome to Migration Wizard

Migration Assistant is designed to migrate all services and data to your new Synology NAS.

- ✔ Data
- ✔ Package
- ✔ System configuration

Source ┈┈ ───────► **Target**
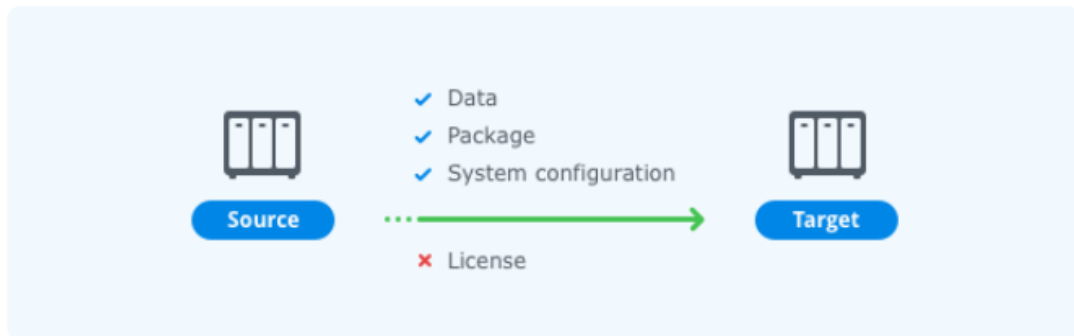
- ✘ License

- All data, packages, and system configuration on the source server will be migrated.
- Licenses (e.g. Surveillance Station) cannot be migrated. Learn about non-migratable items **here**.

Next   Cancel

Before you start

To ensure a successful migration, prior configuration on the source and target servers is required.

On the source server:

- The DSM version must be DSM 6.0 or above.
- The model must be supported by Migration Assistant. **Supported models**
- Synology High Availability, SSD cache, and Time Backup must be removed.

On the target server:

- Set up storage pool in Storage Manager first, as data will be migrated on a volume/block-level basis. The total capacity of storage pools must be larger than the total capacity of all volumes on the source server.
- We recommend setting up the target server in the same local network as the source server.

Back   Next   Cancel

5. Enter your source server's IP or server name, admin account, and password. Click **Next**.

Select the source server

Source server name, IP, or IP: custom port number ▼

Administrator account on the source server

Password

Back   Next   Cancel

6. Confirm settings. Click **Apply**.

Confirm settings

Source server: **demi3615 (10.17.29.219)**

Target server: **luke718p (10.17.40.32)**

Estimated migration time: **about 8 minutes** ⓘ

Volume/LUN allocation on target:

Volume/LUN ▲	Total Capacity	File System	Location (RAID Type)	
Volume 1	10 GB	Btrfs	Storage Pool 1 (SHR)	
Volume 2	15 GB	Btrfs	Storage Pool 1 (SHR)	

Note: All volumes, LUNs, packages, and system configurations on the target server (luke718p), including administrator's credentials, will be deleted and replaced by the ones on the source server (demi3615).

Back   Apply   Cancel

7. A dialogue will appear to confirm the actions that will be taken. Click **Continue**.
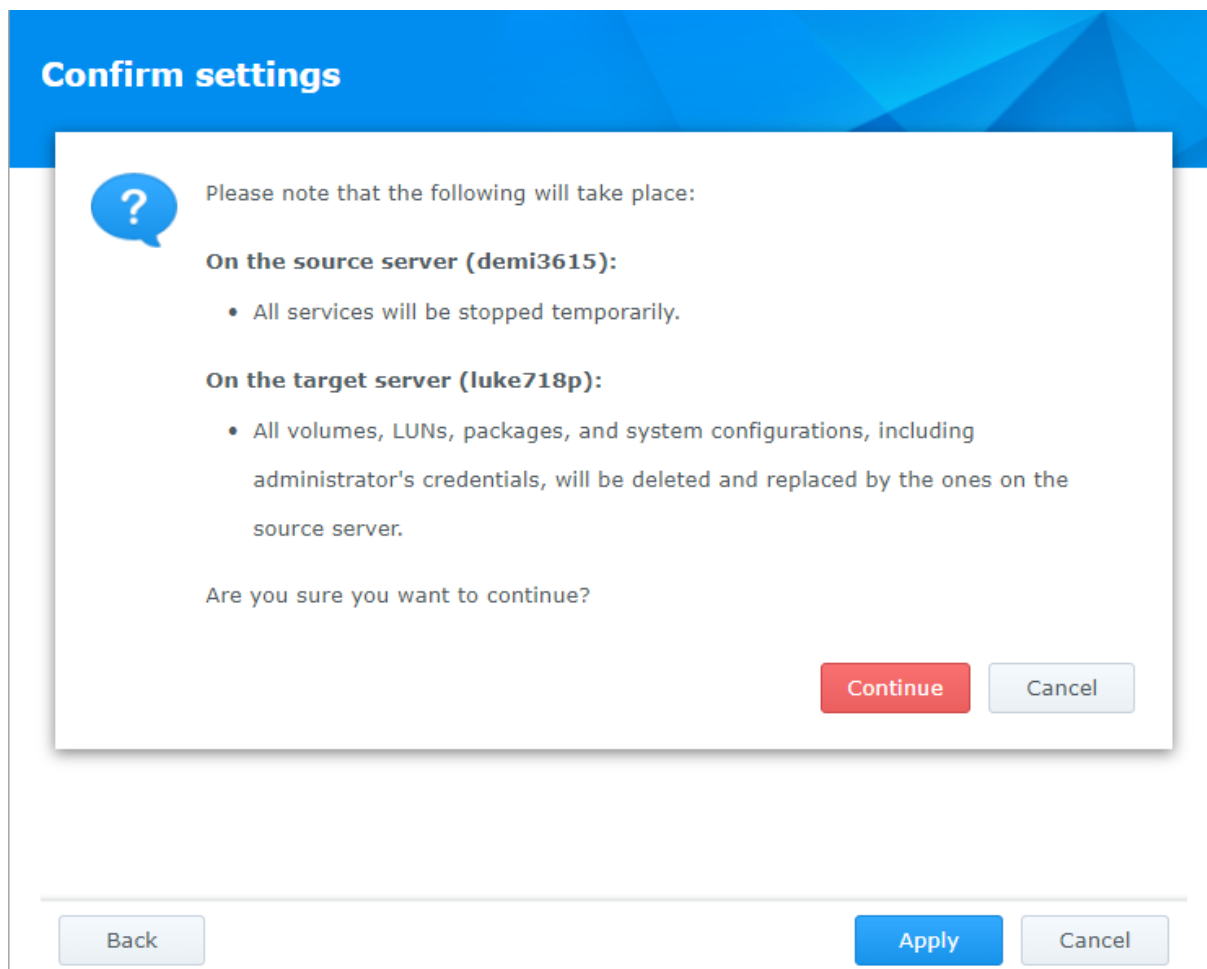
8. To double confirm the actions, you will be asked to enter the password of the account you're currently logged into. Click **Submit** after entering the password and begin the migration process.
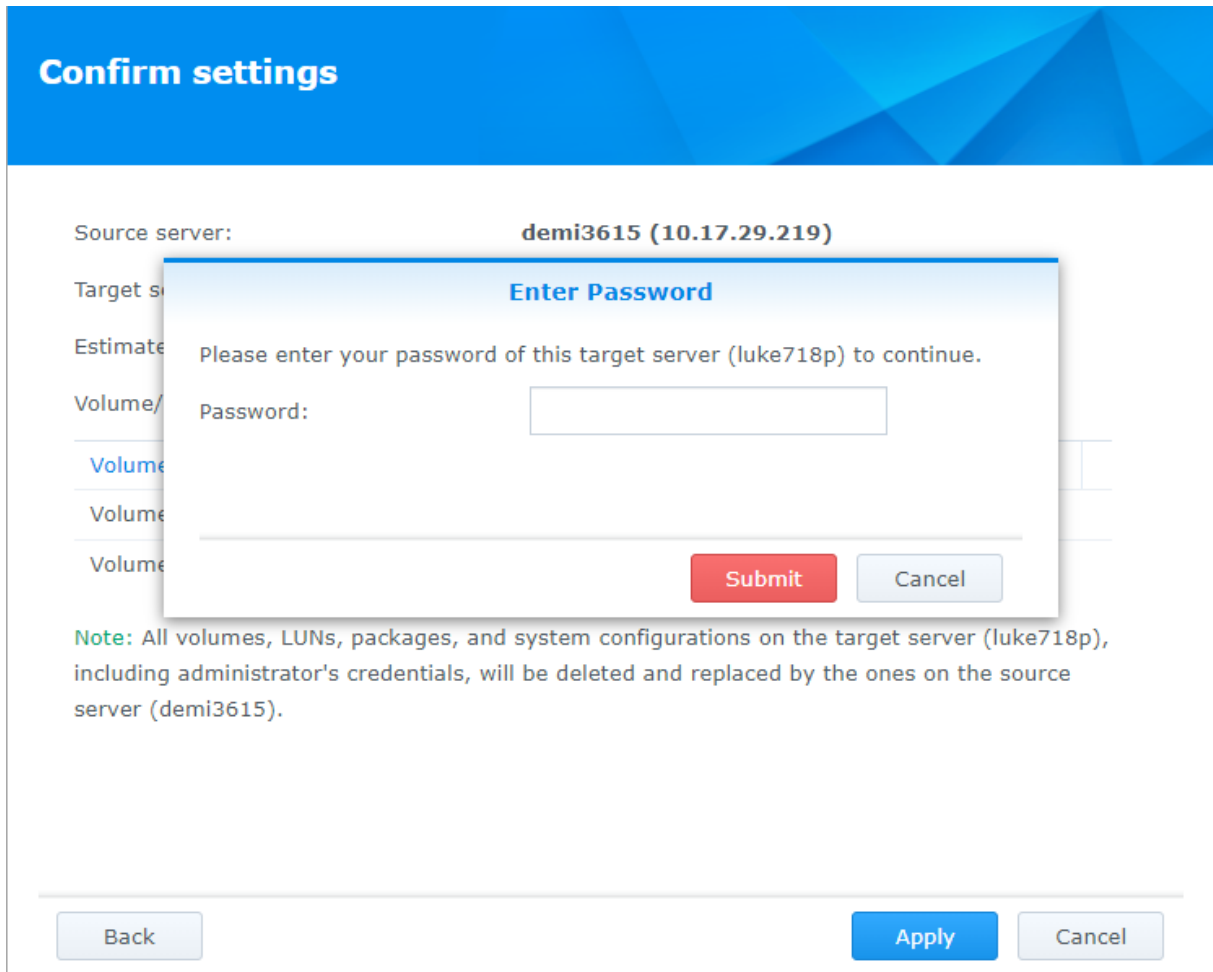
9. At the end of **System** stage, a dialogue will appear to inform you to restart the target server. click **Restart Now** to complete the data transfer and the connection between the two servers will be terminated.
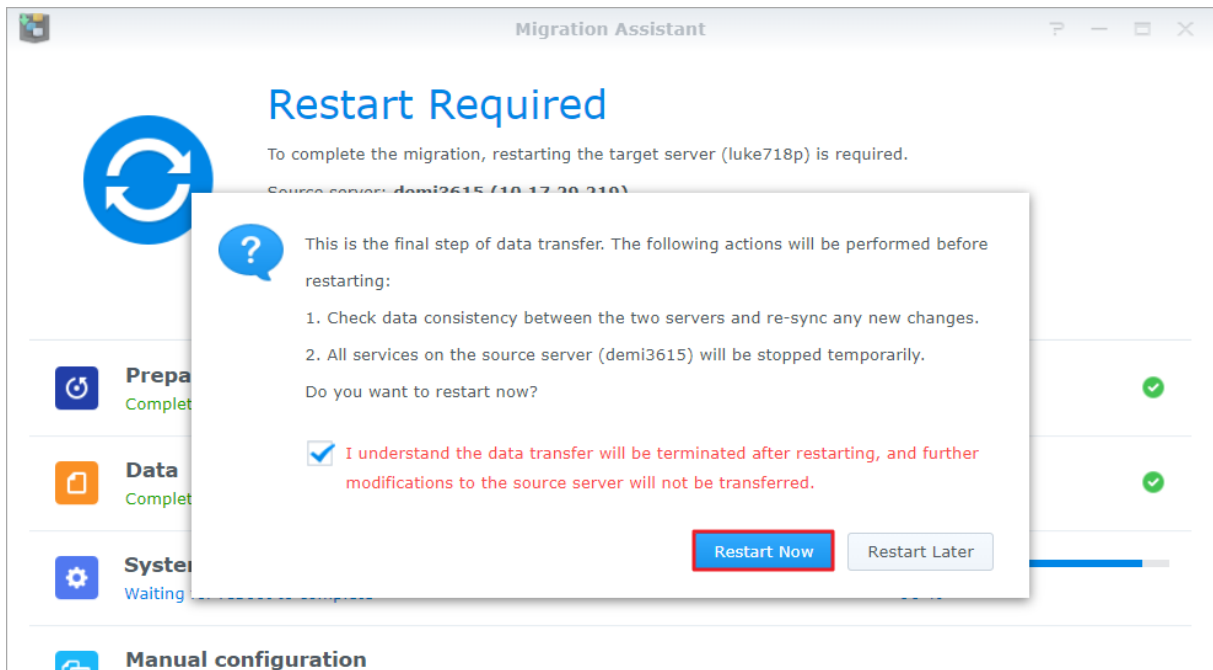
best practice to ensure all services can work properly on the target server.

> **The following actions CANNOT be performed during the migration process:**
>
> - Disabling the SSH service on the source server.
> - Editing or removing the user account named Migration Assistant on the source server. This account was automatically created by Migration Assistant for the migration task and will be removed after the migration task is completed.
> - Changing the storage location of packages on the source server.
> - Changing any settings on the target server.
> - Adding or removing volumes or Block-Level LUNs on either source or target server.
> - Editing the administrator account (such as disabling the account or changing the password) which is being used to connect to the source server.
> - Creating or deleting Bond on either source or target server.
> - Enabling or disabling Open vSwitch on either source or target server.

5. Migration via Hyper Backup

This section explains how to migrate your Synology NAS with **Hyper Backup**, with or **without network connection**. You can copy data from one Synology NAS to another without going through the hassle of migrating hard drives.

To copy data across the network:

> **Before you start:**
>
> - Set up and install DiskStation Manager on both Synology NAS. Connect them to the same network as your computer.
> - Log in to the target Synology NAS, go to **Storage Manager** > **Volume**, and make sure there is a volume with twice the amount of storage capacity as the amount of data on your source Synology NAS. For example, if you want to migrate 100GB of data from your source Synology NAS, then your target Synology NAS must have a volume with at least 200GB of storage capacity.
> - You must install Hyper Backup on your source Synology NAS while the destination Synology NAS must have both Hyper Backup and Hyper Backup Vault installed.

- To learn more about the requirements and limitation of Hyper Backup, read **online help**.

1. Log in to the **target Synology NAS**.

2. Open **Control Panel**.

3. Go to **File Services** > **rsync** and check the **Enable rsync service** box. Then click **Apply**.
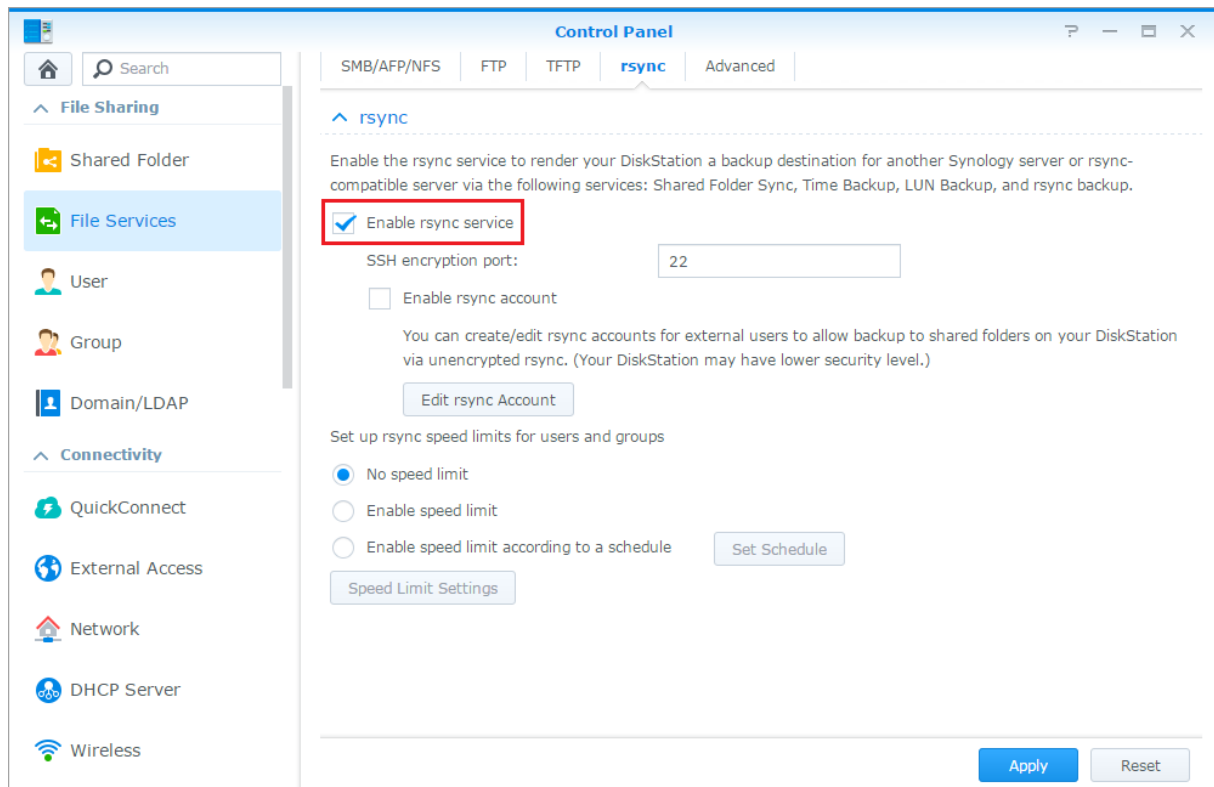
4. Now log in to the **source Synology NAS**.

5. Go to **Hyper Backup**.

6. Click the **Create** icon > **Data backup task**.

7. Choose the **Remote Synology NAS** option. Then click **Next**.

8. Enter the server name or IP address, admin account, and password of the target Synology NAS. You can also quickly find the target Synology NAS by clicking the arrow in the **Server name or IP address** text field. Specify which shared folder to back up data to and a directory that will be created (e.g. **DiskStation_1**). Then click **Next**.

Backup Destination Settings
Specify the backup destination for this task.

- Create backup task

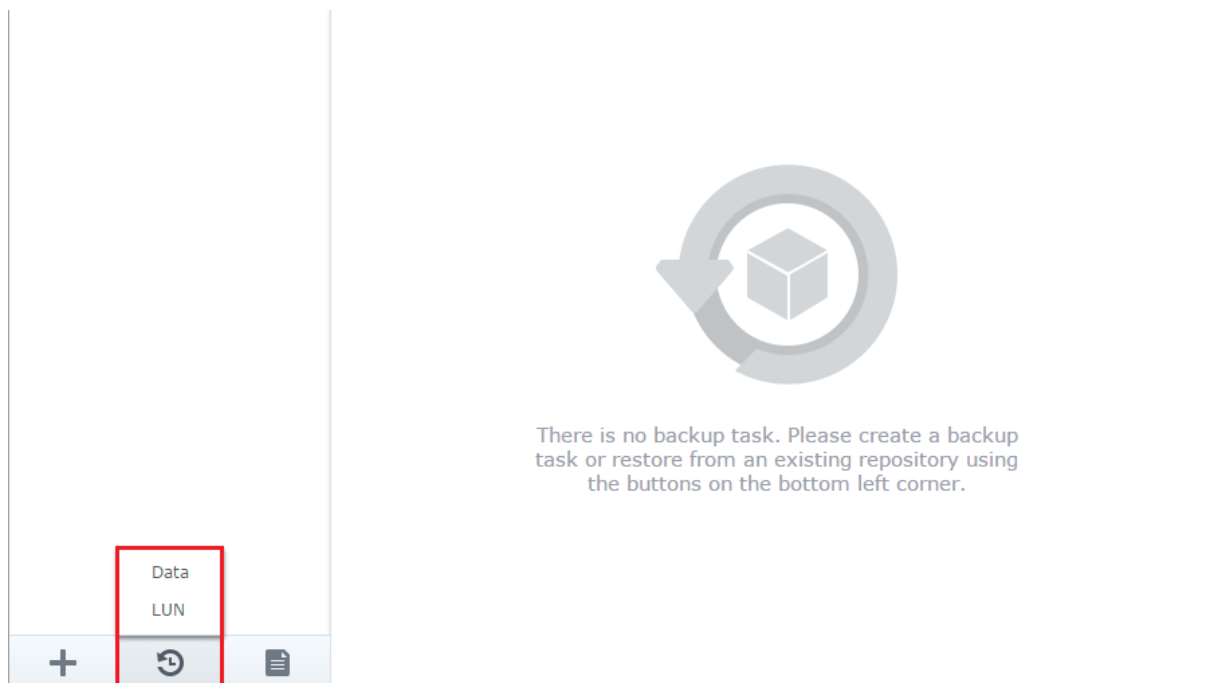|	
Server name or IP address:	10.12.10.151
Transfer encryption:	Off
Port:	6281
Username:	admin
Password:	••••••
Shared Folder:	
Directory:	

- Relink to existing task
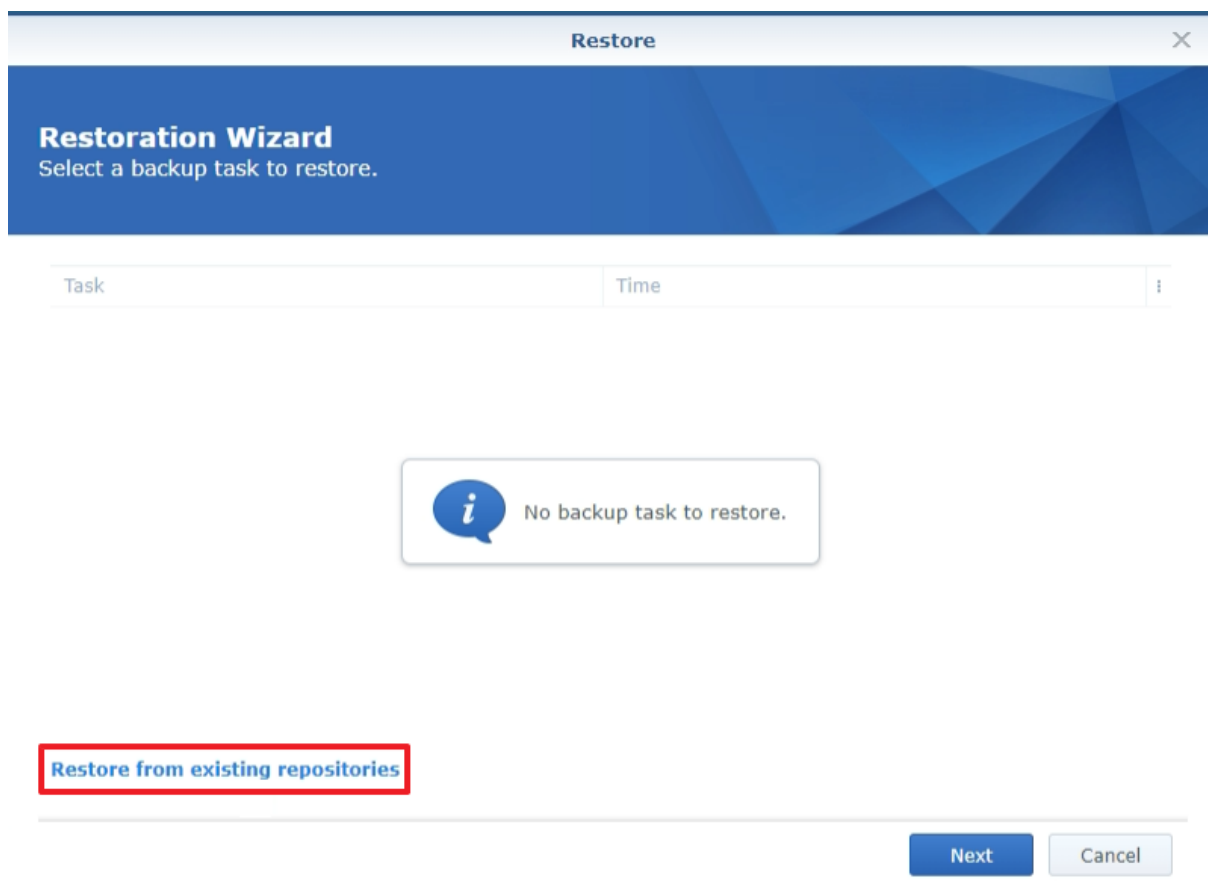- Export to a local shared folder (including an external storage device)

Back   Next   Cancel

9. Check the box of each folder you want to back up. Then click **Next**.

10. Check the box of each application you want to back up. Then click **Next**.

11. Click **Next** and follow the wizard instructions.

12. Wait for the backup task to finish backing up data to the target Synology NAS.


Hyper Backup

Synology NAS 1 ✓

Success

Last backup time: 2017-04-05 16:33
Next scheduled backup time: 2017-04-06 03:00

Back up now
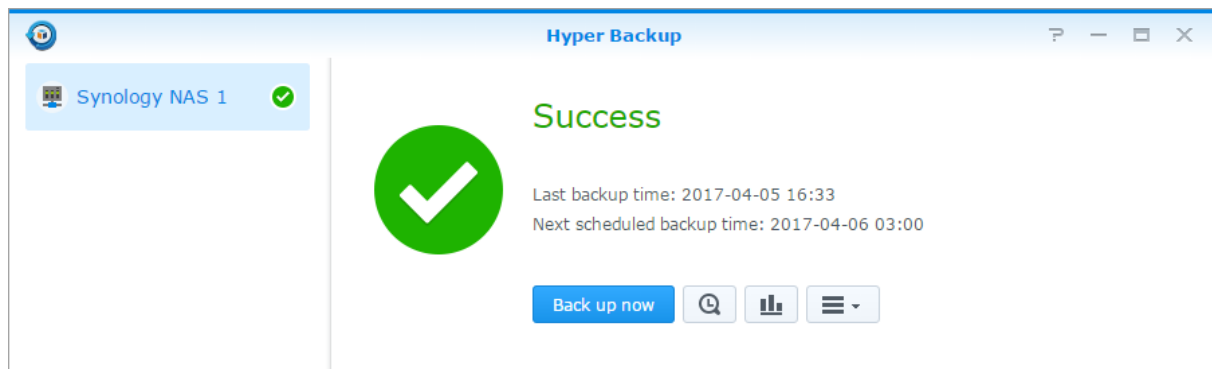
13. Now log in to the **target Synology NAS**.

14. Open **Hyper Backup**.

15. Click the **Restore** icon and choose **Data**.

Data
LUN

16. Select **Restore from existing repositories**.

Restore

Restoration Wizard
Select a backup task to restore.

Task	Time	

No backup task to restore.

Restore from existing repositories

Next   Cancel

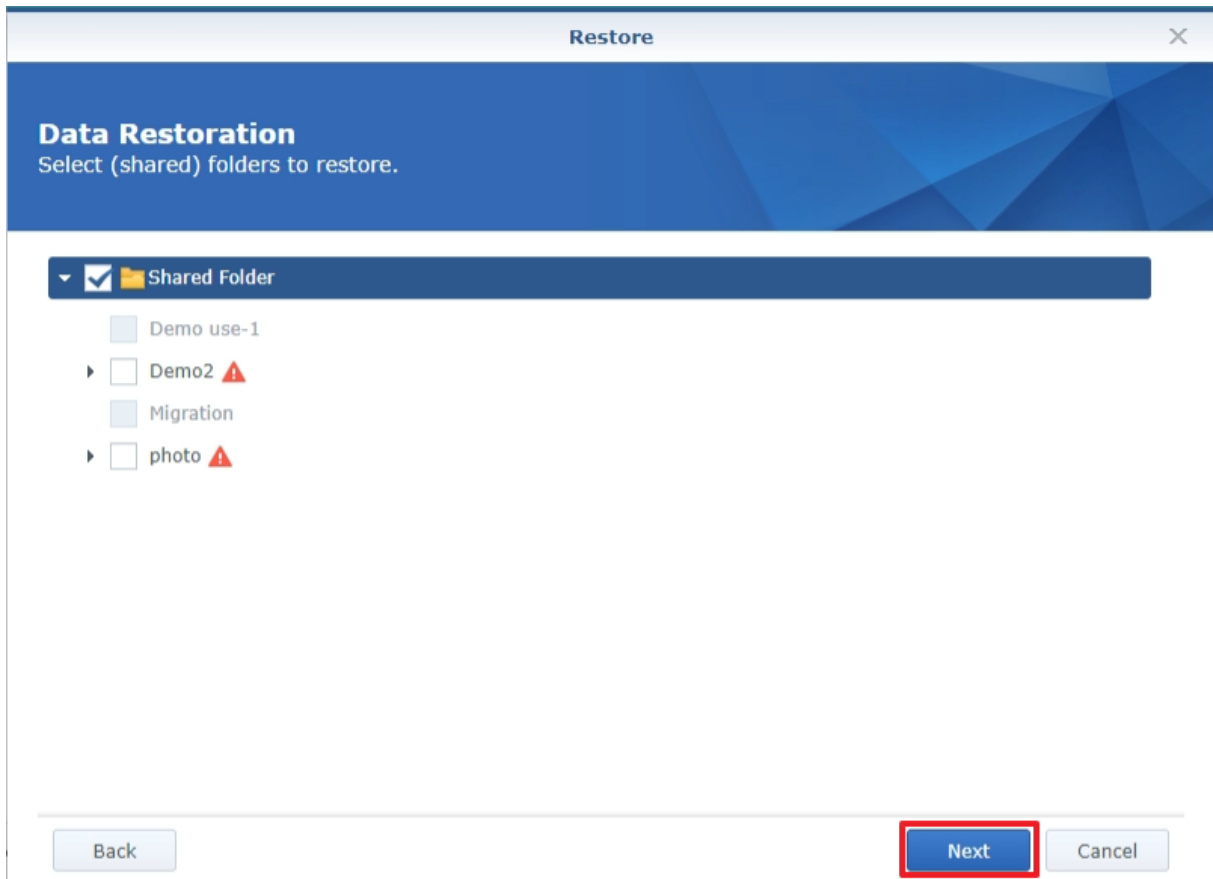17. Select **Local folder & USB** as the restoration source.
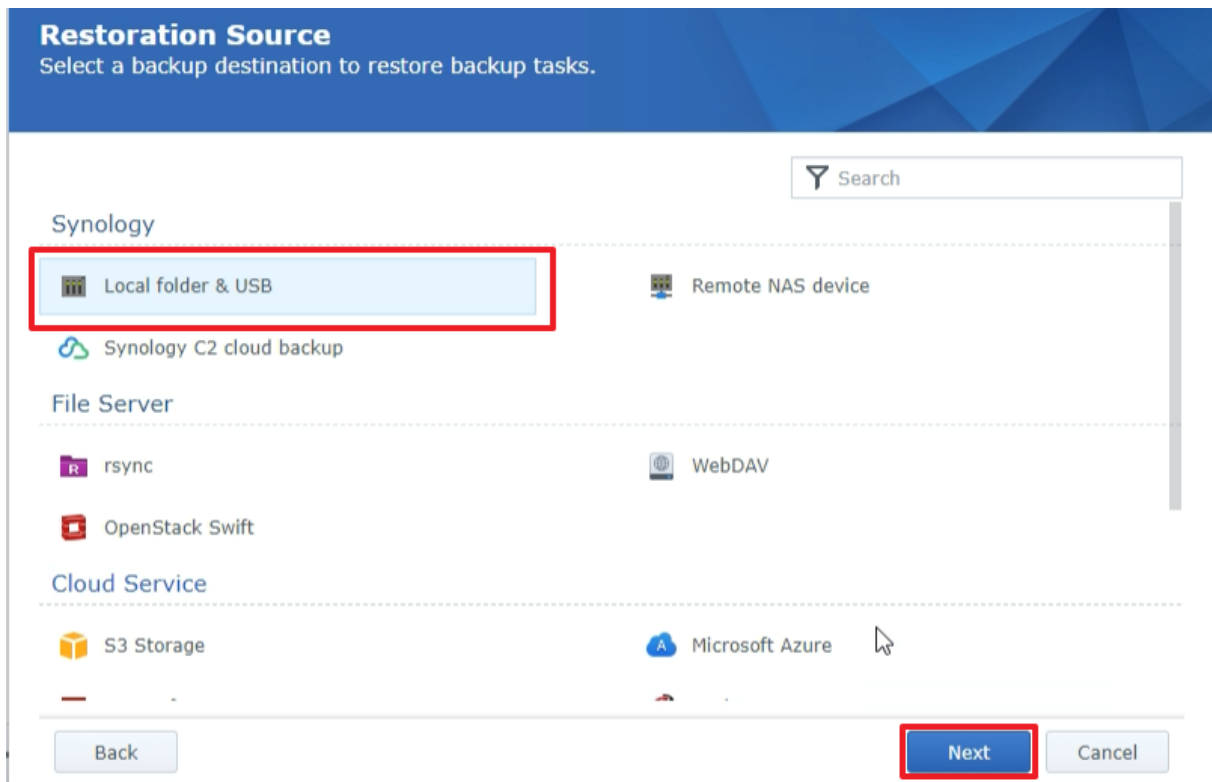
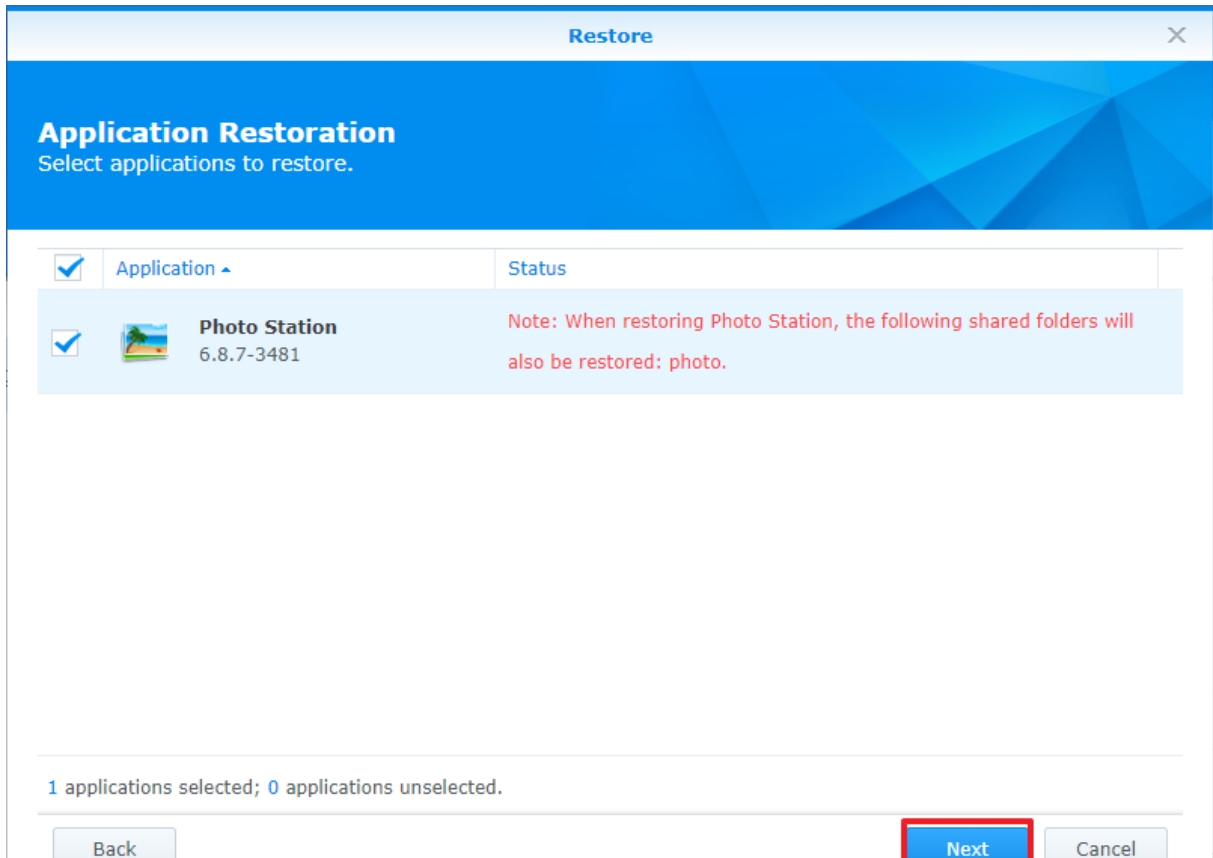18. Choose a shared folder as the backup destination for files from the source server.

19. In this example, we will choose to **Restore system configuration** and check **All System Configurations** because we want to restore all settings from the source Synology NAS. Click **Next**.

Oké
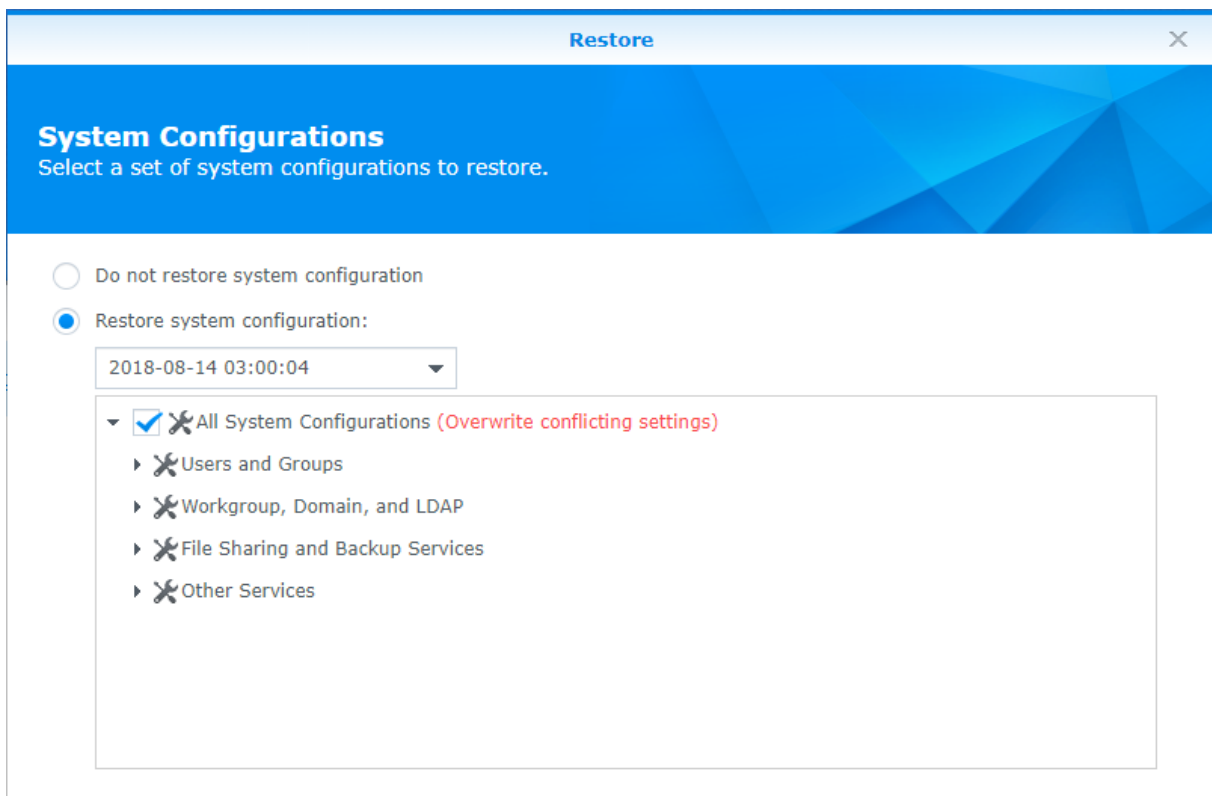
21. In this example, we will restore data of Photo Station. Click **Next**.

have confirmed all data and settings have been successfully copied and restored to the target Synology NAS, you can delete the shared folder used to restore the data.

**Making an offline backup to another storage device:**

Aside from the method above, if your Synology NAS is not connected to the internet, you can also copy data from the source Synology NAS to a storage device, and then copy the data from the storage device to the target Synology NAS.

> **Before you start:**
> - Make sure you are using the latest DSM and Synology Assistant. Both are available at Synology's **Download Center**.

To back up configurations:

1. Log in to the source Synology NAS.

2. Go to **Control Panel** > **Update & Restore**.

3. Go to the **Configuration Backup** tab and click **Back up configuration**. A configuration file named **[DiskStation Name]_[Created Date].dss** will be downloaded to your computer. Keep this file in a safe place.
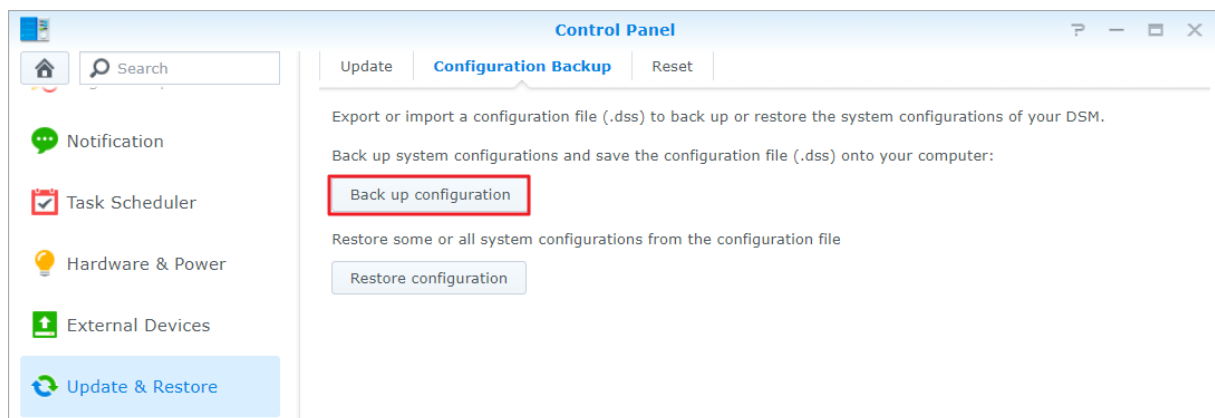
To back up data:

1. Log in to the source Synology NAS.

2. Go to **Hyper Backup**.

3. Click the **Create** icon > **Data backup task** to back up data on the source Synology NAS.

Data backup task

LUN backup task
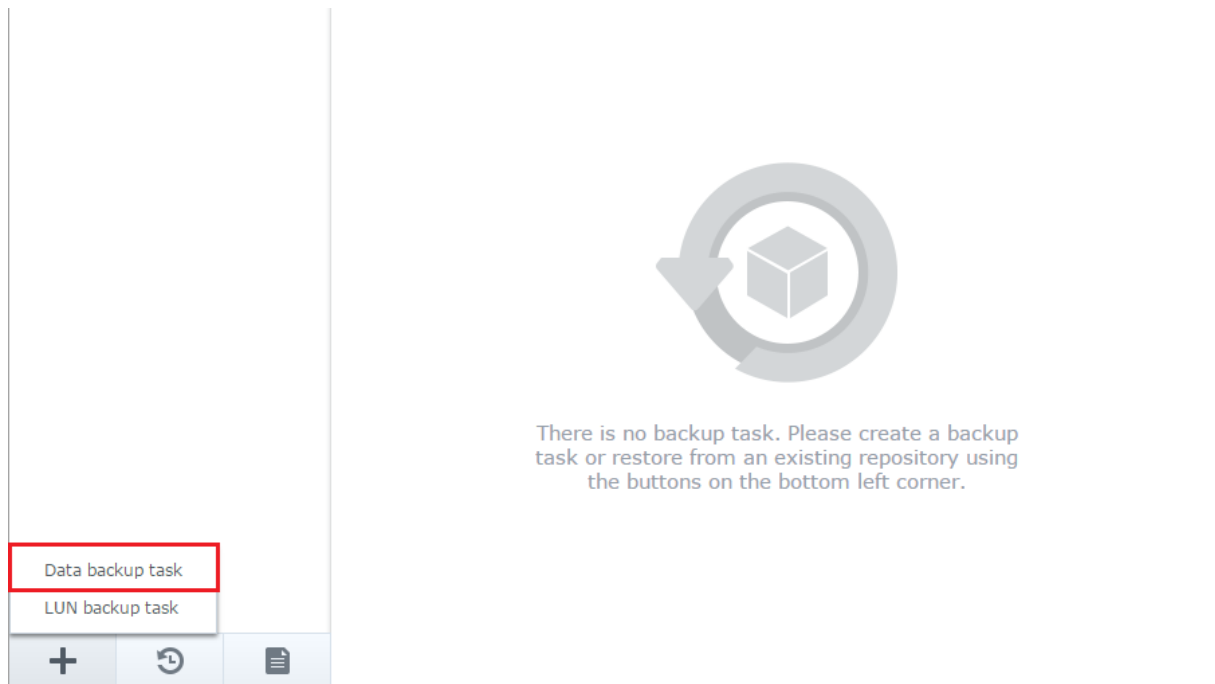
4. Remove the external storage device.

5. Now log in to the target Synology NAS. Make sure you have connected the external storage device to the target Synology NAS.

6. Open **Hyper Backup**.

7. Click the **Restore** icon and choose **Data** to copy the data from your storage device to the target Synology NAS.

8. Follow **steps 13 to 24** in **To copy data across the network**.
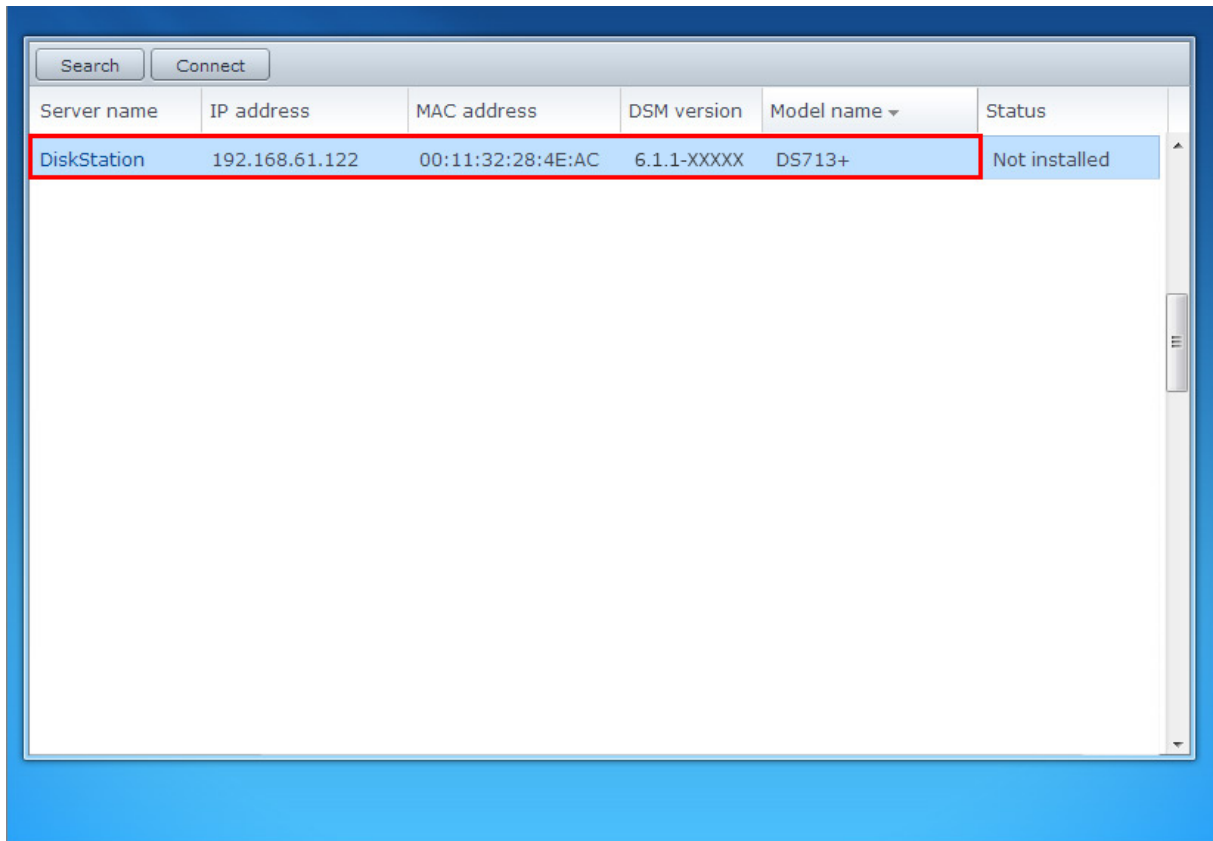

Important:

Make sure you complete the steps above before continuing.

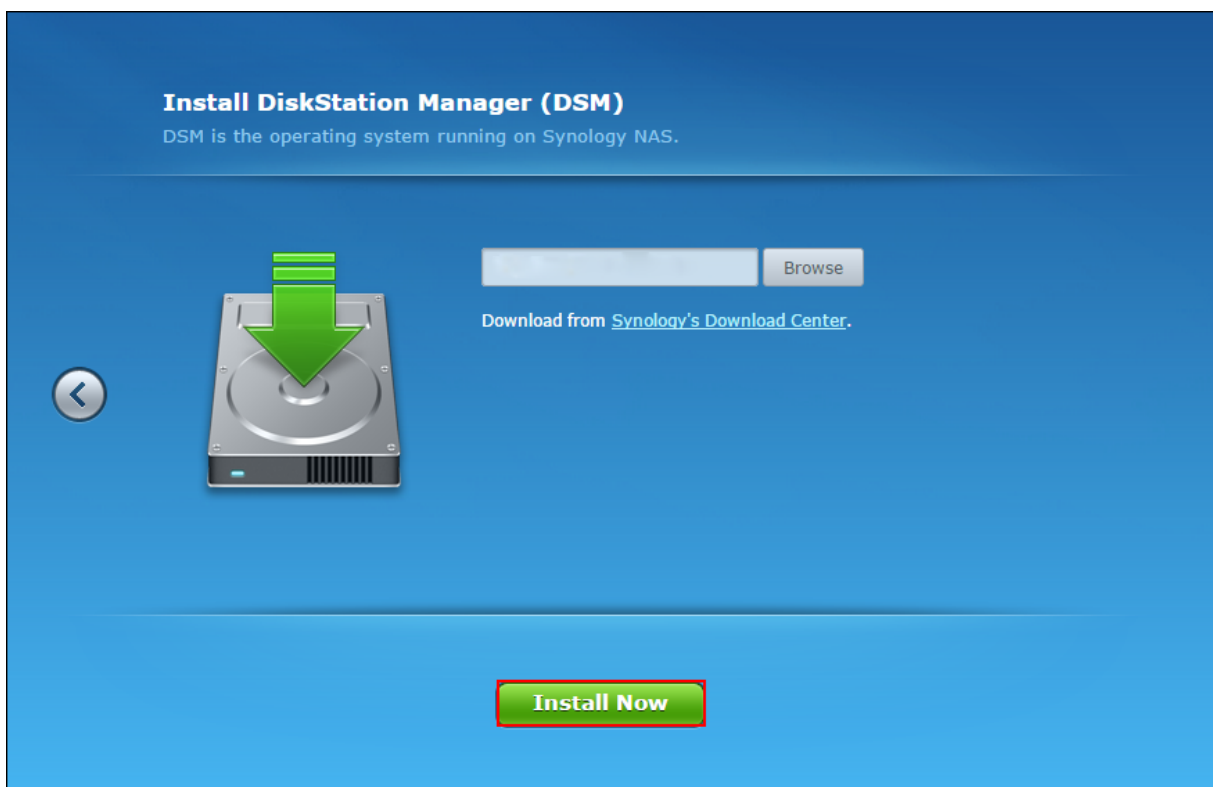---

To erase data on your drives:

1. Remove the drives from the source Synology NAS.

2. Delete all partitions and data on the drives by doing any of the following:

   - Install the drives into your computer, and then use the computer's disk utility to delete all partitions on the drives. Deleting data on drives with your computer should lower the chances of errors occurring. After that, install the drives into the target Synology NAS.

   - Install the drives directly into the target Synology NAS and let Synology Assistant delete partitions and data on the drives during DSM installation.

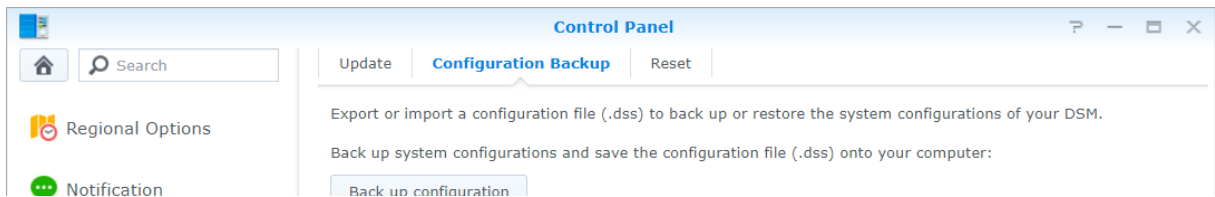| Server name	IP address	MAC address	DSM version	Model name ▾	Status
DiskStation	192.168.61.122	00:11:32:28:4E:AC	6.1.1-XXXXX	DS713+	Not installed

3. The welcome screen is displayed. Click **Next** to continue.

4. Use **Synology's Download Center** to download and install the newest version of DSM.

   Click **Install Now** to continue.

9. Click **restore configuration** to upload and restore configurations using the backup file you exported earlier.

Export or import a configuration file (.dss) to back up or restore the system configurations of your DSM.

Back up system configurations and save the configuration file (.dss) onto your computer:

Back up configuration

NAS Selector

RAID-rekenmachine
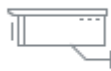
NVR Selector

Knowledge Base

Downloads

Community

Vennootschap

Verkoop

Compatibiliteit

Synology

Algemene Voorwaarden | Privacy

Nederlands