



Pro/VM

# Backup on Synology

**Mindtime  
Backup**

T +31 570 56 23 43 [info@mindtimebackup.com](mailto:info@mindtimebackup.com) [mindtimebackup.com](http://mindtimebackup.com)

**ISO 27001  
CERTIFIED**

# Table of Contents

Introduction.....	3
1. Preparation.....	4
1.1 Windows .....	4
1.2 SSH toegang .....	4
1.3 Backup account .....	4
2. Synology configuration .....	5
3. OBM installation and configuration .....	5
3.1 Preparation.....	5
3.2 Installation .....	6
3.3 Configuration.....	6
4. Restore .....	7
5. Summary .....	8
6. Explanatory words.....	8

## Introduction

Mindtime backup is not responsible for any data loss or the device no longer functioning due to modification of the device. This manual was written for people with some knowledge of how Linux and NAS devices work and how to modify the latter. In case that you do not know how these devices work or are uncertain about something please contact a professional for following this manual.

This manual was made and tested on a "Synology DS214play" with 2x Seagate 500GB disks in a RAID1 configuration. This specific model has an Intel x86 architecture (an Atom CPU), in case you own a simpler model like the "DS214" this manual won't work for you as this has an ARM (Marvell) CPU.

*12-09-2016*: The following Synology models support the x86 CPU requirement:

- DS214play (2 bay, Intel Atom CE5335 Dual Core @ 1,6 Ghz)
- DS216+II (2 bay, Intel Celeron N3060 Dual Core @ 2,48 Ghz)
- DS716+II (2 bay, Intel Celeron N3160 Quad Core @ 2,24 Ghz)
- DS713+ (2 bay, Intel Atom D2700 Dual Core @ 2,13 Ghz)
- DS416play (4 bay, Intel Celeron N3060 Dual Core @ 1,6 Ghz)
- DS415+ (4 bay, Intel Atom C2538 Quad Core @ 2,4 Ghz)
- DS916+ (4 bay, Intel Pentium N3710 Quad Core @ 1,6 Ghz)
- DS1515+ (5 bay, Intel Atom C2538 Quad Core @ 2,4 Ghz)
- DS1815+ (8 bay, Intel Atom C2538 Quad Core @ 2,4 Ghz)

## 1. Preparation

In this manual the assumption is made that the initial configuration like hard disk montage and network configuration are already done.

In case these are not done yet you need to complete these before continuing in this manual.

### 1.1 Windows

For the PC the program Putty is required to create a SSH connection to the NAS. Putty can be found as a [single executable](#) or as a [installation](#). (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>).

### 1.2 SSH toegang

In the Synology web interface go to "Control panel" > "Network services" and select "Terminal" Select the "Enable SSH service". Click "Apply". (when required the port can be altered, but remember it for later)

The minimal requirements have now been installed and activated to be able to edit the NAS configuration and install the OBM software.

### 1.3 Backup account

Go to [www.mindtimebackup.com](http://www.mindtimebackup.com) and create a Pro or VM Backup Demo or request an account from your partner. The PC software version doesn't have a Linux client which is required for a NAS device.

## 2. Synology configuration

In this manual the assumption is made that the hard disks are configured in RAID1 and that the software will be installed in: /volume1/@appstore/obm

The location might differ depending on the configuration you selected, in that case all references to the /volume1/@appstore folder in this manual should be changed to match your configuration. Remember to select a location outside the RAM drive because during a reboot the RAM drive is reset to factory settings.

We are now ready to connect to the NAS device using Putty, Type the internal IP of the NAS device and click connect. The web-interface uses the admin account but on ssh level this does not allow us to change the configuration so we need to connect using the root account. You need to logon using root / *[your password]*

Selecting text in Putty equals copy (Ctrl + C) and right clicking somewhere pastes the clipboard content at the location of the cursor (Ctrl + V)

The grey blocks are commands that can be copy-pasted when your configuration matches the one in this manual. Copy this 1 line at a time and click Enter after each line.

## 3. OBM installation and configuration

First create the desired backupset(s) using the web interface of the backup server, this can be found at [www.mindtimebackup.com](http://www.mindtimebackup.com) > login > Backup Server (client). It isn't necessary to fully configure the sets at this point yet but a clear name helps identify the sets during configuration.

For some unknown reason the scheduler ignores the time zone settings from the web-interface. So when a backup needs to run at 22:00 hours it needs to be scheduled at 21:00 hour.

### 3.1 Preparation

First the required folders are created and the software is downloaded.

```
mkdir /volume1/@appstore/obm
mkdir /volume1/@appstore/obm/scripts
cd /volume1/@appstore/obm
wget -O obm-nix.tar.gz https://www.mindtimebackup.com/downloads/Pro-backup-win.exe
tar xzfv obm-nix.tar.gz
```

The software is now downloaded and extracted to /volume1/@appstore/obm

Since the 6 series software there is a check to see if the current user has enough credentials to install the software, but this check can't handle the internal NAS admin account so we need to disable this.

```
vi /volume1/@appstore/obm/util/bin/privilege.sh
```

Go to the end of the file and change the following line

```
return $B_EXIT_CODE
```

To

```
return 0
```

## 3.2 Installation

Now we can start with the actual installation, during installation you might see an error message about the RC\_PATCH, this can be ignored.

```
cd /volume1/@appstore/obm/bin
./install.sh
cp /volume1/@appstore/obm/aua/bin/obmaua /volume1/@appstore/obm/scripts/.
cp /volume1/@appstore/obm/bin/obmscheduler /volume1/@appstore/obm/scripts/.
```

The installation is now completed and the startup scripts are secured in the install dir.

The /etc/init.d directory does not exist so the scripts are not copied to the correct destination.

All we have to do now is put the scheduler script in the correct location so that when to NAS is rebooted the scheduled backup will start.

```
cd /usr/local/etc/rc.d
cp /volume1/@appstore/obm/scripts/obmscheduler .
mv obmscheduler obmscheduler.sh
chmod 755 obmscheduler.sh
./obmscheduler.sh start
```

The script must have an .sh extension with the correct rights

*If you would like to run an application when the system boots up, you have to write a startup script and put it in /usr/local/etc/rc.d/. Following are some rules for the startup script:*

1. *It must have the suffix ".sh". For example, "myprog.sh".*
2. *The permission must be 755.*
3. *It must have the options "start" and "stop". When the system boots*

*up, it will call "myprog.sh start"; when it shuts down, it will call "myprog.sh stop".*

## 3.3 Configuration

The configuration has to be done First in order to create the software profile directory. You will be asked about the server address (e.g. backup05.mindtime.nl), connection type (HTTPS), username and password. After this you will be asked about the encryption key per backup, only the sets that run on this NAS need to be filled in correctly. Don't forget to answer yes when asked if the set should run on this machine.

! Write down the encryption key, because in case of loss we can't help with retrieving it !

```
cd /volume1/@appstore/obm/bin
./Configurator.sh
```

After the configuration is completed we can clean up the installation file.

```
rm -rf / volume1/@appstore/obm/obm-nix.tar.gz
```

Reboot the NAS device using the Synology web interface.

You can now use the backupserver web interface to configure what the backupsets should backup and when the backups should start. It takes about 5 to 10 minutes for the changes to be downloaded by the NAS device..

## 4. Restore

In case you want to restore something straight to the NAS device u can use the Restore.sh in de bin directory of the software.

We are now ready to connect to the NAS device using Putty, Type the internal IP of the NAS device and click connect. The default root account is replaced by the admin account so you need to logon using admin / *[your password]*

In this manual we assume you want to restore the BackupSet named Test. The restore will be executed in a screen because restoration might take a while.

```
cd /volume1/@appstore/obm/bin
cp Restore.sh RestoreTest.sh
vi RestoreTest.sh
```

The above command will create a copy of the Restore script so that it can be adjusted and opens it for input. After Vim is opened press the letter "i" to switch to input mode so that the parameters can be edited.

A minimum of 5 parameters must be changed before we can start the restore; Only edit the parameters between the "User Define Section" lines.

- **BACKUP\_SET** u can use the sets name or ID, The ID is in the summary of every backup report.
- **RESTORE\_TO** Where should the data base restored to.
- **RESTORE\_FROM** This is the path on the backup server where the files we want to restore where at POINT\_IN\_TIME on the server.
- **POINT\_IN\_TIME** The exact time of the backupjob you want to restore to (Your partner can provide you with the correct code using the report function in the Partner Portal)
- **SETTING\_HOME** Points to the profile home dir so the script can be linked to the account.

An example RestoreTest.sh. This would restore the directory Orders from the job 1-8-2015 at 02:06:15 to a temporarily folder.

```
##### Start - User Define Section #####
BACKUP_SET="Test"
RESTORE_TO="/volume1/Raid1/Data/Temp "
RESTORE_FROM="/volume1/Raid1/Data/Orders "
POINT_IN_TIME="2015-08-01-02-06-15"
RESTORE_PERMISSION="Y"
SKIP_INVALID_KEY="N"
SYNC_OPTION="N"
REPLACE_EXISTING_FILE="-all"
SETTING_HOME="/root/.obm"
FILTER=""
##### END: User Define Section #####
```

After u are done changed the parameters press ESC and then ":" (shift ;) to open the Vim prompt. At the prompt type **wq** (Write Quit)

Use the following command to start the restore process.

```
./RestoreTest.sh
```

## 5. Summary

- The software is installed under `/volume1/@appstore/obm`
- The profile directory with all settings and logs can be found here: `/root/.obm`
- During a reboot everything under `/` is reset so the following items have been secured:
  - `/etc/init.d/obmscheduler` (Online Back-up scheduler service)
- For MariaDB backup the dump tool can be found in `/volume1/@appstore/MariaDB/usr/bin/mysqldump`

## 6. Explanatory words

<b>Word</b>	<b>Meaning</b>
<b>HTTPS</b>	A secured internet connection
<b>OBM</b>	Online Backup Manager (Pro Backup Manager)
<b>Backupset</b>	A collection of settings for a backup selection
<b>Backupjob</b>	The task when a backupset is executed
<b>Encryptionkey</b>	Your unique code used to secure/encrypt your data
<b>Backup server</b>	A machine in a secured room
<b>Firmware</b>	Software running on hardware (e.g. the menu you see on a phone)
<b>VI/VIM</b>	A simple text editor for Linux
<b>Restore</b>	The restoration / recovery of data from the backup
<b>NAS</b>	Network Attached Storage. An "computer" harddisk which contains data with its own network connection allowing every machine in the network to access the data.
<b>SSH</b>	Secure Shell. An encrypted connection between your machine and the remote device allowing you the execute command on the remote machine.