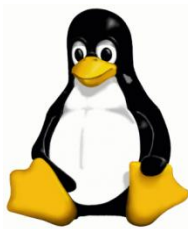




Manual – Pro Backup Client on a NAS

Created and tested on a QNAP TS-559 Pro
Intel x86 Architecture
Default hardware configuration
OBM v5.5.8.0

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1. Preperation

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. QNAP

Two steps are required to prepare the NAS for the customization that is necessary for this manual.

1.2.1. IPKG

Login on the webinterface of the QNAP device and goto "Applications" The select "QPKG Plugins" at the top right select "Get QPKG" and a popup is opened. At the bottom of the list there is a package named "Optware IPKG (Itsy Package Management System)". Click this link an select the Intel x86 zip file for download, the popup can now be closed. After downloading the zip en extracting it proceed to the "Installation" tab and select the recently extracted qpkg file for installation.



After the installation is finished click the Optware icon , In case it hasn't been activated yet this can be done in the current screen.

1.2.2. SSH

In the QNAP webinterface goto "Network Services" and select "Telnet / SSH" Select the "Allow SSH connections". Click "Apply".

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



2. Adjust QNAP configuration

2.1. Pre

In this manual the assumption is made that the hard disks are configured in RAID5 and that the software will be installed in: /share/MDO_DATA/.qpkg/obm

The location might differ depending on the configuration you selected, more details about this can be found in [the unofficial manual](#) under the chapter “How HDDs are Referenced” created by [Don](#) (QNAP owner)

It might be the case that you don't have a MDO_DATA folder under the /share folder, in that case all references to the MDO_DATA 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 default root account is replaced by the admin account so you need to logon using **admin / [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.

2.2. Installing IPKG packages

The default shell that is provided by QNAP is limited in its functionality. In order to “improve” some of the functions as well as install some required functions the following IPKG packages need to be installed on the QNAP NAS.

```
ipkg install vim
ipkg install screen
ipkg install gcc
ipkg install wakelan
ipkg install openssl
ipkg install bash
ipkg install grep
ipkg install less
ipkg install links
ipkg install lsof
ipkg install man
ipkg install coreutils
```

Vim is a text editor under Linux, It can be used via **vi [file]** or **vim [file]**

Screen starts a session environment that stays active even when the connection is interrupted. Before executing long commands it's wise to start Screen using **# screen**. You can reconnect using **# screen -R**.



2.3. Creating the startup script

We are now going to create a startup script that will be executed during boot in order to make the necessary changes that are lost because they were made in the RAM drive.

```
vi /share/MD0_DATA/.qpkg/autorun.sh
```

The above command creates a new file called autorun.sh. After Vim is opened press the letter “i” to switch to input mode. Copy the text below and right click in the Putty window to paste the text in the newly created file.

```
PATH=/opt/bin:/opt/sbin:$PATH

rm /bin/vi
ln -s /share/MD0_DATA/.qpkg/Optware/bin/vim /bin/vi
rm /bin/vim
ln -s /share/MD0_DATA/.qpkg/Optware/bin/vim /bin/vim
ln -s /share/MD0_DATA/.qpkg/Optware/bin/screen /bin/screen
ln -s /share/MD0_DATA/.qpkg/Optware/bin/ipkg /bin/ipkg
ln -s /share/MD0_DATA/.qpkg/Optware/bin/gcc /bin/gcc
ln -s /share/MD0_DATA/.qpkg/Optware/bin/wakelan /bin/wakelan
ln -s /share/MD0_DATA/.qpkg/Optware/bin/openssl /bin/openssl
ln -s /share/MD0_DATA/.qpkg/Optware/bin/bash /bin/bash
rm /bin/ash
ln -s /share/MD0_DATA/.qpkg/Optware/bin/bash /bin/ash
rm /bin/grep
ln -s /share/MD0_DATA/.qpkg/Optware/bin/grep /bin/grep
ln -s /share/MD0_DATA/.qpkg/Optware/bin/less /bin/less
ln -s /share/MD0_DATA/.qpkg/Optware/bin/links /bin/links
ln -s /share/MD0_DATA/.qpkg/Optware/sbin/lsof /bin/lsof
ln -s /share/MD0_DATA/.qpkg/Optware/bin/man /bin/man

ln -s /share/MD0_DATA/.qpkg/Optware/bin/coreutils-nohup /bin/nohup
ln -s /share/MD0_DATA/.qpkg/obm/.obm /root/.obm
cp -f /share/MD0_DATA/.qpkg/obm/scripts/obmscheduler /etc/init.d/.
cp -f /share/MD0_DATA/.qpkg/obm/scripts/obmaua /etc/init.d/.
sh "/etc/init.d/obmscheduler" start &
sh "/etc/init.d/obmaua" start &
```

After the text is pasted press “:” (shift ;) to open the Vim prompt. At the prompt type **wq** (Write Quit)



2.4. Adjust QNAP startup configuration

In order to make the QNAP NAS load our autorun.sh during boot we first need to load the current configuration. This configuration depends on the NAS model you have, more information about this can be found at the QNAP wiki:

http://wiki.qnap.com/wiki/Running_Your_Own_Application_at_Startup

```
mount /dev/sdx6 /tmp/config  
cd /tmp/config
```

Before removing the autorun.sh check if it already has a content. In case there is you need to add the commands before our [startupscript](#) in the autorun.sh so the existing code is executed before ours. After this is done the old script can be removed and a link to ours can be made.

```
rm autorun.sh  
ln -sf /share/MD0_DATA/.qpkg/autorun.sh autorun.sh  
cd /  
umount /dev/sdx6
```

The umount command is required

If the startup script is no longer executed after a firmware update the above instructions can be used to restore the script.



3. OBM installation and configuration

First create the desired backupset(s) using the webinterface of the backupserver, this can be found at www.mindtimebackup.com > login > Backup Server (client). It isn't necessary the fully configure the sets at this point yet but a clear name helps identify the sets during configuration.

3.1. Preparation

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

```
mkdir /share/MDO_DATA/.qpkg/obm
mkdir /share/MDO_DATA/.qpkg/obm/scripts
cd /share/MDO_DATA/.qpkg/obm
wget -O obm-nix.tar.gz http://www.mindtimebackup.nl/webfm_send/75/1
tar -zxf obm-nix.tar.gz
```

The software is now downloaded and extracted to /share/MDO_DATA/.qpkg/obm

3.2. Installation

Now we can start with the actual installation, during installation you might see a error message about the RC_PATCH, this can be ignored.

```
cd bin
./install.sh
cp /etc/init.d/obmaua /share/MDO_DATA/.qpkg/.obm/scripts/
cp /etc/init.d/obmscheduler /share/MDO_DATA/.qpkg/.obm/scripts/
```

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

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 !

```
./Configurator.sh
```

After the configuration is completed it can be closed so we can secure it outside the RAM drive.

```
cp -r /root/.obm /share/MDO_DATA/.qpkg/obm/
rm -rf /root/.obm
rm -rf /share/MDO_DATA/.qpkg/obm/obm-nix.tar.gz
```

Reboot the NAS device using the QNAP webinterface.

You can now use the backupserver webinterface 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. Summary

- The software is installed under `/share/MD0_DATA/.qpkg/obm`
- The profile directory is moved from `/root/.obm` to `/share/MD0_DATA/.qpkg/obm/.obm` and a symbolic link has replaced it.
- The boot scripts have been altered to include our `autorun.sh`
- During a reboot everything under `/` is reset so the following items have been secured:
 - `/etc/init.d/obmscheduler` (Online Back-up scheduler service)
 - `/etc/init.d/obmaua` (Auto update agent)
 - `/root/.obm` (Profile folder)



5. Explanatory words

Word	Meaning
HTTPS	A secured internet connection
OBM	Online Backup Manager (Pro Backup Manager)
Backupset	A collection of settings for a backup selection
Backupjob	The task when a backupset is executed
Encryptiesleutel	Your unique code used to secure/encrypt your data
Backupserver	A machine in a secured room
Firmware	Software running on hardware (e.g. the menu you see on a phone)