



TS-409 Turbo NAS

User Manual (Version: 2.1.0)



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FOREWORD

Thank you for choosing QNAP products! This user manual provides detailed instructions of using TS-409. Please read carefully and start to enjoy the powerful functions of TS-409!

NOTE

- "TS-409" or "TS-409 Pro" is hereafter referred to as "NAS".
- This manual provides the description of all functions of TS-409. The product you purchased may not support certain functions dedicated to specific models.
- All features, functionality, and other product specifications are subject to change without prior notice or obligation.
- All brands and products names referred to are trademarks of their respective holders.

LIMITED WARRANTY




In no event shall the liability of QNAP Systems, Inc. (QNAP) exceed the price paid for the product from direct, indirect, special, incidental, or consequential software, or its documentation. QNAP makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. QNAP reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.








CAUTION

1. Back up your system periodically to avoid any potential data loss. QNAP disclaims any responsibility of all sorts of data loss or recovery.
2. Should you return any components of the NAS package for refund or maintenance, make sure they are carefully packed for shipping. Any form of damages due to improper packaging will not be compensated.

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Safety Warnings

1. The NAS can operate normally in the temperature of 0°C-40°C and relative humidity of 0%-95%. Please make sure the environment is well-ventilated.
2. The power cord and devices connected to the NAS must provide correct supply voltage (100W, 90-264V).
3. Do not place the NAS in direct sunlight or near chemicals. Make sure the temperature and humidity of the environment are in optimized level.
4. Unplug the power cord and all connected cables before cleaning. Wipe the NAS with a dry towel. Do not use chemical or aerosol to clean the NAS.
5. Do not place any objects on the NAS for the server's normal operation and to avoid overheat.
6. Use the flat head screws in the product package to lock the hard disks in the NAS when installing hard disks for proper operation.
7. Do not place the NAS near any liquid.
8. Do not place the NAS on any uneven surface to avoid falling off and damage.
9. Make sure the voltage is correct in your location when using the NAS. If you are not sure, please contact the distributor or the local power supply company.
10. Do not place any object on the power cord.
11. Do not attempt to repair your NAS in any occasions. Improper disassembly of the product may expose you to electric shock or other risks. For any enquiries, please contact the distributor.

Chapter 1. Overview

1.1 Introduction

Thank you for choosing QNAP NAS. This product has the following key features:

- ✓ Powerful All-in-one NAS Server (12-in-1)

File Server

- Sharing files across Windows, Mac, Linux, and Unix.
- Windows AD service support

FTP Server

- Access files from remote location via FTP server
- Encrypted FTP via SSL/ TLS (explicit) mode
- Passive FTP port range control

Backup Server

- Professional Backup Software- NetBak Replicator
- Automatic/ Instant/ Schedule Backup

Remote Replication

- Back up critical data on QNAP NAS to other QNAP NASes in remote locations over the network.
- Encrypted remote replication
- Block-level backup

Printer Server

- Network printer sharing via USB
- Support Windows & Mac platforms (maximum 3 sets)

RAID Station

- Advanced disk configurations: RAID 0, 1, 5, 6, 5 + spare, single and JBOD.
- Intelligent on-line RAID capacity expansion and RAID level migration

Web Server

- Support Joomla!, PHP and MySQL/ SQLite
- Create your own online shops, forums, and blogs over the Internet

MySQL Server

- MySQL and SQLite dual support
- Can be configured as a standalone database server
- Built-in MySQL management tool- phpMyAdmin

UPnP Media Server

- Built-in TwonkyMedia Server

- Media streaming to DLNA compliant DMA, PS3 or Xbox 360 game consoles
- Photos and videos playing on TV, and music and Internet radio playing on Hi-Fi system

iTunes Server

- Music streaming from NAS to the iTunes program on Mac or Windows PC
- Smart playlist

Multimedia Station

- Photo sharing via web-based photo album.
- Photo album access authority management

Download Station

- BitTorrent (with DHT), FTP and HTTP download
- Remote management of the download tasks by QGet software anytime, anywhere.

Surveillance Station

- Remote real-time monitoring and recording of network cameras

- ✓ Diagnostic and Monitoring System: HDD S.M.A.R.T. and HHS Technology to prevent physical hard drive failure
- ✓ Powerful System Management: Comprehensive event logs for multiple file sharing protocols and file-level recordings

1.2 Package Contents

Your NAS package contains:

- ✓ TS-409 Turbo NAS



- ✓ Adaptor



- ✓ Power cord



- ✓ CD-ROM (user manual, QNAP Finder & utility inclusive)



- ✓ Quick Installation Guide



- ✓ Flat head screw x 16



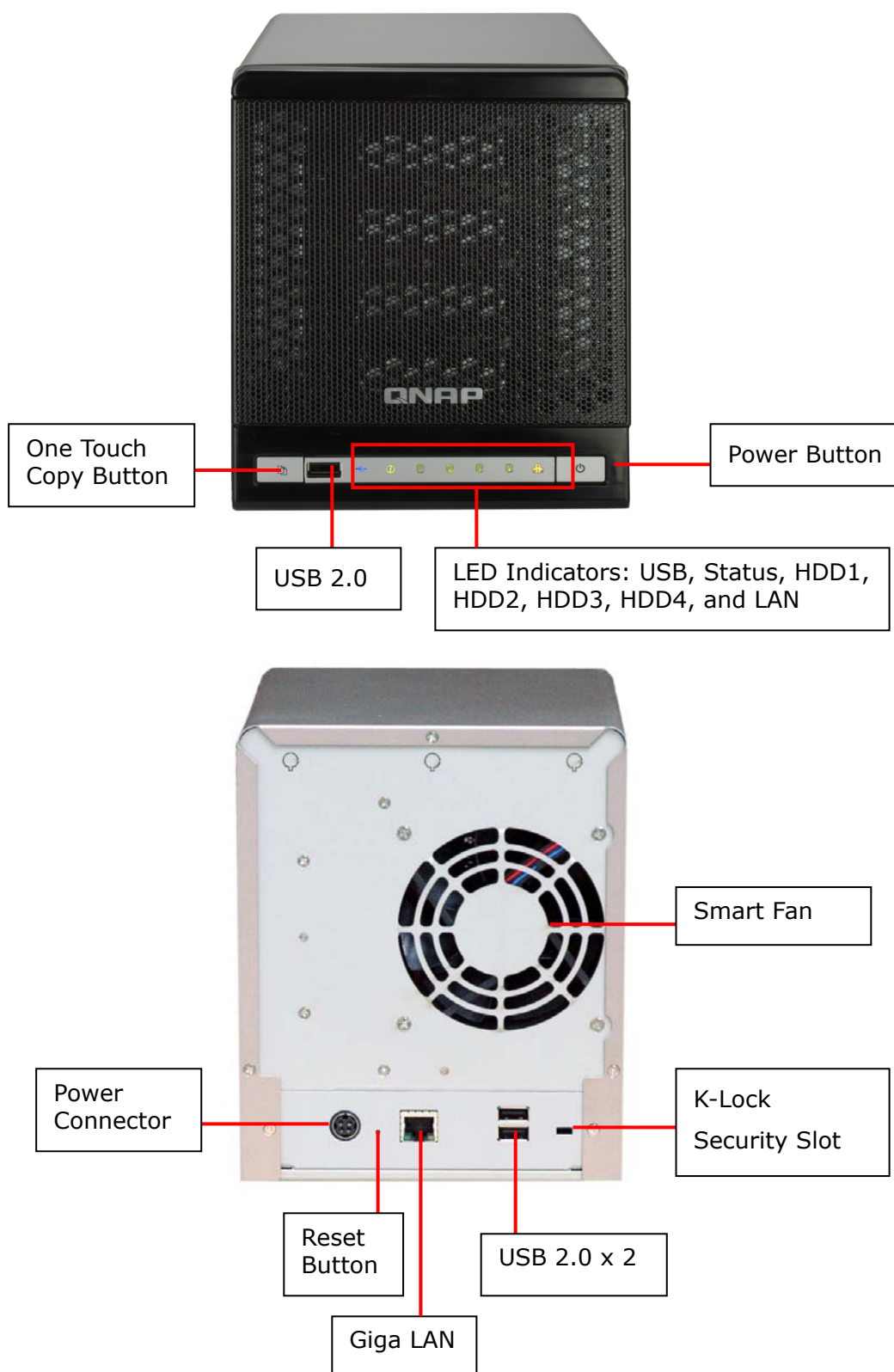
- ✓ Ethernet cable



- ✓ Hard disk lock



1.3 Hardware Illustration



Chapter 2. Install NAS

2.1 Install Hard Disk

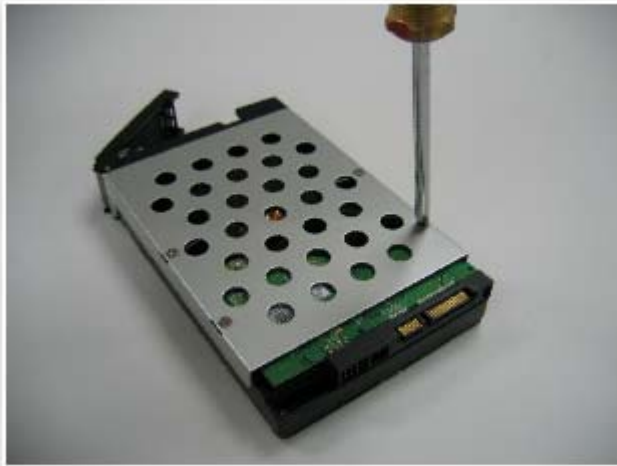
1. Open the front cover.



2. Take out the disk trays.



3. Install a hard disk on each tray. Make sure the disk holes match the holes at the base of the disk tray and lock the disk with four screws.



4. Insert the disk trays to the NAS. Push the disk trays to the end.



2.2 Hard Disk Compatibility List

The following HDD models are verified by QNAP that are compatible with the NAS. It is recommended to use the disk models listed here. Other HDD brands that are not tested by QNAP may or may not work properly with the NAS. For more updated compatible hard disk information, please visit QNAP website at <http://www.qnap.com>.



QNAP disclaims any responsibility for product damage/ malfunction or data loss/ recovery due to misuse or improper installation of hard disks in any occasions for any reasons.

Brand	Product Family	Model	Interface	Drive size (GB)	RPM	Buffer Size (MB)
Hitachi	Deskstar 7K1000	HDS721010KLA330	SATA II	1000	7200	32
Hitachi	Deskstar 7K1000	HDS721075KLA330	SATA II	750	7200	32
Hitachi	Deskstar T7K500	HDT725050VLA360	SATA II	500	7200	16
Hitachi	Deskstar T7K500	HDT725050VLA380	SATA II	500	7200	8
Hitachi	Deskstar T7K500	HDT725040VLA360	SATA II	400	7200	16
Hitachi	Deskstar T7K500	HDT725040VLA380	SATA II	400	7200	8
Hitachi	Deskstar T7K500	HDT725032VLA360	SATA II	320	7200	16
Hitachi	Deskstar T7K500	HDT725032VLA380	SATA II	320	7200	8
Hitachi	Deskstar T7K500	HDT725025VLA360	SATA II	250	7200	16
Hitachi	Deskstar T7K500	HDT725025VLA380	SATA II	250	7200	8
Hitachi	Deskstar T7K250	HDT722525DLA380	SATA II	250	7200	8
Hitachi	Deskstar T7K250	HDT722516DLA380	SATA II	160	7200	8
Hitachi	Deskstar P7K500	HDP725050GLA380	SATA II	500	7200	16
Hitachi	Deskstar P7K500	HDP725050GLA360	SATA II	500	7200	8
Hitachi	Deskstar P7K500	HDP725040GLA360	SATA II	400	7200	16
Hitachi	Deskstar P7K500	HDP725040GLA380	SATA II	400	7200	8
Hitachi	Deskstar P7K500	HDP725032GLA360	SATA II	320	7200	16
Hitachi	Deskstar P7K500	HDP725032GLA380	SATA II	320	7200	8
Hitachi	Deskstar P7K500	HDP725025GLA380	SATA II	250	7200	8
Seagate	Barracuda ES	ST3750640NS	SATA II	750	7200	16
Seagate	Barracuda ES	ST3500630NS	SATA II	500	7200	16
Seagate	Barracuda ES	ST3400620NS	SATA II	400	7200	16
Seagate	Barracuda ES	ST3320620NS	SATA II	320	7200	16
Seagate	Barracuda ES	ST3250620NS	SATA II	250	7200	16

Seagate	Barracuda ES	ST3250820NS	SATA II	250	7200	8
Seagate	Barracuda 7200.11	ST31000340AS	SATA II	1000	7200	32
Seagate	Barracuda 7200.10	ST3750640AS	SATA II	750	7200	16
Seagate	Barracuda 7200.10	ST3750840AS	SATA II	750	7200	8
Seagate	Barracuda 7200.10	ST3500630AS	SATA II	500	7200	16
Seagate	Barracuda 7200.10	ST3500830AS	SATA II	500	7200	8
Seagate	Barracuda 7200.10	ST3400620AS	SATA II	400	7200	16
Seagate	Barracuda 7200.10	ST3400820AS	SATA II	400	7200	8
Seagate	Barracuda 7200.10	ST3320620AS	SATA II	320	7200	16
Seagate	Barracuda 7200.10	ST3320820AS	SATA II	320	7200	8
Seagate	Barracuda 7200.10	ST3300820AS	SATA II	300	7200	8
Seagate	Barracuda 7200.10	ST3250620AS	SATA II	250	7200	16
Seagate	Barracuda 7200.10	ST3250410AS	SATA II	250	7200	16
Seagate	Barracuda 7200.10	ST3250310AS	SATA II	250	7200	8
Seagate	Barracuda 7200.10	ST3250820AS	SATA II	250	7200	8
Seagate	Barracuda 7200.10	ST3200820AS	SATA II	200	7200	8
Seagate	Barracuda 7200.10	ST3160815AS	SATA II	160	7200	8
Seagate	Barracuda 7200.10	ST3160215AS	SATA II	160	7200	2
Seagate	Barracuda 7200.10	ST3120815AS	SATA II	120	7200	8
Seagate	Barracuda 7200.10	ST3120215AS	SATA II	120	7200	2
Seagate	Barracuda 7200.10	ST380815AS	SATA II	80	7200	8
Seagate	Barracuda 7200.10	ST380215AS	SATA II	80	7200	2
Seagate	Barracuda 7200.10	ST340815AS	SATA II	40	7200	8
Seagate	Barracuda 7200.10	ST340215AS	SATA II	40	7200	2
WD	WD Caviar GP	WD10EACS	SATA II	1000	7200	16
WD	WD Caviar GP	WD7500AACS	SATA II	750	7200	16
WD	WD Caviar GP	WD5000AACS	SATA II	500	7200	16
WD	WD Caviar RE2	WD5000YS	SATA II	500	7200	16
WD	WD Caviar RE2	WD4000YS	SATA II	400	7200	16
WD	WD Caviar RE	WD3200YS	SATA II	320	7200	16
WD	WD Caviar RE	WD2500YS	SATA II	250	7200	16
WD	WD Caviar RE	WD1600YS	SATA II	160	7200	16
WD	WD Caviar SE16	WD7500AAKS	SATA II	750	7200	16
WD	WD Caviar SE16	WD5000AAKS	SATA II	500	7200	16
WD	WD Caviar SE16	WD4000AAKS	SATA II	400	7200	16
WD	WD Caviar SE16	WD3200AAKS	SATA II	320	7200	16
WD	WD Caviar SE16	WD2500AAKS	SATA II	250	7200	16

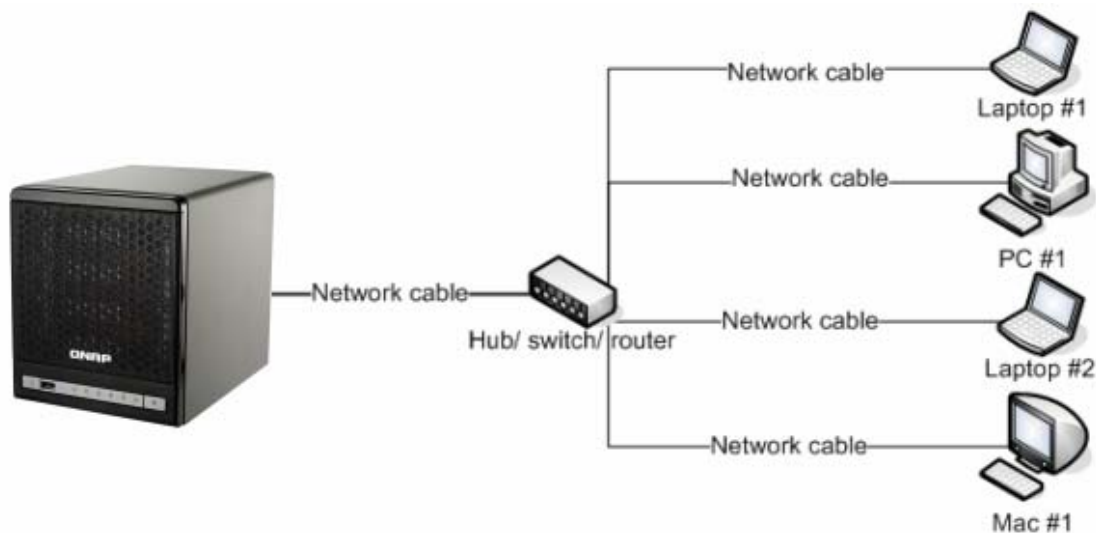
WD	WD Caviar SE16	WD5000KS	SATA II	500	7200	16
WD	WD Caviar SE16	WD4000KS	SATA II	400	7200	16
WD	WD Caviar SE16	WD3200KS	SATA II	320	7200	16
WD	WD Caviar SE16	WD2500KS	SATA II	250	7200	16
WD	WD Caviar SE	WD5000AAJS	SATA II	500	7200	8
WD	WD Caviar SE	WD4000AAJS	SATA II	400	7200	8
WD	WD Caviar SE	WD3200AAJS	SATA II	320	7200	8
WD	WD Caviar SE	WD3200JS	SATA II	320	7200	8
WD	WD Caviar SE	WD3000JS	SATA II	300	7200	8
WD	WD Caviar SE	WD2500AAJS	SATA II	250	7200	8
WD	WD Caviar SE	WD2500JS	SATA II	250	7200	8
WD	WD Caviar SE	WD2000JS	SATA II	200	7200	8
WD	WD Caviar SE	WD1600AAJS	SATA II	160	7200	8
WD	WD Caviar SE	WD1600JS	SATA II	160	7200	8
WD	WD Caviar SE	WD1200JS	SATA II	120	7200	8
WD	WD Caviar SE	WD800AAJS	SATA II	80	7200	8
WD	WD Caviar SE	WD800JD	SATA II	80	7200	8
WD	WD Caviar SE	WD400JD	SATA II	40	7200	8

2.3 Set up the NAS

Please check your network environment and select the appropriate installation method before installing the NAS.

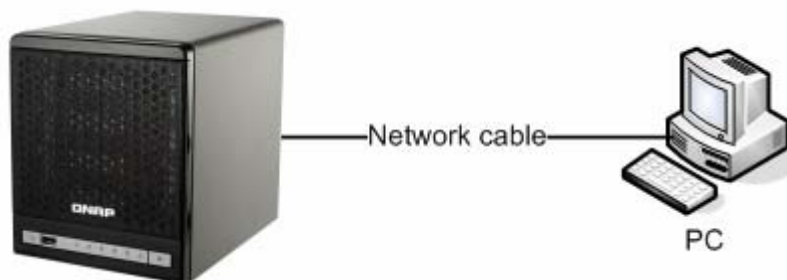
1. Office/ Home

Connect the NAS and PC to the same hub/ switch/ router.

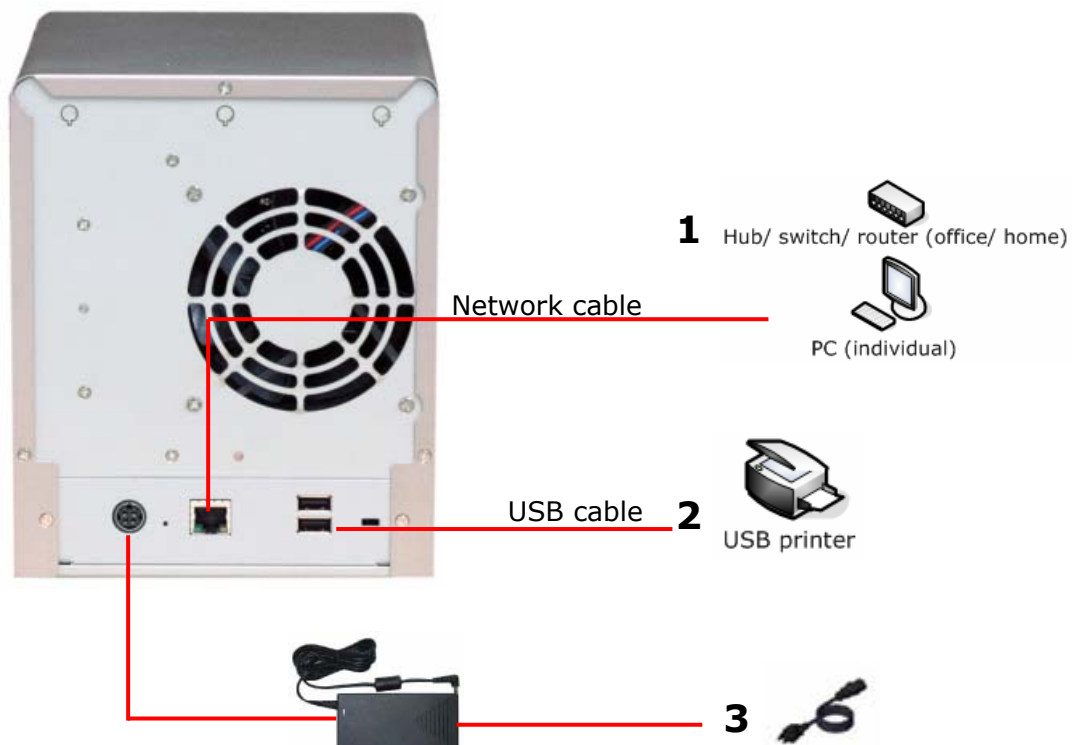


2. Individual

Connect the NAS directly to your PC by a network cable.



When you have verified your network environment, please follow the steps below to install the NAS.

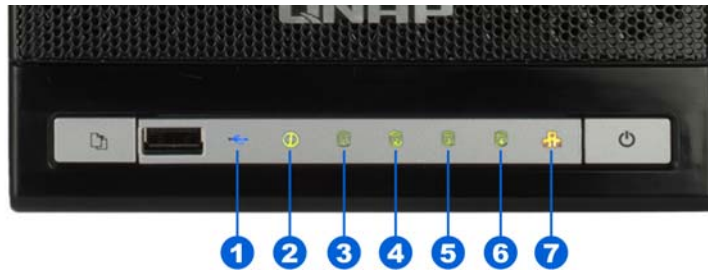


1. Connect the NAS to the hub/ switch/ router or PC according your network environment.
2. Connect USB printer to the NAS and enable USB printer service*.
3. Connect the power.
4. Turn on the NAS.

*** Note:** Please connect a USB printer to the server after the software configuration is completed.

2.4 Check System Status

The NAS provides LED indicators for you to indicate the system status and information easily. When the NAS is turned on, please check the following items to make sure the system status is normal. Note that the following LED information is applicable only when you have properly installed HDD1 and/or HDD2, and connected the NAS to the network and power.



- ❶ USB Status
- ❷ Status
- ❸ HDD1
- ❹ HDD2
- ❺ HDD3
- ❻ HDD4
- ❼ LAN

LED Display & System Status Overview

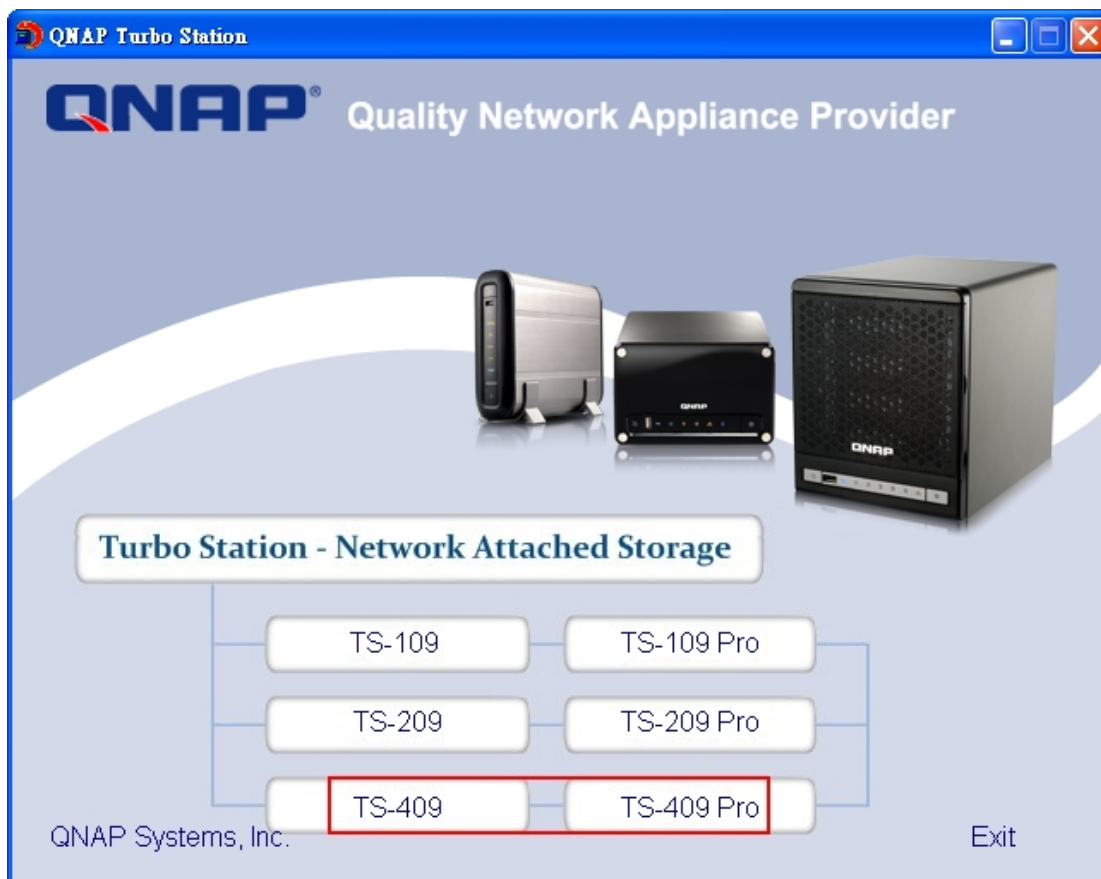
LED	LED Display & System Status
❶ Front USB Status	Blue: You can press the copy button to copy data
	Flashes blue: Accessing data
❷ Status	Green: System is normal
	Flashes green: Hard disk not detected; Hard disk not initialized
	Red: Warning on disk full status; Disk capacity is almost full; RAID degraded mode (read-only), abnormal disk writing
	Flashes red: RAID degraded mode
	Flashes green and red alternatively: Update firmware; RAID rebuilding/ expanding/ migrating
	Off: HDD standby mode
❸ HDD1/ ❹ HDD2 ❺ HDD3/ ❻ HDD4	<ul style="list-style-type: none"> • Green: Disks are normal • Flashes green: Reading/ writing data • Red: Abnormal reading/ writing • Flashes red: Hard disks are abnormal, but are still being read/ written
❽ LAN	Flashes orange: Accessing data

2.5 Configure Software Settings

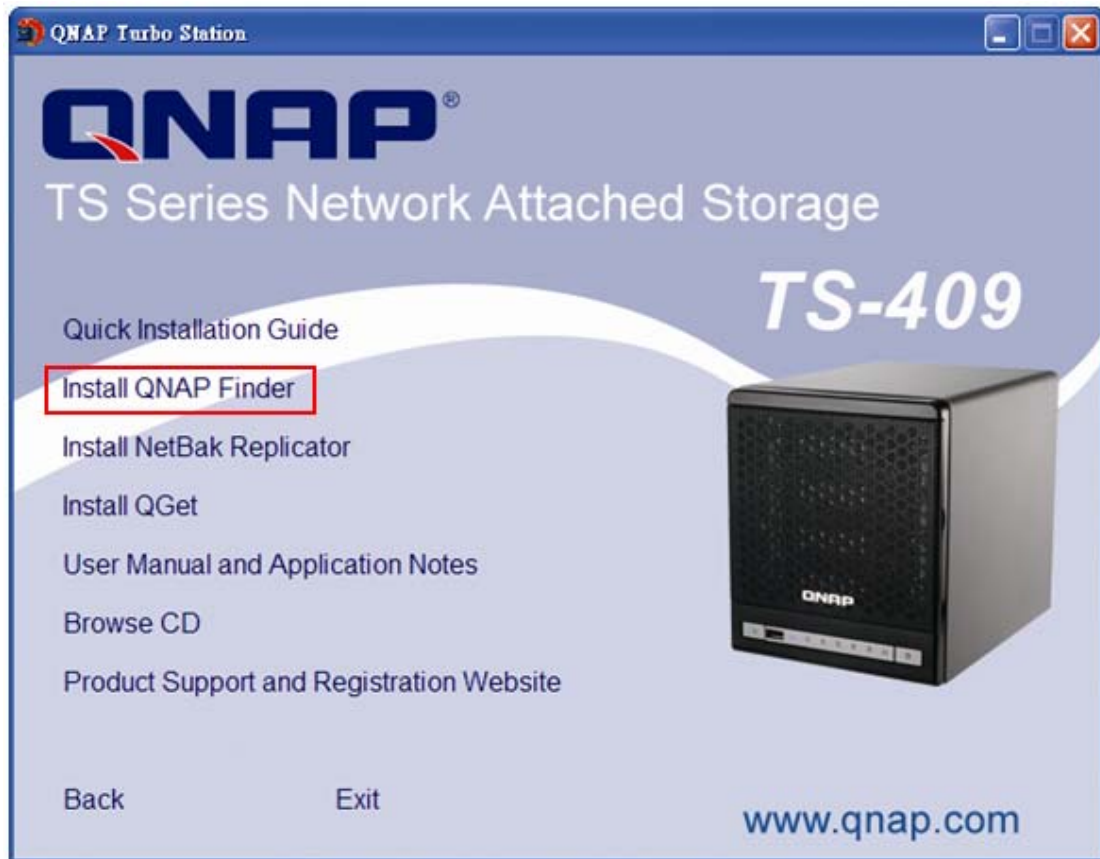
After checking the system status, please follow the steps below to configure the software settings of the NAS. The configuration procedure of Windows and Mac users are different. Please select the appropriate procedure according to your OS.

2.5.1 Windows® Users

1. Execute the product CD, a model selection menu will be shown. Select your NAS model to continue.



2. The following menu will be shown. Select "Install QNAP Finder" to continue.

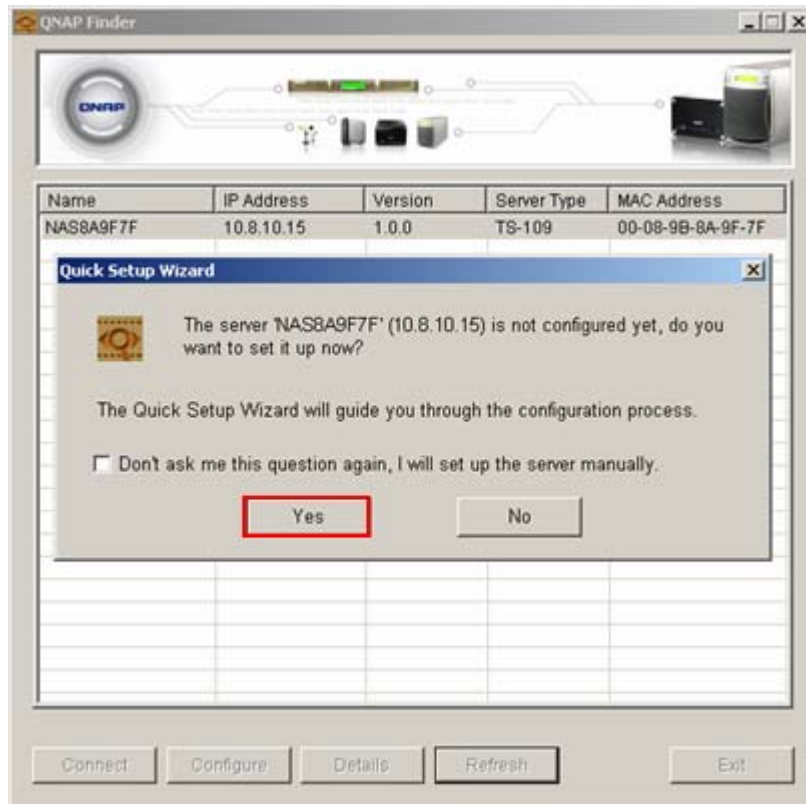


3. Follow screen instructions to install QNAP Finder. QNAP Finder will run automatically. If you are using Windows XP SP2, the following screen will be shown. Please select "Unblock".



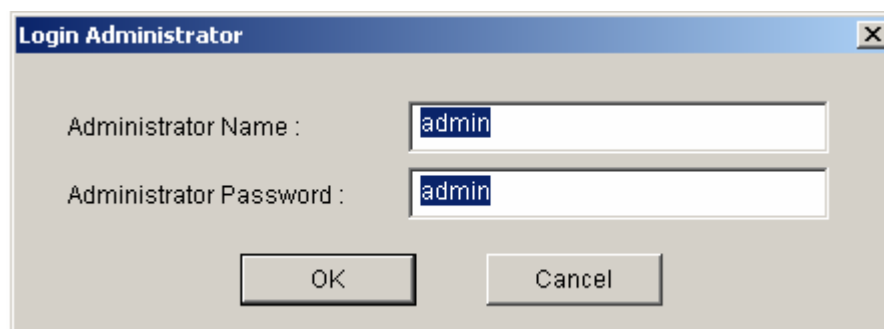
4. QNAP Finder will detect the NAS in the network and ask if you want to perform quick setup. Click **Yes** to continue.

Note: If the server is not found, click Refresh to try again.

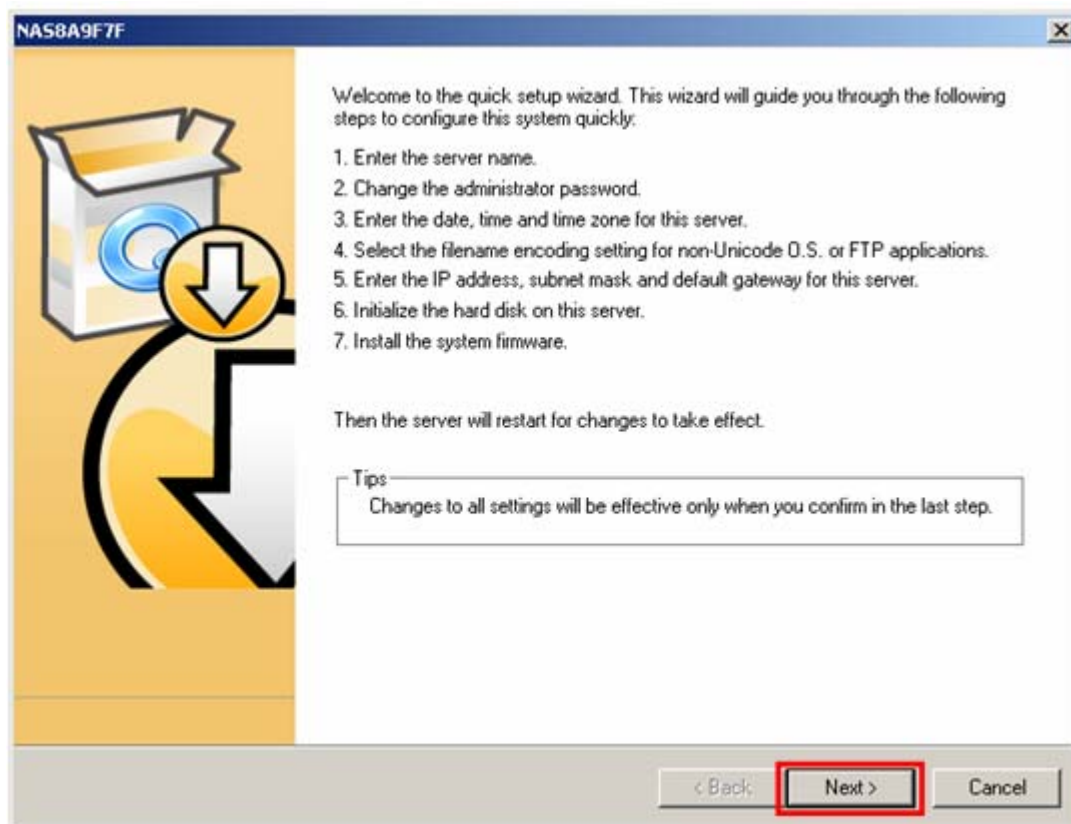


5. Enter the default user name and password.

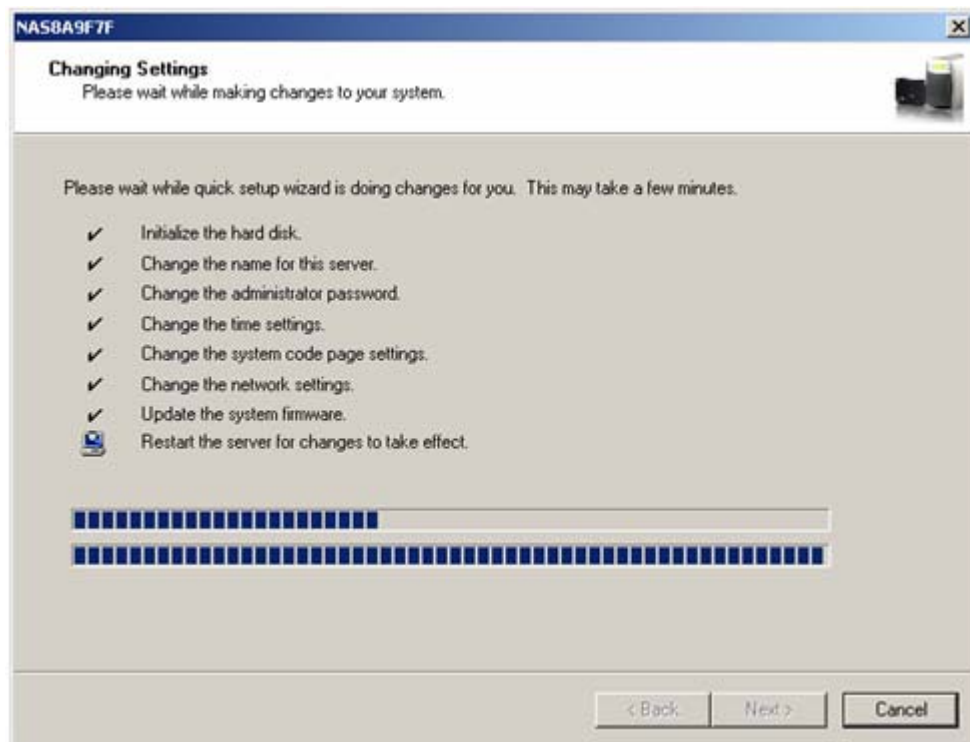
Default user name: **admin**
Password: **admin**



6. The first page of the Quick Setup Wizard will be shown. Click **Next** to continue and complete the configuration.

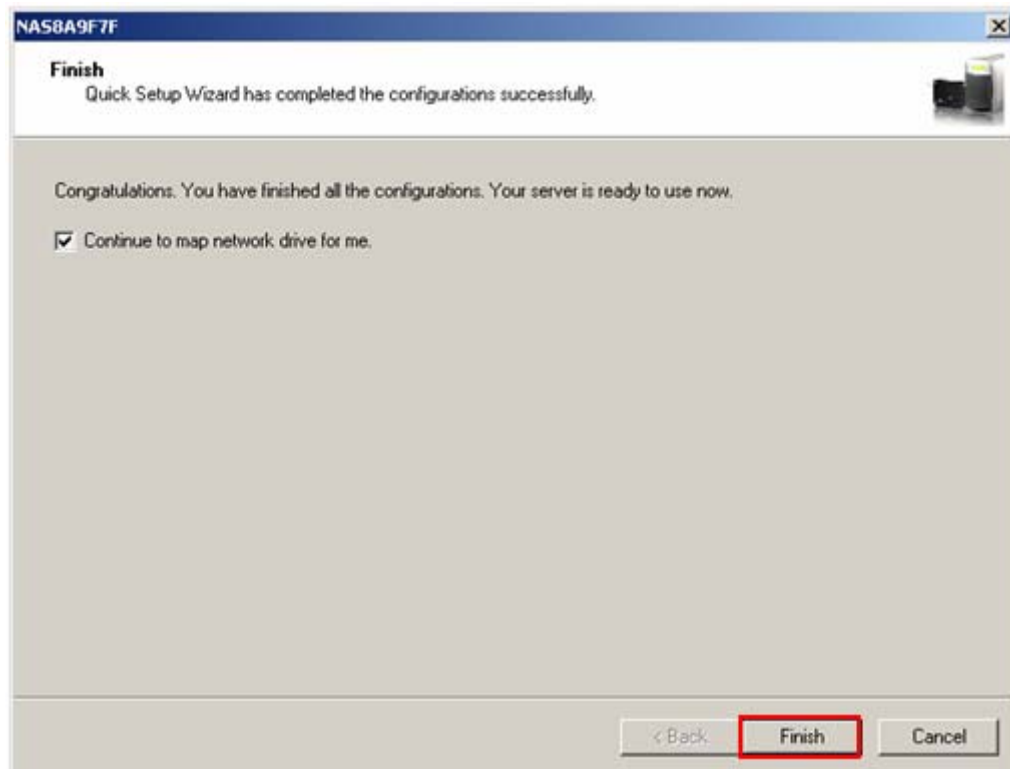


7. Follow the on-screen instructions to complete the configuration. Please wait patiently while changing the system settings. NAS will restart after changing the settings.



Note: The configuration process may take up to twenty minutes if you are using a hard disk drive with capacity larger than 500GB.

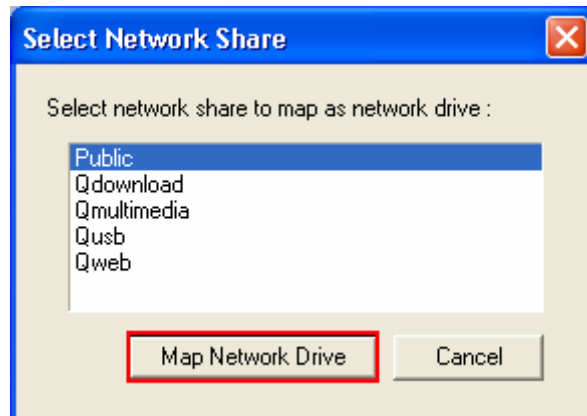
8. After quick setup is completed, click **Finish** to continue.



The NAS provides several default share folders for data sharing and access. To map the share folders on the NAS as your drive, check the option **"Continue to map network drive for me"** and follow the steps below to proceed.

Map Network Drive

NAS provides several default share folders for sharing and access. Select the share folder to be mapped as the local drive and click **Map Network Drive**.

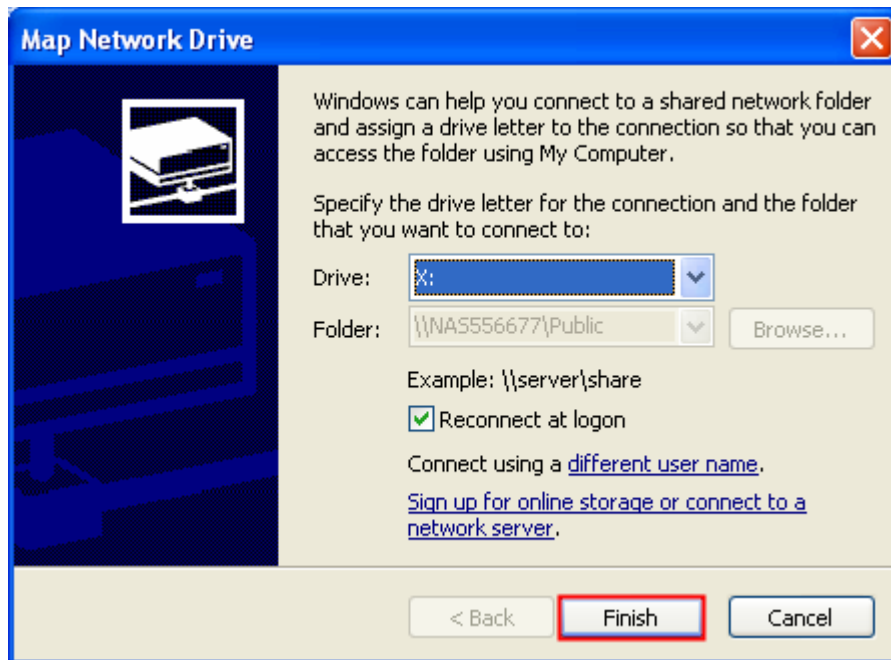


The share folders Qdownload, Qmultimedia, Qusb, and Qweb are system default network share of the NAS for the use of Download Station, Multimedia Station, USB auto-copy, and Web Server. Qrecordings is the default network share of Surveillance Station.

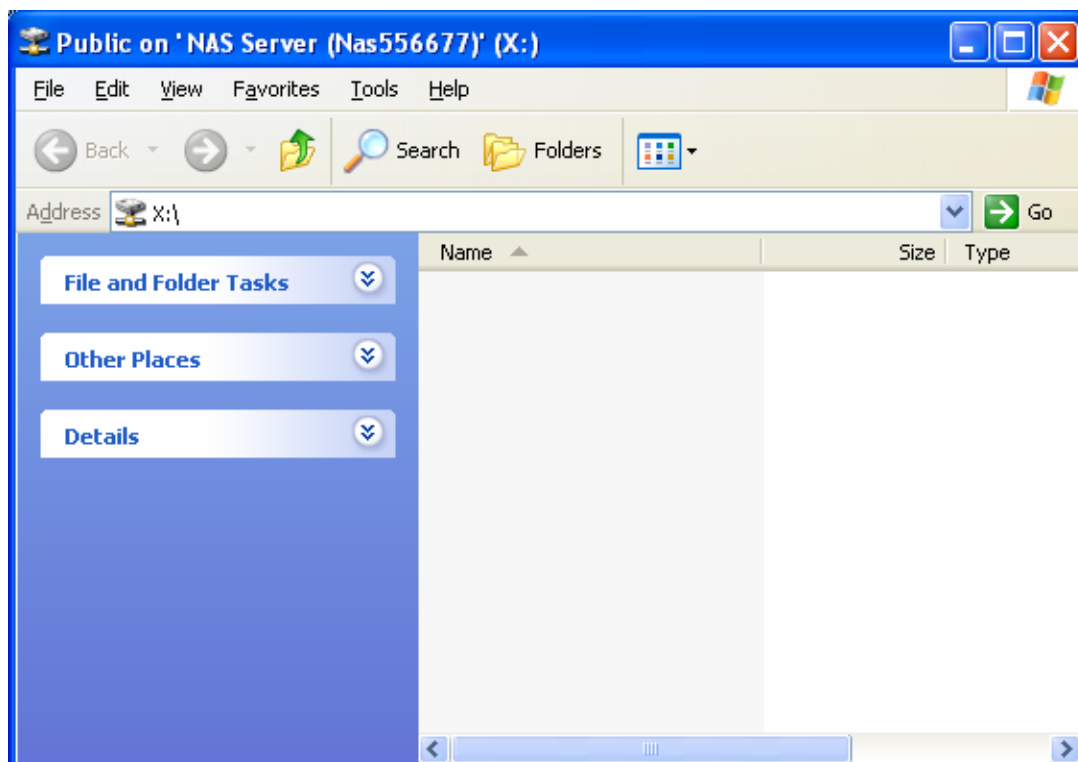
Enter the default user name and password.



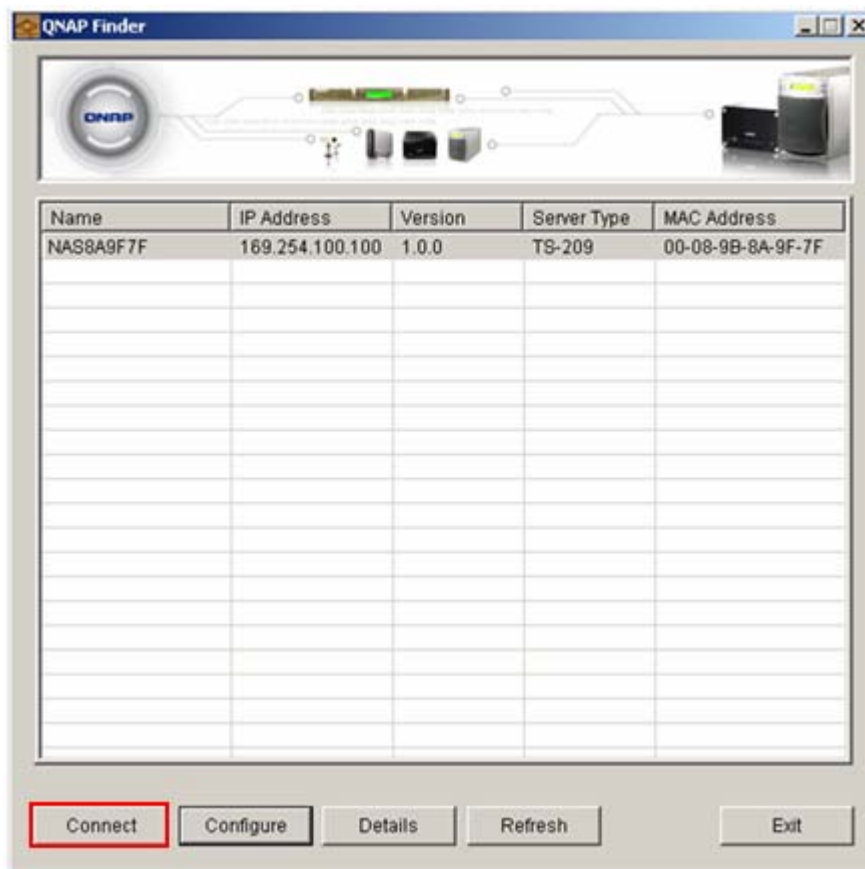
Select the drive letter for the connection and click **Finish**.




Upon successful connection, you can start to use the share folder on the NAS. You can access these folders by opening My Computer.



9. QNAP Finder will appear when all configurations are completed. Choose the name of NAS on the list, and click "**Connect**".

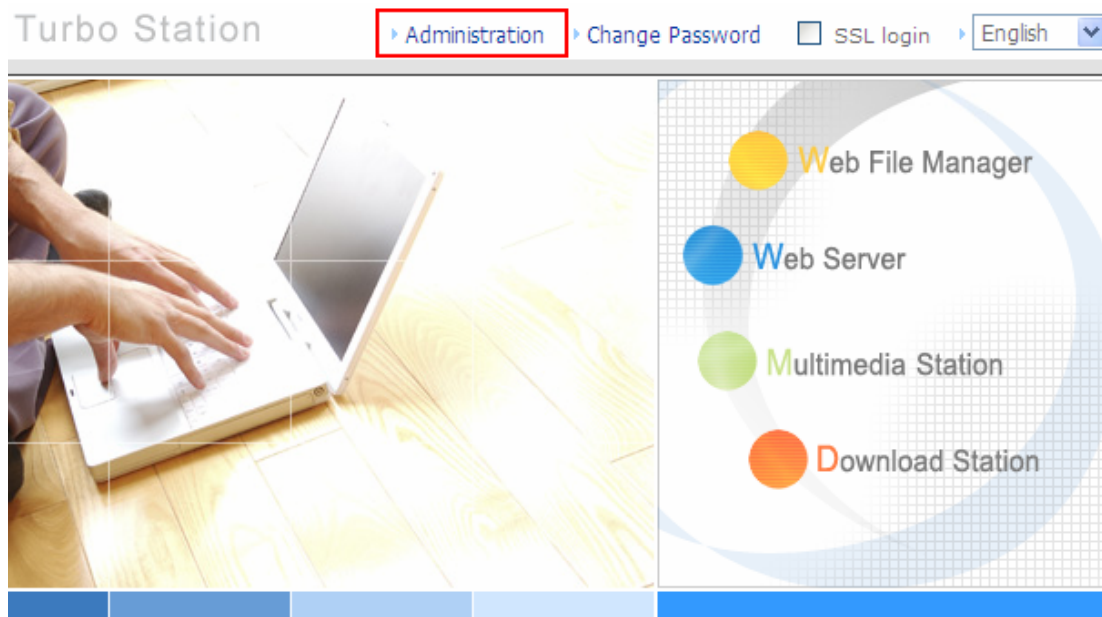


10. When the administration page of the NAS is shown, you can start to use the services.

If you have any questions during web administration, please click the help button  on the top right hand corner of the page.

To modify system settings, click "**Administration**". Enter the user name and password to login.

Default user name: **admin**
Password: **admin**

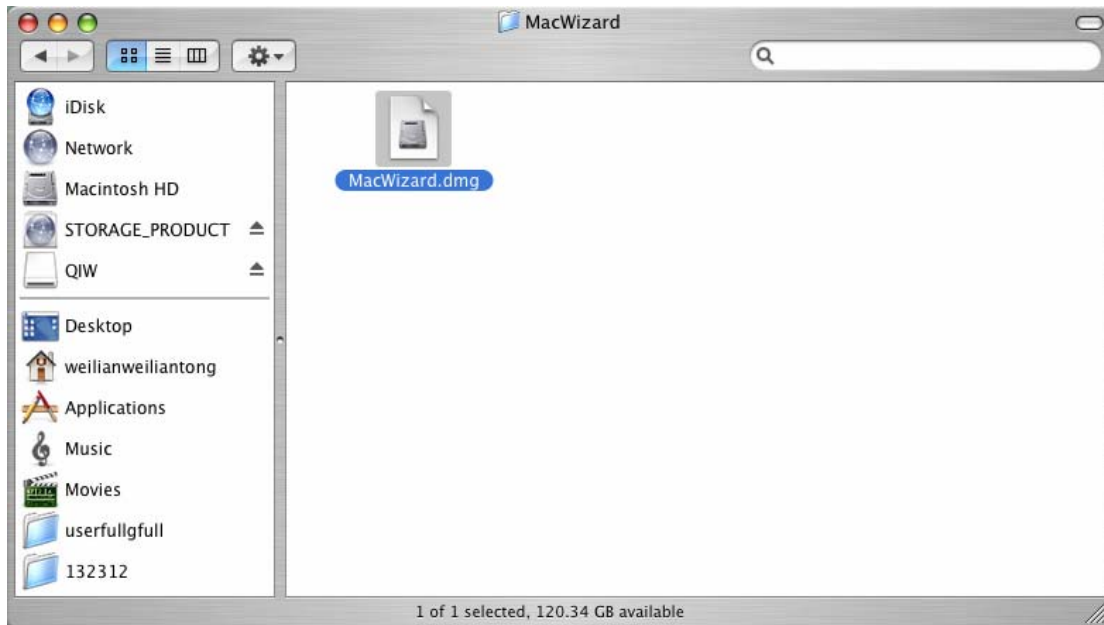


Note:

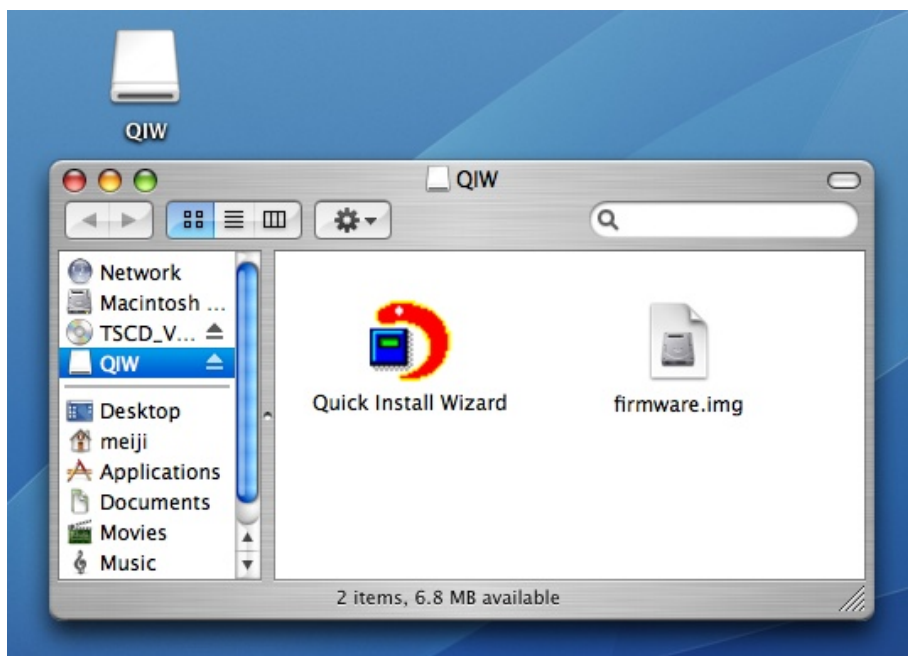
1. It is recommended to use Internet Explorer 6.0 or above to access the NAS. If the OS of your PC is Windows® 98, the NAS supports Internet Explorer 6.0 or above only.
2. The NAS also supports Mozilla Firefox.

2.5.2 Mac Users

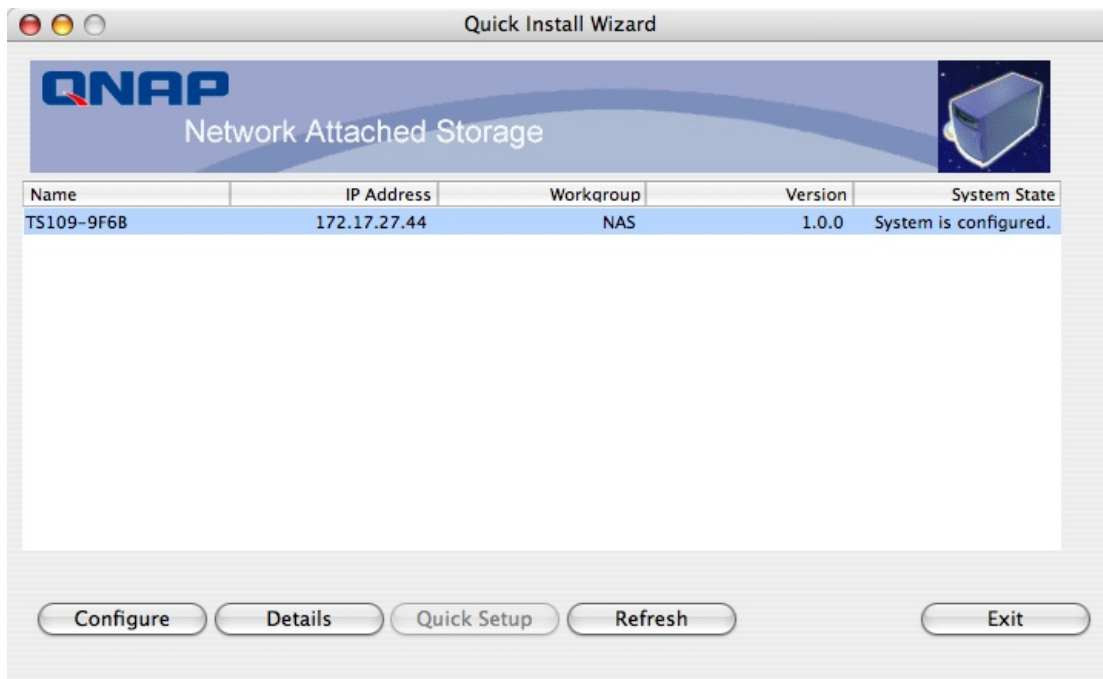
Insert the NAS CD-ROM in your Mac and find the directory **MacWizard**. Then run **MacWizard.dmg**.



You can find and run the QIW image file on desktop after MacWizard.dmg is opened. Run Quick Install Wizard.



Follow the on-screen instructions to complete the configuration. Please wait patiently while changing the system settings. NAS will restart after changing the settings.



Note:

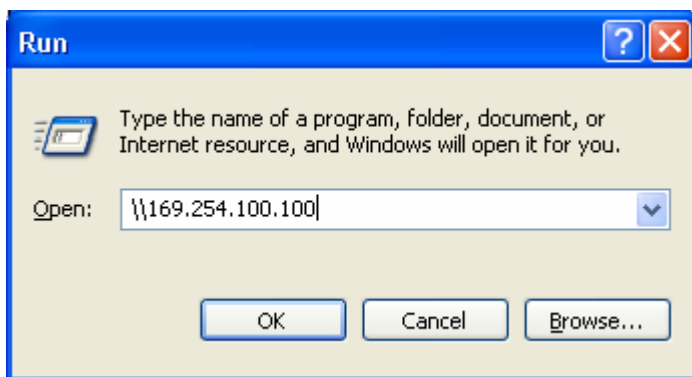
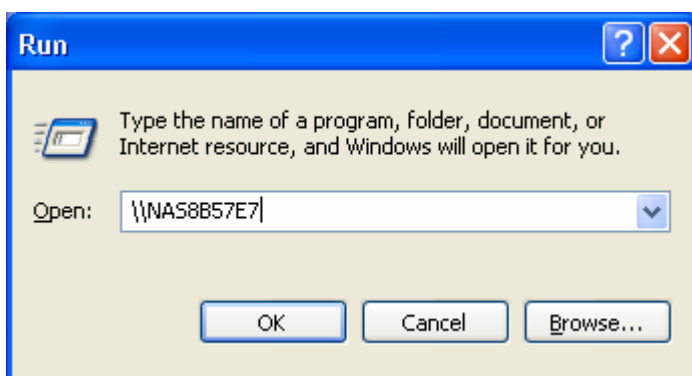
1. Mac Quick Install Wizard does not support mapping network drive.
2. The Map Drive function of Windows Quick Install Wizard is replaced as "Quick Setup" in Mac Quick Install Wizard.
3. It is recommended to access the NAS by Mozilla Firefox in Mac. Safari does not support Download Station of the NAS.

Chapter 3. Enjoy the Powerful Services of the NAS

The NAS provides the following powerful functions and applications.

A. Use network share-Public folder

1. You can access the public folder of the NAS by the following means:
 - a. Open My Network Places and find the workgroup of the NAS. If you cannot find the server, please browse the whole network to search for the NAS. Double click the name of the NAS for connection.
 - b. Use Run function in Windows®. Enter `\\[NAS name]*` or `\\[NAS IP]#` to access share folder on the NAS.



- c. Windows® users can use Quick Install Wizard to find the NAS. When the administration page is shown, click **Web File Manager**. Enter the user name and password, and then start to manage the NAS.
2. You can upload files to the Public folder.

B. Manage the NAS

■ **Manage the NAS using web browser by Windows® or Mac**

1. You can access the NAS web administration page by the following methods:
 - a. Use Quick Install Wizard to find the NAS.
 - b. Open a web browser and enter **http://[NAS IP]:8080#**



Note:

1. It is recommended to use Microsoft® Internet Explorer 6.0 or above to access the NAS. If the OS of your PC is Windows® 98, the NAS supports Internet Explorer 6.0 only.
2. Please use Mozilla Firefox to access the NAS on Mac.

*The user name here should be the same as the server name you enter in Chapter 2.5 **Configure Software Settings**.

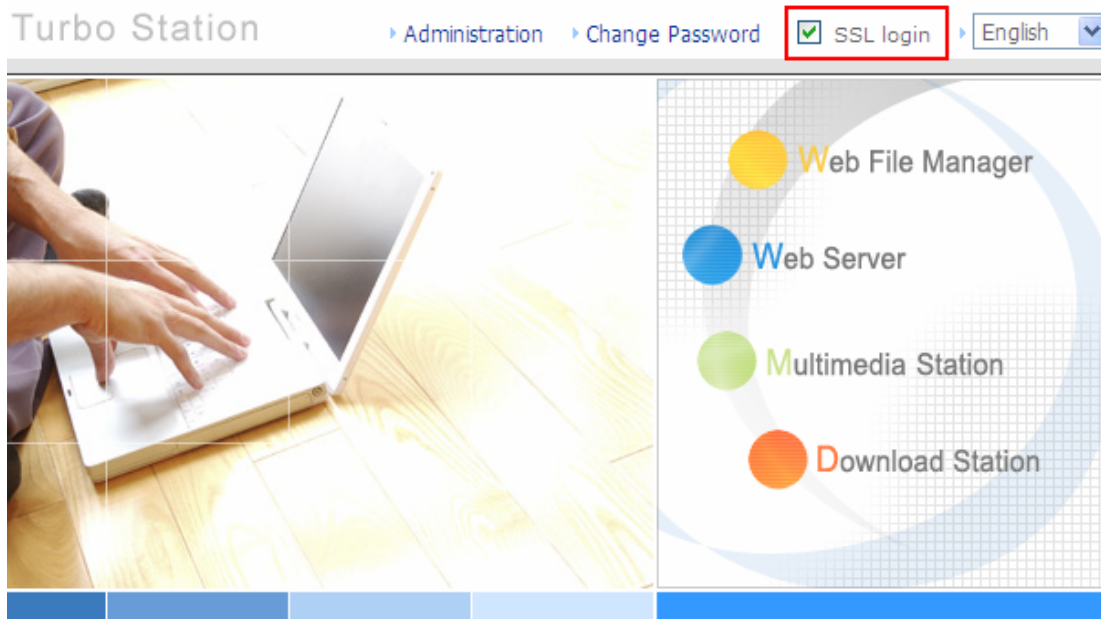
#The IP address here should be the same as the IP address you enter in Chapter 2.5 **Configure Software Settings**. If you are using DHCP: (a) connect the PC to the NAS directly, please use the default IP address 169.254.100.100 of the NAS; (b) connect the NAS by network, please run Quick Install Wizard to view the IP address of the NAS.

2. When the administration page is shown, click **Administration, Web File Manager, Web Server, Multimedia Station, or Download Station**. Enter the user name and password, and then start to manage the NAS.

3. The NAS supports SSL secure login which enables you to configure and manage the server by encrypted transfer. To use this function, check the box **SSL login** on the administration page and login the server.



Note: If your NAS is placed behind an NAT gateway and you want to access the NAS by secure login from the Internet, you must open the port 443 on your NAT and forward this port to the NAS LAN IP.



C. Use the NAS's Services

■ Multimedia Station

The NAS provides a user-friendly web management interface for you to manage and share personal albums and multimedia files via network easily. Supports embedded iTunes Server music sharing, UPnP and DLNA standard multimedia technology to establish home multimedia sharing center. Please refer to Chapter 5.

■ Download Station

The NAS supports BT, FTP, and HTTP download. You can add download tasks to the NAS and let the server finish downloading independently of your PC. Please refer to Chapter 6.

■ Disaster Recovery

The NAS supports remote share folder backup via the network. In case of data damage in PC, you can restore all backup data. Please refer to Chapter 3.8.9.

■ Web Server

The NAS enables you to create your own website easily. It also supports Joomla!, PHP and SQLite to establish interactive websites. Please refer to Chapter 7.

■ Printer Server

The NAS supports network printer sharing function by direct USB connection. No extra help from PC is needed. Please refer to Chapter 3.5.4.

■ FTP Server

The NAS offers the simplest FTP server setup procedure for you to establish FTP server without any professional assistance. Please refer to Chapter 8.

■ Backup Server

NetBak Replicator is the powerful backup software designed for Windows users to configure automatic backup schedule. Block level remote replication is supported to provide the most reliable, instant, and secure data backup mechanism. Please refer to Chapter 10.

■ File Server

The NAS provides convenient and secure file server functions that support central









data management. Users can be granted with the right to access network share and share important files. Please refer to Chapter 3.7 and Chapter 9.

■ **Surveillance Station**


The Surveillance Station enables you to watch and record live video from your network cameras quickly and easily. Please refer to Chapter 3.4.13.


3.1 Server Administration


There are 8 main sections in server administration:


	Quick Configuration Quick step-by-step server setup		User Management Users · User Groups · Quota
	System Settings Server Name · Date & Time · Filename Encoding Setting · Configure SMTP Server · View System Settings		Network Share Management Create · Property · Access Control · Delete · NFS Access Control
	Network Settings TCP/IP Configuration · Microsoft Networking · Apple Networking · NFS Service · Web File Manager · FTP Service · Multimedia Station · iTunes Service · Download Station · Web Server · DDNS Service · MySQL Server · Surveillance Station · System Port Management · View Network Settings		System Tools Alert Notification · Restart/ Shutdown · Hardware Settings · UPS · Hard Disk SMART · System Update · USB one touch copy backup · Change Logo · Back up to an external storage device · Remote Replication · Backup/ Restore/ Reset Settings · IP Filter · Network Recycle Bin · Remote Login
	Device Configuration SATA Disk · USB Disk · USB Printer · eSATA Disk		System Logs Event Logs · System Connection Logs · On-line Users · System Information

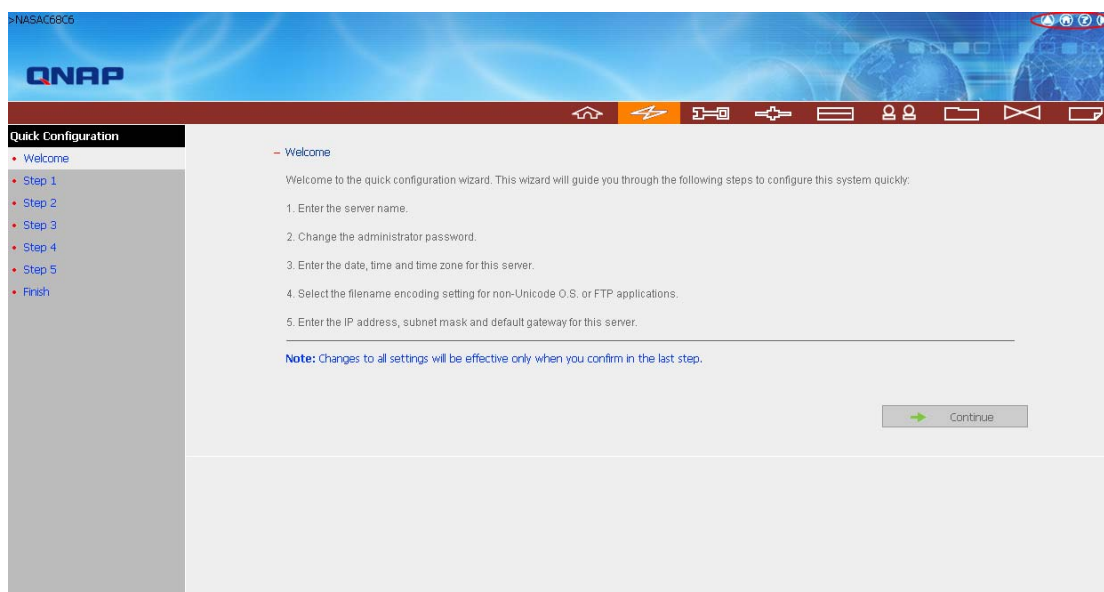
3.2 Quick Configuration

Please follow the step-by-step guide in Quick Configuration to complete the settings of the NAS. If you have any questions during web administration, please click the help button  on the top right hand corner of the page. Other buttons are described as below:

: Return to previous page

: Return to home page

: Logout system



Step 1. Enter the server name.

1. Enter the server name.

Server Name :

 Back  Next

Step 2. Change the administrator password or select to use the original password.



2. Change the administrator password.

Password :

Verify Password :

☐ Use the original password

Note: If you select "Use the original password", the administrator password will not be changed.

 Back  Next

Step 3. Enter the date, time and select the time zone for the server.

3. Enter the date, time and time zone for this server.

Time Zone : (GMT+08:00) Taipei

Current date and time : 2007 / 10 / 19 PM 02 : 57 : 18

☐ Change the server's time and date as below:

Date: January , (mm dd, yyyy)

Time: : AM (hh:mm:ss)

☐ Synchronize with an Internet time server automatically

Server: pool.ntp.org Test (Status: --)

Back Next

Step 4. Select the language the server uses to display files and directories. The default setting is **English**.

4. Select the filename encoding setting for non-unicode O.S. or FTP applications.

Filename Encoding: English

Back Next

Step 5. Enter the IP address, subnet mask and default gateway for the server.

5. Enter the IP address, subnet mask and default gateway for this server.

☒ Obtain TCP/IP settings automatically via DHCP

☐ Use the following settings

IP Address: 169 . 254 . 100 . 100

Subnet Mask: 255 . 255 . 0 . 0

Default Gateway: 169 . 254 . 100 . 100

Primary DNS Server: 0 . 0 . 0 . 0

Secondary DNS Server: 0 . 0 . 0 . 0

Note: If you don't need a default gateway for this server, please enter "0.0.0.0".

Back Next




Note:


1. Please contact your ISP or network administrator for the IP address of primary and secondary DNS servers. When the NAS plays the role as a terminal and needs to perform independent connection, e.g. BT download, you must enter at least one DNS server IP for proper URL connection. Otherwise, the function may not work properly.
2. If you select to obtain IP address via DHCP, there is no need to configure the primary and secondary DNS servers. You can enter "0.0.0.0" in the settings.

Finished. The basic system settings are shown.

Your system setting is as below, please click "Finish" to initialize the system.

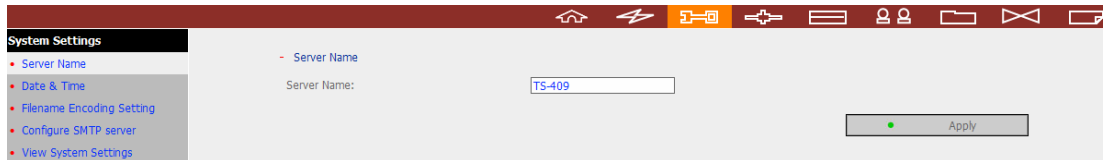
Server Name :	NASAC68C6
Time Zone :	(GMT+08:00) Taipei
Time Setting:	2007 / 10 / 19 PM 03 : 10 : 47
Filename Encoding:	English
Network :	DHCP

 Back

 Finish

3.3 System Settings

Basic system settings include the server name, date, time, and view system settings.



3.3.1 Server Name

Enter the name of the NAS. The server name can be 14 characters long at maximum, which supports alphabets, numbers, and hyphen (-). The server does not accept names with space, period (.), or names in pure number.



3.3.2 Date & Time

Set the date, time, and time zone according to your location. If the settings are incorrect, the following problems may occur:

- ✓ When using a web browser to access or save a file, the display time of the action will be incorrect.
- ✓ The time of event log displayed will be inconsistent with the actual time when an action occurs.

- Adjust the date, time and time zone of this server

Time Zone: (GMT+08:00) Taipei

Current date and time: 2007 / 9 / 21 AM 10 : 02 : 34

☐ Change date and time manually

Date: January , (mm dd, yyyy)

Time: : : AM (hh:mm:ss)

☐ Synchronize with an Internet time server automatically

Server: pool.ntp.org Update now (Status: --)

Time Interval: 1 day(s)

Apply

✓ Synchronize with an Internet time server automatically

You can enable this option to update the date and time of the system automatically with specified NTP (Network Time Protocol) server. Enter the IP address or domain name of the NTP server, e.g. time.nist.gov, time.windows.com. Then enter the time interval for adjusting the time.

☒ Synchronize with an Internet time server automatically

Server: pool.ntp.org Update now (Status: --)

Time Interval: 1 day(s)



Note: The first time you enable NTP server, it may take several minutes for time synchronization before the time is correctly adjusted.

3.3.3 Encoding Setting

Select the language the NAS uses to display files and directories.



Note: All files and directories on the NAS will be created using Unicode encoding. If your FTP clients or the OS of your PC does not support Unicode, e.g. Windows® 95/98/ME, select the language the same as your OS here in order to view the files and directories on the server properly.

- Filename Encoding Setting

Filename Encoding:

3.3.4 Configure SMTP Server

Configure the SMTP server for outgoing mails of this server.

If your mail server requires SMTP authentication, please enter the user name and password for the mail server.

- Configure SMTP server

SMTP Server:

☐ Enable SMTP Authentication

User Name :


Password :

3.3.5 View System Settings

You can view all current system settings, e.g. server name, on this page.

[View System Settings](#)

Server Name	
Server Name	NASAC68C6
Date & Time	
Date	October 19, 2007
Time	3:20:39 PM
Time Zone	(GMT+08:00) Taipei
Filename Encoding	
Code Page	English (437)
System Information	
Version	2.0.0 Build 1018T

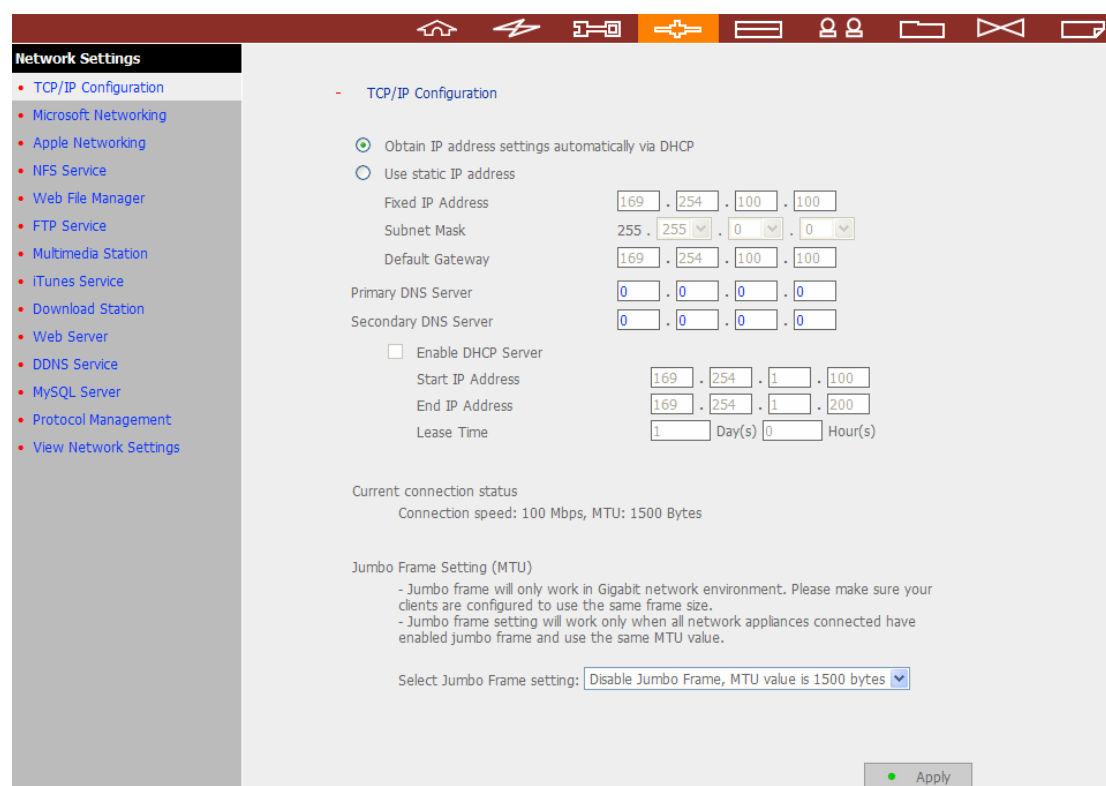
 OK

3.4 Network Settings

You can configure network settings in this section and enable several powerful applications of the NAS, e.g. Multimedia Station, Download Station, and Web Server.

3.4.1 TCP/ IP Configuration

You can select one of the following two methods to configure the TCP/IP settings of the NAS.



The screenshot displays the 'Network Settings' window with a sidebar on the left containing a list of services: TCP/IP Configuration (selected), Microsoft Networking, Apple Networking, NFS Service, Web File Manager, FTP Service, Multimedia Station, iTunes Service, Download Station, Web Server, DDNS Service, MySQL Server, Protocol Management, and View Network Settings. The main panel is titled 'TCP/IP Configuration' and features two radio buttons: 'Obtain IP address settings automatically via DHCP' (selected) and 'Use static IP address'. Below these are input fields for 'Fixed IP Address' (169.254.100.100), 'Subnet Mask' (255.255.0.0), and 'Default Gateway' (169.254.100.100). There are also fields for 'Primary DNS Server' and 'Secondary DNS Server', both set to 0.0.0.0. A checkbox for 'Enable DHCP Server' is present. Below it, fields for 'Start IP Address' (169.254.1.100), 'End IP Address' (169.254.1.200), and 'Lease Time' (1 Day(s), 0 Hour(s)) are shown. The 'Current connection status' section indicates 'Connection speed: 100 Mbps, MTU: 1500 Bytes'. The 'Jumbo Frame Setting (MTU)' section includes a warning about Gigabit network environments and a dropdown menu set to 'Disable Jumbo Frame, MTU value is 1500 bytes'. An 'Apply' button is at the bottom right.

1. Obtain IP address settings automatically via DHCP

If your network supports DHCP, the NAS will use DHCP protocol to retrieve the IP address and related information automatically.

2. Use static IP address

To use fixed IP address for network connection, enter fixed IP address, subnet mask, and default gateway.

Primary DNS Server: Enter the IP address of primary DNS server that provides DNS service for the NAS in external network.

Secondary DNS Server: Enter the IP address of secondary DNS server that provides DNS service for the NAS in external network.



Note:

1. Please contact your ISP or network administrator for the IP address of primary and secondary DNS servers. When the NAS plays the role as a terminal and needs to perform independent connection, e.g. BT download, you must enter at least one DNS server IP for proper URL connection. Otherwise, the function may not work properly.
2. If you select to obtain IP address via DHCP, there is no need to configure the primary and secondary DNS servers. You can enter "0.0.0.0" in the settings.

Enable DHCP Server

If no DHCP is available in the LAN where the NAS locates, you can enable this function to enable the NAS as a DHCP server and allocate dynamic IP address to DHCP clients in LAN.

You can set the range of IP addresses allocated by DHCP server and the lease time. Lease time refers to time that IP address is leased to the clients by DHCP server. When the time expires, the client has to acquire an IP address again.

For example, to establish a DLNA network, and share the multimedia files on the NAS to DLNA DMP via UPnP while there is no NAT gateway that supports DHCP server, you can enable DHCP server of the NAS. The NAS will allocate dynamic IP address to DMP or other clients automatically and set up a local network.



Note: If there is an existing DHCP server in your LAN, do not enable this function. Otherwise, there will be IP address allocation and network access errors.

<input checked="" type="checkbox"/> Enable DHCP Server	
Start IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="100"/>
End IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="200"/>
Lease Time	<input type="text" value="1"/> Day(s) <input type="text" value="0"/> Hour(s)

Jumbo Frame Settings (MTU)

"Jumbo Frames" refer to Ethernet frames that are larger than 1500 bytes. It is designed to enhance Ethernet networking throughput and reduce the CPU utilization of large file transfers by enabling more efficient larger payloads per packet.

Maximum Transmission Unit (MTU) refers to the size (in bytes) of the largest packet that a given layer of a communications protocol can transmit.


The NAS uses standard Ethernet frames: **1500 bytes** by default. If your network appliances support Jumbo Frame setting, select the appropriate MTU value for your network environment. The NAS supports 4074, 7418, and 9000 bytes for MTU.



Note: Jumbo Frame setting is valid in Gigabit network environment only. Besides, all network appliances connected must enable Jumbo Frame and use the same MTU value.

Jumbo Frame Setting (MTU)

- Jumbo frame will only work in Gigabit network environment. Please make sure your clients are configured to use the same frame size.
- Jumbo frame setting will work only when all network appliances connected have enabled jumbo frame and use the same MTU value.

Select Jumbo Frame setting: 



Apply

3.4.2 Microsoft Networking

- Microsoft Networking

☒ Enable file service for Microsoft networking

☒ Standalone Server
☐ AD Domain Member

Server Description:

Workgroup:

AD Server Name:

Domain Name:

Domain Username:

Password:

☐ Enable WINS server

☐ Use the specified WINS server

WINS server IP address:

☐ Domain Master

Apply

Enable file service for Microsoft networking: If you are using Microsoft® Windows® OS, enable this service to access the files on network share folders. Assign a workgroup name.

✓ **Standalone Server**

Use local users for user authentication.

✓ **AD Domain Member**

*This option is supported by "TS-409 Pro" only.

The NAS supports Windows 2003 AD (Active Directory) to provide quick and direct import of user accounts to the existing AD server available in your network. This function helps you to save time and effort on creating user accounts and passwords and lowers IT maintenance cost by automatic configuration procedure.

➤ **Server Description**

Describe the NAS for users to identify the server. To use the NAS on the Microsoft Windows OS, you must enable Microsoft Network Services.

➤ **Workgroup**

Specify the workgroup the NAS belongs to. The workgroup is a computer group unit in Microsoft Windows network for network sharing.

➤ **AD Server Name**

Enter the name of the AD server when AD domain is selected for authentication.

➤ **Domain Name**

The name of Microsoft domain. When you select AD domain, you must enter the domain name, the login user name, and the password.

Please refer to Chapter 11 for the information of AD authentication.

✓ **WINS server**

If the local network has a WINS server installed, specify the IP address. The NAS will automatically register its name and IP address with WINS service. If you have a WINS server in your network and want to use this server, enter the WINS server IP.

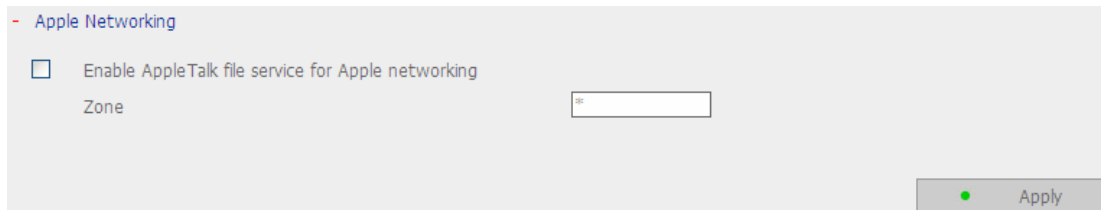
✓ **Domain Master**

There is a unique Domain Master Browser for collecting and recording resources and services available for each PC in the network or workgroup of Windows. When you find the waiting time for accessing Network Neighborhood too long, it may be caused by failure of an existing master browser, or there is no master browser in the network.

If there is no master browser in your network, you can check the box Domain Master in this section to configure the NAS as the master browser to enhance the speed of accessing information on Network Neighborhood.

3.4.3 Apple Network

To use the NAS on Apple Mac operating system, enable AppleTalk network support. If your AppleTalk network uses extended networks, and is assigned with multiple zones, assign a zone name to the NAS. If you do not want to assign a network zone, enter an asterisk (*) to use the default setting. **This setting is disabled by default.**

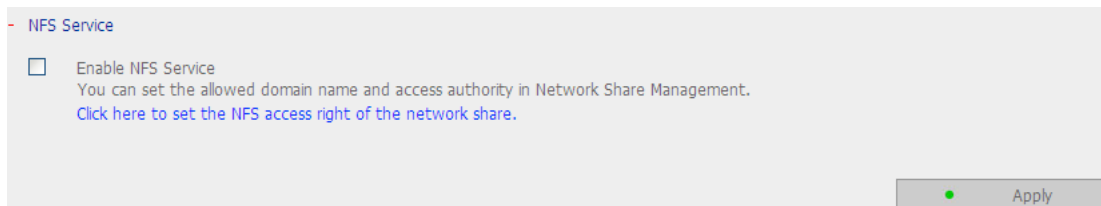


The screenshot shows the 'Apple Networking' settings panel. It features a checkbox labeled 'Enable AppleTalk file service for Apple networking'. Below this checkbox is a text input field labeled 'Zone'. To the right of the input field is a small button with a green dot and the text 'Apply'.

3.4.4 NFS Service

*This option is supported by "TS-409 Pro" only.

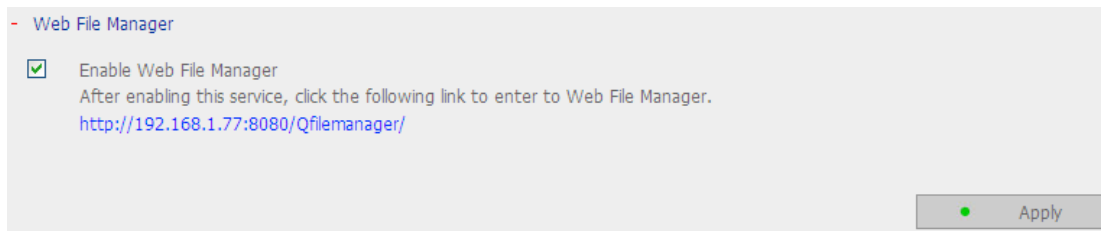
After enabling this service, you can click here to set up the Network access authority to configure the settings. For detailed configuration, please refer to Chapter 3.7.6. For the information of connecting to the NAS via NFS on Linux, please refer to Chapter 12.



The screenshot shows the 'NFS Service' settings panel. It features a checkbox labeled 'Enable NFS Service'. Below this checkbox is a text input field. To the right of the input field is a small button with a green dot and the text 'Apply'.

3.4.5 Web File Manager

To access files on the NAS via web browser, enable Web File Manager. If the NAS is connected to the Internet and uses a valid IP address, you can access files on the server by web browser from anywhere. For more information, please refer to Chapter 9. The NAS supports SSL secure login. You can select SSL login on the NAS administration page and login Web File Manager via https; or enter https://NAS IP:8080/Qfilemanager/ in the browser.



3.4.6 FTP Service

When you enable FTP service, you can define the port number for the service and maximum number of users connected to the FTP at the same time.

✓ Select Protocol Type

Select to use standard FTP connection or SSL/TLS encrypted FTP. Select the corresponding protocol type in your client FTP software to ensure successful connection.

✓ Unicode Support

Select to enable or disable Unicode Support. The default setting is No. Since most FTP clients do not support Unicode currently, it is recommended that you disable Unicode support here and select the language the same as your OS in “System Settings—Encoding Setting” page so that the folders and files on FTP can be properly shown (please refer to Chapter 3.3.3). If your FTP client supports Unicode, make sure you have enabled Unicode support for both your client and the NAS.

FTP Service

☒ Enable FTP Service

Protocol type:

☒ FTP (standard)
☐ FTP with SSL/TLS (Explicit)

Port Number

21

Unicode Support

☐ Yes ☒ No

Enable Anonymous

☐ Yes ☒ No

Passive FTP Port Range

☒ Use the default port range (55536 - 56559)
☐ Define port range: 55536 - 56559

☐ Respond with external IP address for passive FTP connection request
External IP address:

Maximum number of all FTP connections:

30

Maximum number of connections for a single account

10

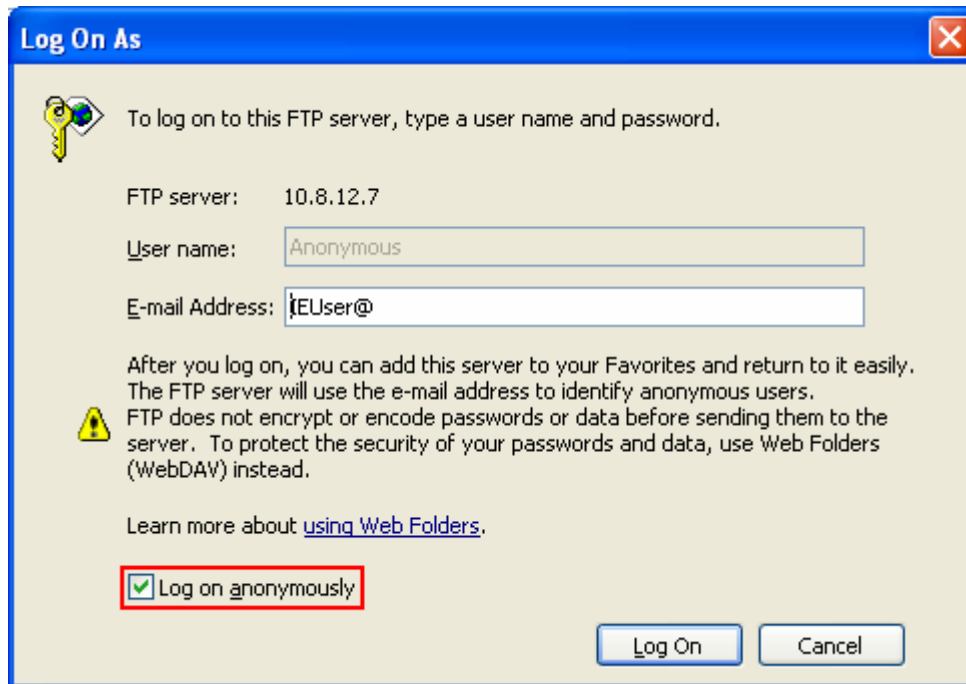
☐ Enable FTP transfer limitation(0 means unlimited)
Single connection: Maximum download rate (KB/s): 0 KB/s * Maximum upload rate (KB/s): 0 KB/s

Note: If your FTP client does not support Unicode, please select "No" for Unicode Support and select a supported filename encoding from [Filename Encoding Setting] under [System Settings] so that the folders and files on FTP can be properly shown.

Apply

✓ **Log on anonymously**

You can enable anonymous login to allow users to access the FTP server of the NAS anonymously. The users can access the folders and files which are opened for public access. If this option is disabled, users must enter an authorized user name and password to access the server.



✓ **Passive FTP Port Range**

You can use the default port range (55536-56559) or define a port range larger than 1024. When using this function, please make sure you have opened the configured port range on your router or firewall.

Respond with external IP address for passive FTP connection request

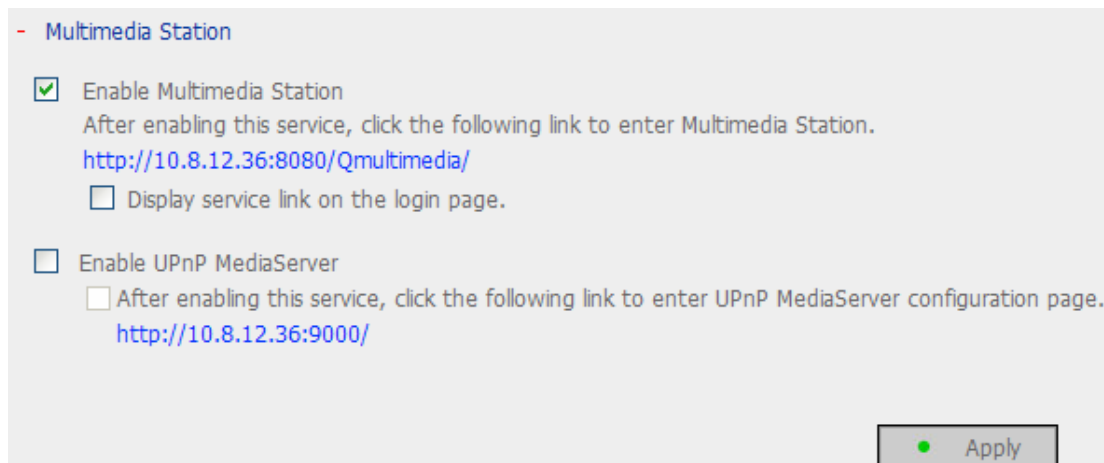
When passive FTP connection is in use and the FTP server is configured under a router, if the remote computer cannot connect to the FTP server via WAN, you can enable this function. By enabling this function, the FTP service replies the manually specified IP address or automatically detects the external IP address so that the remote computer can connect to the FTP server successfully.

✓ **FTP Transfer Limitation**

You can configure the maximum number of all FTP connections, maximum connections of a single account and the maximum upload/ download rates of a single connection.

3.4.7 Multimedia Station

To share multimedia files like photos, music or video files on the network, please enable Multimedia Station. For further information of Multimedia Station, iTunes service and UPnP Media Server, please refer to Chapter 5.



- Multimedia Station

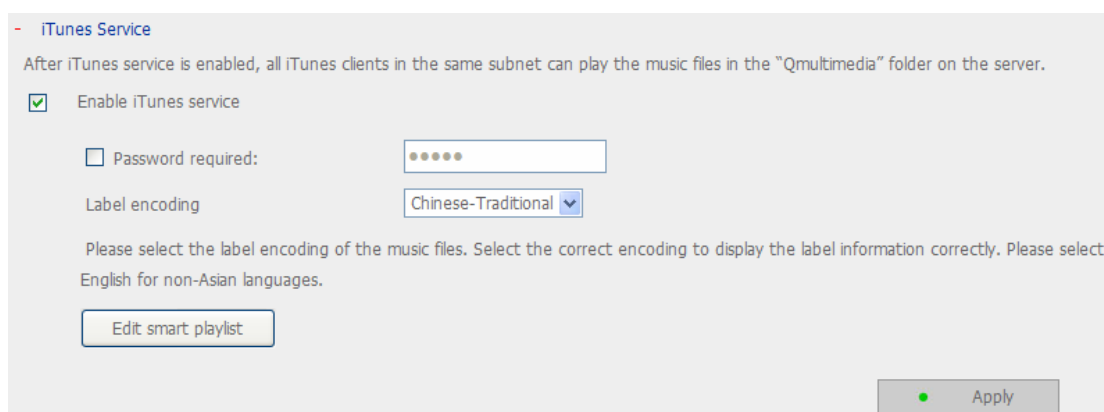
☒ Enable Multimedia Station
After enabling this service, click the following link to enter Multimedia Station.
<http://10.8.12.36:8080/Qmultimedia/>
☐ Display service link on the login page.

☐ Enable UPnP MediaServer
☐ After enabling this service, click the following link to enter UPnP MediaServer configuration page.
<http://10.8.12.36:9000/>

● Apply

3.4.8 iTunes Service

By enabling the iTunes service, the NAS shares the mp3 files in the Qmultimedia folder to all the iTunes clients available in the same subnet. The clients can automatically detect, browse, and play the music files in the NAS. For further details, please refer to Chapter 5.2.



- iTunes Service

After iTunes service is enabled, all iTunes clients in the same subnet can play the music files in the "Qmultimedia" folder on the server.

☒ Enable iTunes service

☐ Password required:

Label encoding

Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages.

● Apply

3.4.9 Download Station

The NAS supports BT, HTTP and FTP download independent of PC/notebook. To use download function of the NAS, please enable Download Station. For further information, please refer to Chapter 6.

Download Station

☒

Enable Download Station
After enabling this service, click the following link to enter to Download Station.
<http://10.8.12.4:8080/Qdownload/>

☒

Display service link on the login page.

Apply



Warning: Please be warned against illegal downloading of copyrighted materials. The Download Station functionality is provided for downloading authorized files only. Downloading or distribution of unauthorized materials may result in severe civil and criminal penalty. Users are subject to the restrictions of the copyright laws and should accept all the consequences.

3.4.10 Web Server

You can publish your own server by enabling Web Server function of the NAS. Enter the port number for web server service, the default number is 80. For further information, please refer to Chapter 7.

Web Server

After enabling this function, you can upload the webpage files to Qweb network share to publish your website.

☒ Enable Web Server [View version](#)

Port Number

After enabling this service, click the following link to enter to Web Server.

<http://10.8.12.4:80/>

The built-in web page applications of the system are as below (make sure you have enabled MySQL server and Web server)

- Click the link on the right to enter Joomla content management system

<http://10.8.12.4:80/Joomla/>

register_globals ☐ On ☒ Off

[Apply](#)

☐ php.ini Maintenance

The file **php.ini** is the system configuration file of Web Server. After enabling this function, you can edit, upload or restore this file. It is recommended to use the system default setting.

Configure register_globals

Select to enable or disable register_globals. The setting is disabled by default. When the web program asks to enable php register_globals, please enable this option. However, for system security concerns, it is recommended to disable this option.

php.ini Maintenance

☒ php.ini Maintenance

Please select...
Please select...
Upload
Edit
Restore

The file **php.ini** is the system configuration file of Web Server. After enabling this function, you can edit, upload or restore this file. It is recommended to use the system default setting.

Check the box "php.ini Maintenance" to select to upload, edit or restore php.ini.

Edit: Edit the current php.ini file.

Upload: Upload a new php.ini file to replace the current file.

Restore: Restore the php.ini file to system default.

Note: To use PHP mail() function, you can go to System Settings/ Configure SMTP Server to configure the SMTP server settings.

3.4.11 DDNS Service

The screenshot shows a configuration window titled "DDNS Service". Below the title, a note states: "After enabling DDNS Service, you can connect to this server by domain name." There is a checked checkbox labeled "Enable Dynamic DNS Service". Below this, a dropdown menu for "Select DDNS server:" is set to "members.dyndns.org". A text prompt says "Enter the account information you registered with the DDNS provider:". Below this are three input fields: "User Name:" with the value "nas", "Password:" with five dots, and "Host Name:" with the value "nas.dyndns.org". At the bottom, there are two radio buttons: "Dynamic IP Address" (which is selected) and "Fixed IP Address". An "Apply" button with a green indicator light is in the bottom right corner.

To set up a server on the Internet and enable users to access it easily, a fixed and easy-to-remember host name is often required. However, if ISP provides only dynamic IP address, the IP address of the server will change from time to time and is difficult to recall. You can enable DDNS service to solve the problem.

After enabling DDNS service of the NAS, whenever the NAS restarts or the IP address is changed, the NAS will notify DDNS provider immediately to record the new IP address. When the user tries to connect the NAS via the host name, DDNS will transfer the recorded IP address to the user.

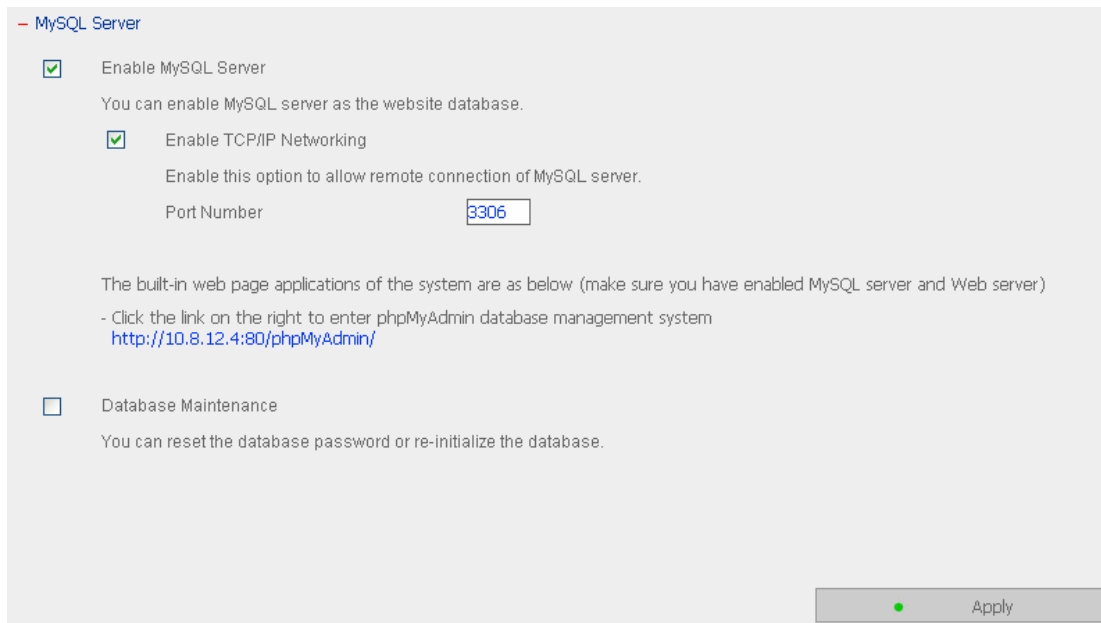
Enable and configure DDNS of the NAS:

Before using DDNS service, please register a host name from the DDNS provider*. The NAS supports the 5 DDNS providers: members.dyndns.org, update.ods.org, members.dhs.org, www.dyns.cx, www.3322.org.

Enable Dynamic DNS Service, and select DDNS server. Then enter the user name, password, and hostname.

* For the information of DDNS service registration, please refer to the website of the DDNS providers.

3.4.12 MySQL Server



MySQL Server

☒ Enable MySQL Server
You can enable MySQL server as the website database.

☒ Enable TCP/IP Networking
Enable this option to allow remote connection of MySQL server.

Port Number

The built-in web page applications of the system are as below (make sure you have enabled MySQL server and Web server)
- Click the link on the right to enter phpMyAdmin database management system
<http://10.8.12.4:80/phpMyAdmin/>

☐ Database Maintenance
You can reset the database password or re-initialize the database.

● Apply

You can enable MySQL Server as the website database.

Enable TCP/IP Networking

You can enable this option to configure your NAS's MySQL Server as a database server of another web server in remote site through Internet connection. When you disable this option, your MySQL Server will only be configured as local database server for NAS's web server.

After enabling remote connection, please assign a port for the remote connection service of MySQL server. The default port is 3306.

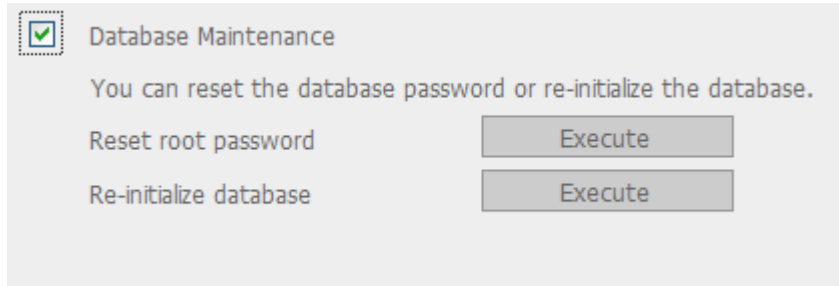
After the first-time installation of the NAS, a folder phpMyAdmin is created in the Qweb network folder. You can enter `http://NAS IP/phpMyAdmin/` in the web browser to enter the phpMyAdmin page and manage the MySQL database.

Note:

1. Please do not delete the phpMyAdmin folder. You can rename this folder but the link on the MySQL Server page will not be updated. To access the renamed folder, you can enter the link `http://NAS IP/renamed folder` in the web browser.
2. The phpMyAdmin folder is created after the first-time installation. When you update the firmware, the folder remains unchanged.

Database Maintenance

Check the box **Database Maintenance** to reset the database password or initialize the database.



☒ Database Maintenance

You can reset the database password or re-initialize the database.

Reset root password Execute

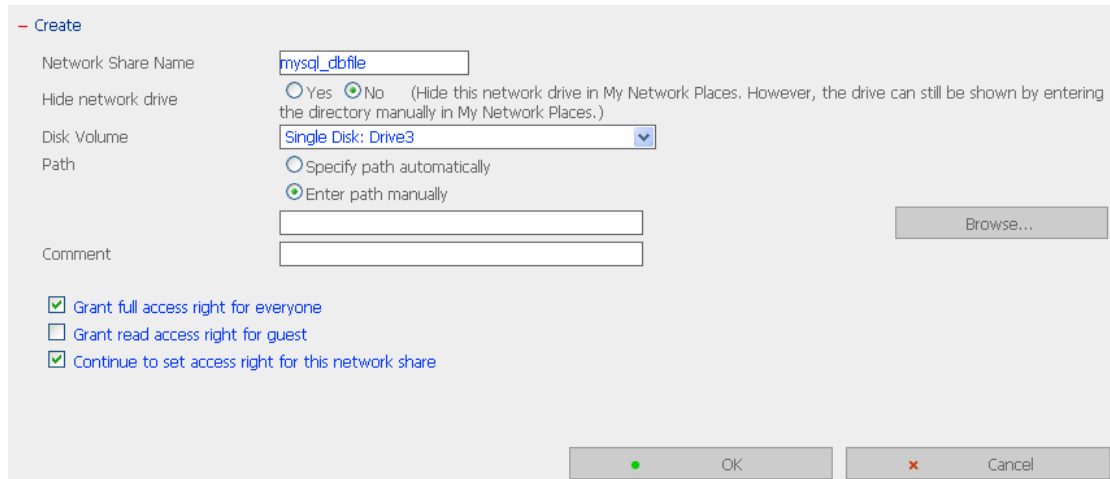
Re-initialize database Execute

Reset root password: Execute this function to reset the password of MySQL root as "admin".

Re-initialize database: Execute this function to delete all the data on MySQL database.

Description: File location of MySQL database

1. Create a network share in **Network Share Management**.
2. Enter the network share name and select "Enter path manually". Then click "Browse..."



Create

Network Share Name: mysql_dbfile

Hide network drive: ☐ Yes ☒ No (Hide this network drive in My Network Places. However, the drive can still be shown by entering the directory manually in My Network Places.)

Disk Volume: Single Disk: Drive3

Path: ☐ Specify path automatically ☒ Enter path manually

Comment: [Empty text box]

Grant full access right for everyone ☒

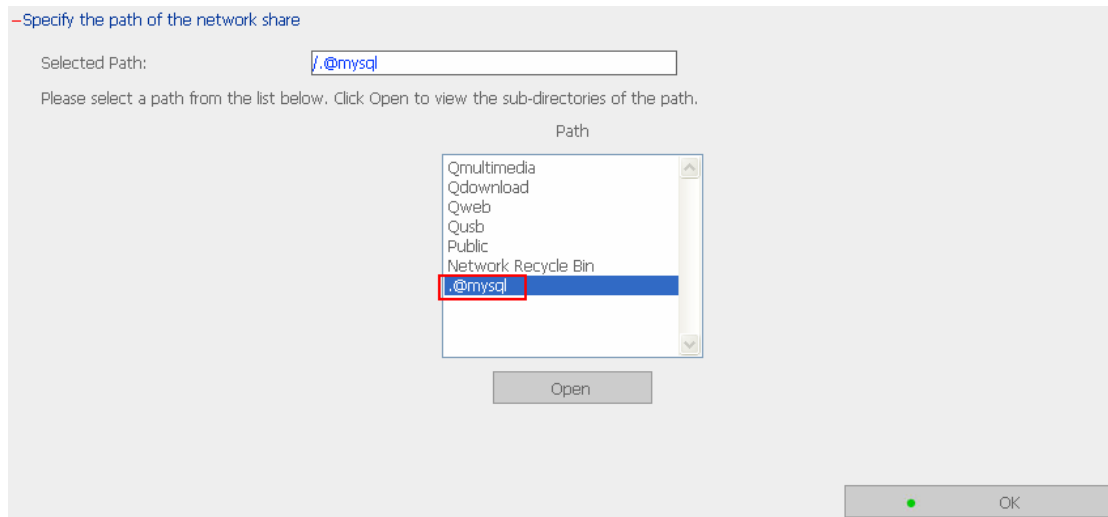
Grant read access right for guest ☐

Continue to set access right for this network share ☒

Browse...

OK Cancel

3. Select `.\mysql` and click "OK". After the network share has been created, configure the access right. The network share name configured in the above step is the file location of MySQL database.

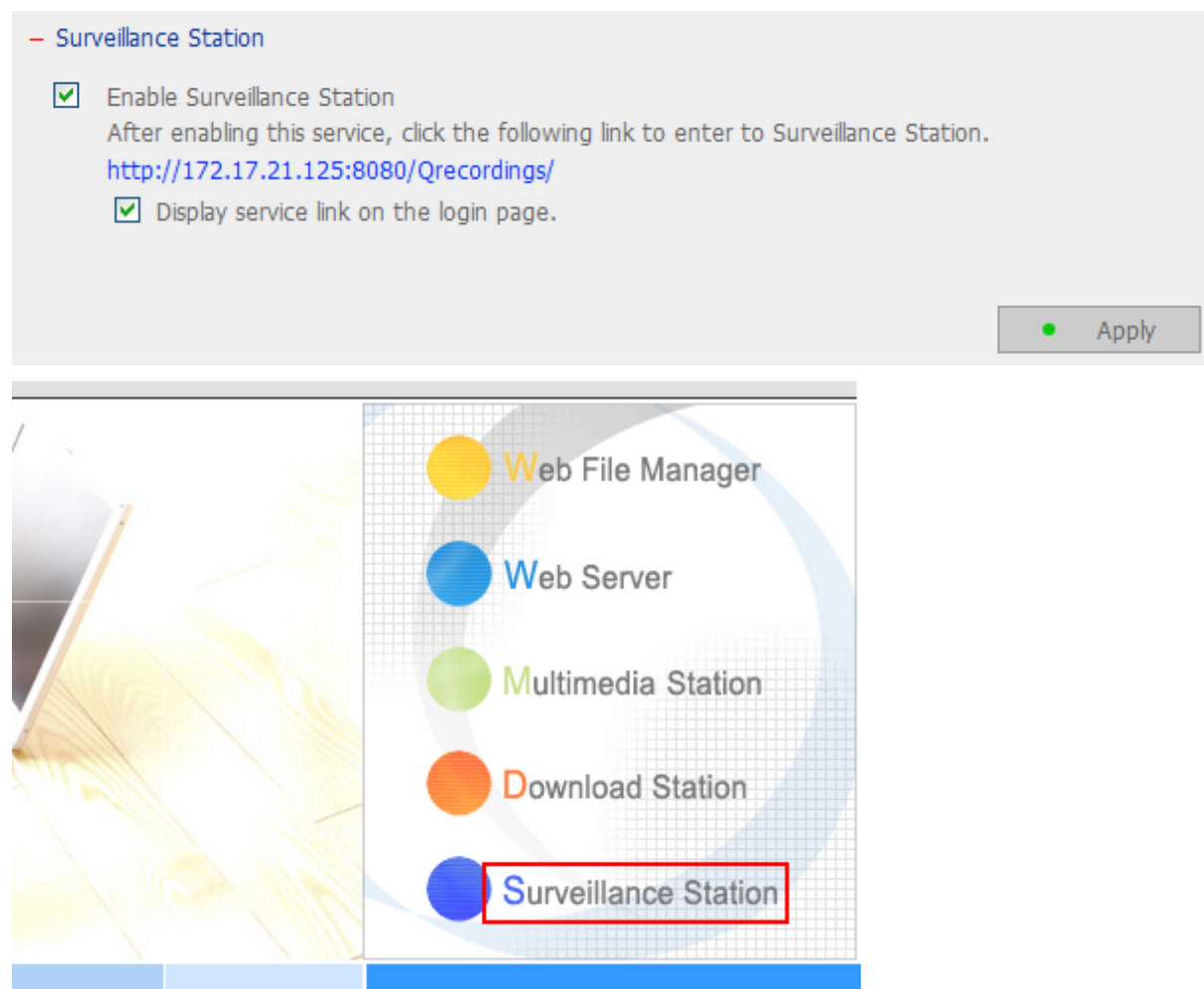


3.4.13 Surveillance Station

The Surveillance Station enables you to monitor and record the live video of the network cameras available on the network (LAN or WAN). To use this function, enable "Surveillance Station" in the "Network Settings" page.

Click on the link or enter the URL "http://NAS IP:8080/Qrecordings" in the web browser or click "Surveillance Station" on the login page to enter the Surveillance Station.

Note: Surveillance Station is only supported on IE browser 6.0 or later.



To set up your network surveillance system by NAS, follow the steps below:

1. Plan your home network topology
2. Set up the IP Cameras
3. Configure the camera settings on NAS
4. Configure your NAT router (for remote monitoring over the Internet)

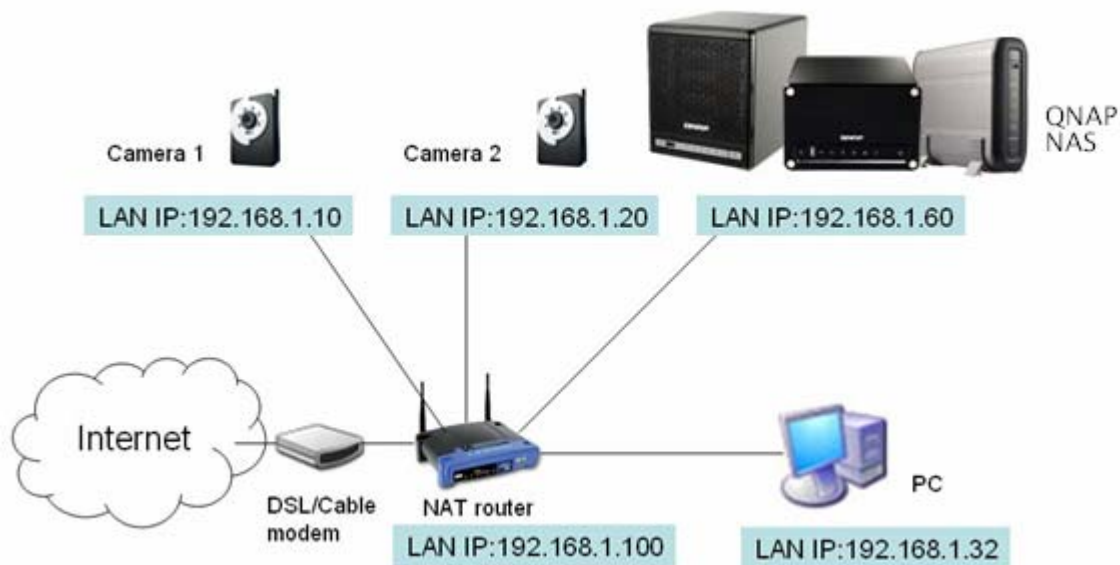
1. Plan your home network topology

Write down your plan of the home network before starting to set up the surveillance system. Consider the following when doing so:

- i. The IP address of NAS
- ii. The IP address of the cameras

Your computer, the NAS, and the IP cameras should be installed to the same router in LAN. Assign fixed IP addresses to the NAS and the IP cameras. For example,

- The LAN IP of the home router: 192.168.1.100
- Camera 1 IP: 192.168.1.10 (fixed IP)
- Camera 2 IP: 192.168.1.20 (fixed IP)
- NAS IP: 192.168.1.60 (fixed IP)



2. Set up the IP Cameras

In this example, two IP cameras will be installed. Connect the IP cameras to your home network. Then set the IP address of the cameras so that they are in the same LAN as the computer. Login the configuration page of the Camera 1 by IE browser. Enter the IP address of the first camera as 192.168.1.10. The default gateway should be set as the LAN IP of the router (192.168.1.100 in this example). Then configure the IP address of the second camera as 192.168.1.20.

Some cameras provide a utility for IP configuration. You may refer to the user manual of the cameras for further details.

*** Please refer to [Appendix A](#) for the supported network camera list.**

3. Configure the camera settings on NAS

Login the Surveillance Station by IE browser to configure the IP cameras. Go to "Settings>Camera Settings" page. Enter the camera information, e.g. name, model, and IP address.

	Camera Name	Brand	IP Address	WAN IP Address
1	Camera 1	Panasonic	192.168.1.10	
2	Camera 2	iPUX	192.168.1.20	

Camera Number: 1: Camera 1

Camera Model: Panasonic BL-C1

Camera Name: Camera 1

IP Address: 192.168.1.10

☐ Port: 80

WAN IP: (for monitoring from public network)

(If your IP camera is installed behind NAT router, you may input the public IP address (or URL) and the corresponding forwarded port of the router.)

☐ Port: 80

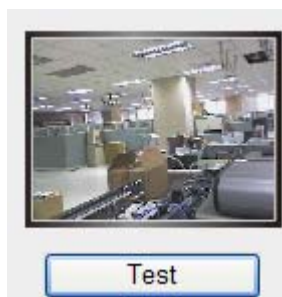
User Name : administrator

Password :

☒ Enable recording on this camera

Note: All the camera configuration will not take effect until you click the "Apply" button.

Click "Test" on the right to ensure the connection to the IP camera is successful.



You may enable continuous recording by checking the option "Enable recording on this camera".

If your camera supports audio recording, you may enable the option in "Recording Settings" page. Click "Apply" to save the changes.

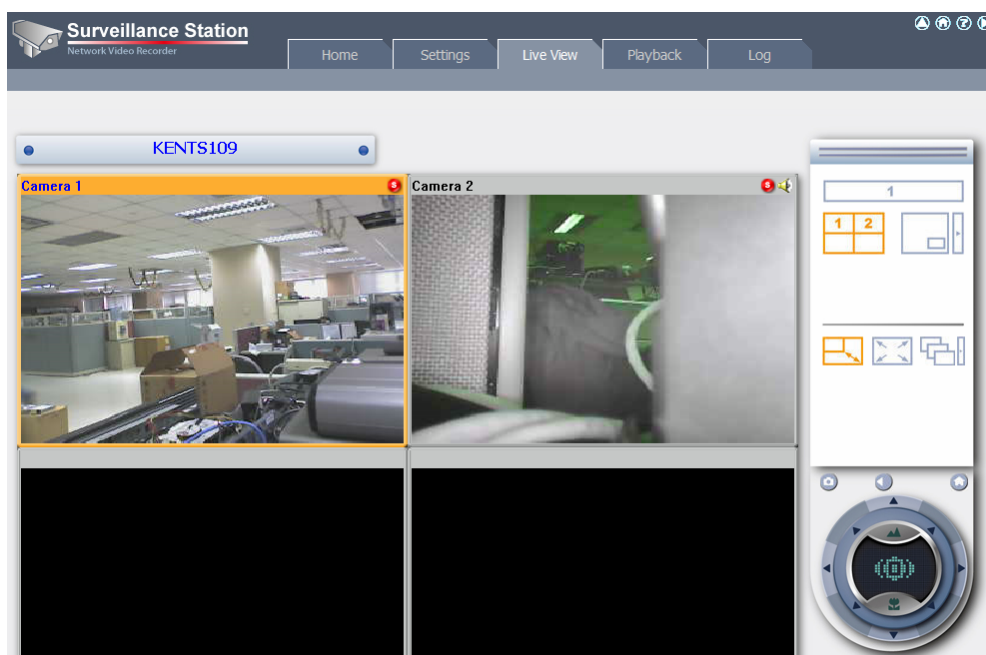
Camera Number:	2: Camera 2
Video Compression:	Motion JPEG
Resolution:	QVGA
Frame Rate:	20
Quality:	Normal
<input checked="" type="checkbox"/> Enable audio recording on this camera	
Estimated Storage Space for Recording: 6760 GB	
<input type="button" value="Apply"/>	

Configure the settings of Camera 2 following the above steps.

After you have added the network cameras to NAS, go to the "Live View" page. The first time you access this page by IE browser, you have to install the ActiveX control in order to view the images of Camera 1 and Camera 2. You can start to use the monitoring and recording functions of the Surveillance Station.

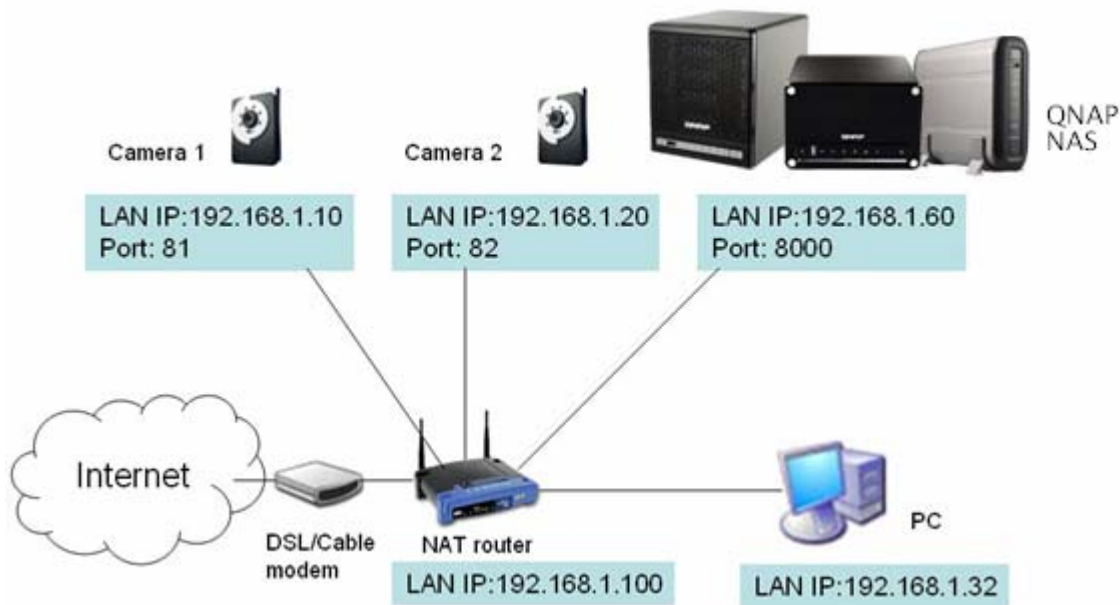
To use other functions of the Surveillance Station such as motion detection recording, schedule recording, and video playback, please refer to the online

help .



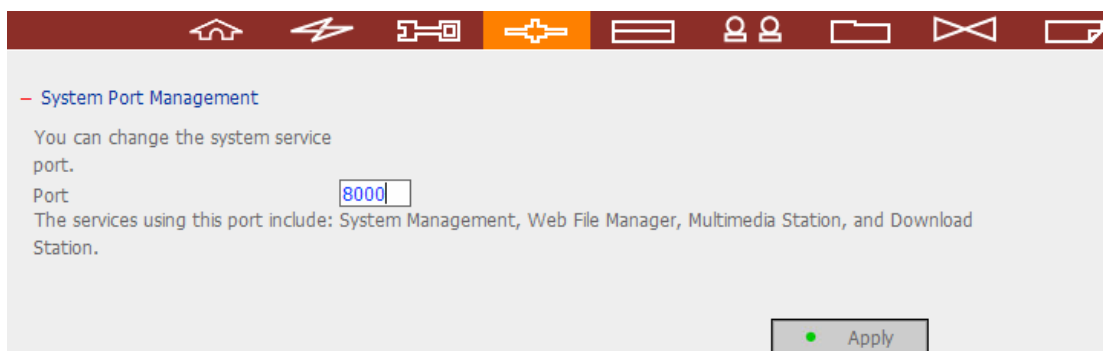
4. Configure your NAT router (for remote monitoring over the Internet)

To view the monitoring video and access the NAS remotely, you need to change the network settings by forwarding different ports to the corresponding LAN IP on your NAT router.



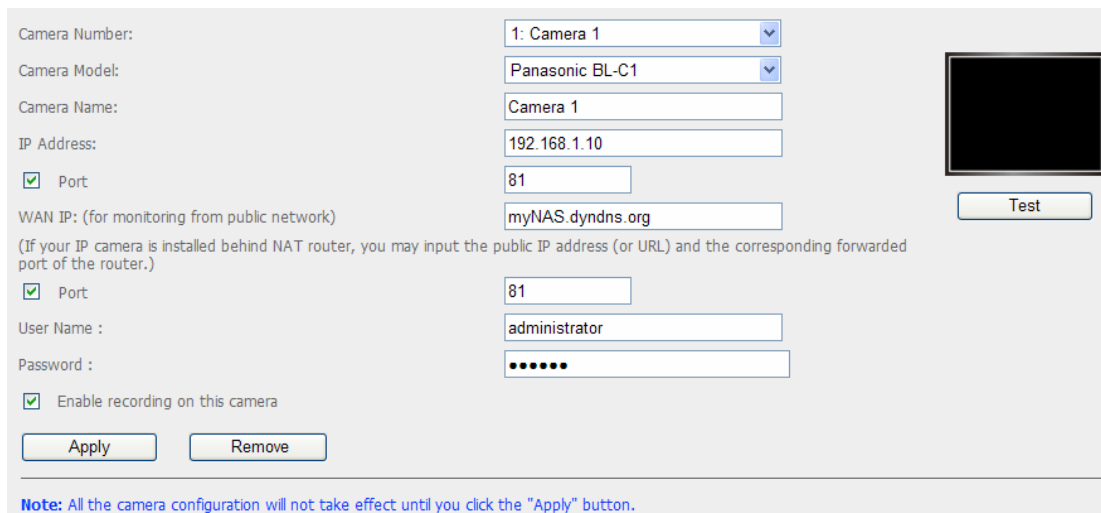
Change the port settings of NAS and IP cameras

The default HTTP port of NAS is 8080. In this example, the port is changed to 8000. Therefore, you have to access the NAS via **http://NAS IP:8000** after applying the settings.



Then login the network settings page of the IP cameras. Change the HTTP port of Camera 1 from 80 to 81. Then change the port for Camera 2 from 80 to 82.

Next, login Surveillance Station. Go to "Settings>Camera Settings". Enter the port numbers of Camera 1 and Camera 2 as 192.168.1.10 **port 81** and 192.168.1.20 **port 82** respectively. Enter the login name and password for both cameras. Besides, enter the WAN IP address (or your domain address in public network, e.g. MyNAS.dyndns.org) and the port on the WAN side for the connection from Internet. After finishing the settings, click "Test" to ensure successful connection to the cameras.



Camera Number: 1: Camera 1

Camera Model: Panasonic BL-C1

Camera Name: Camera 1

IP Address: 192.168.1.10

☒ Port 81

WAN IP: (for monitoring from public network) myNAS.dyndns.org

(If your IP camera is installed behind NAT router, you may input the public IP address (or URL) and the corresponding forwarded port of the router.)

☒ Port 81

User Name : administrator

Password :

☒ Enable recording on this camera

Apply Remove

Note: All the camera configuration will not take effect until you click the "Apply" button.

Go to the configuration page of your router and configure the port forwarding as below:

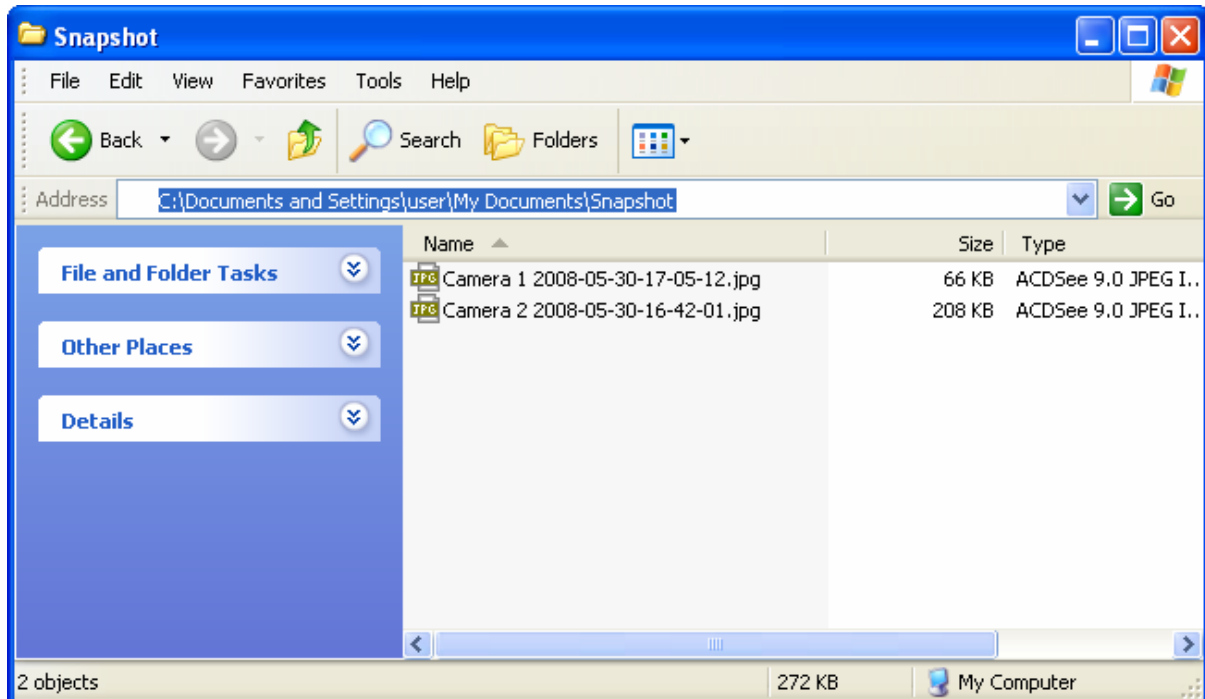
- Forward Port 8000 to NAS LAN IP: 192.168.1.60
- Forward Port 81 to Camera 1's LAN IP: 192.168.1.10
- Forward Port 82 to Camera 2's LAN IP: 192.168.1.20

Note: When you change the port settings, make sure remote access is allowed. For example, if your office network blocks port 8000, you will not be able to access your NAS from the office.

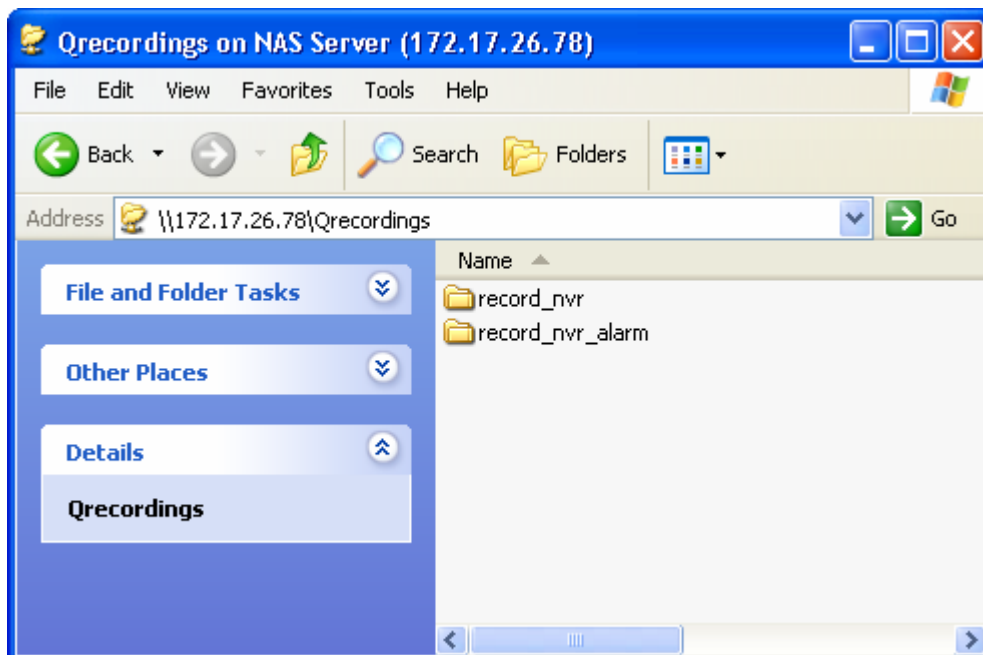
After you have configured the port forwarding and router settings, you can start to use the Surveillance Station for remote monitoring over the Internet.

Access the snapshots and video recordings of Surveillance Station

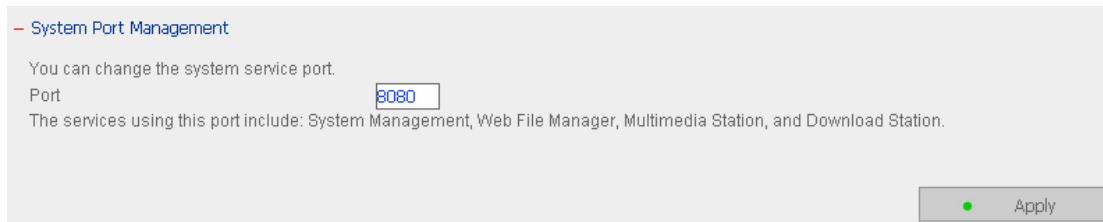
All snapshots taken are saved in the "Snapshot" folder under My Documents in your computer.



The video recordings will be saved in <\\NASIP\Qrecordings>. Normal recordings are saved in the folder "record_nvr" and alarm recordings are saved in the folder "record_nvr_alarm" in the network share.



3.4.14 System Port Management



The screenshot shows a web interface for "System Port Management". It includes a title bar, a description of the port's function, a text input field for the port number (currently set to 8080), a list of services using the port, and an "Apply" button with a green status indicator.

– System Port Management

You can change the system service port.

Port

The services using this port include: System Management, Web File Manager, Multimedia Station, and Download Station.

● Apply

Assign a protocol for the system management. The default port is 8080. The services of this port include: System Management, Web File Manager, Multimedia Station, and Download Station.

The system will restart after clicking "**Apply**". Please wait. The website will automatically change to the homepage of the new protocol system.

3.4.15 View Network Settings

You can view current network settings and status of the NAS in this section.

View Network Settings

Network

Network File Services

LAN Configuration

Connection Type	Static
IP Address	192.168.1.77
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.100
MAC Address	00:08:9B:8A:AE:7C
Connection Status	Ready
Enable DHCP Server	No

Close

- View Network Settings

Network	Network File Services
Microsoft Networking	
Enabled	Yes
Server Type	Standalone Server
Workgroup	NAS
WINS server Enabled	No
Domain Master Enabled	No
Apple Networking	
Enabled	No
Apple Zone Name	*
Unix/Linux NFS	
Enabled	No
Web File Manager	
Enabled	Yes
FTP Service	
Enabled	Yes
Port Number	21
Max Connections	30
Multimedia Station	
Enable Multimedia Station	Yes
Enable iTunes Service	No
Enable UPnP MediaServer	Yes
Download Station	
Enabled	Yes
Web Server	
Enabled	No
Port Number	80
register_globals	off
DDNS Service	
Enabled	No
MySQL Server	
Enabled	No
Enable TCP/IP Networking	Yes
Surveillance Station	
Enabled	Yes
System Port Management	
Port Number	8080

- Close

3.5 Device Configuration


You can configure SATA disk, USB disk, and USB printer settings in this section.

Device Configuration


- SATA Disk
- RAID Management
- USB Disk
- USB Printer

SATA Disk


New Disk Volume Configuration




Single Disk Volume
Create single disk volume(s).




RAID 0 Striping Disk Volume
Create one striping disk volume.




RAID 5 Disk Volume
Combine 3 or more disks to create a disk volume with data protection (1 disk crash is allowed).



RAID 1 Mirroring Disk Volume
Create mirroring disk volume(s).



Linear Disk Volume
Create one linear disk volume.



RAID 6 Disk Volume
Combine 4 or more disks to create a disk volume with data protection (2 disk crash is allowed).

Current Disk Volume Configuration

Physical Disks

Disk	Model	Capacity	Status	Bad Blocks Scan	SMART Information
Drive 1	WDC WD1600JD-00HB80 08.0	149.05 GB	Ready	<button>Scan now</button>	Good
Drive 2	--	--	No Disk	<button>Scan now</button>	---
Drive 3	--	--	No Disk	<button>Scan now</button>	---
Drive 4	--	--	No Disk	<button>Scan now</button>	---

Logical Volumes

Volume	Total Size	Free Size	Status	Format	Check Disk	Delete Disk Volume
Single Disk: Drive 1	145.63 GB	145.48 GB	Ready	<button>Format now</button>	<button>Check now</button>	<button>Remove now</button>

3.5.1 SATA Disk


This page shows the model, size and current status of the disk(s) installed on the NAS. You can format and check disks, and scan bad blocks on the disks. When the SATA disks are formatted, the NAS will create the following default share folders:

- ✓ Public: Network share for file sharing
- ✓ Qdownload: Network share for Download Station
- ✓ Qmultimedia: Network share for Multimedia Station
- ✓ Qusb: Network share for data copy function via USB ports
- ✓ Qweb: Network share for Web Server
- ✓ Qrecordings: the default network share of Surveillance Station


You can create the following disk volumes by clicking on the corresponding icon on the "SATA Disk" page.

SATA Disk


New Disk Volume Configuration




Single Disk Volume
Create single disk volume(s).




RAID 0 Stripping Disk Volume
Create one stripping disk volume.



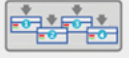
RAID 5 Disk Volume
Combine 3 or more disks to create a disk volume with data protection (1 disk crash is allowed).



RAID 1 Mirroring Disk Volume
Create mirroring disk volume(s).



Linear Disk Volume
Create one linear disk volume.



RAID 6 Disk Volume
Combine 4 or more disks to create a disk volume with data protection (2 disk crash is allowed).

Current Disk Volume Configuration

Physical Disks

Disk	Model	Capacity	Status	Bad Blocks Scan	SMART Information
Drive 1	WDC WD1600JD-00HBB0 08.0	149.05 GB	Ready	<button>Scan now</button>	Good
Drive 2	--	--	No Disk	<button>Scan now</button>	---
Drive 3	--	--	No Disk	<button>Scan now</button>	---
Drive 4	--	--	No Disk	<button>Scan now</button>	---

Logical Volumes

Volume	Total Size	Free Size	Status	Format	Check Disk	Delete Disk Volume
Single Disk: Drive 1	145.63 GB	145.48 GB	Ready	<button>Format now</button>	<button>Check now</button>	<button>Remove now</button>

You can create the following disk volumes:

- **Single Disk Volume**

Each disk will be used as a standalone disk. However, if a disk is damaged, all data will be lost.

- **RAID 1 Mirroring Disk Volume**

RAID 1 (mirroring disk) protects your data by automatically backing up the contents of one drive onto the second drive of a mirrored pair. This protects your data if one of the drives fails. Unfortunately, the storing capacity is equal to a single drive, as the second drive is used to automatically back up the first. Mirroring Disk is suitable for personal or corporate use to store important data.

- **RAID 0 Striping Disk Volume**

RAID 0 (striping disk) combines 2 or more drives into one larger disk. It offers the fastest disk access but it does not have any protection of your data if the striped array fails. The disk capacity equals the number of drives in the array times the size of the smallest drive. Striping disk is usually used to maximize your disk capacity or for fast disk access but not for storing important data.

- **Linear Disk Volume**

You can combine two or more disks into one larger disk. During file saving, the file will be saved on physical disks sequentially but does not have a disk failure file protection function. The overall capacity of linear disk is the sum of all disks. Linear disk is generally used for storing large data and is not appropriate to use for file protection of sensitive data.

- **RAID 5 Disk Volume**

RAID 5 disk volume is ideal for organizations running databases and other transaction-based applications that require storage efficiency and data protection. To create a RAID 5 disk volume, a minimum of 3 hard disks are required. The total capacity of RAID 5 disk volume = the size of the smallest capacity disk in the array x (no. of hard disk – 1). It's recommended that you use same brand and same capacity hard drive to establish the most efficient hard drive capacity. Additionally, if your system contains four disk drives, three of them can be used to implement RAID 5 data disks and the fourth drive can be used as a spare disk. That way, in the event of a physical disk failure, the system will automatically use the

spare disk to rebuild your data.

RAID 5 can survive 1 disk failure and system can still operate properly. When a disk fails in RAID 5, the disk volume will be in "degraded mode". There is no more data protection at this stage. If one more disk fails, all the data will be crashed.

Therefore, you must replace a new disk immediately. You can select the install a new disk after turning off the server or hot swap the new disk when the server is on. The status of the disk volume will become "rebuilding" after installing a new disk. When rebuilding completes, your disk volume resumes to normal status.

Note: To install a disk when the server is on, make sure the disk volume is in "degraded" mode. Or wait after the two long beeps after the disk crash, then insert the new disk.

- **RAID 6 Disk Volume**

RAID 6 disk volume is ideal for important data protection.

To create a RAID 6 disk volume, a minimum of 4 hard disks are required. The total capacity of RAID 6 disk volume = the size of the smallest capacity disk in the array x (no. of hard disk-2). It's recommended that you use same brand and same capacity hard drive to establish the most efficient hard drive capacity.

RAID 6 can survive 2 drives failure and system can still operate properly.

Note: To install a disk when the server is on, make sure the disk volume is in "degraded" mode. Or wait after the two long beeps after the disk crash, and then insert the new disk.

- **RAID 5, RAID 6 Read-only Mode**

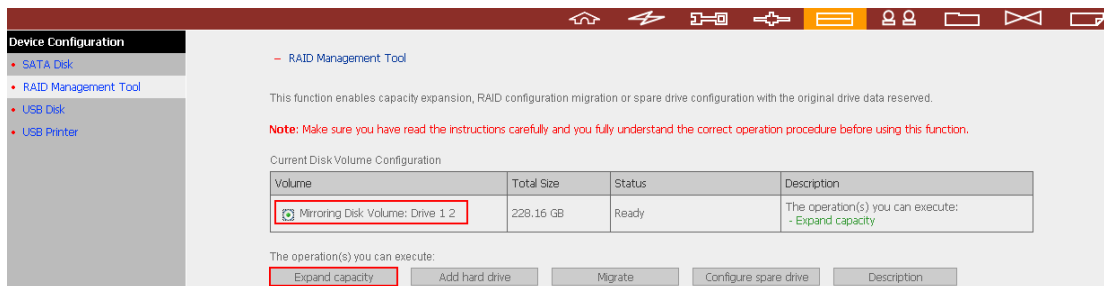
The drive configuration enters read-only mode in the following occasions.

- 2 drives are damaged in RAID 5
- 3 drives are damaged in RAID 6

The drives in the above configurations are read-only. It is recommended to re-create new drive configuration in such case.

3.5.2 RAID Management

This function enables capacity expansion, RAID migration, or spare drive configuration with the original drive data reserved.



- **Expand capacity**

This function enables drive capacity expansion by replacing the drives in a configuration one by one. This option is supported for the following drive configurations:

- RAID 1 expansion
- RAID 5 expansion
- RAID 6 expansion

- **Add hard drive**

This function enables adding new drive member to a drive configuration. This option is supported for the following drive configurations:

- RAID 5 expansion

- **Migrate**

This function enables a drive configuration to be migrated to a different RAID configuration. This option is supported for the following drive configurations:

- Migrate single drive to RAID 1, 5, or 6
- Migrate RAID 1 to RAID 5 or 6
- Migrate RAID 5 to RAID 6

- **Configure spare drive**

This function enables adding or removing RAID 5 spare drive. The options available are:

- Add spare drive in RAID 5
- Remove spare drive in RAID 5

For detailed operation, please click "**Description**" on the management interface to view the detailed operation instructions.

3.5.3 USB Disk

The NAS supports USB disks and thumb drives for extended storage. Connect the USB device to the USB port of the NAS, when the device is successfully detected, the details will be shown on this page.

It may take tens of seconds for the NAS to detect the external USB device successfully. Please wait patiently.

USB Disk

USB Disk 1

Manufacturer:

JetFlash

Model:

TS1GJF110

Device Type:

USB 2.0

Total / Free size:

992 MB / 1 MB

File System:

FAT

Status:

Ready

Format As:

FAT

Eject:

EXT 3

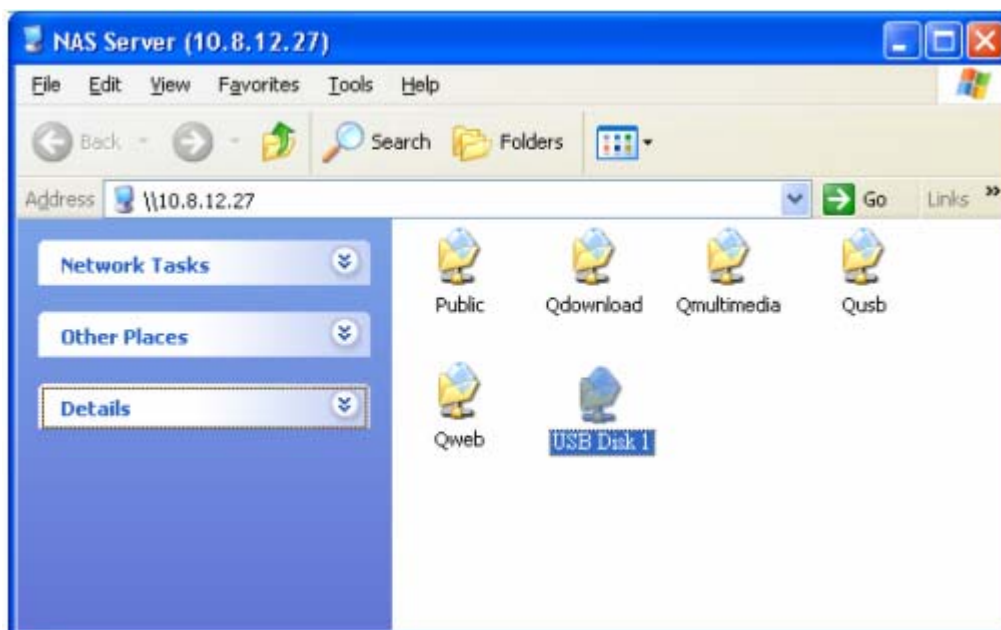
FAT

Format now...

Eject now...

To remove the hardware device, please click [Eject now...]. When the system does not show the device anymore, you can remove it safely.

Note: Do NOT unplug the device when it is in use to protect the device.



3.5.4 USB Printer

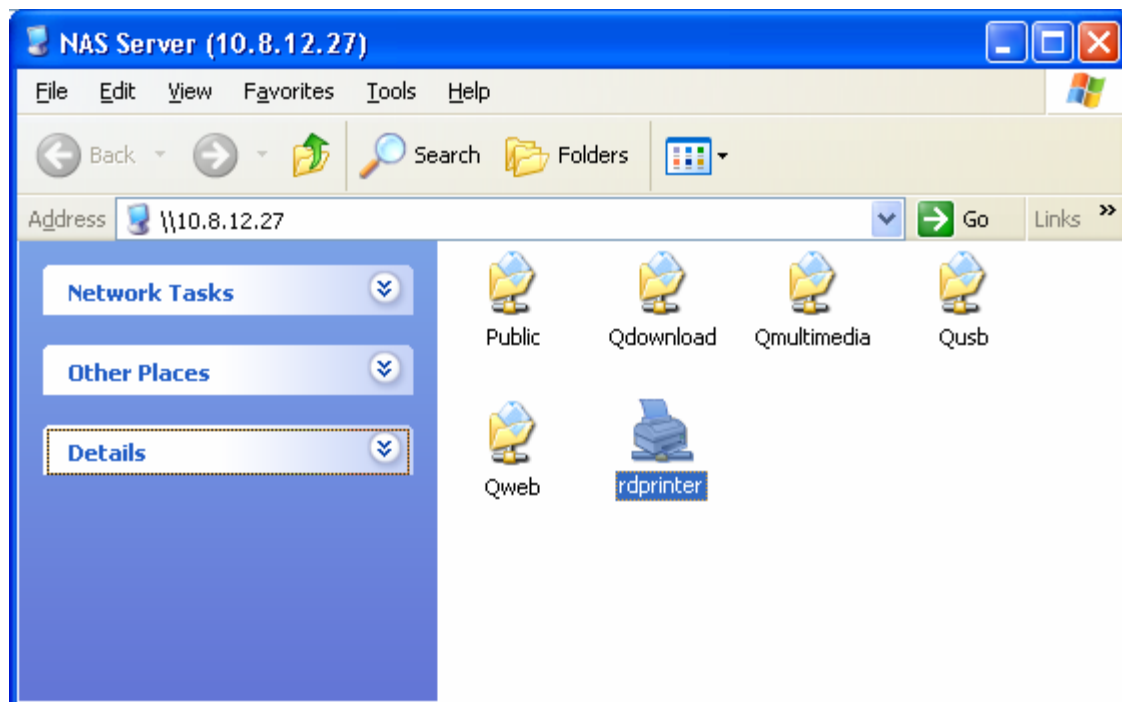
To provide printer sharing function for network users, you can simply connect a USB printer to the USB port of the NAS. The NAS will detect the printer automatically. This function supports up to 3 printers.



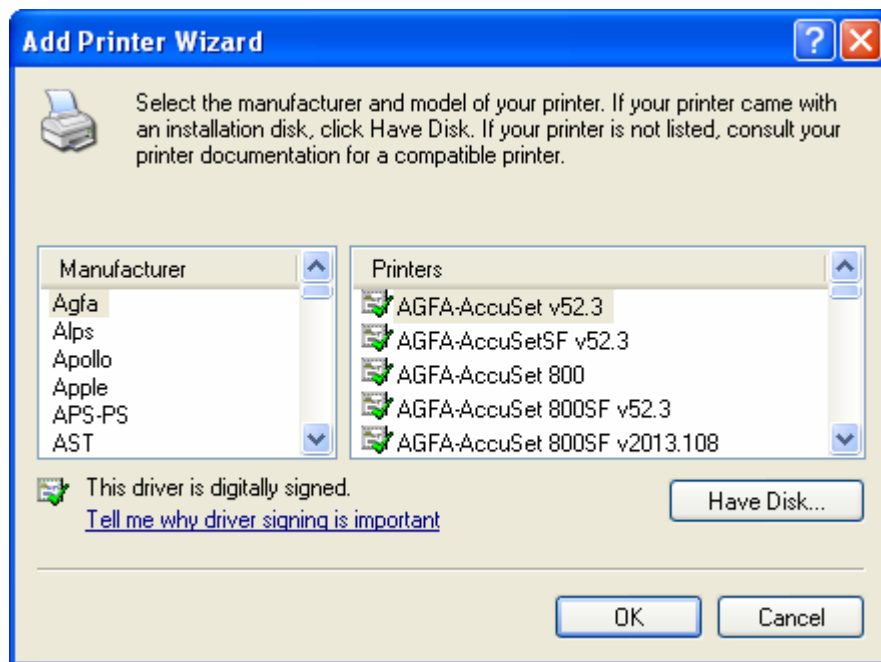
3.5.4.1 Windows Users

Method 1

1. A printer icon should be shown in the share folder of the server. Double click the icon.



2. Install the printer driver.



3. When finished, you can start to use network printer service of the NAS.

Method 2

The following configuration method has been verified on Windows XP only:

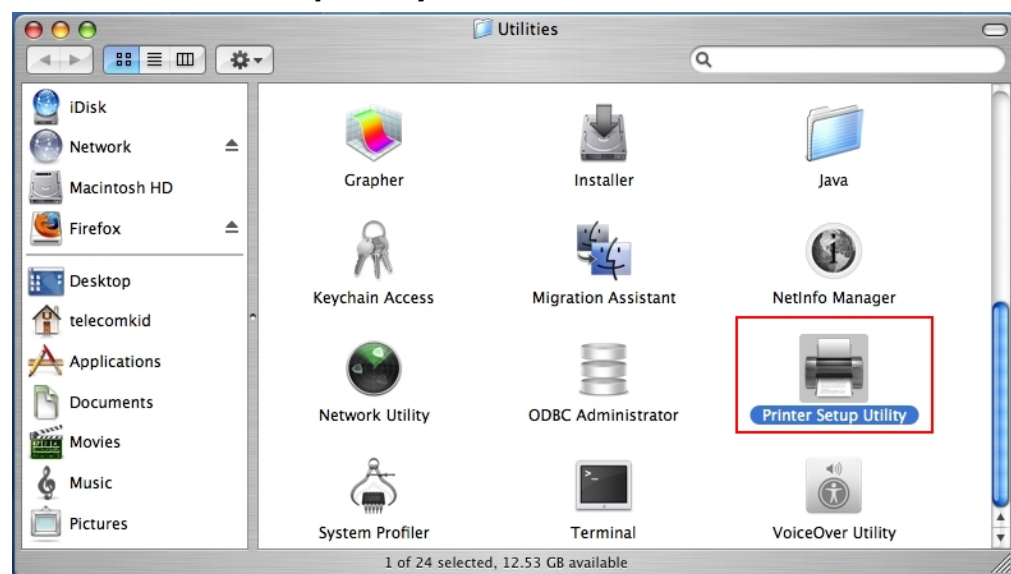
1. Open **Printers and Faxes**.
2. Delete the existing network printer (if any).
3. Right click the blank area in the Printers and Faxes window. Select **Server Properties**.
4. Click the **Ports** tab and delete the ports configured for the previous network printer (if any).
5. Restart your PC.
6. Open Printers and Faxes.
7. Click **Add a printer** and click **Next**.
8. Select **Local printer attached to this computer**. Click **Next**.
9. Click **Create a new port** and select **Local Port** from the drop-down menu. Click **Next**.
10. Enter the port name. The format is \\NAS IP\\NAS name**pr**, e.g. NAS IP= 192.168.1.1, NAS name= myNAS, the link is [\\192.168.1.1\\myNASpr](\\\\192.168.1.1\\myNASpr).
11. Install the printer driver.
12. Print a test page.

3.5.4.2 Mac Users

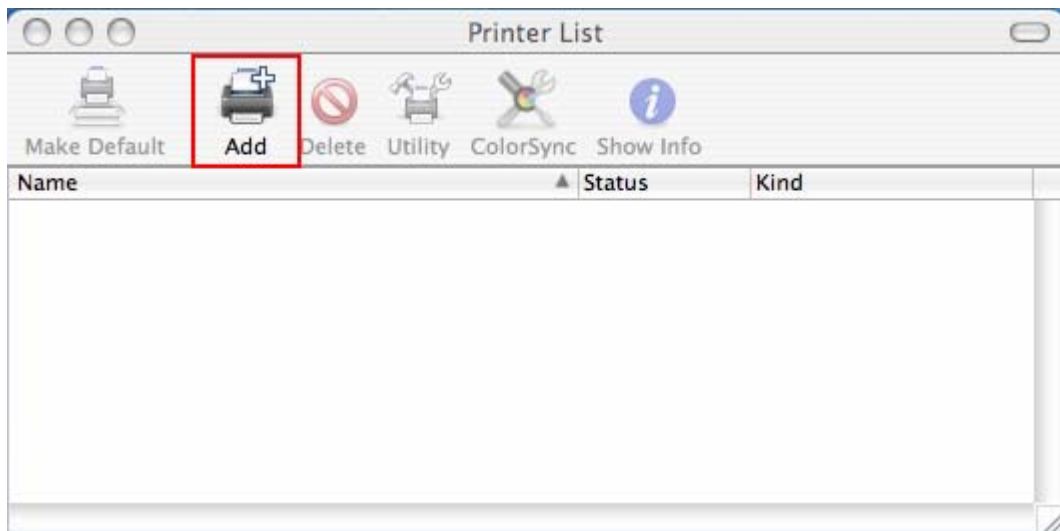
1. On the toolbar, click **Go/ Utilities**.




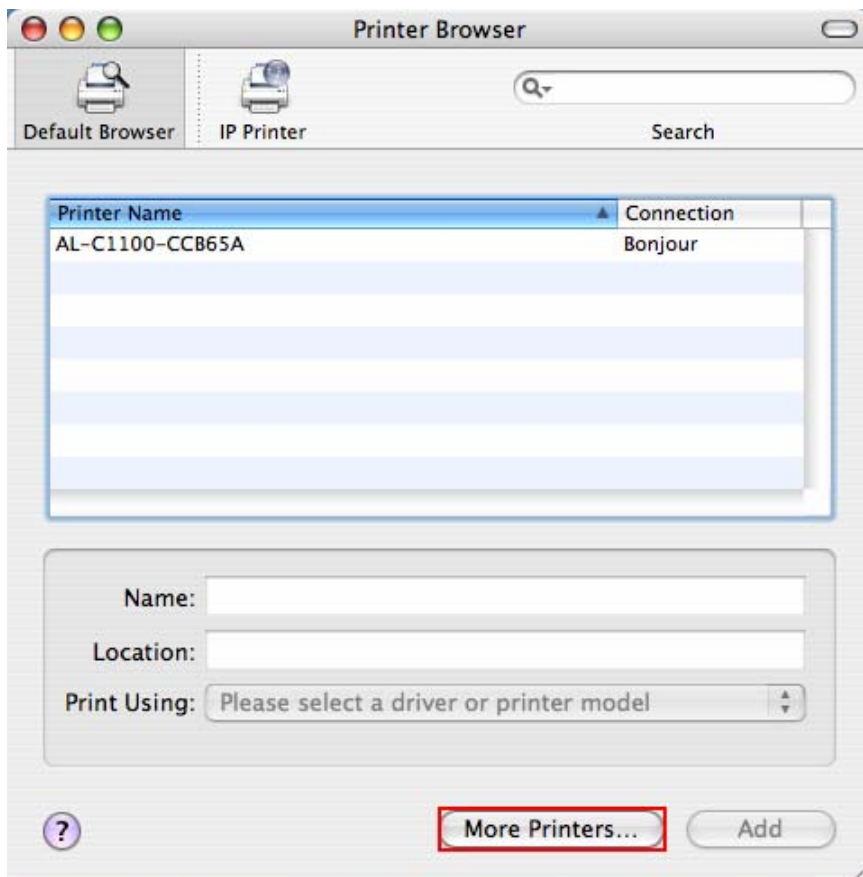
2. Click **Printer Setup Utility**.



3. Click **Add**.



4. Press and hold the **alt** key  on the keyboard and click **More Printers** concurrently.

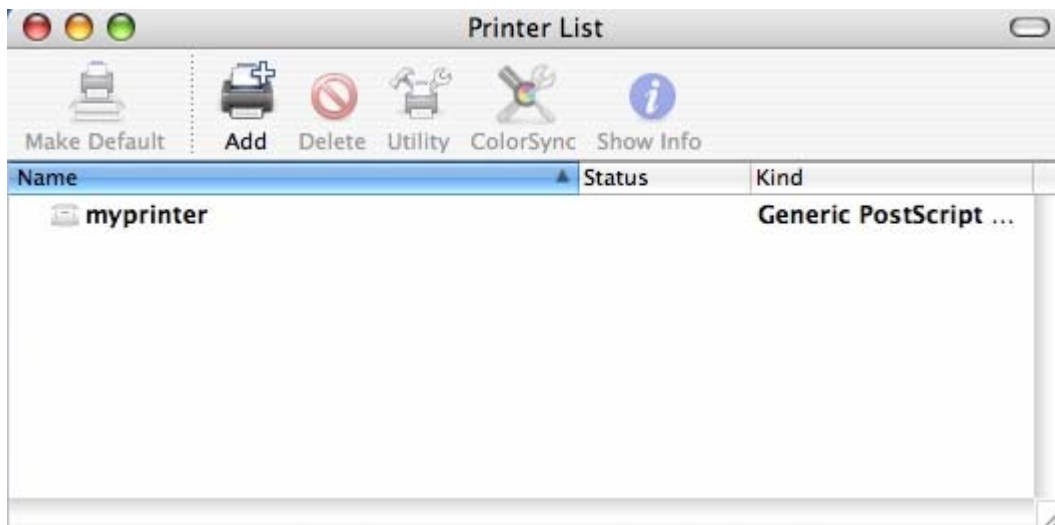


5. In the pop up window:
 - a. Select **Advanced***.
 - b. Select **Windows Printer with SAMBA**.
 - c. Enter the printer name.
 - d. Enter the printer URI, the format is smb://NAS IP/printer name. The printer name is found on the Device Configuration/ USB Printer page.
 - e. Select **Generic** for Printer Model.
 - f. Click **Add**.



*Note that you must hold and press the **alt** key and click **More Printers** at the same time to view the Advanced printer settings. Otherwise, this option does not appear.

6. The printer appears on the printer list. It is ready to use.

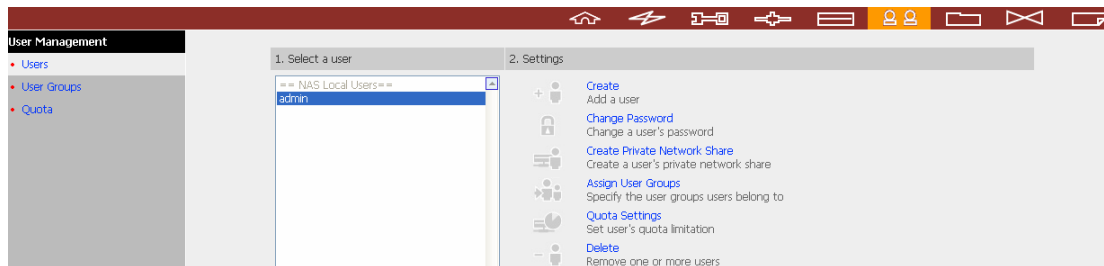


Note:

1. The NAS network printer service supports Postscript printer on Mac OS only.
2. For the latest USB printer compatibility list, please visit <http://www.qnap.com>.

3.6 User Management

The files on the NAS can be shared among multiple users. For easier management and better control of users' access right, you have to organize users, user groups and their access right control.



3.6.1 Users

The system has created the following users by default:

① admin

By default, administrator has access to system administration and cannot be deleted.

② guest

This is a built-in user and will not be displayed on User Management page. When you use a non-registered user name to login, the server will recognize the user as a guest and will allow limited access. A guest does not belong to any user group. The login password for guest is **guest**.

③ Anonymous

This is a built-in user and will not be displayed on User Management page. When you connect to the server by FTP service, you can use this name to login as a guest.

512 users can be created at maximum (including system default users). You can create a new user according to your needs. The following information is required to create a new user:

✓ **User name**

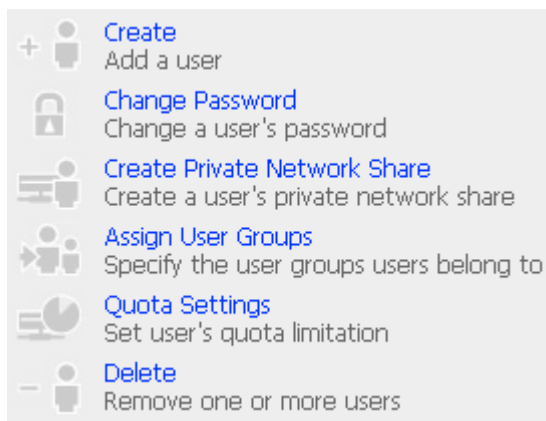
The user name must not exceed 32 characters. It is case-insensitive and supports double-byte characters, such as Chinese, Japanese, and Korean except:

" / \ [] : ; | = , + * ? < > ` '

✓ **Password**

The password is case-sensitive and can be 16 characters long at maximum. It is recommended to use a password of at least 6 characters.

You can perform the following actions for user management:



3.6.2 User Groups

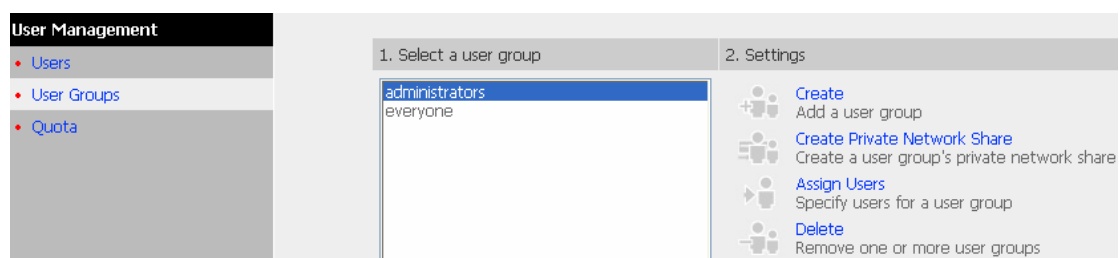
User group is a collection of users with the same access right to files or folders. The NAS has created the following user groups by default:

① Administrators

All members in this group have administration right. You cannot delete this group.

② Everyone

All registered users belong to everyone group. You cannot delete this group.



You can manage user groups with the following options:



1024 groups can be created at maximum. A group name must not exceed 256 characters. It is case-insensitive and supports double-byte characters, such as Chinese, Japanese, and Korean, except the following ones:

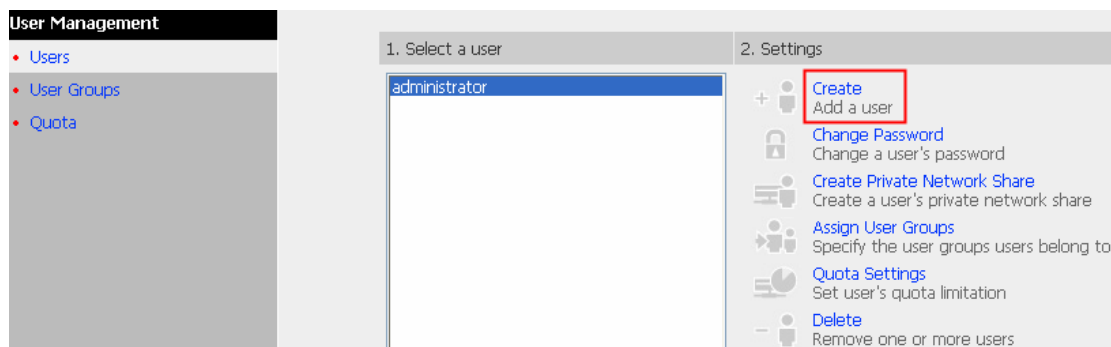
" / \ [] : ; | = , + * ? < > ` '

Create Users and Assign Users to User Group

The following example demonstrates how to create new users and assign users to a user group.

ABC Co. has recently recruited two employees Mr. Jones Lee for Administration Department and Ms. Jane Wu for Sales Department. The IT Department therefore needs to create two user accounts for them to access company data on the NAS.

- i. To create a user account, go to User Management-Users. Click **Create**.



- ii. Enter the user name (Jones Lee/ Jane Wu) and password. Check the box “Continue to set the user groups to which this user belongs” and click **OK**.

– Add a user

User Name

Password

Verify Password

Note: For increased security, password should be at least 6 characters.

☒ Continue to set the user groups to which this user belongs

– Add a user

User Name

Password

Verify Password

Note: For increased security, password should be at least 6 characters.

☒ Continue to set the user groups to which this user belongs

- iii. Select the user groups the users belong to on the right list, i.e. Mr. Jones Lee for Administration Dept and Ms. Jane Wu for Sales Dept, and click **Add**. Then click **Close**.

– Specify the user groups users belong to

User groups which **Jones Lee** belongs to

everyone

User groups which **Jones Lee** doesn't belong to

Administration Dept
Sales Dept
administrators

← Add

Remove →

Close

– Specify the user groups users belong to

User groups which **Jane Wu** belongs to

everyone

User groups which **Jane Wu** doesn't belong to







Administration Dept
Sales Dept
administrators

← Add

Remove →

Close

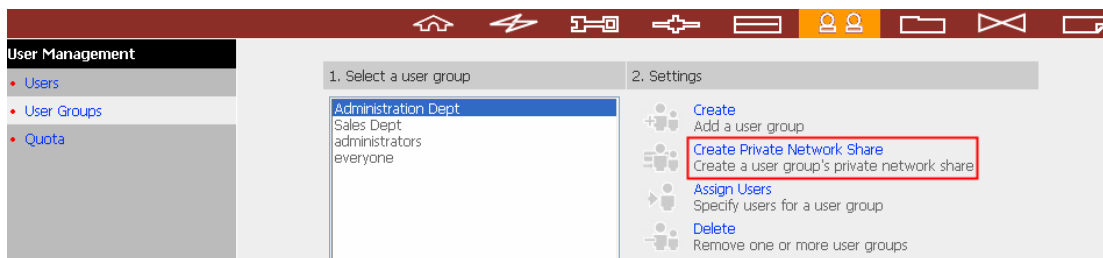
iv. The user names will appear on the list on Create User Page.

1. Select a user	2. Settings
<div>Jane Wu</div> <div>Jones Lee</div> <div>administrator</div>	<div> Create Add a user</div> <div> Change Password Change a user's password</div> <div> Create Private Network Share Create a user's private network share</div> <div> Assign User Groups Specify the user groups users belong to</div> <div> Quota Settings Set user's quota limitation</div> <div><div></div> Delete Remove one or more users</div>

Create Private Network Share for User Groups

You can create particular network share for each user group. The procedure is described as below:

1. To create a network share called **media** accessible by Administration Department only, please go to "User Management—User Groups" page. Select the user group Administration Dept and click **Create Private Network Share** on the right.

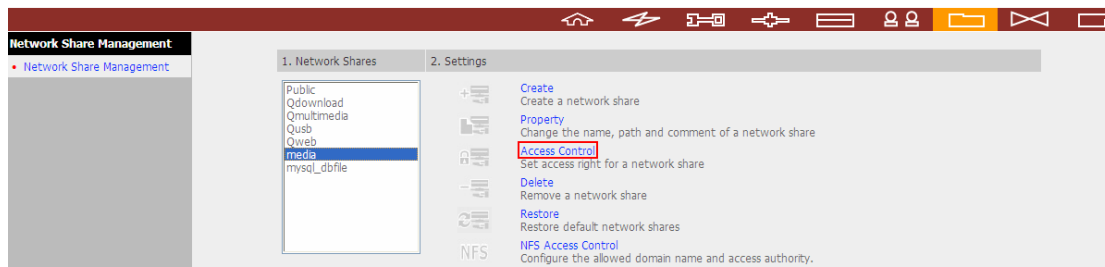


2. Enter the network share name **media**. Select the disk volume that the share will be created in and specify the path automatically or manually. Enter the comment for the network share, e.g. media folder for Admin Dept and click **Apply**.

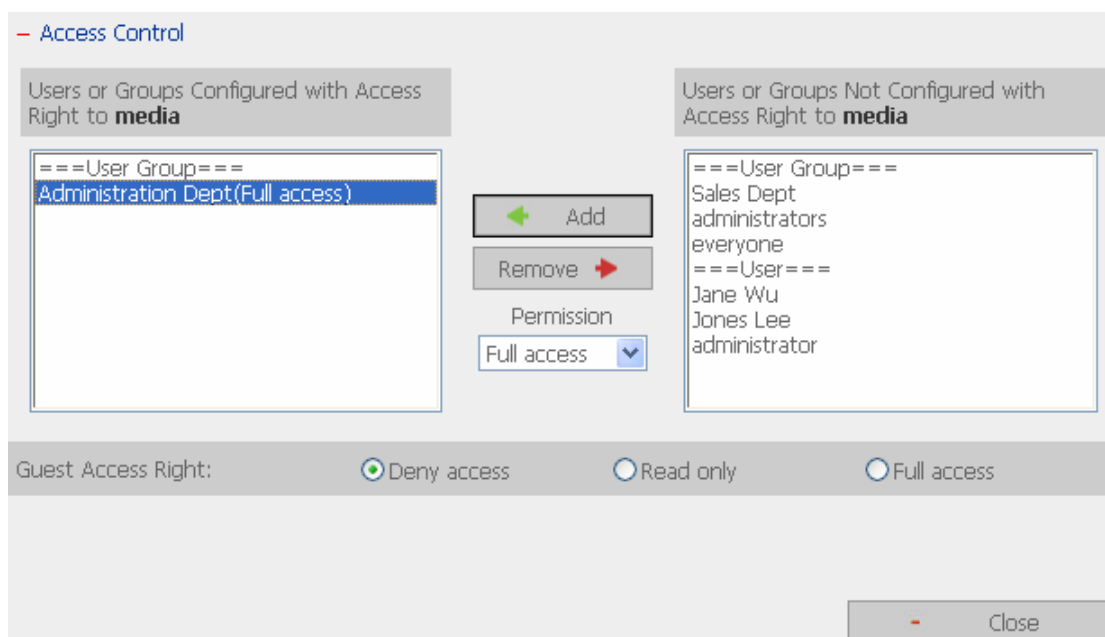
— Enter new network share's name, volume and path. Only users that are the members of Administration Dept user group can access this network share.

Network Share Name	<input type="text" value="media"/>
Hide network drive	<input type="radio"/> Yes <input checked="" type="radio"/> No (Hide this network drive in My Network Places. However, the drive can still be shown by entering the directory manually in My Network Places.)
Disk Volume	<input type="text" value="Mirroring Disk Volume: Drive12"/>
Path	<input checked="" type="radio"/> Specify path automatically <input type="radio"/> Enter path manually
Comment	<input type="text" value="media folder for Admin Dept"/>

3. You can see the folder **media** in **Network Share Management** page.



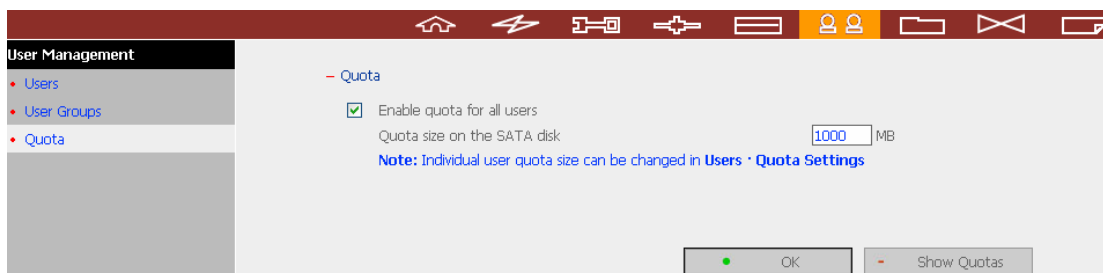
4. Enter Access Control. You can see that only Administration Dept has full access right to the folder.



3.6.3 Quota

To allocate disk volume efficiently, you can specify the quota that can be used by each user. When this function is enabled and a user has reached his/her disk quota, he/she cannot upload data to the server anymore. By default, no limitations are set for users. You can modify the following two options:

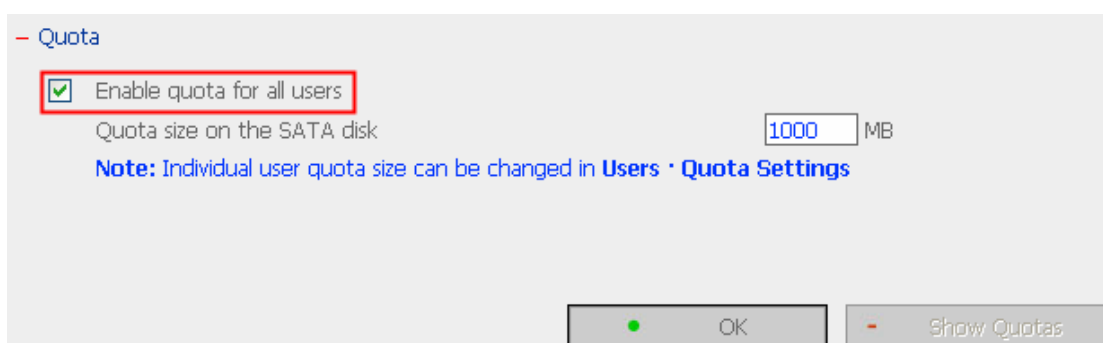
- i. Enable quota for all users
- ii. Quota size on each disk volume



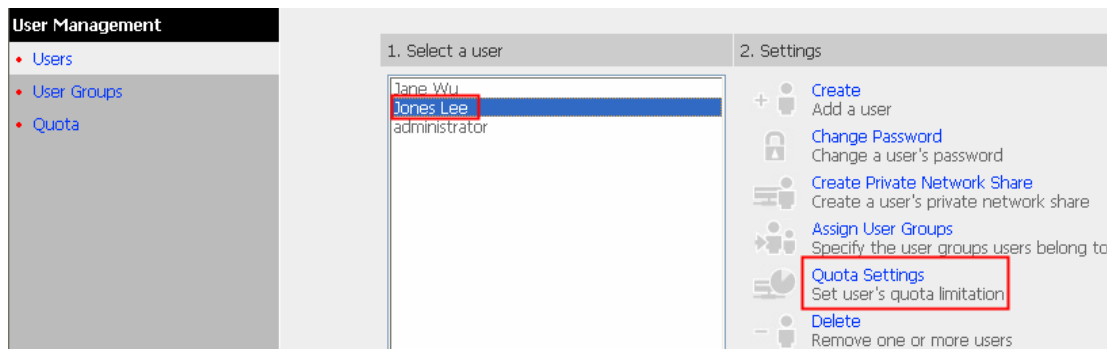
Please refer to the following example to configure the quota setting of users:

The IT department is planning to set the disk quota of Mr. Jones Lee from Administration Department and Ms. Jane Wu from Sales Department on the NAS. The disk quota is 2000MB for Mr. Jones Lee and 4000MB for Ms. Jane Wu.

1. Please go to **Quota** page in **User Management** to enable quota for all users. Enter the quota size on each disk volume, e.g. 1000MB. The quota for individual user can be modified later.



2. Select Jones Lee on User page and click **Quota Settings** on the right.



3. Enter the quota size 2000MB and click **OK**.

— Quota status for user **Jones Lee**

Volume	Quota Size	Used Size	Status
Single Disk: Drive (Free Size: 149190.00 MB)	1000 MB	0.00 MB	Available 1000.00 MB

Set the quota size of **Jones Lee** on the SATA disk

☐ No limit ☒ Quota size: MB

4. Follow the same steps and enter the quota size 4000MB for Jane Wu and click **OK**.
The quota setting is successfully applied.

— Quota status for user **Jane Wu**

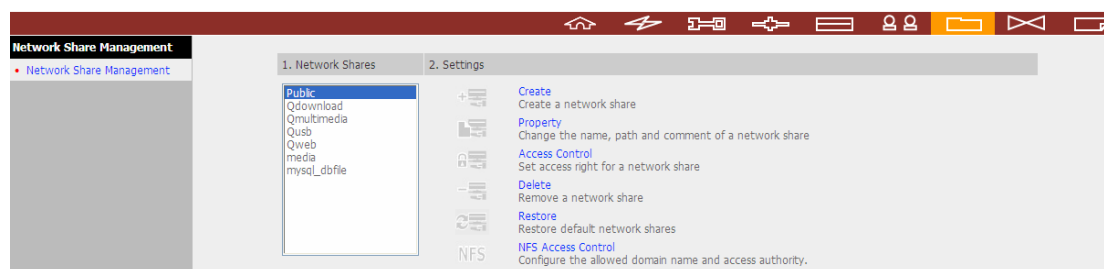
Volume	Quota Size	Used Size	Status
Single Disk: Drive (Free Size: 149190.00 MB)	1000 MB	0.00 MB	Available 1000.00 MB

Set the quota size of **Jane Wu** on the SATA disk

☐ No limit ☒ Quota size: MB

3.7 Network Share Management

The primary purpose of network storage is file sharing. You can create different network share folders for various types of files, and provide different file access rights to users or user groups.



3.7.1 Create

To create a network share, enter the following information:

- ✓ Network share name
The length of the network share name cannot exceed 32 single-byte characters or 10 double-byte characters, and cannot contain the following characters:
" . + = / \ : | * ? < > ; [] %
- ✓ Hide network drive
Select to show or hide the network in My Network Places. Note that the drive can still be shown by entering the directory manually in My Network Places.
- ✓ Disk volume
This area shows the disk volume status.
- ✓ Path
All data is stored under the assigned path onto the disk volume. You can select "Specify path automatically" or assign a path manually. The path cannot exceed 256 characters and cannot contain the characters below:
" . + = / \ : | * ? < > ; [] %

✓ **Comment**

Enter a brief description for the share folder. The comment cannot exceed 128 characters.

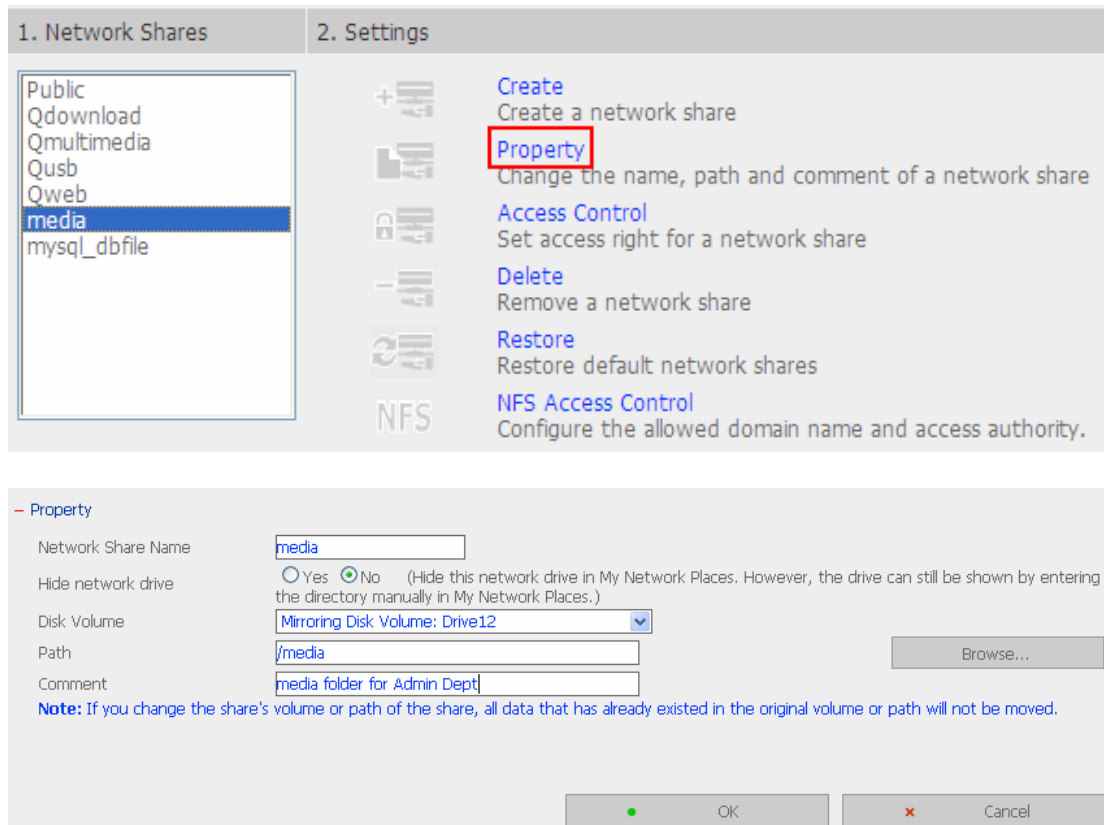
The screenshot shows the 'Create' dialog box for setting up a network share. It includes the following fields and options:

- Network Share Name:** An empty text input field.
- Hide network drive:** Radio buttons for 'Yes' and 'No' (selected). A note states: '(Hide this network drive in My Network Places. However, the drive can still be shown by entering the directory manually in My Network Places.)'
- Disk Volume:** A dropdown menu showing 'Mirroring Disk Volume: Drive12'.
- Path:** Radio buttons for 'Specify path automatically' (selected) and 'Enter path manually'. A 'Browse...' button is located to the right of the 'Enter path manually' option.
- Comment:** Two empty text input fields.
- Access Rights:** Three checkboxes: 'Grant full access right for everyone' (checked), 'Grant read access right for guest' (unchecked), and 'Continue to set access right for this network share' (checked).
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

Note: When you select to enter the path manually, click "Browse..." and the .@mysql directory will be shown. This is the file location of MySQL database.

3.7.2 Property

To edit the property of an existing network share, select a share and click **Property**. You can then edit the content of that share.



3.7.3 Access Control

When a network share is created, you can assign access rights to users or user groups:

- ✓ Deny access
Access to the network share will be denied.
- ✓ Read only
Users can read the files only on the network share.
- ✓ Full access
Users can read, write, create, or delete files and folders on the network share.

The dialog box is titled "Access Control" and is for the network share "media". It is divided into two main sections: "Users or Groups Configured with Access Right to media" and "Users or Groups Not Configured with Access Right to media".

Users or Groups Configured with Access Right to media:

- ====User Group====
- Administration Dept(Full access)

Users or Groups Not Configured with Access Right to media:

- ====User Group====
- Sales Dept
- administrators
- everyone
- ====User====
- Jane Wu
- Jones Lee
- administrator

Buttons:

- Add:** A button with a green arrow pointing left.
- Remove:** A button with a red arrow pointing right.
- Permission:** A dropdown menu currently set to "Full access".

Guest Access Right:

- ☒ Deny access
- ☐ Read only
- ☐ Full access

Close: A button with a red minus sign.

3.7.4 Delete

Select a share and click **Delete**. Click **OK** to confirm.

The dialog box contains the following text:

Please make sure you want to delete network share **media**.

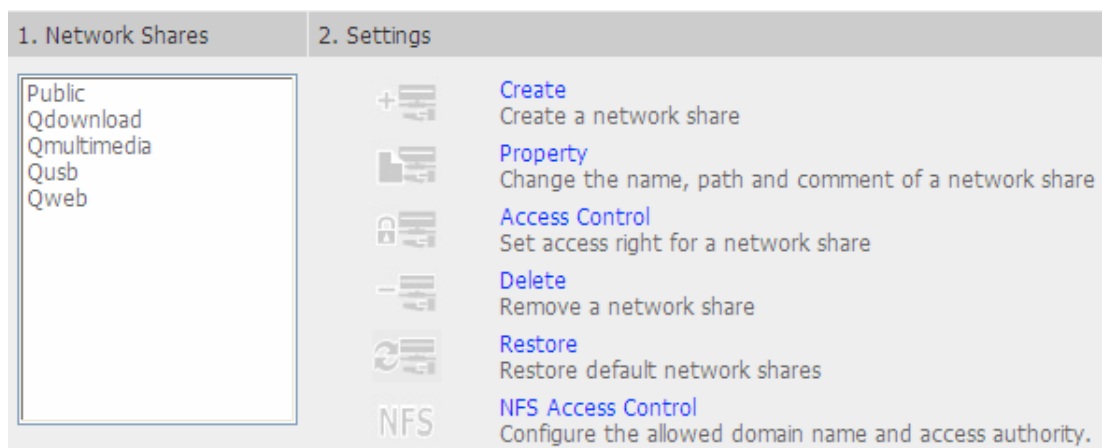
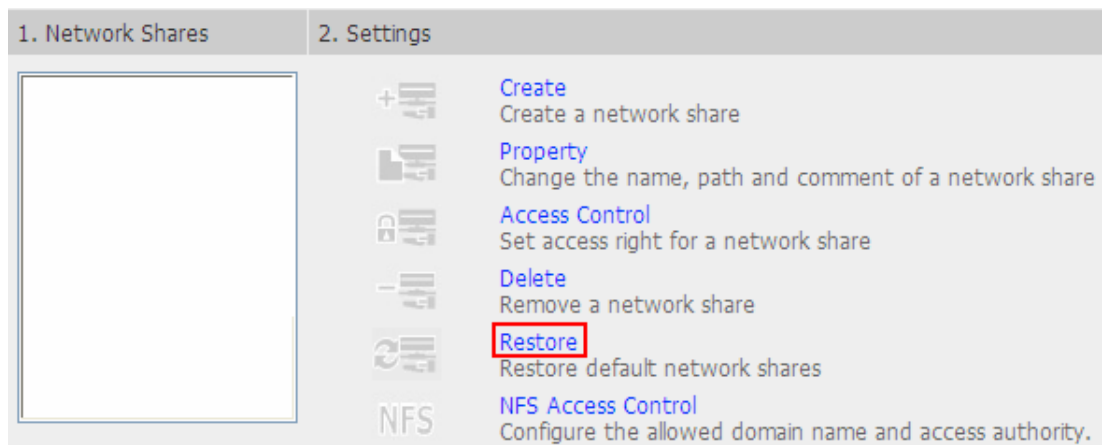
Note: All active users who are currently using this network share will be disconnected.

Buttons:

- OK:** A button with a green dot.
- Cancel:** A button with a red X.

3.7.5 Restore

If the default network shares of the NAS are not created successfully, you can use the Restore function to restore the network shares. To do so, click **Restore** and the shares will be created.



3.7.6 NFS Access Control

*This option is supported by “TS-409 Pro” only.

You can set the NFS access right of the network share. The Public folder is for open access while access is denied for other default network shares. For detailed configuration, please click on the link “Click here for more detailed description”.

NFS Access Control

You can set the NFS access right of the network share.

Network Share Name

Public

Access right

No limit

Allowed IP address or domain name:

Note: Please make sure the format you enter is correct. An incorrect format can lead to access error.

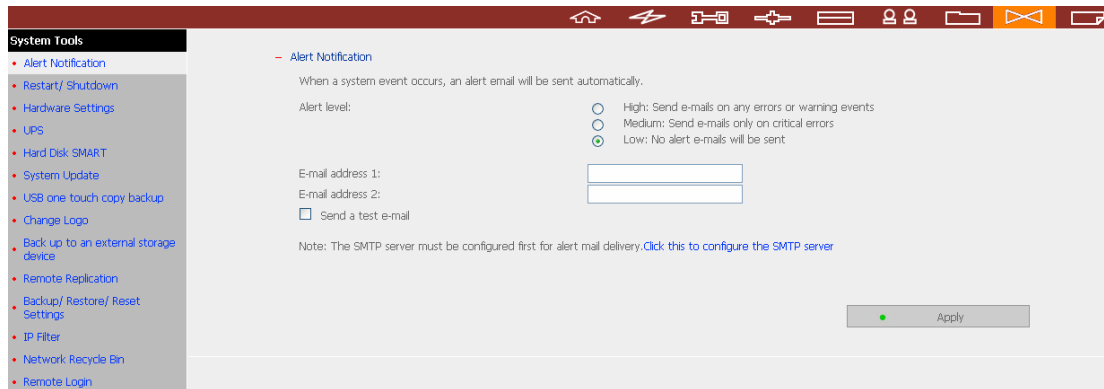
The allowed IP address or domain name can be a complete IP address or a domain name searchable by DNS. The IP addresses and domain names can be separated by comma (.). Wildcard characters “*” and “?” are supported for domain names, e.g. *.yourdomain.com. For further details.[Click here for more detailed description.](#)

OK

Cancel

3.8 System Tools

The System Tools enable you to optimize the maintenance and management of the NAS.



The screenshot shows the 'System Tools' menu on the left with options like Alert Notification, Restart/Shutdown, Hardware Settings, UPS, Hard Disk SMART, System Update, USB one touch copy backup, Change Logo, Back up to an external storage device, Remote Replication, Backup/Restore/Reset Settings, IP Filter, Network Recycle Bin, and Remote Login. The main area is titled 'Alert Notification' and contains the following text: 'When a system event occurs, an alert email will be sent automatically.' Below this, 'Alert level:' is followed by three radio buttons: 'High: Send e-mails on any errors or warning events', 'Medium: Send e-mails only on critical errors', and 'Low: No alert e-mails will be sent' (which is selected). There are two input fields for 'E-mail address 1:' and 'E-mail address 2:'. A checkbox for 'Send a test e-mail' is present. A note states: 'Note: The SMTP server must be configured first for alert mail delivery. [Click this to configure the SMTP server](#)'. An 'Apply' button is at the bottom right.

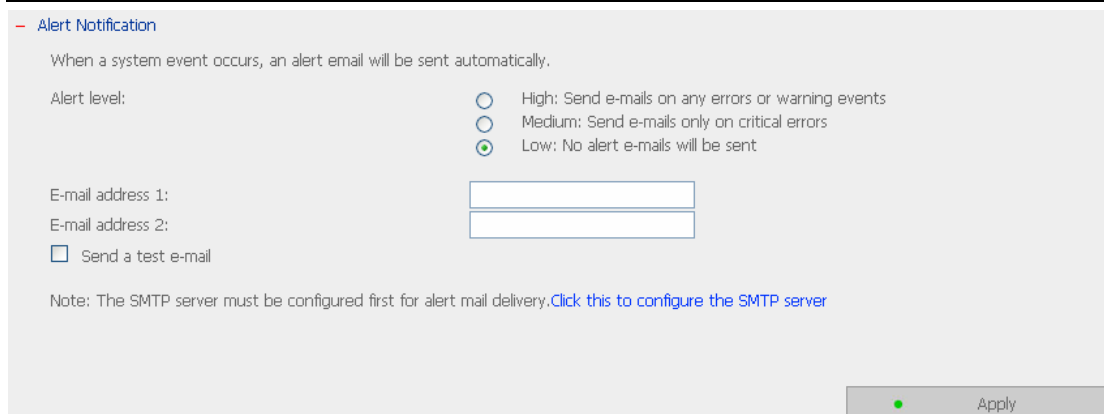
3.8.1 Alert Notification

In case of warning or malfunction, e.g. CPU fan fails, a drive fails or is unplugged, an email will be sent to the administrator automatically. You can go to Event Logs (refer to Chapter 3.9) to check the details of all errors and warnings.

To be able to send notification e-mails, you must configure the SMTP server.



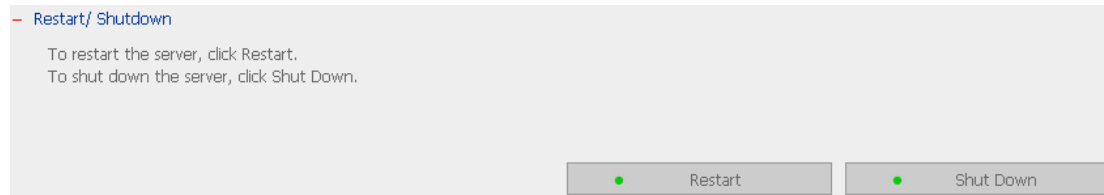
Note: It is recommended to send a test e-mail to make sure you can receive the alert mails.



This screenshot is a closer view of the 'Alert Notification' settings. It includes the same text and radio button options as the previous screenshot. The 'Low' radio button is selected. The 'E-mail address 1:' and 'E-mail address 2:' fields are empty. The 'Send a test e-mail' checkbox is unchecked. The note about SMTP configuration is present. An 'Apply' button is at the bottom right.

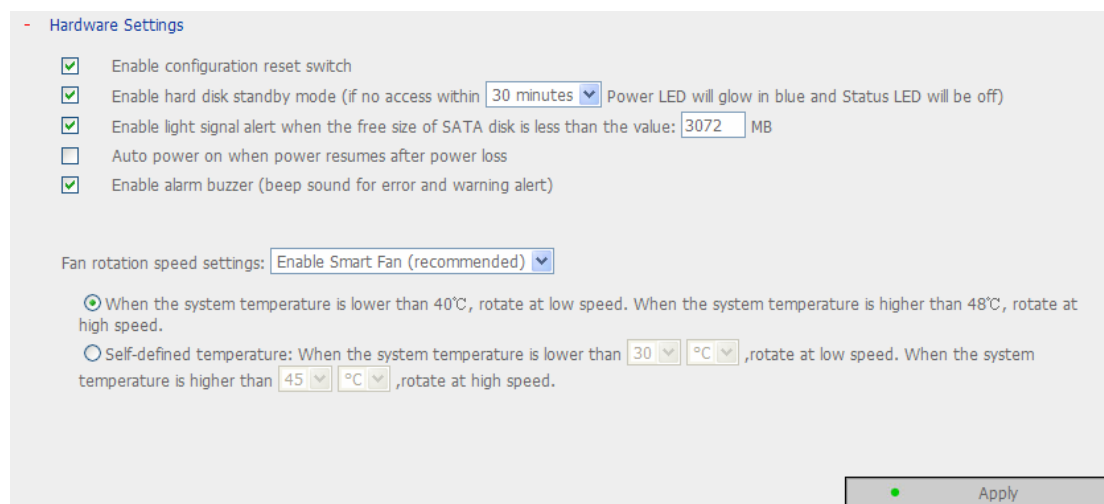
3.8.2 Restart/ Shutdown

Select to restart or shut down the NAS.



3.8.3 Hardware Settings

You can enable or disable the hardware functions of the NAS.



i. Enable configuration reset switch

By enabling this option, you can press the reset button for 3 seconds to reset the administrator password and system settings to default.

ii. Enable hard disk standby mode

When this function is enabled, hard disk will go to standby mode if there is no access within the specified period. The Power LED will glow in blue and the Status LED will be off in hard disk standby mode.

iii. Enable light signal alert when the free size of SATA disk is less than the value

The Status LED flashes red and green when this function is enabled and the free space of the SATA disk is less than the value. The range of the value is 1-51200 MB.

iv. Auto power on when power resumes after power loss

When this function is enabled, the NAS turns on automatically when power resumes after improper shutdown or power loss.

v. Enable alarm buzzer

Enable this option. The system will sound when an error occurs.

vi. **Smart Fan configuration**

After enabling Smart Fan, the fan rotation speed is automatically adjusted according to the server temperature. It is recommended to enable this option. By manually setting the fan rotation speed, the fan rotates at the defined speed continuously.

Note: When Smart Fan is enabled, the fan rotates at high speed when the system temperature reaches 48°C or above. You can define the system temperatures to trigger high speed or low speed rotation of the fan. The fan rotates at low speed when the system temperature is below 40°C.

3.8.4 UPS

If your UPS device provides USB interface, you can enable UPS (uninterruptible power supply) support to protect your system from abnormal system shutdown caused by power outage. In case of utility power failure, the system shuts down automatically by probing the power status of the connected UPS unit.

UPS

☐ Enable UPS Support
The system will be shut down in 5 minute(s) when the AC power status is abnormal.

UPS Model: APC USB UPS (auto detect)

IP Address of UPS: 0 . 0 . 0 . 0

UPS Model: Test

AC Power Status: --
Battery Power Status: --

Note: After selecting the UPS model, click "Test" to make sure the selection is correct.

Refresh Apply

✓ Enable UPS support

To activate the UPS support, you can select this option. You can set the shutdown timer to turn off the system automatically after the system detects the AC power is abnormal. In general, the UPS can keep supplying the power for the system for about 5~10 minutes, depending on the maximum load of the UPS and the number of the loads connected to it.

UPS Model

Select the UPS model from the list. If the UPS model you are using is not available on the list, please contact our technical support.

IP Address of UPS

If you have selected APC UPS with SNMP for UPS model, enter the IP address of the UPS.

3.8.5 Hard Disk S.M.A.R.T.

This page enables users to monitor hard drive health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

Select the hard drive and you can view the following information by clicking the corresponding buttons.

Field	Description
Summary	Displays the hard drive smart summary and the latest test result.
Hard disk information	Displays the hard drive details, e.g., model, serial number, drive capacity, etc.
SMART information	Displays the hard drive SMART. Any items that the values are lower than the threshold are regarded as abnormal.
Test	To perform quick or complete hard drive SMART test and display the results.
Settings	To configure temperature alarm. When the hard drive temperature is over the preset values, the system records error logs. You can also configure quick and complete test schedule. The latest test result is shown in the Summary page.

– Monitor hard disk health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

Select hard disk: Disk 1 ▼

Summary Hard Disk Information SMART Information Test Settings

Good

No errors were detected on the hard disk. Your hard disk should be operating properly.

Hard disk model	Seagate Barracuda 7200.10 family
Drive capacity	232.89 GB
Hard drive health	Good
Hard drive temperature	47 °C ▼
Test time	---
Test result	Not tested

3.8.6 System Update

System Update

Note: If the system is running properly, you do not need to update the firmware.

Current firmware version: 2.0.0 Build 1018T

Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:

Step 1: Download the release notes of the same version as the firmware from QNAP website <http://www.qnap.com/>. Read the release notes carefully to make sure you need to update the firmware.

Step 2: Before updating system firmware, back up all disk data on the server to avoid any potential data loss during system update.

Step 3: Click the **[Browse...]** button to select the correct firmware image for system update. Click the **[Update System]** button to update the firmware.

Note: System update may take tens of seconds to several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.

Update System



Note: If the system is running properly, you do not need to update the firmware.

Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:

Step 1: Download the release notes of the same version as the firmware from QNAP website <http://www.qnap.com/>. Read the release notes carefully to make sure you need to upgrade the firmware.

Step 2: Before upgrading system firmware, back up all disk data on the server to avoid any potential data loss during system update.

Step 3: Click the **[Browse...]** button to select the correct firmware image for system update. Click **Update System** to update the firmware.

Note: System update may take tens of seconds to several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.

3.8.7 USB One Touch Copy Backup

You can configure the function of the USB one touch copy button in this page. The following three functions are available:

- Copy from the front USB storage device to a directory of the internal drive of the NAS.
- Copy to the front USB storage device from a directory of the internal drive of the NAS.
- Disable the one touch copy button

– USB one touch copy backup

To configure the function of the USB one touch copy button.

☒

Copy from the front USB storage device to the

▼

 directory of the internal disk.
Backup method:

Add directory ▼

 Back up data to the newly created directory on the destination sharing folder

☐

Copy to the front USB storage device from the directory of the internal disk.

☐

Disable one touch copy button

Note: The USB LED blinks when data backup to an external device is in process. The USB one touch copy button will be disabled temporarily. If you press the button during the data transfer process, the server will beep thrice to alert you the button is disabled. Please wait for the backup to finish and the USB LED to stop flashing, and then use the USB one touch copy button again.

●

Apply

3.8.8 Change Logo

You can choose your own picture to display on the login page of the NAS. The size of the picture cannot exceed 20K bytes.

[Change Logo](#)

Please select an image from the **To be displayed** pull-down menu. Then click **[Apply]** to confirm the change.

To upload your own image, click **[Browse...]** to select the image. Then click **[Upload]** to upload the image.

To replace an image, select an appropriate image from the **To be replaced to** pull-down menu and click **[Apply]**.


Uploaded image:
To be replaced to:
To be displayed:


Not replace
Image 1


Browse...


Upload


Replace



Image 1


Image 2


Uploaded Image


Image 3


Image 4


Current Logo Image

Note: For the best image effect, the recommended size for the image is 100 x 100 pixels.

●

Apply

3.8.9 Back up to an External Storage Device

Back up to an external storage device

Back up the local disk data to an external storage device. You can select instant, automatic, or schedule backup.

The network drives for backup

The network drives not for backup

Create

Delete

Back up to an external storage device: USB Disk 1 No external device is detected currently.

Free Size/Total Size: --

Backup method: Backup Now Execute backup immediately.

Copy options: Copy Back up data to the destination drive.

Current backup status: No backup operations.

Last backup time: ---

Last backup result: ---

OK

You can back up the local drive data to an external storage device. In this page, you can select to execute instant, automatic, or schedule backup methods, and configure the relevant settings.

- Backup Now: To back up data to the external storage device immediately.
- Schedule Backup: To back up data by schedule. You can select the week day and time to execute the backup.
- Auto-backup: To execute the backup automatically once the storage device is connected to the NAS.

Copy Options:

You can select "Copy" or "Synchronize" for the copy options. When "Copy" is selected, files are copied from the NAS to the external device. By selecting "Synchronize", the data on the internal drives of the NAS and the external storage device are synchronized. Any different files on the external device are deleted.

Note: In the copying and synchronizing process, if the identical files exist on both sides, the files are not copied. If there are files in the same name but different in size or modified dates on NAS and the external device, the files on the external device are overwritten.

3.8.10 Remote Replication (Disaster Recovery)

Remote Replication enables you to replicate files on the NAS to another QNAP NAS. The files are compressed before the replication process in order to save time for data transfer.

Make sure a network share is created before creating a remote replication task.

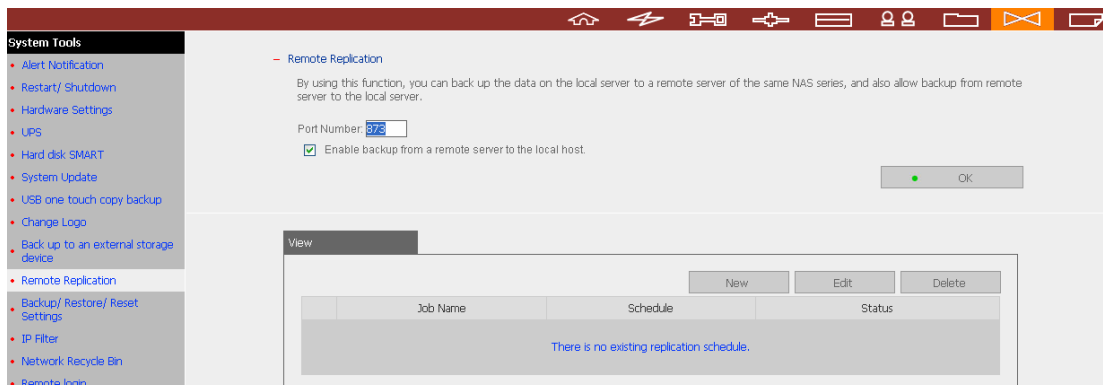
Using Remote Replication

Login the NAS and go to Remote Replication in System Tools.

- ✓ **Port Number:** Specify a port number for remote replication. The default port number is 873.

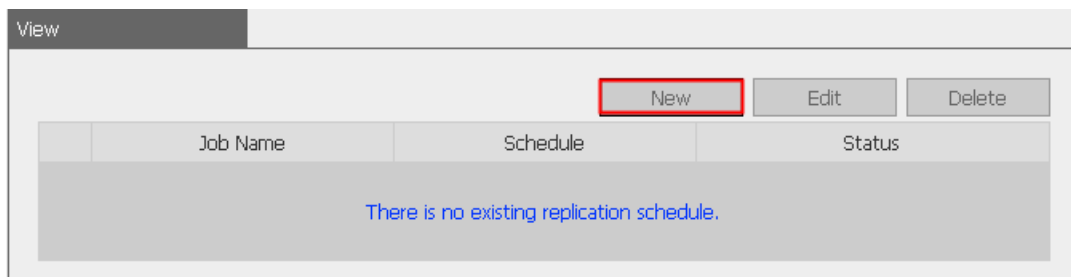
Note: If this server connects to the Internet via a router, make sure the ports 134 and 445, and the specified port for remote replication.

- ✓ **Enable backup from a remote server to the local host:** Check this option to allow the remote server to back up data to the local host via remote replication.



i. New

- Click **New** to enter the following page.



- b. Complete all settings and click **OK** to save or **Cancel** to quit.

Add a remote replication job

Job Name

Remote Destination

Name or IP address of the remote server Port Number:

Destination Path (Network Share/Directory) /

User Name

Password

Remote Host Testing (Status: --)

Local Source

Source Path (Network Share/Directory) /

☒ Replicate Now

Replication Schedule Hour : Minute

☐ Daily

☐ Weekly

☐ Monthly Day

☐ Enable encryption, port number:
(Note that you have to allow SSH encryption on the remote host server and the port number must be the same as the SSH port of the remote host.)

☐ Activate file compression

☐ Stop network file services while replicating

☐ Perform incremental replication

☐ Delete extra files on remote destination

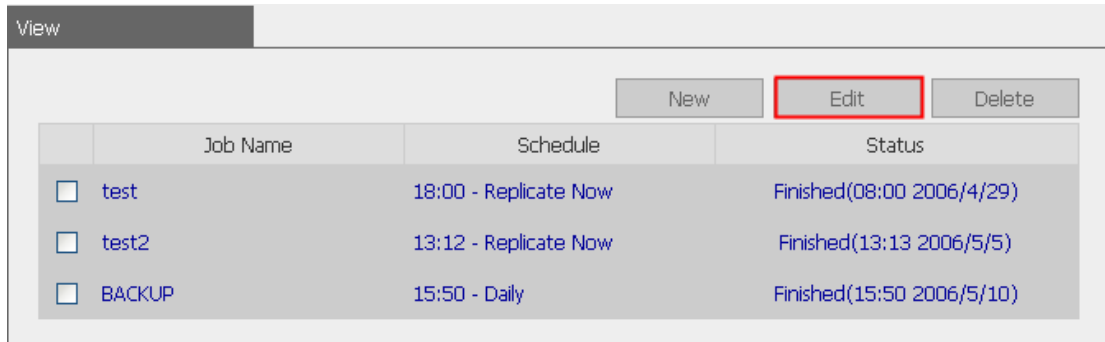
- c. The port for remote replication is 873, 445, 137-139. If you are using two NAS servers behind an NAT router, please open the port 873, 445, 137-139 on NAT router and forward the port to the corresponding LAN IP of the NAS. Otherwise, the remote replication service will be blocked by NAT.



Note: To use remote replication, enable Microsoft Networking service, make sure the destination network share and directory have been created, and the user name and password are valid to login the destination folder.

ii. Edit

- a. Select the task to be edited.
- b. Click **Edit**.
- c. Modify the settings.
- d. Click **OK** to save or **Cancel** to quit.

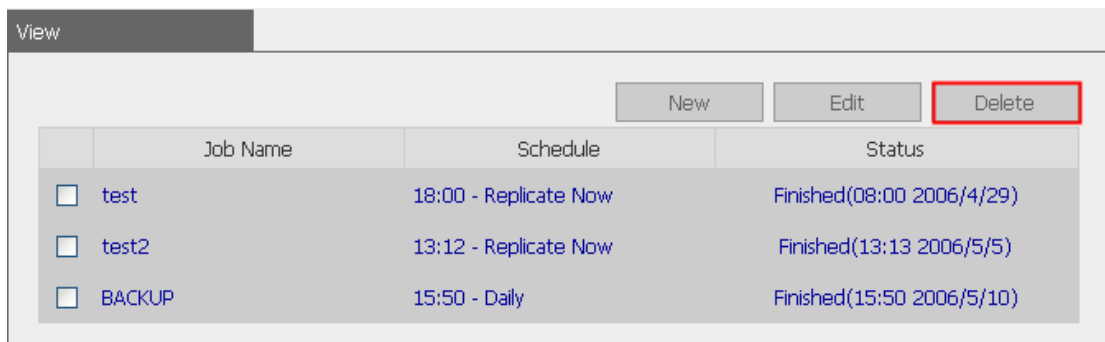


The screenshot shows a window titled 'View' with a table of jobs. Above the table are three buttons: 'New', 'Edit', and 'Delete'. The 'Edit' button is highlighted with a red border. The table has three columns: 'Job Name', 'Schedule', and 'Status'. Each row has a checkbox in the first column.

	Job Name	Schedule	Status
<input type="checkbox"/>	test	18:00 - Replicate Now	Finished(08:00 2006/4/29)
<input type="checkbox"/>	test2	13:12 - Replicate Now	Finished(13:13 2006/5/5)
<input type="checkbox"/>	BACKUP	15:50 - Daily	Finished(15:50 2006/5/10)

iii. Delete

- a. Select the task to be deleted.
- b. Click **Delete**.



The screenshot shows a window titled 'View' with a table of jobs. Above the table are three buttons: 'New', 'Edit', and 'Delete'. The 'Delete' button is highlighted with a red border. The table has three columns: 'Job Name', 'Schedule', and 'Status'. Each row has a checkbox in the first column.

	Job Name	Schedule	Status
<input type="checkbox"/>	test	18:00 - Replicate Now	Finished(08:00 2006/4/29)
<input type="checkbox"/>	test2	13:12 - Replicate Now	Finished(13:13 2006/5/5)
<input type="checkbox"/>	BACKUP	15:50 - Daily	Finished(15:50 2006/5/10)

3.8.11 Backup/ Restore/ Reset Settings

- To backup all settings, including user accounts, server name and network configuration etc., click **Backup** and select to open or save the setting file.
- To restore all settings, click **Browse** to select a previously saved setting file and click **Restore** to confirm.
- To reset all settings to default, click **Reset**.

Caution: When you press **Reset** on this page, all drive data, user accounts, network shares and system settings are cleared and restored to default. Please make sure you have backed up all the important data and system settings before resetting the NAS.

Backup/ Restore/ Reset Settings

- To restore all settings, click Browse to select a previously saved setting file and click Restore to confirm.
- To backup all settings, including user accounts, server name and network configuration etc., click Backup and select to open or save the setting file.
- To reset all settings to default, click Reset.
- **Caution:** When you press [Reset] on this page, all drive data, user accounts, network shares and system settings are cleared and restored to default. Please make sure you have backed up all the important data and system settings before resetting the NAS.

3.8.12 IP Filter

Enter the IP address or network from which the connections to this server are allowed or rejected. When the connection of a host server is denied, all protocols of that server are not allowed to access the local server.

IP Filter

Enter the IP address or network from which the connections to this server will be allowed or rejected.

☒ Allow all connections
☐ Allow connections from the list only
☐ Deny connections from the list

☒ Single IP address
☐ Network (Specify IP addresses of certain network by setting IP address and netmask)

IP: . . .

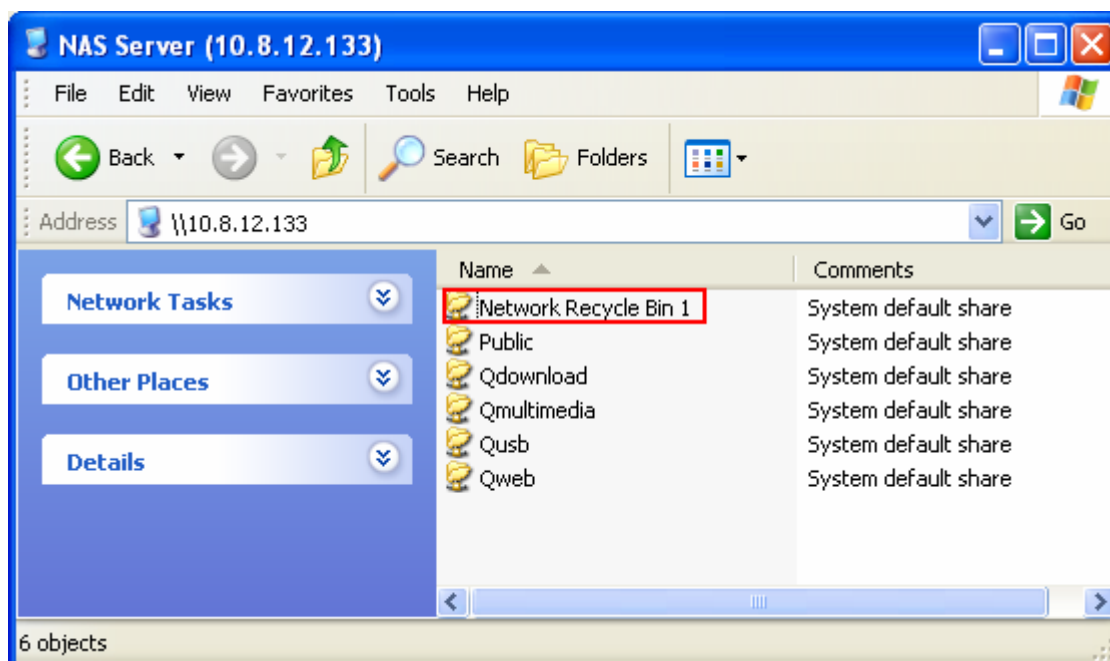
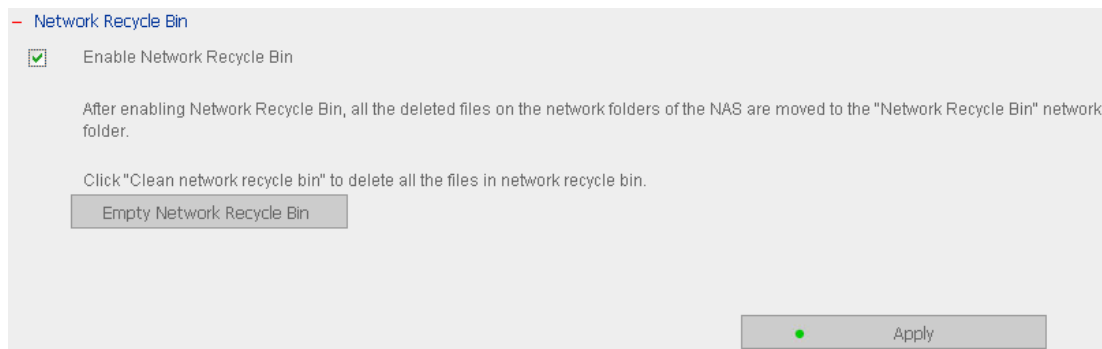
Netmask: 255. 255 . 0 .

Note: All network service will be restarted after you apply the settings.

3.8.13 Network Recycle Bin

This function enables files deleted on the shares of the NAS to be removed to Network Recycle Bin to reserve the files temporarily. To enable this function, check the box "Enable Network Recycle Bin" and click **Apply**. The system creates a network share "Network Recycle Bin" automatically.

To delete all the files in network recycle bin, click "Clean Network Recycle Bin".



3.8.14 Remote Login

After enabling this option, you can access this server via Telnet or SSH encrypted connection (only the account "admin" can login remotely). You can use certain Telnet or SSH connection clients for connection, e.g., putty. Please make sure you have opened the configured ports on your router or firewall when using this function.

Remote Login

After enabling this option, you can access this server via Telnet or SSH connection. (Only the account admin can login remotely.)

☐

Allow Telnet connection

Port

13131

☒

Allow SSH connection

Port

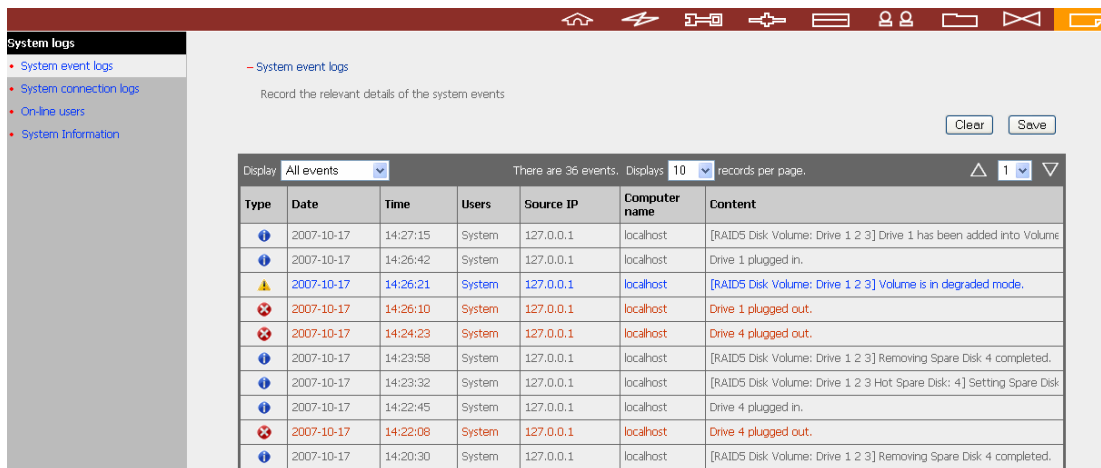
22

Apply

3.9 Event Logs

3.9.1 System Event Logs

The NAS can store 10,000 recent event logs, including warning, error, and information messages. In case of system malfunction, event logs can be retrieved to analyze system problems.



The screenshot displays the 'System logs' section of a web interface. On the left, a sidebar lists 'System logs' with sub-items: 'System event logs', 'System connection logs', 'On-line users', and 'System Information'. The main area is titled 'System event logs' and includes a subtitle 'Record the relevant details of the system events'. There are 'Clear' and 'Save' buttons. Below this, a table displays event logs. The table has columns for Type, Date, Time, Users, Source IP, Computer name, and Content. The table shows 10 records, with a status bar indicating 'There are 36 events. Displays 10 records per page.' The events include RAID5 disk volume updates, drive plugging in/out, and spare disk removal/setting.

Type	Date	Time	Users	Source IP	Computer name	Content
Information	2007-10-17	14:27:15	System	127.0.0.1	localhost	[RAID5 Disk Volume: Drive 1 2 3] Drive 1 has been added into Volume
Information	2007-10-17	14:26:42	System	127.0.0.1	localhost	Drive 1 plugged in.
Warning	2007-10-17	14:26:21	System	127.0.0.1	localhost	[RAID5 Disk Volume: Drive 1 2 3] Volume is in degraded mode.
Error	2007-10-17	14:26:10	System	127.0.0.1	localhost	Drive 1 plugged out.
Error	2007-10-17	14:24:23	System	127.0.0.1	localhost	Drive 4 plugged out.
Information	2007-10-17	14:23:58	System	127.0.0.1	localhost	[RAID5 Disk Volume: Drive 1 2 3] Removing Spare Disk 4 completed.
Information	2007-10-17	14:23:32	System	127.0.0.1	localhost	[RAID5 Disk Volume: Drive 1 2 3 Hot Spare Disk: 4] Setting Spare Disk
Information	2007-10-17	14:22:45	System	127.0.0.1	localhost	Drive 4 plugged in.
Error	2007-10-17	14:22:08	System	127.0.0.1	localhost	Drive 4 plugged out.
Information	2007-10-17	14:20:30	System	127.0.0.1	localhost	[RAID5 Disk Volume: Drive 1 2 3] Removing Spare Disk 4 completed.

3.9.2 System Connection Logs

The logs of connections to the server via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH are recorded in this page.

You can select to start or stop logging. The file transfer performance can be slightly affected by enabling the event logging.

Click "Save" to save the logs as csv file.

Click "Delete" to clear all logs.

System connection logs

Record the logs of connections to the system

Status: Logging

Stop logging

Clear

Save

Display

All events

There are 98 events. Displays

10

 records per page.

1

Type	Date	Time	Users	Source IP	Computer name	Connection type	Accessed resources	Action
	2007-10-19	17:05:40	admin	10.8.12.32	---	HTTP	Administration	Login OK
	2007-10-19	17:01:10	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	16:51:10	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	16:41:10	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	16:31:10	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	16:21:15	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	16:20:22	admin	10.8.12.17	---	HTTP	Administration	Login OK
	2007-10-19	16:10:24	admin	10.8.12.17	---	HTTP	Administration	Login OK
	2007-10-19	16:01:10	guest	10.8.13.188	laurentcheng	SAMBA	---	Login OK
	2007-10-19	15:51:19	admin	10.8.13.188	---	HTTP	Administration	Login OK

3.9.3 On-line Users

The information of the on-line users accessing the system via networking services is shown in this page.

— On-line users

Display the information of the on-line users accessing the system via networking services

There are 2 events.

Date	Time	Users	Source IP	Computer name	Connection type	Accessed resources
2007-10-19	16:10:24	admin	10.8.12.17	---	HTTP	Administration
2007-10-19	17:05:40	admin	10.8.12.32	---	HTTP	Administration

3.9.4 System Information

You can view the system information, e.g., CPU usage and memory in this page.

— System Information

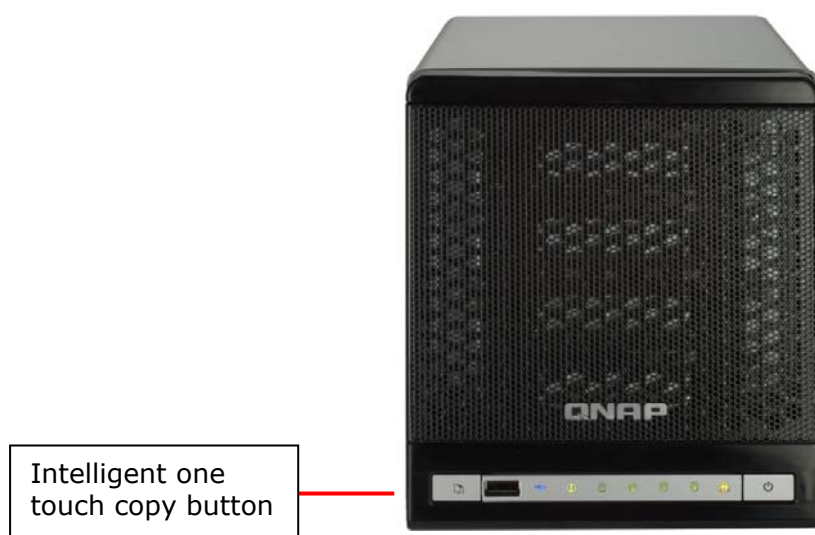
CPU Usage	3.8 %
Total Memory	249.8 MB
Free Memory	124.6 MB
Packets Received	177340
Packets Sent	119968
Error Packets	0
System temperature	34°C/93°F
HDD 1 temperature	36°C/96°F
HDD 2 temperature	39°C/102°F
HDD 3 temperature	41°C/105°F
HDD 4 temperature	--
System Up Time	2 Day(s) 3 Hour(s) 23 Minute(s)

Chapter 4. Use Front USB Backup Button

By connecting an external storage device to the NAS, you can use the front USB backup button to copy data from the external device to NAS or from the NAS to the external device. To use this function, please follow the steps below:

1. Make sure a SATA disk is installed correctly in the NAS according to the instructions in Chapter 2.1.
2. Turn on the NAS.
3. Go to System Tools/ USB one touch copy backup to configure the settings.
4. Connect USB devices, e.g. digital camera, flash, external USB drive to the front USB port of the NAS.
5. Press the **Copy** button on the NAS. The data is copied according to your settings in System Tools/ USB one touch copy backup.

#Intelligent one touch copy button: The NAS detects the data in the connected source automatically. The first time a USB device is connected, press the Copy button and the NAS copies all data in the device automatically. When the same device is connected again and there are changes to the source data, press the Copy button, and the NAS copies all files in the device. If there are no changes, press the Copy button and the NAS does not copy the files.



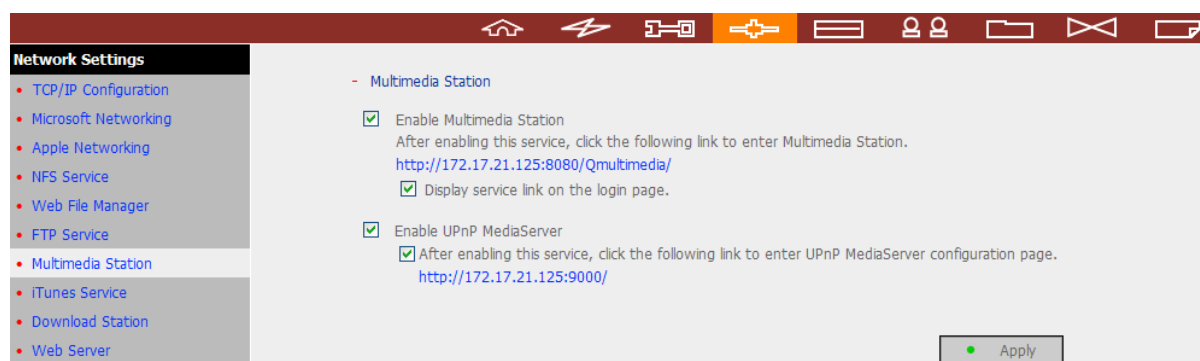
Chapter 5. Multimedia Station

5.1 Share Photos and Multimedia Files via Web Interface

The NAS provides a user-friendly web management interface for you to manage personal albums easily. You can view images and multimedia files, or browse photos by thumbnails preview.

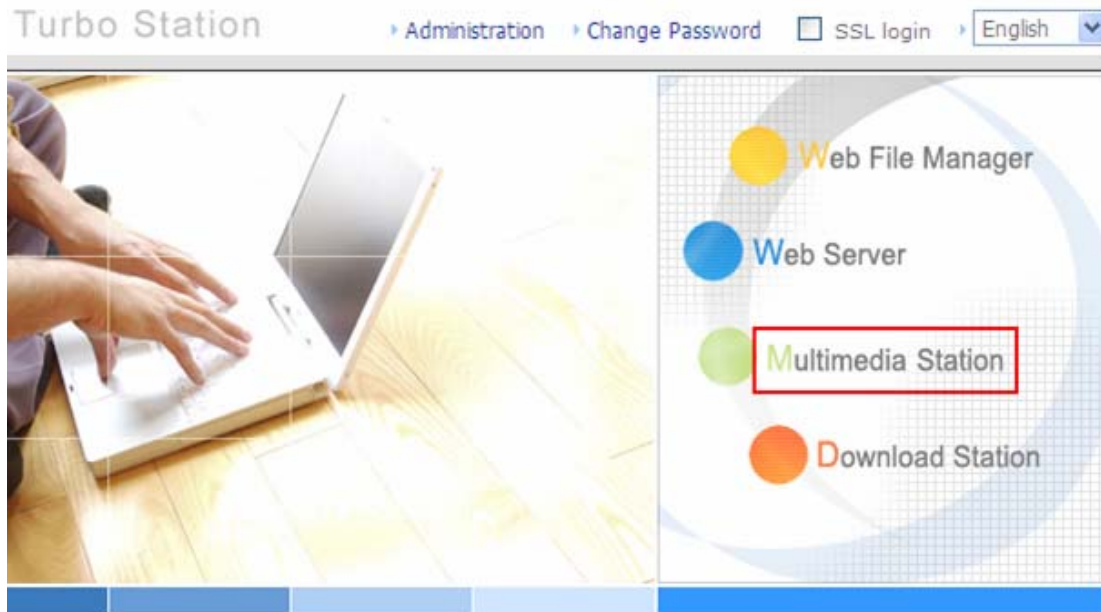
A. Upload photos by web administration


1. To use Multimedia Station of the NAS, make sure a SATA disk is installed correctly in the NAS according to the instructions in Chapter 2.1. A share folder **Qmultimedia** is be created. Enable Multimedia function in **Network Settings**.



2. Click on the link <http://NAS IP/Qmultimedia> on Multimedia Station page or click **Multimedia Station** on the login page of the NAS to access Multimedia Station.

Note: To display the Multimedia Station link on the login page, please enable the option "Display service link on the login page".



3. Click  on the top right hand corner. Login with administrator name and password to manage Multimedia Station. Users without administration right can view the photos and multimedia files on Multimedia Station but they do not have the right to modify the files. When logging in as Multimedia Station user, you can access the albums authorized for browsing.



4. Click **Browse** to select the multimedia file and then click **Upload** to upload the file to the folder.

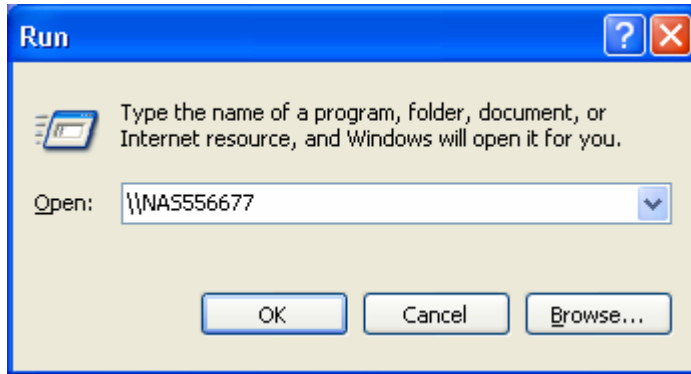


5. You can also create folders by clicking  and upload files to the folders.

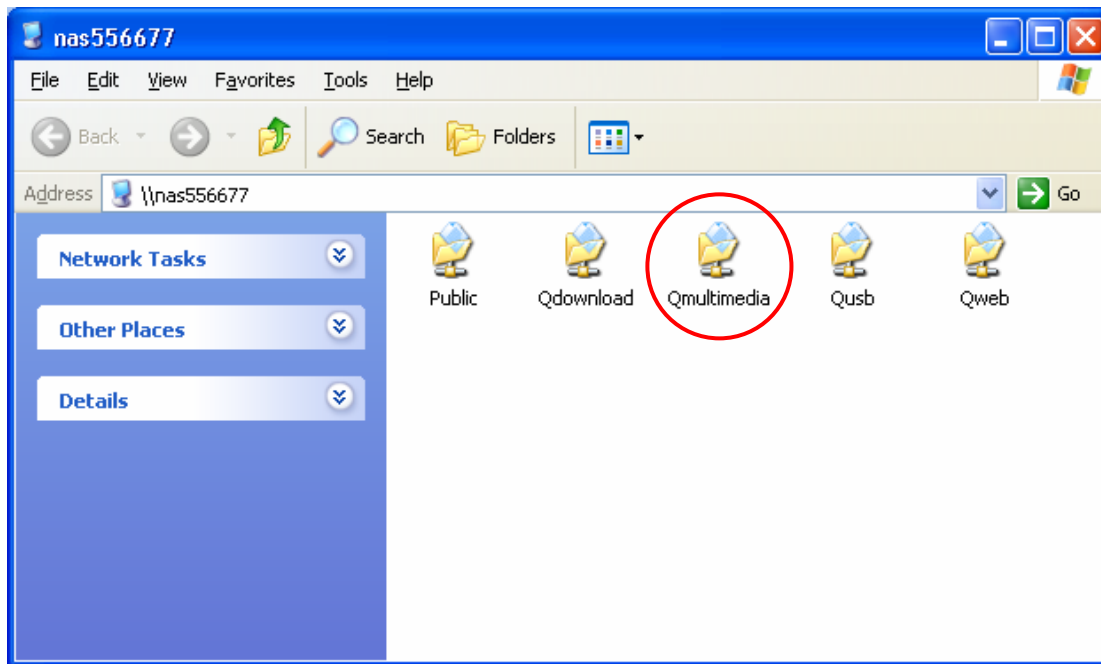
B. Upload photos to Qmultimedia folder directly

You can upload multimedia files to the NAS directly by the following steps.

1. Use **Run** function in Windows. Enter \\[server name] or \\[server IP] to access share folder on the NAS.



2. Open the folder **Qmultimedia**. Enter the user name and password to login.



3. Drag the files and folders to the folder directly. Please wait patiently when the NAS is generating thumbnails for images during uploading.

When you login Multimedia Station by web browser again, all multimedia files are shown.



Buttons on Multimedia Station page

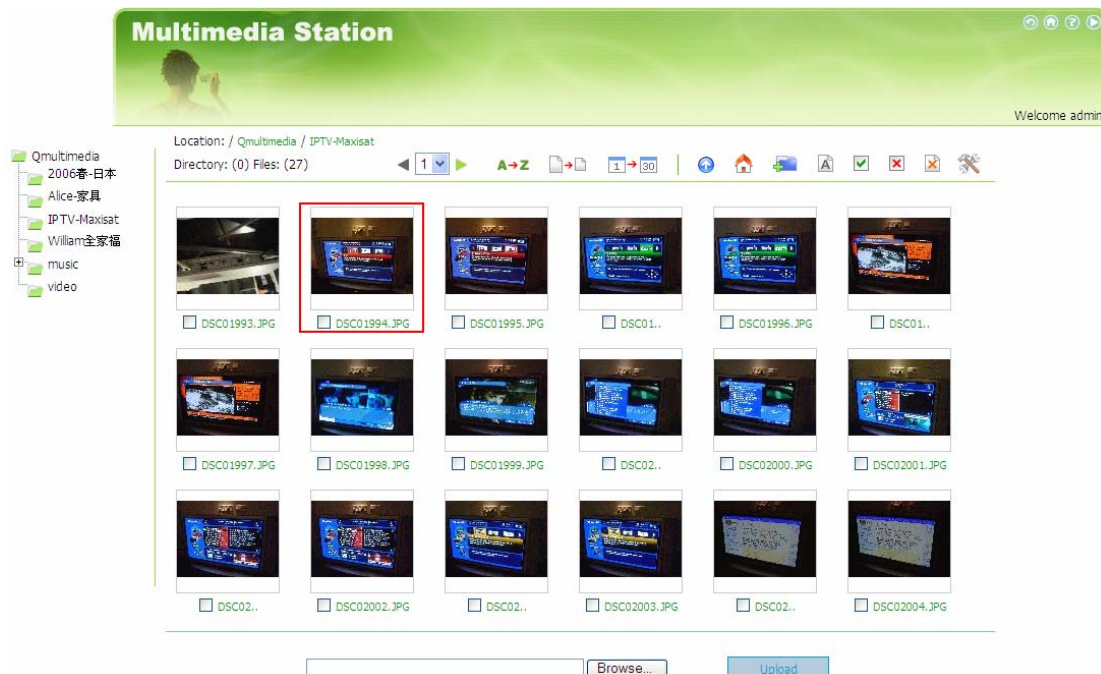
	Sort files by name
	Sort files by size
	Sort files by date
	Return to previous page
	Return to Home
	Create folder
	Rename file or folder
	Select all
	Select none
	Delete

Support file format list

Type	File format
Picture	jpg, bmp, gif
Video	wmx, wvx, avi, mpeg, mpg, mpe, m1v, mp2, mpv2, mp2v, mpa, dvr-ms, asf, asx, wpl, wm, wmx, wmd, wmz
Audio	wma, wax, cda, wav, mp3, m3u, mid, midi, rmi, aif, aifc, aiff, au, snd
Others	(Other formats not mentioned above)

View Photo Information

1. To view detailed information of a photo, click on the thumbnail of the picture.















2. The information of the photo, e.g. file name, resolution, size, camera producer is shown on the right. You can enter a description for the picture in the box below the photo and click **Submit**. To reset the description to previously saved version, click **Reset**.



Buttons Description

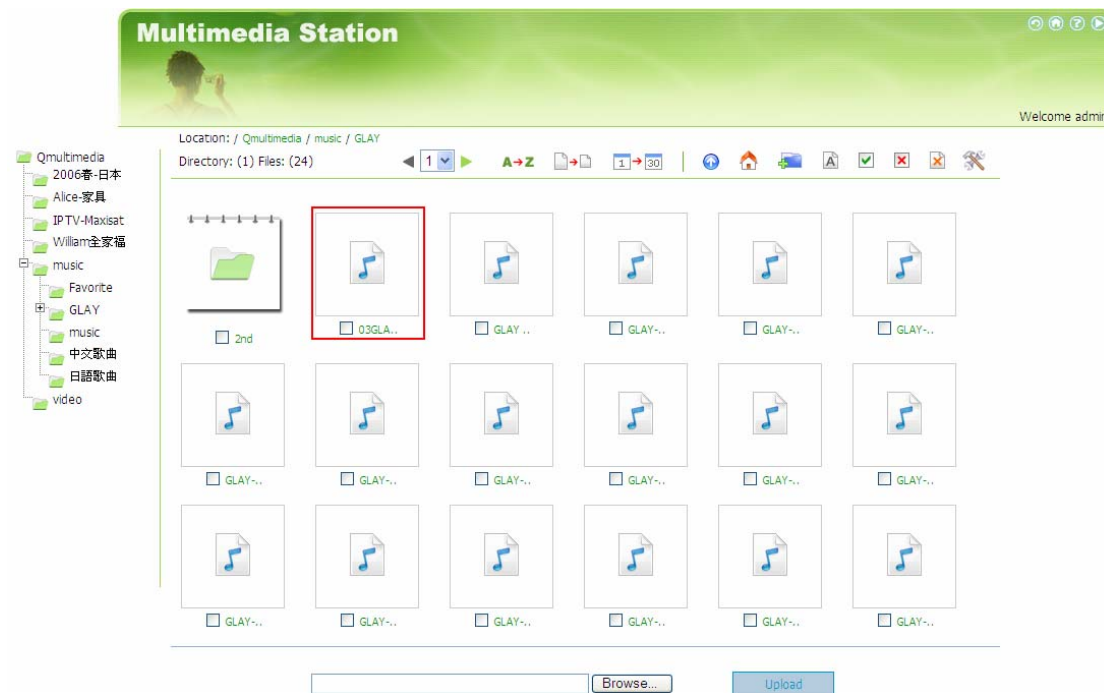
You can use the buttons on top of the photo to manage the album.

	Back to previous level
	Previous image
	Next image
	Rotate image anticlockwise
	Rotate image clockwise
	Zoom in
	Zoom out
SlideShow: <input type="text" value="3"/>  	Play slideshow. Select the time interval in seconds. Click play to play slide show. To stop playing, click stop .
	Print the image
	Save the picture
	Set the picture as album cover


Play music or video files

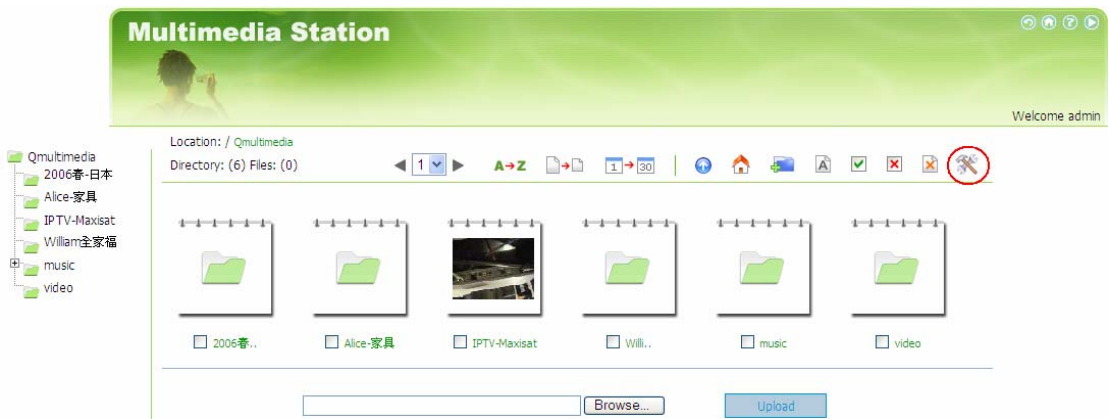
To play music or video files on Multimedia Station, you can click on the thumbnail of the file displayed on the page. The file is played by the default music or video playing program of your PC.


*It is recommended to use Media Player 10.0 or above as the default playing program.





C. Configure album authority

1. After logging in as administrator (admin), click  to enter the configuration page for album authority.




2. You can view, add, delete, and edit users. For any inquiries when using these functions, click on the help button  on the top right corner of the page.



User list [Create user](#)  

User list

User name	Status	Maintain	Description
guest	Enable	---	System default user; you can set the authority of the guests for browsing the album.
baby	Enable	Delete	baby
jeffrey	Enable	Delete	jeffrey

3. You can edit user profile and album access authority on this page. For any inquiries when using these functions, click on the help button  on the top right corner of the page.

Edit personal profile



User's profile

User name:

Description:

Password:

Verify Password:

☐ User cannot change the information.

☐ Disable

guest

Accessible albums

Inaccessible albums

Add

Remove

Submit

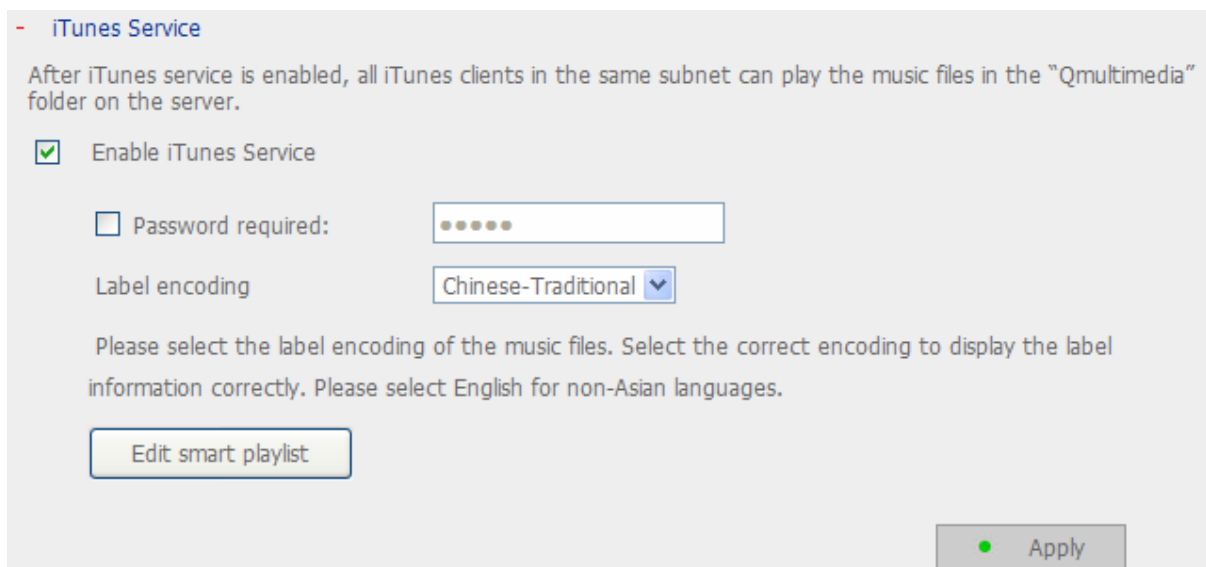
Cancel

5.2 Enable iTunes Service

Enable iTunes service on the NAS. The mp3 files on Qmultimedia folder of the NAS will be shared via iTunes. All the computers with iTunes installed on LAN are able to find, browse, and play the music files on the NAS.

Password required: To allow the users to access the data only by entering the correct password, please check this option and enter the password.

Click "Edit smart playlist" to enter the smart playlist page. You can define the playlist rules. If there is no song that matches the rules in the playlist, the iTunes client does not show the playlist. For detailed operation, please refer to the on-line help.



The image shows a configuration window titled "iTunes Service". At the top, a note states: "After iTunes service is enabled, all iTunes clients in the same subnet can play the music files in the 'Qmultimedia' folder on the server." Below this, there are three main settings: 1. "Enable iTunes Service" with a checked checkbox. 2. "Password required:" with an unchecked checkbox and an adjacent password input field containing five dots. 3. "Label encoding" with a dropdown menu currently set to "Chinese-Traditional". Below these settings is a descriptive text: "Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages." At the bottom left is a button labeled "Edit smart playlist", and at the bottom right is a button labeled "Apply" with a green status indicator.

- iTunes Service

After iTunes service is enabled, all iTunes clients in the same subnet can play the music files in the "Qmultimedia" folder on the server.

☒ Enable iTunes Service

☐ Password required:

Label encoding

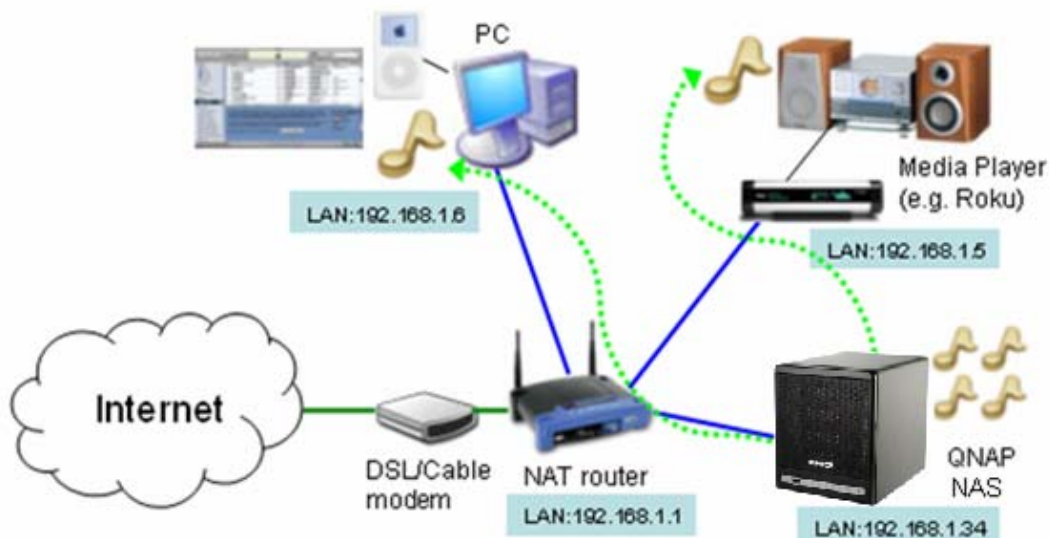
Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages.



Note: You can download the latest iTunes software from official Apple website <http://www.apple.com>.

5.3 Use UPnP Media Server

The NAS is built-in with TwonkyMedia, DLNA compatible UPnP media server. Enable this function and the NAS shares particular music, photos or video files to DLNA network. You can use DLNA compatible digital media player (DMP), to play the multimedia files on the NAS on TV or acoustic sound system.



To use UPnP Media Server, please enable this function and click the following link (<http://NAS IP:9000/>) to enter the configuration page of UPnP Media Server.

– Multimedia Station

☒ Enable Multimedia Station
After enabling this service, click the following link to enter Multimedia Station.
<http://10.8.12.47:8080/Qmultimedia/>
☐ Display service link on the login page.

☒ Enable UPnP MediaServer
☒ After enabling this service, click the following link to enter UPnP MediaServer configuration page.
<http://10.8.12.47:9000/>

● Apply

Click on the link <http://NAS IP:9000/> to enter UPnP Media Server configuration page and configure the following settings.

- (1) Language: Select the display language.
- (2) Server Name: Enter the name of the NAS's UPnP Media Server. This name is shown on DMP operation interface, e.g. NAS.
- (3) Content Locations: Select the share folder on the NAS to be shared to DMP. The default folder is Qmultimedia. You can add more than one share folder.

Click **Save Changes** to save the settings.

MediaServer Version 4.4.2

Basic Setup
First steps
Sharing
Clients/Security
Internet Radio

Advanced Setup
External applications
Naming
Music tree
Picture tree
Video tree
Miscellaneous

Support
Troubleshooting
FAQ

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Save Changes Cancel Rescan content directories

Content Locations:

<input checked="" type="checkbox"/>	/Qmultimedia	All content types	Browse
<input checked="" type="checkbox"/>		All content types	Browse

Add new content directory

Directories where the server shall scan for content. Each directory can be limited to a certain content type. The default setting will scan for all content types. Sharing can be temporarily disabled by unchecking the directory.

Rescan in minutes: 120

This option specifies the rescan behavior of the server. If set to 0, automatic rescans are disabled. A positive value specifies the period between rescans of content directories in minutes. -1 enables the server to watch content directories automatically for new content without the need for rescans.

After configuring the settings, you can upload mp3, photos, or video files to Qmultimedia folder or other specified folders on the NAS.



Note: If you upload multimedia files to the default share folder but the files are not shown on Media Player, you can click "Rescan content directories" or "Restart server" on the Media Server configuration page.

The built-in UPnP Media Server of the NAS is compatible with the DLNA DMP devices in the market.

About UPnP and DLNA

Universal Plug and Play (UPnP) is a set of computer network protocols promulgated by the UPnP Forum. The purpose of UPnP is to allow devices to connect seamlessly and to simplify the implementation of networks at home and in corporate environment. UPnP achieves this by defining and publishing UPnP device control protocols built upon open, Internet-based communication standards.

The term UPnP is gleaned from Plug-and-play, a technology for dynamically attaching devices to a computer directly.

The Digital Living Network Alliance (DLNA) is an alliance of a number of consumer electronics, mobile and personal computer manufacturers. Its aim is to establish a home network in which the electronic devices from all companies are compatible with each other under an open standard. The alliance also tries to promote the idea of digital home by establishing DLNA certification standard. All DLNA certified products connected to the home network can be accessed seamlessly to enable consumers to enjoy digital life conveniently.

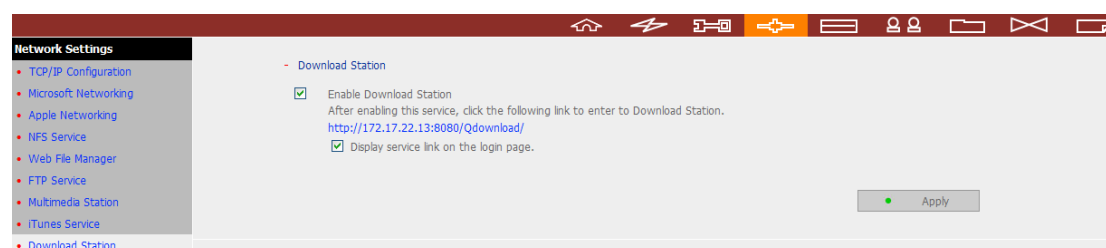
Chapter 6. Download Station

The NAS supports BT, HTTP, and FTP download mechanism. You can add download task to the NAS and let the server finish downloading independent of PC.

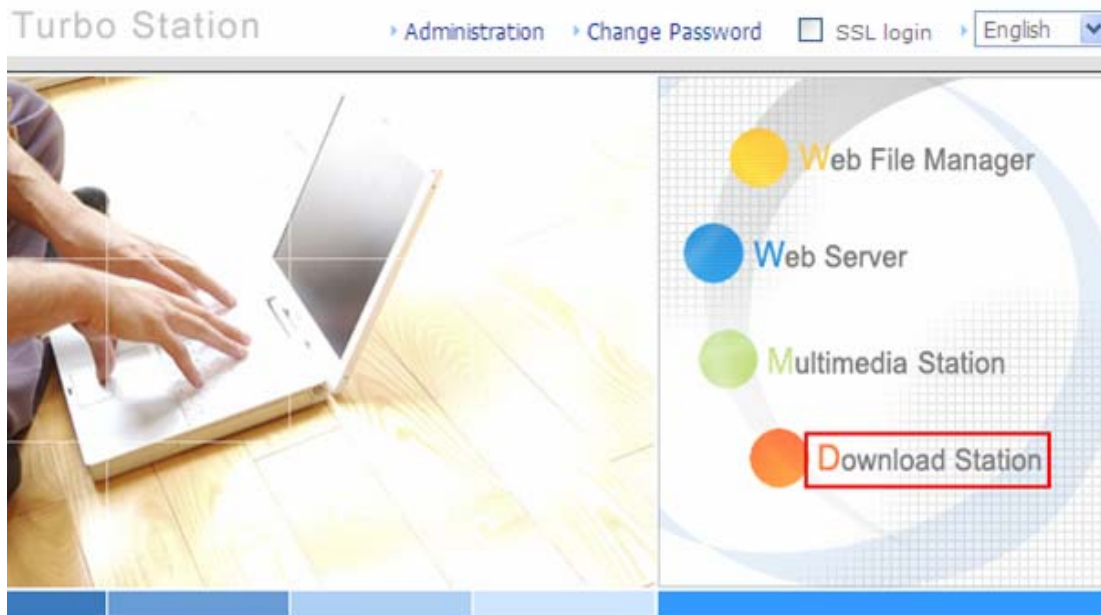


Warning: Please be warned against illegal downloading of copyrighted materials. The Download Station functionality is provided for downloading authorized files only. Downloading or distribution of unauthorized materials may result in severe civil and criminal penalty. Users are subject to the restrictions of the copyright laws and should accept all the consequences.

1. To use Download Station, make sure one or two SATA disks are installed correctly in the NAS according to the instructions in Chapter 2.1. A share folder **Qdownload** is created. Enable this function in **Network Settings**.



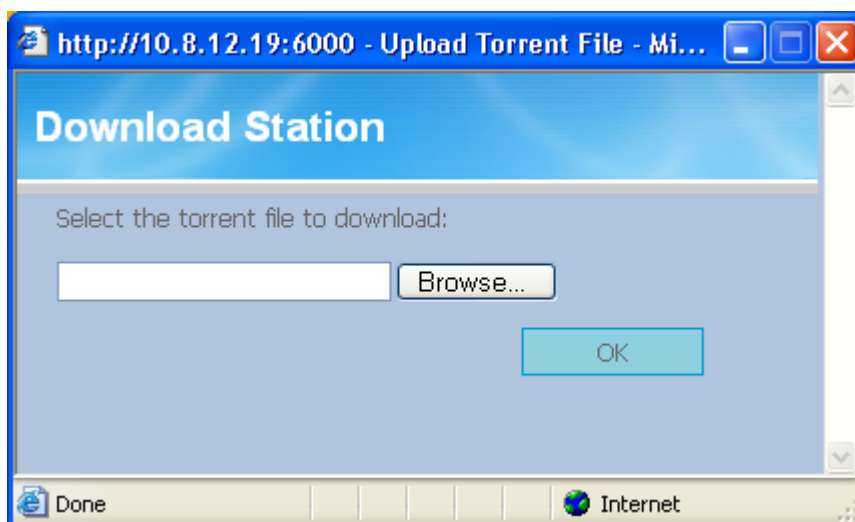
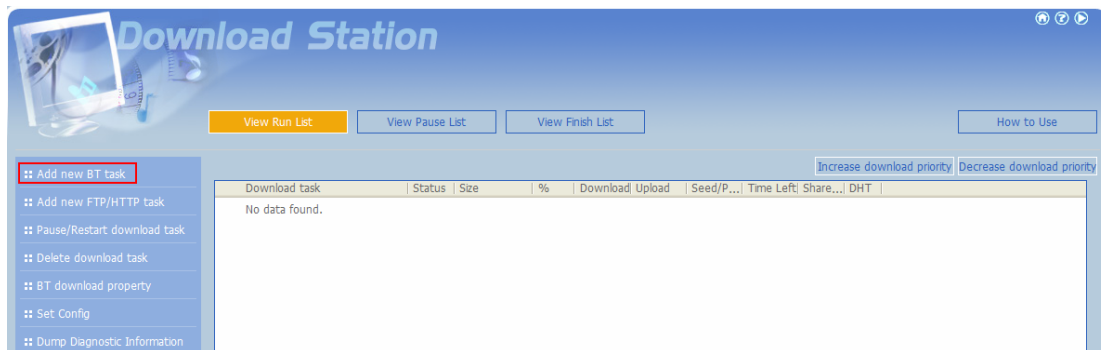
2. Click on the link <http://NAS IP/Qdownload> on Download Station page or click **Download Station** on the login page of the NAS to access Download Station.
- Note:** To display the Download Station link on the login page, please enable the option "Display service link on the login page".



3. Select **Add new BT task** or **Add new FTP/HTTP task**.

(A) Add new BT task

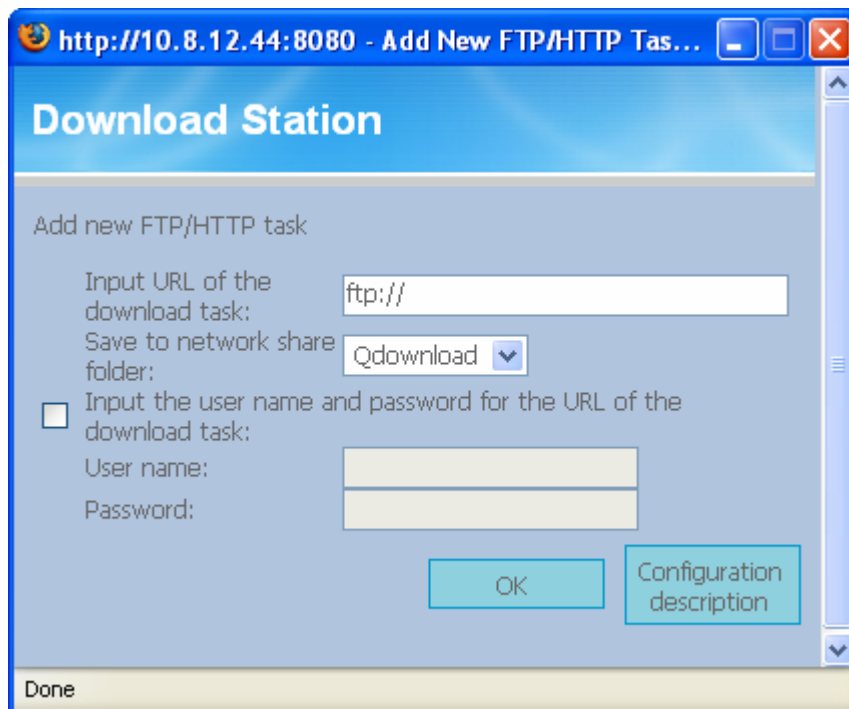
Click **Add new BT task** on the left and upload a torrent file. You can download legal torrent files by searching on the Internet. There are websites that provide legally sharing torrents e.g. www.legaltorrents.com. Please download the torrent files to your local disk and then upload them to the NAS.



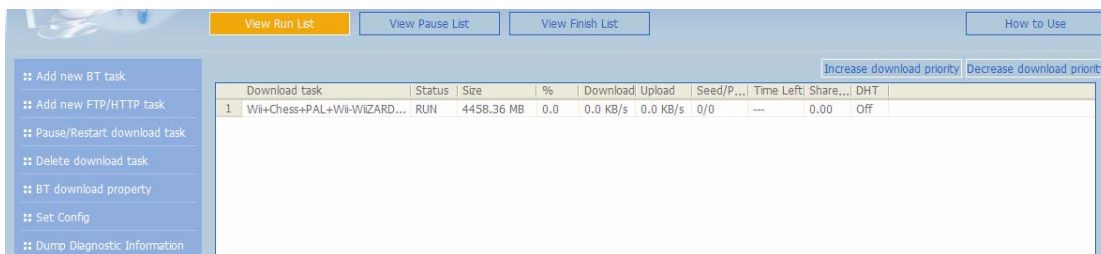
(B) Add new FTP/HTTP task

To run an FTP download task, click **Add new FTP/HTTP task**. Enter the FTP URL of the download task and select the share folder to save the files. Enter the user name and password to login the FTP server (if necessary). Then click **OK** to start downloading.

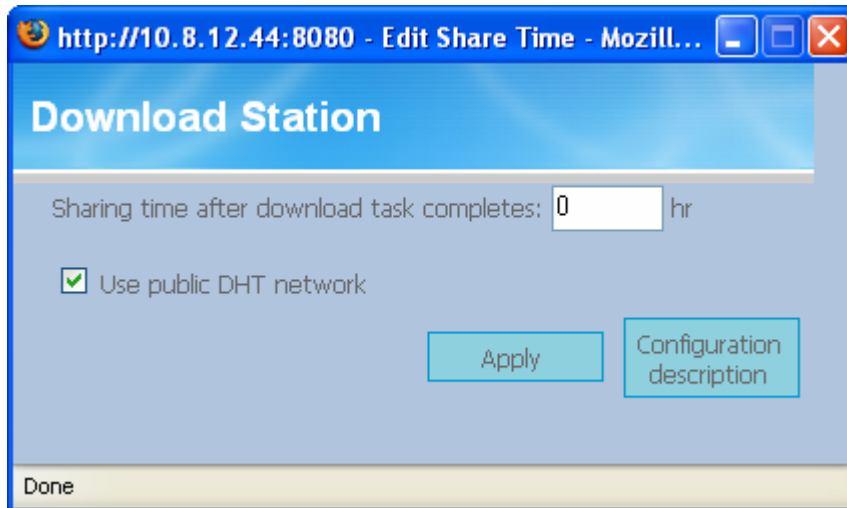
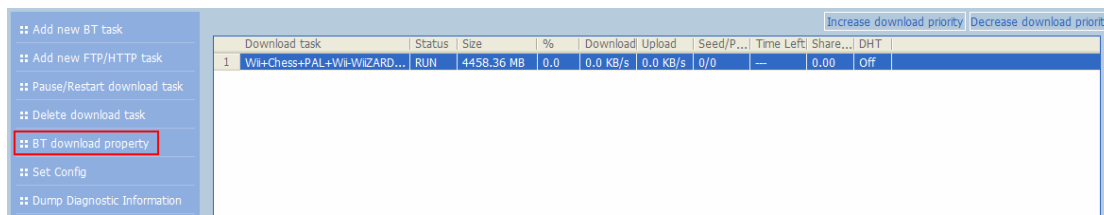
To run an HTTP download task, click **Add new FTP/HTTP task**. Enter the HTTP URL of the download task and select the share folder to save the files. Then click **OK** to start downloading.



4. After uploading a download task, the task appears on **View Run List**.



5. You can select a download task and click **BT download property** to enable or disable DHT public network and configure the sharing time after download completes.



Note: If the sharing time (larger than 0 hr) is set for a download task, the download task will be moved to Finish List after download completes and the sharing time ends.

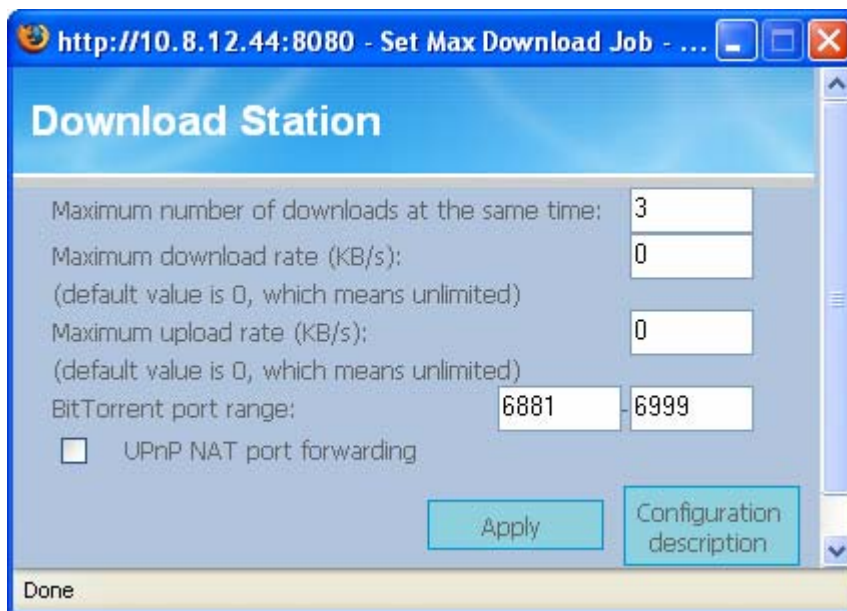
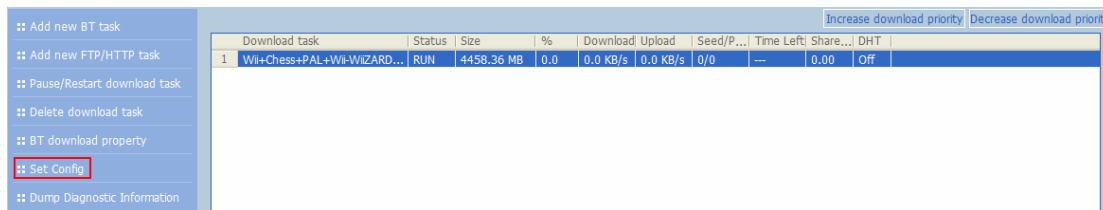
6. Click **Set Config** and enter the number of the maximum tasks you want to download at the same time (Default number: 3).

Enter the maximum download rate (default value is 0, which means unlimited).

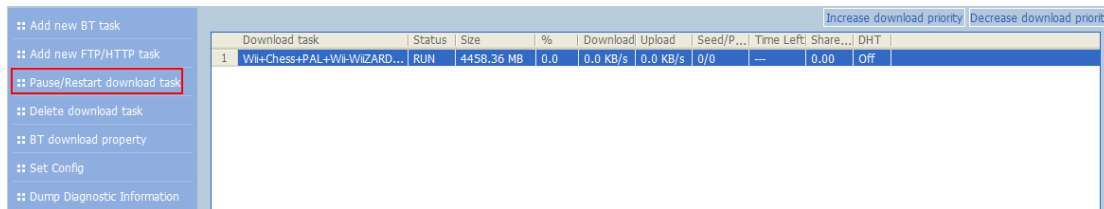
Enter the maximum upload rate (default value is 0, which means unlimited).

Enter the port range for Download Station (default range is 6881-6899).

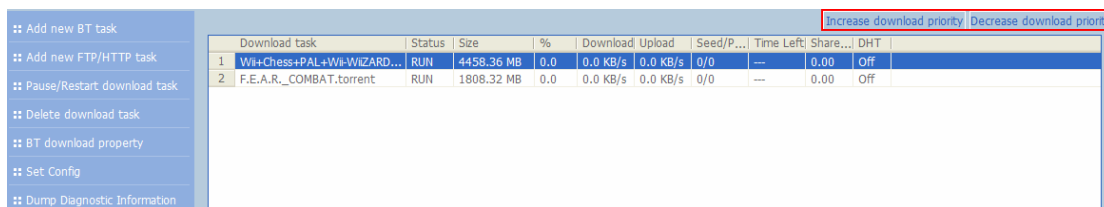
Check UPnP NAT port forwarding to enable automatically port forwarding on UPnP supported gateway (default is not checked).



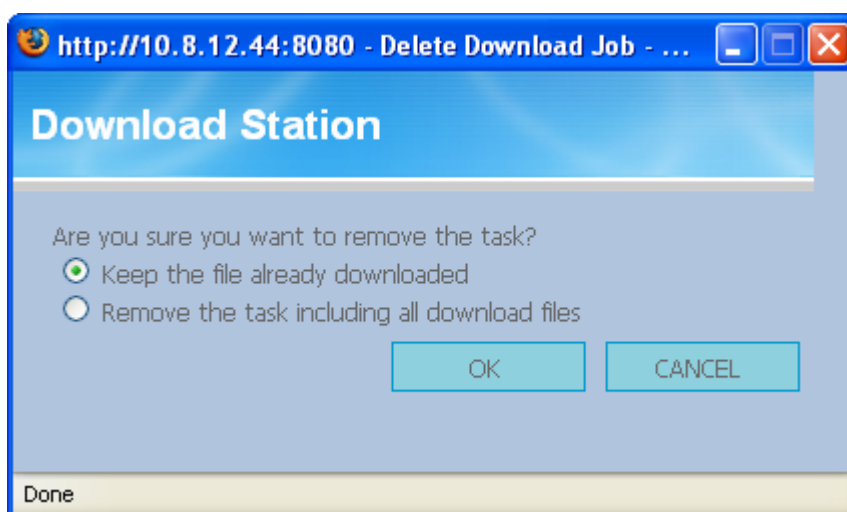
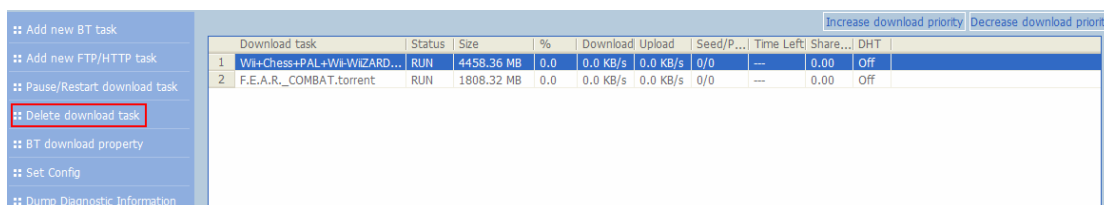
7. To pause a running download task, select the task in **View Run list** and click **Pause/ Restart download task**. You can view tasks that are paused or finished in View Pause List and View Finish List respectively. To restart a paused task, select the task in **View Pause List** and click **Pause/ Restart download task**.



8. You can also increase or decrease task priority by clicking **Increase download priority** and **Decrease download priority** when there are multiple download tasks.

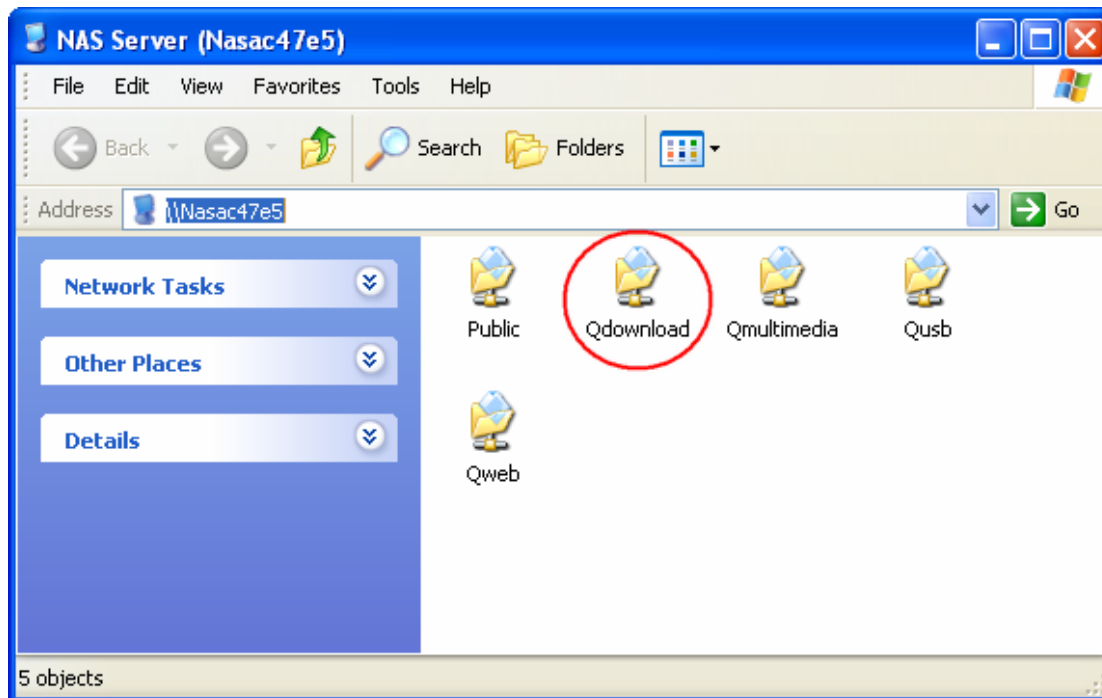


9. To delete a running, paused, or finished task, select the task and click **Delete download task**. You can select to remove the download task only and retain the downloaded files, or remove the task and downloaded files.



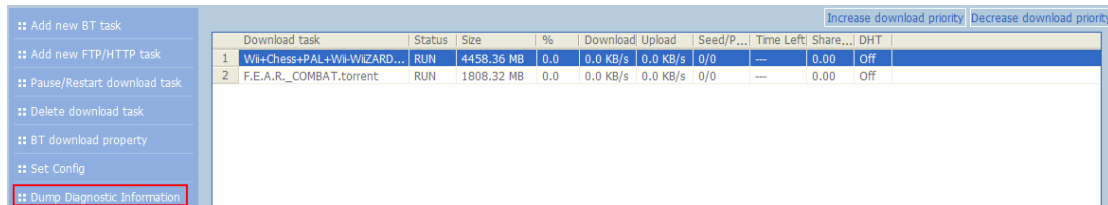
10. To logout Download Station, click  on the top right hand corner.

11. To access the folders you have downloaded, please go to the share folder **Qdownload** of the NAS.



Dump Diagnostic Information

To view the diagnostic details of a download task, select a task on the list and click [Dump Diagnostic Information].



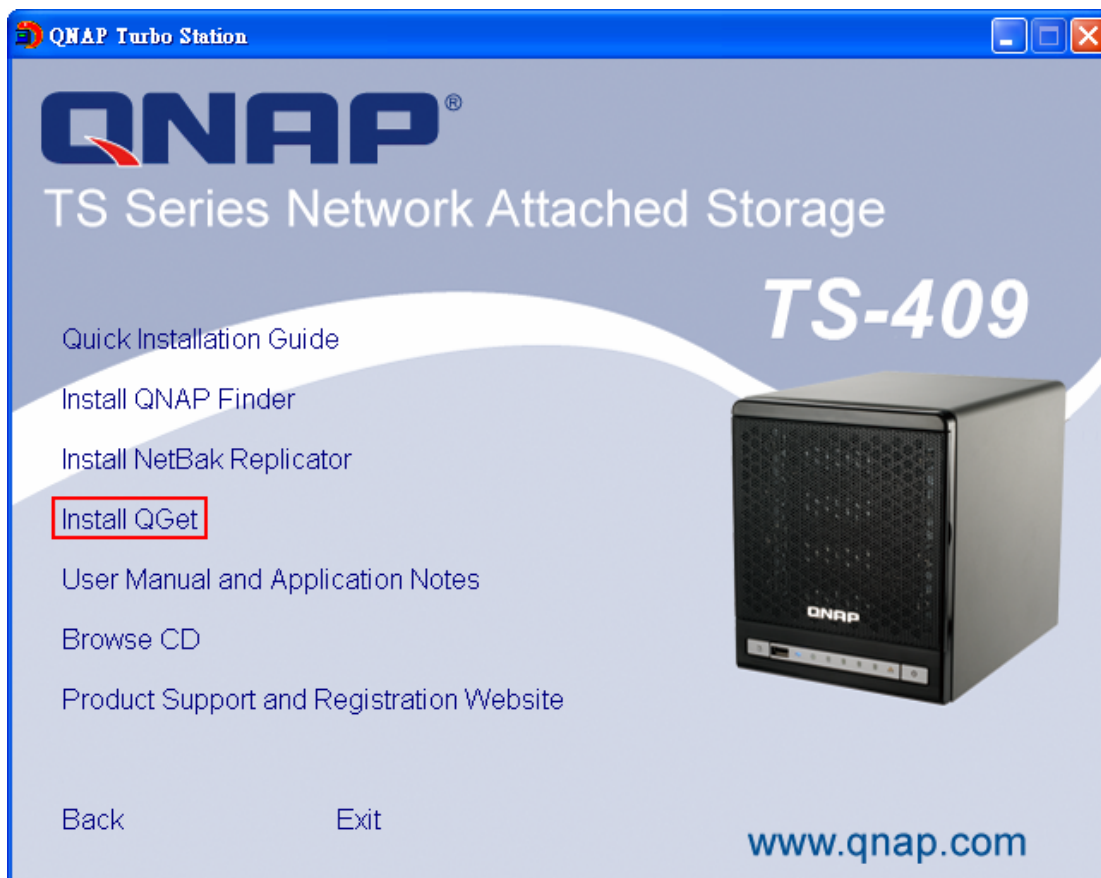
The common reasons for slow BT download rate or download error are as follow:

1. The torrent file has expired, the peers have stopped sharing this file, or there is error in the file.
2. The NAS has configured to use fixed IP but DNS server is not configured, or DNS server fails.
3. Set the maximum number of simultaneous downloads as 3-5 for the best download rate.
4. The NAS is located behind NAT router. The port settings have led to slow BT download rate or no response. You may try the following means to solve the problem:
 - a. Open the BitTorrent port range on NAT router manually. Forward these ports to the LAN IP of the NAS.
 - b. The new NAS firmware supports UPnP NAT port forwarding. If your NAT router supports UPnP, enable this function on the NAT. Then enable UPnP NAT port forwarding of the NAS. The BT download rate should be enhanced.

6.1 Use Download Software QGet

QGet is a powerful management software for maintaining the BT, HTTP and FTP download tasks of multiple TS series NAS servers via LAN or WAN. By using QGet, you no longer need to login the Download Station web interface of multiple servers and manage the settings one by one. Simply install QGet on any computer running Windows 2000/XP, you can manage the download tasks of all your NAS servers.

1. To use QGet, install the software from the product CD-ROM.



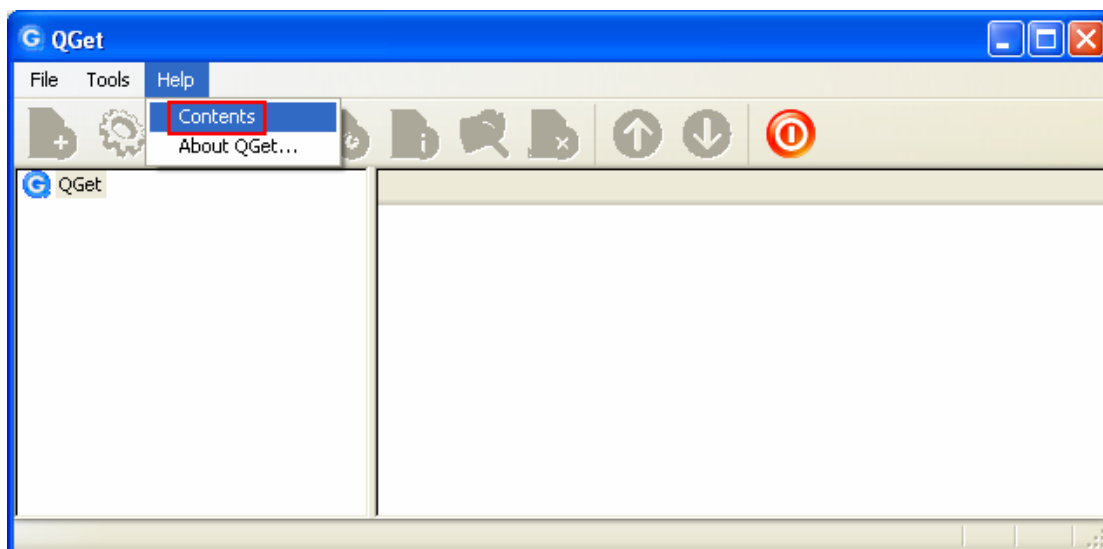
2. Follow the instructions to install QGet.



3. Run QGet from the installed location.



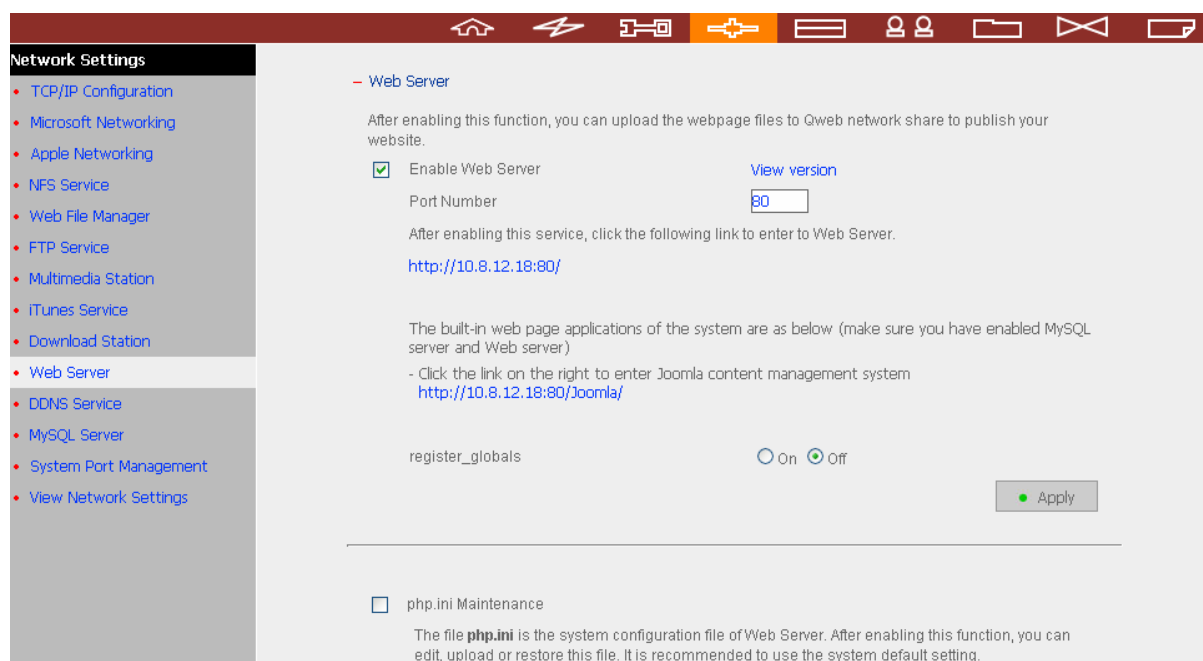
4. For the details of using QGet, please refer to the online help of the software.



Chapter 7. Web Server

The NAS enables you to upload web pages and manage your own website easily by Web Server function. It also supports Joomla!, PHP and SQLite for you to establish an interactive website. Once you activate Web Server function, you can access your own homepage from anywhere. You can add hyperlinks in your homepage to connect to all the features of the NAS, such as Download Station, Multimedia Station, and Web Server.

1. To use Web Server, make sure a SATA disk is installed correctly in the NAS according to the instructions in Chapter 2.1. A share folder **Qweb** is created. Enable Web Server function and enter the port number in **Network Settings**.

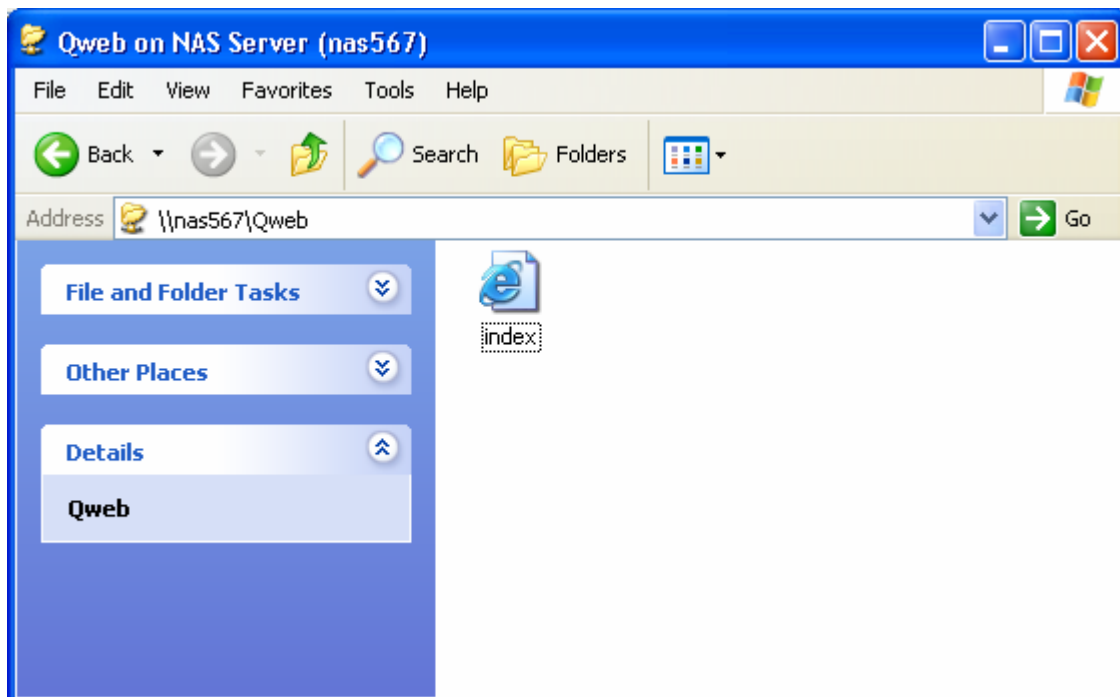


The screenshot displays the 'Network Settings' interface. On the left is a sidebar menu with the following items: TCP/IP Configuration, Microsoft Networking, Apple Networking, NFS Service, Web File Manager, FTP Service, Multimedia Station, iTunes Service, Download Station, Web Server (highlighted), DDNS Service, MySQL Server, System Port Management, and View Network Settings. The main content area is titled 'Web Server' and includes the following elements:

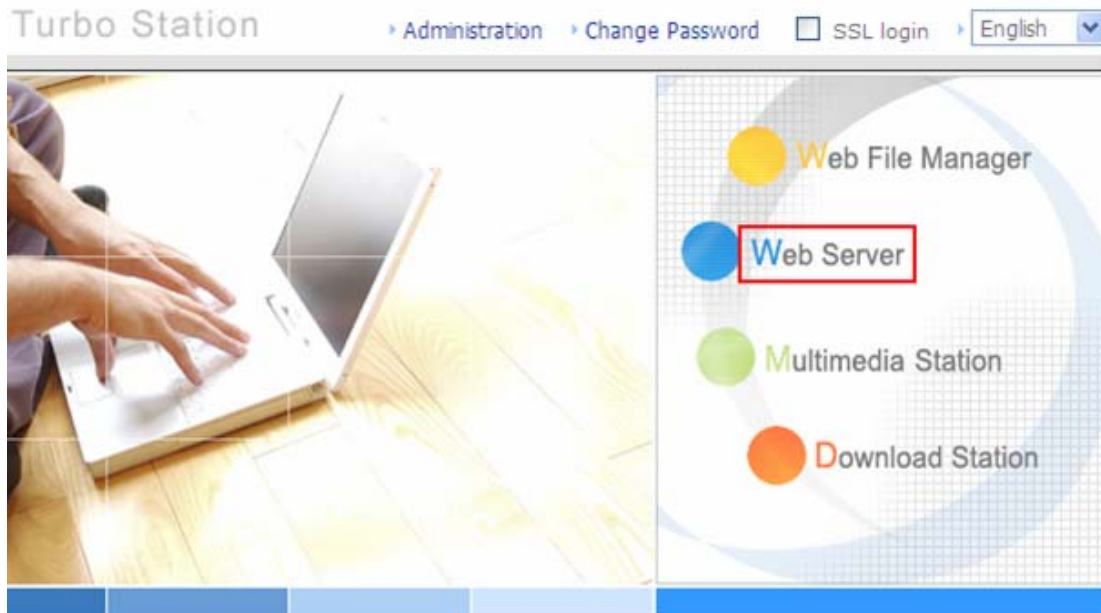
- A sub-header 'Web Server' with a minus sign icon.
- Text: 'After enabling this function, you can upload the webpage files to Qweb network share to publish your website.'
- A checked checkbox for 'Enable Web Server' with a 'View version' link.
- A 'Port Number' input field containing the value '80'.
- Text: 'After enabling this service, click the following link to enter to Web Server.'
- A link: <http://10.8.12.18:80/>
- Text: 'The built-in web page applications of the system are as below (make sure you have enabled MySQL server and Web server)'
- Text: '- Click the link on the right to enter Joomla content management system'
- A link: <http://10.8.12.18:80/Joomla/>
- A 'register_globals' setting with radio buttons for 'On' and 'Off' (the 'Off' option is selected).
- An 'Apply' button with a green dot icon.
- A section for 'php.ini Maintenance' with an unchecked checkbox.
- Text: 'The file **php.ini** is the system configuration file of Web Server. After enabling this function, you can edit, upload or restore this file. It is recommended to use the system default setting.'

2. You can upload your web pages to the folder Qweb by the following methods:
 - a. By using samba: You can open a web browser and type **\\[NAS IP]\Qweb** or **\\[NAS name]\Qweb**. Login the folder and upload your web pages.
 - b. By FTP: You can login FTP service and upload your web pages to the folder (please refer to Chapter 8).
 - c. By Web File Manager: You can login Web File Manager and upload your web pages to the folder (please refer to Chapter 9).

The file index.html, index.htm, or index.php is the home path of your webpage.



3. Click on the link <http://NAS IP/> on Web Server page or click **Web Server** on the login page of the NAS to access the web page you upload. Note that when Web Server is enabled, you have to type [http://NAS IP:8080] in your web browser to access the login page of the NAS.



MySQL Management

The first time you install the system, the phpMyAdmin software is automatically installed as the MySQL management tool. When you update the firmware in the future, phpMyAdmin will not be re-installed and your data on the database will not be overwritten or changed.

The phpMyAdmin program files are created in the Qweb share folders. You can change the folder name and access the database by entering the URL in the browser. However, the link on the web management interface is not changed.

Note: The default user name of MySQL is "root". The password is "admin". Please change your root password immediately after logging in to the phpMyAdmin management interface.

SQLite Management

SQLiteManager is a multilingual web-based tool to manage SQLite databases and can be downloaded from <http://www.sqlitemanager.org/>.

Please follow the steps below or refer to the INSTALL file in the downloaded SQLiteManager-*.tar.gz[?] to install the SQLiteManager.

- (1) Unpack your download file SQLiteManager-*.tar.gz.
- (2) Upload the unpacked folder **SQLiteManager-*** to **\\NAS IP\Qweb**.
- (3) Open your web browser and go to **http://NAS IP/SQLiteManager-*/**.

[?]: The symbol "*" refers to the version number of SQLiteManager.

Chapter 8. FTP Server

The NAS supports FTP service. To use FTP service, enable this function in **Network Settings** and follow the steps below:

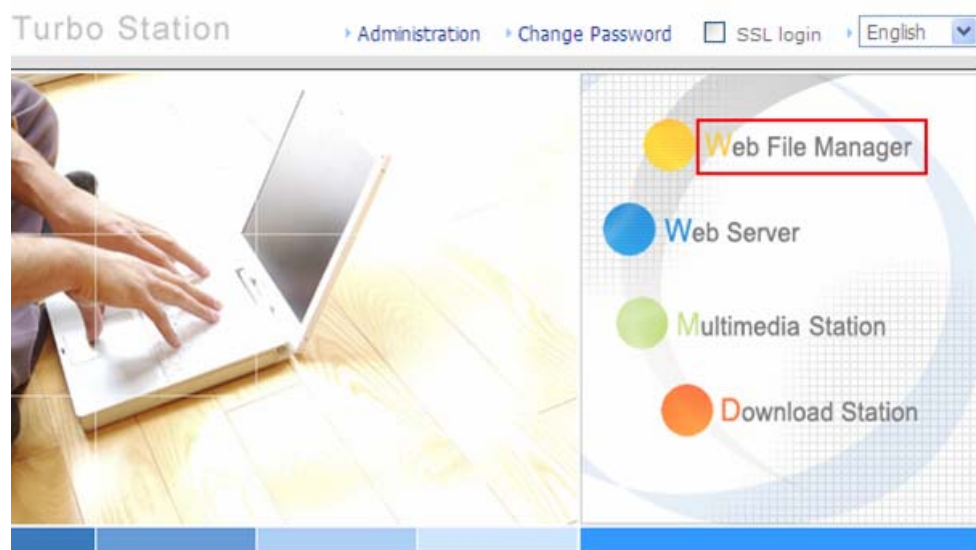
The screenshot shows the 'Network Settings' interface with a sidebar on the left containing a list of services: TCP/IP Configuration, Microsoft Networking, Apple Networking, NFS Service, Web File Manager, FTP Service (highlighted), Multimedia Station, iTunes Service, Download Station, Web Server, DDNS Service, MySQL Server, Surveillance Station, System Port Management, and View Network Settings. The main content area is titled 'FTP Service' and contains the following configuration options:

- ☒ Enable FTP Service
- Protocol type:
 - ☒ FTP (standard)
 - ☒ FTP with SSL/TLS (Explicit)
- Port Number:
- Unicode Support: ☒ Yes ☐ No
- Enable Anonymous: ☒ Yes ☐ No
- Passive FTP Port Range:
 - ☒ Use the default port range (55536 - 56559)
 - ☐ Define port range: -
- ☐ Respond with external IP address for passive FTP connection request
- External IP address:
- Maximum number of all FTP connections:
- Maximum number of connections for a single account:
- ☐ Enable FTP transfer limitation(0 means unlimited)
- Single connection: Maximum download rate (KB/s): KB/s • Maximum upload rate (KB/s): KB/s

Note: If your FTP client does not support Unicode, please select "No" for Unicode Support and select a supported filename encoding from **[Filename Encoding Setting]** under [System Settings] so that the folders and files on FTP can be properly shown.

At the bottom right, there is a green 'Apply' button.

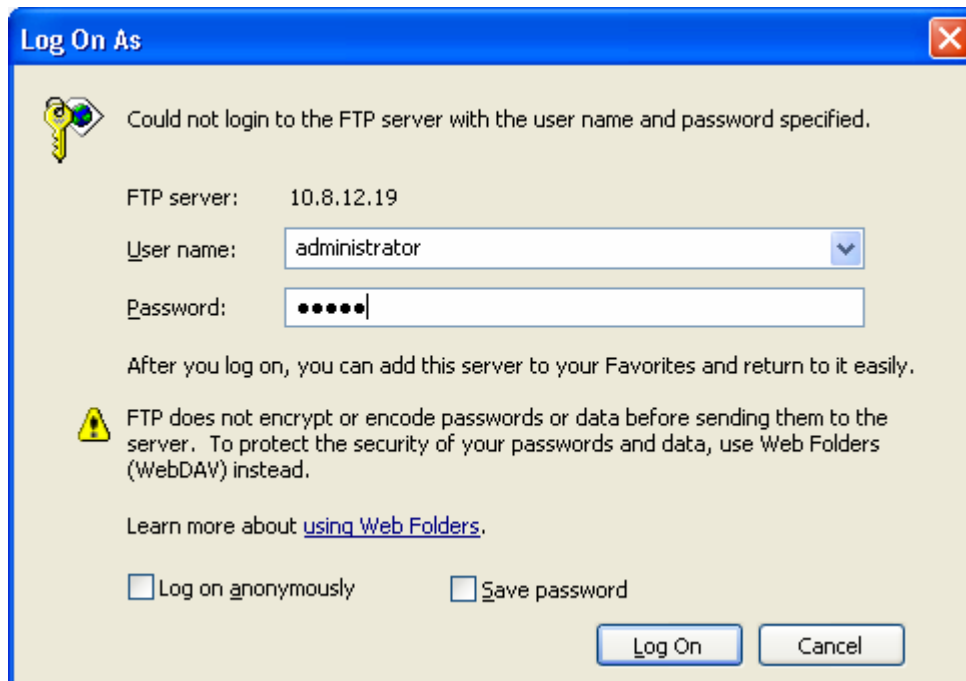
1. Open an IE browser and enter **ftp://[NAS IP]** or **ftp://[NAS name]**. OR
2. By Web File Manager of the NAS.
 - a. Go to the NAS administration page and click **Web File Manager**. Enter user name and password to login the NAS.



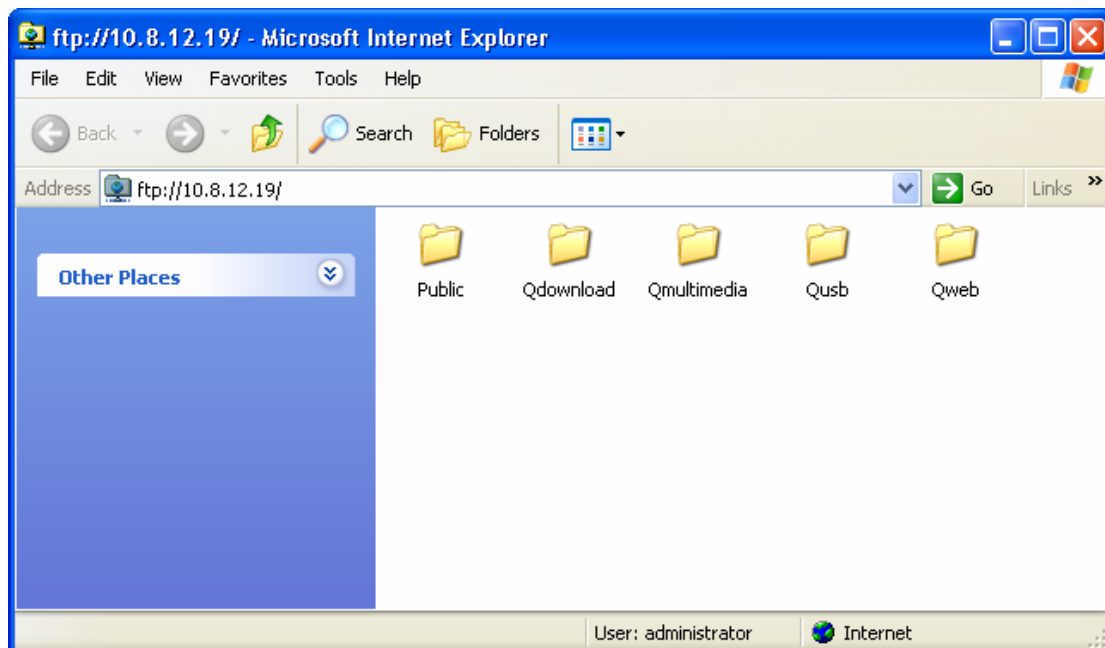
b. Click **FTP**.

FTP		
	Share Folder	Comment
	Public	System default share
	Qdownload	System default share
	Qmultimedia	System default share
	Qusb	System default share
	Qweb	System default share

- c. Enter the user name and password to login FTP service.



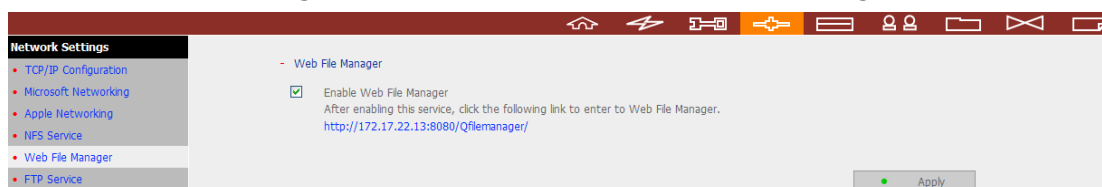
- d. You can start to use FTP service.



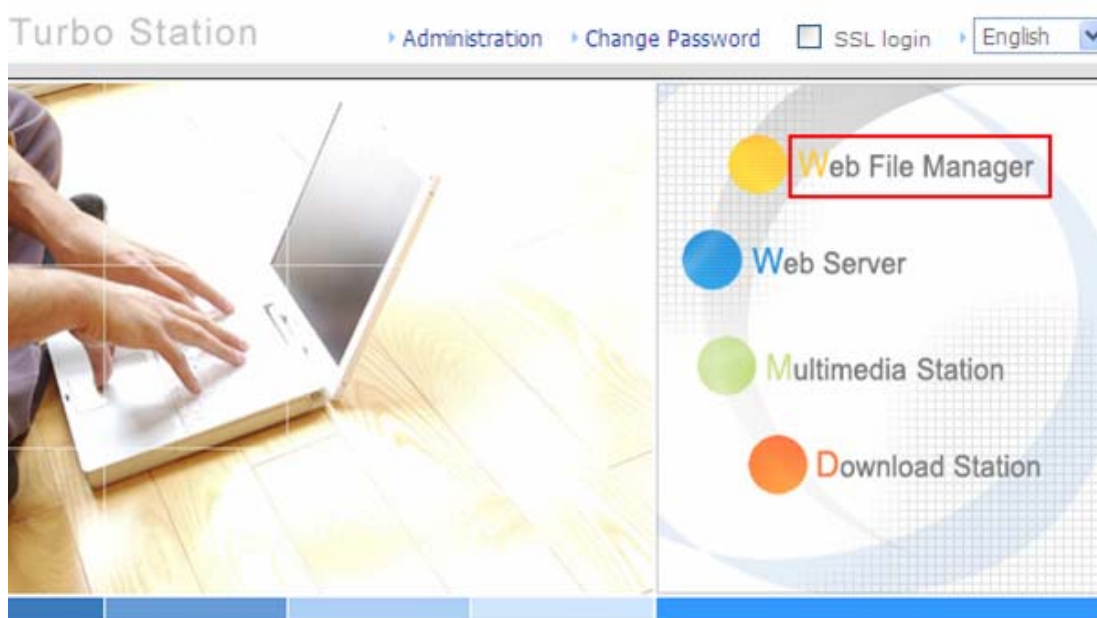
Chapter 9. Web File Manager

Using Web File Manager

To use Web File Manager, enable web service in Network Settings first.



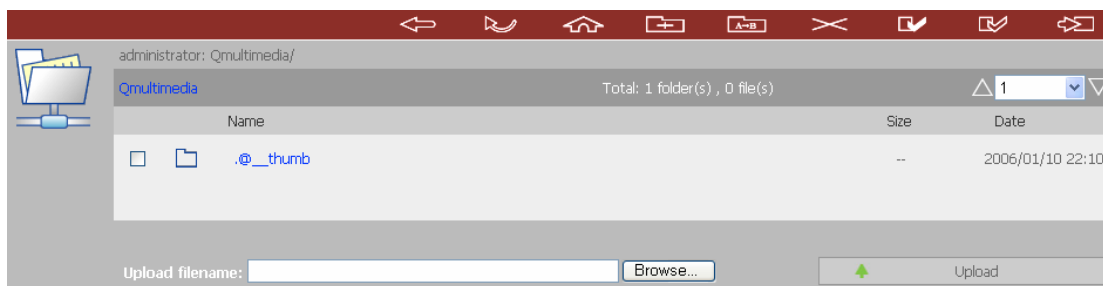
Launch the web browser and go to the NAS administration page. Select **Web File Manager** and enter the correct login name and password. You can login as “guest” to access the network shares open to guest access on the NAS. The login password of guest is **guest**.



Select an existing network share.




You can organize share folders of the NAS. With Web File Manager, you can upload, rename, or delete files and folders in the network shares.




View files online

Click on a file displayed on the web page. The information of the file is shown. If your browser does not support the file format, a download window pops up automatically. Download the file and you can open it on your PC.


Create folder

- Select a network share or folder in which you want to create a new folder.
- Click  (Create Folder) on the toolbar.
- Enter the name of the new folder and click OK.

Rename file or folder

- i. Select a file or folder to rename.
- ii. Click  (Rename) on the toolbar.
- iii. Enter the new file or folder name and click OK.

Delete file or folder

- i. Select a file or folder to delete.
- ii. Click  (Delete) on the toolbar.
- iii. Confirm to delete the file or folder.

To delete all files and folders, click  (Select All) and  (Delete).


Upload file

- i. Open the folder to upload file to.
- ii. Click **Browse** to select the file.
- iii. Click **Upload**.

Download file

- i. Select a file to download.
- ii. Right click the file and select "Save Target As" to save the file.

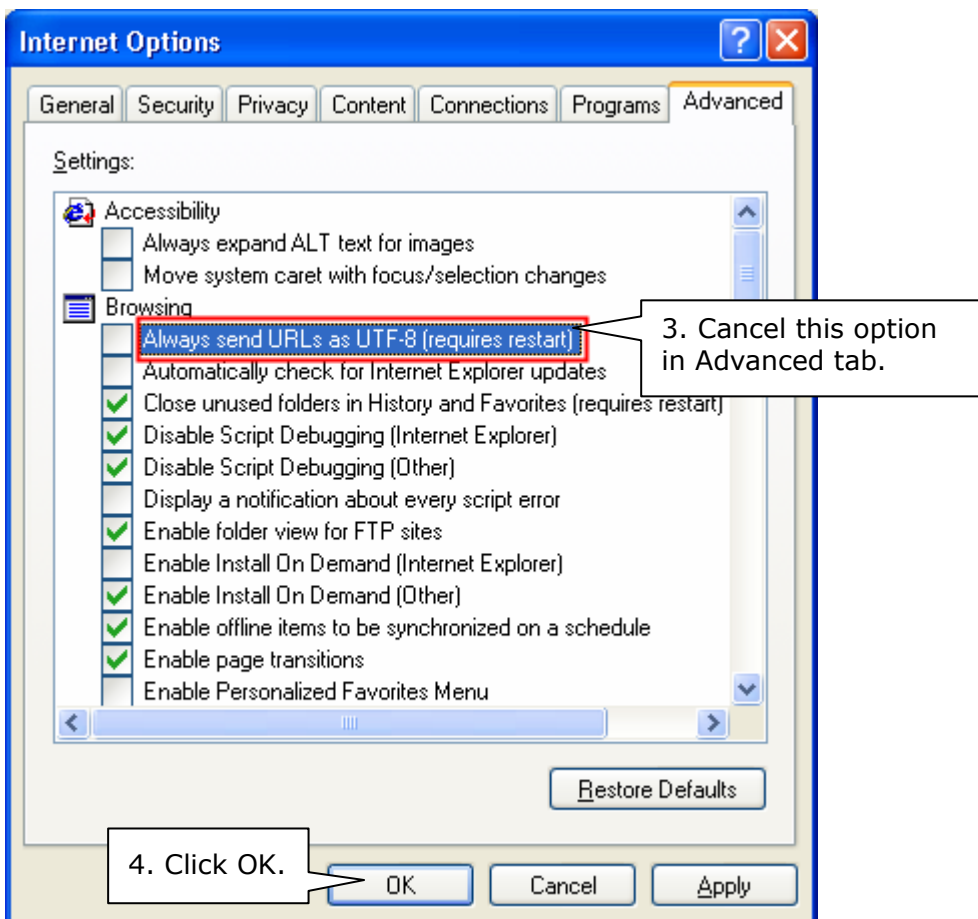
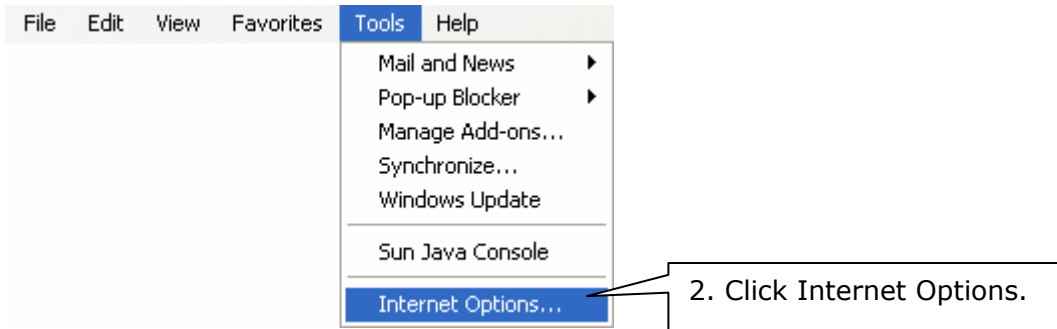
Logout

To exit Web File Manager, click  (Logout).

View Files Named in Local Language













To view files named in Chinese, you may have to configure the browser settings. Take Internet Explorer as an example, follow the steps below to configure the settings.

1. Click on **Tools** in IE browser.



5. Restart the browser.

Web File Manager Icons

Icon	Description
	Return to the parent folder
	Refresh the current page
	Return to network share list home page
	Create folder
	Rename file or folder
	Delete file or folder
	Select all
	Cancel selection
	Logout
	Full access network share folder
	Read-only network share folder
	Malfunction network share folder

Chapter 10. NetBak Replicator

NetBak Replicator is a powerful program installed in user's system (Windows® OS only) for data backup. You can back up any files or folders on local PC to specified share folder on the NAS by LAN or WAN.

Main Functions

1. Backup

- **Instant Backup**
You can select files and folders on local PC and back up files to specified network share folder on the NAS immediately.
- **File Filter**
You can select particular file types to be excluded from backup. The system filters all files belonging to these file types when backing up data.
- **Schedule**
You can specify a schedule for backing up data with this option, e.g. 12:00 every day or 05:00 every Saturday.
- **Monitor**
When this option is enabled, the system uploads all files or folders to the server instantly for backup when the files or folders are modified.

2. Restore

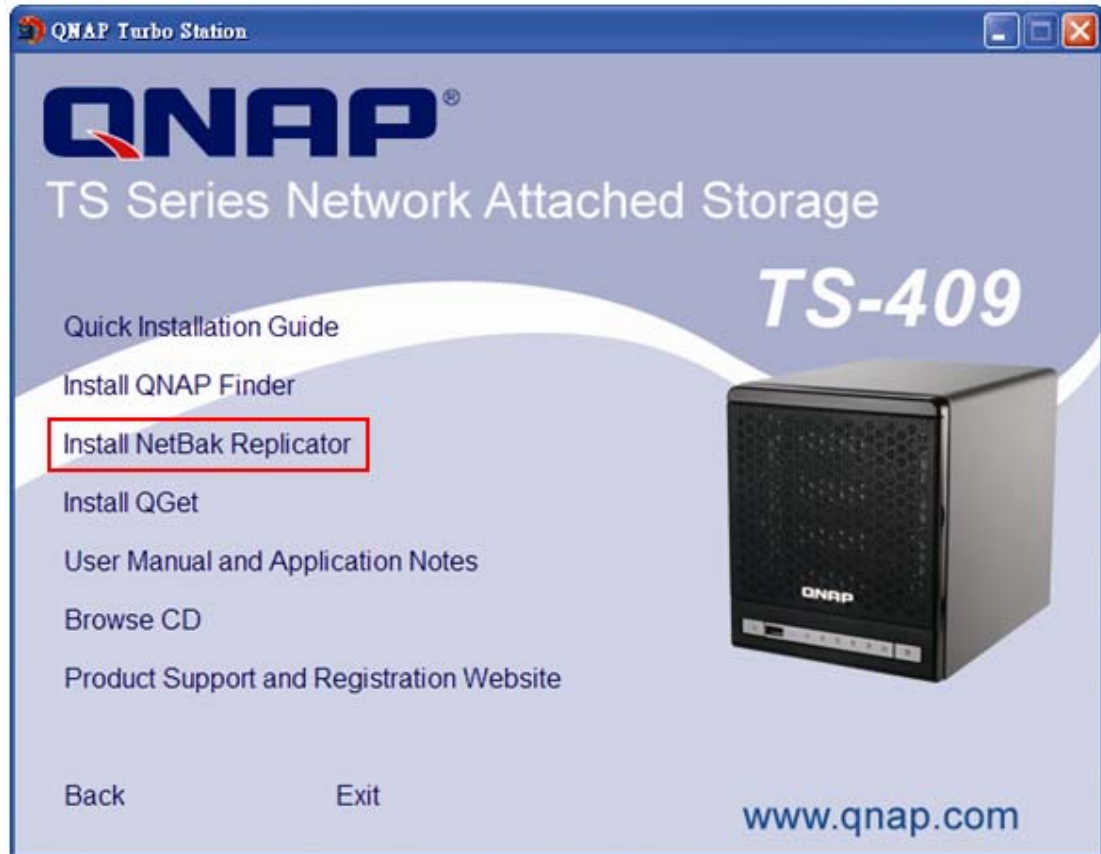
Select this option to restore backed up data to the original location of the file or to a new directory.

3. Log

Enable this option to record events of NetBak Replicator, e.g. the time when NetBak Replicator starts and terminates.


Install NetBak Replicator

1. Select **Install NetBak Replicator** in the NAS CD-ROM.



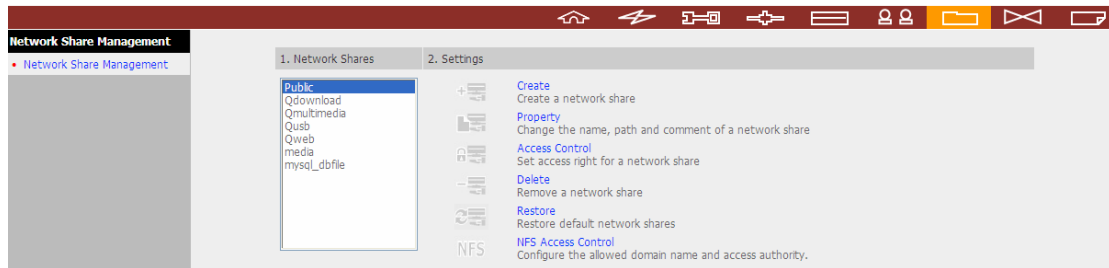
2. Follow the steps to install NetBak Replicator.




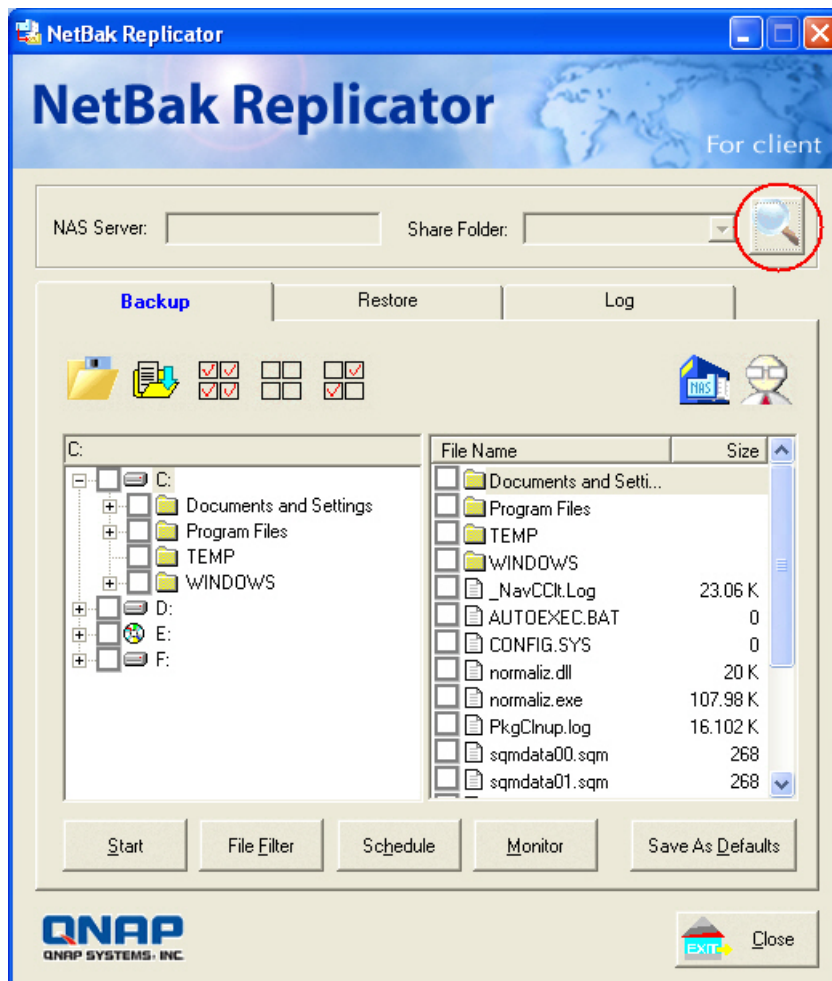
3. Upon successful installation, a shortcut icon  is shown on the Desktop. Double click the icon to run NetBak Replicator.

Use NetBak Replicator

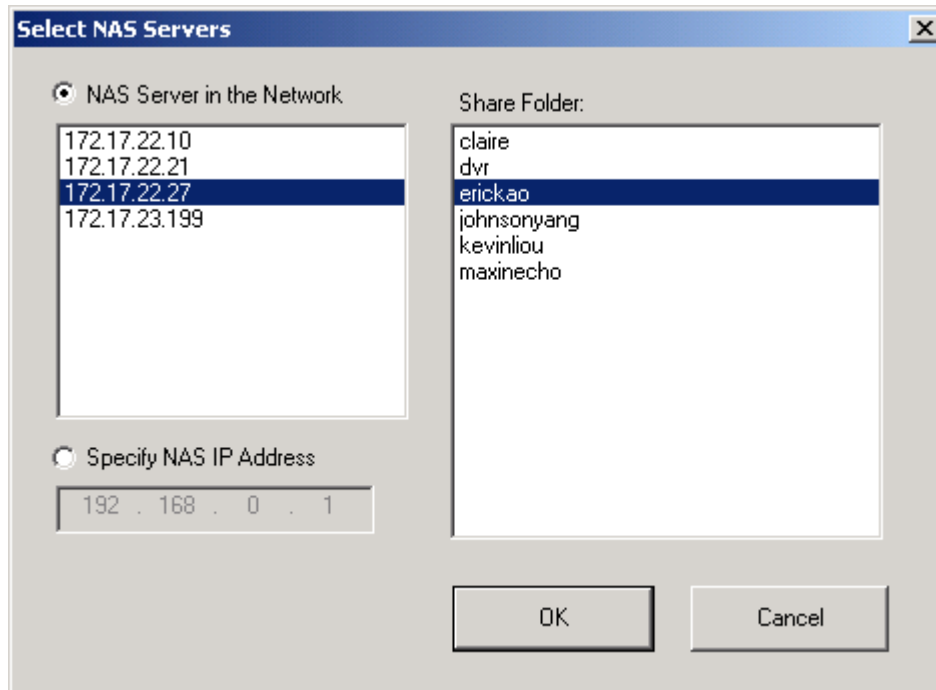
1. Before using NetBak Replicator, please login the NAS administration and go to **Network Share Management** to create a share folder for backup. Make sure the share folder is open for everyone access or you login the share folder with an authorized account or administrator by NetBak Replicator.



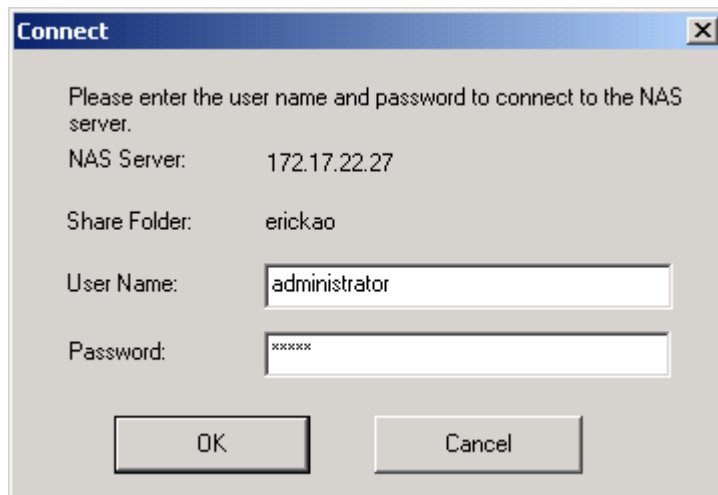
2. Run NetBak Replicator. Click . All the NAS and their share folders within the network is displayed.



3. When the following window appears, all the NAS servers in the LAN appear on the left list. Select a server and a share folder on the right. NetBak Replicator also supports backup via WAN, you can enter the IP address of the NAS for data backup directly and select a share folder. Then click **OK**.










4. Enter the user name and password to login the server.



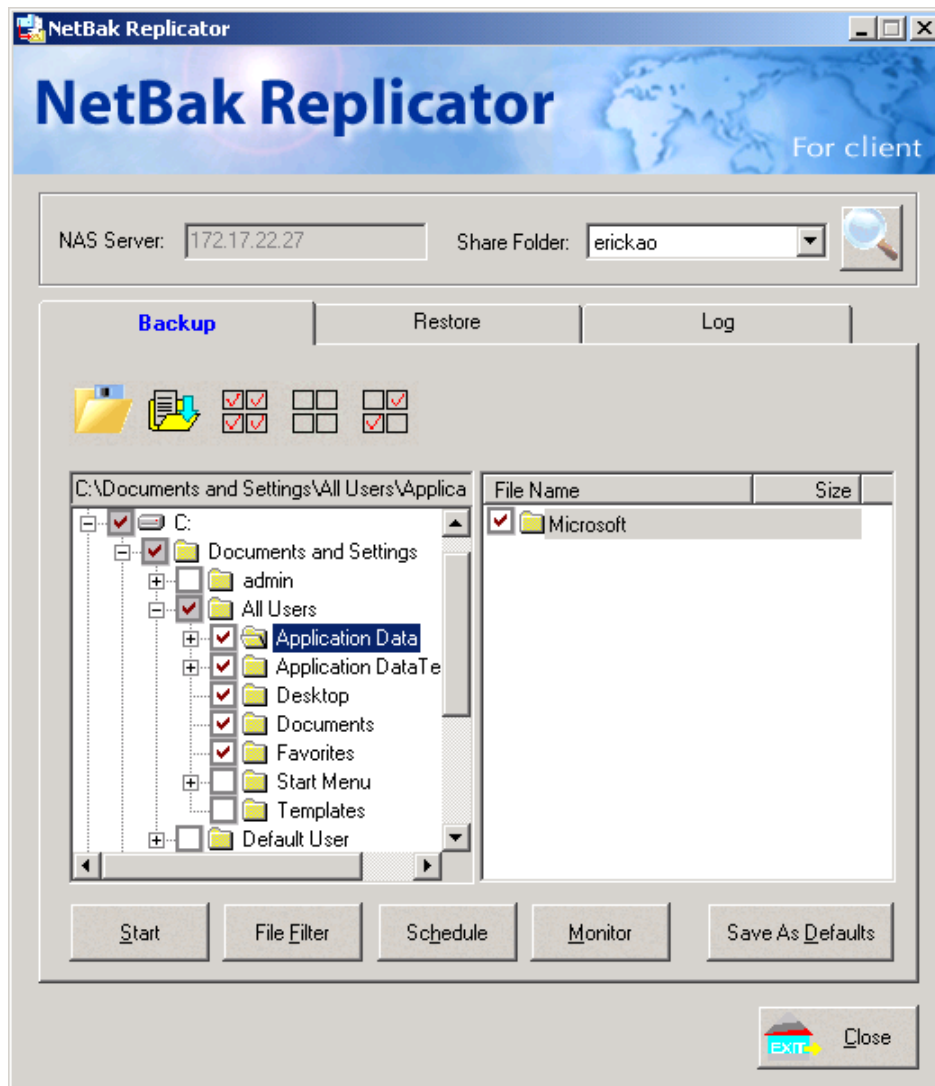
5. You can start the backup procedure upon successful connection to the NAS.

Description of Buttons on NetBak Replicator

	Open Configuration: Open a previously saved NetBak Replicator configuration.
	Save Configuration: Save the settings on NetBak Replicator. The file is named as *.rpr
	Select All: Select all items in the window.
	Clear All: Clear selection.
	Select My Document: Select all folders in My Document.
	Open NAS Backup Folder: This button allows users to find out where the files were backed up, and check or manage the archived files manually.
	Advanced Backup: Advanced Backup allows power user to back up a single folder with more advanced options.

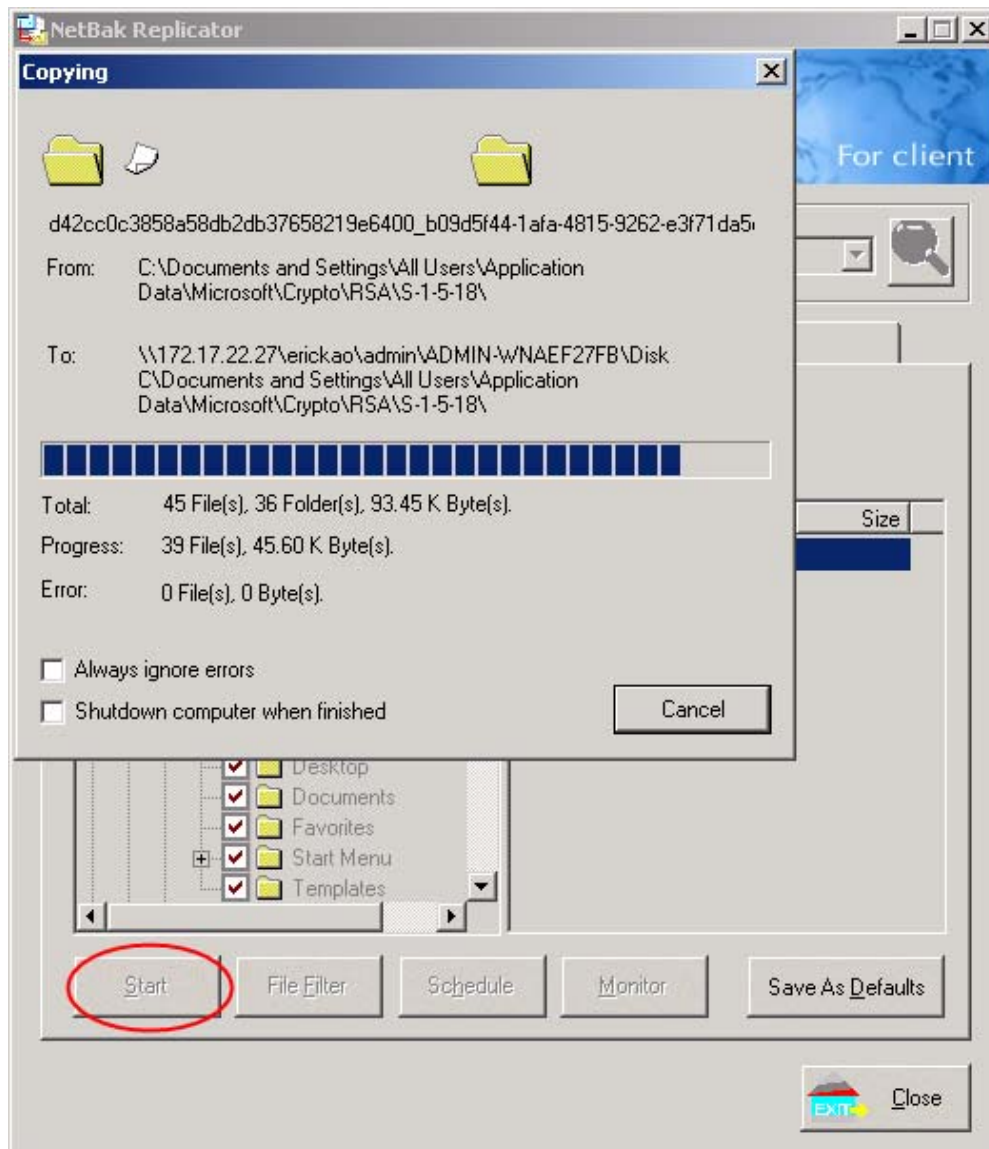
- **Backup**

Select files and folders for backup.



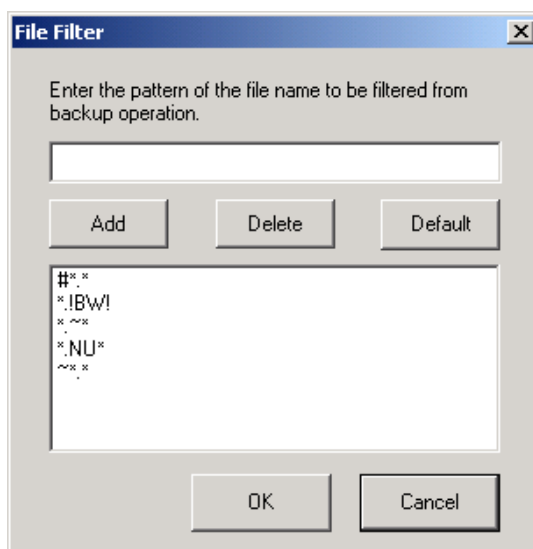
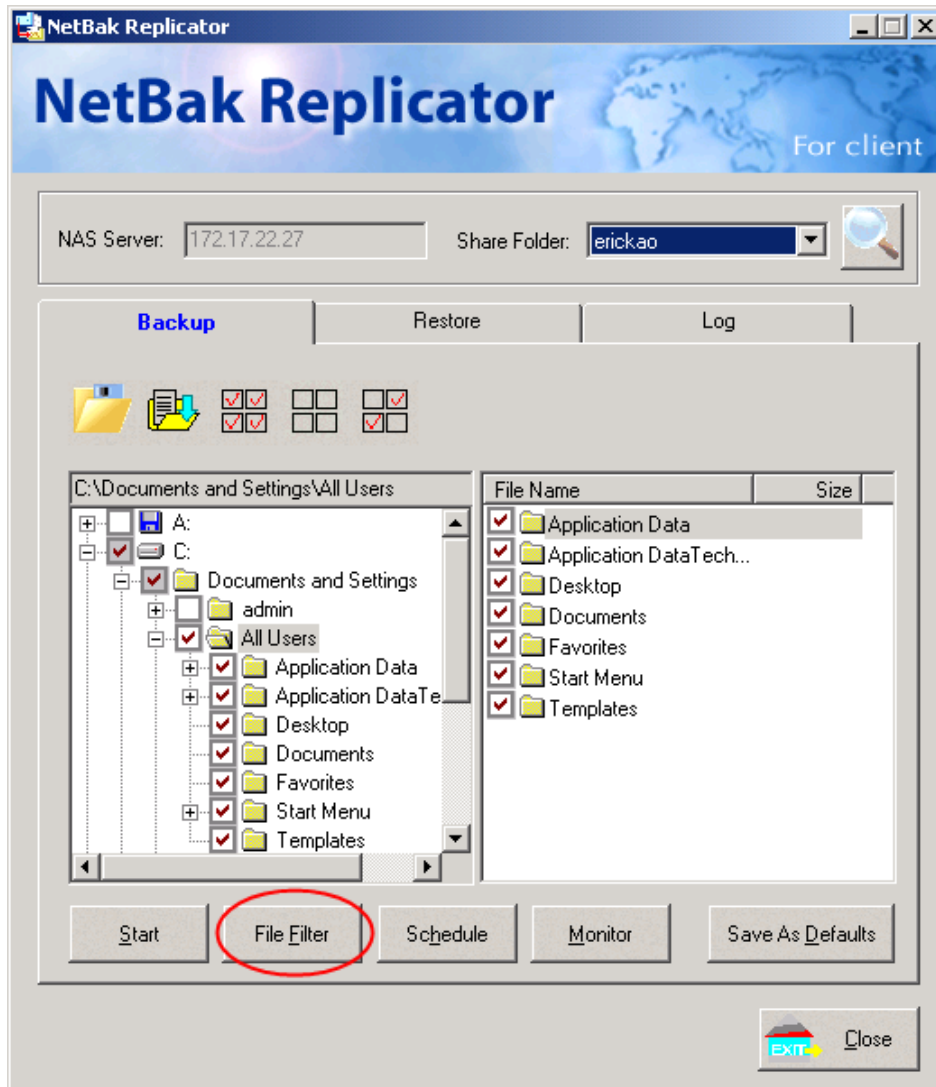
✓ Start

When you have selected the files for backup to the NAS, click **Start** on NetBak Replicator. The program starts to copy the selected files to the specified share folder on the NAS.



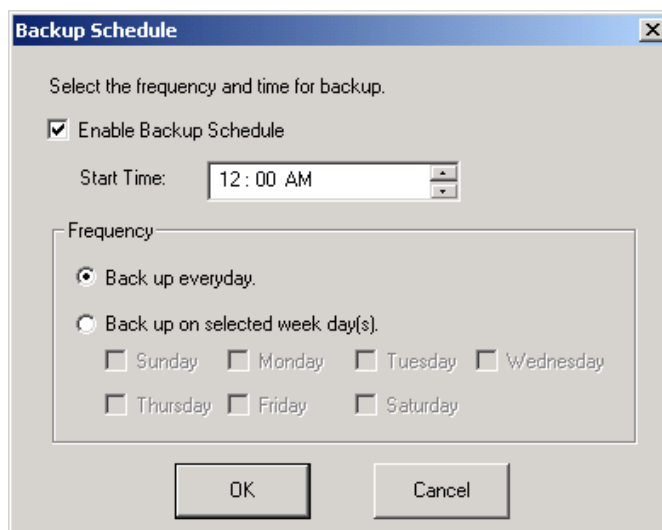
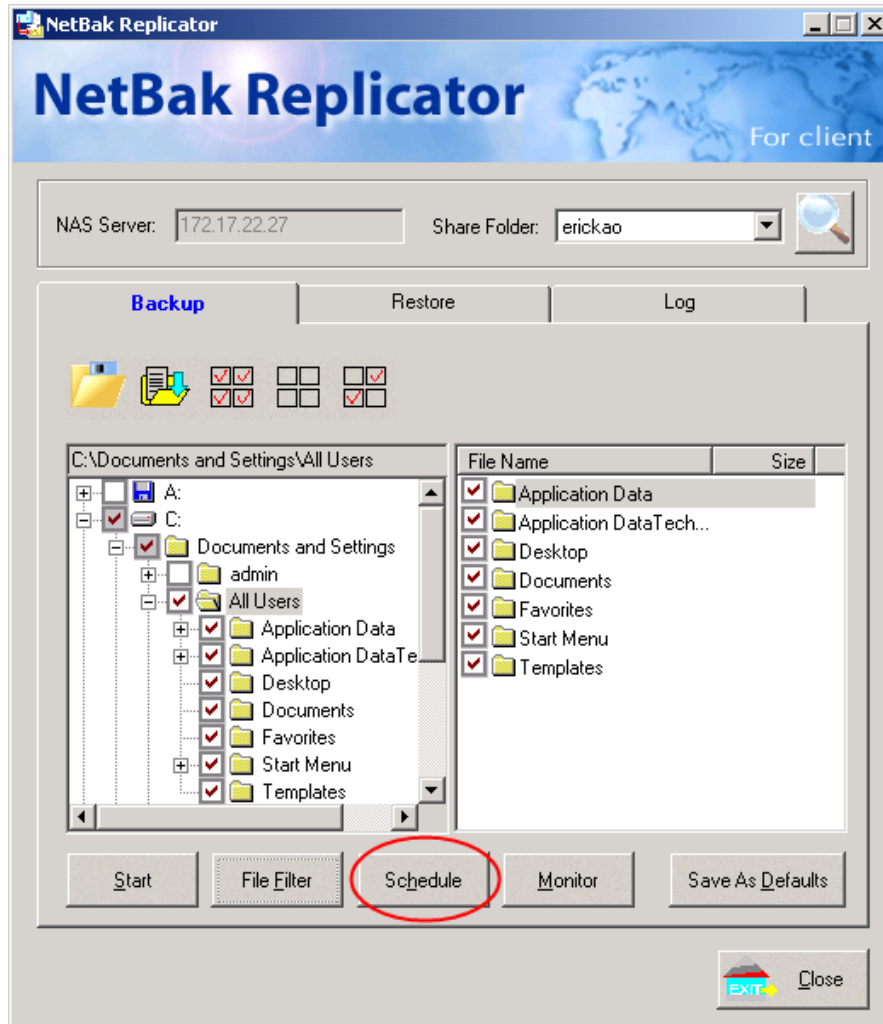
✓ File Filter

Click **File Filter** on NetBak Replicator main page to select file format to be skipped from backup. Then click **OK**.




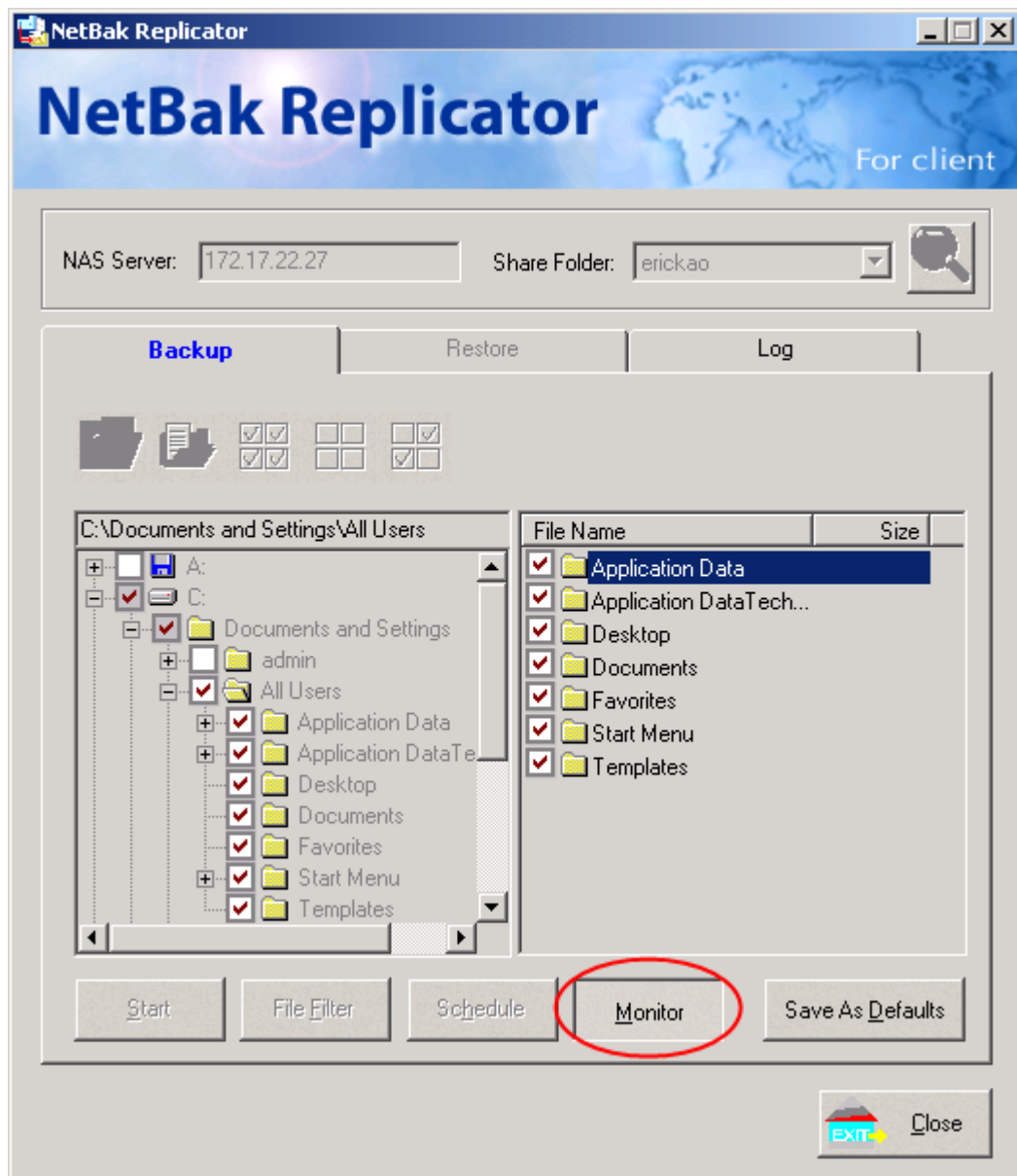
✓ Schedule

Click **Schedule** on NetBak Replicator main page. Then check the box "Enable Backup Schedule" and select the frequency and time for backup. Click **OK** to confirm.



✓ Monitor

Select a folder for monitoring. When this option is enabled, the system uploads all files or folders to the server instantly for backup when the files or folders are modified. Other files are gray and cannot be selected. Click **Monitor** again to cancel monitoring. An icon  appears on task bar of Windows® when monitoring is in process.




✓ Initialize Configuration

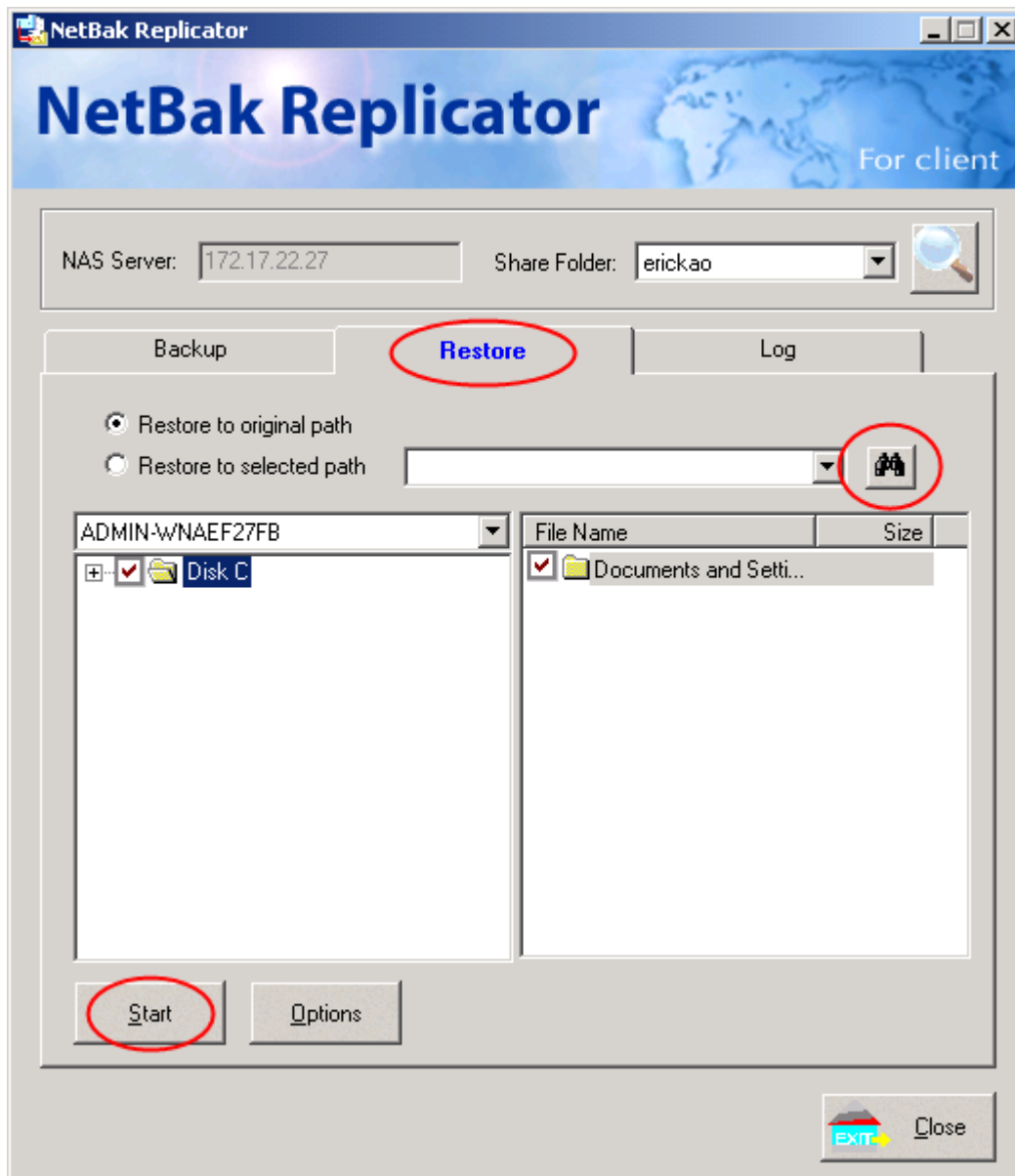
When using this function, NetBak Replicator records all current settings of the user, including whether or not monitor function is enabled. When the user login again, this program loads the previous recorded settings for users to manage data backup.



- **Restore**

Please follow the steps below to restore files from the NAS to your PC.

- a. Restore to original position: Select the location that the data is restored to.
- b. Select new restore position: Click  to select the directory to restore data to or select a previously chosen location from the drop-down menu.
- c. Select the folder(s) and sub-folder(s) for restoring data on the right list and click **Start**.



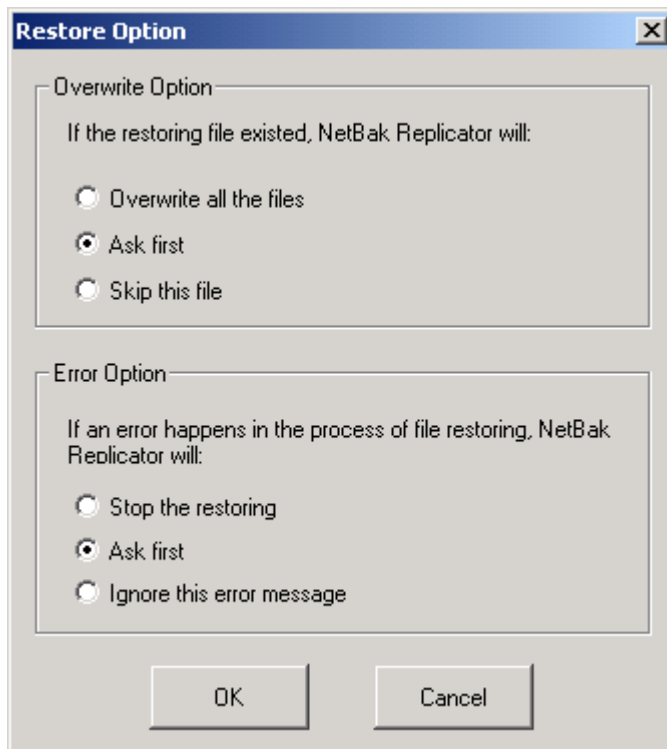
d. Option: Select recovery option and error option.

If the restoring file existed, NetBak Replicator will:

- ✓ Overwrite all the files
- ✓ Ask first
- ✓ Skip this file

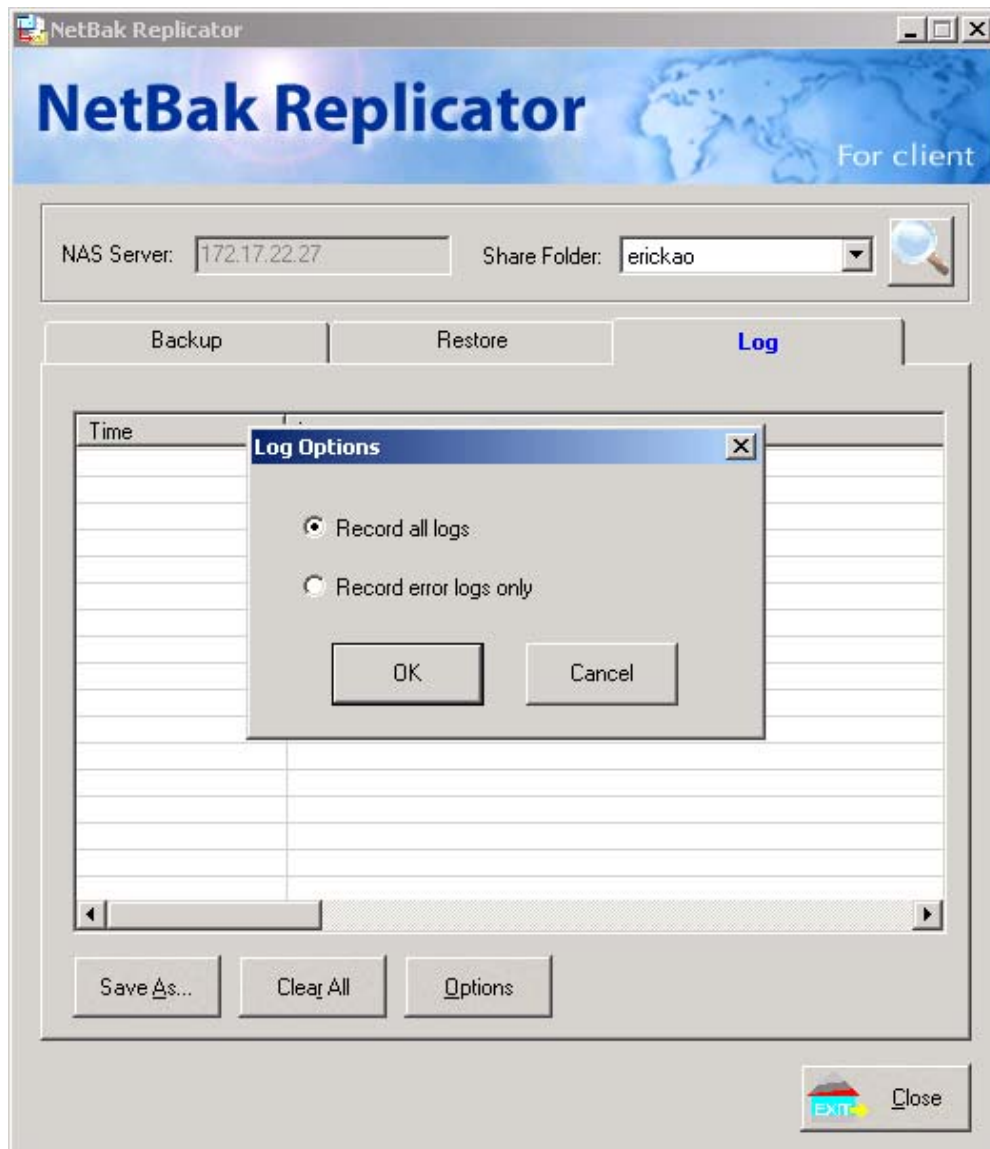
If an error happens in the process of file restoring, NetBak Replicator will:

- ✓ Stop the restoring
- ✓ Ask first
- ✓ Ignore this error message



- **Log**

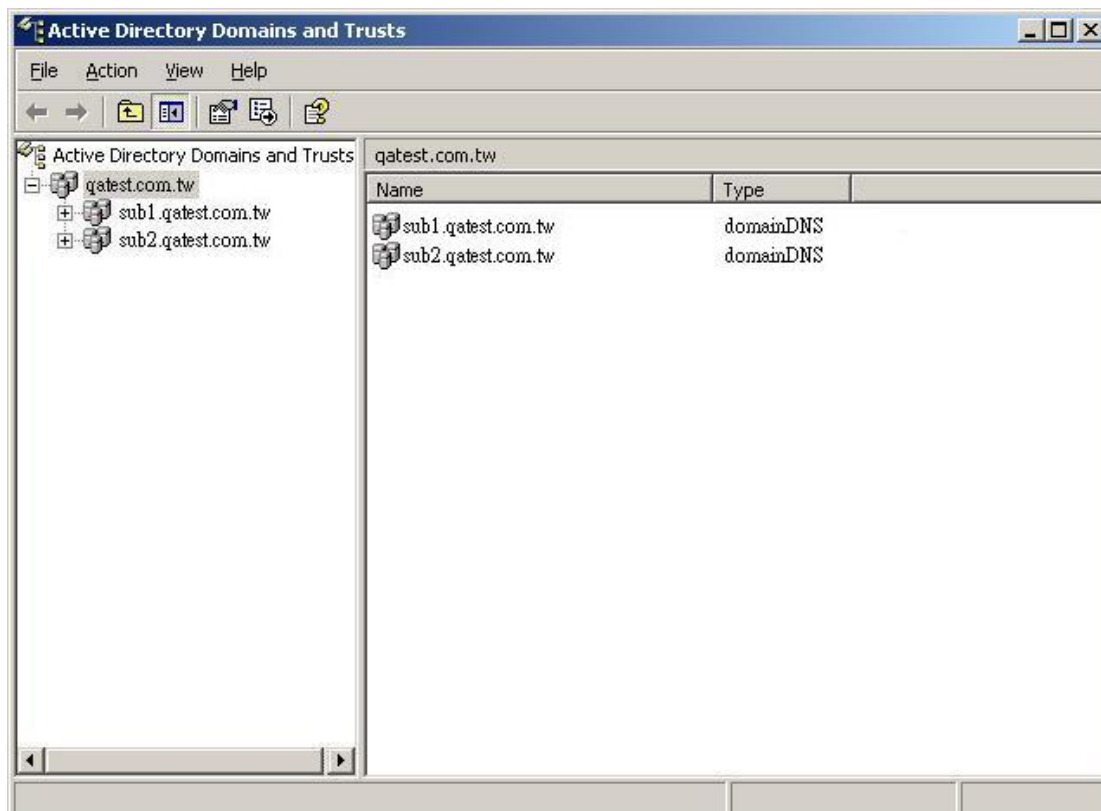
- a. Save As...: To save all logs on NetBak Replicator, click this button. All logs are saved as text file.
- b. Clear All: Click this button to clear all logs.
- c. Option: Select the type of logs to be recorded— "Record all logs" or "Record error logs only".



Chapter 11. Configuring AD Authentication

*This option is supported by "TS-409 Pro" only.

AD environment mixed mode can be supported by the NAS. For example, qatest.com.tw and sub2.qatest.com.tw are domains controlled by Windows 2003 server, and sub1.qatest.com.tw domain is controlled by Windows 2000 server.

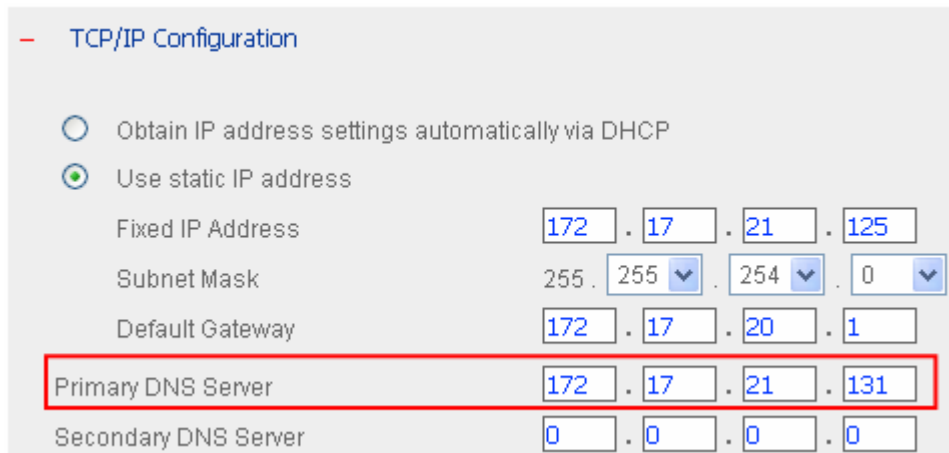


Please make sure you have enabled the Active Directory Service on the Windows Server and check the following items:

- The NAS's DNS server setting must be assigned to AD server.
- The NAS and AD server can synchronize only if their time difference is less than 5 minutes.
- The NAS and AD server synchronize every 5 minutes. To configure the settings manually, the NAS has to be set as standalone mode and then added to AD domain.
- After adding to AD domain, you must login as Domain_name\Username to access Network Neighborhood. Local users of the NAS cannot access the server by Network Neighborhood.
- It is suggested to use Windows 2000 Service Pack 4, or Windows 2003 Service Pack 1.
- When the NAS is added to AD domain, the authority of "everyone" does not work, "everyone" is the default account of the NAS, but is not supported in AD domain. Therefore the authority has to be reset.
- The IP address of the AD server should be recorded in the DNS settings on the AD server.
- You must change the password of "administrator" after you create "Active Directory" service on the AD server.
- The DNS server on the AD Server should have two records on it. For example, when the AD server name is 2003tc.testad.com, the records will be:
2003tc.testad.com A 192.168.1.100
Testad.com A 192.168.1.100
One is "A record" for AD server, and the other is the domain "A record" for DNS queries.

Adding the NAS to Windows Server 2003 Active Directory Domain

1. In TCP/IP Configuration in Network Settings, enter the IP address of Windows AD server as the primary DNS Server IP.



The screenshot shows the 'TCP/IP Configuration' window. The 'Use static IP address' radio button is selected. The 'Fixed IP Address' is 172.17.21.125, 'Subnet Mask' is 255.255.254.0, and 'Default Gateway' is 172.17.20.1. The 'Primary DNS Server' is 172.17.21.131, which is highlighted with a red rectangle. The 'Secondary DNS Server' is 0.0.0.0.

Field	Value
Fixed IP Address	172 . 17 . 21 . 125
Subnet Mask	255 . 255 . 254 . 0
Default Gateway	172 . 17 . 20 . 1
Primary DNS Server	172 . 17 . 21 . 131
Secondary DNS Server	0 . 0 . 0 . 0

2. Go to Microsoft Networking of Network Settings. Enable AD Domain Member, and enter the domain name and the user name with administrator access right to that domain.



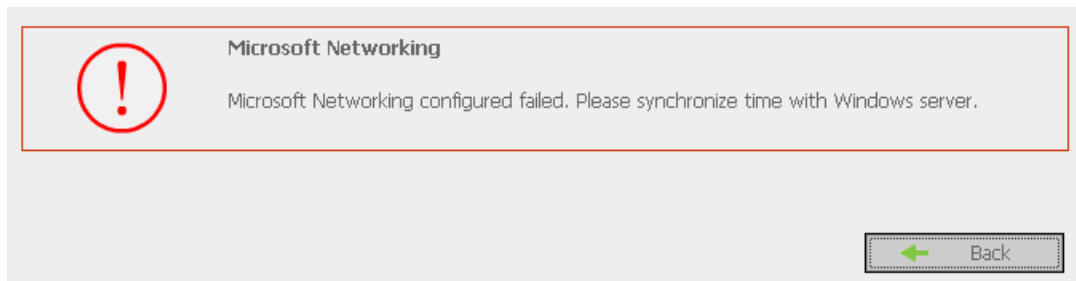
The screenshot shows the 'Microsoft Networking' window. The 'Enable file service for Microsoft networking' checkbox is checked. The 'AD Domain Member' radio button is selected and highlighted with a red rectangle. The 'Server Description' is 'NAS Server', 'Workgroup' is 'NAS', 'AD Server Name' is 'win2003', and 'Domain Name' is 'AD.local'. The 'Domain Username' is 'administrator' and the 'Password' is masked with dots. The 'AD Server Name', 'Domain Name', 'Domain Username', and 'Password' fields are highlighted with a red rectangle.

Field	Value
Server Description	NAS Server
Workgroup	NAS
AD Server Name	win2003
Domain Name	AD.local
Domain Username	administrator
Password

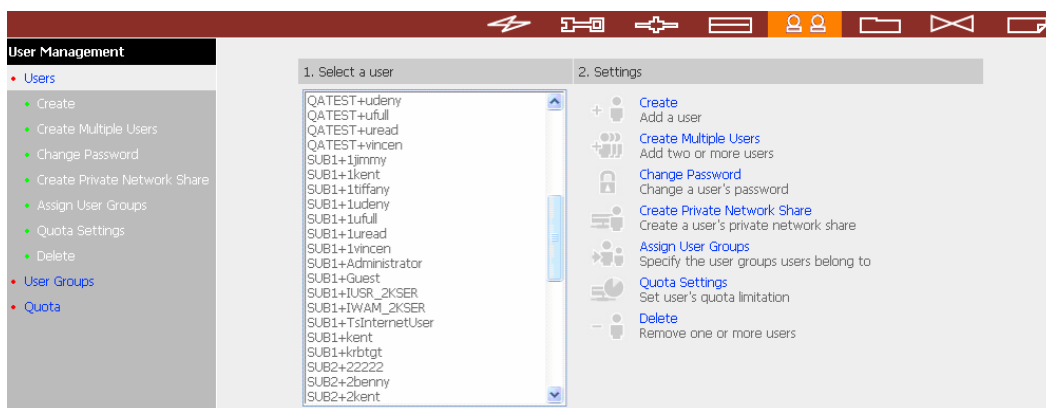
Note:

- a. Make sure that a fully qualified domain name such as AD.local has been filled in.
- b. Make sure the user name with administrator access right to that domain.

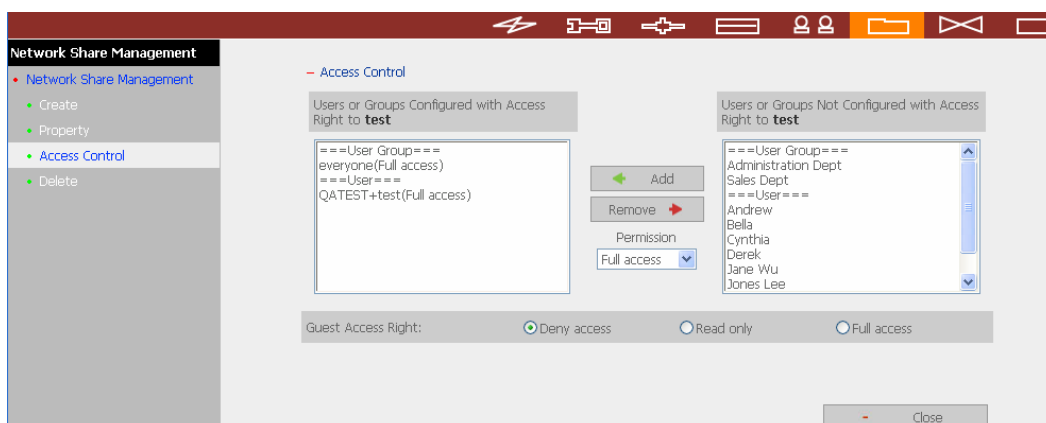
- When the following message appears after applying the settings in step 2, check the time zone settings. Make sure the difference of your time and that of AD server is less than 5 minutes. If the time difference is larger than 5 minutes, you will not be able to add the domain member.



- Upon successful adding of domain member, you can view the list for domain users and local users in User Management.

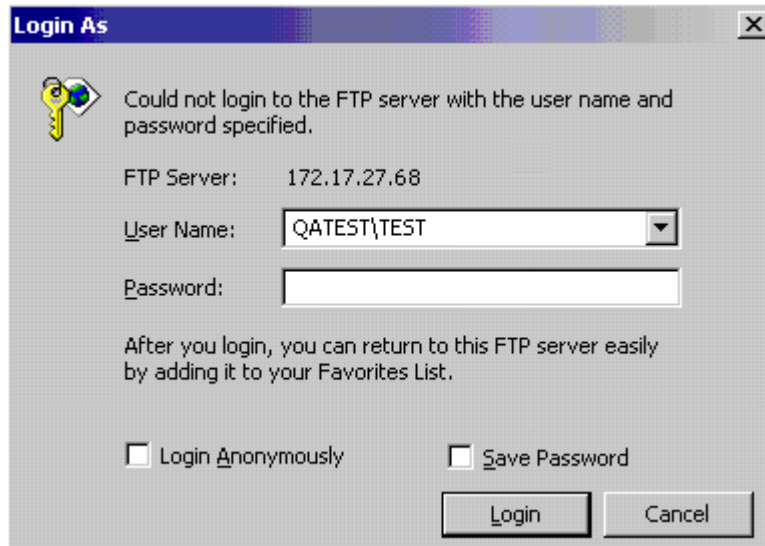


- Go to Access Control in Network Share Management to configure the access control right of AD users for all available network shares.



Using AD users to access services

To access services like FTP, Network Neighborhood, or Apple Talk with an AD user account, add **DomainName** before the user name when logging in.



Chapter 12. Access the NAS on Linux OS

*This option is supported by "TS-409 Pro" only.

In addition to Microsoft and Mac OS, the NAS also supports Linux systems through the NFS service:

1. In Linux, run the following command:

mount -t nfs <NAS IP address>:/<Network Share Name> <Directory to Mount>

For example, if the IP address of your NAS is 192.168.0.1 and you want to link the network share folder "public" under the /mnt/pub directory, use the following command:

mount -t nfs 192.168.0.1:/public /mnt/pub

Note: You must login as "root" user to initiate the above command.

2. Login as the user ID you define, you can use the mounted directory to access your network share files.

Chapter 13. NAS Maintenance

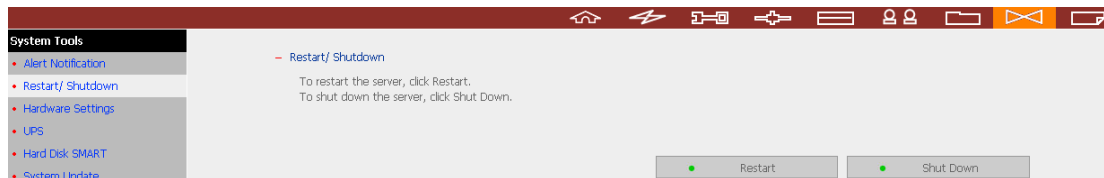
This section provides a general overview on system maintenance.

13.1 Restart/ Shut down Server

Follow the steps below to restart or shut down the NAS.

1. Enter the administration page and go to "Restart/ Shutdown" in System Tools.
2. Click **Restart** to reboot the server or **Shut Down** to turn off the server.

To force shut down the NAS server, press the power button for more than 10 seconds.
The server will beep once and shut down immediately.



13.2 Reset Administrator Password and Network Settings

To reset the administrator password and network settings of the NAS,

1. Press the reset button of the NAS for a few seconds. A beep sound will be heard.

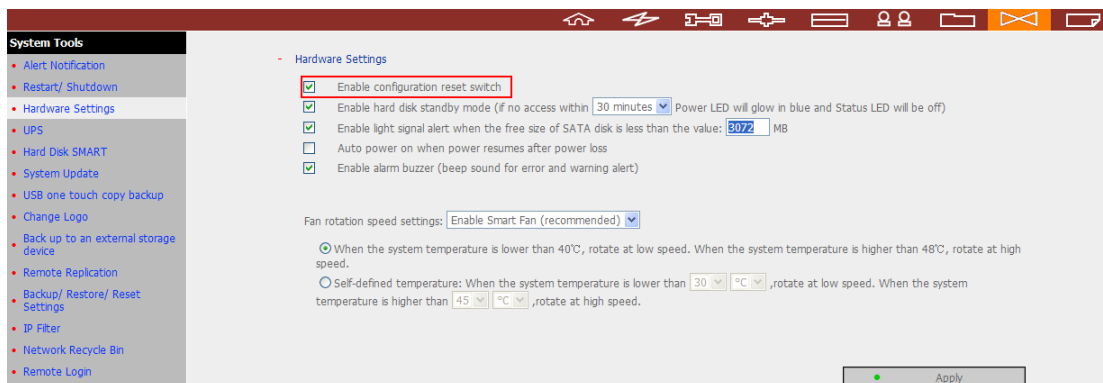
The following settings are reset to default:

- a. System admin password: admin
 - b. Network Settings/ TCP/IP Configuration: Obtain IP address settings automatically via DHCP
 - c. Network Settings/ TCP/IP Configuration: Disable Jumbo Frame
 - d. Network Setting/ System Port Management: 8080 (system service port)
 - e. System Tools/ IP Filter: Allow all connections
2. Login the NAS with the default user name and password:

Default user name: **admin**
Password: **admin**



Note: To reset the system by the reset button, the option "Enable configuration reset switch" in Hardware Settings must be activated.



13.3 Disk Failure or Malfunction

When you encounter disk malfunction or failure, please do the following:

1. Record the malfunction status or error messages shown in Event Logs.
2. Stop using the failed NAS and turn off the server.
3. Contact customer service for technical support.



Note: The NAS must be repaired by professional technicians, do not try to repair the server yourself.
Please back up any important files or folders to avoid potential data loss due to disk crash.

13.4 Power Outage or Abnormal Shutdown

In case of power outage or improper shutdown of the NAS, the system will resume to the state before it is shut down. If your server does not function properly after restart, please do the following:

1. If the system configuration is lost, configure the system again.
2. In the event of abnormal operation of the server, contact customer service for technical support.

To avoid the above situations, please back up your data periodically and make sure you have done the following:

- Follow the instructions described in Chapter 13.1 to restart or shut down the server.
- If there is an anticipated power outage, back up all important data and turn off the server properly until power supply is resumed.

13.5 System Software Abnormal Operation

When the system software does not operate properly, the NAS automatically restarts to resume normal operation. If you find the system restarts continuously, it may fail to resume normal operation. In this case, please contact the technical support immediately.

13.6 System Temperature Protection

When the system temperature exceeds 70°C or 158°F, the system shuts down automatically for hardware protection.

Chapter 14. RAID Abnormal Operation

Troubleshooting

If the RAID configuration of your NAS is found abnormal or there are error messages, please try the following solutions:

Note: You must back up the important data on the NAS first to avoid any potential data crash.

1. Check that the RAID rebuilding has failed:
 - a. LED: The Status LED of NAS flashes in red.
 - b. In **Device Configuration/ SATA Disk** page, the status of the disk volume configuration is "In degraded mode".
2. Check which hard drive(s) causes the RAID rebuilding failure.
 - a. You can go to System Logs/ System Event Logs to search for the following error message and find out which hard drive(s) causes the error.

Error occurred while accessing Drive X.

Drive X has been removed.

X refers to the number of the hard drive slot.

3. Troubleshooting

After plugging in the new hard drive (e.g., HDD 1), drive rebuilding will start. If the drive configuration fails again due to read/write error of the hard drive in the rebuilding process, identify which hard drive causes the error and follow the steps below to solve the problems.

Situation 1: The error is caused by the newly plugged in drive.

If the newly inserted drive (e.g., HDD 1) causes the rebuilding error, please unplug HDD 1 and plug in another new drive to start RAID rebuilding.

Situation 2: The error is caused by an existing drive (e.g., HDD 2) in the RAID configuration.

If the RAID configuration is RAID 1, you can do either one of the following:

- a. Back up the drive data to another storage device. Then reinstall and set up the NAS.
- b. Format the newly plugged in drive (e.g. HDD 1) as a single drive. Then back up the data on the NAS to this drive (HDD 1) via Web File Manager. Unplug the drive with errors (e.g., HDD 2). After that, insert a new drive to NAS to replace the fault drive, and execute RAID 1 migration.

When the RAID configuration is RAID 5 or 6: The RAID configuration is changed to degraded mode (read-only). It is recommended that you back up the data and run system installation and configuration again.

Note: When plugging in or unplugging a hard drive, please strictly adhere to the following rules to avoid abnormal system operation or data crash.

1. Plug in only one drive to NAS or unplug only one drive from NAS at one time.
2. After plugging in or unplugging a hard drive, please wait for about ten seconds or more until you hear two beeps from the NAS. Then unplug or plug in the next hard drive.

Appendix A Network Camera Compatibility List

Brand	Model
AXIS	AXIS 206
	AXIS 207
	AXIS 207W
D-Link	DCS-900
	DCS-2120
	DCS-3220 (G)/ DCS-3420
	DCS-5220
	DCS-5300 (G)
	DCS-6620 (G)
IPUX	ICS 1013/ ICS 1003
LevelOne	FCS-1010/ WCS-2010
	FCS-1030/ WCS-2030
	FCS-1040/ WCS-2040
	FCS-1060/ WCS-2060
	FCS-1070/ WCS-2070
	FCS-3000/ FCS-3021
Linksys	WVC54GCA
Panasonic	BL-C1/ BL-C20
VIVOTEK	BL-C11/ BL-C10/ BL-C111/ BL-C131/ BL-C30/ BL-C31
	IP3112/ IP3122/ IP3111/ IP3121/ IP3132
	IP3135/ IP3137
	PT3112/ PT3122/ PT3117/ PT3127
	IP7135/ IP7137
	IP7131/ IP7132
	PT7135/ PT7137

*For the updated information of supported camera models, please visit QNAP website at <http://www.qnap.com/>.

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You can contact us by the following means:

Online Support: http://www.qnap.com E-mail: q_support@qnap.com MSN: q.support@hotmail.com SKYPE: qnapskype

Technical support for North America users:

E-mail: support@usa.ieiworld.com 1-800 Hotline: 866-276-6754 ext.110 Address: 168 UNIVERSITY PARKWAY POMONA, CA 91768-4300
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Version 3, 29 June 2007

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