LevelOne

GNS-8000B

4-bay Sata NAS w/2 Gigabit Ethernet

User`s Manual

Ver 1.00-0512

CUSTOMER SERVICE

To obtain service or technical support for your system, please refer to the registration card for detailed contacts.

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CAUTION

Please be aware of the danger causing explosion if battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

CAUTION

1. Back up your system periodically to avoid any potential data loss. LevelOne disclaims any responsibility of all sorts of data loss or recovery.
2. Should you return any components of GNS-8000B Server 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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Chapter 1 Overview of GNS-8000B

1.1 Introduction

Thank you for choosing LevelOne GNS-8000B, 4-bay Sata NAS Server. This product has the following key features:

- Simple installation, 5 minutes configuration and user-friendly management interface for SMB users.
- High speed SATA HDD, supports hotswap, maximum capacity up to 2.0TB.
- Dual Gigabit ports for load balance, fail over and standalone settings.
- LCD panel for instant display of IP address and important system info; IP settings can be configured directly without access to PC.
- Built-in virus-scanning mechanism. Supports instant online virus scanning to protect data with an existing virus scanning server.
- Supports redundant power supply to increase system reliability.
- Provides various practical backup mechanisms.
  - ✓ Professional remote replication to remote NAS
  - ✓ USB 2.0 interface for CD/DVD data burning
  - ✓ SCSI interface for tape backup
  - ✓ Provides backup software for Windows users, instant and scheduled backup can be performed without IT professional assistance

1.2 Package Contents

Your GNS-8000B package contains:

1. GNS-8000B Sata NAS Server
2. Power cord
3. CD-ROM (user manual, Quick Install Wizard and software inclusive)
4. Ethernet cable x 2
5. Mount kit x 6
6. Flat head screws x 16
7. Round head screws x 35
8. Hard disk lock x 4

1. GNS-8000B

2. Power cord

3. CD-ROM

4. Hard disk lock

5. Ethernet Cable

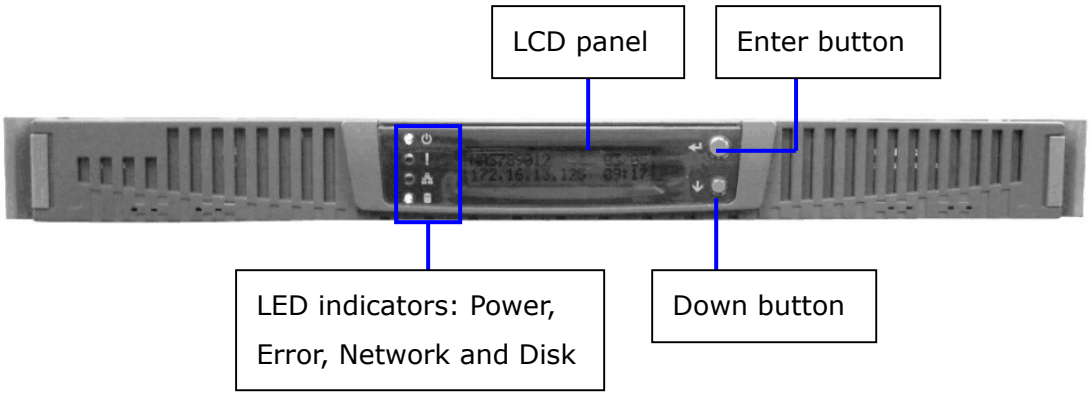
6. Mount kit

7. Flat head screw

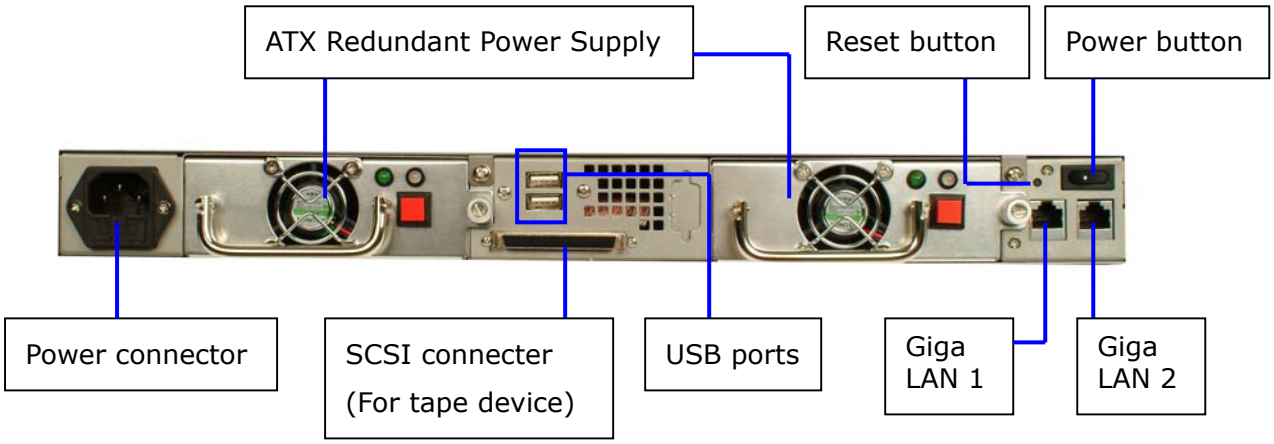
8. Round head screw

1.3 System Overview

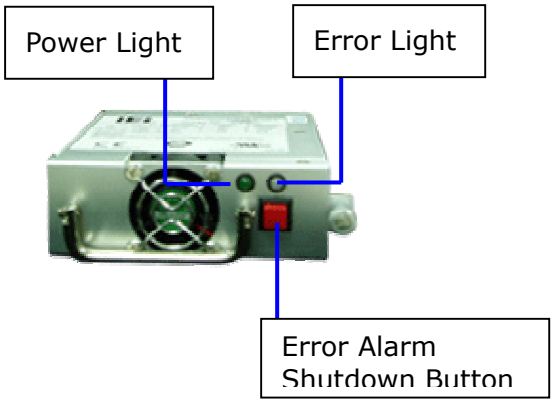
Front View



Rear View



Power Rear View



Chapter 2 Install GNS-8000B

2.1 Install Hard Disk

To install hard disks to GNS-8000B, please make sure you have the following items in place.

❶GNS-8000B

❷HDD tray x 4
(included in GNS-8000B)

❸3.5” SATA hard disk (optional)

❹Flat head screw
(included in GNS-8000B)

❺Round head screws
(included in GNS-8000B)

❻Mount kit (included in GNS-8000B)

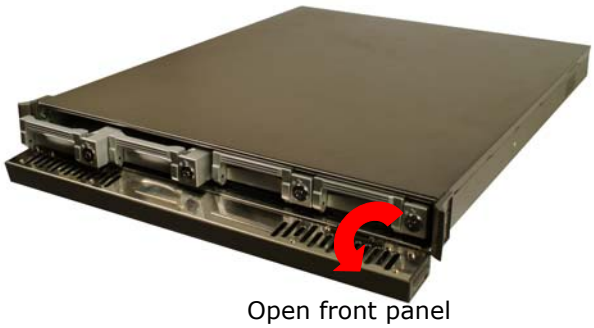
❼ Hard disk lock

❽Screw driver (not included)

Hard Disk Installation Procedure

> It is highly recommended that you install disks of the same brand and same size on GNS-8000B. The server may function improperly if disks of different brands and size are installed. Please refer to Chapter 2.2 for hard disk recommendation list.

1. Push the side locks in the front of GNS-8000B and then pull forwards to open the front panel.

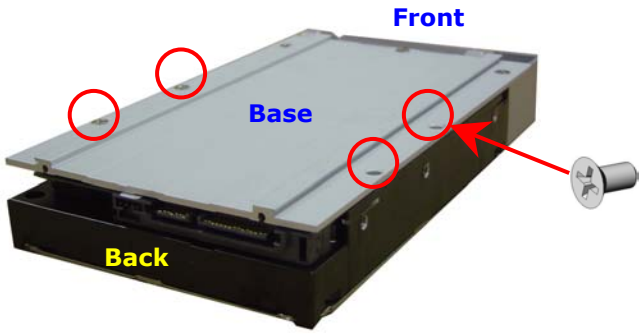


Open front panel

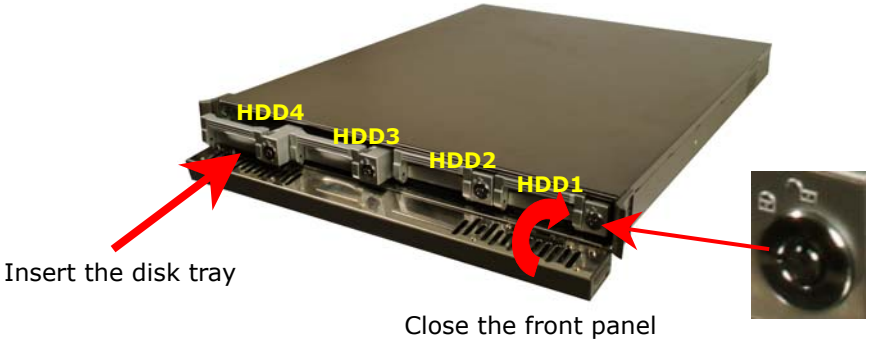
2. Unlock the disk tray with hard disk lock and take out the hard disk tray.

3. Place a hard disk in a hard disk tray.

4. Turn over the disk tray. Make sure the disk holes match the holes at the base of the tray. Fasten the disk with four flat head screws.



5. Insert the hard disk tray to GNS-8000B. Then lock the tray with the hard disk lock. (You can install 4 disks at maximum.)



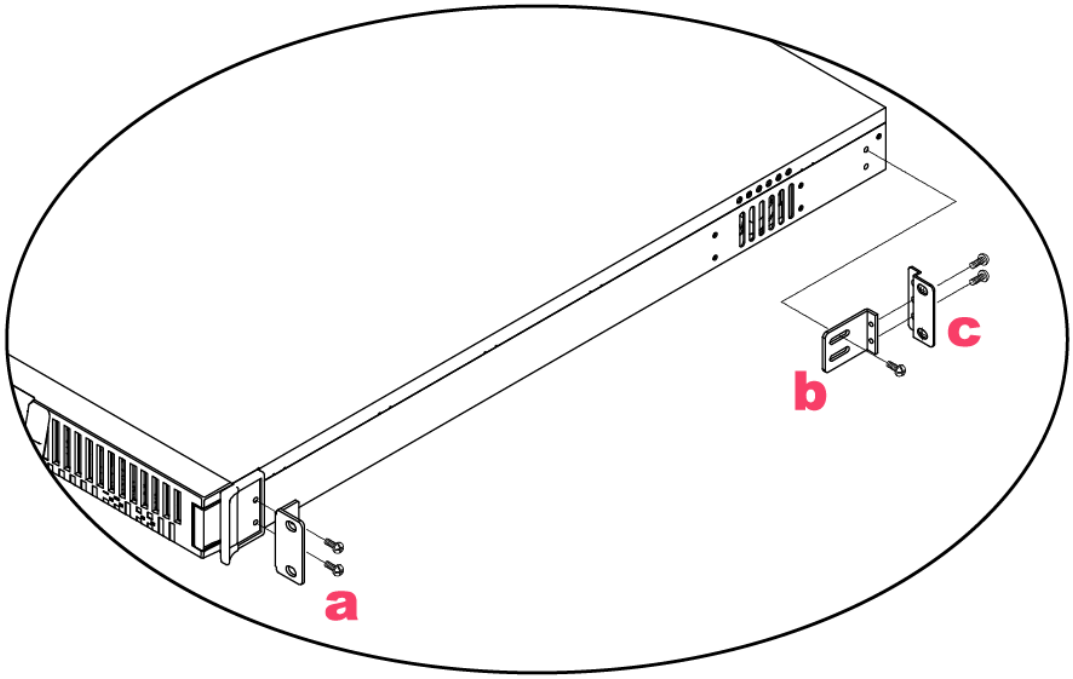
6. When finished, close the front panel of GNS-8000B. Note that all disks should be inserted in order from left to right (HDD1~HDD4).

Note: You can install 1~4 hard disks depending on the type of disk configuration you select for GNS-8000B. If less than 4 disks are installed and the server is turned on, the system will beep continuously. In such case, please go to Hardware Settings in System Tools (refer to Chapter 6.9.4) and disable the buzzer. You can then continue to use GNS-8000B.

Install Rackmount Kit

Please follow the steps below to install the rackmount kit of GNS-8000B.

1. Attach brackets (**a**) to both sides of GNS-8000B in the front.
2. Lock the brackets (**b**) to GNS-8000B. Then attach and fasten z-shape brackets (**c**).
3. Push GNS-8000B into the rack.
4. Fasten the screws to fix the position of GNS-8000B.



Important Notice: Please back up your disk data periodically to avoid data loss due to improper operation or disk failure of GNS-8000B. LEVELONE is not responsible for any data loss or recovery.

2.2 Hard Disk Recommendation List

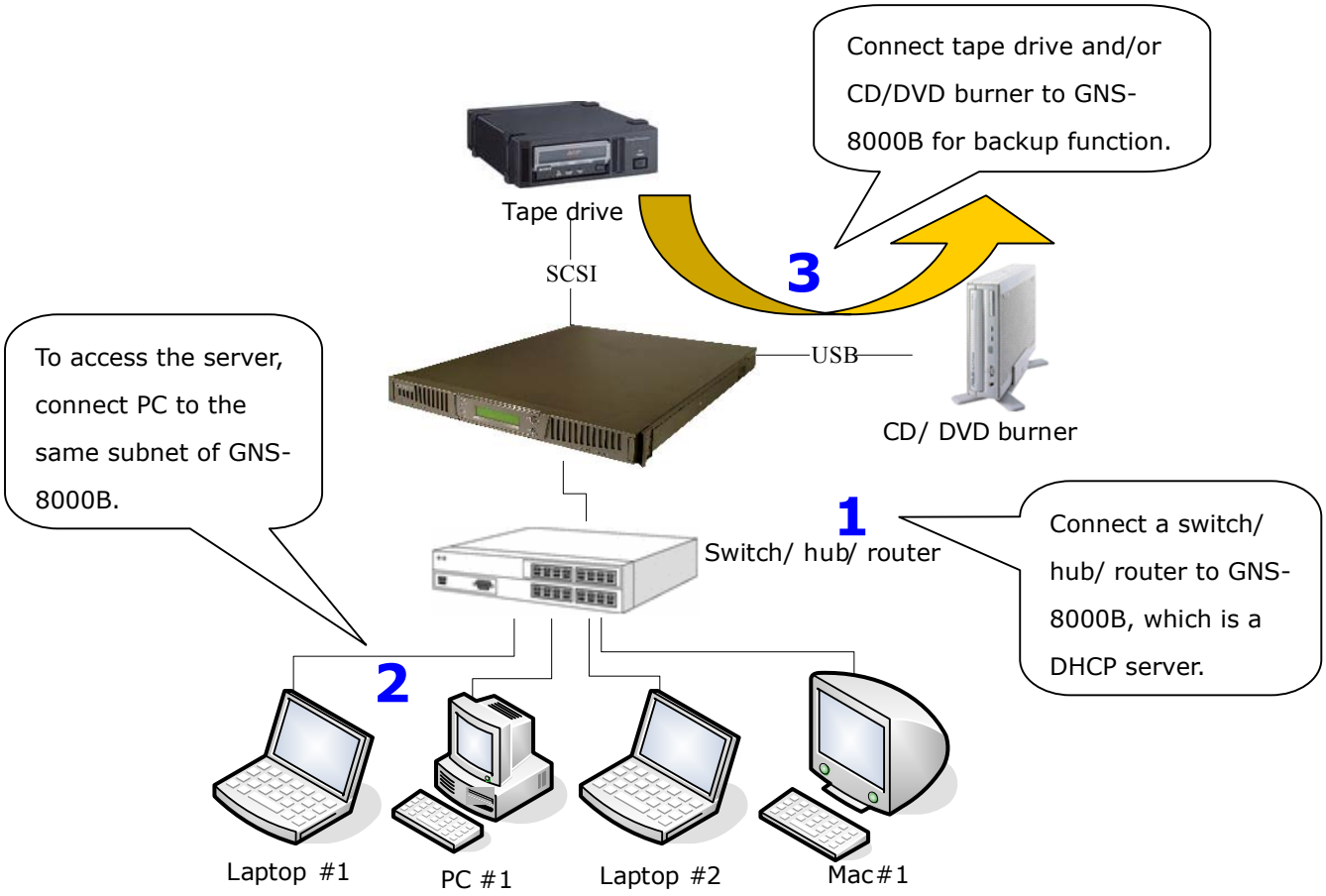
The following HDD models are verified by LEVELONE that are compatible with GNS-8000B. It is recommended to use the same brand and same size listed here for GNS-8000B if more than one hard disk is installed. Other HDD brands that are not tested by LEVELONE may or may not work properly with GNS-8000B. For more updated hard disk recommendation list, please visit LEVELONE website at http://www.Level1.com

LEVELONE 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	Model Name	Interface	Capacity (GB)	Rotational Speed (RPM)	Buffer Size (MB)
Seagate	Barracuda 7200.9 SATA NCQ	SATAⅡ 3.0Gb/s	500	7200	16
	Barracuda 7200.8 SATA NCQ	SATA 1.5Gb/s	400	7200	8
	Barracuda 7200.8 SATA NCQ	SATA 1.5Gb/s	300	7200	8
	Barracuda 7200.8 SATA NCQ	SATA 1.5Gb/s	250	7200	8
	Barracuda 7200.7 SATA NCQ	SATA 1.5Gb/s	160	7200	8
	Barracuda 7200.7 SATA NCQ	SATA 1.5Gb/s	120	7200	8
Maxtor	DiamondMax 10	SATAⅡ 150Mb/s	300	7200	16
	MaXLine Plus II	SATA 150Mb/s	250	7200	8
	DiamondMax 10	SATAⅡ 150Mb/s	200	7200	8
	DiamondMax 10	SATA 150Mb/s	120	7200	8
Hitachi	Deskstar 7K250	SATA 1.5Gb/s	250	7200	8
Western Digital	WD Caviar® SE Serial ATA	SATA 1.5Gb/s	160	7200	8

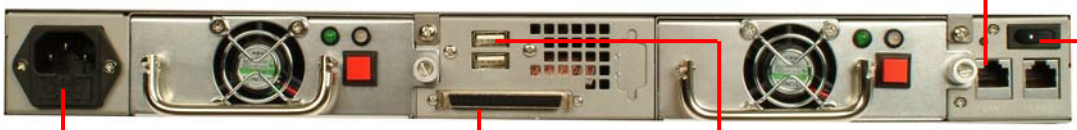
2.3 Connect GNS-8000B to Office Network

When connecting GNS-8000B to office network: **1.** It is recommended to install GNS-8000B in LAN with DHCP server. **2.** You can use any PC in the same subnet to connect to the server by IE browser. **3.** You may also connect a CD/DVD burner to GNS-8000B for data backup and restore.



To install GNS-8000B in office network, please follow the steps: **a, b, c, d, e** below.

a. Connect Gigabit port LAN 1 or LAN 2[#] to a switch/ hub/ router by a network cable.



d. Connect the power cord and plug in the other end of the cord to power outlet.

c. Connect tape drive to the SCSI connector for tape back up service*.

b. Connect CD/DVD burner *.

e. Turn on the server.

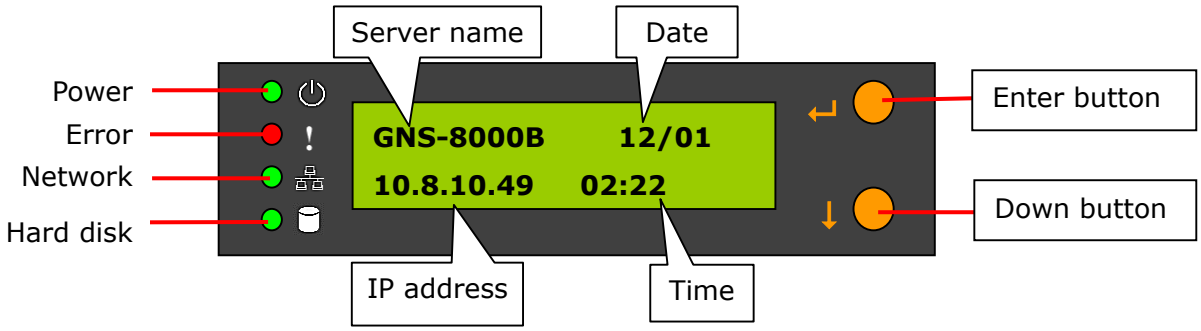
[#] To use fail over or load balance function, please connect both LAN 1 and LAN 2 to switch/ hub/ router. For further details, please refer to Chapter 6.5.1.

* Optional step. You can skip this step if you are not using CD/DVD backup/restore or tape backup service.

Note: To connect GNS-8000B to a PC, please use a network cable to connect the PC to LAN 1 or LAN 2 of GNS-8000B. For further details about accessing GNS-8000B, please refer to Chapter 6.

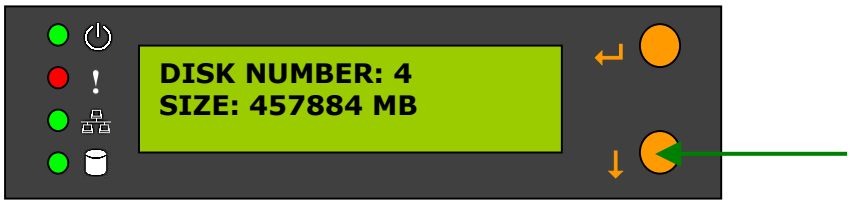
Chapter 3 Use LCD Panel

When GNS-8000B is turned on, the server name, IP address, date, and time will be shown.

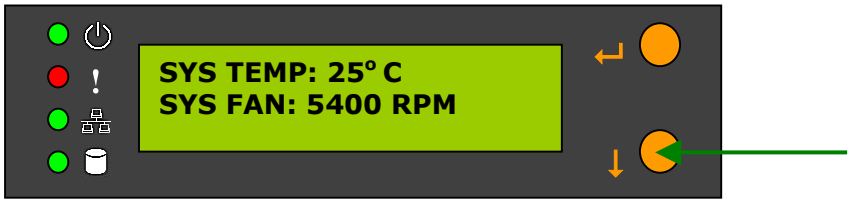


Check System Information

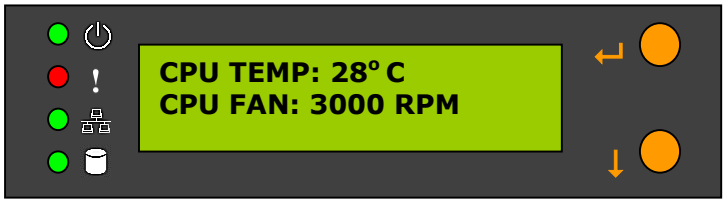
1. Press Down button to view disk information, i.e. number of disks and disk size. Note that the disk size displayed is the total size of all installed disks but may not be the actual disk size you can use. If you configure the disks as RAID 1 disk volume, the actual disk size you can use is smaller than the displayed disk size on the panel.



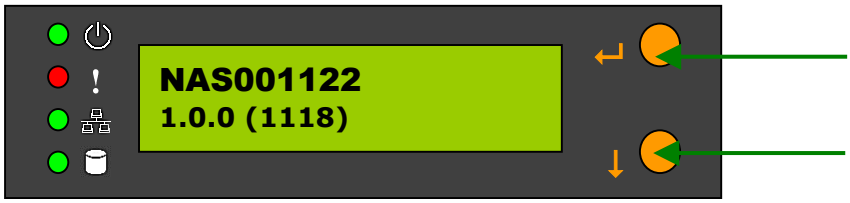
2. Press Down button again to view system temperature and system fan speed.



3. Press Down button again to view CPU temperature and CPU fan speed.

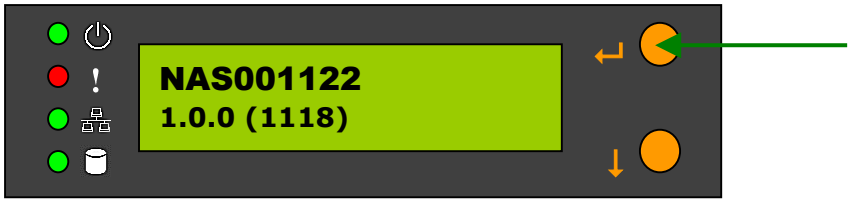


4. Press Down button again to view model number and version information.

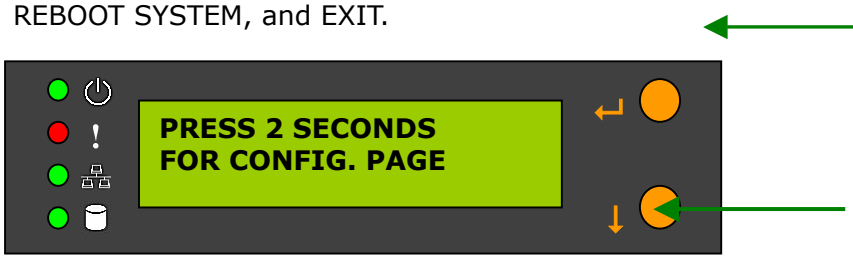


System Setting Function

1. Press Enter button for two seconds to enter configuration page.



2. Press Down button to select an item: NETWORK SETTINGS, POWER DOWN, REBOOT SYSTEM, and EXIT.



Network Settings

Enter NETWORK SETTINGS configuration page and press Down button to select one of the following options.

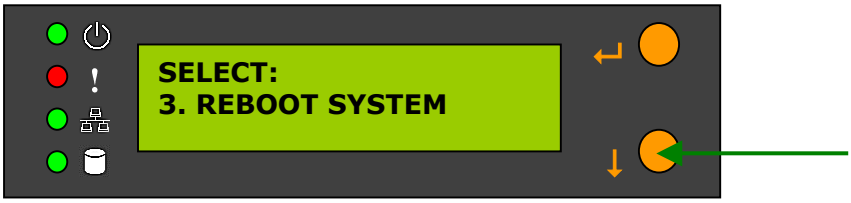
- DHCP
  DHCP will obtain IP address automatically.
- STATIC IP
  Press Enter button to select STATIC IP. Then configure the IP address.
  i. SET STATIC IP
     Press Down button to enter 0~255 and press Enter button to set the next number for the IP address.
  ii. SET NETMASK
     Follow the above procedure to set the netmask address.
  iii. SET GATEWAY
     Follow the above procedure to set the gateway address.
  iv. SELECT STATIC IP
     Press Down button to select YES or NO. When YES is selected, you will be asked to restart the system.
- EXIT
  To return to the previous menu.

POWER DOWN

Press Down button to select POWER DOWN and press Enter button to confirm shutting down GNS-8000B.

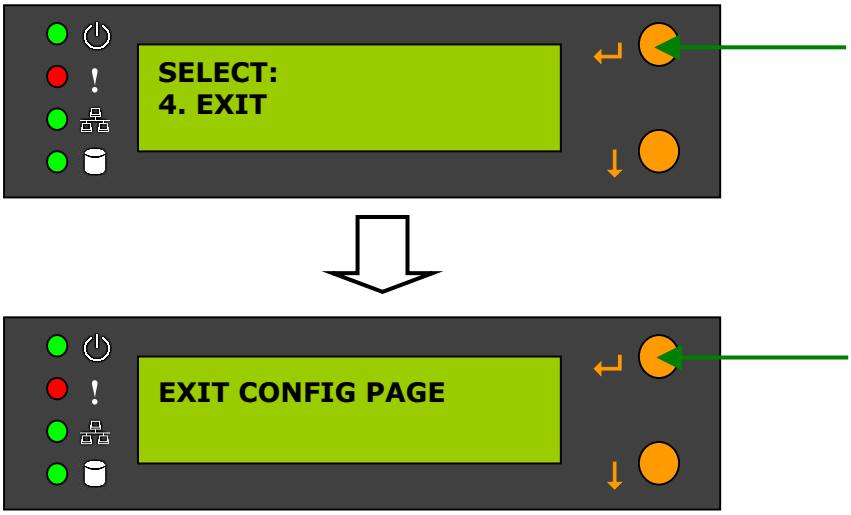
REBOOT SYSTEM

Press Down button to select REBOOT SYSTEM and press Enter button to confirm restarting the system.



Exit Configuration Page (EXIT)

Press Enter button and select EXIT, then press the button again to confirm exiting the configuration page.

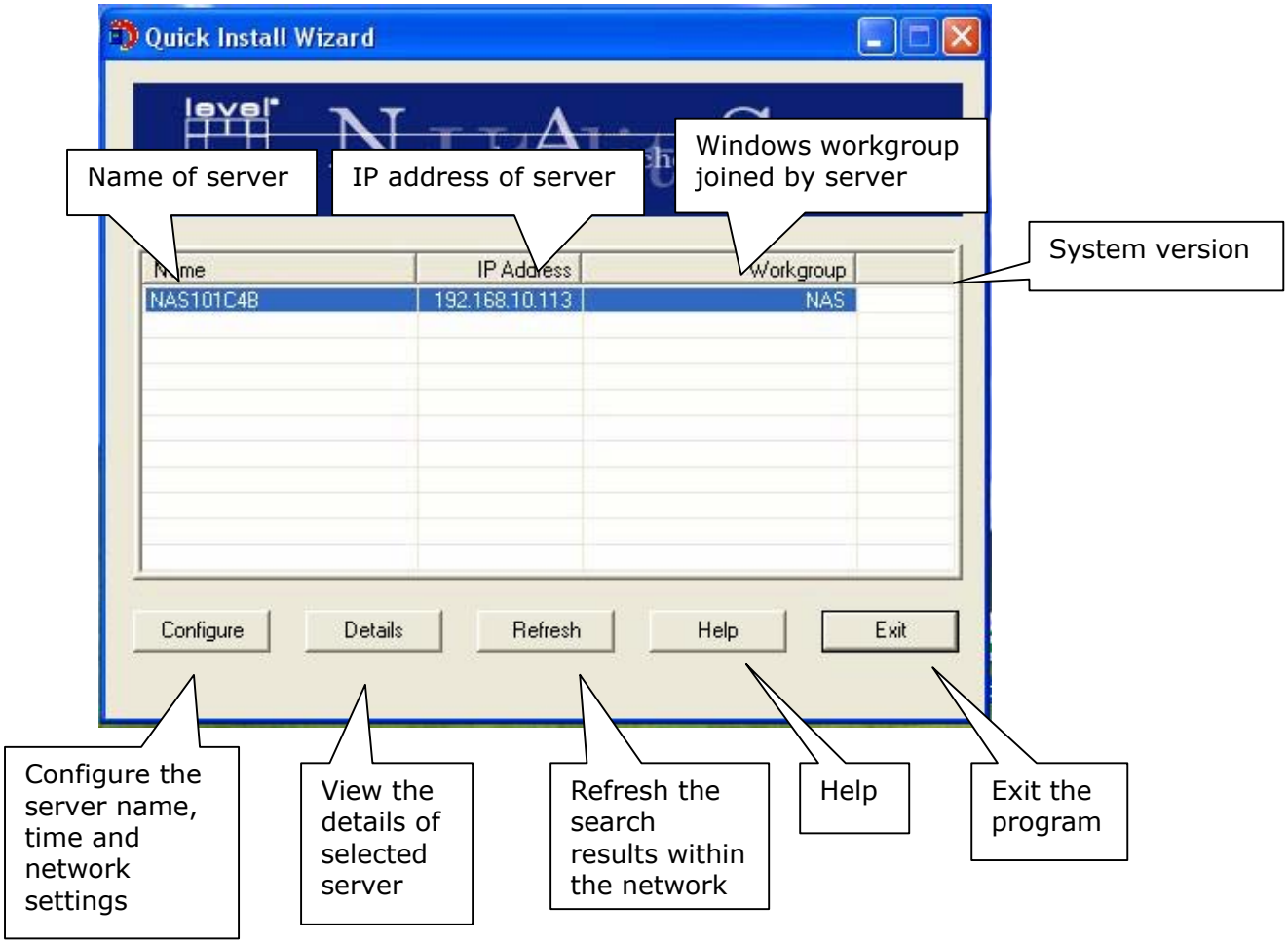


Chapter 4 Quick Install Wizard

Quick Install Wizard enables you to search for all available GNS-8000B within the local network, and view the server name, IP address, and workgroup etc. You can also configure the disk name, date and time, etc. via Quick Install Wizard.

To use Quick Install Wizard, run GNS-8000B CD-ROM in your PC and install the program.

Run Quick Install wizard shortcut on the desktop, the following screen will be shown.

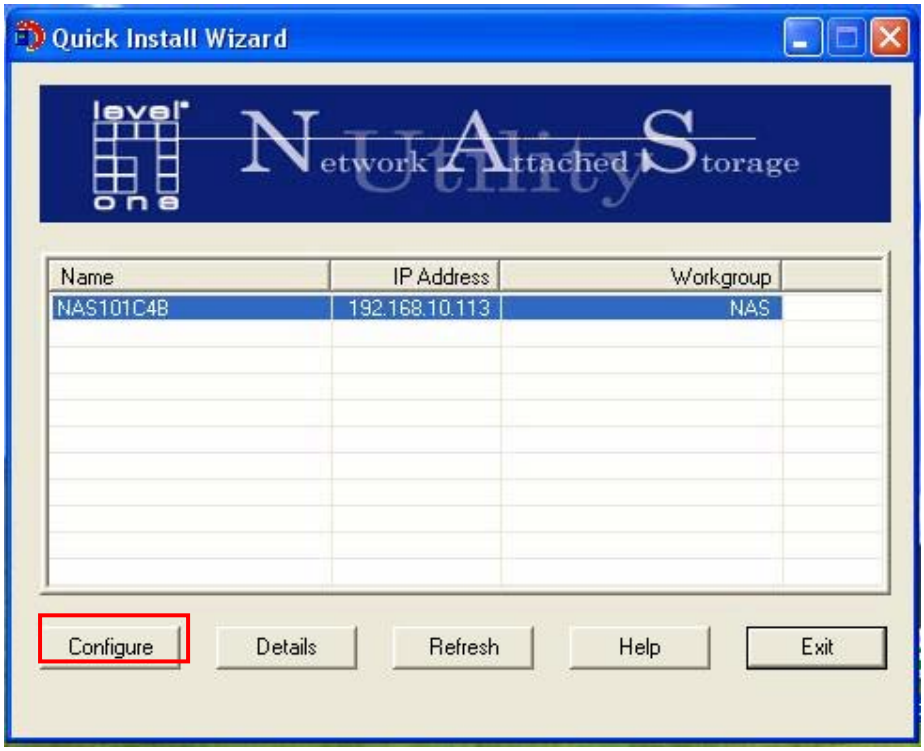


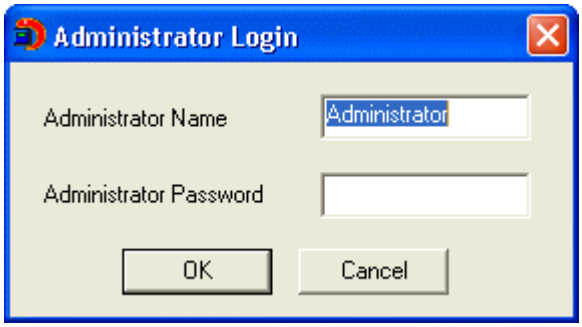
Operation

1. Configure GNS-8000B

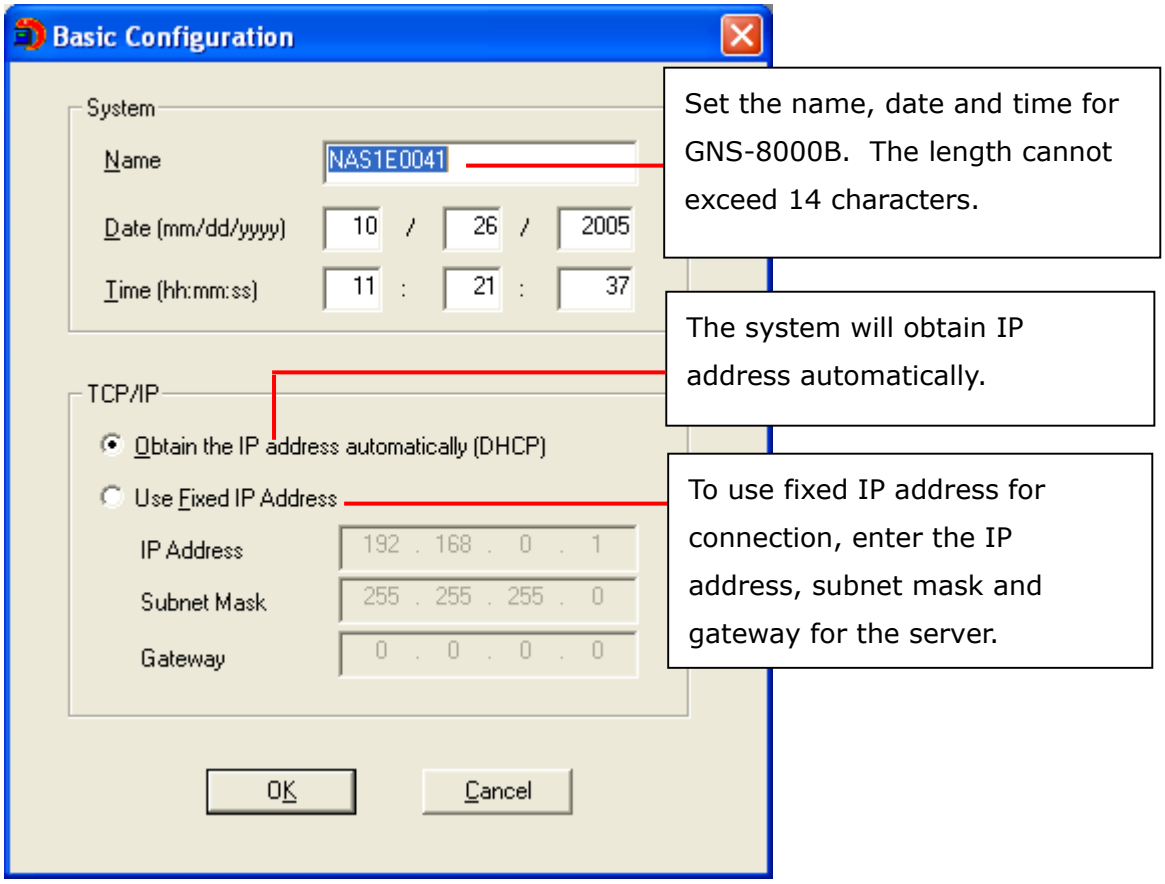
   Select a GNS-8000B displayed on Quick Install Wizard and click **Configure**.

   Enter the administrator password.





   Upon successful login, the following screen will appear. Enter the configuration values and click OK.

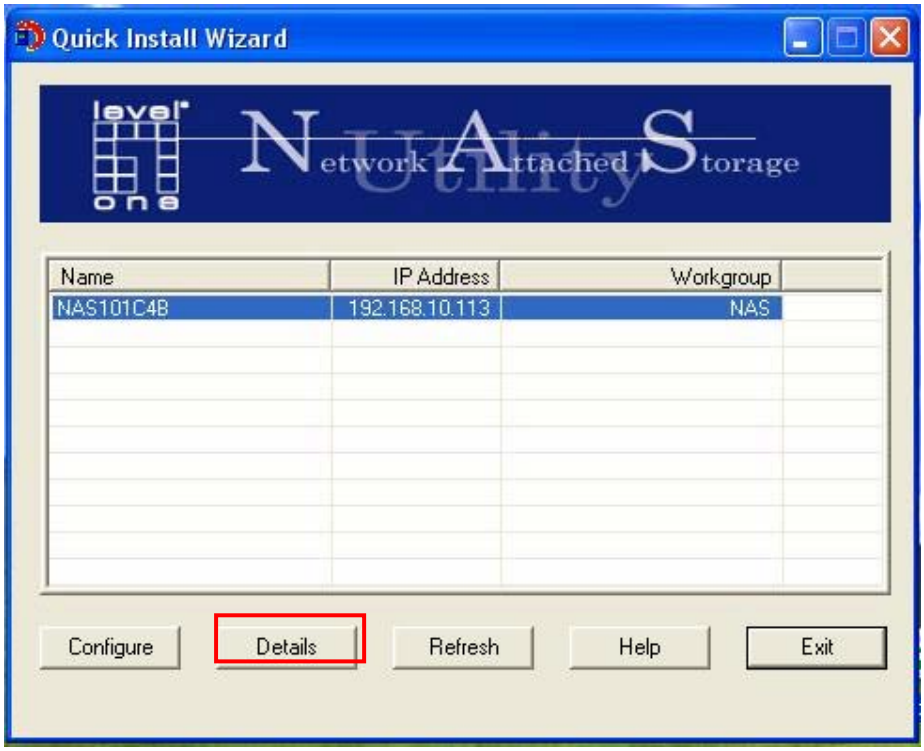


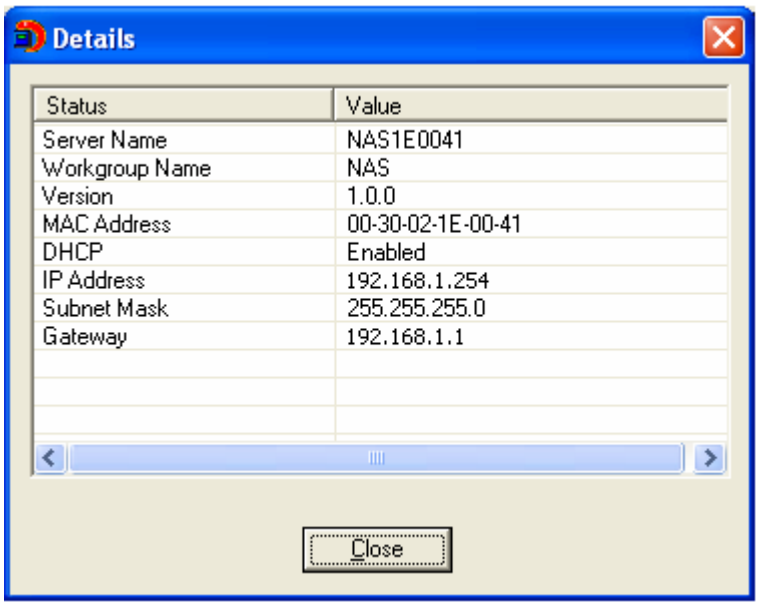
For further configuration of the system, please login the administration page of GNS-8000B via web browser.

Note: You may have to restart GNS-8000B after changing the network configuration.

2. View GNS-8000B details

Select a GNS-8000B available on Quick Install Wizard and click **Details**. The following screen will be shown:





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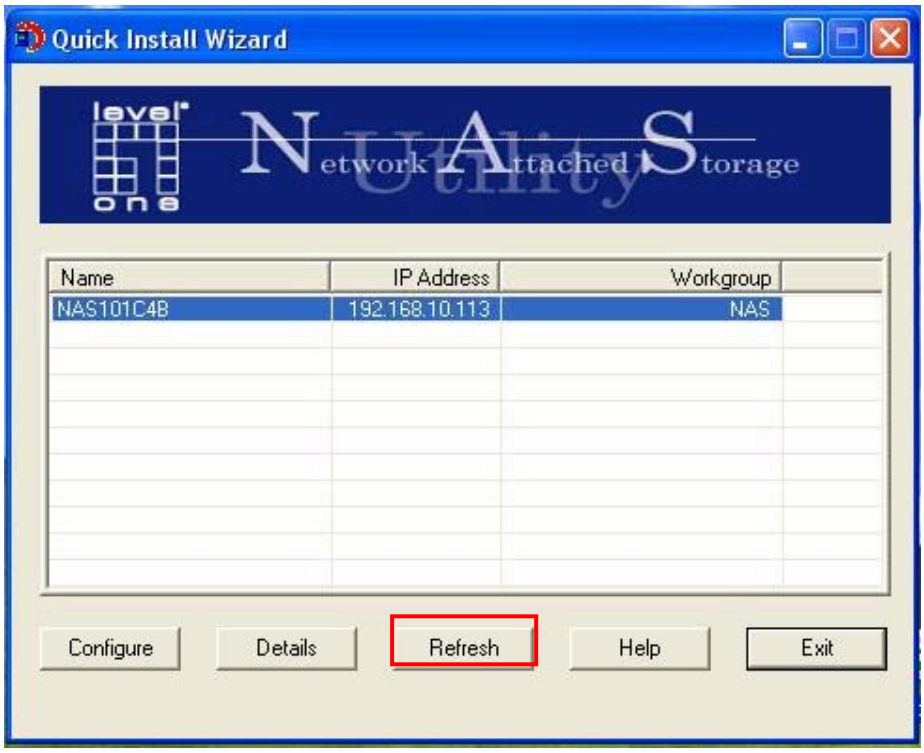
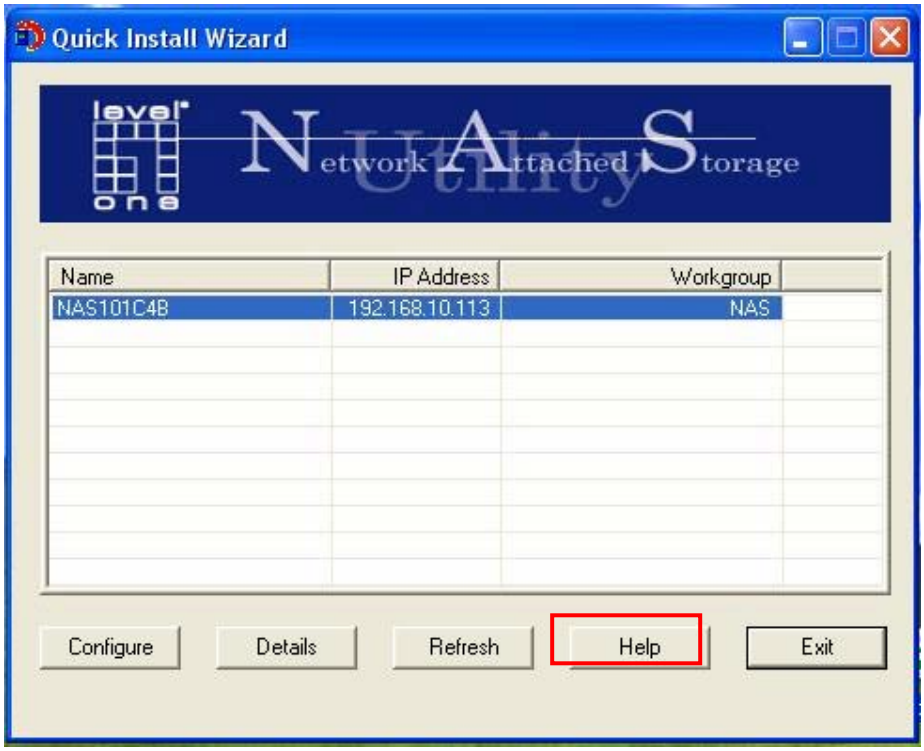
3. Search for all available GNS-8000B again.
   To refresh the search results, click **Refresh** to display all available servers within the network.



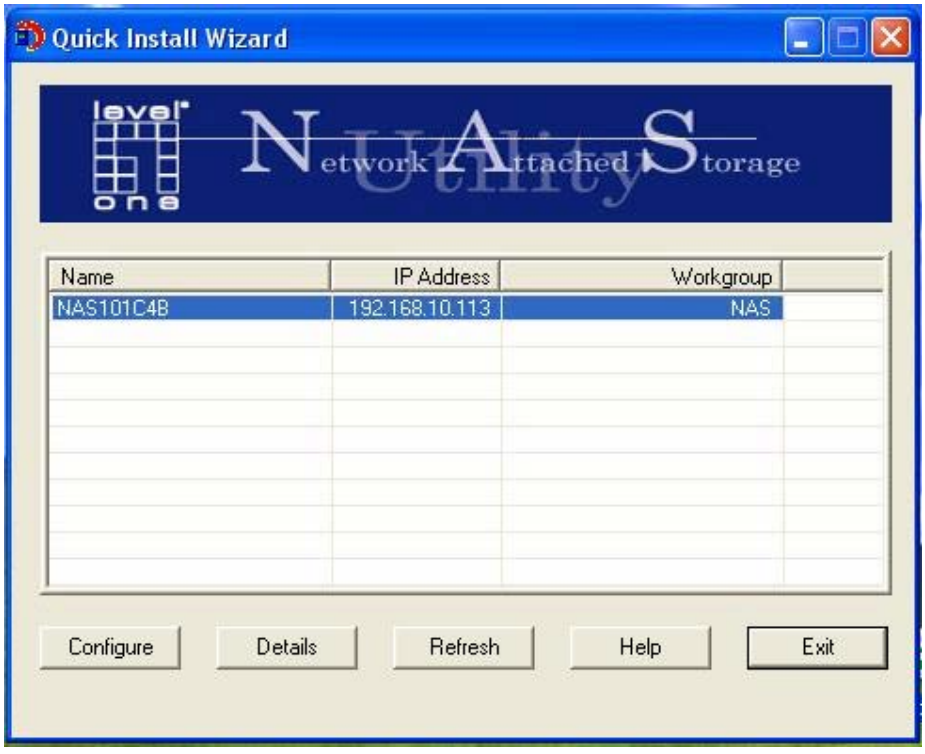
4. Help

If you have any enquiries about Quick Install Wizard when using the program, you can click the **Help** button to view the help text.



5. Enter the homepage of GNS-8000B

Double click on GNS-8000B to enter the administration page.



Chapter 5 Start to Enjoy the Services of GNS-8000B

GNS-8000B provides the following powerful services and applications

5.1 File Server

You can make use of the following means to access and share the folders of GNS-8000B easily:

a. By Quick Install Wizard: By the Map Drive function of Quick Install Wizard, you can configure the share folders on GNS-8000B as a drive of your PC quickly. For further information, please refer to Chapter 4.
b. By samba: GNS-8000B supports Microsoft, MAC and Linux (NFS) OS for data sharing to enable you to share data across different platforms, please refer to Chapter 7.1-7.3.
c. By Web File Manager: GNS-8000B provides a simple-to-use web administration interface for you to access share folders, upload and download files from GNS-8000B, please refer to Chapter Appendix A.

5.2 FTP Server

GNS-8000B supports FTP file transfer. You can use the following methods to access share files by FTP:

a. By IE browser or
b. By Web File Manager

For further information, please refer to Chapter 7.5.

5.3 Backup Server

GNS-8000B provides versatile backup mechanisms to help you back up or restore disk data completely to enhance more efficient and secure system management. The backup/ restore applications are listed below:

a. Remote Replication
   Remote replication is a built-in backup feature of GNS-8000B. You can set up instant or scheduled backup to replicate the data of GNS-8000B to another LEVELONE NAS server. Please refer to Chapter 6.9.9.
b. USB CD/DVD Restore/ Backup
   You can connect USB CD/DVD burner to the high speed USB 2.0 transfer interface of GNS-8000B and enjoy data backup and restore functions to and fro GNS-8000B and CD/DVD. Please refer to Chapter 6.9.11.
c. Tape Backup
   You can use tape backup function of GNS-8000B to perform backup and restore jobs by a tape drive for secure data protection. Please refer to Chapter 6.9.8.

Chapter 6 Administer GNS-8000B

When you have installed GNS-8000B and connected it to the network or PC, you can manage the server via web browser. It is recommended to use Microsoft Internet Explorer 6.0 or above to access GNS-8000B.

GNS-8000B Network Configuration for the First Time of Use

By factory default, GNS-8000B will search the network via DHCP (Dynamic Host Configuration Protocol) to detect IP address settings automatically. If your network does not support DHCP protocol, GNS-8000B will use the default settings as below:

IP Address: **192.168.0.1**
Subnet Mask: **255.255.255.0**

When GNS-8000B boots up, the LCD panel will display current IP address settings. If your network does not support DHCP protocol, you must configure your GNS-8000B to proper LAN settings before using it for the first time. If you are not sure about the LAN settings, please contact your network administrator.

You can change the network settings of GNS-8000B by the following ways:

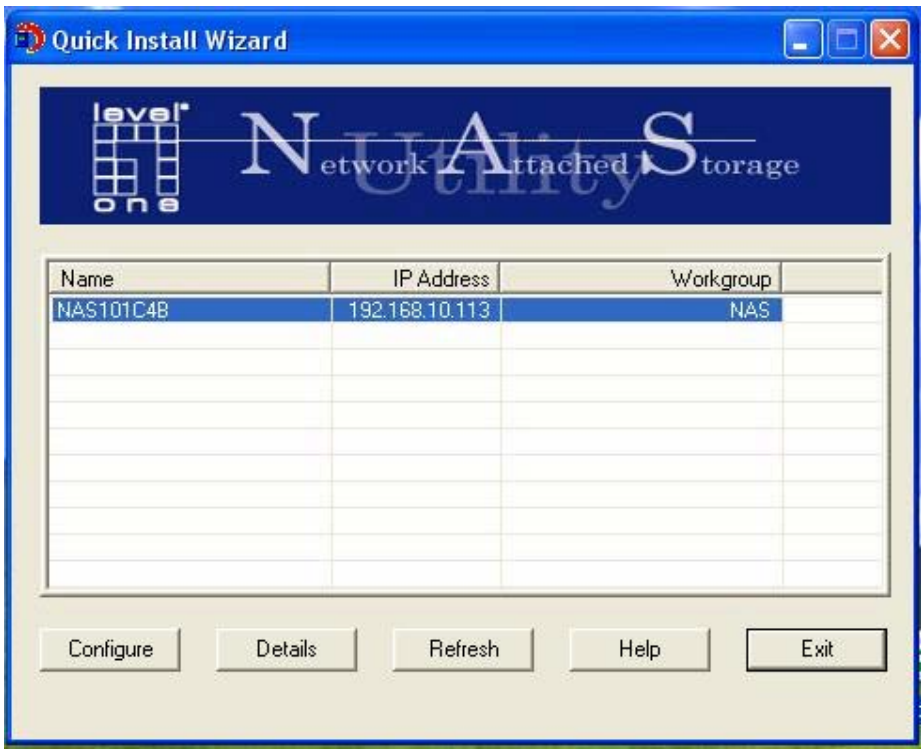
1. Use the LCD panel to change the network settings. For more information, please refer to Chapter 3. OR
2. Use Quick Install Wizard in the CD-ROM to change the network settings. For more information, please refer to Chapter 4.

6.1 Access Administration Page

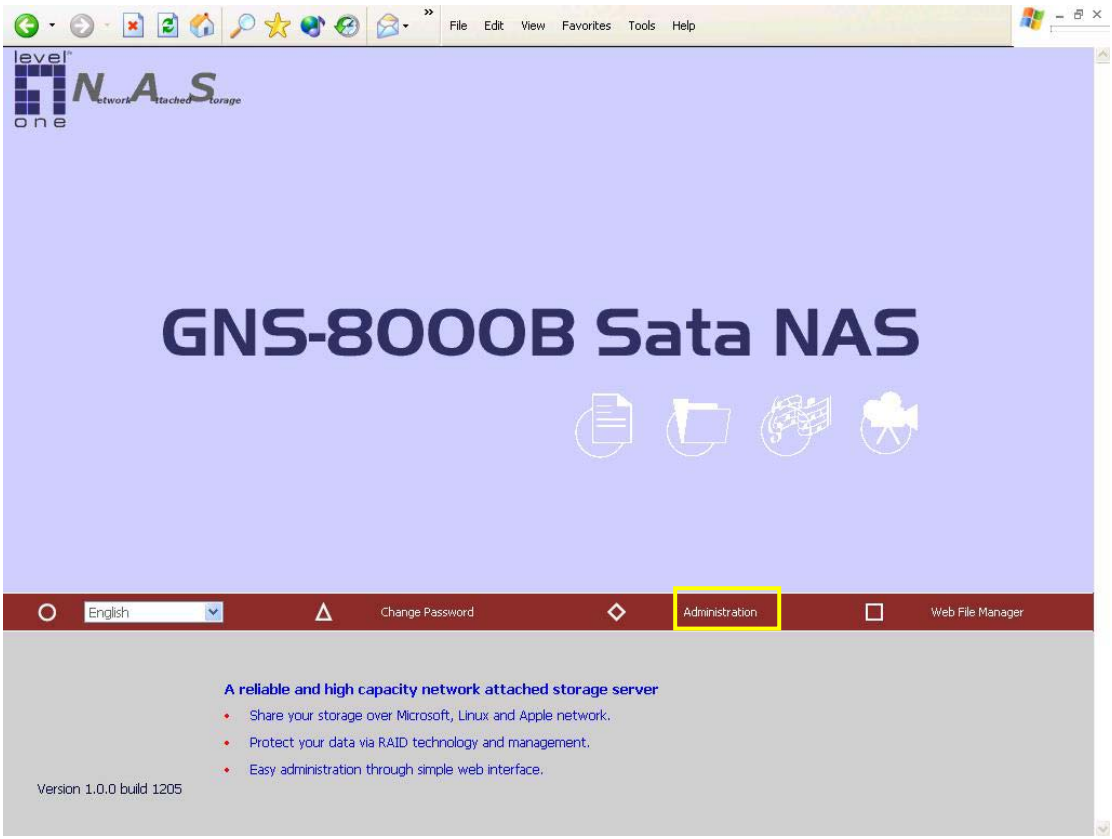
You can access GNS-8000B administration page by the following means:

3. Launch the web browser. Enter the IP address of GNS-8000B to access the administration page. You can check the IP address of GNS-8000B on the LCD panel (see Chapter 3). OR

4. Install and Quick Installation Wizard (see Chapter 4). Search for GNS-8000B in the network and double click the server name on the list.



5. When the administration page is shown, click **Administration**.



6. Enter the user name and password to login.

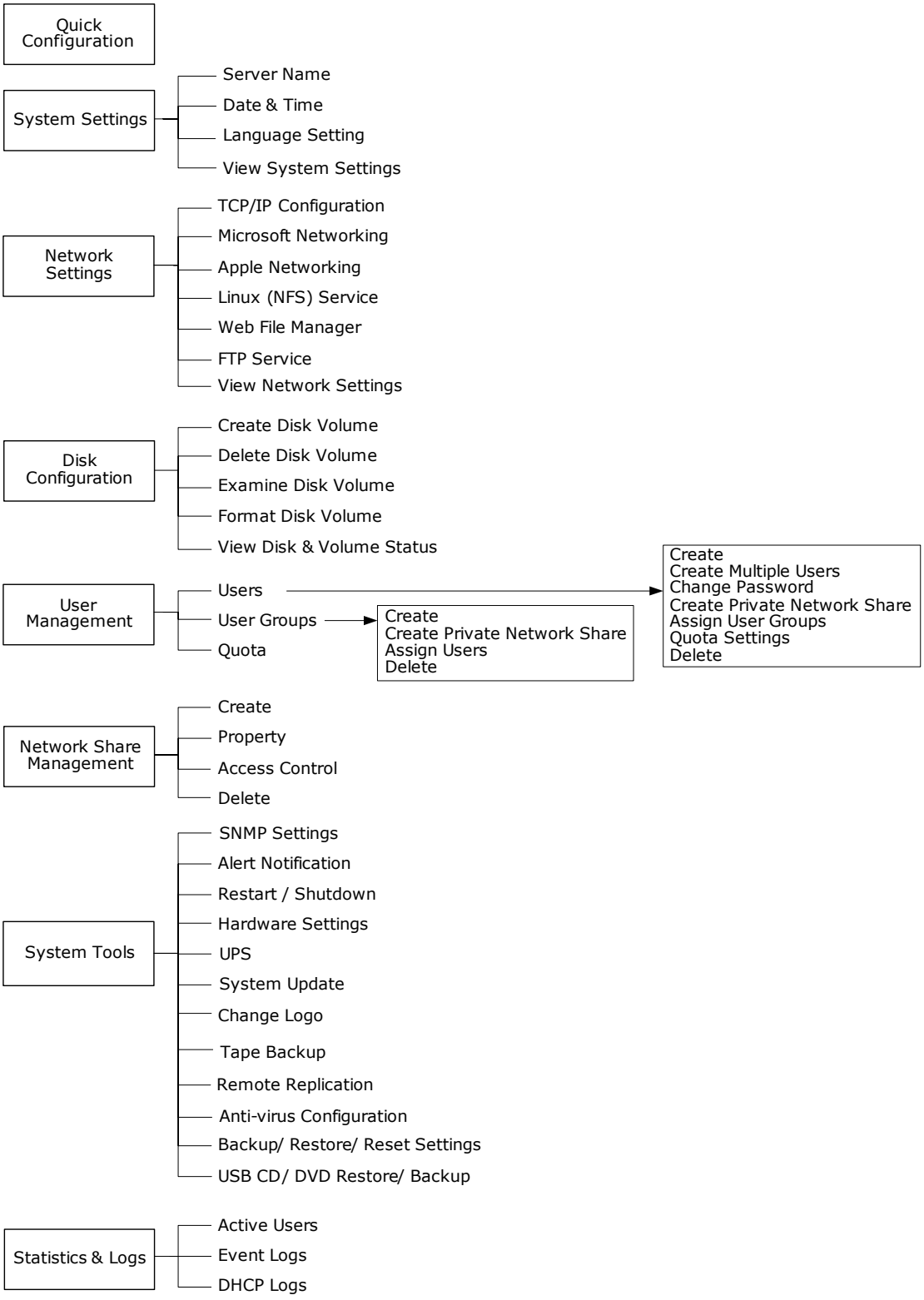
Default user name: **administrator** Password: **admin**

The first time you login GNS-8000B, Quick Configuration page will be shown. Please refer to 6.3 Quick Configuration for more details.

To connect GNS-8000B by MAC, open a web browser in MAC and enter the IP address of GNS-8000B. Login the server and continue the software configuration. Please use the built-in browser in MAC-Safari for browsing.

6.2 Server Administration

There are eight main sections in server administration:



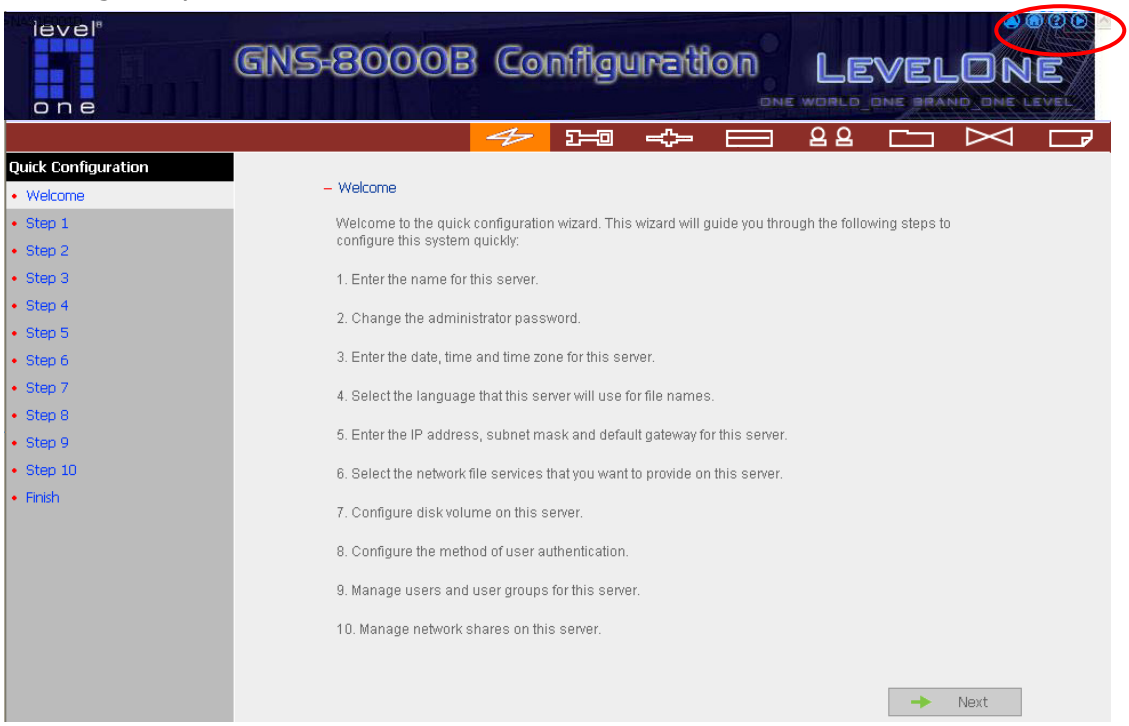
6.3 Quick Configuration

Please follow the step-by-step guide in Quick Configuration to complete the settings of GNS-8000B. 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:

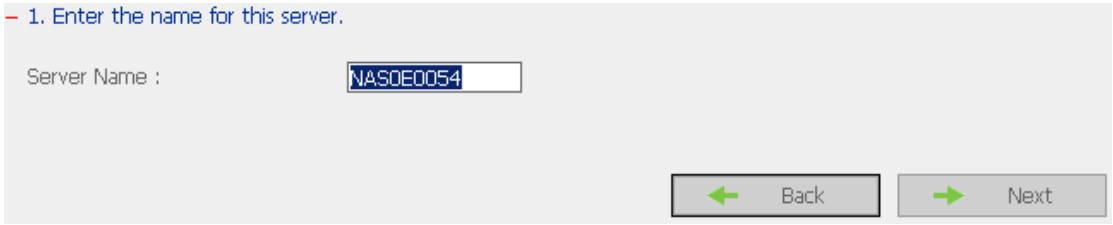
: Return to previous page

: Return to home page

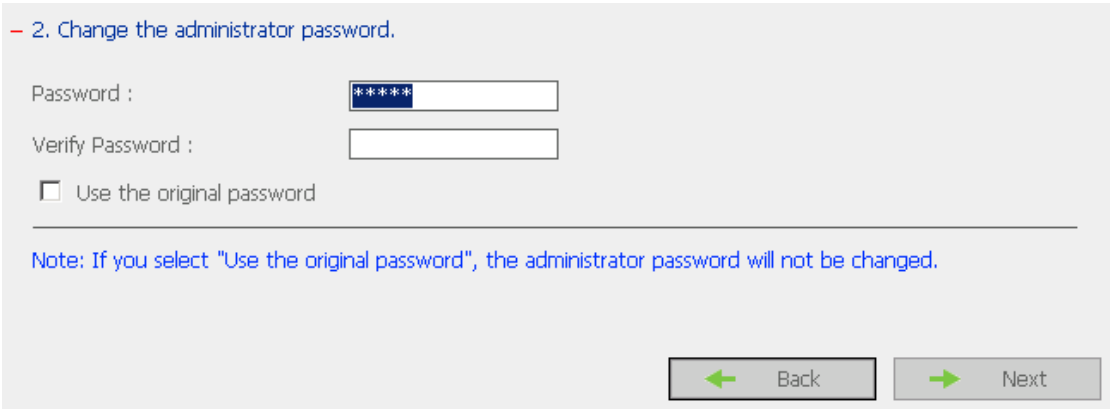
: Logout system



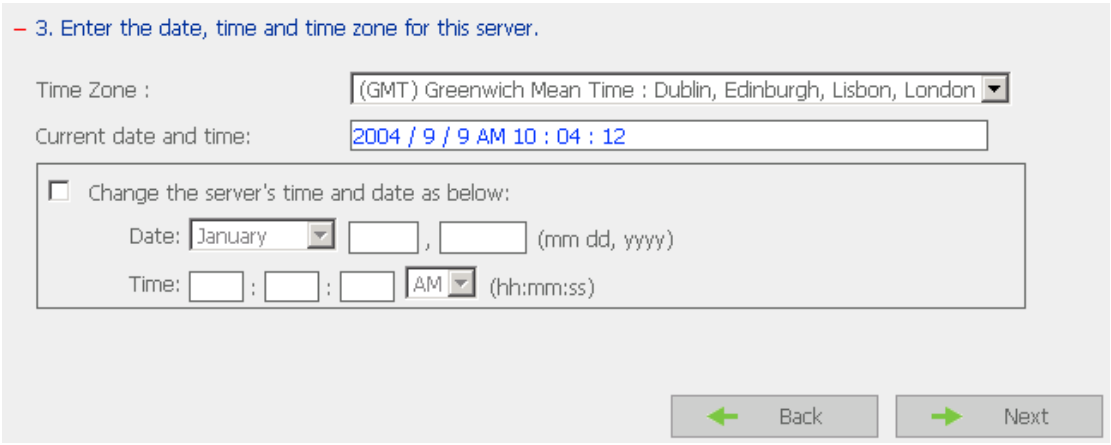
Step 1. Enter the server name.



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

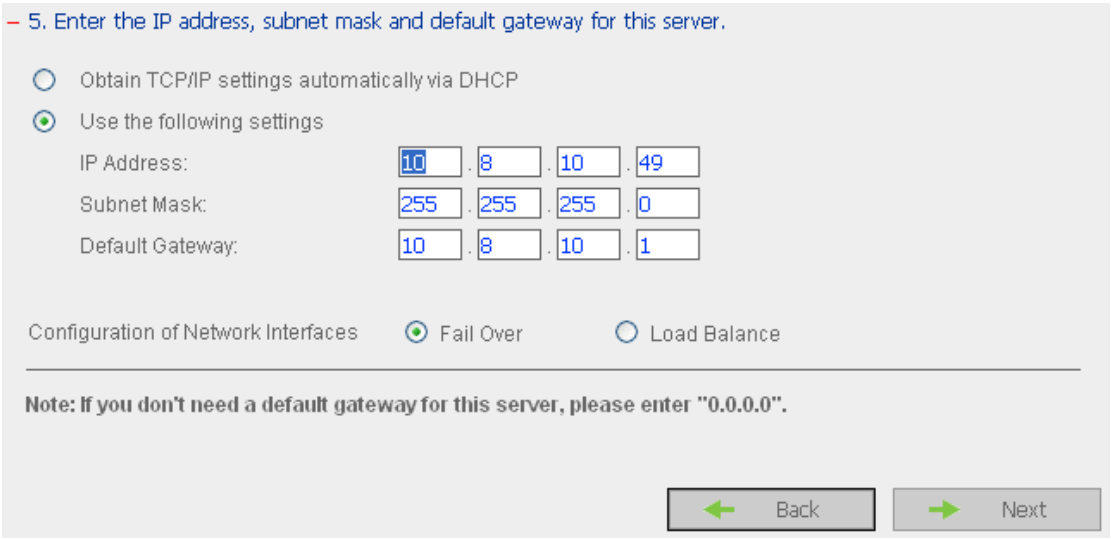


Step 3. Enter the date, time and select the time zone for the server.

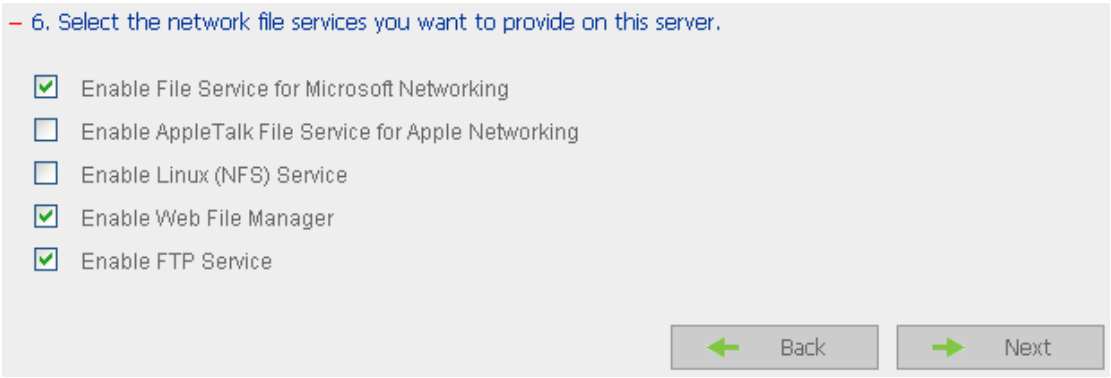


Step 4. Select the language the server uses to display files and directories. The default setting is **English**.

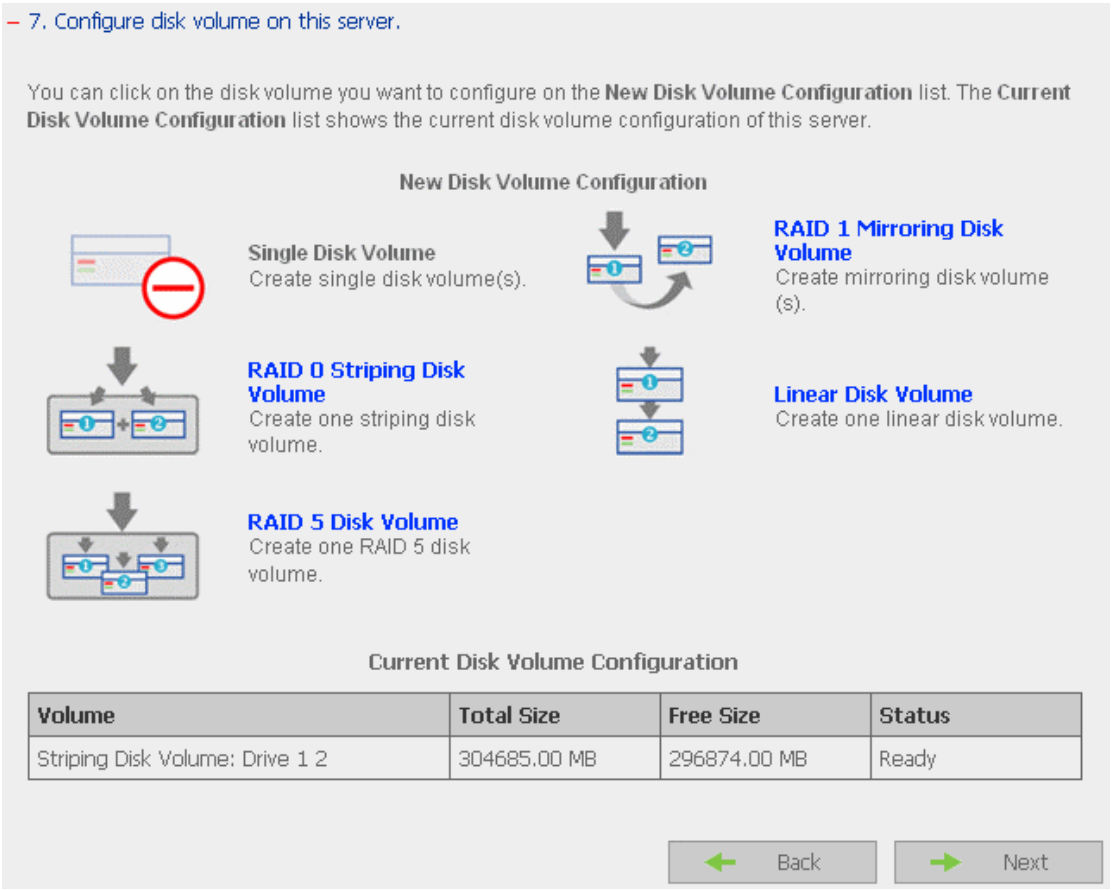
Step 5. Enter the IP address, subnet mask and default gateway for the server.
Select network interface configuration: fail over or load balance.



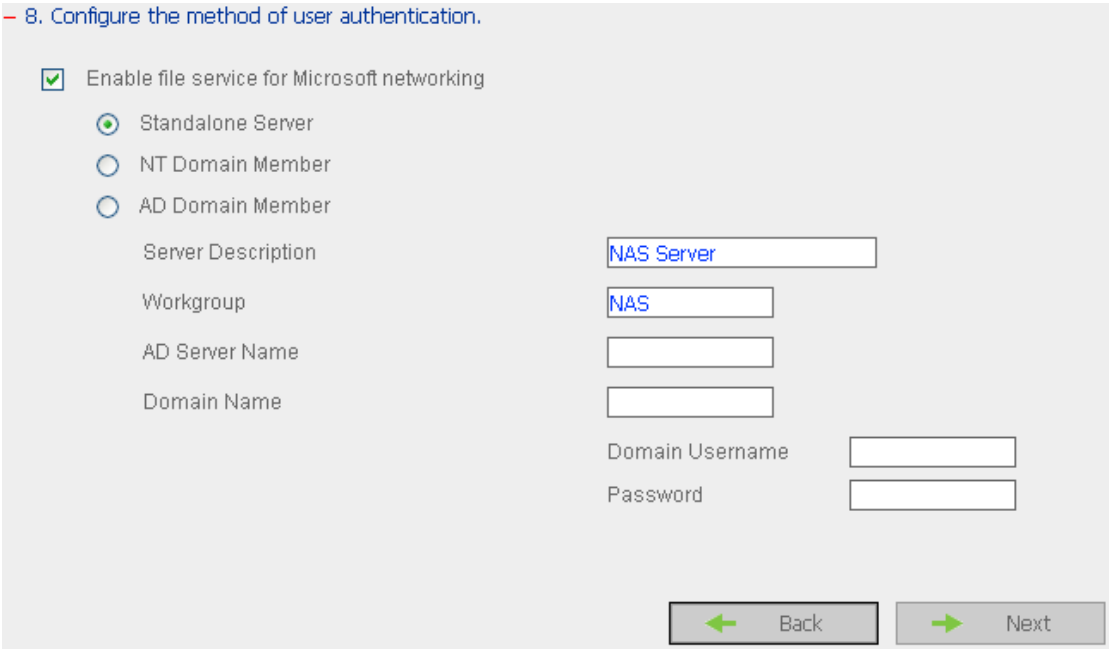
Step 6. Select the network file services to provide on the server.



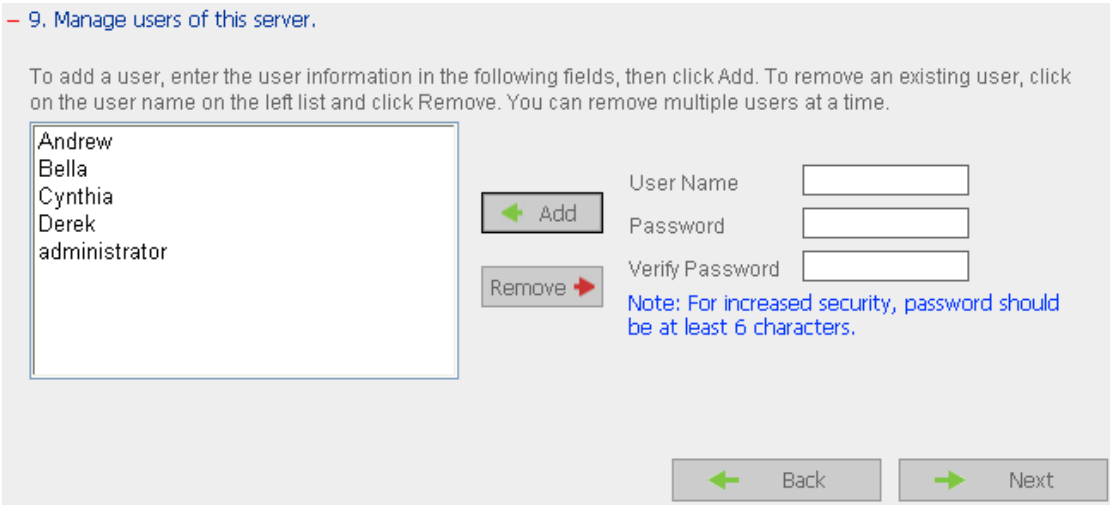
Step 7. Configure disk volume on the server.

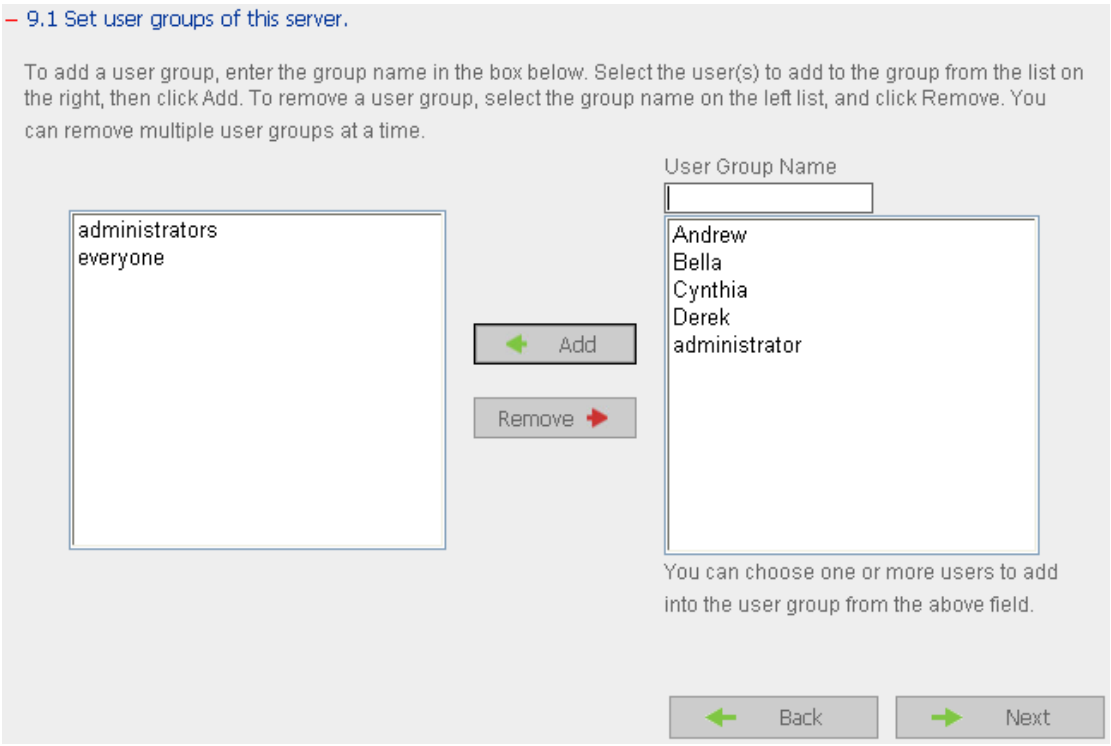


Step 8. Configure the method of user authentication. Please refer to Chapter 6.5.2 for further information.

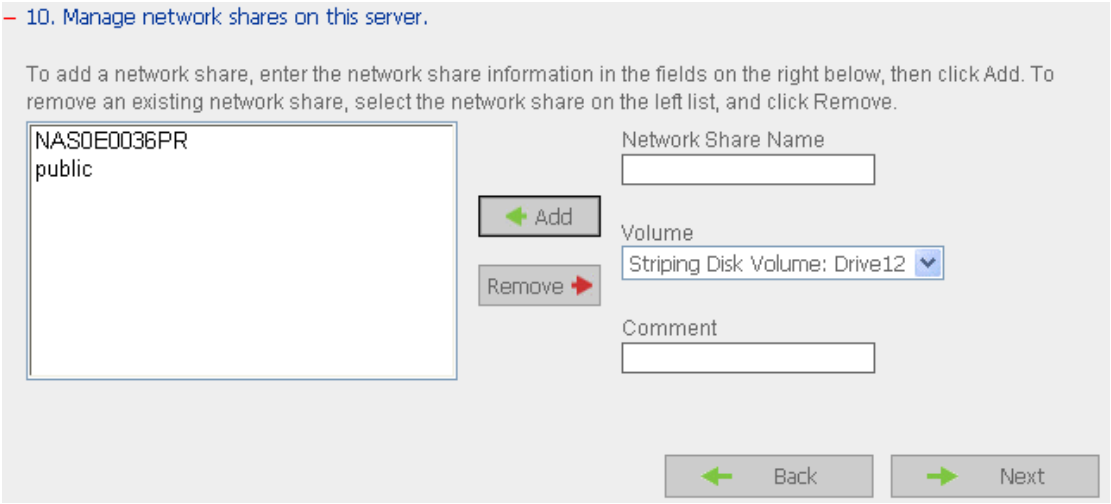


Step 9. Manage users and user groups of this server.

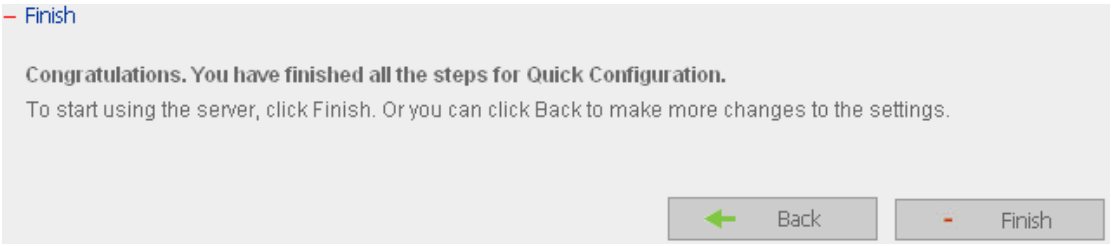




Step 10. Manage network shares on this server.

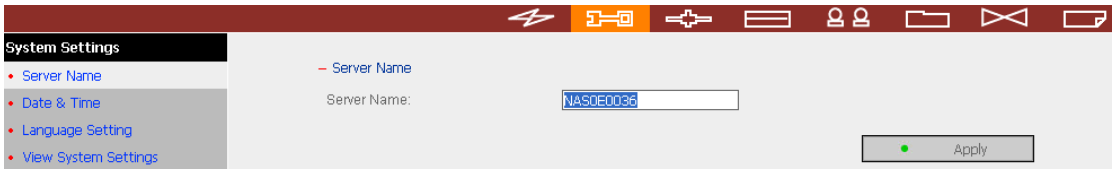


Step 11. Finish. It may take several to tens of minutes to complete Quick Configuration, depending on your system settings.



6.4 System Settings

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



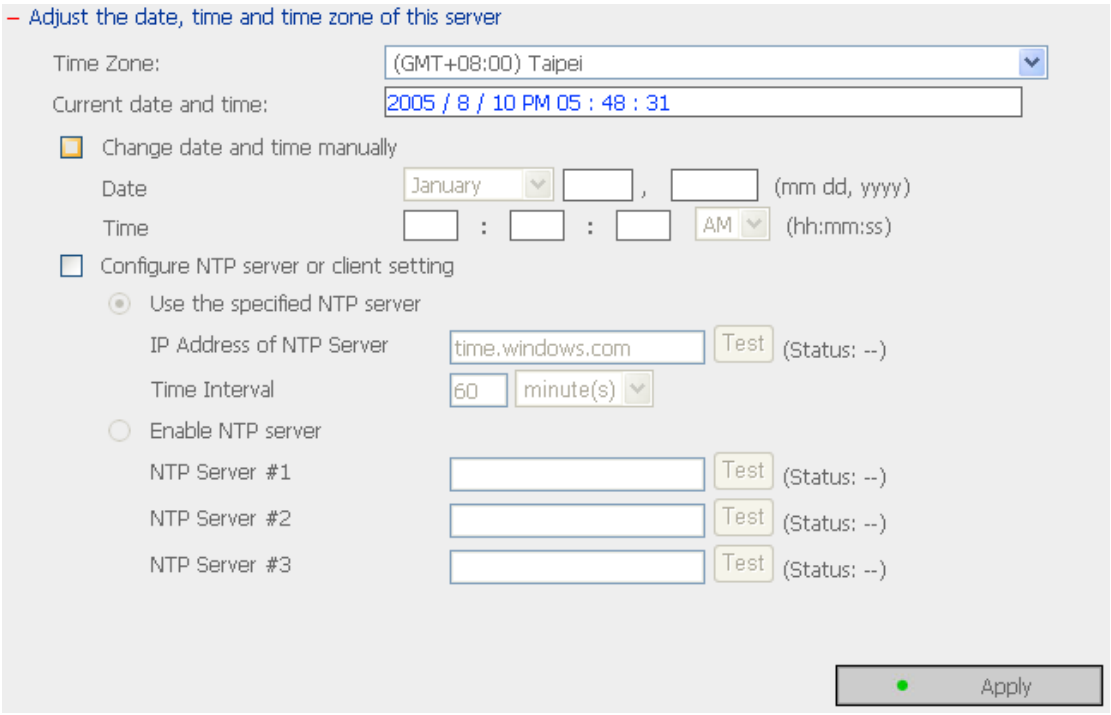
6.4.1 Server Name

Enter the name of GNS-8000B. The server name can be 14 characters long at maximum, which can contain alphabets, numbers and hyphen (-). The server does not accept names with space, period (.), or names in pure numbers.

6.4.2 Date & Time

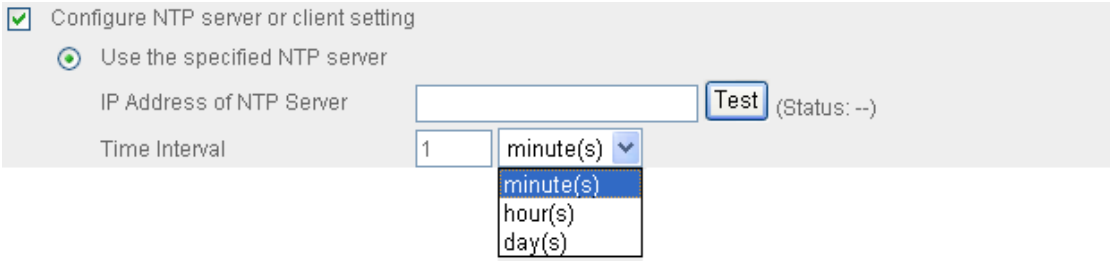
Set the date, time, and time zone according to your location. If the settings are incorrect, the following problems may occur:

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



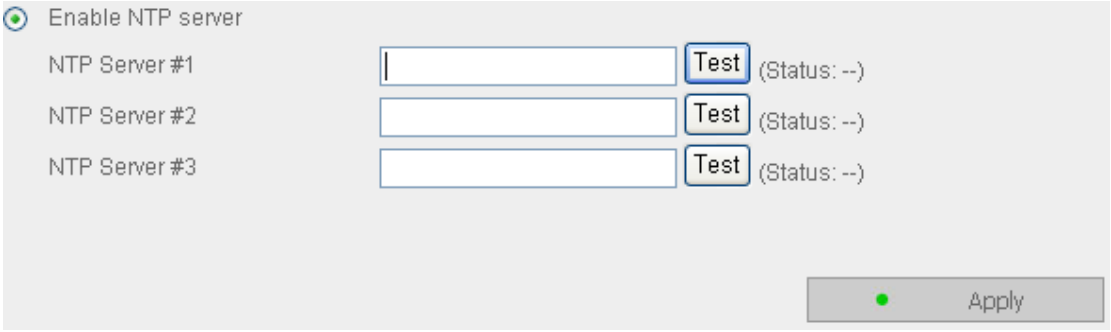
✓ **NTP Server**

You can enable or use specified NTP (Network Time Protocol) server to update the date and time of the system automatically. To enable NTP server, please enable **Configure NTP server or client setting** and enter the IP address or domain name of the NTP server, e.g. time.nist.gov, time.windows.com in **Use the specified NTP server** field. Then enter the time interval for adjusting the time (minimum value is 1 minute and maximum value is 99 days).



To enable multiple NTP servers, you can select **Enable NTP server** and enter the IP address or domain name of the servers. You can enter 3 NTP servers at maximum. If the system fails to connect to the first NTP server, it will try to connect the second one automatically, so on so forth.

You can click **Test** to try to connect to the NTP server. If there is no specified IP address for the NTP server, the system will refer to internal clock for date and time settings.

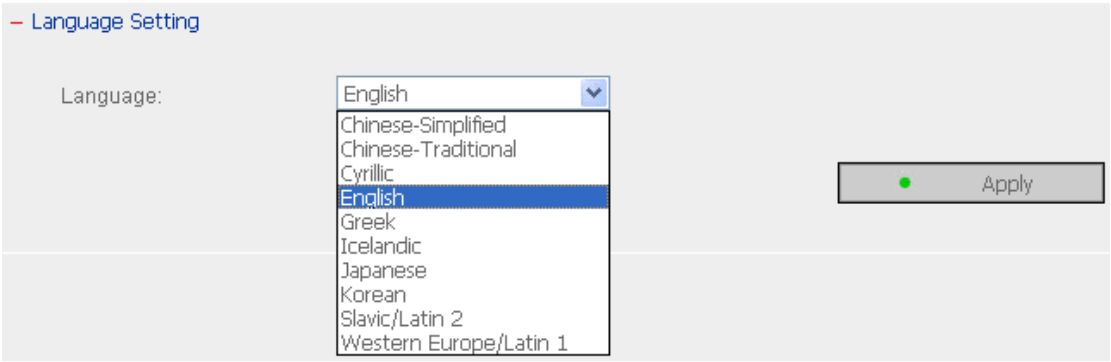


Note: The first time you enable NTP server, it may take several minutes for time synchronization before the time is correctly adjusted.

6.4.3 Language Setting

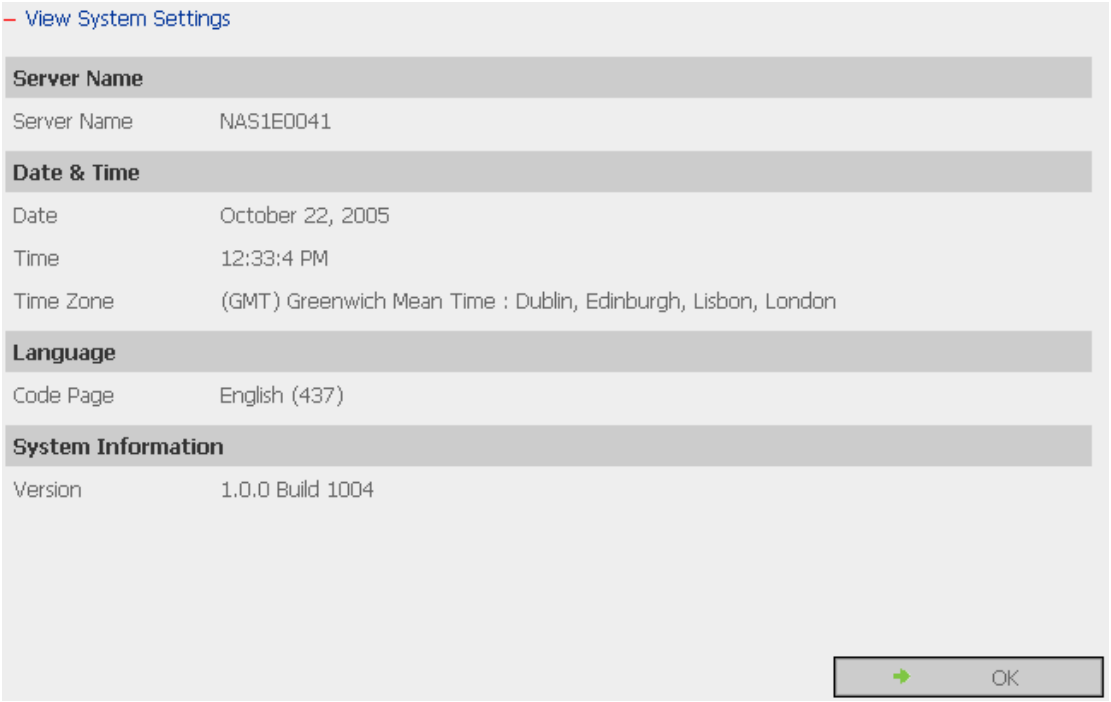
Select the language GNS-8000B uses to display files and directories.

Note: All files and directories on GNS-8000B will be created using Unicode encoding. If your FTP clients or PC does not support Unicode, e.g. Windows 95, 98, ME OS is used, select the language the same as the language of your OS in order to view the files and directories on the server properly.



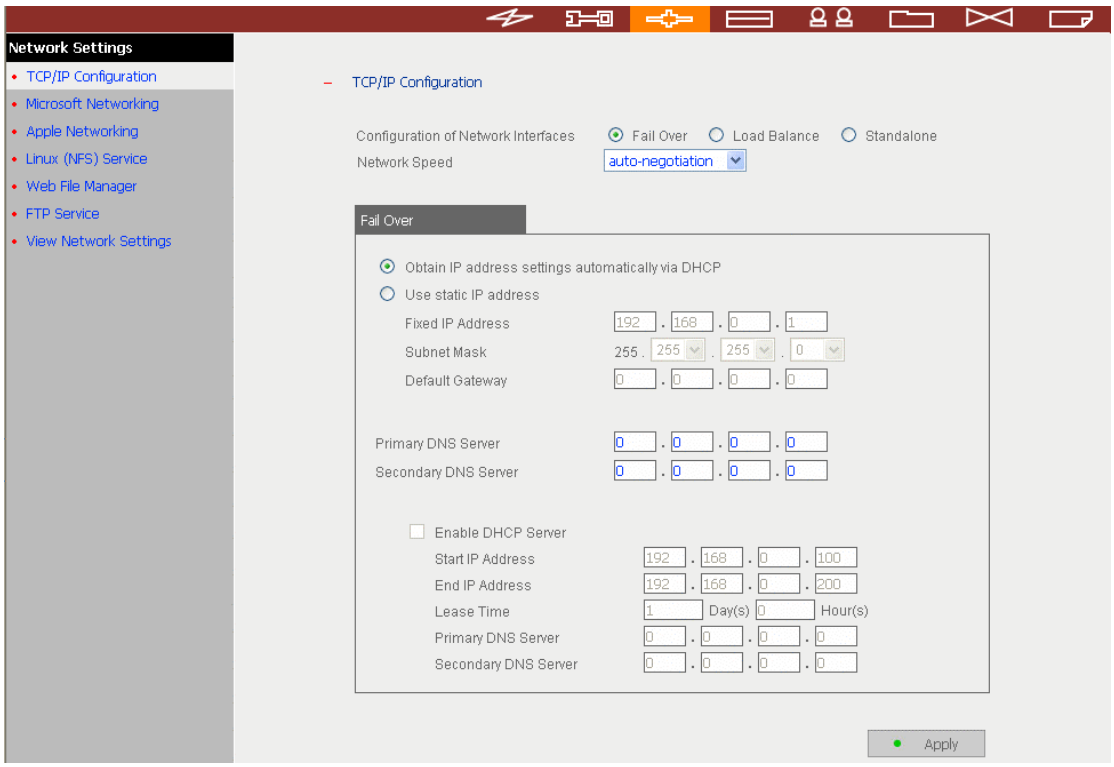
6.4.4 View System Settings

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



6.5 Network Settings

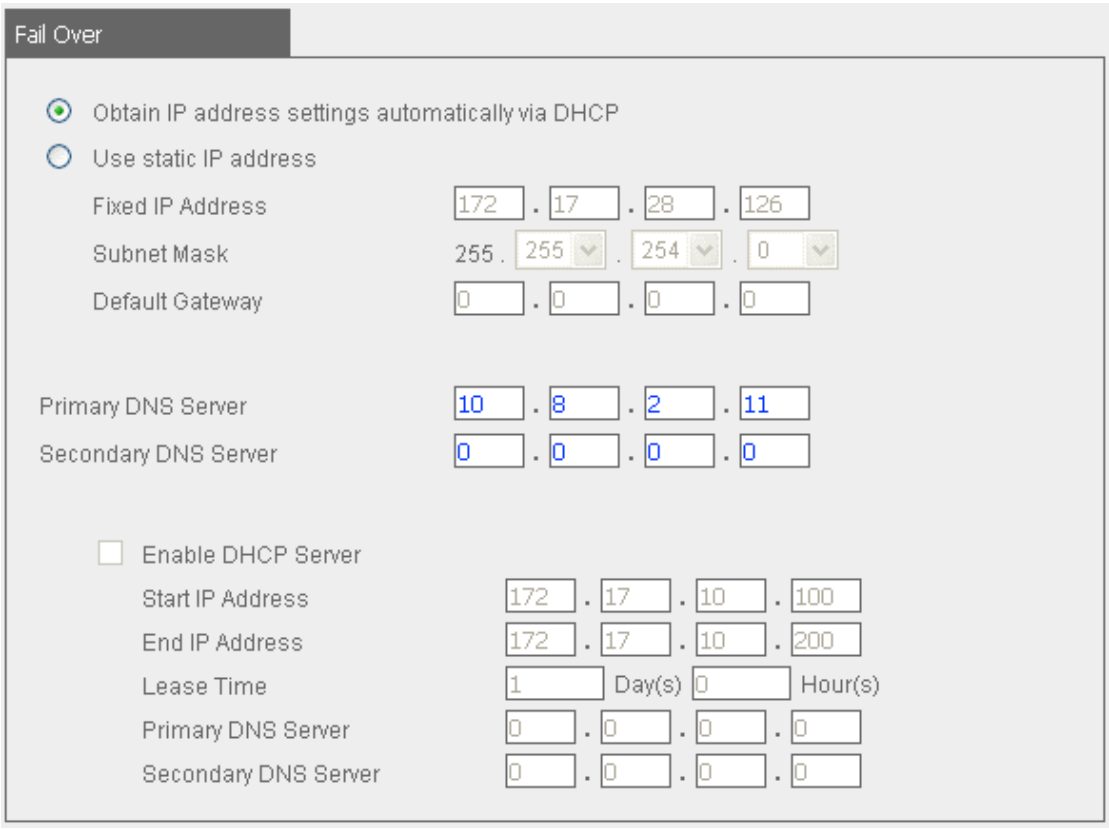
6.5.1 TCP/ IP Configuration



Configuration of Network Interfaces

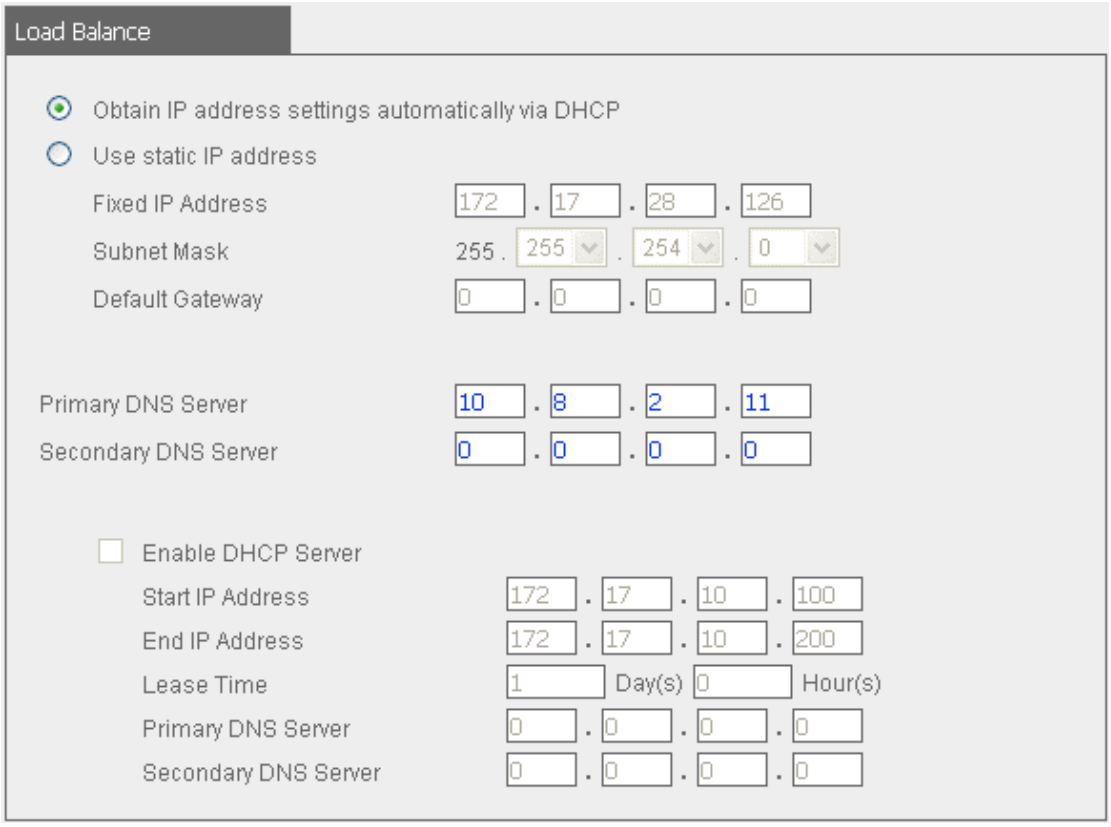
✓ **Fail Over (Default)**

The system supports the configuration of multiple network interfaces, which enables you to perform Fail Over or Load Balance functions. Fail over ensures server availability to the network. If the primary port is disconnected due to a hardware or cable problem, the secondary port will replace its network identity. If the failed port resumes the network connection, it will also resume the role as the primary interface.



✓ **Load Balance**

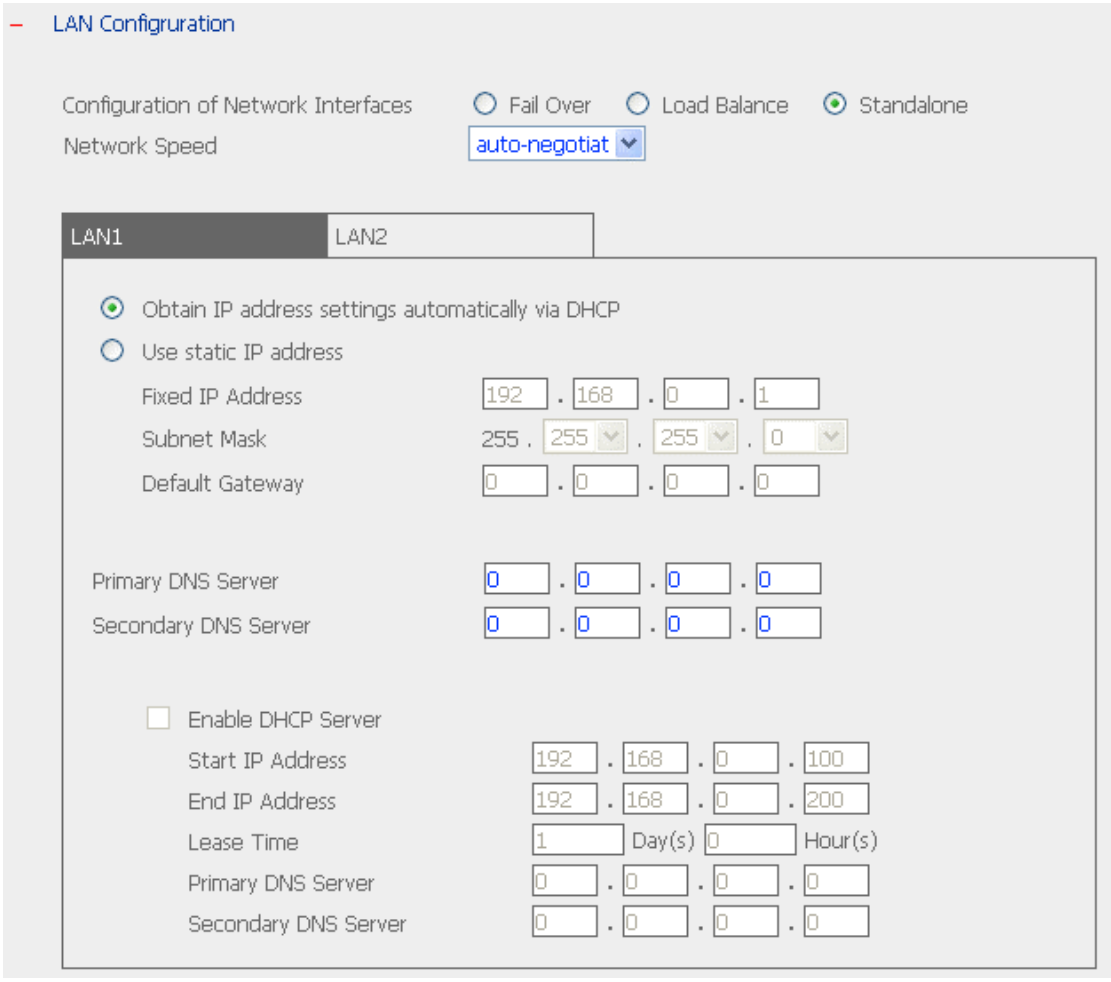
In load balance* mode, the transmission load is distributed among aggregated network ports.

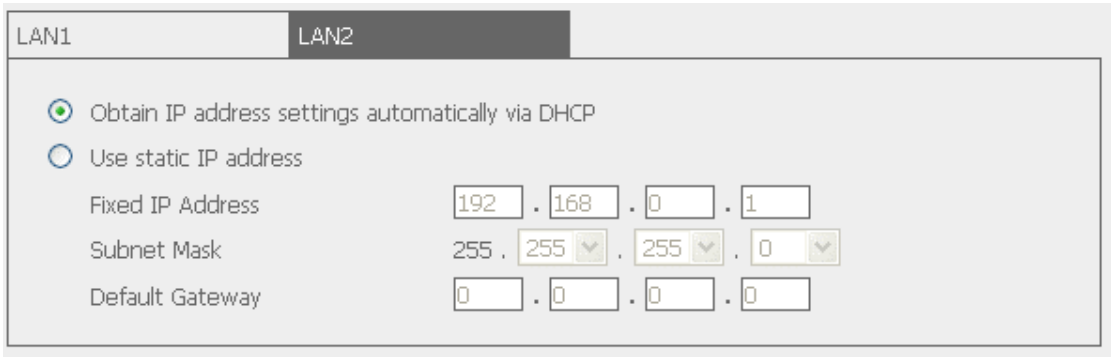


* An intelligent software adaptive agent will repeatedly analyze the traffic flow from the server and distribute the packets based on the destination address. Load balance can only occur on Layer 3 routing protocols (IP or NCP IPX). Multicast/Broadcast and non-routing protocols, such as NetBEUI and Microsoft IPX, are transmitted over the primary port.

✓ **Standalone**

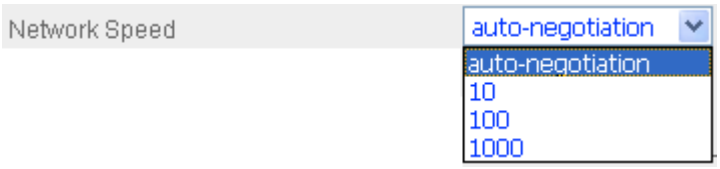
Standalone settings enable each port to have a unique IP, which allows users on different network areas to share one GNS-8000B and maintain their independence from one another in the network. When using this mode, fail over cannot be used and only LAN 1 can be configured as DHCP server.





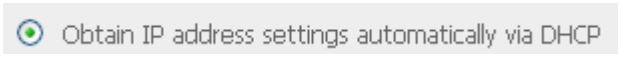
Network Speed

Network speed settings provide an advanced option for configuring network speed. You can select auto-negotiation (default), 10 Mbps, 100 Mbps, or 1000 Mbps. It is recommended to use the default setting that the server will determine network speed automatically.



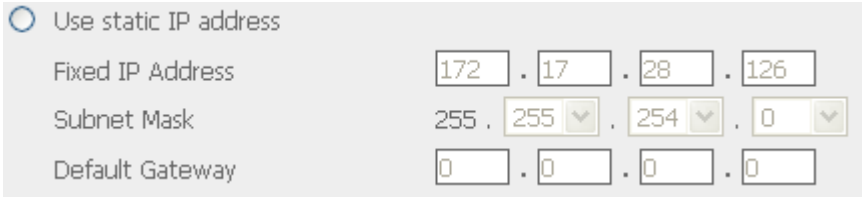
- **Obtain IP address settings automatically via DHCP**

  If your network supports DHCP, GNS-8000B will automatically use DHCP protocol to retrieve the IP address and related information.



- **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 GNS-8000B in external network.

Secondary DNS Server: Enter the IP address of secondary DNS server that provides DNS service for GNS-8000B in external network.

You can also configure the following settings:

✓ **Enable DHCP server**

If there is no DHCP server on your network, you can enable this option to provide IP address settings to the clients.

Start IP address

The first IP address to be dynamically allocated for DHCP service.

End IP address

The last IP address to be dynamically allocated for DHCP service.

Lease time

Define the lease time for the dynamic IP address.

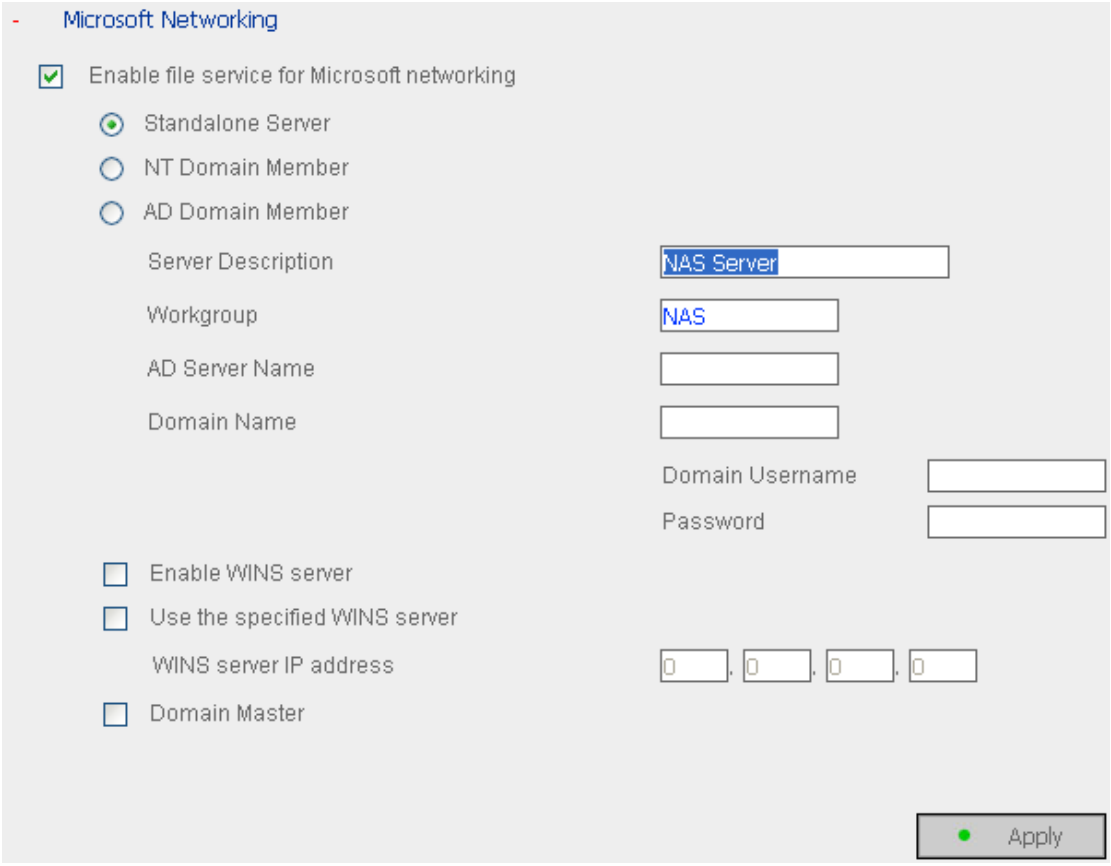
Primary DNS server

When the system allocates an IP address to your computer, the primary DNS server address is also specified to it.

Secondary DNS Server

When the system allocates an IP address to your computer, the secondary DNS server address is also specified to it.

6.5.2 Microsoft Networking



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

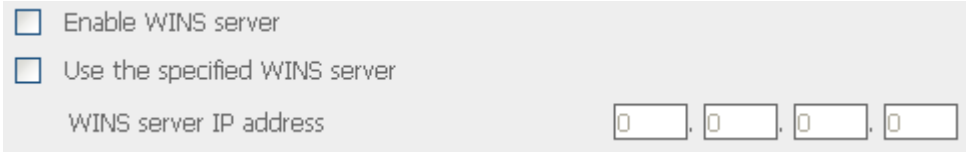
- ✓ **Standalone Server**
  Use local users for user authentication.
- ✓ **NT Domain Member**
  Use Microsoft NT domain for user authentication.
- ✓ **AD Domain Member**
  GNS-8000B supports Windows 2003 AD (Active Directory) to provide quick and direct import of user accounts to the existing AD server 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 GNS-8000B for users to identify the server. To use GNS-8000B on the Microsoft Windows OS, you must enable

Microsoft Network Services.

- Workgroup: Specify the workgroup GNS-8000B 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: Microsoft domain name. Enter the domain name when you select NT domain or AD domain.

✓ **WINS server**

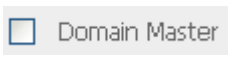
If the local network has a WINS server installed, specify the IP address. GNS-8000B will automatically register its name and IP address with WINS service. If you do not want to enable WINS server support, or you do not have a WINS server on your network, enter **0.0.0.0** in the field for WINS server IP address.



✓ **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 a domain master browser (Windows NT/ 200x/ XP PC) exists already in the network, there is no need to configure GNS-8000B as the domain master.

When you find the waiting time for accessing Network Neighborhood too long, it may due to failure of an existing master browser, or there is no master browser available. If the reason is the latter one, you can check the box Domain Master in this section to configure GNS-8000B as the master browser to enhance the speed of accessing information on Network Neighborhood.



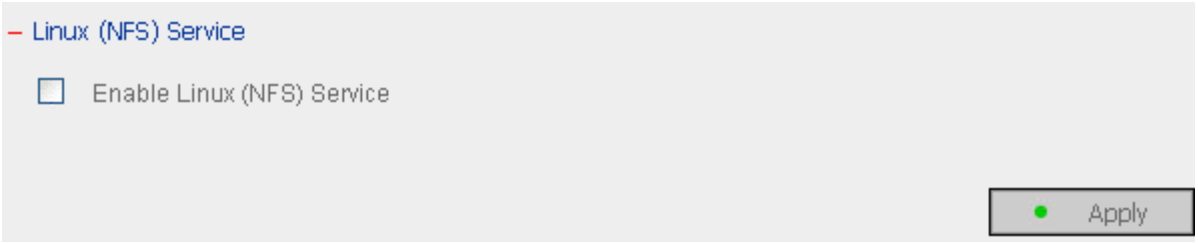
6.5.3 Apple Network

To use GNS-8000B 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 GNS-8000B. If you do not want to assign a network zone, enter an asterisk (*) to use the default setting. **This setting is disabled by default.**

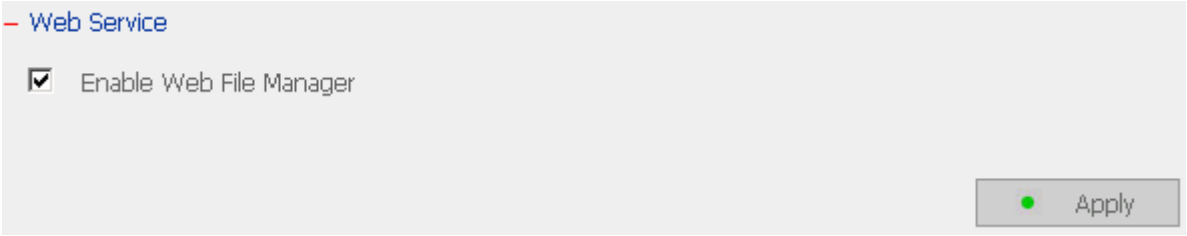
6.5.4 Linux (NFS) Service

To use GNS-8000B on Linux OS computer or server, enable Linux (NFS) service. GNS-8000B supports NFS version 2.0 and 3.0. **This setting is disabled by default.**



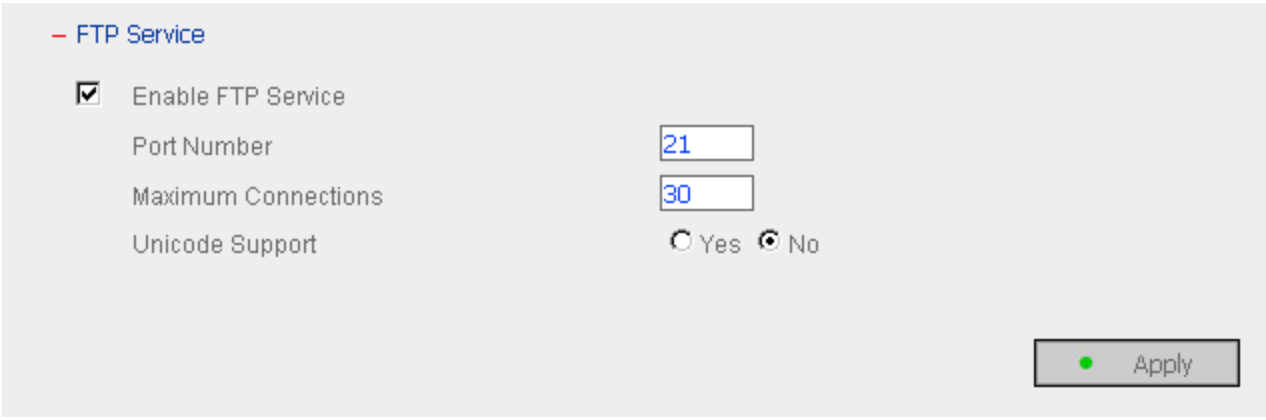
6.5.5 Web File Manager

To access files on GNS-8000B via web browser, enable Web File Manager. If GNS-8000B is connected to the Internet and uses a valid IP address, you can access files on the server by web browser from anywhere. For further details, please refer to Appendix A.



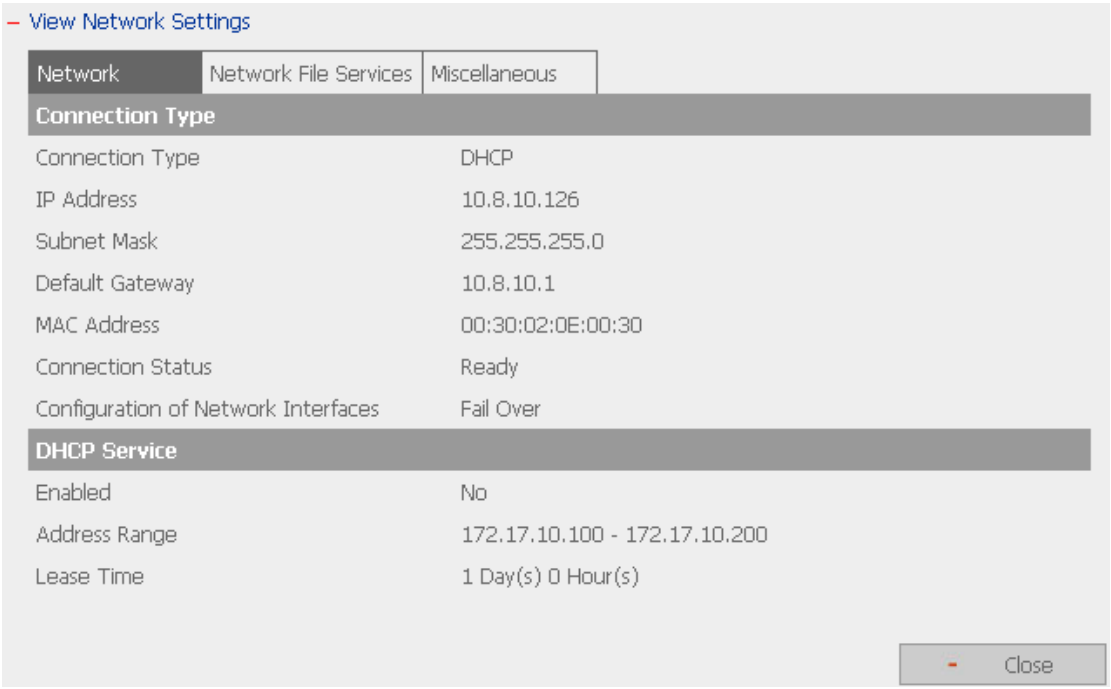
6.5.6 FTP Service

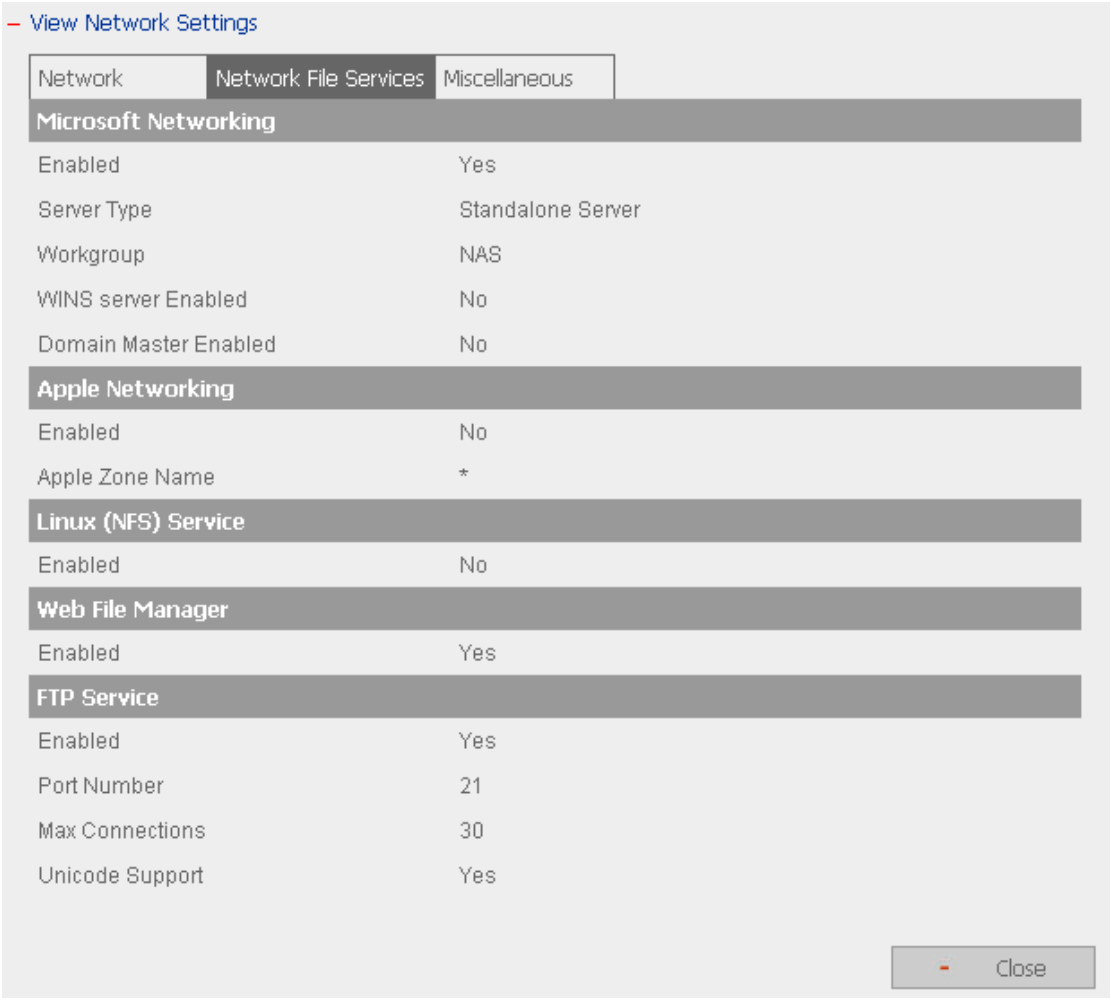
Select to enable or disable Unicode Support. The default setting is **No**. As most FTP clients do not support Unicode currently, it is recommended that you disable Unicode support and select a language the same as your OS in "System Settings—Language Setting" page (refer to Chapter 6.4.3) so that the folders and files on FTP can be properly shown.

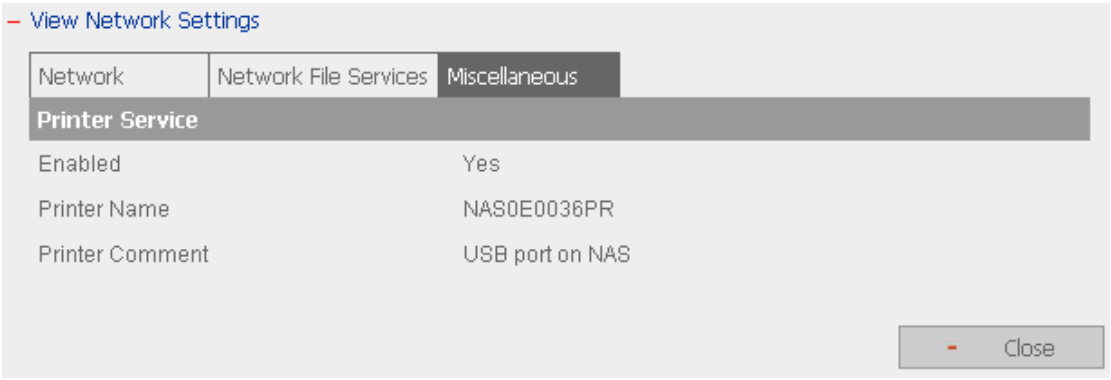


6.5.7 View Network Settings

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

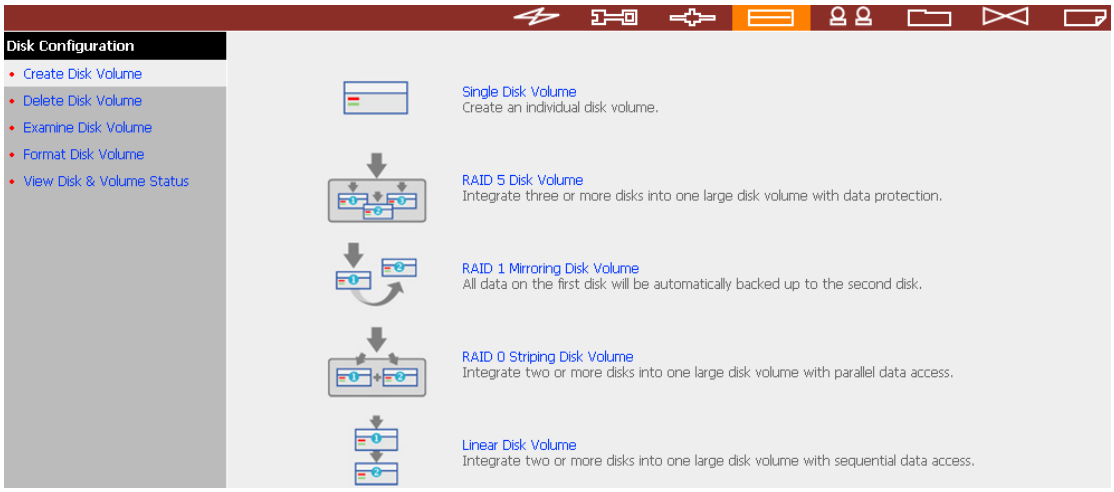



View Network Settings
Network
Network File Services
Miscellaneous
Microsoft Networking
Enabled
Yes
Server Type
Standalone Server
Workgroup
NAS
WINS server Enabled
No
Domain Master Enabled
No
Apple Networking
Enabled
No
Apple Zone Name
*
Linux (NFS) Service
Enabled
No
Web File Manager
Enabled
Yes
FTP Service
Enabled
Yes
Port Number
21
Max Connections
30
Unicode Support
Yes
Close


View Network Settings
Network
Network File Services
Miscellaneous
Printer Service
Enabled
Yes
Printer Name
NAS0E0036PR
Printer Comment
USB port on NAS
Close

6.6 Disk Configuration

In the section, you can create, delete, examine and format disk volume, as well as view disk and volume status of GNS-8000B.

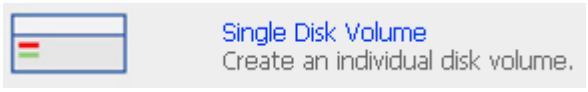


6.6.1 Create Disk Volume

GNS-8000B can accommodate four disks at maximum. You can set the disk volume to the following configurations by clicking on the icons on Create Disk Volume page:

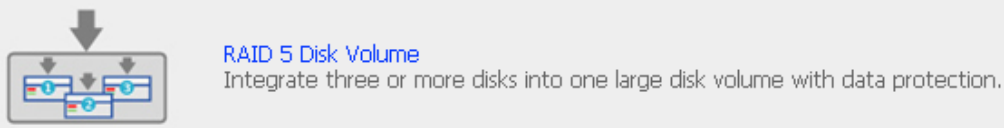
a. Single Disk Volume

You can create an individual disk volume. In case of disk crash, all data will be lost.



b. RAID 5 Disk Volume

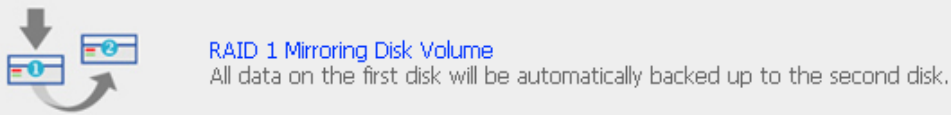
Three or more hard disks can be integrated to form RAID 5 disk volume. Data will be distributed and stored among the disks. If a disk fails, you can replace a new disk with the damaged one, and the system will restore the data to the new disk. You can also use three disks for RAID 5 and a fourth disk as a backup disk. If a disk of RAID 5 volume is damaged, the spare disk can replace that damaged disk, which enhances server stability and efficiency.



Note: When configuring RAID 5 disk volume, at least 3 disks are required.

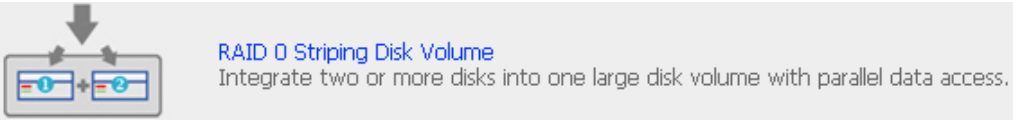
c. RAID 1 Mirroring Disk Volume

Mirroring Disk protects your data by automatically backing up the contents of one disk onto the second disk of a mirrored pair. This protects your data if one of the disks fails. However, the storing capacity is equal to a single disk, as the second disk is used to automatically back up the first one.



d. RAID 0 Striping Disk Volume

Striping disk combines two or more disks into one larger disk. It offers the fastest disk access but does not have any protection of your data if the striped array fails. The disk capacity equals the number of disks in the array times the size of the smallest disk.

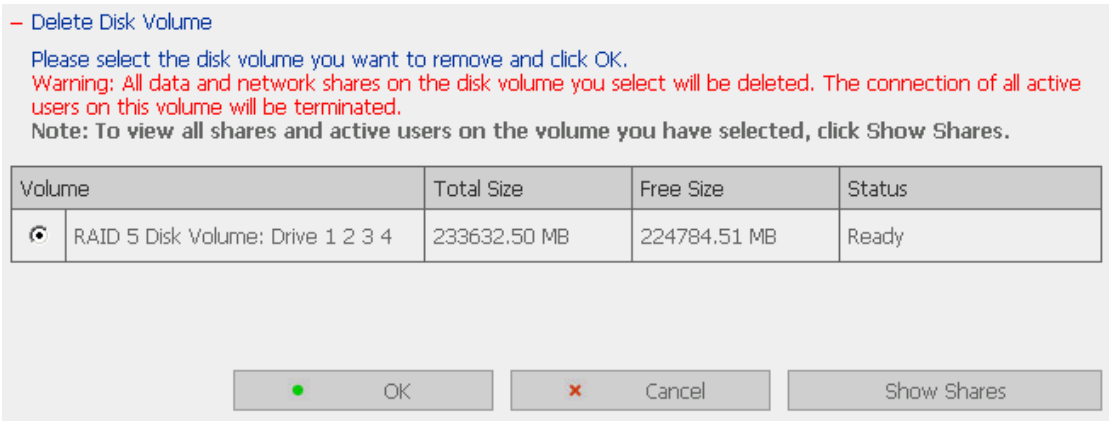


e. Linear Disk Volume

You can combine two or more disks into one larger disk. Files 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.

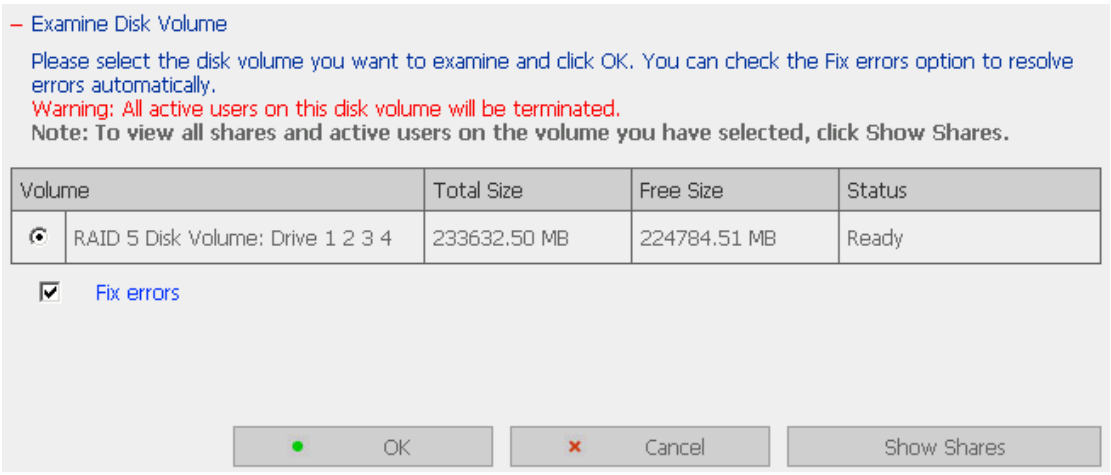
6.6.2 Delete Disk Volume

To delete a disk volume, select the disk volume to remove and click OK.



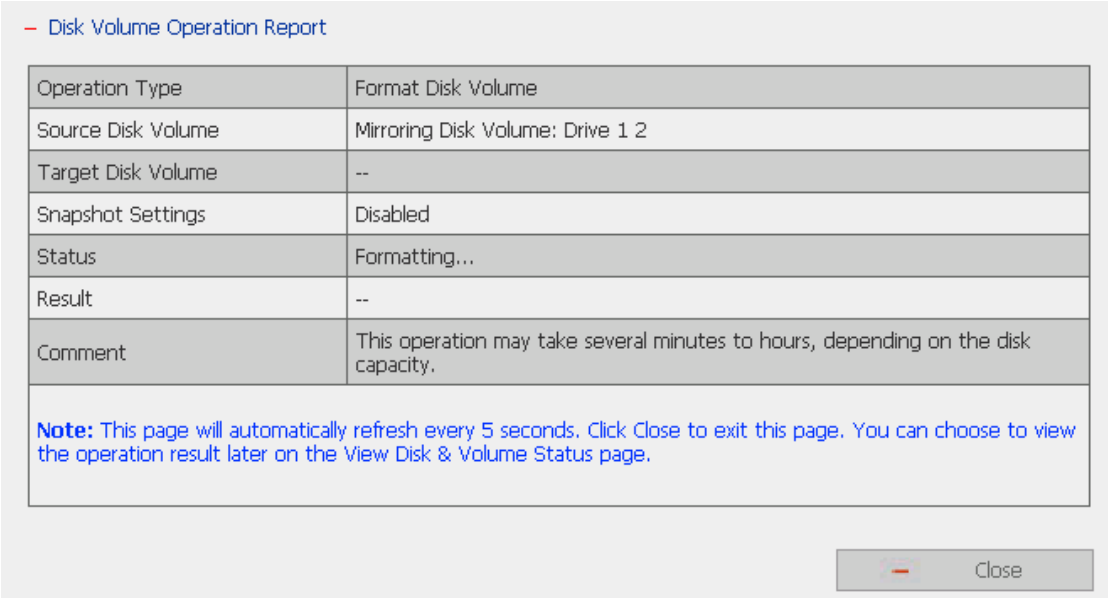
6.6.3 Examine Disk Volume

To examine a disk volume, select the disk volume to examine and click OK. You can check the **Fix errors** box and the server will fix errors automatically during disk checking.



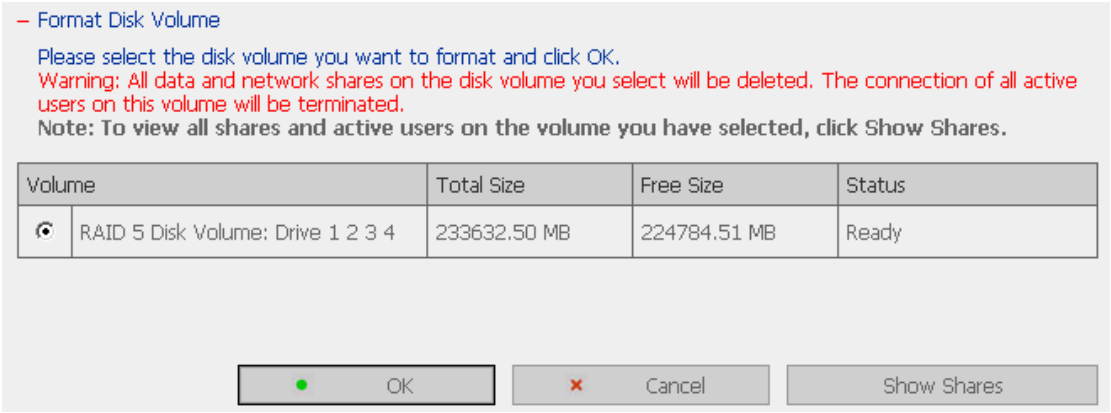
✓ Disk Volume Operation Report

After click OK on Examine Disk Volume page, a page like below will display to show the current status and information of disk volume operation.



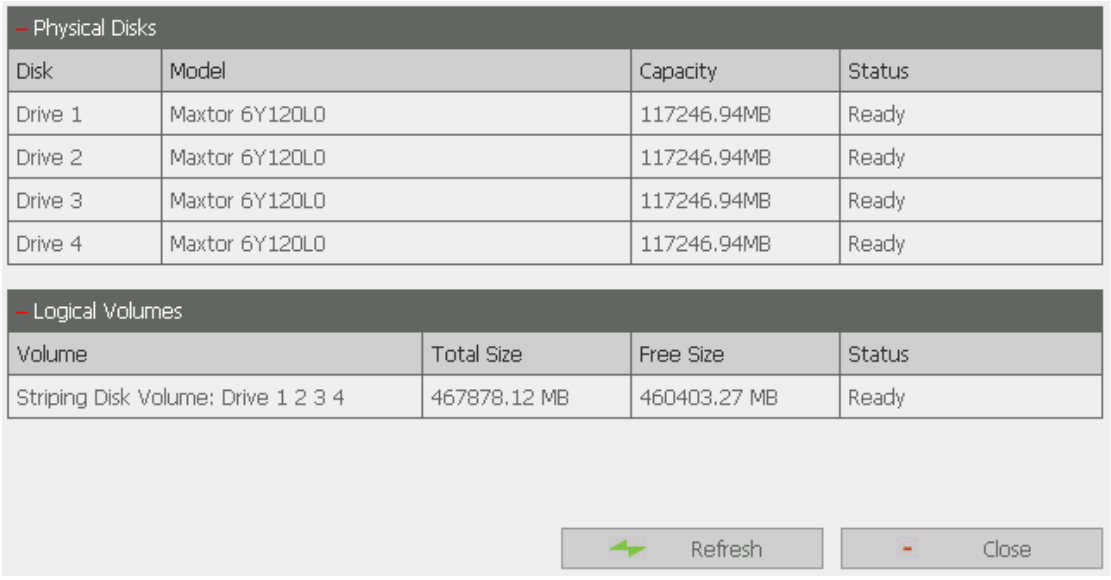
6.6.4 Format Disk Volume

To format disk volume, select the disk volume to format and click OK.



6.6.5 View Disk & Volume Status

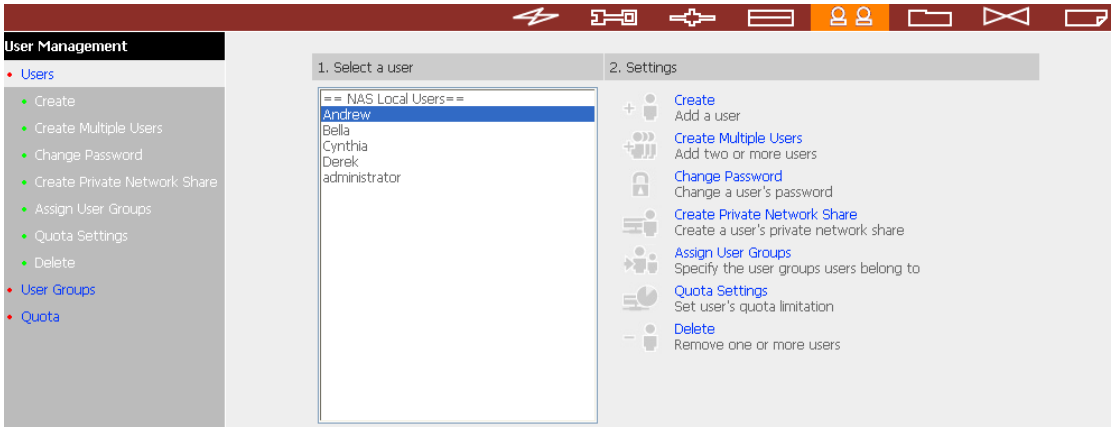
You can view details of physical disks and logical volumes in the section.



Note: When configuring disk volume, make sure there are no active users connecting to GNS-8000B to avoid any potential damage to the disks. You can check all currently active users in Statistics & Logs—Active Users (refer to Chapter 6.10.1) and inform those users to logout before configuring disk volume.

6.7 User Management

The files on GNS-8000B 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.



6.7.1 Users

The system has created the following users by default:

❶ **Administrator**

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

❷ **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.

❸ **Anonymous**

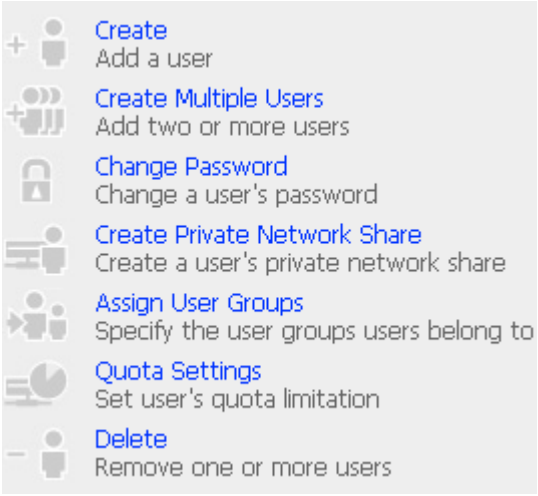
This is a built-in user and will not be displayed on User Management page. When you connect to the server by FTP service, you can use this name to login as a guest.

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 can contain 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 settings for users:



6.7.2 User Groups

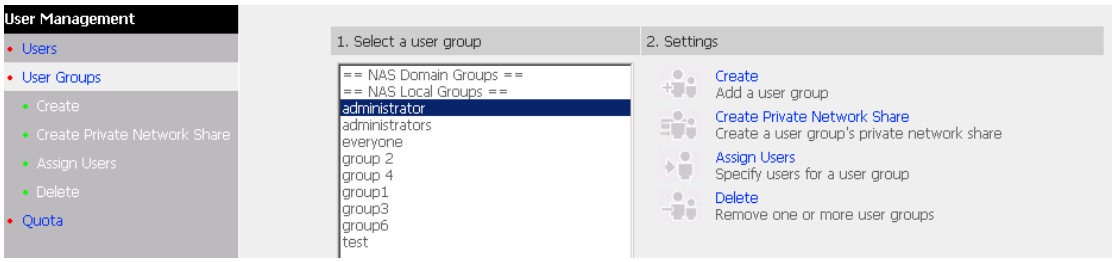
User group is a collection of users with the same access right to files or folders. GNS-8000B has created the following user groups by default:

❶ **Administrators**

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

❷ **Everyone**

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



You can manage user groups with the following options:

User groups name must not exceed 256 characters. It is case-insensitive and can contain double-byte characters, such as Chinese, Japanese, and Korean, except the following ones:

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

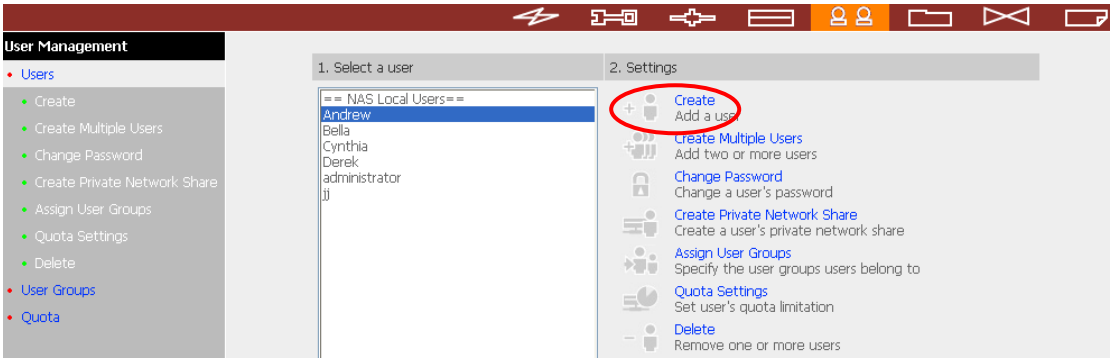
To properly manage security, it is very important to manage users and user groups. You may set the share access parameters of each user or user group accordingly.

Create Users and Assign Users to User Group

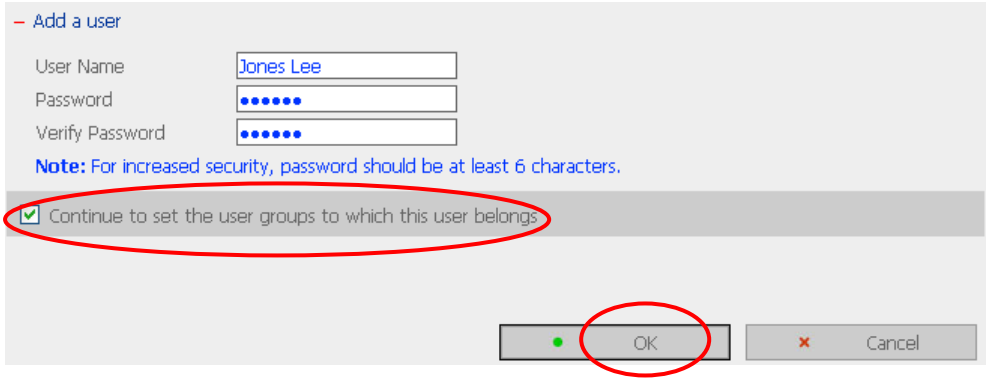
The following example demonstrates how to create new users and assign users to a user group.

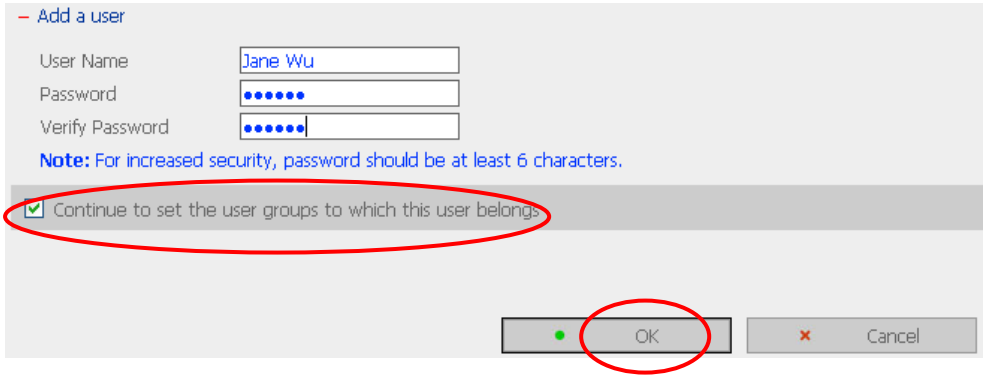
ABC Co. has recently recruited two employees Mr. Jones Lee for Administration Department and Ms. Jane Wu for Sales Department. The IT Department therefore needs to create two user accounts for them to access company data on GNS-8000B.

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

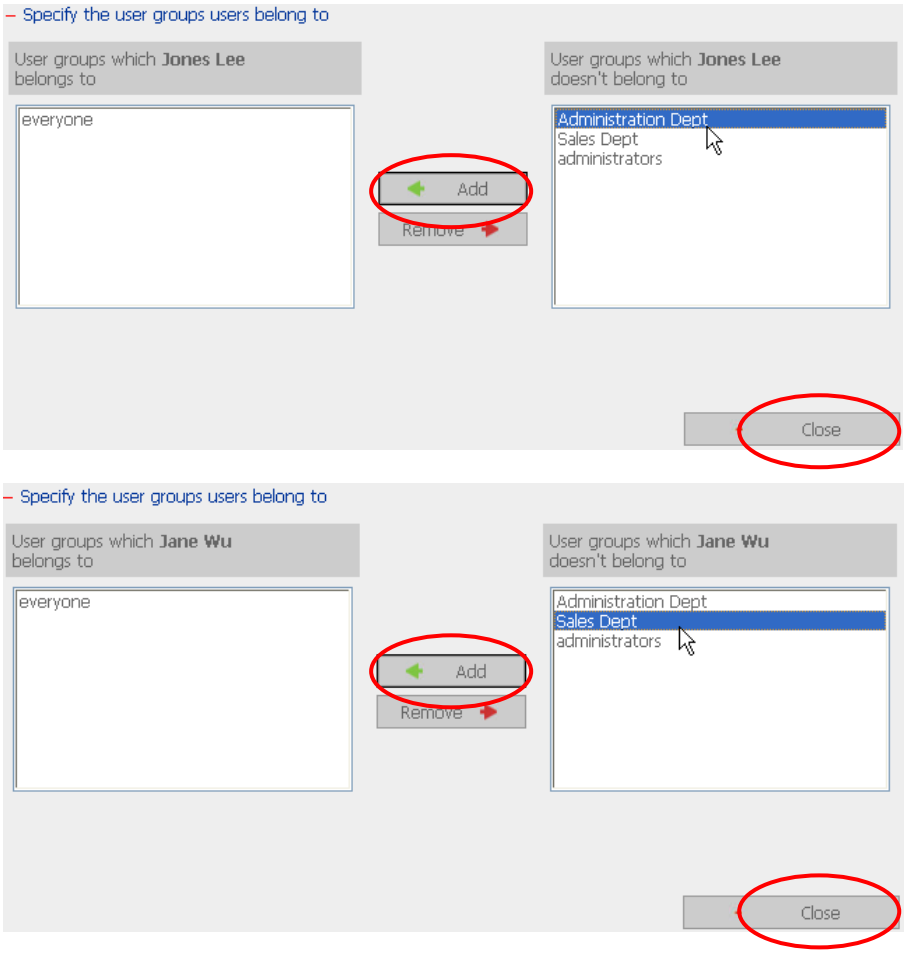


ii. Enter the user name (Jones Lee/ Jane Wu) and password. Check the box "Continue to set the user groups to which this user belongs" and click **OK**.

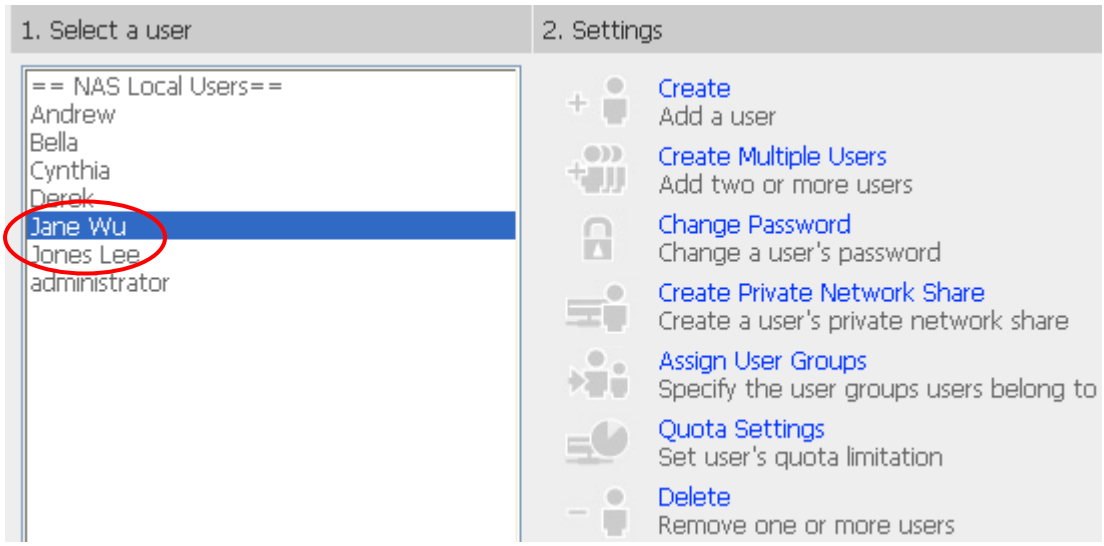




iii. Select the user groups the users belong to on the right list, i.e. Mr. Jones Lee for Administration Dept and Ms. Jane Wu for Sales Dept, and click **Add**. Then click **Close**.



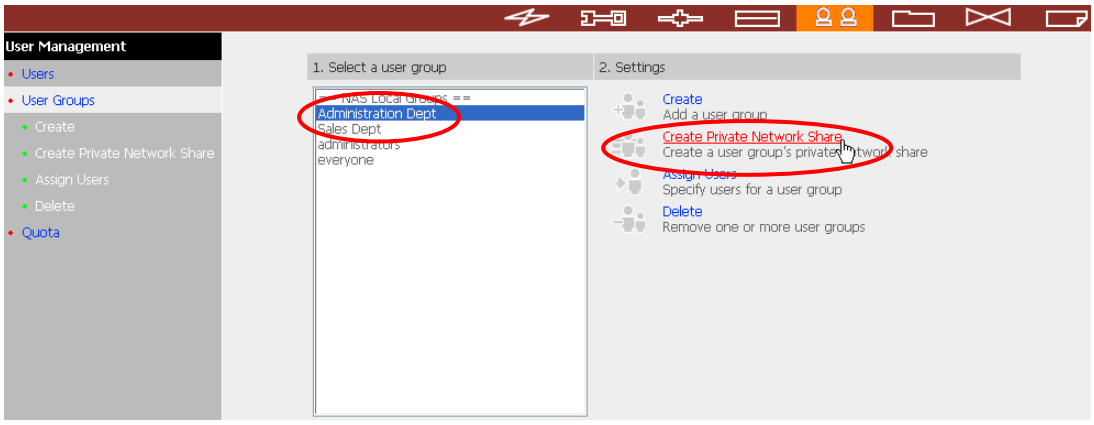
iv. After creating the users, the users will appear on the list on Create User Page.



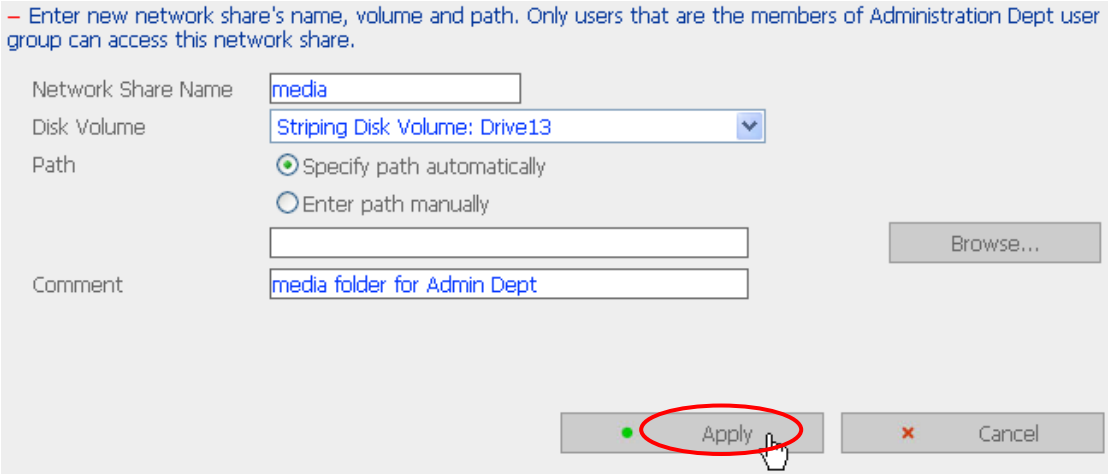
Create Private Network Share for User Groups

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

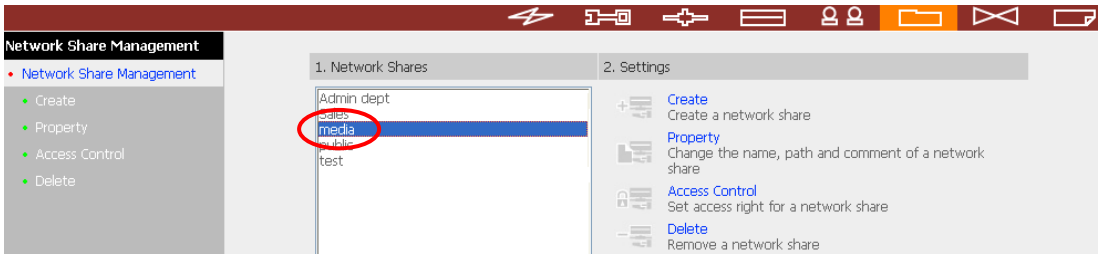
1. To create a network share called **media** accessible by Administration Department only, please go to "User Management—User Groups" page. Select the user group Administration Dept and click **Create Private Network Share** on the right.



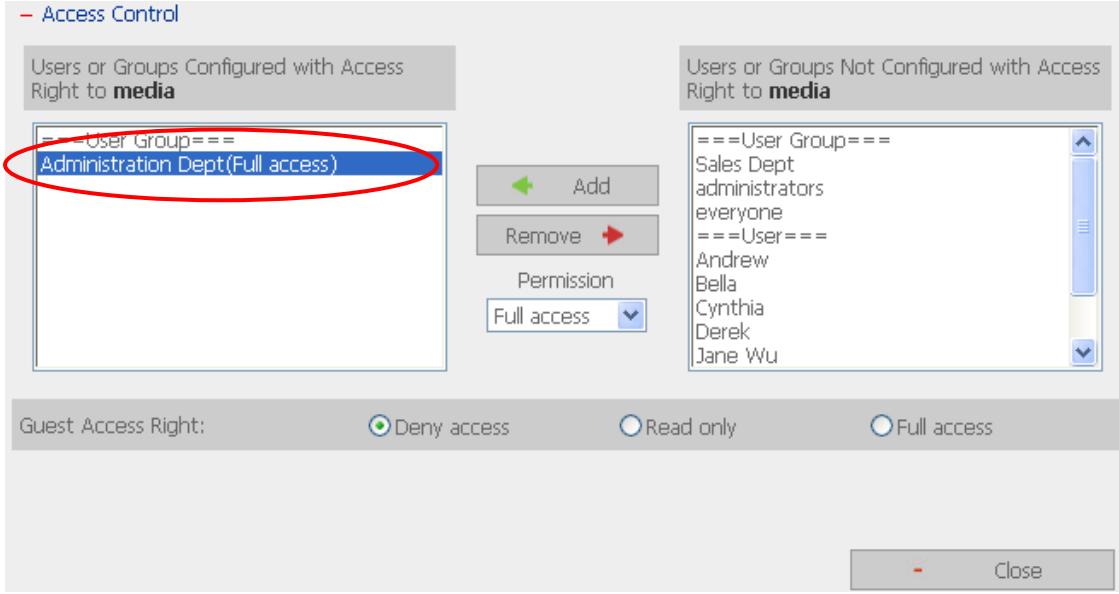
2. Enter the network share name **media**. Select to disk volume that the share will be created in and specify the path automatically or manually. Enter the comment for the network share, e.g. media folder for Admin Dept and click **Apply**.



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.

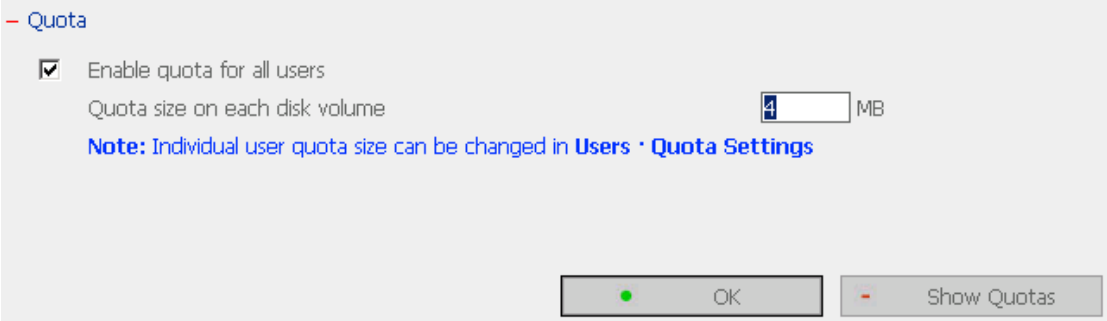


6.7.3 Quota

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:

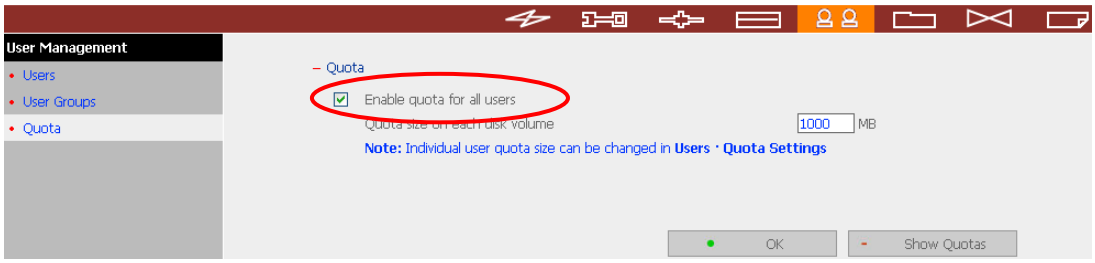
i. Enable quota for all users

ii. Quota size on each disk volume

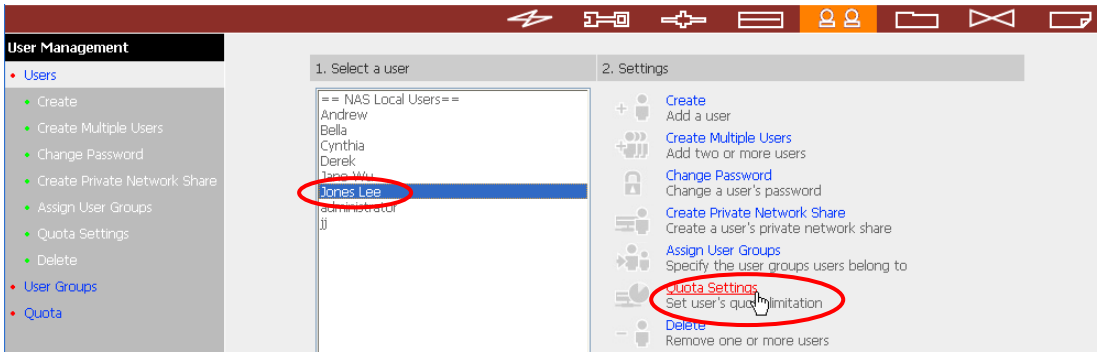


Please refer to the following example to configure the quota setting of users:
The IT department is planning to set the disk quota of Mr. Jones Lee from Administration Department and Ms. Jane Wu from Sales Department on GNS-8000B. The disk quota is 2000MB for Mr. Jones Lee and 4000MB for Ms. Jane Wu.

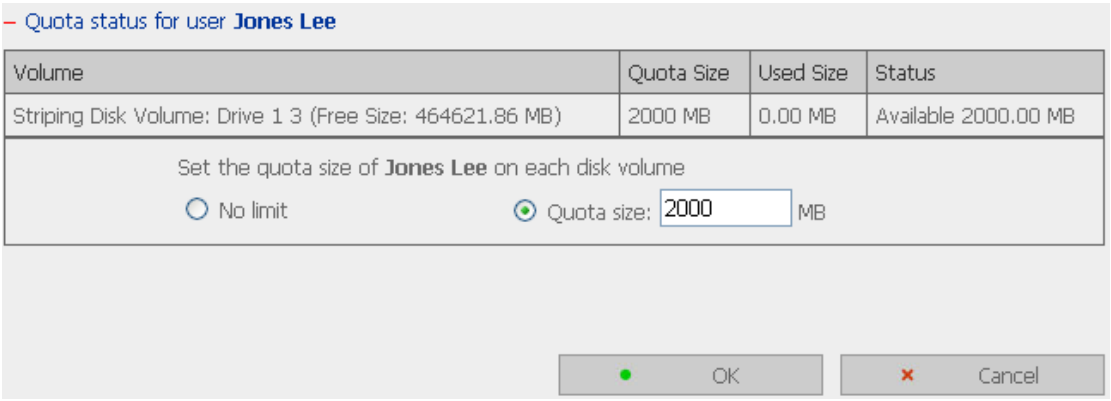
1. Please go to **Quota** page in **User Management** to enable quota for all users. Enter the quota size on each disk volume, e.g. 1000MB. The quota for individual user can be modified later.



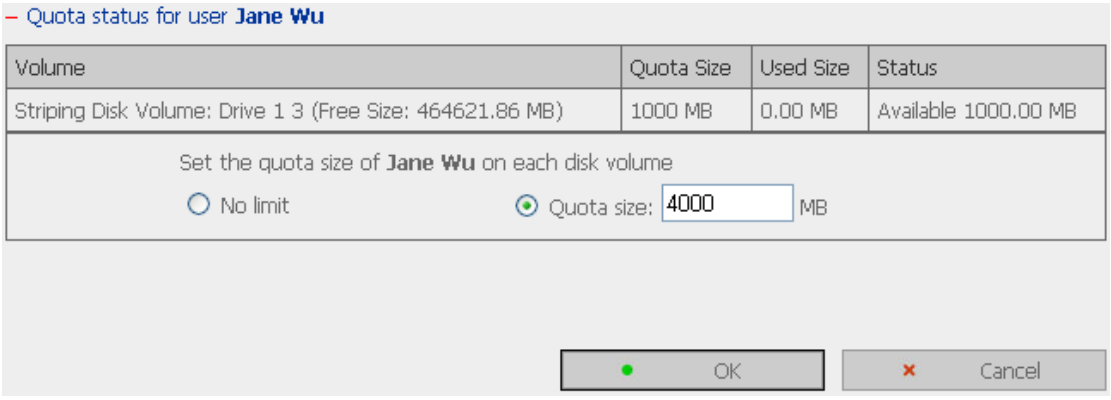
2. Select Jones Lee on User page and click **Quota Settings** on the right.



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

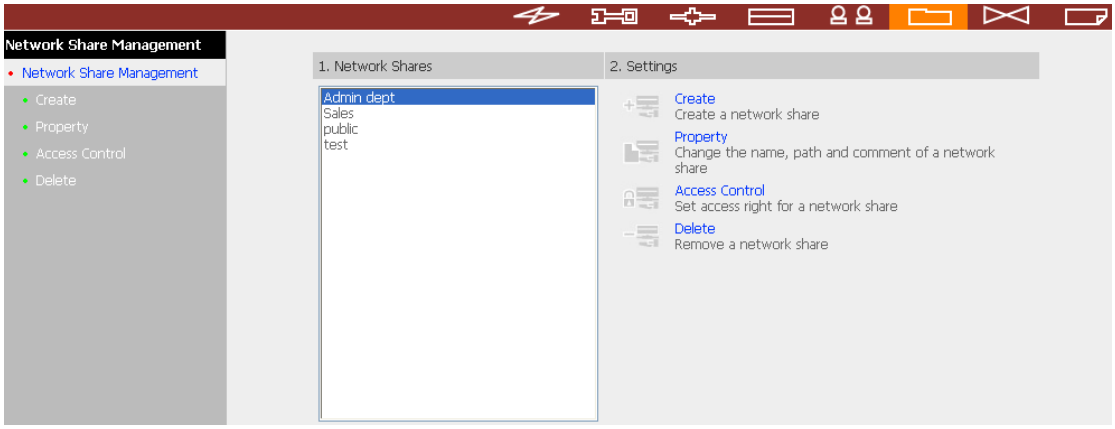


4. Follow the same steps and enter the quota size 4000MB for Jane Wu and click **OK**. The quota setting is successfully applied.

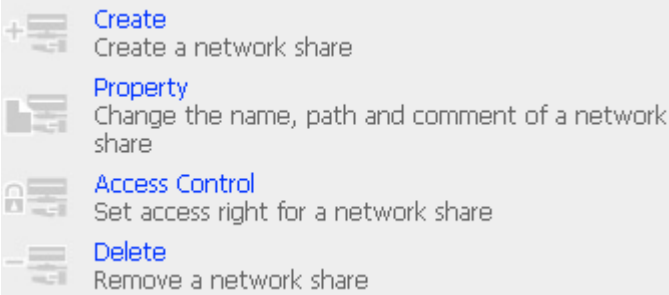


6.8 Network Share Management

The primary purpose of network storage is file sharing. In a standard operation environment, you can create different network share folders for various types of files, or provide different file access rights to users or user groups.



There are four options in Network Share Management:



6.8.1 Create

To create a network share, enter the following information:

✓ Network share name

The share name must not exceed 12 characters and cannot contain the following characters:

" . + = / \ : | * ? < > ; [ ] %

✓ Disk volume

This area shows the disk volume status.

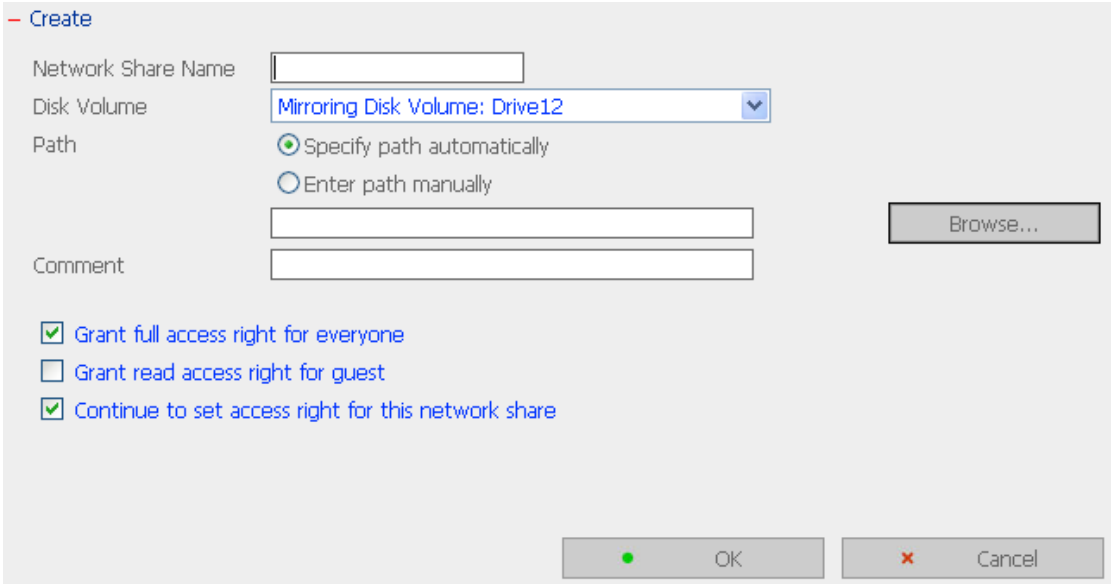
✓ Path

All data are 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:

" . + = / \ : | * ? < > ; [ ] %

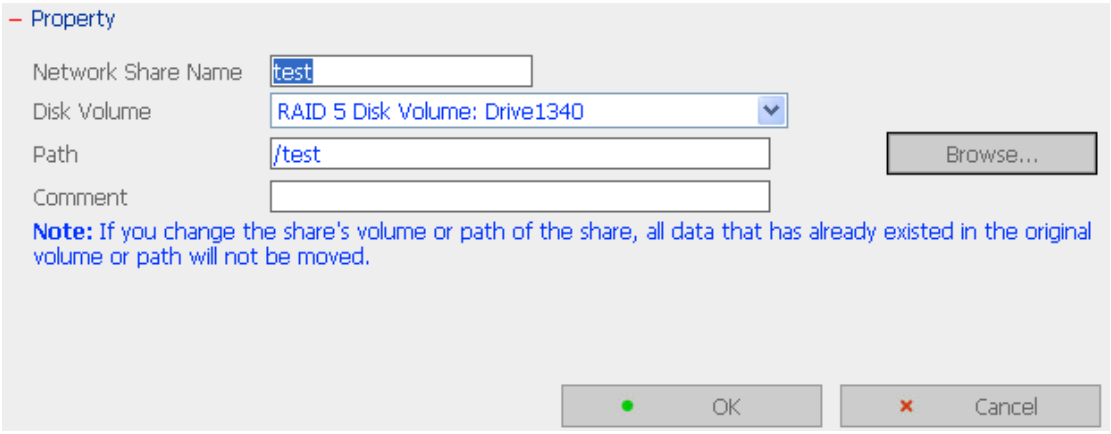
✓ Comment

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



6.8.2 Property

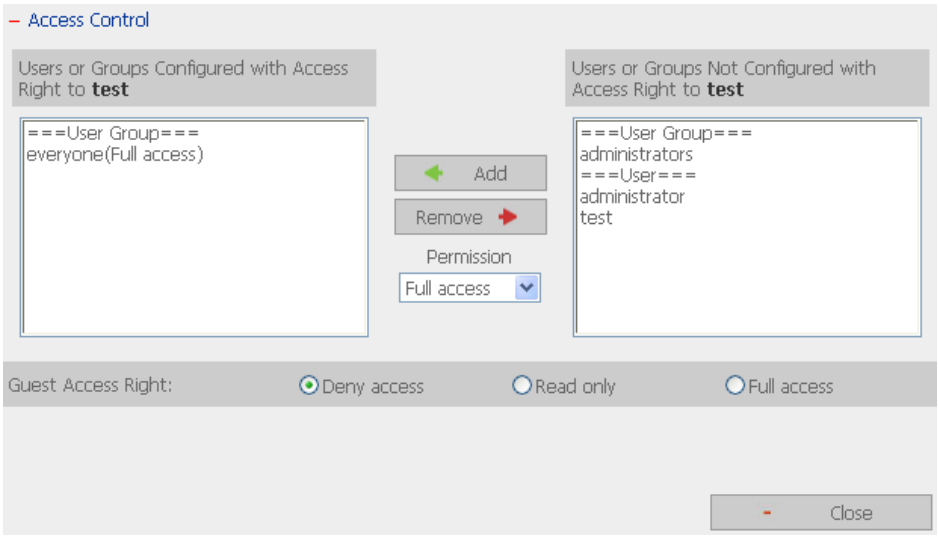
To edit the property of an existing network share, select a share and click **Property**. You can then edit the content of that share.



6.8.3 Access Control

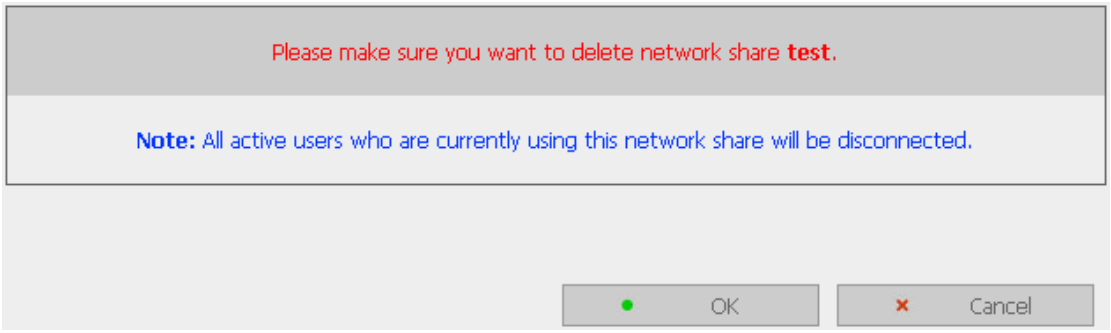
Once the network share is created, you can assign access rights to users or user groups:

- ✓ Deny access
  Access to the network share will be denied when this option is selected.
- ✓ Read only
  Users can read the files only on the network share when read only is assigned.
- ✓ Full access
  Users with full access are allowed to read, write, create, or delete files and folders on the network share.



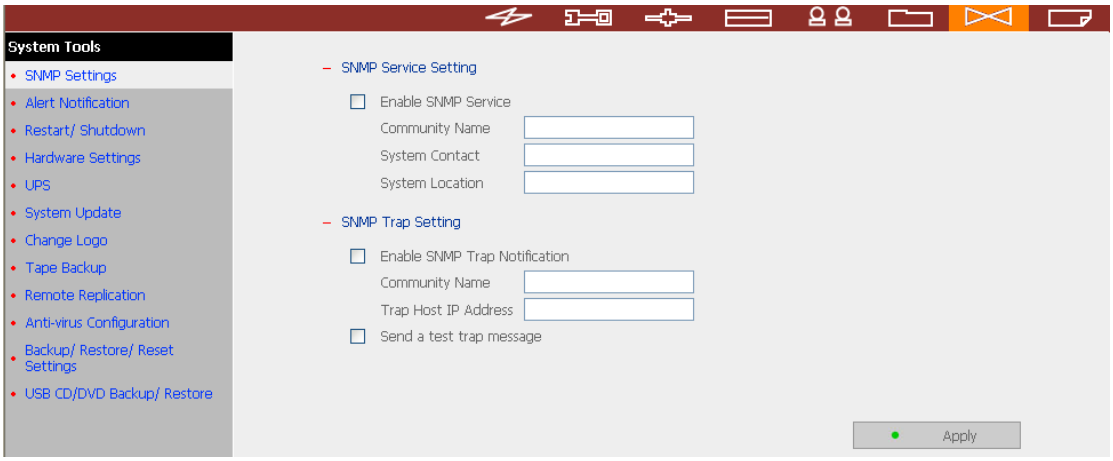
6.8.4 Delete

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



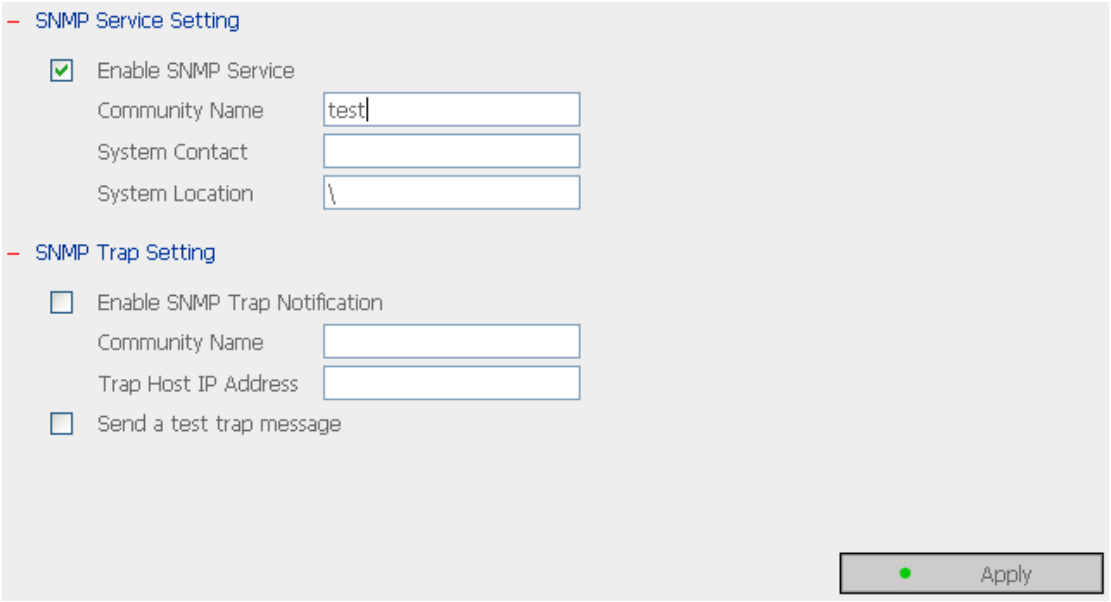
6.9 System Tools

System Tools enable you to optimize the maintenance and management of GNS-8000B.



6.9.1 SNMP Settings

Enable SNMP (Simple Network Management Protocol) service and complete all necessary settings to manage network components of the server by SNMP. When enabling SNMP Trap Notification, a message will be sent to a specified trap host when an error occurs.

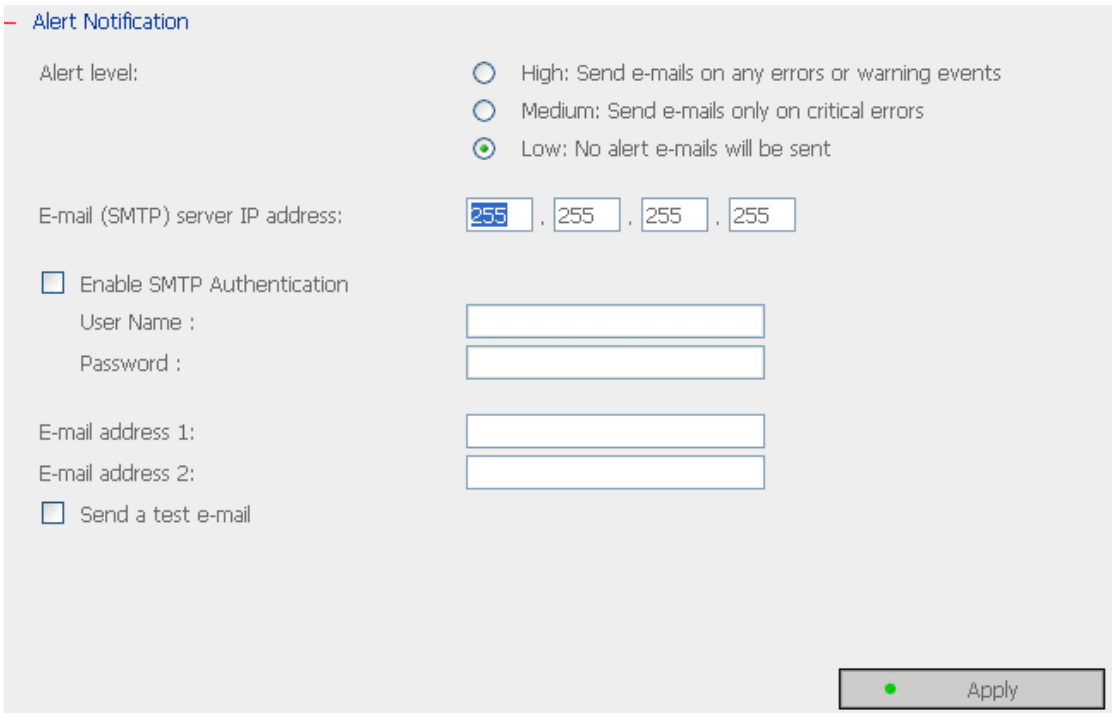


6.9.2 Alert Notification

Enter the e-mail address of administrator and SMTP server IP address. In case of warning or malfunction, e.g. CPU fan fails, a disk drive fails or is unplugged, an email will be sent to the administrator automatically. You can refer to Event Logs section in Statistics & Logs (refer to Chapter 6.10.2) to check all happened errors and warnings.

If your mailbox requires SMTP authentication, enter the user name and password.

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



6.9.3 Restart/ Shutdown

Select to restart or shut down GNS-8000B.

6.9.4 Hardware Settings

You can enable or disable the hardware functions of GNS-8000B.

i. Enable LCD panel setting function

To enable users to configure TCP/IP settings via the LCD panel.

ii. Enable configuration reset switch

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

iii. Enable buzzer

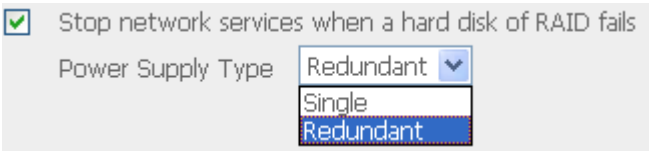
When buzzer is enabled, an alert sound will be played in case of system error.

iv. Power Supply Type

Select power supply type. There is one power supply by default. **Do NOT change the position of default power supply.** To use a second power supply, you can purchase from the distributor.

To use two power supplies, follow the steps below:

1. Set power supply type as Redundant.

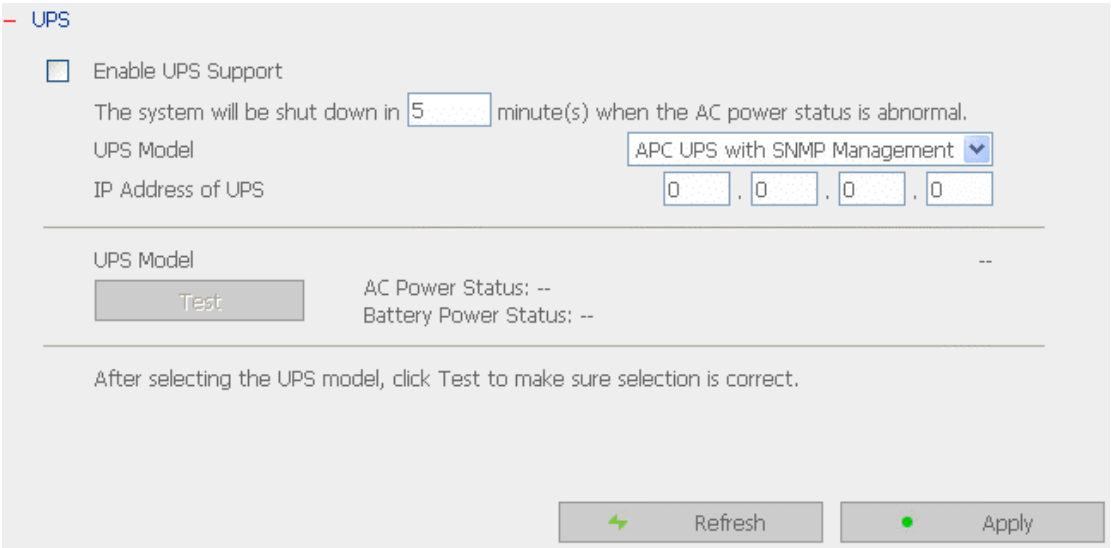


2. Shut down the system properly.
3. Insert the second power supply and turn on the system.

If a power supply fails, the system will send an alert notification to the administrator.

6.9.5 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 will shut down automatically by probing the power status of the connected UPS unit.



✓ **Enable UPS support**

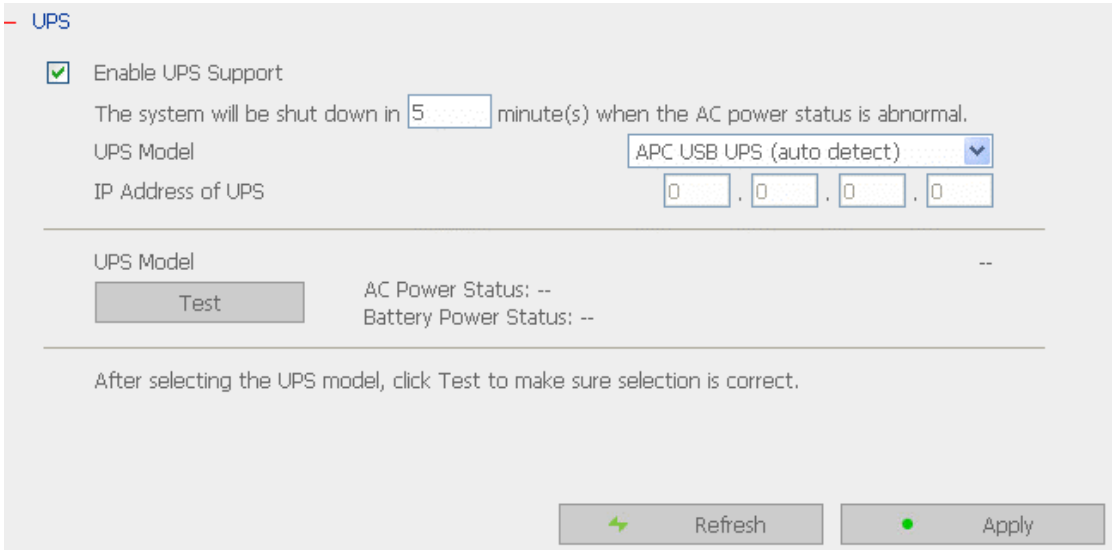
To activate the UPS support, you can select this option. You can set the shutdown timer to turn off the system automatically after the system detects the AC power is abnormal. In general, the UPS can keep supplying the power for the system for about 5~10 minutes, depending on the maximum load of the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



Note: When UPS support is not enabled, the **Test** button will not function.

6.9.6 System Update

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

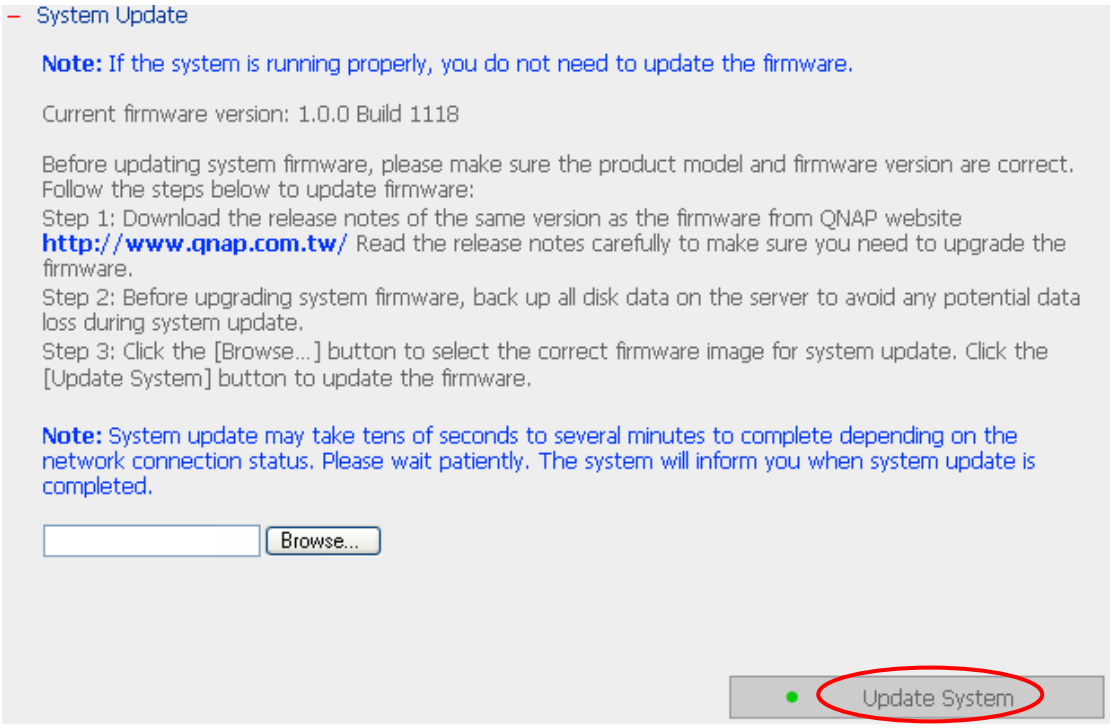
Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:

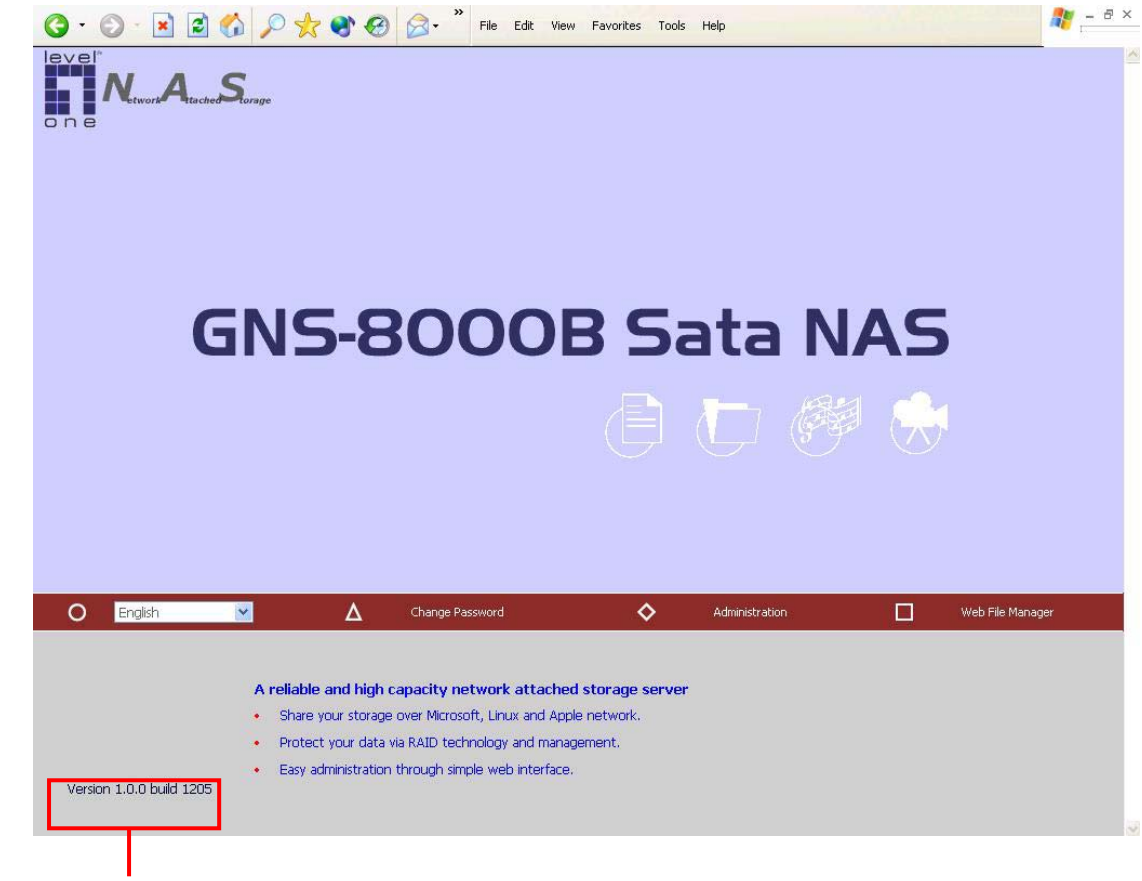
Step 1: Download the release notes of the same version as the firmware from LEVELONE website http://www.Level1.com/. Read the release notes carefully to make sure you need to upgrade the firmware.

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.

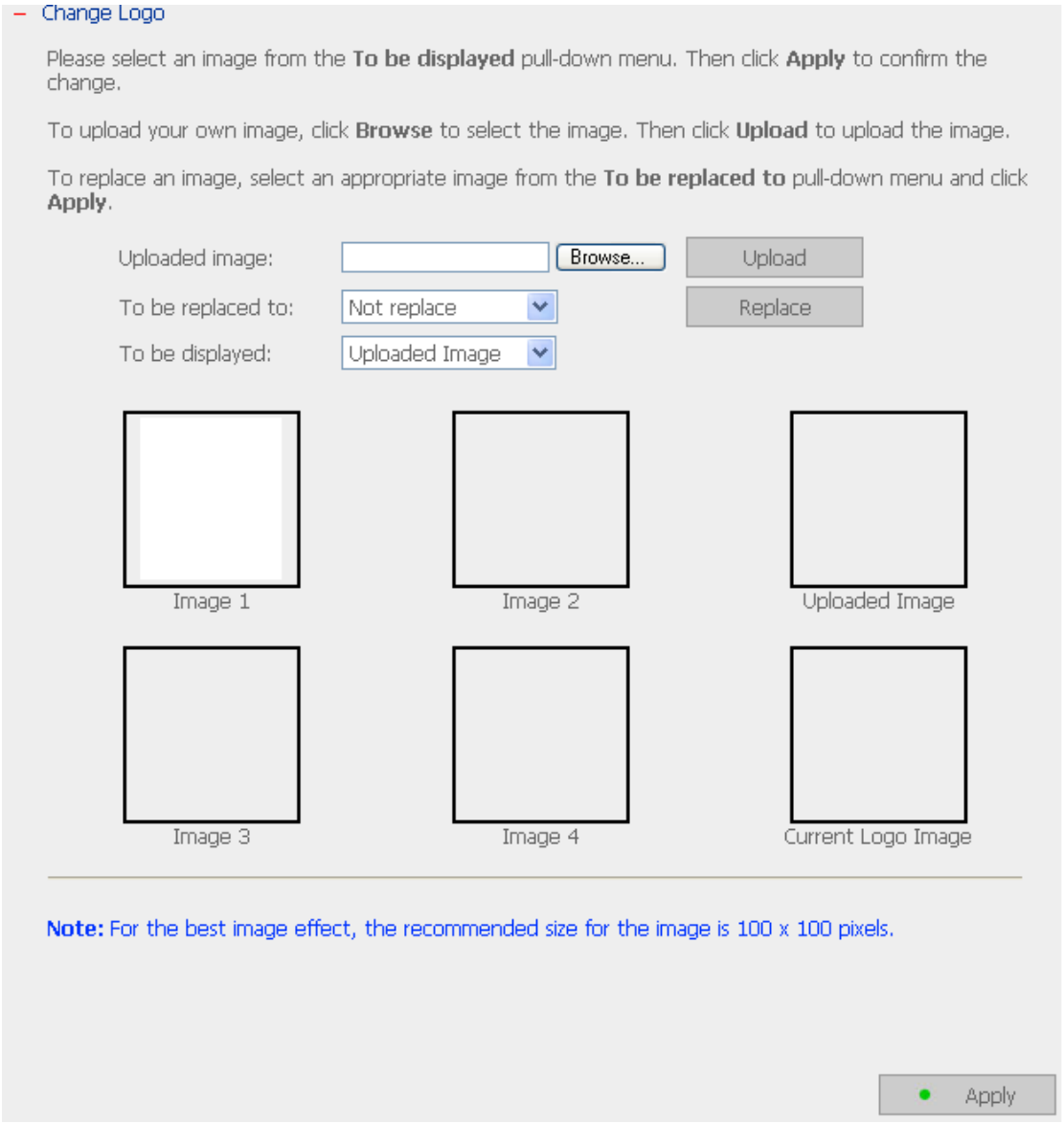




GNS-8000B firmware

6.9.7 Change Logo

You can choose a personal picture to display on the login page of GNS-8000B. The size of the picture cannot exceed 20K bytes.

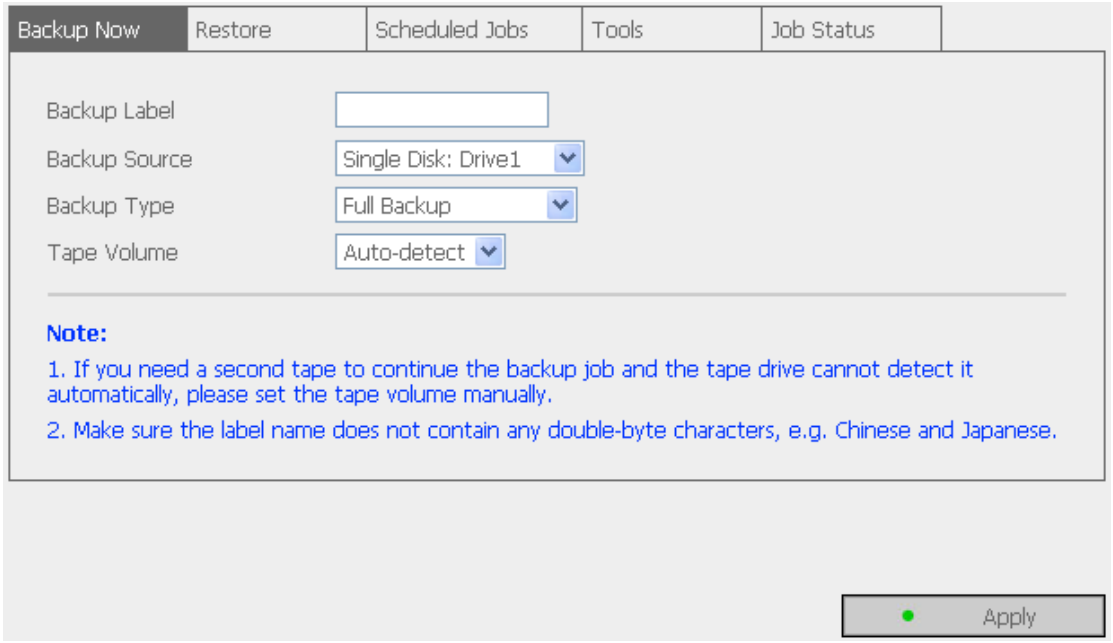


6.9.8 Tape Backup

Tape backup enables you to perform backup or restoration jobs by a tape drive. GNS-8000B supports **full backup** and **incremental backup**. By full backup, all source files will be backed up. By incremental backup, only modified or new files after last backup will be backed up.

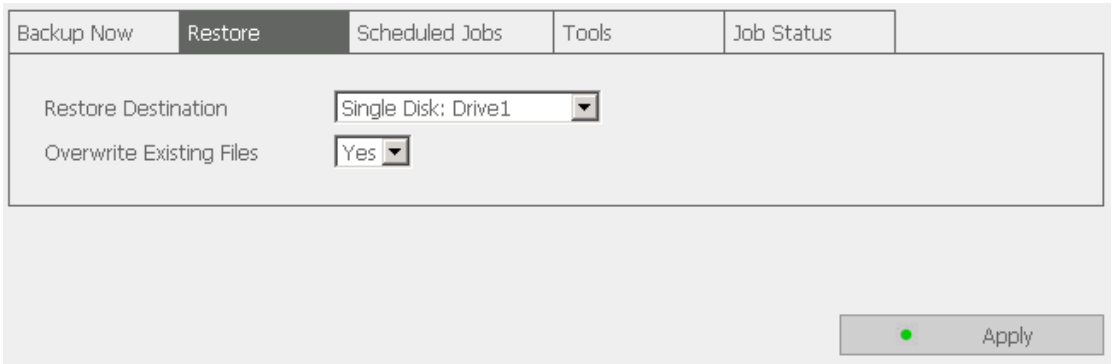
✓ Backup Now

To back up files to the tape drive immediately.



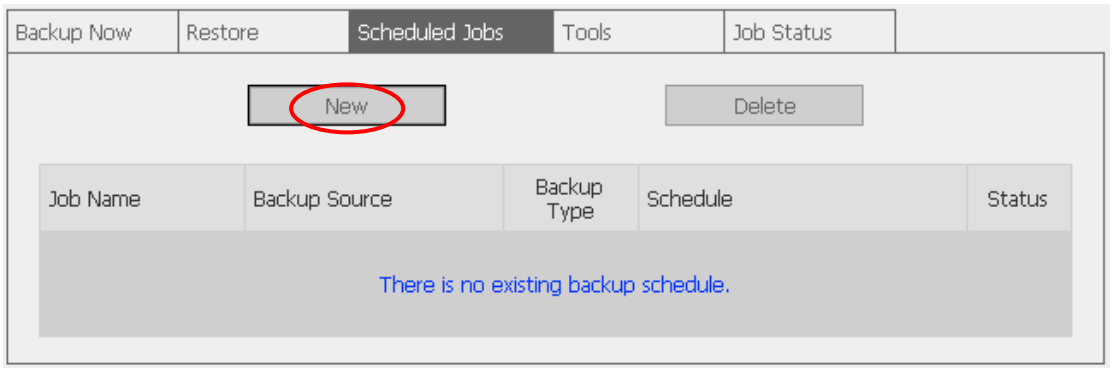
✓ Restore

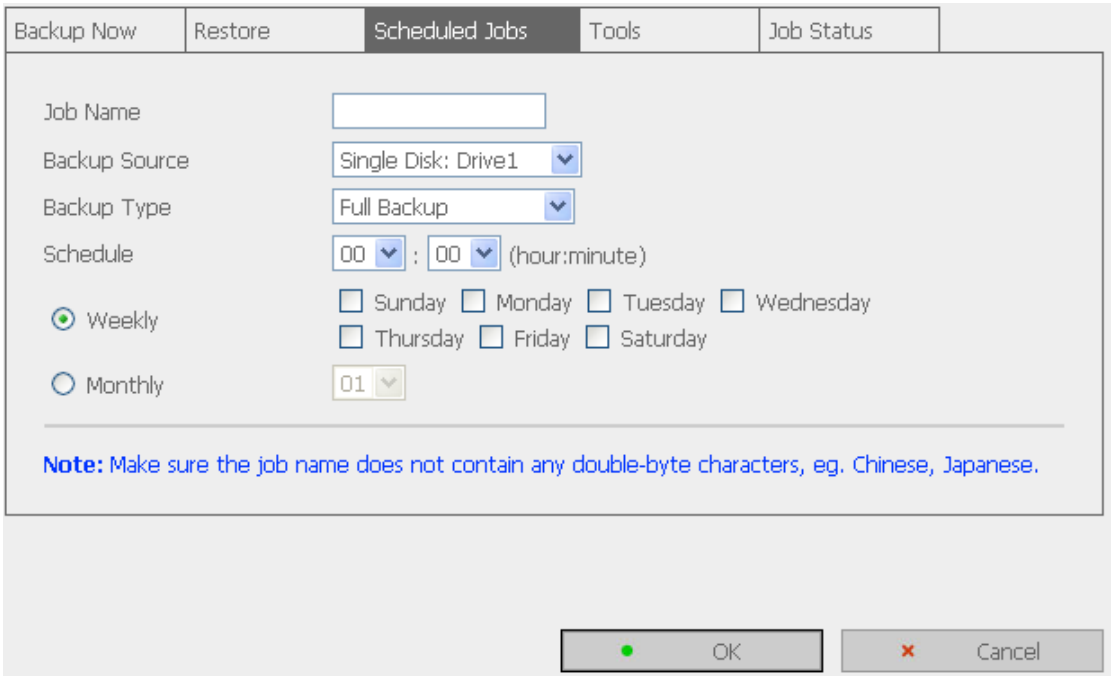
To restore data from the previously backup tape. Select the restore destination and whether or not to overwrite existing files.



✓ Scheduled Jobs

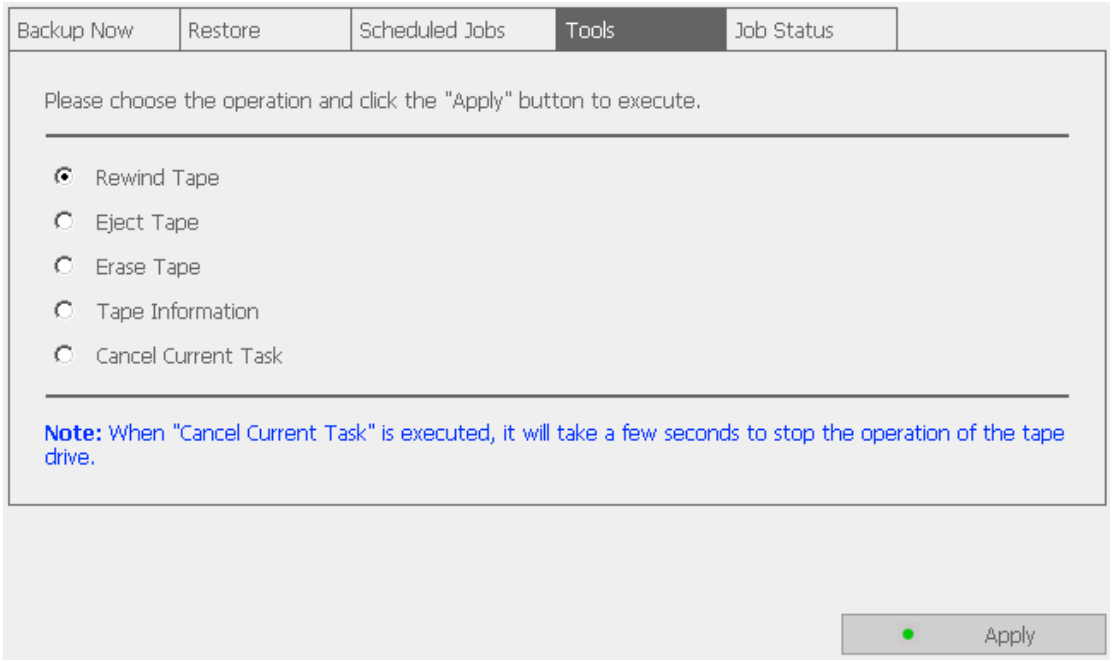
You can schedule a backup job to be executed automatically. Click **New** and define the job name, backup source, backup type, and schedule.





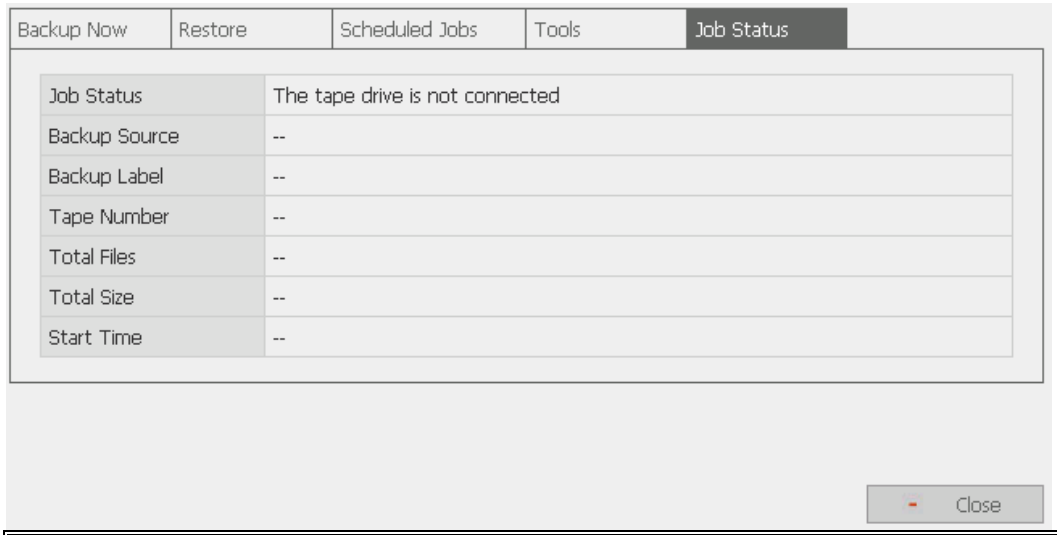
✓ Tools

There are several useful tape functions to operate on the tape drive. For example, you can rewind, eject or erase the tape here. Click **Apply** to execute the action.



✓ Job Status

You can view the status of backup or restore job.



Note:

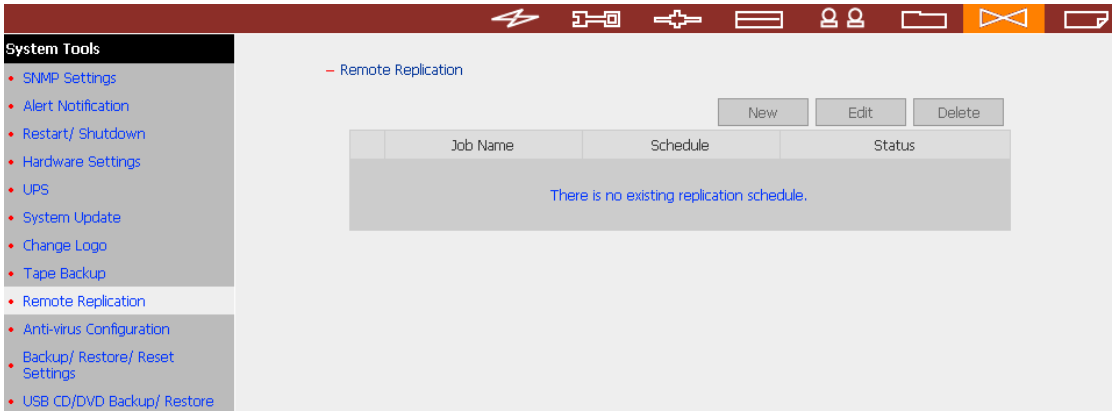
1. The SCSI tape drive has to be properly connected and turned on before starting up GNS-8000B for proper detection.
2. HVD (High Voltage Differential) SCSI tape drive is not supported.

6.9.9 Remote Replication

Remote Replication enables you to replicate local files to remote folders on another server. The files will be 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 job.**

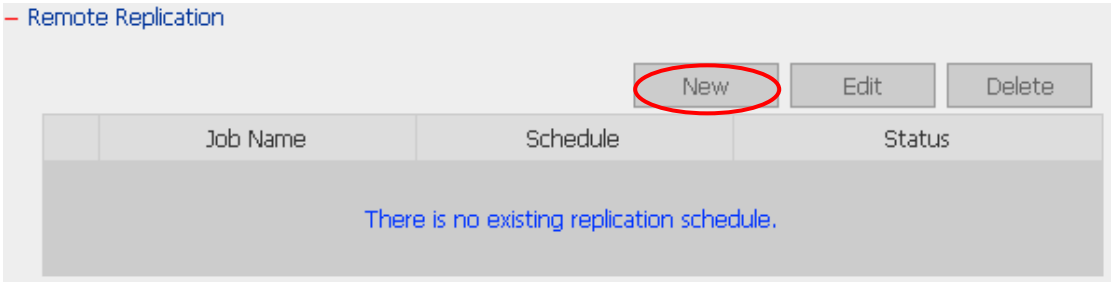
Using Remote Replication

Login GNS-8000B, go to Remote Replication in System Tools.

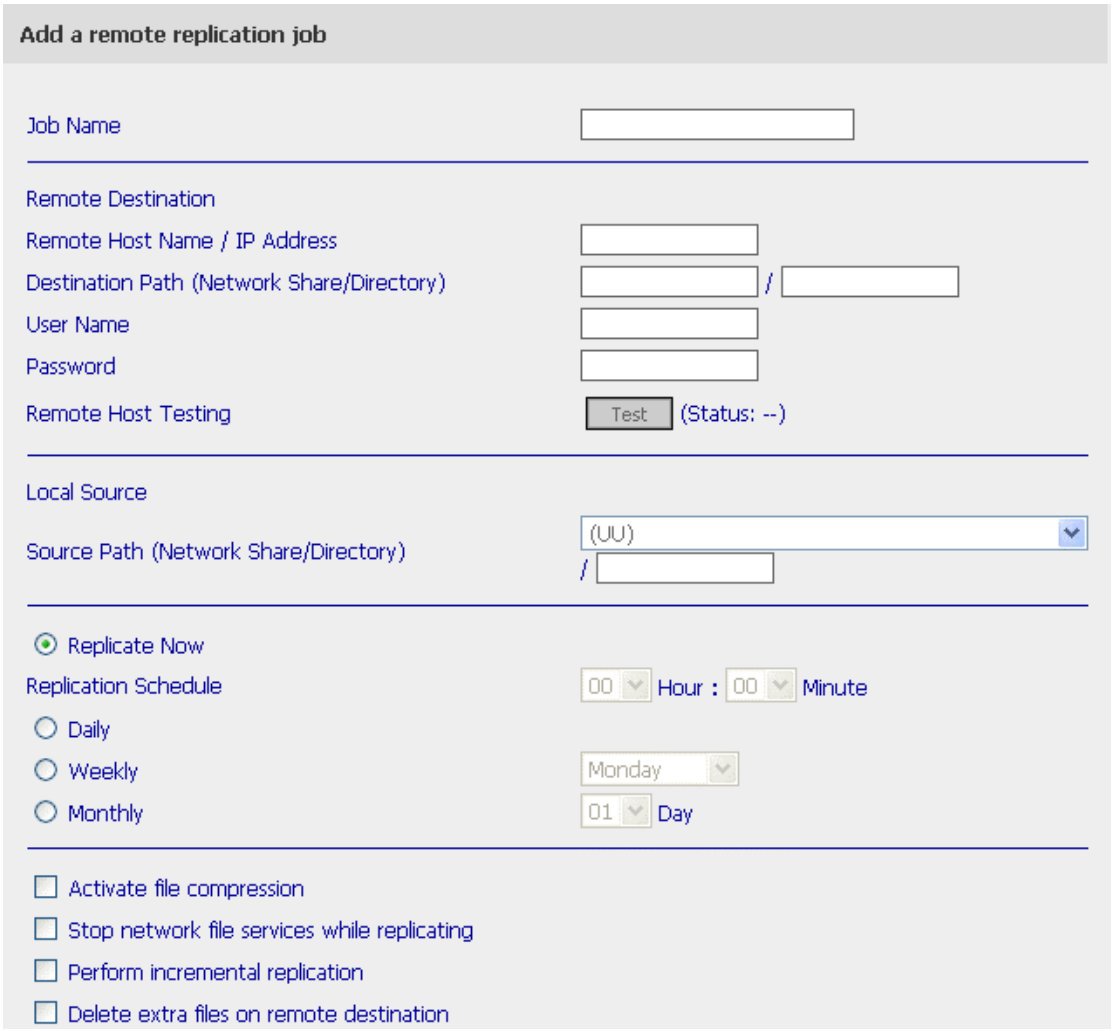


i. New

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



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



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.

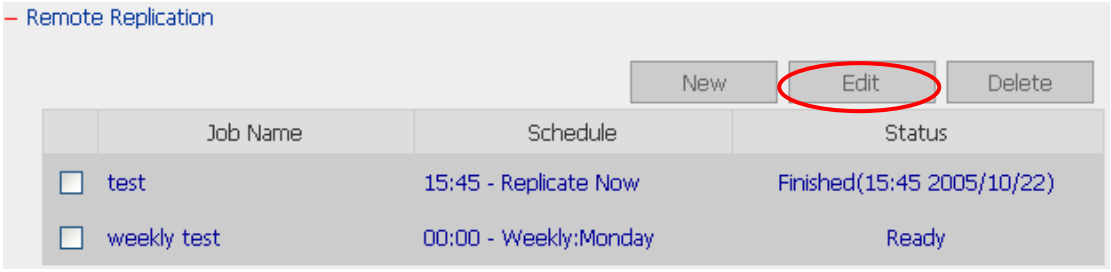
ii. Edit

a. Select the job to be edited.

b. Click **Edit**.

c. Modify the settings.

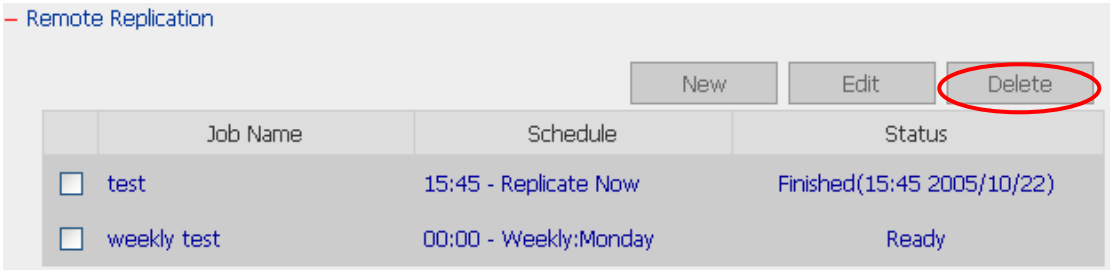
d. Click OK to save or **Cancel** to quit.



iii. Delete

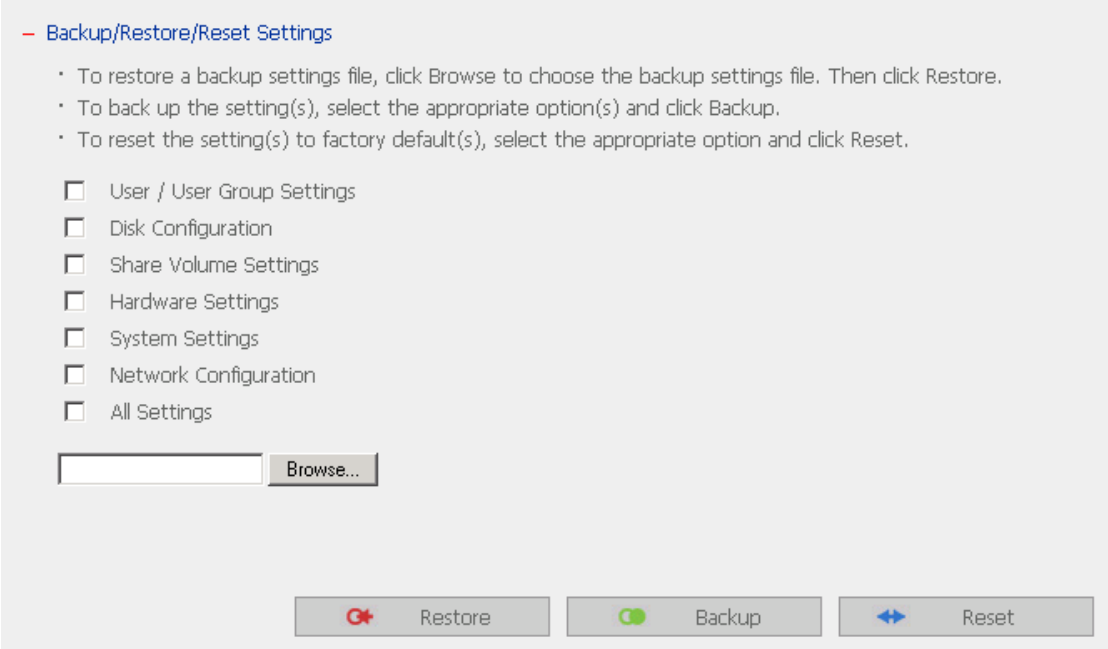
a. Select the job to be deleted.

b. Click **Delete**.



6.9.10 Backup/ Restore/ Reset Settings

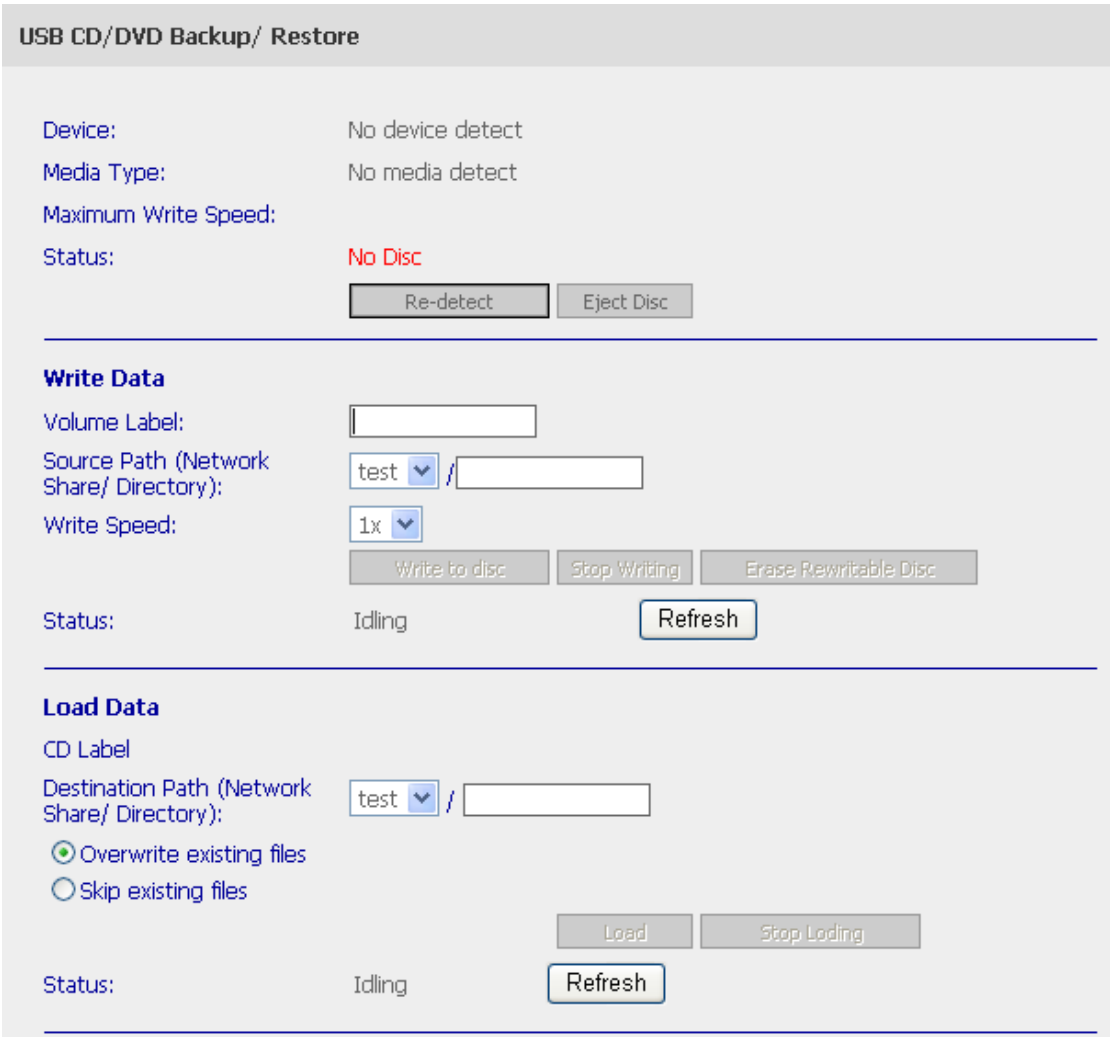
To backup the setting(s), select the appropriate option(s) and click **Backup**. To restore a backup settings file, click **Browse** to select the file and click **Restore**. To reset the setting(s) to factory default(s), select the appropriate option and click **Reset**.



6.9.11 USB CD/ DVD Backup/ Restore

USB Backup/Restore function enables you to back up local data to CD/DVD discs via USB CD/DVD burner, and CD/DVD data to local disk.

Using USB Backup/Restore



i. USB CD/DVD Detection

a. Connect USB burner to GNS-8000B. Turn on the burner and input a writable disc.

b. Click **Re-detect**. The system will display information of the detected burner.

c. Click **Eject Disc** to eject the disc from the burner.

d. Insert the disc again and click **Re-detect** and continue to use writing and loading functions.

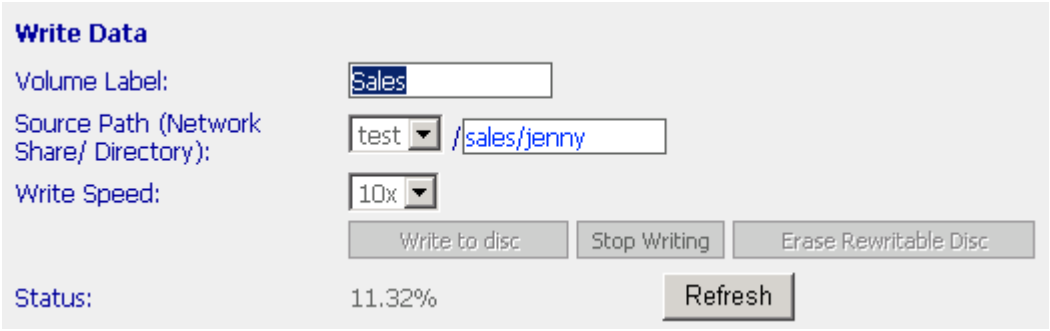
ii. Write data

a. To write data from GNS-8000B to disc, enter the volume label name.

b. In Source Path (Network Share/Directory), select a network share from the drop-down menu and enter a directory name. You can also use stroke to indicate multiple directories, e.g. sales/jenny.

c. Select Write Speed.

d. Click **Write to disc** to write data to the disc. To view updated writing status, click Refresh.



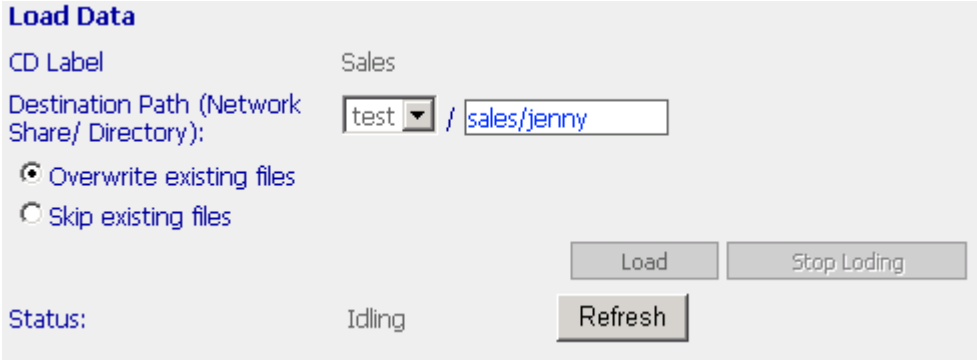
e. The disc will be ejected after burning.

iii. Load data

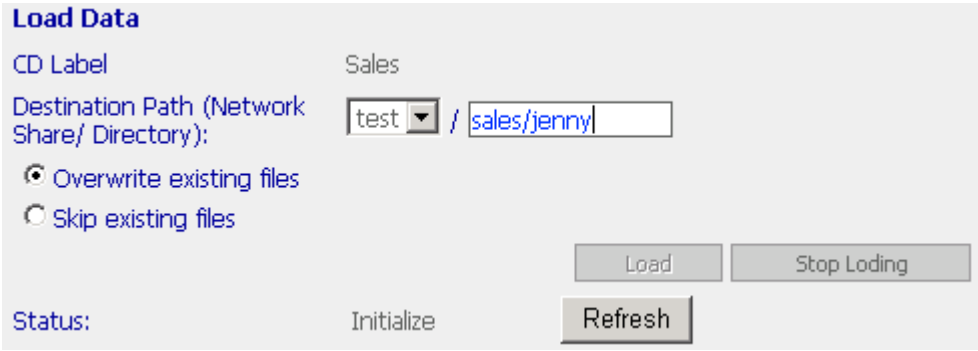
a. Insert the disc for loading data to GNS-8000B network share. The volume label is shown in CD Label.

b. In Destination Path (Network Share/Directory), select a network share from the drop-down menu and enter a directory name. You can also use stroke to indicate multiple directories, e.g. sales/jenny.

c. Select **Overwrite existing files** to overwrite existing files in the directory or **Skip existing files** to skip loading files that have existed in the directory during loading process.



d. Click **Load** to load data to destination path.



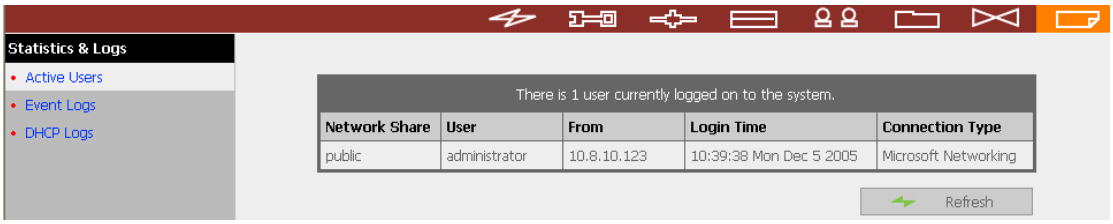
e. The disc will be ejected after loading.

6.10 Statistics & Logs

You can view the event logs of all currently online users on GNS-8000B for system monitoring.

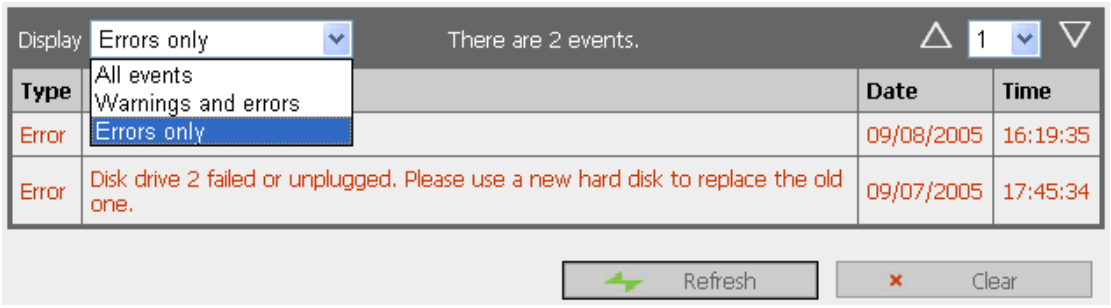
6.10.1 Active Users

This page shows all users that are currently logged on to Web File Manager.



6.10.2 Event Logs

GNS-8000B can store thousands of recent event logs, including warning, error and information messages. In case of system malfunction, event logs can be retrieved to analyze system problems.



6.10.3 DHCP Logs

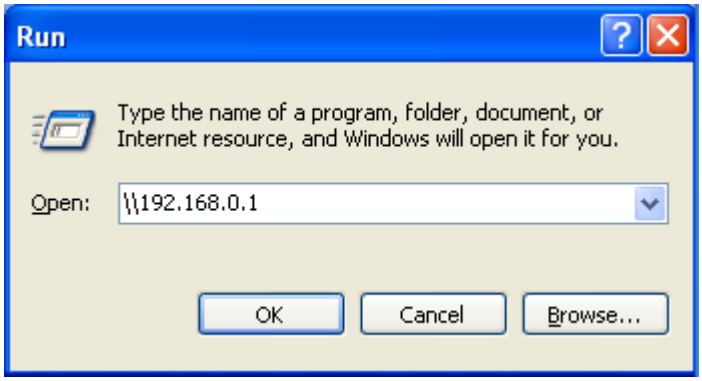
When DHCP service is enabled, you can refer to DHCP logs to monitor all assigned dynamic addresses, client MAC addresses and other information.

Chapter 7 Access GNS-8000B

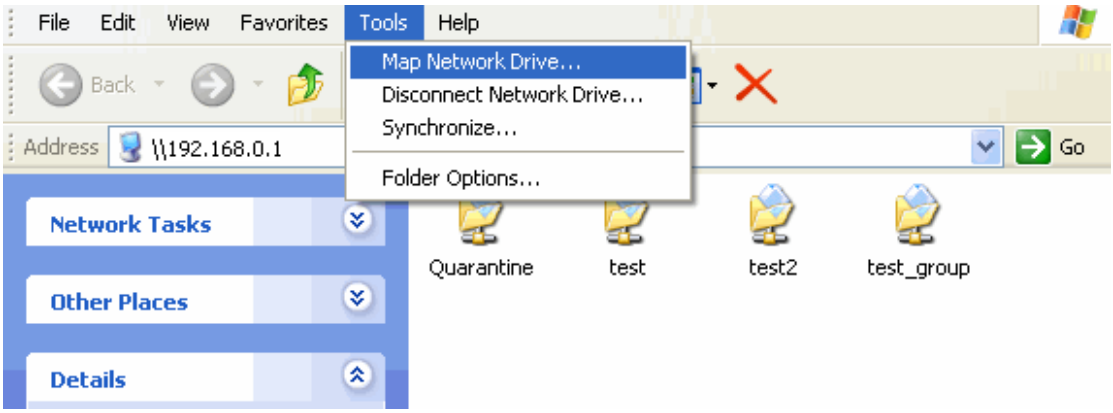
7.1 By Microsoft Windows

1. You can access GNS-8000B in Windows OS by the following ways:
   a. By Quick Install Wizard. For further information, please refer to Chapter 4.
   b. You may also search for GNS-8000B within the Network Neighborhood. Locate the workgroup and find the name of your GNS-8000B. When the server is found, double-click on the server name to connect.
   c. You may also use "Search for Computers" function to look for your GNS-8000B in Windows. Under Windows OS, please follow these steps:
      i. Open "My Network Places".
      ii. Under the tool bar, click **Search**.
      iii. Enter the name of GNS-8000B in Computer Name field.
      iv. Click **Search**.

      When GNS-8000B is found, double click the item to access the server.
   d. Use Run function in Windows. Type \\[server name] or \\[server IP] to access share folder on GNS-8000B.



2. Once the connection to GNS-8000B is successful, all listing on your available network share will be displayed. Use the option **Map Network Drive** to map the folder(s) as your network drive.

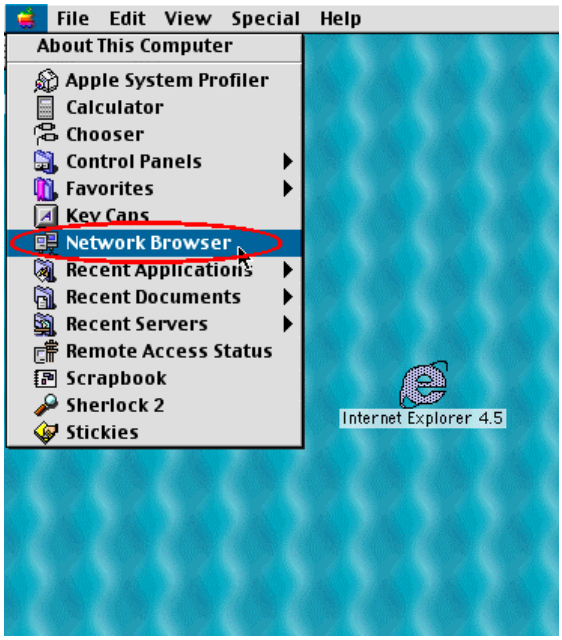


7.2 By Apple MAC OS

If you are an Apple MAC user, you can access GNS-8000B by the following ways:

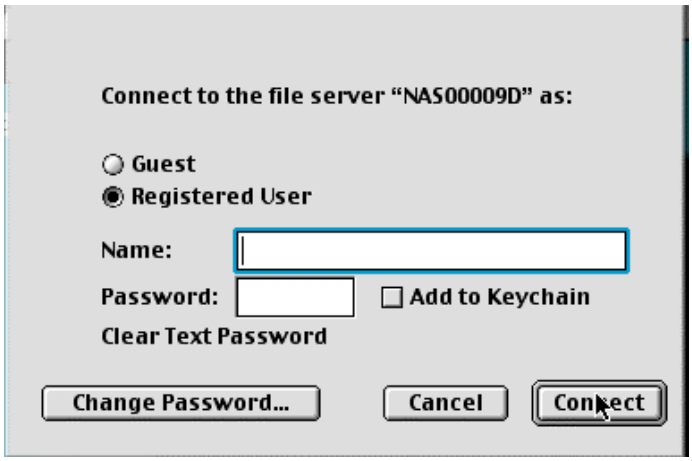
1. Using Network Browser

a. Choose "Network Browser" in Apple menu.

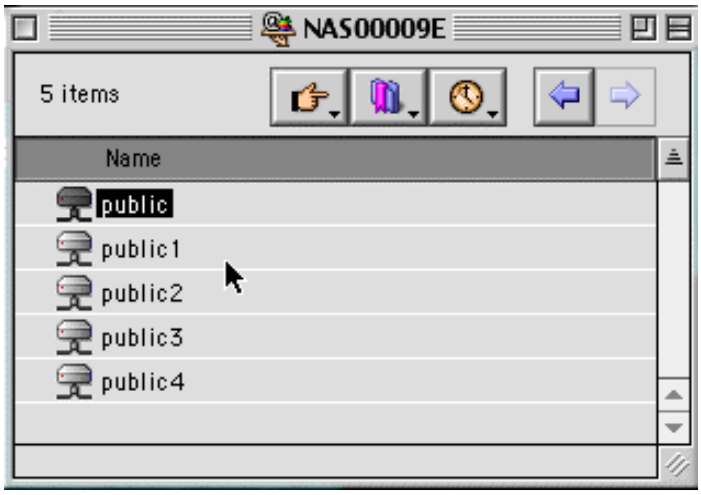


b. In "Network Browser", choose AppleTalk. A list of computers on the AppleTalk network will appear. Select GNS-8000B.

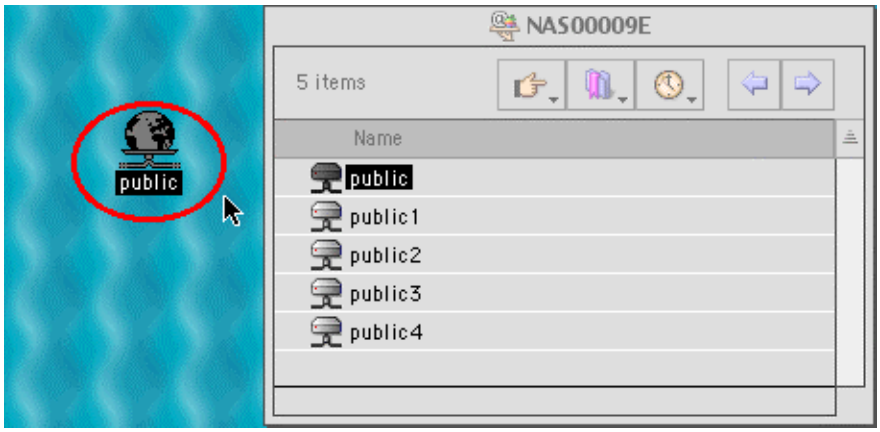
c. Enter the login name and password, or use "Guest" to enter. Click **Connect**.



d. When GNS-8000B is connected, all network shares will be shown.

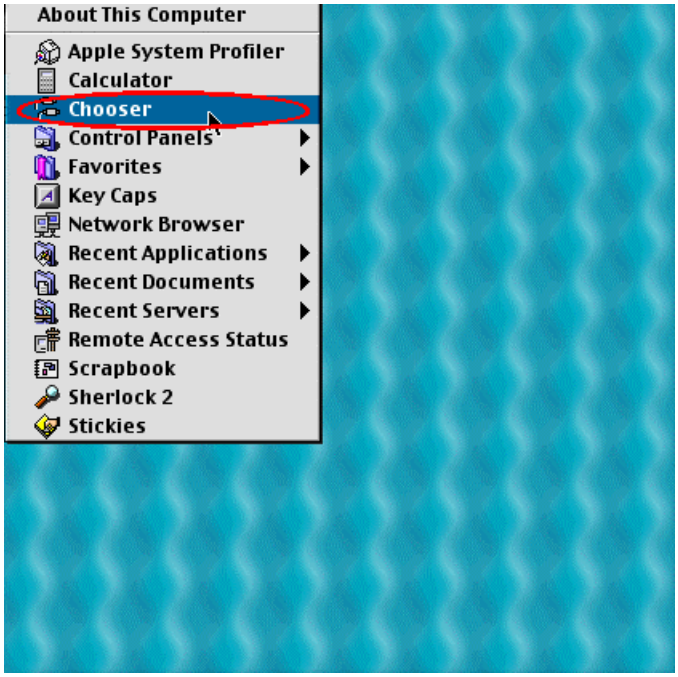


e. Choose a network share to connect. The network share will appear on the desktop.

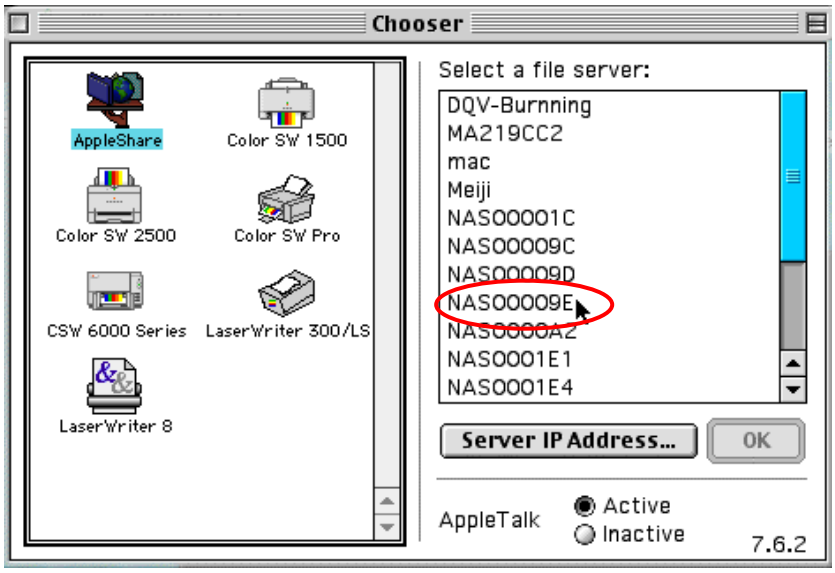


2. Using Chooser

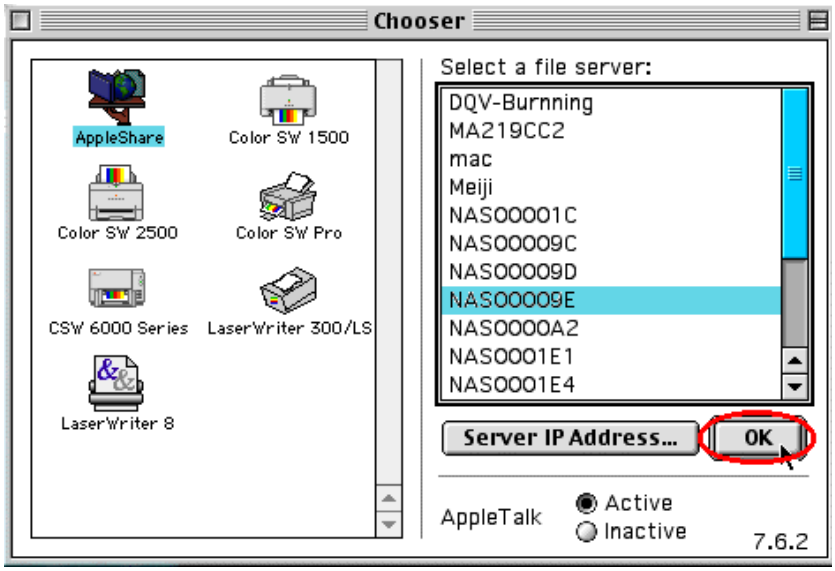
a. Select **Chooser** on Apple menu bar.



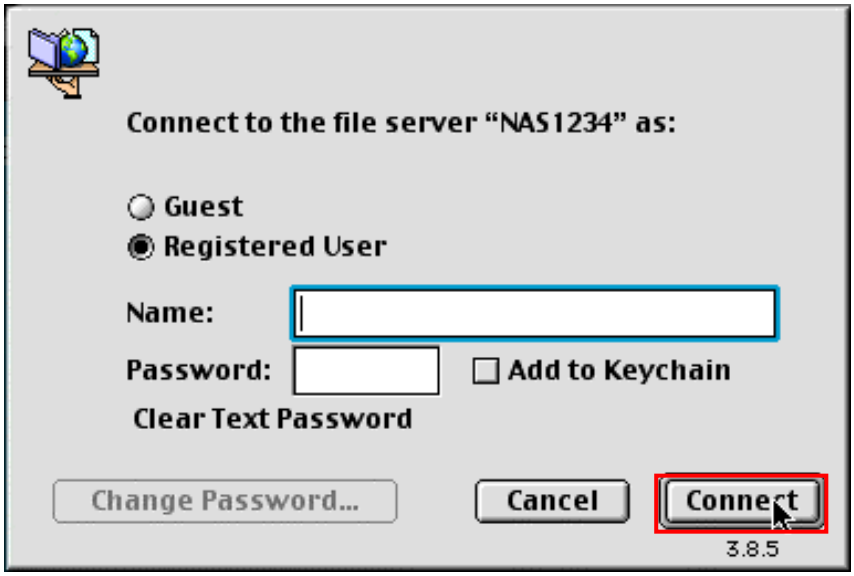
b. Click on **AppleShare**. The name of GNS-8000B will appear on the right side of the window.



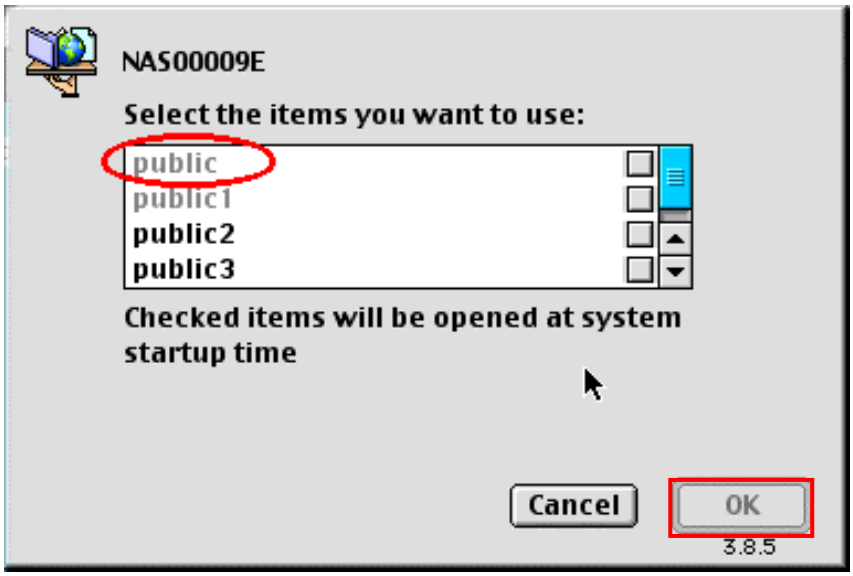
c. Use the mouse to highlight GNS-8000B and click OK.



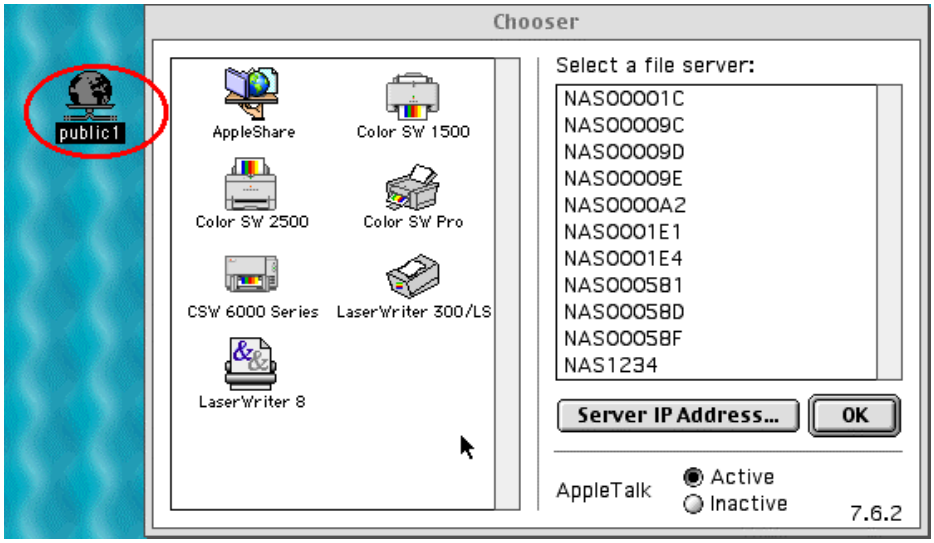
d. Enter the correct login name and password or use "Guest" to login, and then click **Connect**.



e. All available network shares will be listed. Select a network share and click OK.



f. Close the Chooser program. Double click on the icon on the desktop to access the files.



7.3 By Linux OS

In addition to Microsoft and MAC OS, GNS-8000B also supports Linux systems through the NFS service:

1. On Linux, run the following command:
   mount -t nfs <GNS-8000B IP address>:/<Network Share Name> <Directory to Mount>

   For example, if the IP address of your GNS-8000B 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.

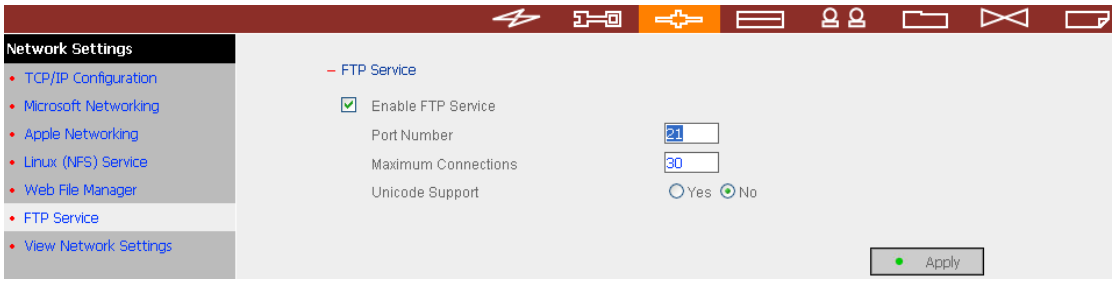
7.4 By Web Browser

Other than OS support, your GNS-8000B also provides a convenient web file management interface that allows using a standard web browser to access your data. If you link GNS-8000B to the Internet and use a public IP address, you can access the files on the server anywhere. For more information, please refer to Appendix A.

7.5 By File Transfer Protocol (FTP)

In addition to working with multiple operating systems, GNS-8000B also supports connection via FTP. Enter the correct user name and password to connect the server or access the public share folders as guest.

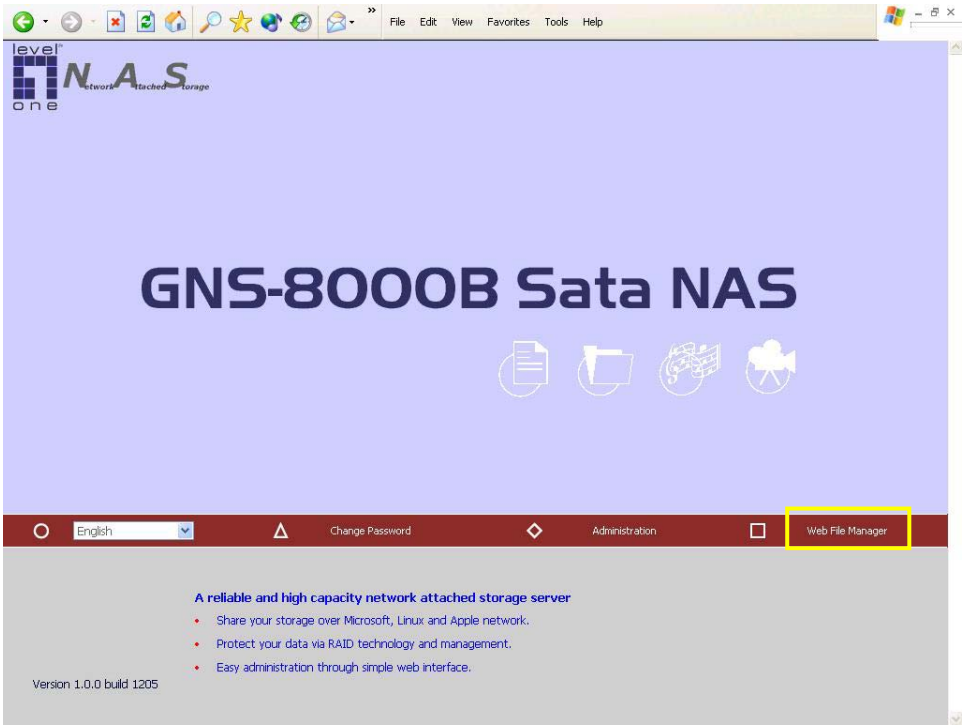
Please go to **Network Settings—FTP service** and enable FTP service before using FTP service.



Follow the steps below to use FTP service:

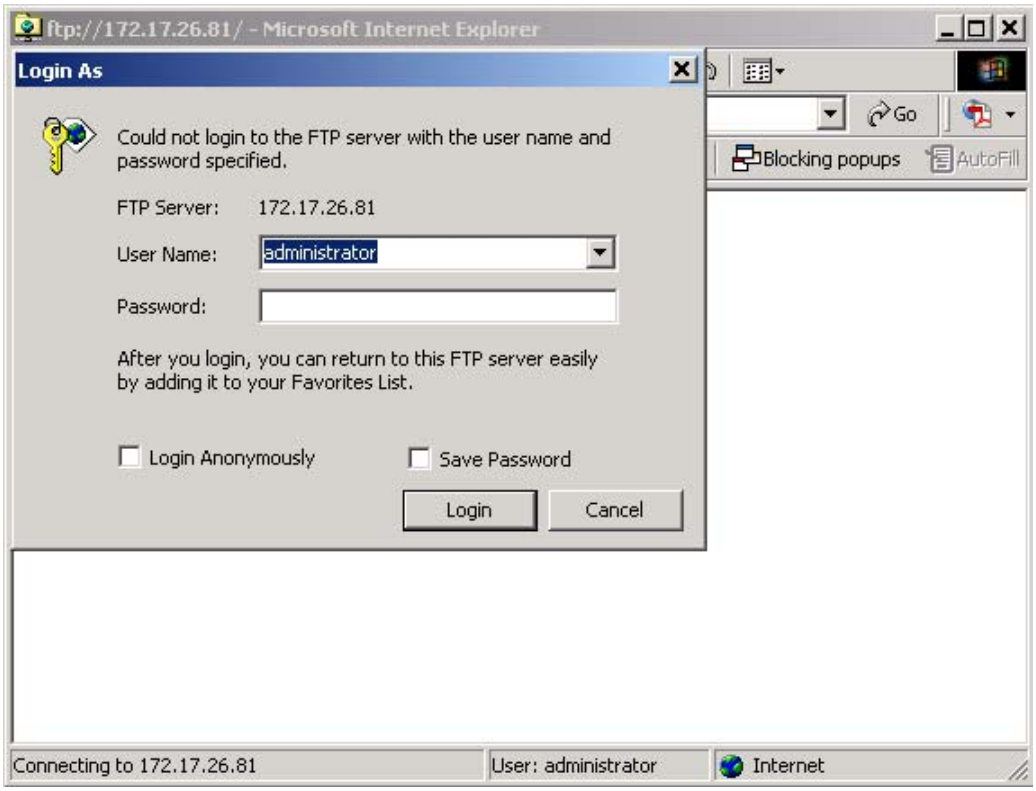
1. Open an IE browser and type ftp://[server IP] or ftp://[server name]. OR

2. By Web File Manager of GNS-8000B.
   a. Go the GNS-8000B administration and click Web File Manager. Enter user name and password to login GNS-8000B.

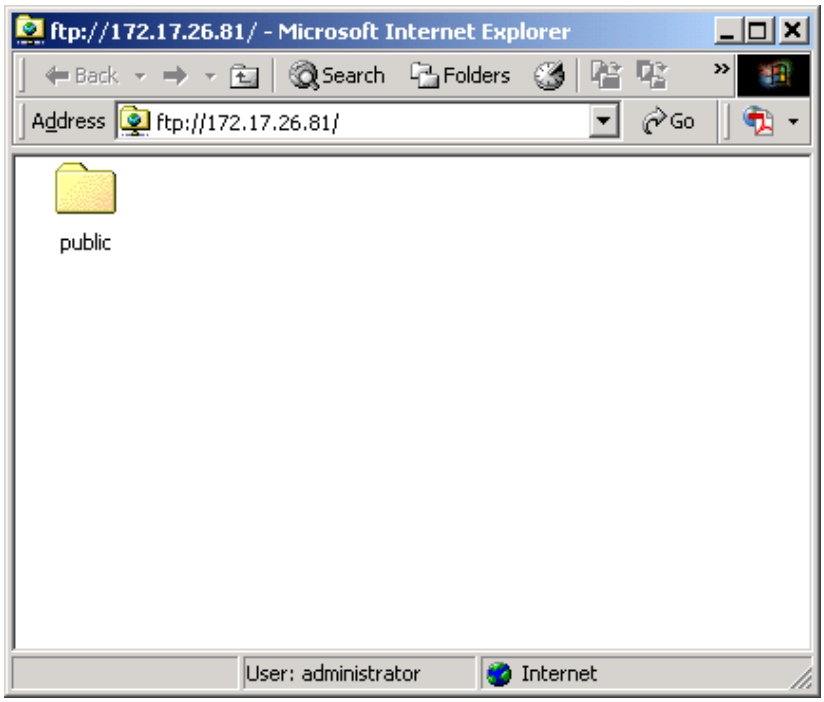


b. Click the share folder in **FTP** section.

c. When the ftp folder is shown, enter user name and password.



d. The share folder will be shown. You can then manage the folder by dragging and dropping files to it, as well as rename or delete the files.



Chapter 8 GNS-8000B Maintenance

GNS-8000B is specially designed to run 24x7 and be ready at all times against system crash caused by power outage. This section provides a general overview on system maintenance.

8.1 Restart/ Shut down Server

Follow the steps below to restart or shut down GNS-8000B.

1. Ask all active users of GNS-8000B to save their files and disconnect from the server.
2. Enter the administration page and select Restart/ Shutdown in System Tools.
3. Click **Restart** to reboot the server or **Shut Down** to turn off the server. You can perform these actions by the LCD panel.

8.2 Reset Administrator Password and Network Settings

To reset the administrator password and network settings of GNS-8000B,

1. Press the reset button of GNS-8000B for a few seconds. A beep sound will be heard.
2. Login GNS-8000B with the default user name and password:

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

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

8.3 Disk Failure or Malfunction

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

1. Record the malfunction status or error messages.
2. Stop using the failed GNS-8000B and turn off the server.
3. Contact customer service for technical support.

Note: Your GNS-8000B must be repaired by professional technicians, please 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.

8.4 Power Outage or Abnormal Shutdown

In case of power outage or improper shutdown of GNS-8000B, 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.

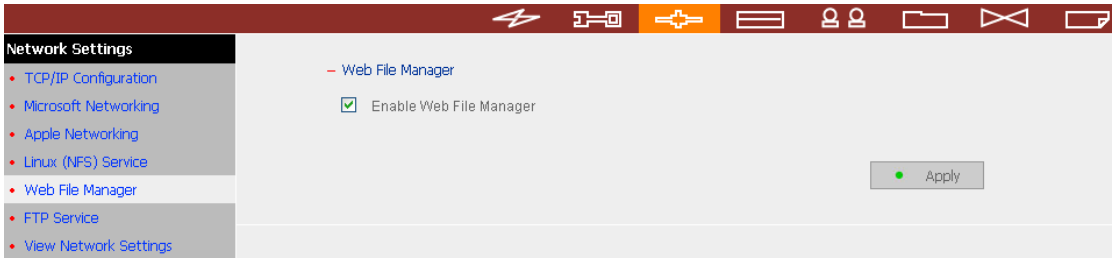
To avoid the above situations, please back up your data periodically and make sure you have done the following:

- Follow the instructions described in Chapter 8.1 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.

Appendix A Web File Manager

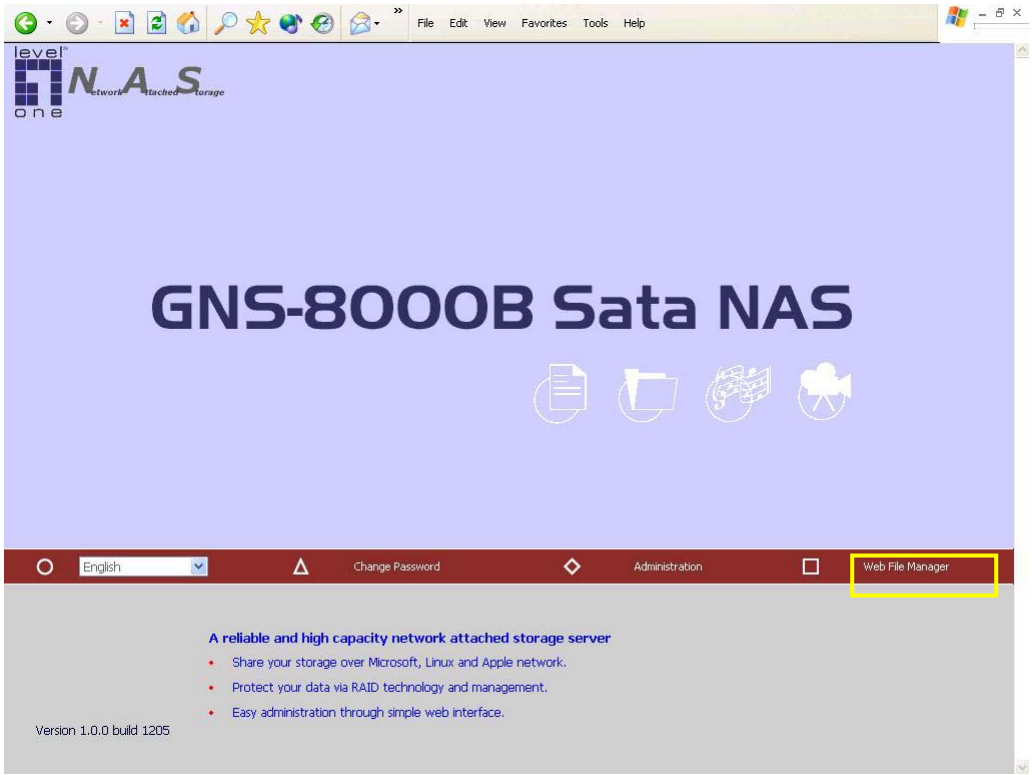
Using Web File Manager

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



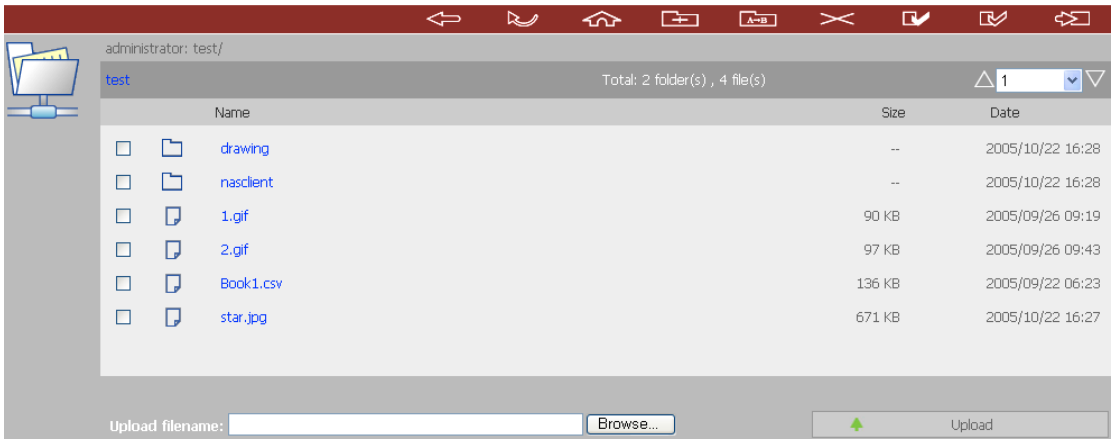
Launch the web browser and go to GNS-8000B home page. Select **Web File Manager** and enter the correct login name and password. You may also enter "guest" in the login name field with no password to access the network shares on GNS-8000B as an anonymous guest.

Note: Make sure a network share has been created before using Web File Manager.



Select an existing network share for management.

You can organize network share folders of GNS-8000B. 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 will be displayed. If your browser does not support the file format, the download window pops up automatically. Once the file is downloaded, you can open it on your computer.

Create folder

i. Select a network share or folder in which you want to create a new folder.

ii. Click (Create Folder) on the toolbar.

iii. 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 then (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 mouse and select “Save Target As” to save the file.

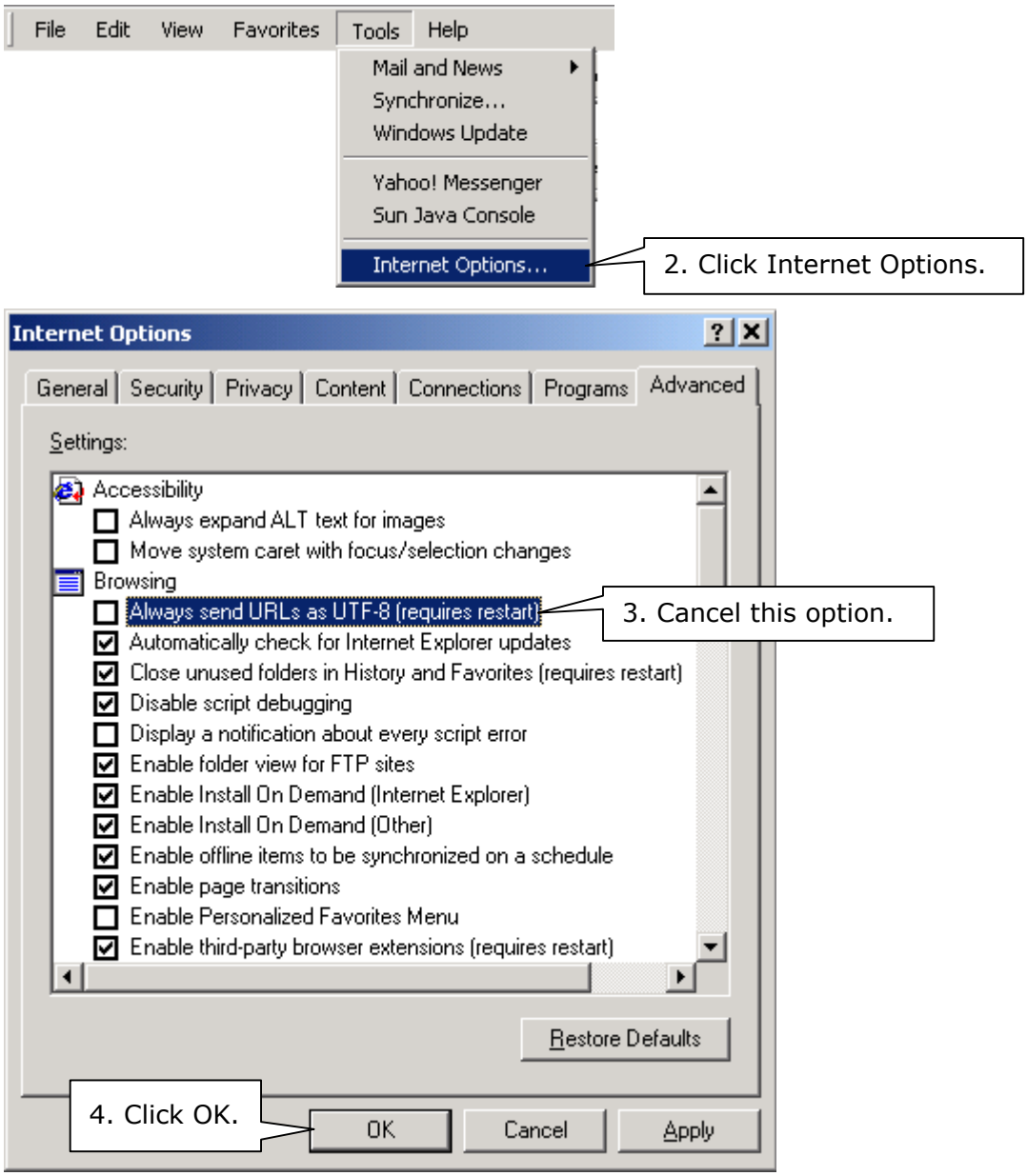
Logout

To exit Web File Manager, click (Logout).

Viewing Files Named in Chinese

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.



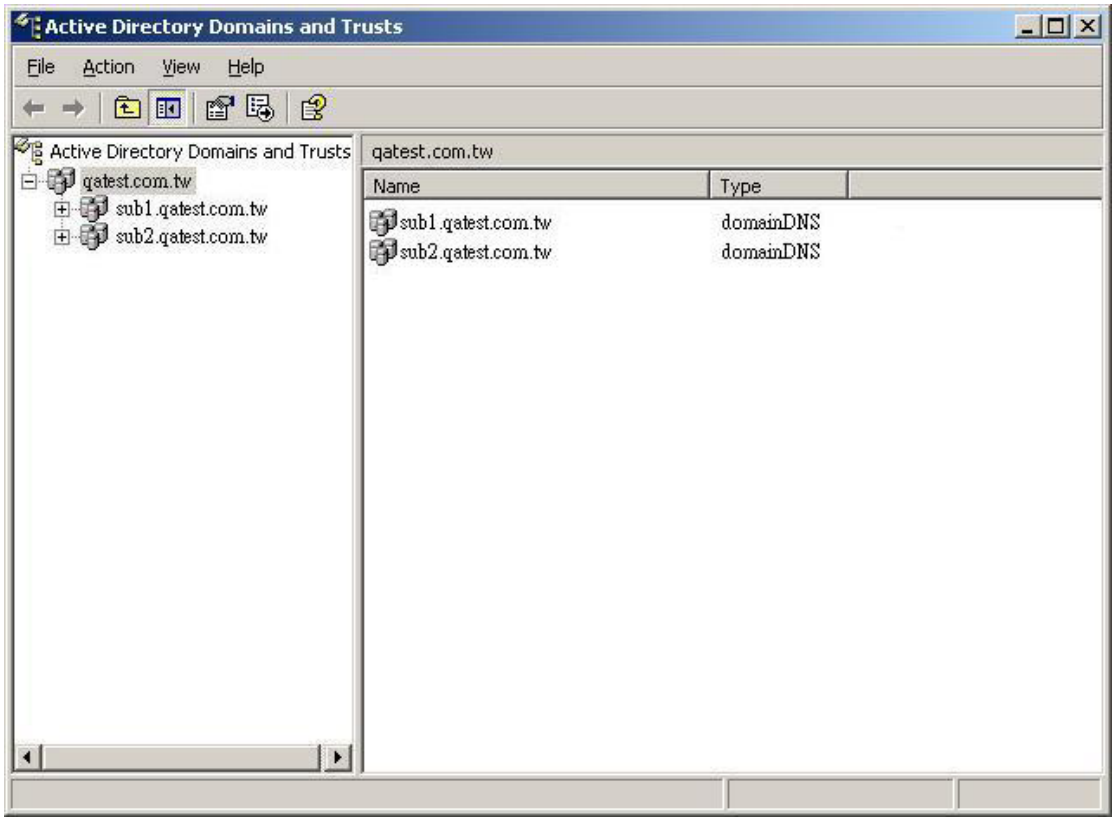
5. Restart the browser.

Web File Manager Icons

Icon	Description
	Up-return to the parent folder
	Refresh-reload the current page
	Home-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

Appendix B Configuring AD Authentication

AD environment mixed mode can be supported by GNS-8000B. 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.

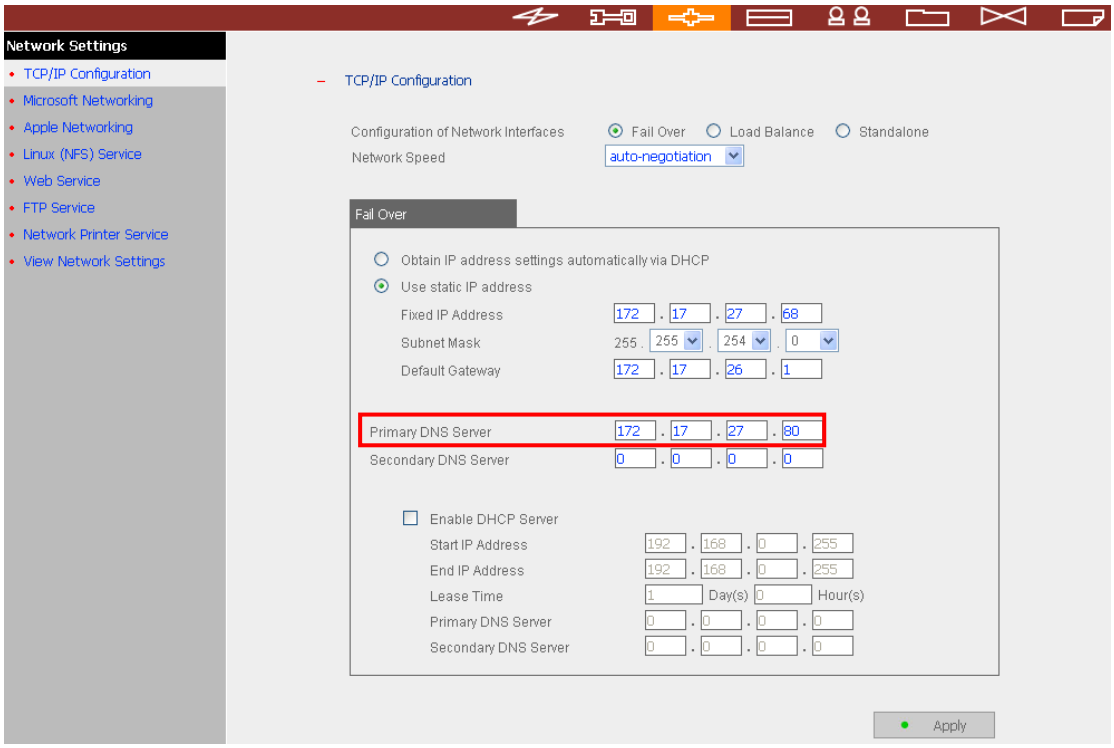


Please make sure you have enabled the Active Directory Service on the Windows Server and check the following items:

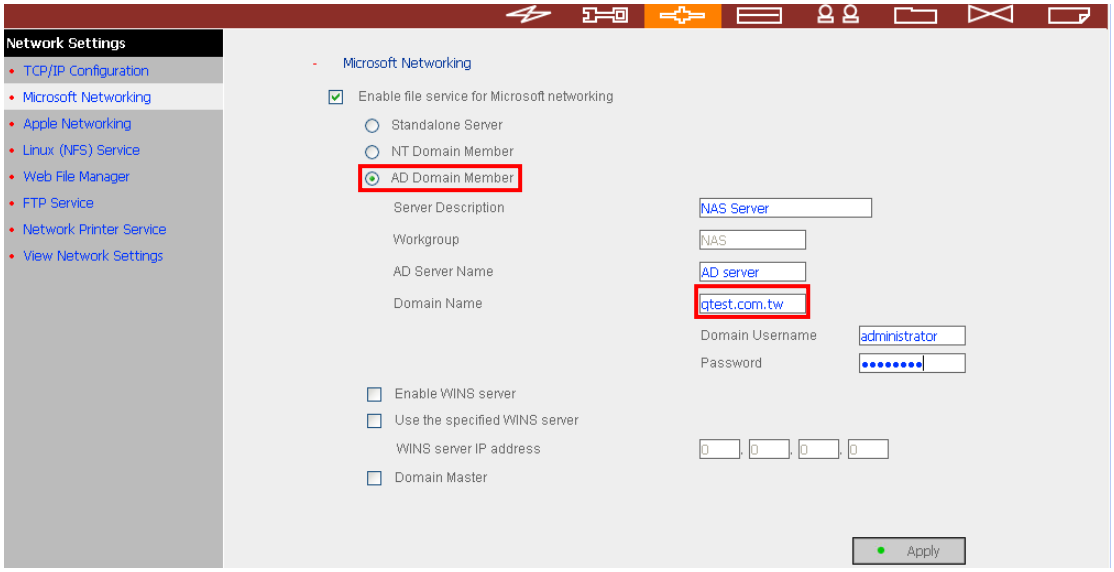
1. DNS Server setting on GNS-8000B has to be directed to AD server.
2. GNS-8000B and AD server can synchronize only if their time difference is less than 5 minutes.
3. GNS-8000B and AD server will synchronize each 5 minute. To configure the settings manually, GNS-8000B has to be set as standalone mode and then added to AD domain.
4. When adding GNS-8000B to AD domain, please login by domain_name\Username. GNS-8000B local user cannot login AD domain.
5. Inter-network segments can be used.
6. If you are using NT Domain, please select standalone mode when you want to upgrade the system, then join AD domain.
7. It is suggested to use Windows 2000 Service Pack 4, or Windows 2003 Service Pack 1.
8. When GNS-8000B is added to AD domain, the authority of "everyone" will not work, "everyone" is the original account of GNS-8000B, but doesn't include AD. Therefore the authority has to be reset.
9. The DNS setting on Windows 2000 server should be added as "Active Directory DNS", the server should be rebooted after DNS setting is set.
10. You should use the full domain name on the AD setting of GNS-8000B. For example, if your FQDN name of AD server is "ad.test.com.tw", you should use "test.com.tw" as the ad domain setting on GNS-8000B.
11. The DNS setting on AD server should have the IP of AD server itself.
12. You must change the password of "administrator" after you create "Active Directory" service on AD server.
13. The DNS server on the AD Server should have two records on it.
    For example, AD Server Name: 2003tc.testad.com
    DNS record on DNS Server
    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 GNS-8000B to Windows Server 2003 Active Directory Domain

1. Go to TCP/IP Configuration in Network Settings. Enter the IP address of primary DNS server. You can inquire AD domain via this DNS server.



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.

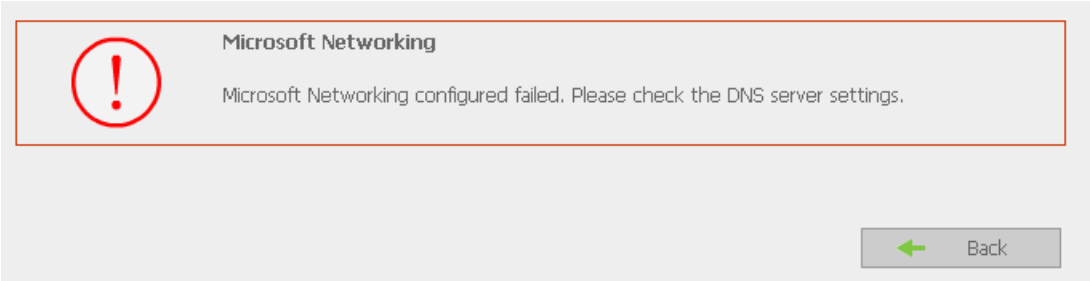


Note:

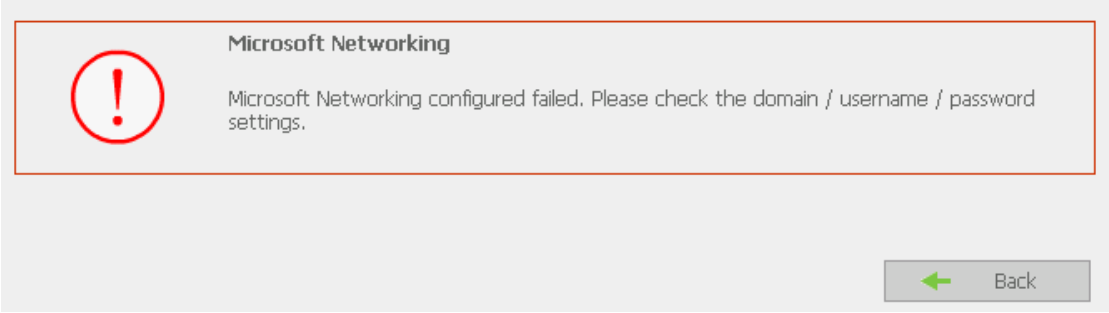
a. Make sure that a fully qualified domain name such as qatest.com.tw has been filled in.

b. Make sure the user name with administrator access right to that domain.

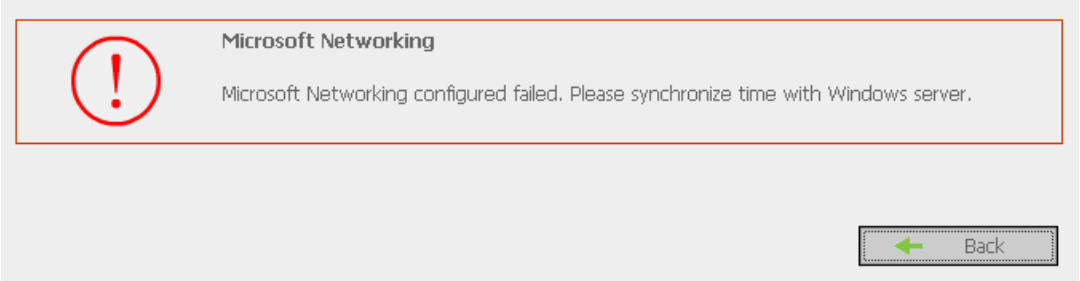
3. When the following message appears after applying the settings in step 2, check the DNS IP.



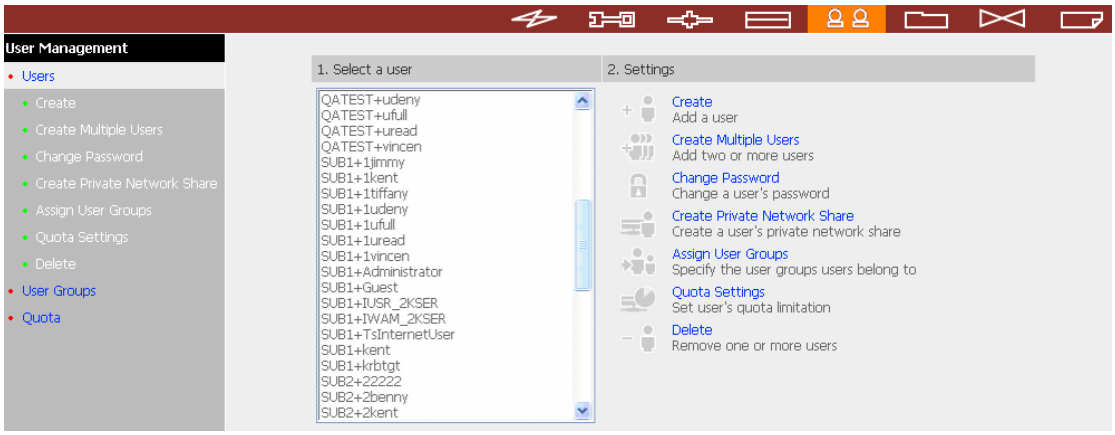
When the following message appears after applying the settings in step 2, domain name, domain user name, and the password.



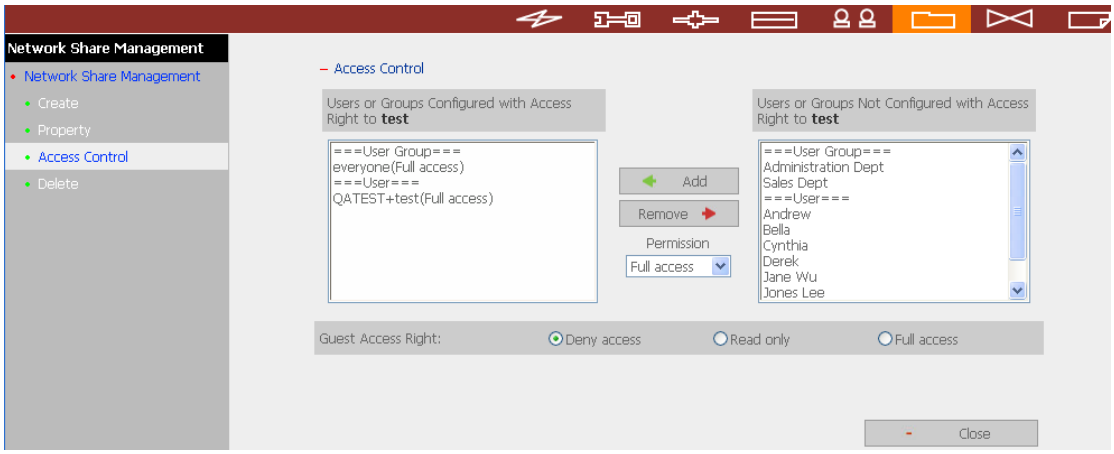
When the following message appears after applying the settings in step 2, check the time zone settings. Make sure the difference of your time and that of AD server is less than 5 minutes. If the time difference is larger than 5 minutes, you will not be able to add the domain member.



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

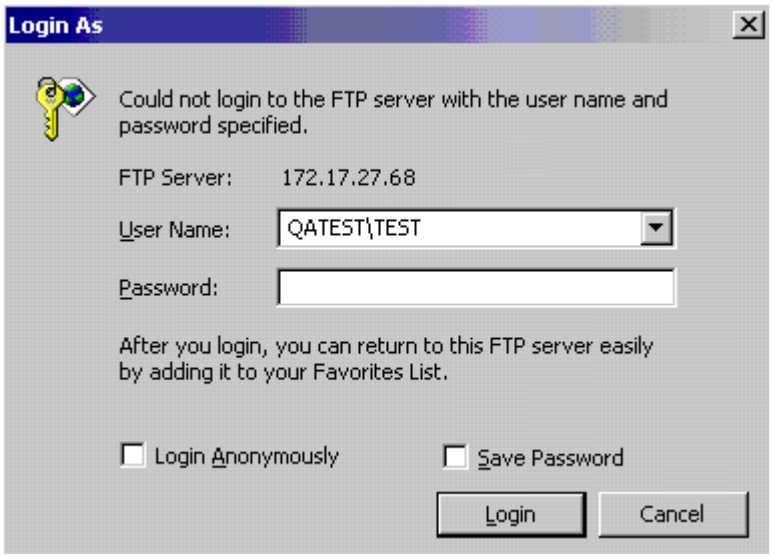


5. Go to Access Control in Network Share Management to configure the access control right of AD users for all available network shares.



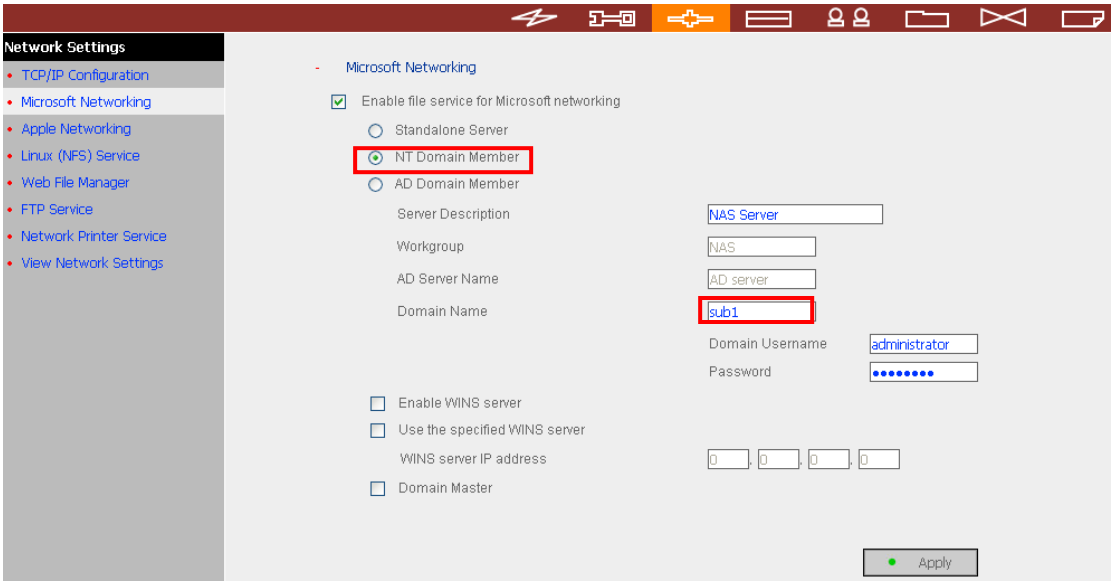
Using AD users to access services

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



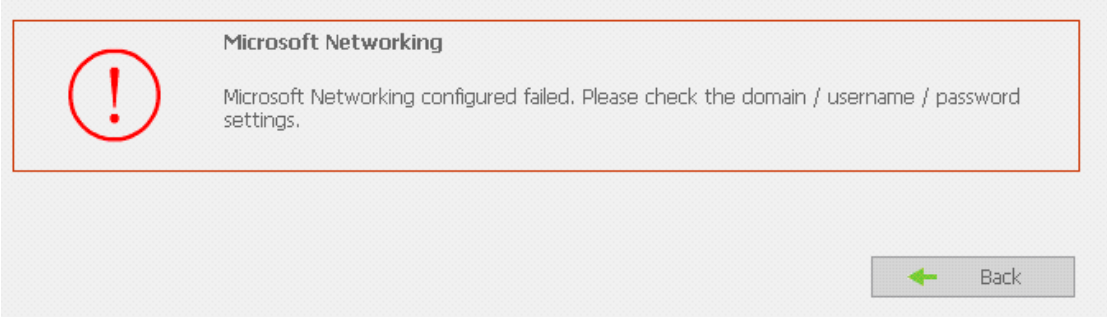
Adding GNS-8000B to Windows Server 2000 NT Domain

1. Go to Microsoft Networking to enable NT Domain member and then enter the domain name such as sub1 and the user who has administrator access right for identification.



Note:

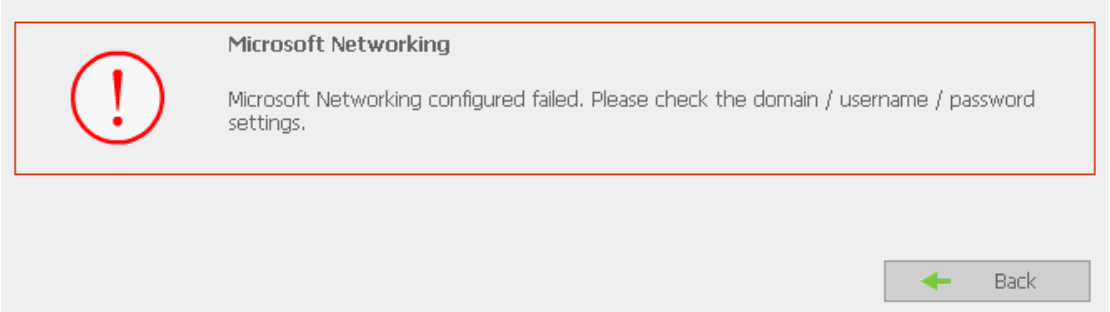
a. Please notice that GNS-8000B and Windows 2000/2003 server must be in the same section or the system will show the following error message.



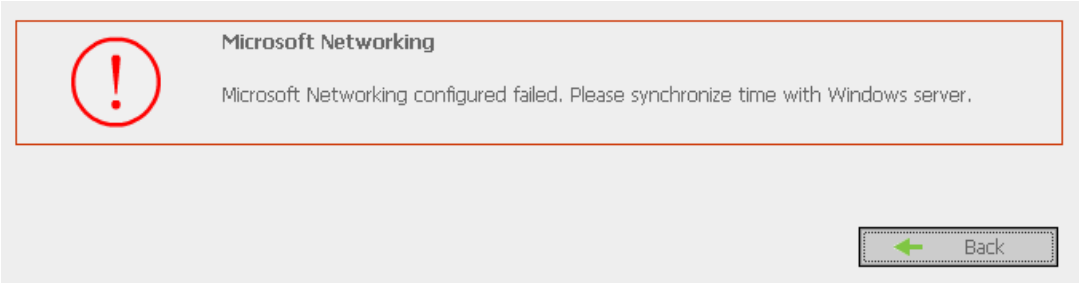
b. Make sure that a domain name such as sub1 has been filled in.

c. Make sure the user name with administrator access right to that domain.

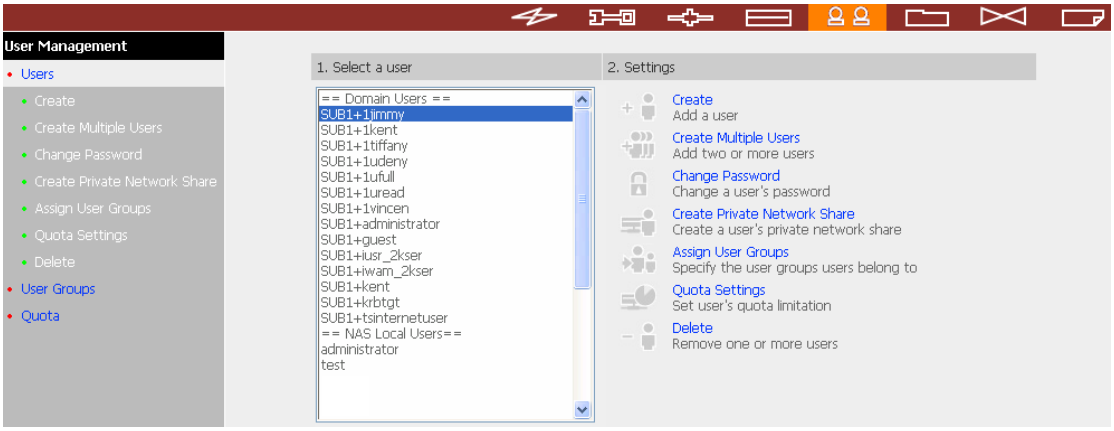
2. When the following message appears after applying the settings in step 1, check the domain name, domain user name, and the password.



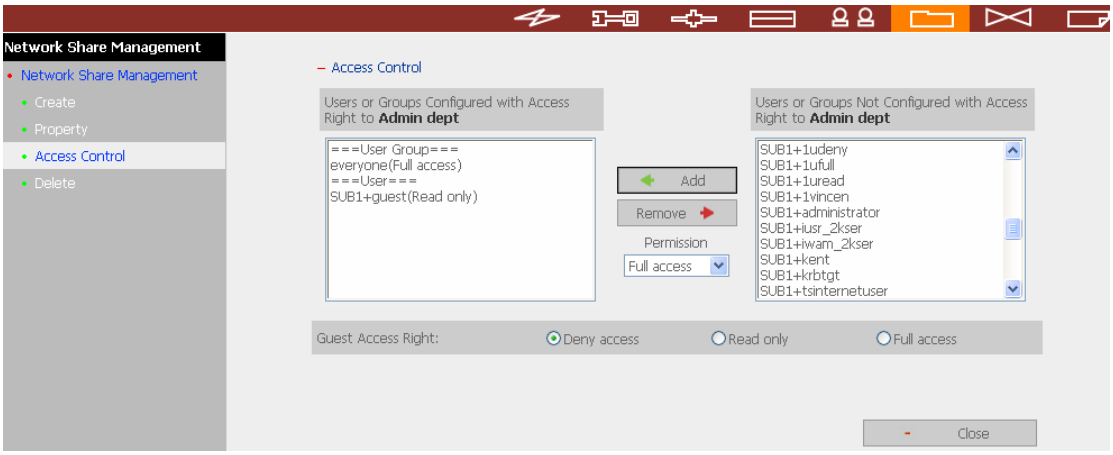
When the following message appears after applying the settings in step 2, check the time zone settings. Make sure the difference of your time and that of AD server is less than 5 minutes. If the time difference is larger than 5 minutes, you will not be able to add the domain member.



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

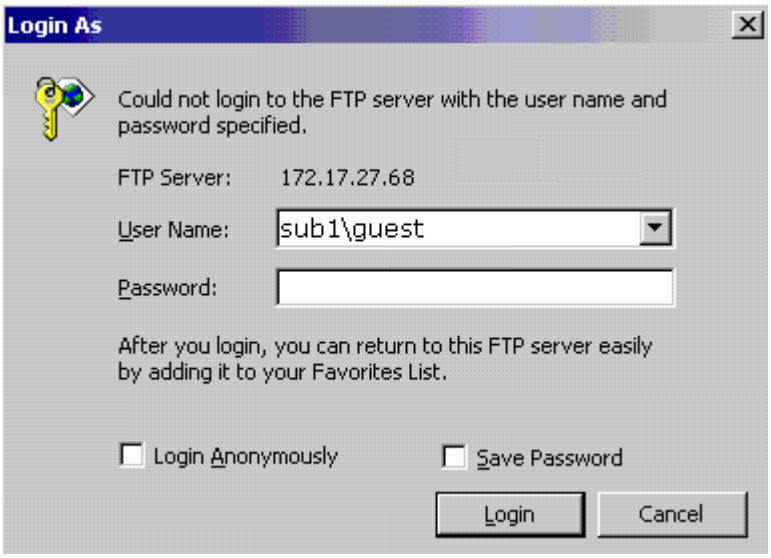


4. Go to Access Control in Network Share Management to configure the access control right of domain users for all available network shares.



Using domain users to access services

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



Note: To join AD domain again, set GNS-8000B as standalone server in Microsoft Networking section. Make sure all domain users are removed in User Management before joining GNS-8000B to AD domain.

Appendix C Messages of Hard Disk and Disk Configuration Status

Hard Disk

English Display	Status Description
Ready	The hard disk status is normal
No disk	No disk currently ✓ Disk tray is not installed or there is main board error. Users can check disk tray. If there is main board error, please contact LEVELONE customer service.
Invalid	Indicates the disk does not have a record on GNS-8000B ✓ The disk is used on GNS-8000B the first time, or the disk on the same GNS-8000B model is used. Users can re-configure disk volume.
R/W error	Disk fails ✓ When R/W error is shown, users should back up data immediately and replace the failed disk.

Disk Configuration/ RAID Configuration

English Display	Status Description
Initializing	Initializing disk
Formatting	Formatting disk
Creating	Creating RAID configuration
Removing	Removing RAID configuration
Rebuilding	Rebuilding RAID configuration
Checking	Error checking on hard disk or disk configuration in process ✓ GNS-8000B will check disk automatically if it is shut down improperly

Disk Configuration/ RAID Configuration

English Display	Status Description
Ready	The status of current disk or disk configuration is normal
Unmounted	Hard disk is not installed or hard disk configuration is not configured
Not Active	RAID configuration is damaged and cannot be enabled ✓ When this message is shown, users should back up disk data immediately and replace the failed disk.
Uninitialized	Initialization fails ✓ Single disk does not support hot swap. If the hard disk is unplugged when GNS-8000B is turning on, disk configuration will be damaged and will lead to data loss.
In degraded mode	A disk of RAID 1 or RAID 5 configuration is unplugged or fails. RAID data protection mechanism fails. ✓ In this situation, users should back up disk data immediately and replace the failed disk to rebuild RAID configuration.

Note:

1. When R/W error is displayed for hard disk status, or "Not active" or "In degraded mode" is displayed for RAID configuration, please replace the hard disk immediately to ensure RAID data protection can work properly. LEVELONE is not responsible for any data loss caused by delay in replacing failed disks in a RAID configuration by users intentionally or unintentionally.
2. LEVELONE Systems, Inc. guarantees that all GNS-8000B (GNS-8000B) released have passed strict and complete QA test and can operate properly in normal condition. LEVELONE offers conditional and limited maintenance for GNS-8000B within warranty period. However, LEVELONE disclaims the responsibility for any data loss or damage, or business loss of users. In no event shall the liability of LEVELONE exceed the price paid for the product from direct, indirect, special, incidental, or consequential software, or its documentation.

Appendix D: Virus Scan

A network share may not be able to detect a virus without an automatic virus scan function when there is a transfer of infected files. The user computer may have been infected in this situation. To prevent virus infection of the user computers, the system provides a virus scan program to comprehend with available virus scan agent for the best data protection.

In System Tools, enter the IP address of the network share and set up the user account and password for the virus scan agent. Specify the IP address of the virus scan agent. When there is a file transfer, the virus scan agent will notify the virus scan software on the system to scan the file.

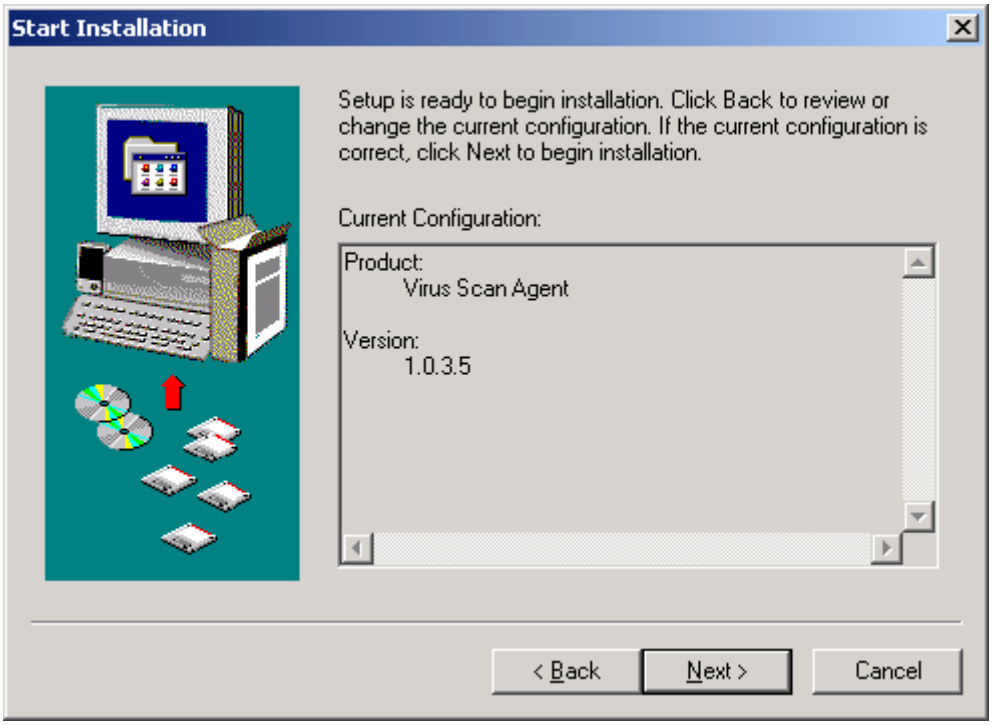
Installing Virus Scan Agent

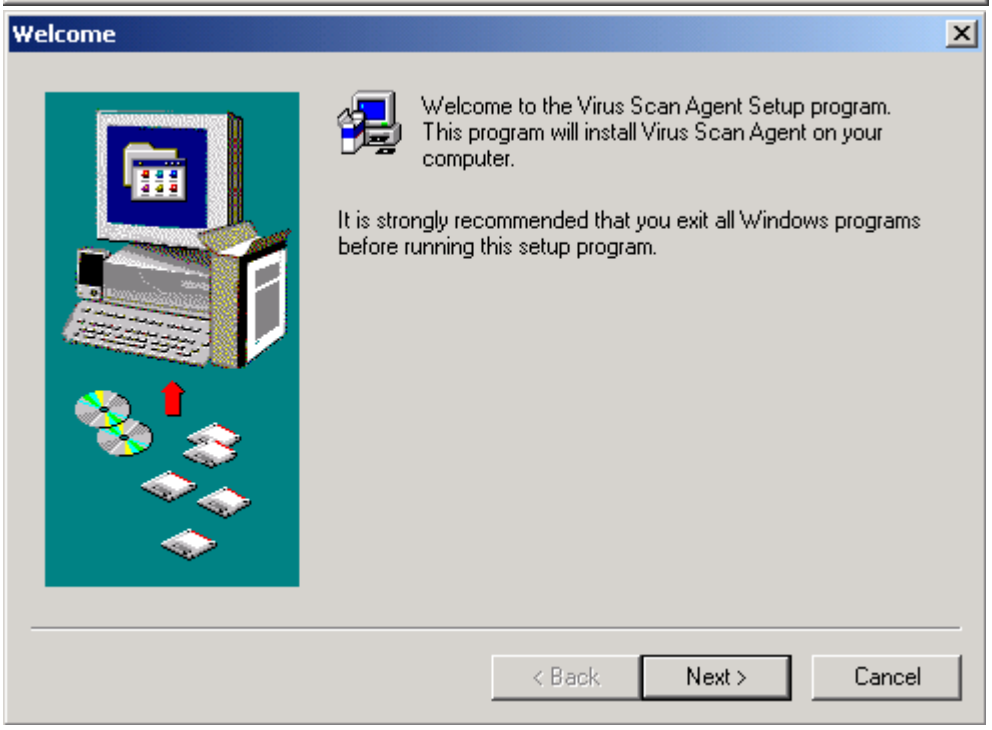
Make sure the virus scan agent and software are installed on the same computer that performs virus scanning before activating the agent.

Follow the following steps to installing Virus Scan Agent:

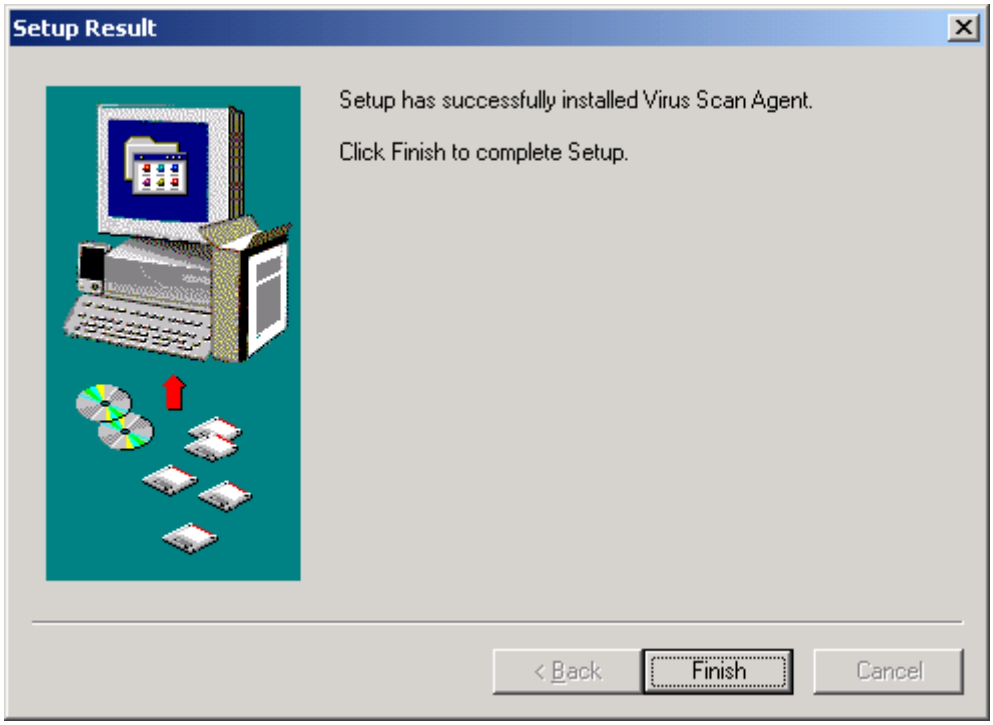
1. Run the CD-ROM enclosed in the Disk On-line Server package. When the following screen appear, click Install Virus Scan Agent.

2. Click Next to continue the Virus Scan Agent Setup.

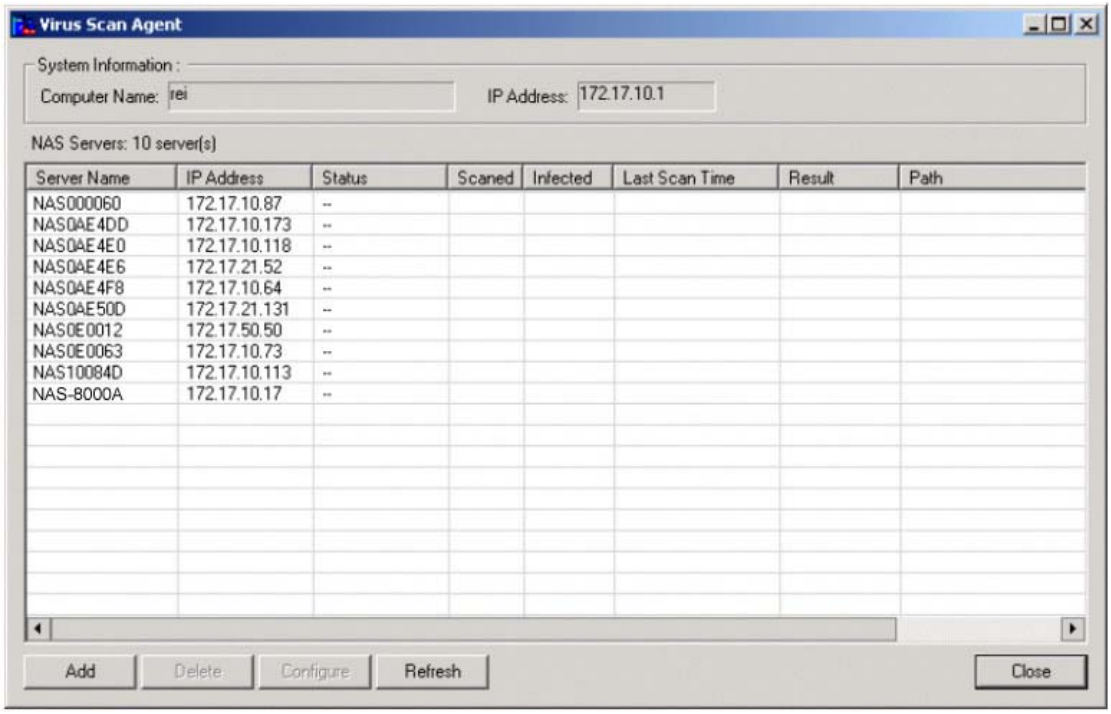




3. Click Finish to complete the Setup.



A screen will pop up to show the system information the first time you have successfully installed the virus scan agent.



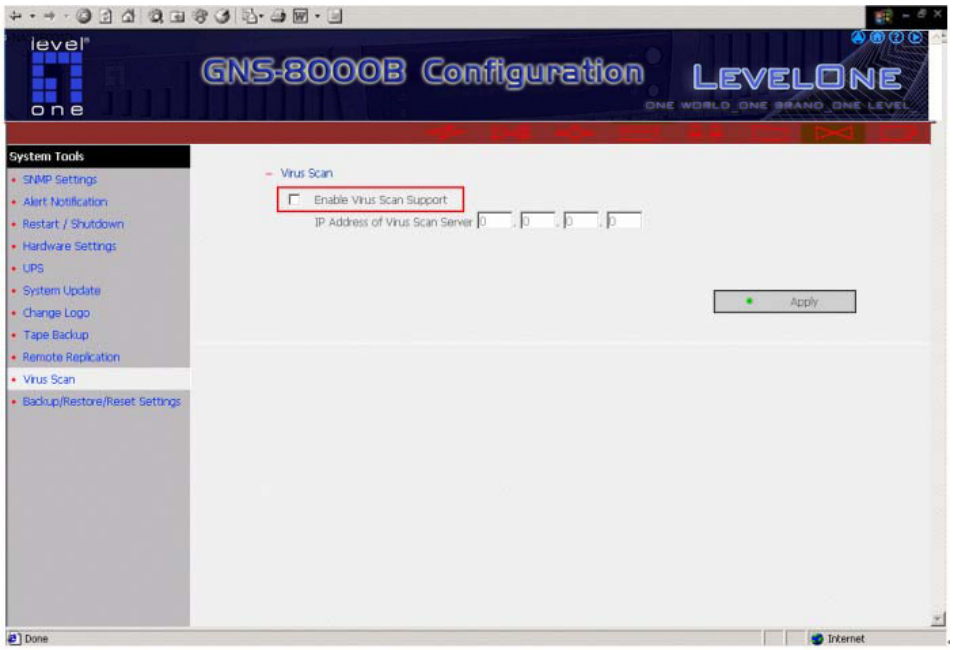
The description of the fields is as below:

Fields	Description
Server Name	Name of the network share under the protection of virus scan agent

IP Address	The IP address of the network share
Status	Connection status of the host network share with the virus scan agent: • *Disconnect:* Not connected to the network • *Idle:* Connection has been enabled but there is no file transfer for three minutes or more. • *Ready:* Connection has been enabled and ready to be scanned • *--:* User name and password have not been set up
Infected	Number of infected files
Last Scan Time	Date and time of the most recent virus scanning job
Result	Scanning result: OK: No files are infected • *Virus Found:* Virus is found. The name of the infected file(s) may not be displayed due to the scanning of other files. Go to the administration page to view the name and location of the infected file(s). • *Access Denied:* Access to the server is denied. • *Authentication Failed:* The login user ID is not authorized to access the folder of the network share.
Path	The file location on the network share

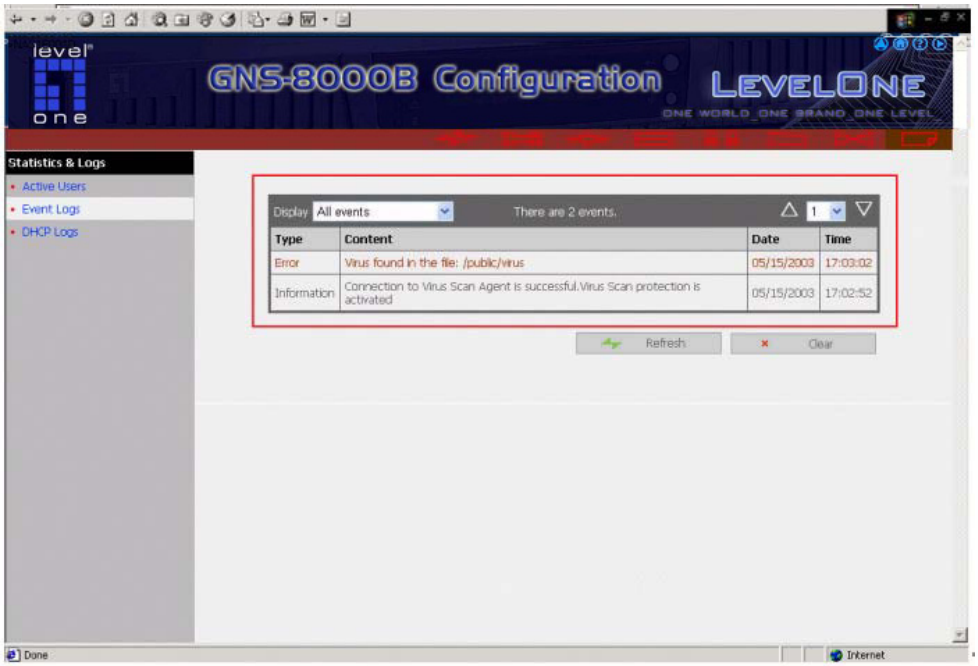
Enabling Virus Scan Support

Go to Virus Scan of System Tools. To enable virus scan support, tick the box Enable Virus Scan Support. Enter the IP address of the virus scan server and click Apply.



Viewing Details of Infected Files

To view the details of infected files of the network share, go to Event Logs of Statistics & Logs. A warning message will be shown in the table.


level one
GNS-8000B Configuration
LEVELONE
ONE WORLD, ONE BRAND, ONE LEVEL
Statistics & Logs
Active Users
Event Logs
DHCP Logs
Display All events
There are 2 events.
1
Type
Content
Date
Time
Error
Virus found in the file: /public/virus
05/15/2003
17:03:02
Information
Connection to Virus Scan Agent is successful.Virus Scan protection is activated
05/15/2003
17:02:52
Refresh
Clear
Done
Internet

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