



# Media Server

NSA Series

Version 4.70

Edition 4

## User's Guide

### Default Login Details

Web Address	nsa310 nsa310s nsa320 nsa320s nsa325 nsa325-v2
User Name	admin
Password	1234

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**IMPORTANT!**

**READ CAREFULLY BEFORE USE.**

**KEEP THIS GUIDE FOR FUTURE REFERENCE.**

Screenshots and graphics in this book may differ slightly from your product due to differences in your product firmware or your computer operating system. Every effort has been made to ensure that the information in this manual is accurate.

### **Related Documentation**

- Quick Start Guide

The Quick Start Guide shows how to connect the NSA and get up and running right away.

- Web Configurator Online Help

The embedded Web Help contains descriptions of individual screens and supplementary information.

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# **PART I**

## **User's Guide**

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# Getting to Know Your NSA

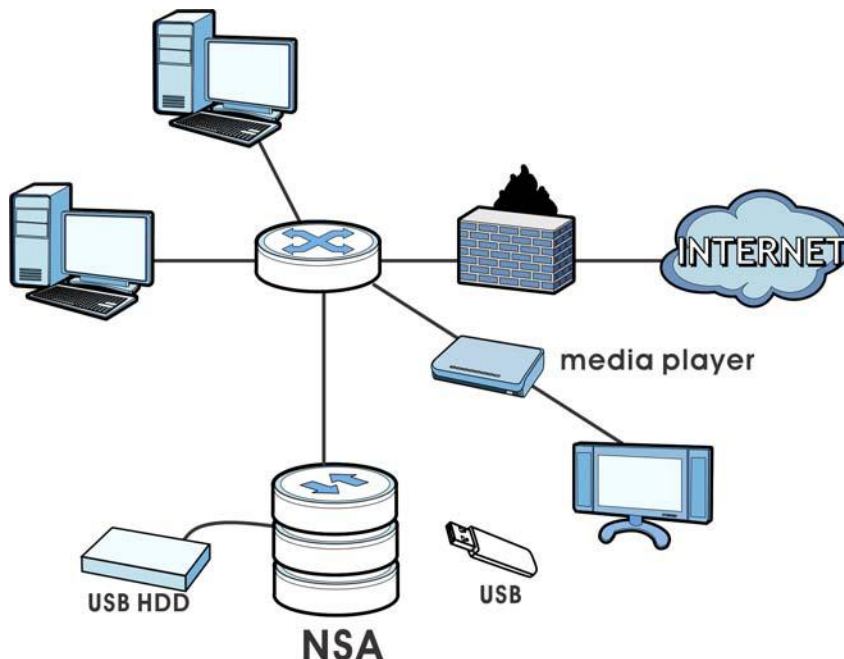
## 1.1 Overview

This chapter covers the main features and applications of the NSA.

Use the NSA to do the following.

- Share files between computers on your network.
- Back up files from your computers to the NSA.
- Use the **COPY/SYNC** button to copy or synchronize files between the NSA and USB devices like card readers, MP3 players, mass storage devices, and digital cameras without using a computer.
- Have the NSA handle large file downloads.
- Automatically download files from website feeds for convenient viewing.
- Play the NSA's video, music and photo files on your computers using the included media client software.
- Play the NSA's video, music and photo files on hardware-based media players.
- Use the NSA's website to share files with remote users.
- Use iTunes on your computer to play video and music files stored on the NSA.
- Share printers.
- Automatically upload photo and video files to your FTP server, Flickr and YouTube accounts.

**Figure 1** Example of the NSA in a Home Network



Above is the NSA in a home network. Users back up and share data on the NSA. The media player plays the NSA's media files on the TV. A USB hard drive provides extra storage space and files are copied directly from the USB mass storage device to the NSA.

Place the NSA behind a firewall and/or IDP (Intrusion Detection and Prevention) device to protect it from attacks from the Internet.

Refer to the Quick Start Guide for hardware connections and how to install and remove hard drives from the disk trays.

Note: Turn off and disconnect the NSA before you install or remove the internal hard disk or disks.

**Table 1** Model-specific Features

FEATURE	MODELS
2 hard disk bays	NSA320, NSA320S, NSA325, NSA325 v2
1 hard disk bay	NSA310, NSA310S
Telnet	NSA310S, NSA320S, NSA325, NSA325 v2
Power Control Schedule	NSA310S, NSA320, NSA320S, NSA325, NSA325 v2
Power On After Power Failure	NSA310S, NSA320, NSA320S, NSA325, NSA325 v2
zCloud App for accessing and uploading media files	NSA325 v2, NSA325, NSA320S, NSA320, and NSA310S with firmware version 4.61 or higher. See <a href="#">Chapter 3 on page 29</a> for details.

## 1.1.1 Hard Disks for 2-Bay Models

The 2-bay NSA models have two internal hard disk bays. Install one or two SATA (Serial Advanced Technology Attachment) hard disks. Note that both SATA hard disks are treated as internal or SATA volumes in the **Storage > Volume** screen ([Section 8.3 on page 165](#)). Any hard disk connected to the USB port(s) is considered an external or USB volume.

## 1.1.2 Hard Disks for 1-Bay Models

The 1-bay NSA models have one internal hard disk bay and one external SATA (eSATA) port. This allows you to connect one internal SATA (Serial Advanced Technology Attachment) hard disk and one eSATA hard disk (optional).

Initializing the internal hard disk configures it as a JBOD volume by default. JBOD stands for Just a Bunch Of Disk and in this storage method, all disk space is used for your data - none is used for backup. If you are not using an eSATA hard disk, JBOD is the only storage method you can use.

If you attach an eSATA (external SATA) hard disk, you can create a RAID 1 volume. RAID 1 allows data recovery in case your hard disk fails. To create a RAID 1 volume on the NSA, you must delete the JBOD volume created by the firmware. Refer to [Section 8.3 on page 165](#) for the **Storage** screen where you can create the RAID 1 volume.

The eSATA hard disk can also be configured as a JBOD or a PC Compatible Volume. See [Section 8.1.1 on page 161](#) for more information on these storage methods.

Note that both SATA and eSATA hard disks are treated as internal or SATA volumes in the **Storage** screen ([Section 8.3 on page 165](#)). Any hard disk connected to the USB port(s) is considered an external or USB volume.

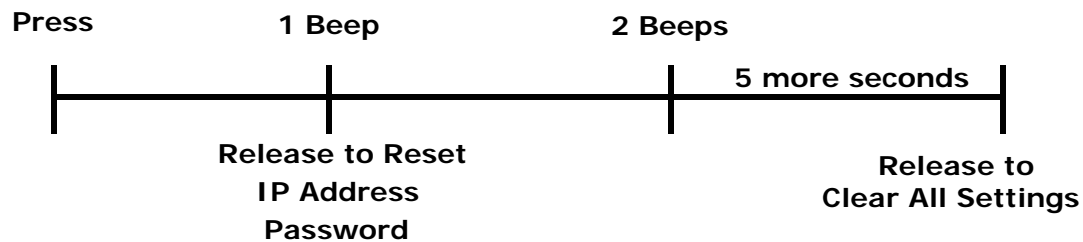
### 1.1.3 COPY/SYNC Button

Use the **COPY/SYNC** button on the front panel to copy or synchronize files between a connected USB device and the NSA. See [Section 10.11 on page 212](#) for more details on how to configure the copy/sync settings.

### 1.1.4 RESET Button

Use the **RESET** button on the rear panel to restore the NSA's default settings.

**Figure 2** The RESET Button



- Press the **RESET** button until you hear one beep (after about two seconds), then release it. You will hear one more beep after you release the button.

This resets the NSA's IP address and password to the default values.

- Press the **RESET** button until you hear two beeps. After the second beep, continue pressing the button for five more seconds, then release it. You will hear three quick beeps after you release the button.

This resets the NSA to the factory default configuration. All settings you have configured on the NSA, including IP address, password, user accounts, groups, and so on will be reset to the factory defaults.

The reset process does NOT affect the volume settings, nor data stored on the NSA.

You should periodically back up your configuration file to your computer (see [Section 18.5 on page 333](#) for details about managing the NSA's configuration file). You could then restore your configuration in the event that you or someone else reset the NSA to the factory defaults.

**Note:** Keep the NSA in a secure location in order to prevent unauthorized reset of the device.

You may need to close and re-open the NAS Starter Utility to discover the NSA. This is because the NSA automatically re-acquires IP address information, so its IP address may change. If no IP address information is assigned, the NSA uses Auto-IP to assign itself an IP address and subnet mask. For example, you could connect the NSA directly to your computer. If the computer is also set to get an IP address automatically, the computer and the NSA will choose addresses for themselves and be able to communicate.



# NAS Starter Utility

Note: Installing this version of the NAS Starter Utility will uninstall previous versions.

## 2.1 Overview

Use the NAS Starter Utility to find, set up, and manage the NSA as well as copy files to it and access the files on it.

**Make sure you have a backup of any existing data in the hard disk before installing it in the NSA. Using the initialization wizard formats the hard disk and deletes all data in the process.**

The NAS Starter Utility supports Windows XP, Windows Vista, Windows 7, and Windows 8. Click **Help** to open a Web Help page about the NAS Starter Utility screens. NAS Starter Utility screens are shown here as they display with the Windows platform.

Note: Refer to the Quick Start Guide for your NSA's hardware connections and the steps for installing the NAS Starter Utility.

## 2.2 Starting the NAS Starter Utility

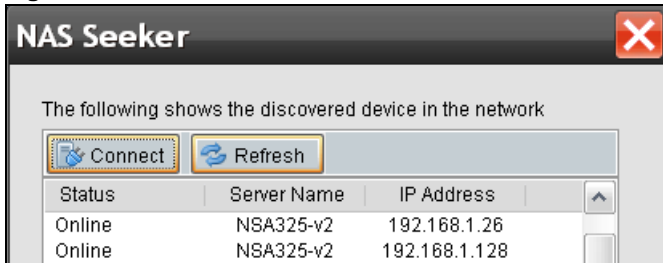
- The NAS Starter Utility broadcasts a request packet when you first run it. Each NSA has an NAS Starter Utility Agent that always listens and responds to requests from the NAS Starter Utility. The NAS Starter Utility receives the response packet that contains information, such as host name, IP, and so on.
- If you plan to use more than one NSA in your network, configure them with unique server names. This enables you to identify each NSA in the NAS Starter Utility screens.

## 2.3 NAS Seeker Screen

Use this screen to view the NSAs in your network. The NSA's **Server Name**. The default is 'nsa' followed by the number of your model ('**nsa320**' for example). See [Section 2.8 on page 27](#) for how to change it to a more recognizable one in your network.

Start the NAS Starter Utility (click the icon in your Desktop or in **Start > Programs > ZyXEL > NAS Starter Utility**). The first time you open the NAS Starter Utility the discovery screen appears as follows.

**Figure 3** NAS Seeker



The following table describes the labels in this screen.

**Table 2** NAS Seeker

LABEL	DESCRIPTION
Connect	Select a NSA and click this to connect to it.
Refresh	Click this to refresh the screen. The NAS Starter Utility does not automatically refresh.
Status	This shows whether the NSA is <b>Online</b> , <b>Unreachable</b> , <b>Configuring</b> , or <b>Config Failed</b> .
Server Name	This is the server name you configured for the NSA. If you have more than one NSA in your network, it is recommended that you give each one a unique name for identification purposes.
IP Address	This is the current IP address of the NSA.

## 2.4 Main NAS Starter Utility Screen

The main NAS Starter Utility screen displays after you select an NSA in the **NSA Seeker** screen.

**Figure 4** NAS Starter Utility Main Screen



The following table describes the labels in this screen.

**Table 3** NAS Starter Utility Main Screen

LABEL	DESCRIPTION
?	Click this to display the utility help.
Configuration	Click this to run the initialization wizard (see the utility help for details), configure system settings (see <a href="#">Section 2.8 on page 27</a> ), or go to the NSA's Web Configurator login screen (see <a href="#">Section 4.3 on page 43</a> ).
NAS Seeker	Click this to use the NSA Seeker screen ( <a href="#">Section 2.3 on page 21</a> ) to find and connect to a different NSA on your network.
Server Name	This is the server name you configured for the NSA. If you have more than one NSA in your network, it is recommended that you give each one a unique name for identification purposes.
IP Address	This is the current IP address of the NSA.
MAC Address	This is the NSA's unique physical hardware address (MAC).
Firmware Version	This shows the version of firmware the NSA is currently using.
Status	This shows whether the NSA is <b>Online</b> , <b>Uninitialized</b> , <b>Unreachable</b> , <b>Configuring</b> , or <b>Config Failed</b> .
Run Initialization Wizard	This button displays if the NSA detects an installed hard disk that the NSA has not yet configured. Click the button to run the initialization wizard (see the utility help for details).

**Table 3** NAS Starter Utility Main Screen

LABEL	DESCRIPTION
Capacity	This shows the NSA's total, in-use, and remaining storage capacity.
Media Player	Click this to go to the Playzone screens where you can play media files (see <a href="#">Section 4.4 on page 45</a> ).
zPilot	Click this to launch the zPilot to drag and drop files onto the NSA.
Network Drive	Click this to add the NSA as a network drive in your computer's Windows Explorer.
Shared Folder	Click this to log into the NSA's file directory in Windows Explorer.
P2P Download	Click this to use the NSA to manage file downloads, including P2P downloads.
Dropbox	Click this to use your Dropbox account to move files to the NSA and have the NSA download *.torrent files.
SMART	This displays when the NSA has the SMART package installed. Click this to view hard disk health and performance details.
WordPress	This displays when the NSA has the WordPress package installed. Click this to create and manage a blog or website. Use the NSA administrator credentials to log in. The administrator can then create accounts for other users.
eMule	This displays when the NSA has the eMule package installed. Click this to use the NSA's eMule peer-to-peer (P2P) file-sharing console to download and share files from the Internet. See <a href="#">Section 11.8 on page 236</a> for details.
Gallery	This displays when the NSA has the Gallery package installed. Click this to use your NSA to host pictures. You can upload images in your local computer or shares to this application. Use the NSA administrator account to log in to the Gallery console.
pyLoad	This displays when the NSA has the pyLoad package installed. Click this to use pyLoad to have the NSA manage your downloads, including those from one-click hosting sites.

## 2.4.1 Directory of the NAS

Click **Shared Folder** to log into the NSA's file directory in Windows Explorer. Enter the administrator user name and password and click **Login**.

**Figure 5** Login

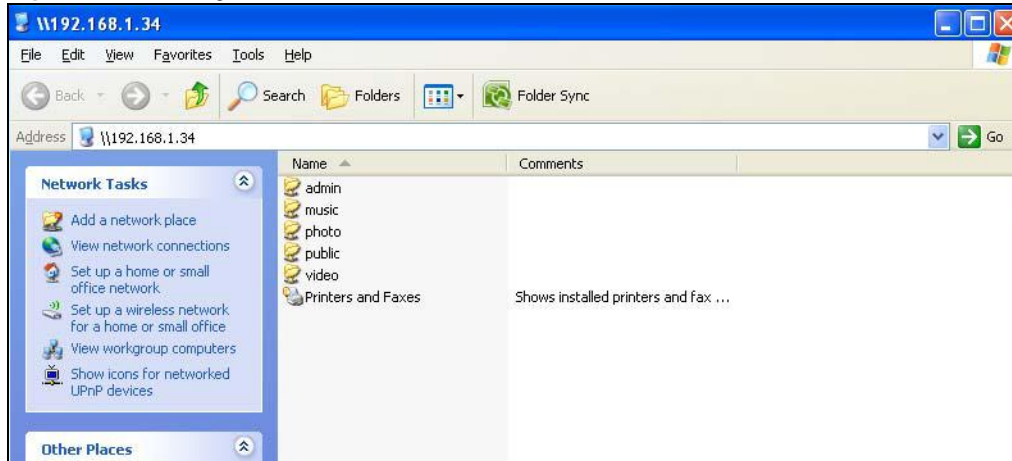
The screenshot shows a 'Login' dialog box with the following elements:

- Two text input fields: 'User Name' and 'Password'.
- Two checkboxes: 'Remember name' and 'Guest'.
- Two buttons: 'Ok' and 'Cancel'.



The utility opens the NSA's directory in Windows Explorer.

**Figure 6** Directory

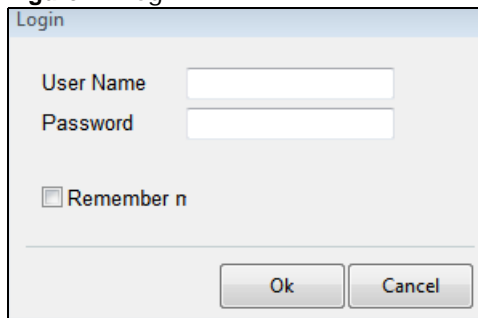


## 2.5 Import Files or Folders with zPilot

In the main NAS Starter Utility screen click **zPilot** to be able to drag and drop files from your computer to the NSA.

Enter the administrator user name and password and click **Login**.

**Figure 7** Login



The zPilot icon displays.

**Figure 8** zPilot



Drag files onto the zPilot icon to move them to the NSA. zPilot automatically sorts music, photo, and video files into the **Music**, **Photo**, and **Video** folders. zPilot automatically sorts the types of media files listed in [Section 21.2 on page 372](#) (except for the subtitles). Other types of files go to the

**Public** folder. For folders of files you are prompted to choose the target destination. The zPilot icon shows the transfer rate.

**Figure 9** zPilot Showing Transfer Rate



Double-click the zPilot icon to display status details about the file transfers. Select an entry and click **Pause**, **Resume**, or **Remove** to control the transfer. After the transfer finishes you can select the entry and click **Open Destination Folder** to see the file on the NSA. Click **Clear Completed** to clear completed transfers from the list.

**Figure 10** zPilot Transfer Details

Status	File Name	Percent
Completed	BellyDance_2011.mp4	100%

Buttons: Pause, Resume, Remove, Open Destination Folder, Clear Completed

## 2.6 Network Drive

In the main NAS Starter Utility screen click **Network Drive** to add the NSA as a network drive in your computer's Windows Explorer.

Enter your user name and password and click **Login** to be able to add the NSA's shares to which you have access as network drives. Otherwise select **Guest** and click **Login** to be able to add the NSA's public shares as network drives.

**Figure 11** Login

Login

User Name

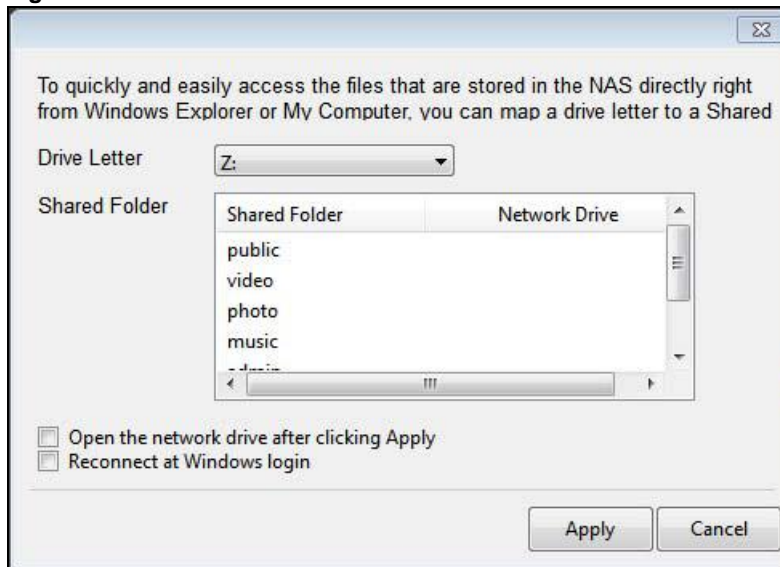
Password

Remember n  Guest

Select a share on the NSA and the drive letter on your computer to which you want to map it. The shares that each user can select to map depends on the user's permissions. For example, if share1 is private to user1, then only user1 is allowed to map share1. The table displays the NSA shares that are already mapped to drive letters on your computer. After you click **Apply** you can see the

new drive in Windows Explorer (My Computer) where you can access and use it like your computer's other drives.

**Figure 12** Network Drive

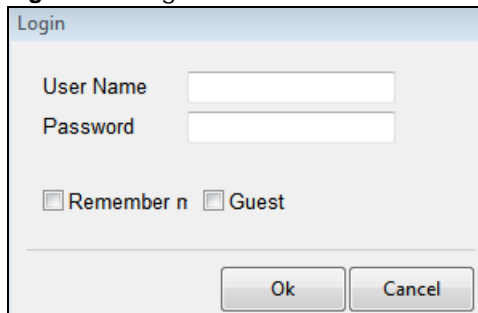


## 2.7 Manage the Device

In the main NAS Starter Utility screen click **Configuration > Administration** to log into the NSA's administration screens where you can manage the NSA.

Enter the administrator user name and password and click **Login**.

**Figure 13** Login



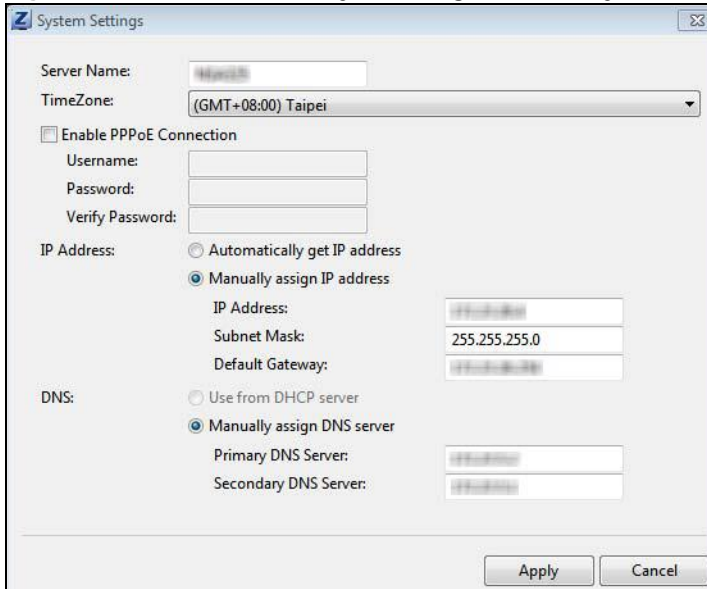
See [Section 4.5 on page 57](#) for more on the administration screens.

## 2.8 Configure System Settings

Use these screens to be able to change the NSA's server name, time zone, PPPoE, IP address, subnet mask, default gateway, or DNS settings.

Click **Configuration > System Setting** in the main utility screen to display the following screen.

**Figure 14** NAS Starter Utility > Configuration > System Setting



The following table describes the labels in this screen.

**Table 4** NAS Starter Utility > Configuration > System Setting

LABEL	DESCRIPTION
Server Name	Specify a name to uniquely identify the NSA on your network. You can enter up to 15 alphanumeric characters with minus signs allowed but not as the last character. The name must begin with an alphabetic character (a-z) and is case sensitive.
Time Zone	Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).
Enable PPPoE Connection	Click this if your Internet connection requires you to enter a user name and password to connect to the Internet. Enter your user name and password
Automatically get IP address	Select this if the NSA is automatically assigned an IP address from the ISP or a DHCP server in your network.
Manually assign IP address	Select this if you want to assign the NSA a fixed IP address, subnet mask and default gateway.  <b>Note:</b> Do not configure an IP address that is already in use in your network. This results to a network IP address conflict and makes the NSA inaccessible.
Use from DHCP server	Domain Name System (DNS) is for mapping a domain name to its corresponding IP address and vice versa. Select this if the NSA is automatically given DNS information from the ISP or a DHCP server in your network.
DNS	Domain Name System (DNS) is for mapping a domain name to its corresponding IP address and vice versa.  Select <b>Use from DHCP server</b> if the NSA is automatically given DNS information from the ISP or a DHCP server in your network.  Select <b>Manually assign DNS server</b> if you were given specific IP address(es) of the DNS server(s). Enter the primary and secondary DNS in the corresponding fields.

## 3.1 zCloud

Install the zCloud app from the Apple App store or Google Play on your iOS or Android phone or tablet to access the NSA's media files from your mobile device and upload media files from your mobile device to the NSA.

Note: The NSA325 v2, NSA325, NSA320S, NSA320, and NSA310S with firmware version 4.61 or higher supports this app.

- Browse your media contents from your NSA directly on your smartphone or tablet
- View your photos with the app's built-in slideshow
- Playback your music library
- Watch your favorite videos
- Upload your photos to your NSA media server directly from your smartphone or tablet
- Compatibility: Requires a smartphone or tablet with iOS 6.0 or later or Android 4.0 or later

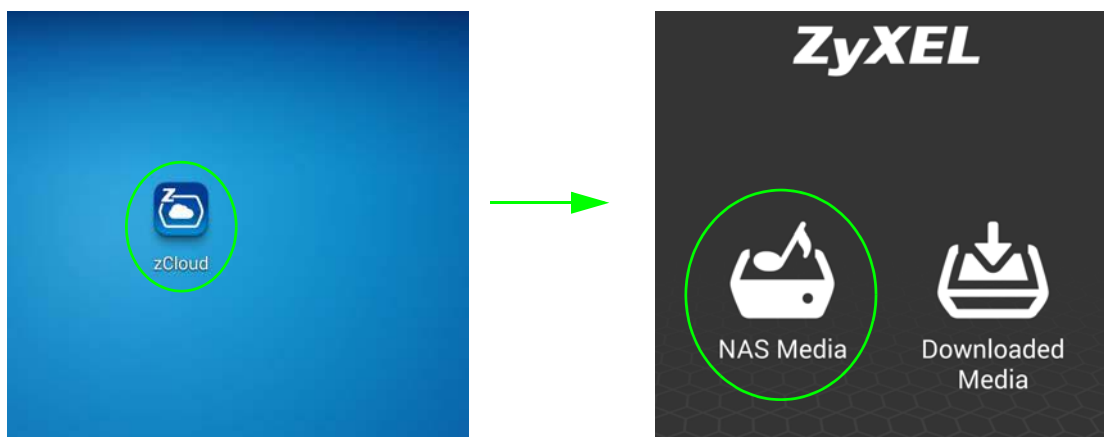
Note: The iOS version of zCloud has some layout differences from the Android version shown in this chapter but the same functions.

### 3.1.1 Connect zCloud to Your NSA Media Server

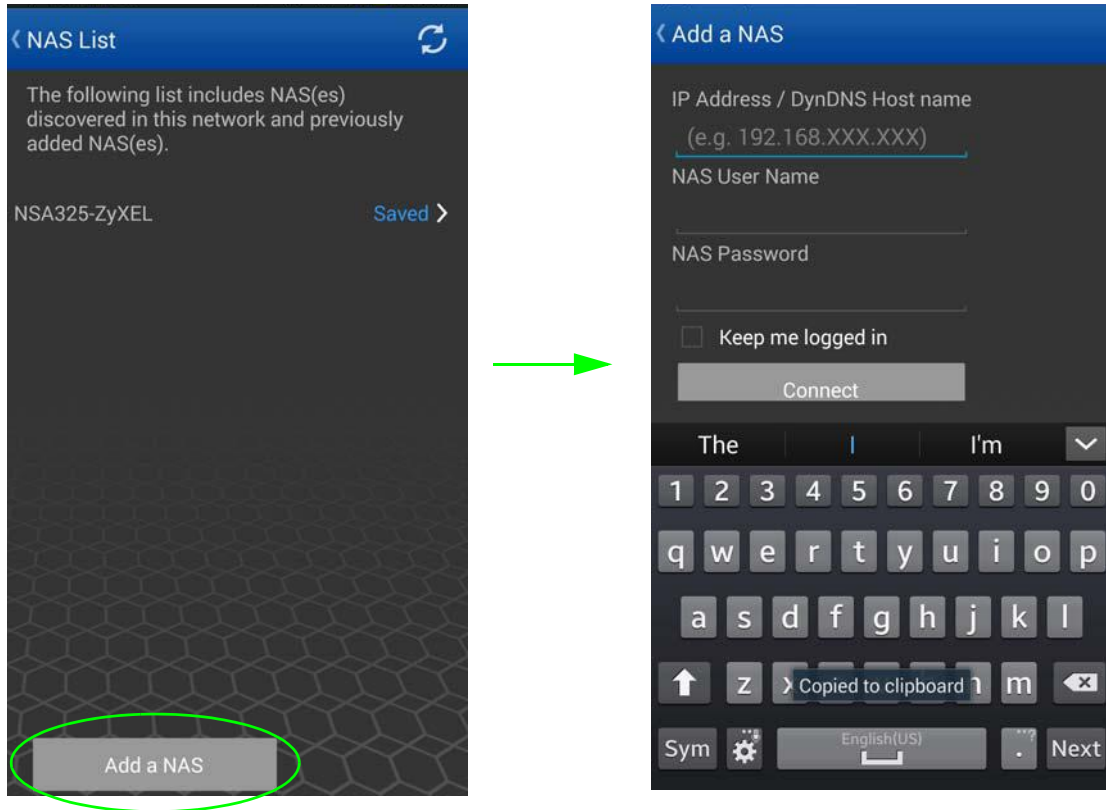
- 1 After installing the zCloud app on your mobile device, click the zCloud icon to open it.

Tap **NAS Media** to access NSA music, photo, or video files or upload media files to the NSA.

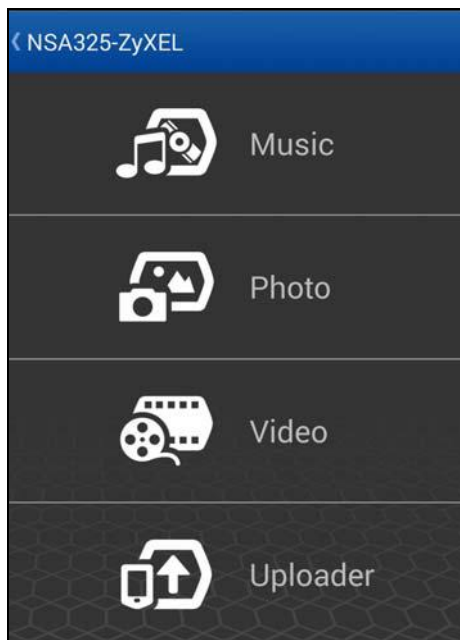
See [Section 3.1.6 on page 37](#) for how to use **Downloaded Media** to access media files you download to your mobile device from the NSA.



- 2 Tap **Add a NAS** and enter your NSA's IP address and your user name and password and tap **Connect**. The next time you use the zCloud NAS media function you can select the NSA from the list.

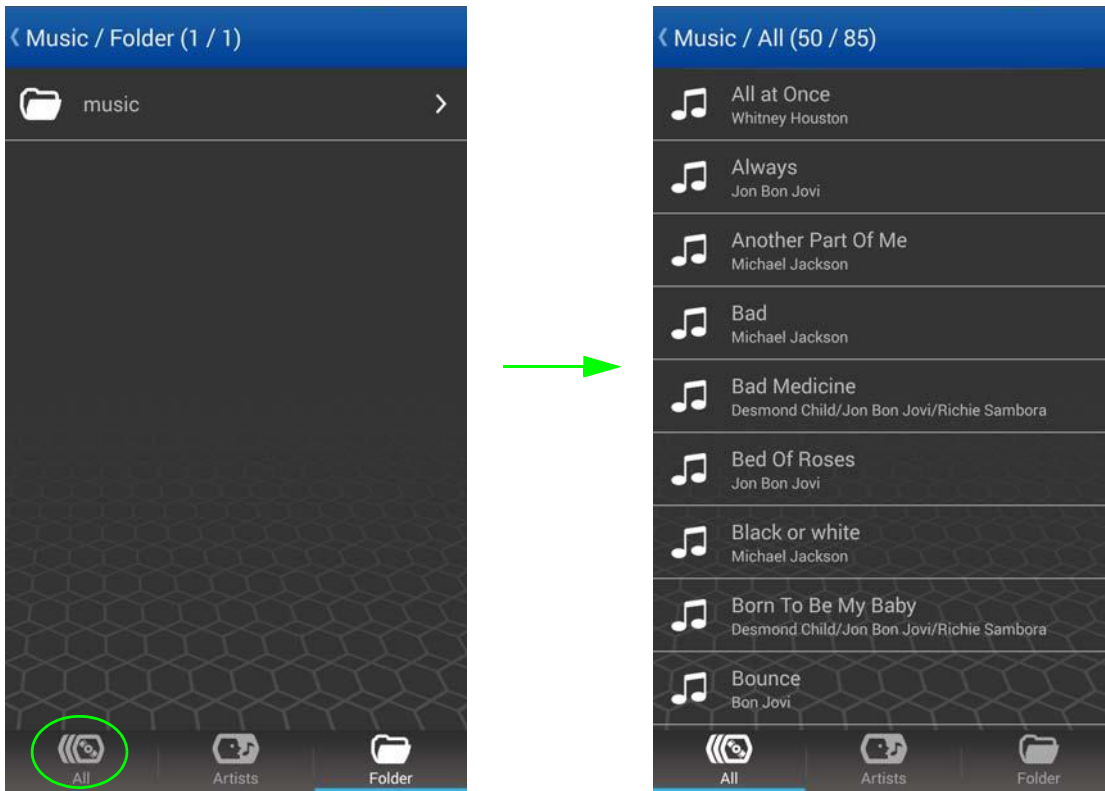


- 3 Go to the NSA's published music, photo, or video files or upload media files to the NSA.



### 3.1.2 NSA Media Music Screens

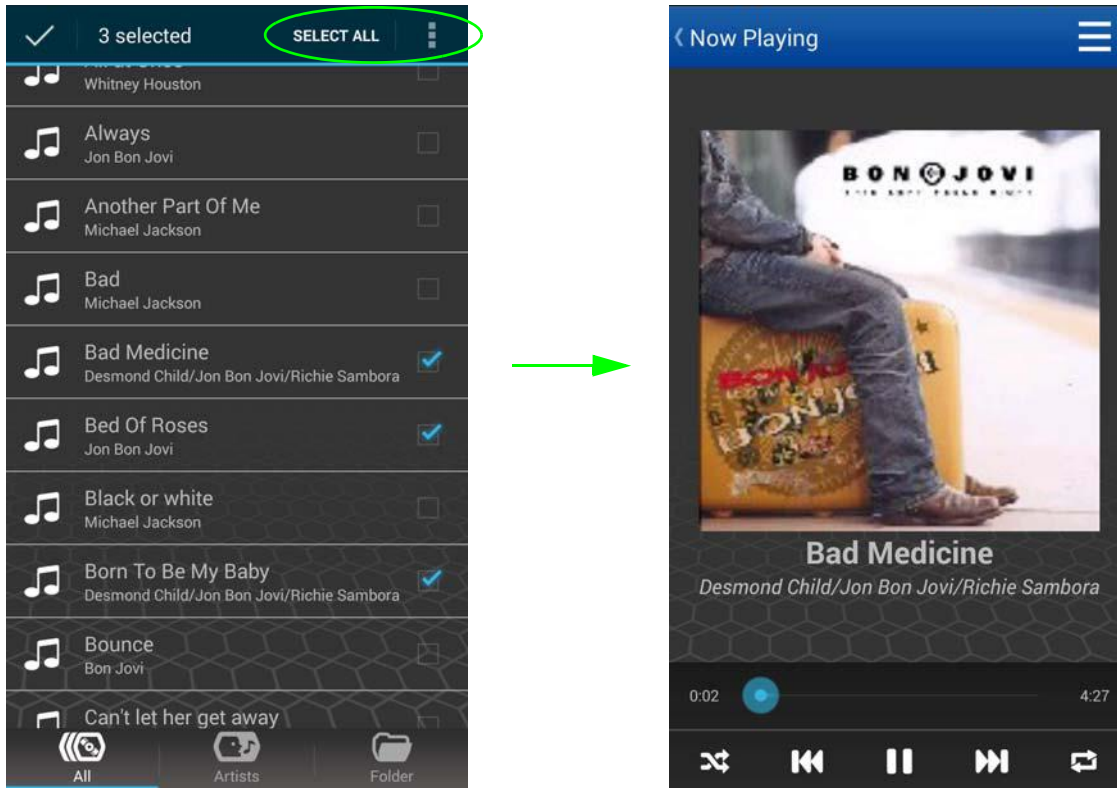
- 1 Browse the NSA's published music files by folders, all music files, or by artist.



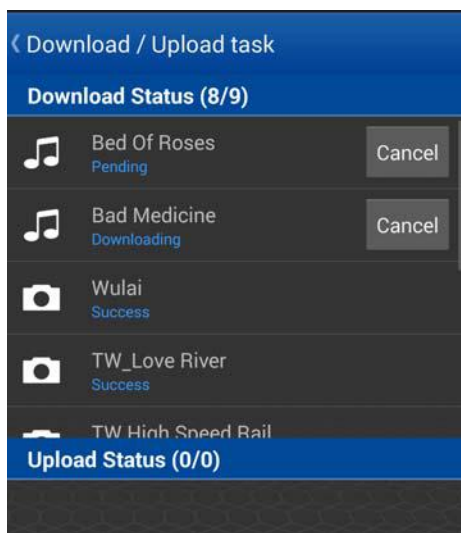
- 2 Tap a song to play it or press your mobile device's menu button to use **select-n-go** to select multiple files to play or download.

When using **select-n-go** the top of the zCloud screen has a **SELECT ALL** option and a three squares menu option with **Play Selected** and **Download Selected** options.

The playback screen displays song information and the playback progress and lets you control the playback.

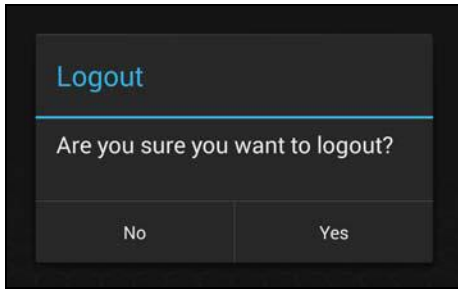


- 3 Press your mobile device's menu button to be able to show download and upload details (**Show Download / Upload**).



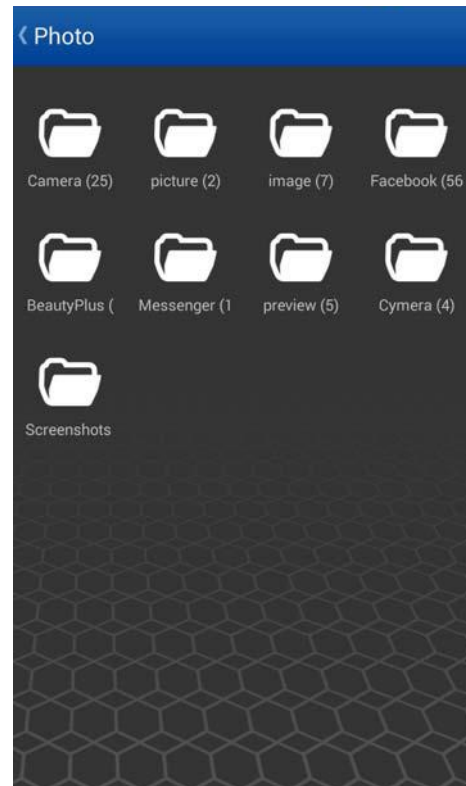


- When you finish viewing the NSA's media files you can press your mobile device's menu button to get the option to log out from the NSA (**Logout**).



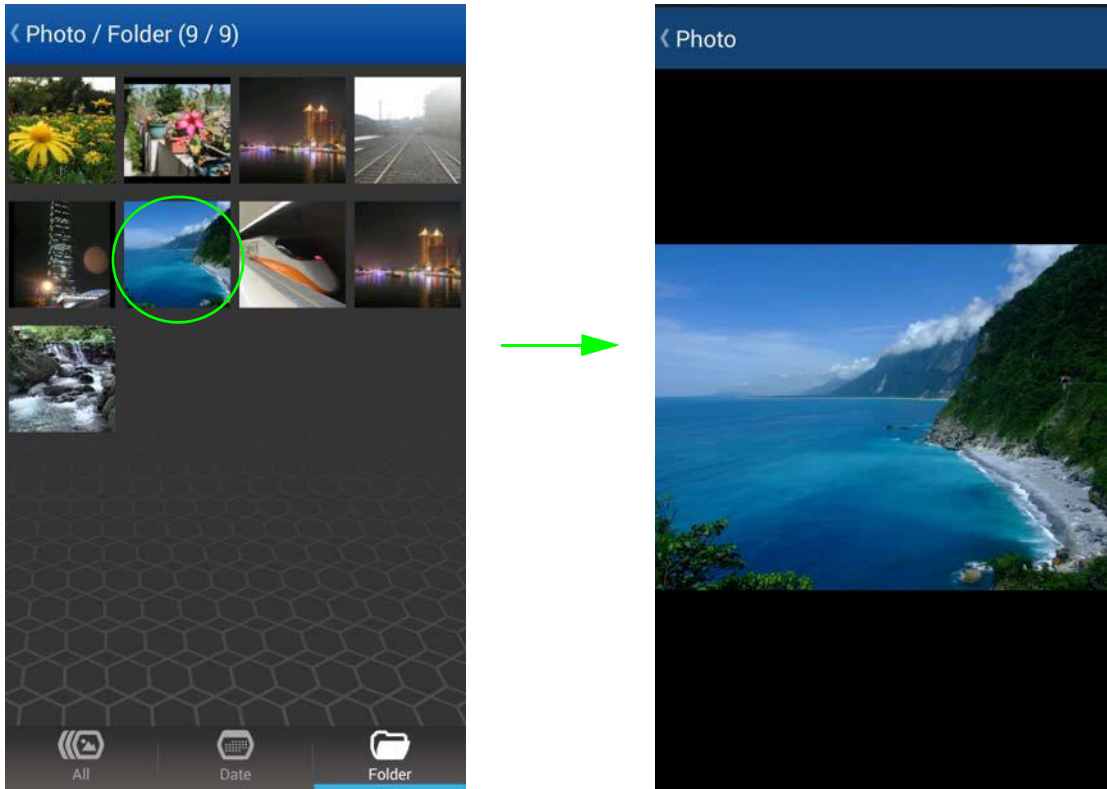
### 3.1.3 NSA Media Photo Screens

- Browse the NSA's published photos by folders, all photos, or by date.



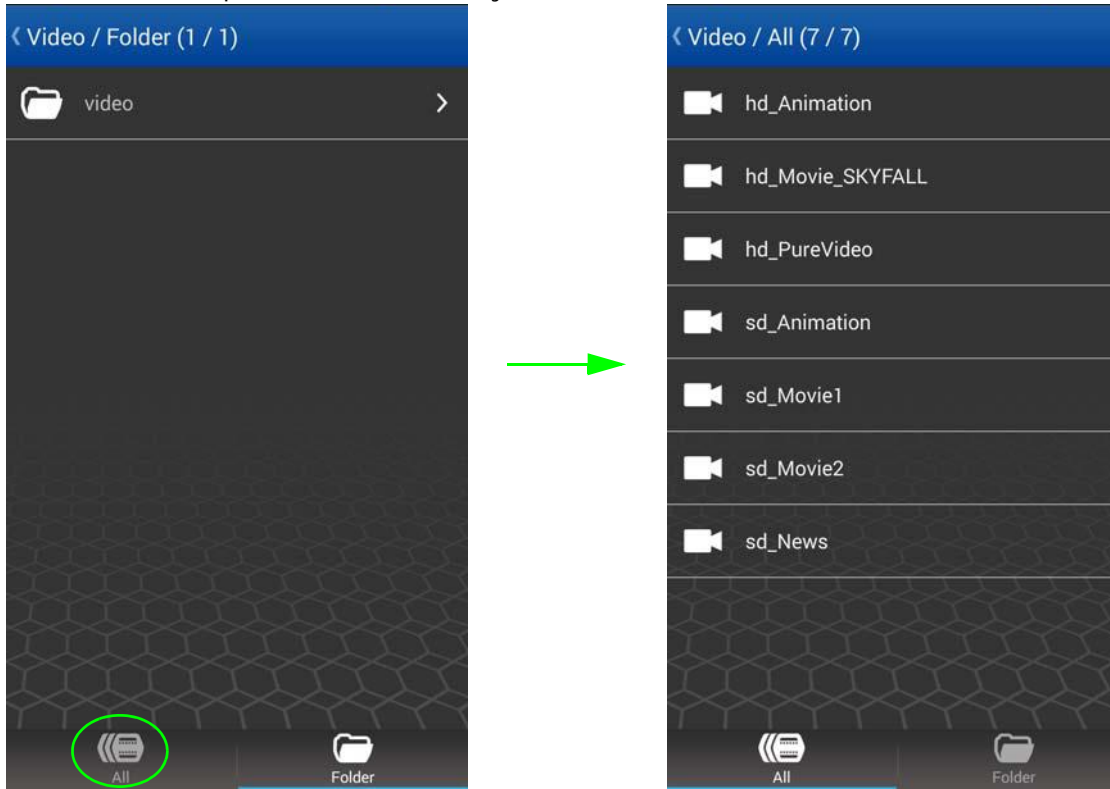
- 2 Tap a photo to display it or press your mobile device's menu button to use **select-n-go** to select multiple files to download.

With a photo displayed, press your mobile device's menu button to get the option to start a slideshow.

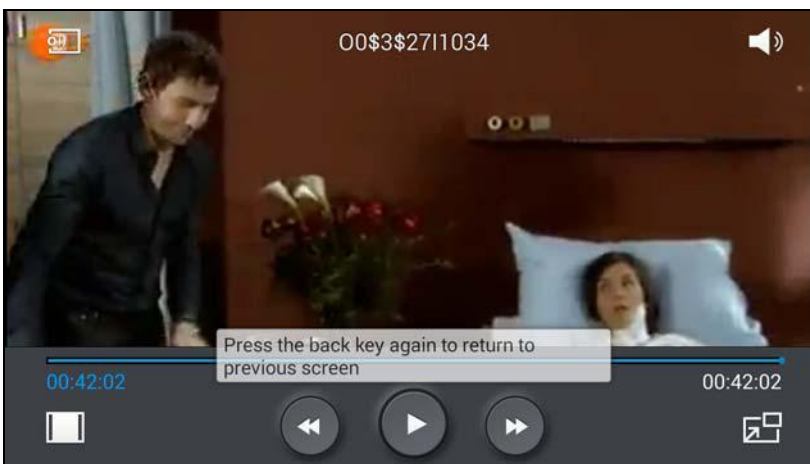


### 3.1.4 NSA Media Video Screens

- 1 Browse the NSA's published video files by folders or all video files.

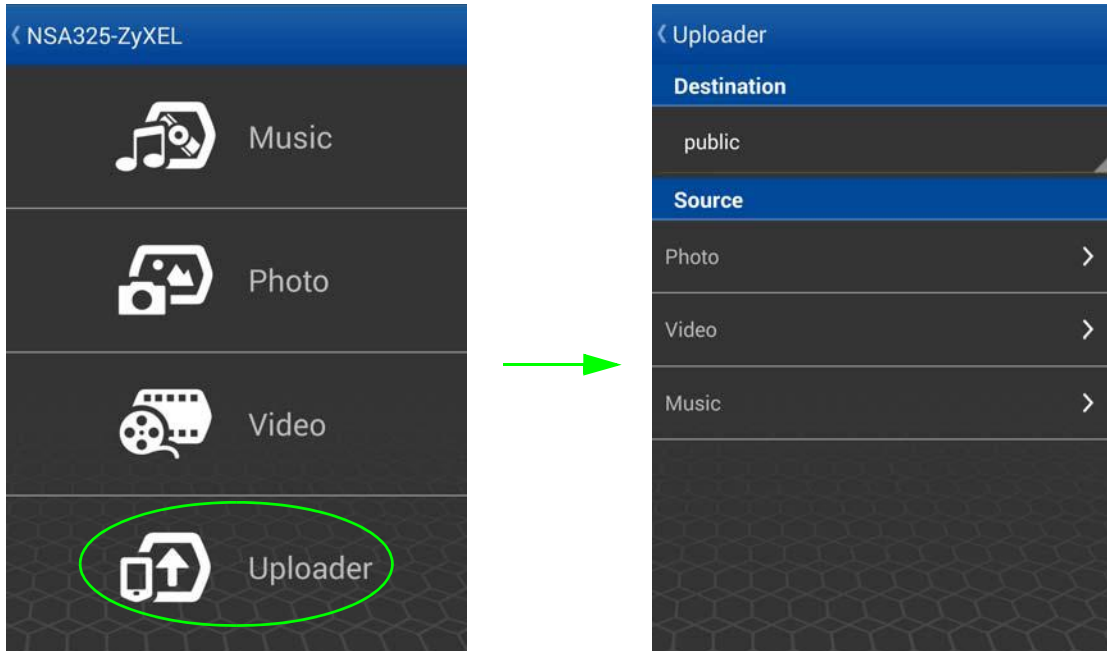


- 2 Tap a video to play it or press your mobile device's menu button to use **select-n-go** to select multiple files to download.

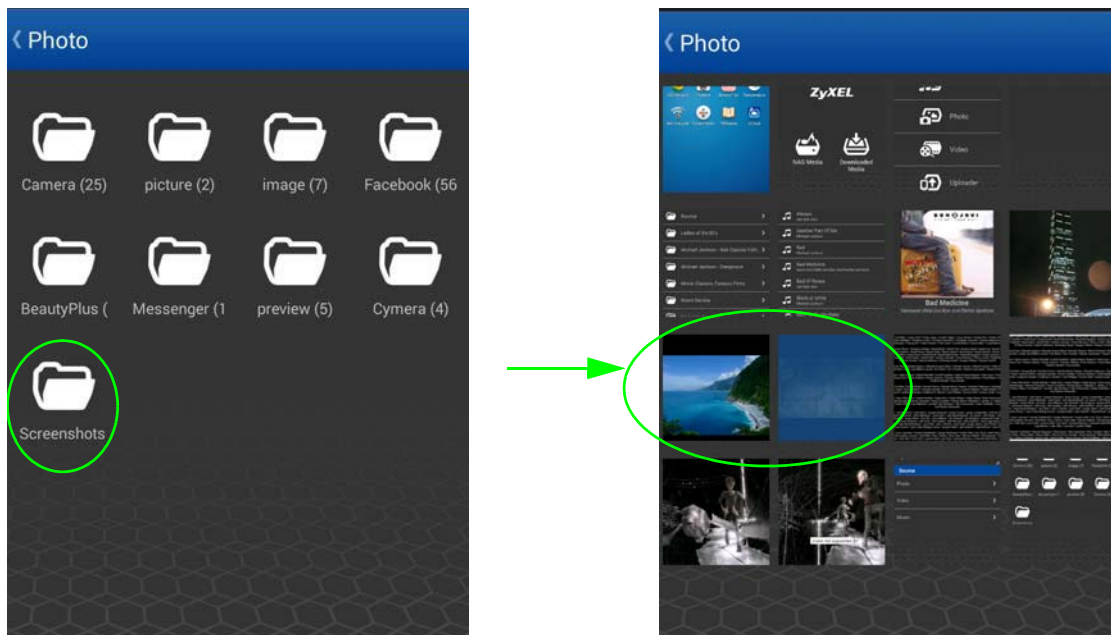


### 3.1.5 zCloud Uploader

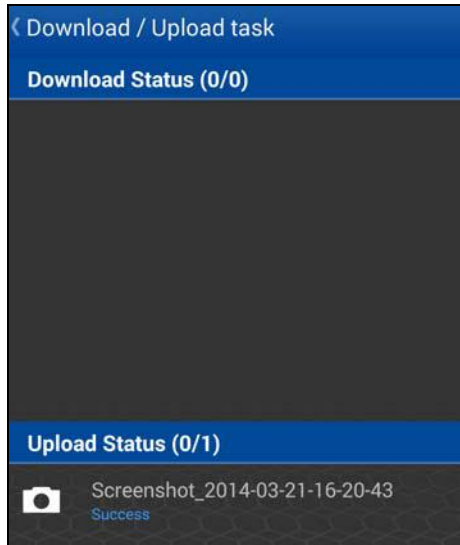
- 1 Tap **Uploader** to upload music, photo, or video files from your mobile device to the NSA. Select a destination folder on the NSA and the photos, music, or video files to upload.



- 2 For example, if you selected **Photo**, select the folder containing the photos you want to upload to the NSA. Then select the photos and press your mobile device's menu button to display the **Upload** option.

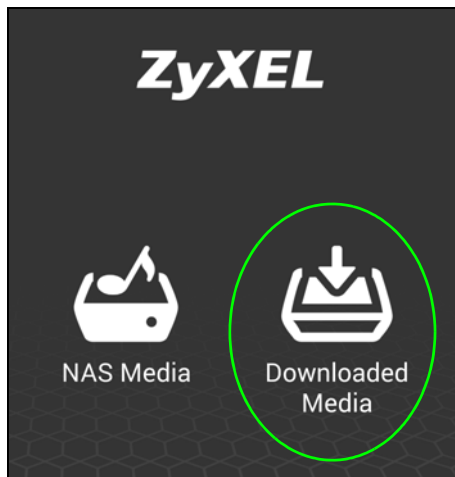


- 3 Press the mobile device's menu button for options to select all files (**Select All**), show download and upload details (**Show Download / Upload**), and log out from the NSA (**Logout**). Here is an example of the download and upload details.



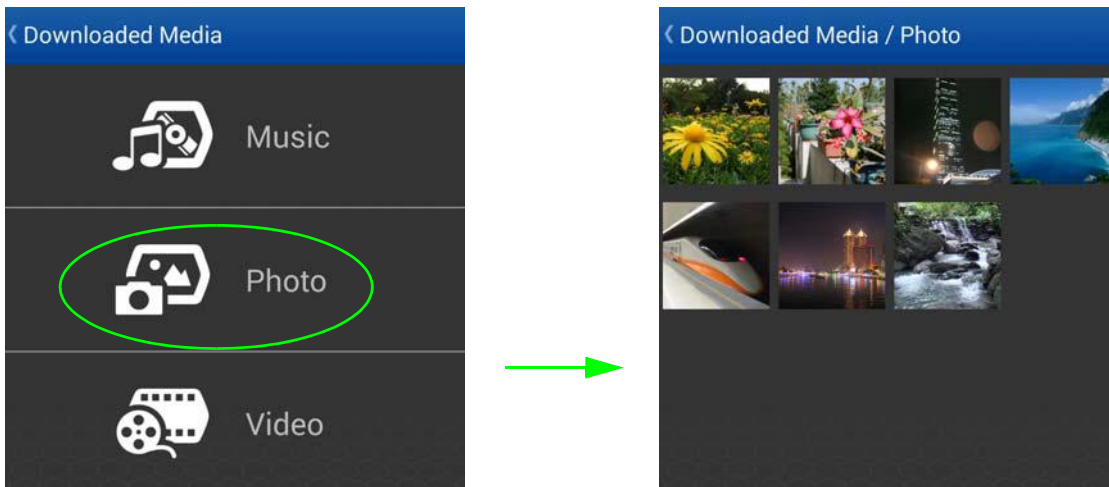
### 3.1.6 Browse zCloud Downloaded Media

- 1 In the main zCloud app screen, tap **Downloaded Media** to access music, photo, or video files downloaded from the NSA to your mobile device.

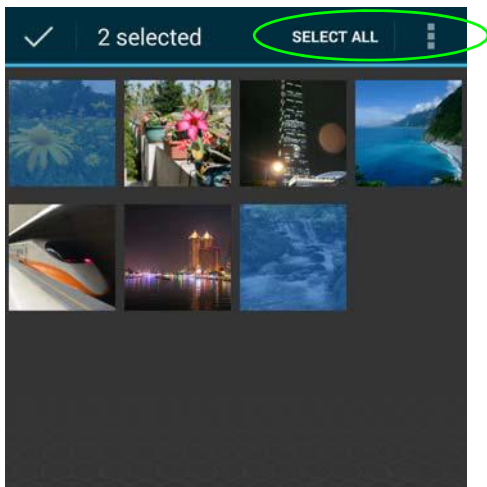


- 2 Tap the type of downloaded media files to display (photos for example).

Tap a photo to display it or press your mobile device's menu button to use **select-n-go** in the options menu to select multiple files to delete.



- 3 When using **select-n-go** the top of the zCloud screen has a **SELECT ALL** option and a three squares menu option with a **Delete** option. Tap a photo to display it or press your mobile device's menu button to use **select-n-go** in the options menu to select multiple files to delete.



- 4 After you display a photo, you can press your mobile device's menu button to see the option to start a slideshow.







# Web Configurator Basics

## 4.1 Overview

This chapter describes how to access the NSA web configurator and provides an overview of its screens.

The web configurator is an HTML-based management interface that allows easy NSA setup and management using an Internet browser.

Use Internet Explorer 7.0, Mozilla Firefox 3.6, Safari 5, Google Chrome 10, or later versions of these browsers. The recommended screen resolution is 1024 by 768 pixels or higher.

In order to use the web configurator you need to allow:

- Web browser pop-up windows from your device. Web pop-up blocking is enabled by default in Windows XP SP (Service Pack) 2.
- JavaScript (enabled by default).

## 4.2 Accessing the NSA Web Configurator

Make sure your NSA is properly connected and that your computer is in the same subnet as the NSA (refer to the Quick Start Guide or the appendices).

## 4.2.1 Access the NSA Via NAS Starter Utility

If you don't know the IP address of the NSA, then use the NAS Starter Utility to find it. Refer to the Quick Start Guide for how to install and run the NAS Starter Utility. See [Chapter 2 on page 21](#) for more information on the NAS Starter Utility.

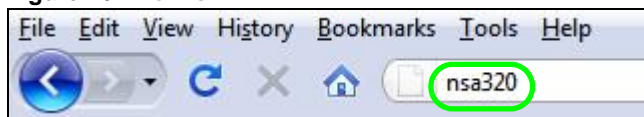
**Figure 15** NAS Starter Utility Main Screen



## 4.2.2 Web Browser Access

Configure the server name of your NSA using the **Network Configuration** screen ([Section 2.8 on page 27](#)) of the NAS Starter Utility. Open your browser and type in the server name of the NSA. The default is 'nsa' followed by the number of your model ('**nsa320**' for example).

**Figure 16** NSA URL



## 4.3 Login

The default username and password are 'admin' and '1234' respectively. Enter your username and password. See [Chapter 15 on page 307](#) for how to create other user accounts. If you use the option to stay logged in (assuming you do not log out), make sure you keep your computer secure from unauthorized access. Click **User Login** to go to the Playzone screens where you can play media files. Click **Administrator Login** to go to the advanced administration screens.

**Figure 17** NSA Login Screen



The image shows the NSA Login Screen. At the top right, there is a language dropdown menu set to 'English'. The main content area is a light blue box with a dark blue border. Inside, it says 'Enter Username/password and click to login.' Below this, there are two input fields: 'Username' and 'Password'. Under the password field, there is a note: '( a maximum of 14 alphanumeric, printable characters, no single and double quotes )'. Below the note is a checkbox labeled 'Keep me logged in'. At the bottom of the box, there are two buttons: 'User Login' and 'Administrator Login'. Below the main box, there is a yellow warning icon followed by the text: 'Note: Please turn on the Javascript and ActiveX control setting on Internet Explorer.'

If you have not done so yet, you should see a screen asking you to change your password (highly recommended) as shown next. Type a new password (and retype it to confirm) and click **Apply** or click **Ignore**.

**Figure 18** Change Password Screen

The screenshot shows a web interface titled "Update Admin Info" with a padlock icon. It contains a message about password security, two input fields for "New Password" and "Password (Confirm)", a character limit note, and "Apply" and "Ignore" buttons. A blue footer bar contains a "Note" about redirection.

**Update Admin Info**

As a security precaution, it is highly recommended that you change the admin password.

New Password

Password (Confirm)

( a maximum of 14 alphanumeric, printable characters, no single and double quotes )

**Note:**  
Once you apply the setting, the page will re-direct to the log-in page immediately.

## 4.4 Playzone Screens

The Playzone **Home** screen displays after you log in using the **User Login** button.





**Figure 19** Playzone Home






Note: The Web Configurator session automatically times out if it is left idle for 15 minutes. Simply log back into the NSA if this happens to you.

The Playzone **Home** screen displays icons for the various features you can access.

**Table 5** Playzone Home Screen Icons

ICON	DESCRIPTION
	Use the Playzone media server screens to view and play media files in the shares that publish them. Use <b>Music</b> to view and play music files in the shares that publish music.
	Use <b>Photo</b> to view photos in the shares that publish photos.
	Use <b>Video</b> to view and play video files in the shares that publish videos. See <a href="#">Section 10.5 on page 188</a> for how to configure the media server.
	Use <b>File Browser</b> to see files in a tree-folder structure.

**Table 5** Playzone Home Screen Icons (continued)

ICON	DESCRIPTION
	Use <b>Playzone Settings</b> to edit general Playzone screen settings and account passwords.
	Administrators can use <b>Application Zone</b> to manage the NSA's applications. Normal users can go to the management page of installed, non-built-in packages.
	Administrators can use <b>Administrator</b> to go to the administrator configuration screens. The NSA opens the administrator configuration screens in a new browser window if you click <b>Administrator</b> while using the Playzone media server to play music.

Note: Your browser may need the Windows Media Player plugin installed to play music and video files.

Use the icons at the top of most Playzone screens as follows.

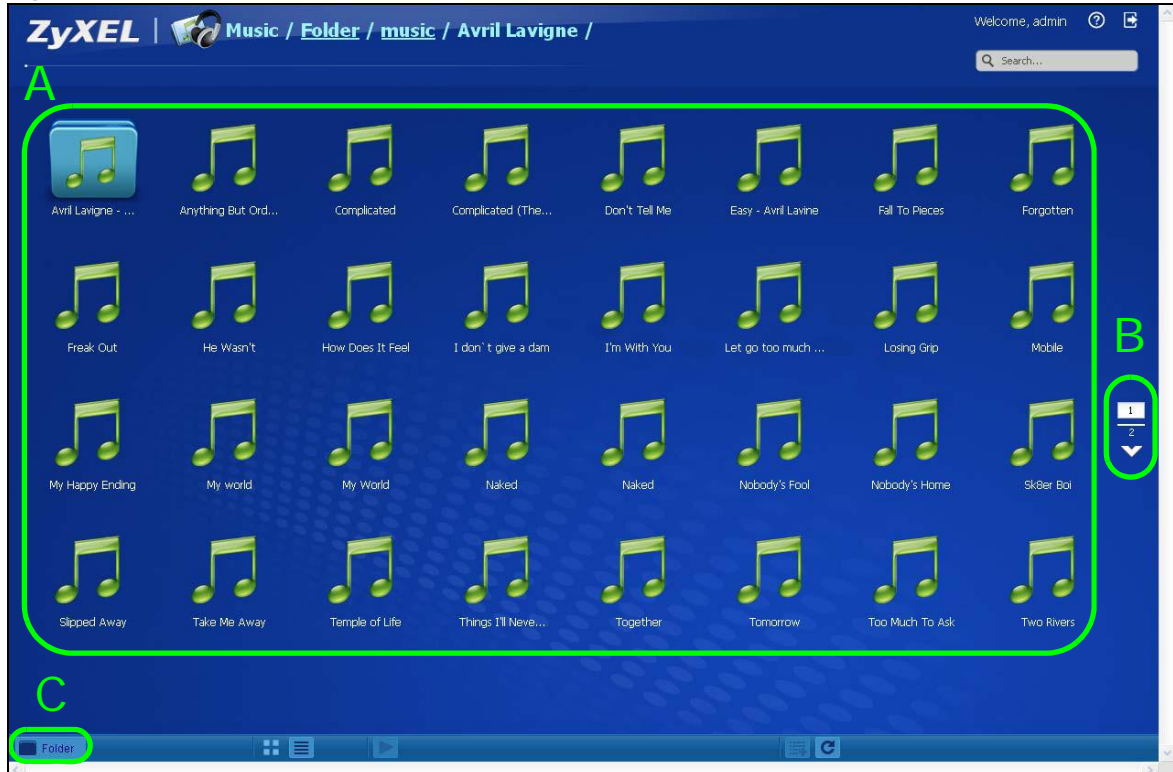
**Table 6** Global Playzone Labels and Icons

LABEL/ICON	DESCRIPTION
ZyXEL	Click this to return to the Playzone <b>Home</b> screen.
Help	Click this to open Web Help for the current screen.
Logout	Click this at any time to exit the web configurator.

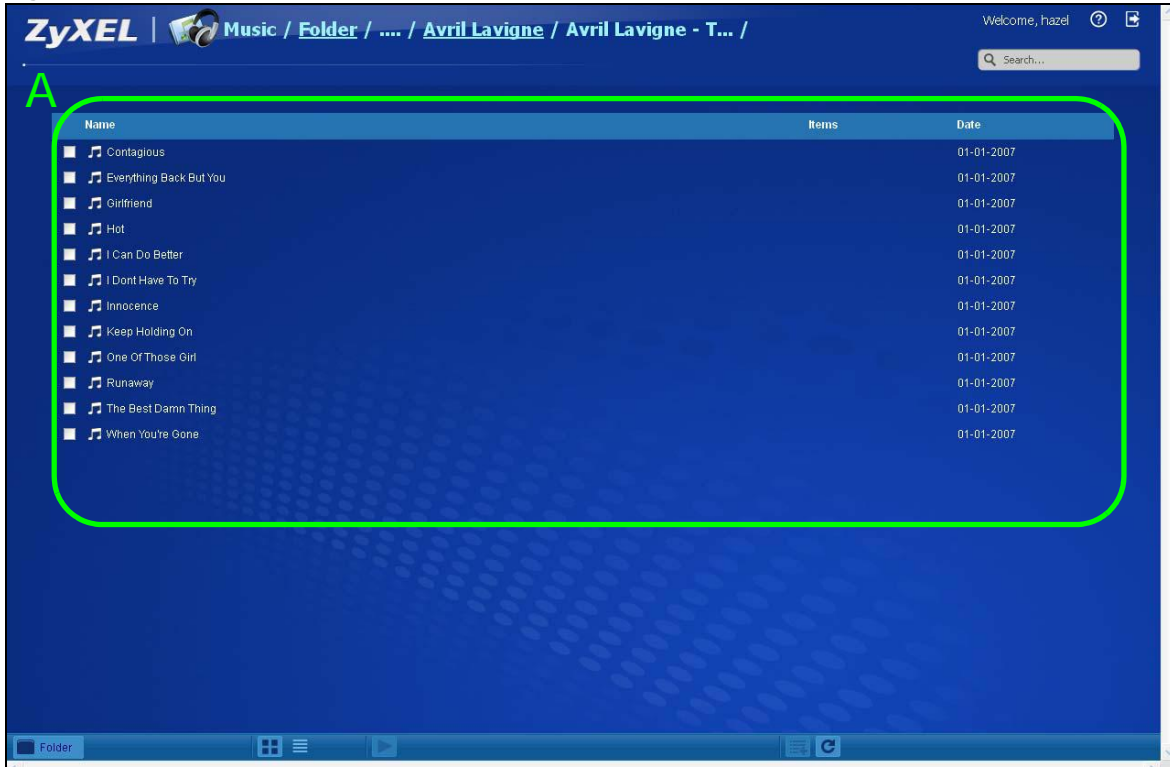
## 4.4.1 Media Server Screens

Use the Playzone media server screens to view published photos and play published music and video files. This following figures shows a folder within the **Music** media server screens with the files as thumbnails and as a list.

**Figure 20** Music (Thumbnail)



**Figure 21** Music (List)



This table describes common labels in the Playzone media server screens. Not every item displays in every screen.

**Table 7** Playzone Media Server Screens

LABEL	DESCRIPTION
ZyXEL	The path of the current view. Click ZyXEL to return to the Playzone <b>Home</b> screen. Click an underlined link to go to that location in the path. <b>Music, Photo, or Video</b> indicates the category of files. <b>Artist, All, Folder, Current Playlist</b> indicates the current view type.
Search	Use this to look for a file by name.
A	View files. Double-click an item to play it. You can also select check boxes for multiple items when you display the files as a list.
B	The current page and total number of pages displays when a category has multiple pages of entries. Click an arrow or type a number to go to another page of entries.
C	Select a view type for displaying folders and files: <b>Artist</b> - Sort music by artist. <b>All</b> - Display all of the category's files. <b>Folder</b> - List the folders containing music files. <b>Current Playlist</b> - Show the playing and queued songs.
Thumbnail	Click this to view the files as thumbnails.
List	Click this to view the files as a list. This also provides
Play	Click this to play the currently selected file. You can also double-click a file to play it.

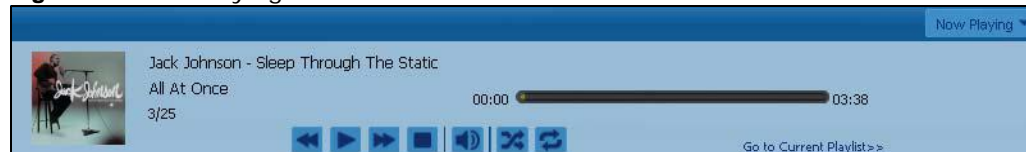


**Table 7** Playzone Media Server Screens

LABEL	DESCRIPTION
Add to Current Playlist	Click this to add the selected music file to the currently playing playlist.
Refresh	Click this to update the display in the screen.
Now Playing	This link is available when a song is playing. Click it to see details about the song that is currently playing.

## 4.4.2 Now Playing (Music)

A **Now Playing** link displays when a song is playing. Click it to display a panel like the following. This screen displays the name of the current song and its play progress and lets you control the playback.

**Figure 22** Now Playing

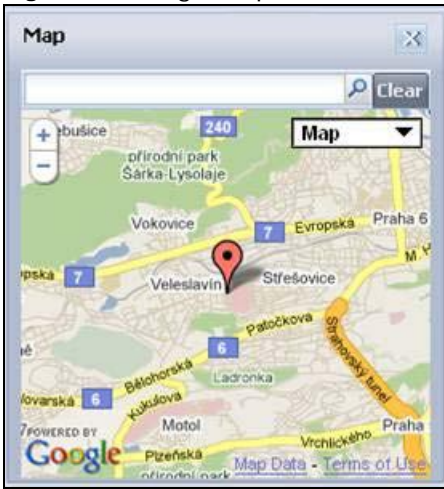
## 4.4.3 Exif and Google Maps (Photos)

Double-click a photo file to display it. Thumbnails of all photos in the view display across the bottom of the screen. Click a photo's **EXIF** button to display or hide the photo's Exchangeable image file format (Exif) data.

**Figure 23** Exif Information

If a photo's Exif data includes GPS location data, click the latitude or longitude link to display the location in Google Maps. Click **Clear** to delete the markers of other photos and only display the current photo's marker.

**Figure 24** Google Maps



#### 4.4.4 Slideshow (Photos)

In a **Photo** menu click the **SlideShow** button to display the menu's files as a slideshow. Move your cursor over the slideshow's screen to display full screen, previous, pause, and next buttons for controlling the slideshow.

Note: Your browser must have the Flash Player plug-in installed to view slideshows.

**Figure 25** Slideshow

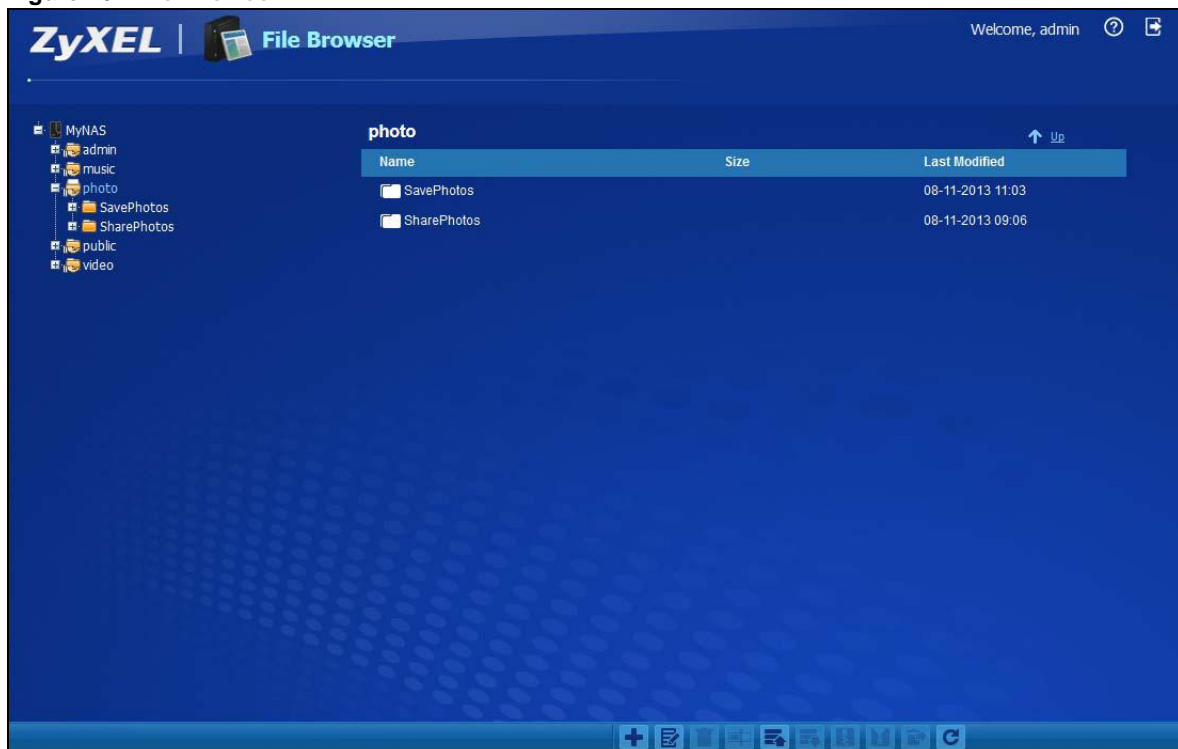


## 4.4.5 File Browser

Click **File Browser** to open the following screen. Use the file browsing screens to play, open, upload, and download files. A share is a set of user access permissions for a specific folder on a volume (gives someone access to a folder). It is equivalent to the Windows concept of a shared folder, but the access rights are independent of the folder (you configure the share and the folder separately). You can map a share to a network drive for easy and familiar file transfer for Windows users.

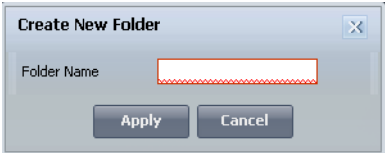
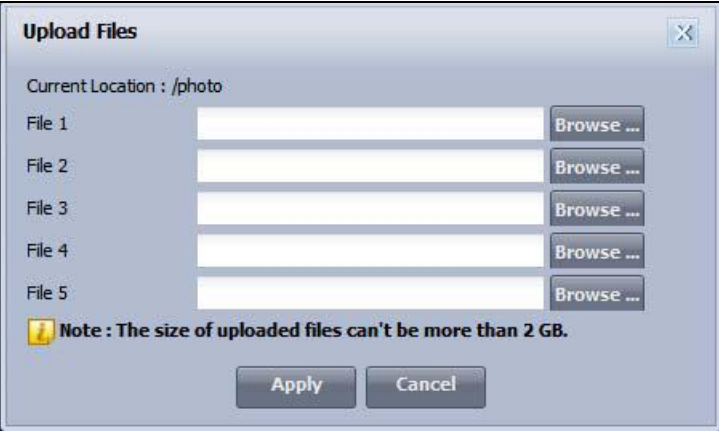
- A folder icon with a hand indicates a share.
- The administrator owns and manages the public shares.
- Double-click a media file to open it. Double-click other types of files to be able to save them.
- Click to the right of a file or folder name to select it.
- Use the [SHIFT] key to select a range of entries. Hold down the [CTRL] key to select multiple individual entries.
- Drag and drop files to open a screen that lets you choose whether to copy or move them.
- You can upload files of up to 2 GB in size.
- You can download individual files of up to 4 GB in size with Mozilla Firefox and Internet Explorer 7 and later or up to 2 GB in size with Internet Explorer 6.

**Figure 26** File Browser



The following table describes the labels in this screen.

**Table 8** File Browser

LABEL	DESCRIPTION
Up	Click this to go to the next higher layer in the share's folder tree.
Name	This column identifies the names of folders and files in the share. Click a file's file name to open the file or save it to your computer. Click a folder's name to display the folder's contents.
Size	This column displays a file's size in bytes.
Last Modified	This column displays the last time the file or folder was changed (in year-month-day hour:minute:second format).
Create New Folder	<p>Click this to open the following screen where you can create a new folder within the share.</p>  <p>Specify a name to identify the folder. See <a href="#">Section 4.4.6 on page 54</a> for more information on folder names. Click <b>Apply</b> to create a folder or click <b>Cancel</b> to exit this screen.</p>
Configure Share	Select a share and click this link to open a screen where you can see and configure share management details.
Delete	Select a file or folder and click this to delete it from the NSA.
Rename	Select a file or folder and click this to change its name.
Upload	<p>Click this to open the following screen where you can add files to the share.</p>  <p>Use the <b>Browse</b> button to locate your file/s and click <b>Apply</b> to upload the file. Click <b>Cancel</b> to close this screen.</p> <p>Note: Do not refresh the screen while an upload is going on.</p>
Download	<p>Select a file and click this to save the file to your computer.</p> <p>Note: Do not refresh the screen while a download is going on.</p>
Compress	Select files or folders and click this to compress them into a zip file.
Decompress	Select a zipped file and click this to create a folder named after the zip file and save the decompressed files into the folder.



**Table 8** File Browser (continued)

LABEL	DESCRIPTION
Restore	When you are in a recycle bin folder, select a folder or file and click this to restore it.
Refresh	Click this to update the information displayed in the screen.  Note: Do not refresh the screen while an upload or download is in progress.

#### 4.4.5.1 Configure Share Screen

In the **File Browser** screen, select a share and click **Configure Share** to open the following screen where you can see and configure share management details.

**Figure 27** File Browser > Configure Share

The following table describes the labels in the this screen.

**Table 9** File Browser > Configure Share

LABEL	DESCRIPTION
Share Name	Configure a name to identify this share. Type a share name from 1 to 239 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing local share. See <a href="#">Section 4.4.6 on page 54</a> for more information on share names. This is not configurable for the NSA's default admin, music, photo, public, and video shares.
Volume	This shows the volume the share is on. It is read-only.
Make this share owned by	Select the administrator or user account that is to own (manage) this share. The share owner controls access rights to the share. This is not configurable for the NSA's default admin and public shares.
Enable This Share	Select this option to allow users to access this share. When this option is not selected, you cannot see and access this share.
Enable Recycle Bin	Select this option to keep deleted items in a recycle bin. When you delete an item, a recycle folder is created within the share, and the deleted item is stored in the recycle bin. Later if you want to retrieve a deleted item, you can select the item from the recycle folder and move/copy the item to another share.
Publish this share to Media Server	Select this option to make the share's files available to media clients. When you publish a share, you can also select whether or not to publish music tracks, photos, and videos.
Publish this share to Web	Select this option to let people use a web browser to access this share's files without logging into the Web Configurator screens.

**Table 9** File Browser > Configure Share (continued)

LABEL	DESCRIPTION
Share Access	<p>Select who can access the files in the share and how much access they are to be given. If you publish the share to the media server or the web, all users will have at least read-only access to the share, regardless of what you configure here.</p> <p>Select <b>Keep it private to owner</b> to allow only the share owner to read files in the share, delete files in the share and save files to the share.</p> <p>Select <b>Make it public</b> to allow anyone (with or without a user account on the NSA) to read files in the share, delete files in the share and save files to the share.</p> <p>Select <b>Advanced</b> to select which individual users can read the share's files, which users can delete the share's files, and which users are blocked from doing either.</p>
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 4.4.6 Share and Folder Names

The name can only contain the following characters:

- Alphanumeric (A-z, 0-9) and Unicode.

The NSA allows FTP access to shares, folders or files with names encoded in the UTF-8 (8-bit UCS/Unicode Transformation Format) format. So your FTP client must support UTF-8 in order to access shares, folders or files on the NSA with Unicode names.

- Spaces
- \_ [underscores]
- . [periods]
- - [dashes]

Other limitations include:

- All leading and trailing spaces are removed automatically.
- Multiple spaces within names are converted to a single space.
- Share names must be unique (they cannot be the same as other share names).
- The NSA creates automatic volume names for external (USB) disk volumes. These are a type of share, so the share name you configure cannot conflict with the external (USB) disk volume names. "ExtVol1" or "ExtVol2" are examples of external (USB) disk volume names.
- Folder names must be unique (they cannot be the same as other folder names).
- The minimum character length of a name is one character, that is a name cannot be blank.
- The maximum character length of share name is 239 characters.
- Unicode is supported for share names, although your FTP client must support UTF-8. Full support should be available in all Windows versions after Windows 2000.

## 4.4.7 Application Zone

Administrators can click **Application Zone** to go to a screen where you can enable or disable various applications for file sharing and downloading. Normal users can go to the management page of installed, non-built-in packages.

**Figure 28** Application Zone



The following table describes the labels in the this screen.

**Table 10** Application Zone

LABEL	DESCRIPTION
Name	This is the name of the application.
Version	This is the version number of the item.
Description	This is a brief description of the application. See <a href="#">Chapter 10 on page 185</a> for more information.
Management Page	Click this link to go the application's management page where you can configure settings for it. See <a href="#">Chapter 10 on page 185</a> for more information.
Enable	Select a disabled application and click this to turn on the application. Some applications are always enabled and cannot be disabled.
Disable	Select an enabled application and click this to turn off the application. Select the Flickr or Youtube Uploadr entry and click this to cancel all uploading. Some applications are always enabled and cannot be disabled.
Pause	Select the Flickr or Youtube Uploadr entry and click this to pause current uploading. <b>Resume</b> will resume current uploading.

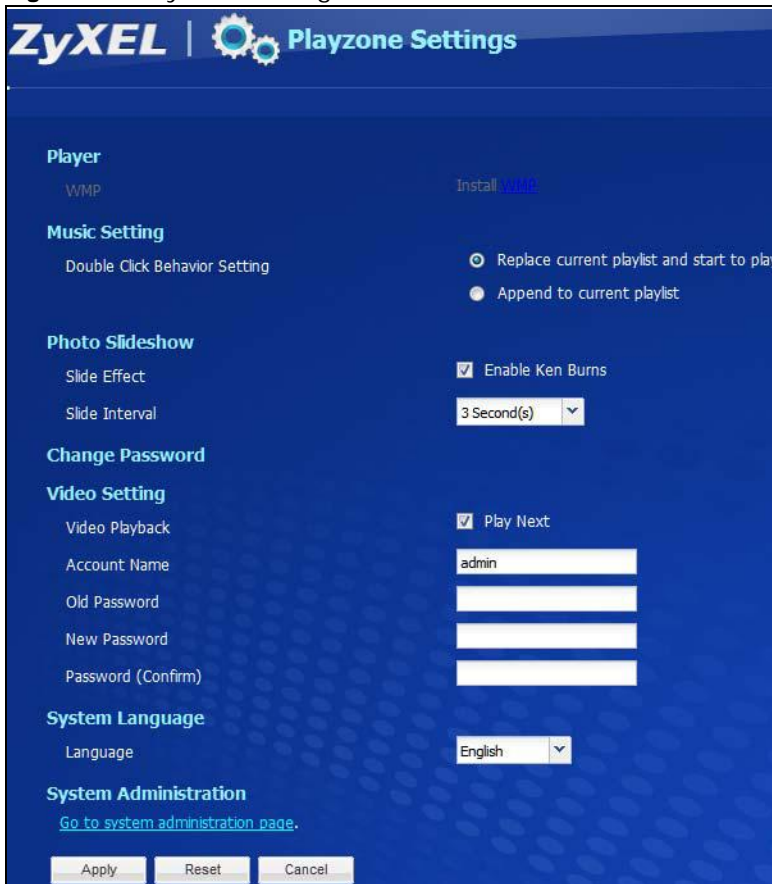
**Table 10** Application Zone (continued)

LABEL	DESCRIPTION
Resume	Select the Flickr or Youtube Uploadr entry and click this to resume current uploading.
Refresh	Update the list of applications in the screen.

### 4.4.8 Playzone Settings

Click **Playzone Settings** to open the following screen. Use this screen to change general Play zone screen settings and account passwords.

**Figure 29** Playzone Settings



The following table describes the labels in this screen.

**Table 11** Playzone Settings

LABEL	DESCRIPTION
WMP	This field displays “Installed” if you already have Windows Media Player installed or a link for installing it if you do not already have it installed.
Double Click Behavior Setting	Select <b>Replace current playlist and start to play</b> to have double clicking a song cause the NSA to immediately stop any currently playing song and start playing the double-clicked song.  Select <b>Append to current playlist</b> to have double clicking a song add a song to the end of the current playlist.



**Table 11** Playzone Settings (continued)

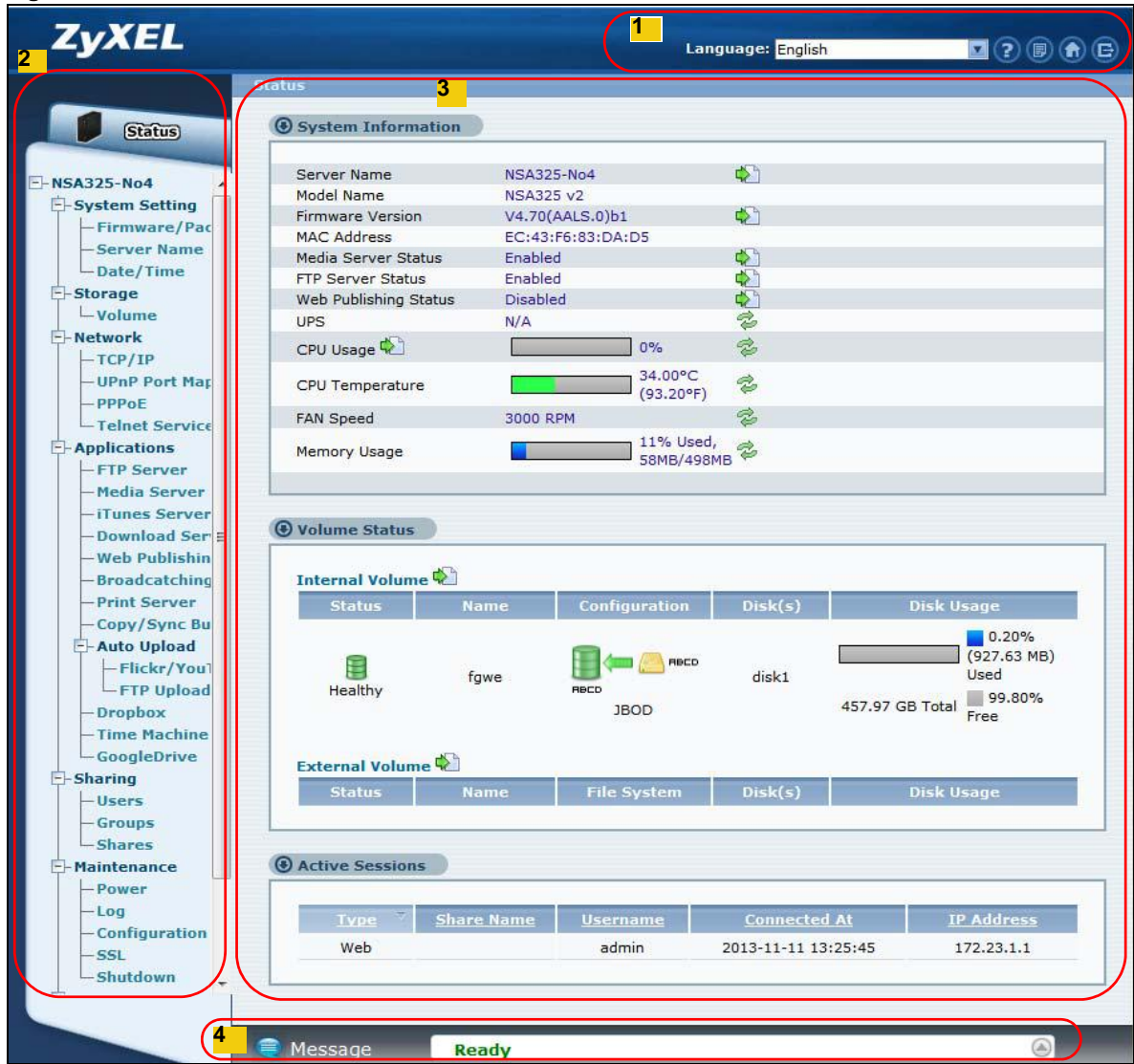
LABEL	DESCRIPTION
Slide Effect	Enable the Ken Burns effect to have the NSA automatically pan and zoom photos in slideshows. Disable it to display photos in slideshows normally.
Slide Interval	Select how long to display each image in a slideshow before changing to the next.
Video Playback	Select <b>Play Next</b> to play the rest of the video files in a folder. So for example, a folder has video files 1~10 and you play video 3. When video 3 finishes the device continues playing the rest of the videos in the folder (4~10). It does not loop back and play videos 1 and 2.
Account Name	Type the user name of the account for which you want to change the password.
Old Password	Type the user's current password.
New Password	Create a new password for the user. You can type from one to 14 single-byte (no Chinese characters allowed for example) ASCII characters.
Password (Confirm)	You must type the exact same password that you just typed in the above field.
Language	Select the web configurator language from the drop-down list box.
Go to system administration page	This link appears when you are logged in as the administrator. Click it to open the advanced administration screens. See <a href="#">Section 4.5 on page 57</a> for more on the advanced administration screens. The NSA opens the administrator configuration screens in a new browser window if you click <b>Go to system administration page</b> while using the Playzone media server to play music.
Apply	Click this to save your changes.
Reset	Click this to refresh the screen.
Cancel	Click this to exit the screen without saving your changes.

## 4.5 Administration Screens

Use the login screen's **Administrator Login** button to go directly to the advanced administration screens. An **Administration** link also displays in the Playzone **Home** screen when you log into the Playzone as the administrator.

The **Status** screen is the first advanced administration screen that displays. See [Chapter 6 on page 147](#) for more information about the **Status** screen.

**Figure 30** Status



### 4.5.1 Global Administration Icons

The icons and language label at the top-right of the screen (1) are visible from most of the administration screens. The following table describes the 'global' icons and labels.


**Table 12** Global Labels and Icons

LABEL/ICON	DESCRIPTION
Language	Select the web configurator language from the drop-down list box.
Help	Click this to open Web Help for the current screen.
About	Click this to view the model name, firmware version and copyright.

**Table 12** Global Labels and Icons

LABEL/ICON	DESCRIPTION
Home	Click this to go to the Playzone <b>Home</b> screen.
Logout	Click this at any time to exit the web configurator. This is the same as clicking the <b>Logout</b> link at the bottom of the navigation panel.

## 4.5.2 Navigation Panel

The navigation panel on the left of the Web Configurator screen (  ) contains screen links. Click a link to display sub-links. There are no sub-links for the **Status** screen. Certain screens also contain hyper links that allow you to jump to another screen.

The following table describes the navigation panel screens.

**Table 13** Screens Summary

LINK	SCREEN	FUNCTION
Status		This screen shows system information, the status of the volumes, and the users who are currently using the NSA.
System Setting	Firmware/ Packages	Upload/upgrade new firmware to your NSA and add useful applications. The NSA can download multiple packages/files at once and automatically goes through all the installation steps.
	Server Name	Specify the NSA's server name and workgroup name.
	Date / Time	Chose a time zone and/or allow the NSA to synchronize with a time server.
Storage	Volume	View volume and disk information and create and edit volumes. A volume is a storage area that can span one or more internal disks or a single external (USB) disk.
	S.M.A.R.T	Install the SMART package to display this screen you can use to monitor hard disks.
Network	TCP/IP	Assign the NSA a dynamic or static IP address and DNS information.
	UPnP Port Mapping	Configure your Internet gateway to allow access from the WAN (Internet) to services on the NSA.
	PPPoE	Configure PPPoE settings for a direct Internet connection.
	Telnet Service	Enable or disable Telnet access. This applies to the NSA310S, NSA320S, NSA325, and NSA325 v2.
	DyDNS	Install the DyDNS package to use Dynamic DNS (DDNS) services to use a domain name with a dynamic IP address.
	NFS	Install the NFS package to display this screen where you can configure NFS (Network File System) file-sharing.

**Table 13** Screens Summary (continued)

LINK	SCREEN	FUNCTION
Applications	FTP Server	Enable FTP file transfer to/from the NSA, set the number of FTP connections allowed, an FTP idle timeout, and the character set.
	Media Server	Enable or disable the sharing of media files and select which shares to share.
	iTunes Server	Use the iTunes server to share media files with iTunes users on your network.
	Download Service	Have the NSA handle large file downloads.
	Web Publishing	Let people use a web browser to access files in shares without logging into the Web Configurator.
	Broadcatching	Subscribe the NSA to feeds to download frequently updated digital content like TV programs, radio talk shows, Podcasts (audio files), YouTube videos, or even P2P downloads.
	Print Server	View and manage the NSA's list of printers and print jobs.
	Copy/Sync Button	Copy or synchronize files between a USB device and the NSA.
	Auto Upload - Flickr/YouTube	Upload files in selected shares to your Flickr and/or YouTube accounts.
	Auto Upload - FTP Uploadr	Upload files in selected shares to FTP servers.
	Dropbox	Use your Dropbox account to easily move files to your NSA and have the NSA download *.torrent files.
	Time Machine	Use Time Machine in OS X to use your NSA as a backup volume.
	Memopal	Back up files from the NSA to your Memopal account.
	GoogleDrive	Install the GoogleDrive package to synchronize local user folders on the NSA with Google Drive cloud storage accounts.
	Syslog Server	Enable the syslog server and select the categories to include in the log report.
	TFTP Server	Configure the NSA to accept log files from TFTP clients.
	eMule - Server	Configure the eMule server.
	eMule - Task	Manage eMule tasks.
eMule - Search	Search for files available in an eMule server using keywords and other parameters, such as file type, file size, and extension names.	
pyLoad	Configure the NAS to use pyLoad to manage your downloads, including those from one-click hosting sites.	
Sharing	Users	View, create and edit administrator and user accounts to let people use the NSA.
	Groups	View, create and edit groups. Groups allow you to organize users into specific groups. You can create shares accessible only by the group members.
	Shares	View, create and edit shares. Shares are shared folders to which you can allow specific users read/write access rights.
Maintenance	Power	Configure power saving settings for the NSA and have the NSA turn itself off and on or reboot according to the schedules you configure.
	Log	View the NSA's logs and configure how you want to receive the log reports.
	Configuration	Back up and/or restore the NSA configuration file.
	SSL	Configure HTTPS and the NSA's SSL certificate.
	Shutdown	Restart the NSA or shut it down.

**Table 13** Screens Summary (continued)

LINK	SCREEN	FUNCTION
Protect	Backup	Create and customize backup jobs.
	Restore	Restore previous backups made with the NSA.
Logout		Click this to exit the web configurator. This is recommended to prevent unauthorized administrator access to the NSA.

### 4.5.3 Main Window

The main window (**3**) shows the screen you select in the navigation panel. It is discussed in the rest of this document.










### 4.5.4 Status Messages

The **Message** text box at the bottom of the screen (**4**) displays status messages as you configure the NSA.





### 4.5.5 Common Screen Icons

The following table explains some icons that appear in several configuration screens.

**Table 14** Common Configuration Screen Icons

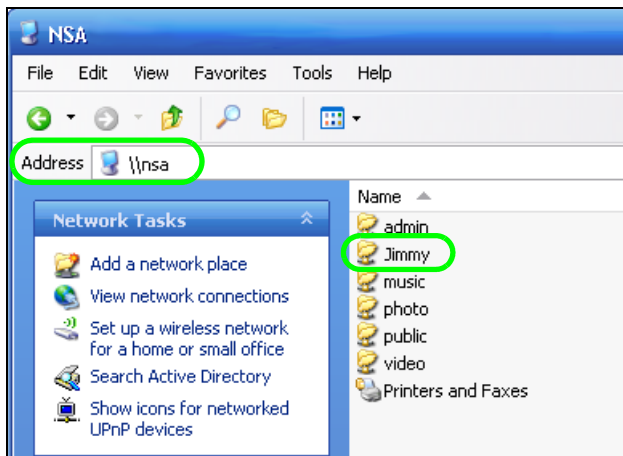
ICON	DESCRIPTION
	<b>Edit</b> Click this to go to a screen where you can change the configuration settings of an entry.
	<b>Delete</b> Click this to delete an entry from the list.
	<b>Edit</b> Click this to jump to related item's configuration screen.
	<b>Refresh</b> Click this to refresh the data for the field or value with which it is associated.
	<b>User</b> See the chapter on user accounts for detailed information on variants of this icon.
	<b>Share</b> See the chapter on shares for detailed information on variants of this icon.
	<b>Healthy</b> This represents a healthy volume.
	<b>Degraded</b> This represents a degraded RAID 1 volume. Replace the faulty disk. If the replacement disk does not contain any partition, the NSA automatically restores the volume. If the replacement disk already contains a volume, you need to delete the volume and then click the <b>Repair</b> icon to fix the degraded RAID volume.
	<b>Down</b> This represents a down volume.

**Table 14** Common Configuration Screen Icons (continued)

ICON	DESCRIPTION
	<b>Scan Disk</b> Click this to scan a hard disk for file system errors.
	<b>Eject</b> Click this before you remove an external hard drive so that you do not lose data that is being transferred to or from that hard drive.
	<b>Locate</b> Click this to cause the LED on the external storage device to blink.
	<b>Repair</b> If you replace a faulty disk with a disk that contains a volume, you need to delete the volume and then click this to fix the degraded RAID volume.

### 4.5.6 Session Example (Windows)

Open Windows Explorer and type two back slashes followed by the NSA name or IP address. Initially you can only read and write to the **Public**, **Video**, **Music**, and **Photo** folders until you create other shares on the NSA. This session is then displayed as shown in the following figure.



## 5.1 Overview

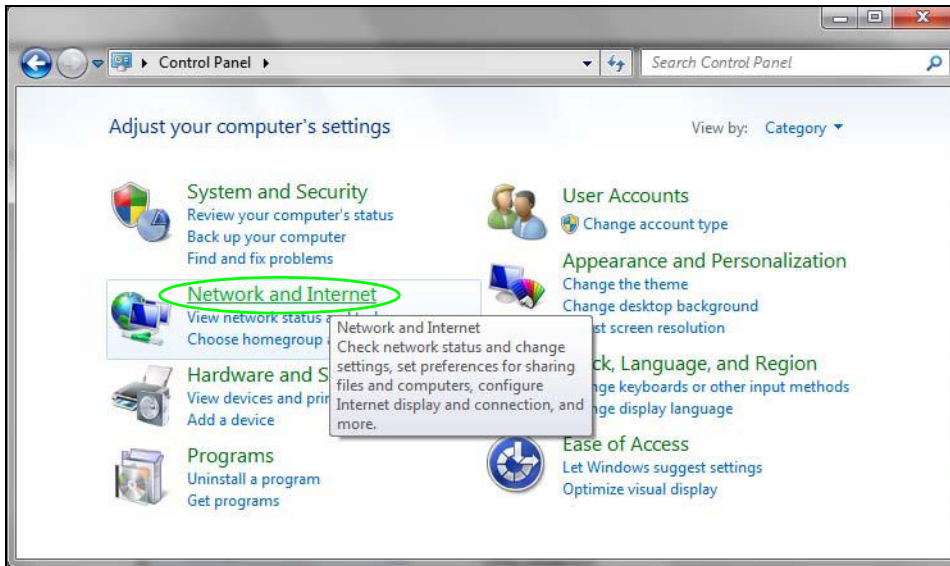
This chapter provides tutorials that show how to use the NSA.

- [Windows 7 Network](#), see [page 63](#)
- [Windows 7 Network Map](#), see [page 67](#)
- [Playing Media Files in Windows 7](#), see [page 69](#)
- [Windows 7 Devices and Printers](#), see [page 69](#)
- [Creating a Volume in a 2-Bay NSA](#), see [page 72](#)
- [Creating a Volume in a 1-Bay NSA](#), see [page 74](#)
- [Deleting a Volume](#), see [page 81](#)
- [File Sharing Tutorials](#), see [page 82](#)
- [Download Service Tutorial](#), see [page 91](#)
- [Broadcatching Tutorial](#), see [page 106](#)
- [Copy and Flickr Auto Upload Tutorial](#), see [page 112](#)
- [FTP Uploadr Tutorial](#), see [page 113](#)
- [Web Configurator's Security Sessions](#), see [page 116](#)
- [Using FTPES to Connect to the NSA](#), see [page 129](#)
- [Using a Mac to Access the NSA](#), see [page 130](#)
- [How to Use the BackupPlanner](#), see [page 133](#)

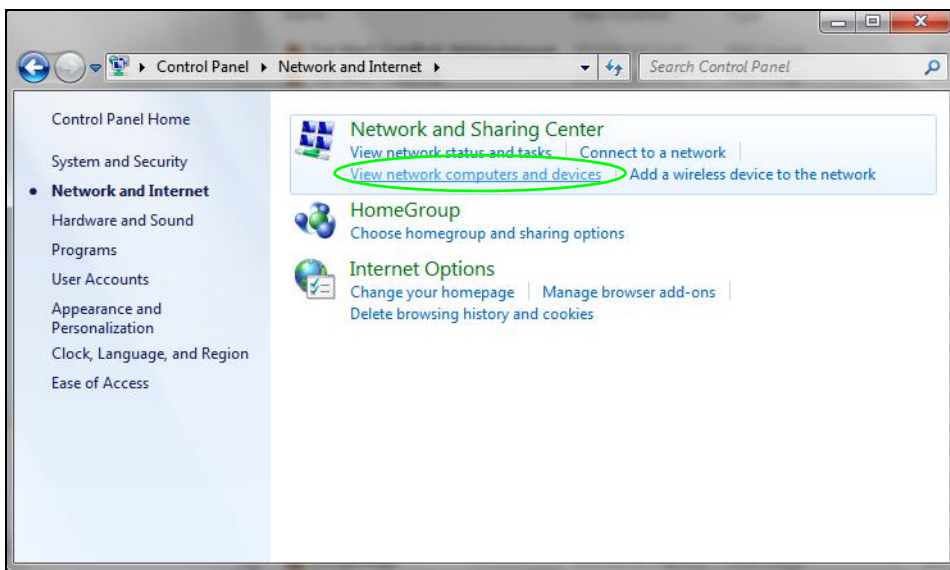
## 5.2 Windows 7 Network

To see your NSA in a Windows 7 home or work network:

- 1 Click **Start > Control Panel**. Set **View by** to **Category** and click **Network and Internet**.

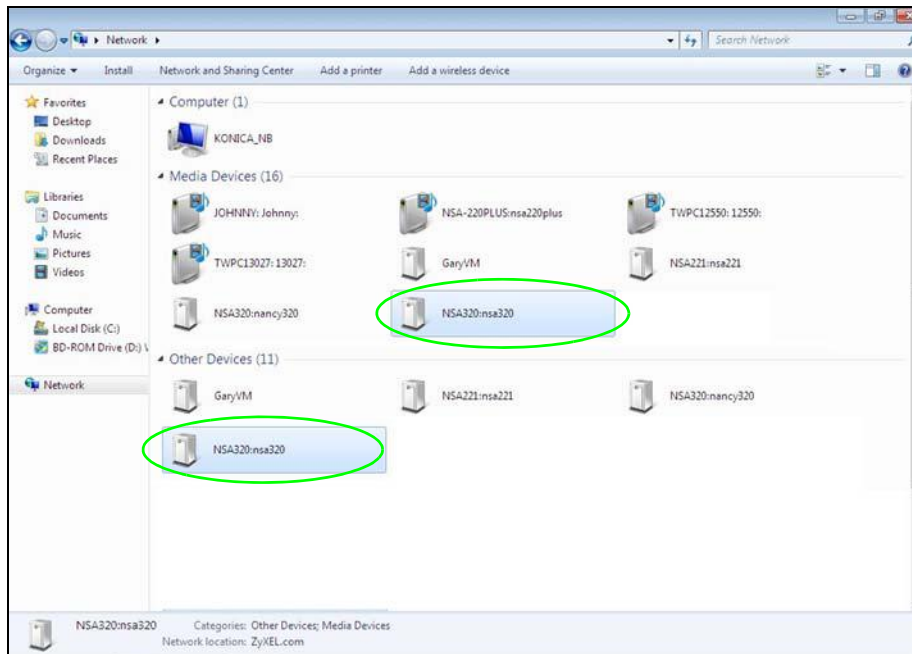


- 2 Click **View network computers and devices**.





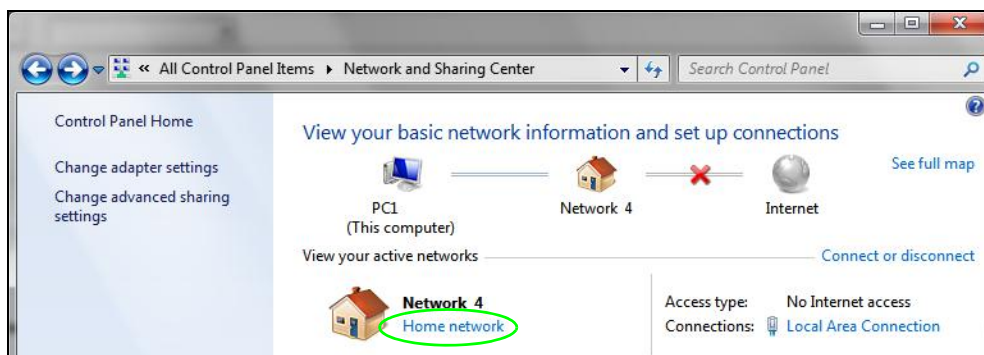
- The NSA icon displays twice because the NSA is both a media server and a storage device. Double-click either NSA icon to open the Web Configurator login screen.



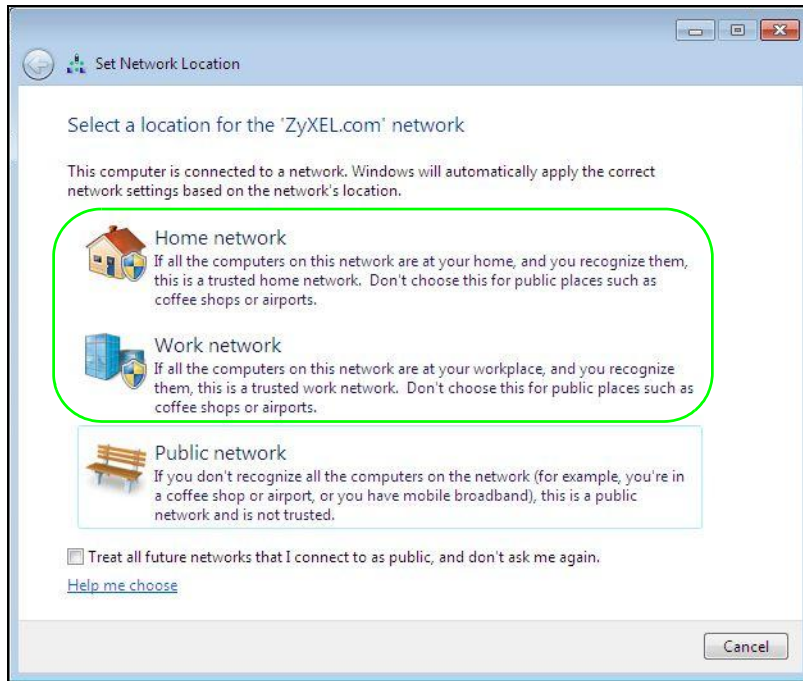
## 5.2.1 If the NSA Icon Does Not Display

The network containing the NSA must be set as a home or work network in order for the NSA icons to display. If the network containing the NSA displays as "Public":

- Click **Network and Sharing Center** and then the network's link (circled in the figure).

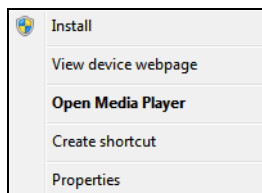


- 2 Use the **Set Network Location** screen to set the network's location to home or work.



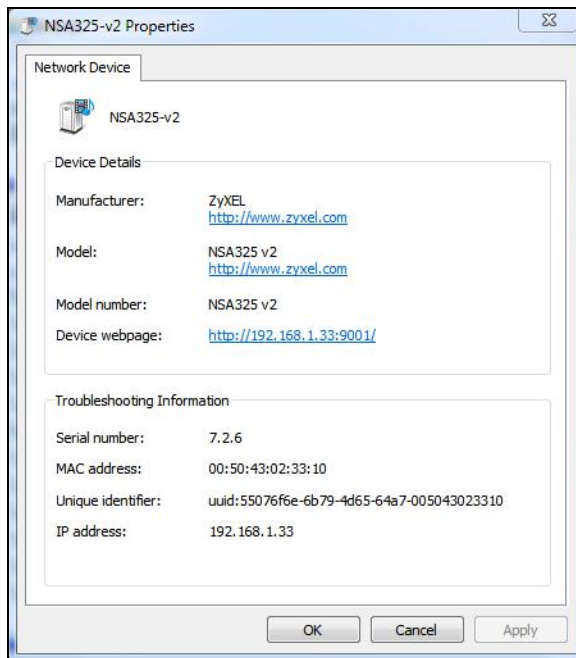
## 5.2.2 NSA Icon Right-click Options

Right-click the NSA's icon to see these options:



- **Install/Uninstall:** Click **Install** to add the NSA as a device in your computer. After you install the NSA you can see it in the computer's list of devices (see [Section 5.5 on page 69](#)). Click **Uninstall** to remove the NSA from the list of devices installed in your computer.
- **View device web page** opens the Web Configurator login screen.
- **Open Media Player** opens the computer's default media player.
- **Create shortcut** adds a desktop shortcut to the Web Configurator login screen.

- **Properties** opens a window of NSA details and troubleshooting information.

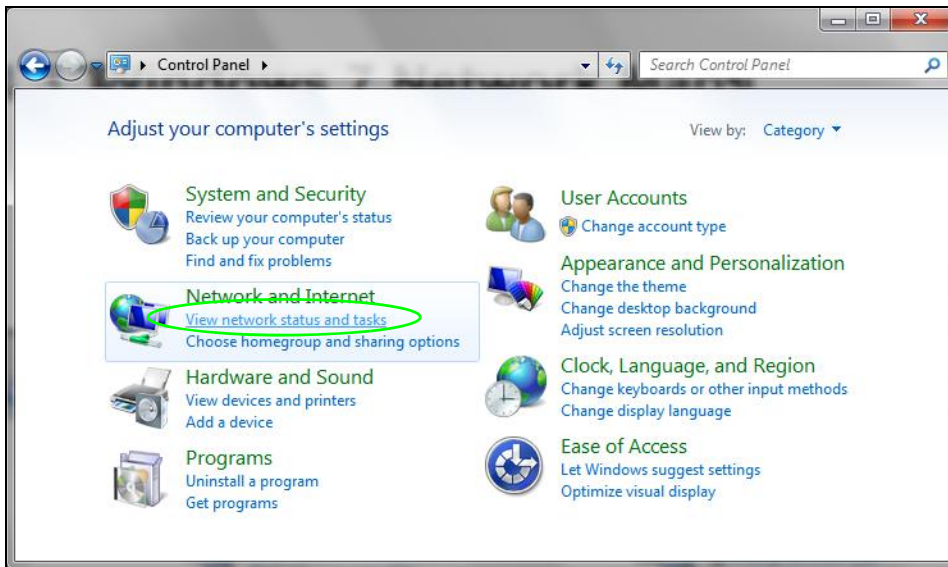


- **Manufacturer** identifies the company that produced the NSA.
- **Model** identifies the NSA model.
- **Model number** identifies the NSA model number.
- **Device webpage** shows the IP address for accessing the Web Configurator.
- **Serial number** is unavailable because the NSA does not have one.
- **MAC address** is the NSA's unique physical hardware address (MAC). You need the MAC address to register the product at myZyXEL.com. Customer support may also request it for troubleshooting purposes.
- **Unique identifier** is a unique UPnP ID that the NSA generated.
- **IP address** is the NSA's IP address. It is also the IP address for accessing the Web Configurator.

## 5.3 Windows 7 Network Map

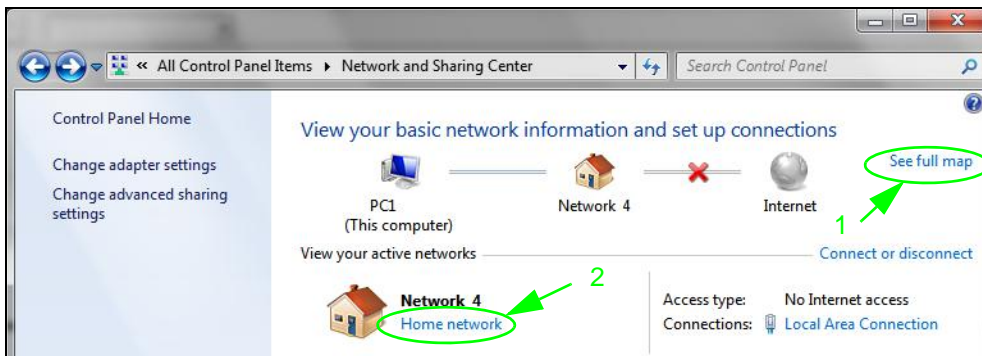
To see your NSA in a Windows 7 home or work network map:

- 1 Click **Start > Control Panel > View network status and tasks** (or **Network and Sharing Center** if you view the Control Panel by icons).

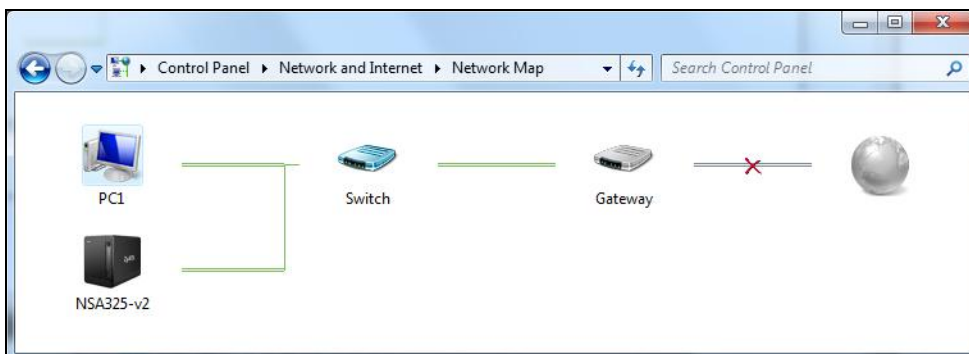


- 2 Click **See full map** (1 in the figure).

The network containing the NSA must be set as a home or work network in order to use the full map feature. If the network containing the NSA displays as "Public", click the network's link (2 in the figure, although it is already set to home here) and use the **Set Network Location** screen to set the network's location to home or work (see [page 66](#)).



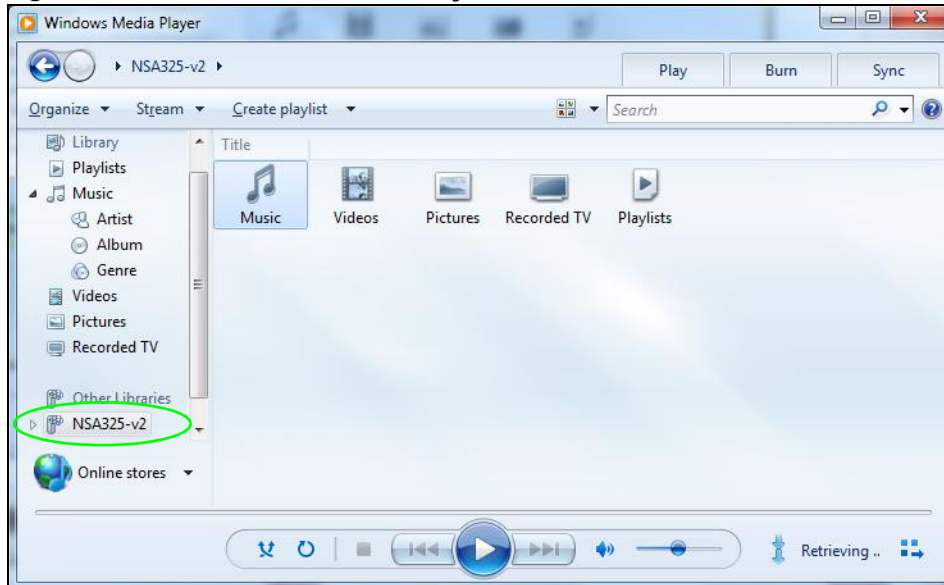
- 3 Double-click the NSA's icon to open the Web Configurator login screen. See [Section 5.2.2 on page 66](#) for the NSA icon's right-click options.



## 5.4 Playing Media Files in Windows 7

In Windows 7, the NSA automatically displays as a library in Windows Media Player.

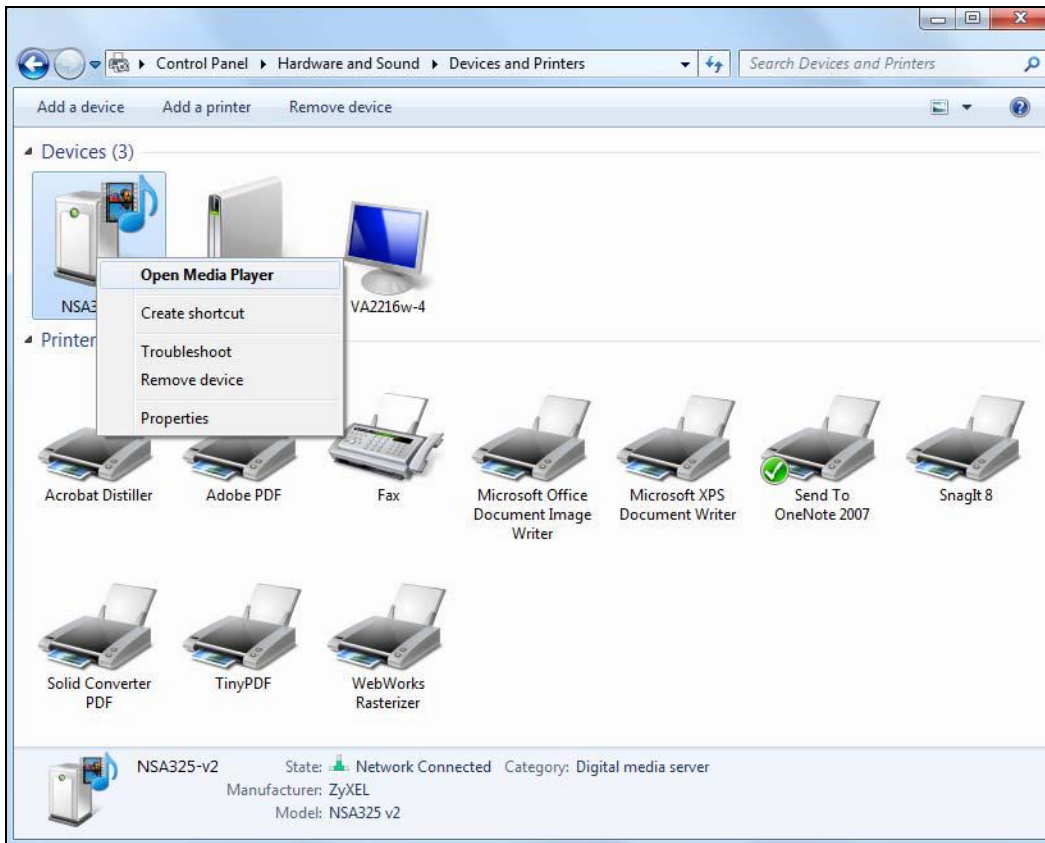
**Figure 31** NSA in Windows Media Player



## 5.5 Windows 7 Devices and Printers

After you use the NSA's network icon's install option you can manage the NSA from the Windows 7 **Devices and Printers** folder.

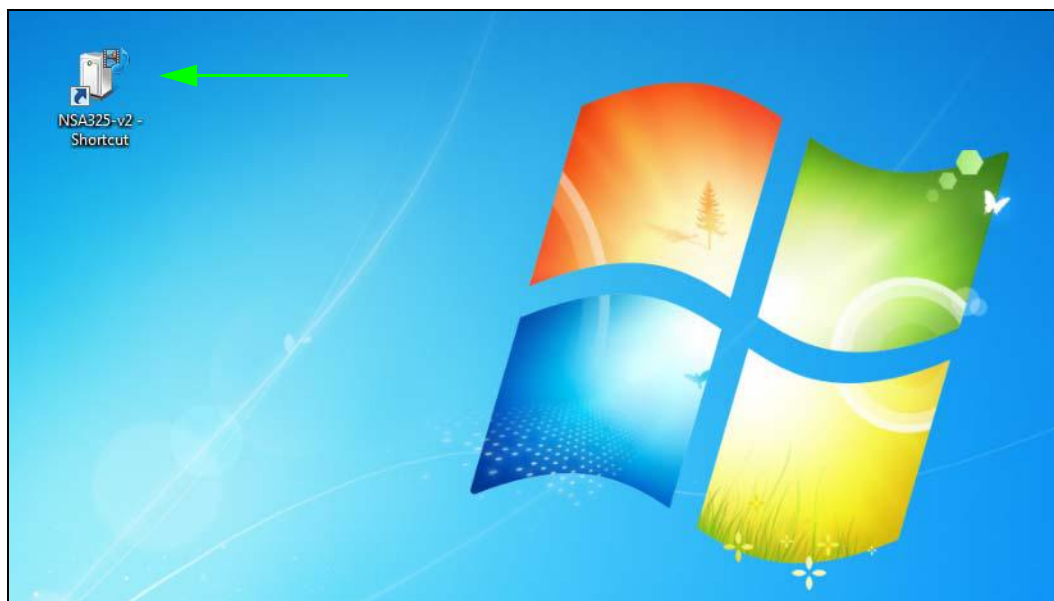
Click **Start > Control Panel > Hardware and Sound > Devices and Printers**. Select the NSA icon to display information about the NSA. Double-click the NSA icon to open a properties window (see [page 67](#)). Right-click the icon to display these options:



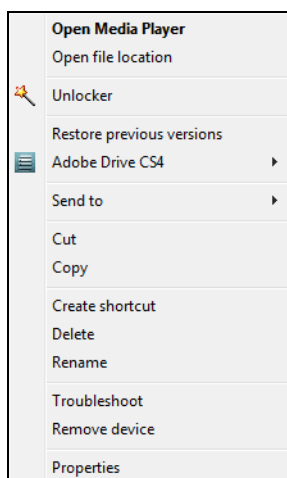
- **Open Media Player** opens the computer's default media player.
- **Create shortcut** has Windows make a desktop shortcut to this screen.
- **Troubleshoot** opens Windows' device troubleshooting wizard.
- **Remove device** removes the NSA from the Windows 7 **Devices and Printers** folder.
- **Properties** opens a window of NSA details and troubleshooting information (see [page 67](#)).

## 5.5.1 Windows 7 Desktop Shortcut

This is the NSA's desktop shortcut. Double-click it to open a properties window (see [page 67](#)).



- 1 Right-click the NSA's desktop shortcut icon to see these options:



- **Open Media Player** opens the computer's default media player.
- **Open file location** takes you to the Windows 7 **Devices and Printers** folder.
- **Download NAS Starter Utility** downloads the NSA's Starter Utility. It lets you find, set up, and manage the NSA as well as copy files to it and access the files on it. See [Chapter 2 on page 21](#) for details.
- **Restore previous versions** is the Windows 7 option for restoring a file or folder. It does not apply to this shortcut.
- **Send** to give you options for copying the shortcut to another location.
- **Cut** removes this shortcut so you can paste it somewhere else.
- **Copy** copies the shortcut so you can paste it somewhere else.



- **Create shortcut** has Windows make a desktop shortcut to this icon.
- **Delete** sends the shortcut to the recycle bin.
- **Rename** lets you change the name of the shortcut.
- **Troubleshoot** opens Windows' device troubleshooting wizard.
- **Remove device** removes the NSA from the Windows 7 **Devices and Printers** folder.
- **Properties** opens a window of details about the shortcut.

## 5.6 Creating a Volume in a 2-Bay NSA

This section shows you how to create a volume in your 2-bay NSA.

**Creating a volume deletes all existing data in the hard disk. Make sure you have a backup of your existing data before following the steps in this section.**

Your NSA has two bays for Serial Advanced Technology Attachment (SATA) hard disks. The JBOD storage method is used if you are using a single hard disk for your NSA.

This JBOD volume shows up in the **Storage > Volume** screen ([Section 8.3 on page 165](#)) as follows.



### 5.6.1 Creating a RAID 1 Volume

This storage method allows recovery of data if your hard disk fails. To create a RAID 1 volume, you must install two SATA hard disks in your NSA. There are two ways to create a RAID 1 volume:

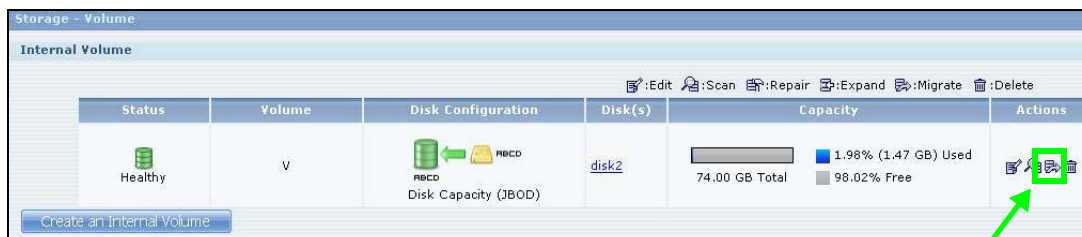
- Click the **Migrate** button - If you already have a SATA hard disk with a volume and you later install a second SATA hard disk in your NSA, use the **Migrate** button to convert the existing JBOD volume to a RAID 1 volume.
- Click the **Create an internal volume** button - Use this if there are no existing volumes in your NSA.



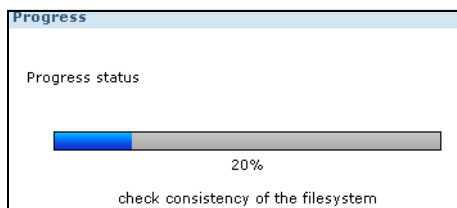
## 5.6.2 Migrate Button

Do the following steps to create a RAID 1 volume.

- 1 Once you install a second SATA hard disk in the NSA, the **Storage > Volume** screen shows the **Migrate** button.



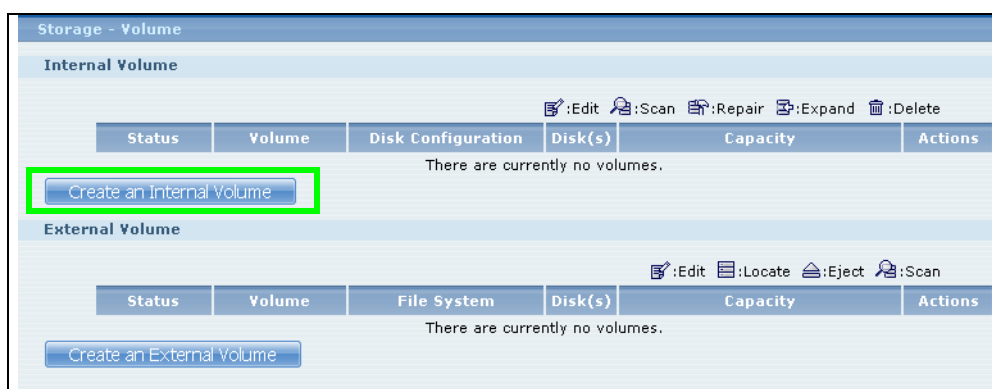
- 2 Click the **Migrate** button and you can see the following progress bar. Wait for the RAID 1 volume to be created. This may take quite a while depending on how much data you have in the original volume.



## 5.6.3 Create an Internal Volume Button

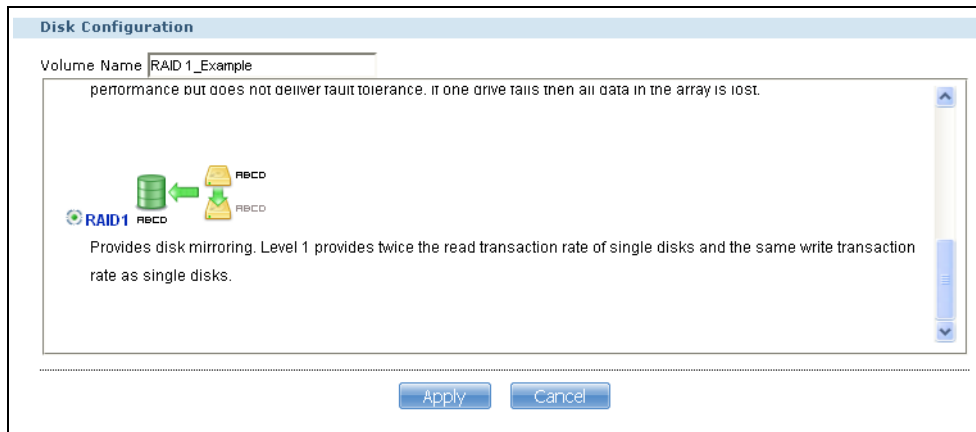
If you do not have an existing volume in the **Storage > Volume** screen, do the following steps to create a RAID 1 volume.

- 1 In the **Storage > Volume** screen, click **Create an Internal Volume**.

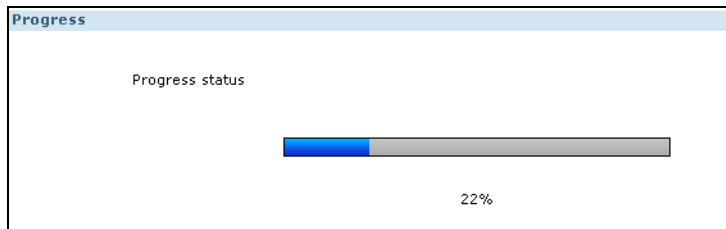


- 2 In the **Disk Configuration** screen, you can select the storage method.
  - Type in the **Volume Name** for your RAID 1 volume. The volume name can be 1 to 31 characters (a-z, 0-9, " " [spaces], "\_", and ".").
  - Choose **RAID 1** and click **Apply**.

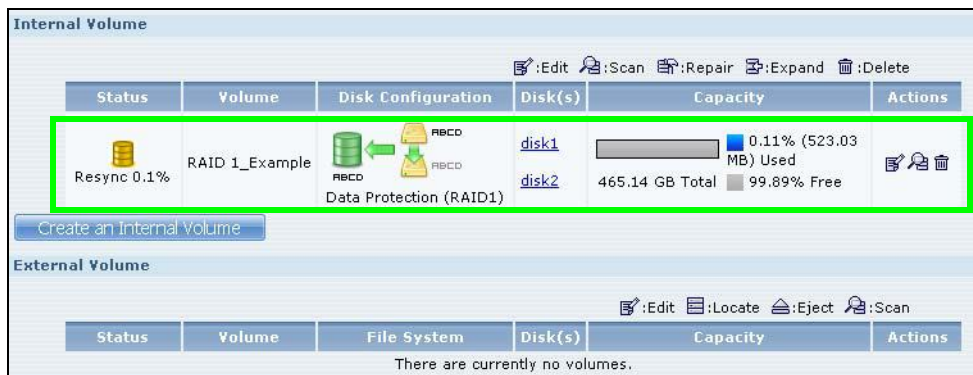
**This deletes all existing data in the SATA hard disk. Make sure you have a backup of any existing data in the hard disk.**



The NSA starts creating the volume and you can see the following progress bar. Wait for the RAID 1 volume to be created.



- 3 The **Storage > Volume** screen displays with your RAID 1 volume.



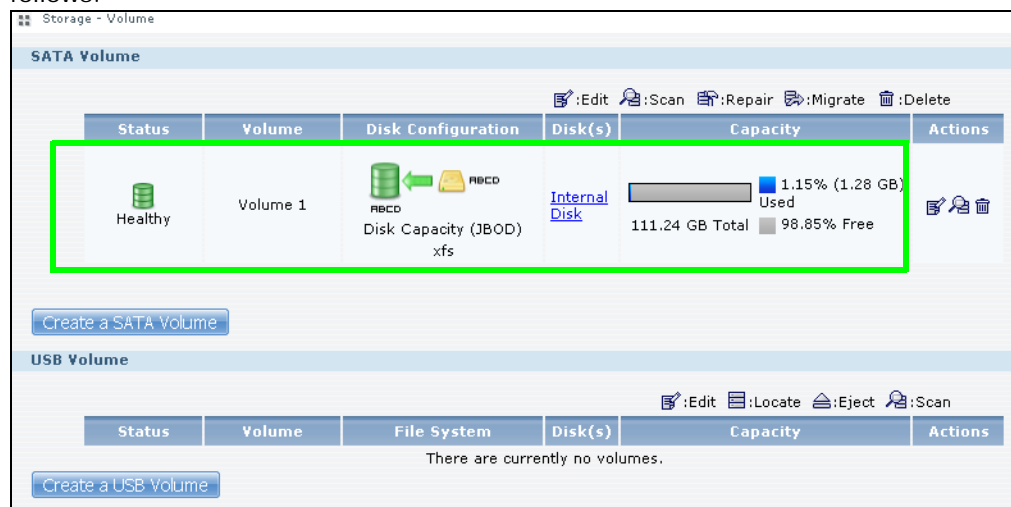
## 5.7 Creating a Volume in a 1-Bay NSA

This section shows you how to create a volume on your 1-bay NSA.

**Creating a volume deletes all existing data in the SATA or eSATA hard disk. Make sure you have a backup of your existing data before following the steps in this section.**

Your NSA has a single bay for a SATA (Serial Advanced Technology Attachment) hard disk. JBOD is the only storage method for the NSA310S and the default storage method if you are using a single hard disk in the NSA310.

This JBOD volume shows up in the **Storage > Volume** screen (Section 8.2 on page 162) as follows.



When you attach an eSATA hard disk to your NSA, you can configure this volume as: 1) a backup to your SATA hard disk (**RAID 1**); or 2) as a separate storage drive (either another **JBOD** or a **PC Compatible Volume**).

## 5.7.1 Creating a RAID 1 Volume

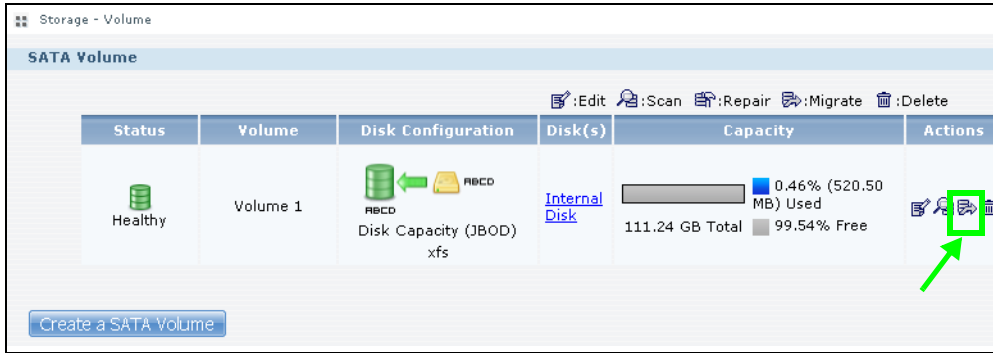
This applies to the NSA310. This storage method allows recovery of data if your hard disk fails. To create a RAID 1 volume, you must connect an eSATA hard disk to your NSA. There are two ways to create a RAID 1 volume:

- Click the **Migrate** button - This is a quick way to create a RAID 1 volume. Use this to automatically synchronize data in the internal hard disk to the eSATA hard disk.
- Click the **Create a SATA volume** button - Use this if there are no existing volumes in your NSA.

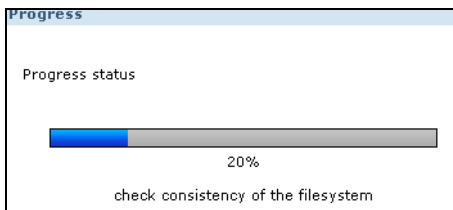
## 5.7.2 Migrate Button

Do the following steps to create a RAID 1 volume.

- 1 Once you attach the eSATA hard disk to the NSA, the **Storage > Volume** screen shows the **Migrate** button.



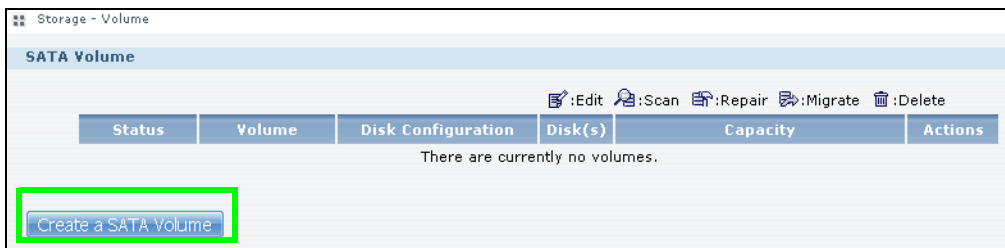
- 2 Click the **Migrate** button and you can see the following progress bar. Wait for up to 10 minutes for the RAID 1 volume to be created.



### 5.7.3 Create a SATA Volume Button

If you do not have an existing volume in the **Storage > Volume** screen, do the following steps to create a RAID 1 volume.

- 1 In the **Storage > Volume** screen, click **Create a SATA Volume**.



- 2 In the **Disk Configuration** screen, you can select the storage method.
  - Type in the **Volume Name** for your RAID 1 volume. The volume name can be 1 to 31 characters (a-z, 0-9, " " [spaces], "\_", and ".").
  - Choose **RAID 1** and click **Apply**.

**This deletes all existing data in the eSATA hard disk. Make sure you have a backup of any existing data in the hard disk.**

**Disk Configuration**

Volume Name

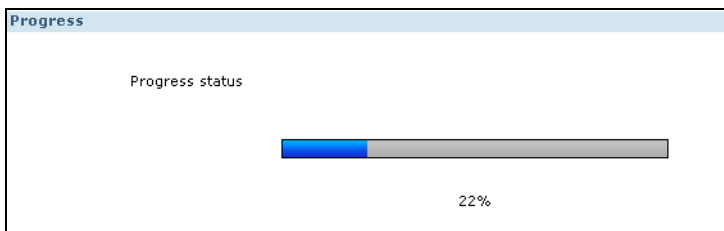
**JBOD** ABCD  
 A JBOD volume can be a single disk volume or can be made to span across several disks into a single larger volume. It does not provide any fault tolerance or performance benefits.  
 Volume will be created on  Internal Disk  External Disk

**PC Compatible Volume** ABCD  
 A primary partition will be created on the disk. It can be accessed by a PC if this disk is connected to a PC which supports the selected file system.  
 Volume will be created on  External Disk File System

**RAID1** ABCD  
 Provides disk mirroring. Level 1 provides twice the read transaction rate of single disks and the same write transaction rate as single disks.  
 Volume will be created on  Internal Disk  External Disk

**Note:**  
 When internal disk defect in RAID1 mode, NSA210 will be in "uninitialized" state. You can bring NSA210 to normal state by switching external disk to internal disk. After login WEB GUI, you can repair the degraded RAID1 by another external disk.

The NSA starts creating the volume and you can see the following progress bar. Wait for 2 minutes for the RAID 1 volume to be created.



- 3 The **Storage > Volume** screen displays with your RAID 1 volume.

**SATA Volume**

[Edit](#) [Scan](#) [Repair](#) [Migrate](#) [Delete](#)

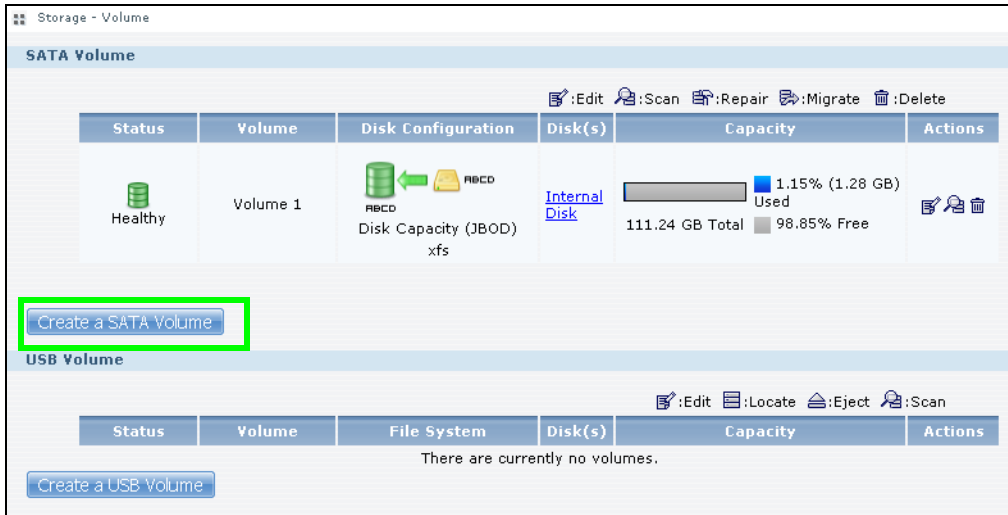
Status	Volume	Disk Configuration	Disk(s)	Capacity	Actions
Resync 0.1%	RAID1_Example	Data Protection (RAID1)	<a href="#">Internal Disk</a> <a href="#">External Disk</a>	0.46% (520.44 MB) Used 111.24 GB Total 99.54% Free	

**Note:**  
 When internal disk becomes defective while in RAID1 mode, the NSA210 will be in "uninitialized" state. You can bring the NSA210 to its normal state by using the external disk as the new internal disk. After login WEB GUI, you can repair the degraded RAID1 by another external disk.

## 5.7.4 Creating a PC Compatible Volume

You can use your eSATA hard disk as a separate storage volume. The following section shows you how to create a **PC Compatible Volume**. Use this storage method if you have an eSATA hard disk that will be connected to a Windows computer when it is not connected to the NSA. However, the computer's platform (for example, Windows XP SP2) should support the file system you selected for the eSATA hard disk.

- 1 Connect the eSATA hard disk to your NSA and go to the **Storage > Volume** screen. Click **Create a SATA Volume**.

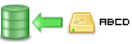


- 2 In the **Disk Configuration** screen, you can select the storage method.
  - Type in the **Volume Name** for your PC Compatible volume. The volume name can be 1 to 31 characters (a-z, 0-9, " " [spaces], "\_", and ".").
  - Choose **PC Compatible Volume**.
  - Select the **File System** you want to use (**NTFS** in this example). Make sure this file system is supported by the Windows platform you are using in your computer. Refer to [Table 26 on page 168](#) for file systems supported by your NSA. Click **Apply**.

**This deletes all existing data in the eSATA hard disk. Make sure you have a backup of any existing data in the hard disk.**


**Disk Configuration**

Volume Name

**JBOD**  ABCD


A JBOD volume can be a single disk volume or can be made to span across several disks into a single larger volume. It does not provide any fault tolerance or performance benefits.

Volume will be created on  Internal Disk  External Disk

**PC Compatible Volume**  ABCD

A primary partition will be created on the disk. It can be accessed by a PC if this disk is connected to a PC which supports the selected file system.

Volume will be created on  External Disk File System

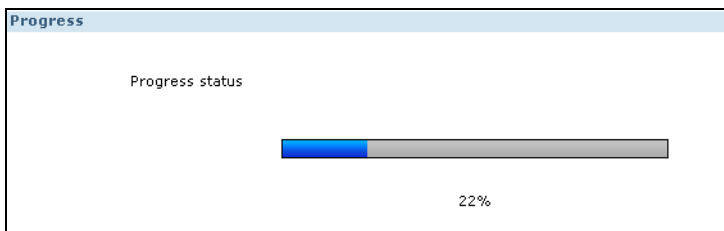
**RAID1**  ABCD

Provides disk mirroring. Level 1 provides twice the read transaction rate of single disks and the same write transaction rate as single disks.

Volume will be created on  Internal Disk  External Disk



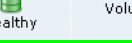
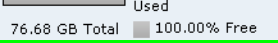
**Note:**  
When internal disk defect in RAID1 mode, NSA210 will be in "uninitialized" state. You can bring NSA210 to normal state by switching external disk to internal disk. After login WEB GUI, you can repair the degraded RAID1 by another external disk.

The NSA starts creating the volume and you can see the following progress bar. Wait for 2 minutes for the volume to be created.



- 3 The **Storage > Volume** screen displays with your **PC Compatible Volume**.

**SATA Volume**

Status	Volume	Disk Configuration	Disk(s)	Capacity	Actions
Healthy	DISK	 <small>ABCD</small> Disk Capacity (JBOD) ext3	<a href="#">Internal Disk</a>	 0.63% (706.91 MB) Used 109.55 GB Total 99.37% Free	<input type="button" value="Edit"/> <input type="button" value="Scan"/> <input type="button" value="Delete"/>
Healthy	Volume 2	 <small>ABCD</small> PC Compatible Volume fat32	<a href="#">External Disk</a>	 0% (64.00 KB) Used 76.68 GB Total 100.00% Free	<input type="button" value="Edit"/> <input type="button" value="Scan"/> <input type="button" value="Delete"/> <input type="button" value="Home"/>

### 5.7.4.1 Checking Your PC Compatible Volume

The files in the eSATA hard disk that you configured as a **PC Compatible Volume** should be accessible when you connect the eSATA hard disk to your computer.

You can configure the features of your NSA to save files to your eSATA hard disk. For example, you can refer to [Section 5.11 on page 106](#) to use the **Broadcatching** feature of your NSA to download files to your eSATA disk.

- 1 When asked for the **Location of Downloaded Files**, make sure you save the completed files to the eSATA hard disk (**Volume 2** in this example).

**Settings**

Channel Name http://www.gcast.com/u/bluer...

URL http://www.gcast.com/u/blueritz/main.xml

Download Policy Download Only New Items

Delete Policy  Manual  
 Keep last  of items

Location of Downloaded Files

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	Volume 2	/

Edit

Apply Reset Cancel

- 2 The files downloaded by the NSA should be in the **Volume 2** folder. You can check this when you access the **Volume 2** folder from **My NSA > Share Browser** screen as follows.

**Share Browsing**

Create Folder Upload Rename Delete Move Copy

Current Location: /Volume 2/C&D Top 10 Podcast

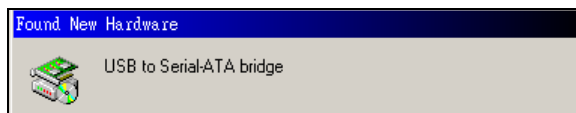
Type	Name	Size	Modified Date
..			
▶	01_May_21_2009_Thursday_Part_2.mp3	5.57 MB	2009-06-19 14:55:38
▶	01_May_21_2009_Thursday_Part_1.mp3	9.20 MB	2009-06-19 14:53:14
▶	01_May_20_2009_Wednesday_Part_4.mp3	4.93 MB	2009-06-19 14:53:51
▶	01_May_20_2009_Wednesday_Part_3.mp3	6.39 MB	2009-06-19 14:53:38
▶	01_May_20_2009_Wednesday_Part_2.mp3	5.14 MB	2009-06-19 14:53:26
▶	01_May_20_2009_Wednesday_Part_1.mp3	6.35 MB	2009-06-19 14:54:35
▶	01_May_19_2009_Tuesday_Part_4.mp3	7.91 MB	2009-06-19 14:54:26
▶	01_May_19_2009_Tuesday_Part_3.mp3	6.93 MB	2009-06-19 14:54:15
▶	01_May_19_2009_Tuesday_Part_2.mp3	6.43 MB	2009-06-19 14:54:11
▶	01_May_19_2009_Tuesday_Part_1.mp3	7.37 MB	2009-06-19 14:54:02

Page 1 Of 2 Next →

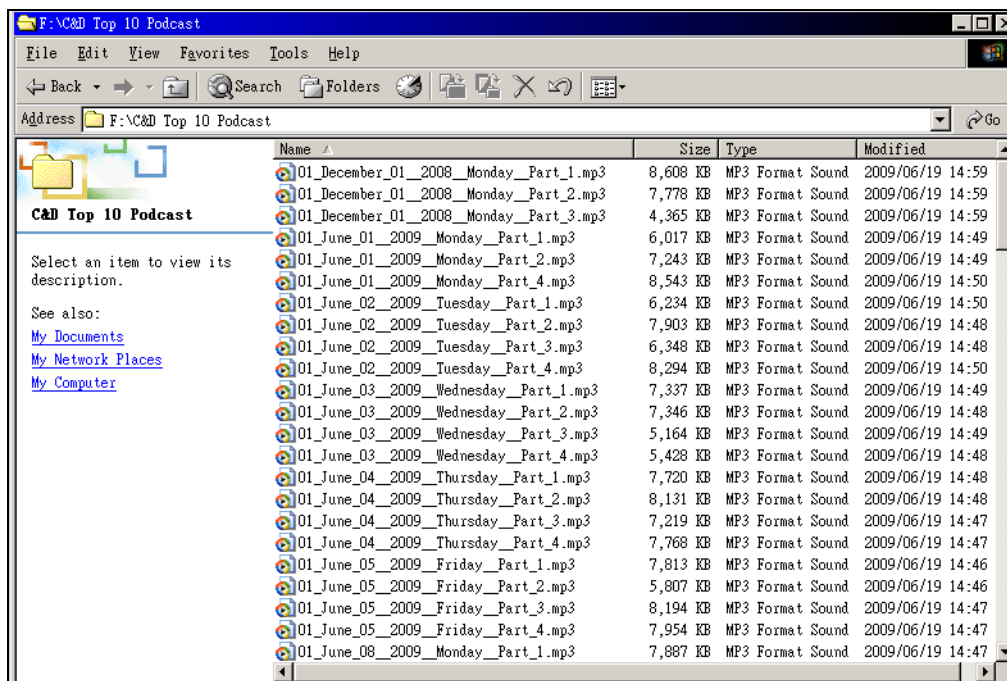
Close



- 3 Disconnect the eSATA hard disk from the NSA. Connect the eSATA hard disk to your computer. On some systems, you can see the following notification.



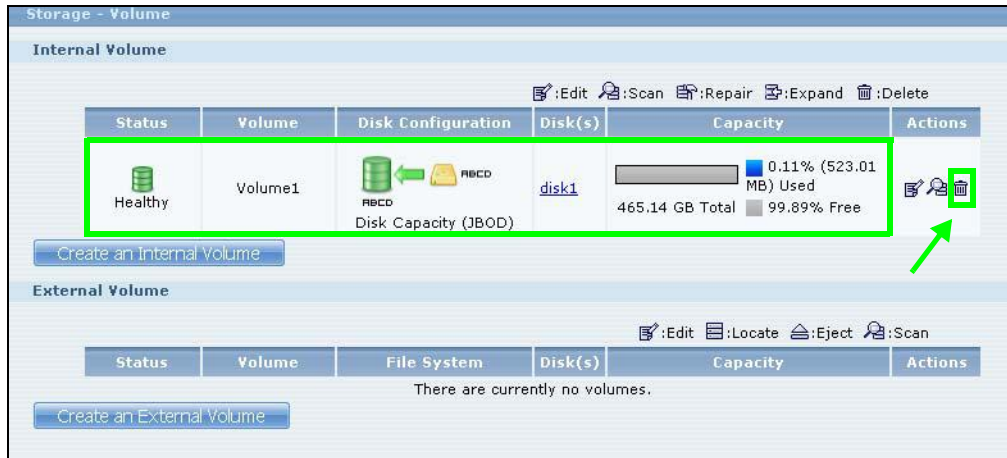
- 4 The computer assigns a letter to the eSATA hard disk (drive F in this example) that is accessible from the **My Computer** screen. Double click the eSATA drive and check your files. They should be the same files that are in the **My NSA > Share Browser** screen.



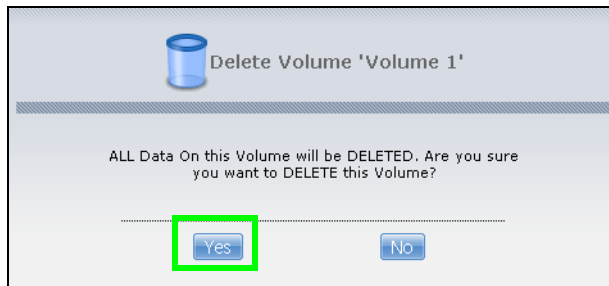
## 5.8 Deleting a Volume

Delete an existing volume in your NSA by doing the following steps.

- 1 In the **Storage > Volume** screen, select the volume you want to delete and click the delete icon.



- 2 A confirmation window appears as follows. Click **Yes**.



**This deletes all existing data in the volume. Make sure you have a backup of any existing data in the hard disk.**

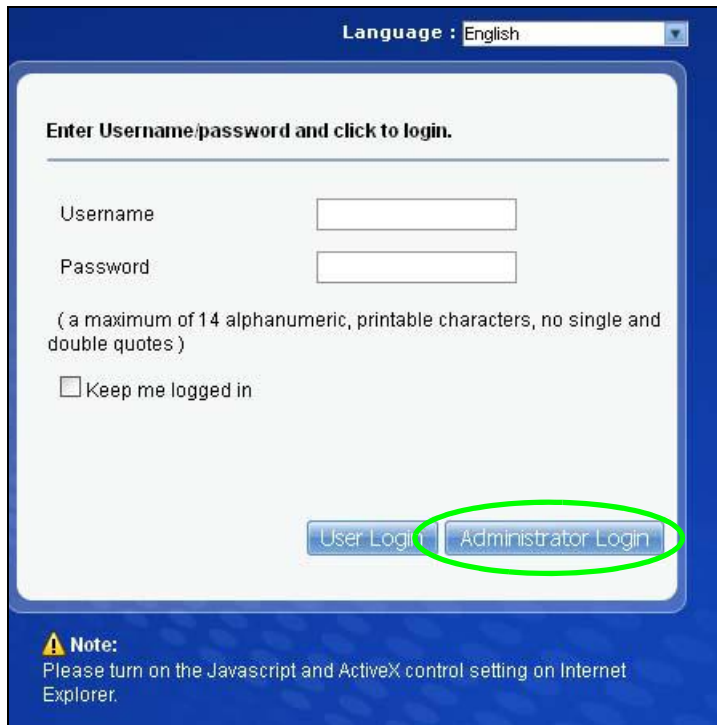
## 5.9 File Sharing Tutorials

The following sections cover using the NSA for file sharing. This chapter assumes you have already followed the Quick Start Guide instructions to perform initial setup and configuration (so you have a working volume). See the rest of this User's Guide for details on configuring the NSA's various screens.

### 5.9.1 Creating a User Account

Bob wants to create accounts for his sons Jimmy and Kevin. This is how he would do it.

- 1 At the NSA web configurator login screen enter the administrator account and password and click **Administrator Login** to go to the advanced administration screens.



Language : English

**Enter Username/password and click to login.**

Username

Password

( a maximum of 14 alphanumeric, printable characters, no single and double quotes )

Keep me logged in

User Login Administrator Login

**Note:**  
Please turn on the Javascript and ActiveX control setting on Internet Explorer.

- 2 Click **Sharing > Users** to open the **Users** screen. Then click **Add User**.



**Users**

Add User Search Edit User Delete Selected User(s) User Info

Display Number 20  
Go to Page 1

Page 1 Of 1

User Type	Username
	Bob
	admin

Page 1 Of 1

- 3 Configure the screen as follows and write down the username and password to give to Jimmy. If the username and password are the same as Jimmy's Windows login, Jimmy will not need to enter a username and password when he logs into his share from his computer. Set the **Account Type** to **User** so Jimmy doesn't get to configure the whole NSA. Click **Apply** to create the account.

The screenshot shows the 'Add User' dialog box with the following configuration:

- Username:** Jimmy
- New Password:** masked with 'xxxxxx'
- Password (Confirm):** masked with 'xxxxxx'
- Account Type:** User (selected)
- Available Group(s):** children, family
- Group Membership:** (empty list)
- Buttons:** Add Selected Group(s) →, ← Remove Selected Group(s), Apply, Cancel

- 4 The account now displays in the **Users** screen.

Page 1 Of 1	
User Type	Username
	Bob
	Jimmy
	admin

Page 1 Of 1

Now that Bob has created Jimmy's account, he can go through the steps again to create another account for Kevin. After both accounts are created, he can go to [Section 5.9.2 on page 84](#) to create shares for Jimmy and Kevin.

## 5.9.2 Creating a Share

Suppose Bob has already created separate accounts for his sons Jimmy and Kevin. Now Bob wants to create a share for each son. He also wants to make sure that each son can only access his own share (to keep them from deleting each other's files). This is how he would do it.



- 1 In the NSA's administration web configurator screens, click **Shares > Add Share**. Click **Add Share** to create a new share.



Sharing - Shares

Shares

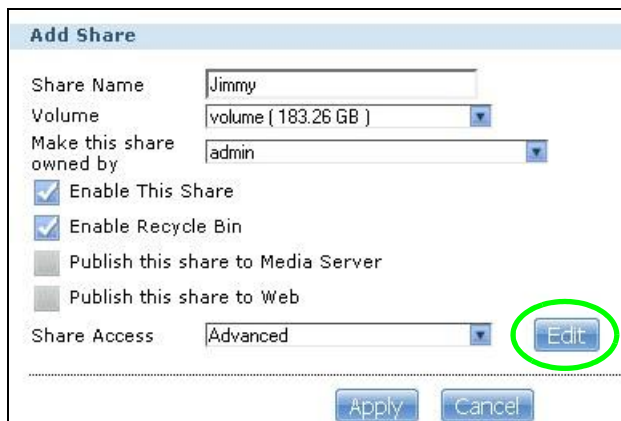




Status	Share Type	Share Name	Share Path	Share Owner	Permission Type
	Predefined	video	my-volume/vi...	admin	Public
	Predefined	photo	my-volume/ph...	admin	Public
	Predefined	music	my-volume/mu...	admin	Public
	User-created	Bill	my-volume/Bi...	admin	Private
	Built-in	public	my-volume/pu...	admin	Public
	Built-in	admin	my-volume/ad...	admin	Private

- 2 Specify a name for the share and select which volume it should be on. Configure the screen as follows. Then click **Edit**.



Add Share

Share Name

Volume

Make this share owned by

Enable This Share

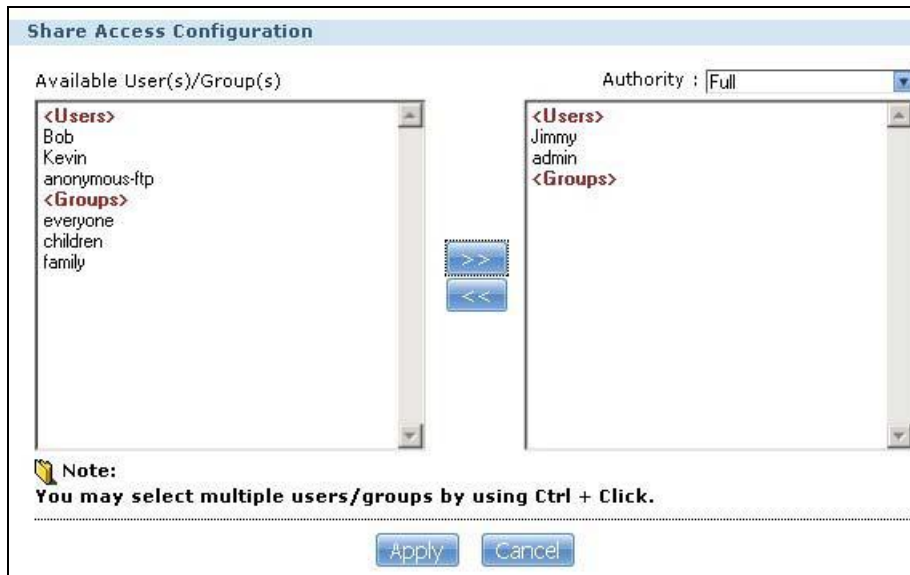
Enable Recycle Bin

Publish this share to Media Server

Publish this share to Web

Share Access

- Configure the screen as follows to give Jimmy full access right to the share. Then click **Apply** to create the share.



Now that Bob has created Jimmy's share, he can go through the steps again to create another share for Kevin.

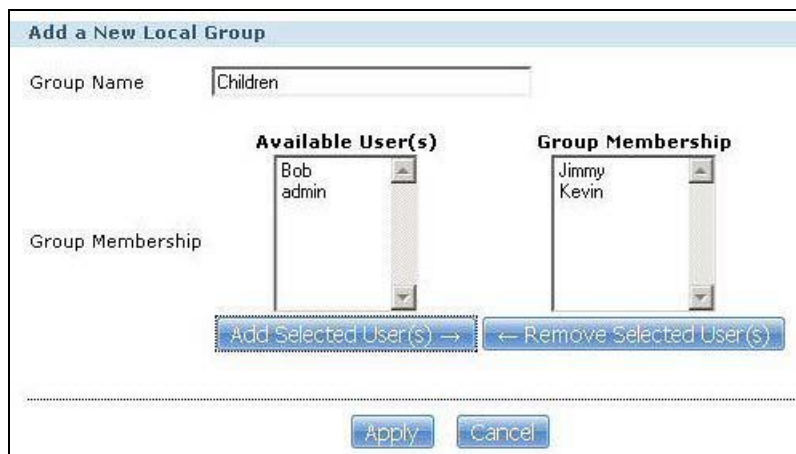
### 5.9.3 Creating a Group

After creating user accounts for Jimmy and Kevin, Bob wants to create a group for his sons and another one for the parents. Bob can assign access rights to his sons' group for certain shares such as a cartoons share and allow only the parents' group to access the scary movie share. This is how he would create the group.

- In the NSA's administration web configurator screen, click **Groups > Add Group**.



- Specify a name for the group. Select the user(s) you want to add to the group from the **Available User(s)** list and click **Add Selected User(s)**. Configure the screen as follows. Then click **Apply** to create the group.

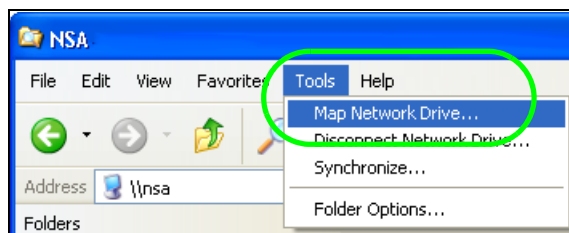


Now that Bob has created a group for Jimmy and Kevin, he can go through the steps again to create another group for the parents. Then he can see the rest of the tutorials for how to use the groups in assigning access rights to shares.

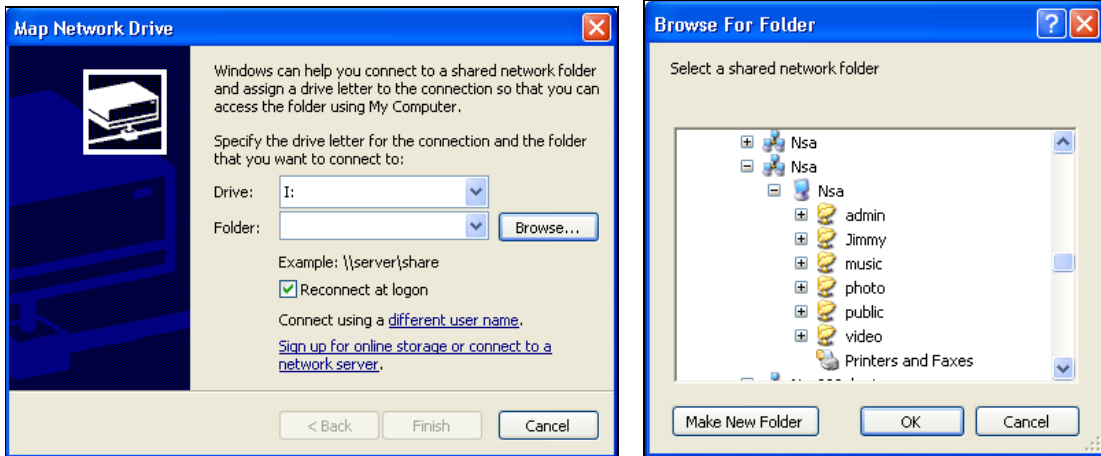
## 5.9.4 Accessing a Share From Windows Explorer

If you map a NSA share (where data is stored) to a Windows network drive, you can use Windows Explorer to transfer files to and from the NSA as if it was another folder on your computer. Here he maps Jimmy's share to Jimmy's computer.

- Start Windows Explorer and go to the NSA's server name. The default is 'nsa' followed by the number of your model ('**nsa320**' for example).
- Click **Tools > Map Network Drive**.



- 3 Select the network drive that you want to map the NSA to from the **Drive** list box. This example uses **I**. Then browse to and select the share on the NSA. Click **Finish**.

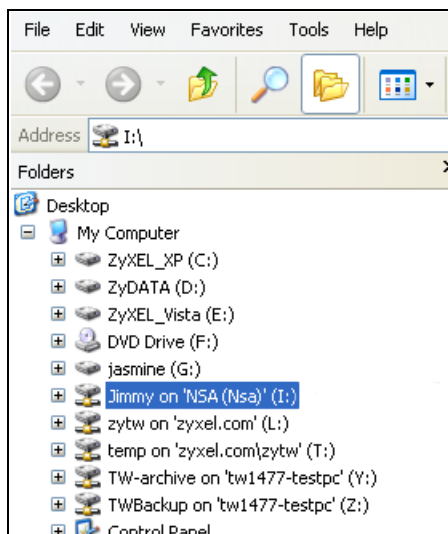


- 4 Enter the username and password for Jimmy's account and click **OK**. You do not need to do this if the username and password are the same as Jimmy's Windows login.





- After the mapping is done, you can then simply copy and paste or drag and drop files from/to your local computer's drives to or from this network folder. Just like the NSA's share was another folder on your computer.

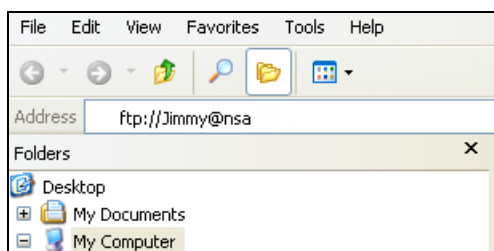


Now that Bob has mapped Jimmy's share to Jimmy's computer, he can go through the steps again to map Kevin's share to Kevin's computer.

## 5.9.5 Accessing a Share Using FTP

You can also use FTP to access the NSA. Suppose Jimmy is temporarily using a different computer and wants to access his share without mapping it to the computer. This is how he would do it.

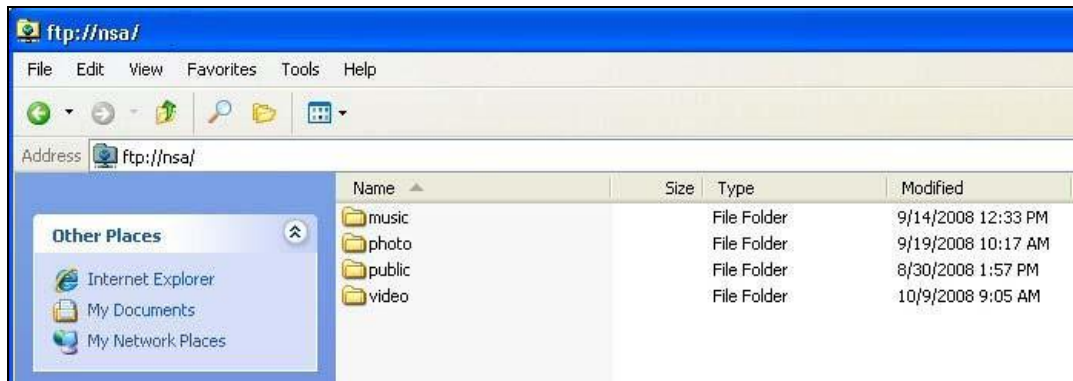
- Open the FTP client (Windows Explorer is used here) and type "ftp://username@server" where "username" is the account's username and "server" is the NSA's IP address or server name.



- 2 Enter your password and click **Login**.



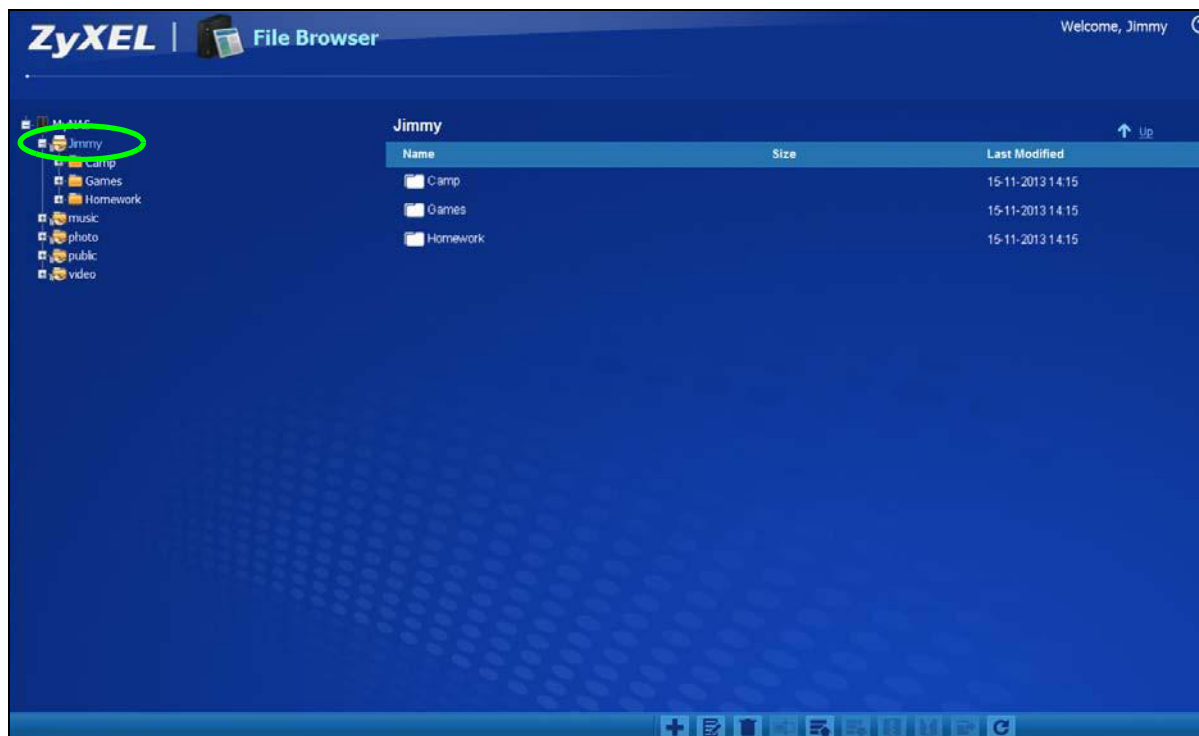
- 3 Now you can access files and copy files from/to your local computer's drives to or from this network folder.



## 5.9.6 Accessing a Share Through the Web Configurator

You can browse and access files through the web configurator.

- 1 Log into the NSA web configurator (see [Section 4.3 on page 43](#)) using the appropriate user name and password (this example uses Jimmy's) and click **File Browser**. Click a share (the Jimmy share in this example) to see the top level of the share's contents.



- 2 Click a folder's file name to browse the folder. You can open files or copy them to your computer. You can also create new folders and upload additional files to the share.
- 3 Click the logout icon when you are done.

## 5.10 Download Service Tutorial

This tutorial covers using the NSA to download a file from the Internet. Use this same procedure for P2P downloads as well as regular HTTP (web) and FTP downloads. See [Section 10.12.2 on page 214](#) for more on the download service.

### 5.10.1 Copying/Pasting a Download Link

- 1 Open your Internet browser (this example uses Internet Explorer).

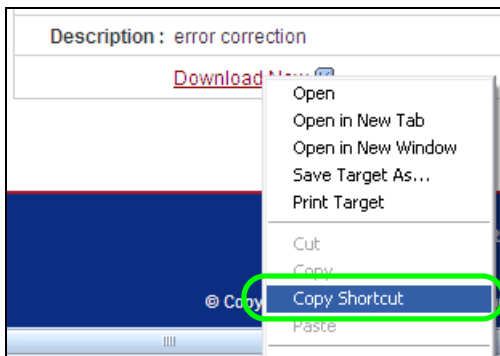
- Find a download link for the file you want. In this example, www.zyxel.com has a **Download Now** link for downloading a datasheet for ZyXEL's GS-2024 (a device for making phone calls over the Internet).



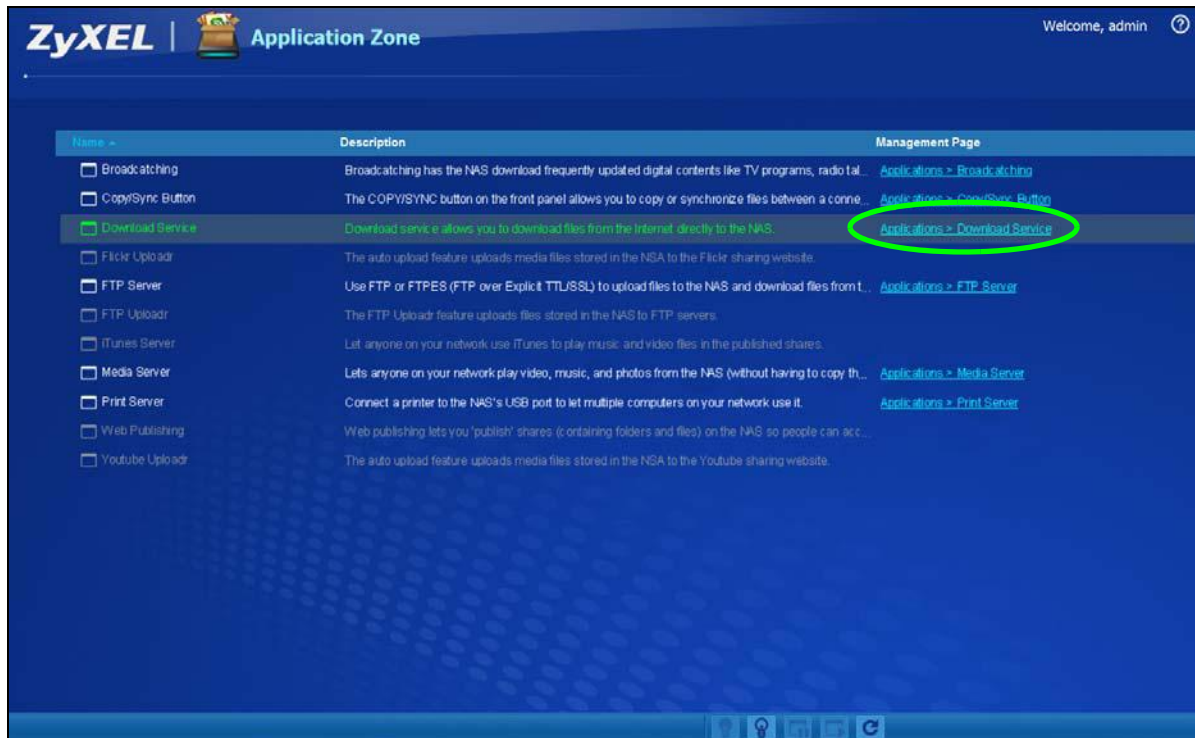
Note: Make sure the link opens either the file you want or a pop-up window about how to handle the file.

Note: It is also OK for the link to open a .torrent file. If you are redirected to a screen that says the download should start in a few seconds, there may be a link to click if the download does not start automatically. See if that link opens the file or the pop-up window.

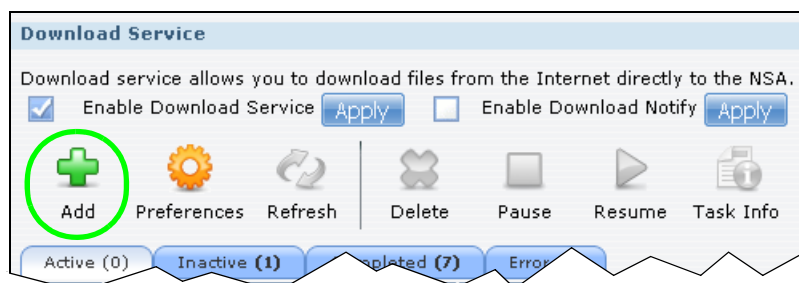
- Right-click the download link and select **Copy Shortcut** in Internet Explorer (or **Copy Link Location** in Firefox).



- 4 Log into the NSA web configurator (see [Section 4.3 on page 43](#)) using the administrator account and click **Application Zone** and the **Application Zone > Download Service** link.



- 5 Click **Add**.



- 6 Right-click the **URL** field and select **Paste**.

**Add Download Task From URL**

**Source**

URL  Torrent File

**Location of Downloaded Files**

	Share
Put incomplete downloads in	admin
Move completed downloads to	admin

**Note:**

1. P2P download jobs are stored in /admin/download/incoming.
2. HTTP/FTP jobs are stored in /admin/download.
3. All jobs triggered by RSS channels create the subfolder in /admin/download using the channel name where the files are downloaded from that channel.

**Caution:**

Do not use the NAS for illegal downloads. Illegal downloading or sharing of files can result in severe civil and criminal penalties. You are subject to the restrictions of copyright laws and any other applicable laws and will be held responsible for any infringements thereof. ZyXEL takes NO responsibility or liability for your use of the download service.

Apply Cancel

- 7 The URL displays in the **URL** field. Click **Apply**.

**Add Download Task From URL**

**Source**

URL  Torrent File

941\_20080620\_3.80-GS-2024\_eWVC-UG\_v3-80\_Ed1\_2008-06-19.pdf&model=GS-2024#

**Location of Downloaded Files**

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	public	/

**Note:**

1. BitTorrent jobs are stored in /public/incoming.
2. HTTP/FTP jobs are stored in /public.
3. All jobs triggered by RSS channels create the subfolder in /public using the channel name where they store all files downloaded from that channel.

**Caution:**

Do not use the NSA for illegal downloads. Illegal downloading or sharing of files can result in severe civil and criminal penalties. You are subject to the restrictions of copyright laws and any other applicable laws and will bear the consequences of any infringements thereof. ZyXEL takes NO responsibility or liability for your use of the download service feature.

Apply Cancel

- 8 After a few moments, the download task appears in the **Download Service** screen's **Active** tab.

The download appears in the **Completed** tab when it is done. By default the NSA stores all downloads in the **admin** share's **download** folder. See [Section 5.9.4 on page 87](#), [Section 5.9.5 on page 89](#), or [Section 5.9.6 on page 90](#) for how to access a share.

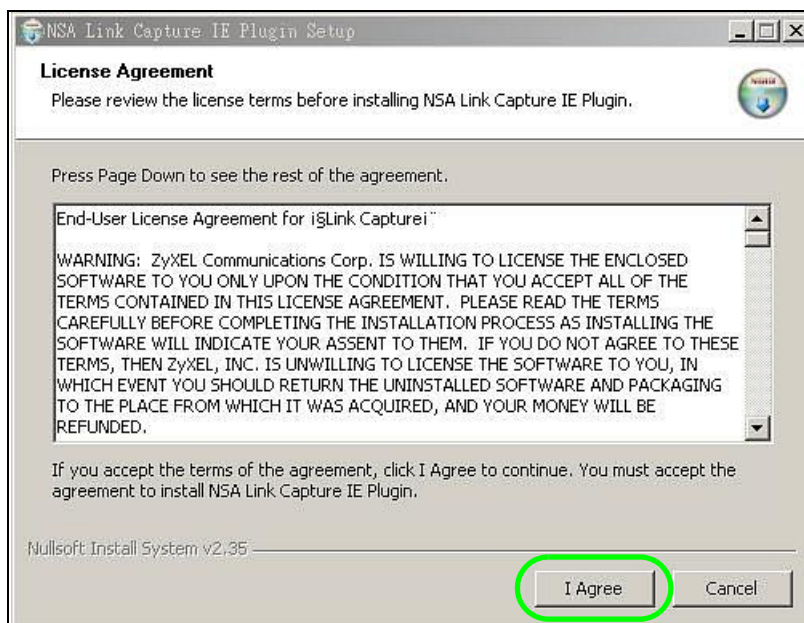
## 5.10.2 Installing the Link Capture Browser Plugin

In addition to copying and pasting a download link to the **Download Service** screen, you can also install a link capture browser plugin in your web browser. Use the plugin to easily add a download link to the NSA's download service. See [Section 10.12.3 on page 215](#) for more on the link capture browser plugin.

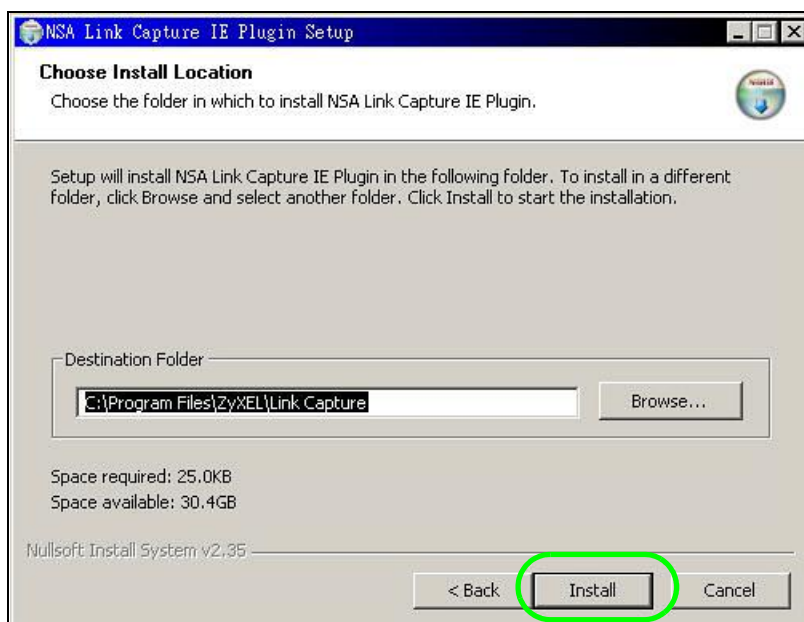
Note: At the time of writing the plugin supports Internet Explorer 6.0/7.0 and Mozilla Firefox 2.0/3.0; it does not support Windows 7.

## Internet Explorer

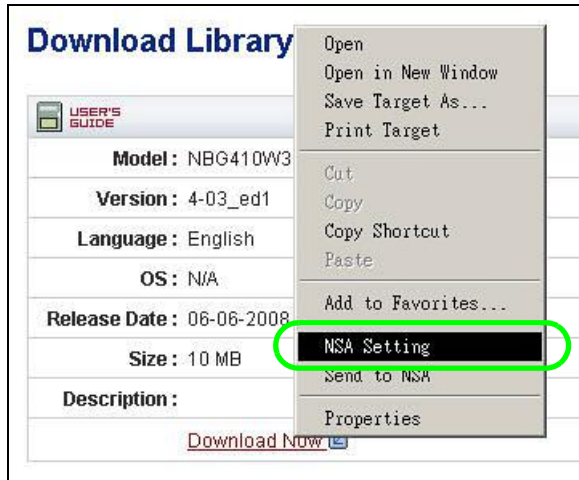
- 1 Open the folder containing the link capture browser plugin.
- 2 Double-click on the plugin to display the following screen. Click **I Agree** to begin installation.



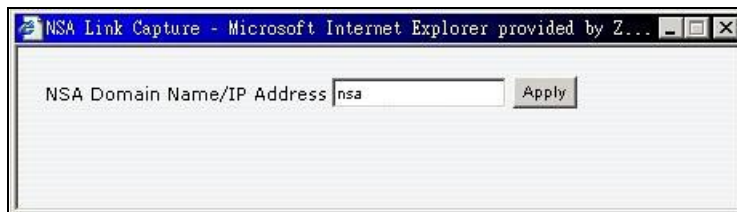
- 3 Select a location to save the plugin and click **Install**. Close the screen once the installation is complete.



- 4 Open Internet Explorer and locate a download link. In this example, [www.zyxel.com](http://www.zyxel.com) has a **Download Now** link for downloading a user's guide for ZyXEL's NBG410W3G (a 3G wireless router). Right-click on the download link and select **NSA Setting**.



- 5 Enter the NSA's web address. The default is 'nsa' followed by the number of your model ('**nsa320**' for example). Then click **Apply**. A warning message displays asking for confirmation. Click **OK** to apply the setting.

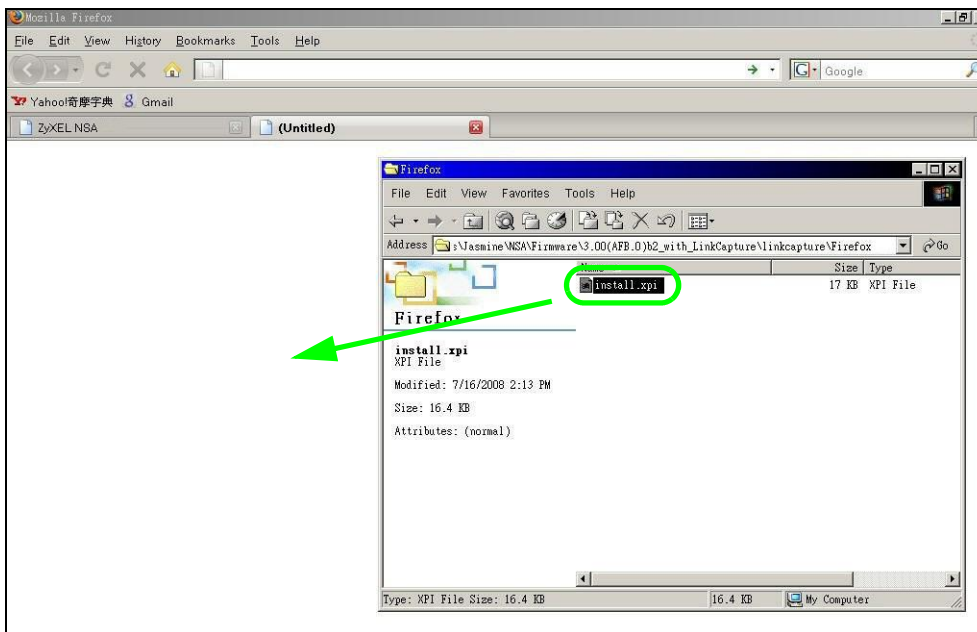


## Firefox

- 1 Open Firefox.
- 2 Open the folder containing the link capture browser plugin.



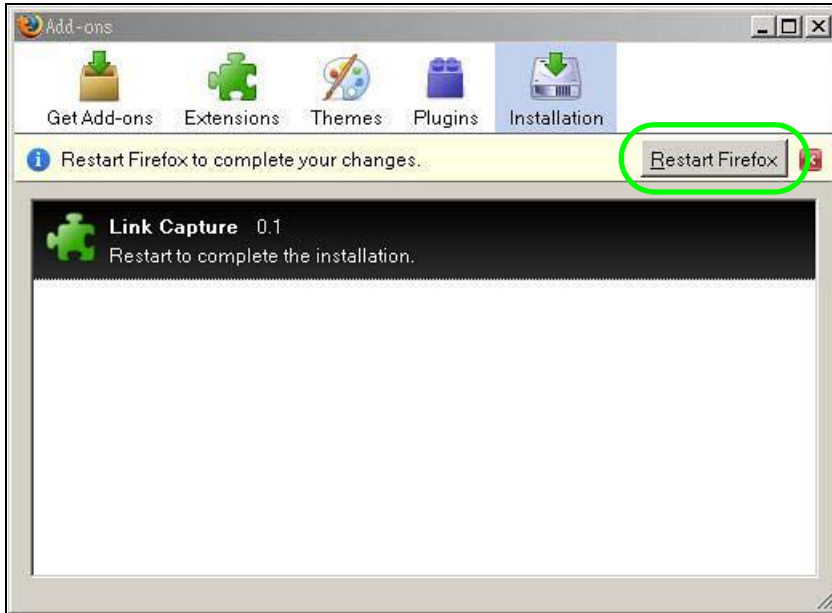
- To install the plugin, drag and drop the plugin to Firefox.



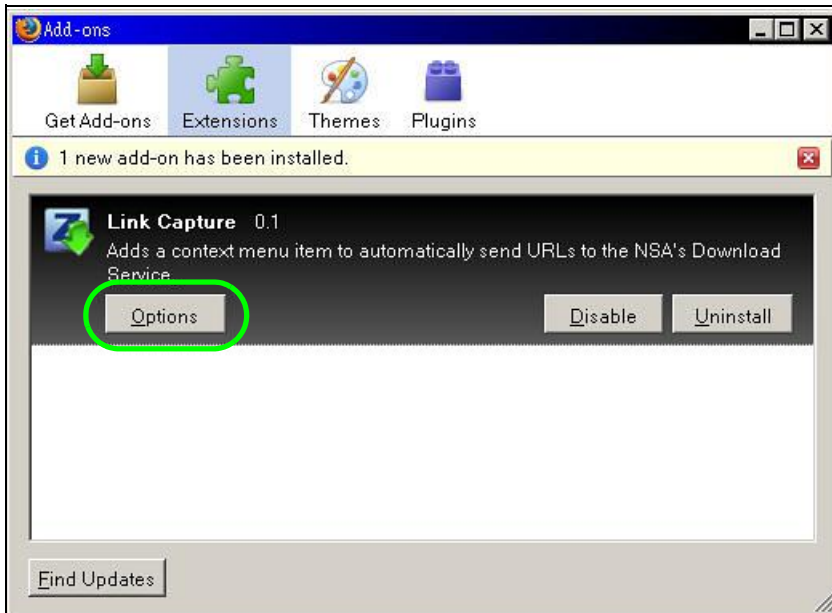
- The following screen displays. Click **Install Now**.



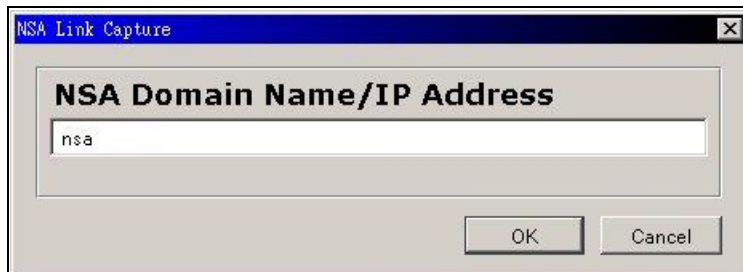
- 5 You need to restart Firefox after the installation.



- 6 When Firefox restarts, a message displays to show the installation succeeded. The plugin is installed as an extension in Add-ons. Click **Options** to configure the NSA's web address.



- 7 Enter the NSA's web address. The default is 'nsa' followed by the number of your model ('nsa320' for example). Then click **OK**.



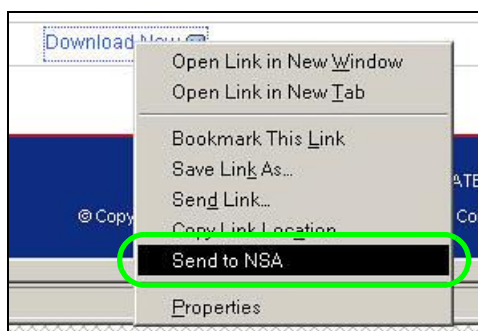
### 5.10.3 Using the Link Capture Browser Plugin

Once you install the plugin, you may begin sending download links to the NSA from your web browser. This example shows how to send a download link to the NSA's download service using the link capture browser plugin.

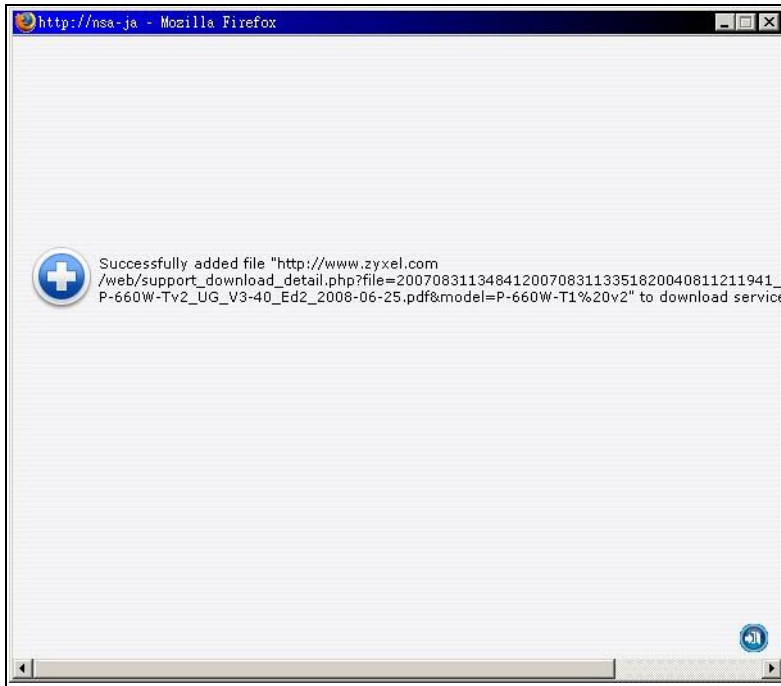
- 1 Open your Internet browser (this example uses Firefox).
- 2 Find a download link for the file you want. In this example, www.zyxel.com has a **Download Now** link for downloading a user's guide for ZyXEL's P-660W-T1 (an ADSL router).



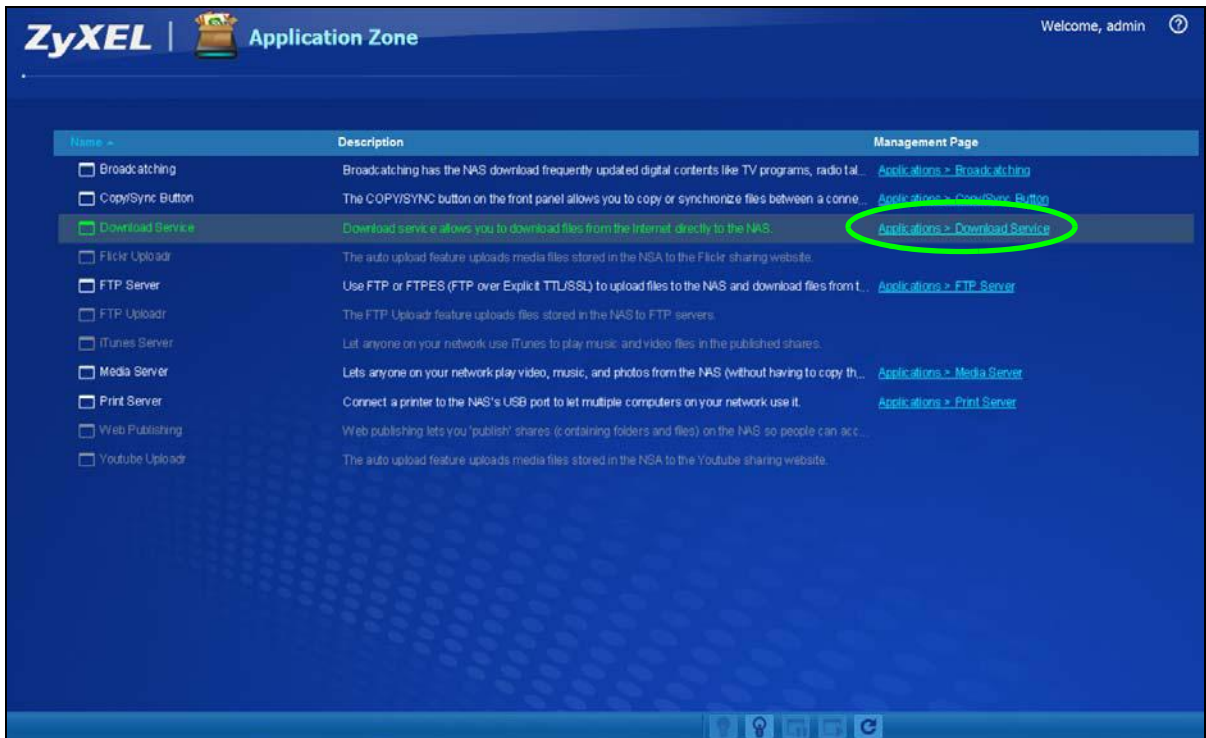
- 3 Right-click on the download link and select **Send to NSA**.



- The login screen shows up. Enter your NSA's login information and click **Login** to send the link to the download service. A confirmation message displays.



- Log into the NSA web configurator (see [Section 4.3 on page 43](#)) using the administrator account and click **Application Zone** and the **Application Zone > Download Service** link.



- 6 The download task appears in the **Download Service** screen's **Active** or **Queue** tab. It may appear in the **Completed** tab if the NSA already finished downloading the file or it may appear in the **Error** tab if the NSA failed to download the file.

By default the NSA stores all downloads in the **admin** share's **download** folder. See [Section 5.9.4 on page 87](#), [Section 5.9.5 on page 89](#), or [Section 5.9.6 on page 90](#) for how to access a share.

## 5.10.4 Configuring the Download Service Preferences

Once you added a list of download tasks to the NSA (see [Section 5.10.1 on page 91](#) and [Section 5.10.3 on page 99](#)), you can have the NSA download files during a specific time period of the day. You can also configure the P2P download settings to control bandwidth and optimize download efficiency.

Say you have the NSA turned on all the time, but you only want the NSA download files at night. Here is how you use the download period control feature to set the time range.

- 1 Click **Applications > Download Service > Preferences** to open the **General Settings** screen.
- 2 Select **Enable Download Period Control** and use the arrows to adjust the time period from 23:30 to 09:00. Click **Apply** to save your changes. The NSA only downloads files within this 9.5-hour period every day.

Preferences

General Settings: P2P download

Location of Downloaded Files

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	admin	/download

Edit

Note:

1. P2P download jobs are stored in `/admin/download/incoming`.
2. HTTP/FTP Jobs will be stored in `/admin/download`
3. Jobs triggered by RSS Channel will create the Channel Name to `/admin/download`

Download Period Control

Enable Download Period Control

Download Service is active in the specified time period (hh:mm - hh:mm)

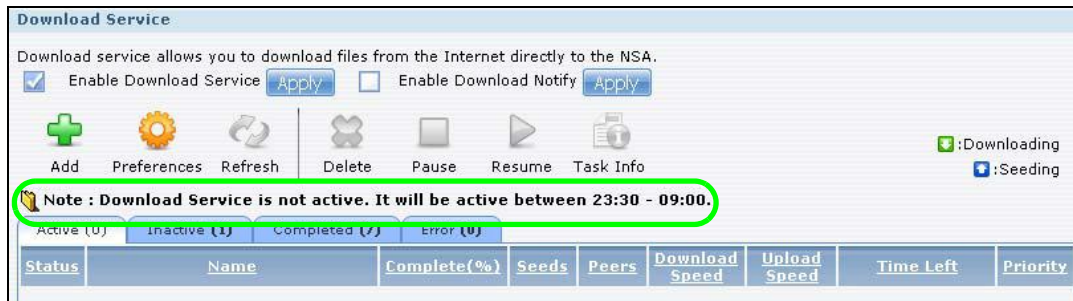
23:30 - 09:00

Apply Reset Cancel

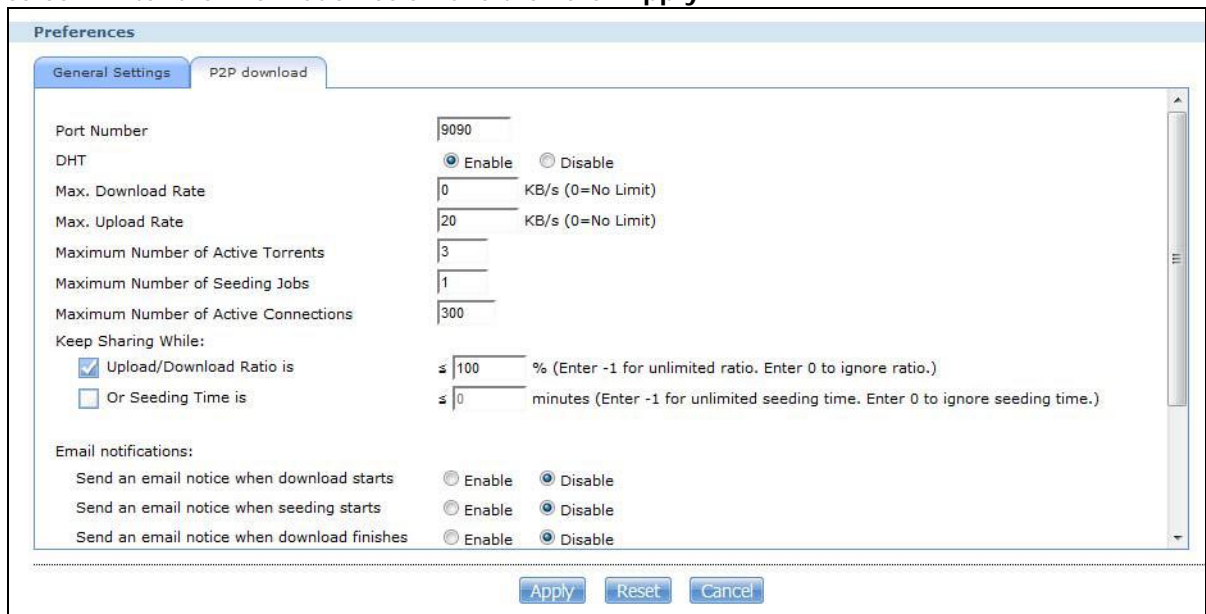
Note: If you configure the **Power On/Off Schedule** feature in the **Power Management** screen, make sure your active download period does not conflict with the power-off period.

Note: If power failure occurs during the active download period, the NSA will verify whether the downloaded files were damaged. If a file is corrupted, the NSA will download the file again. If the file is intact but not completely downloaded, the NSA will resume the download task after it restarts.

- 3 When it is not the download time, you see a message in the **Download Service** screen, indicating the active download period.



Click **Applications > Download Service > Preferences > P2P download** to open the following screen. Enter the information below and then click **Apply**.



Here is a list of P2P download settings you want to configure for your NSA:

- Limit the maximum upload rate to 20 KB/s.  
Enter this value in the **Max. upload rate** field.
- Actively download three torrent files but only upload one at a time.  
Enter 3 in the **Maximum Number of Active Torrents** field and enter 1 in the **Maximum Number of Seeding Jobs** field.
- Keep sharing until the NSA has shared equal or greater amount of the downloaded files.  
Select the check box and enter 100 in the **Upload/Download Ratio** field.

- Scroll down and click **Edit IP Filter**. Use an online IP filter table from <http://www.bluetack.co.uk/config/level1.gz> for example to protect P2P downloads.

Enter the URL in the **Update IP Filter from the Internet Every Week** field.

### 5.10.5 Using Download Service Notification

Use an RSS feed reader on your computer to keep track of files the NSA has downloaded. The following examples show how to subscribe to the NSA's download service notifications. See [Section 10.12.4 on page 215](#) for more on download service notifications.

Some RSS readers may not support the NSA's download service notifications. For example, Google Reader cannot support this feature if the NSA has a private IP address.

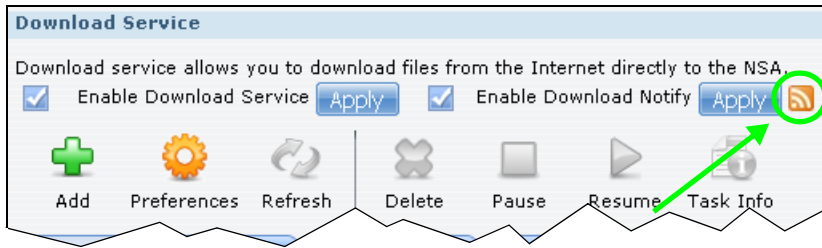
Note: It is recommended to subscribe to the download service notifications using the built-in reader in Internet Explorer 7 or higher, or Firefox.

You have to activate this feature in the **Download Service** screen. Click **Applications > Download Service** to open the following screen. Select **Enable Download Notify** and click **Apply**.

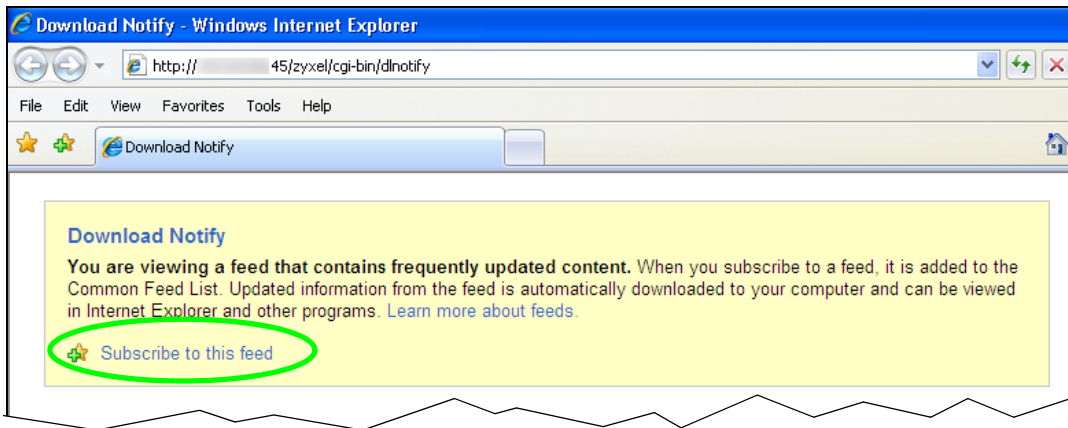


## Internet Explorer 7 Example

- 1 After you activate download service notification, click the **RSS** feed icon.



- 2 The following screen displays. Select **Subscribe to this feed**.

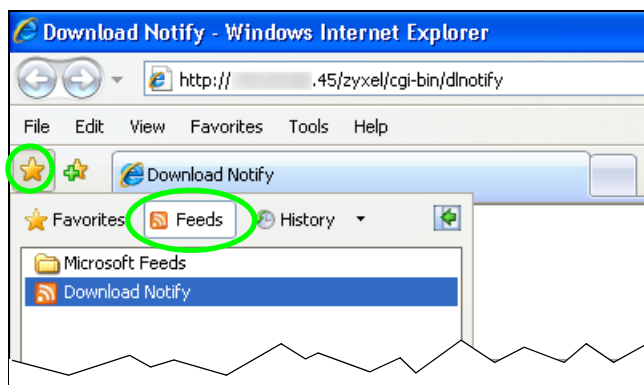


- 3 The following screen displays. Click **Subscribe**.



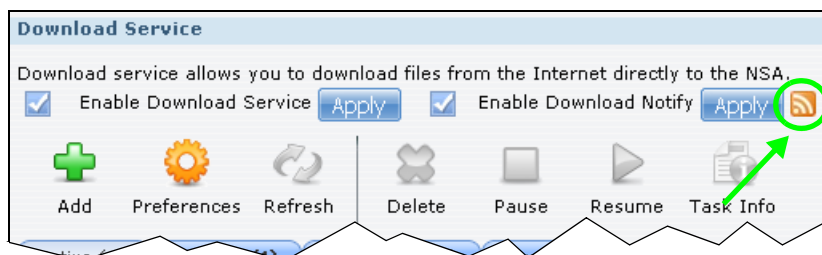


- Click the **Favorite** icon on your browser and select the **Feeds** tab to check the updates of your NSA's download list.

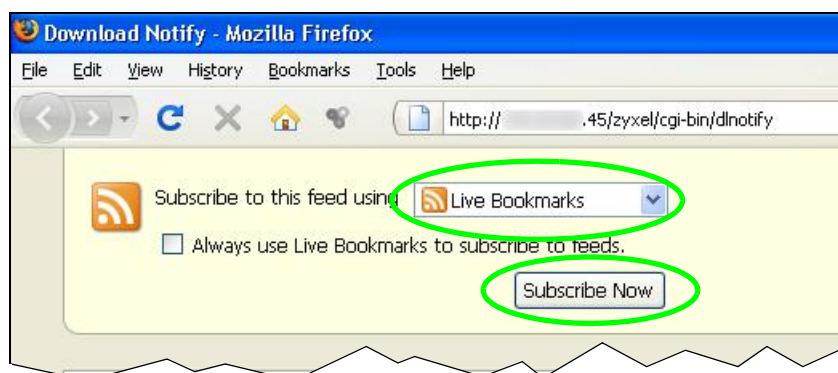


### Firefox Example

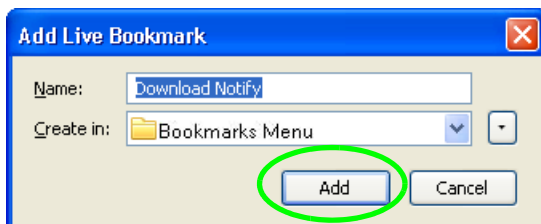
- After you activate download service notification, click the **RSS** feed icon.



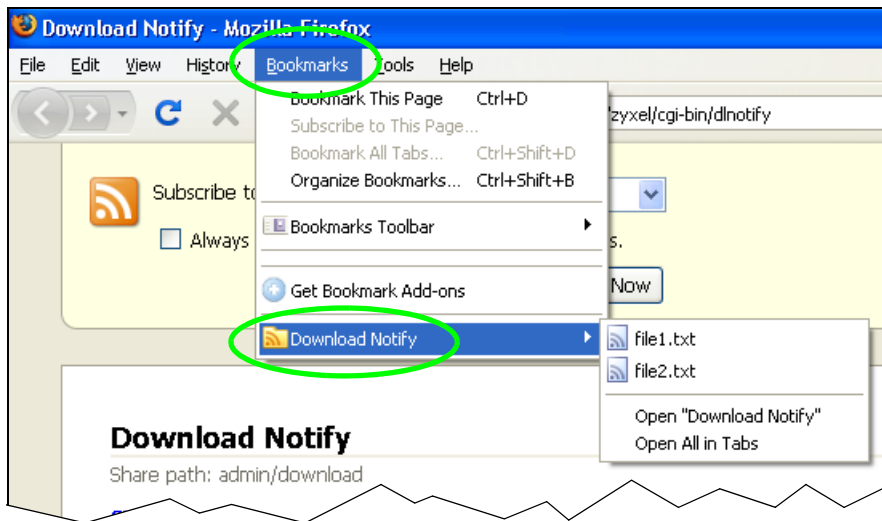
- The following screen displays. Select **Live Bookmarks** from the drop-down list and click **Subscribe Now**.



- The following screen displays. Select **Bookmarks Menu** and click **Add**.



- 4 From the Firefox's **Bookmarks Menu**, select **Download Notify** to check the updates of your NSA's download list.

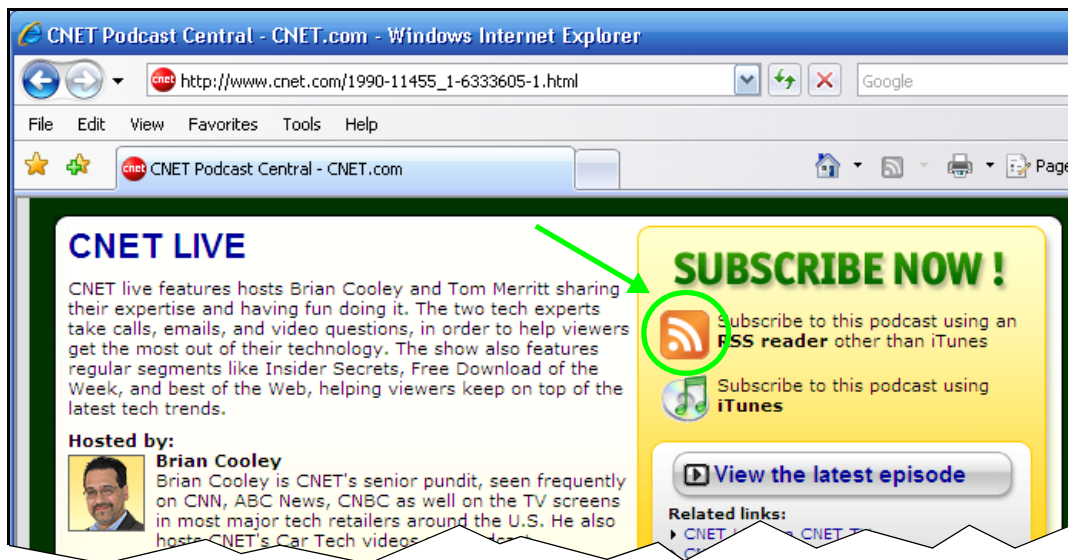


## 5.11 Broadcaching Tutorial

Use broadcaching to have the NSA download frequently updated digital content like TV programs, radio talk shows, Podcasts (audio files), and blogs. This example shows how to subscribe the NSA to the CNET TV Internet television channel. See [Section 10.9 on page 204](#) for more on the broadcaching service.

- 1 Open your Internet browser (this example uses Firefox).

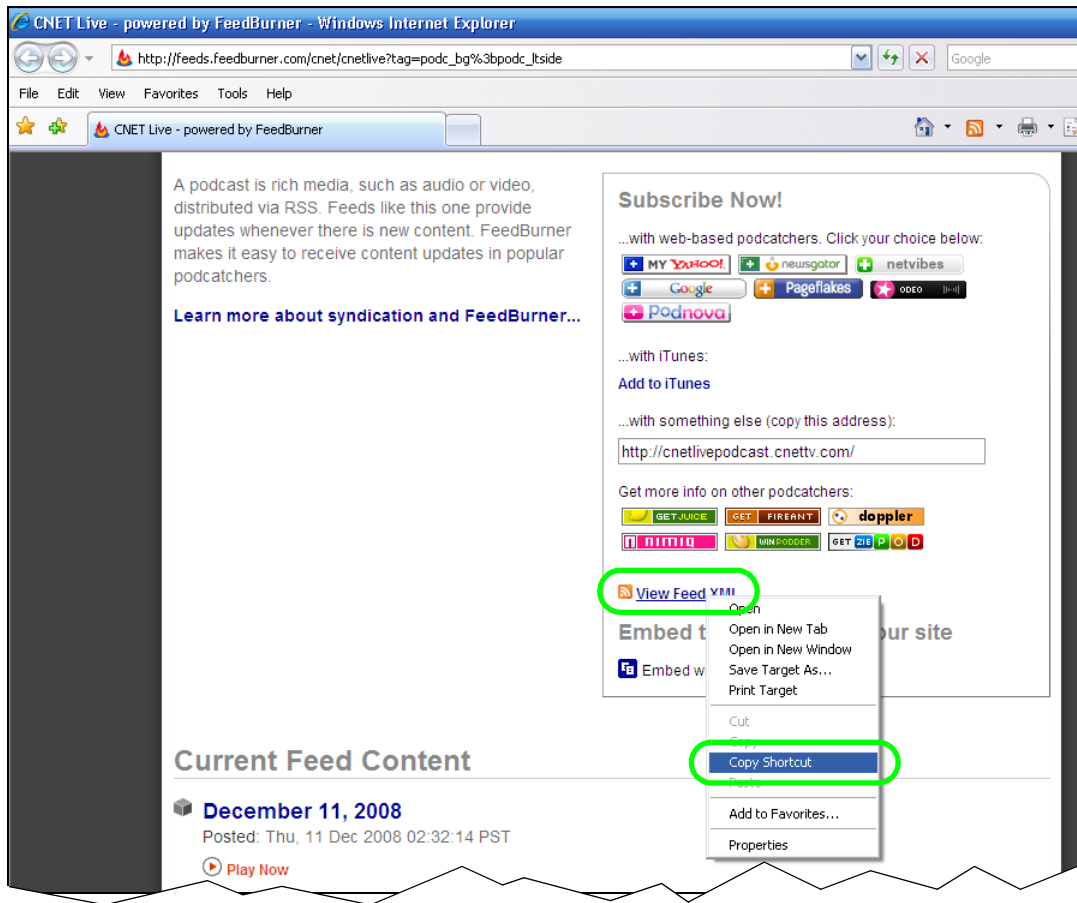
- 2 Find the link for the RSS feed containing the channel you want to add. In this example, [http://reviews.cnet.com/4520-11455\\_7-6333605-1.html](http://reviews.cnet.com/4520-11455_7-6333605-1.html) has an **RSS** link for subscribing to the CNET Live podcast. However this is not the link for the actual RSS feed. Click the link to go to another screen that has RSS feed links.



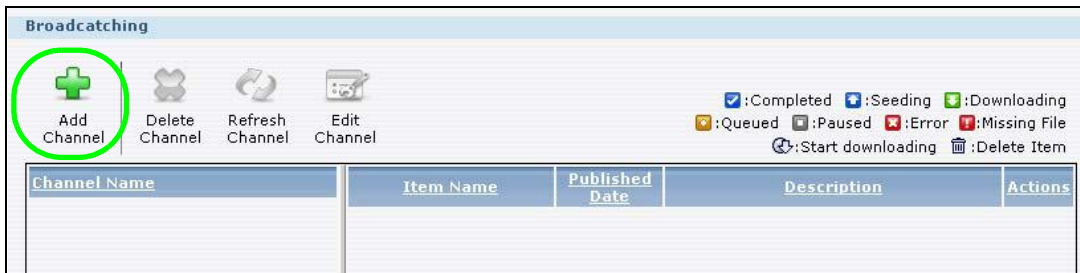
Note: Make sure the link goes to the actual RSS feed instead of to another list of links or information about the channel.

One way to test this is by clicking the link. Clicking an actual RSS feed link opens a screen of XML code (in browsers without an RSS feed aggregator) or a window where you can add the RSS feed (in browsers with an RSS feed aggregator).

- 3 Right-click the download link and select **Copy Link Location** in Firefox (or **Copy Shortcut** in Internet Explorer).



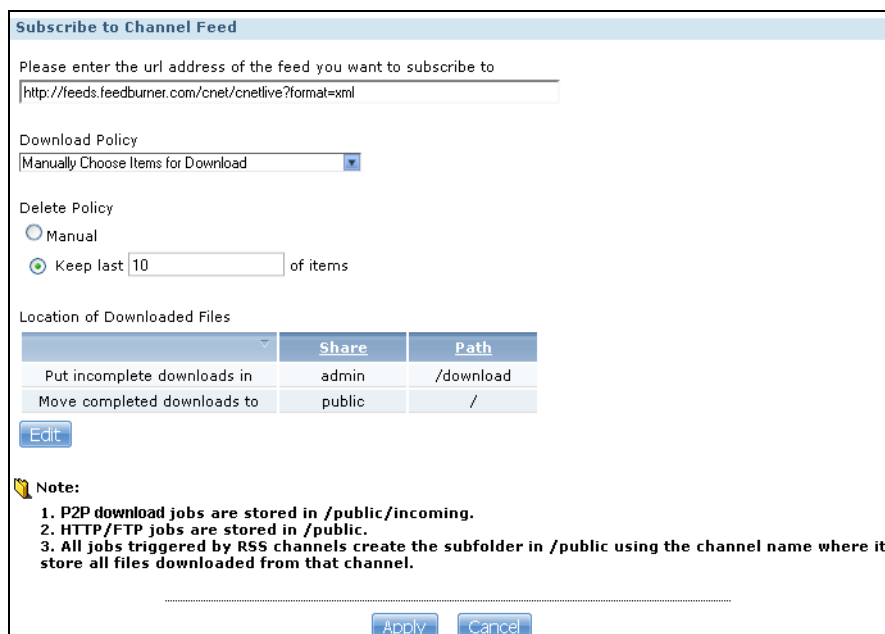
- 4 Log into the NSA web configurator (see [Section 4.3 on page 43](#)) using the administrator account and click **Administration > Applications > Broadcatching**.
- 5 Click **Add Channel**.



- 6 Right-click the URL field and select **Paste**.



- 7 The URL displays in the **URL** field.
- 8 Select a policy for what items to download. This example uses **Manually Choose Items for Download** so you will be able to select individual items to download later.
- 9 Select a policy for what items to delete. This example keeps the most recent 10 items.
- 10 Click **Apply**.

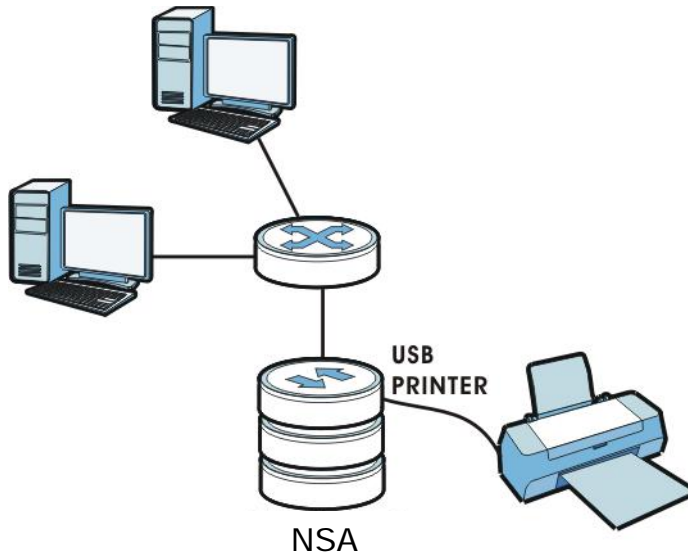


- 11 After a few moments, the channel appears in the **Broadcatching** screen where you can select items you want to download. The NSA saves the items you download in a folder named after the channel. By default, the channel folders are created in the **admin** share's **download** folder. The NSA's media server feature makes it easy for users on your network to play the broadcatching files you download. See [Section 10.12.1 on page 213](#) for more on the media server.

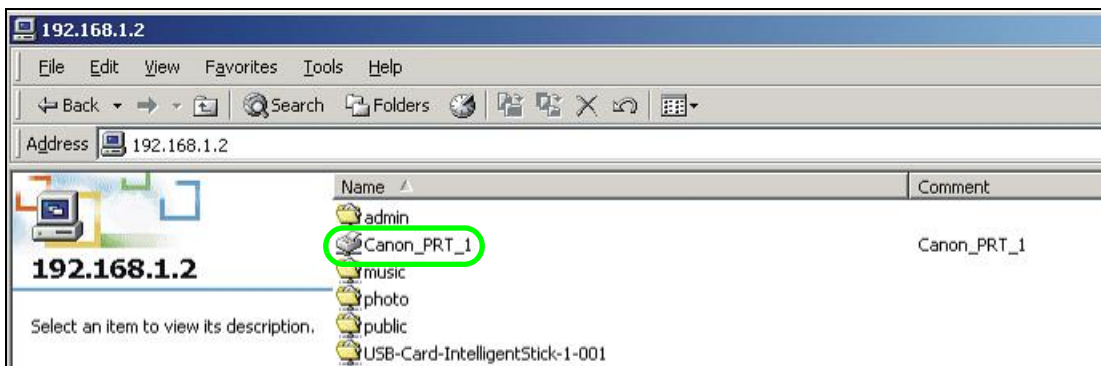
## 5.12 Printer Server Tutorial

Do the following to have the NSA let computers on your network share a printer. See [www.zyxel.com](http://www.zyxel.com) for a list of compatible printers.

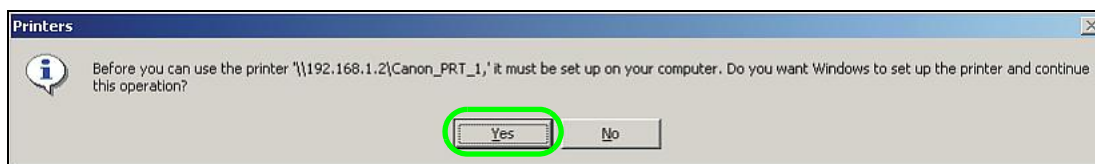
- 1 Make sure the NSA is on and the **SYS** light is on steady (not blinking).
- 2 Use a USB cable to connect the printer's USB port to one of the NSA's USB ports. Make sure the printer is also connected to an appropriate power source.



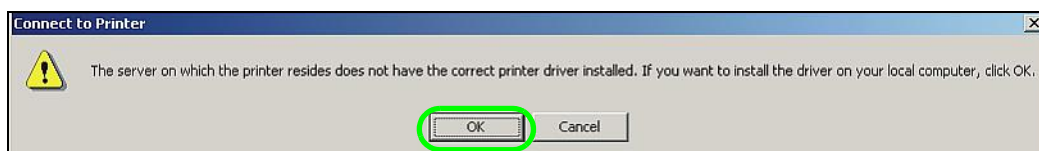
- 3 Turn on the printer.
- 4 The NSA detects the printer after a few moments.
- 5 On your computer, open your CIFS file sharing program (Windows Explorer for example) and browse to the NSA. Double-click the printer's icon.



- 6 If you get a warning screen, click the option that lets you continue (**Yes** in this example).



- 7 If your computer does not already have the printer's driver installed, you will need to install it. In this example, click **OK**.

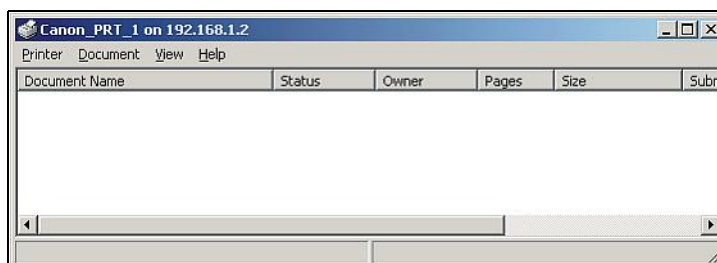


- 8 Use the wizard screens to install the printer driver on the computer. You may need to get the file from the printer's CD or the printer manufacturer's website (the driver is not installed on the NSA).

Note: You must install the printer driver on each computer that will use the printer.



After the driver installation finishes, the computer is ready to use the printer. Select the printer in an application to use it to print. Browse to the NSA using a CIFS program (like Windows Explorer) and double-click the printer's icon to open the printer's queue of print jobs.



Note: Repeat steps 5 to 8 on your other computers so they can also use the printer.

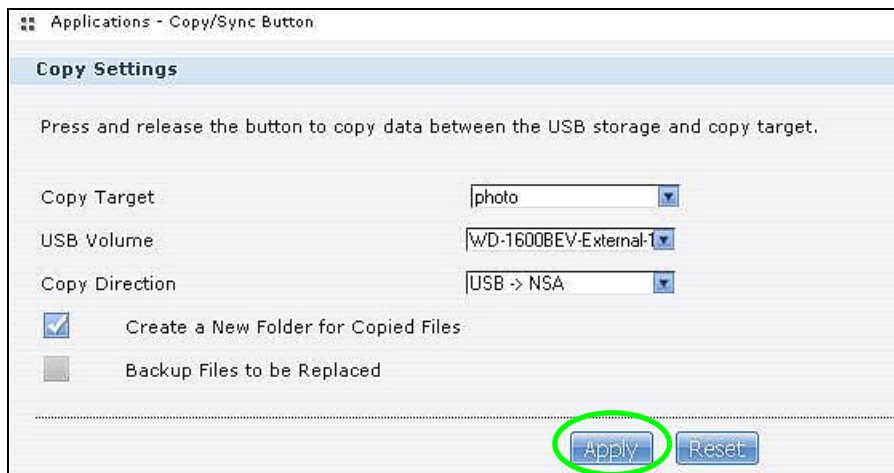
## 5.13 Copy and Flickr Auto Upload Tutorial

Amy received some photos taken during her best friend's wedding and saved the files on a USB disk. She wants to save a copy of the photos in the NSA and upload the photos to her Flickr account.

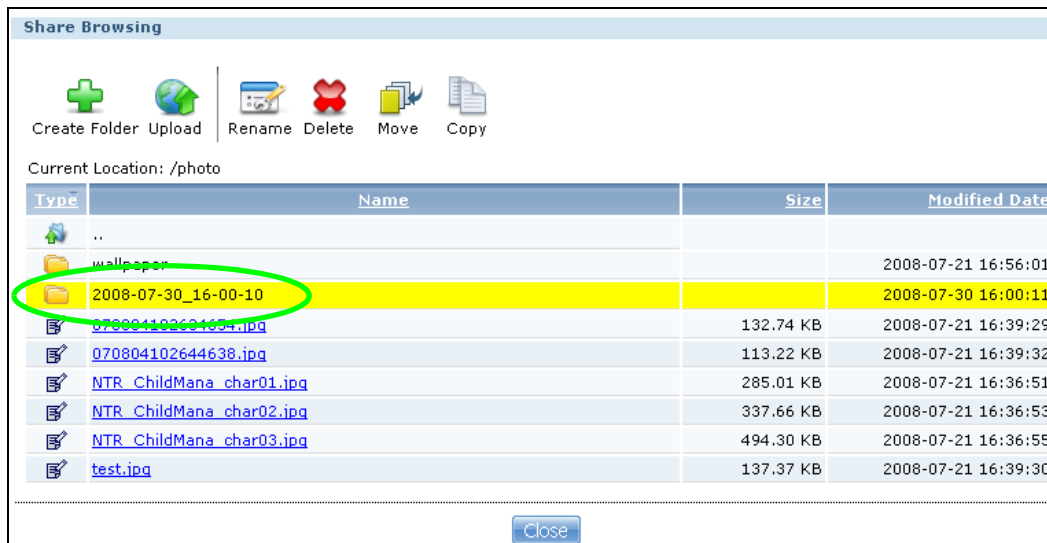
Amy has to activate the NSA's auto upload feature. See [Section 12.4 on page 285](#) for more details on setting up a Flickr account for auto upload. In this example Amy select the NSA's photo share for auto upload.

This is how Amy would transfer the files from her USB disk to the NSA.

- 1 Click **Applications > Copy/Sync Button** in the navigation panel to open the screen.
- 2 Configure the copy settings as shown and click **Apply**.

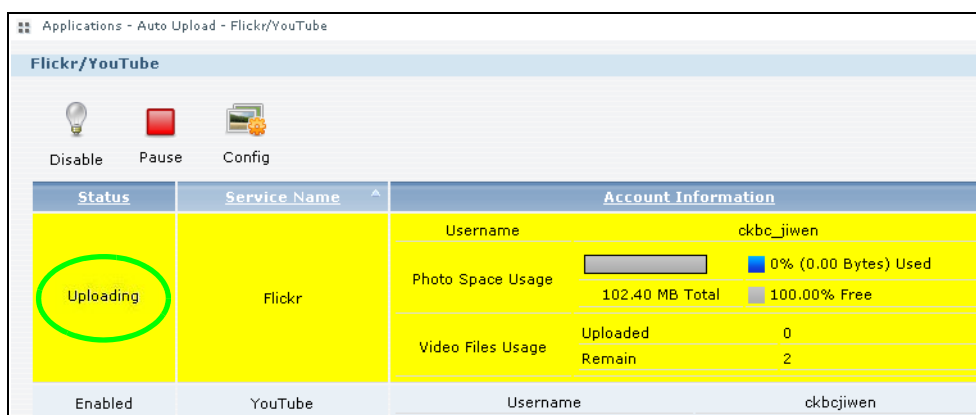


- 3 Press and release the **COPY/SYNC** button on the NSA's front panel to start copying files.
- 4 The copied files can be found in a new folder in the photo share. The name of this folder is the date (yyyy-mm-dd) and time (hh-mm-ss) when the folder is created.





- 5 The NSA also automatically uploads the copied files to Flickr.

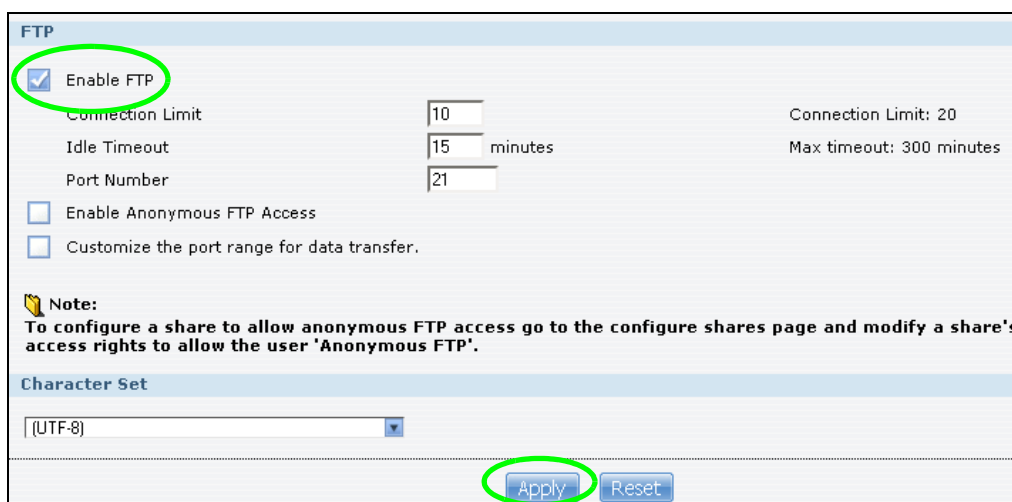


## 5.14 FTP Upload Tutorial

FTP Uploadr can automatically upload files saved on the NSA to a remote FTP server. Amy wants to share files on her NSA with Susan. They each have an NSA at home, so Susan has to set her NSA as an FTP server for Amy to automatically send files using FTP Uploadr.



To set the NSA as an FTP server, click **Applications** > **FTP** to open the **FTP** screen. Select **Enable FTP** and click **Apply**.



Susan also has to create a user account and share on her NSA for Amy to upload files. The share is used for files uploaded from Amy's NSA. Amy will then use the following information to configure FTP Uploadr on her NSA.

**Table 15** FTP Uploadr Tutorial: FTP Server Information

FTP Domain Name or IP Address	example2.com
FTP User Name	Amy
FTP Password	xxxxx
Share (Remote Path)	Amy

This is how Amy would set up the NSA's FTP Uploadr.

- 1 Click **Applications > Auto Upload > FTP Uploadr** to open the **FTP Uploadr** screen. Select **Enable FTP Uploadr** and click **Apply** to turn on FTP Uploadr.



- 2 Click **Add Server**.



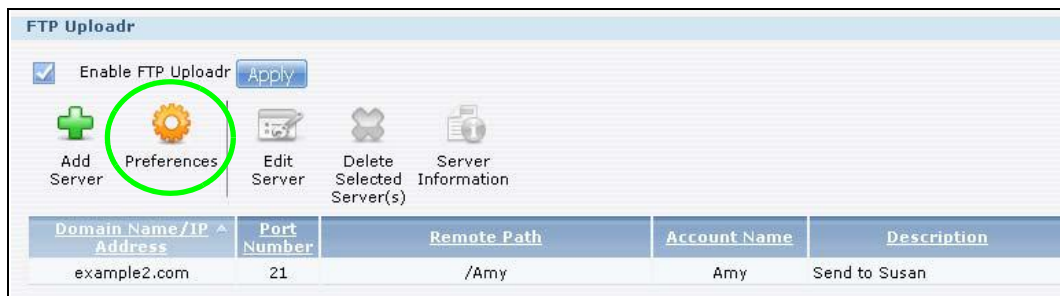
- 3 Enter the information as describe in [Table 15 on page 114](#). Click **Apply** to add the server.

The 'Add Server' dialog box contains the following fields and values:
 

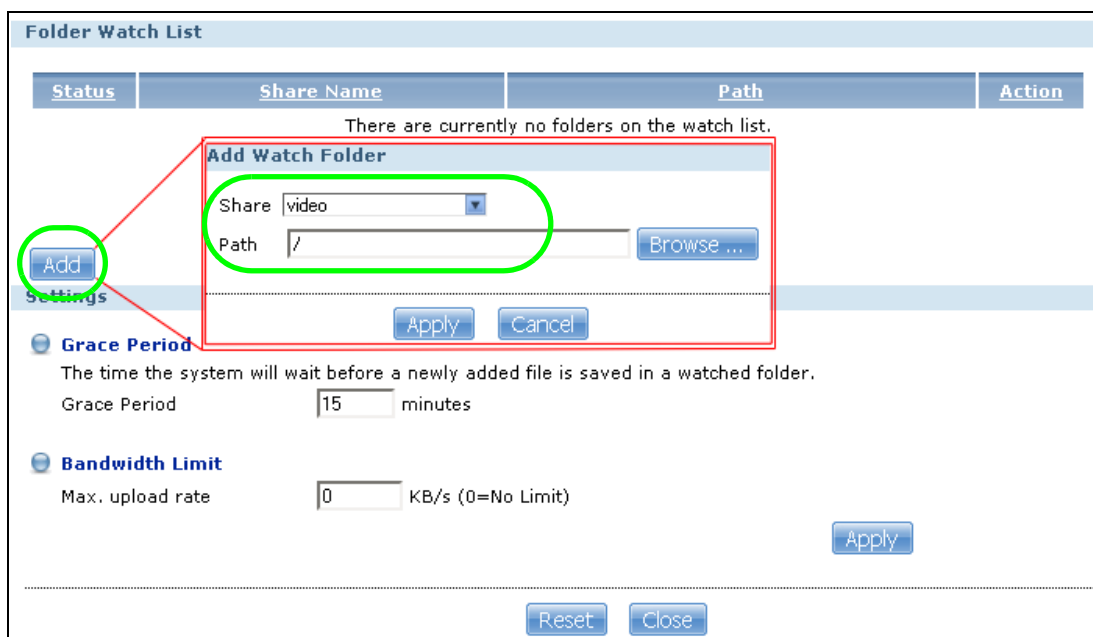
- Domain Name/IP Address: example2.com
- Account Name: Amy
- Password: xxxxx
- Port Number: 21
- Remote Path: /Amy
- Description: Send to Susan

 There is a 'Test Connection' button and 'Apply' and 'Cancel' buttons at the bottom.

- 4 In the **FTP Uploadr** screen, click **Preferences** to configure the auto upload settings.



- 5 Amy wants to share video files with Susan. In the **Preferences** screen, click the **Add** button and select **video** from the **Shares** drop-down list box, enter a forward slash in the **Path** field and click **Apply** to add the share to the **Folder Watch List**.



- 6 Amy also set the **Bandwidth Limit** to 20 KB/s so that the upload doesn't slow down her Internet connection.

Status^	Share Name	Path	Action
	video	/	

Add

Settings

**Grace Period**  
The time the system will wait before a newly added file is saved in a watched folder.  
Grace Period  minutes

**Bandwidth Limit**  
Max. upload rate  KB/s (0=No Limit)

Now Amy has set up FTP Uploadr to send files to Susan's NSA. Every time Amy adds new files or renames files in the **video** share, these new or modified files will be uploaded automatically to the **Amy** share on Susan's NSA.

Similarly, Susan can go through the steps described above to configure FTP Uploadr on her NSA. Once Susan completes the setup, Amy can also receive files from Susan's NSA.



## 5.15 Web Configurator's Security Sessions

These tutorials show you how to configure security for the NSA's Web Configurator sessions. You will customize the NSA's self-signed SSL certificate and distribute it to your users.

## 5.15.1 Customizing the NSA's Certificate

- 1 Click **Maintenance > SSL** and then select **Edit a self-signed CA certificate** and click **Edit**.

Maintenance - SSL

### Force HTTPS (TLS/SSL) Connections

**Caution:**  
Modifications of TLS/SSL certificate settings will restart network services.

Force HTTPS

Apply

### Install System Default CA

This action will install the system default CA in the trusted CA list of your browser

**Step1** Download the default CA file [Download](#)

**Step2** Double click on the CA file to install it into your browser

### Modify the Existing Certificate

**Caution:**  
Modifications of TLS/SSL certificate settings will restart network services.

Edit a self-signed CA certificate [Edit](#)

**Step1** Edit the Self-signed Certificate [Download](#)

**Step2** Download the self-signed CA file [Download](#)

**Step3** Double click on the CA file to install it into your browser

Create a Certificate To Be Authorized By My Own Certificate Authority

- 2 Next, let's modify the certificate by changing the **Common Name** to this NSA's host name of "nsa", the **Organization** to "ZyXEL" and the **Key Length** to **2048**.

### Edit the Self-signed Certificate

Common Name

Host IP Address

Host Domain Name

Organizational Unit(Optional)  Max length: 64 characters

Organization(Optional)  Max length: 64 characters

Country(Optional)  Country code only, such as TW, US, JP, etc,...

Key Type

Key Length

**Note:**  
If you choose a large key length, it may take a while to make the certificate file.

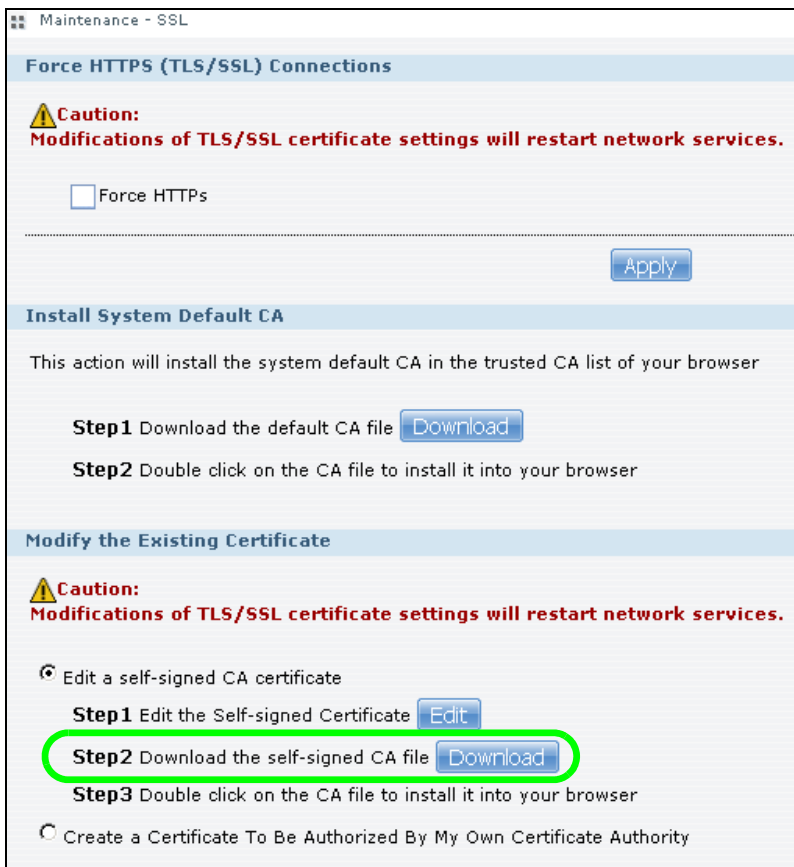
Apply Cancel

- 3 The NSA restarts its network services and returns you to the login screen.

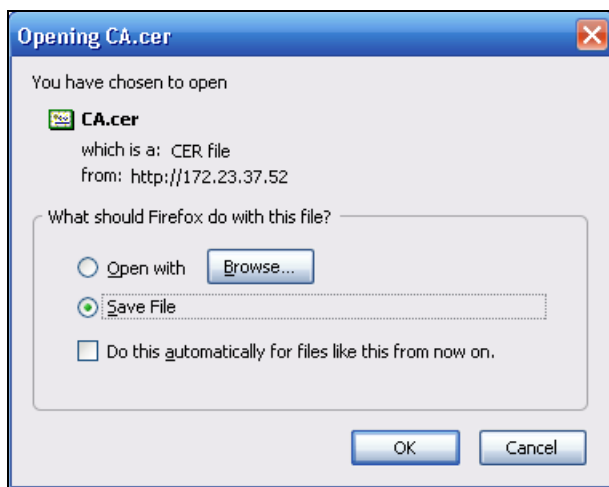


## 5.15.2 Downloading and Installing Customized Certificate

- 1 Log in and return to **Maintenance > SSL**. Under **Modify the Existing Certificate**, click **Download**.



- 2 Save the file to your computer.



- 3 Find the certificate file on your computer and double-click it.



- 4 Install the certificate. The rest of the steps in this section are an example of installing a certificate in Windows. In the **Certificate** dialog box, click **Install Certificate**.

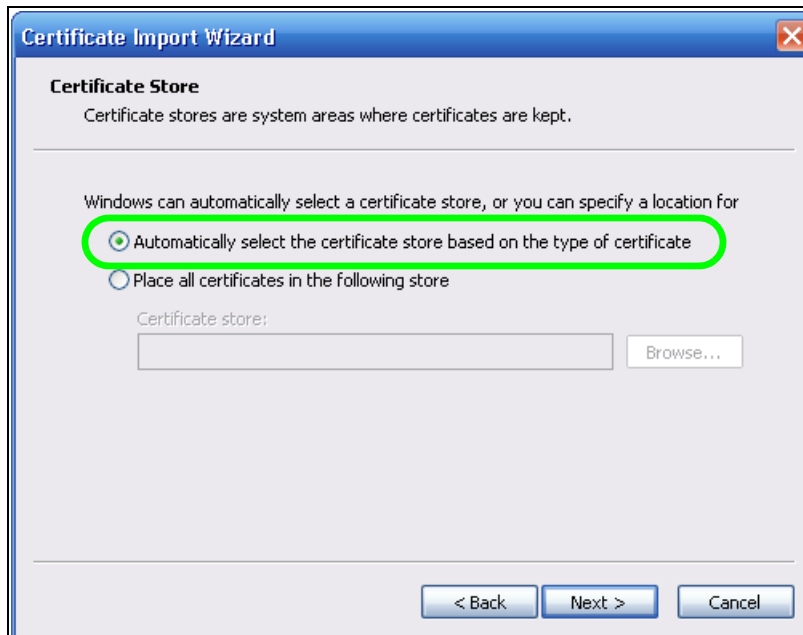


- 5 In the **Certificate Import Wizard**, click **Next**.

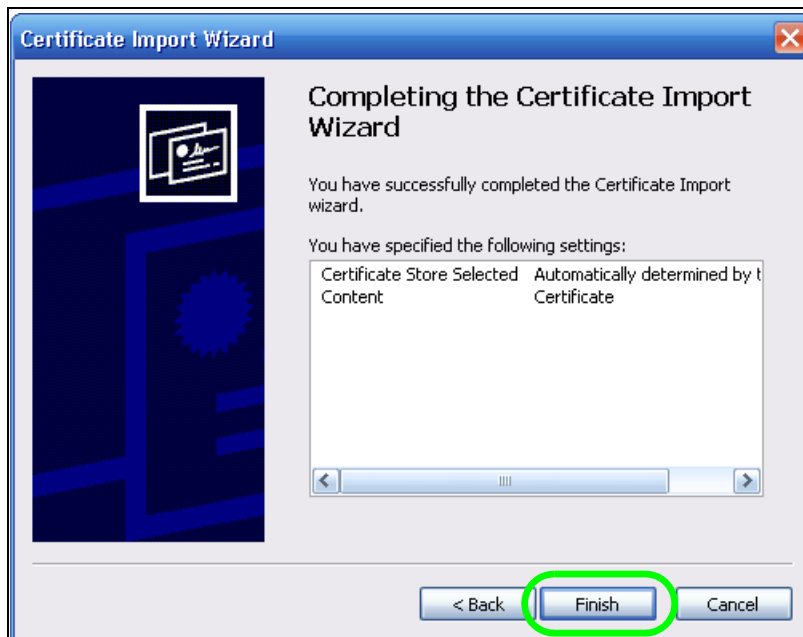




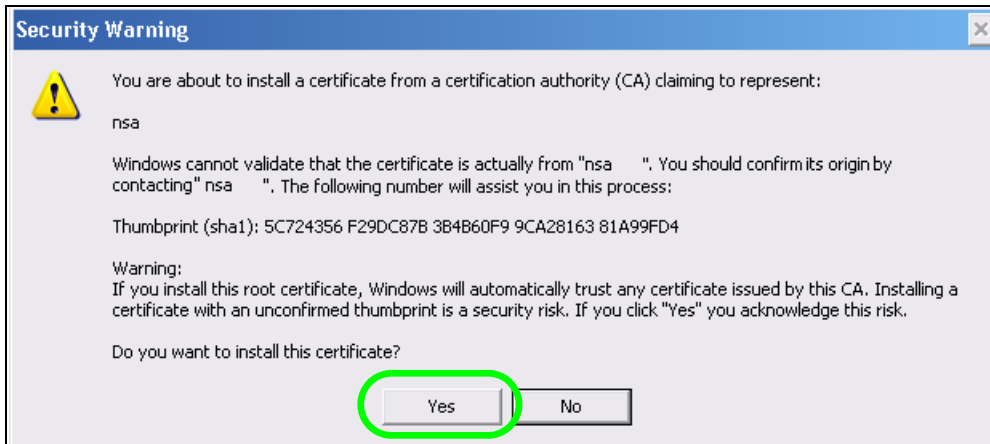
- 6 Leave **Automatically select certificate store based on the type of certificate** selected and click **Next**.



- 7 In the **Completing the Certificate Import Wizard** screen, click **Finish**.



- 8 If you are presented with another **Security Warning**, click **Yes**.



- 9 Finally, click **OK** when presented with the successful certificate installation message.



### 5.15.3 Turn on the NSA's Web Security

Now that you have customized the NSA's certificate and installed it in your computer, you can turn on security for your Web Configurator sessions. This example uses Firefox 3.0.

- 1 Close your web browser and open it again to reset its session with the NSA. Log in and click **Maintenance > SSL**. Select **Force HTTPS** and click **Apply**.

Maintenance - SSL

### Force HTTPS (TLS/SSL) Connections

**Caution:**  
Modifications of TLS/SSL certificate settings will restart network services.

Force HTTPS

Apply

### Install System Default CA

This action will install the system default CA in the trusted CA list of your browser

**Step1** Download the default CA file [Download](#)

**Step2** Double click on the CA file to install it into your browser

### Modify the Existing Certificate

**Caution:**  
Modifications of TLS/SSL certificate settings will restart network services.

Edit a self-signed CA certificate

**Step1** Edit the Self-signed Certificate [Edit](#)

**Step2** Download the self-signed CA file [Download](#)

**Step3** Double click on the CA file to install it into your browser

Create a Certificate To Be Authorized By My Own Certificate Authority

- 2 A warning screen pops up if applying your change may disconnect some users. Click **Apply** to continue.

**Warning Confirmation**

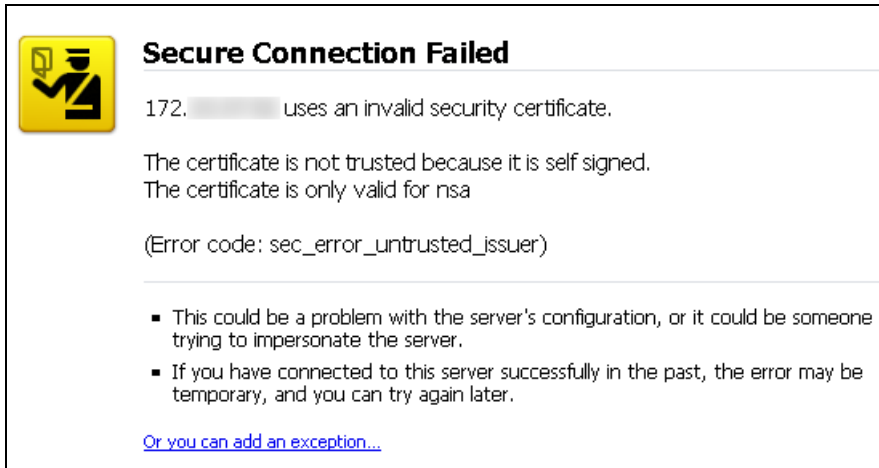
The following users are currently connected. If you decide to continue, they may be disconnected.

Type	Share Name	Username	IP Address
Web		admin	.104
CIFS	music	admin	.104

**Caution:**  
Performing this operation will cause some network services to temporarily disconnect.

Apply Cancel

- The NSA logs you out and automatically redirects your formerly non-secure (HTTP) connection to a secure (HTTPS) connection. Your browser may give you a warning about the device's public key certificate. Add an exception to allow your browser to bypass the warning.



**Secure Connection Failed**

172. [redacted] uses an invalid security certificate.

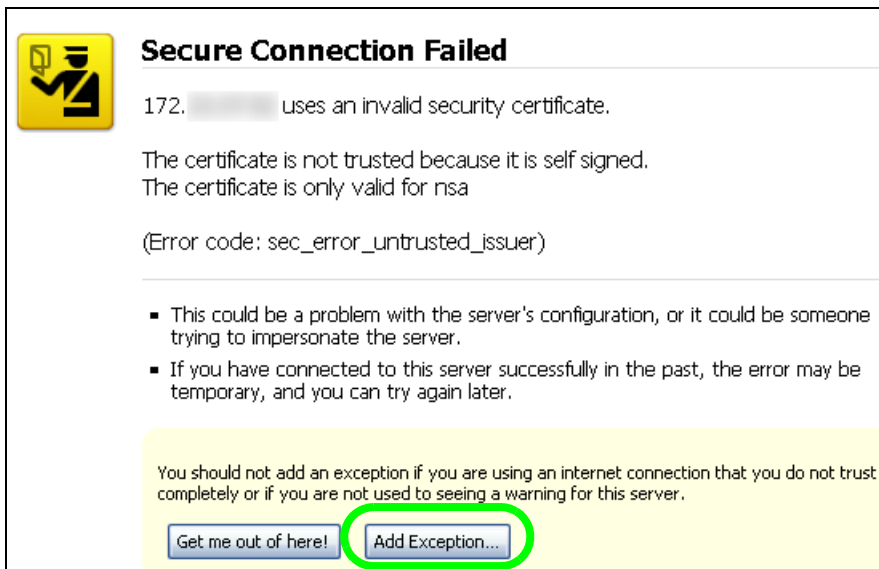
The certificate is not trusted because it is self signed.  
The certificate is only valid for nsa

(Error code: sec\_error\_untrusted\_issuer)

- This could be a problem with the server's configuration, or it could be someone trying to impersonate the server.
- If you have connected to this server successfully in the past, the error may be temporary, and you can try again later.

[Or you can add an exception...](#)

- Click **Add Exception**.



**Secure Connection Failed**

172. [redacted] uses an invalid security certificate.

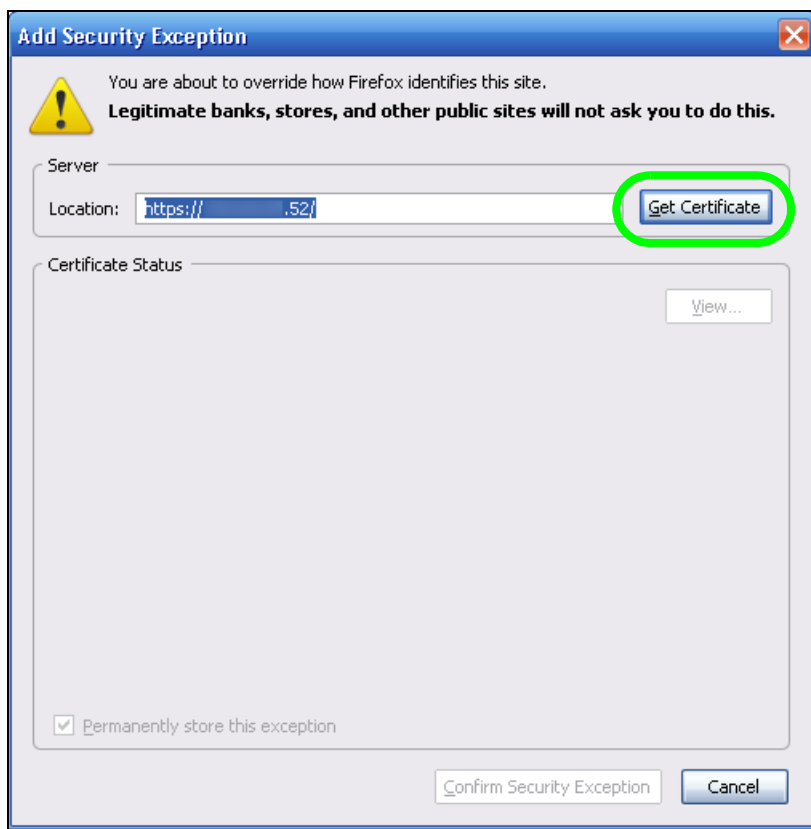
The certificate is not trusted because it is self signed.  
The certificate is only valid for nsa

(Error code: sec\_error\_untrusted\_issuer)

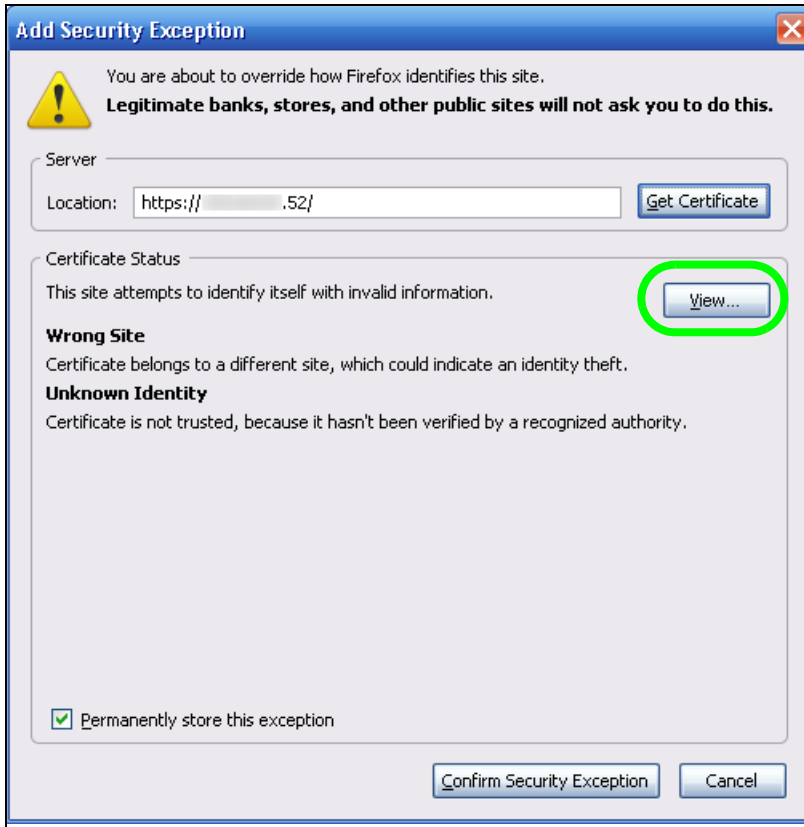
- This could be a problem with the server's configuration, or it could be someone trying to impersonate the server.
- If you have connected to this server successfully in the past, the error may be temporary, and you can try again later.

You should not add an exception if you are using an internet connection that you do not trust completely or if you are not used to seeing a warning for this server.

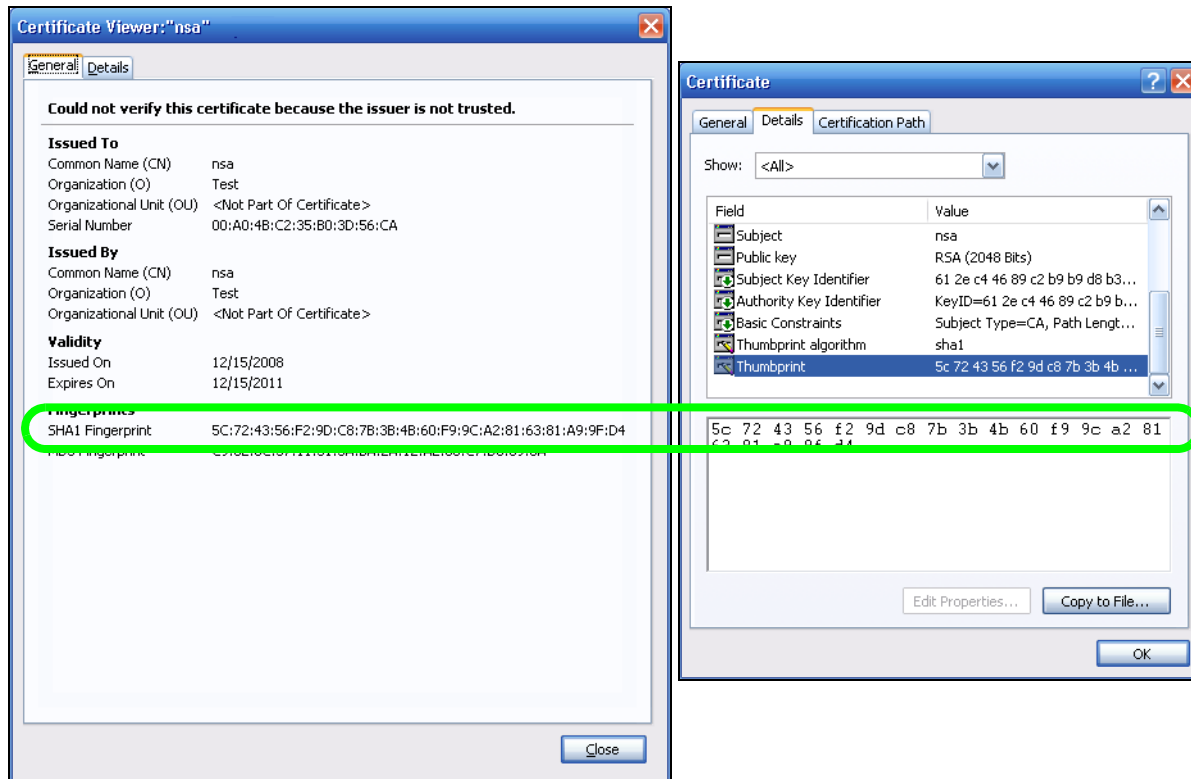
5 Click **Get Certificate**.



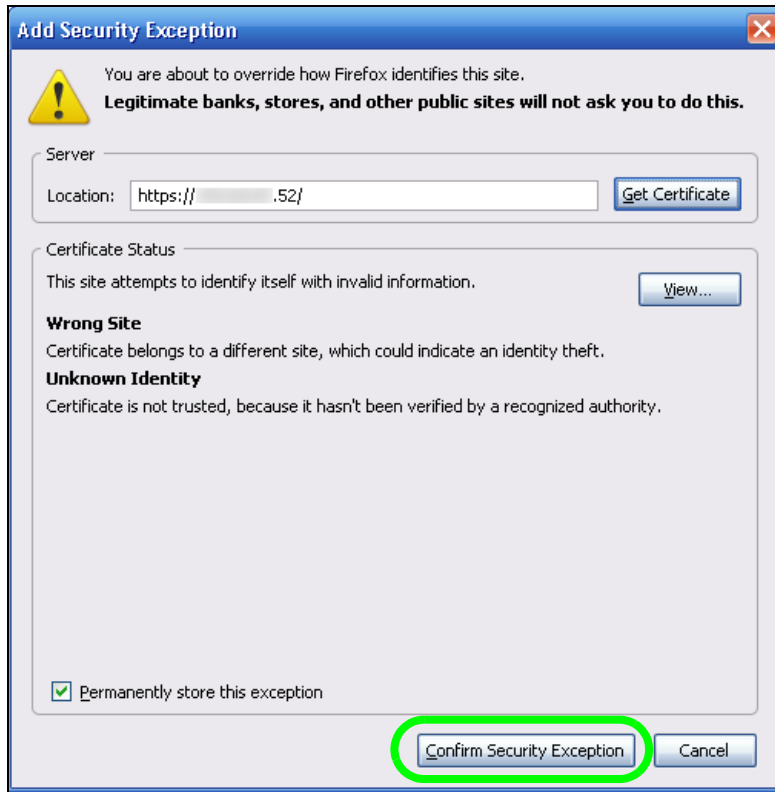
- 6 Before you add an exception, verify that the device to which you are trying to connect is providing the correct certificate. Click **View**.



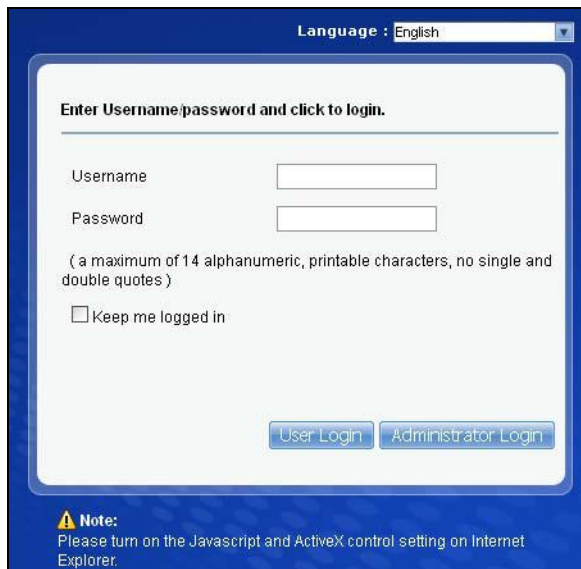
- The SHA1 fingerprint must match the NSA's certificate you downloaded from the NSA to your computer. (Double-click the NSA's certificate file and then click **Details** and look at the **Thumbprint**). Click **Close**.



- 8 If the certificate fingerprints match, click **Confirm Security Exception**, otherwise click **Cancel**.



- 9 The login screen displays.



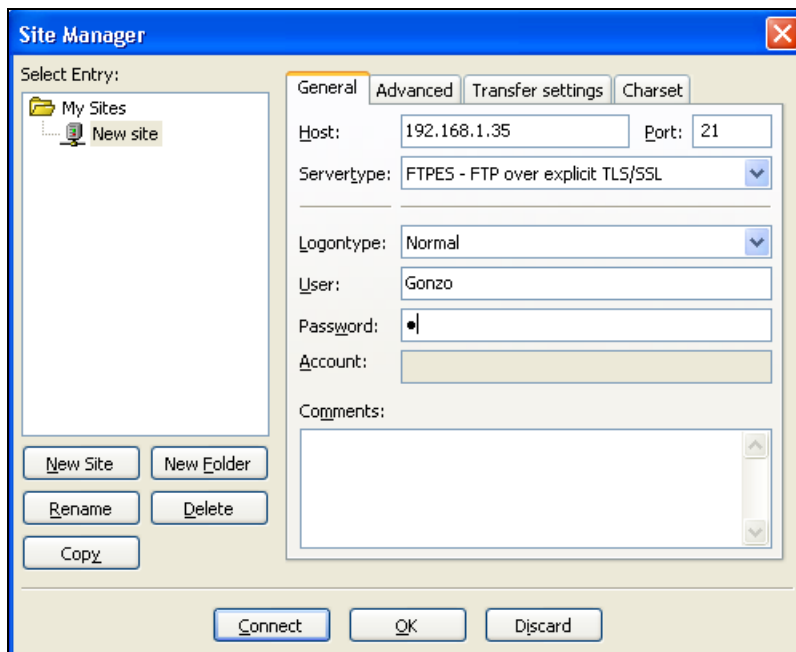
Now, anyone who connects to the NSA's Web Configurator screens will automatically do so by HTTPs. Use a secure method to let your users know the correct fingerprint for the NSA's certificate so they can check it before adding a security exception (as in steps 6 to 7 on pages 126 to 127). See the next section for how to use FTPES with the NSA for secure FTP transfers.



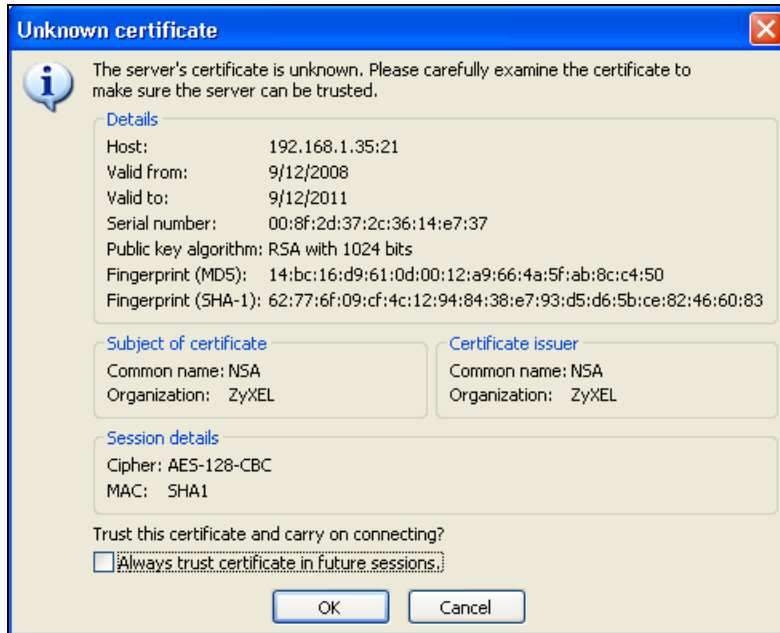
## 5.16 Using FTPES to Connect to the NSA

This section covers how to use FTP over Explicit TLS/SSL with the NSA for secure FTP transfers. Before you go through this section, read [Section 5.15 on page 116](#) to configure HTTPS. This example uses FileZilla.

- 1 Open FileZilla and click **File > Site Manager > New Site**.
  - Configure the **Host** field with the NSA's address.
  - Set the **Servertype** to **FTPES - FTP over explicit TLS/SSL**.
  - Configure the account name and password.
  - Click **Connect**.



- 2 A security warning screen displays. The SHA1 fingerprint must match the NSA's certificate you downloaded from the NSA to your computer. (Double-click the NSA's certificate file and then click **Details** and look at the **Thumbprint**). If they match, click **OK**.



The shares and folders to which Gonzo has access display. Now you can use FTP to securely transfer files to or from the NSA. Use a secure method to let your users know the correct fingerprint for the NSA's certificate so they can check it before adding a security exception.

## 5.17 Using a Mac to Access the NSA

This tutorial shows you how to find the NSA on Mac OS X 10.5 (Leopard).

You can access the NSA in two ways:

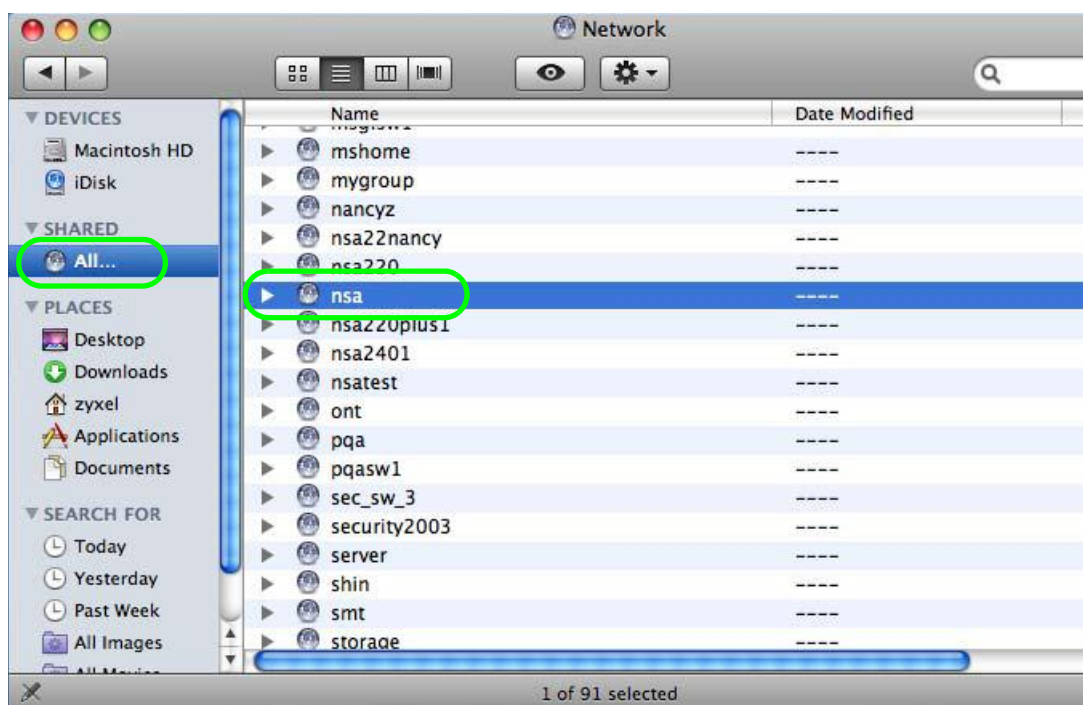
- Use the **Finder** to browse for the NSA, or
- Use the **Finder > Go** option to connect to the NSA.

## 5.17.1 Finder

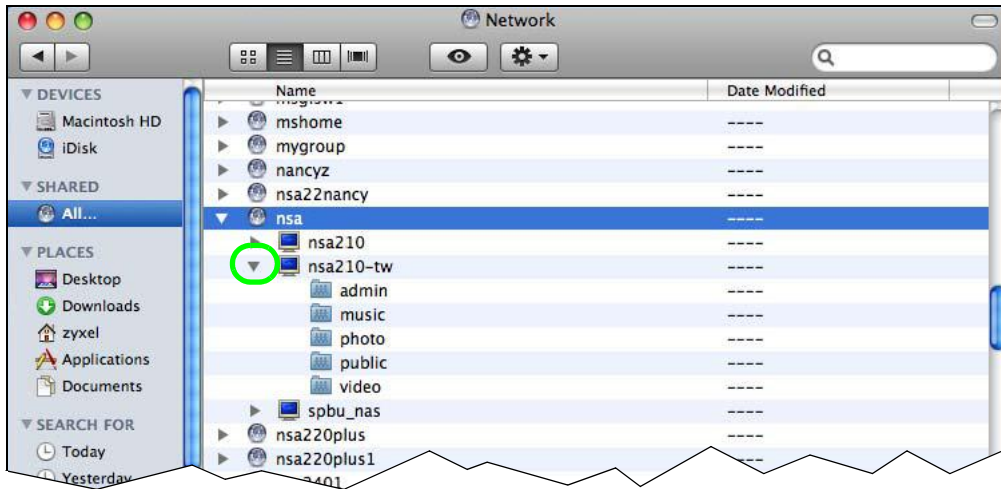
- 1 Open a new **Finder** window.



- 2 Select **All** under the **SHARED** sidebar. Look for the NSA from the **Network** list.

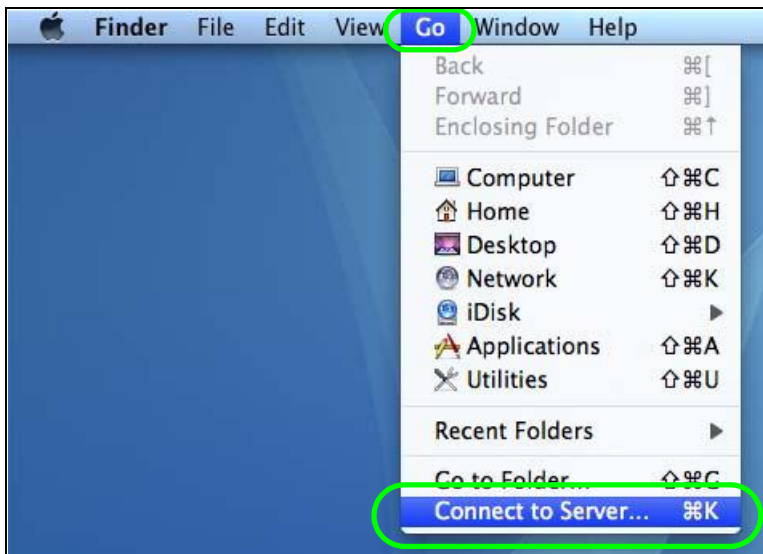


- Expand the NSA to display the shares you may access.

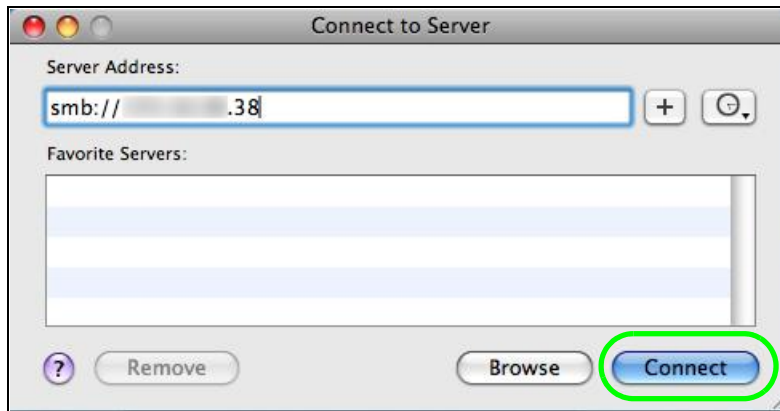


### 5.17.2 Go Menu

- In the **Finder**, click **Go > Connect to Server**.



- 5 When the **Connect to Server** dialog box opens, enter `smb://` and the NSA's IP address in the **Server Address** field. You may also click **Browse** to have the Mac search for the NSA. Click **Connect**.



- 6 Once you establish the connection, you can access the NSA from the **Finder** or directly from the desktop.

## 5.18 How to Use the BackupPlanner

Note: The screens and links in this section appear only after you have installed and enabled BackupPlanner. BackupPlanner is an application that you can install using Package Management (see [Chapter 11 on page 225](#).)

Use the NSA's BackupPlanner to have a backup of your files and folders.

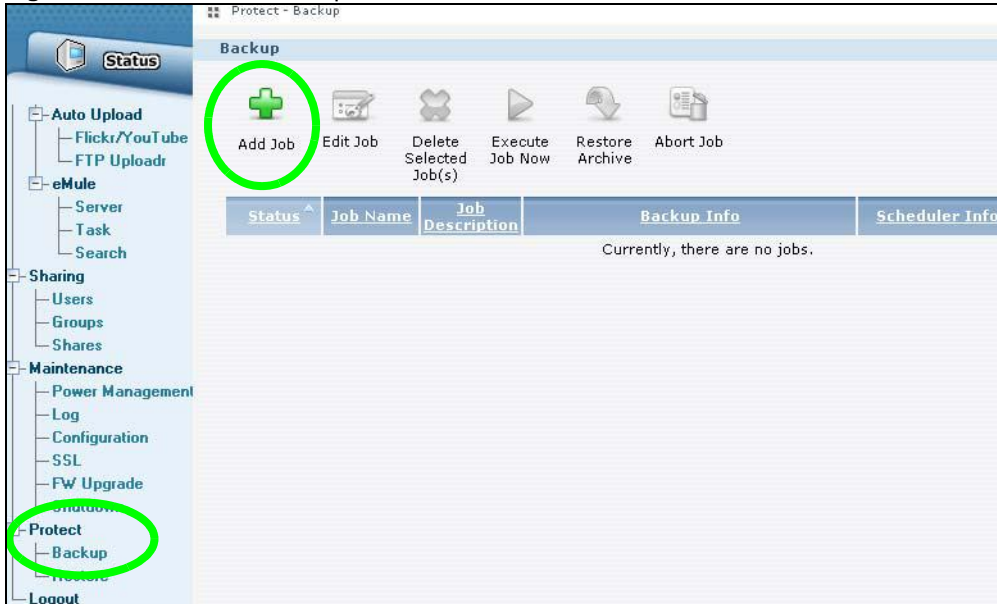
Schedule backups for times when the network is not busy (like at night or on weekends). For example, you might do daily backups of important individual files or folders and a weekly general archive. You can save backups to another location so your files can survive even if the original RAID or NSA fails.

### 5.18.1 Creating an Archive Backup

To backup the NSA every week to a remote NSA:

- 1 Click **Protect > Backup > Add Job**.

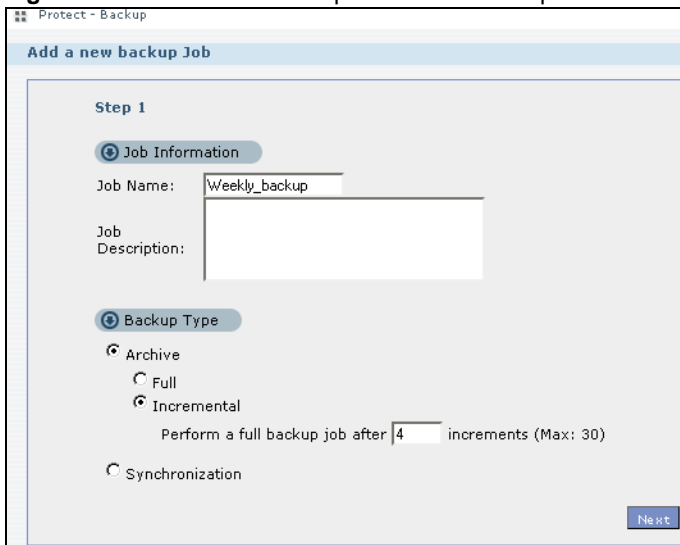
**Figure 32** Protect > Backup



- 2 Identify the backup job and select **Archive**.

New files are often added to the shares that you need to back up and existing files are not frequently changed so select **Incremental**. The NSA does a full backup first and later only copies source files that are new and/or modified since the last backup. This example sets the NSA to do another full backup after every four incremental backups.

**Figure 33** Protect > Backup > Add Job: Step 1



- 3 Select the **volume1** check box to select all the folders and files.  
Select **Remote** and enter the other NSA's address, username, password, and share name.  
If you want to make sure the remote NSA is reachable, click **Test Connection**.

**Figure 34** Protect > Backup > Add Job: Step 2

Protect - Backup

Add a new backup Job

Step 2

Backup Source

Volume 1

Volume 1

- public
- video
- photo
- music
- admin
- Private

Selected Source Folders

Volume 1/

Backup Target

Remote

Remote NSA Address: 192.168.3.2

Username: admin

Password: \*\*\*\*

Share Name: Backups

Test Connection

Local

External

Previous Next

- 4 In this example, the target NSA is on the LAN so leave the compression off. Security is already configured on the target NSA so you can leave the encryption off, too. Have the NSA keep 3 backups.

**Figure 35** Protect > Backup > Add Job: Step 3

Protect - Backup

Add a new backup Job

Step 3

Compression

Yes

No

Encryption

Yes

No

Purge Policy

Keep All Old Backup files

Keep Only the last 3 backup files(1-30)

Keep Backups For [ ] day(s)(1-3650)

Previous Next

- 5 Set the frequency to **Weekly**. Schedule the backup for 5:00 every Saturday morning.

Protect > Backup > Add Job: Step 4

Protect - Backup

Add a new backup Job

Step 4

Scheduler

Backup Frequency: Weekly

Start Time (hh:mm): 5:00

Every how many weeks? 1 (1-52)

on every  Sunday  Monday  Tuesday  Wednesday  Thursday  Friday  Saturday

Previous Done

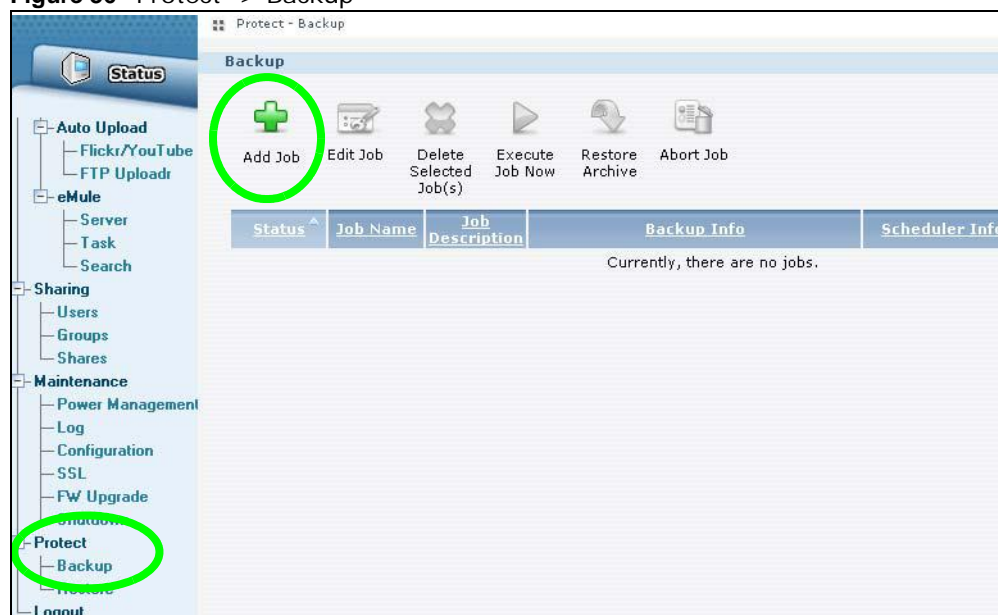
## 5.18.2 Creating a Synchronization Backup

To create a synchronization backup:



- 1 Click **Protect > Backup > Add Job**.

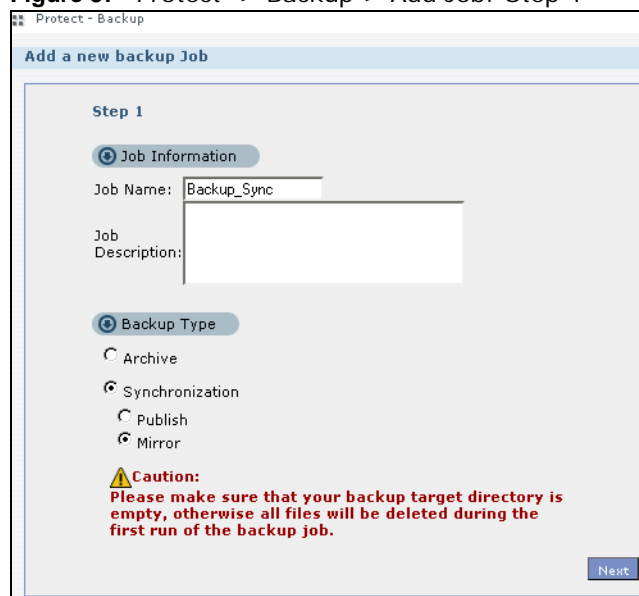
**Figure 36** Protect > Backup



Name the backup job and select **Synchronization**.

You want only your current set of files in the remote NSA's folder, so you select **Mirror** to make the target folder identical to the source folder. The NSA deletes any other files in the target folder.

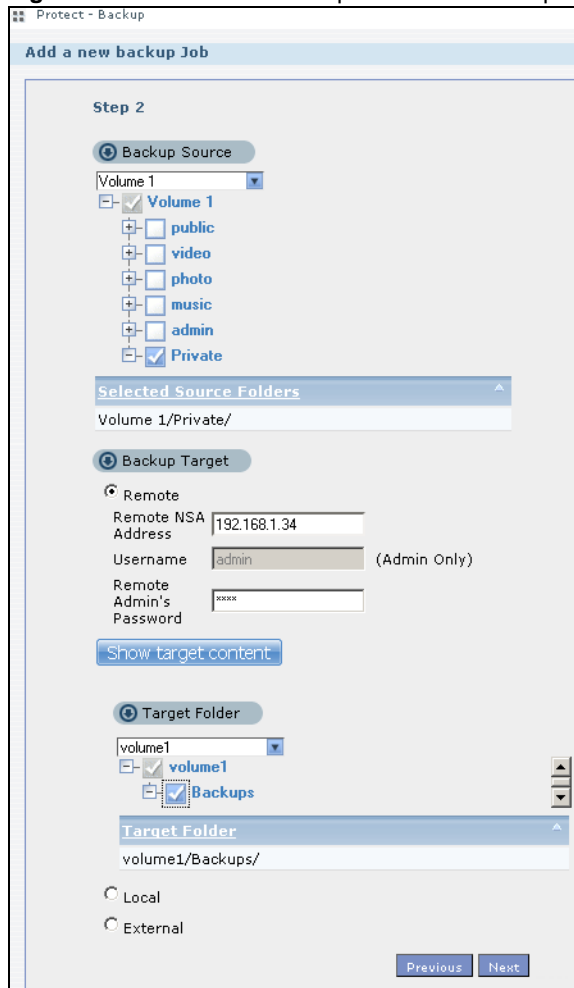
**Figure 37** Protect > Backup > Add Job: Step 1



- 2 Select the folder that needs to be mirrored (your **Private** folder in this example) and **Remote**.
  - Enter the other NSA's address and administrator password.
  - Click **Show target content** to display the remote NSA's contents.
  - Select the destination on the remote NSA (**Backups** in this example).

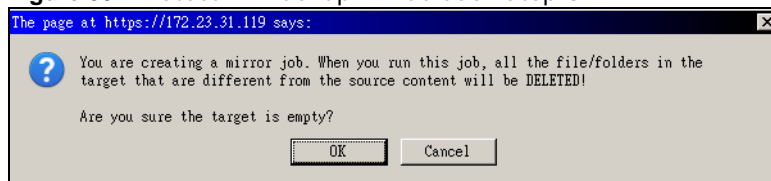
- Click **Next**.

**Figure 38** Protect > Backup > Add Job: Step 2



- 3 Click **OK** in the warning dialog box.

**Figure 39** Protect > Backup > Add Job: Step 3



- 4 For this example, assume the connection to the German branch office is a good one and not many files need to be backed up so leave the compression off.
  - Turn on the encryption to protect these sensitive files during the transfer. The final files stored on the remote NSA will be unencrypted (usable).
  - Restrict the bandwidth usage to 256 KB/s to stop the archives from using all of your network connection's available bandwidth.
  - You don't have to configure a purge policy for a synchronization backup.

- Click **Next**.

**Figure 40** Protect > Backup > Add Job: Step 3

**Add a new backup Job**

**Step 3**

**Compression**

Yes

No

**Encryption**

Use Encrypted Connection

Yes

No

**Bandwidth**

256 KB/s (0 : No Limit)

**Purge Policy**

Keep All Old Backup files

Keep Only the last  backup files(1-30)

Keep Backups For  day(s)(1-3650)

- 5 Schedule the backup to occur every morning at 3:00 and click **Done**.

**Figure 41** Protect > Backup > Add Job: Step 4

**Add a new backup Job**

**Step 4**

**Scheduler**

Backup Frequency: Daily

Start Time (hh:mm): 3:00

Every how many days? 1

You do not need to use a special restore process to use the files a synchronization backup creates. The copy of files that the NSA creates on the other NSA's Backups share can be used directly by anyone with access to that share.

### 5.18.3 Restoring Archived Files by Backup Job

If you have backup jobs for which the NSA has already performed backups, you can restore the files based on the backup job. Do the following:

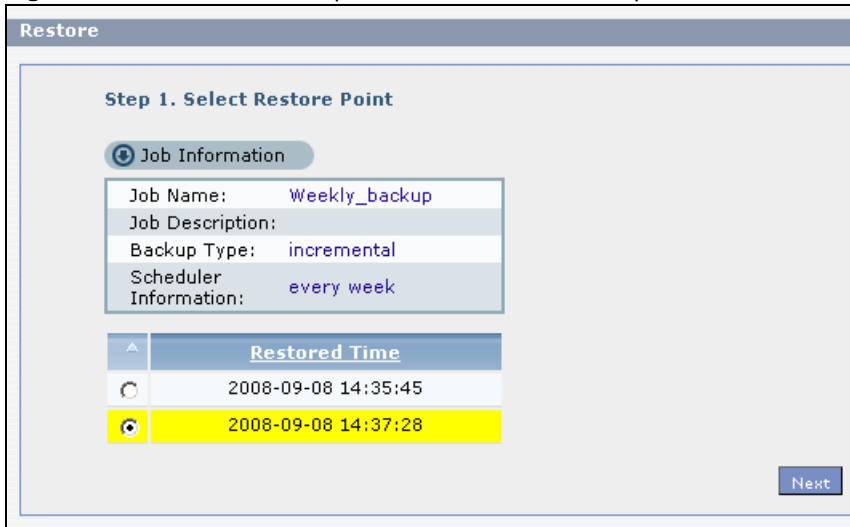
- 1 Click **Protect > Backup** screen, select a backup job and click **Restore Archive**.

**Figure 42** Protect > Backup



- 2 Select which backup to use and click **Next**.

**Figure 43** Protect > Backup > Restore Archive: Step 1



- 3 Select the files and folders you want to restore and click **Next**.

**Figure 44** Protect > Backup > Restore Archive: Step 2



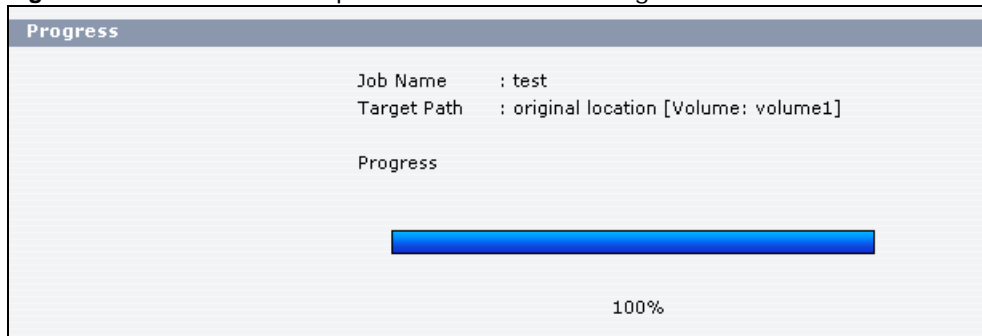
- 4 Select the original location and click **Done**.

**Figure 45** Protect > Backup > Restore Archive: Step 3



- The NSA restores the files into the share. When it finishes you can access the files.

**Figure 46** Protect > Backup > Restore Archive: Progress

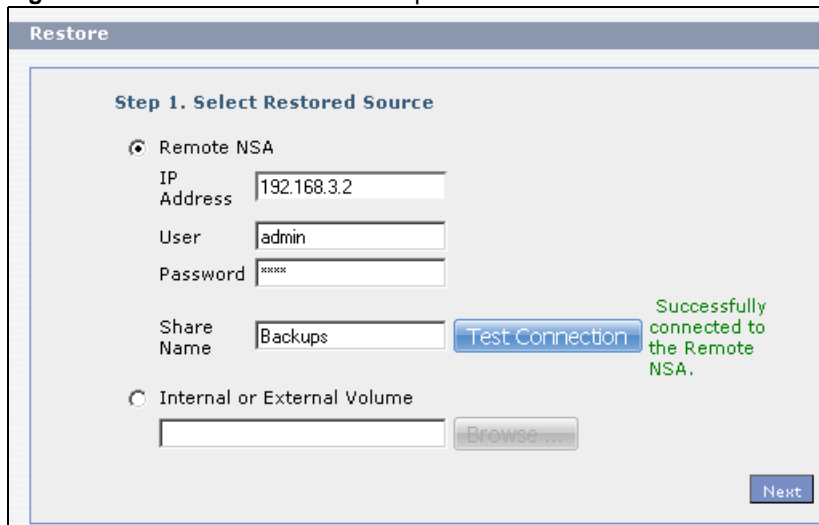


### 5.18.4 Restoring by Backup Files

If you deleted an archive backup job or the NSA or the RAID array containing the backup job failed you cannot restore archived files by the backup job. In this example, the NSA's RAID array failed. You've replaced the hard drives and re-configured the RAID. To restore by backup files:

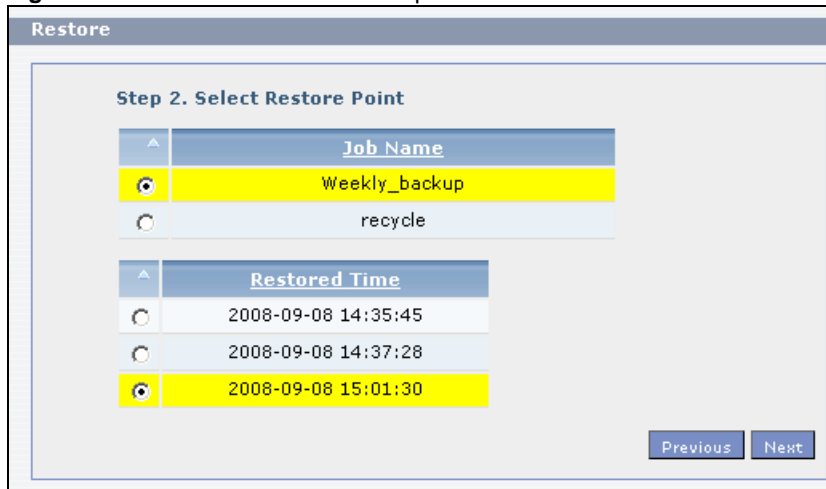
- Click **Protect > Restore**. Specify where the archive files are located. In this example, enter "192.168.3.2" as the IP address, "admin" as the account name, "1234" as the password, and "Backups" as the share name. Click **Test Connection**. Click **Next**.

**Figure 47** Protect > Restore: Step 1



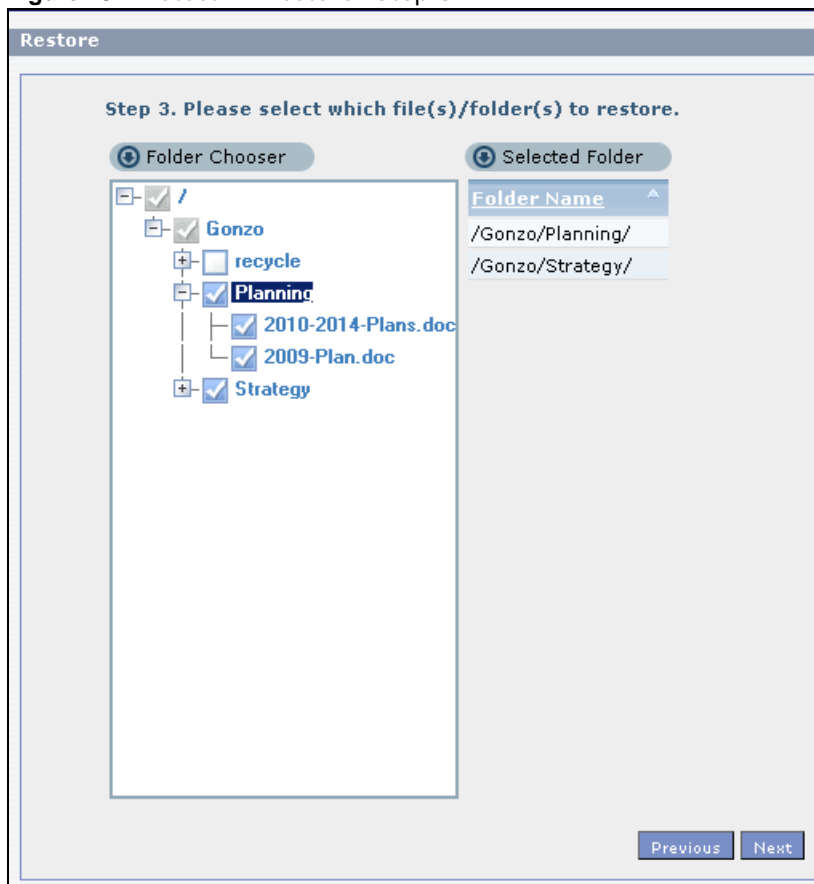
- 2 Select the backup job and backup time and click **Next**.

**Figure 48** Protect > Restore: Step 2



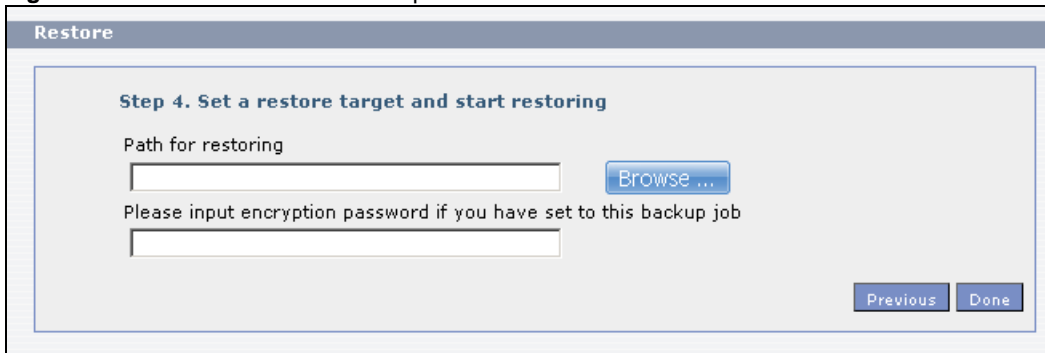
- 3 Select everything in the share except the recycle folder. Click **Next**.

**Figure 49** Protect > Restore: Step 3



- 4 Browse to the folder where you want to put the files. Click **Done**.

**Figure 50** Protect > Restore: Step 4



- 5 The NSA restores the files and you can use them again.



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# **PART II**

## **Technical Reference**

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# Status Screen

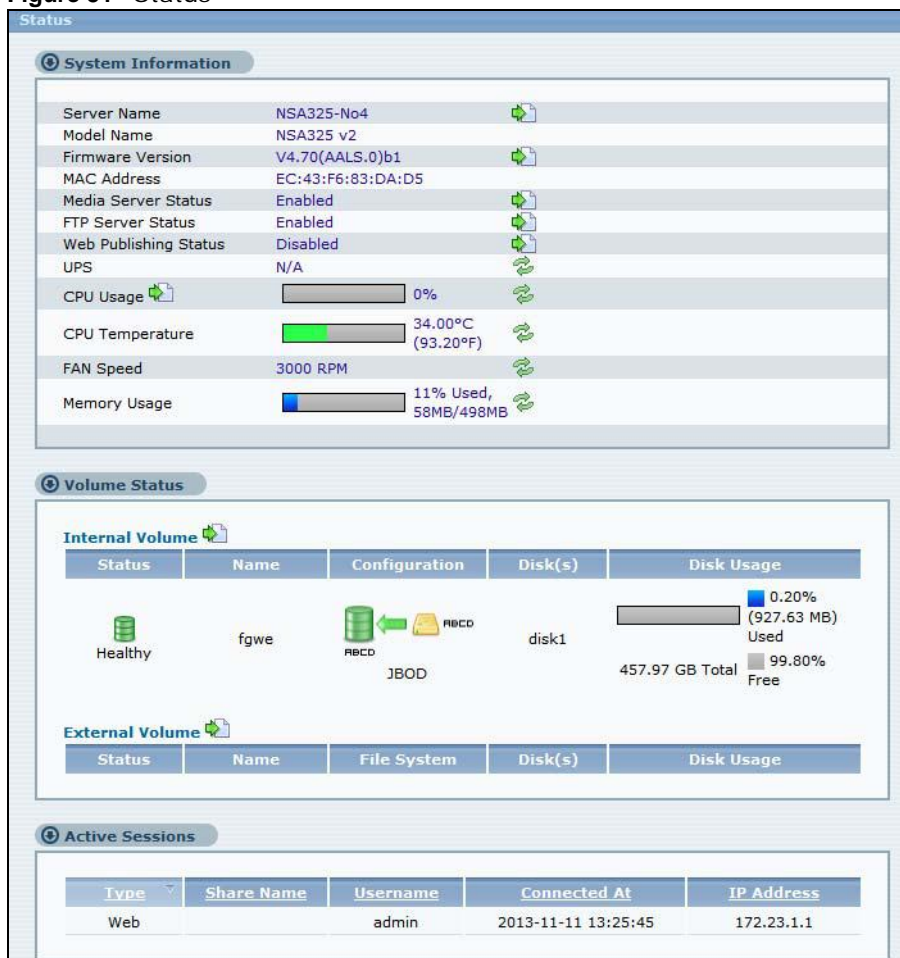
## 6.1 Overview

This chapter describes the **Status** screen, which is the first advanced administration screen that displays.

## 6.2 The Status Screen

Use the login screen's **Administrator Login** button or click **Administration** in the Playzone **Home** screen ([Section 4.5 on page 57](#)) to open the Web Configurator. You can also view the status screen, by clicking **Status** on the top-left of the navigation panel.

**Figure 51** Status



The following table describes the labels in this screen.

**Table 16** Status

LABEL	DESCRIPTION
Status	Click this to refresh the status screen statistics.
System Information	
Server Name	This displays the name which helps you find the NSA on the network. Click the <b>Edit</b> icon to go to the screen where you can configure this.
Model Name	This displays which model this NSA device is.
Firmware Version	This is the NSA firmware version. Click the <b>Edit</b> icon to go to the <b>Maintenance &gt; FW Upgrade</b> screen from which you can upload/upgrade new firmware.
MAC Address	This displays the NSA's unique physical hardware address (MAC). You need the MAC address to register the product at myZyXEL.com. Customer support may also request it for troubleshooting purposes.
Media Server Status	This shows whether the media server function is enabled or disabled. It must be enabled for media clients to play content files stored on the NSA. Click the <b>Edit</b> icon to go to the screen where you can configure this.
FTP Server Status	This shows whether the FTP server function is enabled or disabled. It must be enabled to use FTP file transfer to/from the NSA. Click the edit icon to go to the screen where you can configure this.
Web Publishing Status	This shows whether the Web server function is enabled or disabled. It must be enabled to use HTTP to access shares on the NSA. Click the <b>Edit</b> icon to go to the screen where you can configure this.
UPS	This shows the Uninterruptible Power Supply (UPS) capacity. Click the <b>Edit</b> icon to go to the screen where you can configure this.
CPU Usage	<p>This displays a summary of CPU usage by all current processes.</p> <p>Click the <b>Show CPU Info</b> icon to display the ten processes currently using the most CPU capacity.</p> <p>Click the <b>Refresh</b> icon to update this display. It also automatically updates itself every 10 seconds.</p> <p><b>Note:</b> If too many users are using the NSA then the NSA may appear sluggish.</p>
CPU Temperature	<p>This displays the current temperature near the NSA's CPU. The NSA generates an emergency log if the temperature goes out of the normal operating range. If the temperature goes even higher, the NSA shuts down automatically to avoid damage from overheating. If the NSA overheats, make sure the fans are working and it is in a well ventilated place.</p> <p>Click the <b>Refresh</b> icon to update this display. It also automatically updates itself every 60 seconds.</p>
Fan Speed	<p>This is the RPM (Rotations Per Minute) of the NSA's fans.</p> <p>Click the <b>Refresh</b> icon to update this display. It also automatically updates itself every 60 seconds.</p>
Memory Usage	<p>This shows how much of the NSA's total memory is being used.</p> <p>Click the <b>Refresh</b> icon to update this display. It also automatically updates itself every 10 seconds.</p>
Volume Status	A volume is a storage area on a single disk or spread across a number of disks within a single file system.
Internal Volume (or SATA Volume)	<p>This displays the volumes created on the hard drives installed in the NSA.</p> <p>Click the <b>Edit</b> icon to open the <b>Storage</b> screen. You can create and edit the NSA's internal volume. See <a href="#">Chapter 8 on page 161</a> for more details.</p>

**Table 16** Status (continued)

LABEL	DESCRIPTION
External Volume (or USB Volume)	<p>This displays the volumes created on USB hard drives connected to the NSA. USB disks are numbered in the order that you insert USB devices.</p> <p>Click the <b>Edit</b> icon to open the <b>Storage</b> screen. You can create and edit the external volume. See <a href="#">Chapter 8 on page 161</a> for more details.</p>
Status	This icon indicates whether the volume is healthy, degraded, or down.
Name	This field shows the name for the volume.
Configuration	This field (also known as <b>Type</b> ) shows what type of data storage system (a RAID type or JBOD) an internal volume is using.
File System	This field shows what file system an external (USB) volume is using.
Disk(s)	For internal drives, this shows which hard drive bays are included in the volume. For external drives, this field shows <b>front USB</b> for the front USB port and <b>rear USB1</b> and <b>rear USB2</b> for the rear USB ports.
Disk Usage	This field shows total disk size, the percentage of the disk being used and the percentage that is available.
Active Sessions	This shows how many users are currently connected to the NSA.
Type	This shows whether it's a Windows/CIFS, web (web configurator), or FTP connection to the NSA.
Share Name	This displays the shared folder name on the NSA that the user is connected to for CIFS sessions and is blank for FTP and web sessions.
Username	This displays the name of the user connected to the NSA if one is defined. <b>ANONYMOUS FTP</b> displays if a username is not defined for the user's connection.
Connected At	This displays the date and time the user last connected to the NSA in year, month, day, hour, minute, second format.
IP Address	This displays the IP address of the computer connected to the NSA.



# System Setting

## 7.1 Overview

This chapter gives an overview of the various features included in the system setting screens. Upgrade the NSA firmware. Use package management to add more useful applications in your NSA. Identify your NSA on the network and set the time that the NSA follows for its scheduled tasks/logs.

## 7.2 What You Can Do

- Use the **Firmware / Packages** screens ([Section 7.4 on page 153](#) to [Section 7.5 on page 153](#)) to upload new firmware and download and install applications from the web.
- Use the **Server Name** screen ([Section 7.6 on page 157](#)) to specify the NSA's server and workgroup names.
- Use the **Date/Time** screen ([Section 7.7 on page 157](#)) to set up date/time and choose a time zone for the NSA.

## 7.3 What You Need to Know

### Package Management

This feature enables you to install and use the following applications:

- **BackupPlanner** - Use this to schedule and run backup jobs for files stored in your NSA to an internal drive, external storage device or to another NSA in the network.
- **DyDNS** - This gives your NSA a domain name with a dynamic IP address. At the time of writing, this package supports accounts from the following service providers: DynDNS, NoIP, 3322, ZoneEdit, and DHS.
- **Gallery** - This web-based application allows your NSA to host pictures. You can upload images in your local computer or shares to this application. Use the administrator account of your NSA to log in to the Gallery console. The administrator can then create accounts for other users.
- **NFS** - NFS (Network File System) is a file-sharing protocol most commonly implemented on Unix-like systems.
- **NZBGet** - This news grabber helps download files from UseNet.
- **PHP-MySQL-phpMyAdmin** - This tool can be used to manage MySQL through the web. Enter 'root' as the username and '1234' as the password to log in. This includes MySQL 5.1.30, PHP 5.2.8 and phpMyAdmin 3.1.1.

- **SMART** - Use S.M.A.R.T. (Self Monitoring, Analysis, and Reporting Technology) to monitor hard disks. It detects and reports the reliability of hard disks using standard indicators, enabling administrators to anticipate possible disk failures.
- **SqueezeCenter** - This enables you to manage a Logitech's Squeezebox device connected to the NSA.
- **Syslog** - Use this to configure the NSA to accept syslog logs from syslog clients.
- **TFTP** - Use this to configure the NSA to accept log files from TFTP clients.
- **Transmission** - This Bit Torrent client supports adding tasks through torrent files and magnet links.
- **WordPress** - This allows you to create and manage a blog. Use the NSA administrator credentials to log in. The administrator can then create accounts for other users.
- **eMule** - eMule is an open-source peer-to-peer (P2P) file-sharing application similar to eDonkey, which can be used to download files from the Internet. It uses the Kad protocol.
- **pyLoad** - Use this to have the NAS manage your downloads including those from one-click hosting sites. One-click hosting sites allow Internet users to easily upload files to the one-click host's server so others can download them.

The following applications come with their own configuration screens and documentation:

- Gallery
- NZBGet
- PHP-MySQL-phpMyAdmin
- SqueezeCenter
- Transmission
- WordPress

## Windows/CIFS

Common Internet File System (CIFS) is a standard protocol supported by most operating systems in order to share files across the network.

- CIFS is included by default in Windows operating systems.
- You can use Samba with Linux to use CIFS.
- CIFS transfers use security.

## Time Lag

Time lag occurs when the time on the NSA falls behind the time on the time server. This may happen if:

- the time server is no longer reachable
- if the NSA is shut down often (the NSA internal battery keeps time when the NSA is shut down and this may cause possible variance)
- power surges occur.

The NSA gives no warning if time lag occurs. You should resynchronize the time after a power surge or after you have shut down the NSA several times.



## 7.4 The Firmware Upgrade Screen

Use this screen to upgrade the NSA firmware. You should first have downloaded the latest firmware files from the ZyXEL website.

**Do not turn off the NSA while it is upgrading the firmware or you may render it unusable.**

Click **System Setting > Firmware / Packages** to open the following screen.

**Figure 52** System Setting > Firmware / Packages

The following table describes the labels in this screen.

**Table 17** System Setting > Firmware / Packages

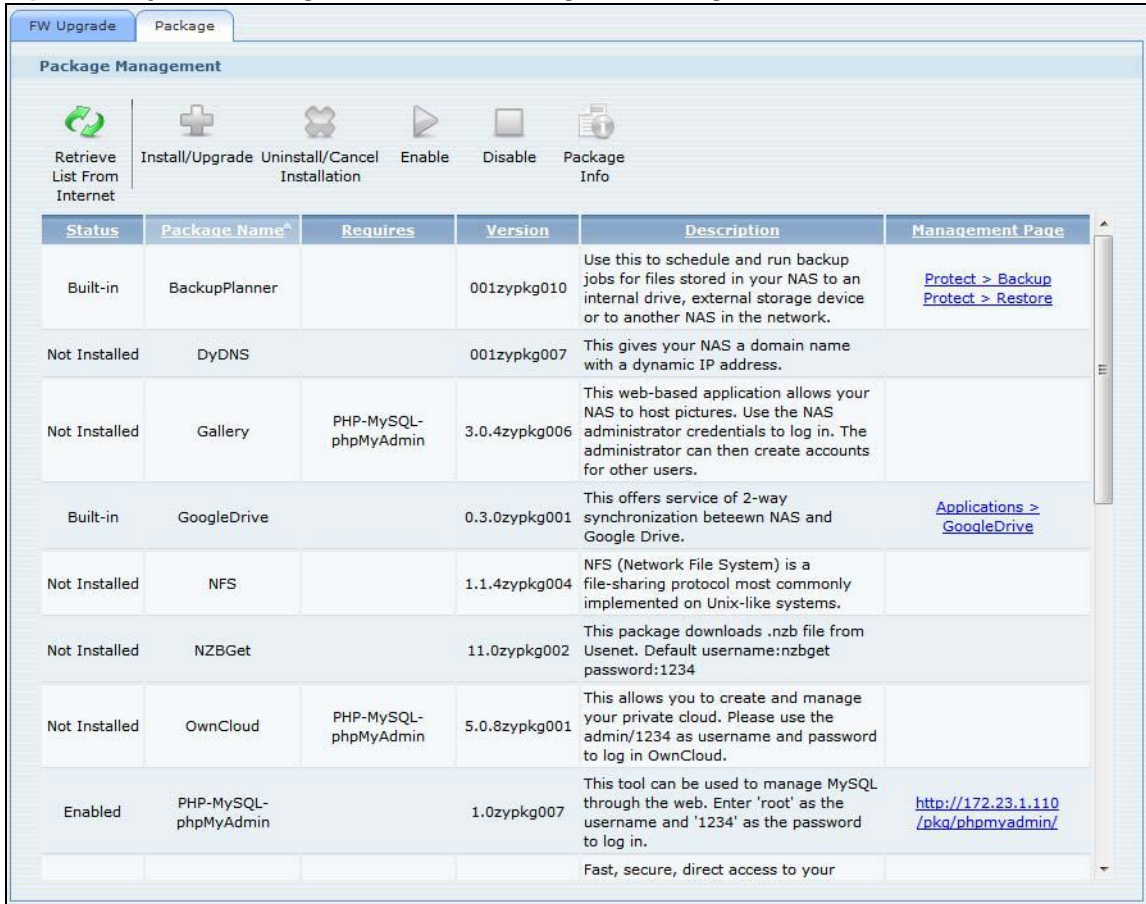
LABEL	DESCRIPTION
Firmware File	Type the location of the firmware file you want to upload
Browse	Click this to find the file on your computer
Upload	Click this to upload the new firmware. The NSA automatically restarts after you upgrade. Wait until the restart completes before accessing the NSA again. If you interrupt the upgrade, then the NSA may become unusable. See <a href="#">Section 21.1 on page 371</a> for your model's LED behavior during firmware upgrade.
Reset	Click this to refresh the screen.
Periodically Check for Latest Firmware Automatically	Select this to have the NSA regularly check ZyXEL's server for updated firmware. The NSA notifies you at login if a new firmware is available. Click <b>Apply</b> to save this field's setting.
Check for Latest Firmware Now	Click this to check ZyXEL's server for updated firmware.

## 7.5 Package Management Screen

Use this screen to download and install applications from the web. See [Chapter 11 on page 225](#) for more about the features you can add to the NSA by installing packages.

Click **System Setting > Firmware / Packages > Package** to open the following screen.

**Figure 53** System Setting > Firmware / Packages > Package




The following table describes the labels in this screen.

**Table 18** System Setting > Firmware / Packages > Package

LABEL	DESCRIPTION
Package Management	
Retrieve List From Internet	Click this to retrieve a list of available packages from the ZyXEL website.
Install/Upgrade	Choose the item(s) on the list and click this to install the selected application(s) on your system or upgrade to the latest version if you have previously installed the application.
Uninstall/Cancel Installation	Choose the item(s) on the list and click this to uninstall the selected application(s) from your system or cancel their active download(s) or install process/es.  This is only available if you have previously installed the package.
Enable	This option is only for non built-in packages.  Choose the item(s) on the list and click this to enable the application(s) on your system.  This is only available if you have previously installed the package.

**Table 18** System Setting > Firmware / Packages > Package (continued)

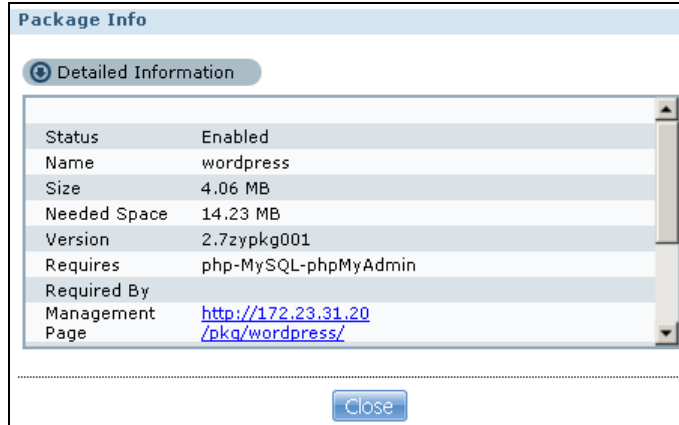
LABEL	DESCRIPTION
Disable	<p>This option is only for non built-in packages.</p> <p>Choose the item(s) on the list and click this to disable the application on your system. You have to enable the application again in order to use it.</p> <p>This is only available if you have previously installed the package.</p>
Package Info	<p>Select an item on the list and click this to display information about the package. See <a href="#">Section 7.5.1 on page 156</a> for more details.</p>
Status	<p>This is the current status of the application. It shows:</p> <ul style="list-style-type: none"> <li>• <b>Not Installed</b> - This displays for applications that have not been installed by the NSA.</li> <li>• <b>Installing (%)</b> - This displays when the application is being installed. It also shows the percent of the package already installed.</li> <li>• <b>Built-in</b> - This displays for applications installed by the NSA that you can configure in the NSA Web Configurator.</li> <li>• <b>Enabled</b> - This displays for applications installed and enabled by the NSA that have their own web configurators.</li> <li>• <b>Disabled</b> - This displays for applications installed and disabled by the NSA that have their own web configurators.</li> <li>• <b>Unknown</b> - It is possible to get this status if the web location for the application is unavailable.</li> </ul>
Package Name	<p>This is the name of the application.</p>
Requires	<p>This shows the other packages required in order to run this application.</p> <p>Note: A package would be disabled/enabled simultaneously if its prerequisite package(s) has been disabled/enabled. For example, when you enable WordPress, this also enables PHP-MySQL-phpMyAdmin automatically. However when you enable PHP-MySQL-phpMyAdmin, this does not automatically enable WordPress.</p>
Version	<p>This is the version number of the item.</p> <p>The  icon indicates that the application has a newer version available. Move your mouse over this icon to see the latest version number. Choose this item and click <b>Install/Upgrade</b>.</p>
Description	<p>This shows a brief description of the application.</p>
Management Page	<p>This shows the location of the screens or web configurator where you can manage the application (after the package has been installed on the system).</p>

Note: Once you install an application and enable it, additional links show up in the navigation panel. This applies to **eMule**, **DyDNS**, **NFS**, **SMART**, **Syslog Server**, **TFTP Server**, **pyLoad**, and **BackupPlanner**. For **Gallery**, **PHP-MySQL-phpMyAdmin**, **SqueezeCenter** and **WordPress**, you can access the applications' web configurators through the **Package Management** screen.

## 7.5.1 Displaying the Package Information

Select an item on the list and click **Package Info**. Use this screen to check detailed information about the application.

**Figure 54** System Setting > Firmware / Packages > Package > Package Info



The following table describes the labels in this screen.

**Table 19** System Setting > Firmware / Packages > Package > Package Info

LABEL	DESCRIPTION
Status	This is the current status of the application. It shows: <ul style="list-style-type: none"> <li><b>Not Installed</b> - This displays for applications that have not been installed by the NSA.</li> <li><b>Installing (%)</b> - This displays when the application is being installed. It also shows the percent of the package already installed.</li> <li><b>Built-in</b> - This displays for applications installed by the NSA that you can configure in the NSA Web Configurator.</li> <li><b>Enabled</b> - This displays for applications installed and enabled by the NSA that have their own web configurators.</li> <li><b>Disabled</b> - This displays for applications installed and disabled by the NSA that have their own web configurators.</li> </ul>
Name	This is the name of the application.
Size	This is the size of the application at initial download.
Needed Space	This is the needed space to complete the installation of the application.
Version	This is the version number of the application.
Requires	This shows other package/s required to run this application.
Required By	This shows which other packages require this application in order to be usable.
Management Page	This shows the location of the screens, console or web configurator where you can manage the application (after the package has been installed on the system).
Source	This shows the location of the installed files of the application.
Description	This shows a brief description of the item.
Close	Click this to close the screen.

## 7.6 The Server Name Screen

Click **System Setting** > **Server Name** to open the following screen. Use this screen to configure your CIFS settings. In this screen you can set your server name and specify if your NSA is a part of a workgroup.

Note: CIFS cannot be disabled on the NSA.

**Figure 55** System Setting > Server Name

The following table describes the labels in these screens.

**Table 20** System Setting > Server Name

LABEL	DESCRIPTION
Server Name	Enter a name to identify your NSA on the network in this field. You can enter up to 15 alphanumeric characters with minus signs allowed but not as the last character. The name must begin with an alphabet (a-z) and is NOT case sensitive.
Description	Add text here to describe the NSA if the <b>Server Name</b> field is not enough. Use up to 61 characters. You can use all characters except the following: \/: []<>+; ,?="~.
Workgroup Name	Type your workgroup name in this field. A workgroup is a group of computers on a network that can share files. These user accounts are maintained on the NSA. You can enter up to 15 alphanumeric characters with minus signs allowed but not as the last character. The name must begin with an alphabet (a-z) and is NOT case sensitive.
Prevent NSA From Being Master Browser	Select this option if computers in your workgroup are named with non-English characters (such as Chinese and Russian). When you perform a search in the workgroup, this option allows you to locate computers named with non-English characters.
Apply	Click this to save your changes.
Reset	Click this to restore previously saved settings.

## 7.7 The Date/Time Screen

Use this screen to select a time zone and a time server from which your NSA can get the time and date. This time is then used in NSA logs and alerts.

Click the **System Setting** link in the navigation panel and then click the **Date/Time** link to access the **Date/Time** screen.

**Figure 56** System Setting > Date/Time

The following table describes the labels in this screen.

**Table 21** System Setting > Date/Time

LABEL	DESCRIPTION
Current System Date Time Setting	
Current Time	This field displays the time used by your NSA for its logs and alerts.
Current Date	This field displays the date used by your NSA for its logs and alerts.
Date Time Setup	
Manual	Select this radio button to enter the time and date manually. When you enter the time settings manually, the NSA uses the new setting once you click <b>Apply</b> .  Note: If you enter time settings manually, they revert to their defaults when power is lost.
New Date (yyyy-mm-dd)	This field displays the last updated date from the time server or the last date configured manually. When you set <b>Time and Date Setup</b> to <b>Manual</b> , enter the new date in this field and then click <b>Apply</b> .
New Time (hh:mm:ss)	This field displays the last updated time from the time server or the last time configured manually. When you set <b>Time and Date Setup</b> to <b>Manual</b> , enter the new time in this field and then click <b>Apply</b> .
Get from Time Server	Select this check box to have the NSA get the time and date from the time server you select in the <b>Time Server Address</b> field.
Time Server Address	Select a time server from the drop-down list box or select <b>Specify my own time server</b> and enter the time server you wish to use in the field below. Check with your ISP/network administrator if you are unsure of this information.

**Table 21** System Setting > Date/Time (continued)

LABEL	DESCRIPTION
Synchronize Now	Click this for the NSA to retrieve the correct time from the configured time server right away.
Time Zone	
Time Zone	Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).
Manual Daylight Saving	<p>Daylight saving is a period from late spring to fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening.</p> <p>Select this option to manually enter Daylight Saving Time settings. Clear this option to have the NSA automatically retrieve Daylight Saving Time settings from the Internet. The NSA will download a new daylight saving resource file from the Internet every month.</p>
Start Date	<p>Configure the day and time when Daylight Saving Time starts if you selected <b>Enable Daylight Saving</b>. The hour field uses the 24 hour format. Here are a couple of examples:</p> <p>Daylight Saving Time starts in most parts of the United States on the second Sunday of March. Each time zone in the United States starts using Daylight Saving Time at 2 A.M. local time. So in the United States you would use <b>March, Second, Sunday</b>, at <b>2:00</b>.</p> <p>Daylight Saving Time starts in the European Union on the last Sunday of March. All of the time zones in the European Union start using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select <b>March, Last, Sunday</b>. The time you specify depends on your time zone. In Germany for instance, you would type 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).</p>
End Date	<p>Configure the day and time when Daylight Saving Time ends if you selected <b>Enable Daylight Saving</b>. The <b>o'clock</b> field uses the 24 hour format. Here are a couple of examples:</p> <p>Daylight Saving Time ends in the United States on the first Sunday of November. Each time zone in the United States stops using Daylight Saving Time at 2 A.M. local time. So in the United States you would select <b>November, First, Sunday</b>, at <b>2:00</b>.</p> <p>Daylight Saving Time ends in the European Union on the last Sunday of October. All of the time zones in the European Union stop using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select <b>October, Last, Sunday</b>. The time you specify depends on your time zone. In Germany for instance, you would type 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).</p>
Offset	Specify by how many hours to change the time for Daylight Saving Time.
Apply	Click this to save your changes. If you configured a new time and date, Time Zone and Daylight Saving at the same time, all of the settings take affect.
Cancel	Click this to restore your previously saved settings.





## 8.1 Overview

Several NSA features require a valid internal volume. This chapter covers the management of volumes and disks (both internal and external).

Use the **Storage** screen ([Section 8.2 on page 162](#)) to display information on all volumes, create internal and external volumes, and configure the volume's properties.

### 8.1.1 What You Need to Know About Storage

#### Disk

SATA or Serial ATA (Advanced Technology Attachment) is a computer bus technology that allows high-speed data transfer to and from hard disks.

1-bay NSA models include an eSATA port. An eSATA (external SATA) hard disk has the same specifications as a SATA hard disk but is attached to the NSA using a cable. It can be used either to expand storage or backup data. The eSATA hard disk is optional. You can attach one SATA and one eSATA to the NSA hard disk tray. Both SATA and eSATA hard disks are treated as internal disks/volumes (refer to [Section 8.3 on page 165](#)).

USB-attached storage disks are treated as external disks/volumes.

#### Volume

A volume is a storage area on a disk or disks. You can create volumes on the internal disks and external disks attached to the USB port(s). You can spread a volume across internal disks but not between internal and external disks.

#### Storage Methods

The NSA uses the following storage methods:

- RAID (Redundant Array of Independent Disks)
- PC Compatible Volume (1-bay models)
- JBOD (Just a Bunch of Disks)

The storage method you use depends on how many disks you have and how many volumes you want to create. It's important that you consider this carefully as all data is deleted when you re-create a volume. See [Figure 8.6.2 on page 170](#) for details on choosing a storage method.

Note: 1-bay models configure the internal hard disk (SATA) as JBOD by default. You can modify it if you attach a second internal hard disk (an eSATA hard disk).

## Finding Out More

See [Section 8.6 on page 169](#) for more technical background information on storage.

## 8.2 The Storage Screen

The **Storage** screen allows you to create and edit volumes in the NSA.

### 8.2.1 Disk Replacement Restrictions

See the Quick Start Guide for information on replacing disks in the NSA. When replacing a disk in a degraded or down RAID volume, the new disk must be at least the same size or bigger than the other disks that are already in the RAID volume, so as all data in the volume can be restored.

For example, if you have RAID with 250 GB disks, you must put in a 250 GB or bigger disk as a replacement in order to restore all original data in that volume. If the replacement disk is of a higher capacity, the extra space on the disk will not be used except if it is for a RAID 1 volume and you follow the [Expanding a RAID 1 Volume](#) procedure.

Note: The NSA automatically repairs a degraded RAID volume if you insert an empty disk without an existing file system. Otherwise, when you replace a disk you must go to the **Storage > Internal Volume > RAID** screen, select the degraded array, and click **Repair**.

### Resynchronizing or Recovering a RAID 1 Volume

Resynchronizing or recovering a RAID 1 volume that was down is done block-by-block, so the time it takes depends more on the size of your hard drive(s) than the amount of data you have on them.

Note: Do not restart the NSA while the NSA is resynchronizing or recovering a volume as this will cause the synchronization to begin again after the NSA fully reboots.

Note: You can access data on a RAID volume while it is resynchronizing or recovering, but it is not recommended.

### Expanding a RAID 1 Volume

Replace a RAID 1 volume's hard disks with higher capacity hard disks to be able to increase the RAID 1 volume's capacity. For example, you have two 500 GB hard disks. You replace one 500 GB hard disk with a 1 TB hard disk and repair the volume. After the NSA finishes resynchronizing the volume, you replace the second 500 GB hard disk with another 1 TB hard disk and repair the volume again. After the NSA finishes the second repair, use the **Expand** icon to have the RAID1 volume use the rest of the hard disk capacity.

## 8.2.2 Storage Screen

Click **Storage > Volume** in the navigation panel to display the following screen. Use this screen to display internal and external volumes on the NSA.

Note: It is recommended to scan the volume every three months or 32 reboots.

**Figure 57** Storage > Volume



The following table describes the labels in this screen.

**Table 22** Storage > Volume

LABEL	DESCRIPTION
Internal/External Volume	These tables display information on all internal volumes (created on NSA internal disk drives) and external volumes (created on external disk drives attached to the NSA USB ports).
Create an Internal Volume	Click this to format internal hard drives and create a new volume. All data on the disk(s) will be lost.
Create an External Volume	Click this to format an external hard drive and create a new volume. All data on the disk will be lost.
SATA/USB Volume	(NSA310) These tables display information on all internal SATA volumes (created on NSA internal disk drives) and external volumes (created on external disk drives attached to the NSA USB ports).
Create a SATA Volume	(NSA310) Click this to format internal hard drives and create a new volume. All data on the disk(s) will be lost.
Create a USB Volume	(NSA310) Click this to format an external hard drive and create a new volume. All data on the disk will be lost.
Status	This field shows whether the volume is <b>Healthy</b> , <b>Resync</b> , <b>Recovering</b> , <b>Degraded</b> , or <b>Down</b> . See <a href="#">Section 8.4 on page 167</a> for details on a volume's status.
Volume	The NSA creates the volume name automatically. You can edit it.
Disk Configuration	This field shows which disks and data storage system the volume is using.
File System	This field displays the file system that an external (USB) volume is using.
Disk(s)	Click or roll your mouse over a link in this column to display the following details about the hard drive located in the corresponding hard drive bay.  <b>Type:</b> Whether it is an internal or external (USB) hard drive. <b>Model Name:</b> This is the hard disk number that identifies the disk. <b>File System:</b> The file system that an external volume is using <b>Capacity:</b> The total storage space on the disk.

**Table 22** Storage > Volume (continued)

LABEL	DESCRIPTION
Capacity	This field shows total disk size, the percentage of the volume being used and the percentage that is available.
Actions	This field displays icons allowing you to edit, scan, repair, expand, migrate, or delete a volume. You can also locate or eject an external volume.  Note: If you delete a volume, all data in the volume disk(s) is erased.

You see a warning screen before you delete a volume.

**Figure 58** Delete a Volume Warning Screen

### 8.2.3 Volume Status

You (the administrator) can see the status of a volume in the **Status** or **Storage** screens.

The NSA has the following classifications for the status of a volume:

- **Healthy** if all disks in the volume are OK and the file system is functioning properly.
- **OK** means the USB connected device is functioning properly.
- **Resync** when you create a RAID volume.
- **Recovering** appears when repairing a RAID 1 volume. (A RAID1 volume was once degraded, but you have installed a new disk and the NSA is restoring the RAID1 volume to a healthy state.)
- **Degraded** when a volume is currently down, but can be fixed. Data access may be slower from a degraded volume, so it's recommended that you replace the faulty disk and repair the volume as soon as you can.
- **Inactive** when a disk is missing from a RAID 0 volume or a two-disk JBOD volume. The volume is unusable. If you removed one of the disks you should be able to re-install it and use the volume again (as long as you did not change anything on the disk). If a disk has failed, you need to replace it and re-create the whole volume. All data will be lost. See page 348 for how to install or replace a hard drive.
- **Down** when a volume is down and can not be fixed.

A down RAID volume cannot be used until you repair or replace the faulty disk(s) in the volume. Degraded means one of the disks in the RAID volume is not available but the volume can still be used. For a degraded volume, you should replace the faulty disk as soon as possible to obtain previous performance. See your Quick Start Guide for more information on replacing a disk.

If it's down, then the only indication is that you can no longer transfer files to/from the shares in the down volume. If it's degraded, then file transfer to/from the shares in the degraded volume will be slower.

Note: There is no explicit message from CIFS that tells users their volume is degraded or down.

## 8.3 Creating an Internal (SATA) Volume

In the **Storage** screen (Figure 57 on page 163), click the **Create an Internal Volume** or **Create a SATA Volume** button (depending on your model) to open the following screen. Use this screen to create a new NSA internal disk drive volume.

Note: Creating a volume formats the hard drive. All data on the disk will be lost.

**Figure 59** Storage > Create an Internal Volume

**Disk Configuration**

Volume Name  \*

**JBOD** ABCD

A JBOD volume can be a single disk volume or can be made to span across several disks into a single larger volume. It does not provide any fault tolerance or performance benefits.

Volume will be created on  disk1  disk2

**RAID0** ABCD

Provides data striping (spreading out blocks of each file across multiple disk drives) but no redundancy. This improves performance but does not deliver fault tolerance. If one drive fails then all data in the array is lost.

**RAID1** ABCD

Provides disk mirroring. Level 1 provides twice the read transaction rate of single disks and the same write transaction rate as single disks.

The following table describes the labels in this screen.

**Table 23** Storage > Create an Internal Volume

LABEL	DESCRIPTION
Volume Name	<p>Type a volume name from 1 to 31 characters. To avoid confusion, it is highly recommended that each volume use a unique name.</p> <p>Acceptable characters are all alphanumeric characters, " " [spaces], "_" [underscores], and "." [periods].</p> <p>The first character must be alphanumeric (A-Z 0-9).</p> <p>The last character cannot be a space " ".</p> <p>For an external volume, type a volume name from 1 to 32 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing external volume.</p>
JBOD	<p>Use this if you want maximum storage capacity and/or you have other means of protecting your data. JBOD is the only option if you only have one disk installed. With two disks, you can choose to create a JBOD volume on one of the disks or both. JBOD is the only option for the NSA310S.</p> <p>Select which disks to use for this volume (disk1, disk2, or disk1 and disk2). A disk can only belong to one volume. You do not need to select anything if only one hard disk is installed.</p> <p>For the NSA310:</p> <ul style="list-style-type: none"> <li>• <b>Internal Disk</b> - Is the hard disk inside an NSA310.</li> <li>• <b>External Disk</b> - Is the eSATA hard disk connected to an NSA310.</li> </ul>
PC Compatible Volume	<p>(NSA310 only)</p> <p>This type is only available if you have attached an eSATA hard disk to your NSA.</p> <p>A primary partition is created on the eSATA hard disk.</p> <p>Use this to make your eSATA hard disk readable by other computer systems. However, the computer's platform (for example, Windows XP SP2) should support the file system you selected for the eSATA hard disk.</p> <ul style="list-style-type: none"> <li>• <b>External Disk</b> - This is checked automatically. It refers to the eSATA hard disk that you can attach as a second drive to your NSA310.</li> <li>• <b>File System</b> - Select the file system you want the new volume to use. <ul style="list-style-type: none"> <li>Windows file systems include: <ul style="list-style-type: none"> <li><b>NTFS</b>: Recommended for volumes greater than 40 GB.</li> <li><b>FAT32</b>: Newer, and more efficient than FAT16. Supports a volume size of up to 32 GB (Giga Bytes) and individual file sizes of up to 4 GB.</li> <li><b>FAT16</b>: Compatible with older Windows operating systems. Supports volume and file sizes of up to 2 GB.</li> </ul> </li> <li>Linux file systems include: <ul style="list-style-type: none"> <li><b>EXT2</b>: Most commonly used on Linux platforms.</li> <li><b>EXT3</b>: The same as EXT2, but adds a journaled file system and is more robust.</li> <li><b>EXT4</b>: Supports larger files and better performance than EXT3.</li> <li><b>ReiserFS</b>: Offers better performance for small files.</li> <li><b>XFS</b>: Allows expansion for mounted volumes.</li> </ul> </li> </ul> </li> </ul>
RAID 0	<p>(2-bay models only)</p> <p>Use this if you want maximum speed for your disks, and/or you have other means of protecting your data. This is only available when you have two hard disks installed.</p>
RAID 1	<p>Use this if you want to mirror all data on one disk to the other disk. This is only available when you have two hard disks installed.</p>
Volume will be created on	<p>This field lists all hard disks installed inside the NSA. Select which disks should make up this volume. A disk can only belong to one volume. You do not need to select anything if only one hard disk is installed.</p>
Apply	<p>Click this to save your changes and create the volume.</p>
Cancel	<p>Click this to exit this screen without saving your changes or creating a volume.</p>

Note: Once you create the first volume on the NSA, it is recommended to restart the NSA for better performance.

## 8.4 Editing a Volume

Click an internal volume's **Edit** icon in the **Storage** screen as shown in [Figure 57 on page 163](#) to open the following screen. Use this screen to change the volume's name.

**Figure 60** Storage > Edit

The following table describes the labels in this screen.

**Table 24** Storage > Edit

LABEL	DESCRIPTION
Volume Name	<p>For an internal volume, type a volume name from 1 to 31 characters. To avoid confusion, it is highly recommended that each volume use a unique name.</p> <p>Acceptable characters are all alphanumeric characters and " " [spaces], "_" [underscores], and "." [periods].</p> <p>The first character must be alphanumeric (A-Z 0-9).</p> <p>The last character cannot be a space " ".</p> <p>For an external volume, type a volume name from 1 to 32 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing external volume.</p>
Apply	Click this to save your changes and rename the volume.
Cancel	Click this to close this screen without saving your changes.

### 8.4.1 Scanning a Volume

Select a volume in the **Storage > Volume** screen ([Section 8.2 on page 162](#)) and click **Scan** to open the following screen. Scan the volume for errors and select whether or not to have the NSA automatically repair them.

**Figure 61** Storage > Volume > Scan

The following table describes the labels in this screen.

**Table 25** Storage > Volume > Scan

LABEL	DESCRIPTION
Auto File Repair	Select this to have the NSA automatically attempt to repair any errored files it detects during the scan. This may also result in the NSA finding some files and placing them in the <b>Lost and Found</b> share.
Apply	Click this to have the NSA scan the volume.
Cancel	Click this to close this screen without scanning the volume.

## 8.5 Creating an External (USB) Volume

Click the **Create a New External Volume** button (or the **Create a USB Volume** button depending on your model) in the **Storage** screen as shown in [Figure 57 on page 163](#) to open the following screen. Use this screen to create a new NSA external disk drive volume.

Note: Creating a volume formats the drive. All data on the disk will be lost.

**Figure 62** Storage > Create an External Volume

**Disk Configuration**

Volume Name

Available Disk(s)

File System

**Warning: If there is any existing data on the Disk, it will be deleted to create this new Volume.**

The following table describes the labels in this screen.

**Table 26** Storage > Create an External Volume

LABEL	DESCRIPTION
Volume Name	Type a volume name from 1 to 31 characters. The name cannot be the same as another existing external volume.  Acceptable characters are all alphanumeric characters and " " [spaces], "_" [underscores], and "." [periods].  The first character must be alphanumeric (A-Z 0-9).  The last character cannot be a space " ".
Available Disk(s)	Select the external (USB) device upon which you want to create the volume.



**Table 26** Storage > Create an External Volume (continued)

LABEL	DESCRIPTION
File System	Select the file system you want the new volume to use.  Windows file systems  <b>NTFS:</b> Recommended. <b>FAT32:</b> Newer, and more efficient than FAT16. Supports a volume size of up to 2 TB (Tera Bytes) and individual file sizes of up to 4 GB. <b>FAT16:</b> Compatible with older Windows operating systems. Supports volume and file sizes of up to 2 GB.  Linux file systems  <b>EXT2:</b> Older file system. <b>EXT3:</b> The same as EXT2, but adds a journaled file system and is more robust. <b>EXT4:</b> Supports larger files and better performance than EXT3. <b>ReiserFS:</b> Offers better performance for small files. <b>XFS:</b> Allows expansion for mounted volumes.
Apply	Click this to save your changes and create the volume.
Cancel	Click this to exit this screen without saving changes.

## 8.5.1 External Disks

You may connect USB storage devices that support the following file systems to the NSA.

- Windows File Systems: NTFS, FAT32 and FAT16.
- Linux File Systems: ReiserFS, EXT2, EXT3, and XFS.

## 8.6 Storage Technical Reference

This section provides some background information about the topics covered in this chapter.

### 8.6.1 Volumes and RAID

A volume is a storage area on a disk or disks. You can create volumes on the internal disks and external disks attached to the USB port(s). You can spread a volume across internal disks but not between internal and external disks.

RAID (Redundant Array of Independent Disks) or JBOD is the storage method that the NSA uses. The storage method you use depends on how many disks you have and how many volumes you want to create. It's important that you consider this carefully as all data is deleted when you re-create a volume.

Note: Back up your data before deleting or re-creating a volume!

Below is a table that summarizes some attributes of the various RAID levels as supported on the NSA. For capacity and storage efficiency, "S" is the size of the smallest drive in the array, and "N" is the number of drives in the array.

Storage efficiency assumes all drives are of identical size.

Performance rankings are approximations.

**Table 27** RAID Quick Comparison

RAID Level	0	1
Number of Disks	2	2
Capacity	S*N	S*N/2
Storage Efficiency	100%	50%
Fault Tolerance	None	YYYY
Availability	Y	YYYY
Read Performance	YYYY	YYY
Write Performance	YYYY	YYY

## 8.6.2 Choosing a Storage Method for a Volume

The following is a guide to help you choose a storage method for the various number of disks supported on the NSA. See [Section 8.6.3 on page 170](#) for theoretical background on JBOD and the RAID levels used on the NSA. Typical applications for each method are also shown there.

### One Disk

If you only have one disk, you must use JBOD. All disk space is used for your data - none is used for backup. If the disk fails, then you lose all the data on that volume (disk). You can add another disk to your one-disk JBOD volume later without having to re-create shares, access rights, and so on. Alternatively, you could create a different JBOD volume if you install a second disk. (and create new shares, access rights and so on).

### Two Disks:

You may choose JBOD, RAID 0 or RAID 1. With two disks you could create:

- up to two JBOD volumes
- one RAID 0 or RAID 1 volume
  - Choose JBOD for flexibility and maximum usage of disk space for data.
  - If you have a 2-bay model, you can choose RAID 0 if performance matters more than data security. RAID 0 has the fastest read and write performance but if one disk fails you lose all your data on the volume. It has fast performance as it can read and write to two disks simultaneously. Performance may matter more than data security to gamers for example. This method may also be acceptable for data that is already backed up somewhere else.
  - Choose RAID 1 if data security is more important than performance. Since RAID 1 mirrors data onto a second disk, you can recover all data even if one disk fails, but the performance is slower than RAID 0.

## 8.6.3 Storage Methods

This section contains theoretical background on JBOD and the RAID levels used on the NSA. Redundant Array of Independent Disks (RAID) is a method of storing data on multiple disks to provide a combination of greater capacity, reliability, and/or speed. JBOD (Just a Bunch Of Disks) is not a RAID storage method but it is included in this discussion.

These are some terms that you need to know in order to understand storage systems.

- **Mirroring**

In a RAID system using mirroring, all data in the system is written simultaneously to two hard disks instead of one. This provides 100% data redundancy as if one disk fails the other has the duplicated data. Mirroring setups always require an even number of drives.

- **Duplexing**

Like in mirroring, all data is duplicated onto two distinct physical hard drives but in addition it also duplicates the hardware that controls the two hard drives (one of the drives would be connected to one adapter and the other to a second adapter).

- **Striping**

Striping is the breaking up of data and storing different data pieces on each of the drives in an array. This allows faster reading and writing as it can be done simultaneously across disks. Striping can be done at the byte level, or in blocks. Byte-level striping means that the first byte of the file is sent to the first drive, then the second to the second drive, and so on. Block-level striping means that each file is split into blocks of a certain size and those are distributed to the various drives. The size of the blocks used is also called the stripe size (or block size).

- **Parity**

In mirroring 50% of the drives in the array are reserved for duplicate data. Parity is another way to allow data recovery in the event of disk failure using calculations rather than duplicating the data. If you have 'n' pieces of data, parity computes an extra piece of data. The 'n+1' pieces of data are stored on 'n+1' drives. If you lose any one of the 'n+1' pieces of data, you can recreate it from the 'n' that remain, regardless of which piece is lost. Parity protection is used with striping, and the "n" pieces of data are typically the blocks or bytes distributed across the drives in the array. The parity information can either be stored on a separate, dedicated drive, or be mixed with the data across all the drives in the array.

Note: In the following figures, A1, A2, A3 and so on are blocks of data from the A file. Similarly, B1, B2, B3 and C1, C2, C3 are blocks of data from the B and C files.

## JBOD

JBOD allows you to combine multiple physical disk drives into a single virtual one, so they appear as a single large disk. JBOD can be used to turn multiple different-sized drives into one big drive. For example, JBOD could convert 80 GB and 100 GB drives into one large logical drive of 180 GB. If you have two JBOD volumes (with one disk in each), a failure of one disk (volume) should not affect the other volume (disk). JBOD read performance is not as good as RAID as only one disk can be read at a time and they must be read sequentially. The following figure shows disks in a single JBOD volume. Data is not written across disks but written sequentially to each disk until it's full.

**Table 28** JBOD

<b>A1</b>	<b>B1</b>
<b>A2</b>	<b>B2</b>
<b>A3</b>	<b>B3</b>
<b>A4</b>	<b>B4</b>
<b>DISK 1</b>	<b>DISK 2</b>

## RAID 0

RAID 0 spreads data evenly across two or more disks (data striping) with no mirroring nor parity for data redundancy, so if one disk fails the entire volume will be lost. The major benefit of RAID 0 is performance. The following figure shows two disks in a single RAID 0 volume. Data can be written and read across disks simultaneously for faster performance.

**Table 29** RAID 0

A1	A2
A3	A4
A5	A6
A7	A8
<b>DISK 1</b>	<b>DISK 2</b>

RAID 0 capacity is the size of the smallest disk multiplied by the number of disks you have configured at RAID 0 on the NSA. For example, if you have two disks of sizes 100 GB and 200 GB respectively in a RAID 0 volume, then the maximum capacity is 200 GB (2 \* 100 GB, the smallest disk size) and the remaining space (100 GB) is unused.

Typical applications for RAID 0 are non-critical data (or data that changes infrequently and is backed up regularly) requiring high write speed such as audio, video, graphics, games and so on.

## RAID 1

RAID 1 creates an exact copy (or mirror) of a set of data on another disk. This is useful when data backup is more important than data capacity. The following figure shows two disks in a single RAID 1 volume with mirrored data. Data is duplicated across two disks, so if one disk fails, there is still a copy of the data.

**Table 30** RAID 1

A1	A1
A2	A2
A3	A3
A4	A4
<b>DISK 1</b>	<b>DISK 2</b>

As RAID 1 uses mirroring and duplexing, a RAID 1 volume needs an even number of disks (two or four for the NSA).

RAID 1 capacity is limited to the size of the smallest disk in the RAID array. For example, if you have two disks of sizes 150 GB and 200 GB respectively in one RAID 1 volume, then the maximum capacity is 150 GB and the remaining space (50 GB) is unused.

Typical applications for RAID 1 are those requiring high fault tolerance without need of large amounts of storage capacity or top performance, for example, accounting and financial data, small database systems, and enterprise servers.

## **RAID and Data Protection**

If a hard disk fails and you're using a RAID 1 volume, then your data will still be available (but at degraded speeds until you replace the hard disk that failed and resynchronize the volume). However, RAID cannot protect against file corruption, virus attacks, files incorrectly deleted or modified, or the NSA malfunctioning. Here are some suggestions for helping to protect your data.

- Place the NSA behind a hardware-based firewall. It should have stateful packet inspection, IDP (Intrusion Detection and Prevention), and anti-virus (like ZyXEL's ZyWALL UTM products for example).
- Use anti-virus software on your computer to scan files from others before saving the files on the NSA.
- Keep another copy of important files (preferably in another location).



## 9.1 Overview

This chapter discusses the network configuration screens. The **Network** screens allow you to configure TCP/IP and PPPoE settings for the NSA.

## 9.2 What You Can Do

- Use the **TCP/IP** screen ([Section 9.4 on page 176](#)) to assign the NSA a dynamic or static IP address and DNS information.
- Use UPnP port mapping ([Section 9.5 on page 179](#)) to automatically configure your Internet gateway's firewall and Network Address Translation (NAT) to allow access to the NSA from the Internet.
- Use the **PPPoE** screen ([Section 9.6 on page 182](#)) to configure PPPoE settings for a direct Internet connection.
- Use the **Telnet** screen ([Section 9.7 on page 183](#)) to enable or disable Telnet access.

## 9.3 What You Need to Know

### IP Address

The NSA needs an IP address to communicate with other devices on your network. The NSA can get an IP address automatically if you have a device on your network that gives them out. Or you can assign the NSA a static (fixed) IP address.

### DNS Server Address

A DNS (Domain Name System) server maps domain names (like [www.zyxel.com](http://www.zyxel.com)) to their corresponding numerical IP addresses. This lets you use domain names to access web sites without having to know their IP addresses. The NSA can receive the IP address of a DNS server automatically (along with the NSA's own IP address). You can also manually enter a DNS server IP address in the NSA.

### PPPoE

Point-to-Point Protocol over Ethernet (PPPoE) allows the NSA to establish a direct Internet connection if you do not have a router. PPPoE is a dial-up connection. You need a username and password from your Internet Service Provider (ISP) to set up the connection.

## Jumbo Frames

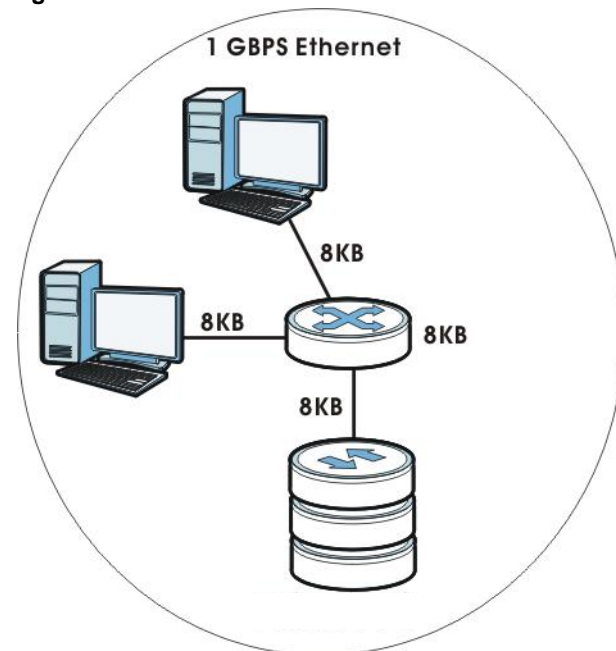
Jumbo frames are Ethernet frames larger than 1500 bytes. They enable data transfer with less overhead. The bigger the frame, the better the network performance. Your network equipment such as computers, switches and routers must be capable of supporting jumbo frames. You also need to enable jumbo frames in all related network devices.

To use jumbo frames, your LAN must support 1 Gbps transmissions (Gigabit Ethernet). All of your network devices (computer Ethernet cards and switches, hubs, or routers) must also support the same size of jumbo frames that you specify in the NSA.

Note: If you enable jumbo frames on the NSA in a network that does not support them, you will lose access to the NSA. If this occurs, you will have to restore the factory default configuration. Push the **RESET** button on the NSA's rear panel and release it after you hear a beep.

In the following example, the NSA has jumbo frames enabled and set to 8KB frames. This means the computer, notebook computer, and switch must also have jumbo frames enabled and be capable of supporting 8KB frames.

**Figure 63** Jumbo Frames



## 9.4 The TCP/IP Screen

Use the **TCP/IP** screen to have the NSA use a dynamic or static IP address, subnet mask, default gateway and DNS servers.

Click **Network > TCP/IP** in the navigation panel to open the following screen.



Note: If you change the NSA's IP address, you need to log in again after you apply changes.

**Figure 64** Network > TCP/IP

**Network - TCP/IP**

**IP Address**

Dynamic  
 Static

IP Address: 192.168.1.1  
 IP Subnet Mask: 255.255.255.0  
 Default Gateway: 192.168.1.254

**IPv6 Settings**

**DNS**

Dynamic  
 Static

Primary DNS Server: 192.168.1.254  
 Secondary DNS Server: 0.0.0.0

**HTTP (Web Configurator)**

Enable Another HTTP Web Configuration Port  
 Port Number:

**Note:**  
 NAS will use port 8082 for media streaming.

**Jumbo Frames**

Disabled  
 Enabled

4KB  
 8KB  
 9KB

**Caution:**  
 Jumbo Frame is supported in 1 Gbps and higher mode only. Please make sure your host, switch hub, and router support Jumbo Frames

**Network Diagnostic Tool**

Host: a.root-servers.net

The following table describes the labels in this screen.

**Table 31** Network > TCP/IP

LABEL	DESCRIPTION
IP Address	
Dynamic	Select this option to have the NSA get IP address information automatically.  If no IP address information is assigned, the NSA uses Auto-IP to assign itself an IP address and subnet mask. For example, you could connect the NSA directly to your computer. If the computer is also set to get an IP address automatically, the computer and the NSA will choose addresses for themselves and be able to communicate.
Static	Select this option for the NSA to use fixed TCP/IP information. You must fill in the following fields.
IP Address	Type an IP address in this field.
IP Subnet Mask	Type an IP subnet mask in this field.
Default Gateway	Type a default gateway address in this field.

**Table 31** Network > TCP/IP (continued)

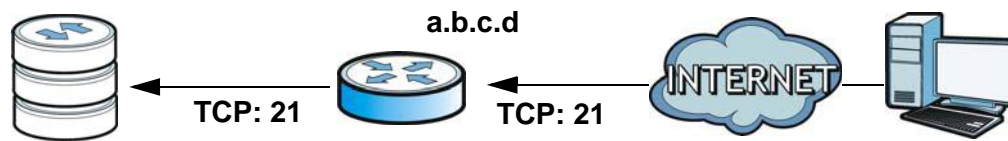
LABEL	DESCRIPTION
IPv6 Settings	<p>Click this to configure the following IPv6 settings.</p> <p><b>Mode</b> -</p> <ul style="list-style-type: none"> <li>• Select <b>Auto</b> to have the Device use the IPv6 prefix from the connected router's Router Advertisement (RA) to generate an IPv6 address.</li> <li>• Select <b>Static</b> if you have a fixed IPv6 address assigned by your ISP.</li> <li>• Select <b>Disable</b> to not assign any IPv6 address for the NSA.</li> </ul> <p><b>Address</b> - Enter the IPv6 address assigned by your ISP.</p> <p><b>Subnet prefix length</b> - Enter the address prefix length to specify how many most significant bits in an IPv6 address compose the network address. The range is 0 to 128</p> <p><b>Default Gateway</b> - Enter the IP address of the next-hop gateway. The gateway is a router or switch on the same segment as your Device's interface(s). The gateway helps forward packets to their destinations.</p>
DNS	DNS (Domain Name System) is for mapping a domain name to its corresponding IP address and vice versa. If you have the IP address(es) of the DNS server(s), enter them.
Dynamic	Select the option to have the NSA get a DNS server address automatically.
Static	Select this option to choose a static DNS server address. Type the DNS server IP address(es) into the fields below.
Primary DNS Server	Type a primary DNS server IP address.
Secondary DNS Server	Type a secondary DNS server IP address.
HTTP (Web Configurator)	
Enable Another Web Configuration Port	Select this to configure an additional HTTP port for accessing the web configurator. Specify a number in the <b>Port Number</b> field.
Jumbo Frames	<p>Jumbo frames improve network performance. You must have a 1 Gbps (Gigabit Ethernet) network that supports jumbo frames. Select the largest size of frame that all of your network devices (including computer Ethernet cards and switches, hubs, or routers) support.</p> <p>When enabled, you can choose between <b>4 KB</b>, <b>8 KB</b>, and <b>9 KB</b> frame sizes.</p> <p><b>Note:</b> If you enable jumbo frames on the NSA in a network that does not support them, you will lose access to the NSA. If this occurs, you will have to restore the factory default configuration. Push the <b>RESET</b> button on the NSA's rear panel and release it after you hear a beep.</p>
Network Diagnostic Tool	<p>Use this section to test the network connection to a particular IP address or domain name. Select an address or type it into the field. Then click <b>Ping</b> to have the NSA send a packet to test the network connection.</p> <ul style="list-style-type: none"> <li>• <b>Successfully pinged host</b> - The NSA is able to "ping" the host, the network connection is OK.</li> <li>• <b>Unable to ping host</b> - The NSA is able to "ping" the selected host.</li> </ul>
Apply	Click this to save your TCP/IP configurations. After you click <b>Apply</b> , the NSA restarts. Wait until you see the <b>Login</b> screen or until the NSA fully boots and then use the NAS Starter Utility to rediscover it.
Reset	Click this to restore your previously saved settings.

## 9.5 UPnP Port Mapping Screen

Use UPnP (Universal Plug and Play) port mapping to allow access from the WAN to services you select on the NSA. It is recommended that you place the NSA behind an Internet gateway firewall device to protect the NSA from attacks from the Internet (see [RAID and Data Protection on page 173](#) for firewall type suggestions). Many such Internet gateways use UPnP to simplify peer-to-peer network connectivity between devices. UPnP can automatically configure the Internet gateway's firewall and Network Address Translation (NAT) to allow access to the NSA from the Internet.

**Figure 65** UPnP for FTP Access

**192.168.1.20**



In the above example, UPnP creates a firewall rule and NAT port forwarding mapping to send FTP traffic (using TCP port number 21) from the public IP address a.b.c.d to the NSA's private IP address of 192.168.1.20.

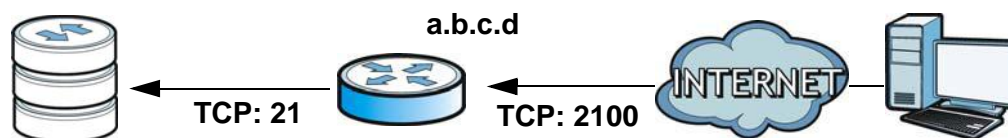
Use the NSA's **UPnP Port Mapping** screen to configure the UPnP settings your Internet gateway uses to allow access from the WAN (Internet) to services you select on the NSA. You can also set which port Internet users need to use in order to access a specific service on the NSA.

Note: To use UPnP port mapping, your Internet gateway must have UPnP enabled.

If your Internet gateway supports Port Address Translation (PAT is sometimes included with a port forwarding feature), you can have the Internet users use a different TCP port number from the one the NSA uses for the service.

**Figure 66** UPnP Port Address Translation for FTP Example

**192.168.1.20**



In the above example, the Internet gateway uses PAT to accept Internet user FTP sessions on port 2100, translate them to port 21, and forward them to the NSA.

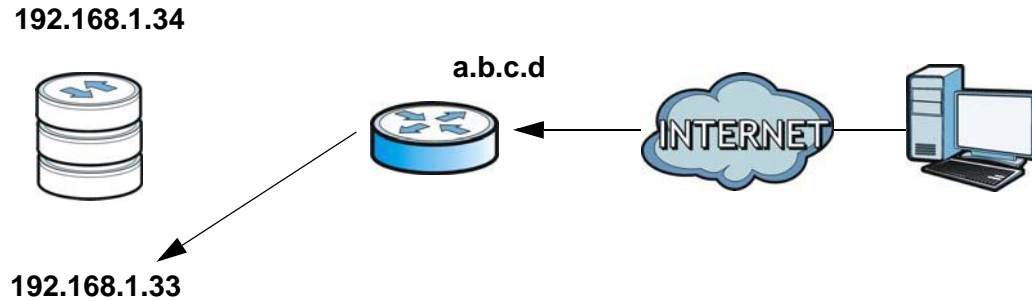
### 9.5.1 UPnP and the NSA's IP Address

It is recommended that the NSA use a static IP address (or a static DHCP IP address) if you will allow access to the NSA from the Internet. The UPnP-created NAT mappings keep the IP address the NSA had when you applied your settings in the **UPnP Port Mapping** screen. They do not automatically update if the NSA's IP address changes.

Note: WAN access stops working if the NSA's IP address changes.

For example, if the NSA's IP address was 192.168.1.33 when you applied the **UPnP Port Mapping** screen's settings and the NSA later gets a new IP address of 192.168.1.34 through DHCP, WAN access stops working because the Internet gateway still tries to forward traffic to IP address 192.168.1.33. Since you can no longer access the NSA from the WAN, you would have to access the NSA from the LAN and re-apply your **UPnP Port Mapping** screen settings to update the Internet gateway's UPnP port mappings.

**Figure 67** UPnP Using the Wrong IP Address



## 9.5.2 UPnP and Security

UPnP's automated nature makes it easier to use than manually configuring firewall and NAT rules, but it is also less secure. Using UPnP may make your network more susceptible to snooping and hacking attacks.

## 9.5.3 The NSA's Services and UPnP

This section introduces the NSA's services which an Internet gateway can use UPnP to allow access to from the Internet.

### CIFS (Windows File Sharing)

Common Internet File System (CIFS) is a standard protocol supported by most operating systems in order to share files across the network. Using UPnP port mapping for CIFS allows users to connect from the Internet and use programs like Windows Explorer to access the NSA's shares to copy files from the NSA, delete files on the NSA, or upload files to the NSA from the Internet.

If you configure UPnP port mapping to allow CIFS access from the WAN but cannot get it to work, you may also have to configure the Internet gateway to also allow NetBIOS traffic. See [Section 7.3 on page 151](#) for more on CIFS.

### FTP

File Transfer Protocol is a standard file transfer service used on the Internet. Using UPnP port mapping for FTP allows remote users to use FTP from the Internet to access the NSA's shares. A user with read and write access to a share can copy files from the share, delete files from the share, or upload files to the share. See [Section 10.4 on page 187](#) for more on FTP. If you use UPnP to allow FTP access from the WAN, you may want to use a different WAN port number (instead of the default of port 21) to make it more secure. Remember to tell the remote users to use the custom port number when using FTP to access the NSA.

## HTTP (Web Configurator)

You can use UPnP port mapping to allow access to the NSA's management screens. If you use UPnP to allow web configurator access from the WAN, you may want to use a different WAN port number (instead of the default of port 80) to make it more secure. Remember to use the custom port number when accessing the NSA's web configurator from the Internet.

## HTTP (Web Published Shares)

This is the NSA's web publishing feature that lets people access files using a web browser without having to log into the Web Configurator. Use UPnP port mapping to allow access to these files from the Internet without having to enter a user name or password. See [Section 10.8 on page 203](#) for more on web publishing.

### 9.5.4 Configuring UPnP Port Mapping

Click **Network > UPnP > Port Mapping** to display the **UPnP Port Mapping** screen.

Use this screen to set how the Internet gateway's UPnP feature configure's the Internet gateway's NAT IP address mapping and port mapping settings. These settings allow Internet users connected to the Internet gateway's WAN interface to access services on the NSA. You can set which port Internet users need to use to access a specific service on the NSA.

Note: Some Internet gateways will delete all UPnP mappings after reboot. So if the Internet gateway reboots, you may need to use this screen again to re-apply the UPnP port mapping.

**Figure 68** Network > UPnP > Port Mapping

**UPnP Port Map Settings**

**Note:**

- In order to use a port number on the gateway device(WAN) that is different from that on the NSA (LAN), your gateway device should support Port Address Translation.
- For Distributed Hash Table (DHT) support, the P2P download service will also attempt to open the following UDP port: 9089

LAN		WAN		
Service Name	LAN Port	Service Name	Enable WAN Access	WAN Port
P2P Download	9090	P2P Download	<input checked="" type="checkbox"/>	9090
CIFS (Windows File Sharing)	445	CIFS (Windows File Sharing)	<input type="checkbox"/>	--
FTP	21	FTP	<input type="checkbox"/>	--
HTTP (Web Configurator)	80	HTTP (Web Configurator)	<input type="checkbox"/>	--
HTTP (Web published shares)	80	HTTP (Web published shares)	<input type="checkbox"/>	--





172.16.26.2

▶ : This service requires that the LAN port setting is the same as the WAN port setting  
 ⚠ : This port setting currently conflicts with another service's port.  
 ⚡ : This port is being used by another service but will be replaced if you apply this setting.

Apply Reset

The following table describes the labels in this screen.

**Table 32** Network > UPnP > Port Mapping

LABEL	DESCRIPTION
LAN	Use these fields to specify what port the Internet gateway uses to connect from its LAN port to the service on the NSA.
Service Name	This read-only field identifies a service on the NSA.
LAN Port	Specify the port number (1~65,536) the Internet gateway needs to use to connect from its LAN port to the service on the NSA. This is the NSA's internal port number for the service. Changing a service's port number in this screen also changes it in other NSA screens that display it. Similarly, changing a service's port number in another NSA screen also changes it here.
	The number below this icon is your Internet gateway's WAN IP address (the IP address your Internet gateway uses for connecting to the Internet).
WAN	Use these fields to specify what port Internet users must use to connect to the Internet gateway's WAN port in order to connect to the service on the NSA.
Service Name	This read-only field identifies a service on the NSA.
Enable WAN Access	Select this check box to have UPnP configure your Internet gateway to allow access from the Internet to the NSA's service.  If you clear this check box, people will not be able to access the NSA's service from the Internet unless you manually configure the Internet gateway's firewall and NAT rules to allow access.
WAN Port	When you enable WAN access for one of the NSA's services, specify the port number (1~65,536) Internet users need to use to connect to the Internet gateway's WAN port in order to access the service on the NSA. Whoever wants to access a service on the NSA from the Internet must use this port number.  P2P download's WAN port must be the same as the LAN port.  Make sure there is not another service using TCP protocol with the same port number.  If another device is using the same port (the Internet gateway has the same port number mapped to another LAN IP address), the NSA overwrites it when you apply the setting and WAN users can no longer access the other device.
	This icon means the service's LAN and WAN port numbers must be the same.
	This icon means another service is using the same port number as this service. Change the port number of one of the services so they use different port numbers.
	This icon means another service is using the listed port, but the port the other service is using will be replaced if you apply the setting. The other service will no longer be accessible from the listed port.
Apply	Click <b>Apply</b> to save your changes back to the NSA.
Reset	Click <b>Reset</b> to begin configuring this screen afresh.

## 9.6 The PPPoE Screen

Use this screen to configure PPPoE settings for a direct Internet connection.

Click **Network > PPPoE** in the navigation panel to open the following screen.

**Figure 69** Network > PPPoE

The following table describes the labels in this screen.

**Table 33** Network > PPPoE

LABEL	DESCRIPTION
Status	
Status	This field displays the status of PPPoE connection.
IP Address	This field displays the IP address of your PPPoE connection.
IP Subnet Mask	This field displays the IP subnet mask of your PPPoE connection.
Configuration	
Enable PPPoE Connection	Select this option to establish a direct Internet connection for the NSA. You need to enter the username and password as given by your ISP.
Username	Enter the username exactly as your ISP assigned. If assigned a name in the form user@domain where domain identifies a service name, then enter both components exactly as given.
Password	Enter the password associated with the username above.
Password (Confirm)	Retype the password for confirmation.
Apply	Click this to save your changes.
Reset	Click this to restore previously saved settings.

## 9.7 Telnet Screen

Use this screen to enable or disable Telnet access to the NSA. Telnet is available in the NSA310S, NSA320S, NSA325, and NSA325 v2.

**Telnet access lets you use line commands to configure the NSA. Use these commands at your own risk. The vendor takes no responsibility for any changes you make using the commands.**

Click **Network > Telnet** in the navigation panel to open the following screen.

**Figure 70** Network > Telnet



The following table describes the labels in this screen.

**Table 34** Network > Telnet

LABEL	DESCRIPTION
Enable Telnet Service	Select this to enable Telnet access to the NSA. Clear it to not allow Telnet access to the NSA. To use Telnet, log in as "admin" or "root" and use the admin password.
Apply	Click this to save your changes.
Reset	Click this to restore previously saved settings.



# Applications

## 10.1 Overview

This chapter discusses the features in the **Application** screens. The NSA contains various applications for file sharing and downloading.

## 10.2 What You Can Do

- Use the **FTP Server** screen ([Section 10.4 on page 187](#)) to configure settings for FTP file transfers to/from the NSA.
- Use the **Media Server** screens ([Section 10.5 on page 188](#)) to share files with media clients.
- Use the **iTunes Server** screens ([Section 10.6 on page 190](#)) to share files with iTunes users on your network.
- Use the **Download Service** screen ([Section 10.7 on page 191](#)) to download files from the Internet.
- Use the **Web Publishing** screen ([Section 10.8 on page 203](#)) to publish shares for people to access files using a web browser.
- Use the **Broadcatching** screen ([Section 10.9 on page 204](#)) to download frequently updated digital content like TV programs, radio talk shows, Podcasts (audio files), and blogs.
- Use the **Print Server** screen ([Section 10.10 on page 210](#)) to share a printer.
- Use the **Copy/Sync Button** screen ([Section 10.11 on page 212](#)) to transfer files between a USB device and the NSA.
- Use the **Auto Upload** screens ([Chapter 12 on page 285](#)) to upload files in selected shares to your Flickr and/or YouTube accounts.

## 10.3 What You Need to Know

### FTP

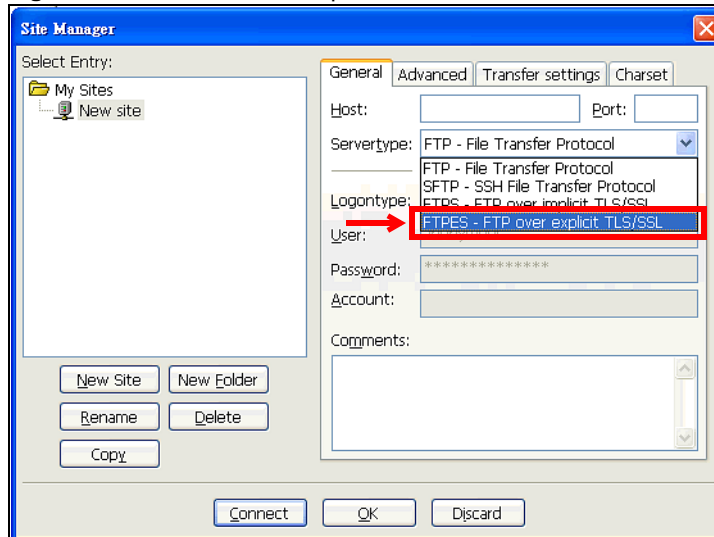
File Transfer Protocol (FTP) is a file transfer service that operates on the Internet. A system running the FTP server accepts commands from a system running an FTP client. FTP is not a secure protocol. Your file transfers could be subject to snooping.

### FTPES (File Transfer Protocol over Explicit TLS/SSL)

File Transfer Protocol over Explicit TLS/SSL (FTPES) is a file transfer service that uses either TLS (Transport Layer Security) or SSL (Secure Sockets Layer) for secure transfers across the Internet.

It requests for a mutual method of encryption from the FTP server for its file transfer sessions. Your FTP client must be set to use FTPES as in the following example.

**Figure 71** FTP Client Example



## Media Server

The media server feature lets anyone on your network play video, music, and photos from the NSA (without having to copy them to another computer). The NSA can function as a DLNA-compliant media server and/or an iTunes server. The NSA streams files to DLNA-compliant media clients or computers using iTunes. The Digital Living Network Alliance (DLNA) is a group of personal computer and electronics companies that works to make products compatible in a home network.

## iTunes Server

The NSA iTunes server feature lets you use Apple's iTunes software on a computer to play music and video files stored on the NSA. You can download iTunes from [www.apple.com](http://www.apple.com).

## Download Service

The NSA's download service downloads files from the Internet directly to the NSA. You do not have to download to your computer and then copy to the NSA. This can free up your computer's system resources.

The NSA can download using these protocols.

- HTTP: The standard protocol for web pages.
- FTP: A standard Internet file transfer service.
- P2P download: Peer-to-peer files sharing protocol.

## Web Publishing

Web publishing lets you "publish" shares (containing folders and files) on the NSA so people can access the files using a web browser without having to log into the Web Configurator. This way you can share files with others without them having to know and enter a username and password.

For example, if you want to share photos in a FamilyPhotos share, you could “web publish” it and others could use a web browser to access the photos at <http://my-NSA's-IP-Address/MyWeb/FamilyPhotos>.

## Broadcaching

Broadcaching is the downloading of digital content from Internet feeds. Use broadcaching to have the NSA download frequently updated digital content like TV programs, radio shows, podcasts (audio files), and blogs.

## RSS

RSS (Really Simple Syndication) is a format for delivering frequently updated digital content. A channel uses a feed to deliver its contents (items). Subscribe the NSA to a feed to be able to download the contents.

# 10.4 FTP Server

Use FTP or FTPES (FTP over Explicit TTL/SSL) to upload files to the NSA and download files from the NSA. Click **Applications > FTP** to open the following screen.

**Figure 72** Applications > FTP

**Applications - FTP Server**

**FTP**

Enable FTP

Connection Limit:  Connection Limit: 20

Idle Timeout:  minutes Max timeout: 300 minutes

Port Number:

Enable Anonymous FTP Access

Customize the port range for data transfer.

Starting Port:  \*

Ending Port:  \*

Download/Upload Rate For All Users (include admin)

Max. Download Rate:  KB/s (0=No Limit)

Max. Upload Rate:  KB/s (0=No Limit)

Download/Upload Rate For Anonymous Users

Max. Download Rate:  KB/s (0=No Limit)

Max. Upload Rate:  KB/s (0=No Limit)

**Note:**  
To configure a share to allow anonymous FTP access go to the configure shares page and modify a share's access rights to allow the user 'Anonymous FTP'.

**Character Set**

(UTF-8)

**Note:**  
The NSA uses UTF-8 format for FTP by default. If the NSA's folders or file names do not display correctly in your FTP client, select the appropriate character set here.

Apply Reset

The following table describes the labels in this screen.

**Table 35** Applications > FTP

LABEL	DESCRIPTION
FTP	
Enable FTP	You can use FTP to send files to the NSA or get files from the NSA. Select this check box to allow users to connect to the NSA via FTP; otherwise clear the check box.
Connection Limit	Enter the maximum number of concurrent FTP connections allowed on the NSA in this field. See your screen for your model's connection limit.
Idle Timeout	Enter the length of time that an FTP connection can be idle before timing out. The timeout limit is 300 minutes.
Port Number	This is the port number used by the NSA for FTP traffic.
Enable Anonymous FTP Access	Select this check box to allow any user to log into the NSA using 'FTP' or 'anonymous' as a username and no password. Any other name is considered a username, so must be valid and have a corresponding correct password.
Customize the port range for data transfer	Select this check box to assign a port range for FTP clients to use when downloading files from the NSA using passive mode.  The connection limit is restricted to half of the port numbers within the range if this value is smaller than the one configured in the <b>Connection Limit</b> field. For example, you specified a port range from 1024 to 1029 and configured 10 in the <b>Connection Limit</b> field. The FTP connection limit will only be 3 (6 ports in the range divided by 2) because it is the smaller value.
Starting Port	Enter the first port number in the range. Choose from 1024 to 65535.
Ending Port	Enter the last port number in the range. Choose from 1024 to 65535.
Download/Upload Rate For All Users (include admin)	Select this if you want to limit the download/upload bandwidth for all users who are logged into the NSA, including the administrator. <ul style="list-style-type: none"> <li>• <b>Max. Download Rate</b> - Enter the download speed (in kilobytes/s) that the NSA allows for users who are logged into the NSA.</li> <li>• <b>Max. Upload Rate</b> - Enter the upload speed (in kilobytes/s) that the NSA allows for users who are logged into the NSA.</li> </ul>
Download/Upload Rate For Anonymous Users	Select this if you want to limit the download/upload bandwidth for users who log into the NSA using 'FTP' or 'anonymous' as a username and no password. <ul style="list-style-type: none"> <li>• <b>Max. Download Rate</b> - Enter the download speed (in kilobytes/s) that the NSA allows for users who are logged into the NSA.</li> <li>• <b>Max. Upload Rate</b> - Enter the upload speed (in kilobytes/s) that the NSA allows for users who are logged into the NSA.</li> </ul>
Character Set	The NSA uses UTF-8 (8-bit UCS/Unicode Transformation Format) format for FTP by default. If the NSA's folders, or file names do not display correctly in your FTP client, select the appropriate language encoding here.  This setting applies to all FTP client connections to the NSA. It does not affect your Windows/CIFS connections (it will not correct the character display in Windows Explorer).
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

## 10.5 The Media Server Screens

The media server application allows you to share media files with media clients.

Click **Applications > Media Server** to open the following screen. Use this screen to view the media server's status and rebuild the media server database.

**Figure 73** Applications > Media Server > Media Server



The following table describes the labels in this screen.

**Table 36** Applications > Media Server > Media Server

LABEL	DESCRIPTION
Enable Twonky Media Server	Select this to have the NSA share the media files in the shares selected in the <b>Share Publish</b> tab. Clear it to stop the NSA from sharing media files through the Playzone screens or media players.  Click the hyper link to open the Twonky media server configuration screens to check media server status or modify media server settings. See the help center in the Twonky screens for details.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

## 10.5.1 The Media Server Share Publish Screen

Click **Applications > Media Server > Share Publish** to open the following screen. Use this screen to select shares to publish (share with media clients like a media player or iTunes).

**Figure 74** Applications > Media Server > Share Publish



The following table describes the labels in this screen.

**Table 37** Applications > Media Server > Share Publish

LABEL	DESCRIPTION
Publish	Select this to have the media server share a share's media files with media clients.
Share Name	This column lists names of shares on the NSA.
Publish Music Tracks	Select this to give media clients access to the share's music files.

**Table 37** Applications > Media Server > Share Publish

LABEL	DESCRIPTION
Publish Photos	Select this to give media clients access to the share's photo files.
Publish Videos	Select this to give media clients access to the share's video files.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

## 10.5.2 The Media Server SqueezeCenter Screen

SqueezeCenter enables you to manage a Logitech's Squeezebox device connected to the NSA.

Click **Applications > Media Server > SqueezeCenter** to open the following screen. This screen is available when the SqueezeCenter application is installed using Package Management (see [Section 7.5 on page 153](#)). Use this screen to turn the SqueezeCenter application on or off.

**Figure 75** Applications > Media Server > SqueezeCenter

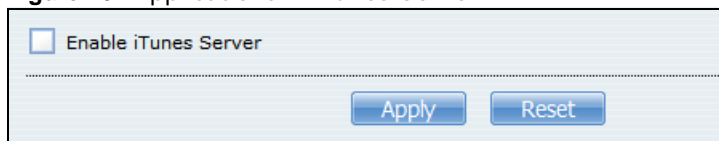
The following table describes the labels in this screen.

**Table 38** Applications > Media Server > SqueezeCenter

LABEL	DESCRIPTION
Enable SqueezeCenter	Check this to enable <b>SqueezeCenter</b> . Click the hyper link to open the Logitech media server screens where you can play files and change settings See the help center in the Logitech media server screens for details.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

## 10.6 The iTunes Server Screen

Click **Applications > iTunes Server** to open the following screen. Use this screen to turn the iTunes server on or off.

**Figure 76** Applications > iTunes Server

The following table describes the labels in this screen.

**Table 39** Applications > iTunes Server

LABEL	DESCRIPTION
Enable iTunes Server	Check this to let anyone on your network use iTunes to play music files in the published shares.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

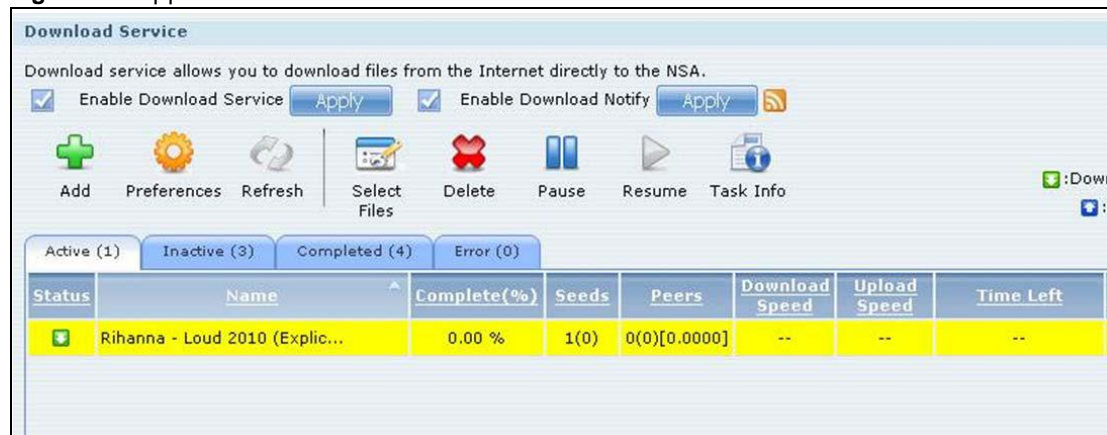
## 10.7 The Download Service Screen

The **Download Service** screen allows you to download files from the Internet.

Click **Applications > Download Service** to open the following screen. Use this screen to manage the NSA's file downloads.


Note: By default, the NSA saves downloads in the **admin** share's **download** folder.

**Figure 77** Applications > Download Service



The following table describes the labels in this screen.

**Table 40** Applications > Download Service


LABEL	DESCRIPTION
Enable Download Service	Use this option (and click the <b>Apply</b> button) to turn the download service off or on. If you turn off the service, all downloads are paused. Files currently downloading are queued. Turning on the download service resumes downloads (or restarts them if they are not able to resume).
Enable Download Notify	Use this option (and click the <b>Apply</b> button) to turn the download service notification off or on. See <a href="#">Section 10.12.4 on page 215</a> for more details about this feature.
	At the time of writing, the NSA supports RSS 2.0 feeds. Click this to get and subscribe to the NSA channel feed. This enables you to keep track and download the NSA's new contents (items).
Add	After you find a file to download, copy the file's URL. Then log into the NSA web configurator and go to the <b>Applications &gt; Download Server</b> screen and click this button. A screen opens where you create a new download task. You can paste the file's URL or use a P2P download file.

**Table 40** Applications > Download Service (continued)

LABEL	DESCRIPTION
Preferences	Click this to open a screen where you can set the default location for saving downloads and configure your P2P download settings.
Refresh	Click this to update the information displayed on the screen.
Select Files	A single P2P download torrent file is often for multiple files. If you do not need all of the files the torrent file specifies, click this to select which files to download.
Delete	<p>To delete download tasks (or manually clear out completed download tasks), select a download task and click this to remove it from the list. A pop-up screen asks you to confirm. Click <b>Apply</b> to delete or <b>Cancel</b> to quit. When you delete a download task, you are given the option to delete the associated files. Selecting this option deletes a downloaded file and in the case of a P2P download task, also deletes the related .torrent file.</p> <p>Use your keyboard's [SHIFT] key to select a range of download tasks. Use the [CTRL] key and click individual download tasks to select multiple individual download tasks.</p>
Pause	<p>Select a downloading item and click this to temporarily stop the download. Paused downloads appear in the <b>Download Service</b> screen's <b>Inactive tab</b>.</p> <p>Use your keyboard's [SHIFT] key to select a range of download tasks. Use the [CTRL] key and click individual download tasks to select multiple individual download tasks.</p>
Resume	<p>Select a paused item and click this to continue downloading the file.</p> <p>Select a completed item and click this to re-seed a P2P file or download a file again. If you want to re-seed a P2P task, keep the P2P file and the completed file in their original locations.</p>
Task Info	<p>Select an item on the list and click this to display information about the download task. See <a href="#">Section 10.7.6 on page 202</a> for more details.</p>
The table lists your downloads. Click a column's heading to sort the entries by that criteria.	
Active	<p>Click this to see the list of files the NSA is currently downloading or sharing with other P2P users. The NSA handles a maximum of 10 active tasks at a time (or fewer depending on how much of the NSA's system memory is available). If you add more, they appear in the <b>Inactive</b> tab.</p> <p>P2P downloads may appear in the <b>Inactive</b> tab for a while before showing in the <b>Downloading</b> tab. The NSA automatically moves completed tasks to the <b>Completed</b> tab.</p>
Inactive	Click this to see the list of files that are queued (waiting in line) for the NSA to download or the downloads that have been manually paused.
Completed	<p>Click this to see the list of files that the NSA has finished downloading.</p> <p>The <b>Location</b> column shows where a downloaded file is saved on the NSA. Click on the location link to open the share browser and access the file.</p>
Error	Click this to see the list of files that the NSA was not able to download. The NSA automatically retries unsuccessful download attempts. The download displays in the error tab when the re-attempts are also unsuccessful and the NSA stops trying to download the file. To try the download again, use the <b>Add</b> button to create a new download task.



**Table 40** Applications > Download Service (continued)

LABEL	DESCRIPTION
Status	<p>The following icons show the download's status.</p>  <p><b>Completed:</b> The NSA has downloaded the whole file.</p> <p><b>Seeding:</b> The download is finished and the NSA is allowing other P2P users to download it.</p> <p><b>Downloading:</b> The NSA is getting the file.</p> <p><b>Queued:</b> The download is waiting in line for the NSA to download it.</p> <p><b>Pause:</b> The download has been manually stopped. Select it and click <b>Resume</b> to continue it.</p> <p><b>Error:</b> The NSA was not able to complete the download. Select it and click <b>Resume</b> to reattempt the download.</p>
Name	This identifies the download file. A "... " indicates an abbreviated name. Hold your cursor over the name to display the full name.
Complete (%)	This is the percentage of the file that the NSA has downloaded.
Location	<p>This appears in the <b>Completed</b> tab.</p> <p>It displays the path for where the file is saved. Click on the location link to open the share browser and access the file.</p>
Seeds	<p>Seeds apply to P2P downloads. This is the number of computers that are sharing the complete file that you are downloading.</p> <p>This value is in the format "Leeches(Seeds)" where Leeches refer to peers that do not have a complete copy of the file yet and are still downloading; Seeds refer to peers that have the complete file.</p>
Peers	<p>Peers apply to P2P downloads. This is the number of other computers that are also downloading (and sharing) the file you are downloading.</p> <p>This value is in the format "ConnectedPeers(AllPeers)[Health]" where Connected Peers is the number of computers to which the NSA is connected in order to download the file; AllPeers refer to the total number of computers to which the NSA can connect in order to download the file; Health indicates the availability of the file.</p>
Download Speed	<p>This is how fast the NSA is getting the file.</p> <p>It is normal for a P2P download to start out with a slow download speed since it has to set up numerous connections. The speed should increase as the download progresses and decrease near the end of the download.</p>
Upload Speed	This is how fast the NSA is sending the file to other P2P users.
Time Left	This is how much longer (in hours, minutes, and seconds) it should take to finish the download at the current download speed.
Priority	This is the download's priority on the NSA. You can set a currently downloading or queued download to high or automatic priority. You can set a download to high priority to have the NSA try to download it before the other files. However the actual download speed depends more on factors like the speed of you Internet connection, the speed of the download source's Internet connection, how many others are trying to download at the same time, the peers and seeds available and general network conditions.
Error Code	<p>This appears in the <b>Error</b> tab.</p> <p>This shows the tag for the error that occurred.</p>
Error Message	<p>This appears in the <b>Error</b> tab.</p> <p>This message states what went wrong with the download.</p>

## 10.7.1 Adding a Download Task

Click **Applications > Download Service > Add** to open the following screen. Use this screen to specify a file for the NSA to download. [Section 5.10 on page 91](#) provides a tutorial on adding a download task.


**Figure 78** Applications > Download Service > Add

The following table describes the labels in this screen.

**Table 41** Applications > Download Service > Add

LABEL	DESCRIPTION
Source	
URL	<p>Paste the URL or magnet link of the file you want to download into this field. The URL can be for an HTTP, FTP, or P2P download. A magnet link is for a P2P download.</p> <p>For a P2P download using a magnet link the NSA automatically downloads the file related to the magnet link.</p> <p>For a P2P download using a .torrent file, you can copy and paste the URL of the .torrent file. The NSA will automatically download the .torrent file and use it. You do not have to manually download the .torrent file or save it to your computer.</p> <p><b>Note:</b> Make sure the link opens either the file you want or a pop-up window about how to handle the file.</p> <p>It is also OK for the link to open a .torrent file. If you are redirected to a screen that says the download should start in a few seconds, there may be a link to click if the download does not start automatically. See if that link opens the file or the pop-up window.</p>
Torrent File	<p>A "torrent" file has information the NSA uses to do a P2P download. A torrent file uses a .torrent extension. If you already have a torrent file saved on your computer, select the <b>Torrent File</b> option and specify its path or click <b>Browse</b> and look for its location.</p>

**Table 41** Applications > Download Service > Add

LABEL	DESCRIPTION										
Location of Downloaded Files	<p>This shows where the NSA stores new downloads (<b>Put incomplete downloads in</b>) and where the NSA moves completed downloads (<b>Move completed downloads to</b>).</p> <p>The <b>Share</b> column shows the name of the share where the file is downloaded.</p> <p>The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.</p> <ul style="list-style-type: none"> <li>• P2P download jobs are stored in /*/incoming (where '*' is a folder that you have set.)</li> <li>• HTTP/FTP jobs are stored in /* (where '*' is a folder that you have set.)</li> <li>• All jobs triggered by RSS channels create the subfolder in /* using the channel name where it store all files downloaded from that channel (where '*' is a folder that you have set.)</li> </ul>										
Edit	<p>Click this to open the following screen where you can set the default folder location where you "<b>Put incomplete downloads in</b>" and "<b>Move complete downloads to</b>":.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; margin: 0;"><b>Edit Location of Downloaded Files</b></p> <p><b>Put incomplete downloads in</b></p> <p>Share: <input type="text" value="admin"/> <span style="float: right;">▼</span></p> <p>Path: <input type="text" value="/download"/> <span style="float: right;">Browse ...</span></p> <p><b>Move completed downloads to</b></p> <p>Share: <input type="text" value="public"/> <span style="float: right;">▼</span></p> <p>Path: <input type="text" value="/"/> <span style="float: right;">Browse ...</span></p> <p><b>Note:</b> All downloaded files will be stored here.</p> <p style="text-align: center;">Apply    Cancel</p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the file's location.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="margin: 0;"><b>Browse ...</b></p> <p>Current location: / <span style="float: right;">Folder Name: <input type="text"/></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type</th> <th style="text-align: left;">Name</th> </tr> </thead> <tbody> <tr> <td>..</td> <td>..</td> </tr> <tr> <td>Folder</td> <td>HK Trip</td> </tr> <tr style="background-color: yellow;"> <td>Folder</td> <td>Japan Trip</td> </tr> <tr> <td>Folder</td> <td>Jimmy's Birthday</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">Apply    Cancel</p> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a folder or file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>	Type	Name	..	..	Folder	HK Trip	Folder	Japan Trip	Folder	Jimmy's Birthday
Type	Name										
..	..										
Folder	HK Trip										
Folder	Japan Trip										
Folder	Jimmy's Birthday										
Apply	Click this to save your changes.										
Cancel	Click this to return to the previous screen without saving.										

## 10.7.2 Configuring General Download Settings

Click **Applications > Download Service > Preferences** to open the following screen. Use this screen to set the default location for saving downloads and configure the download period.

**Figure 79** Applications > Download Service > Preferences > General Settings

The screenshot shows the 'Preferences' dialog box with two tabs: 'General Settings' and 'P2P download'. The 'General Settings' tab is active. Under the heading 'Location of Downloaded Files', there is a table with the following data:

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	public	/

Below the table is an 'Edit' button. A 'Note' section contains the following text:

**Note:**


1. P2P download jobs are stored in /admin/download/incoming.
2. HTTP/FTP jobs are stored in /public.
3. All jobs triggered by RSS channels create the subfolder in /public using the channel name where it store all files downloaded from that channel.

The 'Download Period Control' section has a checkbox labeled 'Enable Download Period Control' which is currently unchecked. Below it is the text 'Download Service is active in the specified time period (hh:mm - hh:mm)' and a time range input field showing '00:00 - 00:00'.

At the bottom of the dialog are three buttons: 'Apply', 'Reset', and 'Cancel'.

The following table describes the labels in this screen.

**Table 42** Applications > Download Service > Preferences > General Settings

LABEL	DESCRIPTION										
Location of Downloaded Files	<p>This shows where the NSA stores new downloads (<b>Put incomplete downloads in</b>) and where the NSA moves completed downloads (<b>Move completed downloads to</b>).</p> <p>The <b>Share</b> column shows the name of the share where the file is downloaded.</p> <p>The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.</p> <ul style="list-style-type: none"> <li>• P2P download jobs are stored in /*/incoming (where '*' is a folder that you have set.)</li> <li>• HTTP/FTP jobs are stored in /* (where '*' is a folder that you have set.)</li> <li>• All jobs triggered by RSS channels create the subfolder in /* using the channel name where it store all files downloaded from that channel (where '*' is a folder that you have set.)</li> </ul>										
Edit	<p>Click this to open the following screen where you can set the default folder location where you "<b>Put incomplete downloads in</b>" and "<b>Move complete downloads to</b>".</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Edit Location of Downloaded Files</b></p> <p><b>Put incomplete downloads in</b></p> <p>Share: admin</p> <p>Path: /download <span style="float: right;">Browse ...</span></p> <p><b>Move completed downloads to</b></p> <p>Share: public</p> <p>Path: / <span style="float: right;">Browse ...</span></p> <p><b>Note:</b> All downloaded files will be stored here.</p> <p style="text-align: center;"><span>Apply</span> <span>Cancel</span></p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the file's location.</li> </ul>										
	<div style="border: 1px solid black; padding: 5px;"> <p><b>Browse ...</b></p> <p>Current location: / <span style="float: right;">Folder Name: <input type="text"/></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>...</td> <td>...</td> </tr> <tr> <td>Folder</td> <td>HK Trip</td> </tr> <tr style="background-color: yellow;"> <td>Folder</td> <td>Japan Trip</td> </tr> <tr> <td>Folder</td> <td>Jimmy's Birthday</td> </tr> </tbody> </table> <p style="text-align: center;"><span>Apply</span> <span>Cancel</span></p> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>	Type	Name	...	...	Folder	HK Trip	Folder	Japan Trip	Folder	Jimmy's Birthday
Type	Name										
...	...										
Folder	HK Trip										
Folder	Japan Trip										
Folder	Jimmy's Birthday										
Download Period Control	<p>This feature sets the NSA to download files only within a specified time period.</p>										
Enable Download Period Control	<p>Use the check box to turn the download period control on or off.</p>										

**Table 42** Applications > Download Service > Preferences > General Settings

LABEL	DESCRIPTION
Download Service is active in the time period (hh:mm - hh:mm)	Specify the time period for the NSA to download files.  <b>Note:</b> If you also configured the <b>Power On/Off Schedule</b> feature in the <b>Power Management</b> screen, make sure your active download period does not conflict with the power-off period.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.
Cancel	Click this to return to the previous screen without saving.

### 10.7.3 Configuring the P2P Download Settings

Click **Applications > Download Service > Preferences > P2P download** to open the following screen. Use this screen to configure P2P download settings.

**Figure 80** Applications > Download Service > Preferences > P2P download

The screenshot shows the 'Preferences' window for 'P2P download'. It has two tabs: 'General Settings' and 'P2P download'. The 'P2P download' tab is active. The settings are as follows:

- Port Number: 9090
- DHT:  Enable  Disable
- Max. Download Rate: 0 KB/s (0=No Limit)
- Max. Upload Rate: 0 KB/s (0=No Limit)
- Maximum Number of Active Torrents: 10
- Maximum Number of Seeding Jobs: 10
- Maximum Number of Active Connections: 300
- Keep Sharing While:
  - Upload/Download Ratio is: 0 % (Enter -1 for unlimited ratio. Enter 0 to ignore ratio.)
  - Or Seeding Time is: 60 minutes (Enter -1 for unlimited seeding time. Enter 0 to ignore seeding time.)
- Email notifications:
  - Send an email notice when download starts:  Enable  Disable
  - Send an email notice when seeding starts:  Enable  Disable
  - Send an email notice when download finishes:  Enable  Disable
- Note:** Please go to "Log>Report Config" to configure email settings.
- Buttons: Edit IP Filter
- Note:** For Distributed Hash Table (DHT) support, the P2P download service will also attempt to open the following UDP port: 9089
- Bottom buttons: Apply, Reset, Cancel

The following table describes the labels in this screen.

**Table 43** Applications > Download Service > Preferences > P2P download

LABEL	DESCRIPTION
Port Number	Assign a port number for P2P downloads. You can select a number from 2 to 65536. It is recommended to use a port number greater than 1025.
DHT	<p>Select <b>Enable</b> or <b>Disable</b> to use Distributed Hash Table (DHT) or not.</p> <p>Note: When you use DHT, the NSA will also attempt to open a UDP port one number smaller than the P2P download port number. So if the P2P download port number is 9090, the NSA uses UDP port 9089.</p>
Max. download rate	You may need to limit the bandwidth the NSA uses for P2P downloads if your network's other Internet applications are not getting enough downstream bandwidth. 0 has the NSA impose no restriction.
Max. upload rate	<p>You may need to limit the bandwidth the NSA uses to share files through P2P download if your network's other Internet applications are not getting enough upstream bandwidth. 0 has the NSA impose no restriction.</p> <p>If you do not allow any uploads, (for example, you set a limit of 1 KB/s) you will not have a good standing in the P2P download community.</p> <p>Note: The settings for maximum download/upload rates would not affect peers accessing the NSA from the same LAN.</p>
Maximum Number of Active Torrents	Specify how many simultaneous P2P downloads are allowed on the NSA. You can enter a number from 1 to 10.
Maximum Number of Seeding Jobs	Specify how many simultaneous seeds are allowed on the NSA. Enter a number from 1 to 10. This value cannot exceed the one you configured in the <b>Maximum Number of Active Torrents</b> field.
Maximum Number of Active Connections	Specify how many active connections are allowed on the NSA. Enter a number from 1 to 500. This specifies the number of computers that can connect to the NSA to download files being shared by the NSA.
Keep Sharing While	<p>With P2P download, the NSA starts sharing a file while you are downloading it. Set how long to continue sharing a file after the NSA finishes the download.</p> <p>Select <b>Upload/Download Ratio</b> to keep sharing a file until the NSA has uploaded a specific percent compared to the download.</p> <p>Select <b>Seeding Time</b> to keep sharing a file for a specific number of minutes after the download finishes.</p> <p>Continuing to share a file helps other P2P download users finish downloading it. Sharing out at least as much as you download helps keep you in good standing in the P2P download community.</p> <p>Enter -1 to share a file indefinitely. Leave both check boxes blank to have the NSA stop sharing the file as soon as the download finishes.</p> <p>If you select both options, the NSA keeps sharing a file until both conditions exceed the values you configure. For example, you entered 150% in the <b>Upload/Download Ratio</b> field and 120 minutes in the <b>Seeding Time</b> field. The NSA keeps sharing a file until it has shared 1.5 times the size of the file and has passed 120 minutes.</p>
Email notifications	Select whether or not to send emails to the email address configured for emailing log reports (see <a href="#">Section 18.4.2 on page 331</a> ) when the NSA starts downloading the file, seeding the file, and/or finishes downloading the file.
Edit IP Filter	<p>Click this to enable or disable IP filtering for P2P downloads.</p> <p>Refer to <a href="#">Section 10.7.4 on page 200</a> for information about the fields in this screen.</p>
Apply	Click this to save your changes.

**Table 43** Applications > Download Service > Preferences > P2P download

LABEL	DESCRIPTION
Reset	Click this to restore your previously saved settings.
Cancel	Click this to return to the previous screen without saving.

## 10.7.4 Edit IP Filter

Use this screen to enable or disable IP filtering for P2P downloads. IP filtering blocks IP addresses known to share fake files. You can either get an IP filter table from a website or use your own table.

Click **Edit IP Filter** in the **Applications > Download Service > Preferences > P2P download** screen.

**Figure 81** Applications > Download Service > Preferences > P2P download > Edit IP Filter

The following table describes the labels in this screen.

**Table 44** Applications > Download Service > Preferences > P2P download > Edit IP Filter

LABEL	DESCRIPTION
Enable IP Filter	Click this to enable or disable IP filtering for P2P downloads.
Update IP Filter Table File from the Internet Every Week	Select this option and enter a URL to use an online IP filter table. You can find an online IP filter table in websites such as <a href="http://www.bluetack.co.uk/config/level1.gz">http://www.bluetack.co.uk/config/level1.gz</a> . When you change the URL of the online IP filter table, the NSA also performs an update after you click <b>Apply</b> .
Upload IP Filter Table	Select this option to upload your own IP filter table. Use the <b>Browse</b> button to locate the file and click <b>Upload</b> to save it on the NSA. The NSA supports .txt, .dat, .gz, .tgz, and .tar.gz file extensions. The NSA saves the IP filter table as <b>/admin/download/ipfilter.dat</b> .
Download Current IP Filter Table	Click this to save a copy of the IP filter table on your computer.
Apply	Click <b>Apply</b> to update the IP filter table from the specified URL.
Cancel	Click this to return to the previous screen without saving.



## 10.7.5 Selecting Files to Download

Select an item in the **Applications > Download Service** screen's list and click **Select Files** to open the following screen. Use this screen to select which of the torrent's files to download. [Section 5.10 on page 91](#) provides a tutorial on adding a download task.

**Figure 82** Applications > Download Service > Select Files



The following table describes the labels in this screen.

**Table 45** Applications > Download Service > Select Files

LABEL	DESCRIPTION
Select Files	
File Name	This is the name of a file specified in the torrent file. Select the check boxes of the files you want to download.
Size	This is the size of the file to be downloaded.
OK	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 10.7.6 Displaying the Task Information

Select an item on the list and click **Task Info**. Use this screen to check detailed information about the task.

**Figure 83** Applications > Download Service > Task Info

Task Info	
Detailed Information	
Status:	Pause
Name:	Christmas Adventure Screensaver (Christmas Adventure Screensaver [mininova].torrent)
Size:	3.42 MB
Uploaded/Downloaded Ratio:	NaN (0.00 Bytes/0.00 Bytes)
Complete(%):	0.00 %
Seeds:	--
Peers:	--
Download Speed:	--
Upload Speed:	--
Health:	0.000000
Time Left:	--
Priority:	Auto
Comment:	Auto-generated torrent by Minino
Start Time:	2008-Dec-03 17:11:14
Completed On:	1970-Jan-01 08:00:00
Info-Hash:	52c15b1ba6daa21aac1516145e68c26a2be0c59f
Tracker:	--

The following table describes the labels in this screen.

**Table 46** Applications > Download Service > Task Info

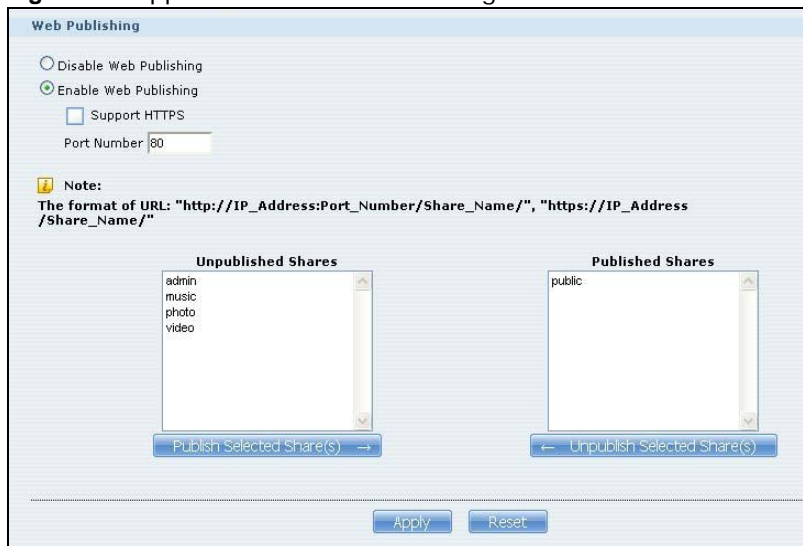
LABEL	DESCRIPTION
Status	This is the current status of the task.
Name	This is the name of the task.
Size	This is the size of the file to be downloaded.
Uploaded/Downloaded Ratio	This is the ratio of total uploaded data to downloaded data.
Complete(%)	This field displays how much has been downloaded to the NSA.
Seeds	This is the number of computers that are sharing the complete file that you are downloading.
Peers	This is the number of other computers that are also downloading (and sharing) the file you are downloading.
Download Speed	This field displays how fast the NSA downloads the file.
Upload Speed	This field displays how fast the NSA uploads the file.
Health	This field displays how many full copies of the file are available for this task. The NSA can download a file with a higher health value more efficiently. If the health value is less than 1 (0.65 for example), there is no full copy of the file, and the NSA may not be able to complete downloading the file.
Time Left	This is the time remaining to complete the task.

**Table 46** Applications > Download Service > Task Info

LABEL	DESCRIPTION
Priority	Use this field to set the priority for downloading the task. Select <b>Auto</b> to have the NSA automatically determine the task's priority. Select <b>High</b> to have the NSA download this file before the other files.
Comment	Enter a description for this task. Click <b>Apply</b> to save the description.
Start Time	This field displays when the NSA started to download files.
Completed on	This field displays when the file was successfully downloaded to the NSA.
Info-Hash	This information is used to verify the torrent file.
Tracker	This field displays the tracker that NSA is currently connected to. A tracker is a server used for finding peers sharing the file.
Close	Click this to close the screen.

## 10.8 The Web Publishing Screen

Use this screen to turn web publishing on or off and select shares to publish. Click **Applications > Web Publishing** to open the following screen.

**Figure 84** Applications > Web Publishing

The following table describes the labels in this screen.

**Table 47** Applications > Web Publishing

LABEL	DESCRIPTION
Web Publishing	
Disable / Enable Web Publishing	Turn on web publishing to let people access files in the published shares using a web browser, without having to log into the Web Configurator.
Support HTTPS	Select this to allow users to use web browser security for connections to the web-published shares. In order to use secured connections users must use "https://" in the NSA's web address and install the NSA's public key certificate.

**Table 47** Applications > Web Publishing

LABEL	DESCRIPTION
Port Number	Specify a port number for accessing the published share websites hosted on the NSA. If you enter a number other than 80, make sure you include it when telling others how to access the web-published share. For example, say you specified port 8080, the NSA's IP address is 192.168.1.23, and the name of the web-published share is FamilyPhotos. You would have to enter "http://192.168.1.23:8080/MyWeb/FamilyPhotos/" in your browser's address bar to access the share's web page.
Unpublished Shares	This list box displays the shares that the NSA does not publish for web browser access.
Publish Selected Share(s)	Select shares in the <b>Unpublished Shares</b> box and click this to let people access files in the published shares using a web browser, without logging into the Web Configurator. Use the [SHIFT] key to select a range of entries. Hold down the [CTRL] key to select multiple individual entries.
Published Shares	This list box displays the shares people can access using a web browser, without logging into the Web Configurator.
Unpublish Selected Share(s)	Select shares in the <b>Published Shares</b> box and click this to not let people access using a web browser without logging into the Web Configurator. Use the [SHIFT] key to select a range of entries. Hold down the [CTRL] key to select multiple individual entries.
Apply	Click this to save your changes.
Reset	Click this to restore your previously saved settings.

Note: If you installed **php-MySQL-phpMyAdmin** through the **Package Management** screen ([Section 7.5 on page 153](#)) and enable it, you can use PHP and MySQL in your published web page.

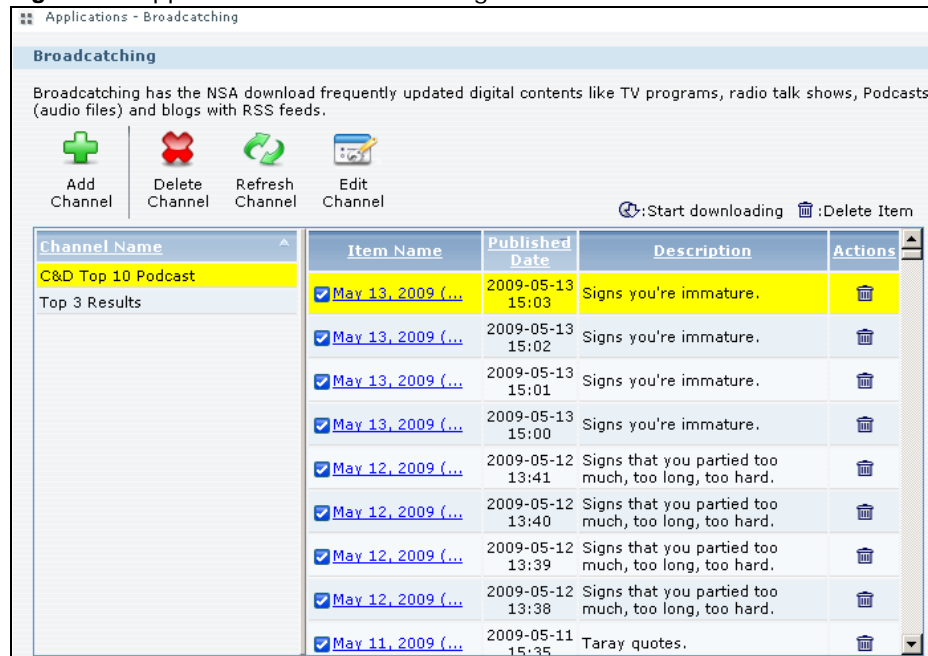
## 10.9 The Broadcatching Screen

This screen displays the NSA's subscribed channels and the associated contents.

- The NSA saves a channel's downloaded items in a folder named after the channel.
- The NSA creates the channel folders in the same destination as the download service. See [Section 10.7.2 on page 196](#) to change the destination for saving downloads.
- The NSA's media server feature makes it easy for users on your network to play the broadcatching files you download. See [Section 10.12.1 on page 213](#) for more on the media server.
- If you add a channel that contains a torrent file, the NSA downloads the torrent file (.torrent) and transfers it to **Download Service** ([Section 10.7 on page 191](#)) and start the P2P download task accordingly.

Click **Applications > Broadcatching** to open the following screen.

**Figure 85** Applications > Broadcatching




The following table describes the labels in this screen.

**Table 48** Applications > Broadcatching

LABEL	DESCRIPTION
Add Channel	When you find a channel to subscribe to, copy the URL of the channel's feed and click this button. A screen opens for you to subscribe to the feed. When you are done, the feed's channel and contents display in the <b>Applications &gt; Broadcatching</b> screen.
Delete Channel	Select a channel and click <b>Delete Channel</b> to remove the channel from the NSA. Any of the channel's items that you have already downloaded stay in the channel's folder (in the <b>admin</b> share's <b>download</b> folder).
Refresh Channel	Select a channel and click <b>Refresh Channel</b> to check for new files.
Edit Channel	Select a channel and click <b>Edit Channel</b> to open a screen where you can set the channel's download and delete policies.
	The table lists channels and their files. Click a column's heading to sort the entries by that criteria.
Channel Name	This identifies the channel. A channel displays in red if there was an error the last time the NSA attempted to connect to it. When this happens, you can select the channel and click <b>Refresh Channel</b> to have the NSA reattempt to connect to it. Select a channel to see its available files. A "..." indicates an abbreviated name. Hold your cursor over the name to display the full name.

**Table 48** Applications > Broadcatching

LABEL	DESCRIPTION
Item Name	<p>These are the downloadable files. The following icons show the file's status in the NSA.</p>  <p><b>Completed:</b> The NSA has downloaded the whole file. Double-click the item to go to the <b>Download Service</b> screen where you can see the file's name and location.</p> <p><b>Seeding:</b> The NSA downloaded the complete file and NSA is sharing it with other P2P download users. Double-click the item to go to the <b>Download Service</b> screen.</p> <p><b>Downloading:</b> The NSA is downloading the file. Double-click the item to go to the <b>Download Service</b> screen.</p> <p><b>Queued:</b> The file is waiting in line for the NSA to download it. Double-click the item to go to the <b>Download Service</b> screen.</p> <p><b>Pause:</b> The download has been manually stopped. Double-click the item to go to the <b>Download Service</b> screen.</p> <p><b>Missing File:</b> The NSA could not find the file.</p> <p><b>Error:</b> The NSA automatically retries unsuccessful download attempts. The status displays as error when the re-attempts are also unsuccessful and the NSA stops trying to download the file. To try the download again, use the <b>Add</b> button to create a new task.</p> <p>Note: A ... indicates an abbreviated file name. Hold your cursor over the name to display the full name.</p>
Published Date	This is when the file was made available for download.
Description	This is the publishers introduction for the file.
Actions	<p><b>Start Downloading:</b> Click this to add the file to the NSA's download queue or check the file's status in the NSA's download service.</p> <p>Click the <b>Delete</b> icon to remove the file from the channel's list.</p>

## 10.9.1 Adding a Broadcatching Channel

At the time of writing, the NSA supports RSS 2.0 feeds. Websites with a feed usually display a feed icon (shown next). Copy and paste the feed's URL into the **Applications > Broadcatching > Add Channel** screen and you can download new files as they are added.

**Figure 86** Feed Icon

A channel uses a feed to deliver its contents (items). Subscribe the NSA to a feed to be able to download the contents.

Click **Applications > Broadcatching > Add Channel** to open the following screen. Use the **Add Channel** screen to subscribe the NSA to a channel's feed so you can view the channel. You also

select policies for downloading and deleting the channel's items. [Section 5.11 on page 106](#) provides a tutorial on adding a broadcasting channel.

**Figure 87** Applications > Broadcatching > Add Channel

**Subscribe to Channel Feed**

Please enter the url address of the feed you want to subscribe to

Download Policy  
Download All Items

Delete Policy  
 Manual  
 Keep last:  of items

Location of Downloaded Files

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	admin	/download


**Note:**  
 1. P2P download jobs are stored in /admin/download/incoming.  
 2. HTTP/FTP jobs are stored in /admin/download.  
 3. All jobs triggered by RSS channels create the subfolder in /admin/download using the channel name where it store all files downloaded from that channel.

The following table describes the labels in this screen.

**Table 49** Applications > Broadcatching > Add Channel

LABEL	DESCRIPTION
Subscribe to Channel Feed	<p>Paste (or type) the URL of the feed for the channel to which you want to subscribe into this field. This is read-only in the <b>Preferences</b> screen.</p> <p><b>Note:</b> Make sure the link goes to the actual RSS feed instead of to another list of links or information about the channel.</p> <p>One way to test this is by clicking the link. Clicking an actual RSS feed link opens a screen of XML code (in browsers without an RSS feed aggregator) or a window where you can add the RSS feed (in browsers with an RSS feed aggregator).</p>
Download Policy	<p>Set which of the channel's items the NSA downloads.</p> <p><b>Download All Items:</b> Download every file in the feed.</p> <p><b>Download Only New Items:</b> Download new files from today on.</p> <p><b>Manually Choose Items for Download:</b> Only download individual files you select later in the <b>Broadcatching</b> screen.</p>
Delete Policy	<p>Set how the NSA handles deleting the items downloaded from the channel.</p> <p><b>Manual:</b> Only delete individual files you select later in the <b>Broadcatching</b> screen.</p> <p><b>Keep last N of items:</b> Select this to set the NSA to only keep a number of the channel's most recent files. When this number has been reached, if the NSA downloads another file from the channel, it deletes the oldest file from the NSA.</p>

**Table 49** Applications > Broadcatching > Add Channel

LABEL	DESCRIPTION										
Location of Downloaded Files	<p>This shows where the NSA stores new downloads (<b>Put incomplete downloads in</b>) and where the NSA moves completed downloads (<b>Move completed downloads to</b>).</p> <p>The <b>Share</b> column shows the name of the share where the file is downloaded.</p> <p>The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.</p> <ul style="list-style-type: none"> <li>• P2P download jobs are stored in /*/incoming (where '*' is a folder that you have set.)</li> <li>• HTTP/FTP jobs are stored in /* (where '*' is a folder that you have set.)</li> <li>• All jobs triggered by RSS channels create the subfolder in /* using the channel name where it store all files downloaded from that channel (where '*' is a folder that you have set.)</li> </ul>										
Edit	<p>Click this to open the following screen where you can set the default folder location where you "<b>Put incomplete downloads in</b>" and "<b>Move complete downloads to</b>":.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Edit Location of Downloaded Files</b></p> <p><b>Put incomplete downloads in</b></p> <p>Share: <input type="text" value="admin"/> <input type="button" value="Browse ..."/></p> <p>Path: <input type="text" value="/download"/> <input type="button" value="Browse ..."/></p> <p><b>Move completed downloads to</b></p> <p>Share: <input type="text" value="public"/> <input type="button" value="Browse ..."/></p> <p>Path: <input type="text" value="/"/> <input type="button" value="Browse ..."/></p> <p><b>Note:</b> All downloaded files will be stored here.</p> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the file's location.</li> </ul> <div style="border: 1px solid black; padding: 5px;"> <p><b>Browse ...</b></p> <p>Current location: / Folder Name: <input type="text"/></p> <table border="1"> <thead> <tr> <th>Type</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>...</td> <td>..</td> </tr> <tr> <td>Folder</td> <td>HK Trip</td> </tr> <tr> <td>Folder</td> <td>Japan Trip</td> </tr> <tr> <td>Folder</td> <td>Jimmy's Birthday</td> </tr> </tbody> </table> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>	Type	Name	...	..	Folder	HK Trip	Folder	Japan Trip	Folder	Jimmy's Birthday
Type	Name										
...	..										
Folder	HK Trip										
Folder	Japan Trip										
Folder	Jimmy's Birthday										
Apply	Click this to save your changes.										
Cancel	Click this to return to the previous screen without saving.										



## 10.9.2 Editing a Broadcatching Channel

Click **Applications > Broadcatching**, then select a channel and click **Edit Channel** to open a similar **Edit** screen. Use the **Edit Channel** screen to change the download or delete policies.

**Figure 88** Applications > Broadcatching > Edit Channel

The screenshot shows the 'Settings' window for editing a channel. It includes the following fields and options:

- Channel Name:** http://www.google.com.tw
- URL:** http://www.google.com.tw
- Download Policy:** Download All Items
- Delete Policy:** Manual (selected), Keep last [ ] of items
- Location of Downloaded Files:**

	Share	Path
Put incomplete downloads in	admin	/download
Move completed downloads to	admin	/download

At the bottom, there is an 'Edit' button and a 'Note' section with three points:

1. P2P download jobs are stored in /admin/download/incoming.
2. HTTP/FTP jobs are stored in /admin/download.
3. All jobs triggered by RSS channels create the subfolder in /admin/download using the channel name where it store all files downloaded from that channel.

Buttons for 'Apply', 'Reset', and 'Cancel' are located at the bottom of the window.

The following table describes the labels in this screen.

**Table 50** Applications > Broadcatching > Edit Channel

LABEL	DESCRIPTION
Channel Name	This is the name of the feed for the channel to which you want to subscribe into this field. This is read-only.
URL	This is the address of the channel.
Download Policy	Set which of the channel's items the NSA downloads. <b>Download All Items:</b> Download every file in the feed. <b>Download Only New Items:</b> Download new files from today on. <b>Manually Choose Items for Download:</b> Only download individual files you select later in the <b>Broadcatching</b> screen.
Delete Policy	Set how the NSA handles deleting the items downloaded from the channel. <b>Manual:</b> Only delete individual files you select later in the <b>Broadcatching</b> screen. <b>Keep last N of items:</b> Select this to set the NSA to only keep a number of the channel's most recent files. When this number has been reached, if the NSA downloads another file from the channel, it deletes the oldest file from the NSA.

**Table 50** Applications > Broadcatching > Edit Channel

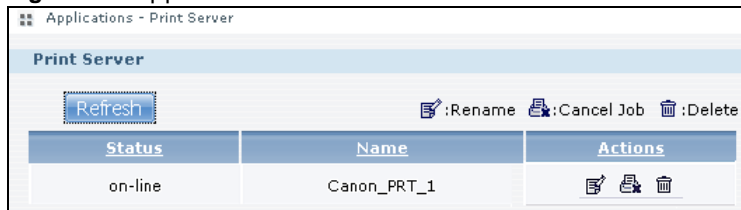
LABEL	DESCRIPTION										
Location of Downloaded Files	<p>This shows where the NSA stores new downloads (<b>Put incomplete downloads in</b>) and where the NSA moves completed downloads (<b>Move completed downloads to</b>).</p> <p>The <b>Share</b> column shows the name of the share where the file is downloaded.</p> <p>The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.</p> <ul style="list-style-type: none"> <li>• P2P download jobs are stored in /*/incoming (where '*' is a folder that you have set.)</li> <li>• HTTP/FTP jobs are stored in /* (where '*' is a folder that you have set.)</li> <li>• All jobs triggered by RSS channels create the subfolder in /* using the channel name where it store all files downloaded from that channel (where '*' is a folder that you have set.)</li> </ul>										
Edit	<p>Click this to open the following screen where you can set the default folder location where you "<b>Put incomplete downloads in</b>" and "<b>Move complete downloads to</b>".:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; margin: 0;"><b>Edit Location of Downloaded Files</b></p> <p><b>Put incomplete downloads in</b></p> <p>Share: <input type="text" value="admin"/> <span style="float: right;">▼</span></p> <p>Path: <input type="text" value="/download"/> <span style="float: right;">Browse ...</span></p> <p><b>Move completed downloads to</b></p> <p>Share: <input type="text" value="public"/> <span style="float: right;">▼</span></p> <p>Path: <input type="text" value="/"/> <span style="float: right;">Browse ...</span></p> <p><b>Note:</b> All downloaded files will be stored here.</p> <p style="text-align: center;">Apply    Cancel</p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the file's location.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="margin: 0;"><b>Browse ...</b></p> <p style="margin: 0;">Current location: / <span style="float: right;">Folder Name: <input type="text"/></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Type</th> <th style="width: 90%;">Name</th> </tr> </thead> <tbody> <tr> <td>...</td> <td>..</td> </tr> <tr> <td>Folder</td> <td>HK Trip</td> </tr> <tr style="background-color: yellow;"> <td>Folder</td> <td>Japan Trip</td> </tr> <tr> <td>Folder</td> <td>Jimmy's Birthday</td> </tr> </tbody> </table> <p style="text-align: center; margin: 0;">Apply    Cancel</p> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>	Type	Name	...	..	Folder	HK Trip	Folder	Japan Trip	Folder	Jimmy's Birthday
Type	Name										
...	..										
Folder	HK Trip										
Folder	Japan Trip										
Folder	Jimmy's Birthday										
Apply	Click this to save your changes.										
Cancel	Click this to return to the previous screen without saving.										

## 10.10 The Print Server Screen

Use the **Print Server** screen to view and manage the NSA's list of printers and print jobs.

Click **Applications > Print Server** to open the following screen.

**Figure 89** Applications > Print Server



The following table describes the labels in this screen.

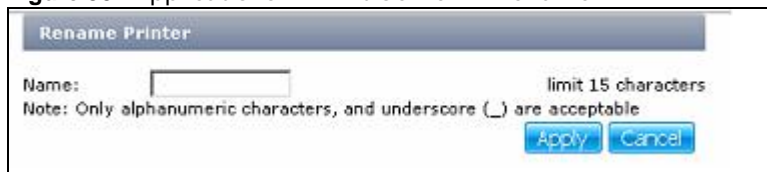
**Table 51** Applications > Print Server

LABEL	DESCRIPTION
Refresh	Click this to update the list of printers and print jobs.
	The table lists printers and their queued print jobs. Click a column's heading to sort the entries by that criteria.
Status	This fields shows whether the printer is connected and turned on ( <b>on-line</b> ) or not ( <b>off-line</b> ).
Name	This identifies the printer. Each printer connected to the NSA must use a unique name.
Actions	<p><b>Rename:</b> Click this to change the name the NSA uses for the printer.</p> <p><b>Cancel Job:</b> Click this to remove all print jobs from the NSA queue for a particular printer. However, since the NSA sends print jobs to the printer as soon as it can, this button may only have an effect if there are very large or many print jobs in the queue. To stop a print job that has already started, you may have to turn off the printer.</p> <p><b>Delete:</b> Click this to remove a printer from the NSA's printer list. To add the printer back into the list, disconnect the printer from the NSA's USB port and reconnect it. If that does not work, disconnect the USB port and turn off the printer's power. Then reconnect the printer and turn it back on.</p>

## 10.10.1 Print Server Rename

Click **Applications > Print Server** and a printer's **Rename** icon to open the following screen. Use this screen to change the name the NSA uses for the printer.

**Figure 90** Applications > Print Server > Rename



The following table describes the labels in this screen.

**Table 52** Applications > Print Server > Rename

LABEL	DESCRIPTION
Name	Type a new name to identify the printer. The name must be unique from all the other names of printers connected to the NSA.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 10.11 The Copy/Sync Button Screen

The **Copy/Sync** button on the front panel allows you to copy or synchronize files between a connected USB device and the NSA.

Click **Applications > Copy/Sync Button** to open the following screen.

**Figure 91** Applications > Copy/Sync Button

The following table describes the labels in this screen.

**Table 53** Applications > Copy/Sync Button

LABEL	DESCRIPTION
Copy Settings	
NSA Copy Target	Select the NSA share to use with the copy function.
USB Volume	If your USB device has multiple partitions, select which partition to use with the copy function.
Copy Direction	Select <b>USB -&gt; NSA</b> to copy files from your USB device to the NSA. Select <b>NSA -&gt; USB</b> to copy files from the NSA to your USB device.
Create a New Folder for Copied Files	Select this option to place the copied files in a new folder. The name of the folder created for the copied files consists of the date and time of the copy in year_month_day_hour_minute_second format.
Backup Files to be Replaced	This option is only available if you do not select <b>Create a New Folder for Copied Files</b> . Select this option to save the files that will be replaced by the source files.
Backup Target	Select a share in which to save the backup files.  Note: The NSA will not create a new folder to store the backup files. It is recommended to create a specific share (such as "backup") for backup purposes.
Sync Settings	
NSA Sync Target	Select the NSA share to use with the synchronization function.

**Table 53** Applications > Copy/Sync Button

LABEL	DESCRIPTION
USB Volume	If your USB device has multiple partitions, select which partition to use with the synchronization function.
Sync Direction	Select <b>USB -&gt; NSA</b> to synchronize files from your USB device to the NSA. Select <b>NSA -&gt; USB</b> to synchronize files from the NSA to your USB device. Select <b>NSA &lt;-&gt; USB</b> to synchronize files in both directions simultaneously.
Backup Files to be Replaced or Removed	Select this option to save the files that will be replaced by the source files.
Backup Target	Select a share in which to save the backup files.  Note: The NSA will not create a new folder to store the backup files. It is recommended to create a specific share (such as "backup") for backup purposes.
Apply	Click this to save your changes.  The configuration file is saved on the USB device.
Reset	Click this to restore your previously saved settings.

## 10.12 Technical Reference

This section provides technical background information on the topics discussed in this chapter.

### 10.12.1 Sharing Media Files on Your Network

The media server feature lets anyone on your network play video, music, and photos from the NSA (without having to copy them to another computer). The NSA can function as a DLNA-compliant media server and/or an iTunes server. The NSA streams files to DLNA-compliant media clients or computers using iTunes. The Digital Living Network Alliance (DLNA) is a group of personal computer and electronics companies that works to make products compatible in a home network.

- Publish shares to let others play the contained media files.
- The media server is a convenient way to share files you download using the broadcast service (see [Section 10.9 on page 204](#)).
- Hardware-based media players can also play the files. See [Section 21.2 on page 372](#) for the supported multimedia file formats.

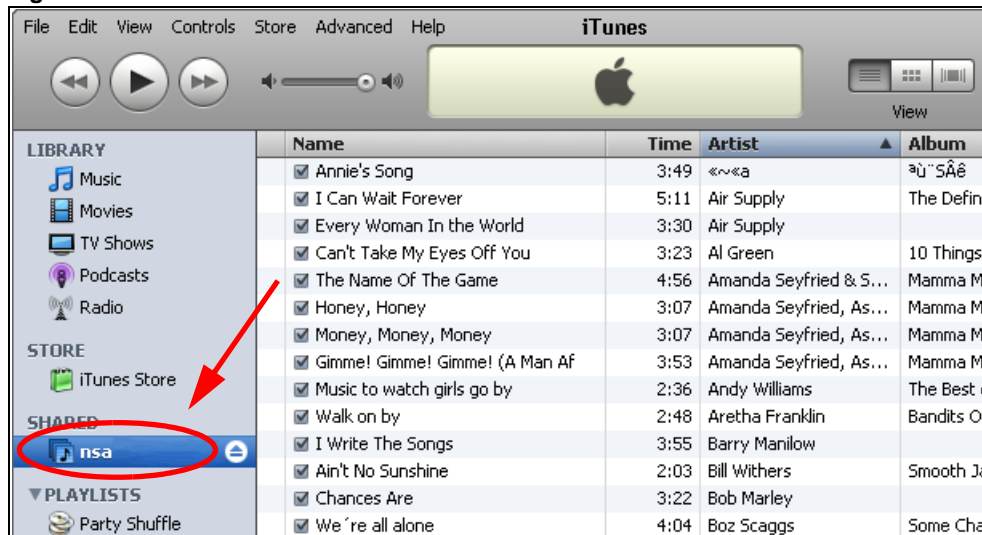
Note: Anyone on your network can play the media files in the published shares. No user name and password or other form of security is used. The media server is enabled by default with the video, photo, and music shares published.

#### Songs from the iTunes Store

After using iTunes on your computer to download songs from Apple's iTunes Store, you can copy them to the NSA. Many of these songs have DRM (Digital Rights Management). At the time of writing, you can use your Apple account ID and password to authorize up to a total of five computers to play the files. To authorize a computer, open iTunes and click **Store > Authorize Computer**.

A link for the NSA in iTunes under **SHARED**. Click it to display the NSA's published media files as shown next.

**Figure 92** NSA link in iTunes



## 10.12.2 Download Service

The NSA's download service downloads files from the Internet directly to the NSA. You do not have to download to your computer and then copy to the NSA. This can free up your computer's system resources. The download service also handles your broadcastching downloads. See [Section 10.9 on page 204](#) for information on broadcastching.

The NSA can download using these protocols.

- HTTP: The standard protocol for web pages.
- FTP: A standard Internet file transfer service.
- P2P download: Peer-to-peer files sharing protocol.

**Note:** Do not use the NSA for illegal purposes. Illegal downloading or sharing of files can result in severe civil and criminal penalties. You are subject to the restrictions of copyright laws and any other applicable laws and will bear the consequences of any infringements thereof. ZyXEL bears NO responsibility or liability for your use of the download service feature.

### Torrent Files

The NSA needs a ".torrent" file for P2P download to download a file. The torrent file gives the NSA information about the file to be downloaded (and shared) and the tracker(s) (computers) that coordinates the distribution of the file.

When you add a P2P download task in the NSA's web configurator screens, you can copy and paste the URL of the torrent file. The NSA automatically downloads the torrent file and saves it in a **torrent** folder within the folder where the NSA stores downloaded files (the **admin** share's **download** folder by default).

If you already have the torrent file saved on your computer, you can just specify its location when adding a download task through the web configurator. Another method is to use FTP or a CIFS program (Windows Explorer for example) to copy the torrent file into the **torrent** folder. The NSA automatically uses the torrent file.

After your P2P download and sharing are finished, you can go to the **incoming** folder within the destination share or folder and delete the .torrent file if you need to free up hard disk space.

### 10.12.3 Link Capture Browser Plugin

The link capture browser plugin is an add-on feature for your web browser. Use the plugin to directly add a file's URL to the NSA's download service.

Note: The link capture browser plugin is located in the included CD.

The following screen displays how the plugin works.

**Figure 93** Link Capture Browser Plugin



Instead of copying and pasting a file's URL to the NSA's download service, you can right-click on the URL in the web browser and select **Send to NSA**. The URL is then added to the NSA's download service list.

See [Section 5.10.2 on page 94](#) and [Section 5.10.3 on page 99](#) for tutorials about installing and using the link capture browser plugin.

Note: At the time of writing the plugin supports Internet Explorer 6.0/7.0/8.0 and Mozilla Firefox 2.0/3.0.

### 10.12.4 Download Service Notification

Use the download service notification to keep track of downloaded files on the NSA. You can subscribe to the NSA's download list on your computer. When the NSA finishes downloading new files, your RSS reader displays the information and links for the files. You can also download the files from the RSS reader to your computer.

See [Section 5.10.5 on page 103](#) for a tutorial about using the download service notification.

In the **Download Service** screen, select **Enable Download Notify** and click **Apply**. An RSS feed icon appears. Click the icon to subscribe to the NSA's download list.



Note: The download service notification only keeps track of files downloaded via P2P download.

**Figure 94** Download Service Notification



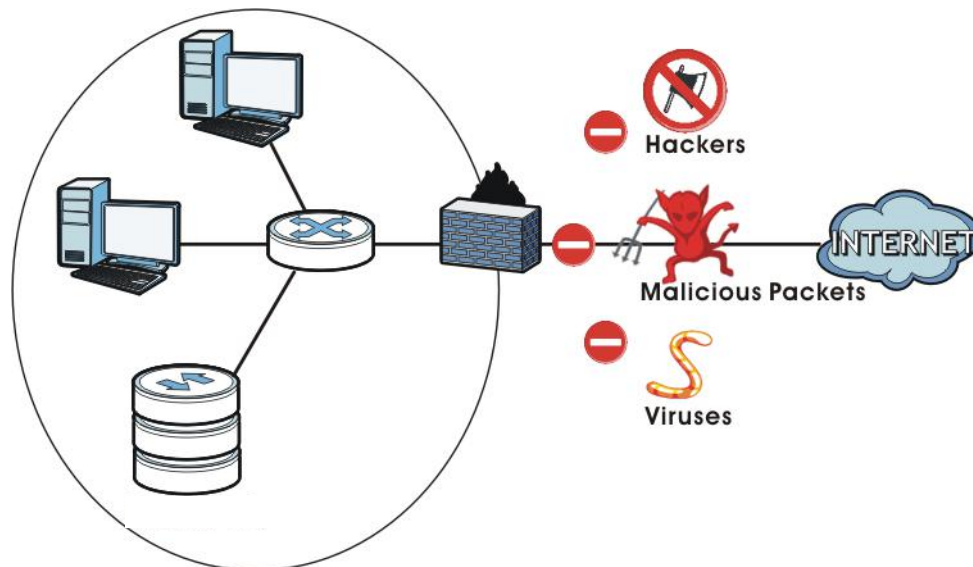
### 10.12.5 P2P Download Security

When you download using P2P, you reveal your IP address. This increases the risk of hacking attacks, which can be protected against by a good firewall.

#### Use a Hardware-based Firewall

Place a hardware-based firewall between your network and the Internet (a software-based firewall on your computer would just protect the computer itself, not the NSA since your computer is not between your NSA and the Internet).

**Figure 95** Firewall



Ideally your firewall should have the following:

- Stateful packet inspection to control access between the Internet and your network and protect your NSA (and computers) from hacking attacks.
- IDP (Intrusion Detection and Prevention) to detect malicious packets within normal network traffic and take immediate action against them.



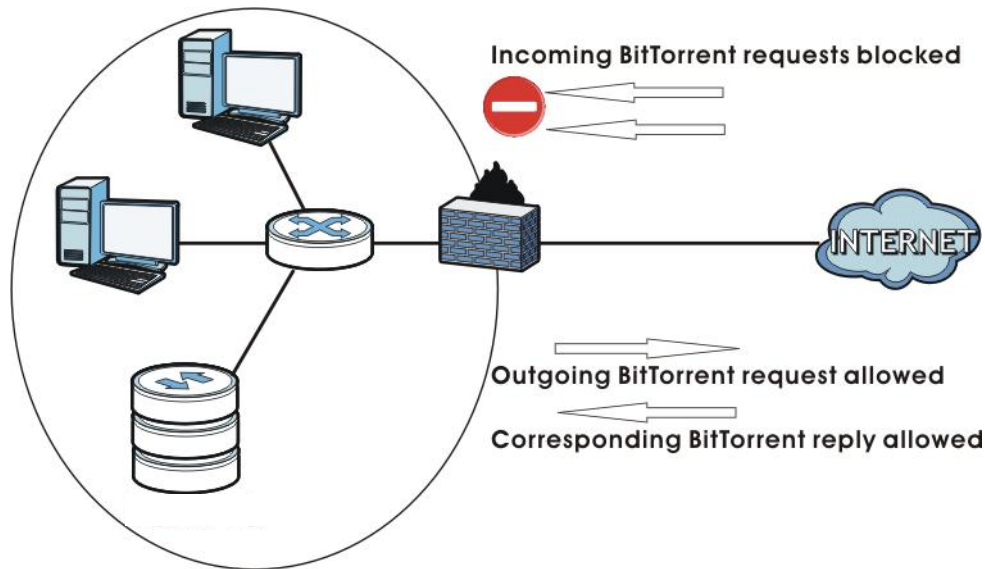
- Anti-virus to check files you download for computer viruses.

## P2P Download and Your Firewall

The anti-virus feature on a firewall probably cannot check P2P downloads for viruses, so use anti-virus software on your computer to scan the NSA for viruses.

When you download using P2P download, many other P2P download users are also trying to download the file from you. The firewall slows this down because by default, it only allows traffic from the Internet in response to a request that originated on the LAN (it lets you get files from the Internet and blocks those on the Internet from getting files from you).

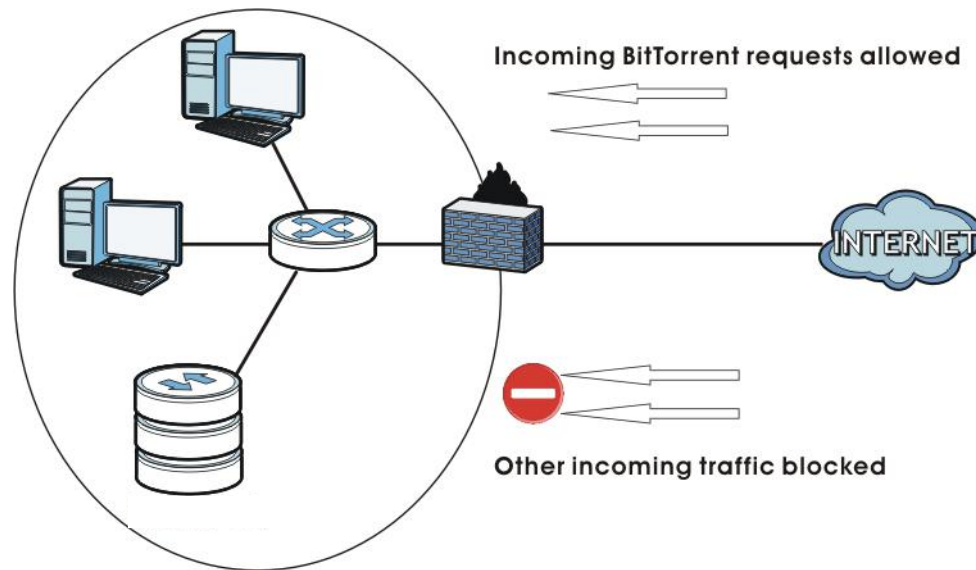
**Figure 96** Firewall Blocking Incoming P2P Download Requests



To speed up P2P download file transfers, configure your firewall's port forwarding to send incoming TCP port 9090 and UDP port 9089 connections to the NSA. You probably need to use your firewall's

HTML (web-based) configuration interface to set this up (see the firewall's manual for details). You may also have to configure a corresponding firewall rule.

**Figure 97** Firewall Configured to Allow Incoming P2P Download Requests



## 10.12.6 Web Publishing Example

This example covers how to configure the **Web Publishing** screen to let people use a web browser to access a share named FamilyPhotos without logging into the Web Configurator and shows how to access the share through the Internet.

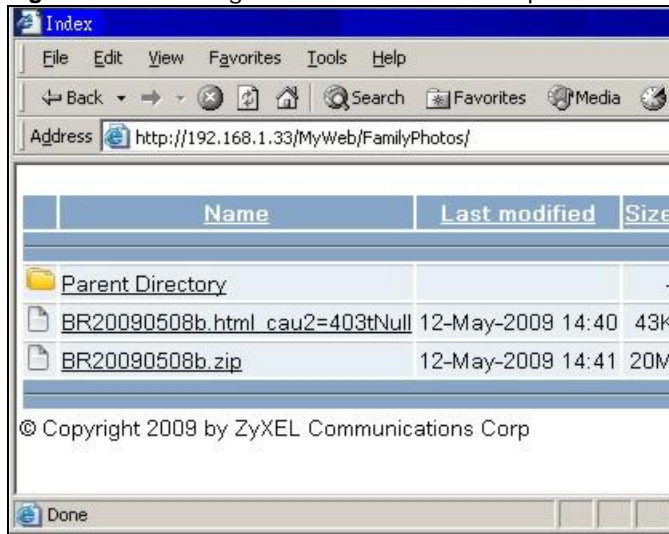
- 1 Click **Applications > Web Publishing** and configure the screen as shown (enable the web publishing and move **FamilyPhotos** over to **Published Shares**) and click **Apply**.

**Figure 98** Applications > Web Publishing (Example)



- Now open your web browser and type in the address of the NSA's FamilyPhotos web page. In this example, the NSA's IP address is 192.168.1.33, and the name of the web-published share is FamilyPhotos. So you would enter "http://192.168.1.33/MyWeb/FamilyPhotos/" in your browser's address bar. Then press [ENTER] or click **Go**. A screen displays listing the share's files.

**Figure 99** Browsing to an NSA Share Example



- Click a file's link to open the file.
- Right-click a file's link and select **Save Target As..** (in Internet Explorer) to save a copy of the file.
- Click a label in the heading row to sort the files by that criteria.
- To customize how the page looks and works, create an index.html or index.htm file and store it in the share.

## 10.12.7 Web Publishing

Web publishing lets you "publish" shares (containing folders and files) on the NSA so people can access the files using a web browser without having to log into the Web Configurator. This way you can share files with others without them having to know and enter a user name and password.

For example, if you want to share photos in a FamilyPhotos share, you could "web publish" it and others could use a web browser to access the photos at <http://my-NSA's-IP-Address/MyWeb/FamilyPhotos>.

**Note:** The NSA does not use any security for the files in the published folders. It is not recommended to publish shares if you do not have the NSA behind a good hardware-based firewall. See [page 216](#) for more on firewalls.

Additionally, you can use HTML editing software (not included) to create an index.html or index.htm file to define and customize how your website works and looks.

### Accessing Web-published Shares from the Internet

You need to use a public address to access the NSA's web-published shares from the Internet. If your NSA uses a private IP address, you may need to use the public IP address of your Internet gateway and configure NAT or port forwarding on your Internet gateway and possibly firewall rules in order to let people access the NSA's web-published shares from the Internet.

## Web Publishing Port Number

If the web-published shares use a port number other than 80 (the normal port for web traffic), users must include it after the NSA's IP address in order to access the NSA's web-published shares. For example, say you specified port 8080, the NSA's IP address is 192.168.1.23, and the name of the web-published share is FamilyPhotos. You would have to enter "http://192.168.1.23:8080/MyWeb/FamilyPhotos/" in your browser's address bar to access the share's web page.

The NSA's web configurator uses port 80. To make the web configurator more secure, you can have the web-published shares use another port number. Then you can configure one set of firewall rules and NAT or port forwarding settings on your Internet gateway specifically for allowing access to the web-published shares and another separate set of rules for accessing the NSA's web configurator.

### 10.12.8 Channel Guides for Broadcaching

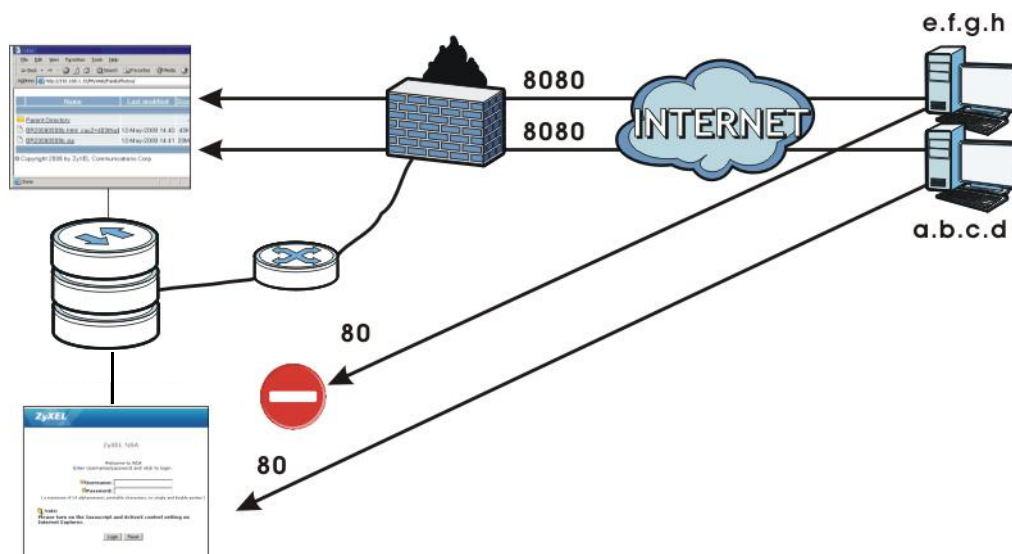
Here are some popular broadcaching channel guide web sites.

Note: ZyXEL does not endorse these web sites and is not responsible for any of their contents. Use these or any other web sites at your own risk and discretion.

- <http://www.zencast.com/>
- <http://www.miroguide.com/>
- <http://www.vuze.com/>
- <http://www.mefedia.com/>
- <http://www.vodstock.com/>
- <http://www.mininova.org>

In the following example, the Internet gateway's firewall is configured to allow anyone to access the NSA's web-published screens using port 8080. Web configurator access (port 80) however, is only allowed from IP address a.b.c.d.

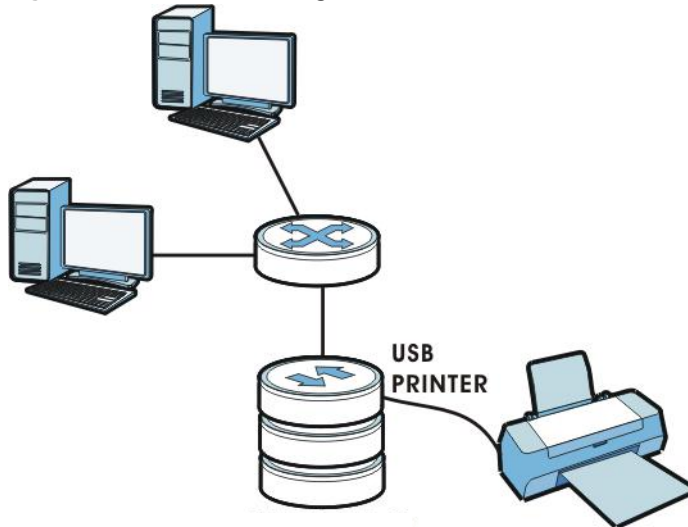
**Figure 100** Web Publishing Port Number Example



## 10.12.9 Printer Sharing

The NSA can act as a print server. A print server lets multiple computers share a printer. Connect a printer to the NSA's USB port to let multiple computers on your network use it. See [www.zyxel.com](http://www.zyxel.com) for a list of compatible printers.

**Figure 101** Printer Sharing



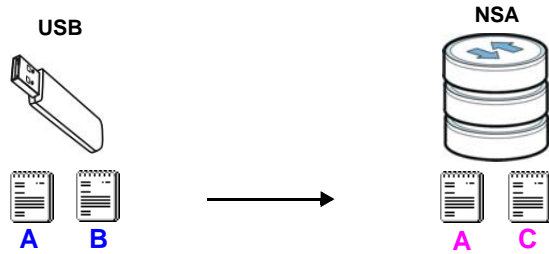
## 10.12.10 Copying Files

You can copy files from a USB device to the NSA or from the NSA to a USB device. Simply press and release the **COPY/SYNC** button to start copying files. See [Section 10.11 on page 212](#) for details about configuring the copy settings.

The following figure illustrates how copying files works when you copy files from a USB device to the NSA. The same concept applies when you copy files from the NSA to a USB device.

**Figure 102** Copying Files Example

**Before Copy**



**After Copy**



Both storage devices contain file A.

- A copy of files A and B from the USB device is transferred to the NSA.
- File A from the USB device replaces file A on the NSA.

## 10.12.11 Synchronizing Files

Synchronization makes the contents on the target device identical to the ones on the source device. You can synchronize files from a USB device to the NSA or from the NSA to a USB device. In addition, you may also synchronize files in both directions simultaneously.

Press and hold the **COPY/SYNC** button until you hear a beep to synchronize files. See [Section 10.11 on page 212](#) for details about configuring the synchronization settings.

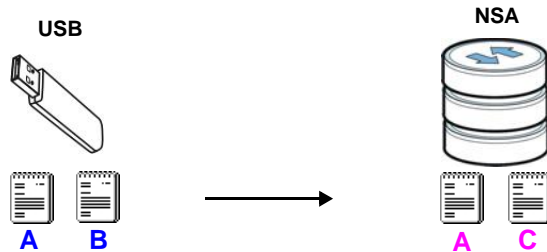
### USB -> NSA or USB <- NSA

When you synchronize files in one direction, contents on the source device replace the files on the target device.

The following figure illustrates how synchronization works when you synchronize files from a USB device to the NSA. The same concept applies when you synchronize files from the NSA to a USB device.

**Figure 103** Synchronizing Files Example 1

### Before Sync



### After Sync



Both storage devices contain A.

- A copy of files A and B from the USB device is transferred to the NSA.
- File A from the USB device replaces file A on the NSA.
- File C on the NSA is deleted.

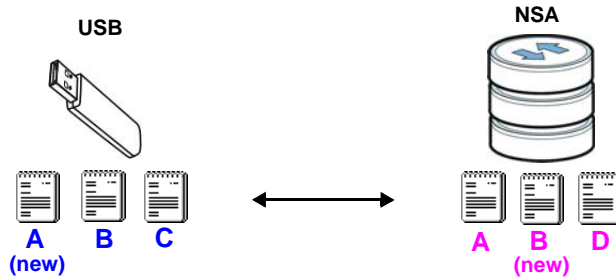
### USB <-> NSA

When you synchronize files in both directions simultaneously, both storage devices transfer unique files to one another. Files with the same file name are synchronized according to their modification date/time. The difference in modification time between the two files has to be greater than five minutes. More recently modified files overwrite the older ones during synchronization.

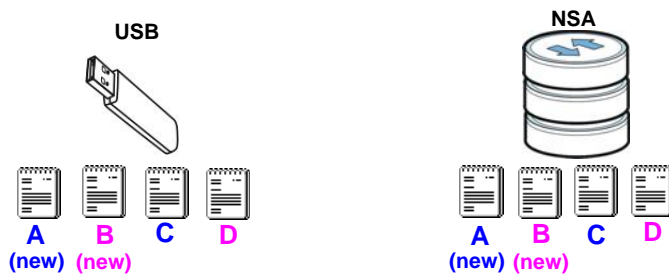
The following figure illustrates how synchronization works when you synchronize files in both directions simultaneously.

**Figure 104** Synchronizing Files Example 2

**Before Sync**



**After Sync**



A on the USB device and B on the NSA are modified more recently.

- File A from the USB device replaces file A on the NSA.
- File B from the NSA replaces file B on the USB device.
- A copy of file C from the USB device is transferred to the NSA.
- A copy of file D from the NSA is transferred to the USB device.



# Packages

## 11.1 Overview

This chapter describes features you can add to the NSA by installing packages. See [Section 7.5 on page 153](#) for how to manage packages.

## 11.2 What You Can Do

- Use the **SMART** screens ([Section 11.3 on page 225](#)) to view your NSA hard disk(s) statistics and monitor their performance.
- Use the **DyDNS** screen ([Section 11.4 on page 229](#)) to configure the domain name settings of your NSA.
- Use the **NFS** screen ([Section 11.5 on page 230](#)) to configure the Network File System (NFS) settings of your NSA.
- Use the **Syslog Server** screen ([Section 11.6 on page 233](#)) to configure the NSA to accept syslog logs from syslog clients.
- Use the **TFTP Server** screen ([Section 11.7 on page 235](#)) to configure the NSA to accept log files from TFTP clients.
- Use the **eMule** screens ([Section 11.8 on page 236](#)) to configure the server, task and search settings for the eMule application.
- Use the **pyLoad** screen ([Section 11.9 on page 250](#)) to configure the NAS so you can have it manage your downloads including those from one-click hosting sites.
- Use **ownCloud** ([Section 11.10 on page 251](#)) to store, back up, synchronize, and share files, photos, calendars, and more with computers and mobile devices.
- Use **Polkast** ([Section 11.11 on page 254](#)) for fast, secure, direct access to your NSA from your iPad, iPhone or Android device.
- Use the **Google Drive** screens ([Section 11.12 on page 257](#)) to synchronize local NSA shares or folders and Google Drive accounts.
- Use **Memopal** ([Section 11.13 on page 261](#)) to back up files on the NSA to your Memopal online backup and storage account.
- Use the **Protect** screens ([Section 11.14 on page 264](#)) to configure and schedule the backup and restore jobs of your NSA.

## 11.3 SMART Screen

Use this screen to view indicators of your NSA's hard disk(s) health.

Self Monitoring, Analysis, and Reporting Technology (S.M.A.R.T) detects and reports the reliability of hard disks using standard indicators (called “attributes”), to help you anticipate possible disk failures.

Note: The fields included the screens may vary depending on the hard disk that you use.

Click **Storage > S.M.A.R.T** to open the following screen.

**Figure 105** Storage > S.M.A.R.T

Status	Name	Temperature	Performance	Type	Volume Name	Model Name	Capacity
Healthy	disk1	46 °C	Good	jbod	Volume 1	ATA ST3120827AS 3.42	111.79 GB

The following table describes the labels in this screen.

**Table 54** Storage > S.M.A.R.T

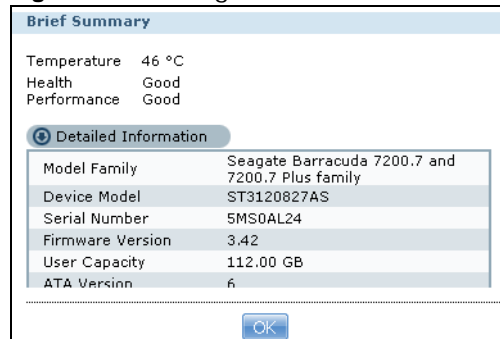
LABEL	DESCRIPTION
S.M.A.R.T. Information	
Brief Summary	Select a hard disk volume from the list and click this to display information about the volume, such as the hard disk vendor, specific model, hard disk capacity and so on. See <a href="#">Section 11.3.1 on page 227</a> to view the <b>Brief Summary</b> screen.
Full Summary	Select a volume and click this to display more detailed information about the volume. See <a href="#">Section 11.3.1 on page 227</a> to view the <b>Full Summary</b> screen.
The table lists your hard disks. Click a column's heading to sort the entries by that criteria.	
Status	This shows the condition of the hard disk volume. Go to <a href="#">Section 8.4 on page 167</a> for more information.
Name	This shows the name assigned to the hard disk.
Temperature	This shows the temperature of the hard disk in degrees celsius.
Performance	This shows your hard disk's performance. Refer to <a href="#">Section 11.3.2 on page 228</a> for more information on how S.M.A.R.T determines your hard disk's condition. This displays: <ul style="list-style-type: none"> <li>• <b>Good</b> - This shows when you compare each <b>Value</b> with the <b>Threshold Value</b> and all the <b>Value</b> is greater than the <b>Threshold Value</b>.</li> <li>• <b>Bad</b> - This shows when you compare each <b>Value</b> with the <b>Threshold Value</b> and at least one <b>Value</b> is less than or equal to the <b>Threshold Value</b>.</li> </ul>
Type	This shows volume type or file system that the hard disk is using, such as <b>JBOD</b> , <b>PC Compatible Volume</b> and <b>RAID</b> or <b>FAT32</b> , <b>FAT16</b> and <b>NTFS</b> . See <a href="#">Section 8.6.3 on page 170</a> for descriptions of the volume types.
Volume Name	This shows the name of the hard disk volume.
Model Name	This shows the factory model of the hard disk.
Capacity	This shows the total hard disk space of the hard disk volume.

## 11.3.1 SMART Brief Summary

Use this screen to display information about the volume, such as the hard disk vendor, specific model, hard disk capacity and so on.

Click **Brief Summary** in the **Storage > S.M.A.R.T** screen to display the following.

**Figure 106** Storage > S.M.A.R.T: Brief Summary



The following table describes the labels in this screen.

**Table 55** Storage > S.M.A.R.T: Brief Summary

LABEL	DESCRIPTION
Brief Summary	
Temperature	This shows the current temperature of the hard disk in degrees celsius.
Health	This describes the overall health of the volume based on S.M.A.R.T diagnostics.
Performance	This shows your hard disk's performance. Refer to <a href="#">Section 11.3.2 on page 228</a> for more information on how S.M.A.R.T determines your hard disk's condition. This displays: <ul style="list-style-type: none"> <li><b>Good</b> - This shows when you compare each <b>Value</b> with the <b>Threshold Value</b> and all the <b>Value</b> is greater than the <b>Threshold Value</b>.</li> <li><b>Bad</b> - This shows when you compare each <b>Value</b> with the <b>Threshold Value</b> and at least one <b>Value</b> is less than or equal to the <b>Threshold Value</b>.</li> </ul>
Detailed Information	
Model Family	This shows the vendor and product family of the hard disk.
Device Model	This shows the factory model of the hard disk.
Serial Number	This shows the serial number of the hard disk.
Firmware Version	This shows the firmware version installed in the hard disk.
User Capacity	This shows the total hard disk space of the hard disk volume.
ATA Version	This shows the ATA version of the hard disk, which refers to an industry standard category for storage devices and connectors used.
ATA Standard	This field displays the Advanced Technology Attachment standard the hard drive supports.
Local Time	This field displays the local time that the hard drive is using.
SMART support	This field displays whether or not the hard drive is SMART-capable.
SMART support	This field displays whether or not the hard drive has SMART monitoring turned on.
OK	Click this to close the window.

## 11.3.2 SMART Full Summary

Use this screen to display more details information about the volume.

Click **Full Summary** in the **Storage > S.M.A.R.T** screen to display the following.

**Figure 107** Storage > S.M.A.R.T: Full Summary

ID	Attribute Name	Flag	Value	Worst	Threshold	Type	Updated	When Failed
197	Current Pending Sector	0x0012	100	100	000	Old_age	Always	-
195	Hardware_ECC_Recovered	0x001a	063	045	000	Old_age	Always	-
200	Multi_Zone_Error_Rate	0x0000	100	253	000	Old_age	Offline	-
198	Offline_Uncorrectable	0x0010	100	100	000	Old_age	Offline	-
12	Power_Cycle_Count	0x0032	100	100	020	Old_age	Always	-
9	Power_On_Hours	0x0032	097	097	000	Old_age	Always	-
1	Raw_Read_Error_Rate	0x000f	063	045	006	Pre-fail	Always	-
5	Reallocated_Sector_Ct	0x0033	100	100	036	Pre-fail	Always	-
7	Seek_Error_Rate	0x000f	082	060	030	Pre-fail	Always	-

The following table describes the labels in this screen.

**Table 56** Storage > S.M.A.R.T: Full Summary

LABEL	DESCRIPTION
ID	This is the identification number used to tag a hard disk attribute.  This is standard across all S.M.A.R.T-enabled storage devices. However it depends on the storage vendor which attributes it will allow S.M.A.R.T to diagnose.
Attribute Name	This refers to an attribute of the hard disk that S.M.A.R.T can assess. Attributes describe the hard disk's physical state, performance, wear-and-tear, and so on.
Flag	This shows a code that S.M.A.R.T uses to determine the current state of the hard disk.
Value	This is a value that corresponds to the <b>Raw Value</b> . Compare this with the <b>Threshold Value</b> .  S.M.A.R.T compresses the raw value(s) into a digit from 1 to 253, where 1 indicates the worst scenario while 253 indicates the best scenario.  The values 100 or 200 usually represent the mean or normal value.
Worst	This is the lowest value attained by the hard disk since S.M.A.R.T started its assessment of the hard disk.
Threshold	This is the attribute's threshold value. If the attribute's current normalized value is less than or equal to the threshold, the attribute has failed. An attribute value close to or below the threshold indicates the hard drive is no longer reliable.
Type	This shows S.M.A.R.T's assessment of the hard disk.  <b>Old_age</b> indicates end-of-product life from old-age (normal wearing out) if the attribute value is less than or equal to the threshold.  <b>Pre-fail</b> indicate imminent hard drive failure if the attribute value is less than or equal to the threshold.  Note that just because an attribute is of the Pre-fail type does not mean your hard drive is ready to fail. It only means this if the current normalized value of the attribute is less than or equal to the threshold.

**Table 56** Storage > S.M.A.R.T.: Full Summary

LABEL	DESCRIPTION
Updated	This indicates when the hard drive updates the value for this attribute. <ul style="list-style-type: none"> <li><b>Always</b> means the hard drive updates this attribute during normal operation and during offline activities.</li> <li><b>Offline</b> means the hard drive only updates this attribute when no one is accessing the hard drive.</li> </ul>
When Failed	This column indicates when (if ever) the attribute failed. An attribute has failed if the normalized value is less than or equal to the threshold. <ul style="list-style-type: none"> <li>-: This displays if the attribute is not failing now and has never failed in the past.</li> <li><b>FAILING_NOW</b>: This displays if the attribute's current normalized value is less than or equal to the threshold.</li> <li><b>In_the_past</b>: This displays if the attribute's current normalized value is greater than the threshold but the worst recorded value is less than or equal to the threshold.</li> </ul>
Raw Value	This is the attribute's unprocessed raw data. These values show exact amounts of time or numbers of attempts or errors. The meaning to the raw values is specific to the hard drive manufacturer. Table 42 on page 156 has some information about whether a higher or lower individual raw S.M.A.R.T. attribute value is better.
OK	Click this to close this window.

## 11.4 DyDNS Screen

Use this to enable and configure DyDNS.

Dynamic DNS allows you to update your current dynamic IP address with a dynamic DNS service so that anyone can contact you (such as through NetMeeting or CUSeeMe). You can also access your FTP server or Web site on your own computer using a domain name (for instance myhost.dhs.org, where myhost is a name of your choice) that will never change instead of using an IP address that changes each time you reconnect. Your friends or relatives will always be able to call you even if they don't know your IP address.

Click **Network > DyDNS** to open the following screen.

**Figure 108** Network > DyDNS

Network - DyDNS

**Gateway Information**

Internal Address                      unknown

External Address

**Configuration**

Enable DyDNS support to allow users to access the server through a registered hostname.

Enable DyDNS

Service Provider                      DynDNS.com

Hostname                                      \_\_\_\_\_

Username                                      \_\_\_\_\_

Password                                      \_\_\_\_\_

Password (Confirm)                      \_\_\_\_\_

Apply      Reset

The following table describes the labels in this screen.

**Table 57** Network > DyDNS

LABEL	DESCRIPTION
Gateway Information	
Internal Address	This shows the IP address assigned to the NSA by the gateway in your local network.
External Address	This shows the IP address of the NSA that can be accessed in the Wide Area Network (WAN). Note that this is not assigned by the DyDNS server.
Configuration	
Enable DyDNS	Select this to use dynamic DNS.  You need to have registered a dynamic DNS account with a service provider such as www.dyndns.org. The Dynamic DNS service provider will give you a password or key.
Service Provider	Select your Dynamic DNS service provider.
Hostname	Enter your host name provided by the Dynamic DNS service.
Username	Enter your user name for your DNS account.
Password	Enter the password assigned to your DNS account.
Password (Confirm)	Confirm the password you entered.
Apply	Click this to save your changes.
Reset	Click this to clear the fields.

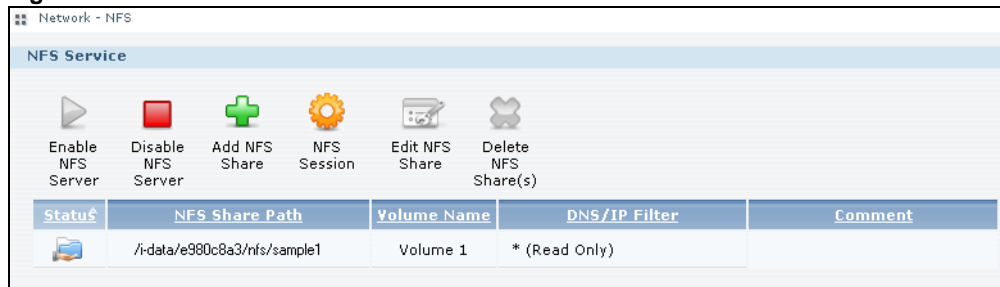
## 11.5 NFS Screen

Use this screen to enable and configure Network File System (NFS) settings on your NSA.

NFS is a client/server distributed file service that provides transparent file sharing for network environments. This allows shared folders in your NSA to be accessible like a local folder in a user's computer.

Click **Network > NFS** to open the following screen.

**Figure 109** Network > NFS



The following table describes the labels in this screen.

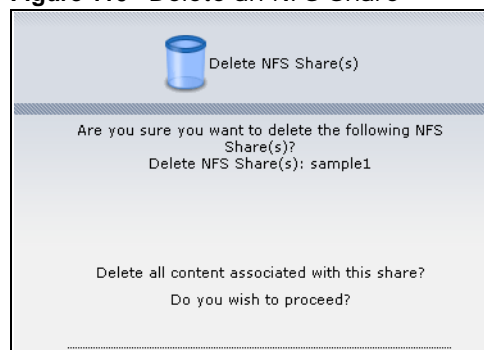
**Table 58** Network > NFS

LABEL	DESCRIPTION
NFS Service	
Enable NFS Server	Click this to employ NFS in your NSA.

**Table 58** Network > NFS

LABEL	DESCRIPTION
Disable NFS Server	Click this to stop using NFS. This makes all NFS shares unavailable.
Add NFS Share	Click this to add an NFS share. Refer to <a href="#">Section 11.5.1 on page 231</a> for the <b>Add NFS Share</b> screen.
NFS Session	Click this to view active NFS sessions. You can see the list of users who have access to the NFS shares. Refer to <a href="#">Section 11.5.2 on page 232</a> for the <b>NFS Session</b> screen.
Edit NFS Share	Select an NFS share from the list and click this to edit it. Refer to <a href="#">Section 11.5.1 on page 231</a> for the <b>Edit NFS Share</b> screen.
Delete NFS Share (s)	Select an NFS share from the list and click this to delete it.
The table lists your NFS shares. Click a column's heading to sort the entries by that criteria.	
Status	This shows whether the share is active or not.
NFS Share Path	This shows the location of the share in the NSA.
Volume Name	This shows the volume where the NFS share is located.
DN/IP Filter	This shows which domain name(s) or IP address(es) have read/write access to the NFS shares. Refer to <a href="#">Section 11.5.1 on page 231</a> for the screen where you can configure this.
Comment	This shows a short description of the share.

You see a warning screen before you delete a volume.

**Figure 110** Delete an NFS Share

## 11.5.1 Add/Edit NFS Share

Use this screen to add or edit an NFS share.

Note: Some attributes of the NFS share cannot be edited.

Click **Add** or **Edit** in the **Network > NFS** screen to open the following:

**Figure 111** Network > NFS: Add/Edit

The following table describes the labels in this screen.

**Table 59** Network > NFS: Add/Edit

LABEL	DESCRIPTION
Volume Name	Select the volume where the folder you want to add as an NFS share is located.
NFS Share Name	Enter the name you want to give to the NFS share.
Full Path	This shows the location of the NFS share in the NSA. The NFS server assigns this path to the share folder you input.
Comment	Enter a short description for the share.
DN/IP Filter	Enter the domain name(s) or IP address(es) that can have access to the NFS share. Enter '*' to make the share available to all users in the network. You can also enter a wildcard, such as '*.domain.com' to indicate that all users within that network have access to the share. Select the access rights you want to grant to each domain name or IP address you enter and click <b>Add</b> . <ul style="list-style-type: none"> <li>• <b>Read Only</b> - Users with this access right can only view and copy files in the NFS share but cannot modify or delete them.</li> <li>• <b>Read/Write</b> - Users with this access right can view, edit or delete files in the NFS share.</li> </ul>
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 11.5.2 NFS Session

Use this screen to view a list of active NFS sessions. You can see which users are connected the NFS shares.



Click **NFS Session** in the **Network > NFS** screen to open the following.

**Figure 112** Network > NFS: NFS Session

NFS Session				
Type	NFS Share Path	Username	Connected At	IP Address
Currently, there are no NFS sessions.				
<input type="button" value="OK"/>				

The following table describes the labels in this screen.

**Table 60** Network > NFS: NFS Session

LABEL	DESCRIPTION
Type	This shows if the NFS share is active or not.
NFS Share Path	This shows the location of the share in the NSA.
Username	This shows the username of the active user connected to the NFS share.
Connected At	This displays the date and time the user last connected to the NSA in year, month, day, hour, minute, second format.
IP Address	This shows the IP address of the user accessing the NFS share.
OK	Click this to close the window.

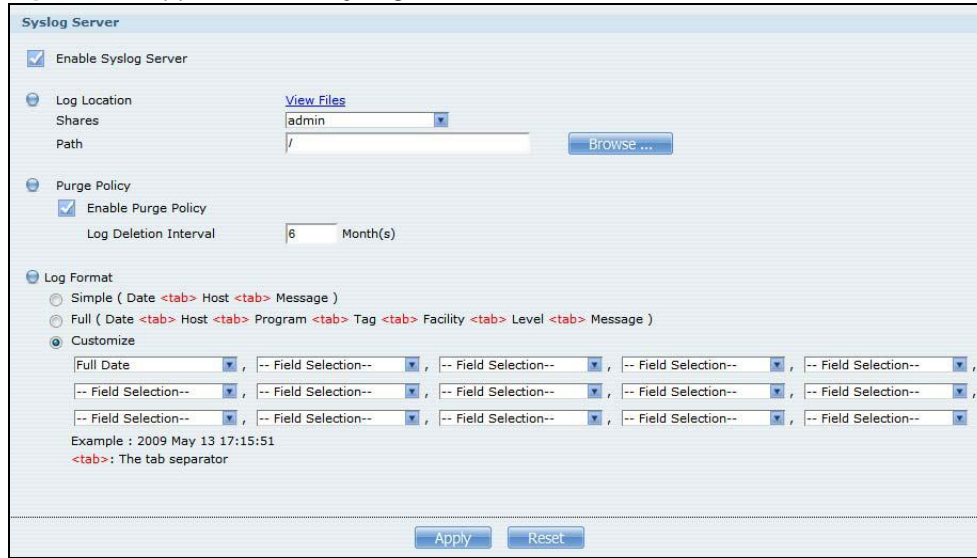
## 11.6 Syslog Server Screen

Use this screen to configure the NSA to accept syslog logs from syslog clients such as ZyXEL's G-4100 v2.

Note: You may need to configure any firewalls between the NSA and the syslog clients in order to let the syslog traffic go to the NSA.

Click **Applications > Syslog Server** to open the following screen.

**Figure 113** Applications > Syslog Server



The following table describes the labels in this screen.

**Table 61** Applications > Syslog Server

LABEL	DESCRIPTION
Enable Syslog Server	Select this to have the NSA accept syslog logs from syslog clients. Clear it to stop the NSA from accepting syslog logs from syslog clients.
Log Location	Click <b>View Files</b> to browse to where you want to store the syslog logs on the NSA.
Shares	Select the share in which to store the syslog logs.
Path	Use this if you want to further specify a folder within the share. This field displays the share folder's path. Type the location of the folder using forward slashes as branch separators or use <b>Browse</b> to find or create a folder on the NSA. <div> </div> <p>After you click <b>Apply</b> in the <b>Syslog Server</b> screen the NSA creates a folder for the current month's logs. The folder's name uses the year and month in YYYYMM format.</p>
Purge Policy	Select <b>Enable Purge Policy</b> and set a number of months in the <b>Log Deletion Interval</b> field that displays to have the NSA delete the syslog messages after keeping them for the specified period of time.  Regardless of how you set the purge policy, to save hard disk space the NSA archives the syslog logs in a .tgz file on the second day of each month and deletes the original folder and syslog files. The NSA creates a new folder for the syslog logs it receives after that. You can use a zip program such as 7-zip to open the archives.

**Table 61** Applications > Syslog Server

LABEL	DESCRIPTION
Log Format	Select the format you want to use for recording the received logs.  The <b>Example</b> item below the drop-down list boxes displays how the selected custom format looks. For example, if you select <b>Full Date</b> , the individual log entries would display with something like 2009 May 13 17:15:51 in front of them.
Apply	Click this to save your changes.
Reset	Click this to restore the screen's last-saved settings.

## 11.7 TFTP Server Screen

Trivial File Transfer Protocol (TFTP) is an Internet file transfer protocol similar to FTP and often used for transmitting large numbers of small files. Use this screen to configure the NSA to accept log files from TFTP clients such as ZyXEL's G-4100 v2.

Note: You may need to configure any firewalls between the NSA and the TFTP clients in order to let the log files go to the NSA.

Click **Applications > TFTP Server** to open the following screen.


**Figure 114** Applications > TFTP Server

The following table describes the labels in this screen.

**Table 62** Applications > TFTP Server

LABEL	DESCRIPTION
Enable TFTP Server	Select this to have the NSA accept log files from TFTP clients. Clear it to stop the NSA from accepting log files from TFTP clients.
Upload / Download Directory Setting	Click <b>View Files</b> to browse to where you want to store the log files on the NSA.
Shares	Select the share in which to store the log files.

**Table 62** Applications > TFTP Server

LABEL	DESCRIPTION
Path	Use this if you want to further specify a folder within the share This field displays the share folder's path. Type the location of the folder using forward slashes as branch separators or use <b>Browse</b> to find or create a folder on the NSA. 
Apply	Click this to save your changes.
Reset	Click this to restore the screen's last-saved settings.

## 11.8 eMule Screens

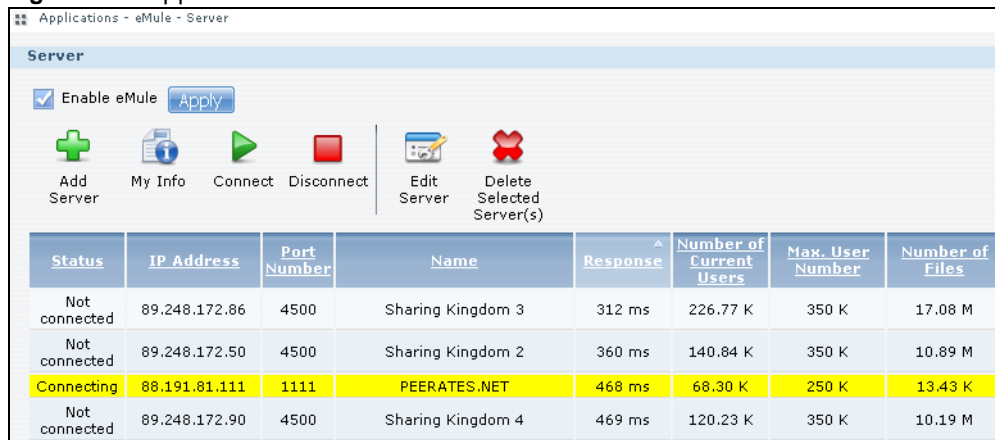
Use these screens to manage the eMule application in your NSA. eMule is a peer-to-peer (P2P) file-sharing console that lets you download files from the Internet. It works with eDonkey and Kad networks.

### 11.8.1 eMule Server Screen

Use this screen to configure the eMule server.

Click **Applications > eMule > Server** to open the following screen.

**Figure 115** Applications > eMule > Server



Status	IP Address	Port Number	Name	Response	Number of Current Users	Max. User Number	Number of Files
Not connected	89.248.172.86	4500	Sharing Kingdom 3	312 ms	226.77 K	350 K	17.08 M
Not connected	89.248.172.50	4500	Sharing Kingdom 2	360 ms	140.84 K	350 K	10.89 M
Connecting	88.191.81.111	1111	PEERATES.NET	468 ms	68.30 K	250 K	13.43 K
Not connected	89.248.172.90	4500	Sharing Kingdom 4	469 ms	120.23 K	350 K	10.19 M

The following table describes the labels in this screen.

**Table 63** Applications > eMule > Server

LABEL	DESCRIPTION
Server	You can add multiple servers in this screen. However, the NSA can only connect to one eMule server at a time.
Enable eMule	Check this and click <b>Apply</b> to enable the eMule application.
Add Server	Click this to add an eMule server. A server provides a list of available files for download, users sharing them and other information.  Refer to <a href="#">Section 11.8.2 on page 238</a> for the <b>Add Server</b> screen.
My Info	Select a server from the list and click this to view the details and connection status of the server.  Refer to <a href="#">Section 11.8.4 on page 239</a> for the <b>My Info</b> screen.
Connect	Click this to connect to the selected server or a random server if no server is selected.
Disconnect	Select a server from the list and click this to disconnect from the server.
Edit Server	Select a server from the list and click this to edit the server's information, including the server name and IP address.  Refer to <a href="#">Section 11.8.3 on page 238</a> for the <b>Edit Server</b> screen.
Delete Selected Server(s)	Select the server(s) from the list and click this to delete the server(s) from the list.
The table lists your servers. Click a column's heading to sort the entries by that criteria.	
Status	This shows the status of the NSA's connection to the server: <b>Connected, Connecting</b> or <b>Not Connected</b> .
IP Address	This shows the IP address of the server.
Port Number	This shows the port number used by the server for file-sharing.
Name	This shows the name of the server.
Response	This shows the length of time (in milliseconds) that the server took to reply to the NSA.
Number of Current Users	This shows the number of users currently connected to the server.
Max. User Number	This shows the total number of users that can connect to the server at the same time.
Number of Files	This shows the number of files available for download in the server.

You see a warning screen before you delete a server.

**Figure 116** Delete a Server



## 11.8.2 Add Server

Use this screen to add a server for the eMule application.

Click **Add** in the **Applications > eMule > Server** screen to add a server.

**Figure 117** Applications > eMule > Server: Add

The following table describes the labels in this screen.

**Table 64** Applications > eMule > Server: Add

LABEL	DESCRIPTION
Server IP	Select this if you know the server name, IP address and port number of the eMule server you want to add.
Server Name	Enter the server name.
IP Address	Enter the IP address of the server.
Port Number	Enter the port number used by the server for file-sharing.
ED2K Link	Select this and enter the ED2K link for the eMule server you want to add.  The ED2K link is used within the eMule network and contains information about the server.
Insert server.met from URL	Select this and enter the URL from which you want to download the server list that you want the NSA to use.
Apply	Click this to apply your changes.
Cancel	Click this to return to the previous screen without saving.

## 11.8.3 Edit Server

Use this screen to edit a server for the eMule application.

Click **Edit** in the **Applications > eMule > Server** screen to edit a server.

**Figure 118** Applications > eMule > Server: Edit

The following table describes the labels in this screen.

**Table 65** Applications > eMule > Server: Edit

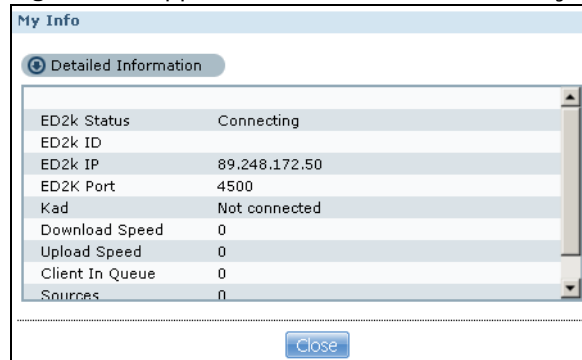
LABEL	DESCRIPTION
Server Name	Enter the server name.
IP Address	Enter the IP address of the server.
Port Number	Enter the port number of the server.
Apply	Click this to apply your changes.
Cancel	Click this to return to the previous screen without saving.

## 11.8.4 My Info

Use this screen to view the server details, including the status, IP address and download/upload speeds.

Click **MyInfo** in the **Applications > eMule > Server** screen to view the server details.

**Figure 119** Applications > eMule > Server: MyInfo



The following table describes the labels in this screen.

**Table 66** Applications > eMule > Server: MyInfo

LABEL	DESCRIPTION
ED2k Status	This shows the status of the NSA's connection to the server: <b>Connected</b> , <b>Connecting</b> or <b>Not Connected</b> .
ED2k ID	This is the identification given to the NSA by the eMule server. The ID comes in two types: <ul style="list-style-type: none"> <li>• <b>High ID</b> - The NSA connects to the server directly.</li> <li>• <b>Low ID</b> - The NSA connects to the server from behind a firewall.</li> </ul>
ED2k IP	This is the IP address of the eMule server to which the NSA is connected.
ED2k Port	This is the port number of the eMule server to which the NSA is connected.
Kad	This shows the status of the NSA's connection to the Kad network: <b>Connected</b> or <b>Not Connected</b> .  Kad is a shortcut for Kademlia network, which does not use servers to store files or user information in order to run a peer-to-peer network. Instead it employs peers/clients as small "servers" and runs queries through these peers.
Download Speed	This shows the current download speed of the eMule client.
Upload Speed	This shows the current upload speed of the eMule client.
Client in Queue	This shows the number of peers waiting to connect to the NSA to download its file (s).

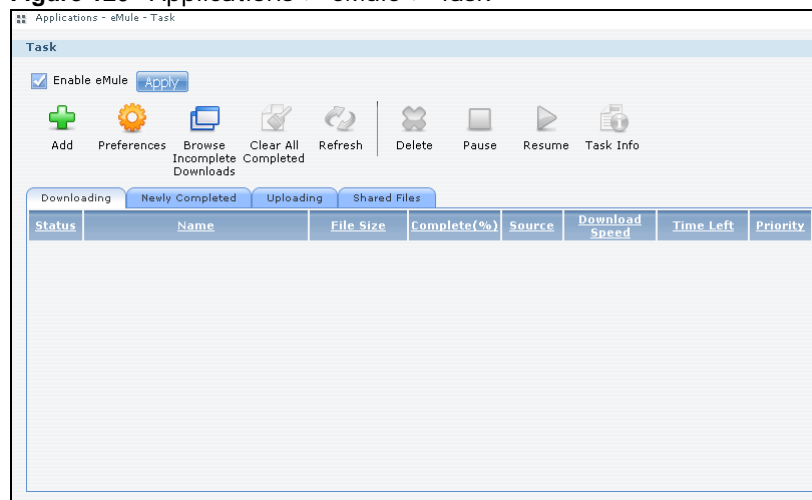
**Table 66** Applications > eMule > Server: MyInfo

LABEL	DESCRIPTION
Sources	This shows the total number of peers that can share the required files to the NSA eMule client.
Close	Click this to exit the screen.

## 11.8.5 eMule Task Screen

Use this screen to view tasks, including completed, downloading, uploading and shared tasks, that are being handled by the NSA.

Click **Applications > eMule > Task** screen to view the task details.

**Figure 120** Applications > eMule > Task

The following table describes the labels in this screen.

**Table 67** Applications > eMule > Task

LABEL	DESCRIPTION
Task	
Enable eMule	Check this and click <b>Apply</b> to enable the eMule application.
Add	Click this to add a download task (ED2K link) to the list. Refer to <a href="#">Section 11.8.6 on page 242</a> for the <b>Add Task</b> screen.
Preferences	Click this to open a screen where you can set the default location for saving downloaded files. You can also configure your eMule download settings. Refer to <a href="#">Section 11.8.7 on page 243</a> for the <b>Preferences</b> screen.
Browse Incomplete Downloads	Click this to open a screen where you can see a list of *.part.met files that the NSA is still in the process of downloading. Refer to <a href="#">Section 11.8.9 on page 246</a> for the <b>Share Browsing</b> screen.
Clear All Completed	Click this to remove all completed downloads from the task list. This only removes the newly completed task(s) in this session.
Refresh	Click this to refresh the task screen.
Delete	Select an item from the list and click this to delete the task.
Pause	Select an item from the list and click this to pause the task.



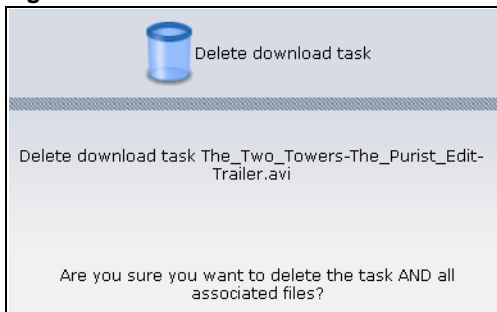
**Table 67** Applications > eMule > Task

LABEL	DESCRIPTION
Resume	Select a paused item from the list and click this to resume the task.
Task Info	Select an item from the list and click this to view the details and status of the task.
The table lists your tasks. Click a column's heading to sort the entries by that criteria.	
Downloading	This table shows a list of download tasks that are still in progress.
Newly Completed	This table shows a list of tasks that have been completed but have not been cleared from the list.
Uploading	This table shows a list of upload tasks that are still in progress.
Shared Files	This table shows a list of files on the NSA that are available for download by other peers in the network.
Status	This shows the current status of the task: <b>Waiting</b> or <b>Downloading</b> .
Name/File Name	This shows the name of the file(s) associated to the task.
File Size/Size	This shows the size of the file(s) associated in the task.
Complete (%)	This shows the percentage of the file that has been downloaded by the NSA. It also indicates what percent of the file still needs to be downloaded.
Source	This shows the total number of peers that can share the required files to the NSA eMule client.
Download Speed	This shows the download speed of the NSA for the task.
Time Left	This shows how much more time the NSA needs to complete the file's download.
Priority	Use this field to set the priority for the task. Choose from <b>Auto</b> , <b>Low</b> , <b>Normal</b> or <b>High</b> . Select <b>Auto</b> to have the NSA automatically determine the task's priority. Select <b>High</b> to have the NSA complete this task before the others.
Transferred	This shows what percent of the file the NSA has uploaded to other peers. This column is available in the <b>Uploading</b> tab.
Upload Speed	This shows the upload speed of the NSA. This column is available in the <b>Uploading</b> tab.
Requests	This shows the number of requests for a shared file. This column is available in the <b>Shared Files</b> tab.
Accepted Requests	This shows the number of file requests granted by the NSA. This column is available in the <b>Shared Files</b> tab.

Note: Download tasks initially appear in the **Downloading** tab of the eMule **Task** screen. Depending on its status, it can eventually show up in the other tabs (**Newly Completed**, **Uploading** or **Shared Files** tabs).

You see a warning screen before you delete a task.

**Figure 121** Delete a Task



## 11.8.6 Add Task

Use this to add a download task to the NSA.

Click **Add** in the **Applications > eMule > Task** screen to add a task.

**Figure 122** Applications > eMule > Task: Add

	Share	Path
Put incomplete downloads in	admin	/eMule/Temp
Move completed downloads to	admin	/eMule/Incoming

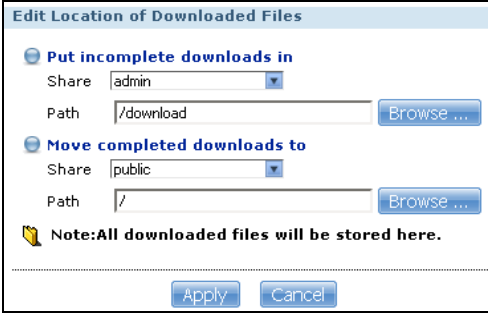


**Caution:**  
Do not use the NSA for illegal downloads. Illegal downloading or sharing of files can result in severe civil and criminal penalties. You are subject to the restrictions of copyright laws and any other applicable laws and will bear the consequences of any infringements thereof. ZyXEL takes NO responsibility or liability for your use of the download service feature.

The following table describes the labels in this screen.

**Table 68** Applications > eMule > Task: Add

LABEL	DESCRIPTION
Source	
ED2K Link	Paste the ED2K link of the file you want to download into this field.  The ED2K link identifies files in the eMule network. It starts with ed2k:// and may contain the name and size of the file you want to download.
Location of Downloaded Files	This shows where the NSA stores new downloads ( <b>Put incomplete downloads in</b> ) and where the NSA moves completed downloads ( <b>Move completed downloads to</b> ).  The <b>Share</b> column shows the name of the share where the file is downloaded.  The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.

**Table 68** Applications > eMule > Task: Add

LABEL	DESCRIPTION
Edit	<p>Click this to open the following screen where you can set the default folder location where you <b>Put incomplete downloads in</b> and <b>Move complete downloads to</b>:</p>  <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the destination share from the drop-down list.</li> <li>• <b>Path</b> - This field displays the share folder's path. You can use <b>Browse</b> to find or create a folder on the NSA or type the location of the folder using forward slashes as branch separators.</li> </ul>  <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a folder or file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 11.8.7 Preferences

Use this screen to configure your eMule settings, such as port numbers to use, its download/upload rates and the maximum number of peers allowed to connect to the NSA.

Click **Applications > eMule > Task > Preferences** to open the following screen.

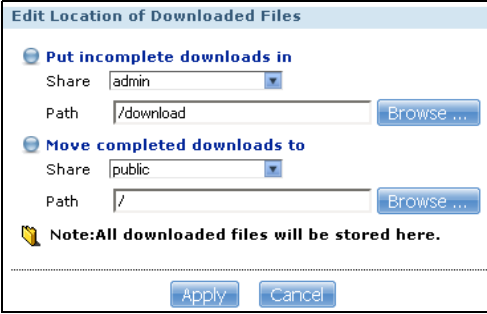


**Figure 123** Applications > eMule > Task > Preferences

The following table describes the labels in this screen.

**Table 69** Applications > eMule > Task > Preferences

LABEL	DESCRIPTION
Username	
Username	Enter your user name that identifies the NSA in the eMule network.
Location of Downloaded Files	<p>This shows where the NSA stores new downloads (<b>Put incomplete downloads in</b>) and where the NSA moves completed downloads (<b>Move completed downloads to</b>).</p> <p>The <b>Share</b> column shows the name of the share where the file is downloaded.</p> <p>The <b>Path</b> column points to the location in the share where the NSA will save the downloaded files.</p>

**Table 69** Applications > eMule > Task > Preferences

LABEL	DESCRIPTION
Edit	<p>Click this to open the following screen where you can set the default folder location where you <b>“Put incomplete downloads in”</b> and <b>“Move complete downloads to”</b>:</p>  <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the destination share from the drop-down list.</li> <li>• <b>Path</b> - This field displays the share folder's path. You can use <b>Browse</b> to find or create a folder on the NSA or type the location of the folder using forward slashes as branch separators.</li> </ul>  <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a folder or file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Port Number	
UDP Port	Enter the UDP port number you want to use for file transfers.
TCP Port	Enter the TCP port number you want to use for file transfers.
Upload and Download Rate	
Max. download rate	Enter the maximum download rate for download tasks.
Max. upload rate	Enter the maximum upload rate for upload tasks.
Connection	
Maximum Number of Active Connections	Enter the maximum number of eMule peer-to-peer connections.
IP Filter	
Edit IP Filter	<p>Click this to edit the IP Filter.</p> <p>IP filtering prevents your NSA from accessing certain networks and IP addresses that may be hosting malicious programs.</p> <p>Refer to <a href="#">Section 11.8.8 on page 246</a> to view and configure the <b>Edit IP Filter</b> screen.</p>
Apply	Click this to save your changes.

**Table 69** Applications > eMule > Task > Preferences

LABEL	DESCRIPTION
Reset	Click this to clear the fields.
Cancel	Click this to return to the previous screen without saving.

## 11.8.8 Edit IP Filter

Use this screen to enable IP filtering which prevents your NSA from accessing certain networks and IP addresses that may be hosting malicious programs.

**Figure 124** Applications > eMule > Task > Preferences: Edit IP Filter

The following table describes the labels in this screen.

**Table 70** Applications > eMule > Task > Preferences: Edit IP Filter

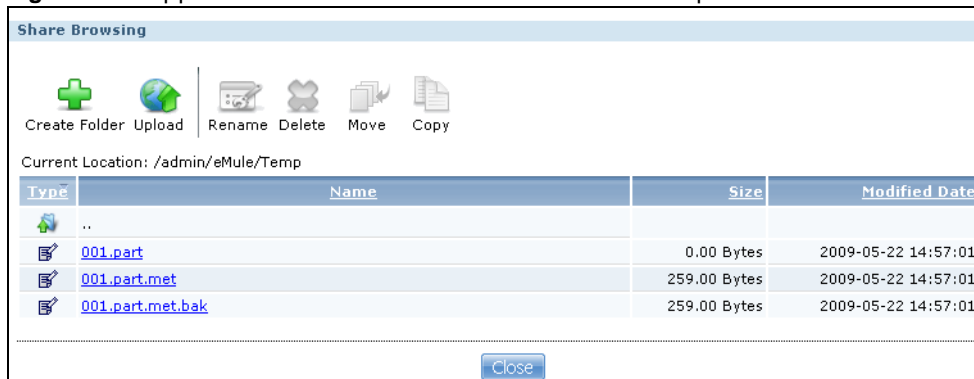
LABEL	DESCRIPTION
Enable IP Filter	Click this to enable IP filtering. This prevents your NSA from accessing certain networks and IP addresses that may be hosting malicious programs.  Select <b>Update IP Filter Table File from the Internet Every Week</b> if you know the web location of the IP filter table you want to use. Enter the link where your NSA can acquire the list of networks and IP addresses. The NSA checks this link every week and uses the latest IP filter table available.  Select <b>Upload IP Filter Table</b> if you want to use an IP filter table from your local computer.
Apply	Click this to save your changes.
Reset	Click this to return to the previous screen without saving.

## 11.8.9 Share Browsing

Use this screen to view a list of files that are still being downloaded by the NSA. The files are located in the eMule\Temp folder in the Admin share by default.

Click **Applications > eMule > Task > Browse Incomplete Downloads** to open the following screen.

**Figure 125** Applications > eMule > Task > Browse Incomplete Downloads




The following table describes the labels in this screen.

**Table 71** Sharing > Shares > Share Browser

LABEL	DESCRIPTION
Create Folder	Type a folder name and click <b>Apply</b> to make a new folder. The name can be 1 to 239 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing folder in the same path. See <a href="#">Section 4.4.6 on page 54</a> for more information on folder names.
Upload	Click this to add files to the share. Use <b>Browse</b> to locate a file and click <b>Apply</b> to upload the file. Note that the size of each file should be less than 2 GB. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><b>Upload Files</b></p> <p>File 1 <input type="text"/> <input type="button" value="Browse..."/></p> <p>File 2 <input type="text"/> <input type="button" value="Browse..."/></p> <p>File 3 <input type="text"/> <input type="button" value="Browse..."/></p> <p>File 4 <input type="text"/> <input type="button" value="Browse..."/></p> <p>File 5 <input type="text"/> <input type="button" value="Browse..."/></p> <p> <b>Note: The size of uploaded files can't be more than 2G.</b></p> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div>
Rename	Select a folder or file and click this to open a screen. Enter the name you want and click OK to make the changes. <p><b>Note: When you change a file name, make sure you keep the file extension</b></p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><b>Rename</b></p> <p>File Name <input type="text" value="070804102639741.jpg"/></p> <p><input type="button" value="Apply"/> <input type="button" value="Close"/></p> </div>

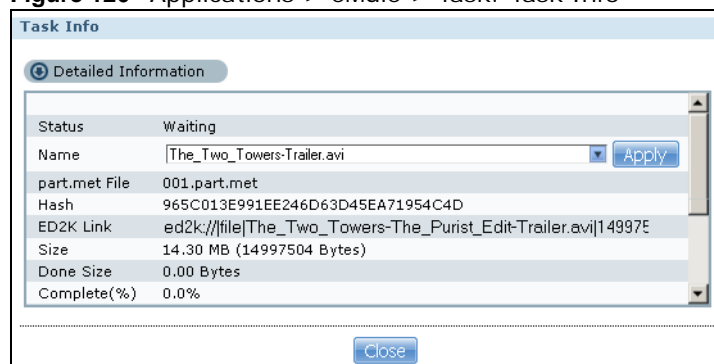
**Table 71** Sharing > Shares > Share Browser (continued)

LABEL	DESCRIPTION
Delete	Select a file/folder from the list and click this to open a warning screen. Click <b>Yes</b> to delete the file/folder, or click <b>No</b> to close the screen. 
Move	Select a file/folder from the list and click this to relocate the file/folder to another share.
Copy	Select a file/folder from the list and click this to make a duplicate of the file/folder to another share.
Current location	This is the name of the share and folder path that you are in.
Type	The icon in this column identifies the entry as a folder or a file.  The folder with an arrow pointing up is for the link that takes you to the next higher layer in the share's folder tree.
Name	This section lists the share's existing folders or files. Click to the right of the file/folder name to select the file/folder. You can also click the folder's name to navigate to a sub-folder within the folder.
Size	This field displays size of the file.
Modified Date	This field displays a file's latest modification date.
Close	Click this to close the screen.

## 11.8.10 Task Info

Use this screen to view eMule task details, such as status, file name, file size and its download progress.

Click **Task Info** in **Applications > eMule > Task** screen to open the following.

**Figure 126** Applications > eMule > Task: Task Info



The following table describes the labels in this screen.

**Table 72** Applications > eMule > Task: Task Info

LABEL	DESCRIPTION
Status	This shows the current status of the task - <b>Waiting</b> or <b>Downloading</b> .
Name	This shows the file name of the file associated with the task. You can change this file name by entering the new name and clicking <b>Apply</b> .
part.met File	This shows the temporary file name for an incomplete file.  Files in peer-to-peer networks can be divided into several parts for easier download. Once all the parts have been downloaded, you can run one part and the file automatically rebuilds itself. If the download of the file(s) is not completed, the file parts cannot open on their own.
Hash	This shows the hash value of the download file.  This is a text string that can be interpreted by eMule to check the downloaded file's integrity.
ED2K Link	This shows the ED2K link for this file.  The ED2K link identifies files in the eMule network. It starts with ed2k:// and may contain the name and size of the file you want to download.
Size	This shows the size of the file associated with the task.
Done Size	This shows the size of the file that has been downloaded so far.
Complete (%)	This shows what percent of the file has been downloaded so far.
Source	This shows the total number of peers that can share the required files to the NSA eMule client.
Download Speed	This shows the download speed for the task.
Time Left	This shows how much time is needed to complete the task.
Priority	This shows the priority of this task.  You can set this in <a href="#">Section 11.8.5 on page 240</a> .
Seen Complete	This shows the last time a source with the complete file was online.
Close	Click this to exit the screen.

### 11.8.11 eMule Search Screen

Use this screen to search for files available in an eMule server using keywords and other parameters, such as file type, file size, and extension names.

Click **Applications > eMule > Search** to open the following screen.

**Figure 127** Applications > eMule > Search

The following table describes the labels in this screen.

**Table 73** Applications > eMule > Search

LABEL	DESCRIPTION
Search	
Enable eMule	Check this and click <b>Apply</b> to enable the eMule application.
Keyword(s)	Enter words that are related to the file you want to download.
File Type	Select the file type that you want to download.
Method	Select the search method you want eMule to employ.
Min Size	Enter the minimum file size you want included in the search results.
Max Size	Enter the maximum file size you want included in the search results.
Min Sources	Enter the minimum number of peers sharing the file you want to download.
Extension	Enter the file extensions separated by commas of files you want included in the search results.
Search	Click this to have the NSA search the eMule network for files that match the criteria you have set.
Clear	Click this to clear the fields.
Download	Select a file from the results and click this to start downloading the file.
This table shows the results of the search.	
File Name	This shows the name of the file(s) that match the criteria you have set.
File Size	This shows the size of the file(s) that match the criteria you have set.
Source	This shows how many peers are currently available to share this file so that the NSA can download it.

## 11.9 pyLoad Screen

Use this screen to configure the NAS so you can use pyLoad to manage your downloads, including those from one-click hosting sites.

Click **Applications > pyLoad** to open the following screen.

**Figure 128** Applications > pyLoad

The following table describes the labels in this screen.

**Table 74** Applications > pyLoad

LABEL	DESCRIPTION
Enable pyLoad	Select this to have the NSA manage your downloads. Clear it to turn the feature off.
Management Page	This is the IP address and port number of the NSA's pyLoad management login screen. The pyLoad management login screen uses the NSA's IPv4 address and the port number you configure. Click this link to go to it.
Username	Only the admin account can log into the pyLoad management screen.
Password	You can configure a separate password for using the admin account to access the NSA's pyLoad management screen.
Password (Confirm)	Type the same password again to make sure you entered it correctly.
Port Number	Set the pyLoad management page's port number. The range of valid port numbers is 1024~65536. Include this port number after the IP address when manually entering the pyLoad management login page's address in your browser's address bar. For example, 192.168.1.2:7272.
Apply	Click this to save your changes.
Reset	Click this to restore the screen's last-saved settings.

## 11.10 ownCloud Setup

Use the **Package Management** screen to install the ownCloud package. Use ownCloud to store, back up, synchronize, and share files, photos, calendars, and more with computers and mobile devices. Use the following procedure to install the ownCloud package.

- 1 Click **Firmware/Packages > Package** and select **ownCloud**. Then click the **Install/Upgrade** icon.

Note: If ownCloud does not appear, click the **Retrieve List from Internet** icon to update the list.

**System Setting - Firmware/Packages**

FW Upgrade | Package

**Package Management**

Retrieve List From Internet | **Install/Upgrade** | Uninstall/Cancel Installation | Enable | Disable | Package Info

Status	Package Name ^	Requires	Version	Description	Management Page
Built-in	BackupPlanner		001zypkg010	Use this to schedule and run backup jobs for files stored in your NAS to an internal drive, external storage device or to another NAS in the network.	<a href="#">Protect &gt; Backup</a> <a href="#">Protect &gt; Restore</a>
Not Installed	DyDNS		001zypkg007	This gives your NAS a domain name with a dynamic IP address.	
Not Installed	Gallery	PHP-MySQL- phpMyAdmin	3.0.4zypkg006	This web-based application allows your NAS to host pictures. Use the NAS administrator credentials to log in. The administrator can then create accounts for other users.	
Built-in	GoogleDrive		0.3.0zypkg001	This offers service of 2-way synchronization between NAS and Google Drive.	<a href="#">Applications &gt; GoogleDrive</a>
Not Installed	NFS		1.1.4zypkg004	NFS (Network File System) is a file-sharing protocol most commonly implemented on Unix-like systems.	
Not Installed	NZBGet		11.0zypkg002	This package downloads .nzb file from Usenet. Default username:nzbget password:1234	
Not Installed	OwnCloud	PHP-MySQL- phpMyAdmin	5.0.8zypkg001	This allows you to create and manage your private cloud. Please use the admin/1234 as username and password to log in OwnCloud.	

- The following confirmation screen appears. Click **Apply**. The NSA must have a connection to the Internet to download the package.

**Install/Upgrade**

Install/Upgrade Package List

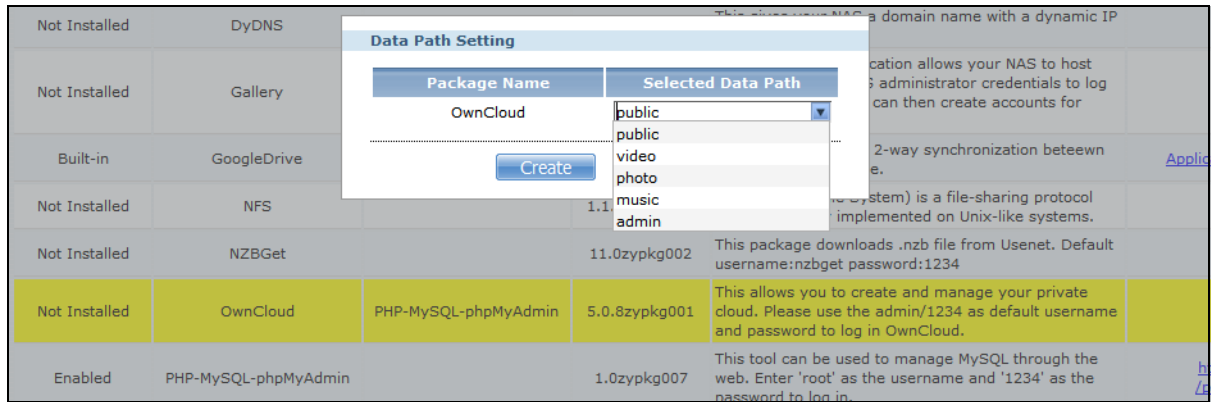
Action	Package Name ^	Version	Size	Source
Install	OwnCloud	5.0.8zypkg001	62.51 MB	NAS

Enable package(s) after installing.

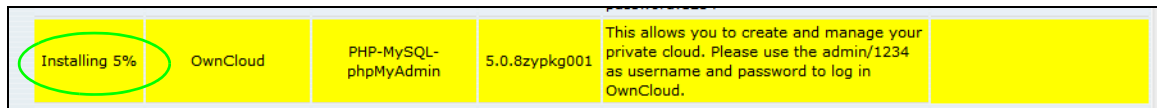
Package Total Size: 62.51 MB  
Current Free Size: 457.06 GB

**Apply** | Cancel

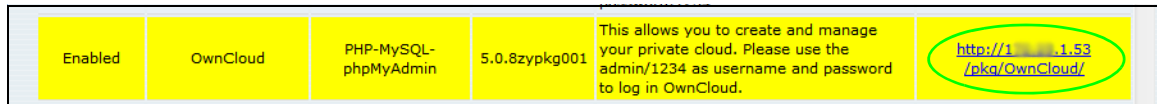
- 3 Select the share in which to create a folder for ownCloud data and click **Create**.



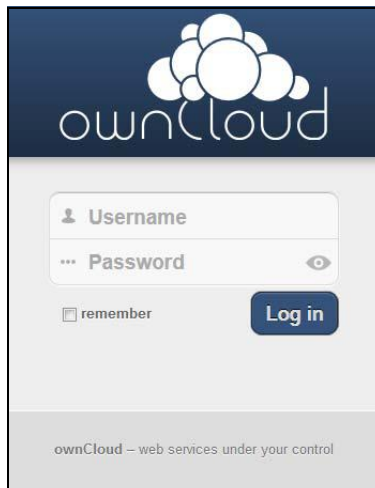
- 4 The installation progress appears in the ownCloud row.



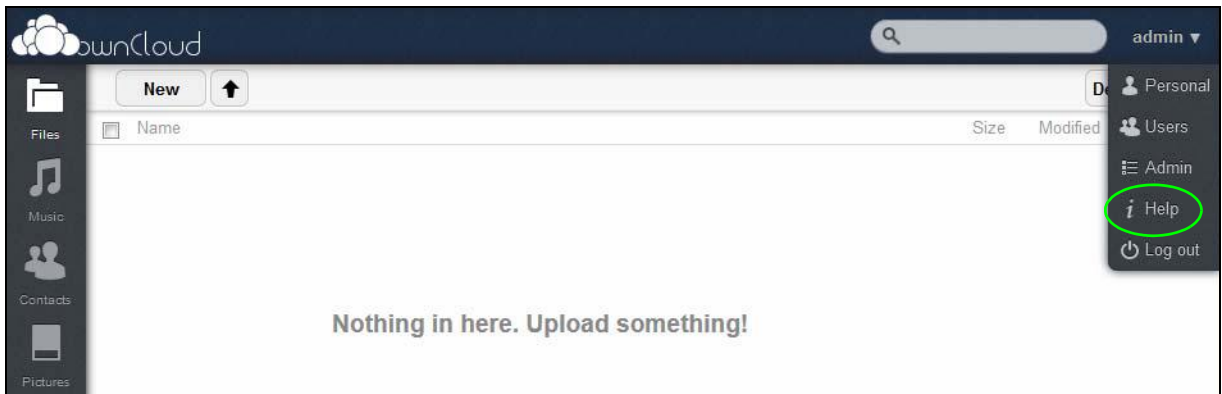
- 5 A link appears in the **Management Page** column after installation finishes. Click this link.



- 6 The ownCloud login screen appears. Use admin and 1234 for your first login.



- 7 The main ownCloud screen displays. Click the drop-down arrow next to your user name in the upper-right corner to see the help for more information on using ownCloud.



Note: Get ownCloud desktop clients from [www.owncloud.com](http://www.owncloud.com) and ownCloud mobile apps from the Apple App Store, Google Play, or Amazon Appstore.

## 11.11 Polkast Setup

Use the **Package Management** screen to install the Polkast package. Use Polkast for fast, secure, direct access to your Media Server from your iPad, iPhone or Android device. Use the following procedure to install the Polkast package.

- 1 Click **Firmware/Packages > Package** and select **Polkast**. Then select the **Install/Upgrade** icon.

Note: If Polkast does not appear, click the **Retrieve List from Internet** icon to update the list.

**Figure 129** Polkast Installation Step 1

The screenshot shows the 'Applications - Package' management interface. At the top, there are several icons: 'Retrieve List From Internet', 'Install/Upgrade' (circled in green), 'Uninstall/Cancel Installation', 'Enable', 'Disable', and 'Package Info'. Below the icons is a table listing various packages. The 'Polkast' package is highlighted in yellow. The table has columns for Status, Package Name, Requires, Version, Description, and Management Page.

Status	Package Name <sup>^</sup>	Requires	Version	Description	Management Page
Not Installed	BackupPlanner		001zypkg008	Use this to schedule and run backup jobs for files stored in your NAS to an internal drive, external storage device or to another NAS in the network.	
Not Installed	DyDNS		001zypkg005	This gives your NAS a domain name with a dynamic IP address.	
Not Installed	Gallery	PHP-MySQL-phpMyAdmin	3.0.2zypkg005	This web-based application allows your NAS to host pictures. Use the NAS administrator credentials to log in. The administrator can then create accounts for other users.	
Not Installed	NFS		1.1.4zypkg004	NFS (Network File System) is a file-sharing protocol most commonly implemented on Unix-like systems.	
Not Installed	PHP-MySQL-phpMyAdmin		1.0zypkg005	This tool can be used to manage MySQL through the web. Enter 'root' as the username and '1234' as the password to log in.	
Not Installed	Polkast		001zypkg076	Fast, secure, direct access to your Media Server from your iPad, iPhone or Android device.	
Not Installed	SMART		5.39zypkg005	Use S.M.A.R.T. (Self Monitoring, Analysis, and Reporting Technology) to monitor hard disks. It notifies you ahead of time of any issues that can result to the hard disk's poor performance or failure.	

- The following confirmation screen appears. Click **Apply**. The NSA must have a connection to the Internet to download the Polkast package.

**Figure 130** Polkast Installation Step 2

The screenshot shows the 'Install/Upgrade' confirmation screen. It displays the package name 'Polkast', version '001zypkg076', and size '34.67 MB'. There is a checkbox for 'Enable package(s) after installing.' which is checked. Below this, it shows 'Package Total Size' as 34.67 MB and 'Current Free Size' as 228.05 GB. At the bottom, there are 'Apply' and 'Cancel' buttons, with the 'Apply' button circled in green.

Action	Package Name <sup>^</sup>	Version	Size	Source
Install	Polkast	001zypkg076	34.67 MB	Internet

Enable package(s) after installing.

Package Total Size: 34.67 MB  
 Current Free Size: 228.05 GB

- The installation progress appears in the Polkast row.

**Figure 131** Polkast Installation Step 3

The screenshot shows the 'Applications - Package' management interface. The 'Polkast' package is now shown with a status of 'Installing 25%'. The 'Apply' button from the previous step is circled in green.

Status	Package Name <sup>^</sup>	Requires	Version	Description	Management Page
Installing 25%	Polkast		001zypkg076	Fast, secure, direct access to your Media Server from your iPad, iPhone or Android device.	

- 4 A link appears in the **Management Page** column after installation finishes. Click this link.

**Figure 132** Polkast Installation Step 4

Enabled	Polkast	001zypkg076	Fast, secure, direct access to your Media Server from your iPad, iPhone or Android device.	<a href="http://172.23.26.13/pkg/Polkast">http://172.23.26.13/pkg/Polkast</a>
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- 5 The Polkast login screen appears. Click the link to create a new account or enter your login information for an existing account.

**Figure 133** Polkast Login

**Could not logon automatically.**

Polkast connects your mobile devices, computers and media server directly to create your own secure personal cloud.

With Polkast, you can securely access your entire file library stored on this media server any time from your computer, iPad, iPhone or Android device. Please login or register for a Polkast account here, then visit polkast.com to download the free companion applications.

If you don't have a Polkast account, it's easy and fast to create one. [Click here to create a new account.](#)

Polkast is offline.

Email

Password

Device name  
  Use system hostname

[Login](#)

[Can't access your account?](#)

NOTE: Polkast mobile apps are freely available on Apple App Store, Amazon AppStore and Android Market. Search for "polkast" in your device app store.

For more information visit, [www.polkast.com](http://www.polkast.com).

Note: For more information on using Polkast, visit [www.polkast.com](http://www.polkast.com). Get free Polkast mobile apps from the Apple App Store, Amazon AppStore, and Android Market. For Polkast Pro users the NSA does not count as a second homebase for pricing purposes.



## 11.12 GoogleDrive

Install the GoogleDrive package to synchronize local NSA user folders and Google Drive cloud storage accounts. This two-way synchronization means changes in the Google Drive account appear in the local sync folder and changes in the local sync folder appear in the Google Drive account.

Note: Do not store your only copy of a document in Google Drive or the local sync folder.

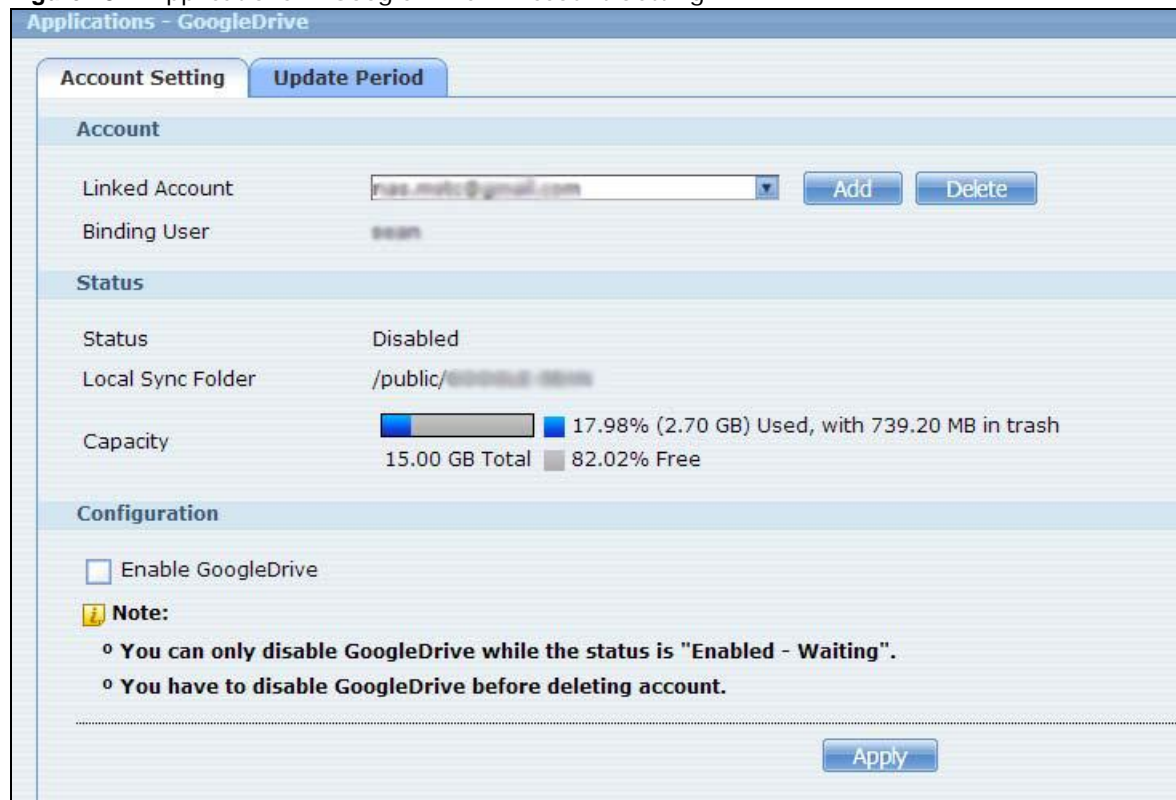
- Modifying or deleting a file or folder at either end modifies or deletes it at the other end.
- Moving a file out of the local sync folder or Google Drive deletes it at the other end.
- Use the **Protect** screens instead of Google Drive for backups (see [Section 11.14 on page 264](#)).
- You can link multiple NSA user accounts to Google accounts.
- You can link an individual NSA user account to multiple Google accounts.
- You can only link each individual Google account to one NSA user account.
- This package does not currently download Google Documents.

### 11.12.1 Account Setting Screen

Use the **Account Setting** screen to synchronize local NSA shares or folders and Google Drive accounts.

Click **Applications > GoogleDrive** to open the following screen.

**Figure 134** Applications > GoogleDrive > Account Setting



The following table describes the labels in this screen.

**Table 75** Applications > GoogleDrive > Account Setting

LABEL	DESCRIPTION
Linked Account	<p>Select a Google account linked to an NSA user account.</p> <p>Click <b>Add</b> to open a screen where you can link an NSA user account and a Google account.</p> <p>Click <b>Delete</b> to remove the NSA's link to the selected Google account. You must disable the Google Drive feature for the account before you can do this. A screen pops up to let you decide what to do with the data in the NSA's linked local sync folder.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">Do you want to delete data in "/public/...?"</p> <hr style="border: 0; border-top: 1px dotted black; margin: 5px 0;"/> <p style="text-align: center;"> <input type="button" value="Yes"/> <input type="button" value="No"/> <input type="button" value="Cancel"/> </p> </div> <p>Click <b>Yes</b> to delete all data in the local sync folder. Click <b>No</b> to remove the link to the selected Google account but keep the data in the local sync folder. Click <b>Cancel</b> to do nothing (keep the account link and data).</p>
Binding User	The NSA user account linked to the selected Google account.
Status	<p>The current status of the GoogleDrive feature for the selected Google account.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b> - The GoogleDrive feature is turned off. During this state you can use the other sections of this screen to add or delete linked accounts or enable Google Drive.</li> <li>• <b>Enabled - Waiting</b> - The GoogleDrive feature is configured, enabled, and waiting to perform the next Google Drive update. During this state you can use the other sections of this screen to add or delete linked accounts or disable Google Drive.</li> <li>• <b>Enabled - Synchronizing</b> - The GoogleDrive feature is synchronizing the local sync folder and the Google account. During this state you can use the other sections of this screen to add linked accounts during this state.</li> </ul>
Local Sync Folder	The NSA folder or share the NSA synchronizes with the linked Google account.
Capacity	The Google account's used, available, and total online Google Drive storage space.
Enable GoogleDrive	<p>Select this to have the NSA periodically synchronize the selected linked account's local sync folder and Google Drive storage. You can enable synchronizing with Google Drive for individual accounts and disable it for other accounts.</p> <p>Clear this option to disable synchronizing the selected linked account's local sync folder and Google Drive storage.</p>
Apply	Click this to save your changes.

## 11.12.2 Account Setting Add Screen

Use the **Account Setting Add** screen to link an NSA user account and a Google account. Click **Applications > GoogleDrive > Add** to open the following screen.

Note: The user has to log into the Google account on the same computer to allow the NSA to link to it.

**Figure 135** Applications > GoogleDrive > Account Setting > Add

The screenshot shows a multi-step dialog box titled 'Add'. It is divided into three main sections:

- Step 1 - Set A Local Sync Folder:** Contains a table with columns 'Share Name' and 'Path'. Below the table, it says 'There is currently no local sync folder.' and has an 'Edit' button.
- Step 2 - Select A User To Bind With Google Account:** Features a dropdown menu with 'JoeUser' selected. Below it is a yellow note icon and the text: 'Note: Please make sure that the user has enough quota.'
- Step 3 - Authorization:** Contains three sub-steps:
  - Step 3-1:** 'Click here to get the authorization code from Google' with a blue link.
  - Step 3-2:** 'Enter the authorization code below' with a text input field and a red asterisk below it.
  - Step 3-3:** 'Press Apply and authorization is done'.

At the bottom of the dialog are 'Apply' and 'Cancel' buttons.

The following table describes the labels in this screen.

**Table 76** Applications > GoogleDrive > Account Setting > Add

LABEL	DESCRIPTION
Step 1	Specify the folder on the NSA to synchronize with Google Drive for the local user.
Share Name	The name of a share on the NSA containing the folder the NSA synchronizes with Google Drive.
Path	The location of the folder the NSA synchronizes with Google Drive.
Edit	<p>Click this to open the following screen where you can specify the share or folder to synchronize with Google Drive. The NSA's sharing configuration must allow the user access. The user must also have a large enough quota on both the NSA and Google Drive to hold whatever files go in the local sync folder and in the Google Drive account (since they both end up containing everything you put in either).</p> <div> <p>The 'Edit Local Sync Folder' dialog has a 'Share' dropdown menu with 'public' selected and a 'Path' text input field with a red asterisk and a 'Browse ...' button next to it. 'Apply' and 'Cancel' buttons are at the bottom.</p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share or click <b>Browse</b> to navigate to the folder. Use a "/" to synchronize the entire share.</li> </ul>
Step 2	Select the local NSA user account to link with Google Drive.

**Table 76** Applications > GoogleDrive > Account Setting > Add (continued)

LABEL	DESCRIPTION
Step 3	<p>Click the link to get the authorization code from Google. The user must sign into the Google account. You may need to sign out of Google's services first if another user account is already signed in.</p> <div> </div> <p>The NSA GoogleDrive package uses the Grive app. Review what the Grive app wants to use and click <b>Accept</b> if you agree.</p> <div> </div> <p>Copy the code and paste it into the field in the Web Configurator screen.</p> <div> <pre>Please copy this code, switch to your application and paste it there: 4/PWAf8R6gGdiI4V54G7c_2UqaMB8.0jWhoTq2Li</pre> </div> <p>Click <b>Apply</b> to have the NSA connect to Google and complete the authorization. In the <b>Account Setting</b> screen, select the <b>Enable Google Drive</b> option and click <b>Apply</b> to start synchronizing your files with Google Drive.</p>

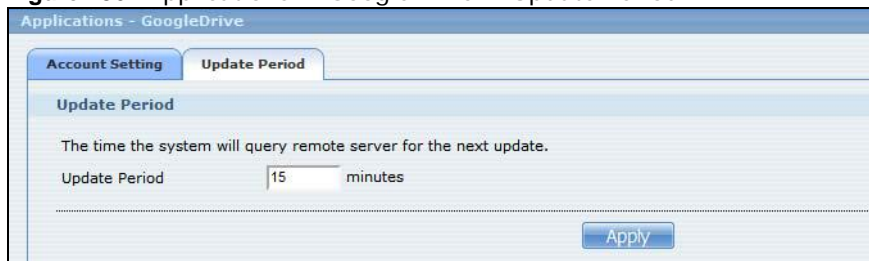
**Table 76** Applications > GoogleDrive > Account Setting > Add (continued)

LABEL	DESCRIPTION
Apply	Click this to save your changes and complete the authorization.
Cancel	Click this to return to the previous screen without saving.

### 11.12.3 Update Period Screen

Use the **Update Period** screen to set how often the NSA synchronizes with Google Drive. The NSA initiates the connections, thus you do not have to configure rules on a firewall located in front of the NSA to allow access.

Click **Applications > GoogleDrive > Update Period** to open the following screen.

**Figure 136** Applications > GoogleDrive > Update Period

The following table describes the labels in this screen.

**Table 77** Applications > GoogleDrive > Update Period

LABEL	DESCRIPTION
Update Period	Specify how frequently the NSA synchronizes the local sync folders and the linked Google Drive accounts. The range is 1 to 4320 minutes (3 days).
Apply	Click this to save your changes.

## 11.13 Memopal

Install the **Memopal** package to back up folders of files on the NSA to your Memopal online backup and storage account.

Note: Deleting files from your Memopal account's online backup set does not delete the files from the NSA, just as deleting a file from the NSA does not delete a backup copy in your Memopal account's online backup set.

Deleting a file or a folder from your Memopal account's online backup set deletes all versions of that file from the online backup set.

Click **Applications > Memopal** to open the following screen.

**Figure 137** Applications > Memopal

**Applications - Memopal**

**Status**

Status	Starting
To Backup	0
Backed up	0
Failures	0
Upload Speed	0 B/s
Progress	--

Restart Backup
Retry Failures
Backup Report

**Note:**  
**Size limitation of single file is 1GB.**

**Settings**

Enable Memopal

**General Setting**

Email  \*

Password  \*

Limit File Size  MB

**Schedule Setting**

Enable Schedule

Weekly

Daily  hours

Hourly  minutes

**Backup Folder Setting**

Share Name	Path	Actions
public	/memopal	

Share

Path  Browse ... Add

**Note:**  
**You must click "Apply" button to finish Backup Folder Setting.**

Apply
Reset

The following table describes the labels in this screen.

**Table 78** Applications > Memopal

LABEL	DESCRIPTION
Status	<p>This shows the status of the Memopal application's interaction with the Memopal server.</p> <p><b>Disabled:</b> The NSA Memopal application is turned off.</p> <p><b>Starting:</b> The backup job is initializing and the NSA is getting ready to back up.</p> <p><b>Running:</b> The backup job is executing.</p> <p><b>Stopped:</b> The backup job is stopped. This may be due to a network error, remote server error, or other issue.</p> <p><b>Completed:</b> The backup job finished.</p>
To Backup	The number of files remaining to back up.
Backed up	The number of files backed up already.
Failures	The number of files the NSA failed to back up to the Memopal server.
Upload Speed	This is how fast in Bytes per second the NSA is backing up to the Memopal server.
Progress	This shows the percentage of the files already backed up from the total files to be backed up.
Restart Backup	Re-scan all files and perform a backup.
Retry Failures	Only re-scan and back up files the NSA failed to back up.
Backup Report	Display back up record details.
Enable Memopal	Select this to back up files to your Memopal account. The rest of the configuration fields display.
Email	Enter the email address you use for your Memopal account.
Password	Enter the password for your Memopal account.
Limit File Size	Select this and enter a number of MegaBytes if you want to restrict the size of files the NSA uploads to the Memopal account. You have to enter your password again if you select this.
Enable Schedule	Select this to set when the Memopal backups occur. You have to enter your password again if you select this. Clear this to have the NSA back up files in the selected folders to your Memopal account in real-time whenever you add or modify the files.
Weekly	Select this to perform a Memopal backup on a weekly basis. The NSA performs the backup job every Sunday at 2:00 AM and continues until the job finishes.
Daily	Select this to perform a Memopal backup every day. The NSA performs the backup job every day at 2:00 AM. Use <b>hours</b> to specify for up to how many hours the NSA can perform a Memopal backup. Enter 0 in <b>hours</b> to have the NSA continue the backup job until it finishes (no time limit).
Hourly	Select this to perform a Memopal backup every hour. Use <b>minutes</b> to specify for up to how many minutes the NSA can perform a Memopal backup. Enter 0 in <b>minutes</b> to have the NSA continue the backup job until it finishes (no time limit).
Share Name	This is the name of the share containing a folder the NSA Memopal application backs up to the Memopal server.
Path	This field displays the share folder's path.
Actions	Click the <b>Delete</b> icon to remove the folder from the list of folders the NSA Memopal application backs up to the Memopal server.
Share	Select the share containing the folder to back up to the Memopal server.

**Table 78** Applications > Memopal (continued)

LABEL	DESCRIPTION
Path	Identify the folder to back up to the Memopal server.  Use <b>Browse</b> to find or create a folder on the NSA or type the location of the folder using forward slashes as branch separators.  Click <b>Add</b> to add the folder to the list of folders the NSA Memopal application backs up to the Memopal server.
Apply	Click this to save your changes.
Reset	Click this to restore the screen's last-saved settings.

## 11.14 Protect Screens

The **Protect** screens include:

- **Backup** screens - These include steps to create and customize backup jobs.
- **Restore** screens - These include steps to restore previous backups made with the NSA.

## 11.15 Backup Screens

Use this screen to create and customize scheduled backup jobs for your files.

You can have several backup jobs for specific folders and time periods.

Click **Protect > Backup** to open the following screen.

**Figure 138** Protect > Backup

The following table describes the labels in this screen.

**Table 79** Protect > Backup

LABEL	DESCRIPTION
Backup	
Add Job	Click this to create and customize a backup job.
Edit Job	Select a backup job in the list and click this to make some changes to it.
Delete Selected Job(s)	Select a backup job in the list and click this to delete it.



**Table 79** Protect > Backup

LABEL	DESCRIPTION
Execute Job Now	Select a backup job in the list and click this to run the backup job immediately.
Restore Archive	Select a backup job in the list and click this to restore the file(s) included in that backup job to the NSA.  This applies to Archive backups only. Refer to <a href="#">Section 11.15.8 on page 274</a> to see the screens.
Abort Job	Select a backup job in the list and click this to stop the process if the backup job is currently active.
Activate Job	Enable the selected backup job.
Inactivate Job	Disable the selected backup job.
Status	This shows the current state of the backup job. <ul style="list-style-type: none"> <li>• <b>Waiting</b> means the backup job is not active but is scheduled to run at some time.</li> <li>• <b>Running</b> indicates that the NSA is currently doing the backup job. When the backup job is running, you can also see a progress bar.</li> </ul>
Job Name	This identifies the backup job.
Job Description	This is a short description of the backup job.
Backup Info	This lists down the backup job details: type, source and target. Refer to <a href="#">Section 11.15.1 on page 265</a> and <a href="#">Section 11.15.2 on page 267</a> .
Scheduler Info	This shows the backup schedule, including the frequency, the time it was last run in (and whether or not it succeeded), and when it is scheduled to run again. The times use yyyy-mm-dd hh:mm:ss format.  Refer to <a href="#">Section 11.15.4 on page 271</a> .

## 11.15.1 Backup: Step 1

Use this screen to specify the job information and back up type.

Click **Add Job** in the **Protect > Backup** screen to open the following:

**Figure 139** Protect > Backup: Step 1

The screenshot shows a web interface titled "Protect - Backup" with a sub-header "Add a new backup Job". Under "Step 1", there are two main sections: "Job Information" and "Backup Type".

**Job Information:** Includes a "Job Name:" field with a red asterisk indicating a required field, and a "Job Description:" text area.

**Backup Type:** Includes radio buttons for "Archive", "Full", "Incremental", "Synchronization", and "Rsync". The "Incremental" option is selected. Below this, there is a text input field for "Perform a full backup job after" followed by the word "increments".

A "Next" button is located in the bottom right corner of the form area.

The following table describes the labels in this screen.

**Table 80** Protect > Backup: Step 1

LABEL	DESCRIPTION
Job Information	
Job Name	Enter a name to identify the backup job.
Job Description	Enter a short description (up to 100 keyboard characters) for the backup job.
Backup Type	<p>Choose the backup type the NSA implements for the backup job.</p> <p><b>Archive</b> - This is a backup of the source folder in an archive format. Once you backup your files in the target folder, you cannot access the files individually unless you have the extracting tool used by the NSA. If there are existing files in the target folder prior to the NSA's backup job, the files remain undisturbed. You can also choose between the following types of archive:</p> <ul style="list-style-type: none"> <li>• <b>Full</b> - The NSA does a fresh backup each time. This provides the most protection but also requires the most storage space.</li> <li>• <b>Incremental</b> - The NSA backs up new or modified files from the source folder since the last backup. The first backup is a full backup. You can also do a full backup after several incremental backups. Enter how many incremental backups the NSA runs before it performs a full backup of the source folder. You must keep the latest full backup to be able to restore the files later.</li> </ul> <p><b>Synchronization</b> - This does a backup of individual files. If you use this type, you cannot use the <b>Restore</b> feature of the NSA. You can also choose between the following types of synchronization:</p> <ul style="list-style-type: none"> <li>• <b>Mirror</b> - The NSA deletes all data in the target folder before running the backup. It makes the target folder identical to the source folder.</li> <li>• <b>Publish</b>- The NSA does a backup of individual files to the target folder without overwriting existing files in that folder. It makes a copy of the source files.</li> </ul> <p><b>Rsync</b> - This synchronizes individual files to another device that supports rsync. Rsync is open source and provides incremental file transfers. It only sends the differences in the files through the connection so it brings the remote files into sync very quickly.</p> <ul style="list-style-type: none"> <li>• The NSA deletes all data in the target folder before running the backup. It makes the target folder identical to the source folder.</li> <li>• If you use this type, you cannot use the <b>Restore</b> feature of the NSA.</li> </ul>
Next	Click this to go to the next step.

## 11.15.2 Backup: Step 2

Use this screen to specify where the files you want to backup are located and set where you want the backup to be stored.

**Figure 140** Protect > Backup: Step 2

Protect - Backup

Add a new backup Job

Step 2

Backup Source

Volume 1

Selected Source Folders

Backup Target

Remote

Remote NSA Address

Username

Password

Share Name

Test Connection






Local

External

Previous Next

The following table describes the labels in this screen.

**Table 81** Protect > Backup: Step 2

LABEL	DESCRIPTION
Backup Source	<p>Select an (internal) volume and the folders and files to back up using this tree interface.</p> <p>Click  to browse through folders, sub-folders and files.</p> <p>Click  to close a folder in the tree. This is useful if there are many folders or files that you wish to hide from view.</p> <p>Click <input type="checkbox"/> to select a folder or file to back up. This also selects all sub-folders and files.</p> <p>Click <input checked="" type="checkbox"/> to deselect the folder or file. This also deselects all sub-folders and files.</p> <p><b>More ...</b>  and <b>More ...</b>  appear when there are too many folders/files to display. Click the arrows to scroll up or down through the folders/files.</p> <p><input checked="" type="checkbox"/> for a folder means all sub-folders and files and new folders/files added later will be backed up.</p> <p><input checked="" type="checkbox"/> for a file means the file will be backed up.</p> <p><input type="checkbox"/> (a grayed out check box) for a folder means that only some sub-folders and files under the folder will be backed up. Newly added folders/files will NOT be backed up.</p> <p> means the file structure is still loading. Please wait for the folders/files to display.</p> <p><b>Note:</b> If you select to back up an entire folder <input checked="" type="checkbox"/> and then de-select a sub-folder or file within that folder, the main folder icon will turn <input checked="" type="checkbox"/> and any new sub-folders and files added to this main folder after the initial backup configuration will <b>NOT</b> be backed up.</p> <p>A list of your select folders and files displays below the selection fields.</p>
Selected Source Folders	This shows the path of the backup source folder you selected.
Backup Target	Select the target folder where you want to place your backup.

**Table 81** Protect > Backup: Step 2

LABEL	DESCRIPTION
Remote	<p>Select this to back up to another device.</p> <p>For Archives:</p> <p>The remote device can be another NSA in the network. Fill in the following fields in order to be able to access it.</p> <ul style="list-style-type: none"> <li>• Remote NSA Address</li> <li>• Username</li> <li>• Password</li> <li>• Share Name</li> </ul> <p>Click <b>Test Connection</b> to see if your NSA can communicate with the remote device.</p> <p>For Synchronization:</p> <p>The remote device must be another NSA compatible with the NSA's synchronization feature. Fill in the following fields in order to be able to access it.</p> <ul style="list-style-type: none"> <li>• Remote NSA Address</li> <li>• Username (always "admin")</li> <li>• Remote Admin's Password</li> </ul> <p>Click <b>Show target content</b> to connect to the remote NSA so you can select the target share for the backup.</p> <p>For Rsync:</p> <p>The remote device must be a NAS that supports rsync or a computer running the rsync utility. Fill in the following fields in order to be able to access it.</p> <ul style="list-style-type: none"> <li>• Remote NSA Address</li> <li>• Username (always "admin")</li> <li>• Remote Admin's Password</li> </ul> <p>Click <b>Show target content</b> to connect to the remote NAS or computer so you can select the target share for the backup.</p>
Local	<p>Select this if you want to place your backup in another volume in the NSA. Select the folder where you want to place the backup.</p>
External	<p>Select this if you have a USB hard disk connected to the NSA that you want to use for your backup. Select the folder where you want to place the backup.</p>
Previous	<p>Click this to go back to the previous screen.</p>
Next	<p>Click this to go to the next screen.</p>

### 11.15.3 Backup: Step 3

Use this screen to specify compression, encryption and purge policies for the backup job. This step is only available if you are doing an archive backup or a synchronization backup to a remote target.

**Figure 141** Protect > Backup: Step 3

The screenshot shows a web-based configuration interface for a backup job. The title bar reads 'Protect - Backup'. Below it is a header 'Add a new backup Job'. The main content area is titled 'Step 3' and contains three expandable sections: 'Compression', 'Encryption', and 'Purge Policy'. Each section has radio buttons for 'Yes' and 'No'. The 'Compression' and 'Encryption' sections have 'No' selected. Below these is a 'Bandwidth' field with a text input containing 'N/A' and the label 'KB/s (0 for no limitation)'. The 'Purge Policy' section has three radio button options: 'Keep All Old Backup files' (selected), 'Keep Only the last [input] backup files(1-30)', and 'Keep Backups For [input] day(s)(1-3650)'. At the bottom right of the form are 'Previous' and 'Next' buttons.

The following table describes the labels in this screen.

**Table 82** Protect > Backup: Step 3

LABEL	DESCRIPTION
Compression	Select <b>Yes</b> if you want NSA to compress the files for your backup. Otherwise, choose <b>No</b> .  In an <b>Archive</b> backup, compression is a method of packing computing files in a way that saves hard disk space.  For a <b>Synchronization</b> backup (to a remote target), the source data will be compressed before the transmission to reduce the transmission time. It is used in slow networks only.
Encryption	Select <b>Yes</b> if you want NSA to encrypt the files for your backup. Otherwise, choose <b>No</b> .  In an <b>Archive</b> backup, this means using a password to secure files.  For a <b>Synchronization</b> backup (to a remote target), this means securing the file transfer session. However the final file stored on the remote NSA is unencrypted. This takes a long time. Make sure you really need this feature before enabling it.
Bandwidth	Restrict the bandwidth of synchronization backups to help stop them from using all of your network connection's available bandwidth. This is more important when backing up to a remote NSA or computer through the Internet.
Purge Policy	The NSA maintains the files that have been included in your backups. However to save hard disk space, you can choose to delete files that have been included in previous backups. <ul style="list-style-type: none"> <li>Select <b>Keep All Old Backup files</b> to store all files that have been included in previous backups.</li> <li>If you want to store a certain number of backup files, select <b>Keep Only the last n backup files (1-30)</b>. Enter a value (n) from 1 to 30 to specify how many backups the NSA stores. All backup files older than the last one are deleted. You will not be able to recover files that existed (only) in those previous backups. Select this if backup space is limited and recovery of old files is not important.</li> <li>If you want to store all backups for a certain time period, select <b>Keep Backups for n day(s) (1-3650)</b>. Enter a value (n) from 1 to 3650 to specify how many days the NSA stores all backup files. After this day has expired, all backup files will be deleted.</li> </ul>

**Table 82** Protect > Backup: Step 3

LABEL	DESCRIPTION
Previous	Click this to go back to the previous screen.
Next	Click this to go to the next screen.

## 11.15.4 Backup: Step 4

Click this to specify the schedule for the backup job. The backup job automatically runs according to the schedule that you set in this screen.

**Figure 142** Protect > Backup: Step 4

The screenshot shows the 'Add a new backup Job' screen, Step 4, Scheduler configuration. The screen is titled 'Add a new backup Job' and 'Step 4'. Under the 'Scheduler' tab, the 'Backup Frequency' is set to 'Monthly'. The 'Start Time (hh:mm)' is set to '0:00'. Below this, there are two steps for scheduling: 'Step 1: Please select the month(s) of a year' and 'Step 2: Please select the day of the month'. Step 1 includes checkboxes for all twelve months (January through December). Step 2 includes a radio button for 'Day' and a dropdown menu for 'First' and 'Monday'. At the bottom right, there are 'Previous' and 'Done' buttons.

The following table describes the labels in this screen.

**Table 83** Protect > Backup: Step 4

LABEL	DESCRIPTION
Scheduler	
Backup Frequency	Select from <b>Hourly</b> , <b>Daily</b> , <b>Weekly</b> and <b>Monthly</b> backup intervals. The screen changes depending on the item you select.
Every how many hours?	This is only available if you selected <b>Hourly</b> as your backup frequency. Select every how many hours the NSA performs the backup job.
On which minute of the hour?	This is only available if you selected <b>Hourly</b> as your backup frequency. Select the minute (from 0 to 59) in an hour when the NSA performs the backup job.
Start Time (hh:mm)	This is available if you selected <b>Daily</b> , <b>Weekly</b> or <b>Monthly</b> as your backup frequency. Select the time in hour:minute format when you want the NSA to perform the backup job.
Every how many days?	This is only available if you selected <b>Daily</b> as your backup frequency. Enter the interval between days when the NSA performs the backup job.
Every how many weeks?	This is only available if you selected <b>Weekly</b> as your backup frequency. Enter the interval between weeks when NSA performs the backup job.
Step 1: Please select the month(s) of a year	This is only available if you selected <b>Monthly</b> as your backup frequency. Select the month(s) when you want the NSA to perform the backup job.

**Table 83** Protect > Backup: Step 4

LABEL	DESCRIPTION
Step 2: Please select the day of the month	This is only available if you selected <b>Monthly</b> as your backup frequency. Select the day in a month when you want the NSA to perform the backup job.
Previous	Click this to go back to the previous screen.
Done	Click this to close the screen.

## 11.15.5 Edit Job Screen

Use this screen to edit an existing backup job. Some attributes of the backup job cannot be changed, such as the name, backup type, source folder and so on.

## 11.15.6 Edit Job: Step 1

Click **Protect > Backup**. Select a backup job from the list and click **Edit Job** to open the following.

**Figure 143** Protect > Backup > Edit: Step 1

The screenshot shows a window titled "Protect - Backup" with a "Step 1" header. Under "Job Settings", the following fields are visible:

- Job Name**: Example\_Backup
- Job Description**: This is an example.
- Backup Type**: incremental
- Source folder(s)/file(s)**: Volume 1/music/
- Backup Target**: External Volume
- Target Path**: silicon--power-0-001/
- Compression**: No
- Encryption**: No
- Bandwidth**: N/A KB/s (0 for no limitation)
- Purge Policy**:
  - Keep All Old Backup files
  - Keep Only the last [ ] backup files(1-30)
  - Keep Backups For [ ] day(s)(1-3650)

A "Next" button is located at the bottom right of the form.

The following table describes the labels in this screen.

**Table 84** Protect > Backup > Edit: Step 1

LABEL	DESCRIPTION
Job Settings	
Job Name	This field is read-only and shows the name of the backup job.
Job Description	Enter a short description for the backup job.
Backup Type	This field is read-only and shows the backup type.



**Table 84** Protect > Backup > Edit: Step 1

LABEL	DESCRIPTION
Source folder(s)/ file(s)	This is read-only and shows the path of the source folder for backup.
Backup Target	This field is read-only and shows on which volume (whether internal or external) the backup files are stored. If the target location is a remote NSA, this shows the remote IP address.
Target Path	This field is read-only and shows the target folder for the backup files.
Compression	This field is read-only and shows whether the backup employs compression.  Compression reduces the size of the file that you want to back up. Backup is then faster, but restoring may be slower, so if backup space is not a concern and recovery speed is, then turn off compression.
Encryption	This field is read-only and shows whether the backup employs encryption.  You can have the NSA use a password to encrypt the backup files.
Bandwidth	For backups to a remote NSA, you can restrict the bandwidth to help prevent the backups from using all of your network connection's available bandwidth. This is more important when backing up to a remote NSA or computer through the Internet.
Purge Policy	The NSA maintains the files that have been included in your backups. However to save hard disk space, you can choose to delete files that have been included in previous backups. <ul style="list-style-type: none"> <li>Select <b>Keep All Old Backup files</b> to store all files that have been included in previous backups.</li> <li>If you want to store a certain number of backup files, select <b>Keep Only the last n backup files (1-30)</b>. Enter a value (n) from 1 to 30 to specify how many backups the NSA stores. All backup files older than the last one are deleted. You will not be able to recover files that existed (only) in those previous backups. Select this if backup space is limited and recovery of old files is not important.</li> <li>If you want to store all backups for a certain time period, select <b>Keep Backups for n day(s) (1-3650)</b>. Enter a value (n) from 1 to 3650 to specify how many days the NSA stores all backup files. After this day has expired, all backup files will be deleted.</li> </ul>
Next	Click this to go to the next screen.

## 11.15.7 Edit Job: Step 2

Use this screen to edit the schedule for the backup job.

**Figure 144** Protect > Backup > Edit: Step 2

Protect - Backup

Edit

Step 2

Scheduler Settings

Backup Frequency: Monthly

Start Time (hh:mm) 1:00

Step 1: Please select the month(s) of a year

January  February  March  April  May  June

July  August  September  October  November  December

Step 2: Please select the day of the month

\* Day

First Sunday

Previous Done

The following table describes the labels in this screen.

**Table 85** Protect > Backup > Edit: Step 2

LABEL	DESCRIPTION
Scheduler Settings	
Backup Frequency	Edit this by selecting from <b>Hourly</b> , <b>Daily</b> , <b>Weekly</b> and <b>Monthly</b> backup intervals. The screen changes depending on the item you select.
Every how many hours?	This is only available if you selected <b>Hourly</b> as your backup frequency. Select every how many hours the NSA performs the backup job.
On which minute of the hour?	This is only available if you selected <b>Hourly</b> as your backup frequency. Select the minute (from 0 to 59) in an hour when the NSA performs the backup job.
Start Time (hh:mm)	This is available if you selected <b>Daily</b> , <b>Weekly</b> or <b>Monthly</b> as your backup frequency. Select the time in hour:minute format when you want the NSA to perform the backup job.
Every how many days?	This is only available if you selected <b>Daily</b> as your backup frequency. Enter the interval between days when the NSA performs the backup job.
Every how many weeks?	This is only available if you selected <b>Weekly</b> as your backup frequency. Enter the interval between weeks when NSA performs the backup job.
Step 1: Please select the month(s) of a year	This is only available if you selected <b>Monthly</b> as your backup frequency. Select the month(s) when you want the NSA to perform the backup job.
Step 2: Please select the day of the month	This is only available if you selected <b>Monthly</b> as your backup frequency. Select the day in a month when you want the NSA to perform the backup job.
Previous	Click this to go back to the previous screen.
Done	Click this to close the screen.

## 11.15.8 Restore Archive Screen

Use this screen to restore previous backups made with the NSA.

## 11.15.9 Restore Archive: Step 1

Click **Protect > Backup** screen ([Section 11.15 on page 264](#)). You can restore a previous backup job by selecting a backup job from the list and clicking **Restore Archive**.

**Figure 145** Protect > Backup > Restore Archive: Step 1

The screenshot shows a web-based interface for restoring a backup. The main heading is "Restore". Underneath, it says "Step 1. Select Restore Point". There are two tabs: "Job Information" (selected) and another unlabeled tab. The "Job Information" tab contains a table with the following data:

Job Name:	Example F
Job Description:	Example F
Backup Type:	full
Scheduler Information:	every month

Below this table is another table for "Restored Time":

Restored Time:	2009-06-09 16:19:31
----------------	---------------------

A "Next" button is located in the bottom right corner of the form area.

The following table describes the labels in this screen.

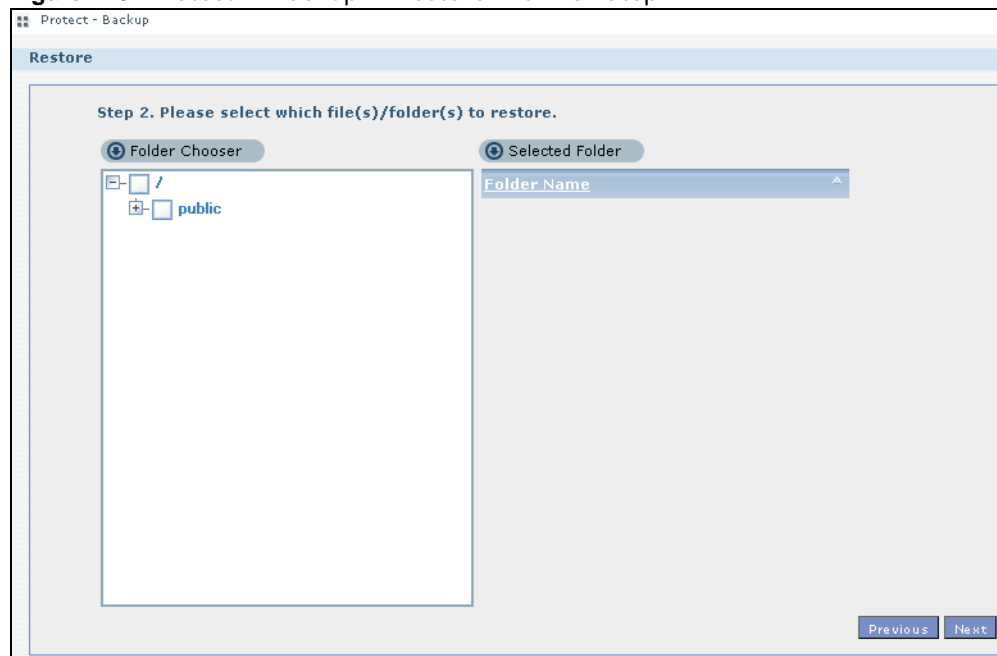
**Table 86** Protect > Backup > Restore Archive: Step 1

LABEL	DESCRIPTION
Step 1. Select Restore Source	Select a previous archive backup that you want to restore to the NSA.
Job Information	
Job Name	This is the name to identify the backup job.
Job Description	This is a short description (up to 100 keyboard characters) for the backup job.
Backup Type	This is the type of backup implemented for the backup job.
Scheduler Information	This field displays the backup's frequency.
Restored Time	Select a previous backup in the list that you want to restore to your NSA.
Next	Click this to go to the next screen.

## 11.15.10 Restore Archive: Step 2

Use this screen to select the folder where the archive you want to restore is located.

**Figure 146** Protect > Backup > Restore Archive: Step 2



The following table describes the labels in this screen.

**Table 87** Protect > Backup > Restore Archive: Step 2

LABEL	DESCRIPTION
Step 2. Please select which file(s)/folder(s) to restore.	
Folder Chooser	Select the folder where the backup you want to restore is located.
Selected Folder	This shows the path of the folder you selected.
Previous	Click this to go back to the previous screen.
Next	Click this to go to the next screen.

### 11.15.11 Restore Archive: Step 3

Use this screen to select the location in the NSA where you want to restore your backup.

**Figure 147** Protect > Backup > Restore Archive: Step 3



The following table describes the labels in this screen.

**Table 88** Protect > Backup > Restore Archive: Step 3

LABEL	DESCRIPTION
Step 3. Set a restore target and start restoring	
Original Location	Select this to restore the files to their original location in the NSA.
Other Location	Click this to select a folder where you want to place the restored files. Click <b>Browse</b> to open the following screen. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> </div> <ul style="list-style-type: none"> <li>• <b>Volume</b> - Select a volume from the list.</li> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Previous	Click this to go back to the previous screen.
Done	Click this to run the restore process and go back to the <b>Backup</b> screen.

## 11.16 Restore Screen

Use this screen to restore previous backups made with the NSA, including archives and folders from internal, external or remote NSAs to the NSA.

## 11.16.1 Restore: Step 1

You can access this screen by clicking **Protect > Restore**.

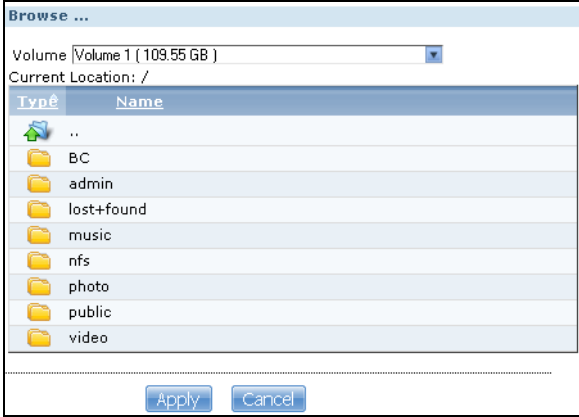
**Figure 148** Protect > Restore: Step 1

The following table describes the labels in this screen.

**Table 89** Protect > Restore: Step 1

LABEL	DESCRIPTION
Step 1. Select Restore Source	Select a previous archive backup that you want to restore to the NSA. Select <b>Remote NSA</b> if the file is in another NSA in the network that you used for your backup. Fill in the fields below when you choose this option. Select <b>Internal or External Volume</b> if you want to use another volume in the NSA or an attached USB hard disk for your backup. Click <b>Browse</b> to select the backup file.
IP Address	Enter the address of the NSA you want to use.
User	Enter the username you use to access the NSA.
Password	Enter the password of your NSA account.
Share Name	Enter the name of the share you want to use.
Test Connection	Click this to test your connection to the remote NSA that you have specified in the fields above.

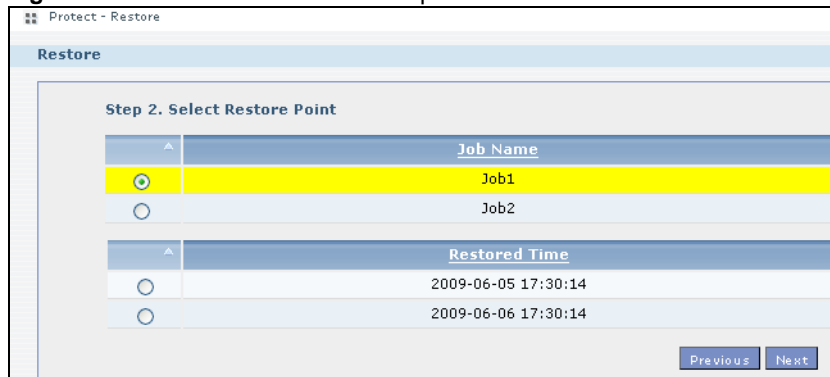
**Table 89** Protect > Restore: Step 1

LABEL	DESCRIPTION
Browse	<p>Click this to select where the previous backup that you want to restore is located.</p>  <ul style="list-style-type: none"> <li>• <b>Volume</b> - Select a volume from the list.</li> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Next	Click this to go to the next screen.

### 11.16.2 Restore: Step 2

Select a previous archive backup that you want to restore to the NSA.

**Figure 149** Protect > Restore: Step 2



The following table describes the labels in this screen.

**Table 90** Protect > Restore: Step 2

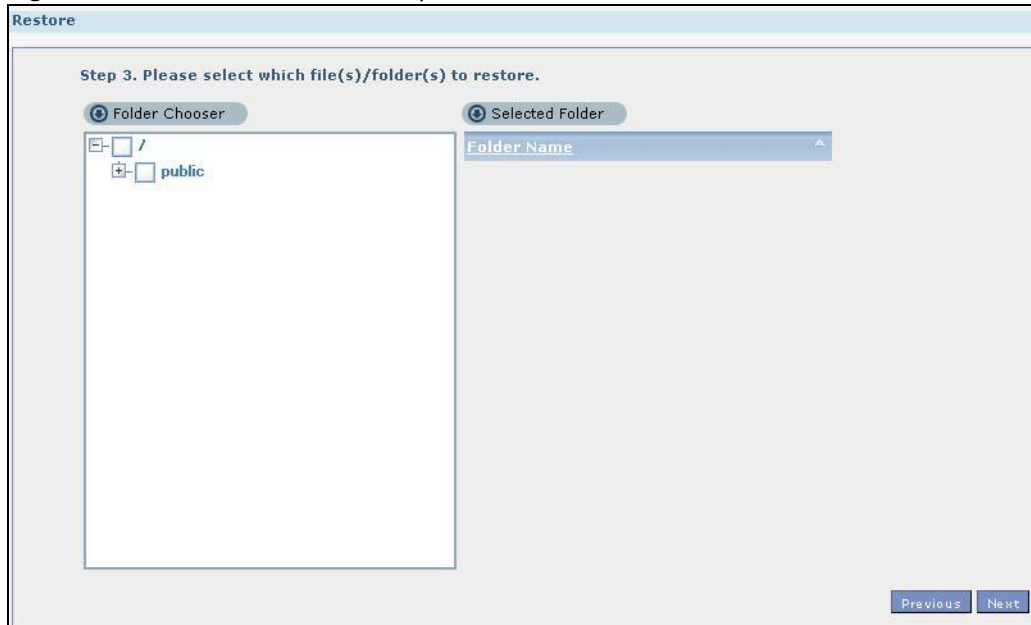
LABEL	DESCRIPTION
Step 2. Select Restore Point	<p>If you selected <b>Remote NSA</b> for the backup you want to restore, you can see a list of all the backups you performed in the <b>Job Name</b> table.</p> <p>If you selected <b>Internal or External Volume</b> for the backup you want to restore, you can see a list of restore times for the backups you performed in the <b>Restored Time</b> table.</p>
Job Name	Select a previous backup job in the list that you want to restore to your NSA. Once you choose a job name, all available restore times for that backup job shows in the <b>Restored Time</b> table.

**Table 90** Protect > Restore: Step 2

LABEL	DESCRIPTION
Restored Time	Select a previous backup job in the list that you want to restore to your NSA.
Previous	Click this to go back to the previous screen.
Next	Click this to go to the next screen.

### 11.16.3 Restore: Step 3

Use this screen to select the folder where the archive you want to restore is located.

**Figure 150** Protect > Restore: Step 3

The following table describes the labels in this screen.

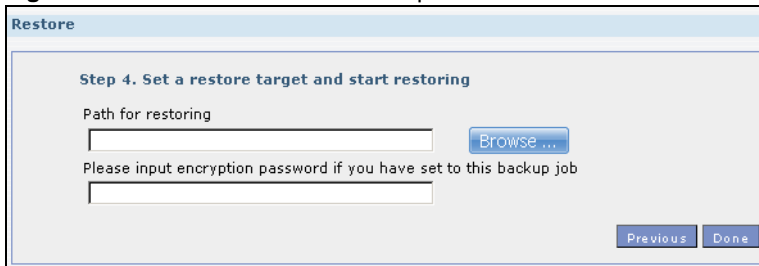
**Table 91** Protect > Restore: Step 3

LABEL	DESCRIPTION
Step 3. Please select which file(s)/folder(s) to restore.	
Folder Chooser	Select the folder where the backup you want to restore is located.
Selected Folder	This shows the path of the folder you selected.
Previous	Click this to go back to the previous screen.
Next	Click this to go to the next screen.

## 11.16.4 Restore: Step 4

Use this screen to select the location in the NSA where you want to restore your backup.

**Figure 151** Protect > Restore: Step 4



The following table describes the labels in this screen.

**Table 92** Protect > Restore: Step 4

LABEL	DESCRIPTION
Step 3. Set a restore target and start restoring	
Browse	<p>Click this to select a folder where you want to place the restored files.</p> <ul style="list-style-type: none"> <li>• <b>Volume</b> - Select a volume from the list.</li> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Type</b> - This identifies the item as a file or folder.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Previous	Click this to go back to the previous screen.
Done	Click this to run the restore process and go back to the <b>Backup</b> screen.

## 11.17 Technical Reference

This section provides technical background information on the topics discussed in this chapter.



## 11.17.1 S.M.A.R.T Attributes

The following table describes some common S.M.A.R.T. attributes. If a higher or lower raw attribute value is better, it is indicated in the **BETTER** column. Since S.M.A.R.T. attributes and their definitions vary by manufacturer, refer to the hard drive manufacturer for details about the attributes your hard drive supports.

**Table 93** S.M.A.R.T. Attributes

ID	ATTRIBUTE NAME	BETTER	DESCRIPTION
01	Read Error Rate	Low	Shows the rate of hardware read errors. If this is not zero, there is a problem with the disk surface or the read/write heads.
02	Throughput Performance	High	This is the hard drive's general (overall) throughput performance. A decreasing value indicates a problem.
03	Spin-Up Time	Low	This is the average number of milliseconds the hard drive took for spindle spin up (from zero RPM to fully operational).
04	Start/Stop Count		The total number of spindle start and stop cycles.
05	Reallocated Sectors Count	Low	Total number of reallocated sectors on the hard drive. When the hard drive detects a read/write/verification error, it marks the sector as "reallocated" and transfers the data to a specially reserved (spare) area. The process is also known as remapping with "reallocated" sectors known as remaps. The more sectors the hard drive has to reallocate, the slower read and write speeds become.
06	Read Channel Margin		This is the margin of a channel when it reads data.
07	Seek Error Rate	Low	This is the rate of the magnetic heads' seek errors. A failure in the mechanical positioning system, such as servo damage or a thermal widening of the disk, results in seek errors. An increasing number of seek errors indicate the condition of the disk surface and the mechanical subsystem are worsening.
08	Seek Time Performance	High	This is an average performance indicator for the seek operations of the magnetic heads. Mechanical subsystem problems cause this value to decrease.
09	Power-On Hours (POH)	Low	This is how many hours the hard drive has been in a power-on state. The raw value lists the total number of hours (or minutes, or seconds depending on the manufacturer).
10	Spin Retry Count	Low	This is the total number of spin start retry attempts. This is the number of attempts to spin up to fully operational speed the hard drive has made when the first attempt did not succeed. An increase in this value is an indicator of hard disk mechanical subsystem problems.
11	Recalibration Retries	High	This is the number of times recalibration was requested when the first attempt did not succeed. A decrease in this value is an indicator of hard disk mechanical subsystem problems.
12	Device Power Cycle Count		This is the number of times the hard drive has gone through a full power on and power off.
13	Soft Read Error Rate	Low	This is the number of uncorrected read errors the hard drive has reported. If this is not zero, back up your data.
190	Airflow Temperature	Low	This indicates the temperature of the airflow measured by a Western Digital hard drive.

**Table 93** S.M.A.R.T. Attributes (continued)

ID	ATTRIBUTE NAME	BETTER	DESCRIPTION
190	Temperature Difference from 100	High	This indicates the value of 100 - the temperature in degrees Celsius. Manufacturers can set a minimum threshold that corresponds to a maximum temperature.
191	G-sense error rate	Low	This is the number of mistakes caused by impact loads.
192	Power-off Retract Count	Low	This is how many times the heads are loaded off the media.
193	Load/Unload Cycle	Low	This is the number of load and unload cycles into head landing zone position.
194	Temperature	Low	This is the hard drive's internal temperature.
195	Hardware ECC Recovered	High	This is the time between ECC (Error Correction Code)-corrected errors.
196	Reallocation Event Count	Low	This is the total number of reallocation (remap) operations. The raw value is the total attempts to move data from reallocated sectors to a spare area. Successful and unsuccessful attempts are both included.
197	Current Pending Sector Count	Low	This is the number of unstable sectors awaiting reallocation. If the sector is later successfully written or read, this value decreases and reallocation is not performed. Only failed write attempts cause a reallocation, not read errors. This can be difficult to test since only direct I/O writes to the disk cause reallocations, not cached writes.
198	Uncorrectable Sector Count	Low	This is the number of errors reading or writing a sector that were not correctable. An increase in this value is an indicator of disk surface defects or mechanical subsystem problems.
199	UltraDMA CRC Error Count	Low	This is the number of data transfer errors through the interface cable according to the ICRC (Interface Cyclic Redundancy Check).
200	Write Error Rate / Multi-Zone Error Rate	Low	This is the total number of errors in writing sectors.
201	Soft Read Error Rate	Low	This is the number of read/write head off-track errors. If the value is not zero, make a backup.
202	Data Address Mark Errors	Low	This is the number of data address mark errors. This could also be a different, manufacturer-specific attribute.
203	Run Out Cancel	Low	This is the number of ECC (Error Correction Code) errors.
204	Soft ECC Correction	Low	This is the number of errors corrected by software ECC (Error Correction Code).
205	Thermal Asperity Rate (TAR)	Low	This is the number of thermal asperity errors. Thermal asperity is a read signal spike caused by sensor temperature rise due to touching the disk surface or contaminant particles.
206	Flying Height		This is the height of the hard drive's read/write heads above the disk surface.
207	Spin High Current		This is the quantity of high current used to spin up the drive.
208	Spin Buzz		This is the number of buzz routines to spin up the drive. When the arm holding the read/write heads is stuck, the motor driving it tries to oscillate the arm to free it. This causes an audible vibration.
209	Offline Seek Performance		This is the hard drive's seek performance during offline operations. Offline operations are tests the drive does itself as opposed to those that an external diagnostic tool has it do. Seek performance is how quickly the drive moves from track to track.

**Table 93** S.M.A.R.T. Attributes (continued)

ID	ATTRIBUTE NAME	BETTER	DESCRIPTION
220	Disk Shift	Low	This is how far the disk has moved relative to the spindle (this kind of shift is usually due to shock).
221	G-Sense Error Rate	Low	This is the number of errors that have resulted from external vibration and shock.
222	Loaded Hours		This is how long the hard drive has operated under data load (this requires movement of the magnetic head armature).
223	Load/Unload Retry Count		This is how many time the magnetic head has changed position.
224	Load Friction	Low	This is resistance caused by friction in mechanical parts during operation.
225	Load/Unload Cycle Count	Low	This is the total number of load cycles.
226	Load 'In'-time		This is the total time that the magnetic heads actuator has had a load (not been in the parking area).
227	Torque Amplification Count	Low	This is the number of attempts to compensate for variations in platter speed.
228	Power-Off Retract Cycle	Low	This is how many times the magnetic armature was automatically retracted because the power was cut.
230	GMR Head Amplitude		This is the amplitude of thrashing (or the distance of repetitive forward and reverse head motion).
231	Temperature	Low	This is the hard drive's temperature.
240	Head Flying Hours		This is the total time that the head has been positioning.
250	Read Error Retry Rate	Low	This is the number of errors in reading from the disk.



# Auto Upload

## 12.1 Overview

This chapter discusses the features in the **Auto Upload** screens.

The auto upload feature uploads media files stored in the NSA to the Flickr and/or YouTube sharing websites. Besides web publishing and media server, auto upload is another convenient way to share media files with your friends and family. You can link the NSA to your Flickr and/or YouTube account and select shares for the NSA to upload. The NSA uploads the media files stored in the specified shares to your Flickr and/or YouTube account. When you add new files to the specified shares, the NSA also automatically uploads the new files to your Flickr and/or YouTube account.

## 12.2 What You Can Do

- Use the **Flickr/YouTube** screen ([Section 12.4 on page 285](#)) to upload photos and videos to your Flickr and YouTube accounts.
- Use the **FTP Uploadr** screen ([Section 12.5 on page 294](#)) to upload files to FTP servers.

## 12.3 What You Need to Know

### FTP

File Transfer Protocol (FTP) is a file transfer service that operates on the Internet. A system running the FTP server accepts commands from a system running an FTP client. FTP is not a secure protocol. Your file transfers could be subject to snooping.

### FTPES (File Transfer Protocol over Explicit TLS/SSL)

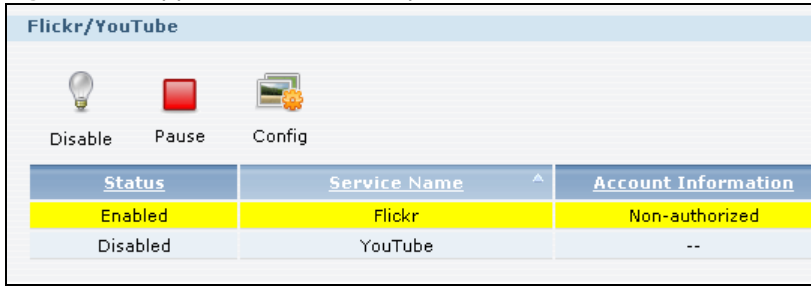
File Transfer Protocol over Explicit TLS/SSL (FTPES) is a file transfer service that uses TLS (Transport Layer Security) or Secure Socket Layer (SSL) for secure transfers across the Internet.

## 12.4 The Flickr/YouTube Screen

Use this screen to upload photos and videos to your Flickr and YouTube accounts.

Click **Applications > Auto Upload > Flickr/YouTube** to open the following screen.

**Figure 152** Applications > Auto Upload > Flickr/YouTube



The following table describes the labels in this screen.

**Table 94** Applications > Auto Upload > Flickr/YouTube

LABEL	DESCRIPTION
Flickr/YouTube	
Disable/Enable	Select a service from the list and click this to turn the service on or off. If you disable the service and add more files to the watch folder(s), the NSA will not auto upload these files. However, the NSA still uploads any files added before you turned off the service.
Pause/Resume	Select a service from the list and click this to pause or resume the auto upload feature.
Config	Select a service from the list and click this to manage the service's settings.
Status	This field displays the service's status. The service may be <b>Enabled, Disabled, Uploading or Paused</b> .
Service Name	This field displays the name of a sharing website to which the NSA can automatically upload files.
Account Information	This field displays the username and related information of the account to use with the auto upload feature.

## 12.4.1 Configuring the Flickr Settings

In the Applications > Auto Upload > Flickr/YouTube screen, select Flickr from the list and then click the Config button.

The following screen displays if you have not authorized the NSA to use a Flickr account. Click **OK** to continue the authorization process.

**Figure 153** Linking NSA to Flickr



The web browser opens the Yahoo! Flickr login page. Enter your Yahoo account's information and click **Sign In**.

**Figure 154** Yahoo! Flickr Login Page

YAHOO! flickr Yahoo! - Help


Welcome to Yahoo!  
**Enjoy all the benefits of Yahoo! Flickr.**

- **Access** all your digital images in one place.
- **Show off** your favorite photos to the world.
- **Share photos** with your friends and family - it's easy!

---

**Get all the best with one Yahoo! ID.**  
 Your Yahoo! ID gives you access to powerful communications tools like mail and instant messaging, security features like email AntiVirus and Pop-Up Blocker, and favorites like online photos and music — **all for free.**

**Sign in to Yahoo!**

 **Are you protected?**  
 Create your sign-in seal.  
(Why?)

Yahoo! ID:  
  
(e.g. free2rhyme@yahoo.com)

Password:

**Keep me signed in**  
 for 2 weeks unless I sign out. [Info](#)  
[Uncheck if on a shared computer]

[Forget your ID or password?](#) | [Help](#)

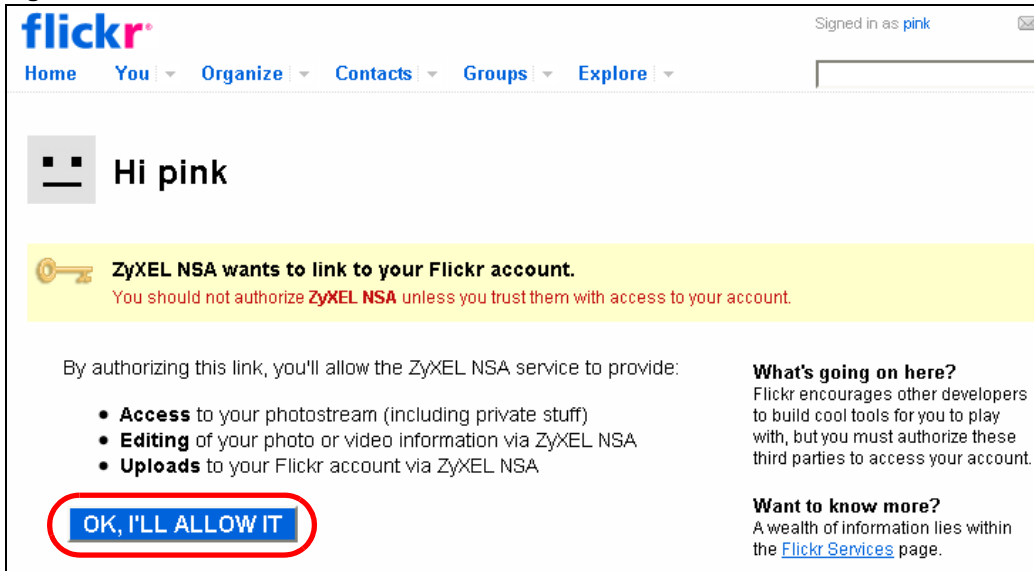
---

**Don't have a Yahoo! ID?**  
 Signing up is easy. [Sign Up](#)

Copyright © 2008 Yahoo! Inc. All rights reserved. [Copyright/IP Policy](#) | [Terms of Service](#) | [Guide to Online Security](#)  
 NOTICE: We collect personal information on this site.  
 To learn more about how we use your information, see our [Privacy Policy](#)

The following page displays asking for your authorization. Click **OK, I'LL ALLOW IT** to establish a link between the NSA and your Flickr account.

**Figure 155** Flickr Authorization



A confirmation page displays indicating successful authorization. Return to the NSA web configurator. Click **Get Ready** in the following screen to complete the authorization process.

**Figure 156** Confirming Flickr Authorization





Once the NSA is associated with your Flickr account, you can configure auto upload settings in the following screen.

**Figure 157** Applications > Auto Upload > Flickr/YouTube > Config (Flickr)

Applications - Auto Upload - Flickr/YouTube

### Flickr Account Configuration

Username: stopitswine

Photo Space Usage:  ■ 0% (0.00 Bytes) Used  
 102.40 MB Total ■ 100.00% Free

Video Files Usage: Uploaded: 0, Remain: 2 Switch User

### Folder Selection

#### Folder Watch List

Status	Share Name	Path	Action
	photo	/	

Add

**Note:**  
 Only the following file formats will be automatically uploaded: bmp, gif, jpeg, jpg, png, tif, tiff, 3gp, 3g2, avi, mov, mpeg, mpg, wmv, mp4

### Grace Period

The time the system will wait before a newly added media file is saved in a watched folder.

Grace Period:  minutes

### Default Privacy

Who can see your media files on Flickr?

Only You  
 Your friends  
 Your family  
 Anyone  
 Hide from public site area?

### Default Safety Level

Safe  
 Moderate  
 Restricted

**Note:**  
 Video on Flickr may only include "Safe" or "Moderate" content.  
 "Restricted" video content is not allowed on Flickr and will be removed.













### Default Content Type

Photos / Videos  
 Screenshots / Screencasts  
 Illustration / Art / Animation / CGI

Apply
Reset

The following table describes the labels in this screen.

**Table 95** Applications > Auto Upload > Flickr/YouTube > Config (Flickr)

LABEL	DESCRIPTION										
Flickr Account Configuration											
Username	This field displays the Flickr account authorized for the auto upload feature.										
Photo Space Usage	This shows how much storage space for photos (in size and percentage) you have used and how much space is still available on your Flickr account.										
Video Files Usage	This shows how many videos you have uploaded and how many videos you can still upload to your Flickr account.										
Switch User	Click this to use a different Flickr account for the auto upload feature.										
Folder Selection											
Folder Watch List	This table displays a list of shares and folders selected for auto upload. Files stored in these locations are uploaded to your Flickr account.										
Status	<p>This indicates whether the folder or share is available.</p> <p> represents a valid folder. The folder is available for auto upload.</p> <p> represents a missing folder. The share may be deleted from the NSA, or the hard disk was removed from the NSA.</p>										
Share Name	This is the share selected for auto upload.										
Path	This is the path of a folder selected for auto upload. The NSA only uploads files stored in the specified share or folder to your Flickr account.										
Action	Use the <b>Remove</b> icon to remove a folder from the <b>Folder Watch List</b> .										
Add	<p>Click this to open the following screen where you can set a folder that contains files you want the NSA to automatically upload.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Add Watch Folder</b></p> <p>Shares: public <input type="button" value="v"/></p> <p>Path: <input type="text"/> <input type="button" value="Browse ..."/></p> <hr/> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the folder's location.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Browse ...</b></p> <p>Current location: / <span style="float: right;">Folder Name: <input type="text"/></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type</th> <th style="text-align: left;">Name</th> </tr> </thead> <tbody> <tr> <td>..</td> <td>..</td> </tr> <tr> <td></td> <td>HK Trip</td> </tr> <tr style="background-color: yellow;"> <td></td> <td>Japan Trip</td> </tr> <tr> <td></td> <td>Jimmy's Birthday</td> </tr> </tbody> </table> <hr/> <p style="text-align: right;"><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This is the type of the folder/file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>	Type	Name	..	..		HK Trip		Japan Trip		Jimmy's Birthday
Type	Name										
..	..										
	HK Trip										
	Japan Trip										
	Jimmy's Birthday										
Grace Period											

**Table 95** Applications > Auto Upload > Flickr/YouTube > Config (Flickr) (continued)

LABEL	DESCRIPTION
Grace Period N minutes	Specify how long the NSA should wait when you add a new file for auto upload. For example, if you set the grace period to 5 minutes, the NSA uploads a new file after it has been in a watched folder for 5 minutes. You can choose from a range of 1 to 10080 minutes (up to one week).
Default Privacy	
Who can see your media files on Flickr?	Determine who has the right to see files uploaded to your Flickr account. Select <b>Only You</b> if you do not want anyone else to see your files. You may also restrict the access to <b>Your friends</b> and/or <b>Your family</b> . You can set up a friend/family list in your Flickr account. Select <b>Anyone</b> to allow everyone to see your files.
Hide from public site area	Check this option to prevent others from finding your files when they perform a search in the Flickr website.
Default Safety Level	Assign a safety level to your files. Select <b>Safe</b> if the contents of your files are suitable for the general public. Select <b>Moderate</b> if the contents of your files may be offensive to some people. Select <b>Restricted</b> if the contents of your files are not suitable for certain people, such as children or your colleagues.
Default Content Type	Select a content type for your files. You can choose <b>Photo/Video</b> , <b>Screenshots/Screencasts</b> , or <b>Illustration/Art/Animation/CGI</b> .
Apply	Click this to save your changes.
Reset	Click this to restore previously saved settings.

## 12.4.2 Configuring the YouTube Settings

In the **Applications > Auto Upload > Flickr/YouTube** screen, select YouTube from the list and then click the **Config** button.

Note: Your YouTube account must be associated with a Google account.

Get a Google account and use it to log into YouTube. You can then merge the existing YouTube account to your Google account.

If you have not authorized a YouTube account on the NSA, the following screen displays. Enter your Google account's e-mail address and password in the fields and click **OK** to authorize the service.

**Figure 158** YouTube Account Settings

**YouTube Account Settings**

Email  \*

Password  \*

**Note:**  
**To use this feature you must use a Google account that is linked to your YouTube account. Please create a Google account if you do not have one. Login to YouTube using your Google account and then link your existing YouTube account or create a new YouTube account.**

OK Cancel

Once the NSA is associated with your YouTube account, you can configure auto upload settings in the following screen.




**Figure 159** Applications > Auto Upload > Flickr/YouTube > Config (YouTube)

The following table describes the labels in this screen.

**Table 96** Applications > Auto Upload > Config (YouTube)

LABEL	DESCRIPTION
Youtube Account Configuration	
Username	This field displays the Youtube account authorized for the auto upload feature.

**Table 96** Applications > Auto Upload > Config (YouTube) (continued)

LABEL	DESCRIPTION
Switch User	Click this to use a different YouTube account for the auto upload feature.
Folder Selection	
Folder Watch List	This table displays a list of shares and folders selected for auto upload. Files stored in these locations are uploaded to your YouTube account.
Status	<p>This field indicates whether the share or folder is available.</p> <p> represents a valid folder. The folder is available for auto upload.</p> <p> represents a missing folder. The share may be deleted from the NSA, or the hard disk was removed from the NSA.</p>
Share Name	This field displays the share selected for auto upload.
Path	This field displays the path of a folder selected for auto upload. The NSA only uploads the files stored in the specified share or folder to your YouTube account.
Action	Use the <b>Remove</b> icon to delete a folder from the <b>Folder Watch List</b> .
Add	<p>Click this to open the following screen where you can set a folder that contains files you want the NSA to automatically upload.</p> <div> </div> <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the folder's location.</li> </ul> <div> </div> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This is the type of the folder/file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Grace Period	
Grace Period N minutes	Specify how long the NSA should wait when you add a new file for auto upload. For example, if you set the grace period to 5 minutes, the NSA uploads a new file after it has been in a watched folder for 5 minutes. You can choose from a range of 1 to 10080 minutes (up to one week).
Video Category	Select the category that best describes the media files you want to upload.
Default Privacy	

**Table 96** Applications > Auto Upload > Config (YouTube) (continued)

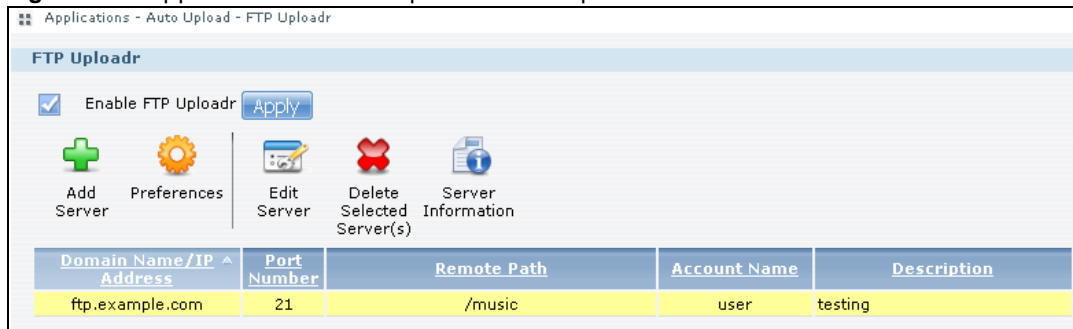
LABEL	DESCRIPTION
Who can see your media files on YouTube?	Determine who has the right to see files uploaded to your YouTube account. Select <b>Only You</b> if you do not want anyone else to see your files. Select <b>Anyone</b> to allow everyone to see your files.
Apply	Click this to save your changes.
Reset	Click this to restore your previously stored settings.

## 12.5 The FTP Uploadr Screen

The FTP Uploadr feature uploads files stored in the NSA to FTP servers. Besides web publishing and media server, auto upload is another convenient way to share media files with your friends and family. You can link the NSA to the FTP server or the FTP server on another NSA and select shares or folders for the NSA to upload. The NSA uploads the files stored in the specified shares to the FTP server. When you add new files to the specified shares, the NSA also automatically uploads the new files to the FTP server.

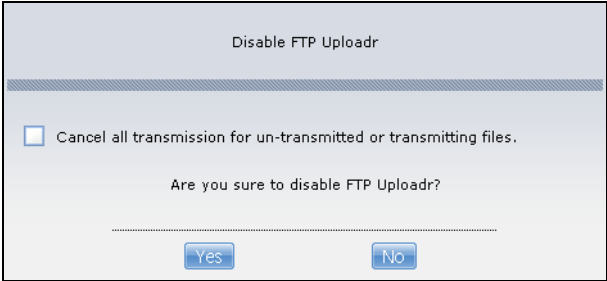
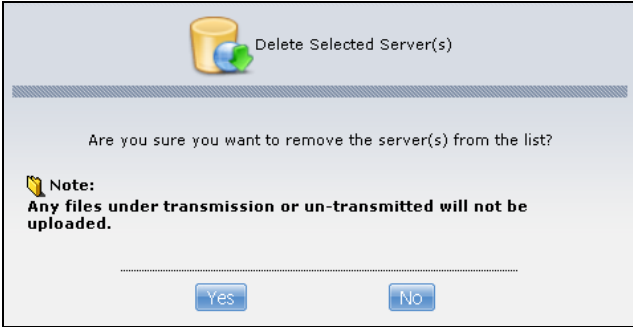
Use this screen to configure the FTP Uploadr.

Click **Applications > Auto Upload > FTP Uploadr** to open the screen shown next.

**Figure 160** Applications > Auto Upload > FTP Uploadr

The following table describes the labels in this screen.

**Table 97** Applications > Auto Upload > FTP Uploadr

LABEL	DESCRIPTION
Enable FTP Uploadr	<p>Use the check box to enable or disable the FTP Uploadr. Click <b>Apply</b> to save your changes.</p> <p>When you disable the FTP Uploadr, a screen opens requesting confirmation. Select the check box to stop any current or queued uploads. If you do not select the check box, the FTP Uploadr will finish uploading the files that are already in the queue list. Clicking <b>Yes</b> will disable the FTP Uploadr.</p> 
Add Server	Click this to add a target FTP server entry. See <a href="#">Section 12.5.1 on page 295</a> for more details.
Preferences	Click this to manage the settings of the FTP Uploadr.
Edit Server	Select a server from the list and click this to edit the FTP server entry.
Delete Selected Server(s)	<p>Select a server from the list and click this to remove the FTP server entry.</p> 
Server Information	Select a server from the list and click this to display the status and settings about the FTP server.
Domain Name/IP Address	This is the domain name or IP address of the FTP server.
Port Number	This is the port number used by the FTP server.
Remote Path	The NSA automatically uploads files to this location of the FTP server.
Account Name	This is the login account for the FTP server.
Description	This is the information related to the FTP server.

## 12.5.1 Adding or Editing an FTP Server Entry

Use this screen to add or edit an FTP server entry for auto upload.

In the **FTP Uploadr** screen, click the **Add Server** or **Edit Server** button to open the following screen.

**Figure 161** Applications > Auto Upload > FTP Uploadr > Add or Edit a Server

The following table describes the labels in this screen.

**Table 98** Applications > Auto Upload > FTP Uploadr > Add or Edit a Server

LABEL	DESCRIPTION
Domain Name/IP Address	Enter the domain name or IP address of the FTP server.
Account Name	Enter the account name used to access the FTP server.
Password	Enter the password associated with the account name.
Port Number	Enter the port number for the FTP server.
Remote Path	Enter the path of the FTP server where the NSA automatically uploads files.
Description	Enter additional information about this FTP server.
Test Connection	Click this to test your settings and check whether you can use the settings to connect to the FTP server.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 12.5.2 The FTP Uploadr Preferences Screen

Use this screen to configure the general settings for the FTP Uploadr.



In the **FTP Uploadr** screen, click the **Preferences** icon to open the following screen.

**Figure 162** Applications > Auto Upload > FTP Uploadr > Preferences

**Folder Watch List**

Status	Share Name	Path	Action
There are currently no folders on the watch list.			

Add

**Settings**

**Grace Period**  
The time the system will wait before a newly added file is saved in a watched folder.  
Grace Period  minutes



**Bandwidth Limit**  
Max. upload rate  KB/s (0=No Limit)

Apply




Reset Close

The following table describes the labels in this screen.

**Table 99** Applications > Auto Upload > FTP Uploadr > Preferences

LABEL	DESCRIPTION
Folder Watch List	
Status	This field indicates whether the share or folder is available.  represents a valid folder. The folder is available for auto upload.  represents a missing folder. The share may be deleted from the NSA, or the hard disk was removed from the NSA.
Share Name	This is the share selected for auto upload.
Path	This is the path of a folder selected for auto upload. The NSA only uploads files stored in the specified share or folder to your FTP server.
Action	Use the <b>Remove</b> icon to delete a folder from the <b>Folder Watch List</b> .

**Table 99** Applications > Auto Upload > FTP Uploadr > Preferences (continued)

LABEL	DESCRIPTION
Add	<p>Click this to open the following screen where you can set a folder that contains files you want the NSA to automatically upload.</p>  <ul style="list-style-type: none"> <li>• <b>Share</b> - Select the share from the list.</li> <li>• <b>Path</b> - Type the folder location in the share directly or click <b>Browse</b> to open the following screen and navigate to the folder's location.</li> </ul>  <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This is the type of the folder/file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Settings	
Grace Period	<p>Specify how long the NSA should wait when you add a new file for auto upload. For example, if you set the grace period to 5 minutes, the NSA uploads a new file after it has been in a watched folder for 5 minutes. You can choose from a range of 1 to 10080 minutes (up to one week).</p>
Bandwidth Limit	<p>Enter the maximum upload rate for auto upload. You can choose from a range of 0 to 100,000 KB/s. Enter 0 if you do not want to set any limit.</p> <p>Use this to leave bandwidth on your network connection for other traffic, especially if your Internet connection has restricted upload speed.</p>
Apply	<p>Click this to save your changes in this section.</p>
Reset	<p>Click this to restore previously saved settings.</p>
Close	<p>Click this to return to the previous screen without saving.</p>

## 13.1 Overview

The Dropbox Web-based file hosting service uses cloud computing to let you use file synchronization to store and share files and folders with others across the Internet. Use your Dropbox account to easily move files to your NSA and have the NSA download \*.torrent files.

## 13.2 Dropbox Screen

Use the **Dropbox** screen to log the NSA into your Dropbox account. This creates Drop2NAS and zDownload folders in your Dropbox account. See [Section 13.3 on page 301](#) for how to use the folders to move files to your NSA and have the NSA download \*.torrent files. The NSA checks the Dropbox account's Drop2NAS and zDownload folders every three minutes.

Click **Applications > Dropbox** to open the following screen.

**Figure 163** Applications > Dropbox

The screenshot shows the 'Applications - Dropbox' configuration page. It is divided into several sections:

- Status:**
  - Status: Receiving file/folder from Dropbox tunnel.
  - Name: Jack Chen
  - Email: [Redacted]
  - Capacity: A progress bar shows 0.04% (926.70 KB) Used and 99.96% Free. Total capacity is 2.25 GB.
- Configuration:**
  - Enable Dropbox
- Note:**
  - The default directory is in admin/Dropbox/FromDropbox.




Buttons for 'Logout' and 'Apply' are visible.

The following table describes the labels in this screen.

**Table 100** Applications > Dropbox

LABEL	DESCRIPTION
Status	<p>This shows the status of the NSA Dropbox application's interaction with the Dropbox server.</p> <p><b>Disable:</b> The NSA Dropbox application is turned off.</p> <p><b>Ready:</b> The NSA Dropbox application has authenticated with the Dropbox server and is ready to use.</p> <p><b>Authenticating with Dropbox. Please wait.:</b> The NSA Dropbox application is logging into the Dropbox server.</p> <p><b>Failed to negotiate link with Dropbox. Please contact your vendor.:</b> The NSA cannot find the Dropbox server at the normal address.</p> <p><b>Receiving file/folder from Dropbox tunnel.:</b> The NSA is getting a file from your Dropbox account.</p> <p><b>Dropbox account has been already used on other NAS.:</b> One Dropbox account can only work with one NSA at a time. Log the other NSA out of your Dropbox account to be able to use the account with this NSA.</p>
Name	This is the owner of the Dropbox account the NSA is configured to use.
Email	This is the e-mail address of the owner of the Dropbox account the NSA is configured to use.
Logout	<p>This displays after the NSA connects to Dropbox. Click <b>Logout</b> to stop syncing your files with Dropbox and have the NSA log out from your Dropbox account. Use this to be able to use the NSA with another Dropbox account. If you only want to stop syncing your files with Dropbox, you can just clear the <b>Enable Dropbox</b> option and click <b>Apply</b>.</p>
Capacity	This shows how much total storage space is available on the NSA to use for Dropbox as well as the amounts already in use and still available.

**Table 100** Applications > Dropbox (continued)

LABEL	DESCRIPTION
Enable Dropbox	<p>Select this to synchronize and back up your Dropbox account. The first time you do this a Dropbox screen prompts you to log into your Dropbox account.</p>  <p>Then a NSA pop-up opens. Click <b>Get Ready</b>.</p>  <p>Click <b>Allow</b> when the Dropbox screen notifies you of the NSA's DropNAS application trying to connect to your Dropbox account.</p>  <p>After the NSA connects to Dropbox, clear the <b>Enable Dropbox</b> option and click <b>Apply</b> to stop syncing your files with Dropbox without logging out from your Dropbox account. Click <b>Logout</b> instead to be able to use the NSA with another Dropbox account.</p>
Apply	Click this to save your changes.

## 13.3 How to Use Dropbox with the NSA

Here is how to use the Drop2NAS and zDownload folders the NSA creates in your Dropbox account.

### Using the Drop2NAS Folder

The NSA connects to Dropbox and copies files in the Drop2NAS folder to the NSA's admin\Dropbox\FromDropbox folder and empties the Drop2NAS folder. The NSA initiates connections to the Dropbox server so you do not need to configure rules on a firewall in front of the NSA to allow access to the NSA. Dropbox is not connecting to the NSA. When you upload files of the same name to the Drop2NAS folder, the NSA adds a number to the names of the files in the NSA's

admin\Dropbox\FromDropbox folder in the format of “filename(n).extension”. Here is an example of the Drop2NAS folder.

Note: Do not delete the NAS token file as it is needed for your NSA to work with the Dropbox account.

**Figure 164** Dropbox\Drop2NAS



## Using the zDownload Folder

The NSA copies \*.torrent files in the zDownload folder to the NSA's admin\download\torrents folder and automatically starts downloading them. The NSA adds a suffix to the name of each torrent file in the Dropbox account's zDownload folder and keeps updating it to show the job's state (downloading, queued, paused, canceled, uploading, finished, error, or retrying). The NSA does not take any action for folders nor other types of files in the zDownload folder. Here is an example of torrent files in the zDownload folder.

**Figure 165** Dropbox\zDownload

名稱	大小	類型	修改日期
Readme_zDownload.pdf	3 KB	Adobe Acr...	2011/08/05 10:52
test_Torrent(3).torrent.downloading	220 KB	DOWNLO...	2009/04/24 17:48
test_Torrent(6).torrent.downloading	64 KB	DOWNLO...	2009/04/24 17:45
test_Torrent(7).torrent.downloading	56 KB	DOWNLO...	2009/04/24 17:47
test_Torrent.torrent.downloading	221 KB	DOWNLO...	2009/04/23 17:00
test_Torrent(5).torrent.error	14 KB	ERROR ...	2009/04/23 16:59
test_Torrent(2).torrent.queue	28 KB	QUEUE ...	2009/04/23 16:58
test_Torrent(4).torrent.uploading	14 KB	UPLOADI...	2009/04/23 16:59

# Using Time Machine with the NSA

## 14.1 Overview

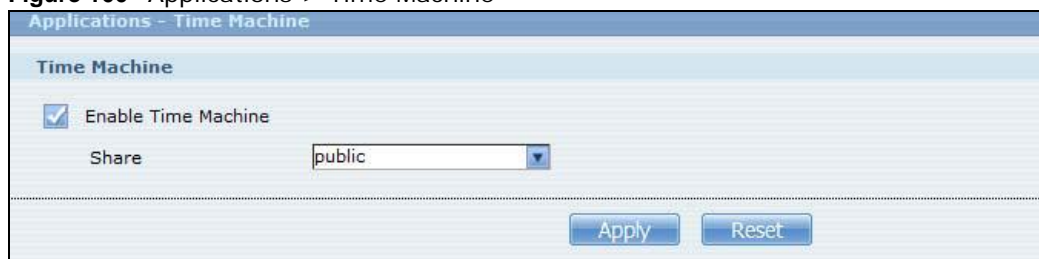
Time Machine is a backup system provided by Mac OS X. It automatically backs up everything on your Mac, including pictures, music, videos, documents, applications, and settings. This chapter helps you to enable Time Machine in OS X to use your NSA as a backup volume.

## 14.2 Time Machine Screen

Use the **Time Machine** screen to turn Time Machine support on or off, and designate the share for Time Machine backups.

Click **Applications > Time Machine** to open the following screen.

**Figure 166** Applications > Time Machine



The following table describes the labels in this screen.

**Table 101** Applications > Time Machine

LABEL	DESCRIPTION
Enable Time Machine	Select this to allow Macs to use Time Machine to back up to the NSA. Clear it to turn off Time Machine support.
Share	Select the share the NSA uses to store Time Machine backups.
Apply	Click this to save your changes.
Reset	Click this to restore the screen's last-saved settings.

## 14.3 Using Time Machine

After enabling Time Machine on the NSA, follow the steps below to set up Time Machine on your Mac to use your NSA for backup.

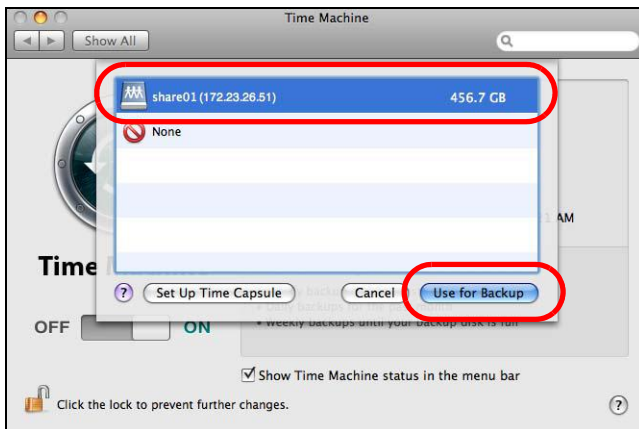
- 1 Click **Apple > System Preferences**. Then go to **System** and select **Time Machine**.



- 2 Turn Time Machine **ON**. Then click **Change Disk**.



- 3 Select **share01** as the backup disk. Then click **Use for Backup**.

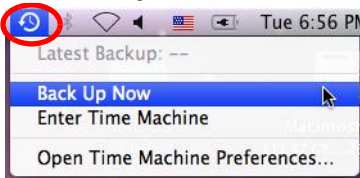




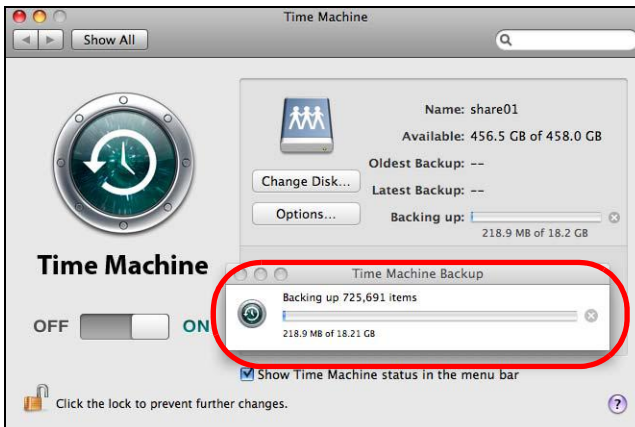
- 4 When prompted for the username and password of **share01**, enter the login information for an existing user account with write access permission on **share01** (for information on configuring user accounts and shares see [Section 5.9 on page 82](#)). In this example **user1/12345** is used. Then click **Connect**.



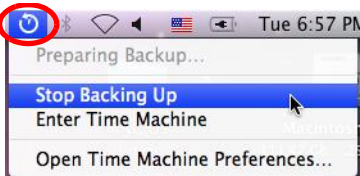
- 5 Time Machine starts backing up files to **share01** after 120 seconds. If you want to backup immediately, click Time Machine icon and select **Back Up Now**.



- 6 The screen shows the status of the backup once the process begins.



- 7 To stop the backup process, click the Time Machine icon and select **Stop Backing Up**. Then turn Time Machine **OFF**.





## 15.1 Overview

This chapter introduces the **Users** screens of the NSA. Use the **Users** screens to create and manage administrator and user accounts.

Administrators can:

- Configure and manage the NSA.
- Create volumes, shares, and user accounts.
- Assign individual users specific access rights for specific shares.

Users are people who have access rights to the NSA and can store files there for later retrieval. A user can:

- Manage shares that he owns.
- Change his own password.
- Access the contents of other shares to which he is given access rights.

## 15.2 What You Can Do

- Use the main **Users** screen ([Section 15.3 on page 307](#)) to display a list of user accounts created on the NSA.
- Use the **Add User** screen ([Section 15.3.2 on page 309](#)) to create new user accounts.
- Use the **Edit User** screen ([Section 15.3.2 on page 309](#)) to edit the properties of an existing account.
- Use the **User Info** screen ([Section 15.4 on page 312](#)) to display the amount of volume space used by a selected account and the account's membership in any groups.

## 15.3 The Users Screen

Click **Sharing** > **Users** to display the screen shown next.

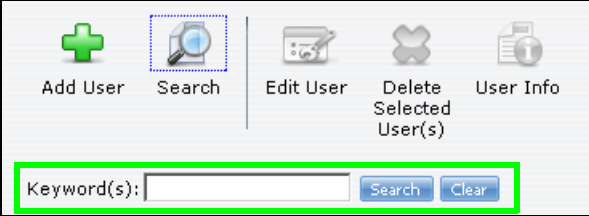
Use this screen to create and manage accounts for users who can store files on the NSA.

**Figure 167** Sharing > Users



The following table describes the labels in this screen.

**Table 102** Sharing > Users

LABEL	DESCRIPTION
Add User	Click this to open a screen where you can configure a new user account. Refer to <a href="#">Section 15.3.2 on page 309</a> to see the screen.
Search	Click this to display a search field. Type in the name of an account and then click <b>Search</b> to look up the account you specified. Click <b>Clear</b> to close the search function. 
Edit User	Select an account and click this to open a screen where you can edit the properties of the account. Refer to <a href="#">Section 15.3.2 on page 309</a> to see the screen.



**Table 102** Sharing > Users (continued)

LABEL	DESCRIPTION
Delete Selected Users	<p>Select an account and click this to open a screen where you can delete the user account.</p> <div style="text-align: center;"> </div>
User Info	<p>Select an account and click this to open a screen displaying the amount of storage space used by the account. You can also check the account's membership in any groups.</p> <p>Refer to <a href="#">Section 15.4 on page 312</a> to see the screen.</p>
Display Number	Click the drop-down menu to set how many accounts you want to display in one screen.
Go to Page	Click the drop-down menu to display and access more user accounts.
User Type	This field displays whether the account is an administrator account or a user account.
Username	This field displays the username of each account.

### 15.3.1 User Icons

The following table describes the user icons.

**Table 103** User Icons

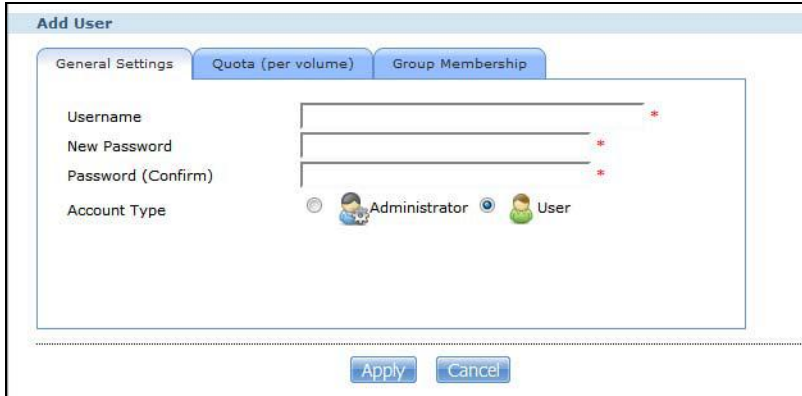
ICON	DESCRIPTION
	The blue icon is for an administrator account.
	The green icon is for a user account.

### 15.3.2 Adding or Editing an Account

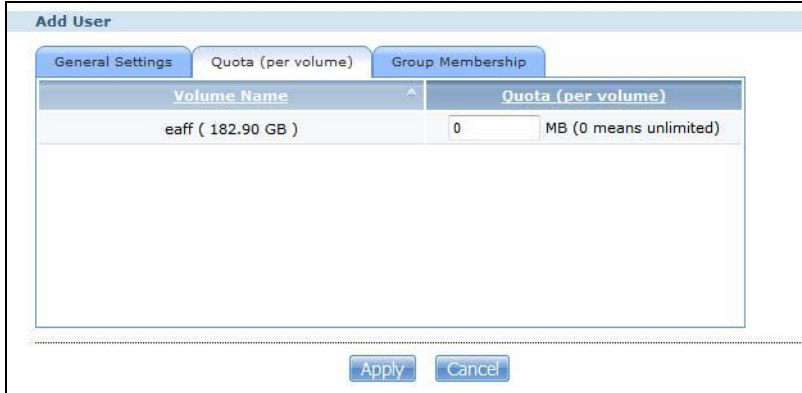
Use this screen to create or edit a NSA user account with NSA access password.

Click the **Add User** button in the **Users** screen to open the following screens. Click the **Edit User** button in the screen shown previously to edit an existing account.

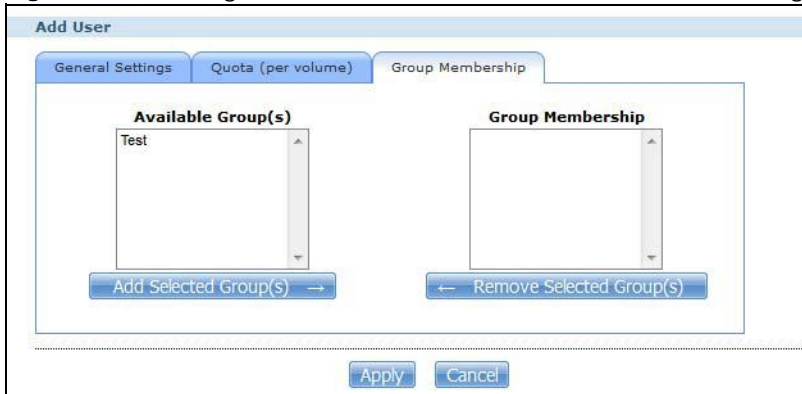
**Figure 168** Sharing > Users > Add or Edit a User: General Settings



**Figure 169** Sharing > Users > Add or Edit a User: Quota (per volume)



**Figure 170** Sharing > Users > Add or Edit a User: General Settings



The following table describes the labels in these screens.

**Table 104** Users > Add or Edit a User

LABEL	DESCRIPTION
General Settings	Click this to configure the user's user name and password.
Username	Type a name from 1 to 32 single-byte (no Chinese characters allowed for example) ASCII characters. See <a href="#">Section 15.3.3 on page 311</a> for more details on usernames.
New Password	Create a password associated with this user. You can type from one to 14 single-byte (no Chinese characters allowed for example) ASCII characters.

**Table 104** Users > Add or Edit a User (continued)

LABEL	DESCRIPTION
Password (Confirm)	You must type the exact same password that you just typed in the above field.
Account Type	Select <b>Administrator</b> to give the account full configuration and management access to the NSA.  Select <b>User</b> to give the account basic access rights to the NSA and allow the user to manage his own shares, change his own password, and access the contents of other shares to which he is given access rights.
Quota (per volume)	Click this to configure which volume the user can use and the allowed storage space.
Volume Name	Select the volume in which you want the user's files to be stored.
Quota (per volume)	Enter how much space (in megabytes) you want to allow for the user to store files.
Group Membership	Click this to configure to which groups on the NSA the user belongs.
Available Group(s)	This field lists the groups created on the NSA to which the selected account does not belong.
Group Membership	This field lists the groups that the selected account belongs to.
Add Selected Group(s)	Select a group from the <b>Available Groups</b> list and click this to add the account to that group.
Remove Selected Group(s)	Select a group from the <b>Group Membership</b> list and click this to remove the account from that group.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

### 15.3.3 Usernames

Enter a username from one to 32 characters. The first character must be alphabetical (case insensitive, [A-Z a-z]); numeric characters are not allowed as the first character.

The username can only contain the following characters:

- Alphanumeric A-z 0-9. Unicode usernames are supported with CIFS logins, but not FTP or web configurator logins.
- Spaces
- \_ [underscores]
- . [periods]
- - [dashes]

Other limitations on usernames are:

- All leading and trailing spaces are removed automatically.
- Multiple spaces within names are converted to a single space.
- Usernames are case insensitive. The username cannot be the same (no matter the letter case) as an existing user. For example, if a user exists with the name 'BOB', you cannot create a user named 'bob'. If you enter a user 'bob' but use 'BOB' when connecting via CIFS or FTP, it will use the account settings used for 'bob'.
- The username cannot be the same as a system username such as **ANONYMOUS-FTP** nor be the same as an existing user. Other reserved usernames that are not allowed are:
  - bin
  - daemon

- ftp
- anonymous-ftp
- anonymous
- nobody
- root
- pc-guest
- admin
- password

## 15.4 Displaying User Info

Use this screen to display a user's information.

In the **Users** screen, select an account and click **User Info** to open the following screen.

**Figure 171** Sharing > Users > User Info



The following table describes the labels in this screen.

**Table 105** Sharing > Users > User Info

LABEL	DESCRIPTION
Username	This field displays the selected username.
Space Usage	Click this to display the amount of volume space used by the selected account.
Group List	Click this to display the selected user's group membership.
Volume Name	This field displays the volume(s) created on the NSA.
Used Space	This field displays how much storage space the selected account is currently using. This only applies for files that the user saved onto the NSA while logged in with that username.
Group Name	This shows when you click the <b>Group List</b> tab. This displays the list of groups to which the selected user belongs.
OK	Click this to close the current screen.



## 16.1 Overview

This chapter introduces the **Groups** screens. Use the **Groups** screens to create and manage groups. You can assign users to groups and grant individual groups access rights to specific shares.

## 16.2 What You Can Do

- Use the main **Groups** screen (Section 16.3 on page 313) to display and manage a list of groups created on the NSA.
- Use the **Add Group** screen (Section 16.3.1 on page 314) to create new groups.
- Use the **Edit Group** screen (Section 16.3.1 on page 314) to edit the properties of an existing group.

## 16.3 The Groups Screen

Use this screen to create and manage groups.

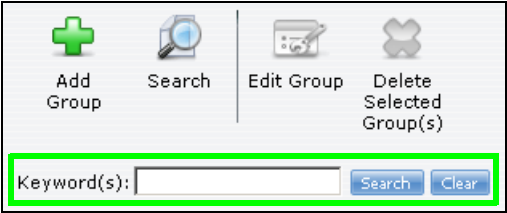


Click **Sharing > Groups** to display the screen shown next.

**Figure 172** Sharing > Groups



The following table describes the labels in this screen.

**Table 106** Sharing > Groups

LABEL	DESCRIPTION
Add Group	Click this to open a screen where you can configure a new group.
Search	<p>Click this to display a search field. Type the name of a group and then click <b>Search</b> to look up the group you specified. Click <b>Clear</b> to close the search function.</p> 
Edit Group	Select a group and click this to open a screen where you can edit the properties of the selected group.
Delete Selected Group(s)	<p>Select a group and click this to open a screen where you can delete the group.</p> 
Display Number	Click the drop-down menu to set how many groups you want to display in one screen.
Go to Page	Click the drop-down menu to select a page number. Jump to a different page to display and access more groups.
Status	 This field displays the group icon.
Group Name	This field displays the group names created on the NSA.

### 16.3.1 Adding or Editing a Group

Use this screen to create or edit a NSA group.

Click the **Add Group** button in the **Groups** screen to open the following screen. Click the **Edit Group** button in the screen shown previously to edit an existing group.

**Figure 173** Sharing > Groups > Add or Edit a Group

The following table describes the labels in this screen.

**Table 107** Sharing > Groups > Add or Edit a Group

LABEL	DESCRIPTION
Group Name	Type a name from 1 to 32 single-byte (no Chinese characters allowed for example) ASCII characters. See <a href="#">Section 16.3.2 on page 315</a> for more details on group names.
Group Membership	Use this field to assign group membership to individual users.
Available User(s)	This field lists the user accounts created on the NSA that are not members of the current group.
Group Membership	This field lists the user accounts added to the group.
Add Selected User(s)	Select a user account from the <b>Available Users</b> list and click this to add the account to the group.
Remove Selected User(s)	Select a user account from the <b>Group Membership</b> list and click this to remove the account from the group.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 16.3.2 Group Names

Enter a group name from 1 to 32 characters. The first character must be alphabetical (case insensitive, [A-Z a-z]); numeric characters are not allowed as the first character.

The group name can only contain the following characters:

- Alphanumeric A-z 0-9. Unicode usernames are supported with CIFS logins, but not FTP or web configurator logins.
- Spaces
- \_ [underscores]
- . [periods]
- - [dashes]

Other limitations on group names are:

- All leading and trailing spaces are removed automatically.

- Multiple spaces within names are converted to a single space.
- Group names are case insensitive. The group name cannot be the same (no matter the letter case) as an existing group. For example, if a group exists with the name 'FAMILY', you cannot create a group named 'family'.
- The group name cannot be the same as a system group name such as **EVERYONE** nor be the same as an existing group. Other reserved groups names that are not allowed are:
  - nobody
  - root
  - everyone

## 17.1 Overview

A share is a set of access permissions mapped to a specific folder on a volume. It is equivalent to the Windows concept of a shared folder. You can map a share to a network drive for easy and familiar file transfer for Windows users.

## 17.2 What You Can Do

- Use the **Shares** screen ([Section 17.3 on page 317](#)) to navigate a list of shares created on the NSA.
- Use the **Add Shares** screen ([Section 17.3.1 on page 319](#)) to create additional shares on the NSA.
- Use the **Recycle Bin** screen ([Section 17.4 on page 321](#)) to configure and clean up the recycle bins.
- Use the **Edit Share** screen ([Section 17.3.1 on page 319](#)) to edit a share's properties.
- Use the **Share Browser** screen ([Section 17.5 on page 322](#)) to navigate, add and edit the contents in a share.

## 17.3 The Shares Screen

Click **Sharing > Shares** in the navigation panel to open the following screen. This screen lists all shares created on the NSA.

**Figure 174** Sharing > Shares









The screenshot shows the 'Shares' screen with a navigation bar at the top containing icons for 'Add Share', 'Recycle Bin', 'Edit Share', 'Delete Share', and 'Share Browser'. Below the navigation bar is a table listing shares with columns for Status, Share Type, Share Name, Share Path, Share Owner, and Permission Type.

Status	Share Type	Share Name	Share Path	Share Owner	Permission Type
	Predefined	video	Volume1/video	admin	Public
	Predefined	photo	Volume1/photo	admin	Public
	Predefined	music	Volume1/music	admin	Public
	Auto-SATA	Volume1	Volume1/	admin	Private
	Built-in	public	Volume1/public	admin	Public
	Built-in	admin	Volume1/admin	admin	Private

The following table describes the labels in this screen.

**Table 108** Sharing > Shares

LABEL	DESCRIPTION
Add Share	Click this to create a new share.
Recycle Bin	Click this to configure recycle bins.
Edit Share	Select a share and click this to edit the share.
Delete Share	<p>Select a share and click this to remove or restrict access to the share.</p> 
Share Browser	Select a share and click this to browse the share's contents.
Status	<p>This field displays the share icons.</p> <ul style="list-style-type: none"> <li> represents a <b>Built-in</b> share on a volume on the internal hard drives.</li> <li> represents an <b>Auto-SATA</b>, <b>Predefined</b>, or <b>User-Created</b> share on a volume on the internal hard drives.</li> <li> represents an <b>Auto</b> or <b>User-Created</b> share on a volume on the external (USB) devices.</li> <li> represents a disabled share that no user can access.</li> <li> represents a missing share. The NSA cannot find the hard disk associated with the share (the disk may be removed from the NSA for example). You may install the disk back to the NSA to recover the share, or you may delete the share from the NSA.</li> </ul>
Share Type	<p>The NSA automatically creates an <b>Auto-SATA</b> share for each internal SATA volume. The auto-SATA share has the same name as the volume and is the volume's root (or "master") share. It contains all of the volume's shares. All new shares you create on the volume are also automatically included in the auto-SATA share. You cannot delete, edit, or use the share browser with the auto-SATA share.</p> <p><b>Note:</b> Use the admin account to map the auto SATA share to a Windows network drive. This gives the administrator convenient access to all of the volume's shares through a single Windows network drive. External disk (volume) shares must still be mapped individually.</p> <p>This field displays <b>Built-in</b> for system shares. You cannot delete these shares. These are the public and admin shares.</p> <p>This field displays <b>Predefined</b> for default shares. You cannot delete these shares. These are the video, music, and photo shares.</p> <p>This field displays <b>User-created</b> for shares that an administrator has created. You can delete these shares.</p> <p>This field displays <b>Auto</b> for shares that are automatically created on an external (USB) device when a user plugs in the device.</p>
Share Name	This field displays the share's names.

**Table 108** Sharing > Shares (continued)

LABEL	DESCRIPTION
Share Path	This field displays the share's file path, for example, volume1/music.
Share Owner	This is the name of the user account to which this share belongs.
Permission Type	This field displays the access permission of a share.  Everyone on the network can access a <b>Public</b> share.  Only the share owner can access a <b>Private</b> share.  An <b>Advanced</b> share allows you to assign specific access rights (read-only for example) to individual users/groups.

### 17.3.1 Adding or Editing Share

Click **Add Share** to create a new share. In the **Shares** screen, select a share and click **Edit Share** to open the following screen. Use this screen to create or edit a share.

**Figure 175** Shares > Add Share (or Edit Share)

The following table describes the labels in this screen.

**Table 109** Shares > Add Share (or Edit Share)

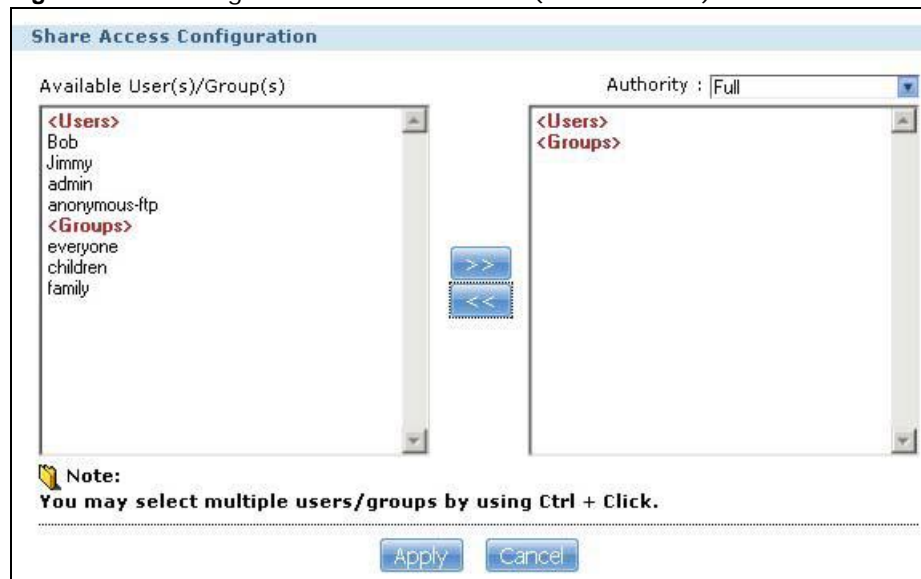
LABEL	DESCRIPTION
Share Name	Type a share name from 1 to 239 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing share. See <a href="#">Section 4.4.6 on page 54</a> for more information on share names.
Volume	You should have already created volumes (a single accessible storage area with a single file system) on the NSA. Select the one that contains the folder that you want to share out.  You cannot modify this when editing a share.
Make this share owned by	Select the administrator or user account that can own (manage) this share. The share owner controls access rights to the share.
Enable this share	Click this to allow access to this share.
Enable Recycle Bin	Click this to activate the recycle bin. When you delete a file from this share, a recycle folder is created to store the deleted item.

**Table 109** Shares > Add Share (or Edit Share) (continued)

LABEL	DESCRIPTION
Publish this share to Media Server	This option is available only when you enable the <b>Media Server</b> (Section 10.5 on page 188).  Select this option to have the NSA make media files in this share available to media clients and through the Playzone screens. When you publish a share, you can also select whether or not to publish music tracks, photos, and videos. The media clients do not have to use a password to play the shares you publish.
Publish this share to Web	This option is available when you enable the <b>Web Publish</b> (Section 10.8 on page 203).  Select this option to let people use a web browser to access this share's files without logging into the Web Configurator.
Share Access	Assign access rights (full, read only or deny) to users or groups. If you publish the share to the media server or the web, all users will have at least read-only access to the share, regardless of what you configure here.  <b>Keep it private to owner</b> means only the share owner (selected above) can access the share.  <b>Make it Public</b> means every user (including people who do not have accounts on the NSA) can access the share.  <b>Advanced</b> allows you to assign specific access rights (full, read only or deny) to individual users/groups.
Edit	This button is available only when you select <b>Advanced</b> share access. Click this to configure advanced share access rights.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 17.3.2 Configuring Advanced Share Access



In the **Sharing > Shares > Add Share** or **Edit Share** screen, select **Advanced** from the **Share Access** drop-down list. Click **Edit** to open the following screen. Use this screen to configure share access rights for individual users and groups.

**Figure 176** Sharing > Shares > Add Share (or Edit Share) > Advanced



The following table describes the labels in this screen.

**Table 110** Sharing > Shares > Add Share (or Edit Share) > Advanced

LABEL	DESCRIPTION
Available Users/Groups	This field lists the users/groups to which you can assign access rights.
Authority	Use this field to assign access rights to users/groups.  <b>Full Control</b> gives users/groups full access (read, write and execute) to all files contained within this share.  <b>Read-Only</b> gives users/groups read-only access (they cannot modify nor execute) to all files contained within this share.  <b>Deny</b> blocks access (users/groups cannot read, modify, nor execute) to all files contained within this share.  Among all access rights, <b>Deny</b> has the highest priority. For example, User A belongs to Group 1. You assign User A full access rights to the Music share but deny access rights to Group 1. Then User A cannot access the Music share.  Note: If you deny access to all users, no-one can use the share, not even the administrator.
 	Click an arrow button to move users/groups between the left and right fields. Use the arrow buttons to assign access rights to users/groups.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

### 17.3.3 Public and ANONYMOUS Share Access Rights

If you make a share public, users do not need to log in.

With **ANONYMOUS FTP**, you must enter either 'anonymous' or 'ftp' as the username. Any other name is considered a username, so must be valid and have a corresponding correct password.

## 17.4 The Recycle Bin Configuration Screen

Use this screen to periodically clean up items in all recycle bins.

### 17.4.1 Recycle Bins

Recycle bins in the NSA help users recover accidentally deleted files or folders in the shares. When you delete an item, a recycle folder is created within the share to hold the deleted item.

Every share can have its own recycle folder. You must enable the recycle-bin function to recycle deleted items. You can configure this setting when you add or edit a share. See [Section 17.3.1 on page 319](#) for details on activating the recycle bin in a share.

Later if you want to retrieve a deleted item, you can locate the item in the recycle folder. You may move or copy the deleted item to another share.

## 17.4.2 Configuring Recycle Bins

In the **Sharing > Shares** screen, click **Recycle Bin** to open the following screen.

**Figure 177** Sharing > Shares > Recycle Bin

**Share Configuration**

Clean Recycle Bin every  days (0~31, 0 means not clean it automatically.)

[Clean all recycle bins now](#)

[Apply](#) [Cancel](#)

The following table describes the labels in this screen.

**Table 111** Sharing > Shares > Recycle Bin

LABEL	DESCRIPTION
Clean Recycle Bin every N days	Specify how often you want to clear the contents in all recycle bins. The specified days correspond to how long a file has been stored in a recycle bin. For example, if you set the interval to be 3 days, recycle bins will clean up items deleted or not accessed for 3 days.  Note: Cleaning up recycle bins permanently removes the files from the NSA.
Clean all recycle bins now	Click this to immediately remove contents from all recycle bins.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 17.5 The Share Browser Screen

Use this screen to create folders, upload files, and edit files within the share.

**Figure 178** Sharing > Shares > Share Browser

**Share Browsing**

Create Folder Upload Rename Delete Move Copy

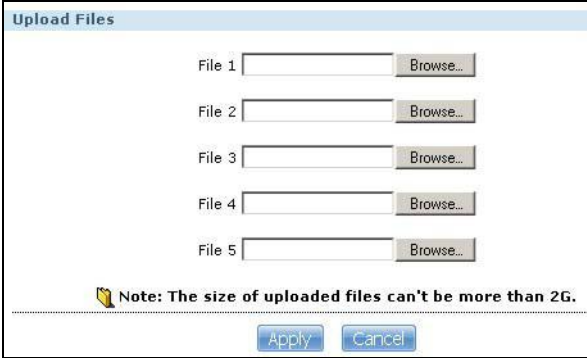
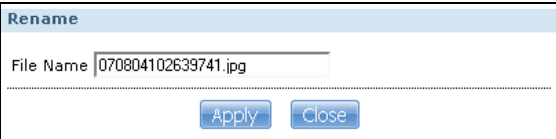

Current Location: /photo

Type	Name	Size	Modified Date
..	..		
wallpaper	wallpaper		2008-07-21 16:56:01
2008-07-30_16-00-10	2008-07-30_16-00-10		2008-07-30 16:00:11
070804102634654.jpg	070804102634654.jpg	132.74 KB	2008-07-21 16:39:29
070804102644638.jpg	070804102644638.jpg	113.22 KB	2008-07-21 16:39:32
NTR_ChildMana_char01.jpg	NTR_ChildMana_char01.jpg	285.01 KB	2008-07-21 16:36:51
NTR_ChildMana_char02.jpg	NTR_ChildMana_char02.jpg	337.66 KB	2008-07-21 16:36:53
NTR_ChildMana_char03.jpg	NTR_ChildMana_char03.jpg	494.30 KB	2008-07-21 16:36:55
test.jpg	test.jpg	137.37 KB	2008-07-21 16:39:30

[Close](#)

The following table describes the labels in this screen.

**Table 112** Sharing > Shares > Share Browser

LABEL	DESCRIPTION
Create Folder	Type a folder name and click <b>Apply</b> to make a new folder. The name can be 1 to 239 single-byte (no Chinese characters allowed for example) ASCII characters. The name cannot be the same as another existing folder in the same path. See <a href="#">Section 4.4.6 on page 54</a> for more information on folder names.
Upload	<p>Click this to add files to the share. Use <b>Browse</b> to locate a file and click <b>Apply</b> to upload the file. Note that the size of each file should be less than 2 GB.</p> 
Rename	<p>Select a folder or file and click this to open a screen. Enter the name you want and click OK to make the changes.</p> <p><b>Note:</b> When you change a file name, make sure you keep the file extension</p> 
Delete	<p>Select a file/folder from the list and click this to open a warning screen. Click <b>Yes</b> to delete the file/folder, or click <b>No</b> to close the screen.</p> 
Move	Select a file/folder from the list and click this to relocate the file/folder to another share.
Copy	Select a file/folder from the list and click this to make a duplicate of the file/folder to another share.
Current location	This is the name of the share and folder path that you are in.
Type	<p>The icon in this column identifies the entry as a folder or a file. Click a music or video file's play icon to play the file.</p> <p>The folder with an arrow pointing up is for the link that takes you to the next higher layer in the share's folder tree.</p>
Name	This section lists the share's existing folders or files. Click to the right of the file/folder name to select the file/folder. You can also click the folder's name to navigate to a sub-folder within the folder.
Size	This field displays size of the file.

**Table 112** Sharing > Shares > Share Browser (continued)

LABEL	DESCRIPTION
Modified Date	This field displays a file's latest modification date.
Close	Click this to close the screen.

## 17.5.1 Moving or Copying Files

Use this screen to move or copy files to another share.

In the **Share Browser** screen, select a file or folder and click **Move** or **Copy** to open the following screen.

**Figure 179** Sharing > Shares > Share Browser > Move (or Copy)

The following table describes the labels in this screen.

**Table 113** Sharing > Shares > Share Browser > Move (or Copy)

LABEL	DESCRIPTION
Shares	Select the destination share from the drop-down list.
Path	This field displays the share folder's path. You can use <b>Browse</b> to find or create a folder on the NSA or type the location of the folder using forward slashes as branch separators.
Browse	<p>Click this to open the following screen and navigate to the location of the file/folder.</p> <ul style="list-style-type: none"> <li>• <b>Current Location</b> - This is the location of the selected folder.</li> <li>• <b>Folder Name</b> - Enter a new folder name and click  to create it.</li> <li>• <b>Type</b> - This identifies the item as a folder or file.</li> <li>• <b>Name</b> - This is the name of the folder/file.</li> </ul> <p>Select a folder. If you don't select a folder, a forward slash (/) displays in the <b>Path</b> field. All contents within the specified share are automatically selected.</p> <p>Click <b>Apply</b> to save your settings and <b>Cancel</b> to close the screen.</p>
Yes	Click this to move or copy the file/folder to the designated share.
Close	Click this to return to the <b>Share Browser</b> screen.

# Maintenance Screens

## 18.1 Overview

This chapter discusses the **Maintenance** screens. The **Maintenance** screens allow you to manage system configurations.

## 18.2 What You Can Do

- Use the **Power** screen ([Section 18.3 on page 325](#)) to configure power settings for the NSA, including power saving, UPS, power on/off after power failure, power on/off schedule, and Wake on LAN.
- Use the **Log** screen ([Section 18.4 on page 329](#)) to check the system's logs.
- Use the **Configuration** screen ([Section 18.5 on page 333](#)) to backup or restore the NSA configuration file.
- Use the **SSL** screen ([Section 18.6 on page 334](#)) to configure HTTPS and the NSA's SSL certificate.
- Use the **Shutdown** screen ([Section 18.7 on page 336](#)) to restart or shut down your NSA.

## 18.3 The Power Screen

Use this screen to manage power settings for the NSA.

### 18.3.1 Notes on NSA-310

- The NSA-310 does not power on after power failure.
- You cannot configure a schedule to power on the NSA-310.

Click **Maintenance > Power** to display the following screen.

**Figure 180** Maintenance > Power



The following table describes the labels in this screen.

**Table 114** Maintenance > Power

LABEL	DESCRIPTION
Power Management	
Turn off hard disk(s)	Enter the number of minutes to wait when the NSA is idle before spinning the hard disks down to sleep (hibernation). The default time is 15 minutes.
Enable Sleeping HDD LED Blinking	Select this to have the HDD LED blink slowly when the hard disk is sleeping (hibernating). Clear this to have the HDD LED stay on when the hard disk is sleeping.
Minimum UPS Capacity	
Minimum UPS Capacity	When you use an APC Uninterruptible Power Supply (UPS) with a USB connection to the NSA, the NSA shuts itself down if the APC UPS's battery charge gets down to the percentage you specify in this field. This allows the NSA to shut down properly and avoid data loss caused by a power failure when the UPS stops supplying power.  A setting around 50% is recommended. A setting close to 100% is not recommended since it would cause the NSA to shut down whenever the UPS is charging. A setting close to 0 is also not recommended since the UPS would not have enough power to allow the NSA to shutdown properly.
Power On After Power Failure	Select an option to set whether or not the NSA restarts when the power is restored after a power failure.  Note: This feature is not supported on NSA310.
Keep Former Status	Select this option to have the NSA automatically restart only if it was operating when the power failed. The NSA remains off if it was already off when the power failed.
Always Power On	Select this option to keep the NSA operating as much of the time as possible. The NSA restarts automatically even if it was turned off when the power failed.

**Table 114** Maintenance > Power (continued)

LABEL	DESCRIPTION
Always Power Off	Select this option to keep the NSA from automatically restarting when the power is restored after a power failure. This is a computer's "traditional" behavior. Select this if you have other servers such as a domain controller or DNS server that you want to start or check after a power failure before the NSA turns on.
Power On/Off Schedule	
Enable Power Control Schedule	<p>Select this option to have the NSA turn itself off and on or reboot according to the schedules you configured.</p> <p>Click <b>Edit</b> to go to the screen where you can configure the power control schedules.</p> <p>Refer to <a href="#">Section 18.3.2 on page 328</a> for this screen.</p> <p><b>Note:</b> This feature is not supported on NSA310.</p>
Enable Wake On LAN	<p>Enable <b>Wake On LAN</b> to be able to turn on the NSA through its wired Ethernet connection.</p> <p>You must have a computer or router on your LAN that supports sending Wake On LAN "magic packets" to turn on the NSA.</p> <p>To use Wake On LAN from a computer on your LAN, install a program such as Wake On LAN EX or another Wake On LAN program that supports sending magic packets.</p> <p>You can use Wake On LAN from a remote location if the router in front of the NSA supports sending magic packets.</p> <p>Use the NSA's power button or the Web Configurator's <b>Maintenance &gt; Shutdown</b> menu to turn off the NSA.</p>
Apply	Click this to save your changes.
Reset	Click this to restore previously saved settings.

## 18.3.2 Editing the Power Control Schedule Screen

Click **Maintenance > Power Management > Edit** to open this screen. Use this screen to configure power control schedules to have the NSA turn on, turn off, or reboot at specified times.

**Figure 181** Maintenance > Power Management > Edit

The screenshot shows the 'Power Control Schedule List' and the 'Add Power Control Schedule' form. The list contains two entries: 'Power On' with frequency 'Monthly : FirstMonday' and 'Power Off' with frequency 'Monthly : FourthFriday', both at '00:00'. The 'Add' form includes fields for 'Type' (Power On), 'Frequency' (Monthly), 'Execute Time (hh:mm)' (0:00), and a section for selecting the day of the month (First, Monday).

Type	Frequency	Execute Time	Actions
Power On	Monthly : FirstMonday	00:00	
Power Off	Monthly : FourthFriday	00:00	

**Note:**  
 You must click on the apply button for your power control schedule settings to apply.

**Add Power Control Schedule**

Type: Power On  
 Frequency: Monthly  
 Execute Time (hh:mm): 0:00  
 Please select the day of the month:  \* Day,  First, Monday

Buttons: Add, Apply, Cancel

The following table describes the labels in this screen.

**Table 115** Maintenance > Power Management > Edit

LABEL	DESCRIPTION
Power Control Schedule List	This table lists the power on, power off, and reboot schedules. For example, you could have one schedule to turn the NSA on every morning, at 8:00, another schedule to turn it off every evening at 18:00, and a third schedule to have it reboot every Friday at 14:00.  Click a column's heading cell to sort the schedules by that column's criteria. Click the heading cell again to reverse the sort order.
Type	This field displays whether the power control schedule has the NSA turn on, turn off, or reboot.
Frequency	This field shows how often (monthly, weekly, or daily) the NSA is to apply this power control schedule.
Execute Time	This field shows when the NSA is to use this power control schedule (when the NSA is to turn on, turn off, or reboot).
Actions	Click the <b>Delete</b> icon to remove a power control schedule from the list.
Add Power Control Schedule	Use this part of the screen to add configure power on, power off, and reboot times.
Type	Select whether this power control schedule has the NSA turn on, turn off, or reboot.
Frequency	Select whether the NSA is to apply this power control schedule entry on a monthly, weekly, or daily basis.



**Table 115** Maintenance > Power Management > Edit (continued)

LABEL	DESCRIPTION
Execute Time (hh:mm)	<p>Enter the time, day, and/or day of the month as appropriate for this power control schedule entry. Leave more than 10 minutes between the execution times of the entries.</p> <p>If the NSA turns off or restarts while a user is transferring files to or from the NSA, the transfer fails. The user will need to restart the transfer.</p> <p>The NSA skips a scheduled restart or power off if the execution time comes while the NSA is doing any of the following:</p> <ul style="list-style-type: none"> <li>• Resynchronizing a RAID</li> <li>• Upgrading firmware</li> <li>• Replacing the configuration file</li> </ul> <p>If the NSA is turned off at the time when a restart or power off is scheduled, the NSA does not perform the restart or power off.</p> <p>If the NSA is turned on at the time when a power on is scheduled, the NSA does not perform the power on.</p>
Use this part of the screen to configure power on, power off, and reboot times.	
Please select the day of the month	<p>This is only available if you set the <b>Frequency</b> to <b>Monthly</b>.</p> <p>Choose the day of each month for the power control schedule entry.</p>
Every how many weeks?	<p>This is only available if you set the <b>Frequency</b> to <b>Weekly</b>.</p> <p>Enter the interval between weeks and choose the day of the week for the power control schedule entry.</p>
Every how many days?	<p>This is only available if you set the <b>Frequency</b> to <b>Daily</b>.</p> <p>Enter the interval between days for the power control schedule entry.</p>
Add	Click this to add the power control schedule to the list.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 18.4 The Log Screen

Click **Maintenance > Log** to open the following screen.

Use this screen to display all NSA logs. There are at most 512 entries in the log. Older logs are removed by the system. You cannot download the log file via FTP or CIFS.

**Figure 182** Maintenance > Log

#	Time	Class	Severity	Message
1	2009-05-18 16:03:43	user	info	User admin has logged in from Web!
2	2009-05-18 16:02:14	user	info	User admin from Web has been logged out (lease timeout)!
3	2009-05-18 15:33:07	user	info	User admin has logged in from Web!
4	2009-05-18 15:30:09	user	info	User admin from Web has been logged out (lease timeout)!
5	2009-05-18 15:14:48	user	info	User admin has logged in from Web!
6	2009-05-18 15:00:31	user	info	User admin from Web has been logged out (lease timeout)!
7	2009-05-18 14:43:01	user	notice	Add new group crushes.
8	2009-05-18 14:41:24	user	info	User admin has logged in from Web!
9	2009-05-18 14:41:04	user	info	User admin from Web has been logged out (lease timeout)!
10	2009-05-18 14:36:32	built-in-service	info	Download service download http://www.garageband.com/mp3cat/UZCMbCSD4a2n/01_April_17__2009__Friday__Part_3.mp3 error (0x20000012)
11	2009-05-18 14:36:31	built-in-service	info	Download service start to download http://www.garageband.com/mp3cat/UZCMbCSD4a2n/01_April_17__2009__Friday__Part_3.mp3

The following table describes the labels in this screen.

**Table 116** Maintenance > Log

LABEL	DESCRIPTION
Refresh	Click this to update the log display.
Purge all Logs	Click this to erase all logs from the NSA.
Report Config	Click this to open a screen where you can configure email alerts for logs. Refer to <a href="#">Section 18.4.1 on page 330</a> to see the screens for this.
Display	The screen always shows all logs by default. Choose a specific log category to view logs for just that category.
#	This is the log entry's number in the list according to the currently selected sort order.
Time	This shows the date and time the log was created. Click the top of the column to sort by oldest or newest.
Class	This displays the log category; see <a href="#">Table 124 on page 337</a> for details.
Severity	This displays how serious the log is rated by the NSA. See <a href="#">Table 125 on page 338</a> for more information.
Message	This displays a description of the log. Click the top of the column to sort by alphabetical or reverse alphabetical order.

## 18.4.1 Report Config Screen

In the **Log** screen, click **Report Config** to do the following:

- Use the **Email Setting** screen ([Section 18.4.2 on page 331](#)) to enable and configure e-mail alerts from the NSA.
- Use the **Report Setting** screen ([Section 18.4.3 on page 332](#)) to select the type of alerts you want to receive through e-mail and schedule when the NSA e-mails the alerts.

- Use the **Syslog Server Setting** screen (Section 18.4.4 on page 332) to enable the syslog server and select the categories to include in the log report.

## 18.4.2 Email Setting

You can enable and configure e-mail alerts from the NSA. In the **Report Config** screen, click the **Email Setting** tab to open the following screen.

**Figure 183** Maintenance > Log > Report Config: Email Setting

The screenshot shows the 'Log Report Configuration' window with the 'Email Setting' tab selected. The 'Email Configuration' section includes the following elements:

- Enable Log Email
- Email To: [Text Field]
- Email From: [Text Field]
- Email Server: [Text Field]
- Email Format:  HTML  Plain Text
- Use SMTP Authentication
- User: [Text Field]
- Password: [Text Field]
- Password (Confirm): [Text Field]
- After applying settings, Send a test email
- Buttons: Apply, Cancel

The following table describes the labels in this screen.

**Table 117** Maintenance > Log > Report Config: Email Setting

LABEL	DESCRIPTION
Enable Log Email	Click this to have the NSA e-mail log alerts to your e-mail account.
Email To	Enter the e-mail address where you want to receive the log alerts.
Email From	Enter the e-mail address the NSA uses in the From field of the e-mail header for its log alerts.
Email Server	Enter the e-mail server address the NSA uses to send e-mail alerts,
Email Format	Select the e-mail format you want the NSA to use in its e-mail alerts.
Use SMTP Authentication	Click this if the e-mail server you want the NSA to use for its e-mail alerts requires a username and password.
User	Enter the username for the e-mail server.
Password	Enter the password for the e-mail server.
Password (Confirm)	Re-enter the password to confirm it.
After apply settings, send a test email	Click this to have the NSA send a test e-mail to the settings you have entered.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 18.4.3 Report Setting

You can select the type of alerts you want to receive through e-mail and schedule when the NSA e-mails the alerts. In the **Report Config** screen, click the **Report Setting** tab to open the following screen.

**Figure 184** Maintenance > Log > Report Config: Report Setting

The following table describes the labels in this screen.

**Table 118** Maintenance > Log > Report Config: Report Setting

LABEL	DESCRIPTION
Email Alert	Check the type of log alerts you want to receive in your e-mail. Select <b>All Log</b> to include all types of log alerts.
Email Report	Check the type of log alerts you want to receive in your e-mail. Select <b>All Log</b> to include all types of log alerts.
Report Time	Select how often ( <b>Weekly</b> , <b>Daily</b> or <b>Hourly</b> ), what day in the week (Monday to Sunday) and which time (hour: minutes) the NSA delivers its e-mail alerts.
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 18.4.4 Syslog Server Setting

You can enable the syslog server and select the categories to include in the log report. In the **Report Config** screen, click the **Syslog Server Setting** tab to open the following screen.

**Figure 185** Maintenance > Log > Report Config: Syslog Server Setting

The following table describes the labels in this screen.

**Table 119** Maintenance > Log > Report Config: Syslog Server Setting

LABEL	DESCRIPTION
Enable Syslog Server	Check this to enable syslog server.
Server Address	Enter the syslog server address you want the NSA to use for its log alerts.
In the table below, check the type of log alerts you want to receive in your e-mail. Select <b>All Log</b> to include all types of log alerts.	
Apply	Click this to save your changes.
Cancel	Click this to return to the previous screen without saving.

## 18.5 The Configuration Screen

Click **Maintenance > Configuration** to open the following screen. Use this screen to backup or restore the NSA configuration settings.

**Figure 186** Maintenance > Configuration

The following table describes the labels in this screen.

**Table 120** Maintenance > Configuration

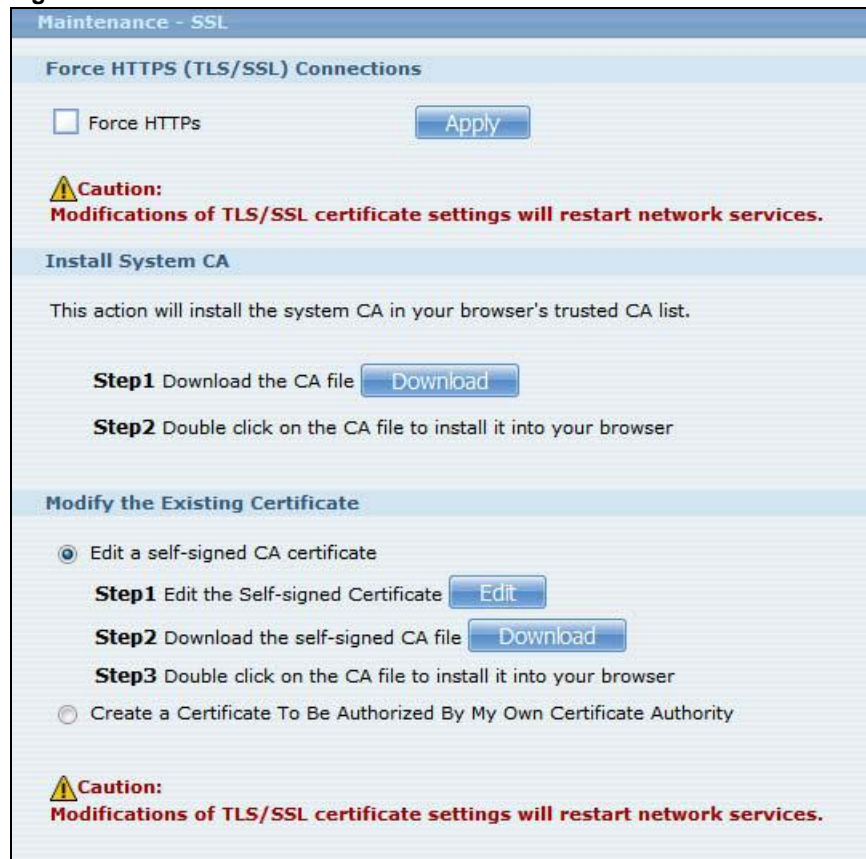
LABEL	DESCRIPTION
Backup Current Configuration Settings	
Backup	Click this to save the current configuration of the NSA to your computer. A pop-up screen appears asking you to confirm. Click <b>OK</b> to continue or <b>Cancel</b> to quit.
Restore Configuration	When you restore a file configuration, the NSA checks the volumes/share paths on the NSA and the configuration file.  If the volume exists but the share path is missing in the NSA, the NSA automatically creates this share path.  If the volume does not exist on the NSA, the <b>Status</b> of the share will show "missing share icon" in <b>Shares</b> screen (see <a href="#">Table 108 on page 318</a> ).
Browse	Click this to locate a previously-saved configuration file.

**Table 120** Maintenance > Configuration

LABEL	DESCRIPTION
Restore	Click this to load the previously-saved configuration file to the NSA. This replaces your current NSA configuration settings with the settings in the previously-saved configuration file.  A pop-up screen appears asking you to confirm. Click <b>OK</b> to continue or <b>Cancel</b> to quit.
Reset MySQL Database Password	Click this to reset the password for your MySQL database.

## 18.6 SSL Certification

Click **Maintenance > SSL** to open this screen, where you can turn on HTTPS, create a public key certificate, or upload a public key certificate that was issued by a known certificate authority.

**Figure 187** Maintenance > SSL

The following table describes the labels in this screen.

**Table 121** Maintenance > SSL

LABEL	DESCRIPTION												
Force HTTPS	<p>Select the <b>Force HTTPS</b> option to turn on the NSA's web browser security. Anyone who connects via HTTPS to the NSA must install the public key certificate associated with it.</p> <p>Note: The NSA will restart the web configurator after you click <b>Apply</b>.</p> <p>The NSA displays a warning screen if applying your change may disconnect some users. Click <b>Apply</b> if you want to continue.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Warning Confirmation</b></p> <p>The following users are currently connected. If you decide to continue, they may be disconnected.</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Share Name</th> <th>Username</th> <th>IP Address</th> </tr> </thead> <tbody> <tr> <td>Web</td> <td></td> <td>admin</td> <td>172.23.37.104</td> </tr> <tr> <td>CIFS</td> <td>music</td> <td>admin</td> <td>172.23.37.104</td> </tr> </tbody> </table> <p><b>⚠ Performing this operation will cause some network services to temporarily disconnect.</b></p> <p style="text-align: center;"> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div>	Type	Share Name	Username	IP Address	Web		admin	172.23.37.104	CIFS	music	admin	172.23.37.104
Type	Share Name	Username	IP Address										
Web		admin	172.23.37.104										
CIFS	music	admin	172.23.37.104										
Install System Default CA	<p>Click <b>Download</b> button to save a copy of the NSA's public key certificate to your local computer. This is useful for installing the certificate without having to connect to the NSA, or for sending by email to other users for them to install prior to logging into the NSA for the first time. After saving the certificate to your computer, double-click it to install it.</p> <p>Note: Each web browser handles certificate installation differently.</p>												
Modify the Existing Certificate	<p>Select <b>Edit a self-signed CA certificate</b>, then follow the on-screen instructions for creating a public key certificate signed by the NSA as the local certificate authority.</p> <p>Note: Use certificates created and signed by the NSA if the device is not open to external access.</p> <p>Select <b>Create a certificate authorized by other CA</b>, then follow the on-screen instructions to install a certificate that has been authorized by a third-party certificate authority.</p> <p>Note: Use this method if the device is open to external access, such as allowing users to connect through the Internet using FTP over TLS or HTTPS.</p>												

## 18.6.1 Modifying or Creating a Certificate

When you select the **Edit a self-signed CA certificate** option, then click the **Edit** button, a screen opens to allow you to make adjustments to the NSA's public key certificate.

The screen is also the same for the **Create a certificate authorized by other CA** option.

**Figure 188** Maintenance > SSL > Create or Edit a Certificate

**Create a Certificate Signing Request**

Common Name

Host IP Address

Host Domain Name

Organizational Unit(Optional)  Max length: 64 characters

Organization(Optional)  Max length: 64 characters

Country(Optional)  Country code only, such as TW, US, JP, etc,...

Key Type

Key Length

**Note:**  
If you choose a large key length, it may take a while to make the certificate file.

The following table describes the labels in this screen.

**Table 122** Maintenance > SSL > Create or Edit a Certificate

LABEL	DESCRIPTION
Common Name	This name describes the certificate's origin, either in the form of an IP address or a domain name.
Host IP Address	Select this option and enter the NSA's IP address if you want to use this for the common name.
Host Domain Name	Select this option and enter the NSA's domain name if you want to use this for the common name
Organizational Unit (Optional)	Enter this name of the organizational unit which owns or maintains the NSA. This is an optional field.
Organization (Optional)	Enter this name of the organization or company which owns or maintains the NSA. This is an optional field.
Country (Optional)	Enter this name of the country in which the NSA is located. This is an optional field.
Key Type	Select the certificate's key type, either <b>RSA</b> or <b>DSA</b> . RSA is a public-key encryption and digital signature algorithm, while DSA is only a digital signature algorithm.
Key Length	Select the encryption key length. The longer the key, the better the encryption security. The only drawback to having a long key is that the file encrypted with it swells in size as well.
Apply	Click this to save your changes.
Cancel	Click this to discard changes and close the window.

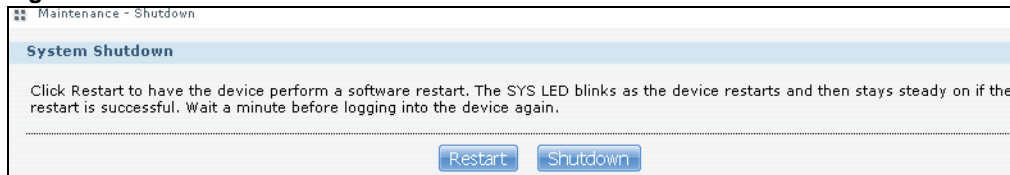
## 18.7 The Shutdown Screen

Use this screen to turn off the NSA or perform a software restart. A software restart is faster than turning the NSA off and then turning it on again. Before shutting down or restarting, check the **System Status > Active Sessions** screen to make sure that no one is logged into the NSA or transferring files to or from the NSA.



Click **Maintenance > Shutdown** to open the following screen.

**Figure 189** Maintenance > Shutdown



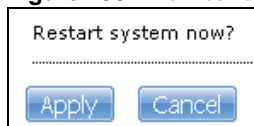
The following table describes the labels in this screen.

**Table 123** Maintenance > Shutdown

LABEL	DESCRIPTION
Restart	Click this to have the device perform a software restart.
Shutdown	Click this to shut down the system and restart it again later.

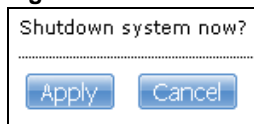
When you click the **Restart** button a pop-up screen will appear asking you to confirm. Click **OK** to continue or **Cancel** to quit the restart.

**Figure 190** Maintenance > Shutdown > Confirm Restart



When you click the **Shutdown** button a pop-up screen will appear asking you to confirm. Click **OK** to continue or **Cancel** to quit the shutdown.

**Figure 191** Maintenance > Shutdown > Confirm Shutdown



## 18.8 Technical Reference

This section provides technical background information on the topics discussed in this chapter.

### 18.8.1 Log Classes

The following table shows information on log classes.

**Table 124** Log Classes

LOG CATEGORY	DESCRIPTION
Users	This log class shows information on user access to the NSA.
Shares	This log class shows information on shares being created or deleted.
Services	This log class shows information on the operation of the NSA's built-in services.
System	This log class shows all other system related messages.

**Table 124** Log Classes (continued)

LOG CATEGORY	DESCRIPTION
Network	This log class shows information on network configuration, setting changes and so on.
Storage	This log class shows information on the NSA's internal and external storage activities.
Backup	This log class shows information on all backup-related activities.
Auto Upload	This log class shows information on automatic uploads done by the NSA.

## 18.8.2 Log Severity Levels

The following table shows information on log severity levels. Levels range from 0 to 6 with 0 being the most severe level log and 6 being an informational log only. Log levels are not displayed in the logs and are for your reference only.

**Table 125** Log Severity Levels

LEVEL	DESCRIPTION
0	Emergency
1	Alert
2	Critical
3	Error
4	Warning
5	Notice
6	Info

## 18.8.3 Log Messages

Here are some example log messages.

**Table 126** Log Messages

CLASS	SEVERITY	MESSAGE
Auto upload	INFO	%s is queued.
Auto upload	INFO	%s uploaded (Flickr or YouTube Upload).
Auto upload	WARNING	error uploading "%s" (%s): %s
Auto upload	INFO	%s will not be uploaded to %s for there is already a duplicate file.
Auto upload	INFO	Failed to upload %s to %s (FTP Upload) : %s
Auto upload	INFO	Successfully upload %s to %s (FTP Upload)
Copy/Sync Button	ERROR	[USB %s] Backup Folder Does Not Exist.
Copy/Sync Button	ERROR	[USB %s] Target Folder Does Not Exist.
Copy/Sync Button	ERROR	[USB Sync] Failed at %s: It is a Folder in Internal Volume. But It is not a Folder in USB.
Copy/Sync Button	ERROR	[USB Sync] Failed at %s: It is a Folder in USB. But It is not a Folder in Internal Volume.
Copy/Sync Button	ERROR	[USB Sync] Failed at File %s.

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
Copy/Sync Button	ERROR	[USB Sync] Sync Failed at Folder %s.
Copy/Sync Button	ERROR	Modify COPY/SYNC Button Configuration: %s
Copy/Sync Button	ERROR	Please Change Your Folder Name. Invalid Path: %s
Copy/Sync Button	INFO	[USB Sync] Copying %s from Internal Volume to Backup Folder.
Copy/Sync Button	INFO	[USB Sync] Copying %s from Internal Volume to USB.
Copy/Sync Button	INFO	[USB Sync] Copying %s from USB to Backup Folder.
Copy/Sync Button	INFO	[USB Sync] Copying %s from USB to Internal Volume.
Copy/Sync Button	INFO	[USB Sync] Deleting %s from Internal Volume.
Copy/Sync Button	INFO	[USB Sync] Deleting %s from USB.
Copy/Sync Button	INFO	[USB Sync] Deleting %s from USB Recursively.
Copy/Sync Button	INFO	[USB Sync] Finished. Elapsed Time %s Seconds.
Copy/Sync Button	INFO	[USB Sync] Moving %s from Internal Volume to Backup Folder.
Copy/Sync Button	INFO	[USB Sync] Moving %s from USB to Backup Folder
Copy/Sync Button	INFO	[USB Sync] Skip %s: File not Exist
Copy/Sync Button	INFO	[USB Sync] Skip %s: Not a Regular File.
Copy/Sync Button	INFO	[USB Sync] Start Pre-Processing: Generating File Lists.
Copy/Sync Button	NOTICE	[USB Sync] Start Copying Files.
Download Service	ERROR	Download service cannot find a volume
Download Service	ERROR	Download service failed to find ipfilter.dat
Download Service	INFO	Download service add a URL download job %s
Download Service	INFO	Download service delete %s by user
Download Service	INFO	Download service download %s error (0x%08x)
Download Service	INFO	Download service download %s finished in %s
Download Service	INFO	Download service found a new torrent file %s

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
Download Service	INFO	Download service initialized
Download Service	INFO	Download service pause %s by user
Download Service	INFO	Download service set %s to %s priority by user
Download Service	INFO	Download service set default download location to %s
Download Service	INFO	Download service set max P2P download rate to %d KB/s by user
Download Service	INFO	Download service set max P2P upload rate to %d KB/s by user
Download Service	INFO	Download service set max download slot to %d
Download Service	INFO	Download service set seeding time to %d minutes
Download Service	INFO	Download service set TCP port to %d and UDP port to %d
Download Service	INFO	Download service set torrent monitor location to %s
Download Service	INFO	Download service start to download %s
Download Service	INFO	Download service stopped
Download Service	INFO	Download service suspend %s because of no data income detected or to limit max download slot
Download Service	INFO	Download service add comment %s to %s by user
Download Service	INFO	Download service set min upload/download ratio to %d%
Download Service	INFO	Download service set max seed slot to %d
Download Service	INFO	Download service start loading ipfilter.dat
Download Service	INFO	Download service clear all ipfilter rules
Download Service	INFO	Download service blocked peer removed from peer list
Download Service	INFO	Download service disconnected blocked peer
Download Service	INFO	Download service incoming connection blocked by IP filter
Download Service	INFO	Download service peer from tracker blocked by IP filter
Download Service	INFO	Download service abort loading ipfilter.dat
Download Service	INFO	Download service will update ipfilter.dat from %s after %d day(s)

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
Download Service	INFO	Download service added %d rules from ipfilter.dat
Download Service	INFO	Download service detected invalid ip range %s in ipfilter.dat
Download Service	WARNING	Download service default location does not exist. Load default
Download Service	WARNING	Download service default torrent location does not exist. Load default
Groups	NOTICE	Add new group %s.
Groups	NOTICE	Delete group %s.
Network	NOTICE	%s is active because of changing Port Group. Enable DHCP client.
Network	NOTICE	%s is inactive because of changing Port Group. Disable DHCP client.
Network	NOTICE	%s MTU > (%s MTU - 8), %s may not work correctly.
Network	NOTICE	(%s MTU - 8) < %s MTU, %s may not work correctly.
Network	NOTICE	Add interface %s.
Network	NOTICE	Because %s link down. Default route will not apply until %s link up.
Network	NOTICE	Because base interface %s will be disabled. Interface %s is disabled now., base_ud_iface
Network	NOTICE	Network Config setting is changed
Network	NOTICE	Interface %s was disabled.
Network	NOTICE	Interface %s was enabled.
Network	NOTICE	Port Group on %s is changed. Renew DHCP client.
Network	NOTICE	Account pppoe was changed
Network	NOTICE	Add account pppoe
Network	NOTICE	ADD interface ppp0
Network	NOTICE	Interface ppp0 will reapply because Device-Ha become active status.
Network	NOTICE	Interface ppp0 will reapply because Device-Ha is not running.
Network	NOTICE	Network port is disabled
Network	NOTICE	Network port is enabled
Services	INFO	HTTP management port has changed to %s
Services	INFO	Clock timezone is set to GMT%s
Services	INFO	Clock timezone is set to default
Services	INFO	Clock daylight saving is enabled
Services	INFO	Clock daylight saving is disabled
Services	INFO	Clock has disable daylight saving
Services	INFO	MyClock has enable daylight saving
Services	INFO	MyClock has set timezone to %s
Services	INFO	MyClock has set timezone to default
Services	INFO	The date and time are updated from NTP server.
Services	INFO	The date and time are updated manually.
Services	INFO	The time is updated manually.
Services	NOTICE	FTP server stops
Services	NOTICE	FTP server starts

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
Services	NOTICE	MyClock has changed daylight saving interval
Services	NOTICE	MyClock has disabled daylight saving interval
Services	NOTICE	NTP server has set to '%s'
Services	NOTICE	NTP server has set to null
Services	NOTICE	The NTP service is disabled.
Services	NOTICE	The NTP service is enabled.
Services	WARNING	Reaching Maximum Allowed Rules
Services	WARNING	Rule is empty
Services	WARNING	The Rule Does Not Exist
Shares	INFO	Expire recycle-bin finish for share %s, process time: %s seconds, remove %s file (%s bytes)
Shares	NOTICE	Add new disabled share %s for unshared folder: %s in volume: %s.
Shares	NOTICE	Add new share %s.
Shares	NOTICE	Delete share %s.
Shares	NOTICE	Purge all files in recycle-bin folder in share: %s.
Shares	NOTICE	Recycle-bin disabled. Remove recycle-bin folder in share: %s.
Storage	ERROR	Eject External Disk (%s): FAILED
Storage	INFO	Eject External Disk (%s): SUCCESS
Storage	ERROR	Relabel Raid to [%s]: FAILED
Storage	ERROR	Start Repairing Degraded Raid by disk%s: FAILED
Storage	INFO	Relabel Raid to [%s]: SUCCESS
Storage	INFO	Start Repairing Degraded Raid by disk%s: SUCCESS
Storage	NOTICE	Auto Repair Degraded RAID by disk%s.
Storage	NOTICE	There is a RAID Degraded.
Storage	ERROR	Cancel External Volume Scan: FAILED
Storage	ERROR	Cancel Internal Volume Scan: FAILED
Storage	ERROR	Cannot Unmount Volume and RAID. System Busy Using Volume and RAID: Please Reboot and Try Again
Storage	ERROR	Create External Normal Volume [%s] (%s): FAILED
Storage	ERROR	Create Internal Volume [%s] (%s): FAILED
Storage	ERROR	Rename External Volume to [%s]: FAILED
Storage	ERROR	Scan External Volume: FAILED
Storage	ERROR	Scan Internal Volume (%s operation): FAILED
Storage	INFO	Cancel External Volume Scan: SUCCESS
Storage	INFO	Cancel Internal Volume Scan: SUCCESS
Storage	INFO	Create External Normal Volume [%s] (%s): SUCCESS
Storage	INFO	Create Internal Volume [%s] (%s): SUCCESS
Storage	INFO	Rename External Volume to [%s]: SUCCESS
Storage	INFO	Scan External Volume: SUCCESS
Storage	INFO	Scan Internal Volume (%s operation): SUCCESS
System	INFO	NTP update failed
System	INFO	NTP updates successfully from %s

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
System	INFO	NTP fails to update from %s
System	INFO	Device is rebooted by administrator!
System	INFO	Device is shutdown by administrator!
System	NOTICE	DNS server is changed.
System	NOTICE	Hostname is cleared.
System	NOTICE	Hostname is set to '%s'.
System	NOTICE	System description is changed.
System	NOTICE	System description is empty now.
System	NOTICE	DNS server setting is changed
System	NOTICE	DNS server address is changed to be given from DHCP server
System	NOTICE	DNS server address is changed to be assigned by user
System	NOTICE	Name server is changed.
USB	NOTICE	An external APC UPS device is plugged/unplugged.
USB	NOTICE	An external Mass Storage device is plugged/unplugged.
USB	NOTICE	An external Printer device is plugged/unplugged.
USB	NOTICE	An external USB hub device is plugged/unplugged.
Users	ALERT	Failed %s login attempt (incorrect password or inexistent username)
Users	ALERT	Failed %s login attempt (incorrect password or inexistent username)
Users	INFO	User %s has logged in from %s!
Users	INFO	User %s has logged out from %s!
Users	INFO	User %s from %s has been logged out (re-auth timeout)!
Users	INFO	User %s from %s has been logged out (lease timeout)!
Users	NOTICE	Add new user %s by %s from %s.
Users	NOTICE	User %s password has been changed.
Users	NOTICE	Delete user %s by %s from %s.
Users	NOTICE	The user %s from %s has attempted to change the user %s password but old password verification fail.
Users	NOTICE	User %s on %u.%u.%u.%u has been denied access from %s
Users	NOTICE	User %s password has been changed by %s from %s.
Backup/ Restore	ERROR	When query remote target [%s]: %s
Backup/ Restore	INFO	Backup job [%s] successfully
Backup/ Restore	ERROR	When backup [%s]: %s
Backup/ Restore	ERROR	When backup [%s], error happens: %s
Backup/ Restore	INFO	Start to restore backup job [%s].
Backup/ Restore	INFO	Restore backup job [%s] successfully.
Backup/ Restore	ERROR	Restore backup job [%s] failed: %s

**Table 126** Log Messages (continued)

CLASS	SEVERITY	MESSAGE
Backup/ Restore	INFO	Start to restore backup job [%s] from [%s].
Backup/ Restore	INFO	Restore from [%s] successfully.
Backup/ Restore	ERROR	Restore from [%s] failed: %s
Backup/ Restore	ERROR	When restore [%s]: %s
Backup/ Restore	ERROR	When restore job [%s], error happens: %s
Power Management	INFO	Job [%s] is triggered by schedule
Power Management	INFO	Job [%s] is triggered by user
Power Management	ERROR	Job [%s] is resulted as failed
Power Management	INFO	Job [%s] is finished successfully
Power Management	INFO	Job [%s] is pending because other job is running
Power Management	INFO	Job [%s] is canceled by user
Power Management	INFO	Restore job [%s] is triggered by user
Power Management	INFO	[Power On] schedule is triggered.
Power Management	INFO	[Power Off] schedule is triggered.
Power Management	INFO	[Reboot] schedule is triggered.



# Protecting Your Data

## 19.1 Overview

This chapter compares the different ways of protecting data on the NSA and explains how to use backup management software included on the CD.

## 19.2 Protection Methods

There are a variety of ways to protect your data on the NSA. Below is a summary table of what can be done in each situation.

**Table 127** Overview of Protection Methods

SITUATION	ACTION
Unexpected NSA behavior after configuration changes	Back up the NSA configuration file before you make major configuration changes.
Need to transfer data from your computer to the NSA after volume(s) have been created	Backup your data to a computer or other storage devices.
Data infected by virus	Use anti-virus software on your computer to scan files before saving them onto the NSA. Although this may be slow so you may want to schedule it to occur while no one is using the NSA.  Use a firewall with anti-virus capability on your network.
Hard drive malfunction.	Use RAID.
NSA malfunction Network down Natural disaster such as a fire or earthquake occurs where your NSA is located	Back up data to another NSA or external USB hard drive.

The following sections describe these methods in more detail. See [Section 8.6.3 on page 170](#) for more information on RAID.

## 19.3 Configuration File Backup and Restoration

Use the **Maintenance > Configuration** menus to create a file of your NSA configurations such as passwords, shares and volumes created, network settings and so on. If you're going to do some major configuration changes, then it is advisable to create a configuration backup file. If things go wrong after you make the configuration changes, you can always go back to the previous configuration by restoring an earlier configuration file.

If you forgot the NSA password, then use the **RESET** button (see [Section 1.1.4 on page 19](#)) to return the NSA to the factory default configuration.

Note: Configuration File Backup and Restoration does not affect data (your files and folders), volumes on the NSA.

# Troubleshooting

## 20.1 Troubleshooting Overview

This chapter offers some suggestions to solve problems you might encounter. The potential problems are divided into the following categories.

- [Power, Hardware, Connections, and LEDs](#)
- [NAS Starter Utility](#)
- [NSA Login and Access](#)
- [I Cannot Access The NSA](#)
- [Users Cannot Access the NSA](#)
- [External USB Drives](#)
- [Firmware](#)
- [File Transfer](#)
- [Networking](#)
- [Some Features' Screens Do Not Display](#)
- [Media Server Functions](#)
- [Download Service and Broadcatching Functions](#)
- [Web Publishing](#)
- [Auto Upload](#)
- [Package Management](#)
- [Backups](#)
- [Google Drive](#)

## 20.2 Power, Hardware, Connections, and LEDs

---

The NSA **PWR** LED does not turn on (no LEDs are on).

---

- Make sure the NSA is turned on.
- Make sure you are using the power adaptor or cord included with the NSA.
- Make sure the power adaptor or cord is connected to the NSA and plugged in to an appropriate power source. Make sure the power source is turned on.
- Turn the NSA off and on.

- If the problem continues, contact the vendor.

---

### An HDD LED is off.

---

The **HDD** LED is off when the NSA cannot detect a hard drive in the drive bay. Replace or install a hard drive. See [Installing or replacing a hard disk](#).

---

### An HDD LED is red.

---

Red means that the NSA detected an error on the hard drive (like a bad sector for example). The NSA automatically tries to recover a bad sector, but the LED stays red until the NSA restarts. Even if the hard drive still functions, it is recommended that you replace it since errors are a sign that the hard drive may fail soon. See [Installing or replacing a hard disk](#).

---

### Installing or replacing a hard disk.

---

**Do not remove or install a hard disk while the NSA is turned on. The NSA must be turned off before you remove or install the hard disk.**

- 1 Turn the NSA off, remove the front panel and make sure:
  - there is a SATA I or SATA II (3.0 Gbit/s) compatible hard disk installed.
  - the hard disk is installed correctly in the disk bay. Push the disk back into the NSA disk bay until the hard disk is fitted snugly inside the NSA (see the NSA Quick Start Guide and [Section 8.2.1 on page 162](#)).
  - the hard disk could be faulty. Try a different hard drive or test the original hard disk in a different NSA or computer.
- 2 If you had to replace the drive, turn on the NSA and go to the **Storage** screen.
  - If you have a RAID 1 volume click the **Repair** icon next to the new drive.
  - If you are using RAID 0 you will need to recreate the whole volume. All of your data is lost.
  - If you are using a single-disk JBOD volume, you need to create a new volume on the new drive.
  - If you are using a two-disk JBOD volume, you need to create a whole new volume on both drives.

---

### The LAN LED (by the LAN port) is off.

---

- Make sure the Ethernet cable is connected properly to the NSA and connected to another (Ethernet) device. Make sure the other device is turned on. If it's connected directly to a computer, make sure that the computer network card is working (ping 127.0.0.1 on the computer).
- Use another Ethernet cable. If you're connecting to a Gigabit Ethernet, make sure you're using an 8-wire Ethernet cable.
- If the problem continues, contact the vendor.

See [Section 21.1 on page 371](#) for a description of NSA LEDs.

---

### The NSA turns off or reboots by itself.

---

Check the **Power Management** screen. This is where you configure power settings for the NSA, including power saving, UPS, power on/off during power failure and power on/off schedule. The NSA may be set to turn off under certain conditions.

---

### A power failure occurred while the NSA is downloading files.

---

- If power failure occurs during the active download period, the NSA will verify whether the downloaded files were damaged.
- If a file is corrupted, the NSA will download the file again.
- If the file is intact but not completely downloaded, the NSA will resume the download task after it restarts.

## 20.3 NAS Starter Utility

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### The NAS Starter Utility cannot discover my NSA.

---

- Close the NAS Starter Utility and reopen it.
- Check your hardware connections and make sure they are set up correctly.
- Only one instance of the NAS Starter Utility can run on your computer. Make sure you close any duplicate windows for this application.
- Wait for the **SYS** LED to stop blinking before clicking **Discover**.
- Confirm that the computer running the NAS Starter Utility has a network connection. See the section on the NSA's LAN connection for related information.
- The computer running the NAS Starter Utility can only discover NSAs in the same subnet. NSAs connected to the same switch or router as your NAS Starter Utility computer are usually in the same subnet unless the router is doing subnetting or the switch is implementing VLAN.

---

The NAS Starter Utility discovered my NSA but the status is always unreachable, even though I can access it.

---

You may need to add the NAS Starter Utility to your software firewall's allow list or lower your software firewall or anti-virus scanner's security level. Alternatively you may have to configure your software firewall or other security software to allow UDP port 50127 traffic from the NSA. If there is a hardware firewall between you and the NSA, configure it to allow UDP port 50127 traffic from the NSA.

---

I was able to access the NSA on a previous attempt but I cannot access the NSA anymore.

---

If you enable jumbo frames on the NSA in a network that does not support them, you will lose access to the NSA. If this occurs, you will have to restore the factory default configuration. The reset process does NOT affect the volume settings, nor data stored on the NSA. Press the **RESET** button until you hear two beeps. After the second beep, continue pressing the button for five more seconds, then release it. You will hear three quick beeps after you release the button.

---

I have at least two NSAs in my network, how do I identify which one I want to configure in the NAS Starter Utility screens.

---

If you have several NSAs connected to your computer/network, give each a unique name. You may have to disconnect all but one and use the NAS Starter Utility to rename it. Then connect another NSA and rename it and continue to connect and rename the NSAs one-by-one until they are all connected and each has a unique name.

Alternatively, if you have a DHCP server on your network and you can access its list of assigned IP addresses, you could see which IP address belongs to which NSA. You can check the MAC address of your NSA by checking the attached sticker in the device housing.

## 20.4 NSA Login and Access

---

I forgot the server name of the NSA.

---

- The default server name is 'nsa' followed by the number of your model ('**nsa320**' for example).
- Use the NAS Starter Utility to discover your NSA. If you have admin privileges, you can directly change the IP address of the NSA using the NAS Starter Utility.
- If the server name has changed and you don't have the NAS Starter Utility, see [Section 1.1.4 on page 19](#) to use the **RESET** button to return to the default setting.

---

### I cannot get to the NSA login screen.

---

- Use the NAS Starter Utility to discover your NSA. If you have admin privileges, you can directly change the IP address of the NSA using the NAS Starter Utility.
- Make sure you have used the NAS Starter Utility to initialize your NSA.
- If you used the **RESET** button, the NSA may have a new IP address. Close and reopen the NAS Starter Utility to discover the NSA.
- Make sure the NSA is turned on.
- If you are trying to login directly by typing the server name into your web browser's address field, make sure you are using the correct server name as the web site address.
  - The default server name is 'nsa' followed by the number of your model ('nsa320' for example). If you have changed the server name, use the new one.
  - If the server name has been changed and you do not know the new server name, see the troubleshooting suggestions for [I forgot the server name of the NSA](#).
  - If it still doesn't work, try using the NAS Starter Utility.
- Check the hardware connections, and make sure the LEDs are behaving as expected. See the Quick Start Guide and [Section 21.1 on page 371](#).
- By default, the NSA gets an IP address automatically. The NSA assigns itself an IP address if no device assigns one. If your computer is also set to get an IP address automatically, the computer and the NSA can both assign themselves IP addresses and communicate. See [Section 9.4 on page 176](#) if you need to configure the NSA with a static IP address.
- If you are connecting to the NSA by its IP address, make sure you use the correct one. If the NSA has a wired Ethernet connection and a wireless connection through an attached USB wireless dongle, the NSA has a different IP address for each connection. To connect through the wired Ethernet connection, use the wired Ethernet connection's IP address. To connect through the wireless connection, use the wireless connection's IP address.
- Make sure your computer's IP address is in the same subnet as the NSA's IP address. You can use the NAS Starter Utility to find the NSA's IP address. Skip this if you know that there are routers between your computer and the NSA.
- Ping the NSA from your computer. Make sure your computer's Ethernet adapter is installed and functioning properly. In a (Windows) computer, click **Start, (All) Programs, Accessories** and then **Command Prompt**. In the **Command Prompt** window, type "ping" followed by the NSA's IP address (use the NAS Starter Utility to find the NSA's IP address if you don't know it) and then press [ENTER].
- Make sure you are using Internet Explorer 6.0 (and later) or Firefox 1.07 (and later).
- Make sure your Internet browser does not block pop-up windows and has JavaScript and Java enabled. With Internet Explorer 6, you may also have to enable scripting of safe ActiveX controls. See [Section 20.4.1 on page 352](#).

---

### I forgot the password.

---

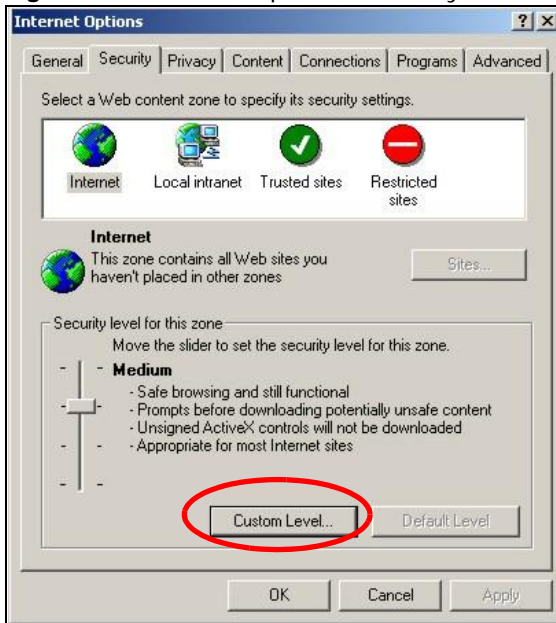
- The default password is **1234**.
- If you have changed the password and forgotten it, you will have to reset the NSA.

## 20.4.1 Enabling Scripting of Safe ActiveX Controls

If pages of the web configurator do not display properly in Internet Explorer, check that scripting of safe ActiveX controls is enabled.

- 1 In Internet Explorer, click **Tools, Internet Options** and then the **Security** tab.

**Figure 192** Internet Options: Security

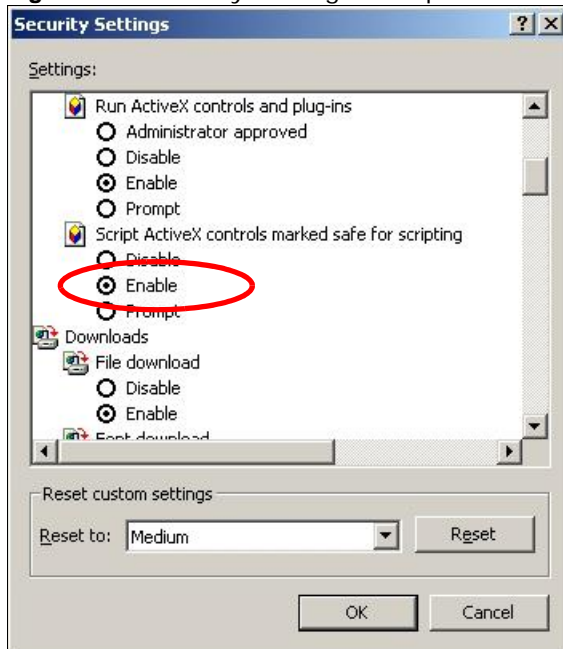


- 2 Click the **Custom Level...** button.
- 3 Under **Script ActiveX controls marked safe for scripting**, make sure that **Enable** is selected (the default).



- 4 Click **OK** to close the window.

**Figure 193** Security Settings - Script Safe ActiveX Controls




---

I can see the login screen, but I cannot log in to the NSA.

---

- Make sure you have entered the username and password correctly. The default username is **admin**, and the default password is **1234**. These fields are case-sensitive, so make sure [Caps Lock] is not on.
- Turn the NSA off and on.
- If this does not work, see [Section 1.1.4 on page 19](#) to reset the device.

---

I cannot see the multi-language web configurator screens while using Internet Explorer.

---

Use [Section 20.4.1 on page 352](#) to enable the scripting of safe ActiveX controls.

---

The Web Configurator logs out by itself.

---

The web configurator management session automatically times out if it is left idle for 15 minutes. Simply log back into the NSA if this happens to you.

## 20.5 I Cannot Access The NSA

---

I cannot access a share.

---

- Check that the NSA is turned on and connected to the network. Try to ping the NSA or use the NAS Starter Utility to discover it.
- Make sure you have used the NAS Starter Utility to initialize your NSA. See [Chapter 2 on page 21](#) for more information.
- Check that you entered your login name and password correctly.
- Check that the share exists and check its access settings.
- Check if the shared folder is a subfolder of another (parent) share. Check that the parent share's access rights do not conflict with the subfolder share. It is recommended that you do not create subfolder shares.
- Check if there are any existing mapped network drives to the NSA. You may need to disconnect existing mapped network drives as a new mapped network drive connection may use (different) previously-saved login information. To do this, open Windows Explorer and click **Tools > Disconnect Mapped Network Drives**.
- Check that the volume in which the share resides, exists and is not down or degraded. If it is down or degraded, see [Section 20.2 on page 347](#).
- Make sure you have the client for Microsoft networks installed and enabled in your network connection's properties.
  - In Windows XP or 2000, click **Start > Settings > Control Panel > Network Connections (Network and Dial-up Connections in Windows 2000/NT) > Local Area Connection > Properties**.
  - Check that **Client for Microsoft Networks** is in the list of components and has its check box selected.

## 20.6 Users Cannot Access the NSA

---

A local user cannot access a share

---

- Check that the NSA is turned on and connected to the network. The local user should try to ping the NSA or use the NAS Starter Utility to discover it.
- The local user should check that he entered his login name and password correctly.
- Check if the share exists and has the correct access settings for this user.
- Check the Access Control List (ACL) of read/write permissions associated with specific files and/or folders. Account names added to the list are linked to the files and folders that they are allowed to access, along with what kinds of actions they are allowed to perform with those files and folders (delete, move, rename, and so on).

- The user's computer may already be connected to another of the NSA's shares using a different user name and/or password. This can happen without the user realizing it if the user's computer automatically connects to a share at logon. Right-click any other connected shares and click **Disconnect**. Then re-attempt to connect to the desired share.
- Check if the share has an ANONYMOUS or EVERYONE access right. If the user is already logged into a share using her username and password, she will NOT be able to access a share that has ANONYMOUS FTP only access rights (as these require 'no login'). In this case she should log out and try to access the share again without logging in. See [Section 10.4 on page 187](#) for more details.
- Check if the shared folder is a subfolder of another (parent) share. Check that the parent share's access rights do not conflict with the subfolder share. It is recommended that you do not create subfolder shares.
- Check if the user belongs to a group with conflicting access rights. **DENY** always takes precedence. If you allow a user **FULL** access to a share but set his group to **DENY**, then he will NOT be able to access the share.
- The local user should check if there are any existing mapped network drives to the NSA. He may need to disconnect existing CIFS connections as new CIFS connection may use previously-saved login information that may be different to NSA login.
- Check that the array in which the share resides, exists and is not down or degraded. If the array is down or degraded, see [Section 20.2 on page 347](#).
- If the user is using DFS links, then he can only access the NSA using CIFS and not FTP.
- Check that the share has not been disabled.

---

I cannot import domain user or user group information even though testing of the connection to the domain controller is OK.

---

- Check the NSA's DNS setting. The DNS server the NSA is using must be able to resolve the domain controller's address. If the domain controller uses a private IP address, the NSA needs to use a private DNS server. If the domain controller uses a public IP address, the NSA needs to use a public DNS server.
- Leave the domain and re-join it.

---

A domain user can't access a share.

---

In addition to the checks listed previously for local users, check that the domain controller is turned on and connected to the network.

---

A user can access a share but cannot access individual folders or files within the share.

---

- Check the Access Control List (ACL) of read/write permissions associated with the share's specific files and/or folders. Account names added to the list are linked to the files and folders that they are allowed to access, along with what kinds of actions they are allowed to perform with those files and folders (delete, move, rename, and so on).

## 20.7 External USB Drives

---

The **COPY** LED is red.

---

Copying files from a USB device failed. The USB device may not be compatible with the NSA. Try to save the files onto a computer and then from the computer to the NSA (through the network connection).

## 20.8 Firmware

---

I want to know the firmware version on the NSA.

---

Go to the **Status** screen. The **Firmware** field shows you the current firmware version running.

## 20.9 File Transfer

---

I want to transfer my file(s) from my local computer or storage device to the NSA.

---

- After you initialize your hard disk, you can directly access the folders in your NSA and transfer files in the same way you transfer files in your local computer:
- 1 On your Windows computer, click **Start > Run** or open a web browser.
  - 2 Enter **\\nsa** followed by the number of your model (**320** for example) or the **Server Name** you assigned the NSA. This shows you the folders in the NSA.
  - 3 Use drag-and-drop or copy-and-paste to transfer files over to your NSA.
    - Use the **COPY/SYNC** button to transfer files from an external (USB) storage device to the NSA.
    - If the file you want to transfer is less than or equal to 2 GB, you can use the NSA Starter Utility's zPilot screen (see [Section 2.5 on page 25](#)).

---

I want to transfer my file(s) from the NSA to my local computer or storage device.

---

- After you initialize your hard disk, you can directly access the folders in your NSA and transfer files in the same way you transfer files in your local computer:

- 1 On your Windows computer, click **Start > Run** or open a web browser.
- 2 Enter `\\nsa` followed by the number of your model (**320** for example) or the **Server Name** you assigned the NSA. This shows you the folders in the NSA.
- 3 Use drag-and-drop or copy-and-paste to transfer files from your NSA to your local computer's folder or your storage device.
  - You can download the files from your NSA. Just click on the file(s) in the **Share Browsing** screen ([Section 4.4.5 on page 51](#)). Your computer will prompt you for the location where you want to save the file.

## 20.10 Networking

---

I want to control who can access my folder(s)/file(s).

---

- If you are an administrator, you can configure a user's access rights. Use the **Shares** screen ([Section 17.3 on page 317](#)) to do this.
- If you enabled **Web Publishing** for a folder, anyone on your network can play the media files in the published shares. No user name and password or other form of security is used. The media server is enabled by default with the video, photo, and music shares published.

---

One of the computers in my network cannot use the printer I connected to the NSA.

---

- You must install the printer driver on each computer that will use the printer.
- Check [Section 20.4 on page 350](#) and check for related connectivity issues.

## 20.11 Some Features' Screens Do Not Display

---

Many NSA features require a valid internal volume.

---

Features like the print server, download service, broadcatching, FTP and Windows/CIFS access will not work without a valid internal volume. Make sure you have a volume on an internal disk and that the volume is in the healthy state.

- Install an internal disk if one is not installed yet or has failed. See the Quick Start Guide for how to install an internal disk.
- Create a new volume if you do not have one on the internal disk yet.
- Make sure the volume on the installed internal disk is in a healthy state.

---

I cannot use some applications in the Web Configurator.

---

- The firmware installed in your NSA includes the features mentioned in [Section 4.5.2 on page 59](#). This does not include the applications you can install using the **Package Management** screen.
- You can use the **Package Management** screen ([Chapter 11 on page 225](#)) to install more applications from a web location (specified in the firmware) to your NSA.
- If you have installed the application and can see the application's configuration screen but still cannot use it, check that you have **Enabled** the application.

## 20.12 Media Server Functions

---

I set the media server function to publish a folder, but some of the files in the folder do not display in the list on the media client.

---

Files with formats that are not supported on the media server may not display in the list. See [Section 21.2 on page 372](#) for the file formats that the media server supports.

---

I published a folder with the media server function, but the media client does not play some of the files (or does not play them properly).

---

- 1 Files with formats that are not supported on the media server may not display in the list. See [Section 21.2 on page 372](#) for the file formats that the media server supports.
- 2 If you are using media client software, you may need to install codecs on your computer. Since the media client software uses your computer's installed codecs, files do not play if the required codec is not installed on your computer.
- 3 The media client may not support the file's format.

---

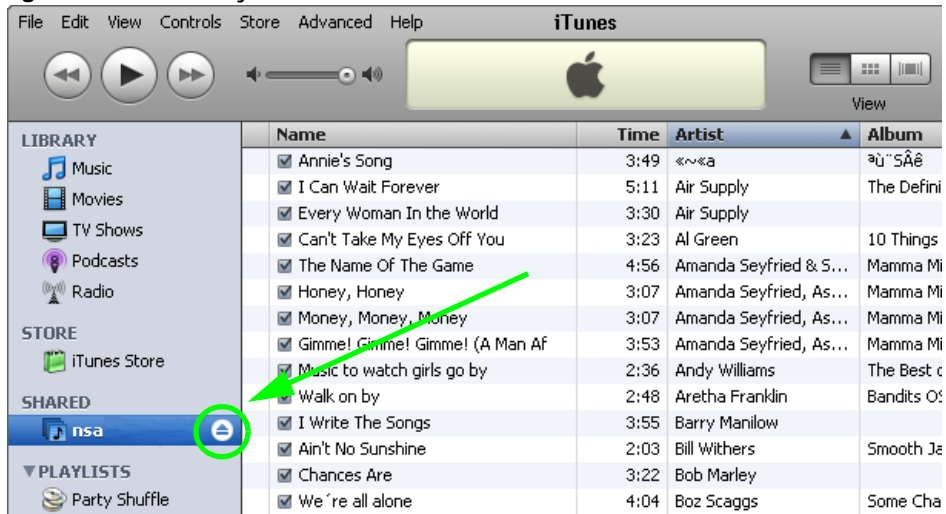
iTunes does not display the names of all the music files I just put on the NSA.

---

- 1 Make sure the files are a format supported by iTunes. See [Section 21.3 on page 372](#).
- 2 Go to **Applications > Media Server**. Make sure the share containing the music files is published and the iTunes server option is enabled.

- 3 If an iTunes client is connected, the NSA's iTunes server function scans the published media server folders for files every three minutes. Leave iTunes connected to the NSA for three minutes. Then use the NSA's eject button (as shown next) to disconnect.

**Figure 194** iTunes Eject Button



- 4 Then click the NSA's link to reconnect.

**Figure 195** iTunes Reconnected



- 5 Another way to get the NSA's iTunes server function to scan the published media server folders for files is to go to **Applications > Media Server** and disable and re-enable the iTunes server option. If you uploaded many files, it may take awhile for the NSA to find and list all of them. Then try reconnecting your iTunes client.

---

I cannot use iTunes to play files located on my NSA.

---

- 1 Make sure the files are a format supported by iTunes. See [Section 21.3 on page 372](#).

- 2 If you have files from the iTunes Store that use DRM, you need to use your Apple account ID and password to authorize other computers to play the files. Apple permits you to authorize up to five computers at a time. To authorize a computer, open iTunes and click **Store > Authorize Computer**.
- 3 If you are connecting through a NAT router, make sure that TCP port 3689 and UDP port 5353 are open for traffic on both the server and the client and all points in between (especially the NAT router). If your router includes a firewall, make sure it also allows TCP port 3689 and UDP port 5353 traffic.

## 20.13 Download Service and Broadcatching Functions

---

The download list or broadcatching items are missing after I removed a hard drive.

---

The NSA's download and broadcatching lists are stored on the system volume. If you have two JBOD volumes, it is possible to remove one and still use the other. However if you remove the system volume, you may lose the download and broadcasting lists. With two JBOD volumes, the hard disk that was installed first is usually the system volume.

---

The channel I added in the **Broadcatching** screen is active but no files are downloaded to the NSA.

---

Check the **Download Policy** for that channel (see [Section 10.9.1 on page 206](#)). It may be set to manual download. You can configure your NSA to download all items or only new items automatically once the channel is updated.

---

I cannot find the download files.

---

By default, the **Download Service** and **Broadcatching** features store downloaded files as follows:

- P2P download jobs are stored in /\*/incoming (where '\*' is a folder that you have set.)
- HTTP/FTP jobs are stored in /\* (where '\*' is a folder that you have set.)
- All jobs triggered by RSS channels create the subfolder in /\* using the channel name where it store all files downloaded from that channel (where '\*' is a folder that you have set.)

Check your **Preferences** in the **Download Service** ([Section 10.7 on page 191](#)) and **Broadcatching** ([Section 10.9 on page 204](#)) screens to know or configure where downloaded files are stored.



## 20.14 Web Publishing

A web-published share cannot be accessed by web browser from the Internet.

- Make sure the person trying to access the share is using the correct web address (and port number if the NSA's web publishing feature is not using port 80). See [page 220](#) for details.
- Make sure the publishing feature is turned on and the share is in the list of published shares.
- Make sure the person trying to access the share is using Internet Explorer 6.0 (and later) or Firefox 1.07 (and later).
- You need to use a public address to access the NSA's web-published shares from the Internet. If your NSA uses a private IP address, use the public IP address of your Internet gateway (firewall) and configure NAT or port forwarding on your Internet gateway and possibly firewall rules in order to let people access the NSA's web-published shares from the Internet.
- Make sure the firewall's public IP address is static or that the firewall uses a Dynamic Domain Name (DDNS).
- Web publishing uses TCP protocol and the port number you specify. Make sure there is not another service using TCP protocol with the same port number.
- If Firefox access to the share does not work, check that you did not set the Web publishing feature to use one of the following ports. (Firefox blocks these ports by default.)

**Table 128** Ports Blocked By Default in Firefox

PORT	SERVICE
1	tcpmux
7	echo
9	discard
11	systat
13	daytime
15	netstat
17	qotd
19	chargen
20	ftp data
21	ftp control
22	ssh
23	telnet
25	smtp
37	time
42	name
43	nicname
53	domain
77	priv-rjs
79	finger
87	tytlink

PORT	SERVICE
95	supdup
101	hostrname
102	iso-tsap
103	gppitnp
104	acr-nema
109	POP2
110	POP3
111	sunrpc
113	auth
115	sftp
117	uucp-path
119	NNTP
123	NTP
135	loc-srv epmap
139	netbios
143	IMAP2
179	BGP
389	LDAP
465	SMTP+SSL
512	print exec

PORT	SERVICE
513	login
514	shell
515	printer
526	tempo
530	courier
531	chat
532	netnews
540	uucp
556	remotefs
563	NNTP+SSL
587	submission
601	syslog
636	LDAP+SSL
993	IMAP+SSL
995	POP3+SSL
2049	nfs
4045	lockd
6000	X11

- Make sure your ISP allows you to run a server and is not blocking the port number of the NSA's web publishing feature.

## 20.15 Auto Upload

---

The NSA does not automatically upload files to Flickr or YouTube.

---

- 1 Make sure the NSA is connected to the Internet. See [Section 9.4 on page 176](#) for details about testing network connections.
- 2 Click **Maintenance** > **Log** to check the NSA's log for a message about the file.
  - 2a If the log message displays "no such file or directory", the file may have been removed from the NSA. Make sure the file still exists in the watch folder.
  - 2b If the log message displays "filename is queued", the file may still be waiting for auto upload. Check the grace period setting in the service's **Configuration** screen. You can set a smaller grace period to shorten the queue time.
  - 2c If you cannot find any log messages about the file:
    - Make sure the **Folder Watch List** includes the folder containing the file. You can upload the file to the watch folder again.
    - Make sure the file's format is supported by Flickr or YouTube. You can find the supported file extensions in the **Folder Watch List**.
  - 2d If the log message displays "not authorized yet", check if you can enter the NSA's **Configuration** screen for the service. If you changed the password of your Flickr or YouTube account, you cannot access the service's **Configuration** screen, and the NSA cannot auto upload files. Make sure you also update the account information in the NSA.
- 3 Make sure the file size does not exceed the limit imposed by the service. At the time of writing, Flickr restricts the file size to 10 MB, and YouTube restricts the file size to 100 MB.
- 4 Make sure you did not exceed the service's upload quota. Flickr and YouTube have different policies about how much you can upload within a certain period, for example, 100 MB/week.
- 5 The NSA may have temporarily failed to connect to the service. You can upload the file to the watch folder again.

## 20.16 Package Management

---

The NSA won't install the package(s) I selected in the **Package Management** screen.

---

- The web location of the package may be undergoing maintenance. Try again at a later time. Upgrade the firmware of the NSA.
- If a new firmware is available, do an upgrade and try installing the package(s) again.

---

The eMule **Search** screen does not work.

---

You need to be connected to an eMule server before you can use the **Search** screen. Wait for the NSA to connect to a server before configuring the **Search** screen.

---

I want to know how my hard disk is performing.

---

Use S.M.A.R.T. (Self Monitoring, Analysis, and Reporting Technology) to monitor hard disks. It detects and reports the reliability of hard disks using standard indicators, enabling administrators to anticipate possible disk failures. Go to the **Package Management** screen to install the S.M.A.R.T. application.

## 20.17 Backups

---

I cannot make a backup.

---

- Check that enough space is available on the external disk. If there isn't you may need to purge older backups or delete other files on the backup USB disk or NSA (see [Section 11.14 on page 264](#)).
- If you are using **BackupPlanner** ([Section 11.15 on page 264](#)):
  - You can look at the **Backup** screen's **Last Run Result** display.
  - If you're backing up to another NSA, another NSA, or a computer, check that it allows the NSA to write files to it. For a synchronization backup, the target must be another NSA or another compatible model.
  - Check that the NSA is not performing another backup job. **Scheduler** queues backups when a different backup is already going on at the time a backup is scheduled.

---

The backup does not run at the time configured.

---

- Check that the correct time is configured on the NSA.
- Check that the NSA is able to access the time server from which it gets the time; see [Section 7.7 on page 157](#).

## 20.18 Google Drive

---

### Google Drive stopped syncing.

---

- 1 Make sure the NSA is connected to the Internet. See [Section 9.4 on page 176](#) for details about testing network connections.
- 2 Check if you have exceeded the Google Drive account's storage quota. You may need to:
  - Delete unneeded files.
  - Empty the Google Drive trash bin. Note, this permanently deletes everything in the bin, even if Google moved it there without telling you (because you moved a file out of the local sync folder for example).
  - Upgrade the account's capacity
- 3 Click **Maintenance** > **Log** to check the NSA's log messages. If a log message says you have exceeded your storage quota on the NSA:
  - Delete unneeded files.
  - Clean out the recycle bin (see [Section 17.4.2 on page 322](#)).
  - Increase the user's quota on the volume containing the local sync folder (see [Section 15.3.2 on page 309](#)).
- 4 Check for any logs about removal of the user account. When you remove a user's NSA account, the NSA also removes the link to the user's Google account. However the NSA keeps the data in the local sync folder. Reconfigure a user account and link it to the Google account to let the user use Google Drive again.

# Customer Support

In the event of problems that cannot be solved by using this manual, you should contact your vendor. If you cannot contact your vendor, then contact a ZyXEL office for the region in which you bought the device. Regional websites are listed below (see also [http://www.zyxel.com/about\\_zyxel/zyxel\\_worldwide.shtml](http://www.zyxel.com/about_zyxel/zyxel_worldwide.shtml)). Please have the following information ready when you contact an office.

## Required Information

- Product model and serial number.
- Warranty Information.
- Date that you received your device.
- Brief description of the problem and the steps you took to solve it.

## Corporate Headquarters (Worldwide)

### Taiwan

- ZyXEL Communications Corporation
- <http://www.zyxel.com>

## Asia

### China

- ZyXEL Communications (Shanghai) Corp.
- ZyXEL Communications (Beijing) Corp.
- ZyXEL Communications (Tianjin) Corp.
- <http://www.zyxel.cn>

### India

- ZyXEL Technology India Pvt Ltd
- <http://www.zyxel.in>

### Kazakhstan

- ZyXEL Kazakhstan
- <http://www.zyxel.kz>

### **Korea**

- ZyXEL Korea Corp.
- <http://www.zyxel.kr>

### **Malaysia**

- ZyXEL Malaysia Sdn Bhd.
- <http://www.zyxel.com.my>

### **Pakistan**

- ZyXEL Pakistan (Pvt.) Ltd.
- <http://www.zyxel.com.pk>

### **Philippines**

- ZyXEL Philippines
- <http://www.zyxel.com.ph>

### **Singapore**

- ZyXEL Singapore Pte Ltd.
- <http://www.zyxel.com.sg>

### **Taiwan**

- ZyXEL Communications Corporation
- <http://www.zyxel.com>

### **Thailand**

- ZyXEL Thailand Co., Ltd
- <http://www.zyxel.co.th>

### **Vietnam**

- ZyXEL Communications Corporation-Vietnam Office
- <http://www.zyxel.com/vn/vi>

## **Europe**

### **Austria**

- ZyXEL Deutschland GmbH
- <http://www.zyxel.de>

### **Belarus**

- ZyXEL BY
- <http://www.zyxel.by>

**Belgium**

- ZyXEL Communications B.V.
- <http://www.zyxel.com/be/nl/>

**Bulgaria**

- ZyXEL България
- <http://www.zyxel.com/bg/bg/>

**Czech**

- ZyXEL Communications Czech s.r.o
- <http://www.zyxel.cz>

**Denmark**

- ZyXEL Communications A/S
- <http://www.zyxel.dk>

**Estonia**

- ZyXEL Estonia
- <http://www.zyxel.com/ee/et/>

**Finland**

- ZyXEL Communications
- <http://www.zyxel.fi>

**France**

- ZyXEL France
- <http://www.zyxel.fr>

**Germany**

- ZyXEL Deutschland GmbH
- <http://www.zyxel.de>

**Hungary**

- ZyXEL Hungary & SEE
- <http://www.zyxel.hu>

**Latvia**

- ZyXEL Latvia
- <http://www.zyxel.com/lv/lv/homepage.shtml>

## **Lithuania**

- ZyXEL Lithuania
- <http://www.zyxel.com/lt/lt/homepage.shtml>

## **Netherlands**

- ZyXEL Benelux
- <http://www.zyxel.nl>

## **Norway**

- ZyXEL Communications
- <http://www.zyxel.no>

## **Poland**

- ZyXEL Communications Poland
- <http://www.zyxel.pl>

## **Romania**

- ZyXEL Romania
- <http://www.zyxel.com/ro/ro>

## **Russia**

- ZyXEL Russia
- <http://www.zyxel.ru>

## **Slovakia**

- ZyXEL Communications Czech s.r.o. organizacna zlozka
- <http://www.zyxel.sk>

## **Spain**

- ZyXEL Spain
- <http://www.zyxel.es>

## **Sweden**

- ZyXEL Communications
- <http://www.zyxel.se>

## **Switzerland**

- Studerus AG
- <http://www.zyxel.ch/>



**Turkey**

- ZyXEL Turkey A.S.
- <http://www.zyxel.com.tr>

**UK**

- ZyXEL Communications UK Ltd.
- <http://www.zyxel.co.uk>

**Ukraine**

- ZyXEL Ukraine
- <http://www.ua.zyxel.com>

**Latin America****Argentina**

- ZyXEL Communication Corporation
- <http://www.zyxel.com/ec/es/>

**Ecuador**

- ZyXEL Communication Corporation
- <http://www.zyxel.com/ec/es/>

**Middle East****Egypt**

- ZyXEL Communication Corporation
- <http://www.zyxel.com/homepage.shtml>

**Middle East**

- ZyXEL Communication Corporation
- <http://www.zyxel.com/homepage.shtml>

**North America****USA**

- ZyXEL Communications, Inc. - North America Headquarters
- <http://www.us.zyxel.com/>

## Oceania

### Australia

- ZyXEL Communications Corporation
- <http://www.zyxel.com/au/en/>

## Africa

### South Africa

- Nology (Pty) Ltd.
- <http://www.zyxel.co.za>





## Product Specifications

See also [Chapter 1 on page 17](#) for a general overview of the key features.



### 21.1 LEDs

This table describes the NSA's LEDs.

**Table 129** LEDs

LED	NAME	COLOR	STATUS	DESCRIPTION
	POWER	Blue	On	The NSA is turned on and receiving power.
			Off	The NSA is turned off.
	SYSTEM	Green	On	The NSA has fully started and is operating normally.
			Blinking	The NSA is starting up.  Note: Do not turn off the NSA while it is upgrading the firmware or you may render it unusable.
		Orange	Blinking	The NSA is upgrading the firmware.  Note: Do not turn off the NSA while it is upgrading the firmware or you may render it unusable.
	HDD	Green	On	The hard disk drive is connected properly to the NSA. This LED stays on green when the hard disk drive is in hibernation if you do not enable sleeping HDD LED blinking.
			Blinking	The NSA is saving data to the hard disk drive.
			Slow Blinking	Sleeping HDD LED blinking is enabled and the hard disk drive is in hibernation.
		Red	On	The NSA detected an error on the hard disk drive (like a bad sector for example). The NSA automatically tries to recover a bad sector, but the LED stays red until the NSA restarts.
		Off	The NSA cannot detect a hard disk in the disk bay.	
	USB	Green	On	The USB device is connected properly to the NSA.
			Blinking	The NSA is saving data to the USB device.
		Red	On	The USB device has failed and the NSA can no longer detect it.
			Off	No USB device connected to the USB port.

**Table 129** LEDs (continued)

LED	NAME	COLOR	STATUS	DESCRIPTION
	LAN	Green	On	The NSA has a successful 10/100 Mbps Ethernet connection.
			Blinking	The 100M LAN is sending or receiving packets.
			Off	The NSA does not have a 10/100 Mbps Ethernet connection.
		Amber	On	The NSA has a successful 1000 Mbps Ethernet connection.
			Blinking	The 1000 M LAN is sending or receiving packets.
			Off	The NSA does not have a 1000 Mbps Ethernet connection.
	COPY/ SYNC	Green	On	A USB device is connected to the NSA.
			Blinking	The NSA is copying or synchronizing files to or from the USB device.
		Red	On	Copying or synchronizing files to or from the USB device failed.
			Off	No USB device is connected.

## 21.2 Supported Media Server Content Formats

The following describes the details about the files that the NSA media server can publish.

- Audio: LPCM (not supported as a file format), MP3, WMA, M4A, M4B, MP4, 3GP, WAV, OGG, FLAC, AAC, MP2, AC3, MPA, MP1, AIF, ASF
- Images: JPEG, PNG, TIF, TIFF, BMP, GIF
- Video: WMV, MPEG2, MP1, MPG, SPTS, MP4, AVI, VOB, DivX, 3GP, VDR, MPE, DVR-MS, Xvid, M1V, M4V, MOV, MPV, MKV, FLV, MTS

Note: Not all published file types can be viewed by all client applications.

## 21.3 Supported iTunes Server Content Formats

At the time of writing, the NSA supports iTunes publishing audio files of the following formats: mp3, m4a, m4p, wav, and mp4.

# Legal Information

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## Certifications

### Federal Communications Commission (FCC) Interference Statement

The device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operations.

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

## Notices

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## Viewing Certifications

- 1 Go to <http://www.zyxel.com>.
- 2 Select your product on the ZyXEL home page to go to that product's page.
- 3 Select the certification you wish to view from this page.

ZyXEL warrants to the original end user (purchaser) that this product is free from any defects in materials or workmanship for a period of up to two years from the date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, ZyXEL will, at its discretion, repair or replace the defective products or components without charge for either parts or labor, and to whatever extent it shall deem necessary to restore the product or components to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal or higher value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product has been modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions.

## Note

Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind to the purchaser.

To obtain the services of this warranty, contact your vendor. You may also refer to the warranty policy for the region in which you bought the device at [http://www.zyxel.com/web/support\\_warranty\\_info.php](http://www.zyxel.com/web/support_warranty_info.php).

## Registration

Register your product online to receive e-mail notices of firmware upgrades and information at [www.zyxel.com](http://www.zyxel.com) for global products, or at [www.us.zyxel.com](http://www.us.zyxel.com) for North American products.

## Open Source Licenses

This product contains in part some free software distributed under GPL license terms and/or GPL like licenses. Open source licenses are provided with the firmware package. You can download the latest firmware at [www.zyxel.com](http://www.zyxel.com). If you cannot find it there, contact your vendor or ZyXEL Technical Support at [support@zyxel.com.tw](mailto:support@zyxel.com.tw). To obtain the source code covered under those Licenses, please contact your vendor or ZyXEL Technical Support at [support@zyxel.com.tw](mailto:support@zyxel.com.tw).

## Safety Warnings

- Do NOT use this product near water, for example, in a wet basement or near a swimming pool.
- Do NOT expose your device to dampness, dust or corrosive liquids.
- Do NOT store things on the device.
- Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning.
- Connect ONLY suitable accessories to the device.
- Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information.
- ONLY qualified service personnel should service or disassemble this device.
- Make sure to connect the cables to the correct ports.
- Place connecting cables carefully so that no one will step on them or stumble over them.
- Always disconnect all cables from this device before servicing or disassembling.
- Use ONLY an appropriate power adaptor or cord for your device.
- Connect the power adaptor or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe).
- Do NOT allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord.
- Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution.
- If the power adaptor or cord is damaged, remove it from the power outlet.
- Do NOT attempt to repair the power adaptor or cord. Contact your local vendor to order a new one.
- Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning.
- CAUTION: RISK OF EXPLOSION IF BATTERY (on the motherboard) IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS. Dispose them at the applicable collection point for the recycling of electrical and electronic equipment. For detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the store where you purchased the product.
- Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device.

Your product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. It means that used electrical and electronic products should not be mixed with general waste. Used electrical and electronic equipment should be treated separately.



## "INFORMAZIONI AGLI UTENTI"

**Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n.151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti"**

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.



La raccolta differenziata della presente apparecchiatura giunta a fine vita è organizzata e gestita dal produttore. L'utente che vorrà disfarsi della presente apparecchiatura dovrà quindi contattare il produttore e seguire il sistema che questo ha adottato per consentire la raccolta separata dell'apparecchiatura giunta a fine vita.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte del detentore comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente."



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