Actiontec®

Wireless Network Attached

Storage Device

Model #s: WNS100, WNS100-160, WNS100-200, WNS100-250, WNS100-300, WNS100-400

User Manual

Ver. 0.3

Solutions for the Digital Life™

Table of Contents

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Introduction 1

Congratulations for purchasing the Actiontec Wireless Network Attached Storage (NAS) Device. The Wireless NAS Device adds gigabytes of storage space to your network without the cost, space, and maintenance hassles of a full-fledged file server. The Wireless NAS Device also provides solid data transfer performance for multiple client connections, and you can add as many Wireless NAS Devices to the network as you like. And now, with its wireless capabilities, you can connect to the Wireless NAS Device using any wireless-equpped computer on the network. Compared to using a standard computer as a file server, the Wireless NAS Device offers lower cost, easier management, and increased reliability.

Features

- Provides from 160 to 400 gigabytes of external hard disk space (depending on model)
- Includes standard USB 2.0 port that can be connected to hard disk or flash drives
- Supports NTFS and FAT file format for connected USB hard drive
- Includes Windows utility program for speedy configuration.
- Web-based configuration and diagnostic interface accessible from any computer on the network
- Can act as a stand-alone DHCP server
- Administrator can limit the amount of available disk space available to individual users.
- High-performance file system automatically maintains itself to provide file system integrity
- Additional NAS Devices can be added to the network at any time
- Supports wireless networking (802.11b, g)

Package Contents

If any of these items are damaged or missing, please contact the dealer for replacements.

- Wireless NAS Device
- Quick Installation Guide
- Setup CD
- Ethernet Cable
- Power Adapter

System Requirements

- Windows 98SE, Me, 2000 and XP
- Ethernet network employing 10BaseT or 100BaseTX
- TCP/IP protocol
- Wireless capability (if using wireless network option)

Technical Support

Actiontec Electronics prides itself on making durable, high-quality, high-performance products. If you need assistance, the Actiontec Technical Support Department is available all day every day to provide professional support.

Actiontec Electronics, Inc.

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Technical Support

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E-mail: http://support.actiontec.com/email_support/support_form.php
Internet: www.actiontec.com/support

Configuring the NAS Device 2

After connecting and setting up the NAS Device (see the included Quick Start Guide for instructions), the user can perform custom configurations. This chapter explains how to configure the NAS Device on the network for various tasks, including file sharing, setting up a print server, and changing the password.

Client PC Setup

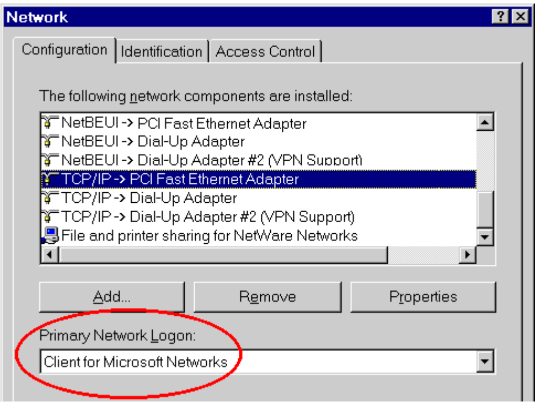
The following items need to be checked or configured:

- Network Logon (Windows 98SE and Me only)
- Locating the NAS Device on the network
- Mapping to the NAS Device

Network Logon (Windows 95/98/ME only)

To check the Network Logon, follow this procedure:

1. Check the Window log on: from the computer's desktop, select **Start** > **Settings** > **Control Panel** > **Network**.
   Ensure the "Primary Network Logon" is set to "Client for Microsoft Networks," as shown below.



The following network components are installed:

NetBEUI -> PCI Fast Ethernet Adapter
NetBEUI -> Dial-Up Adapter
NetBEUI -> Dial-Up Adapter #2 (VPN Support)
TCP/IP -> PCI Fast Ethernet Adapter
TCP/IP -> Dial-Up Adapter
TCP/IP -> Dial-Up Adapter #2 (VPN Support)
File and printer sharing for NetWare Networks

Primary Network Logon:
Client for Microsoft Networks

2. Log on when Windows prompts for a network logon. If ESC (on the keyboard) or Cancel is clicked, no network resources will be available. When logging on, a valid user name and password must be entered. If the administrator has defined users on the NAS Device, use the user name and password supplied by him/her.

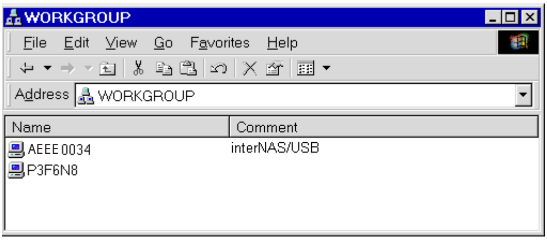
Using the NAS Server's Storage

To use the NAS Device's storage capabilities, "map" a drive letter to each folder on the Device that needs to be accessed. This creates a "network drive" on the computer, which will then be available to all programs. To do this:

1. Double-click **Network Neighborhood** (or **My Network Places**).

2. On the "View" menu, select **Details**. The "Comment" column appears.

3. Locate the NAS Device, as shown below. If not listed, double-click **Entire Network**. Then double-click the workgroup to which the Device belongs. (By default, the Device's workgroup is "Workgroup.")



Name	Comment
AEEE 0034	interNAS/USB
P3F6N8	

4. Double-click the "NAS" icon. A list of shares (shared folders) appears. Files can be read from or written to these shares, unless the administrator has blocked access.

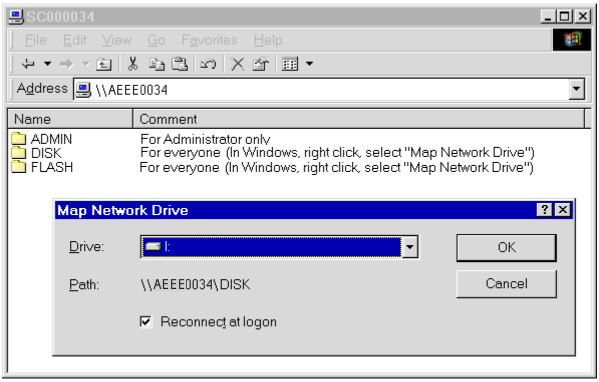
5. To create a shortcut to a NAS folder, drag its icon to the desktop, and accept Windows offer to create a shortcut.

Mapping a Network Drive

You can give a share (shared folder) on the NAS Device a drive letter on the computer, such as "F:" This is called "mapping" the drive. To do this:

1. Right-click on the desired share on the Device.

2. From the menu that appears, select **Map Network Drive…**.



Address: \\AEEE0034

Name	Comment
ADMIN	For Administrator only
DISK	For everyone (In Windows, right click, select "Map Network Drive")
FLASH	For everyone (In Windows, right click, select "Map Network Drive")

Drive: I:

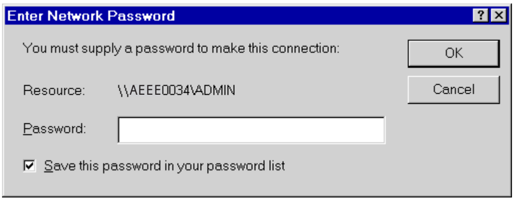
Path: \\AEEE0034\DISK

☑ Reconnect at logon

3. Select a drive letter for this folder, click in the “Reconnect at Logon” check box, then click **OK**.

4. This drive will now be available in Windows Explorer, and from the “File-Open” or “File-Save As” dialogs in all applications.

☞ ***Note:*** When accessing a folder, a prompt for a password may appear, as shown below.



You must supply a password to make this connection:

Resource: \\AEEE0034\ADMIN

Password:

☑ Save this password in your password list

- If the Windows logon name is the same as the user name on the NAS Device, but the passwords are different, enter the password in the “Password” text box.

- If the Windows logon name does not exist on the NAS Device, only guest access rights are made available, and no password should be entered. Ask the administrator to create a user name and password for on the Device.

- Even if the user name and password are correct, access will not be granted if the administrator has not allowed access.

Tips for Storing Data on the NAS Device

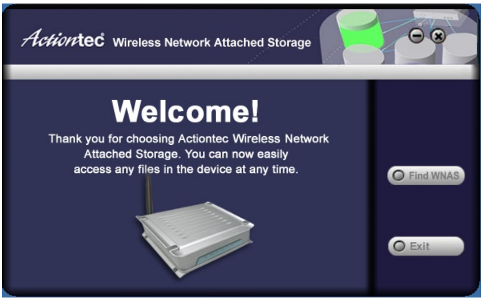
- Change the Windows user name and password to match the user name and password assigned by the NAS Device. This allows just one log in sequence.
- Map multiple NAS folders on the computer, as described above.
- Backup data by copying files from the computer to the NAS Device.
- If Windows Me, 2000, or XP is running on the computer, a backup program is available. Use this backup program to automate the process of backing up data to the Device. Read the instructions and help file supplied with this program for details.

Accessing the NAS Device

To access the NAS Device from the computer to which it is connected:

1. Insert the Utility CD in the CD-ROM drive of the computer.
2. Load the "Actiontec WNAS Setup Utility" on the computer
3. Start the Utility by double-clicking on the Utility's desktop icon.

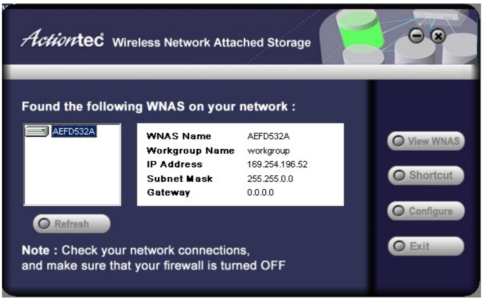
4. The "Welcome" screen appears. Click on the "Find WNAS" button.



Welcome!

Thank you for choosing Actiontec Wireless Network Attached Storage. You can now easily access any files in the device at any time.

5. The Utility searches for the WNAS device. When it is found, another window appears. Click on the "Configuration" button.



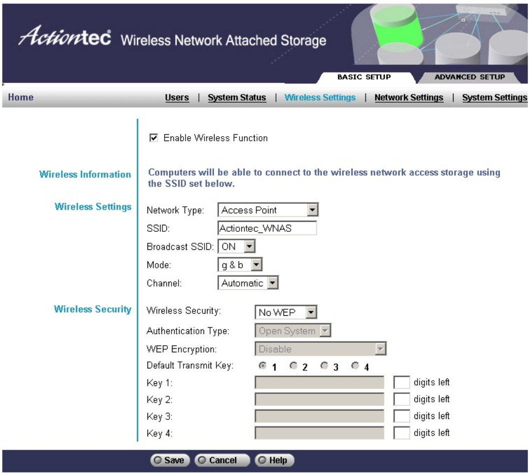
Found the following WNAS on your network :

AEFD532A

WNAS Name	AEFD532A
Workgroup Name	workgroup
IP Address	169.254.196.52
Subnet Mask	255.255.0.0
Gateway	0.0.0.0

Note : Check your network connections, and make sure that your firewall is turned OFF

6. The Web browser starts up, and the "Wireless Settings" page of the Web Configuration Utility appears. Click **Home**.


Actiontec Wireless Network Attached Storage
BASIC SETUP
ADVANCED SETUP
Home
Users | System Status | Wireless Settings | Network Settings | System Settings
Save
Cancel
Help

☑ Enable Wireless Function

Wireless Information

Computers will be able to connect to the wireless network access storage using the SSID set below.

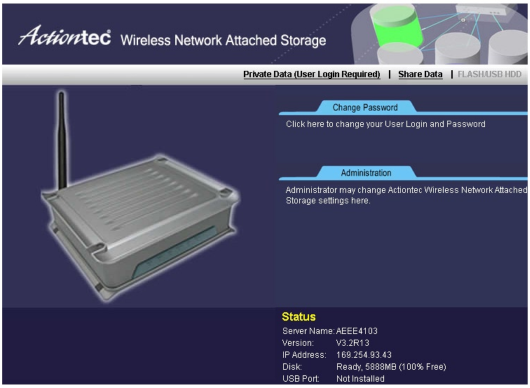
Wireless Settings

Network Type:	Access Point
SSID:	Actiontec_WNAS
Broadcast SSID:	ON
Mode:	g & b
Channel:	Automatic

Wireless Security

Wireless Security:	No WEP	
Authentication Type:	Open System	
WEP Encryption:	Disable	
Default Transmit Key:	● 1 ○ 2 ○ 3 ○ 4	
Key 1:		digits left
Key 2:		digits left
Key 3:		digits left
Key 4:		digits left

7. The Utility's "Home" screen appears.



Actiontec Wireless Network Attached Storage

Private Data (User Login Required) | Share Data | FLASH/USB HDD

Change Password

Click here to change your User Login and Password

Administration

Administrator may change Actiontec Wireless Network Attached Storage settings here.

Status

Server Name: AEEE4103
Version: V3.2R13
IP Address: 169.254.93.43
Disk: Ready, 5888MB (100% Free)
USB Port: Not Installed

8. To browse the files and folders on the NAS Device, click **Shared_Data** or **FLASH/USB HDD**.

- Shares (Folders) to which everyone has access are listed. Access these folders and files by clicking on the folder name or file name.

- To download a file displayed in the browser, right-click on the file and select **Save Target as….**

9. To access data which is password-protected, click **User Login**.

- A prompt for the user name and password appears. Enter the user name and password assigned by the administrator.

- The screen will then update, and list all accessible Shares (folders).

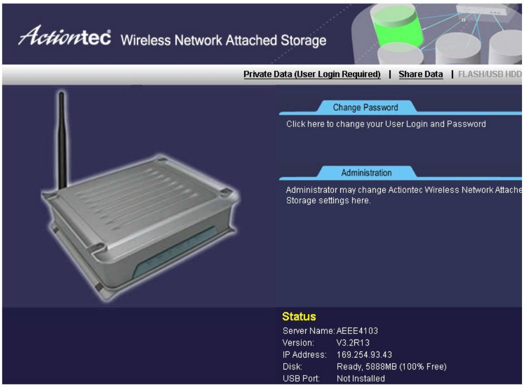
10. Navigate through these folders by clicking on the folder name, and download any file by right-clicking in and selecting **Save Target as**….

Changing the Password

Although the administrator must create the user name and initial password, they can be changed by the user. To do this:

1. Follow steps 1 through 7 of "Accessing the NAS Device" (see page 6).

2. The "Home" screen appears.


Actiontec
Wireless Network Attached Storage
Private Data (User Login Required) | Share Data | FLASH/USB HDD
Change Password
Administration

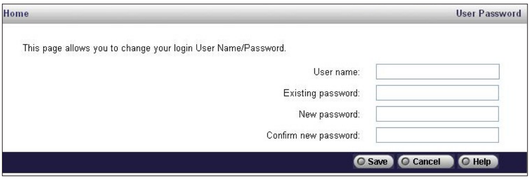
Click here to change your User Login and Password

Administrator may change Actiontec Wireless Network Attache
Storage settings here.

Status

Server Name: AEEE4103
Version: V3.2R13
IP Address: 169.254.93.43
Disk: Ready, 5888MB (100% Free)
USB Port: Not Installed

3. To change the password, click **Change Password**. The following screen appears.



This page allows you to change your login User Name/Password.

User name:
Existing password:
New password:
Confirm new password:

4. Enter the required data:

   - **User name** - the login name of the NAS Device, created by the administrator
   - **Existing password** - the current password
   - **New password** - the new password
   - **Confirm new password** - reenter the new password

5. Click **Save** to save the changes.

6. Click **Home** to return to the main screen.

USB Devices

A USB hard drive or USB Memory Disk (flash memory disk) can be inserted in the NAS Device's USB port at any time. Once the USB LED on the front panel comes on and stays on, the USB device is available for use.

For a USB hard drive, the Device can recognize the FAT and NTFS file formats.

Removing a USB device - Method A (USB Hard Drive)

1. Press the "USB Eject" button on the rear panel. The NAS Device beeps.
2. Wait for the USB LED to start blinking slowly.
3. Remove the USB device.

Removing a USB device - Method B (USB Flash Drive)

1. Click the Flash Utility icon in the computer desktop's system tray.
2. Select **Safely Remove Drive**.
3. Select the desired NAS Device.
4. Click **Eject**.
5. Wait for the USB LED to start blinking slowly. (The program will also display a message when it is safe to physically detach the USB device.)
6. Remove the USB device.

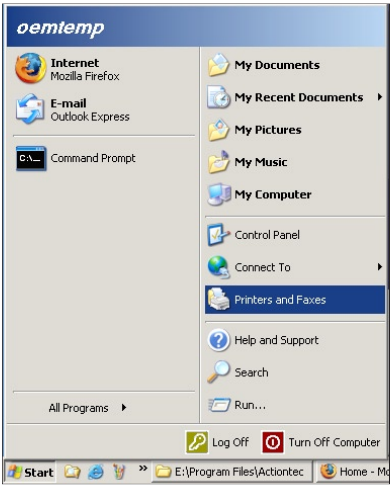
☞ ***Note:*** If the USB device is not removed, it will not be re-connected. The USB device must be removed and re-inserted to reconnect.

Adding a Print Server

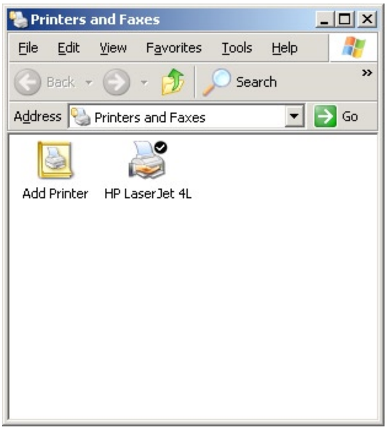
If a USB printer is connected to the NAS Device, the Device can be used as a print server. To do this, follow these instructions (this installation is for Windows XP only; other operating systems may have a slightly different procedure):

1. Plug a USB printer in the USB port on the rear panel of the NAS Device.

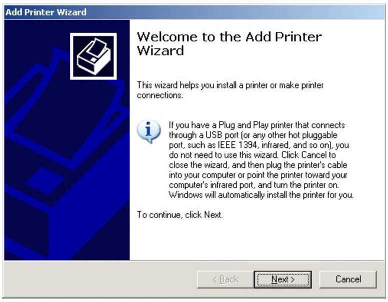
2. From the desktop of the computer, select **Start**, then **Printers**.



3. When the “Printers” (or “Printers and Faxes”) window appears, click **Add Printers**.



4. Read the on-screen information, then click **Next**.



Add Printer Wizard

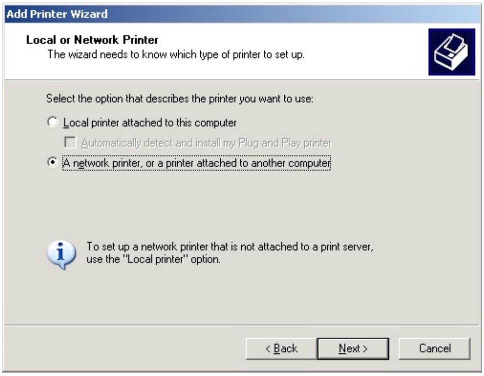
Welcome to the Add Printer Wizard

This wizard helps you install a printer or make printer connections.

If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.

To continue, click Next.

5. In the next window, select the "A network printer…" option. Click **Next**.



Add Printer Wizard

Local or Network Printer
The wizard needs to know which type of printer to set up.

Select the option that describes the printer you want to use:

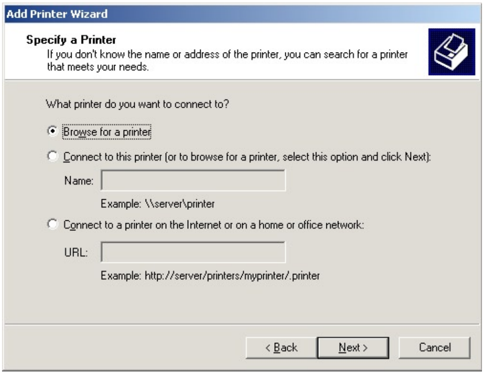
○ Local printer attached to this computer

□ Automatically detect and install my Plug and Play printer

● A network printer, or a printer attached to another computer

To set up a network printer that is not attached to a print server, use the "Local printer" option.

6. In the next window, select the "Browse for a printer" option. Click **Next**.



Add Printer Wizard

Specify a Printer
If you don't know the name or address of the printer, you can search for a printer that meets your needs.

What printer do you want to connect to?

● Browse for a printer

○ Connect to this printer (or to browse for a printer, select this option and click Next):

Name:

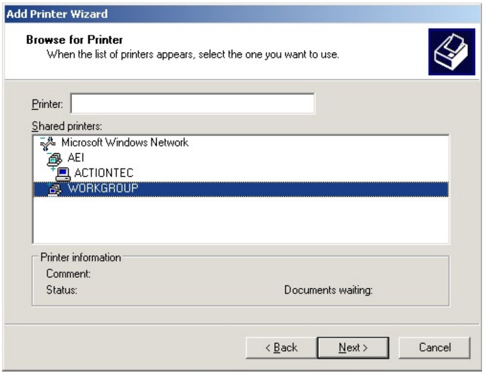
Example: \\server\printer

○ Connect to a printer on the Internet or on a home or office network:

URL:

Example: http://server/printers/myprinter/.printer

7. In the "Add Printer Wizard" window, select the workgroup to which the NAS Device belongs. Click **Next**.



Add Printer Wizard

Browse for Printer

When the list of printers appears, select the one you want to use.

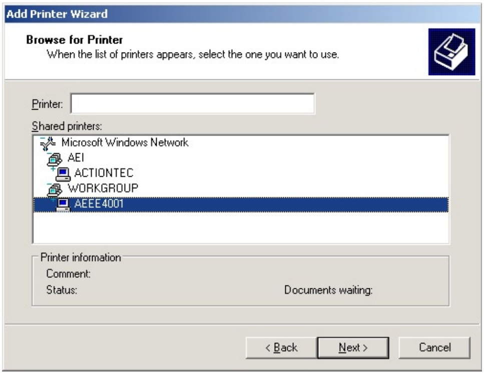
Printer:

Shared printers:

Microsoft Windows Network
AEI
ACTIONTEC
WORKGROUP

Printer information
Comment:
Status: Documents waiting:

8. From the list that appears, select the NAS Device. Click **Next**.



Add Printer Wizard

Browse for Printer

When the list of printers appears, select the one you want to use.

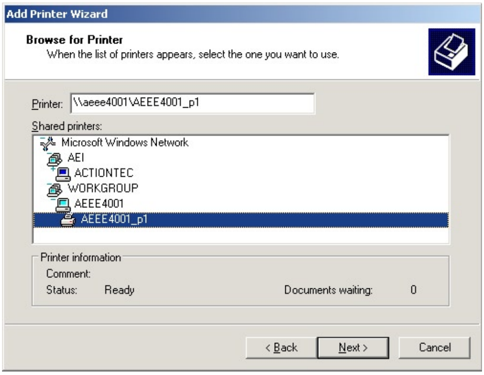
Printer:

Shared printers:

Microsoft Windows Network
AEI
ACTIONTEC
WORKGROUP
AEEE4001

Printer information
Comment:
Status: Documents waiting:

9. From the list that appears, select the printer. Click **Next**.



Add Printer Wizard

Browse for Printer

When the list of printers appears, select the one you want to use.

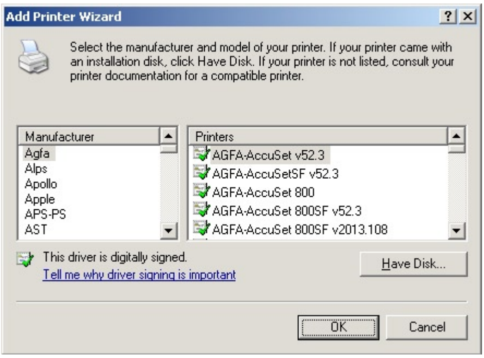
Printer: \\aeee4001\AEEE4001_p1

Shared printers:

Microsoft Windows Network
AEI
ACTIONTEC
WORKGROUP
AEEE4001
AEEE4001_p1

Printer information
Comment:
Status: Ready Documents waiting: 0

10. Select the printer manufacturer and model. Click **Next**.



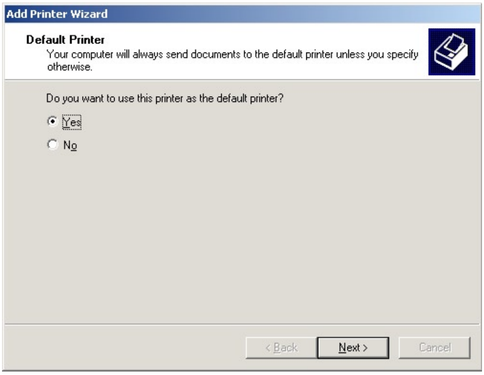
Add Printer Wizard

Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Manufacturer	Printers
Agfa	AGFA-AccuSet v52.3
Alps	AGFA-AccuSetSF v52.3
Apollo	AGFA-AccuSet 800
Apple	AGFA-AccuSet 800SF v52.3
APS-PS	AGFA-AccuSet 800SF v2013.108
AST	

This driver is digitally signed.
Tell me why driver signing is important

11. Select whether or not the printer will function as the default printer. Click **Next**.



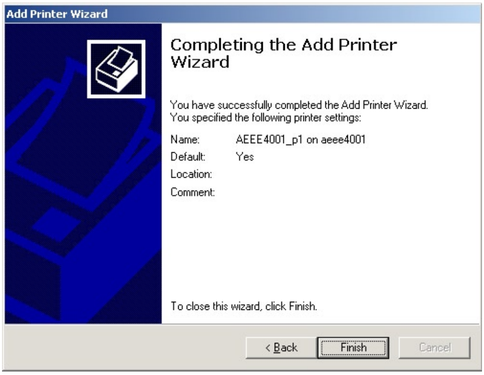
Add Printer Wizard

Default Printer
Your computer will always send documents to the default printer unless you specify otherwise.

Do you want to use this printer as the default printer?

● Yes
○ No

12. Click **Finish** to exit.



Add Printer Wizard

Completing the Add Printer Wizard

You have successfully completed the Add Printer Wizard. You specified the following printer settings:

Name: AEEE4001_p1 on aeee4001
Default: Yes
Location:
Comment:

To close this wizard, click Finish.

Other Configurations

After configuring the NAS Device, all users can access the Device with “guest” access rights. This allows access to the public shares (by default, “Disk” and “Flash or USB HDD”).

However, Actiontec recommends creating a NAS User for each person on the network. This will provide each network user with his/her own name and password, as well as a personal folder on the NAS Device.

See the chapter 3 (“Using the Administrative Utility”) for details on creating users via the Web-base Administrative Utility.

This page left intentionally blank.

Using the Administrative Utility 3

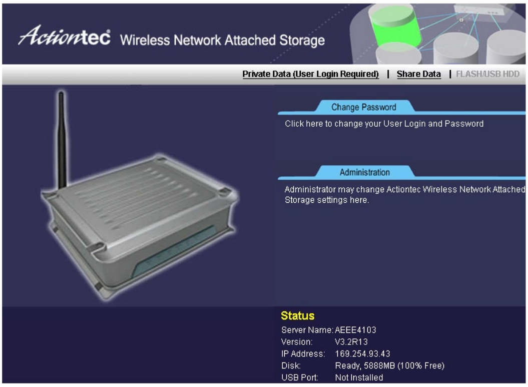
This chapter describes using the NAS Device's Administration Utility. With the Utility, the administrator can check the NAS Device's status, add or delete users, or create user groups.

Accessing the Administrative Utility

To establish a connection from a computer to the NAS Device:

1. Follow steps 1 through 7 of "Accessing the NAS Device" (see page 6).

2. The Utility's "Home" screen appears.


Actiontec Wireless Network Attached Storage
Private Data (User Login Required) | Share Data | FLASH/USB HDD
Change Password
Administration

Click here to change your User Login and Password

Administrator may change Actiontec Wireless Network Attached Storage settings here.

Status

Server Name: AEEE4103

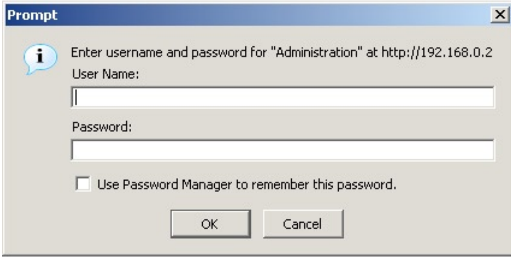
Version: V3.2R13

IP Address: 169.254.93.43

Disk: Ready, 5888MB (100% Free)

USB Port: Not Installed

3. To access the Administration interface, click **Administration** on the right. A password prompt appears, as shown below.



Enter username and password for "Administration" at http://192.168.0.2

User Name:

Password:

□ Use Password Manager to remember this password.

5. Enter "admin" for the name, and leave the password blank.

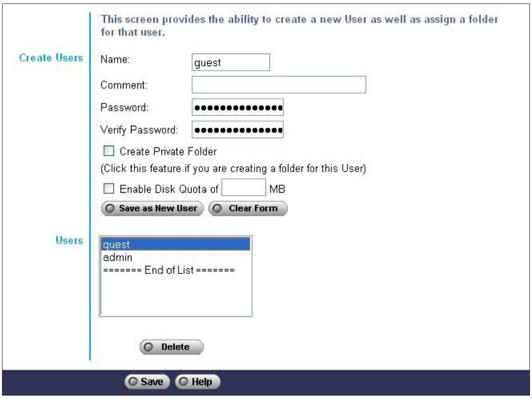
   - To gain access, enter the user name and password of a user in the "Administrators" User Group.
   - By default, the only user in the "Administrators" User Group is "admin." (Other users can be added later.)
   - The default password for the "admin" user is blank (no password). This should be changed. Click **User Password** on the NAS Device home screen to change the password.

6. The "Users" screen appears, as described in the following section. Use the menu tabs to select the other screens as desired.

Users

This is the first screen that appears after selecting "Administration." This screen allows the user to manage other users created on the NAS Device.

- The "guest" and "admin" users are pre-defined, and cannot be deleted.
- Users can be members of many user groups.
- When a user is created, a Share (folder) is created for them, with the same name. Only the user and the Administrator group can access this new Share.



This screen provides the ability to create a new User as well as assign a folder for that user.

Create Users

Name: guest

Comment:

Password: ••••••••••••••

Verify Password: ••••••••••••••

☐ Create Private Folder

(Click this feature if you are creating a folder for this User)

☐ Enable Disk Quota of MB

Users

guest
admin
======= End of List =======

Name

Enter the user name here. Note that punctuation and other special characters (e.g. * / | \ ) cannot be used in the name.

Comment

Enter a comment here.

Password/Verify Password

Enter the user's password in these text boxes.
These text boxes are also used to change an existing user's password, as follows:

1. Select the desired user.
2. Clear the existing values in the password text boxes.
3. Enter the desired password in both the "Password" and "Verify Password" text boxes. If no password is required, leave both text boxes blank.
4. Click **Save as New User**.

When creating a new user, enter the desired password in both of these text boxes.

Create Private Folder

If creating a new user:

- Checking this option creates a Group and a Private Folder (Share) with the same name as the user.
- The "Private Folder (Share) Location" text box allows the user to select which disk is used for the Private Folder.
- Read/Write access will be granted to the Share.

If changing an existing user:

- The check box has no effect - it will neither create nor delete. This option is only available when creating a new user.
- However, the user's private folder can be moved to another disk (if installed) by changing the location, and saving the change.

Enable Disk Quota

Enable the check box to set the disk usage for the user, then enter the maximum amount of disk space this user is allowed to access.

☞ ***Note:*** Unless the check box is checked, the Disk Quota text box has no effect.

Users List

This list shows all existing users. Details of the selected user are displayed in the "Properties" area when scrolling through the list of users.

Save as New User

Use this button to create a new user, after entering their data in the "User Properties" text boxes.

Clear Form

Use this button to clear the form, preparing the form for the entry of a new user.

Groups

Click this to view and/or modify the Groups which the selected user is in.

Delete

Click this button to delete the selected user.

Warning: When a user is deleted, his/her private folder, and any data it contains, is deleted. If this data is important, the administrator should copy it to another folder before deleting the user.

Save

Use this button to save any changes made to the "User Properties" for an existing user.

Modifying Existing User Properties

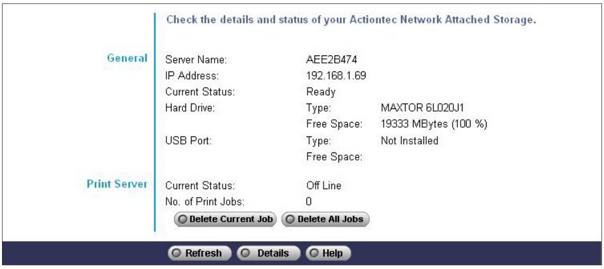
1. Select the desired user from the list. Their details will be displayed in the “User Properties” text boxes.

2. Edit the “User Properties” text boxes as required. Note that the “Create matching Share and Folder” option when modifying a user cannot be changed. However, the “Share (Private Folder) Location” text box can be modified to change to location of a user's Private Folder, if it already exists.

3. Click **Save** to save the changes.

System Status

This screen displays many of the NAS Device’s current settings .



Check the details and status of your Actiontec Network Attached Storage.

General

Server Name: AEE2B474

IP Address: 192.168.1.69

Current Status: Ready

Hard Drive: Type: MAXTOR 6L020J1

Free Space: 19333 MBytes (100 %)

USB Port: Type: Not Installed

Free Space:

Print Server

Current Status: Off Line

No. of Print Jobs: 0

Server Name

The current name of the NAS Device. This name will be shown in “Network Neighborhood” or “My Network Places.”

IP Address

IP address currently used by the NAS Device.

Current Status

Indicates the current status of the Device. This will usually display “Available” or “Ready” If the Device is not available, the message will say why the Device is not available (e.g. "Scandisk in Progress”).

Hard Drive

Disk Type - indicates the make and model of the hard drive installed in the NAS Device, as provided by the manufacturer.
Free Space - indicates the amount of free disk space available.

USB Port

Disk Type - indicates the type of USB disk connected to the NAS Device, as provided by the manufacturer.
Free Space - indicates the amount of free disk space available.

Print Server

Current Status - indicates the status of the print server ("On Line," "Off Line").
No. of Print Jobs - indicates the number of print jobs in the print server queue.

Delete Current Job

Clicking this button deletes the current print job and, if applicable, starts the next print job in the print server queue.

Delete All Jobs

Clicking this button deletes all current print jobs.

Refresh

Click this button to update the data shown on the Status screen.

Details

Clicking this button will open a new screen, displaying further status details, including a list of all computers and other devices allocated an IP address by the DHCP Device function (if enabled).

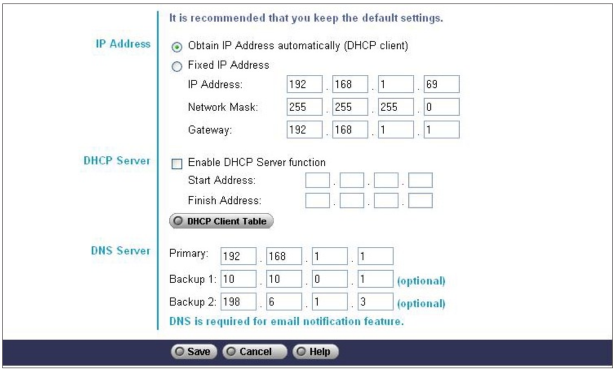
Wireless Settings

See Chapter 4, "Configuring the Wireless Settings," for more information.

Network Settings

This screen allows the modification of the NAS Devices network settings.

> ***Warning:*** Actiontec recommends leaving these values at their default settings. Only experienced network administrators should modify any of the setting in this screen.



It is recommended that you keep the default settings.

IP Address
● Obtain IP Address automatically (DHCP client)
○ Fixed IP Address
IP Address: 192 . 168 . 1 . 69
Network Mask: 255 . 255 . 255 . 0
Gateway: 192 . 168 . 1 . 1

DHCP Server
□ Enable DHCP Server function
Start Address: . . .
Finish Address: . . .

DNS Server
Primary: 192 . 168 . 1 . 1
Backup 1: 10 . 10 . 0 . 1 (optional)
Backup 2: 198 . 6 . 1 . 3 (optional)
DNS is required for email notification feature.

Obtain IP Address Automatically (DHCP Client)

Do not select this option unless a DHCP server is connected to the network. A DHCP server provides an IP address to computers and other devices.

Fixed IP Address

Select this if the Network does not have a DHCP server, and enter the following data:

IP Address

The IP address must be unused, and compatible with the computers on the network. Usually, this means the first three text boxes should be the same as the computer, and the last text box must be an unused number between 1 and 254.

Network Mask

Enter the same Network Mask (Subnet Mask) used by computers on the network.

Gateway (Router)

(**Default: None**) If the network has a router or gateway connected to it, enter its IP address here. Otherwise, leave this blank.

Enable DHCP Server Function

Click in the check box to enable/disable the DHCP server. If a DHCP server is already present, do not enable this feature.

Start/Finish Address

Enter the first and last addresses of the range of IP addresses to be allocated by the DHCP server in these text boxes, respectively. The first three text boxes of each must correspond with each other.

Primary

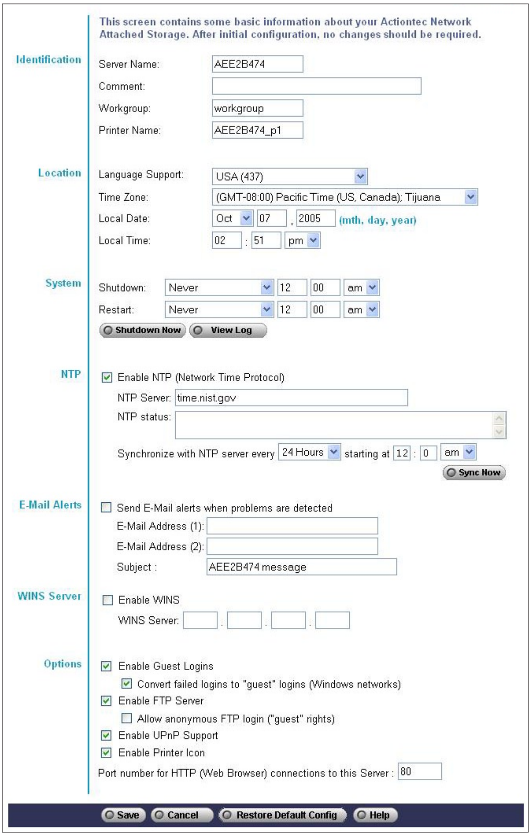
The IP address of the first DNS Server.

Backup

The IP address of the backup DNS server (accessed if the first server is busy).

System Settings

This screen provides an overview of the NAS Device's settings.



This screen contains some basic information about your Actiontec Network Attached Storage. After initial configuration, no changes should be required.

Identification

Server Name: AEE2B474

Comment:

Workgroup: workgroup

Printer Name: AEE2B474_p1

Location

Language Support: USA (437)

Time Zone: (GMT-08:00) Pacific Time (US, Canada); Tijuana

Local Date: Oct 07 , 2005 (mth, day, year)

Local Time: 02 : 51 pm

System

Shutdown: Never 12 00 am

Restart: Never 12 00 am

NTP

☑ Enable NTP (Network Time Protocol)

NTP Server: time.nist.gov

NTP status:

Synchronize with NTP server every 24 Hours starting at 12 : 0 am

E-Mail Alerts

□ Send E-Mail alerts when problems are detected

E-Mail Address (1):

E-Mail Address (2):

Subject : AEE2B474 message

WINS Server

□ Enable WINS

WINS Server: . . .

Options

☑ Enable Guest Logins

☑ Convert failed logins to "guest" logins (Windows networks)

☑ Enable FTP Server

□ Allow anonymous FTP login ("guest" rights)

☑ Enable UPnP Support

☑ Enable Printer Icon

Port number for HTTP (Web Browser) connections to this Server : 80

Server Name

If needed, change the name of the NAS Device here. Note that punctuation and other special characters (e.g. * / | \ ) cannot be used in the name.

Comment

Enter a comment here (the location of the NAS Device, for instance).

Workgroup

This should match the Workgroup name of the computers on the network. If the Workgroup name does not match, access to the NAS Device is still possible, but the Device will not appear when performing a "Browse Network" operation.

Printer Name

This text box displays the name of the printer connected to the NAS Device.

Language Support

Select the language used by computers on the network here. If multiple languages are used, select the most common.

Time Zone

Select the correct time zone for the location of the NAS Device here.

Local Date

Enter the local date here. The NAS Device will set it own calendar according to the date provided.

Local Time

Enter the local time at the location here. The NAS Device will set its own clock according to the time provided Note that the Device's clock will not reset until **Save** is clicked.

Shutdown/Restart

Use these two sets of text boxes to force the NAS Device to turn off and on at the same time every day, or on the weekends.

Shutdown Now

Clicking this button causes the NAS Device to shut down immediately, breaking all existing network connections. No data will be saved.

View Log

Click this button to view the log file in separate window. The log file is a record of activity on the NAS Device, which can help in management and troubleshooting.

Enable NTP (Network Time Protocol)

If enabled, the NAS Device will synchronize its clock with a NTP (Network Time Protocol) Server.

NTP Server

Enter the domain name or IP address of the NTP server to be used. The NTP server can be a public server (on the Internet) or a local server (on the local network).

NTP Status

This shows the status of the NTP update procedure.

Synchronize…

Select how often the NAS Device synchronizes its clock with the specified NTP device. The time of the next synchronization can also be set.

Sync Now

Click this button to synchronize with the NAS Device immediately.

Send E-Mail Alerts…

Click here to enable the sending of e-mail alerts by the NAS Device. Alerts will be sent when there is some problem requiring the administrator’s attention.

E-Mail Address (1)/(2)

Enter the e-mail addresses to which the alerts will be sent.

Subject

Enter the text that will appear in the “Subject” text box of an e-mail alert.

Enable WINS

Click here if the network has a WINS Server. If enabled, the NAS Device will register with the WINS Server. This will allow users on the network to locate the Device through a router. (Without WINS, "Network Neighborhood" or "My Network Places" only scans the local network.)

WINS Server

If WINS is enabled, enter the IP address of the WINS Server. Normally, this will be a Windows NT/2000/XP Server.

Enable Guest Logins

If enabled, "guest" can be used as user ID to login to the NAS Device. If disabled, "guest" will not be accepted as a login.

Convert Failed Logins to "Guest" Logins

If this option is enabled, all Windows users will be able to access the NAS Device via "Network Neighborhood" or "My Network Places," with "guest" access rights. By default, the "guest" user has read/write permission to the "Disk" folder on the USB hard drive, and all folders on the USB flash drive.

Enable FTP Server

If this option is enabled, users can upload and download files via FTP (file transfer protocol).

Allow anonymous FTP login ("guest" rights)

The FTP server prompts for a user name and password when clients attempt to connect. If this option is enabled, users will be able to enter "anonymous" as the user name, and anything as the password. If this option is disabled, users must provide their correct user name and password.

Enable UPnP Support

If enabled, the NAS Device will broadcast its availability. On systems which support UPnP (e.g., Windows Me, XP), an icon for the NAS Device will be automatically generated.

Enable Print Icon

If enabled, the NAS Device places a printer icon for its print server in all print dialog boxes.

Port Number For HTTP...

This port number is used for Web browser connections to the NAS Device. The default port is 80, as used by Web servers. If this is changed, use a number greater than 1024 (8080 is often used). Also, if the port is not 80, specify the port in the Web browser, in order to connect. To do this, add a ":" and the port number after the address: e.g.,

```
        http://192.168.0.100:8080
```

This example assumes the Device's IP address is 192.168.0.100, and the port number is 8080.

Restore Default Config Button

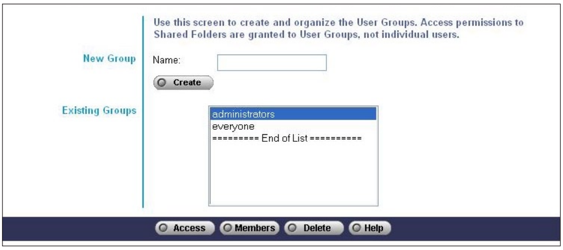
Click this button to restore all settings on the NAS Device to factory defaults. Data stored on the NAS Device will not be affected

Advanced Setup

This screen includes many of the NAS Device's advanced settings, including Groups, Folders, Backup, Hard Drive, and Upgrade.

Groups

In this screen, manage the user groups on the NAS Device.



Use this screen to create and organize the User Groups. Access permissions to Shared Folders are granted to User Groups, not individual users.

New Group

Name:

Existing Groups

administrators
everyone
========= End of List ==========

New Group

Use this text box to create a new group.

Existing Groups

This list box shows the list of all groups. Two groups - "everyone" and "administrators" - always exist. These groups cannot be deleted.

Create

Click this button to create a new group. Enter the desired name for the new Group in the "Name" text box, then click this button.

Access

Click this button to display the shares members of the current group are able to access. Access rights for this group can then be assigned, removed or modified. See below for details.

☞ ***Note:*** The "administrators" group always has read/write access to all shares.

Members

Click this button to display the users who are members of the selected group. Members can then be added or deleted.

☞ ***Note:*** The "everyone" group always contains all users. Members cannot be added or deleted.

Delete

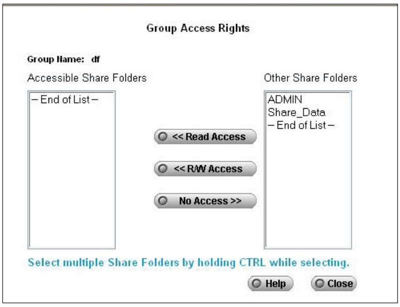
Click this button to delete the selected Group.

☞ ***Note:*** The "administrators" and "everyone" groups cannot be deleted.

Access Rights Screen

In this screen, view and modify the groups which can access this share.

☞ ***Note:*** The administrators group always has read/write access to all shares.



Group Access Rights

Group Name: df

Accessible Share Folders

– End of List –

Other Share Folders

ADMIN
Share_Data
– End of List –

Select multiple Share Folders by holding CTRL while selecting.

Group Name

The name of the group being modified is shown above the two lists of shares.

Accessible Share Folders

The “Accessible Share Folders” column shows which shares this group can currently access. The type of access is shown in brackets. (R = Read Only, R/W = Read-Write).

☞ ***Note:*** The “administrators” group has read/write access to all shares.

To Add Access Rights

Select the share or share in the right-hand column, then click << **Read Access** to provide read-only access, or click << **R/W Access** to provide read-write access. Multiple shares can be selected by holding down CTRL on the keyboard while selecting.

To Remove Access Rights

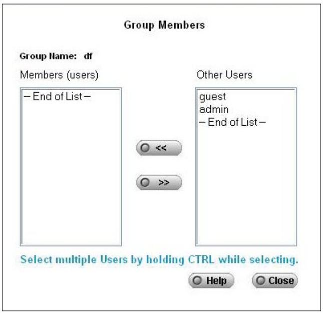
Select the share or shares in the left-hand column, then click the **No Access** >> button. Multiple shares can be selected by holding down CTRL on the keyboard while selecting. When finished, click **Close**.

Help

Click this button for more information about this screen.

Group Members

This screen allows the user to check which users are members of the group, and to add or revoke membership of this group.



Group Members

Group Name: df

Select multiple Users by holding CTRL while selecting.

☞ ***Note:*** The “everyone” Group always contains all users. Members cannot be added or removed.

Group Name

The name of the group being modified is shown at the top of the screen.

Members (Users)

The “Members” column on the left shows the users who are currently members of this group.

Other Users

The “Other Users” column on the right shows users who are not currently members of this group.

To Add a Member to the Group

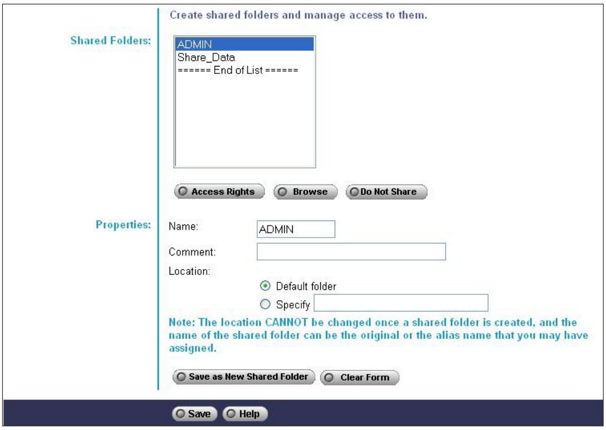
Select the user or users in the right-hand column, then click <<. Multiple users can be selected by holding down CTRL on the keyboard while selecting.

To Delete a Member from the Group

Select the user or users in the left-hand column, then click >>. Multiple users can be selected by holding down CTRL on the keyboard while selecting.When finished, click **Close**.

Folders

This screen allows the user to manage the shared data which exist on the NAS Device. A "Share" is a folder (directory) on the NAS Device which a particular group can access.



Create shared folders and manage access to them.

Shared Folders:

ADMIN
Share_Data
====== End of List ======

Properties:

Name: ADMIN

Comment:

Location:

● Default folder

○ Specify

Note: The location CANNOT be changed once a shared folder is created, and the name of the shared folder can be the original or the alias name that you may have assigned.

- Only the NAS Device administrators can create Shares. However, within a Share, users who have access to that Share can create other folders (directories) as well as files.
- A Share can be accessed by many User Groups, and a User Group can access many Shares.
- If a Share within a Share exists, all users with access to the outer share will always have the same access rights to the inner share.

Shared Folders

All existing shares are listed. When an existing Share is selected in the list of Shares, its details are displayed in the "Share Properties" area.

Access Rights

Click this button to view the Groups which have access to the selected Share, and change these access rights as required.

Browse

Use this to view the files and folders in the selected Share. If using Internet Explorer, right-click a file to perform standard Explorer operations.

Do Not Share

Click this button after a selecting a shared folder in the Shared Folder list box to "unshare" the selected folder.

Name

The current name is displayed here. The Share Name can be changed. This does not change the name of the folder (directory) associated with the Share. Note that punctuation and other special characters (e.g. * / | \ ) cannot be used in the name.

Comment

Change or enter a comment here.

Location

The Location associated with the Share. Note that once a Share is created, its location can not be changed. There are two options:

- **Default folder** - if selected, creates the Share in the default folder.
- **Specify** - if selected, enter the folder (directory) to be converted to a Share. If the folder does not exist, it will be created.

Save as New Share

After entering the required data in the "Share Properties" area, use this button to create a new Share on the selected disk.

Clear Form

Clear the form, preparing it for the creation of a new Share.

Save

Use this button to change the properties of a Share, as follows:

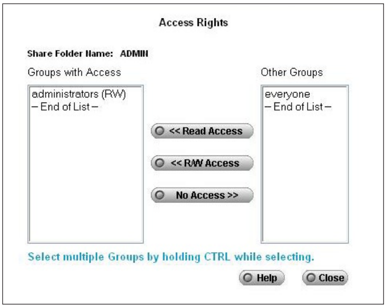
- Select the desired Share from the Shared folders. Its details are displayed in the "Share Properties" area.
- Change the Share properties as required. Note the location cannot be changed.
- Click **Save** to save the changes.

Help

Click this button for more information about this screen.

Share Access

The screen is displayed when **Access Rights** is clicked on the Folders screen. Determine which users can access the selected share in this screen.



Access Rights

Share Folder Name: ADMIN

Groups with Access

administrators (RW)
– End of List –

Other Groups

everyone
– End of List –

Select multiple Groups by holding CTRL while selecting.

Share Name

The name of the Group being modified is shown above the two lists of shares.

Groups with Access

This list shows which Group can currently access this Share. The type of access is shown in brackets. (R = Read Only, R/W = Read-Write).

Note: The "administrators" Group has R/W access to all shares.

Other Groups

The “Other Shares” column on the right shows all other Groups. These Groups have no access to the current Share.

To Add Access Rights

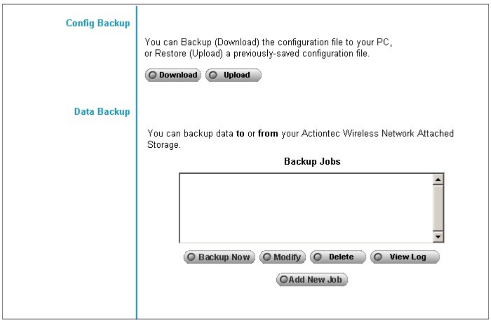
Select the Group in the right-hand column, then click << **Read Access** to provide Read-Only access, or << **R/W Access** to provide R/W access. Multiple Groups can be selected by holding down the CTRL on the keyboard while selecting.

To Remove Access Rights

Select the Group in the left-hand column, then click **No Access** >>. Multiple Groups can be selected by holding down the CTRL on the keyboard while selecting.

When finished, click **Close**.

Backup



You can Backup (Download) the configuration file to your PC, or Restore (Upload) a previously-saved configuration file.

You can backup data **to** or **from** your Actiontec Wireless Network Attached Storage.

Config Backup

This facility allows the user to Backup (Download) and Restore (Upload) the NAS Device's configuration file (named “configuration.bin”). The configuration file contains all network information, as well as the User, Group, and Share information. It does not include any information about the files stored on the NAS Device.

☞ ***Note:*** Using this feature will overwrite (destroy) any existing configuration information.

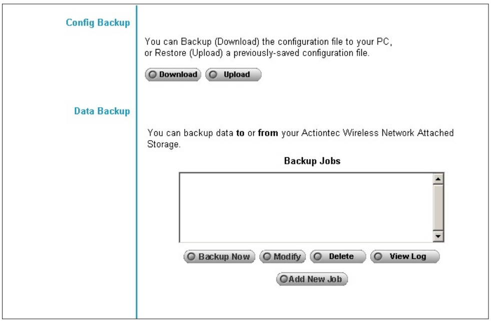
Download Click this to download the configuration file and save it on the computer.

Upload Use this to restore a previously saved configuration file from the computer to the NAS Device.

Data Backup

Data files can be backed up from the NAS Device to another network device, or from another network device to the Device. The Backup Jobs text box displays any defined backup jobs. If no jobs have been defined, the text box will be empty. For each job defined, the following data is shown:

- **Name** - displays the name assigned to this backup job
- **Source & Destination** - displays the name of the source and destination devices in the form Source => Destination.
- **Date/Time** - displays the date and time of the last backup.



Config Backup

You can Backup (Download) the configuration file to your PC, or Restore (Upload) a previously-saved configuration file.

Data Backup

You can backup data **to** or **from** your Actiontec Wireless Network Attached Storage.

Backup Jobs

Backup Now

Click here to run the selected backup job immediately.

Modify

Click here to change the settings of the selected backup job.

Delete

Click here to delete the selected backup job.

View Log

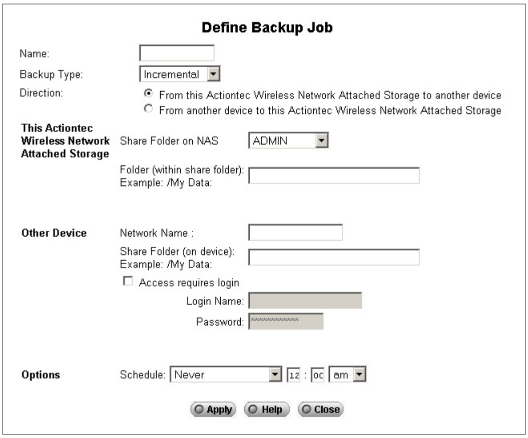
This text box displays a log of completed backup jobs

Add New Job

Clicking this button opens the “Define Backup Job” screen, where a new backup job can be defined.

Define Backup Job

From this screen new backup jobs can be created, which will be displayed on the “Backup” screen.



Define Backup Job

Name:

Backup Type: Incremental

Direction:
● From this Actiontec Wireless Network Attached Storage to another device
○ From another device to this Actiontec Wireless Network Attached Storage

This Actiontec Wireless Network Attached Storage
Share Folder on NAS: ADMIN
Folder (within share folder): Example: /My Data:

Other Device
Network Name :
Share Folder (on device): Example: /My Data:
□ Access requires login
Login Name:
Password: ***********

Options
Schedule: Never 12 : 00 am

Name

Enter the job’s name here. The backup job’s name must be composed of alphanumeric symbols not exceeding 15 characters in length.

Backup Type

Select the desired backup type:

- **Full** - backup all files.
- **Incremental** - only backup files as they change.
- **Synchronize** - backup all files to start, and then any files on the destination that do not exist on the source are deleted.

Direction

Select the desired direction where backing up will occur here:

- **From this NAS to another device** - data on the NAS Device is backed up to remote device.
- **From another device to NAS** - data on remote device is backed up to the NAS Device.

Share

Select the applicable share here. If backing up from the NAS Device, select the share to back up. If backing up to the NAS Device, select the share where the backup-up data will be stored. When the sub-folder text box appears, enter the location of the sub-folder where the share will be stored.

Other Device

Enter the details of the remote device where data will be backed up or stored here.

Name

The name of other device, as seen on the network.

Share Folder

Enter the name of share folder. Depending on the direction of the backup, this is either the share to be backed up or the destination for the backed-up data.

Access the Folder Requires Login

If the share is password protected, click in this check box and enter the Login Name and Password required to gain access to the share.

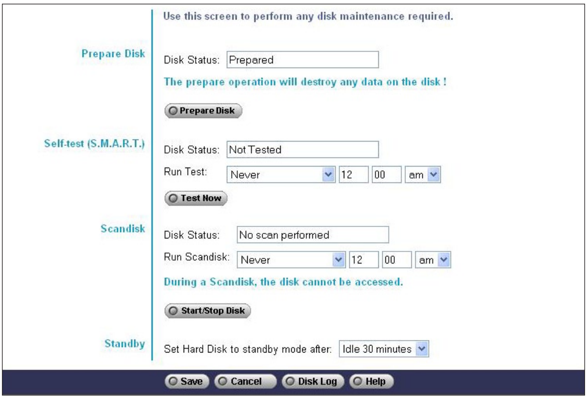
Options - Schedule

This text box displays the schedule options for when the backup will occur:

- **Never** - disables this backup job.
- **Every Day** - the backup job is performed each day at the specified time.
- **Every Monday, Every Tuesday…** - select this option to have the backup performed once per week, on the specified day and time.
- **The time text box (hour, minute, AM/PM)** - specify at what time the backup job should be performed.

Hard Drive

This screen allows the user to perform various disk operations on the NAS hard disk drive. No operations can be performed on a USB flash drive.
This screen has four sections: Prepare Disk, Self-Test (S.M.A.R.T.), Scandisk, and Standby.



Use this screen to perform any disk maintenance required.

Prepare Disk

Disk Status: Prepared

The prepare operation will destroy any data on the disk !

Self-test (S.M.A.R.T.)

Disk Status: Not Tested

Run Test: Never 12 00 am

Scandisk

Disk Status: No scan performed

Run Scandisk: Never 12 00 am

During a Scandisk, the disk cannot be accessed.

Standby

Set Hard Disk to standby mode after: Idle 30 minutes

Prepare Disk

The Prepare Disk operation reformats the NAS hard drive.

Warning: Performing a "Prepare Disk" operation will destroy any data on the hard drive. Once started, this process cannot be halted or reversed.

Status The Status text box can have any of the following values:

- **Not installed** - no disk is inserted, or connection or disk has failed.
- **Not Prepared** - disk has been detected, but not ready for use (press the "Prepare Disk" button to prepare the disk for use).

- **Preparing** - only displayed after the “Prepare Disk” button is pressed. (See below for details).
- **Prepared** - disk is ready for use.

Prepare Disk Click here after installing a new disk. The disk will be partitioned and quick-formatted. Any data on the disk will be lost.

Warning: Performing a “Prepare Disk” operation will destroy any data on the disk. Once started, this process cannot be halted or reversed.

Self-test (S.M.A.R.T.)

S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) can warn of impending problems with the hard disk before it actually fails. This test should be performed regularly.

Disk Status This can have any of the following values:

- **N/A** - no disk is available.
- **Not Tested** - No S.M.A.R.T. check has been performed on this drive.
- **Test OK** - No errors were found in the last test.
- **Errors** - The S.M.A.R.T. check found errors on the drive (drive should be replaced).

Run Test Select the day and time to perform a S.M.A.R.T. test (select “Never” to prevent S.M.A.R.T. from running automatically).

Test Now Run a S.M.A.R.T. test immediately.

Scandisk

Running a Scandisk (Disk Check) test checks the file system and corrects any errors found. This program should be run regularly. The Scandisk program will also run automatically if an error condition is detected, such as an abnormal shutdown due to loss of power.

Disk Status The “Disk Status” text box can have any of the following values:

- N/A - No disk is available.
- **No Scan performed** - No Scandisk has been performed recently on this drive.

- **Scandisk in progress** - Scandisk operation is in progress. The disk cannot be used while a Scandisk is in progress. If required, use the "Start/Stop" button to terminate the Scandisk operation and gain access to data on the disks. (To see the results of the Scandisk operation, use the "View Disk Log" button.)
- **Scandisk completed** - The last Scandisk operation has been completed. Use the "View Disk Log" button to view the results.
- **Scandisk terminated** - The last Scandisk operation was cancelled by the administrator before it was completed.
- **Run Scandisk** - Select the day and time to perform a Scandisk operation. (Select "Never" to prevent Scandisk from running automatically.)

Run Scandisk Select the day and time to perform a Scandisk test (select "Never" to prevent Scandisk from running automatically).

Start/Stop If a Scandisk is in progress, click this button to terminate the Scandisk immediately. Otherwise, clicking here starts the Scandisk operation. The Scandisk operation may take a few hours, and the disk is unavailable to users while the Scandisk is in progress.

Standby

The NAS hard drive can be configured to go into standby (or "sleep") mode here.

Set Hard Disk to standby mode after: Enter the period of idle time after which the hard disk drive switches to standby mode here.

Save

Click to save the settings on this screen. This has no effect on any operations in progress.

Cancel

Restore the settings on the screen to their values after the last "Save" operation. Clicking "Cancel" has no effect on any operations in progress.

Disk Log

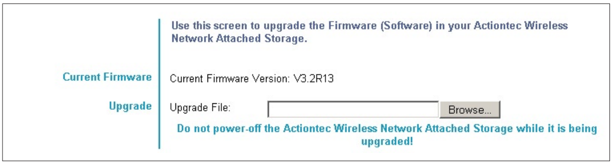
Use this to view the results of the last Scandisk operation.

Help

Click here for more information about this screen.

Upgrade

The "Upgrade" process updates the NAS Device's firmware to the latest version. The upgrade file is obtained from the dealer or supplier. Note that the NAS Device is unavailable during the upgrade process, and all connections will be lost, including the one used to start the upgrade. The NAS Device will reboot when the upgrade installation is completed. The procedure may take from 5 to 10 minutes.



Use this screen to upgrade the Firmware (Software) in your Actiontec Wireless Network Attached Storage.

Current Firmware — Current Firmware Version: V3.2R13

Upgrade — Upgrade File:

Do not power-off the Actiontec Wireless Network Attached Storage while it is being upgraded!

Current Firmware

The version number of the NAS Device's current firmware.

Upgrade

Enter the path (e.g. C:\downloads\utilities\DS36799.rpm) of the upgrade file. Click **Browse** to browse the folders on the computer and select the desired file.

☞ ***Note:*** Implementation of this feature is Web browser-dependent.

Start Upgrade

Click this button to start upgrading the firmware.

Help

Click here for more information about this screen.

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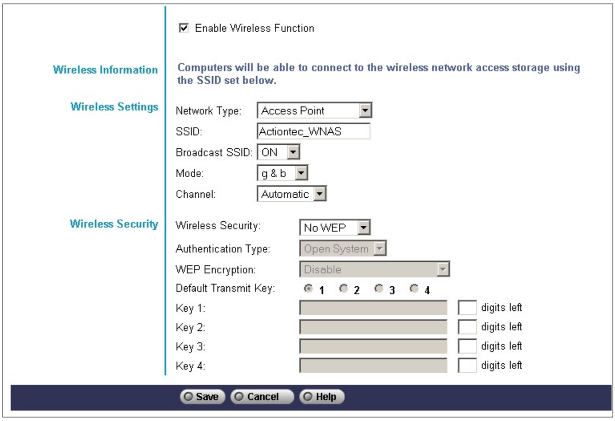
Configuring the Wireless Settings

4

This chapter covers setting up the NAS Device for wireless operation, including configuring security for the wireless connection.

Accessing the Wireless Settings

To access the wireless settings, select **Wireless Settings** from the Administration screen. This generates the "Wireless Settings" screen.



☑ Enable Wireless Function

Wireless Information

Computers will be able to connect to the wireless network access storage using the SSID set below.

Wireless Settings

Network Type:	Access Point
SSID:	Actiontec_WNAS
Broadcast SSID:	ON
Mode:	g & b
Channel:	Automatic

Wireless Security

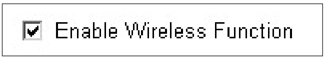
Wireless Security:	No WEP	
Authentication Type:	Open System	
WEP Encryption:	Disable	
Default Transmit Key:	● 1 ○ 2 ○ 3 ○ 4	
Key 1:		digits left
Key 2:		digits left
Key 3:		digits left
Key 4:		digits left

From this screen, all wireless settings for the NAS Device can be configured.

Setting Up Wireless Operation

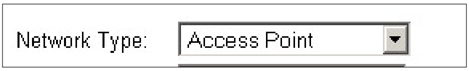
To set up wireless operation on the NAS Device:

1. Turn on the wireless radio by clicking in the "Enable Wireless Function" check box.



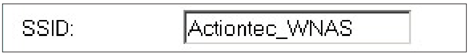
☑ Enable Wireless Function

2. Select "Network Type." If using the NAS Device as a stand-alone access point, select **Access Point** from the drop-down menu. If connecting the NAS Device to an existing wireless network (a network access point, for example), select **Infrastructure**.



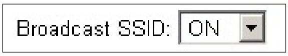
Network Type: Access Point

3. Enter the SSID of the wireless network in the "SSID" text box. The SSID is a wireless network identifier. All devices on a particular wireless network must have the same SSID to communicate with one another. If Infrastructure was selected in step 2, enter the SSID of the wireless network to which the NAS Device is connecting. If Access Point was selected in step 2, enter the SSID of the wireless network being created. This text box is limited to 32 characters, and is case-sensitive. The default entry is "Actiontec_WNAS."



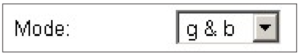
SSID: Actiontec_WNAS

4. Select a Broadcast SSID mode. This option works only if Access Point was selected in step 2. If activated (by selecting **ON** from the drop-down menu), the wireless server of the NAS Device will broadcast the SSID to all wireless devices within the wireless network's range. Selecting **OFF** disables Broadcast SSID.



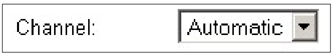
Broadcast SSID: ON

5. Select a wireless mode from the "Mode" drop-down menu. There are three options: **g & b**, which allows the NAS Device to use both 802.1b and 802.11g wireless networks; **g only**, which allows the NAS Device to use the 802.11g wireless networks only; and **b only**, which allows the NAS Device to use 802.11b wireless networks only.



Mode: g & b

6. Select a wireless channel from the "Channel" drop-down menu. This option works only if Access Mode was selected in step 2. All devices on the wireless network must be operating on the same channel in order to communicate with one another. Selecting **Automatic** allows wireless devices to join the network, without regard to channel number.



Channel: Automatic

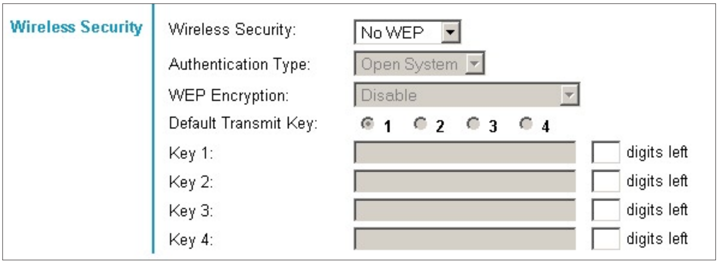
7. Set up the wireless security (see "Setting Up Wireless Security," below.)

8. Click **Save** at the bottom of the screen to save all changes.

The NAS Device is now configured for wireless operation.

Setting Up Wireless Security

At the bottom of the Wireless Settings screen is the "Wireless Security" section.



Wireless Security

Wireless Security: No WEP

Authentication Type: Open System

WEP Encryption: Disable

Default Transmit Key: ● 1 ○ 2 ○ 3 ○ 4

Key 1: □ digits left

Key 2: □ digits left

Key 3: □ digits left

Key 4: □ digits left

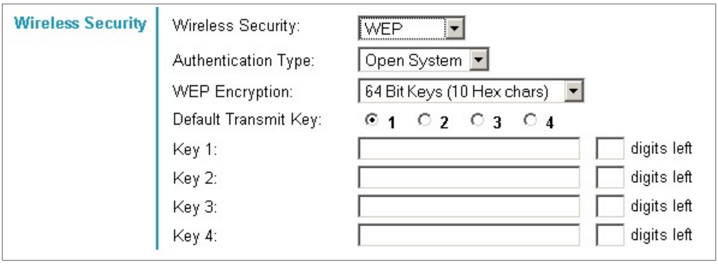
There are three options in this section: **No WEP**, **WEP**, and **WPA-PSK**.

No WEP

Selecting **No WEP** from the "Wireless Security" drop-down menu disables wireless security. If selected, any wireless device with access to the wireless network's SSID can join the wireless network.

WEP

Selecting **WEP** from the “Wireless Security” drop-down menu generates the “WEP” (Wired Equivalent Privacy) option in the Wireless Security section. Here, the authentication type, encryption level, and WEP keys are entered to activate WEP security encryption for the wireless network.



Wireless Security

Wireless Security: WEP

Authentication Type: Open System

WEP Encryption: 64 Bit Keys (10 Hex chars)

Default Transmit Key: ● 1 ○ 2 ○ 3 ○ 4

Key 1: □ digits left

Key 2: □ digits left

Key 3: □ digits left

Key 4: □ digits left

Authentication Type

There are two authentication types: **Open System** and **Shared Key**. Open System authentication allows any wireless-enabled device to recognize the NAS Device, if the correct WEP key is enabled on the device. Shared Key allows only wireless-enabled devices with the correct WEP key or Shared key to recognize the NAS Device.

WEP Encryption

There are three options in the “WEP Encryption” drop-down menu: **Disable**, **64 Bit Keys (10 Hex chars)**, and **128 Bit Keys (26 Hex chars)**.

Disable Selecting “Disable” from the “WEP Encryption” drop-down menu disables the WEP keys.

64-bit WEP Keys Selecting “64 Bit Keys” from the “WEP Encryption” drop-down menu activates 64-Bit WEP encryption. 64-bit WEP requires one or more separate keys. Each key comprises 10 hexadecimal digits. A hexadecimal digits consists of an alphanumeric character ranging from 0-9 or A-F. An example of a 64-bit WEP key is:

`4EA33D6872`

To create a set of 64-bit WEP keys, activate one to four keys by clicking in the appropriate circles, then enter 10 hexadecimal digit characters in each **Key** text box activated (**Key 1-**, **Key 2-**, **Key 3-**, **Key 4-**). After activating 64-bit WEP on the NAS Device, a computer with wireless capability can join the network only if these same keys are entered in the computer’s wireless encryption scheme.

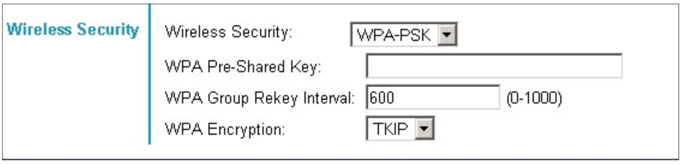
128-bit WEP Keys Selecting "128 Bit Keys" from the "WEP Encryption" drop-down menu activates 128-Bit WEP encryption.128-bit WEP requires one or more keys, comprising 26 hexadecimal digits. A hexadecimal digit consists of alphanumeric characters ranging from 0-9 or A-F. An example of a 128-bit WEP key is:

```
3D44FE6CA1EF2ED3C421745DB1
```

To create a 128-bit WEP key, activate **Key 1** by clicking in the appropriate circle, then enter 26 hexadecimal digit characters in the **Key** text box. After activating 128-bit WEP on the NAS Device, a computer with wireless capability can join the network only if this key is entered in the computer's wireless encryption scheme.

WPA-PSK

Selecting WPA-PSK from the "Wireless Security" drop-down menu generates the "WPA-PSK" (WiFi Protected Access - Pre-Shared Key) option in the Wireless Security Section. Here, the pre-shared key, group rekey interval, and type of encryption are entered to activate WPA-PSK security encryption for the wireless network.



Wireless Security

Wireless Security: WPA-PSK

WPA Pre-Shared Key:

WPA Group Rekey Interval: 600 (0-1000)

WPA Encryption: TKIP

WPA Pre-Shared Key

Enter the pre-shared key in this text box. All wireless devices wishing to join the network must enter this pre-shared key to gain access. To create a pre-shared key, enter at least eight alphanumeric characters in the text box. Also, make sure all wireless devices on the network support WPA and know the pre-shared key.

WPA Group Rekey Interval

Enter the group rekey interval in this text box (supports values from 1 to 1000; default is 600). The group key interval is used to specify the frequency of the temporal encryption automatically generated from the WPA-PSK password. Group rekey interval is supported by TKIP (see below).

WPA Encryption

TKIP (Temporal Key Integrity Protocol) is the only option here. Note that TKIP supports the group rekey interval.

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Accessing the NAS Device on the Internet 5

If the network is connected to the Internet, typically by a broadband router/gateway and modem, the NAS Device can be made available via the Internet. Features available to Internet users include:

- Using a Web browser to view and download files
- Remote management

Connecting Via the Internet

If the network is connected to the Internet via a router or gateway, the NAS Device can be made available from the Internet.

No changes to the NAS configuration are required, unless using a port number other than the default value of 80 for Web connections.

The router or gateway must be configured to pass incoming HTTP connections (and, optionally, IP connections) to the NAS Device. This feature is normally called Port Forwarding or Virtual Servers, and is explained below.

- The default port number for Web browser connections is 80. If using a different port number, specify the port number in the "System" screen (see page 23). The "Web" entry for /Port Forwarding / Virtual Server must then use the port number specified in the System screen.
- To connect to the NAS Device, Internet users need to know and use the Internet IP address of the router/gateway. (If the port number is not 80, they also need to know the port number.)
- If using a domain name, users can connect using the domain name instead of the IP address. If the router/gateway supports dynamic DNS, use a domain name even if a different IP address is used every time a user connects to the ISP. Check the documentation of the router/gateway for further information.

Using the Web Browser from the Internet

This is identical to using the Web browser from the network. But remember:

- The Internet IP address must be used to connect to the NAS Device, not the LAN IP address.
- If the port number used by the NAS Device has been changed from the default (80), specify the correct port number when connecting. For example, if the port is 8080, and the Internet IP address is 203.70.212.52, enter the following as the browser's IP address:

```
http://203.70.212.52:8080
```

Remote Management

Connection via the Web browser from the Internet is the same as connecting via the network. But remember:

- The Internet IP address must be used to connect to the NAS Device, not the LAN IP address.
- If the port number used by the NAS Device has been changed from the default (80), specify the correct port number when connecting. For example, if the port is 8080, and the Internet IP address is 203.70.212.52, enter the following as the browser's IP address:

```
http://203.70.212.52:8080
```

Once connected to the NAS Device via the Internet, all the Web-based management features are available.

However, the “Browse” button on the Shares screen only allows Web-based file browsing. (If using Internet Explorer on Windows, network users can browse shares using Windows Explorer.)

FTP (File Transfer Protocol)

An FTP client can also be used to upload and download files from the Internet. To do this, port forward the FTP port (port 21) on the router or gateway to the IP address of the NAS Device.

Troubleshooting 6

This chapter lists some common problems, and their solutions.

Problem 1: **The NAS Utility doesn't list any NAS Devices.**

Solution 1: Check the following:

- The NAS Device is installed, LAN connections are OK, and it is powered on and startup is complete.
- Ensure the computer and the NAS Device are on the same network segment. (If you don't have a router, this must be the case.)
- Ensure the computer has the TCP/IP network protocol loaded. In Windows, this is done by using Control Panel-Network. If an entry for TCP/IP -> Network card is not listed, use **Add - Protocol - Microsoft - TCP/IP** to add it.
  You then need to select the new entry (TCP/IP -> Network card), click Properties, and configure the IP Address tab.
- If the LAN has a DHCP server, you can select "Obtain an IP Address automatically".
- Otherwise, you must select "Specify an IP Address," and enter values for IP address and subnet mask. Remember that each device needs a unique IP address, and the same subnet mask.

Problem 2: The NAS Device is configured, but I can’t find it in Network Neighborhood.

Solution 2 Try using **Start - Find - Computer**, and enter the NAS Device's name. If this does not work, use **Control Panel - Network** to check the following:

- TCP/IP protocol is installed. If not, use **Add - Protocol - Microsoft - TCP/IP** to install it.
- Check the network Bindings:
- Ensure the TCP/IP protocol is bound to the Network card (NIC).
  Select the Network card, click Properties, and then the Bindings tab. If TCP/IP is not bound (checked), check it.
- Ensure the TCP/IP -> Network card entry is bound to the Client for Microsoft Networks service.
  Select the TCP/IP entry for the Network Card, click Properties, and then the Bindings tab. If Client for Microsoft Networks is not bound (checked), check it.
- If you don't have a router, check that the IP address is compatible with the NAS Device's. This means it needs to be from the same address range (e.g. 192.168.0.1 to 192.168.0.254) and using the same subnet mask (e.g. 255.255.255.0)
- If you do have a router, check that the gateway IP address is set correctly. Ask the administrator for the correct value.

Problem 3 When I click on an NAS folder icon in Network Neighborhood, I get prompted for a password.

Solution 3 This can happen in the following situations:

- The Logon name you used on the computer is recognized by the NAS Device, but the password is not. Simply enter the NAS password, or make the Windows password the same as the NAS password.
- The logon name you used on the computer is not recognized by the NAS Device, and was converted to guest, with guest access rights. Ask the administrator to create a user name for you. (Use the same name as on the computer.)
- You do not have access permission for this share. Ask the administrator to grant you access.

☞ ***Note:*** Windows uses the computer name, as shown on Control Panel - Network - Identification, as the default Logon Name. But you can create a new Windows logon name by merely entering a new name and password at the Logon prompt.

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Specifications A

Model Number(s)

WNS100, WNS100-160, WNS100-200, WNS100-250, WNS100-300, WNS100-400 (Actiontec Wireless Network Attached Storage Device)

Capacity

160, 200, 250, 300, or 400 Gigabytes (depending on model)

Ports

10/100 Ethernet, USB 2.0, Power

Network Interface

10/100 (Auto MDIX)

Wireless

802.11g (via mini PCI slot); WEP and WPA-PSK security

Standards

IEEE 802.3; 802.3u

Protocols

TCP/IP; IPP; DHCP

Power Input

12VDC 1A Linear

Certification

FCC Part 15

LED Indicators

Ready, Status, Disk, Disk Full, USB, Ethernet, Wireless

Operating temperature

0° - 55° C (32° - 131° F)

Relative Humidity

> 80% (non-condensing)

Limited Warranty

1 year

☞ ***Note***: Specifications are subject to change without notice.

Notices

Regulatory Compliance Notices

Class B Equipment

This equipment 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 equipment 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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by implementing one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected;
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Actiontec Electronics, Inc., may void the user's authority to operate the equipment.

Declaration of conformity for products marked with the FCC logo – United States only.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference

2. This device must accept any interference received, including interference that may cause unwanted operation

☞ ***Note***: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

For questions regarding your product or the FCC declaration, contact:

Actiontec Electronics, Inc.
760 North Mary Ave.
Sunnyvale, CA 94086
United States
Tel: (408) 752-7700
Fax: (408) 541-9005

Miscellaneous Legal Notices

Limited Warranty

Hardware: Actiontec Electronics, Inc., warrants to the end user ("Customer") that this hardware product will be free from defects in workmanship and materials, under normal use and service, for twelve (12) months from the date of purchase from Actiontec Electronics or its authorized reseller.

Actiontec Electronics' sole obligation under this express warranty shall be, at Actiontec's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, Actiontec Electronics may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of Actiontec Electronics, Inc. Replacement products may be new or reconditioned. Actiontec Electronics warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

Software: Actiontec Electronics warrants to Customer that each software program licensed from it will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from Actiontec Electronics or its authorized reseller. Actiontec Electronics warrants the media containing software against failure during the warranty period. The only updates that will be provided are at the sole discretion of Actiontec Electronics and will only be available for download at the Actiontec Web site, www.actiontec.com. Actiontec Electronics' sole obligation under this express warranty shall be, at Actiontec Electronics' option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable Actiontec Electronics published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. Actiontec Electronics makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third-party products listed in the Actiontec Electronics software product documentation or specifications as being compatible, Actiontec Electronics will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product or from use of the software product not in accordance with Actiontec Electronics published specifications or user guide.

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THIS ACTIONTEC ELECTRONICS WARRANTY DOES NOT APPLY TO SUCH THIRD-PARTY SOFTWARE. FOR THE APPLICABLE WARRANTY, PLEASE REFER TO THE END-USER LICENSE AGREEMENT GOVERNING THE USE OF SUCH SOFTWARE.

Obtaining Warranty Service: Customer may contact Actiontec Electronics Technical Support Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from Actiontec Electronics or its authorized reseller may be required. Products returned to Actiontec Electronics must be pre-authorized by Actiontec Electronics with a Return Merchandise Authorization (RMA) number marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. The repaired or replaced item will be shipped to Customer, at Actiontec Electronics' expense, not later than thirty (30) days after Actiontec Electronics receives the defective product.

Return the product to:
(In the United States)
Actiontec Electronics, Inc.
760 North Mary Avenue
Sunnyvale, CA 94085

Actiontec Electronics shall not be responsible for any software, firmware, information, memory data, or Customer data contained in, stored on, or integrated with any products returned to Actiontec Electronics for repair, whether under warranty or not.

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Dispute Resolution: The customer may contact the Director of Technical Support in the event the Customer is not satisfied with Actiontec Electronics' response to the complaint. In the event that the Customer is still not satisfied with the response of the Director of Technical Support, the Customer is instructed to contact the Director of Marketing. In the event that the Customer is still not satisfied with the response of the Director of Marketing, the Customer is instructed to contact the Chief Financial Officer and/or President.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California, U.S.A., excluding its conflicts of laws and principles, and excluding the United Nations Convention on Contracts for the International Sale of Goods.