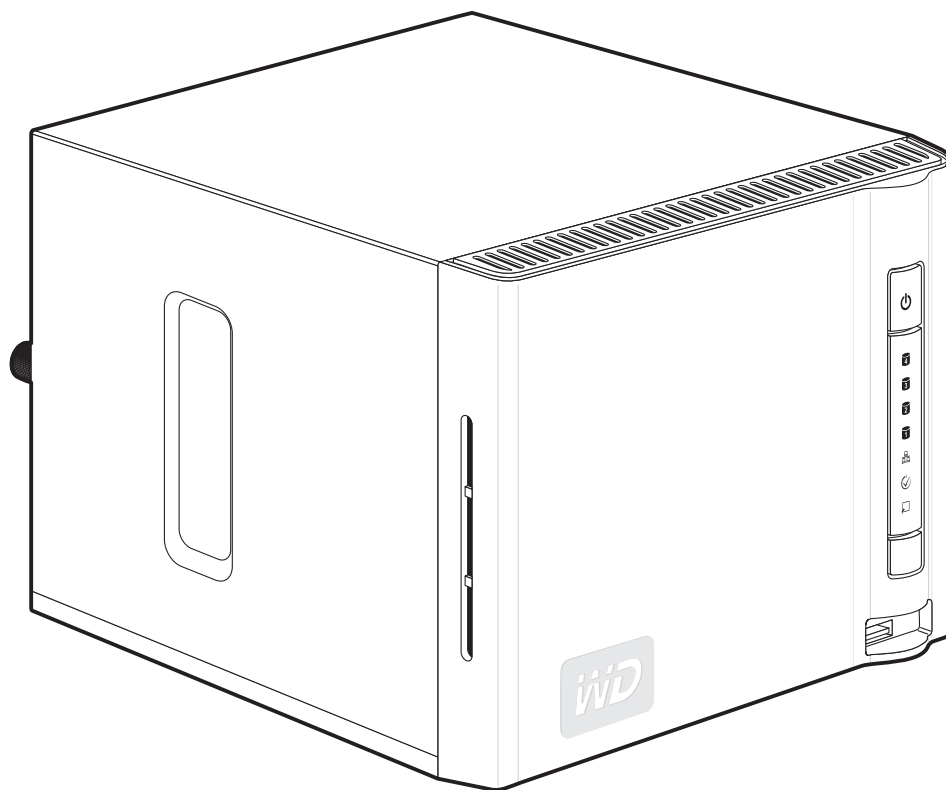


WD ShareSpace™

Network Storage System
User Guide



Important Safety Instructions

1. Follow all warnings and instructions marked on the product.
2. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
3. Do not use this product near any liquids.
4. Do not place this product on an unstable surface. The product may fall, causing serious damage to the product.
5. Do not drop the product.
6. Do not block the slots and openings on the back or bottom side of the chassis; to ensure proper ventilation and reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.
7. Operate this product only from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
10. Never push objects of any kind into this product through the chassis slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.
11. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a When the power cord or plug is damaged or frayed.
 - b If liquid has been spilled on the product.
 - c If the product has been exposed to rain or water.
 - d If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment may result in damage and require extensive work by a qualified technician to restore the product to normal condition.
 - e If the product has been dropped or the chassis has been damaged.
 - f If the product exhibits a distinct change in performance, indicating a need for service.
12. In accordance with workstation regulation standards, do not place this device in the visual field of the user due to the glossy front of the case.



.....

WARNING! The WD ShareSpace uses a lithium battery, type CR2032. There is danger of an explosion if the battery is incorrectly replaced. Replace only with the same or equivalent battery type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Table of Contents

1	Introduction	1
	Format and Configuration	1
	Specifications	1
2	Getting Started	2
	Kit Contents	2
	Accessories	2
	System Requirements	3
	Pre-installation	3
	Recording Your WD Product Information	4
	Registering Your WD Product	4
3	Features	5
	System View	5
	LED Indicators	6
	USB Backup Button	7
	Ports	7
	Reset Button	7
	Kensington Security Slot	7
4	Hardware Setup	8
	Connect the Network Storage System	8
5	System Setup & WD Discovery	9
	System Setup	9
	Setting up the Device	11
	Mapping a Network Drive	14
	Browse Network Shares	17
	Desktop Shortcut Creation	18
	Turning Identify LED On or Off	18

6	Creating Users	20
7	Creating Folder Shares	23
8	Network Storage Manager	25
	Network Storage Manager Features	26
	User Interface Overview	27
	Basic Mode	28
	Advanced Mode	33
9	MioNet Remote Access	80
	Remote Access Setup	80
10	Accessing Data via FTP	81
11	Scheduled Downloads	82
	Downloader Features	82
12	External USB Drive Sharing & Backup	87
	Sharing Data on a USB Hard Drive	87
	USB Auto Backup Feature	87
13	Replacing a Drive	90
	ESD precautions	90
14	Troubleshooting	94
15	Appendix	101
	Regulatory Compliance	101

Environmental Compliance (China)	102
Warranty Information	102
GNU General Public License (“GPL”)	103
WD Service and Support	104

Index	105
--------------------	------------

1

Introduction

Congratulations on your purchase of WD ShareSpace™, a high-speed network attached storage system with a space-saving footprint. This system is equipped with WD drives using WD GreenPower™ technology for efficient cooling and power saving. The multi-level RAID support and high-speed interfaces deliver high performance for small offices or home users and is ideal for backing up and sharing files over the internet. Its friendly web-based user interface allows you to easily access the system from anywhere you have internet access.

This user manual provides step-by-step installation instructions and other important information regarding your WD product. For the latest WD product information and news, visit our website at www.westerndigital.com.

Format and Configuration

WD ShareSpace is preformatted for maximum capacity as a RAID 5 volume (for four-drive systems) or a single large, spanned volume (for two-drive systems). For more information on how to set up RAID, see “Manage RAID” on page 57.

Specifications

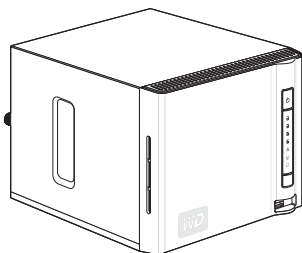
Ethernet	High performance (10/100/1000) Gigabit Ethernet connection
Internal hard drives	Up to four WD 3.5-inch SATA hard drives
External USB storage file systems supported	NTFS, FAT/FAT32
Supported protocols	HTTP, HTTPS, CIFS/SMB, NFS, FTP
I/O ports	- Three USB 2.0 ports (one front for file backup, two rear for USB device expansion) - Ethernet (RJ-45) port
Supported clients	- Windows® 2000/XP/2003 Server/Vista (latest service packs required)* - Mac OS® 10.4.11+, 10.5.2+ - Linux distributions: Suse (10+), Ubuntu (6+), Fedora (Core 5+)
Physical dimensions	- Width: 6.30 in (160.1 mm) - Height: 7.73 in (196.2 mm) - Length: 7.84 in (199.18mm) - Weight: 5.28 lb (2.4 kg)
Power consumption	- Input voltage: 100V to 240V AC - Input frequency: 50 to 60 Hz
Environmental	- Operating temperature: 5 to 35 °C (41 to 95 °F) - Non-operating temperature: -20 to 65°C (-4 to 149 °F)

* Windows 2003 Server not supported by MioNet® remote access software.

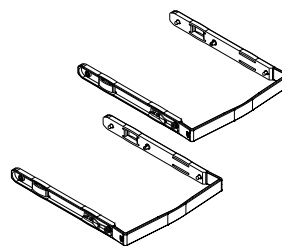
2

Getting Started

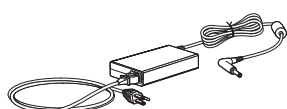
Kit Contents



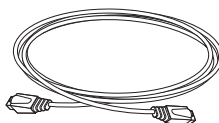
Network storage system
with four or two drives



Drive mounting rails
(only included with two-drive systems)



AC adapter
and power cords



Ethernet cable



Installation CD with
application software
and user manual



Quick Install Guide

Accessories

Visit shopwd.com (U.S. only) to view additional accessories like cables, power supplies, additional hard drives, and drive mounting rails for this product. Outside the U.S., visit support.wdc.com.

System Requirements

Note: For optimum performance, the following system and network requirements are recommended. Compatibility may vary depending on user's hardware configuration and operating system.



.....
Important: For highest performance and reliability, it is recommended that you install the latest updates and service pack (SP). For Macintosh, go to the **Apple** menu and select **Software Update**. For Windows, go to the **Start** menu and select **Windows Update**.

Client computer

- Web browser (Internet Explorer 6.0 SP1 and later on Windows platforms supported by this product, Safari 2.0 and later on Mac platforms supported by this product, Firefox 2.0 and later on supported Windows, Mac and Linux platforms)
- Ethernet connection (network adapter, router, switch, or hub port)
- Pentium III class, 500 MHz or newer
- Operating system
 - Windows 2000/XP/2003 Server/Vista (latest service packs required)
 - Mac OS X 10.4.11+ and 10.5.2+

Local network

- Router/switch (Gigabit required to maximize performance)

Wide Area Network

- Broadband internet connection required for remote access using MioNet

Pre-installation

Before unpacking and installing the system, select a suitable site for the system for maximum efficiency. Place the device in a site that is:

- Near a grounded power outlet
- Clean and dust free
- On a stable surface free from vibration
- Well-ventilated and away from sources of heat
- Secluded from electromagnetic fields from electrical devices such as air conditioners, radio, TV transmitters, etc.

Recording Your WD Product Information

In the following table, write the serial number and model number of your new WD product found on the label on the bottom of the device. Also, write the purchase date and other notes such as your operating system and version. This information is necessary for setup and technical support.

Serial Number:
Model Number:
Purchase Date:
System and Software Notes:

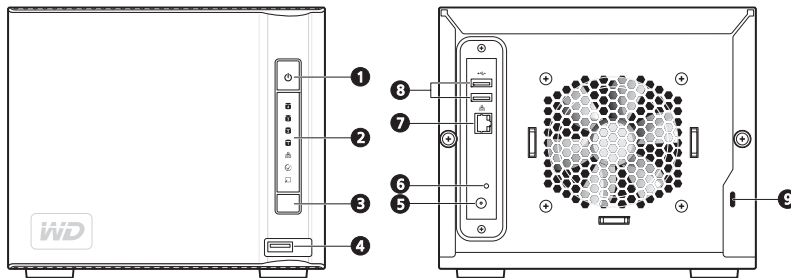
Registering Your WD Product

Your WD product includes 30 days of free technical support during the applicable warranty period for your product. The 30-day period commences on the date of your first telephone contact with WD technical support. Register online at register.wdc.com.

3

Features

System View



- | | | | |
|---|--------------------------|---|---------------------------|
| 1 | Power button | 5 | Power port |
| 2 | LED indicators | 6 | Reset button |
| 3 | USB backup button | 7 | Ethernet port |
| 4 | USB port 1 (Auto-backup) | 8 | USB ports 2 and 3 |
| | | 9 | Kensington® security slot |

Power Button



Important: The device powers on automatically upon initial connection to power, which may take up to three minutes. During this time, do not press the power button.

The power button turns the device on or off. To turn on the device, press the power button and hold down until the LED flashes once, then release. The LED remains off (up to 30 seconds) as the device powers up. Holding the button down for four seconds powers off the device.

LED Indicators

The LED (light-emitting diode) indicators on the device provide information about the status of the system, its hard drives, and network connection. The LEDs on the system indicate the following:

Indicator and icon	Color	State	Description
Power 	Green	Steady	System is powered up (connected to the power supply and turned on) and ready for use.
		Off	System is not powered on
		Flashing	- System is booting - System is restoring to factory default - System is configuring RAID on the hard drive(s) - System is configuring RAID 0, Span, or RAID 5 on a volume - User volume is not available
Hard drives 	Green	Random flashing	Hard drive is in use
		Steady	- Hard drive is ready for use - Hard drive is installed
	Amber	Steady	Hard drive error
	Green/ Amber	Flashing	System detects a foreign hard drive with pre-existing data
	Green/ Amber	Off	- Hard drive is not present - Hard drive is not properly installed
Ethernet (front) 	Green	On	Network link is detected
		Off	No network connection
		Flashing	Transmit or receive activity
System identification /error 	Blue	On	System identification is active
		Off	System identification is disabled
	Red	Flashing	Critical condition
USB backup  	Green	Steady	- A USB storage device is connected to the front USB port - RAID system is rebuilding - Restoring configuration settings - System initialize operation in progress
		Flashing	- One flash per second—system is formatting a USB hard drive - One flash per second (backup)—USB device to WD ShareSpace - Two flashes per second (backup)—WD ShareSpace to USB device
		Off	System initialize operation completed
Ethernet (rear) 	Orange	Flashing	- Network is connecting - Link activity
		Steady	Network is connected
	Green	Flashing	Network connection is active

USB Backup Button

The USB backup button allows you to back up data from a USB hard drive to the device or from the device to a USB hard drive. The USB backup feature only works on USB port 1. See “USB Auto Backup Feature” on page 92 for detailed instructions.

Ports

Component	Icon	Description
USB port 1		Connects to a USB hard drive. Note: This port has an auto-backup feature that makes it possible to automatically create backups of digital files from a USB hard drive to the device and vice-versa.
USB ports 2 and 3		Connects to a USB hard drive.
Ethernet port		Connects the device to a local network.
Reset button		Press to restore the admin user name and password for the device.
Power port		Connects the device to an AC adapter and the power outlet.

Reset Button

The reset button restores configuration settings such as the machine name, network mode/IP address, and admin password to default factory settings without erasing shared folders and volumes. For more information on how to reset the system, see “Resetting the system” on page 99.

Kensington Security Slot

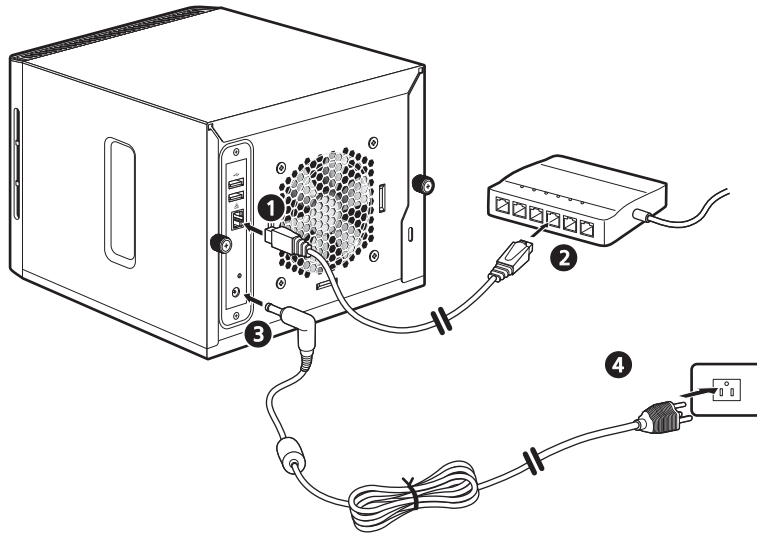
For drive security, the device is equipped with a security slot, which supports a standard Kensington security cable. For more information on the Kensington security slot and available products, visit www.kensington.com.

4

Hardware Setup

Connect the Network Storage System

Follow the steps below to connect the network storage system to a small home/office network.



1. Connect one end of the Ethernet cable into the Ethernet port located on the back of the device.
2. Connect the other end of the Ethernet cable directly into a router or network switch port.
3. Connect the end of the adapter into the DC power supply socket located on the back of the device.
4. Plug the AC adapter into a power outlet. The unit powers up automatically after approximately 30 seconds indicated by a steady green LED illuminated on the power button.



.....
Important: Wait for the network storage system to finish powering up (approximately three minutes) before configuring the device.

To power down the device, press and hold down the power button down for at least four seconds.

5

System Setup & WD Discovery

You must perform an initial setup of the network storage system after the device is powered up for the first time. This section contains system setup steps that you must follow for Windows 2000/XP/Vista (below) and Mac (page 10) to successfully set up the device and map a network drive.

This section also describes how to use WD Discovery™ to do the following (Windows only):

- Configure WD ShareSpace
- Map a network drive
- Browse network shares
- Create a desktop shortcut
- Turn on Identify LED

System Setup

Windows 2000/XP/Vista

Use the WD Discovery application on the software CD for easy network storage system setup, drive mapping, and browsing.

1. Turn on your computer and wait for the operating system to load.
2. Insert the software CD into the CD-ROM drive.

Note: If AutoPlay is disabled on your computer, you must install the utilities manually. Click **Start** and point to **Computer** (Windows Vista) or **My Computer** (Windows 2000/XP), then double-click Setup.exe in the root directory of the CD.

3. *Windows Vista:* Click **Run setup.exe**, then click **Allow**.
4. Click **Accept** in the Terms of Agreement screen.
5. If you have connected the device properly as shown in the Connect screen, click **Next**.
6. The Application Installer screen displays a list of options including software, documentation, and a registration link. All applications are selected by default. Deselect any applications you do not want to install, then click **Start**. Or, click **Cancel** to exit and no applications will be installed.

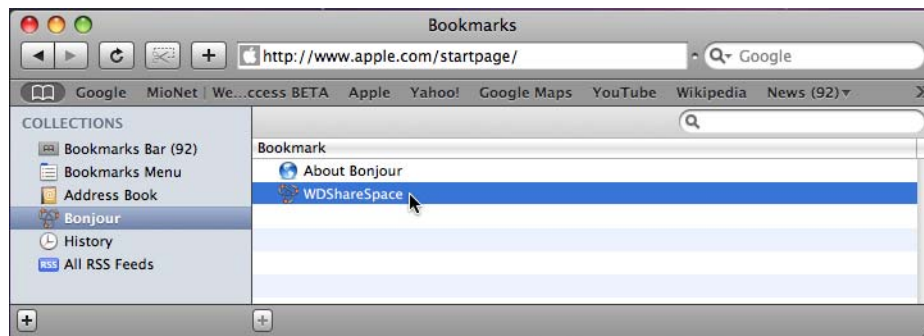
7. The WD Discovery screen appears. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Configure**.



8. The login page appears. Continue device setup by following the instructions for “Setting up the Device” on page 11.

Mac OS X

1. Turn on your computer and wait for the operating system to load.
2. Open the Safari web browser.
3. Click the Bookmarks link  in the upper left corner of the screen.
4. Click **Bonjour**, then click **WDShareSpace**.

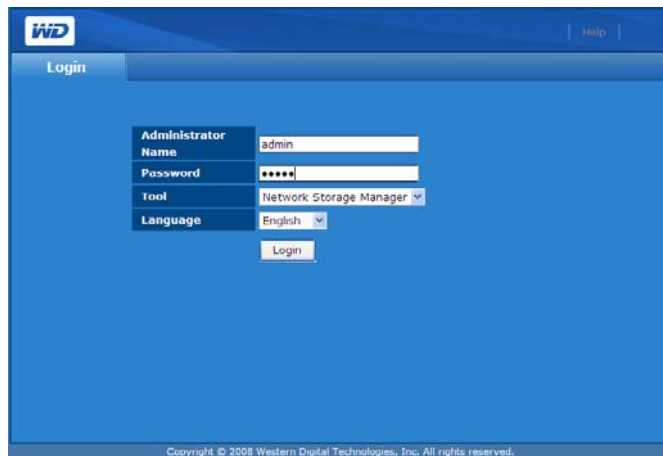


5. The login page appears. Continue device setup by following the instructions for “Setting up the Device” on page 11.

Setting up the Device

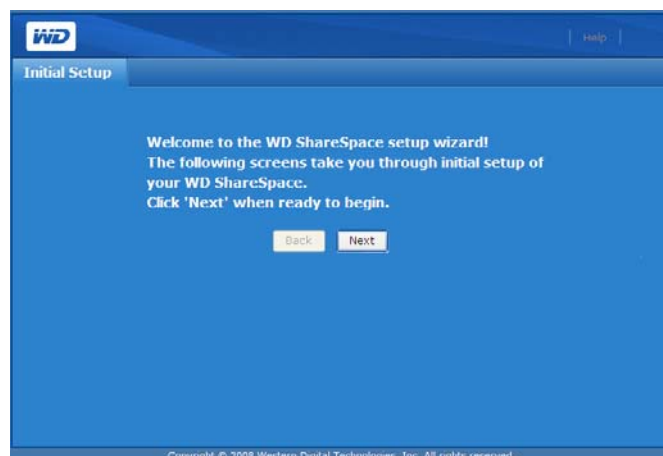
Follow the steps below to continue setting up the device for all operating systems.

1. Enter “admin” in both the **Administrator Name** and **Password** fields and click **Login**.



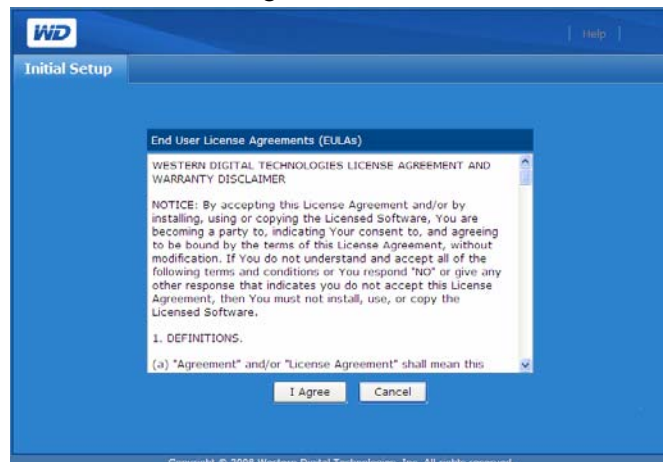
The screenshot shows the WD ShareSpace Login interface. It features a blue header with the WD logo and a 'Help' link. Below the header is a 'Login' tab. The main area contains a form with the following fields: 'Administrator Name' (with 'admin' entered), 'Password' (with masked characters), 'Tool' (set to 'Network Storage Manager'), and 'Language' (set to 'English'). A 'Login' button is at the bottom of the form. The footer contains the copyright notice: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

2. Click **Next**.



The screenshot shows the WD ShareSpace Initial Setup screen. It features a blue header with the WD logo and a 'Help' link. Below the header is an 'Initial Setup' tab. The main area contains a welcome message: 'Welcome to the WD ShareSpace setup wizard! The following screens take you through initial setup of your WD ShareSpace. Click 'Next' when ready to begin.' Below the message are 'Back' and 'Next' buttons. The footer contains the copyright notice: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

3. Read the license agreement, then click **I Agree**



The screenshot shows the WD ShareSpace End User License Agreement screen. It features a blue header with the WD logo and a 'Help' link. Below the header is an 'Initial Setup' tab. The main area contains a window titled 'End User License Agreements (EULAs)' with the text: 'WESTERN DIGITAL TECHNOLOGIES LICENSE AGREEMENT AND WARRANTY DISCLAIMER. NOTICE: By accepting this License Agreement and/or by installing, using or copying the Licensed Software, You are becoming a party to, indicating Your consent to, and agreeing to be bound by the terms of this License Agreement, without modification. If you do not understand and accept all of the following terms and conditions or You respond "NO" or give any other response that indicates you do not accept this License Agreement, then You must not install, use, or copy the Licensed Software. 1. DEFINITIONS. (a) "Agreement" and/or "License Agreement" shall mean this'. Below the text are 'I Agree' and 'Cancel' buttons. The footer contains the copyright notice: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

4. In the Initial Setup screen, do the following:

- (a) Enter a name in the **Device Name** field (up to 15 characters, including alphanumeric and dash '-').



.....

Note: The device name is used to identify the storage device connected to the network and appears in My Network Places. To connect more than one storage device to the same network, you must specify a unique device name for each storage device.



.....

Caution: When renaming WD ShareSpace, it forces all the network computers to remap their shared network resources. Change the device name only when necessary.

- (b) Enter a brief description of the device in the **Device Description** field. The maximum length of the description is 42 alphanumeric characters.
- (c) Select a time zone from the **Time Zone** list.
- (d) If necessary, adjust the date and time manually using the **Date & Time** lists.

Click **Next**.

WD Initial Setup

Device Name: WDShareSpace

Device Description: WD ShareSpace Network Storage System

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

Date & Time: Jun 20, 2008 12:01

Back Next

Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.

5. Enter a new admin password in the **New Admin Password** field. Retype the new password in the **Confirm Password** field. Click **Next**.

WD Initial Setup

New Admin Password: *****

Confirm Password: *****

Back Next

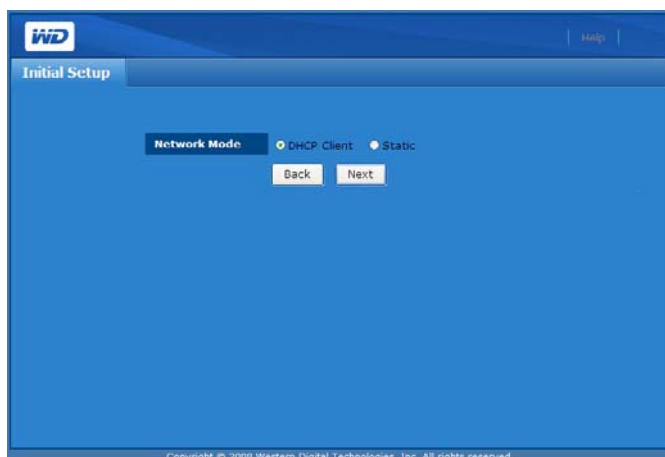
Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.



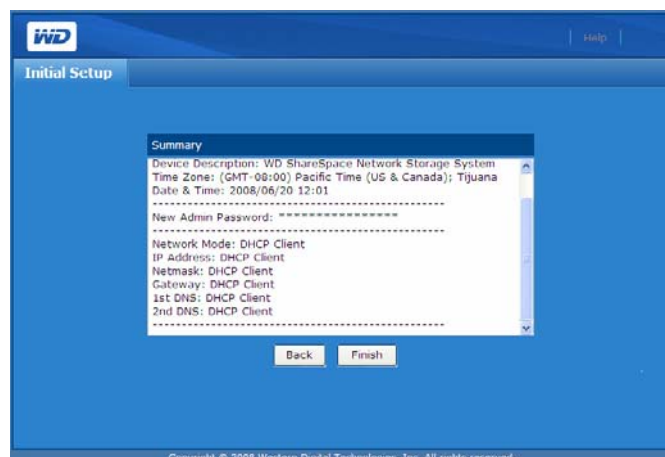
.....

Note: If you forget your admin password, you must reset the device to its default configuration using the reset button. See "Reset Button" on page 7 for instructions.

6. Accept the default DHCP (Dynamic Host Configuration Protocol) client settings. If you are not using DHCP, click **Static** and manually assign the IP address. Click **Next**.



7. The Summary screen appears. Click **Finish**.



To begin sharing and storing data on the network storage system, follow the instructions under “Mapping a Network Drive” on page 14. For more information on how to use the device’s graphical user interface, see “Network Storage Manager” on page 25.

Mapping a Network Drive

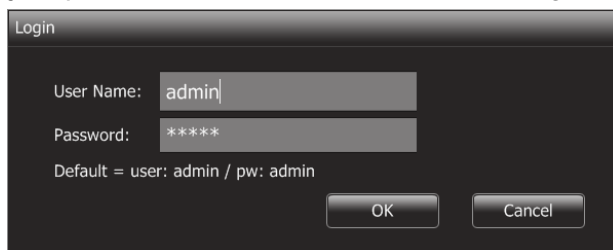
To access and store data on WD ShareSpace after setting up the device, you must first map a network drive to one or more of the default shares. This section contains network drive mapping steps that you must follow for Windows 2000/XP/Vista and Mac.

Windows 2000/XP/Vista

1. Ensure that the device is powered on and connected to the network.
2. If WD Discovery is not running, click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Map Network Drive** in the Things To Do list.



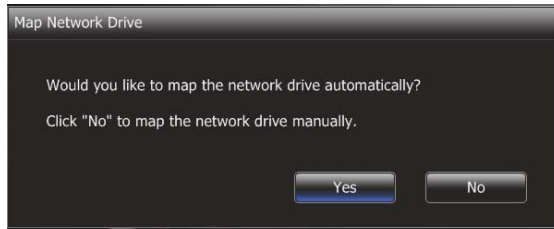
4. Enter the user name and password in the Login screen. Click **OK**. The account you provide should have administrator rights on the target remote device.



.....
Note: Enter the user name and password you created in step 5 of "Setting up the Device" on page 11.

5. After successful login, a message appears asking if you want to map the network drive automatically. If you wish to map a drive manually, skip to step 7.

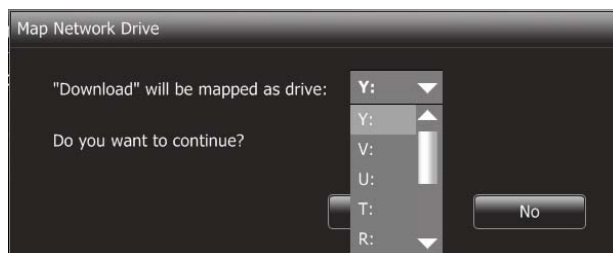
6. Click **Yes**. Skip to step 8 if you want to map the drive manually.



7. All share folders available on the device will be mapped as network drives automatically. Available drive letters are assigned backwards from Z. When the mapping completes, you will find your network drives on the page. Click **Back** to return to the main page.



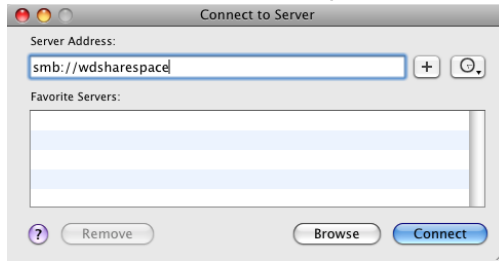
8. Manual drive mapping: Click **No**. All share folders on the device are listed onscreen. Select a folder name, then select a drive letter. Click **Yes** to complete drive letter assignment.



9. Click **Start** and point to **Computer** (Windows Vista) or **My Computer**. The network drives appear. You can now drag and drop files into the network drive folders using My Computer or Windows Explorer.

Mac OS X

1. In Finder, click **Go** and point to **Connect to Server**.
2. Enter “smb://wdsharespace” and click **Connect**.

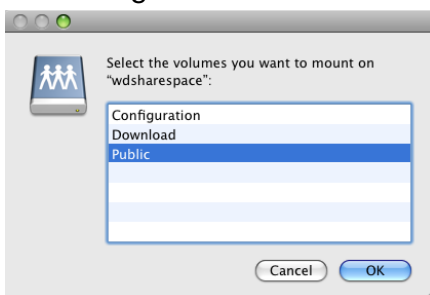


.....
Note: If you renamed the network storage system in step 4 of “Setting up the Device” on page 11, enter “smb://newdevicename.”

3. Click **Registered User** and enter the user name and password you set in step 5 of “Setting up the Device” on page 11. Then, click **Connect**.



4. Click the share you want to access, then click **OK**. The share appears as a shared drive icon on the desktop. For instructions on creating an alias to make the shared drive icon permanent on the desktop, go to support.wdc.com and search the knowledge base for answer ID 2541.



Note: Configuration is a read-only share containing only a Help file and the login page.

Browse Network Shares

To access data on a share using **WD Discovery**:

Use WD Discovery to easily browse network shares without having to manually enter drive paths.

1. Ensure that the device is powered on and connected to the network.
2. Click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Browse Network Shares** in the Things To Do list.



4. Enter the User Name and Password, then click OK. The account you provide should have administrator rights on the target remote device.
5. After successful login, the share folders on the device are listed. Click a network share path to view and access share files in Windows Explorer.



Desktop Shortcut Creation

WD Discovery can create a desktop shortcut that points to a networked WD ShareSpace. Follow these steps to create a desktop shortcut:

1. Ensure that the device is powered on and connected to the network.
2. Click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Create Desktop Shortcut** in the Things To Do list.



4. A dialog appears informing you that the desktop shortcut has been created successfully. Click **OK**.

Turning Identify LED On or Off

Users with multiple WD ShareSpace devices can use the Identify LED feature to find out which WD ShareSpace in the network is currently being accessed via WD Discovery. WD Discovery allows you to turn on or turn off Identify LED on a networked WD ShareSpace device.

To turn on the Identify LED on a networked WD ShareSpace:

1. Ensure that the device is powered on and connected to the network.
2. Click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Turn On Identify LED** in the Things To Do list.



4. The Identify LED on the target device is turned on. The LED icon appears to the left of the device name in WD Discovery.



To turn off the Identify LED on a remote networked WD ShareSpace device:

1. Ensure that the device is powered on and connected to the network.
2. Click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Turn Off Identify LED** in the Things To Do list.
4. The Identify LED on the target device is turned off. The LED icon to the left of the device name in WD Discovery is also turned off.

6

Creating Users

Creating users allows the administrator to share data on WD ShareSpace across the network by creating user accounts. The administrator can also edit and delete user accounts in the Users menu.



You must first access Network Storage Manager to set up a user account.

Accessing Network Storage Manager

Windows

1. Ensure that the device is powered on and connected to the network.
2. If WD Discovery is not running, click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Configure** in the Things To Do list.
4. The login page appears. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.

Mac

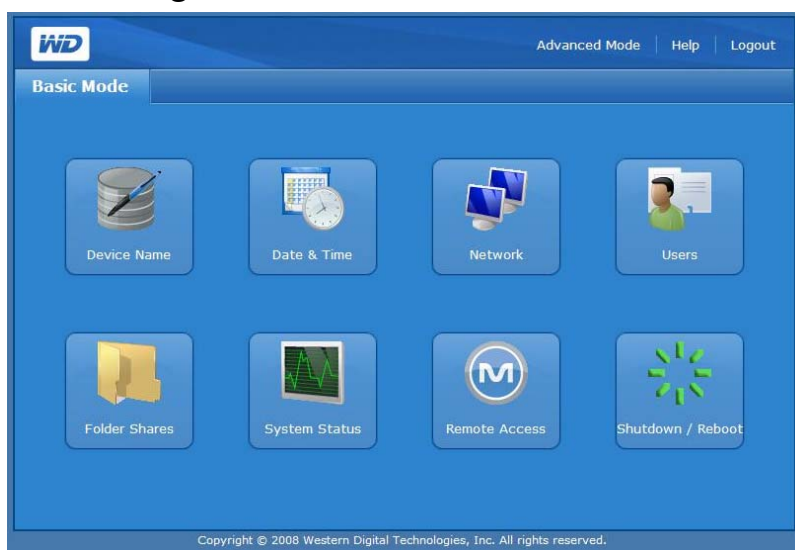
1. Turn on your computer and wait for the operating system to load.
2. Open the Safari web browser.
3. Click the Bookmarks link  in the upper left corner of the screen.
4. Click **Bonjour**, then click **WDShareSpace**.
5. The login page appears. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.

Linux

To launch the web-based user interface using a web browser:

1. Ensure that the device is powered on and connected to the network.
2. Open the Mozilla Firefox web browser, type in the device's IP address, then press **Enter**.

3. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.



To create a new user account:

1. Click **Users** in the basic mode home screen.
2. Click the Create icon .



.....
Note: The user name and password can contain up to 15 characters, including alphabetic, numeric, underscore, space, and most special characters.

3. Enter the user name in the **User Name** field.
4. Enter the user's full name in the **Full Name** field.
5. Enter the password in the **Password** field.
6. Re-enter the password in the **Confirm Password** field.
7. Create a private user share at the same time by clicking **Yes** next to **Create User Private Share**. The new user is granted full access to the private share. The private share name is the same as the user name.
8. Click **Submit**.

To modify a user account:

1. Select the user account to modify, then click the Modify icon .
2. Make the necessary changes, then click **Submit**.

To delete an existing user account:

1. Select the user account you want to delete, then click the Delete icon .
2. Click **OK**.

For more user configuration options using the Network Storage Manager advanced mode, see “Users” on page 70.

7

Creating Folder Shares

Shares are folders that can be used to organize and store files on your WD ShareSpace network storage system. Shares can be shared with everyone (public) or with selected users on your network (private).

The device comes preconfigured with two shares:

- **Public**—created automatically after initial setup
 - Shared Music - for storing music files you want to share with other users. When iTunes Service is enabled, you can browse the music files on iTunes. For more information on how to enable iTunes Service, see “To enable or disable the iTunes Server Service:” on page 69.
 - Shared Pictures - for storing image files you want to share with other users.
 - Shared Videos - for storing video files you want to share with other users.
- **Download**—for saving files using Downloader (see “Scheduled Downloads” on page 87).



.....
Important: Do not change or delete the default share names. Disruption of file sharing could result.

The administrator can create private shares accessible only by user name and password when setting up a user account (see “To create a new user account:” on page 21), or by setting permissions on an existing share (see “Folder Share Permissions” on page 73).

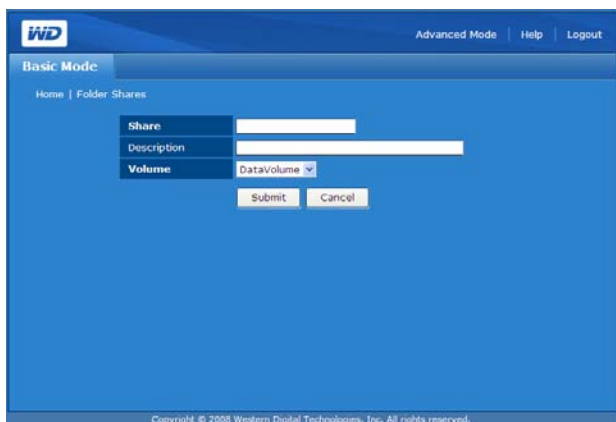
You must first access Network Storage Manager to create a share. See “Accessing Network Storage Manager” on page 20.

The Folder Shares menu provides access to a list of available shares.



To create a share:

1. Click **Folder Shares** in the Basic mode home screen.
2. Click the Create icon .
3. Enter a share name in the **Share** field. The share name can contain up to 32 characters, including alphabetic, numeric, or underscore characters.
4. Enter a brief description in the **Description** field.

5. Click **Submit**.

The screenshot shows the WD ShareSpace Basic Mode interface. At the top, there's a navigation bar with 'WD' logo, 'Advanced Mode', 'Help', and 'Logout'. Below this, the 'Basic Mode' tab is selected. The main content area is titled 'Folder Shares' and contains a form with three input fields: 'Share', 'Description', and 'Volume'. The 'Volume' field is a dropdown menu currently set to 'DataVolume'. Below the form are 'Submit' and 'Cancel' buttons. At the bottom of the page, a copyright notice reads: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

To delete existing shares:



.....

WARNING: Deleting a share erases all data on the share. All files and folders on the share will be lost.

1. Select the share to delete.
2. Click the Delete icon .
3. Click **OK**.

8

Network Storage Manager

Network Storage Manager is a powerful and convenient web-based remote management solution for WD ShareSpace.

Accessing Network Storage Manager

You can manage and configure your network storage system by entering the web-based user interface.

Windows

1. Ensure that the device is powered on and connected to the network.
2. If WD Discovery is not running, click **Start > Programs > WD Discovery**.
3. Click on **WDShareSpace** in the Network Drives Found list and point to and click **Configure** in the Things To Do list.
4. The login page appears. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.

Mac

1. Turn on your computer and wait for the operating system to load.
2. Open the Safari web browser.
3. Click the Bookmarks link  in the upper left corner of the screen.
4. Click **Bonjour**, then click **WDShareSpace**.
5. The login page appears. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.

Linux

To launch the web-based user interface using a web browser:

1. Ensure that the device is powered on and connected to the network.
2. Open the Mozilla Firefox web browser, type in the device's IP address, then press **Enter**.
3. Type in the administrator name and password. In the **Tool** list, click **Network Storage Manager**. In the **Language** list, click the language for your region. Click **Login**.

Network Storage Manager Features

The web-based management utility includes the following features:

- **LAN access**—the device supports local area network access of the web-based user interface, enabling management from anywhere in the network.
- **Secured access**—the device can be accessed and configured by the web-based, password protected user interface over SSL (Secure Socket Layer).
- **E-mail notification**—in the event of warnings or errors related to temperatures, fan speeds, hard drive, network, or USB connection, administrators are automatically alerted by e-mail.
- **Multiple management levels**—users can be assigned different rights. The device supports two levels: full access and read only.
- **Update via web**—firmware updates can be downloaded and installed on the device from a computer on the LAN.
- **Disk management**—the web-based user interface allows administrators to monitor internal hard drives and USB hard drives connected to the device.
- **SMART support**—includes SMART (Smart Monitoring Analysis and Reporting Technology) feature for detecting and reporting the status of the SATA hard drives.
- **USB storage support**—allows reliable data backup from a USB storage device to the device.
- **Support for volume sharing**—allows file sharing over the network.
- **Support for online RAID expansion**—allows RAID configuring of the hard drives.
- **Support for Windows, Mac, Linux, and UNIX systems**—allows users on different platforms to share files using CIFS (Common Internet File System), NFS (Network File System), or FTP (File Transfer Protocol) protocols.
- **iTunes streaming support**—allows users connected to the device to stream audio files to their computers.
- **Remote shutdown or reboot**—allows administrators to power off or reboot the device from any computer on the LAN.
- **System log**—an efficient instrument in analyzing and solving technical issues.
- **UPS-ready**—a UPS (uninterruptable power supply) device can be connected to one of the USB ports to provide secondary power in the event of a power failure. Go to support.wdc.com and search the knowledge base for answer ID 2559 for a list of compatible UPS devices.

Updating the Firmware

To keep your system up to date, go to **Network Storage Manager > Advanced Mode > System > Update** to upgrade the firmware. For more information, see “Update (Firmware)” on page 38.

User Interface Overview

The web-based user interface is designed to logically access and manage the features of the device. Upon logging in, the web user interface defaults to basic mode. Basic mode provides access to the most common device configuration options.

The advanced mode page includes six tabs and each tab is subdivided into several menu buttons providing advanced task management functions. The toolbar located on the upper right allows you to switch from the advanced mode and basic mode any time.

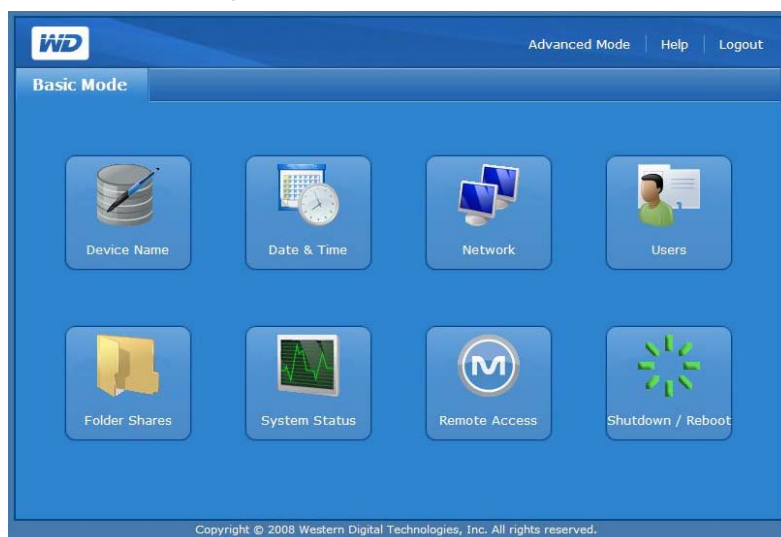
Toolbar

The toolbar located on the upper right of the Network Storage Manager user interface includes the following commands.

Function	Description
Advanced	Allows you to switch the user interface from basic to advanced mode.
Basic	Allows you to switch the user interface from advanced to basic mode.
Help	Displays an online version of this guide.
Logout	Closes the browser session and exits the utility.

Basic Mode

The basic mode provides access to the most common configuration options.



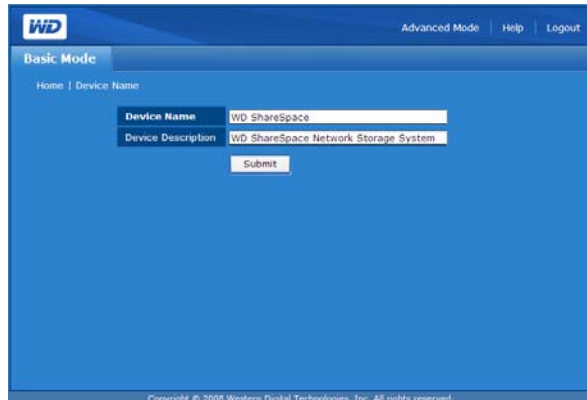
Click any of the menu buttons to display more configuration options. The table below describes the menu options available in basic mode.

Category	Description
Device Name	Enter a device name and description.
Date & Time	Configure the system date and time manually or set the NTP server to synchronize the device.
Network	Configure the network connection.
Users	Create and delete user accounts and change the user password.
Folder Shares	Access configuration details relating to how shares are made available through this storage device. This menu also displays a list of mounted volumes and their available shares. When a USB hard drive is connected to the device, the USB hard drive displays as USB share.
System Status	Displays general information about the storage device, such as device name, firmware version, current date/time, system uptime, IP address, volume usage, and volume RAID type.
Remote Access	Enables or disables the MioNet software. Computers running MioNet can remotely access and share files on the storage device over the wide area network (WAN). <i>Note:</i> Available only on computers running Windows.
Shutdown/ Reboot	Performs device shutdown or reboot from any computer on the local area network (LAN).

Device Name

Use this option to enter or change a device name and/or a description of the device. The device name is the name by which your WD ShareSpace is identified on the LAN.

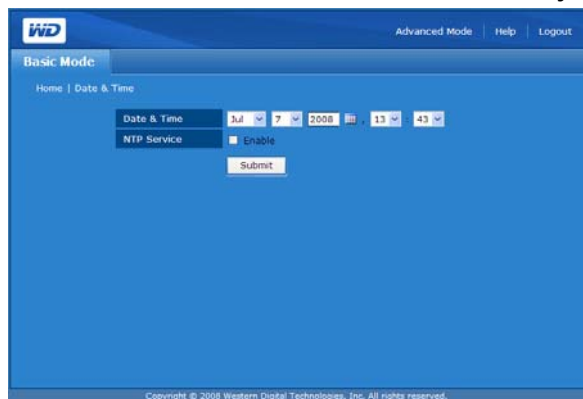
1. Click **Device Name** in basic mode home screen.
2. Enter or change the text in the **Device Name** and/or **Device Description** fields.
3. Click **Submit**.

The screenshot shows the 'Basic Mode' configuration page for 'Device Name'. At the top, there's a navigation bar with 'WD' logo, 'Advanced Mode', 'Help', and 'Logout'. Below it, a breadcrumb trail shows 'Home | Device Name'. The main content area has two text input fields: 'Device Name' with the value 'WD ShareSpace' and 'Device Description' with the value 'WD ShareSpace Network Storage System'. A 'Submit' button is located below these fields. The footer contains the copyright notice: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

Date & Time

The date and time is synchronized to the NTP (network time protocol) server by default. Use this option to configure the network storage system date and time manually or to reset the NTP server to synchronize to the device.

1. Click **Date & Time** in the Basic mode home screen.
2. Deselect **Enable** to set the time manually.

The screenshot shows the 'Basic Mode' configuration page for 'Date & Time'. At the top, there's a navigation bar with 'WD' logo, 'Advanced Mode', 'Help', and 'Logout'. Below it, a breadcrumb trail shows 'Home | Date & Time'. The main content area has a 'Date & Time' section with dropdown menus for month (Jul), day (7), year (2008), hour (13), and minute (43). Below this is an 'NTP Service' section with a radio button labeled 'Enable' which is currently selected. A 'Submit' button is located below the NTP Service section. The footer contains the copyright notice: 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

3. To synchronize the date and time automatically, click **Enable**.

4. Click **Submit**.

WD Sharespace Basic Mode Date & Time configuration page. The page includes a 'Date & Time' section with a date picker set to Jul 7, 2008, and a time picker set to 10:43. Below this is the 'NTP Service' section, which has a checked 'Enable' checkbox and a text field for the 'NTP Time Server' set to 'pool.ntp.org'. A 'Submit' button is located at the bottom of the form.

Network

The device's network mode is set to **DHCP Client** by default, which is appropriate for most environments. By selecting **Static IP**, you can set the network mode and change the IP address, netmask, gateway, and DNS (Domain Name Service) server IP address.

WD Sharespace Basic Mode Network configuration page. The page shows the 'Network Mode' dropdown menu set to 'DHCP Client'. Below it are fields for 'IP Address' (172.25.102.67), 'Netmask' (255.255.255.0), 'Default Gateway' (172.25.102.254), and 'DNS Servers' (172.25.9.25). A 'Submit' button is at the bottom.

To configure the network settings:

1. Click **Network** in the Basic mode home screen.
2. In the Network Mode drop-down menu, select a network mode. Selecting **DHCP Client** as a network mode causes the device to obtain an IP address automatically from the local DHCP server. Selecting **Static IP** as a network mode requires you to enter IP information such as IP address, Default Gateway, and DNS Servers.
3. Click **Submit**.

Users

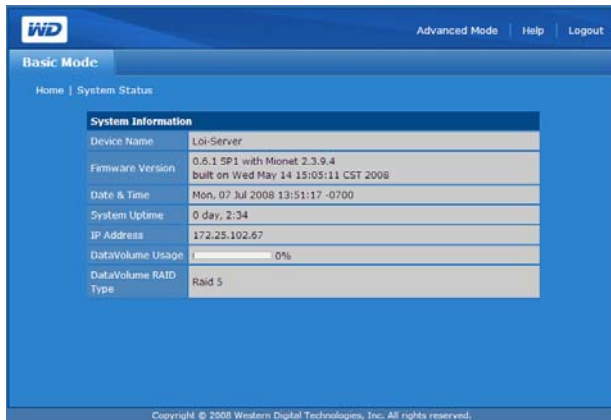
See "Creating Users" on page 20.

Folder Shares

See "Creating Folder Shares" on page 23.

System Status

The System Status option displays general information about the system, such as device name, firmware version, current date/time, system uptime, IP address, volume usage, and volume RAID type. Click System Status in the basic mode home screen to access system information

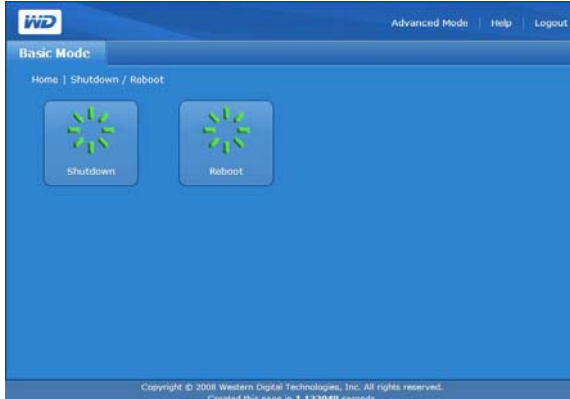


Remote Access

See “Remote Access Setup” on page 80.

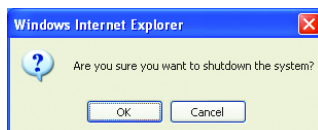
Shutdown/Reboot

The Shutdown/Reboot menu allows you to perform a system reboot or shutdown.



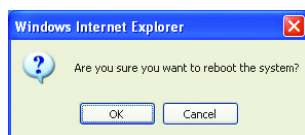
To perform network storage system shutdown:

1. Click **Shutdown/Reboot** in the basic mode home screen.
2. On the Shutdown/Reboot page, click **Shutdown**.
3. Click **OK**.



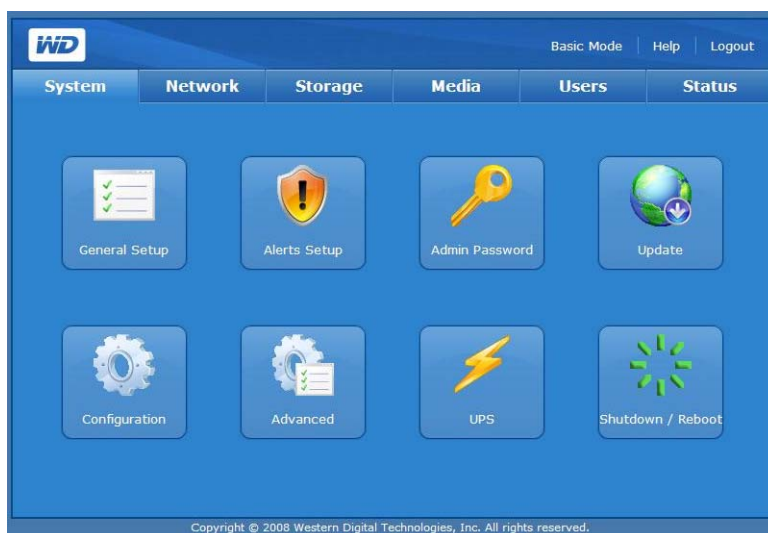
To perform network storage system reboot:

1. Click **Reboot** in the basic mode home screen.
2. On the Reboot page, click **Reboot**.
3. Click **OK**.



Advanced Mode

Advanced mode provides access to additional options not available in the basic mode. When in basic mode, click **Advanced Mode** on the toolbar to view Network Storage Manager in advanced mode.

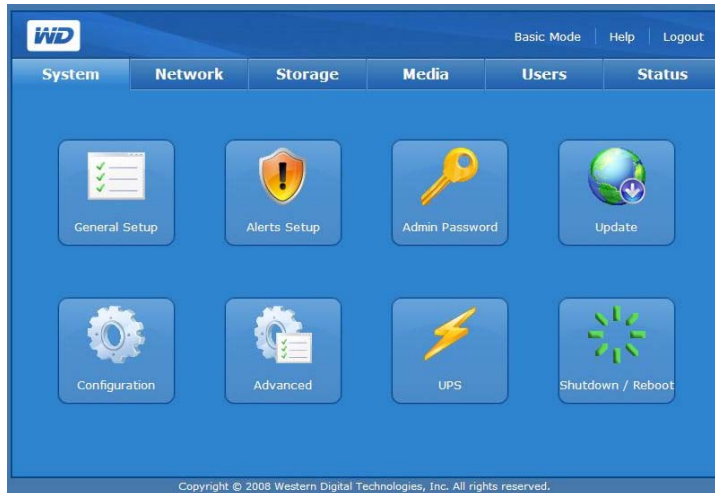


The advanced mode page include six tabs, each subdivided into several menu buttons providing more management options for maximum flexibility and security of the device. The table below describes the tab options available in advanced mode.

Tab	Description
System	The System tab allows you to configure the general system settings, set e-mail or window alerts, change the administrator password, perform firmware upgrades, perform system configuration file backups, restore system to factory defaults, activate the system identification LED, generate an SSL certificate, enable power saving, and perform device shutdown or reboot. For more details, see “System” on page 34.
Network	The Network tab has access to all network configuration options, such as setting DHCP / Static, changing the IP address, netmask, gateway, DNS server IP address, configure jumbo frame size feature, and configuring membership in a domain or workgroup. For more details “Network” on page 47.
Storage	The Storage tab provides a list of all supported drives it locates on the system. It also allows you to configure the RAID capability of the hard drives, manage file share preferences, set the backup destination folder, set disk quotas, and set a share folder for users. For more details, see “Storage” on page 52.
Media	The Media tab allows you to enable or disable the streaming option in iTunes. For more details, see “Media” on page 68.
Users	The Users tab is where to add, modify and delete users and groups, change all user and group permissions (read/write, read only, no access) to shares/folders and USB storage devices. For more details, see “Users” on page 70.
Status	The Status tab displays general information about the system such as device name, firmware version, current date/time, machine up-time, memory and swap activity, and load averages. This tab also allows viewing of logs from the system, Common Internet File System (CIFS), or File Transfer Protocol (FTP). For more details, “Status” on page 76.

System

The System tab allows you to set the system date and time, set up alarm notification, change the admin password, perform software or firmware upgrades, create a backup copy of the system files, restore system to factory defaults, enable the system identification LED, generate and set up a SSL certificate, configure the UPS (Uninterruptible Power Supply), or perform system reboot or shutdown.



The System tab provides access to the following configuration options:

- General Setup
- Alerts Setup
- Admin Password
- Update
- Configuration
- Advanced
- UPS
- Shutdown/Reboot

General Setup

The General Setup submenu allows you to perform basic configuration of device. Here, you can provide a name and brief description for the device, select a compatible web access protocol, and set the time zone. You can set the date and time manually or enable automatic time synchronization via NTP (Network Time Protocol) Service. You can also manually specify the IP address of the NTP servers to which you want to synchronize.

The screenshot displays the 'General Setup' page of the WD ShareSpace Network Storage System. The page has a blue header with the WD logo and navigation links: Basic Mode, Help, and Logout. Below the header is a tabbed menu with System, Network, Storage, Media, Users, and Status. The 'System' tab is active, showing the 'General Setup' page. The form contains the following fields:

- Device Name:** WDShareSpace
- Device Description:** WD ShareSpace Network Storage System
- Web Access Protocol:** HTTP (selected), HTTPS
- Time Zone:** (GMT-08:00) Pacific Time (US & Canada): Tijuana
- Date & Time:** May 18 2008 11:23:30 AM
- NTP Service:** ☒ Enable
- NTP Time Server:** pool.ntp.org

A 'Submit' button is located at the bottom of the form. The footer of the page reads: Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.

To configure system general setup settings:

1. Assign a device name for this storage device in the Device Name field. The device name can contain up to 15 characters, including alphabetic, numeric, space, and most special characters.
2. Enter the brief description for this storage device in the Device Name Description field. The maximum length of the description must not be more than 256 alphanumeric characters.
3. In web access protocol, select either of the following web access protocols:
 - **Hypertext Transfer Protocol (HTTP)** is a communications protocol for the transfer of information on the intranet and the World Wide Web.
 - **Hypertext Transfer Protocol over Secure Socket Layer** or **HTTPS** is a URL scheme used to indicate a secure HTTP connection. It is syntactically identical to the http:// scheme normally used for accessing resources using HTTP. HTTPS provides a more secure means of configuring your device, but may affect the responsiveness of the user interface.
4. To set the date and time manually, deselect **Enable** next to NTP Service.
5. Select a time zone from the **Time Zone** list.
6. Adjust the date and time manually in the **Date & Time** lists.
7. Click **Submit**.

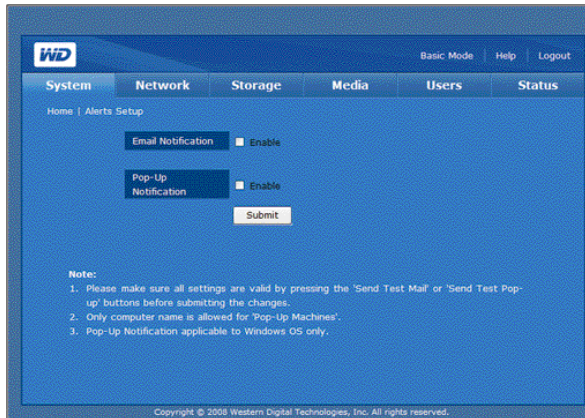
Alerts Setup

Using the Alerts Setup submenu, you can configure e-mails or popup messages that provide alerts for system conditions, fan operability, over temperature; hard drive, volume, network, and USB status; and user and group events. These alerts help the system administrator(s) manage and detect events or errors.



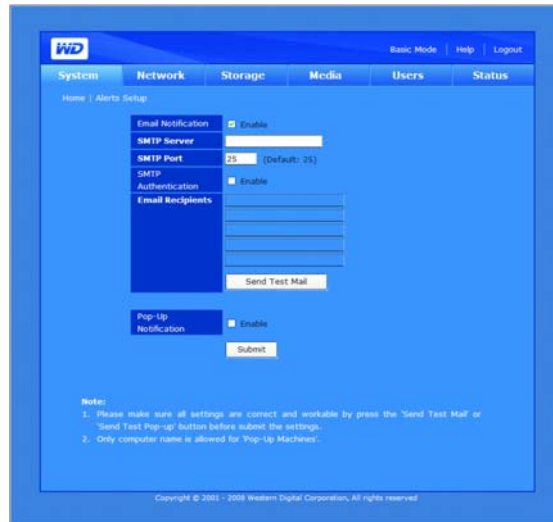
.....

Note: E-mail alerts may not work with some ISPs using strong spam filtering. For further information, go to support.wdc.com and search the knowledge base for answer ID 2570.



To set up automatic e-mail notifications:

1. On the Alerts Setup page, click **Enable** next to Email Notification.
2. Enter the name of the SMTP server or an IP address to be used for sending e-mail in the SMTP Server field (check with your ISP provider for the SMTP server name).
3. Enter the port number to be used when connected for SMTP sending in the SMTP Port field.
4. Click **Enable** next to SMTP Authentication if required, then enter the user name and password.
5. Enter the e-mail address to which to send an e-mail message when an event occurs in the Email Recipients field. Up to five e-mail addresses can be added at a time.
6. Click **Send Test Mail** to send a test alert and confirm your settings are correct.

7. Click **Submit**.**To configure alerts to send pop-up messages when an event occurs:**

.....

Note: Pop-up notification only works with Windows.

For a list of events, see “System Events” on page 103.

1. On the Alerts Setup page, click **Enable** next to Pop-Up Notification.
2. Enter the name of the computer in the **Pop-Up Machines** field. When an event occurs, a pop-up message will appear on the computer. Up to five computer names can be added to the alert list.



.....

Note: To find the name of your computer, click **Start** and right-click on **Computer** or **My Computer**, then click **Properties**.

3. Click **Send Test Pop-up** to send a test alert and confirm that the settings are correct.



.....

Note: Make sure the Messenger Service is activated on the computers to which you want to send the pop-up message when an event occurs. To enable Messenger Service, go to **Start > Control Panel > Administrative Tools > Services > Messenger**. You can test the Messenger Service by clicking **Send Test Pop-up**. Make sure printer and file sharing is selected if the Windows Firewall is enabled in Windows XP.

4. Click **Submit**.

Admin Password

The Admin Password menu allows you to change the administrator's password.

To change the administrator's password:

1. In the **Old Password** field, enter the old password.
2. In the **New Password** field, enter the new password. The maximum length of the password must not be more than 16 alphanumeric characters. The password is case sensitive and should be entered exactly in the same way each time.
3. In the **Confirm Password** field, re-enter the new password.
4. Click **Submit**.

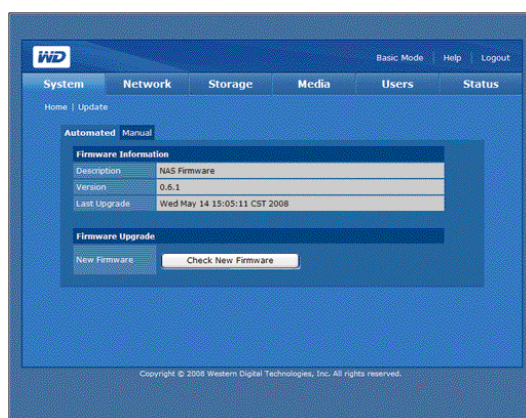
Update (Firmware)

The Update menu provides information about the current firmware version and allows you to perform a firmware update either automatically or manually.

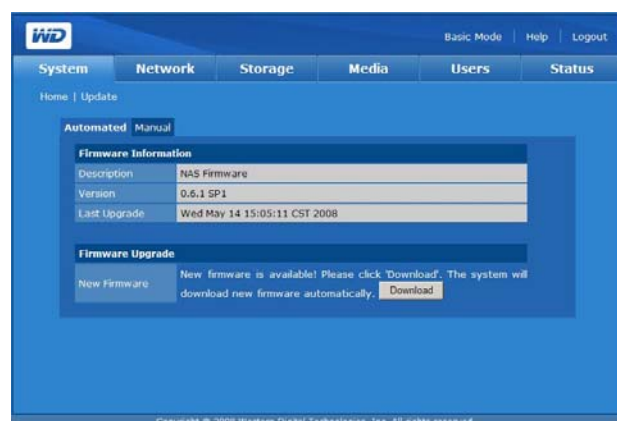
Automated

The Automated tab provides information about the current firmware version and connects to the WD website for automatic downloading of the latest firmware.

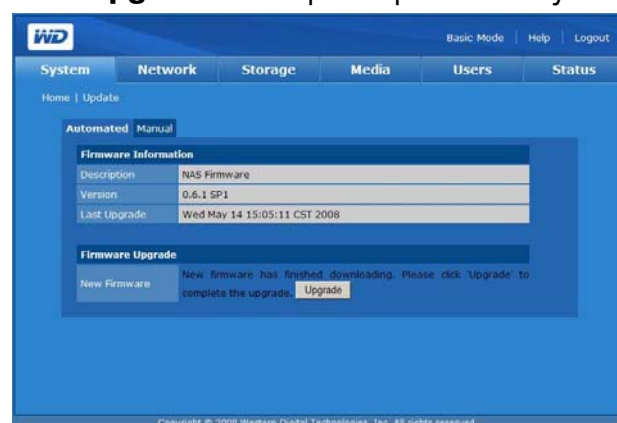
1. Click **Check New Firmware**.



2. Click **Download** if new firmware is available.



3. Click **Upgrade**. The update process may take a few minutes to complete.



After your firmware has been updated, the device will reboot. The user interface redirects to the System Information page after the update has completed.

Manual

The Manual tab allows you to install the firmware manually.

1. Download the latest firmware file from *support.wdc.com*.
2. Enter the path to the firmware file or click **Browse** to locate the file (e.g., wdg4nc40000-01.02.03.img).



.....

Important: Do not rename the firmware file.

3. Click **Submit** to transfer the firmware file from the computer to the network storage system. The update process may take a few minutes to complete.



.....

Warning! Do not interrupt a firmware upgrade in progress, doing so may cause the device to malfunction or render it unable to boot.

After your firmware has been updated, the device will reboot. The web user interface redirects to the System Information page after the update is completed.

The screenshot shows the WD Sharespace web user interface. At the top, there's a navigation bar with 'System', 'Network', 'Storage', 'Media', 'Users', and 'Status'. Below this, there's a 'Home | Update' link. The main content area is titled 'Automated Manual' and contains a 'Firmware Information' table with fields for Description (NAS Firmware), Version (0.6.1), and Last Upgrade (Wed May 14 15:05:11 CST 2008). Below this is a 'Firmware Upgrade' section with a 'New Firmware' input field, a 'Browse...' button, and a 'Submit' button. At the bottom, there's a 'Warning:' section with three bullet points: 1. Downgrading device firmware to a previous version is not allowed. 2. Firmware upgrade process only takes a few minutes to complete. Please DO NOT interrupt the process during upgrade! For example, do not click your browser's 'back' button, close the browser, turn off the power, etc. Any interruption may cause ShareSpace to malfunction. 3. Do not change the file name of the firmware image if you want to upgrade manually. The footer of the page reads 'Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.'

Configuration

The Configuration menu allows you to save or restore system configuration settings or revert system to its factory default settings.

To back up the current system configuration settings:

1. On the Configuration Management page, click **Save current configuration**.



2. Click **Save**.
3. Specify a file name and location for saving the file.
4. Click **Save**.

To restore configuration settings:

1. On the Configuration Management page, click **Browse**.
2. Select the previously saved system configuration file.
3. Click **Open**.
4. Click **General Restore** or **Full Restore**. Selecting General Restore will restore all features to previously saved settings (data volume and shares settings excepted). All current system configurations will be lost. Full Restore restores all features, including the data volume and shares, to previously saved settings. All current system configurations and user data is lost when using Full Restore.
5. Click **OK**.

To restore the device to factory defaults:

Performing a factory default reset will erase all settings in the network storage system. System configuration will reset the device to default factory settings. All information and data will be lost. The LAN settings (including port settings) are not changed. After the reset, the administrator login/password will be changed to "admin/admin."



.....

Important: Save the current configuration prior to restoring the factory default settings.

1. On the Configuration Management page, click **Factory Default Restore**.
2. Click **OK**.

During the system restore process, the system will turn off power LED and blink backup LED. Wait until the system restore process is completed.



.....

Note: You cannot access the configuration web pages if you forget the administrator password, IP address setting, or device name. Use the reset button to restore these settings (including IP setting, device name and administrator password) to factory default configuration. To use this function, press and hold the reset button on the back of the device (next to power interface) for at least 10 seconds. The system reboots automatically and you can then use the default settings to access the device.

Advanced

Configure the device's identification LED, and configure the system for a secure connection by generating a key and an SSL certificate automatically or manually using the Advanced menu. System Identification identifies the location of the device. If you have multiple devices installed, you can use this function to turn on the identification LED and know which device you are configuring.

If the HDD Standby function is enabled, the hard drives go into standby mode to save power after a fixed period of no activity. This period varies from 125 seconds to 375 seconds.

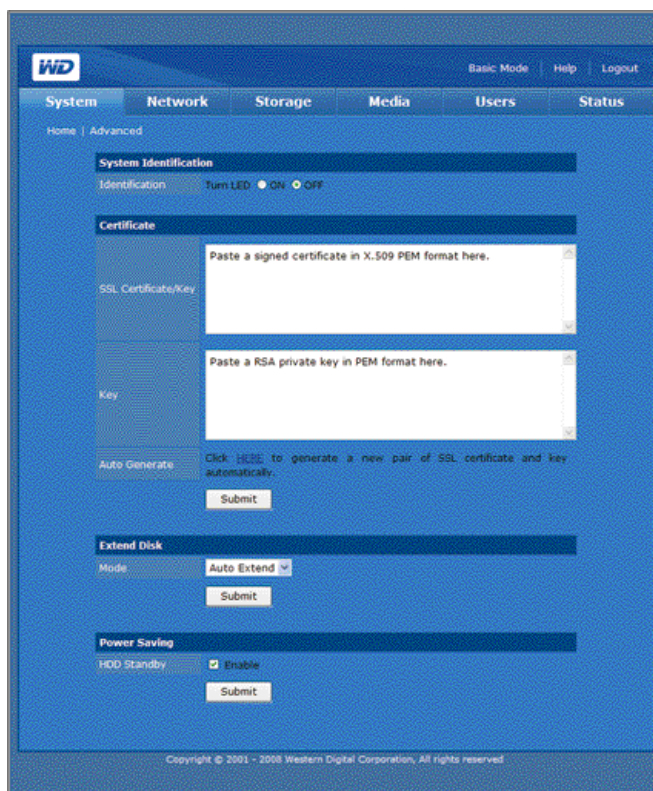


.....

Note: The fan will continue to operate even when the hard drive(s) spin down in standby mode.

To turn on the system identification LED:

1. Click **ON** under System Identification.
2. Click **Submit**.



The screenshot shows the WD Network Storage Manager web interface. The top navigation bar includes the WD logo, 'Basic Mode', 'Help', and 'Logout'. Below this is a menu with 'System', 'Network', 'Storage', 'Media', 'Users', and 'Status'. The 'System' tab is selected, and the 'Home' link is highlighted. The main content area is titled 'System Identification' and contains the following sections:

- System Identification:** A section with a 'Turn LED' toggle set to 'ON' (radio button selected) and 'OFF' (radio button unselected).
- Certificate:** A section with two text input fields: 'SSL Certificate/Key' and 'Key'. The 'SSL Certificate/Key' field contains the text 'Paste a signed certificate in X.509 PEM format here.' and the 'Key' field contains 'Paste a RSA private key in PEM format here.' Below these fields is an 'Auto Generate' button and a link that says 'Click HERE to generate a new pair of SSL certificate and key automatically.' A 'Submit' button is located at the bottom of this section.
- Extend Disk:** A section with a 'Mode' dropdown menu set to 'Auto Extend' and a 'Submit' button.
- Power Saving:** A section with an 'HDD Standby' checkbox checked and labeled 'Enable', and a 'Submit' button.

At the bottom of the page, there is a copyright notice: 'Copyright © 2001 - 2008 Western Digital Corporation. All rights reserved.'

To turn on system identification LED:

1. Click **On** to enable the system identification LED.
2. Click **Submit**.

The system identification LED  on the front panel lights blue.

To generate an SSL certificate and key pair automatically:

1. On the Advanced Setup page, click on the highlighted word [HERE](#). The SSL Certificate/Key Generation dialog appears.

2. Enter the identification information you want to include in the SSL certificate/key pair, then click **Submit**.

To generate a SSL certificate and key pair manually:

1. Generate a RSA private key.
2. Generate a RSA private key by typing the following commands on a Linux system (e.g. Redhat or Fedora).

```
/usr/bin/openssl genrsa 1024 > server.key
```

```
/bin/cat server.key
```

3. Copy and paste to the **Key** field of SSL certificate/key on the Advanced Setup page.

4. Create a self-signed certificate by typing the following commands:

```
/usr/bin/openssl req -new -key server.key -x509 -out server.crt
```

```
/bin/cat server.crt
```

5. Copy and paste to the **Certificate** field of SSL certificate/key on the Advanced Setup page.

To set up extend span mode:

The Extend Span option allows you to manually extend disk volume or have the system automatically extend disk volume when you install a new hard drive.



.....

Note: The system will perform a file system check before performing the extend disk operation. This may take a considerable amount of time depending on the size of the volume and data on that volume.

1. Click **Auto Extend** or **Manual** in the **Mode** list in Extend Disk.



.....

Note: The Extend Disk feature is available when the drives are configured as Span or when the system has only one hard drive.

2. Click **Submit**.

To enable HDD standby:

1. Click **Enable** in HDD Standby.
2. Click **Submit**.

UPS

A UPS (uninterruptable power supply) device can be connected to one of the USB ports to provide secondary power in the event of a power failure. You must connect a UPS device to the network storage system before setting up the UPS service.

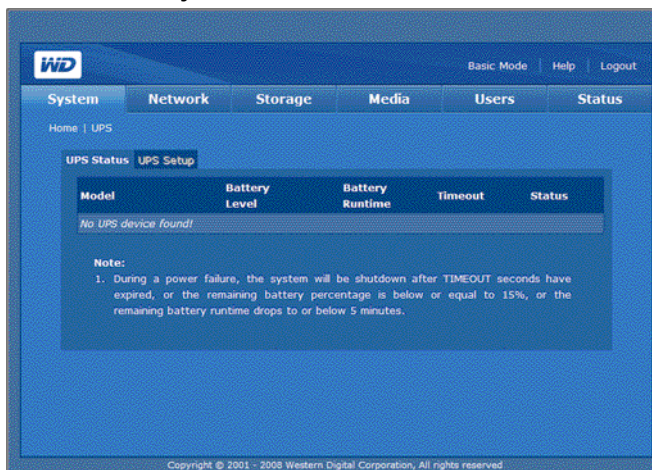


.....

Note: Go to support.wdc.com and search the knowledge base for answer ID 2559 for a list of compatible UPS devices.

UPS Status

The UPS Status tab provides information about the connected UPS device, including model, battery level and runtime, timeout, and status.



UPS Setup

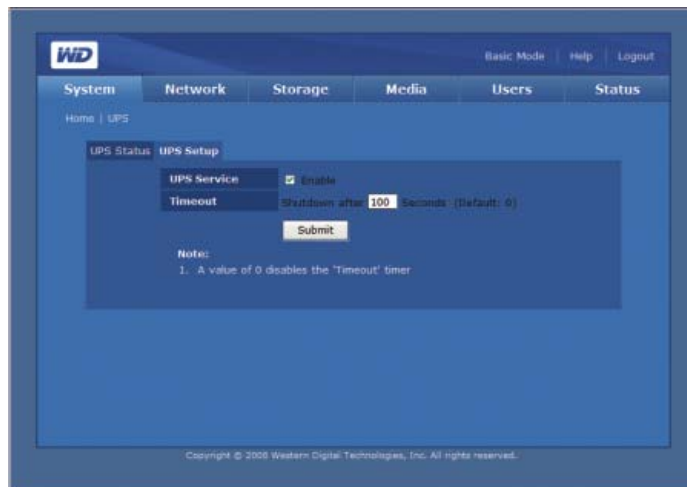
The UPS Setup tab allows you to modify UPS settings.

To enable the UPS service:

1. Click the **UPS Setup** tab.
2. Click **Enable** in UPS service.
3. Enter the timeout value.
4. Click **Submit**.

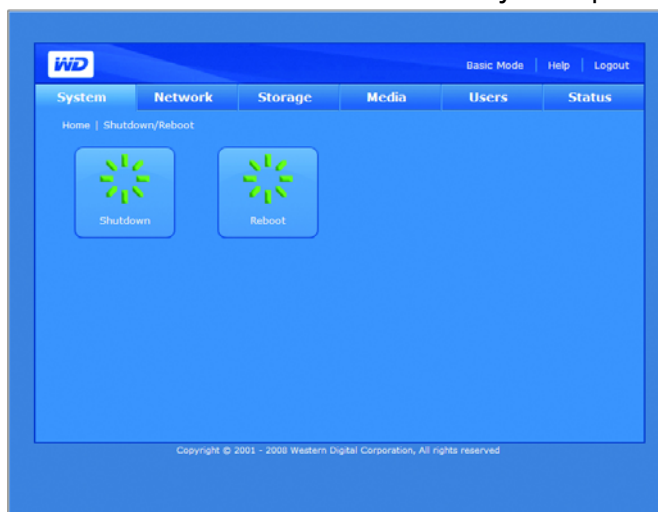


Note: During a power failure, the system will shut down after TIMEOUT seconds have expired, or the remaining battery percentage is below or equal to 15%, or the remaining battery runtime drops to or below 5 minutes. A value of '0' disables the 'Timeout' timer



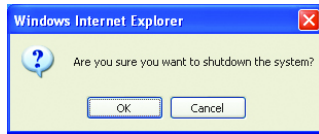
Shutdown/Reboot

The Shutdown/Reboot menu allows you to perform system reboot or shutdown.

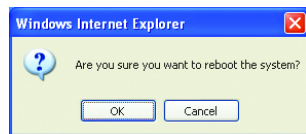
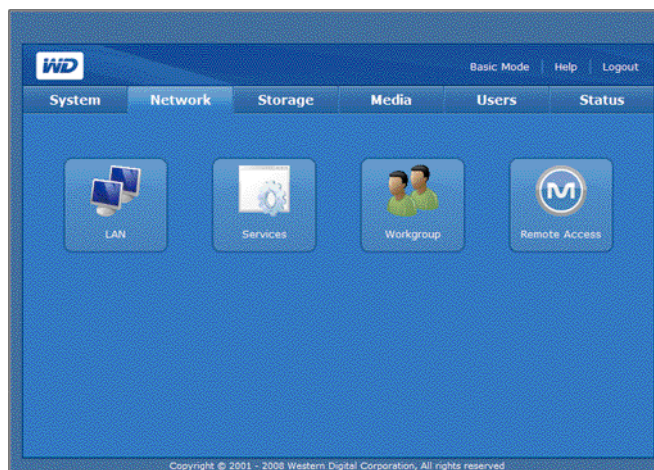


To perform network storage system shutdown:

1. Click **Shutdown/Reboot** in the **System** tab home screen.
2. On the Shutdown/Reboot page, click **Shutdown**.
3. Click **OK**.

**To perform network storage system reboot:**

1. Click **Shutdown/Reboot** in the **System** tab home screen.
2. On the Shutdown/Reboot page, click **Reboot**.
3. Click **OK**.

**Network**

The Network tab provides access to the following configuration options:

- LAN
- Services
- Workgroup
- Remote Access

LAN

The LAN submenu allows access to all network configuration options including setting the connection method, changing the IP address, netmask, gateway, and DNS (Domain Name Service) server IP address, and enabling the jumbo frame feature.

The screenshot shows the WD Network configuration page. At the top, there are tabs for System, Network, Storage, Media, Users, and Status. The 'Network' tab is active. Below the tabs, there's a 'Home | LAN' link. The main configuration area has a 'Network Mode' dropdown menu set to 'DHCP Client'. Below this are input fields for 'IP Address' (10.34.45.45), 'Netmask' (255.255.252.0), 'Default Gateway' (10.34.44.1), and 'DNS Servers' (10.34.1.220, 10.34.1.250). A 'Submit' button is located at the bottom of the form. At the very bottom of the page, there is a copyright notice: 'Copyright © 2001 - 2008 Western Digital Corporation. All rights reserved.'

To configure the network settings:



.....

Note: If connected to a home network, contact the Internet Service Provider (ISP) to obtain the static IP address.

1. In the Network Mode drop-down menu, select a network mode. Selecting DHCP Client as a network mode will cause this storage device to obtain an IP address automatically from the local DHCP server. Selecting Static IP as a network mode requires you to assign IP information such as IP address, Default Gateway, and DNS Servers.
2. If your network link speed is 1000 Mbps in the MTU Size menu, enter the MTU (Maximum Transmission Unit) value for the jumbo frame. The default MTU setting for Jumbo Frames is 1500 bytes. The network card on the client computer must support jumbo frame.



.....

Note: For the MTU size larger than '1500', the client machine and the network switch must also support the same MTU size. The common MTU size for jumbo frame is '9004'. The rule for calculating valid MTU is $(MTU\ size - 1500) \bmod 8 = 0$ ('xxx mod 8' means the value 'xxx' can be divided by 8).

The range of valid IP addresses for each class:

- Class A: 1.0.0.1 to 126.255.255.254
- Class B: 128.1.0.1 to 191.255.255.254
- Class C: 192.0.1.1 to 223.255.254.254

3. Click **Submit**.

Services

The **Services** menu allows you to set protocols for sharing files and folders on the device.

WD ShareSpace Network Services configuration page. The page shows settings for UPnP, Web Access, FTP, and NFS. The 'Service' checkbox for each is checked. The 'Web Access' section shows HTTP Port (Default: 80) and HTTPS Port (Default: 443). The 'FTP' section shows 'Enable Anonymous' (Yes) and Port (Default: 21). The 'NFS' section shows 'Service' (Enable). A 'Submit' button is at the bottom. A 'Note' section at the bottom provides additional information.

Note:

1. Enable the UPnP NAT traversal may delay the system response time during web/ftp port changing.
2. No access allowed for NFS if the IP allowed list is empty.
3. Mount point for NFS share is /nfs/SHARENAME; Ex. /nfs/Public.

Copyright © 2008 Western Digital Technologies, Inc. All rights reserved.

- **Universal Plug and Play (UPnP)** is a set of computer network protocols that simplifies the implementation of networks in the home by allowing devices to connect seamlessly.
- **Hypertext Transfer Protocol (HTTP)** is a communications protocol for the transfer of information on the intranet and the World Wide Web.
- **Hypertext Transfer Protocol over Secure Socket Layer or HTTPS** is a URL scheme used to indicate a secure HTTP connection. It is syntactically identical to the http:// scheme normally used for accessing resources using HTTP.
- **File Transfer Protocol (FTP)** is a network protocol used to transfer data from one computer to another through a network, such as the internet, using an FTP client program. FTP is a popular choice for exchanging files independent of the operating systems involved.
- **Network File System (NFS)** is a network file system protocol used by Linux and Unix computer systems.

To enable UPnP NAT Traversal for Web Access & FTP:

1. Click **Enable** in UPnP for Web Access & FTP.
2. Click **Submit**.

The UPnP NAT Traversal combines with the UPnP feature and NAT feature. Universal Plug and Play (UPnP) is an architecture for pervasive peer-to-peer network connectivity of PCs and intelligent devices. The Network Address Translation (NAT) is used in gateway devices that form the boundary between the public Internet and the private LAN. As IP packets from the private LAN traverse the gateway, NAT translates a private IP address and port number to a public IP address and port number, tracking those translations to keep individual sessions intact.

To enable a network service:

1. Click **Enable** in network service.
2. If you have selected **FTP** as your network service, click **Yes** to enable or click **No** to disable anonymous login, then click **Submit**.
3. If you have selected **NFS** as your network service, the IP allowed field appears. You will be prompted to enter the IP filters that are allowed for NFS service. Click **Add** to add a new IP filter, then click **Submit**.
4. You can specify particular port numbers for **HTTP**, **HTTPS**, and **FTP** services respectively. Instead of selecting the **Default** radio button, you can specify the port number between 8000 and 10000 for each service.



.....

Note: In IP Allowed field of NFS service, '*' means allow all IP addresses. If you intend to allow specified IP addresses or range, please modify '*' in IP Allowed field.
Mount point for NFS share is /nfs/SHARENAME, Ex. /nfs/Public

Workgroup

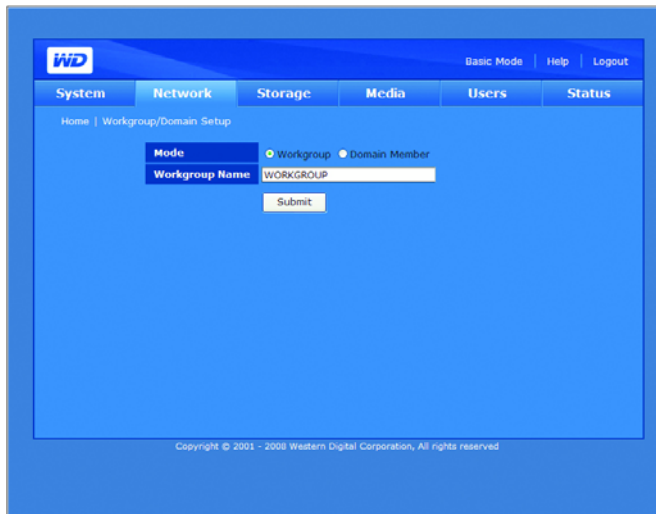
The Workgroup menu allows you to set up the network storage device as a workgroup or a domain member. The default setting is Workgroup. Unlike workgroups, domains are controlled from a central location (domain controller) and require central authentication before you can join them. Workgroups, in contrast, are much simpler to control. As long as you know the workgroup name, you can add any computer to a workgroup.

If your network uses a domain (i.e., has a Windows ADS), you may wish to connect this device as a domain member. When configured as a domain member, the device will ask the ADS to authenticate users. Therefore, as a domain member, the device provides user-level security.

When joining a domain, the device must be authorized by the domain's administrator. A user must enter the Domain Name, Domain Controller IP Address, Administrator Name, and Administrator Password for the authorization.

To create a new workgroup for the system:

1. On the Workgroup/Domain Setup page, click **Workgroup**.
2. Enter a name for the workgroup in the **Workgroup Name** field.
3. Click **Submit**.

**To set up a workgroup name:**

1. Click **Workgroup**.
2. Enter a name for your workgroup in the Workgroup Name field.
3. Click **Submit**.

To set up a domain name:

1. Click **Domain Member**.
2. Enter the domain name in the Domain Name field.
3. Enter the domain controller IP address in **Domain Controller IP Address** field.
4. Enter the Administrator name in the **Administrator** field.
5. Enter the Administrator password in the **Administrator Password** field.



.....

Note: The local user and domain user share the same access control rights if the user name of the local and domain users are the same (FTP service excluded).

6. Click **Submit**.

Remote Access

See "Remote Access Setup" on page 80.

Storage

The **Storage** tab provides all necessary options required for individual storage disk configuration and maintenance. This tab also includes an option to change the system's RAID configuration, set a share name, and format and safely remove the USB hard drives connected to the system.

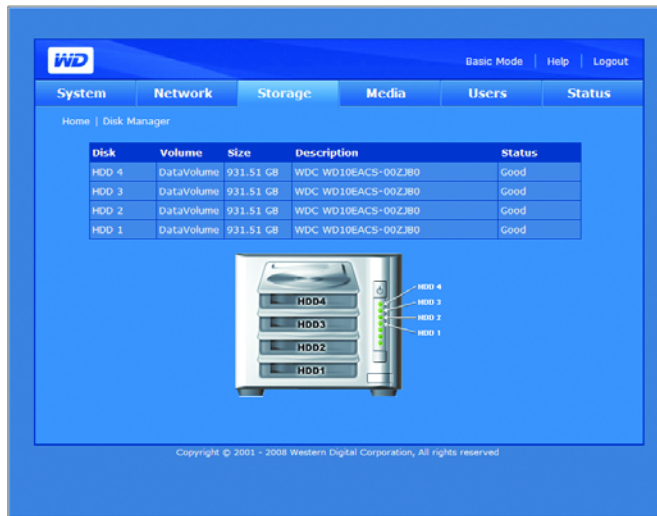


The Storage tab provides the following configuration options:

- Disk Manager
- Volumes & RAID Management
- Folder Shares
- USB Shares
- Quota
- Downloads

Disk Manager

The Disk Manager submenu displays the connected hard drives in the device. This submenu also displays detailed information about the hard drives, such as disk size, disk description, and status.



Drive status messages include the following:

- **Good**—Indicates the hard drive is accessible and functioning normally.
- **Failed**—Indicates a fatal error has occurred on the hard drive(s). See “Replacing a Drive” on page 95 for drive replacement instructions.
- **Foreign**—Indicates the device has detected a hard drive containing user data.

To clean up disk:

If the hard drive is foreign or unused, the Clean Disk  icon appears on the right side of the Disk Management table. Clean Disk allows you to clean all data on the drive.

To safely remove disk:

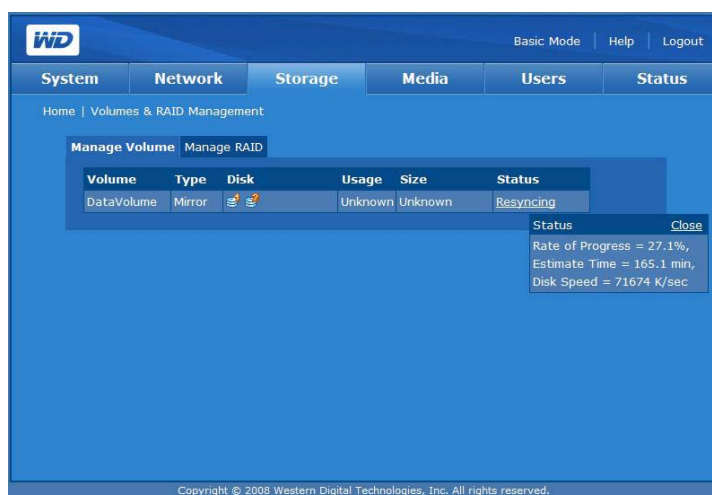
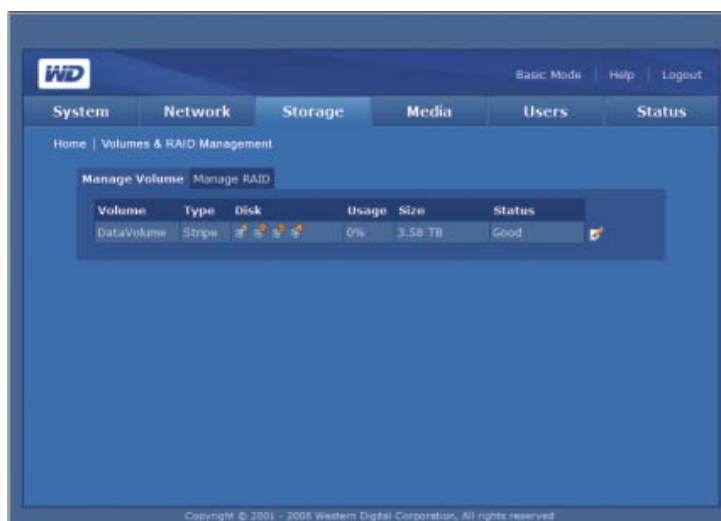
If the hard drive is unused, the Safely Remove Disk  icon appears on the right side of the Disk Management table, and allows you to safely remove the drive.

Volumes and RAID Management

The Volumes menu includes two tabs—**Manage Volume** and **Manage RAID**.

Manage Volume

The **Manage Volume** tab lists all the volumes available on the device and provides detailed information about each volume such as description, RAID type, usage, size, and volume status.



Volume status messages include the following:

- **Good**—Indicates the volume is accessible and hard drive is functioning normally.
- **Failed**—Indicates a volume cannot be started automatically, the disk may be damaged or the file system may be corrupt.
- **Resyncing**—Occurs when creating a mirror or when a mirrored volume is being resynchronized.
- **Formatting**—Indicates volume is being formatted or system is creating an ext3 (third extended) file system for a Linux operating system.
- **Degraded**—Missing one drive in a RAID 1 or RAID 5 configuration.
- **Recovering**—The failed drive is being copied to a working drive in a RAID 1 or RAID 5 configuration.

To modify the volume:

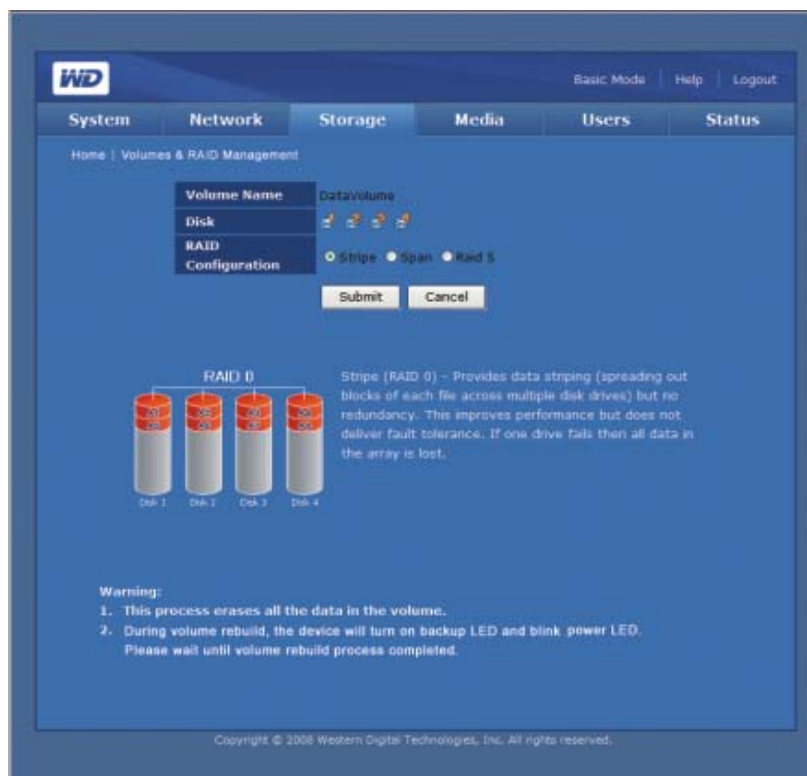
1. Click the **Manage Volume** tab in Volumes.



.....

Note: Only logical volumes in the extended partition can be modified.

2. Choose the volume you want to modify, then click the Modify  icon.



3. Select a RAID level.
4. Click **Submit**.

To delete a volume:

1. Click the Delete  icon.
2. Click **OK**.



.....

Note: Only ExtendVolume can be deleted.

Manage Volume Options

Manage Volume available options	starting mode	+ 0 Drives	manual extend span available	+ 1 Drive	manual extend span available	+ 2 Drives	manual extend span available	+ 3 Drives	manual extend span available	- 1 drive	- 2 drive	- 3 drive
1 Drive	span	span	no	span, stripe, mirror	yes	span, stripe, RAID 5	yes	span, stripe, RAID 5, two mirrors	yes			
2 Drive	span	span, stripe, mirror	no	span, stripe, RAID 5	yes	span, stripe, RAID 5	yes			span		
2 Drive	mirror	span, stripe, mirror	no	span, stripe, RAID 5	no	span, stripe, RAID 5	no			span		
2 Drive	stripe	span, stripe, mirror	no	span, stripe, RAID 5	no	span, stripe, RAID 5	no			span		
3 Drive	span	span, stripe, RAID 5	no	span, Stripe, RAID 5	yes					span, stripe, mirror	span	
3 Drive	stripe	span, stripe, RAID 5	no	span, Stripe, RAID 5	no					span, stripe, mirror	span	
3 Drive	RAID 5	span, stripe, RAID 5	no	span, Stripe, RAID 5	no					span, stripe, mirror	span	
4 Drive	span	span, Stripe, RAID5	no							span, stripe, RAID 5	span, stripe, mirror	span
4 Drive	stripe	span, Stripe, RAID5	no							span, stripe, RAID 5	span, stripe, mirror	span
4 Drive	RAID 5	span, Stripe, RAID5	no							span, stripe, RAID 5	span, stripe, mirror	span
4 Drive	two mirrors (each separate volume would have these options just as with a two- drive mirror)	span, Stripe, mirror	no							span		

Manage RAID

Configure RAID on the hard drives using the **Manage RAID** tab on the Volume Management submenu.



WARNING! Changing the RAID configuration causes all volumes and data to be lost.



RAID (Redundant Array of Independent Drives) refers to an array of multiple independent hard drives that provide high performance and reliability. RAID function depends on the number of drives present and the RAID level selected.

The network storage system supports the following RAID levels:

- **Stripe (RAID 0)** - Provides data striping (spreading out blocks of each file across multiple hard 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.
- **Mirror (RAID 1)** - Provides disk mirroring. Mirroring creates an exact copy (or mirror) of a set of data on two drives, which increases reliability on a single drive. If either drive fails, the other continues to function as a single drive until the failed drive is replaced. Note this RAID type has the highest disk overhead (100%) of all RAID types.
- **Span (JBOD)** - Combines drives into a linear fashion to create one large logical volume. It provides no fault tolerance, nor does it provide any improvements in performance compared to the independent use of its constituent drives. Span (JBOD) of two disk partitions as a single large partition.
- **RAID 5** - Requires a minimum of 3 drives to implement. Adds fault tolerance by including parity information with the data. Parity for blocks in the same rank is generated on Writes, recorded in a distributed location, and checked on Read.

Default RAID configuration

The default RAID configuration for each hard drive installed in the network storage system is as follows:

- If one, two, or three hard drives are installed, the default RAID configuration is Span.
- If four hard drives are installed, the default RAID configuration is RAID 5.

To configure the Manage RAID tab:

.....

Note: Be sure to back up all data before configuring RAID. All data stored in the hard drive is lost when changing the RAID configuration.

1. Click the **Manage RAID** tab.
2. Select a RAID level.

DataVolume is the default volume.

If the volume RAID type is Span and there are new disks in the system, the Extend icon appears on the side of the Volume Management table.

3. Click **Submit**.

Manage RAID Options

Starting Configuration	+ 0 Drives	+ 1 Drive	+ 2 Drives	+ 3 Drives	- 1 drive	- 2 drives	- 3 drives
1 Drive	span	span, stripe, mirror	span, stripe, mirror, RAID 5	span, stripe, RAID5, 2 mirrors	x	x	x
2 Drive	span, stripe, mirror	span, stripe, mirror, RAID 5	span, stripe, RAID 5, 2 mirrors	x	span	x	x
3 Drive	span, stripe, mirror, RAID 5	span, stripe, RAID 5, 2 mirrors	x	x	span, stripe, mirror	span	x
4 Drive	span, stripe, RAID 5, 2 mirrors	x	x	x	span, stripe, mirror, RAID 5	span, stripe, mirror	span

Folder Shares

Shares are folders that can be used to organize and store files on your WD ShareSpace network storage system. Shares can be shared with everyone (public) or with selected users on your network (private).

The device comes preconfigured with two shares:

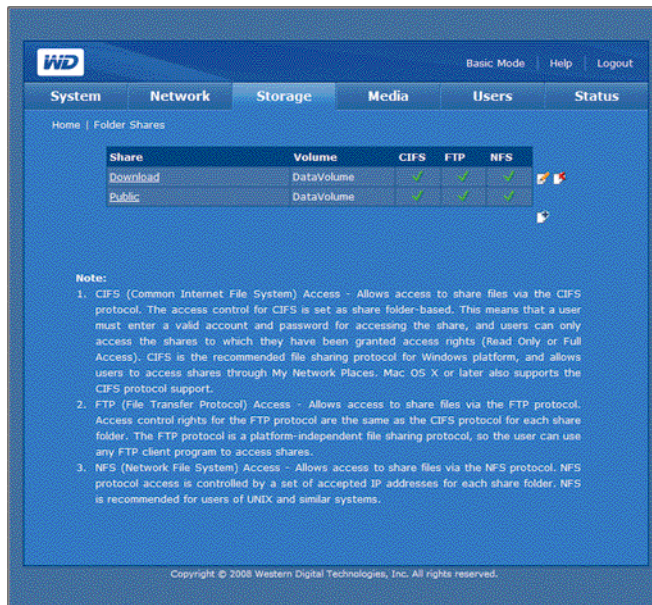
- **Public**—created automatically after initial setup
 - Shared Music - for storing music files you want to share with other users. When iTunes Service is enabled, you can browse the music files on iTunes. For more information on how to enable iTunes Service, see “To enable or disable the iTunes Server Service:” on page 69.
 - Shared Pictures - for storing image files you want to share with other users.
 - Shared Videos - for storing video files you want to share with other users.
- **Download**—for saving files using Downloader (see “Scheduled Downloads” on page 87).



Important: Do not change or delete the default share names. Disruption of file sharing could result.

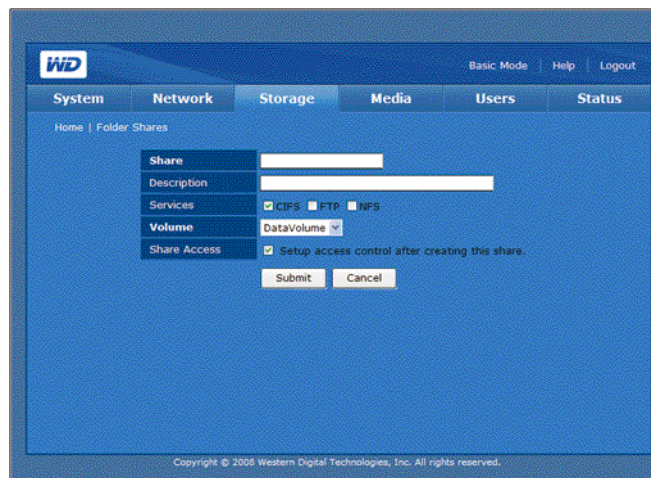
The administrator can create private shares accessible only by user name and password when setting up a user account (see “To create a new user account:” on page 21), or by setting permissions on an existing share (see “Folder Share Permissions” on page 73).

The Folder Shares menu provides access to a list of available shares.



To create a share on the volume:

1. Click the Create icon .
2. Enter a share name in the **Share** field. The share name can contain up to 32 characters, including alphabetic, numeric, or underscore characters.
3. Enter a brief description in the **Description** field.
4. Click a file sharing protocol next to **Services**. The network storage system supports the following file sharing services (protocols):
 - **CIFS (Common Internet File System)** - Allows access to share files via the CIFS protocol. The access control for CIFS is set as share folder-based. This means that a user must enter a valid account and password for accessing the share, and users can only access the shares to which they have been granted access rights (Read Only or Full Access). CIFS is the recommended file sharing protocol for Windows platform, and allows users to access shares through My Network Places. Mac OS X or later also supports the CIFS protocol.
 - **File Transfer Protocol (FTP)** is a network protocol used to transfer data from one computer to another through a network, such as the internet, using an FTP client program. FTP is a popular choice for exchanging files independent of the operating systems involved.
 - **HTTP (Hypertext Transfer Protocol)** is a communications protocol for the transfer of information on the intranet and the World Wide Web.
 - **NFS (Network File System)** is a network file system protocol used by Linux and Unix computer systems.
5. Select a logical volume you want to share from the **Volume** list.
6. Click **Setup access control after creating this share** to set access control for the new share.
7. Click **Submit**.

**To modify properties of the share:**

1. Select the share you want to modify, then click the Modify icon .
2. Enter a new share name. The share name can contain up to 32 characters, including alphabetic, numeric, or underscore characters.
3. Enter a brief description.
4. Select a file sharing protocol.
5. Click **Submit**.

To delete existing shares:

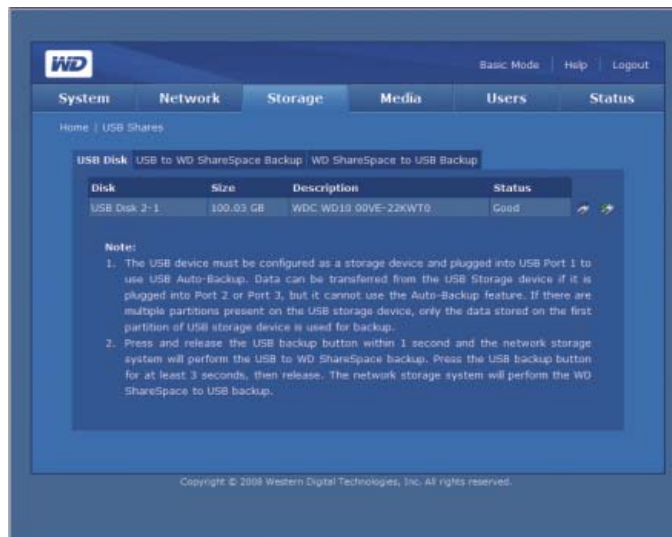
1. Select the share to delete.
2. Click the Delete icon .
3. Click **OK**.

USB Shares

The USB Shares menu includes three tabs—**USB Disk**, **USB to WD ShareSpace Backup**, and **WD ShareSpace to USB Backup**. Use these tabs to format a USB hard drive, remove a USB hard drive, and perform backup operations from a USB hard drive to the network storage system and vice-versa. When a USB storage device with the FAT, FAT32, or NTFS file system is connected to the network storage device, the USB device will be displayed as USB share.

USB Disk

Use the USB Disk tab to format and safely disconnect a USB hard drive or to format the USB hard drive.



To format a USB hard drive:

1. Connect a USB hard drive to the device.

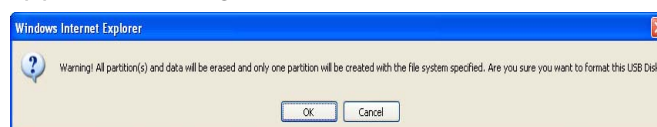


.....

Note: The network storage system supports USB flash disk and external USB hard drives; USB optical drives (CD/DVD combo or DVD dual/multi drive) are not supported.

For instructions on how to connect a USB hard drive to the network storage system, see “USB Auto Backup Feature” on page 92.

2. On the USB Management page, click the **USB Disk** tab.
3. Select the USB hard drive to format, then click the Format icon . A dialog box appears warning that all data will be erased.





.....

Warning! Formatting hard drives erases all the disk contents, including partition tables, logical volumes, and all shared folders and subfolders and files. Perform this procedure only when it is safe to proceed. When formatting a USB hard drive, only one partition is created and the partition is formatted as FAT32.

4. Click **OK**.
5. Disconnect the USB hard drive from the network storage system.

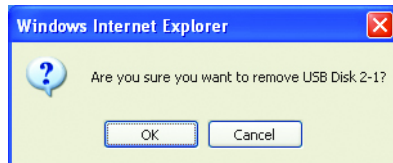
To safely remove a USB hard drive:



.....

Note: Whenever a USB device is disconnected without first being ejected or dismantled, there is a risk of data loss or damage to the USB hard drive. With the safe remove disk option you can safely remove any USB hard drive attached to the device.

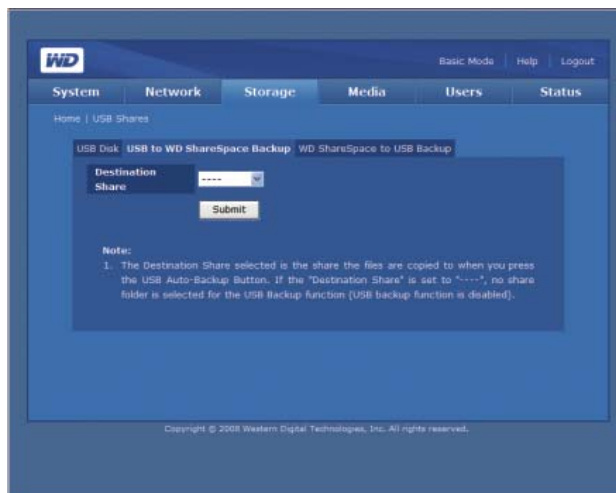
1. On the **USB Disk** tab, select a USB hard drive.
2. Click the Safely Remove Disk icon .



3. Click **OK**.

USB to WD ShareSpace Backup

Use the USB to ShareSpace Backup tab to set a destination share or source share for a different USB storage backup method.

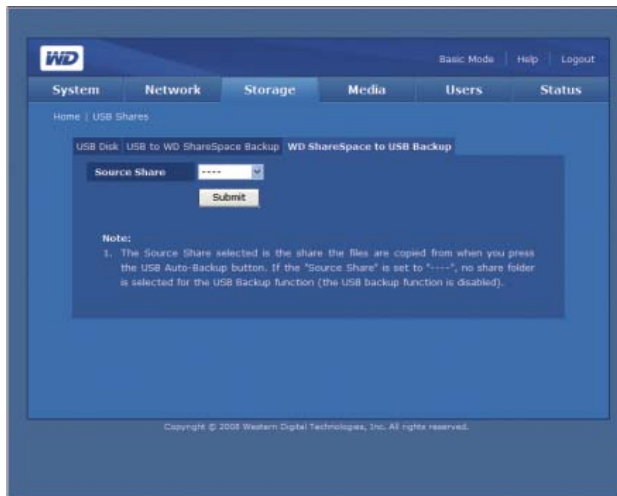


To set a destination share name for the USB hard drive to WD ShareSpace backup:

1. On the USB Shares page, select the **USB to WD ShareSpace Backup** tab.
2. Select a share to be used as a destination share from the **Destination Share** list.
3. Click **Submit**.

WD ShareSpace to USB Backup

Use the WD ShareSpace to USB Backup tab to set a source share for this backup method.



To set a source share name for WD ShareSpace to USB hard drive backup:

1. On the USB Shares page, select the **WD ShareSpace to USB Backup** tab.
2. Select a share to be used as source share from the Source Share list.
3. Click **Submit**.

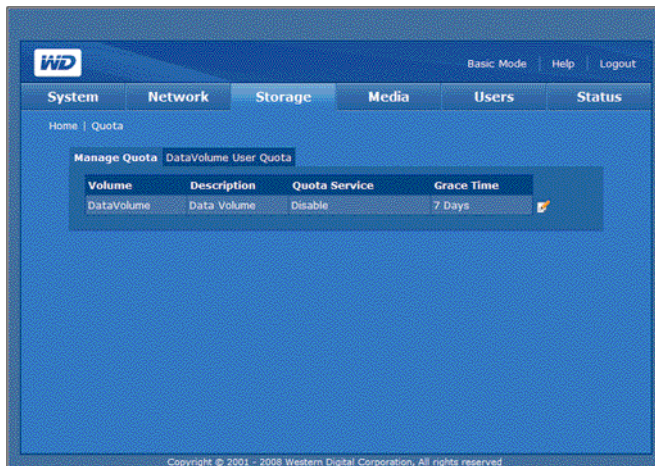
Quota

The Quota menu allows administrators to enable or disable quota control for the device and set grace time and quota limits for each user.

Quota is used to limit the maximum storage capacity for each user. The accumulated file size used in a volume for the specified user cannot exceed the quota setting. Once the user data exceeds the quota, a 7-day (by default) grace period commences. The user still can store up to 100 MB of additional data on the volume within the grace period. When the grace period expires, the user cannot store additional data on the volume until deleting the amount of data required to reduce the total used capacity below the quota setting.

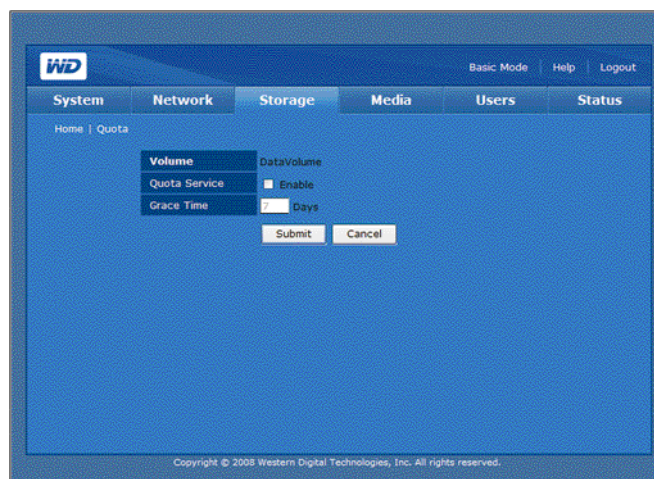
Manage Quota

The **Manage Quota** tab in the Quota Management menu provides the quota information for each volume and allows administrators to modify the quota settings.



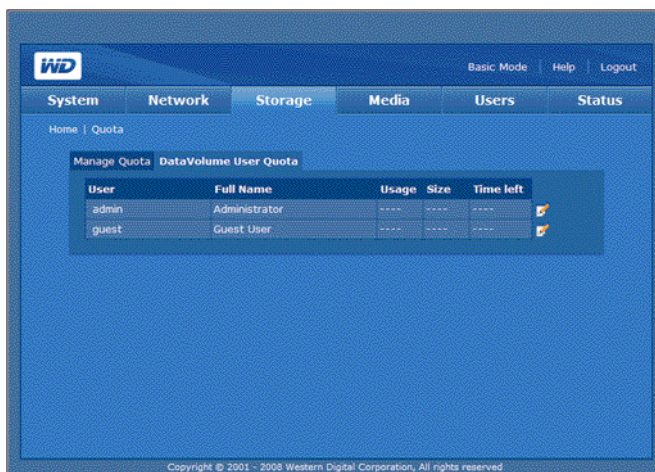
To configure disk quota:

1. Select the volume you want to modify, then click the Modify icon .
2. Click **Enable** next to **Quota Service** to enable disk quota service.
3. Specify the grace period after which no additional drive space is provided.
4. Click **Submit**.



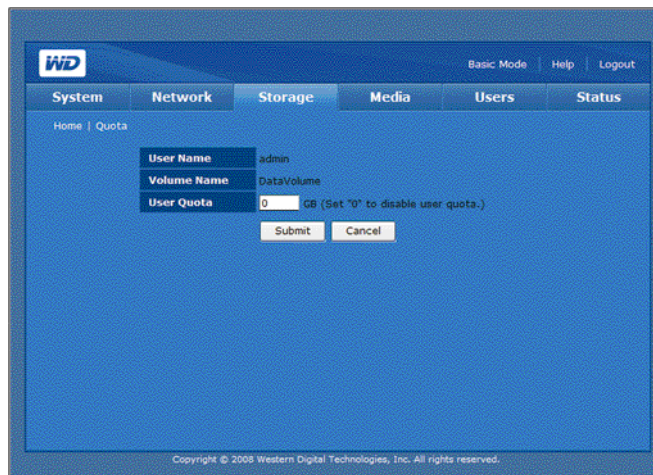
DataVolume User Quota (or ExtendVolume User Quota)

The DataVolume **User Quota** (ExtendVolume User Quota) tab provides user quota information details and allows administrators to modify the user quota setting.



To modify the user quota setting:

1. Select the volume you want to modify, then click the Modify  icon.
2. Click **Enable** next to Quota Service to enable disk quota service.
3. Specify the amount of time the saved or backup files will be retained in the system.
4. Click **Submit**.



Downloads

The Downloads menu includes two tabs—**Setup Destination Share** and **Change Password**. This menu provides configuration options for setting up the share folder and controlling how users access the contents of the shared folder by setting up passwords.

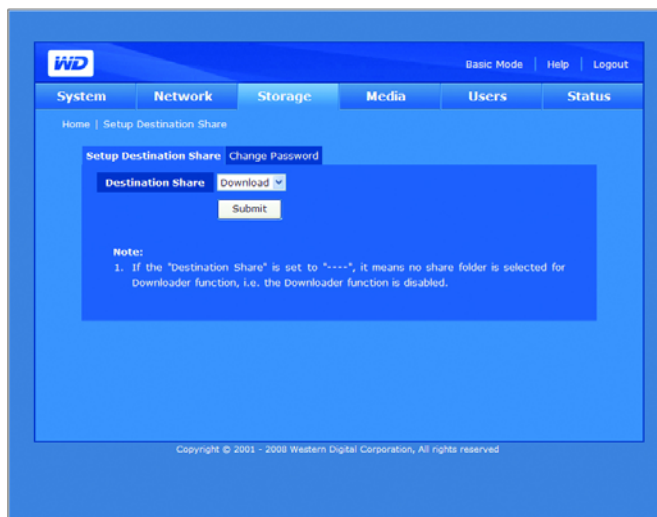
Set up Destination Share

Use the **Setup Destination Share** tab to specify the folder that you want to share with other users. The Downloader utility is enabled automatically when you select the Download share folder in this tab. The specified share folder appears in the utility and users connected to the device can remotely upload or download files to the share folder.

For more information on how to use the Downloader utility, refer to “Scheduled Downloads” on page 87.

To set the destination share name for the Downloader:

1. On the Downloads page, click the **Setup Destination Share** tab.
2. Select the folder to share with others from the **Destination Share** list.
3. Click **Submit**.

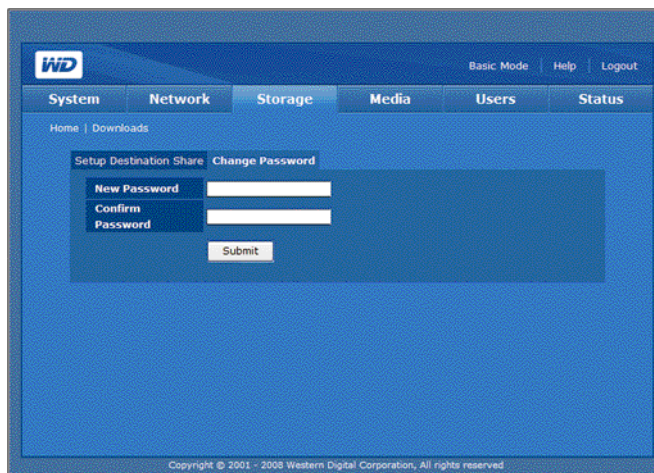


Change Password

The **Change Password** tab allows you to change the Downloader's password.

To change the Downloader's password:

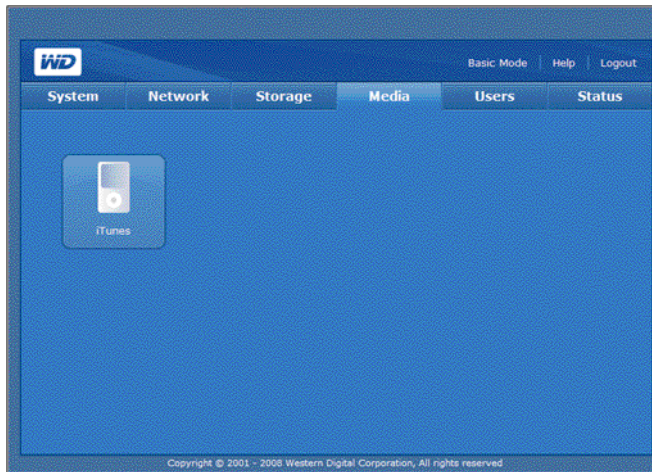
1. On the Downloads page, click the **Change Password** tab.
2. Enter a password in the Change Password field. The maximum length of the password must not be more than 16 alphanumeric characters.
3. Re-enter the password in the **Confirm Password** field.
4. Click **Submit**.



The screenshot shows the WD Sharespace web interface. At the top, there is a navigation bar with the WD logo on the left and links for 'Basic Mode', 'Help', and 'Logout' on the right. Below this is a secondary navigation bar with tabs for 'System', 'Network', 'Storage', 'Media', 'Users', and 'Status'. The 'Storage' tab is currently selected. Under the 'Storage' tab, there is a sub-navigation bar with 'Home | Downloads' and two sub-tabs: 'Setup Destination Share' and 'Change Password'. The 'Change Password' sub-tab is active. The main content area contains a form with two text input fields: 'New Password' and 'Confirm Password'. Below these fields is a 'Submit' button. At the bottom of the page, there is a copyright notice: 'Copyright © 2001 - 2008 Western Digital Corporation, All rights reserved.'

Media

The **Media** tab provides access to the iTunes menu.



iTunes

Enable the iTunes Server Service and customize the service settings using the **iTunes** menu. iTunes Server Service allows iPod and iTunes users to share and play music on the network storage system. When the iTunes Service is enabled in the Network Storage Manager, you or anyone connected to the network storage system can play music files stored on the system using iTunes. This service creates a virtual music library on the device and treats it as an iTunes repository, making it possible for music files to stream from the network storage system to Windows or Mac computers running iTunes.

The iTunes Server Service supports the following file types:

- *.mp3
- *.wav
- *.aac

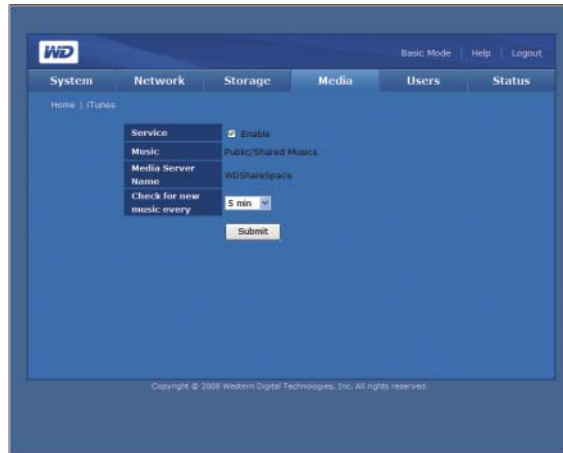


.....

Note: The iTunes server service requires the presence of the '/Public/Shared Music' share folder. Do not rename or delete Shared Music if you want to use the iTunes server. You must recreate or rename the '/Public/Shared Music' share if it has been deleted or renamed.

To enable or disable the iTunes Server Service:

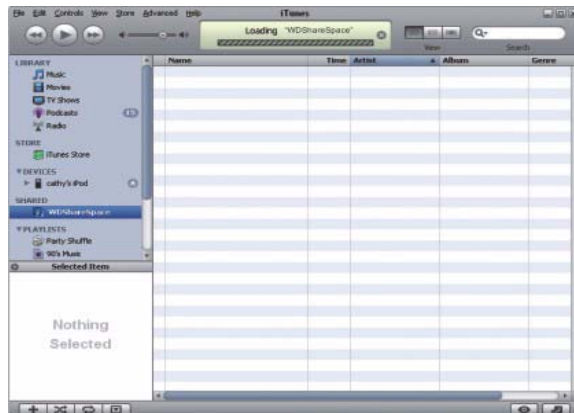
1. On the iTunes Server Service page, click **Enable** next to iTunes Service. Or, deselect the option to disable it.
2. Specify how often iTunes can scan the device for new music files.
3. Click **Submit**.

**To customize media library update frequency:**

1. Click an option in the **Check for new music every** list.
2. Click **Submit**.

To stream audio in iTunes:

1. Make sure that the iTunes Service is enabled in the Network Storage Manager utility. See “To enable or disable the iTunes Server Service:” on page 69 for more information.
2. Open the WDShareSpace folder.
3. Double-click the Public share folder, then the Share Music folder.
4. Double-click an audio file.



The audio file is streamed in iTunes and audio files from the network storage system are displayed under the Shared list.



.....

Note: For optimal performance, streaming music or video should be performed on the Local Area Network and not remotely over the Wide Area Network.

Users

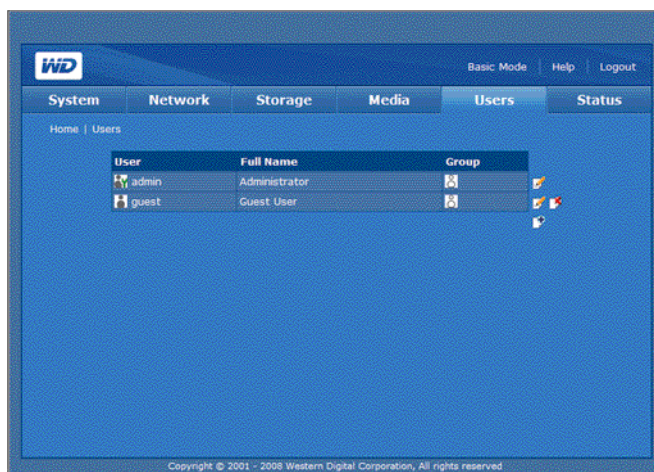
The **Users** tab provides access to the following configuration options:

- Users
- Groups
- Folder Share Permissions
- USB Share Permissions



Users

The Users menu allows administrators to create, edit, and delete user accounts from Access Control list management.



To create a new user account:

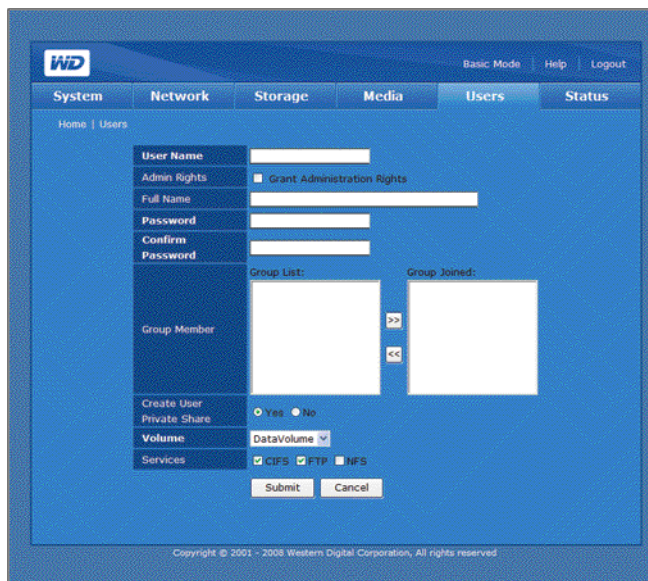
With this feature, you can create user accounts on the network storage system and further customize these accounts with privilege levels.

1. Click the Create icon .



Note: The user name and password can contain up to 15 characters, including alphabetic, numeric, underscore, space, and most special characters.

2. Click **Grant Administration Rights** to provide the user with administrative rights. Administration rights allow the user to configure the device.
3. Enter the user name in the **User Name** field.
4. Enter the user's full name in the **Full Name** field.
5. Enter the password in the **Password** field.
6. Re-enter the password in the **Confirm Password** field.
7. Select a previously created Group for the user to join from the Group List.
8. Click the >> button.
9. Create a private user share at the same time by clicking **Yes** next to **Create User Private Share**. The new user is granted Full Access to the private share. The private share name is the same as the user name.
10. Select a volume that you want the user to access.
11. Select a file sharing protocol.
12. Click **Submit**.


To modify a user account:

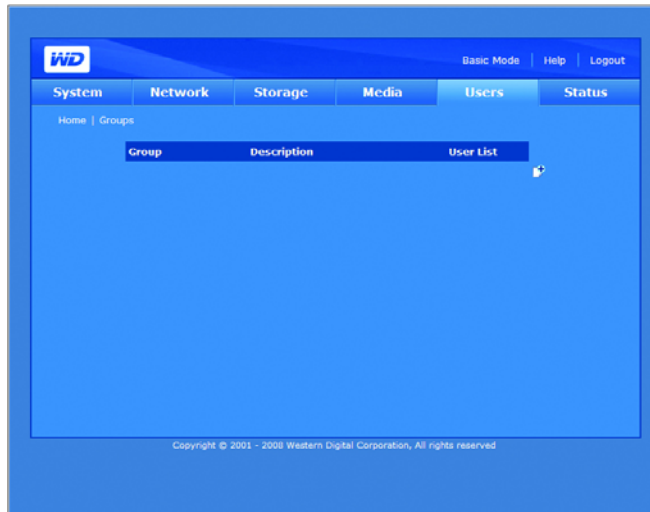
1. Select the user account to modify, then click the Modify icon .
2. Make the necessary changes, then click **Submit**.

To delete an existing user account:

1. Select the user account you want to delete, then click the Delete icon .
2. Click **OK**.

Groups

The **Groups** submenu allows the administrator to create, edit, and delete a group from Access Control list management.

**To create a group account:**

1. Click the Create icon .
2. Assign a new group name.
3. Enter a description of the new group.
4. Select a user from the User List field to add to the User Joined field.
5. Click the >> button.
6. Click **Submit**.



To modify a local group:

1. Select the group account you want to modify, then click the Modify icon .
2. Make the necessary changes, then click **Submit**.

To delete a local group:

1. Select the group you want to delete, then click the Delete icon .
2. Click **OK**.

Folder Share Permissions

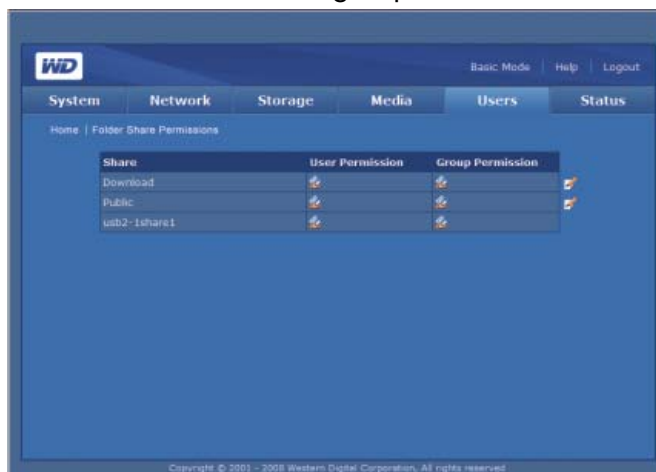
The Folder Shares menu allows you to set the access control for each user or group in the Access list. There are three options for default access assigned to a user or group.

- Public Access 
- Full Access 
- Read Only 
- Deny Access 
- Not Assigned 

When there is a conflict in the access rights of the user and group, the network storage system uses the following rules to handle the conflict:

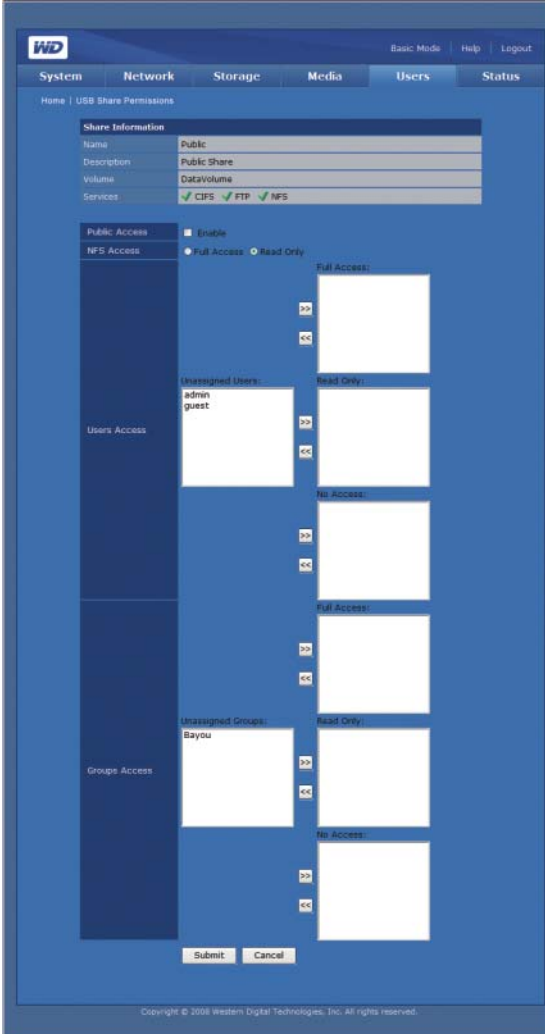
- Deny Access will have the highest priority.
- Full Access + Read Only = Full Access.

If the access control is assigned to users or groups, the full access, read only, and no access icons appear on the Share Access page. You can move your mouse over the icon to view the user or group list.



To edit the access rights of users or groups:

1. Select a user or group, then click the Edit icon .
2. Click **Enable** next to Public Access allow everyone to access to the share.
3. Select an access option.
4. In the **Not Assigned Users** list, select the users to whom you want to grant full access, read only permission, or no access to the share.
5. Click the >> button.
6. In the **Not Assigned Groups** list, select the local groups to which you want to grant full access, read only permission, or no access to the share.
7. Click the >> button.
8. Click **Submit**.



The screenshot displays the WD Share Permissions configuration page. At the top, there are tabs for System, Network, Storage, Media, Users, and Status. The 'Users' tab is selected. Below the tabs, the 'Share Information' section shows details for a 'Public' share, including its description, volume, and supported services (CIFS, FTP, NFS). The 'Public Access' section has a checkbox for 'Enable'. The 'NFS Access' section has radio buttons for 'Full Access' and 'Read Only'. The 'Users Access' section shows a list of 'Not Assigned Users' (admin, guest) and buttons to assign 'Full Access', 'Read Only', or 'No Access'. The 'Groups Access' section shows a list of 'Not Assigned Groups' (Bayou) and buttons to assign 'Full Access', 'Read Only', or 'No Access'. At the bottom, there are 'Submit' and 'Cancel' buttons.

USB Share Permissions

Use the USB Shares menu allows to set access control for the two USB ports on the back of the device.

The three types of access control that you can assign to a user or group include:

- Full Access 
- Read Only 
- Deny Access 

When there is a conflict in the access rights of the user and group, the device uses the following rules to handle the conflict:

- Deny Access will have the highest priority.
- Full Access + Read Only = Full Access.

If the access control is assigned to users or groups, the full access, read only, and no access icons appear on the Share Access page. You can move your mouse over the icon to view the user or group list.



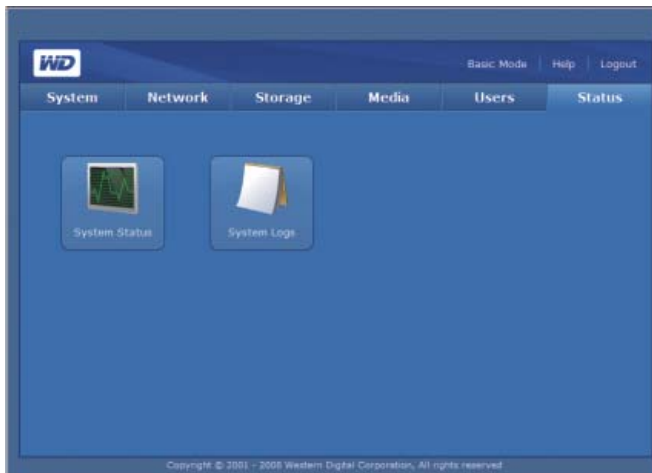
To edit the access rights of users or groups:

1. Select the share you want to modify, then click the Edit  icon.
2. Click **Enable** next to **Public Access** to allow everyone to access the share.
3. Select an access option.
4. In the **Not Assigned Users** list, select the users to whom you want to grant full access, read only permission, or no access to the share.
5. Click the >> button.
6. In the **Not Assigned Groups** list, select the local groups to which you want to grant full access, read only permission, or no access to the share.
7. Click the >> button.
8. Click **Submit**.

Status

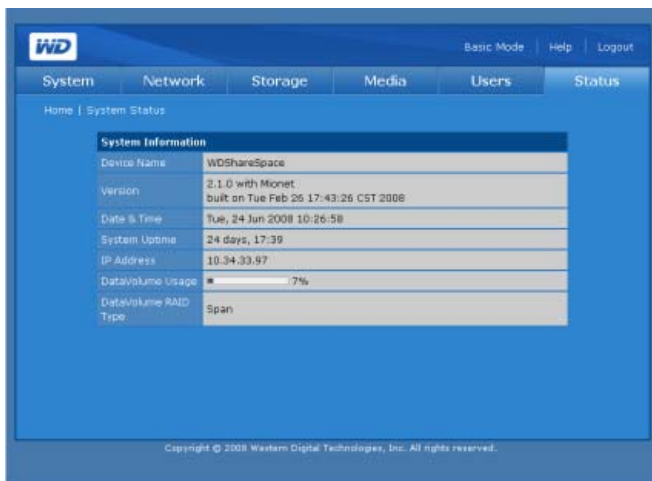
The **Status** tab provides access to the following configuration options.

- System Status
- System Logs



System Status

The System Status menu displays general information about the system, such as device name, version, current date/time, system uptime, IP address, volume usage, and volume RAID type.

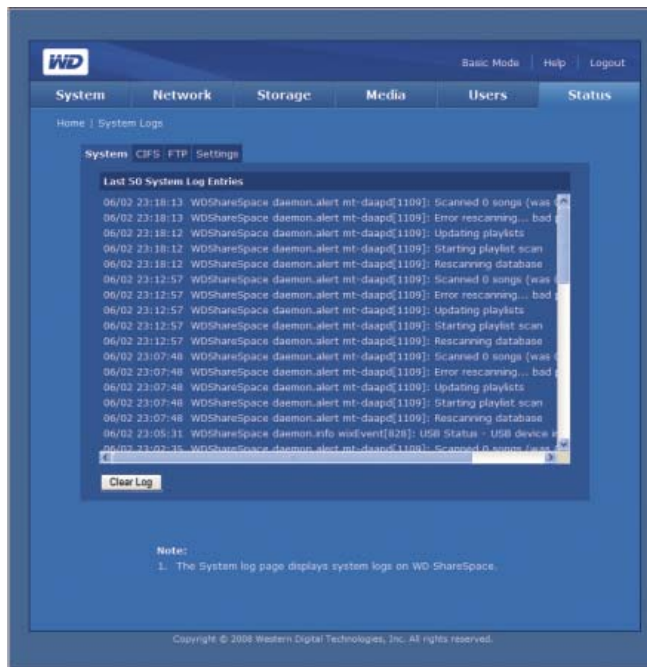


System Logs

The System Logs submenu displays the events recorded by the System Configuration utility. You can view information such as file and services requested on the device, requests and records between the device and client computers, or printer events. You can also change the order and number of the log entries shown in log pages.

System

The System tab displays system logs on the device.



The System Logs record significant problems that occur in the system. You can obtain information from the following conditions or errors that may occur in the system components, hardware or software components.

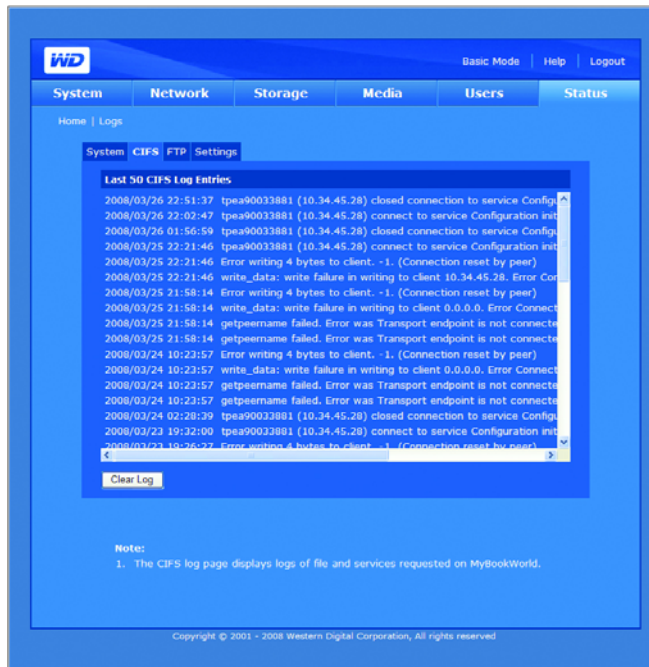
- System shutdown
- System reboot
- Network Storage Manager utility failed to restore
- Fan failed or defective fan
- System temperature exceeds a threshold value
- Disk SMART failure
- Volume failed or do not exist
- Volume space is full or close to 100%
- Unsafe removal of a USB mass storage device
- Extend volume failed
- Resync volume failed

The following types of events are logged:

- **Critical**—An event such as fan failed, system temperature has exceeded the threshold level, Disk SMART failed, volume space is full or close to 100%, extend volume failed, or resync volume failed. When a critical event occurs the power/system status LED lights up and the system record events in the System Log.
- **Warning**—An event that is not necessarily significant, but may indicate a possible future problem. An e-mail or pop-up message alert is sent to notify user of the problem that occurred in the system.
- **Information**—An event that describes the successful operation of an application, driver, or service.

CIFS

The **CIFS** (Common Internet File System) tab displays logs of file and services requested on the device.



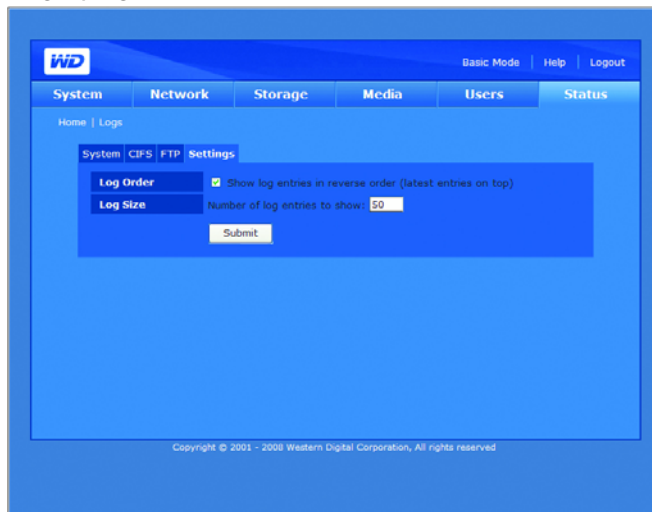
FTP

The **FTP** (File Transfer Protocol) tab displays logs of the requests and records transferred between the device and client computers.



Settings

The **Settings** tab assigns the order and number of log entries that appear on the Logs page.



To configure the log settings:

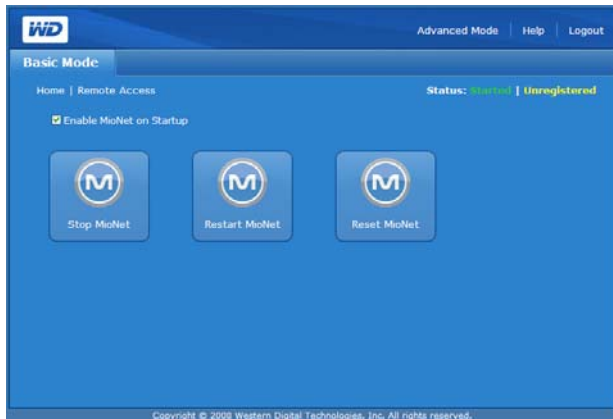
1. On the **Settings** tab, click **Show log entries in reverse order** to display the entries in reverse chronological order.
2. Enter the number of entries you want to appear on the System, CIFS, and FTP logs.

9

MioNet Remote Access

Remote Access Setup

WD ShareSpace comes with MioNet enabled by default. If MioNet is not already installed on the client computer, follow the instructions under “System Setup” on page 9. The **Remote Access** menu allows you to configure the MioNet service on the storage device,



MioNet service status messages:

- MioNet service connection status
 - Started - MioNet service is started
 - Stopped - MioNet service is stopped and will start on system restart.
 - Disabled - MioNet service is disabled and will not start on system restart.
- MioNet registration status
 - Unregistered - Not currently registered to a MioNet account
 - Registered - Already registered to a MioNet account



.....
Note: A mouse-over of the registration status shows the MioNet account name if the device is registered. To register with MioNet, go to: www.mionet.com/wdsharespace.

10

Accessing Data via FTP

You can access data in a shared folder on WD ShareSpace from anywhere using an FTP client software program. An FTP client software program must be installed on the broadband-connected computer you are using to access the device.

1. Open an FTP client software program.
2. Enter ftp://username@IP address as the host name
(e.g., ftp://admin@172.25.102.67)



.....
Note: Click **Network** in either the basic or advanced mode to view the device's IP address.

3. Enter the WD ShareSpace user name and corresponding password.
4. Click **Connect** or **OK**.

You can now upload files to or download files from WD ShareSpace across the internet.

11

Scheduled Downloads

Downloader is powerful management tool for maintaining download tasks. With a user-friendly interface, the Downloader supports multiple simultaneous downloads with various functions to manage downloads. Use Downloader to download files to a default share folder in the network storage system and share the files among many users. To use Downloader, you must set a default share folder to Download in the Network Storage Manager utility. For more information, see “To set the destination share name for the Downloader:” on page 66.

Accessing Downloader



.....
Important: To access Downloader, make sure a destination folder is properly configured in the Network Storage Manager utility. Refer to “To set the destination share name for the Downloader:” on page 66.

You can access Downloader by entering the system’s web-based user interface. See “Accessing Network Storage Manager” on page 25 for instructions.

Downloader Features

Downloader includes the following features:

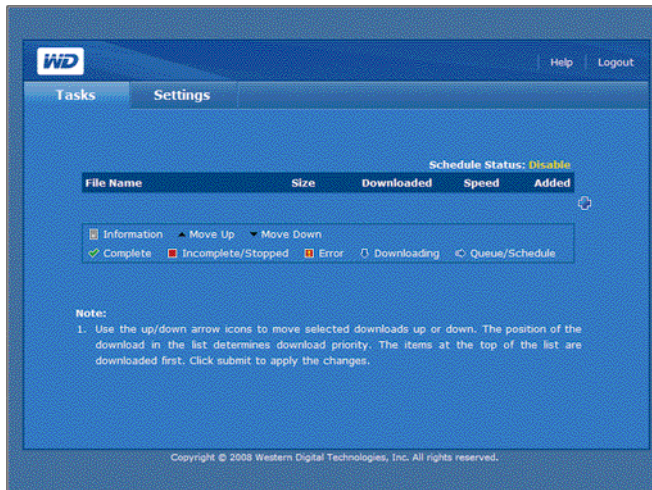
- Download faster with instantaneous "start"
- Simultaneous download of multiple files from the Internet
- Files are automatically stored to a preset destination folder in Network Storage Manager
- Automatically store your partially downloaded files in the database to resume downloading at any time
- Set download speed to reduce bandwidth consumption
- Schedule and queue downloads
- Resume downloading a partial download

User Interface Overview

The Downloader user interface includes two tabs — **Tasks** and **Settings**.

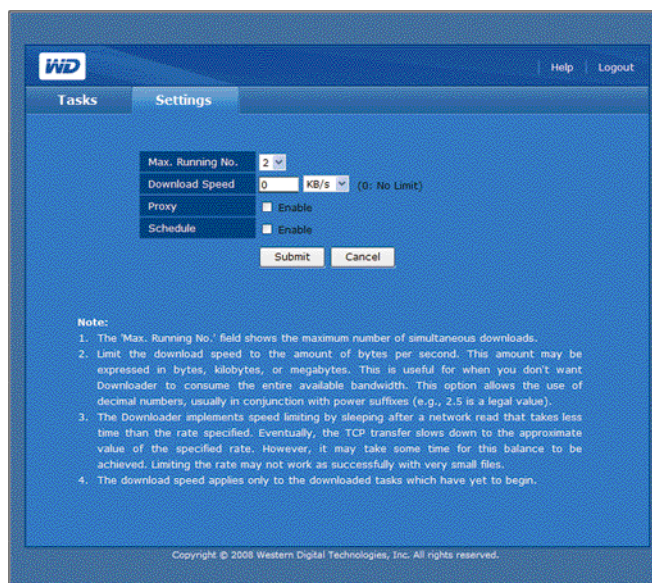
Tasks

The Tasks tab includes a table that displays the file transfer processes. The status of the file download is displayed using icons located on the File Name column and located immediately below the Submit button provides detailed information about the meaning of each status icon. The command icons located on the right-side of the tasks table allows you to add download entries, stop file download, or delete download task.



Settings

Set the download speed and create and schedule several download queues using the **Settings** tab.



Command icons

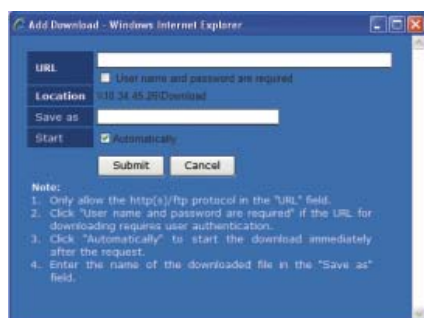
The Downloader Tasks tab includes the following commands:

Icon	Command	Description
	Add	Creates a download task.
	Start	Starts a specific download task.
	Stop	Ends the download task.
	Delete	Deletes download task from the table.
	Help	Displays the online guide.
	Logout	Exits the Downloader utility.

Using Downloader

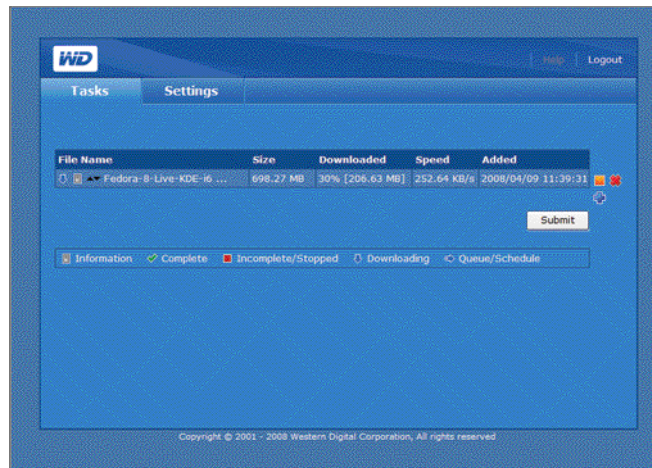
To create a download task:

1. On the Tasks page, click Add .
2. Enter the full web address where you want to download the file in the URL field.
3. If a user name and password is required to download the file, click **User name and password are required**, then enter the user name and password.
4. If you want to enter a new name for the file, then enter a new name in the **Save As** field.
5. Click **Automatically** to start downloading immediately after the request.
6. Click **Submit**.



To stop and resume a download task:

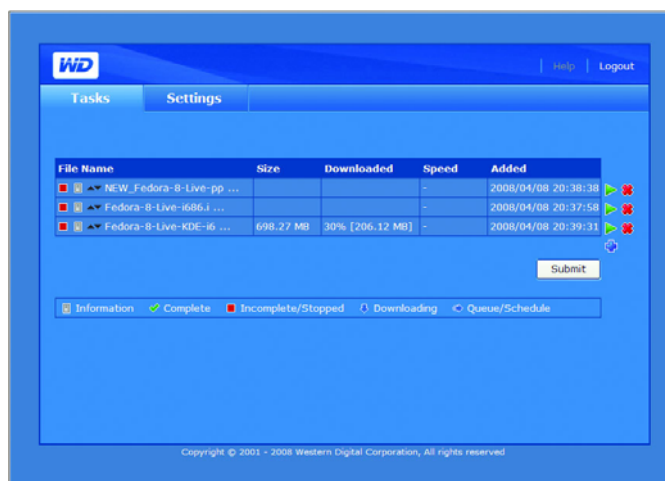
1. Select a task in the Tasks table.
2. Click Stop  to stop the download task.
3. Click Start  to resume download task.

**To delete a download task:**

1. Select a task in the Tasks table.
2. Click Delete  to delete the download task.
3. Click **OK**, then click **OK** again.
4. Click **Submit**.

To change the order of the download queue:

1. Use the arrow buttons to change the order of download tasks or to make a task conditional on a previous task.
2. Select a task in the Tasks table, then click Move Up  or Move Down .
3. Click **Submit**.



To customize the Downloader settings:

1. On the Downloader page, click the **Settings** tab.
2. Select a number to specify the maximum number of simultaneously running downloads in the **Max. Running No.** field.
3. Specify the decimal numbers to limit the downloaded speed if you don't want to consume the entire available bandwidth in Downloader in the **Download Speed** field.
4. Set up the proxy to download files if your network environment doesn't allow making direct connections to an external network in the **Proxy** field.
5. Click **Enable** next to **Schedule** to enable scheduled downloading time.
6. Periods of time during which downloading is allowed are indicated in yellow.
7. Click **Submit**.

12

External USB Drive Sharing & Backup

Sharing Data on a USB Hard Drive

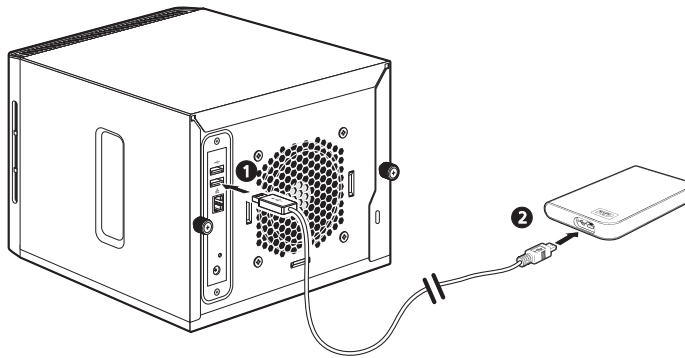
You can share data on your USB drive with other users connected to the network storage system.

To share data on a USB hard drive:

1. Connect a USB hard drive to any of the three USB ports. The front port is USB1 and the two rear ports are USB2 and USB3 from top to bottom.



.....
Note: The network storage system supports external USB storage; USB optical drives (CD/DVD combo or DVD dual/multi drive) are not supported.



2. Open the WDShareSpace folder to access data on the USB hard drive. Double-click on the USB share. The USB share name may appear as usb1-1 share, usb2-1 share, or usb3-1 share, depending on the actual USB port that the USB hard drive is connected to.

USB Auto Backup Feature

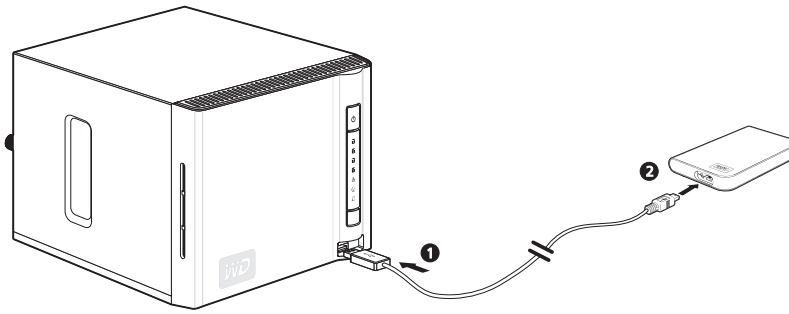
The network storage system's auto backup feature allows you to back up data from a USB hard drive to the network storage system or back up data from the network storage system to a USB hard drive.



.....
Important: When backing up data, always connect the USB hard drive directly to USB port 1 located on the front panel. **Do not use a USB hub.** Ensure that the destination drive has enough free space to store the amount of data being transferred.

To back up data from a USB hard drive to the system:

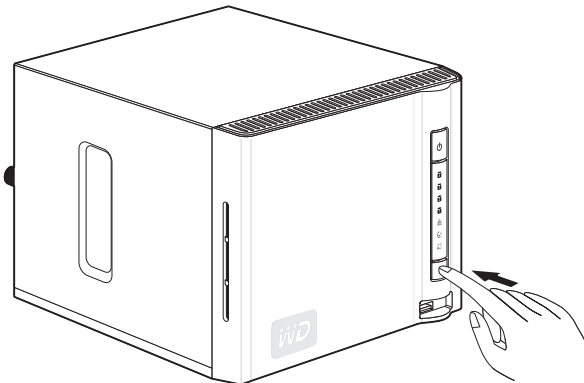
1. Connect a USB hard drive to the USB port 1 located on the front panel.



2. Wait for a few seconds for the USB backup LED  to turn green (this could take up to 30 seconds).

If there are multiple partitions present on the USB hard drive, only the data stored on the first partition of the USB hard drive is backed up to the system.

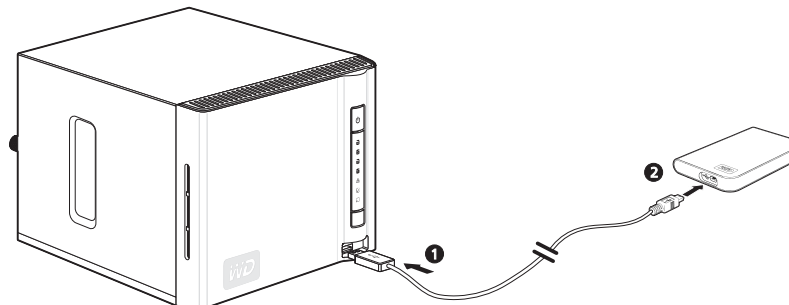
3. Press the USB backup button and release within **one** second. The USB backup LED flashes green to indicate the data backup is in progress.



The system will back up data from the USB hard drive to the “Public” default share folder on the network storage system. The share folder will be automatically named after the USB drive plugged into Port 1 (e.g., usb_Western_Digital_External_HDD-200806201424).

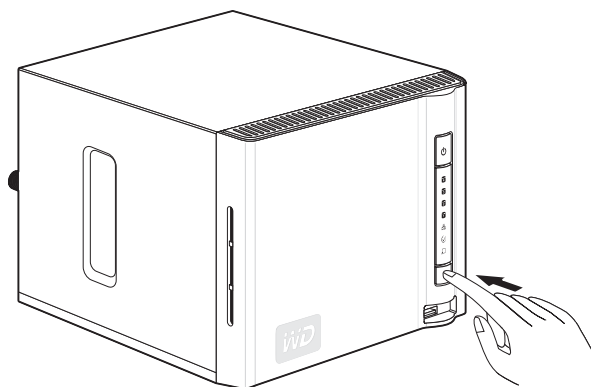
To back up data from a system to the USB hard drive:

1. Prior to performing the backup operation, make sure to set a source share folder in the Network Storage Manager utility. See “To set a source share name for WD ShareSpace to USB hard drive backup:” on page 63 for more information.
2. Connect a USB hard drive to the USB port 1 located on the front panel.



3. Wait for a few seconds for the USB backup LED  to turn green.

4. Press the USB backup button and hold for at least **three** seconds, then release. The USB backup LED flashes green to indicate the data backup is in progress.



The system will back up data from the pre-selected source share folder on the network storage system to the USB hard drive first partition.

13

Replacing a Drive

The network storage system is a limited user-serviceable product which allows for servicing of the four internal 3.5-inch SATA hard drives in the enclosure.



.....
Important: Only WD hard drive assemblies can be inserted into the network storage system enclosure.

In the event a fault occurs and you would like to service the device yourself, visit WD Technical Support at support.wdc.com and search the knowledge base article 2569 for detailed instructions on obtaining a replacement drive. When contacting Technical Support, have the following items ready: serial number of the device, date of purchase, and the serial number of the internal hard drive(s) which require replacement. Once you have received the replacement drive(s), follow the steps below to service the network storage system.

Before getting started, power off the unit and disconnect all of its cables.

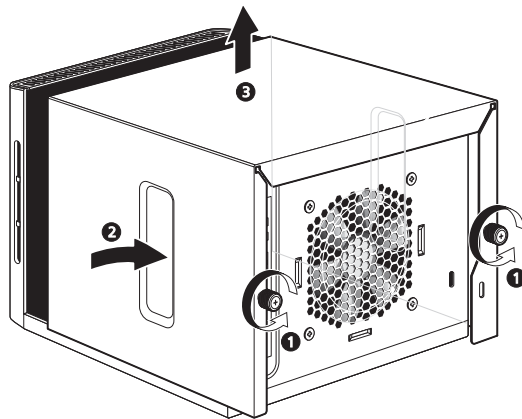
ESD precautions

Electrostatic discharge (ESD) can damage the processor, disk drives, mainboard, memory modules, and other notebook components. Always observe the following precautions before you install a hard drive.

- Do not remove a component from its protective packaging until you are ready to install it.
- Do not touch the component pins, leads, or circuitry.
- Wear a wrist grounding strap and attach it to a metal part of the computer before handling components. If a wrist strap is not available, maintain contact with the computer throughout any procedure requiring ESD protection.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and foam packing.

To replace an internal drive:

1. Turn off the system and all the peripherals connected to it.
2. Unplug all cables from the power outlets.
3. Place the enclosure on a flat, stable surface.
4. Observe ESD precautions when handling a system component.
5. Remove the system cover.
 - (a) Loosen the two captive screws on the rear of the system cover.
 - (b) Slide the cover towards the back of the system until the tabs on the cover disengage with the slots on the unit.
 - (c) Lift the cover to remove it, then set it aside.

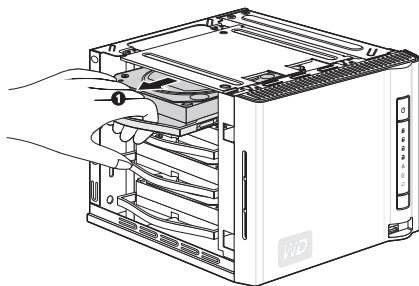


6. Remove the drive from the drive bay.

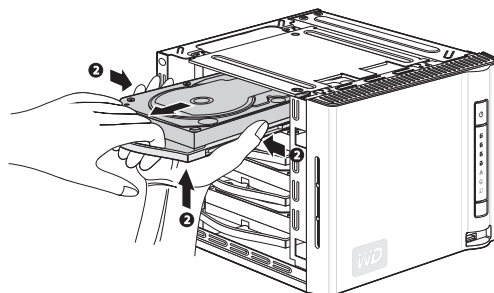


CAUTION: When pulling out the hard drive using the mounting rails handle, use your hand to support it from underneath so it does not fall.

- (a) Pull on the center of the mounting rails handle and move the assembly from side to side to disengage the side latches. Carefully slide the drive forward approximately 1 inch from its bay.

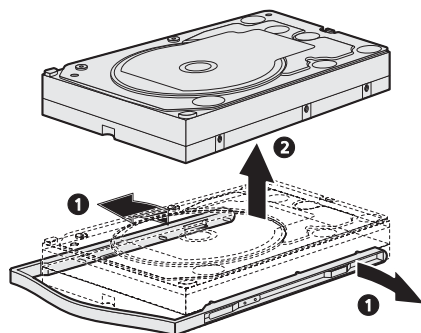


- (b) While pulling out the drive assembly with one hand, use your other hand to support the drive while sliding it out of the enclosure.



7. Remove the drive carrier.

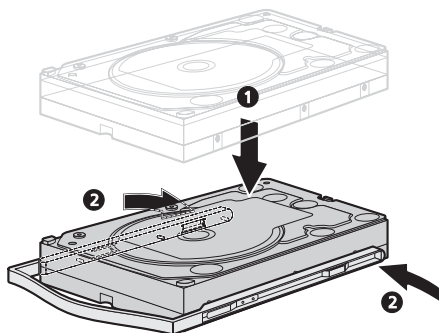
- (a) Flex the back pin of the side rail from the hard drive and gently pull the side-rail down away from the hard drive.
- (b) Remove the drive from the drive carrier.



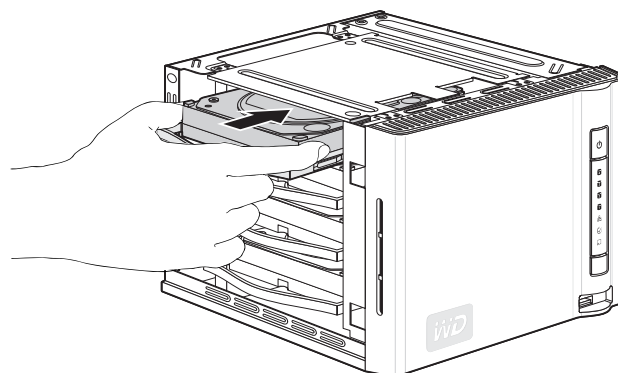
8. Remove the new hard drive from its packaging.

9. Install the new drive into the drive carrier.

- (a) Insert the new drive into the drive carrier.
- (b) Flex the left and right-side rail and insert the pins into the drive's mounting holes.

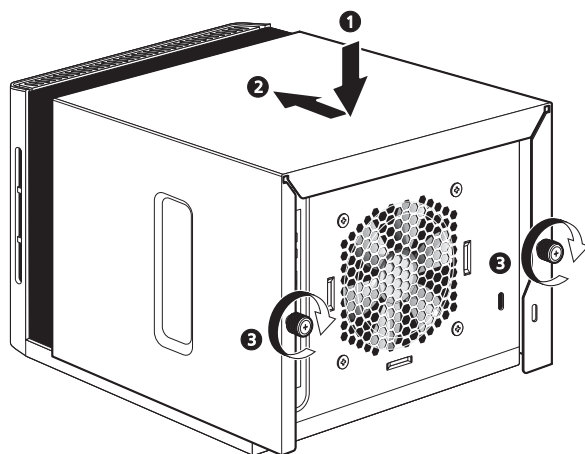


10. Slide the drive carrier all the way into the drive bay, then **push directly on the drive** (not on the mounting rails) until the assembly latches securely into place.



11. Replace the system cover.

- (a) Carefully place the system cover on the unit so that the tabs on the cover align with the slots on the unit.
- (b) Slide the cover toward the front of the unit until it is fully closed.
- (c) Tighten the captive screws on the rear of the unit.



12. Reconnect the cables and power on the unit.

13. Set up the new drive for RAID configuration.

For related instructions, refer to “Manage RAID” on page 57.

14

Troubleshooting

For any issue, first ensure that you are using the latest firmware for WD ShareSpace. The latest firmware includes the latest network and SATA disk drivers. See “Update (Firmware)” on page 38 for instructions.

First steps checklist

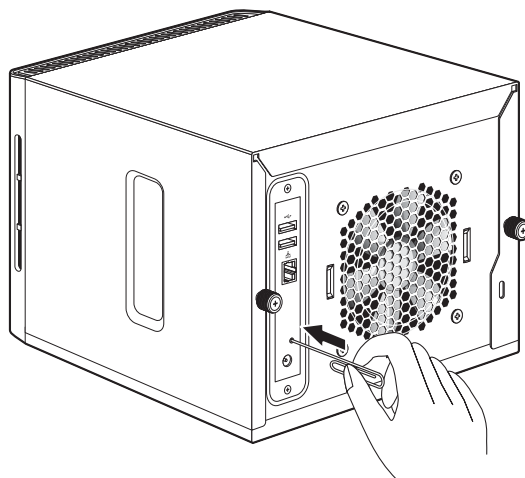
- AC power available at the wall outlet?
- Are the power supplies plugged in? Check the AC cable(s) on the back of the chassis and at the AC source.
- Are all cables correctly connected and secured?
- Are all peripheral devices installed correctly?
- Are all device drivers properly installed?
- Did you press the power button on the front panel to turn the device on (power indicator should be lit)?
- Is the power cord properly connected to the device and plugged into an outlet for 100-127 V or 200-240 V?

Resetting the system

You can perform either a hardware or software reset when resetting the network storage system.

To reset the system using the reset button:

1. Carefully turn the device around so that you have access to the back of the unit.
2. Ensure that the device is powered on and that the LAN connection at the back of the device is active (designated by a green light).
3. Locate a single, small opening in the back of the device. The reset button is inside this opening.
4. Insert the end of an unfolded paperclip into the opening, then press and hold the reset button with the paperclip end (*Do not release the button*).
5. Continue holding the reset button for about seven seconds until the HDD LEDs on the front panel light up. After 14 seconds, the HDD LEDs turn amber.



6. Release the reset button by removing the paperclip. The device will automatically reboot itself.

The reset operation is complete when the device has rebooted and the LAN connection lights and HDD LEDs are on. A successful reset results in restoring the device name, IP address, and admin user name and admin password to factory default (WDShareSpace, DHCP client, and admin).

To reset the system using the Network Storage Manager:

For detailed instructions, see “To restore the device to factory defaults:” on page 42.

Hardware diagnostic testing

This section provides a detailed approach to identifying a hardware problem and locating its source.



.....

CAUTION! Before disconnecting any peripheral cables from the system, turn off the network storage system and any external peripheral devices. Failure to do so can cause permanent damage to the network storage system and/or the peripheral device.

1. Turn off the network storage system and all external peripheral devices.
2. Make sure the power cord is plugged into a properly grounded AC outlet.
3. Turn on the device. If the power indicator on the front panel does not light, see *“Power indicator does not light.”* on page 100.

Specific problems and corrective actions

The following contains specific problems that may arise during the use of your server. Possible solutions are listed for each problem.

Power indicator does not light.

Do the following:

- Make sure the power button on the control panel is turned on.
- Make sure the power cord is connected correctly.
- Make sure that the wall outlet has power. Test it by plugging another device.

HDD activity indicator does not light.

If the drives are pre-installed, contact WD Technical Support (support.wdc.com). Make sure that WD hard drives are installed in the network storage system.

Can I back up all data from a USB hard drive with multiple partitions to the device?

No. Only data stored on the first partition of the USB hard drive is backed up to the network storage system.

System cannot connect to a network and network status indicator does not light.

- Make sure the network cable is securely attached to the correct connector on the rear panel of the device.
- Try a different network cable.
- Make sure switch or router has power.

Do the following:

- Check the cabling and network equipment to make sure that all cables are properly connected.
- Try another port or hub on the switch.

Cannot view web user interface in the web browser.

Make sure JavaScript is enabled in your browser. The following describes how to enable JavaScript using Internet Explorer 6.0 and Mozilla Firefox (1.0 and 1.5) for Windows.

To enable JavaScript in Internet Explorer 6.0:

1. On the **Tools** menu, click **Internet Options**.
2. Click the **Security** tab, then click **Custom Level**.
3. Scroll down to Active Scripting, then click **Enable**.
4. Click **OK**.

To enable JavaScript in Mozilla Firefox 1.0:

1. On the **Tools** menu, click **Options**.
2. Click **Web Features**.
3. Click **Enable JavaScript**, then click **OK**.

To enable JavaScript in Mozilla Firefox 1.5+:

1. On the **Tools** menu, click **Options**.
2. Click **Content**.
3. Click **Enable JavaScript**, then click **OK**.

I received a banner warning message, email alert, or pop-up screen indicating that a volume has failed.

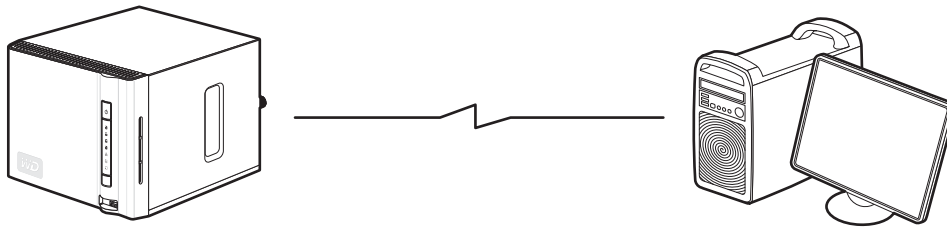
Do the following:

1. Verify hard drive status in the Disk Manager submenu. See “Disk Manager” on page 53. If the status of any drive is “Failed,” visit WD Technical Support at support.wdc.com and search the knowledge base article 2569 for detailed instructions on obtaining a replacement drive.
2. If Disk Manager does not indicate that a hard drive has failed, power cycle the device.
3. If the volume that failed is a new volume, try rebuilding the RAID array. See “Manage RAID” on page 57 for details. If this does not resolve the problem, visit WD Technical Support at support.wdc.com and search the knowledge base article 2569 for detailed instructions on obtaining a replacement drive.

My router has failed or is not available. How do I access my data in the device?

Do the following:

1. Connect the device directly to the computer's Ethernet port.



2. See “Mapping a Network Drive” on page 14 for instructions on how to access data in the device.

I received the message “iTunes server cannot find the path to /Public/Shared Music” or am having problems sharing photos or video

The iTunes server service requires the presence of the '/Public/Shared Music' share folder. Do not rename or delete Shared Music if you want to use the iTunes server. You must recreate or rename the '/Public/Shared Music' share if it has been deleted or renamed. Renaming or deleting any of the default shares (Shared Music, Shared Photos, or Shared Videos) could result in file sharing disruption.

How do I manually create an SSL certificate and key on a Linux system?

Do the following:

1. Generate a RSA private key by typing the following commands:

```
/usr/bin/openssl genrsa 1024 > server.key
```

```
/bin/cat server.key
```

From the Mozilla Firefox browser, select **Tools**.
2. Copy and paste to the Key field of the SSL Certificate/Key on the Advanced Setup page.
3. Create a self-signed certificate by typing the following commands:

```
/usr/bin/openssl req -new -key server.key -x509 -out server.crt
```

```
/bin/cat server.crt
```
4. Copy and paste to the Certificate field of the SSL Certificate/Key on the Advanced Setup page.

System Events

The following table describes the event types that are recorded in the system log.

Event type and Event ID	Event state	Event value	Critical	Warning
System events				
Startup	[none]			
Abnormal Shutdown	[none]			✓
Shutdown	[none]			✓
Reboot	[none]			✓
Software Update	Succeeded	Version		
Software Update	Failed			✓
Factory Default	Succeeded			
Configuration Restore	Succeeded			
Configuration Restore	Failed			✓
iTunes Directory	Not Exist			✓
Fan thermal events				
Fan 1	Normal	RPM		
Fan 1	Failed*		✓	✓
Thermal 1	Normal	Degrees		
Thermal 1	Exceeded the threshold (Overheated)	Degrees	✓	✓
HDD SMART events				
HDD [1,2,3,4]	HDD SMART OK			
HDD [1,2,3,4]	HDD SMART fail		✓	✓

Event type and Event ID	Event state	Event value	Critical	Warning
Volume events				
Volume [1,2]				
Volume [1,2]	RAID volume in normal mode			
Volume [1,2]	RAID volume in degraded mode		✓	✓
Volume [1,2]	RAID(0,1,5) volume resyncing	Progress		✓
Volume [1,2]	Sent if volume could not be recovered		✓	✓
Volume [1,2]	Volume doesn't exist		✓	✓
Volume [1,2]	Volume created			✓
Volume [1,2]	Volume deleted			✓
Volume [1,2]	Volume modified			
Volume usage events				
Volume [1,2]				
Volume [1,2]	Volume has 25~100% free capacity			
Volume [1,2]	Volume has more than 10% free capacity			
Volume [1,2]	Volume has more than 5% free capacity			
Volume [1,2]	Volume has reached 80% capacity			✓
Volume [1,2]	Volume has reached 95% capacity		✓	✓
Volume [1,2]	Volume has reached full capacity		✓	✓
Volume [1,2]	Volume had NOT been mounted		✓	✓
Network events				
LAN 1	Link Ok	Speed (Mbps: 1000/100/10)		
LAN 1	Link down			✓
LAN 1	Use dynamic IP address got from DHCP	IP address		
LAN 1	Can not get IP address from DHCP, use default	IP address		
LAN 1	Use static IP address	IP address		
USB events				
USB [1]	One-touch backup to external drive did not finish because external drive is full		✓	✓
USB [1,2,3]	USB disk insertion			
USB [1,2,3]	USB disk safely removed			

Event type and Event ID	Event state	Event value	Critical	Warning
USB [1,2,3]	USB disk unsafely removed			✓
USB [1,2,3]	USB disk format OK			
USB [1,2,3]	USB disk format fail			
User events				
[User ID]	User quota is normal			
[User ID]	User quota reached 90%			
[User ID]	User quota is full			✓
[User ID]	User created			
[User ID]	User deleted			
[User ID]	User modified			
Group events				
[Group ID]	Group created			
[Group ID]	Group deleted			✓
[Group ID]	Group modified			
Other events				
Volume [1,2]	Volume extend failed		✓	✓
Volume [1,2]	Volume resync failed		✓	✓

* A fan failed event is issued when the device temperature is greater or equal to 40°C (104°F).

Appendix

Regulatory Compliance

FCC Class B Information

This device has been tested and found to comply with the limits of 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 unit 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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. Any changes or modifications not expressly approved by WD could void the user's authority to operate this equipment.

The following booklet, prepared by the Federal Communications Commission, may be helpful: *How to Identify and Resolve Radio/TV Interference Problems*. This booklet is Stock No. 004-000-00345-4 available from the US Government Printing Office, Washington, DC 20402.

The provided Ethernet cable must be used between the unit and network connection to comply with FCC Part 15 Class B and EN-55022 Class B.

ICES/NMB-003 Compliance

Cet appareil de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Canadian ICES-003 Class B.

Safety Compliance

Approved for US and Canada. CAN/CSA-C22.2 No. 60950-1, UL 60950-1: Safety of Information Technology Equipment.

Approuvé pour les Etats-Unis et le Canada. CAN/CSA-C22.2 No. 60950-1 : Sûreté d'équipement de technologie de l'information.

This product is intended to be supplied by a listed limited power source, double insulated, or direct plug-in power unit marked "Class 2."

CE Compliance for Europe

Verified to comply with EN55022 for RF emission; EN-55024 for Generic Immunity, as applicable; and EN-60950 for Safety.

Environmental Compliance (China)

有毒有害物质或元素名称及含量标识
Toxic / Hazardous Substances and Elements Table

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
机架 chassis	×	○	○	○	○	○
外部盖板 external covers	×	○	○	○	○	○
机械组合件 mechanical assemblies	○	○	○	○	○	○
冷却组合件 cooling assembly	○	○	○	○	○	○
空气传动设备 air-flowing devices	○	○	○	○	○	○
电源 power supply	○	○	○	○	○	○
处理器模块 processor module	×	○	○	○	○	○
内存模块 memory modules	×	○	○	○	○	○
电池 batteries	○	○	○	○	○	○
电缆组合件 cable assemblies	○	○	○	○	○	○
存储设备 storage device	×	○	○	○	○	○
有 mech 的电路卡 circuit cards with mech	×	○	○	○	○	○
无 mech 的电路卡 circuit cards w/o mech	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363—2006规定的限量要求以下。

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363—2006规定的限量要求。

环保使用期限 (EPUP) 的免责条款：EPUP 规定的具体期限仅为符合中华人民共和国的相应的法律规定，并非代表 IBM 向客户提供保证或负有任何义务。EPUP 中假定客户按照操作手册在正常情况下使用本产品。对于本产品中配备的某些组合件（例如，装有电池的组件）的 EPUP，其效力可能低于本产品的 EPUP。

Warranty Information

Obtaining Service

WD values your business and always attempts to provide you the very best of service. If this Product requires maintenance, either contact the dealer from whom you originally purchased the Product or visit our product support website at support.wdc.com for information on how to obtain service or a Return Material Authorization (RMA). If it is determined that the Product may be defective, you will be given an RMA number and instructions for Product return. An unauthorized return (i.e., one for which an RMA number has not been issued) will be returned to you at your expense. Authorized returns must be shipped in an approved shipping container, prepaid and insured, to the address provided on your return paperwork. Your original box and packaging materials should be kept for storing or shipping your WD product. To conclusively establish the period of warranty, check the warranty expiration (serial number required) via support.wdc.com. WD shall have no liability for lost data regardless of the cause, recovery of lost data, or data contained in any Product placed in its possession.

Limited Warranty

WD warrants that the Product, in the course of its normal use, will be free from defects in material and workmanship for a period of three (3) years, unless otherwise required by law, and will conform to WD's specification therefor. This limited warranty period shall commence on the purchase date appearing on your purchase receipt. WD shall have no liability for any Product returned if WD determines that the Product was stolen from WD or that the asserted defect a) is not present, b) cannot reasonably be rectified because of damage occurring before WD receives the

Product, or c) is attributable to misuse, improper installation, alteration (including removing or obliterating labels and opening or removing external enclosures, unless the product is on the list of limited user-serviceable products and the specific alteration is within the scope of the applicable instructions, as found at support.wdc.com), accident or mishandling while in the possession of someone other than WD. Subject to the limitations specified above, your sole and exclusive warranty shall be, during the period of warranty specified above and at WD's option, the repair or replacement of the Product. The foregoing warranty of WD shall extend to repaired or replaced Products for the balance of the applicable period of the original warranty or ninety (90) days from the date of shipment of a repaired or replaced Product, whichever is longer.

The foregoing limited warranty is WD's sole warranty and is applicable only to products sold as new. The remedies provided herein are in lieu of a) any and all other remedies and warranties, whether expressed, implied or statutory, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and b) any and all obligations and liabilities of WD for damages including, but not limited to accidental, consequential, or special damages, or any financial loss, lost profits or expenses, or lost data arising out of or in connection with the purchase, use, or performance of the Product, even if WD has been advised of the possibility of such damages. In the United States, some states do not allow exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GNU General Public License ("GPL")

Firmware incorporated into WD ShareSpace includes third party copyrighted software licensed under the GPL ("GPL Software"). In accordance with the GPL: 1) the source code for the GPL Software may be obtained at support.wdc.com/download/gpl; 2) you may re-use, re-distribute and modify the GPL Software; 3) with respect solely to the GPL Software, it is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, to the extent permitted by applicable law; and 4) a copy of the GPL is included on the enclosed CD, may be obtained at www.gnu.org, and may also be found at support.wdc.com/download/gpl.

WD Service and Support

If you need additional information or help during installation or normal use of this product, visit our product support website at support.wdc.com and choose from these topics:

- **Warranty Services** — Obtain warranty information, warranty status, extended warranty, product replacement, RMA status, and shipping and packaging information.
- **Downloads Library** — Download installation software and drivers.
- **Technical Information** — Access product specifications, technical tips, and the online forum.
- **Knowledge Base** — Explore our expert knowledge base and Frequently Asked Questions.
- **Service Partners** — Find available WD-approved service and support in your region.
- **Contact Support** — Contact a support representative by e-mail.
- **Rebates** — Check the status of rebate submissions.
- **Localized Support** — Display service and support information in various languages.

When contacting WD for support, have your WD product serial number, system hardware, and system software versions available.

support.wdc.com
www.westerndigital.com

800.ASK.4WDC	North America
949.672.7199	Spanish
+800.6008.6008	Asia Pacific
+31.20.4467651	EMEA

Western Digital
20511 Lake Forest Drive
Lake Forest, California 92630 U.S.A.

Information furnished by WD is believed to be accurate and reliable; however, no responsibility is assumed by WD for its use nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of WD. WD reserves the right to change specifications at any time without notice.

Western Digital, WD, the WD logo, and MioNet are registered trademarks in the U.S. and other countries; and WD ShareSpace and WD Discovery are trademarks of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies.

© 2008 Western Digital Technologies, Inc. All rights reserved.

4779-705006-A01 Jul 2008

Index

A

- admin login password
 - change 38
- audio
 - streaming in iTunes 69
- Auto backup 87

B

- backup button 7
- backup data
 - system to USB hard drive 88
 - USB hard drive to system 88

C

- CE compliance 101
- change password
 - downloader 67
- China RoHS 102
- Compliance, regulatory 101
- configuration menu 40

D

- data backup 87
- date & time 29
- destination share
 - setup 62, 66
- device name 29
- disk manager 53
- domain
 - set 51
- download queue
 - change order 85
- download task
 - create 84
- Downloader 82
 - accessing 82
 - command icons 84
 - features 82
 - UI overview 83
 - using 84
- Downloader destination share
 - setup 66
- Downloader password
 - change 67
- Downloader settings
 - configure 86
- downloads menu 66
- drive

- replacing 90
- Drive format 1

E

- e-mail notifications
 - setup 36
- Environmental compliance (China) 102
- ESD precautions 90
- Europe, CE compliance 101
- extend span 45

F

- FCC Class B information 101
- features
 - backup button 7
 - format and configuration 5
 - ports 7
 - reset button 7
 - security slot 7
 - system view 5
- file sharing protocols 60
- firmware update 38
- folder share permissions 73
- folder shares 59
 - access rights 73
 - creating 23
- Format and configuration 1
- FTP
 - accessing data 81
- FTP logs 78

G

- general setup 35
- general setup settings
 - configure 35
- getting started 1
- GNU general public license 103
- GPL software 103
- group account
 - create 72
 - delete 73
 - modify 73
- group accounts
 - assign access rights 74

H

- hardware setup
 - check network setup 8

connect the system 8
HDD standby
enable 45

I

ICES/NMB-003 compliance 101
Indicators 6
indicators 6
initialize system 9
introduction 1
iTunes server service 68
enable 69
streaming audio 69

K

kit contents 2

L

LAN submenu 48
Limited warranty 102
log settings
configure 79
logs
FTP 78
settings 79
system 76

M

manage RAID 57
configure 58
options 58
manage volume 54
options 56
media 68
iTunes 68

N

network 47
LAN 48
services 49
workgroup setup 50
network drive
mapping 14
network mode 30
network service
enabling 50
network settings configuration 48
Network Storage Manager 25
accessing 20, 25
Mac 20, 25
using Linux 20, 25
using Windows 20, 25

advanced mode 33
basic mode 28
features 26
media tab 68
network tab 47
status tab 76
storage tab 52
system tab 34
toolbar 27
UI overview 27
users tab 70
using 25

Network storage system
using 87

O

Obtaining service 102

P

permissions
folder share 73
USB share 75
pop-up message alert
setup 37
ports 7
power button 5
pre-installation requirements 3
Product registration 4

Q

quota
configure 64

R

RAID
default configuration 58
RAID levels 57
RAID management 54
RAID options 58
reboot 31
Registration, product 4
Regulatory compliance 101
remote access
setup 80
replacing a drive 90
reset button 7
restore
system to factory defaults 42
RoHS 102
RSA key
generate 44

S

- Safety compliance 101
- scheduled downloads
 - creating 82
- security slot 7
- Service, WD 102, 104
- share
 - access data 17
 - using WD Discovery 17
 - create 23, 60
 - delete 24
- shares 59
 - browse 17
- shortcut creation 18
- shutdown 31
- shutdown/reboot 31
- Software, GPL 103
- source share folder
 - setup 63
- specifications 1
- SSL certificate
 - generate 44
- status 76
 - logs
 - CIFS 78
 - FTP 78
 - settings 79
 - system status 76
- storage 52
 - disk manager 53
 - downloads 66, 67
 - change password 67
 - setup destination share 66
 - folder shares 59
 - quota 63, 65
 - datavolume user quota 65
 - manage quota 63
 - user 65
 - usb shares 61
 - usb disk 61
 - usb to network storage system backup 62
 - WD ShareSpace to USB backup 63
 - volumes 54
 - manage RAID 57
 - manage volume 54
 - volumes and RAID management 54
- Support, WD 104
- system 34
 - admin password 38
 - advanced 42
 - alerts setup 36
 - configuration 40
 - general setup 35
 - remote access 51

- restart 46
- update firmware 38
- UPS 45
- system configuration settings
 - restore 41
 - save 41
- system events specification 98
- system ID LED
 - turn on 43
- system logs 76
- system logs records
 - event type 77
 - system conditions or error 77
- system requirements 3
- system status 31, 76
- system tour 7
 - LED indicators 6
- system view 5

T

- troubleshooting 94
 - checklist 94
 - hardware diagnostic testing 95
 - problems 95
 - backup from USB with multiple partitions 95
 - cannot connect to a network 96
 - HDD LED no light 95
 - LAN LED no light 96
 - no video 96
 - power indicator no light 95
 - resetting the system 94

U

- UL 101
- Underwriters Laboratories Inc. 101
- UPnP NAT Traversal
 - enabling 50
- UPS 45
- UPS service
 - enabling 46
- USB Disk tab 61
- USB hard drive
 - disconnect 62
 - format 61
 - USB sharing 87
- USB share
 - assign access rights 75
- USB share permissions 75
- user account
 - assign privilege 74
 - create 21, 71
 - delete 72

- modify 71
- user quota 65
 - modify 65
- users
 - creating 20
 - folder shares 73
 - groups 72
 - usb shares 75
- users tab 70

V

- volume
 - delete 55
 - modify 55
- volumes 54

W

- Warranty 102
- Warranty, limited 102
- WD
 - service 104
 - support 104
- WD Discovery
 - browse network shares 17
 - desktop shortcut creation 18
 - identify LED 18
- WD ShareSpace
 - using
 - access data 17
 - shares 87
- workgroup
 - create 51
- workgroup menu 50