



# User Guide

## NAS 4.0 Adapter (NAS40ESU)

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### Technical Support

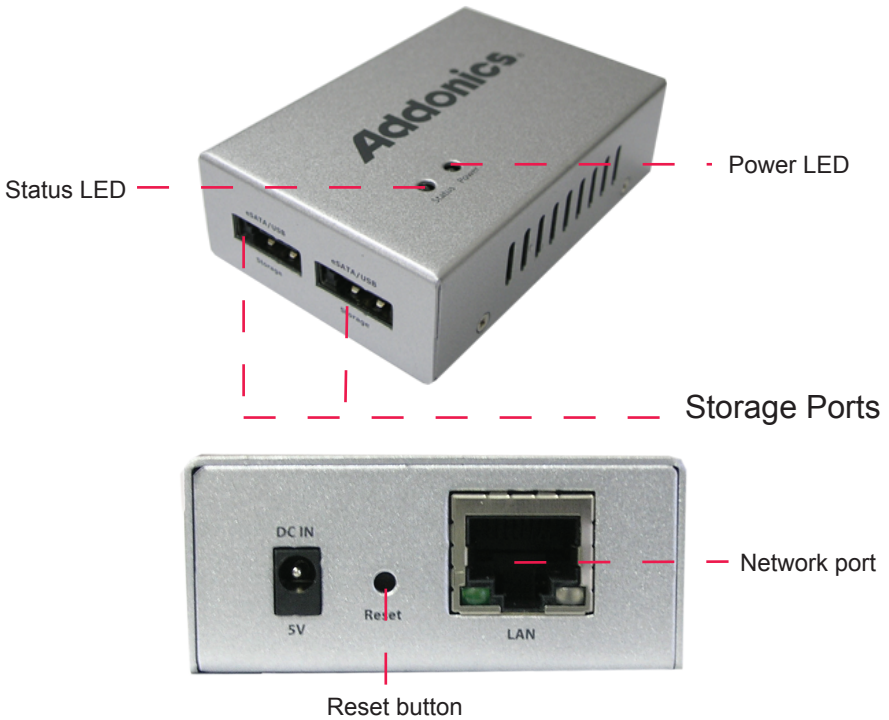
If you need any assistance to get your unit functioning properly, please have your product information ready and contact Addonics Technical Support at:

**Hours: 8:30 am - 6:00 pm PST**

**Phone: 408-453-6212**

**Email: <http://www.addonics.com/support/query/>**

## Overview



**Storage Ports:** eSATA (1.5Gbps) or USB (2.0). Each port supports one eSATA device and one or more USB based devices, up to 16 physical drives.

**Network Port:** Supports 10/100/1000.

**Power LED:** glows when unit is on.

**Status LED:** glows steady when unit is idle, other states are dark or dim to indicate a problem, slow or fast blinking between dark and bright or dim and bright to indicate the unit is busy.

## Quick Install

In order to start sharing storage as soon as possible, follow these steps:

1. Attach the NAS 4.0 unit to a network with a DHCP server present (most home routers provide this by default).
2. Follow the steps described in the Initial Setup section below.
3. Attach one hard disk. The Status LED should begin to blink after a few moments, then settle back to a steady glow. Confirm at least one partition was detected using the View Drive Information feature in the Configuration Menu. If not, the drive may be formatted with ext3 or XFS using the Format Drive feature in the Configuration Menu.
4. Define at least one share, granting either read-only or full access rights to "Everyone."

## Installation

### Network Connection

The NAS 4.0 unit is factory configured for dynamic IP addressing (DHCP client). Connect the unit to a network (router or switch) where DHCP is supported. Static IP may be assigned later after initial setup.

### Storage

The NAS 4.0 unit has two EUHP (eSATA USB Hybrid Port) connectors, supporting eSATA 1.5Gbps or USB 2.0 devices. The eSATA connections do not support FIS switching for port multipliers, only one physical unit may be connected to each port using eSATA. Through the use of USB hubs up to a total of 16 physical units including eSATA and USB can be connected. One SATA port multiplier may be connected using USB; however, with more than one such port multiplier connected only one will function – others will not be recognized at all.

Each physical unit may be formatted with up to 4 individual partitions using a Master Boot Record (MBR), or up to 15 individual partitions using a GUID Partition Table (GPT). Supported file systems are: FAT32, ext2, ext3, ext4, XFS, and NTFS. The NAS 4.0 unit will by far provide the best performance when using an external drive connected using eSATA and formatted with the XFS file system.

Note: Initializing a drive with MBR is limited to drives less than 2TB in capacity with up to 4 partitions total. For drives greater than 2TB in capacity or if more than 4 partitions are desired, the drive must be initialized using a GPT boot record.

## The NAS 4.0 Unit Boot Process

Upon powering up the unit, the status LED will blink at first between bright and dim, then remain dark for a few moments, then begin to blink between bright and dark for a while and finally settle down to glowing steadily. Once this pattern is complete the unit is ready to communicate.

This process normally takes about a minute or less, but may take longer depending on the complexity of the configuration, storage and LAN connections. With the 240 possible file systems, booting may take several minutes or longer.

## Resetting the NAS unit

Should a problem arise with the NAS 4.0 unit or its configuration, the unit may be reset simply by disconnecting power and reconnecting after a few moments. If this doesn't clear the problem, the unit may be returned to its factory configuration by gently pressing and holding the reset button between the power and LAN connectors until the Status LED blinks slowly, then rapidly. After releasing the Reset button while blinking slowly there will be no changes. After releasing the button once the Status LED blinks rapidly, the Status LED will continue to blink for a while, and may possibly glow steadily for a while as well. Eventually it will begin the boot process, beginning with blinking between bright and dim. Once the boot process is complete and the LED is glowing steadily again, all settings will have been cleared and the unit is ready to communicate with all settings reset to the factory default – including the network and device name settings.

If the process appears to become stuck or takes too long to complete, you can try disconnecting power, then reconnect and after the Status LED blinks bright and dark a few times, try the Reset button again.

## Initial Setup

**Windows:** All of the NAS 4.0 unit's functions and features are configured using a Web Interface. Once the hardware is installed, access the Web Interface with a web browser on a computer attached to the same network by typing in "http://addnas" - this will work on most Windows systems. Be sure the computer accessing the NAS has the Workgroup name set to WORKGROUP.

**MAC:** Mac users may need to determine the NAS 4.0 unit's IP address by opening a Terminal window and typing the following command:

```
smbutil lookup addnas
```

This utility should return the NAS 4.0 unit's IP address. Typing this address into the web browser should open the NAS 4.0 unit's Web Interface.

**Linux:** Linux users may need to determine the NAS 4.0 unit's IP address if Windows name resolution support is not fully installed and configured, by examining the DHCP server's clients table and attempting to connect to each unidentified IP address using a browser until the NAS 4.0 unit's Web Interface appears.

Once you have connected to the Web Interface, the Initial Setup page will appear:

**Addonics TECHNOLOGIES** NAS Manager Device Name: ADDNAS  
Workgroup: workgroup  
Firmware: v54 20120327-150809

Friday 29 June 2012 / 11:08 MDT

Home Configuration Sharing P2P/MLDonkey

Welcome to the Initial Setup wizard.

This wizard will guide you through the steps necessary to configure your NAS for use in your home or office network.

Please click "Next" when you are ready...

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Click Next, then set a custom password for the admin account. The admin account name may also be changed.

**Addonics TECHNOLOGIES** NAS Manager Device Name: ADDNAS  
Workgroup: workgroup  
Firmware: v54 20120327-150809

Friday 29 June 2012 / 11:09 MDT Administrator: admin

Home Configuration Sharing P2P/MLDonkey

Initial User & Password Setup

Admin Username:

New Password:

Confirm Password:

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Next, set up the Date and Time. Choose a city nearest you in the same Time Zone and be sure the Date and Time are correct.

**Addonics TECHNOLOGIES** NAS Manager Device Name: ADDNAS  
Workgroup: workgroup  
Firmware: v54 20120327-150809

Friday 29 June 2012 / 11:10 MDT Administrator: admin

Home Configuration Sharing P2P/MLDonkey

Initial Date & Time Setup

Current Date: Friday 29 June 2012  
Current Time: 10:10:22 PDT

TimeZone:

New Date:

New Time:  :

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Finally, review and confirm the settings:

The screenshot shows the Addonics NAS Manager web interface. At the top left is the Addonics Technologies logo. The main header area contains the text "NAS Manager" and a table with device information: Device Name: ADDNAS, Workgroup: workgroup, and Firmware: v54.20120327-150809. Below the header is a navigation bar with tabs for Home, Configuration, Sharing, and P2P/MLDonkey. The main content area displays a message: "Initial Setup Wizard Finished" and "Summary of settings:" followed by details: Admin Username: admin, New Date: Friday 29 June 2012, New Time: 10:10, and TimeZone: America/Los\_Angeles. A confirmation message states: "You have completed the initial setup wizard and you may now continue to update your settings." At the bottom of the main content area are two buttons: "Cancel" and "Update settings". A footer contains technical support contact information and a copyright notice for 2011 Addonics Technologies.

After clicking on the Update settings button, Initial Setup is complete.

## Sharing Files Using the NAS 4.0

### SMB (Windows Sharing)

Connecting to the NAS for direct file access through Windows Explorer is very similar to sharing files between Windows systems. Typing "\\ADDNAS" (or the NAS 4.0 unit's hostname if changed from the default) or the double-backslash followed by the NAS 4.0 unit's IP address is the easiest way to gain direct access quickly. After pressing Enter, the Explorer Window should show a list of the shares available. Opening any of the shares is like opening any other folder, except when accessing a share for the first time, Windows may request a username and password for access to the share (unless "Everyone" permissions have been changed from the default setting of NONE). Entering a valid username and password will open the folder with appropriate access rights to that user. If "NONE" permissions are set for that user on that share, Another username and password prompt will appear. After connecting to a share, Windows will use the same username and password for all connections until the Windows user logs off of Windows.

On Mac systems, on the Finder's Go menu choose "Connect to Server..." then in the server address box type "smb:///" followed by the NAS 4.0 unit's IP address.

On Linux systems, use the "Connect to share..." dialog found on the Nautilus or "File Manager" menu bar, then select Windows Share for the type and complete the remaining fields for share name, username and password. Information required to complete the connection and the system's response vary from one version of Linux to another, and should be expected to work about the same way as connecting to a share on an actual Windows PC.

## FTP Server

The NAS 4.0 FTP server works by offering a private “home” folder to each user with exclusive access to the resources through FTP. FTP cannot be used to access shares defined under the Sharing tab in the web interface. Each user will also have access to their private FTP space using SMB.

## Getting Started with MLDonkey

MLDonkey is a powerful, multi-protocol Peer-to-Peer (P2P) client included with the NAS 4.0 unit. The features and capabilities of this tool are beyond the scope of this user guide, the steps below will show how to get MLDonkey up and running. For more information on how to use MLDonkey, visit <http://mldonkey.sourceforge.net>.

### MLDonkey Basic Setup

The MLDonkey client requires one partition formatted with either ext3 or XFS. The NAS 4.0 unit's format utility can format one physical unit with a single partition using all space if needed.

Under the P2P/MLDonkey tab, choose the drive you wish to create the file structure on and click Save. *Please note: this menu will permit setting up folders on incompatible file systems. If this is done, MLDonkey will not start or may not be able to download files.*

When the folder structure is set up, a page will appear stating this is done. Click the START button. NOTE: The MLDonkey setup page will create a share on the selected drive called MLDonkey. This share will be configured with “None” permissions to “Everyone” as well as all existing users.

Next, a new page will appear stating MLDonkey is running. Click the link at the bottom of the page that reads “Launch MLDonkey Control Panel.”

A new tab will appear in the browser with the MLDonkey web interface. If MLDonkey is not fully initialized yet, the browser may report a failure to connect. If this happens, wait about one minute and try again, either by refreshing the page or clicking a “try again” button – this step varies depending on the browser used.

When first setting up, a prompt appears warning there is no password for the admin account. Click the space between the “DL” and “Input” buttons, then type the command “useradd admin” as shown, then add a password after a space.

**Note:** The MLDonkey admin account is not the same account as the NAS 4.0 unit's web interface admin account. It is recommended that the password matches for simplicity, but not necessary.

MLDonkey will perform most of the remaining steps automatically and connect to some servers on the Donkey network.

To download a file using the Donkey network, begin by clicking search, then enter some criteria and click the Search button. After a query message appears, click the "Search Results" button.

To download a Torrent, on the command bar type dllink followed by a space and the full URL path to the .Torrent file and press Enter or click Input. (example: "dllink <http://sampletorrent.com/path/dot-torrentfile.torrent>"). MLDonkey will parse the download and add it to the download queue automatically.

Files queued for download will appear in the MLDonkey share in the incoming/files folder when when complete.

**Note:** this folder has read-only permissions and cannot be changed.

## The Configuration Tab

The screenshot shows the Addonics NAS Manager web interface. At the top left is the Addonics Technologies logo. The main header is "NAS Manager". On the right, a status box displays: "Device Name: ADDNAS", "Workgroup: workgroup", and "Firmware: v54 20120327-150809". Below the header, a navigation bar shows "Home", "Configuration" (selected), "Sharing", and "P2P/MLDonkey". The main content area is titled "Configure the basic settings of the NAS" and lists the following options: "Update Admin Username and Password [Advanced]", "Configure User Home Directory Drive", "Change Current Date and Time", "Update Device/Workgroup Names", "Update FTP Port Number", "View Current Network Configuration", "Configure the Network Settings", "View Drive Information", "View User Samba and FTP Login Information", "Format Drive", "Safely Remove Drive", "Backup Internal System Configuration Information", "Reboot", and "Upgrade the System Firmware".

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## **Update Admin Username and Password**

Changes the web interface management login.

## **Configure User Home Directory Drive**

Determines which drive on the system carries the HOME directory for users. The user's home folder is used for FTP transfers and as a network share for private files. If a home directory is already defined it will be shown. Choose a volume and click Save. If any files exist in a previous Home directory they will be moved to the new location.

## **Change Current Date and Time**

Settings for time zone, date and time. Set time zone to a listed city nearby in the same time zone.

## **Update Device/Workgroup Names**

Settings for the NAS 4.0 unit's network name and Windows workgroup. Default setting is ADDNAS joined to WORKGROUP. Setting the workgroup name on all devices on the same network to match is strongly recommended. The Device name is used for accessing the Web Interface as well as browsing for the shared folders on the network.

## **Update FTP Port Number**

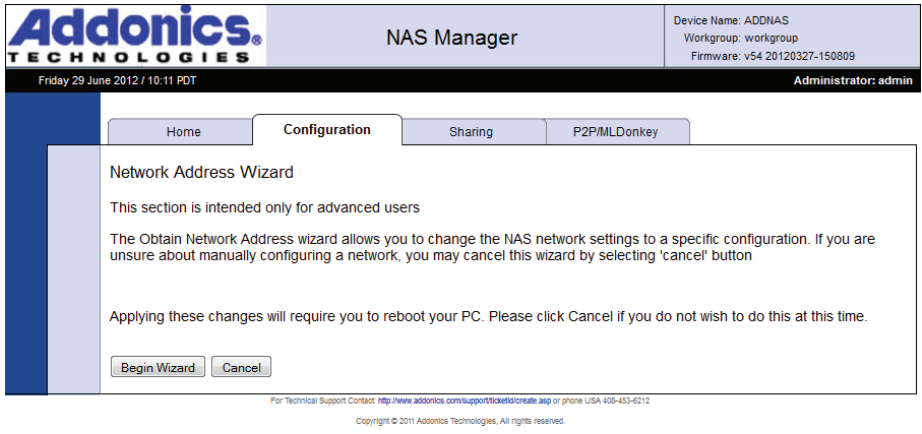
Changes the TCP Port used by the FTP server. Default is port 21. Note that some FTP clients will not be able to connect on alternate ports.

## **View Current Network Configuration**

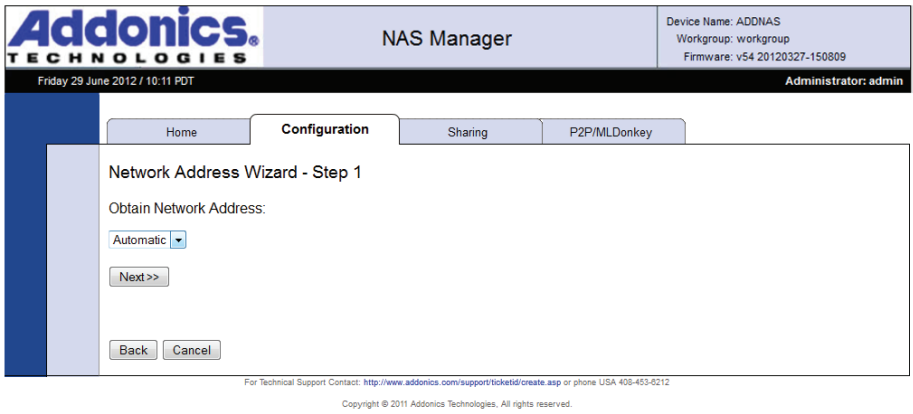
Displays details about the NAS 4.0 unit's current network settings. Includes device and network names as well as TCP/IP settings.

# Configure the Network Settings

Starts the network configuration wizard.



Choosing Automatic will configure the NAS 4.0 unit as a DHCP client and the configuration wizard will skip to the end. Choosing Manual configuration will proceed to Step 2.



Step 2 configures the NAS 4.0 unit's static IP address and subnet mask. To choose a working static IP address, make sure you meet these criteria:

1. The subnet mask must match the rest of the network exactly.
2. The IP address must match the router's IP address exactly where the subnet mask is "255."
3. The IP address cannot end in 0 or 255.
4. The IP address must not match any other system on the network.
5. The IP address should not be within the DHCP server's client pool.

Home

Configuration

Sharing

P2P/MLDonkey

## Step 2 : Network Address and Subnet Settings

Network Address:

 .  .  . 

Subnet Mask:

0  : 0  . 0  . 0 

Recommended subnet mask is 255.255.255.0

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The next step is to configure network connections. The gateway is usually the internal IP address for the router the NAS 4.0 unit is connected to. DNS entries are usually the same as used by the router's external network configuration (determined by your ISP). Setting an NTP server will synchronize the NAS 4.0 unit to a time server, usually on the Internet. This can be a name or IP address. Use the keywords "free NTP servers" on your preferred search engine if you wish to configure this feature and don't know of a server you can use.

Home

Configuration

Sharing

P2P/MLDonkey

## Step 3 : Gateway

Gateway:

 .  .  . 

DNS Servers:

 .  .  .  .  .  .  .  .  . 

NTP Server:

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When the wizard is complete by either choosing Automatic in Step 1 or completing Steps 2 and 3, a confirmation page will appear. Clicking the Finish button will apply the settings.

Home

Configuration

Sharing

P2P/MLDonkey

Finished Gathering Information. Click Finish to update the NAS with the new settings

Applying these changes will require you to reboot your PC. Please click Cancel if you do not wish to do this at this time.

Finish

Back

Cancel

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## View Drive Information

Displays details of all connected drives. **If network shares are configured for drives that have been disconnected, those drives will also appear in this list as unavailable.**

**Device:** The letter after "sd" is the drive's letter, in order of when the drive was first encountered by the NAS unit. The number at the end of the device label is the partition on the drive, in order of the drive's partition map.

**Vendor:** The drive's manufacturer.

**Model:** The drive's model number.

**Mount Point:** Used by the NAS 4.0 unit internally.

**Type:** The file system the partition is formatted with.

**Size:** The total space of the partition.

**Used:** Space in use on the partition.

**Available:** Remaining space available on the partition.

**% Used:** Percentage of the partition space in use.

Home

Configuration

Sharing

P2P/MLDonkey

Device	Vendor	Model	Mount Point	Type	Size	Used	Available	% Used
sda1	ATA		Gb649f5f-c67b-4188-a90c-d7e9fa5ede5c	xfs	78110 MB	7796 MB	70313 MB	10%

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## View User Samba and FTP Login Information

Displays a list of open sessions for file sharing of Windows sharing and FTP. The login username, the computer's hostname and IP address are listed for each session.

## Format Drive

Formats a specific drive using a choice of ext3 or XFS file systems.

*Caution: this function destroys data.*

Choose a drive to format. If the drive is greater than 2TB in capacity choose the GPT boot record, otherwise choose MBR. Finally, choose Linux EXT3 or Linux XFS for the file system. After clicking Format Drive, the format utility will request confirmation.

**Note:** *For highest possible performance, use the XFS file system.*

After clicking "Yes, I'm sure," the format utility will create and prepare one partition on the selected drive, using all space on the disk. A page will load next confirming the format is in progress. This page updates once every minute. Once formatting is complete, the page will change to state it is done. Click any of the tabs above the message to perform other tasks. If desired, this can be done before formatting is complete; however, the drive being formatted cannot be used until formatting is done and there

will be no further notifications.

## Safely Remove Drive

Closes all pending I/O to a specified drive then "unmounts" it for removal.

*Caution: best practice is to notify any and all users this will be done before proceeding to prevent data loss. Abruptly removing a physical drive without notifying users or using the Safely Remove Drive function may cause file system corruption and loss of data.*

## Backup Internal System Configuration Information

Saves or restores all of the NAS 4.0 unit's settings using a specified drive. Select the volume desired for backups. If backups exist on that volume they will be listed under Backups, with comments if present.

To create a backup, add a backup comment if desired then click Create Backup. To restore an existing backup, select the desired backup and click Restore Selected. The currently selected backup may also be deleted using the Delete Selected button. All three functions will request confirmation before proceeding.

## Reboot

Restarts the NAS 4.0 unit.

*Caution: best practice is to notify any and all users this will be done before proceeding*

## Upgrade the System Firmware

In the case of a firmware update release, this utility applies the update. Update will not proceed unless only one volume (one partition on one drive) is present. Instructions on updating firmware are provided with the firmware update.

*Caution: All of the NAS 4.0 unit's settings will be lost in the process of applying firmware. Make sure to notify any and all users this will be done to prevent data loss and use the Backup Internal System Configuration Information utility before proceeding.*

## The Sharing Tab

The screenshot shows the Addonics NAS Manager web interface. The top header includes the Addonics Technologies logo, the title "NAS Manager", and system information: "Device Name: ADDNAS", "Workgroup: workgroup", and "Firmware: v54 20120327-150809". The date and time are "Friday 29 June 2012 / 10:15 PDT" and the administrator is "admin". The "Sharing" tab is selected, showing options for "File Sharing", "Current Shared Folder Settings", "User Management", "Add a Shared Folder", "Rename a Shared Folder", "Remove a Shared Folder", and "Update Security Settings". A table with columns "Share Name", "Drive", and "Available?" is partially visible.

Share Name	Drive	Available?

## User Management

Shows current list of known users on the NAS 4.0 unit.

To delete a user, click the "Delete" link next to that username, then confirm.

To change a user's password, select the username just above "New Password," then enter the new password into the "New Password" and "Confirm Password" fields and click "Change Password."

To create a new user account, click "New User," then enter the new username and the initial password in the "New Password" and "Confirm Password" fields. If shared folders are defined on the system, select the default permissions granted to the new user for each share.

## Add A Shared Folder

Creates a new folder and shares it on the network. This function has several steps. The first page introduces the wizard. Click "Begin Wizard" to proceed.

<b>Addonics</b> TECHNOLOGIES	NAS Manager	Device Name: ADDNAS
		Workgroup: workgroup
Friday 29 June 2012 / 10:16 PDT		Firmware: v54 20120327-150809
		Administrator: admin
Home Configuration <b>Sharing</b> P2P/MLDonkey		
<h3>Add a Share Wizard</h3> <p>Welcome to the Add a Shared Folder Wizard, which guides you through the steps of adding a shared folder to the NAS. Be prepared to provide details such as the folder name and public or private access</p> <p><input type="button" value="Begin Wizard"/> <input type="button" value="Cancel"/></p>		
<small>For Technical Support Contact: <a href="http://www.addonics.com/support/tickets/create.asp">http://www.addonics.com/support/tickets/create.asp</a> or phone USA 408-453-6212</small>		
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**Step 1** is to define the name of the share. The share name will become the folder name on the drive.

Note: The shared folder name will be written to disk using all capital letters. If an existing folder of the same name appears and is not all capital letters, the NAS 4.0 considers that not a match and writes the same folder name in all capital letters anyway. This can cause unpredictable results if the drive is subsequently connected to a computer. If a folder exists of the same name with all capital letters, it will be shared without harming any data.

<b>Addonics</b> TECHNOLOGIES	NAS Manager	Device Name: ADDNAS
		Workgroup: workgroup
Friday 29 June 2012 / 10:16 PDT		Firmware: v54 20120327-150809
		Administrator: admin
Home Configuration <b>Sharing</b> P2P/MLDonkey		
<h3>Step 1: Create Shared Folder Name</h3> <p>New Shared Folder Name : <input type="text"/></p> <p><input type="button" value="Next &gt;&gt;"/></p> <p><input type="button" value="Back"/> <input type="button" value="Cancel"/></p>		
<small>For Technical Support Contact: <a href="http://www.addonics.com/support/tickets/create.asp">http://www.addonics.com/support/tickets/create.asp</a> or phone USA 408-453-6212</small>		
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**Step 2** is to select the drive the share is to be created on. The drive is identified by the drive letter and partition number, the vendor and model, and the mount point.

**Step 3** is to set the initial permissions for the new share. A permission setting for “Everyone” as well as each individual user is listed, with the default permission set to None. Once you have reviewed the permissions for all users and made any desired changes, clicking on “Create Share Folder” will complete the Wizard.

User Name	Full	Read Only	None
Everyone (Set Minimum Permissions)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Rename A Shared Folder

Changes the name of the directory as well as the share name for an existing shared folder. Select the share to change and type in a new name, then click “Rename Shared Folder.”

Note: The new shared folder name will be written to disk using all capital letters. If an existing folder of the same name appears and is not all capital letters, the NAS 4.0 considers that not a match and writes the same folder name in all capital letters anyway. This can cause unpredictable results if the drive is subsequently connected to a computer. If a folder exists of the same name with all capital letters, it will be shared without harming any data.



## **Remove a Shared Folder**

Deletes a share from the NAS 4.0 unit. As a precaution this screen requires the word “yes” is typed in as confirmation.

Note: Removing a shared folder also deletes the associated directory and all of its contents from the drive. It is however possible to delete the share without destroying any data: simply disconnect the drive physically from the NAS 4.0 unit before proceeding.

## **Update Security Settings**

Changes permissions for a share for each user and the general permission for “Everyone.” Select the share to change, then click next and another page will appear with current permissions. Make desired changes and click Update to apply.

# CONTACT US

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