# Y.E.S. Box N2100

# Your Enhanced Storage

# User's Manual

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**About This Manual**

All information in this manual has been carefully verified to ensure its correctness. In case of an error, please provide us with your feedback.   Thecus Technology Corporation reserves the right to modify the contents of this manual without notice.

**Limited Warranty**

Thecus Technology Corporation guarantees all components of Thecus N2100 are thoroughly tested before they leave the factory and should function normally under general usage.   In case of any system malfunctions, Thecus Technology Corporation and its local representatives and dealers are responsible for repair without cost to the customer if the product fails within the warranty period and under normal usage. Thecus Technology Corporation is not responsible for any damage or loss of data deemed to be caused by its products. It is highly recommended that users conduct necessary back-up practices.

Product name: Thecus N2100
Manual Version: 2.1
Release Date: November 2006

# Table of Content

**Chapter 1 Introduction**

Thank you for choosing the Thecus YES Box N2100. With rich built-in software applications, the YES Box N2100 enables simple and secure distribution of all types of digital files, such as music, photos, and data via an IP network. The YES Box N2100 provides high data availability and fault protection using a RAID structure. There are two Gigabit Ethernet ports which enhance network efficiency, enable advanced file management functions, multiple application sharing, and faster data response all at once. The YES Box N2100 allows data consolidation and sharing between Windows (SMB/CIFS), UNIX/Linux, and Apple OS X environments. The YES Box N2100's user-friendly web management interface supports multiple languages. Take the time now to read through this user's manual and get the most out of your YES Box N2100.

**Package Contents**
- ◆ Thecus YES Box N2100
- ◆ Accessory Pack:
    - ➢ Power cord
    - ➢ RJ-45 Ethernet cable
    - ➢ Hard disk screws
    - ➢ Installation CD
    - ➢ Quick Installation Guide
    - ➢ Warranty card

**Hardware Overview**
  **Front Panel**
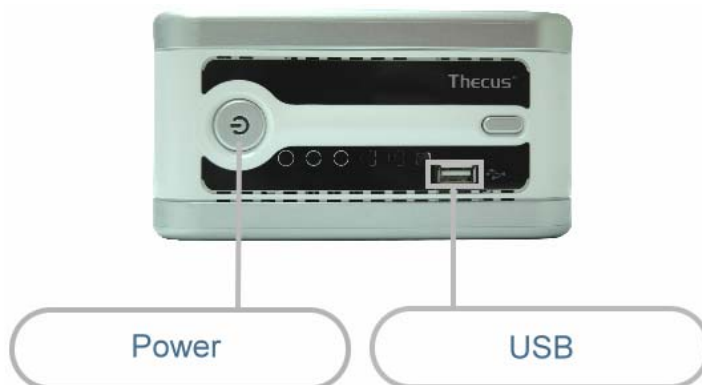


| | |
|---|---|
| Power Button | Power on/off YES Box N2100. |
| | Press and hold the button for 5 seconds to power off. |
| Power LED | Blue: System power on |
| System Status LED | Blinking orange: System startup |

| | |
|---|---|
| ⚠ | Blinking red: System error |
| | Off: System startup complete; system operating normally |
| HDD 1 LED (blue/red) | Blue: HDD 1 detected |
| | Blinking blue: Active HDD 1 data transfer |
| ⟳(+) | Red : HDD 1 error detected |
| | Blinking red: HDD 1 capacity is nearly full (90% or more) |
| | * If RAID is configured, capacity is based on the entire RAID system. |
| HDD 2 LED (blue/red) | Blue: HDD 2 installed |
| | Blinking blue: Active HDD 2 data transfer |
| ⟳(+) | Red: HDD 2 error |
| | Blinking red: HDD 2 capacity is nearly full (90% or more) |
| | * If RAID is configured, capacity is based on the entire RAID system. |
| LAN 1 LED (green) | Blinking green: Network activity |
| ⛁ | |
| LAN 2 LED (green) | Blinking green: Network activity |
| ⛁ | |
| USB LED | USB Device Connection: |
| 🗐 | Blinking blue (5 seconds): USB device connected successfully. *For universal USB memory card readers, the USB LED will blink blue when one or more cards are mounted successfully. |
| | Blinking red (5 seconds): USB device connection failure |
| | Data Transfer: |
| | Blinking blue: Active data transfer |
| | Blinking red: USB device read/write error |
| USB Port | USB 2.0 port for USB storage expansion. |
| | One-Button USB Copy will only copy the front USB Port. |
| One-Button USB Copy | Push the button to copy the entire USB volume to the N2100. Files are stored in a folder named by current time stamp:   (YearMonthDayHHMM) |
| | **Warning**: Before pushing the USB Copy button, make |

sure the USB device is connected successfully. Please refer to the section on USB LED.

**Back Panel**

LAN 1/LAN 2: High speed connections to your network hub/switch.
Power Socket: Connect the power cord, ideally to a surge protector.
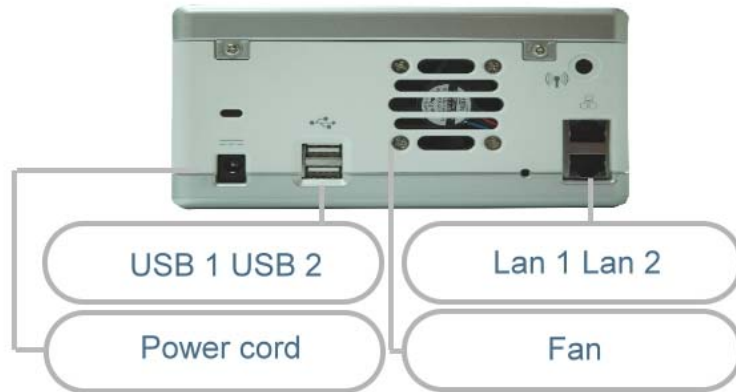


**Hard Disk Installation**

The YES Box N2100 supports up to two Serial ATA (SATA) hard disks.
To install hard disks into the YES Box N2100, please follow the diagrams below:

1. Remove two screws located on the back of the unit using a Philips screwdriver.



2. Unfasten four mounting screws.

3.  Lift up the hard disk cage by pulling up the top panel of the YES Box N2100.



4.  Carefully insert a standard 3.5" SATA hard disk into the cage, and secure the hard disk with screws from the included accessory pack.



**Note:**

-  *Disk 1 is at the bottom of the drive cage.*

5. If you are installing two hard disks, please insert the second hard disk at the top of the cage and secure it with screws from the included accessory pack.

***Note:***

- *Properly secure the HDDs to the cage to prevent damage to the connectors and help cooling of the disk drives.*

6. Carefully lower the hard disk tray back into the YES Box N2100.
   After making sure the tray is in place and the connectors are aligned, secure the hard disk tray with screws.

**Connect & Setup the YES Box N2100**

1. Connect the first Ethernet port (LAN 1) to your network hub/router.

2. Plug in the power cord and turn on the system.

3. Make sure system is running properly by checking all front panel LEDs for any error indications. The system will beep for one second to notify that it is ready for use.

**Installation Wizard**

The handy Thecus Setup Wizard makes configuring your YES Box N2100 a snap. To configure the YES Box N2100 using the Setup Wizard, perform the following steps:

Complete the following steps for basic system configurations.

1.  Insert the installation CD into your CD-ROM drive (the host PC must have connection to the above network).
2.  The Setup Wizard should launch automatically. If not, please browse your CD-ROM drive and double click on Setup.exe
3.  The Setup Wizard will start and automatically detect all YES Box N2100s on your network. If none are found, please check your connection and refer to the Troubleshooting Guide at the back of the YES Box N2100 User's Manual.



4.  Select the YES Box N2100 that you like to configure.
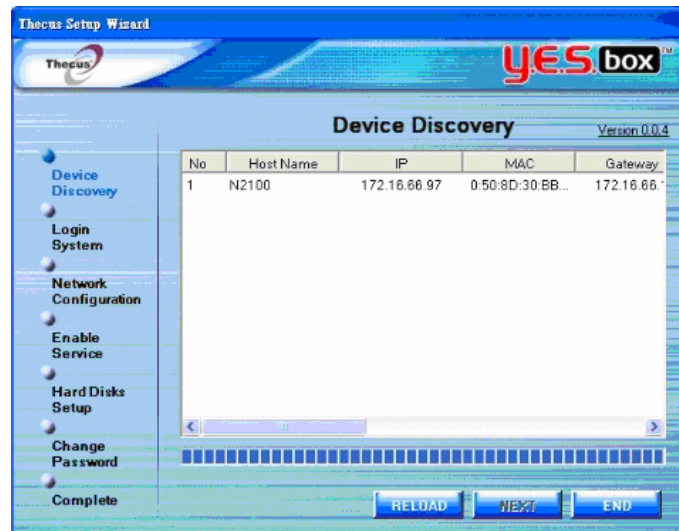


5.  Login with the default administrator account and password. The default account and password are both "admin".

6.  Name your YES Box N2100 system and configure the network IP address. If your router is configured as a DHCP Server, configuring the YES Box N2100 to automatically obtain an IP address is recommended. You may also use a static IP address and enter the DNS Server address manually.
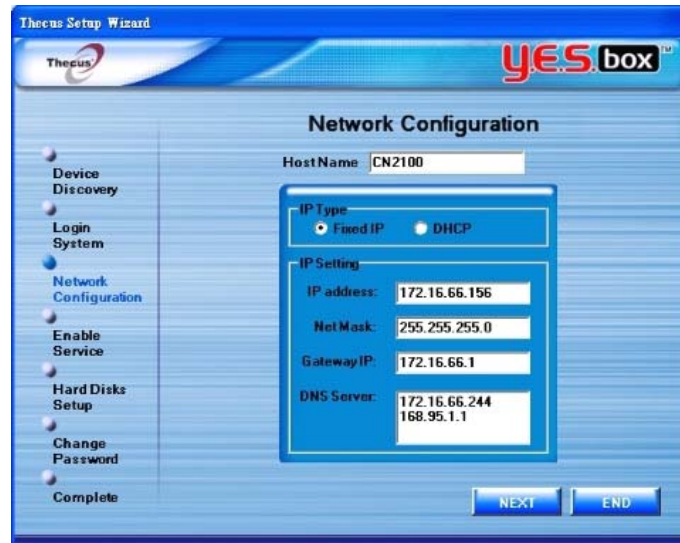


7.  Enable the services you wish to make publicly accessible. The YES Box N2100 offers FTP Server and iTunes® Server options.
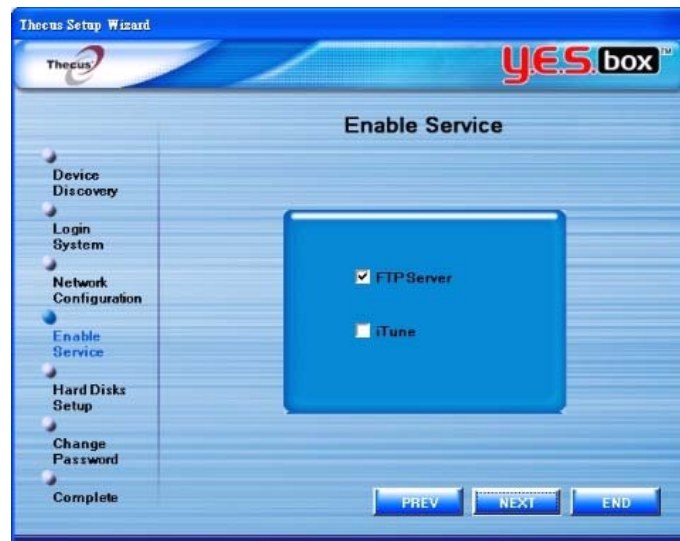


8.  Refer to the following chart and select the hard disk configuration that best suits your usage model.

    RAID 0 – Spanning: Combine 2 physical hard disks into one or more logical drives. Data is separated into threads and stored across both physical drives for increased performance.
    RAID 1 – Mirroring: Use the second hard disk as a mirror image of the first hard disk for increased reliability.
    JBOD – Expansion: Similar to RAID 0, but files are stored in whole on any available hard disks.

| Setup Options | Higher Performance | Increased Reliability |
|---|---|---|
| 1 Disk JBOD | No | No |
| 2 Disk RAID 0 | Yes | No |
| 2 Disk RAID 1 | Yes | Yes |
| 2 Disk JBOD | No | No |

**Warning:**

- *Creating a RAID array will destroy all data on the* delected *disks.*



9. Change the default administrator password.
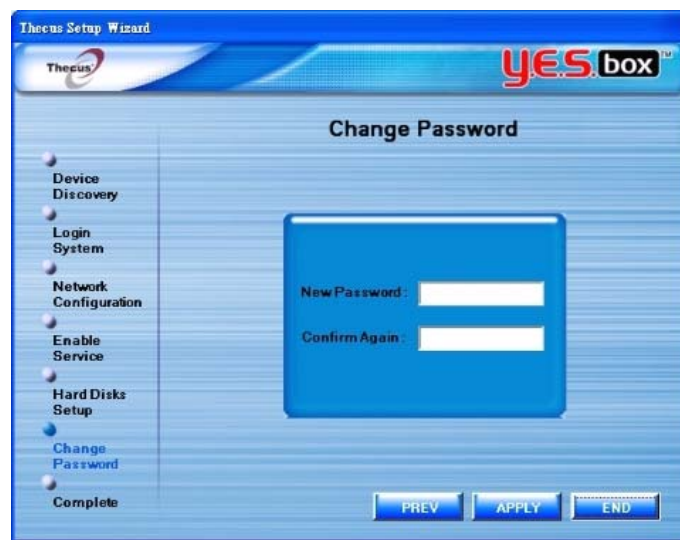


10. Finished! Access the current YES Box N2100 administrator webpage by pressing the "Web Management" button. You can also configure another YES Box N2100 at this point.
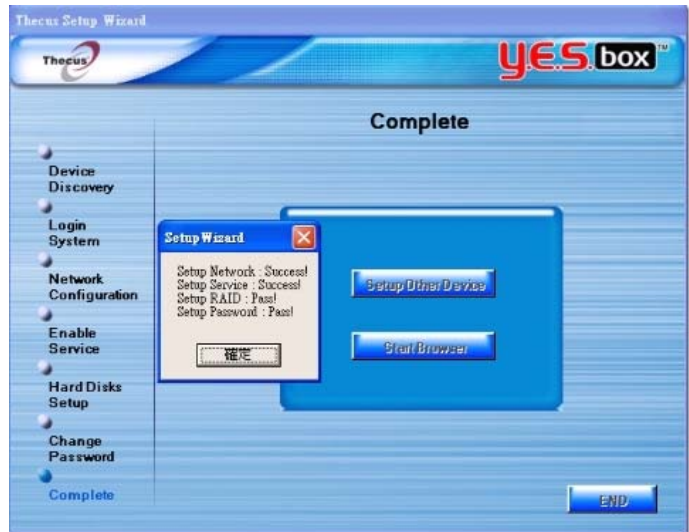
**Chapter 2 System Management**

The YES Box N2100 provides an easily accessible web management interface. The administrator may configure and monitor the YES Box N2100 anywhere on the network.

**System Web Management Login**

Make sure your network is connected to the Internet. To access the YES Box N2100 management webpage:

1.  Type the N2100's IP address into your browser. (Default IP address is http://192.168.1.100)

| *Note:* |
| --- |
| - *Your computer's network IP address must be on the same subnet as the YES Box N2100. If the N2100 has default IP address of 192.168.1.100, your managing PC IP address must be 192.168.1.x, where x is a number between 1 and 254, but not 100. See the appendix for more information on IP settings.* |

2.  Login to the system using factory default administrator user name and password:
    User Name: admin
    Password: admin
    If you changed your password in the setup wizard, use the new password.



**Product Information**

Once you login, you will first see the basic **Product Information** page providing **Manufacturer**, **Product No**., **Firmware Version**, and **Up Time** information.
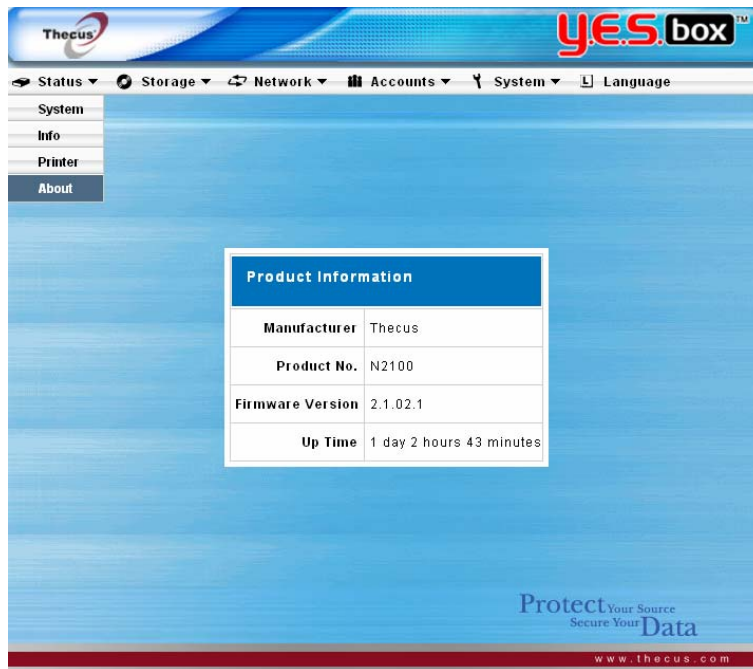
**System Status**

From the **Status** menu, choose the **System** item, and the System Status Information screen appears. This screen provides basic system status information.

| | |
|---|---|
| **CPU Loading (%)** | Displays current CPU workload of the N2100. |
| **System Temperature** | Shows current system processor temperature. |
| **HDD Temperature** | Shows current hard disk drive temperature. |
| **Fan RPM** | Shows cooling fan speed in revolutions per minute (RPM). |
| **Fan Speed Control** | Select to control the current fan speed. |
| | Normal: Default fan speed control. |
| | High: Fan will always running at full speed. |
| | **Note:** When the fan speed is set to high, N2100 will generate more noise than usual. |
| **Up Time** | Shows how long the system has been running. |
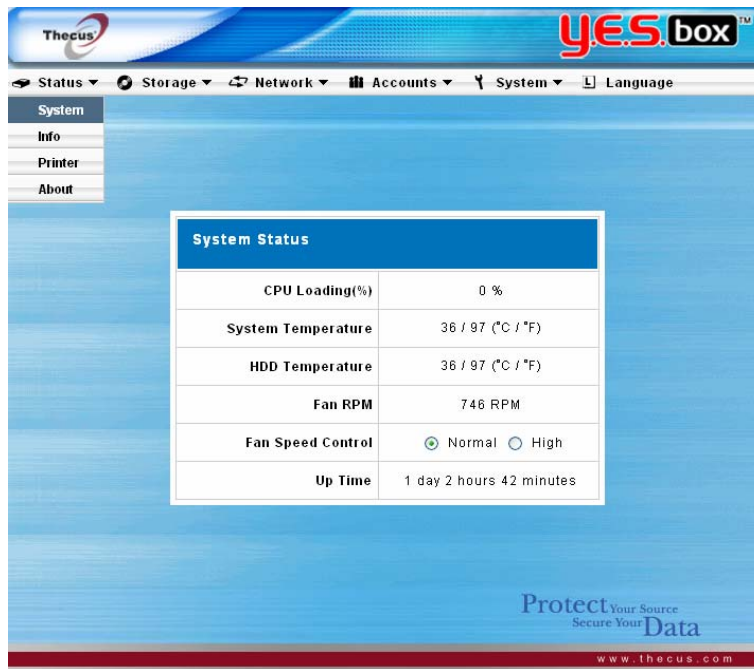
**System Information**

From **Status** menu, choose the **Info** item, and the System Information screen appears. You can change the system information that appears on the Login page by entering the new information here and pressing **Apply** to confirm.

**System Description**      Shows the system description that would also appear on the Login page.
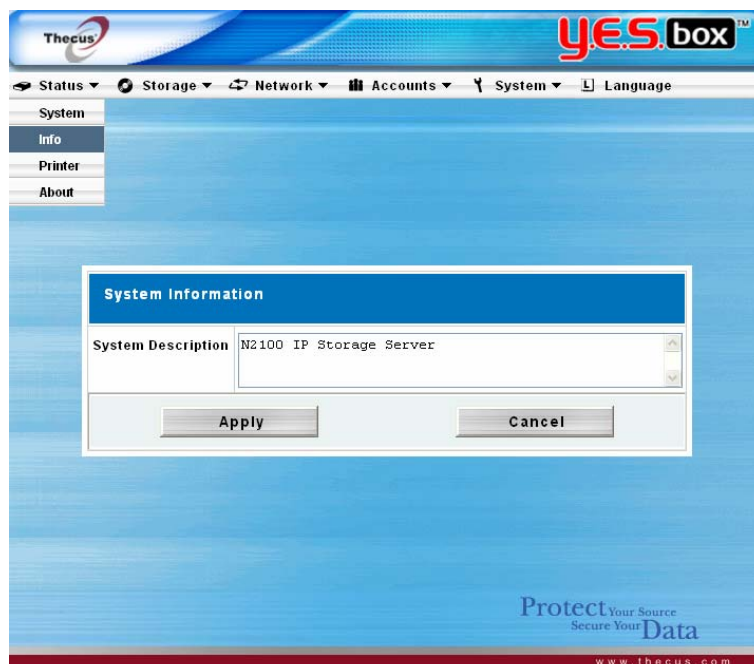
**Printer**

From the **Status** menu, choose the **Printer** item, and the **Printer Information** screen appears. The **Printer Information** screen provides the following information about the USB printer connected to the USB port.

| | |
|---|---|
| **Manufacturer** | Displays the name of the USB printer manufacturer. |
| **Model** | Displays the model of the USB printer. |
| **Status** | Displays the status of the USB printer. |
| **Printer Queue** | Click to remove all documents from printer queue |

If a corrupt print job is sent to a printer, printing may suddenly fail. If your print jobs seem to be locked up, press the Remove All Documents button to clear the print queue may resolve the issue.
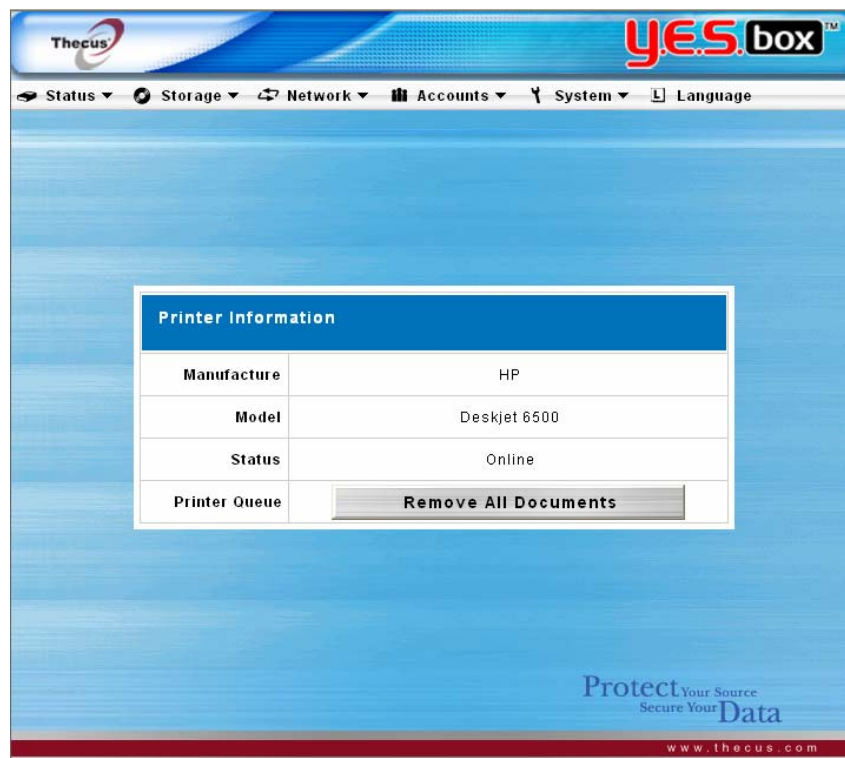


**Print Server** Setup **(Windows XP SP2)**
1.   Connect the USB printer to one of the USB ports (Preferably the rear USB ports; front USB ports can be used for external HDD enclosures).
2.   Go to "**Printers and Faxes**" on your Start Menu
3.   Click on "**Add Printer**" under File menu
4.   Add printer Wizard appears on your screen. Click on "**Next**" button.
5.   Select "**A network printer, or a printer attached to another computer**" option
6.   Select "**Connect to a printer on the Internet or on a home or office network**",

and enter "**http://N2100_IP_ADDRESS:631/printers/usb-printer**" into the URL field.

7. Your Windows system will ask you to install drivers for your printer. Select correct driver for your printer.

8. Your Windows system will ask you if you want to set this printer as "Default Printer". Select Yes and all your print jobs will be submitted to this printer by default. Click on "**Next**" button.

9. Click on "**Finish**" button.

| *Note:* |
| --- |
| - *Not all USB printers are supported. Please check Thecus website for a list of supported printers.* |
| - *Note that if a multi-function (all-in-one) printer is attached to the N2100 YES Box, usually only the printing and fax functions will work. Other features, such as scanning, probably will not function.* |

**Setup Hard Disks and File Folders**

The **Storage** menu provides disk information and allows you to configure both RAID modes and file sharing.

**Hard Disks Information**

From the **Storage** menu, choose the **Disks** item and the Disks Information screen appears. On the Disk Information table, a blank line shows that this particular disk slot is empty. If there is a problem with a disk, the Status column will display "Failed". This page will also show all external USB hard disks that are currently connected to the system.

| | |
|---|---|
| **Disk No.** | Indicates the hard disk slot location. |
| **Capacity** | Shows the hard disk capacity in megabytes. |
| **Model** | Displays the hard disk model name. |
| **Firmware** | Shows the hard disk firmware version. |
| **Status** | Indicates the status of hard disks, and can read either **OK** or **Failed**. |
| **Refresh** | Press **Refresh** to rescan all USB ports and hard disk slots for new disks. |
| **Disk Power Management** | Administrator can decide the length of inactivity before the hard disk drives spin down. |

*Note:*

- *Some services will scan the content directories, and this will keep the hard disk drives from spinning down.*
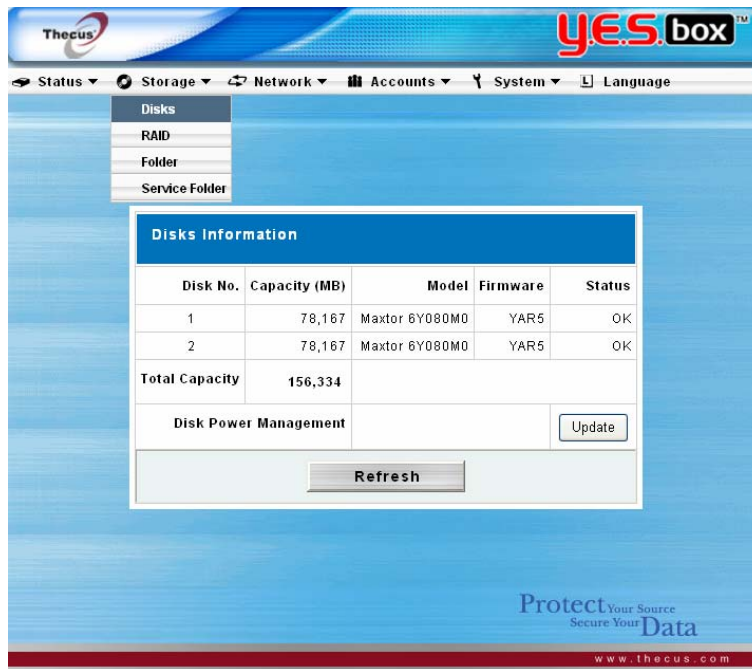
**Configure RAID Settings**

From the **Storage** menu, choose the **RAID** item, and the RAID Information screen appears. The displayed information includes total RAID system capacity, RAID status, and the current RAID setting. To configure your RAID settings, press the **Config** button and the RAID Configuration screen appears.

| | |
|---|---|
| **RAID Level** | Shows the type of RAID used in the system. |
| **Total Capacity** | Shows the total storage capacity after the RAID configuration. |
| **Status** | Indicates the status of the RAID, and can read either **Healthy** or **Failed**. |
| **Used Percentage** | Displays the percentage of used RAID capacity. |
| **Stripe Size** | Shows the current hard disk stripe size. |
| **Remaining Time** | Indicates the time remaining during RAID building process. |

See Appendix B for basic information on RAID.
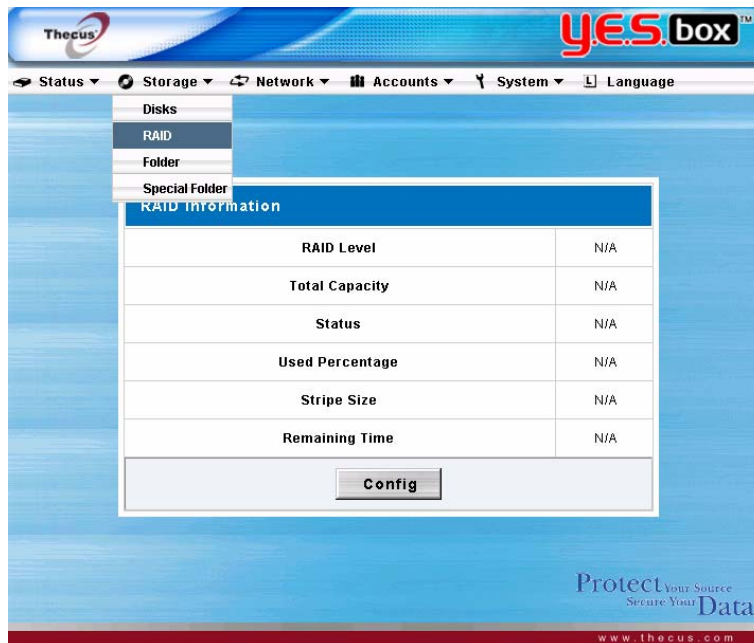
**RAID Configuration**

You can set the storage volume as JBOD, RAID 0, or RAID 1. Configuration is usually required only when you first set up the device. A brief description of each RAID setting follows:

| | |
|---|---|
| JBOD | The storage volume is a single HDD with no RAID support. |
| RAID 0 | Provides data striping but no redundancy. Improves performance but not fault tolerance. At least 2 HDDs are required. |
| RAID 1 | Offers disk mirroring. Provides twice the read rate of single disks, but same write rate. Supports 2 HDDs. This option protects against single hard disk failure and provides data redundancy. |
| RAID | Check the box of the hard disk you wish to add to the storage volume. |
| Stripe size | This sets the stripe size to maximize performance of sequential files in a storage volume. Keep the 64K setting unless you require a special file storage layout in the storage volume. A larger stripe size is better for large files. **Note:** This option is not available in RAID 1. |
| Create | Press this button to configure the file system and create a RAID storage volume. |
| Remove | Press this button to nullify the RAID storage volume. |

*Warning:*

*Creating RAID will destroy all data on the selected disks.*

If you are using JBOD with only one disk and you would like to add a second disk, please refer to Appendix A.
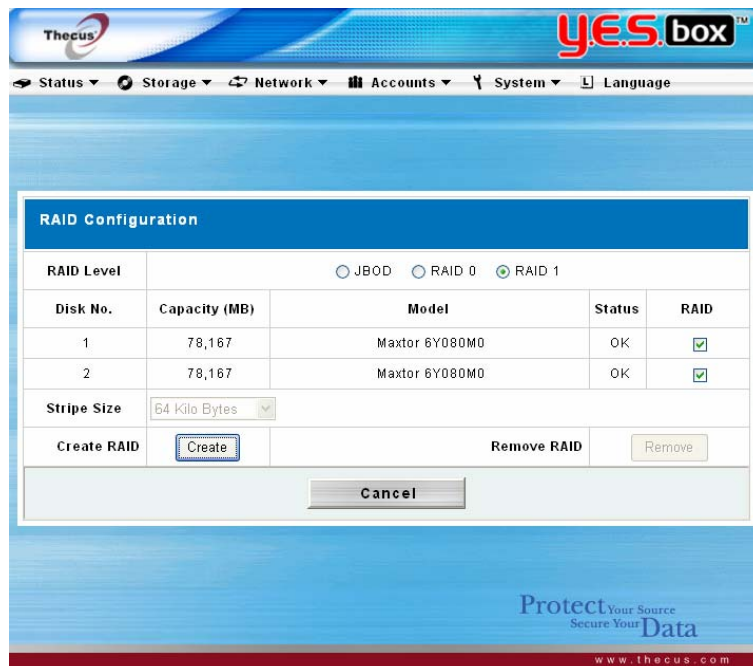


**How to Remove RAID**

1. On the RAID Configuration screen click on the **Remove** button.
2. The system automatically rebuilds and you can create a new RAID array.

| *Warning:* |
| --- |
| - *Removing RAID* will *destroy all data in the current RAID system. The data will not be recoverable.* |

**Manage Folders**

From the **Storage** menu, choose **Folder**, and the Folder screen appears. This screen allows you to create and configure folders on the YES Box N2100 volume.

| | |
| --- | --- |
| **Folder name** | Displays the name of the folder. |
| **Description** | Provides a description of the folder. |
| **ACL** | Press ACL (Access Control List) to configure which users have access to this folder. |
| **Edit** | Press this button to enter the **Edit** screen and modify the folder's name and description. |

| **Del** | Press this button to delete the folder. A screen appears asking to confirm the deletion. |
|---|---|
| **Add** | Press this button and the **Add Folder** screen appears, from which you can add a new folder. |
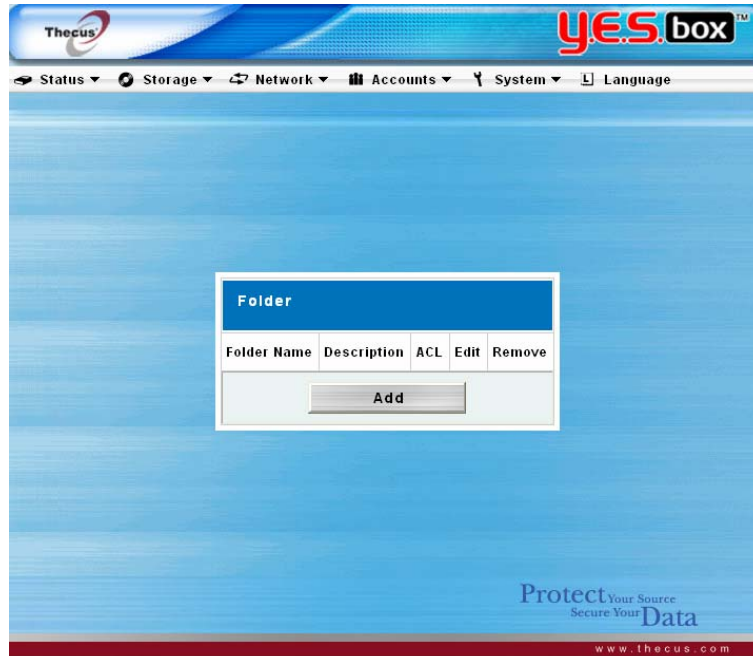


**Add Folder**

In the **Folder** screen press **Add** button and the **Add Folder** screen appears. This screen allows you to add a folder. After entering the information, press **Apply** to create new folder.

| **Folder Name** | Enter the name of the folder. |
|---|---|
| **Description** | Provide a description the folder. |
| **Browseable** | Enable users to browse the folder content |
| **Public** | Admit or deny public access to this folder |

*Note:*

- *Folder names are limited to 60 characters. Systems running Windows 98 or earlier may not support file names longer than 15 characters.*
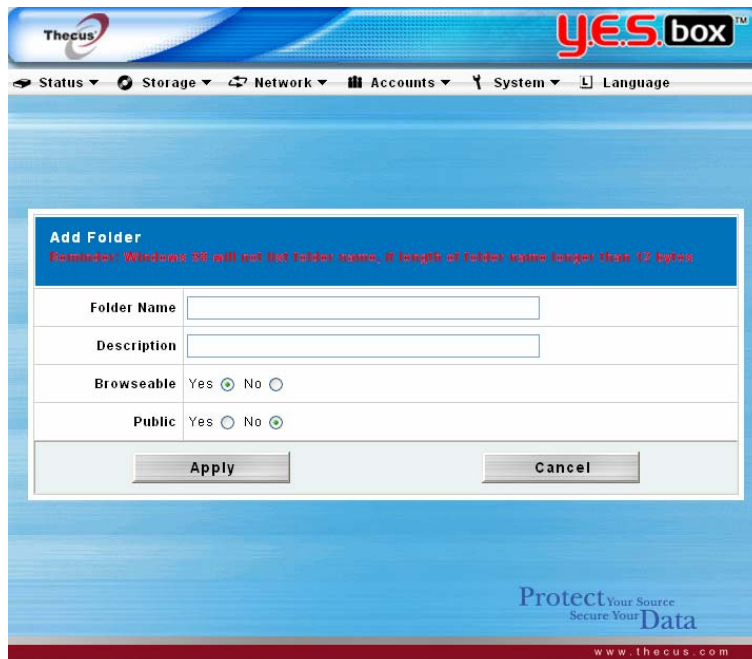
**Edit Folder**

From the **Folder** screen, press the **Edit** button and the **Edit Share** screen appears. This screen allows you to change folder information. After entering the information, press **Submit** to apply the changes.

| | |
|---|---|
| **Folder Name** | Display the name of the current folder. |
| **Description** | Change the description of the current folder. |
| **Browseable** | Enable users to browse the folder content. |
| **Public** | Admit of deny public access to this folder. |
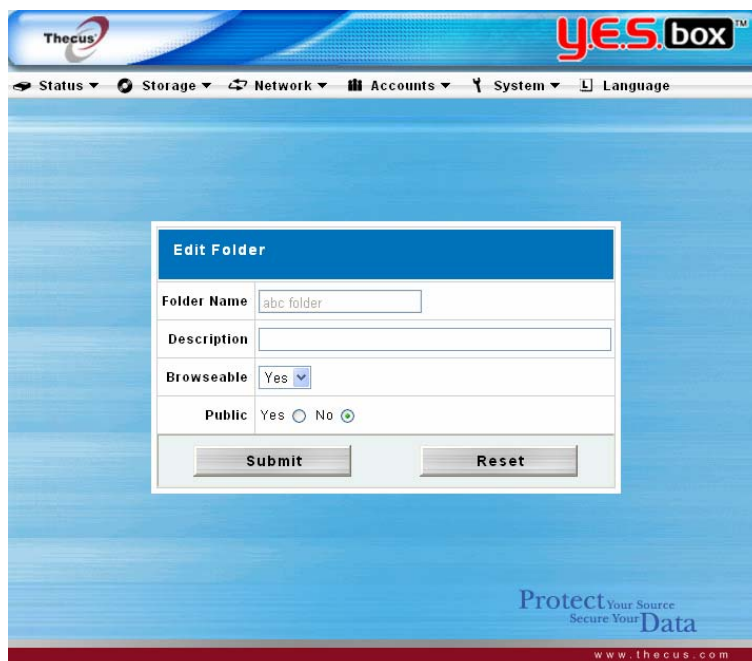
**Delete Folder**

To delete a folder, press the **Del** button from the specified folder row. The system will confirm folder deletion. Press **OK** to delete the folder permanently or **Cancel** to go back to the folder list.

| Warning: |
| :--- |
| - *All the data stored in the folder will be deleted once the folder is deleted. The data will not be recoverable.* |
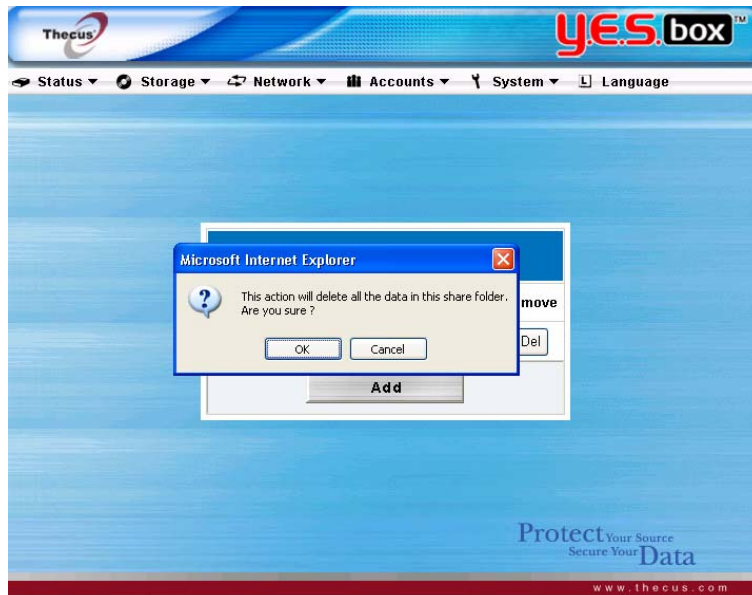


**Folder Access Control List (ACL)**

From the **Folder** screen press the **ACL** button, and the **Access Control List** screen appears. This screen allows you to configure access to specific folder for the users and groups. Select a user or a group from the left hand column and then choose **Deny**, **Read Only**, or **Writable** to configure their access level. Press the **Submit** button to confirm settings.

| | |
| :--- | :--- |
| **Deny** | Denies access to users or groups who are displayed in this column. |
| **Read Only** | Provides Read Only access to users or groups who are displayed in this column. |
| **Writable** | Provides Write access to users or groups who are displayed in this column. |
| **Remove** | Removes the selected user or group from the column in order to reset their access privileges. |
| **Submit** | Submits and confirms settings. |

**Service Folder**

The YES Box N2100 automatically creates folders for its built-in applications: Web Photo Server, Tunes Server, USB One-Button Copy, and USB HDD.

These special folders are created when the RAID is created. To manage these service folders, select **Service Folder** from the **Storage** menu. You may edit these folders and use the **Access Control List** to control access to them.

| *Note:* |
| --- |
| - *To see the special folders, RAID must be created first.* |
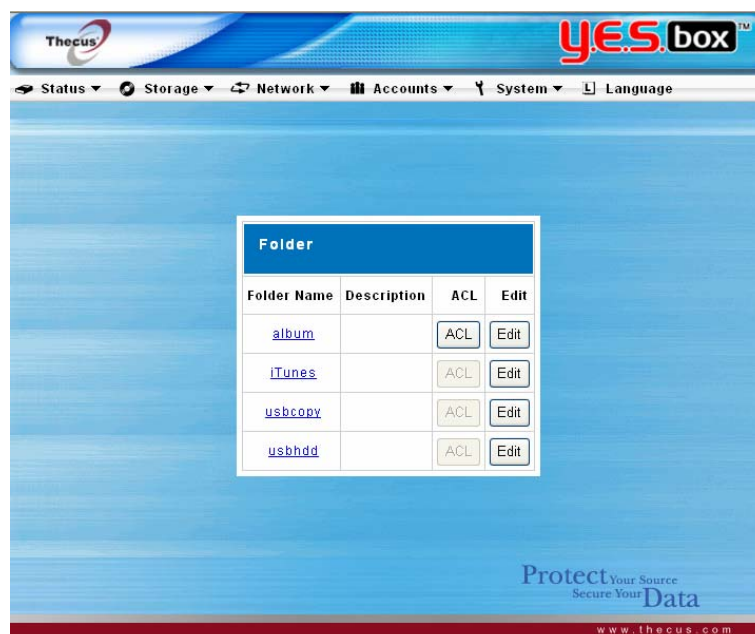
**USB Storage Expansion**

The YES Box N2100 supports external USB hard disks through its three USB ports. Once a USB hard disk has successfully mounted, the entire volume will be copied automatically to the default USB HDD folder. The YES Box N2100 supports up to 6 USB external storage devices. All file names on the USB disk volume are case sensitive.

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*Note:*

- *If you want to write to an USB storage device, the file system must be FAT32.*

| USB storage | FAT32 partition | NTFS partition |
|-------------|-----------------|----------------|
| Read        | OK              | OK             |
| Write       | OK              | NO             |

---

**Configure Network Settings**

Use the **Network** menu to make network configuration settings as well as service support settings.

### LAN 1 Configuration

From the **Network** menu, choose **LAN 1**, and the **Network Configuration** screen appears. This screen displays the network parameters of the system. You may change any of these items and press **Apply** to confirm your settings. See a description of each item in following table:

| | |
|---|---|
| **Host name** | Host name to identify the YES Box N2100 on the network. |
| **Domain name** | Specifies the domain name of the YES Box N2100. |
| **MAC Address** | MAC address of the network interface. |
| **Jumbo Frame Support** | Enable/Disable Jumbo Frame Support of the LAN 1 network interface on your YES Box N2100. |
| **LAN 1 Port** | LAN 1 IP can be set to a Static IP address or Dynamic IP address. Static: Administrator has to enter IP, Netmask, Gateway, DNS Server fields. Dynamic: If there is already a DHCP server on your network, you can let the DHCP server assign an IP address to your N2100. |
| **IP** | IP address of the LAN 1 network interface |
| **Netmask** | Network mask, which is generally: 255.255.255.0 |
| **Gateway** | Default Gateway IP address. |
| **DNS Server** | Domain Name Service (DNS) server IP address |
| **IP Sharing Mode** | When enabled, traffic on LAN 2 will be directed to LAN 1. |

> *Note:*
>
> - *Only use Jumbo Frame settings when operating in a Gigabit environment where all other clients* have *Jumbo Frame Setting enabled.*
> - *Enabling DHCP automatically turns on UPnP—see the Service Support Screen.*
> - *If you are only using one LAN port, we suggest you use LAN 1 and disable IP Sharing Mode. This will result in higher throughput.*

- *A correct DNS setting is vital to networks services, such as SMTP and NTP.*

---

*Warning:*

- *Most of Fast Ethernet (10/100) Switches / Routers do not support Jumbo Frame and you will not be able to connect to your YES Box N2100 after Jumbo Frame is turned on. If this happens, turn off the YES Box N2100. Then, power on the YES Box N2100 and immediately press and hold the Reset button on the back of the unit for 10 seconds. This will reset your network settings, password, and turn off Jumbo Frame Support*
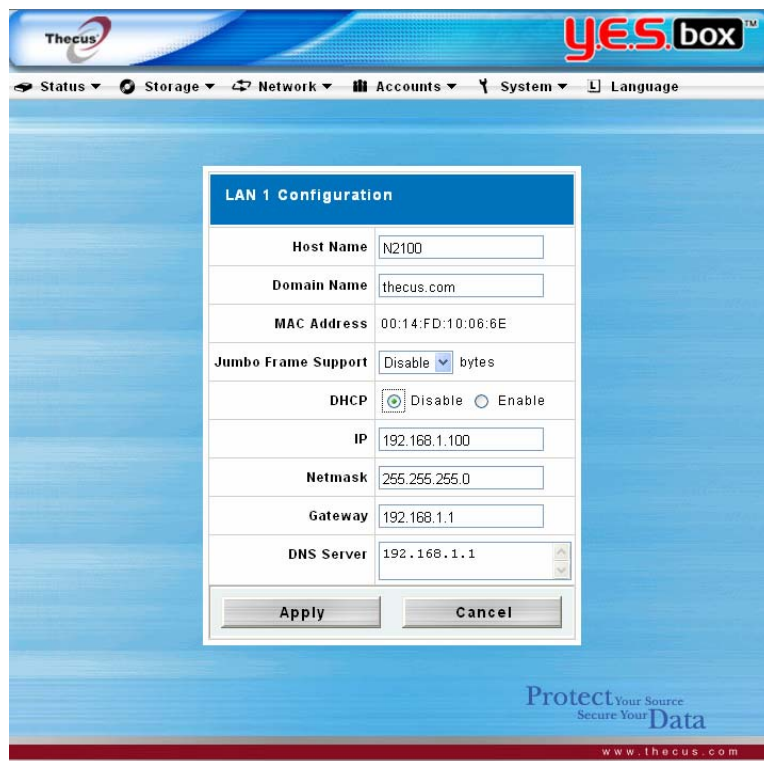


### LAN 2 Configuration

The YES Box N2100 supports a second network connection for higher service availability. To configure the second network connection, choose **LAN 2** from the **Network** menu.

| | |
|---|---|
| **MAC Address** | Displays the MAC address of the LAN2 network interface. |
| **Jumbo Frame Support** | Enable/Disable Jumbo Frame Support of the LAN 2 network interface on your YES Box N2100. |
| **IP** | Specifies the IP address of the LAN2 network interface. |
| **Netmask** | Specifies the Network Mask of the LAN2 network interface. |

**DHCP Server Configuration**

The YES Box N2100 supports a DHCP Server on second network interface.

| | |
|---|---|
| **DHCP Server** | Enable/Disable DHCP server on LAN 2. |
| **Start IP** | Specifies the starting IP address available to be leased. |
| **End IP** | Specifies the end IP address available to be leased. |
| **DNS Server** | Displays the Domain Name Service (DNS) server IP address. |
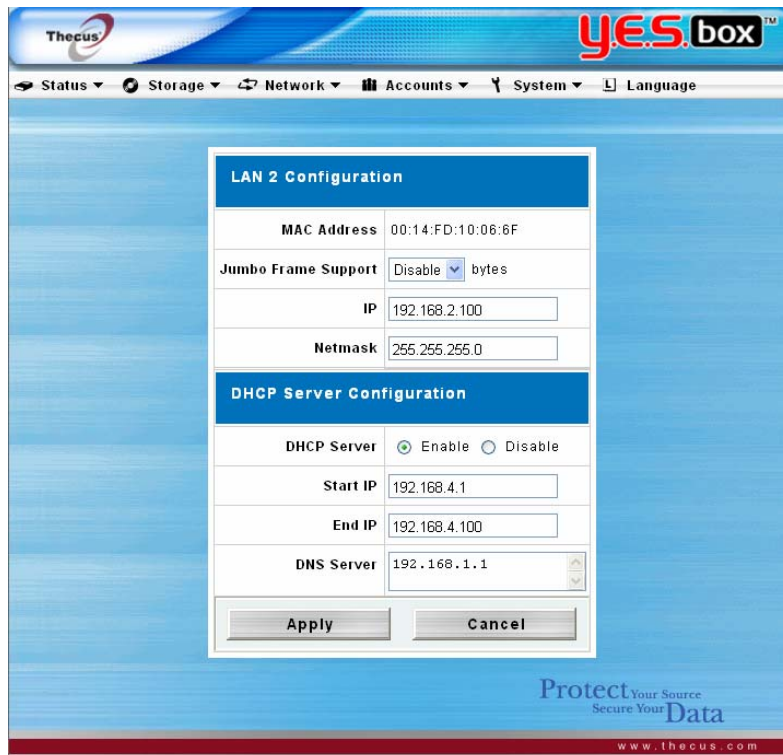
**WLAN Configuration (optional)**

The YES Box N2100 supports wireless LAN connection. The YES Box N2100 will act as a wireless access point (AP) on your network. The **WLAN** section will automatically appear when YES Box N2100 detects a mini PCI wireless LAN card or a USB dongle. Choose **WLAN** from the **Network** menu and **Wireless LAN Configuration** page will appear.

| Note : |
| --- |
| - *Currently supported mini PCI wireless LAN cards are: MSI MS-6833B, CNet CWM-854 and Gemtek WMIR-174G.*<br>- *Currently supported USB wireless dongles are: 3Com 3CRUSB10075, Zyxel G220USB, PCI GW-US54mini. USB dongles have to be connected before YES Box N2100 is powered up.* |

| | |
| --- | --- |
| **MAC Address** | Displays the MAC address of the wireless network interface. |
| **IP** | Specifies the IP address of the WLAN network interface. |
| **Netmask** | Specifies the Network Mask of the WLAN network interface. |
| **ESSID** | Specifies the name of the wireless network. Extended Service Set Identifier (ESSID) is the name |

|              |                                                                 |
|--------------|-----------------------------------------------------------------|
|              | designated for a specific wireless local area network (WLAN).   |
| **ESSID Broadcast** | Enable/disable ESSID Broadcast.<br>Enabling this feature broadcasts the ESSID across the network. |
| **Channel**  | Specifies the channel of the wireless network.<br>All devices on the network must share the same channel. |
| **Auth Mode** | Select **Open System** to communicate the key across the network.<br>Select **Shared** to limit communication to only those devices that share the same WEP key settings. |
| **WEP enable** | Select **Enable** to enter the WEP key.<br>Select **Disable** to disable the WEP key.<br>WEP has to be enabled when Auth Mode is set to **Shared**. |
| **Key Length** | The WEP Key can be set to 64 bit or 128 bit.<br>The WEP key may be constructed with these alphanumeric characers: 0~9 and A~F.<br>When length is set to 64, you must enter 10 characters. (e.g. 2FAB2CAFE0)<br>When length is set to 128, you must enter 26 characters. (e.g.1234567890ABCDEF1234567890) |
| **WEP KEY 1** | Select WEP Key 1. |
| **WEP KEY 2** | Select WEP Key 2. |
| **WEP KEY 3** | Select WEP Key 3. |
| **WEP KEY 4** | Select WEP Key 4. |
| **DHCP Server** | Enable/Disable DHCP server on wireless network. |
| **Start IP** | Specifies the starting IP address available to be leased. |
| **End IP** | Specifies the end IP address available to be leased. |
| **DNS Server** | Displays the Domain Name Service (DNS) server IP address. |

| *Note:* |
|---|
| - *The WLAN must have different segment setting from LAN 1 and LAN 2.* |
| - *The WLAN will use the DNS server specified in the LAN 1 configuration.* |

**DHCP Server Configuration**

The YES Box N2100 supports a DHCP Server on WLAN interface.

**DHCP Server**    Enable/Disable DHCP server on WLAN.

**Start IP**        Specifies the starting IP address available to be leased.

**End IP**         Specifies the end IP address available to be leased.

**DNS Server**     Displays the Domain Name Service (DNS) server IP address.

| *Note:* |
| --- |
| - *The WLAN will use the DNS server specified on LAN 1.*<br>- *The IP Sharing Mode setting on LAN 1 will have the same effect on WLAN traffic as on LAN 2.* |



**Configure Network Services**

From the **Network** menu, choose the **Service** item, and the **Service Support**

screen appears. This screen displays the service support parameters of the system. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:

| | |
|---|---|
| **WebDisk Support** | Enable or disable WebDisk support. Enter the port number if this option is enabled. |
| **Secure WebDisk Support** | Enable or disable secure WebDisk support. Enter the port if this option is enabled. |
| **SMB/CIFS** | Enable or disable SMB/CIFS protocol for Windows, Apple, Unix drive mapping. |
| **UPnP** | Enable or disable Universal Plug and Play protocol. UPnP helps to find the IP address of the N2100. |

> *Note:*
>
> - *Disable HTTP support and Enable Secure HTTP support to guarantee secure access.*
> - *In some environments, due to security concerns, you may wish to disable SMB/CIFS as a precaution against computer viruses.*
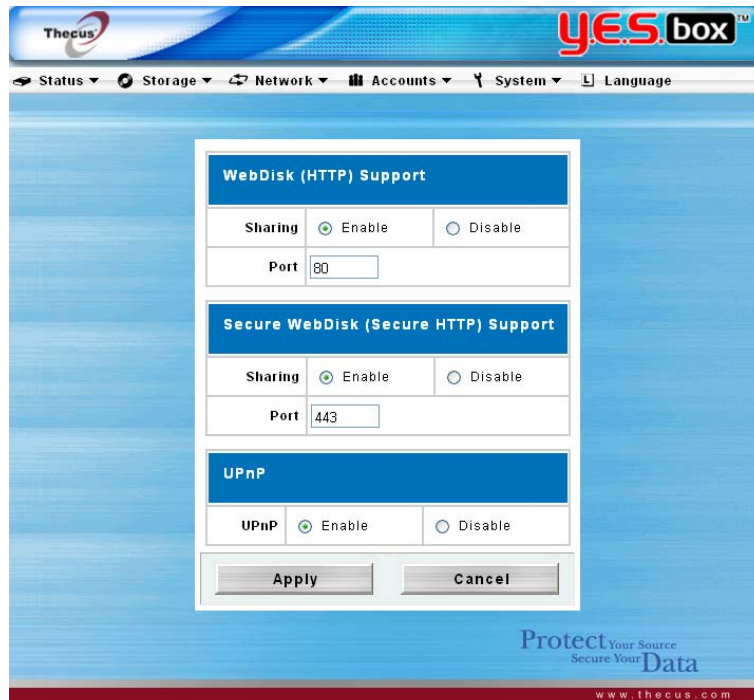


**SMB/CIFS Setup**

YES Box N2100 can act as a Samba server, enabling users to share files using

SMB/CIFS protocol. From the **Network** menu, choose the **SMB/CIFS** item, and the **SMB/CIFS Setup** screen appears. You are allowed to change any of these items and press **Apply** to confirm your settings. A description of each item follows:

| | |
|---|---|
| **Sharing** | If you are using Microsoft Windows®, enable this service to access the files on the N2100 by mapping a network drive. |
| **WINS** | Specify the WINS server IP address, if your network has a WINS server installed. N2100 will automatically register its name and IP address with WINS service. |
| **Work Group/Domain** | To specify your N2100 as a member of a workgroup or domain, enter the appropriate information into this field. |

*Note:*

- *SMB/CIFS service also allows file sharing from Mac OSX and Linux platforms.*
- *Once a Mac OS accesses a share folder, it will create a file named .DS_Store, and directories named Temporary items, Network Trash Folder, .Apple Double, Apple Desktop and AppleDB in the share folder.*
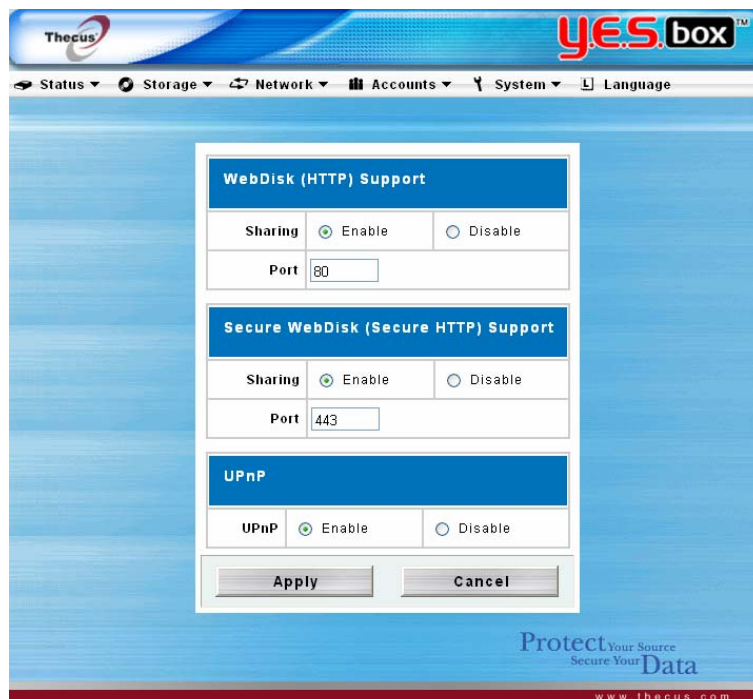


**Apple Network**

From the **Network** menu, choose the **Applet Network** item, and the **Apple Network** Configuration screen appears. This screen displays the **Apple Filing Protocol** configuration items. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:

| | |
|---|---|
| **Apple File Service** | Enable Apple File Service to use N2100 on MAC OS-based system. |
| **MAC CHARSET** | If your operating system does not support Unicode (e.g. MAC OS9/8), select the same language as your OS here in order to properly view the files and directories on the server. |
| **Zone** | Specifies Zone for Applet Talk service. If your AppleTalk network uses extended networks and is assigned with multiple zones, assign a zone name to N2100. If you do not want to assign a network zone, enter an asterisk (*) to use the default setting. |
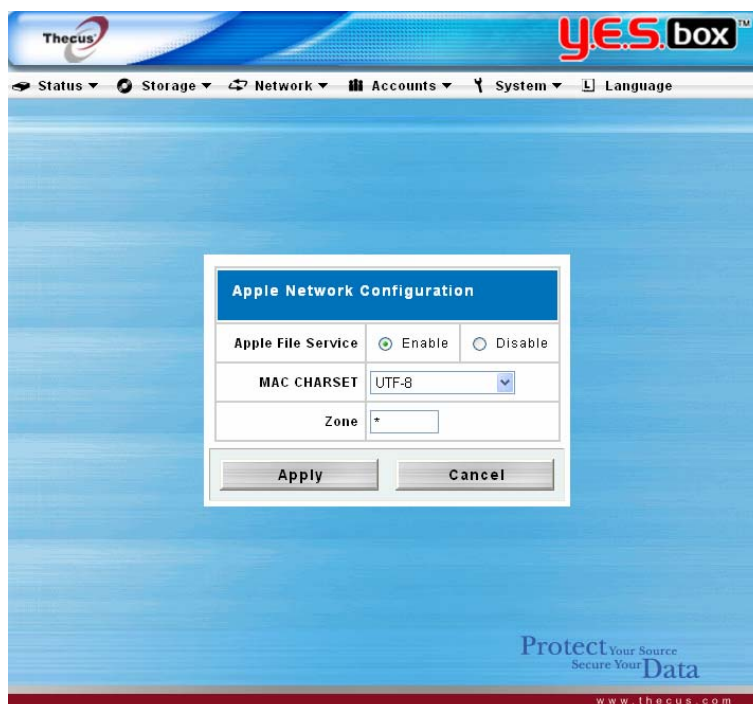


**FTP Server Setup**

YES Box N2100 can act as a FTP server, enabling users to download and upload files with their favorite FTP programs. From the **Network** menu, choose the **FTP** item, and the **FTP Service Setup** screen appears. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:

| | |
|---|---|
| **FTP** | Enable FTP Service on the N2100. |
| **Port** | Specifies the port number of an incoming connection on a non-standard port. |
| **FTP ENCODE** | If your FTP client or operating system does not support Unicode (e.g. Windows® 95/98/ME or MAC OS9/8), select the same encoding as your OS here in order to properly view the files and directories on the server. Available options are BIG5, HZ, GB2312, GB18030, ISO, EUC-JP, SHIFT-JIS and UTF-8. |

To access the share folder in N2100 YES Box, use the appropriate user login and password set up in **Accounts** > **Users** page. Access control to each share folder is set up in **Storage** > **Folder** > **ACL** page.

When trying to access N2100 YES Box anonymously, just enter "anonymous" as the user name, and the anonymous user will be able to access all the share folders that are set to public. Anonymous FTP users are allowed to upload and download files but not delete files in the share folders.
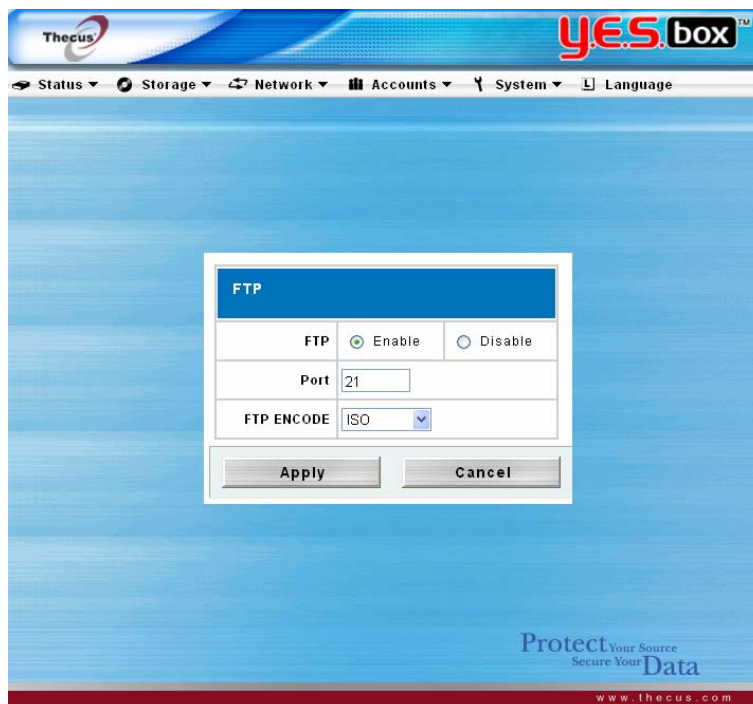


**iTunes Configuration**

With the built-in iTunes server capability, the YES Box N2100 enables digital music to be shared and played anywhere!

From the **Network** menu, choose the **iTunes** item, and the **iTunes Configuration** screen appears. You may enable or disable iTunes Service from here. Once enabled,

enter correct information for each field. See the following table for a detailed field description. Press **Apply** to save your configuration.

| | |
|---|---|
| **iTunes** | Enable or disable iTunes Service. |
| **Server Name** | Name used to identify the YES Box N2100 to iTunes clients. |
| **Password** | Enter password to control access to your iTunes music. |
| **Rescan Interval** | Rescan interval in seconds. |
| **MP3 Tag Encode** | Specify tag encoding for MP3 files stored in N2100. All ID3 tags will be send out in UTF-8 format. |

*Note:*
- *The server same can be different from your host name.*
- *Rescan will interrupt Disk Power Management.*
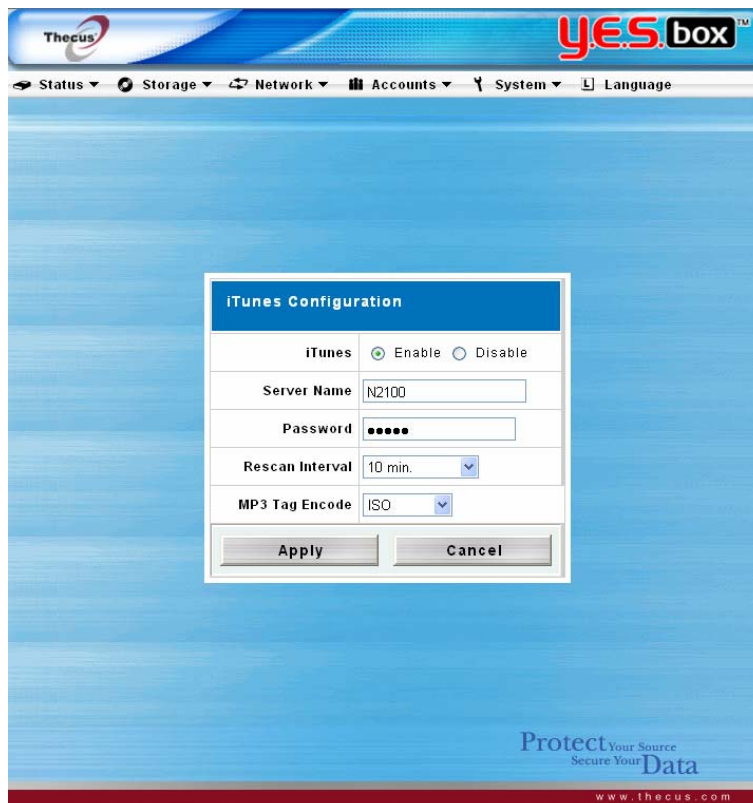


**Media Manager Settings (for Media Server edition only)**

With the built-in Media Server capability, the YES Box N2100 provides media streaming service to stand-alone networked home media adapters that support the UPnP AV protocol or are Digital Living Network Alliance (DLNA) standard compliant. Follow the steps below to install the Media Server onto your YES Box N2100.

**Install Media Server**

1. Go to firmware upgrade page by click on **System > Firmware Upgrade** menu item.
2. Click on the **Browse** button to browse your companion CD, and select the media server software, **Media_Server_N2100_v10.bin**.
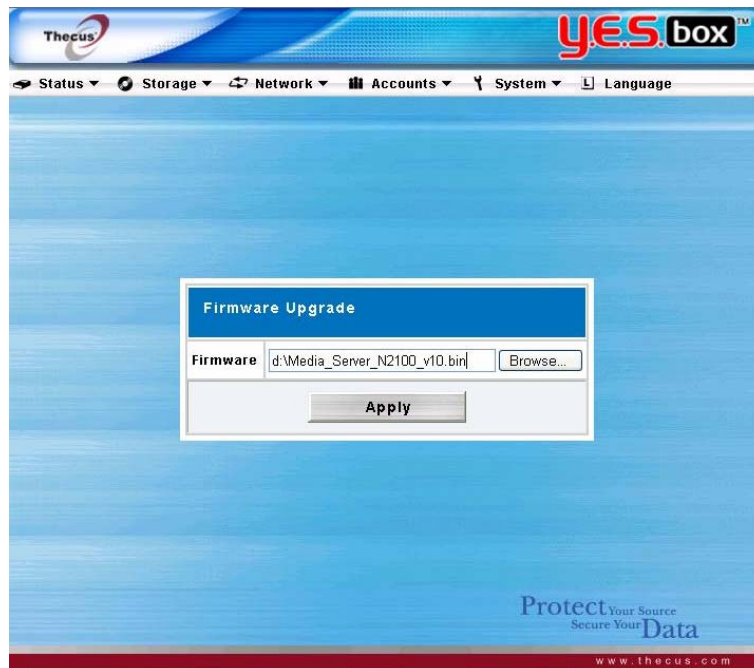


3. Click on **Apply** button to start the Media Server installation.
4. After the Media Server is installed, the YES Box will reboot. After the YES Box is rebooted, the Media Server is ready for use.

**Media Server Operation**

| | |
|---|---|
| **Media Server** | Enable/disable Media Server Service. |
| **Media Folder** | Select the folder that contains media files to be shared. |
| **Add** | Click on **Add** button to add the selected media folder into Media Server sharing folders. |
| **Rescan** | Rescan for new contents in the selected media folder. |
| **Remove** | Remove the selected folder from the Media Server. The content in the folder will not be accessible to the Media Server. |
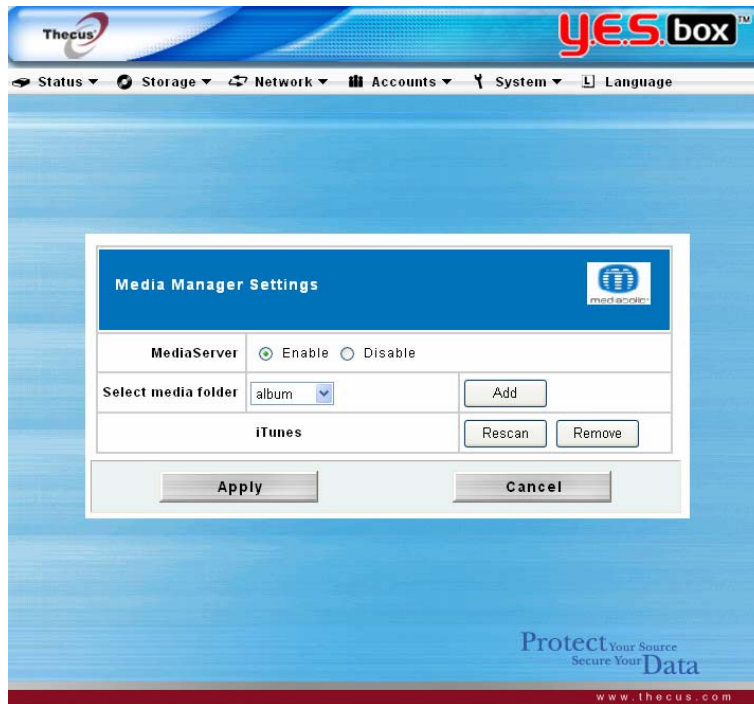
**Universal Plug and Play (UPnP)**

Universal Plug and Play (UPnP) is a set of computer network protocols promulgated by the UPnP Forum. The goals of UPnP are to allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and corporate environments. UPnP achieves this by defining and publishing UPnP device control protocols built upon open, Internet-based communication standards.

Please check the UPNP website for more information (http://www.upnp.org).

**Digital Living Network Alliance (DLNA)**

The Digital Living Network Alliance (DLNA), (formely: Digital Home Working Group), is an alliance of leading companies in the consumer electronics, mobile and personal computer industries.

Its aim is to align the companies and have industry standards, which will allow products from all companies to be compatible with each other and to enable a network of electronic devices in the home. In this way consumers will be able to enjoy digital living easily and seamlessly.

Please check the DLNA website for more information (http://www.dlna.org)

**User and Group Management**

The YES Box N2100 has built-in user database that allows administrator to manage user access using different group policies.

**Local User Configuration**

From the **Accounts** menu, choose the **Users** item, and the **Local User Configuration** screen appears. This screen allows you to Add, Modify, and Delete local user.

| | |
|---|---|
| **Add** | Press the **Add** button to add a user to the list of local users. |
| **Modify** | Press the **Modify** button to modify a local user. |
| **Delete** | Press the **Delete** button to delete a selected user from the system. |
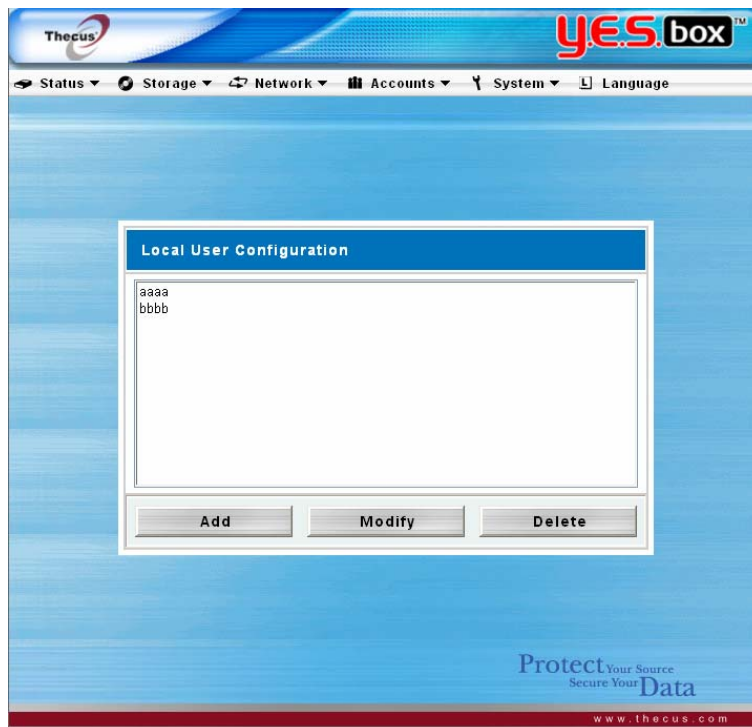


**How to Add a User**

1.  Click on **Add** button in Local User Configuration, and **Local User Setting** screen appears.
2.  In the **Local User Setting** screen, enter a name in the **User Name** box.
3.  Enter a password in the **Password** box and re-enter the password in the **Confirm** box.
4.  Select which group the user will belong to. Group Members is a list of groups

this user belongs to. Group List is a list of groups this user does not belong to. Use the << or **>>** buttons to have this user join or leave a group.

5. Press the **Apply** button and the user is created.

---

*Note:*

- *All users will be in the "users" group.*

---
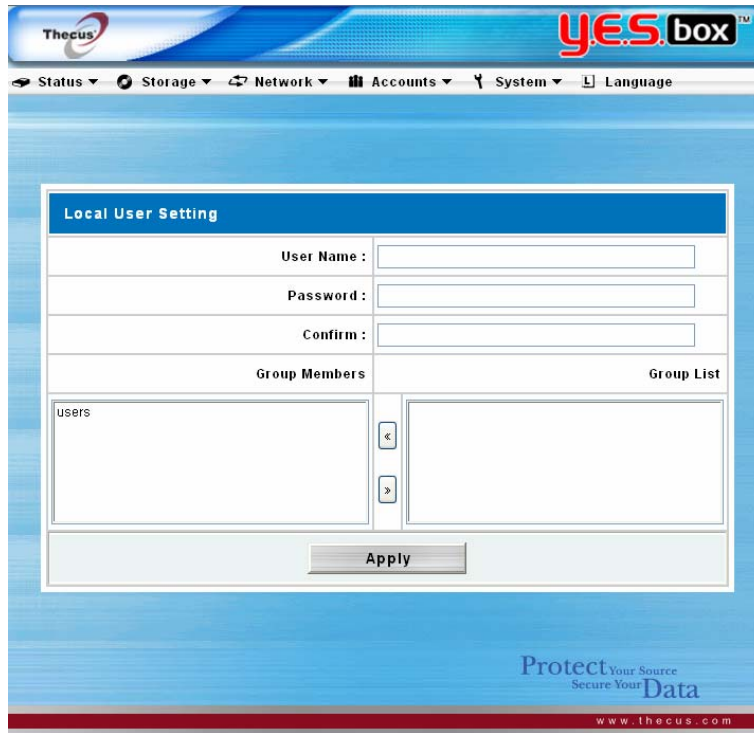


### How to Remove a User

1. Select an existing user from the **Local User Configuration** screen.
2. Click on **Delete** button and the user is deleted from the system.

### How to Modify a User

1. Select an existing user from the **Local User Configuration** screen.
2. Click on the **Modify** button, and **Local User Setting** screen appears
3. Enter a new password and re-enter to confirm, or use the **<<** or **>>** buttons to have this user join or leave a group. Click on the **Apply** button to save your changes.

## Local Groups Configuration

From the **Accounts** menu, choose **Groups** item, and the **Local Groups**

**Configuration** screen appears. This screen allows you to Add, Modify, and Delete local group.

| | |
|---|---|
| **Add** | Press the **Add** button to add a group to the list of local groups. |
| **Modify** | Press the **Modify** button to modify a local group. |
| **Delete** | Press the **Delete** button to delete a selected group from the system. |
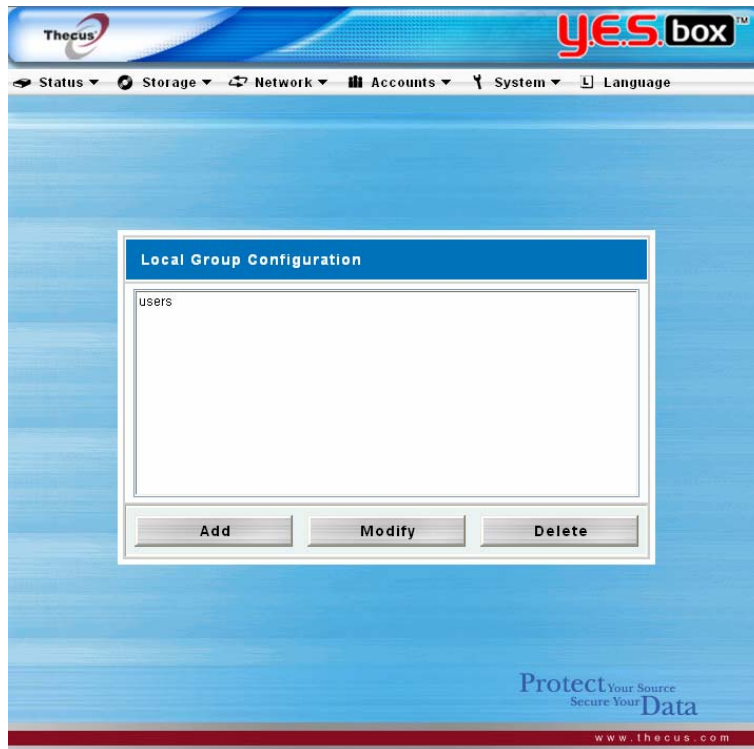


**How to Add a Group**

1. In the **Groups** screen, click on the **Add** button.
2. The **Local Group Setting** screen appears.
3. Enter a **Group Name**, and select users to be in this group from the **Users List** by adding them to the Members List.
4. Click on the **Apply** button.
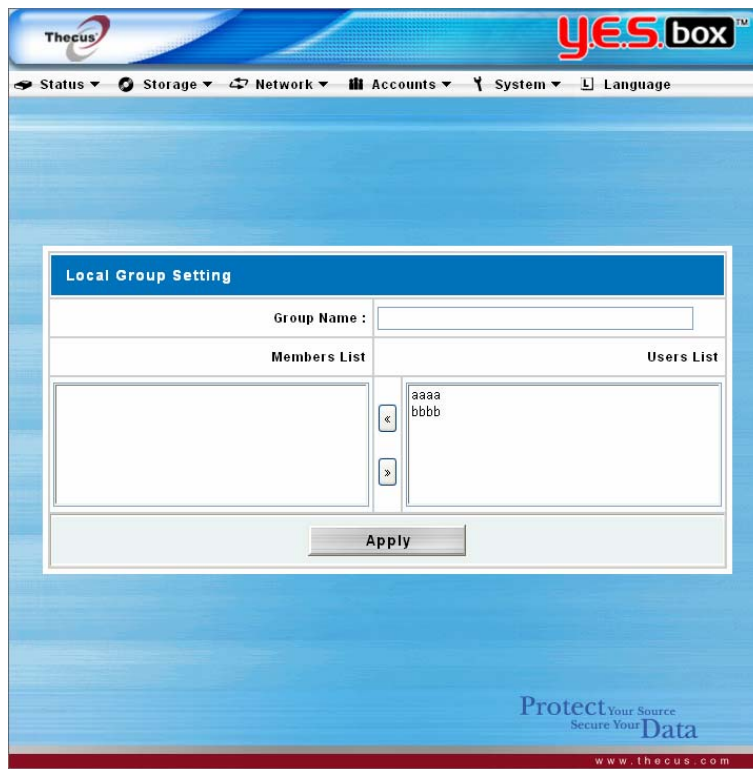
**How to Delete a Group**

1. In the **Groups** screen, select a group name from the list.
2. Press **Delete** to delete the group from the system.

**How to Modify a Group**

1. In the **Groups** screen, select a group name from the list.
2. Press **Modify** button to modify the members in a group.
3. To add a user into a group, select the user from the **Users List**, press the **<<** button to move the user into the **Members List**.
4. To remove a user from a group, select the user from **Members List**, press the **>>** button.
5. Click the **Apply** button to save your changes.

**Additional System Settings**

Use the **System** menu to configure system administration functions.

**Notification Configuration**

From the **System** menu, choose the **Notification** item, and the **Notification Configuration** screen appears. This screen lets you make settings for notification in case of system problems. Press **Apply** to confirm all settings. See following table for a detailed description of each item.

| | |
|---|---|
| **Beep Notification** | Enable/disable the system beeper that beeps when a problem occurs. |
| **Email Notification** | Enable/disable email notifications of system problems. |
| **SMTP Server** | Specifies the hostname/IP address of the SMTP server. |
| **Port** | Specifies the port to send outgoing notification emails. |
| **Auth Type** | Select the SMTP Server account authentication type. |
| **SMTP Account ID** | Set the SMTP Server Email account ID. |
| **Account Password** | Enter a new password. |
| **Confirm Account password** | Confirm a new password. |
| **Receiver's E-mail Address** | Add one or more recipient's email addresses to receive email notifications. |
| **Test E-Mail** | Click to send out test e-mails to make sure the settings are correct. |

*Note:*

- *Consult with your mail server administrator for the email server information.*
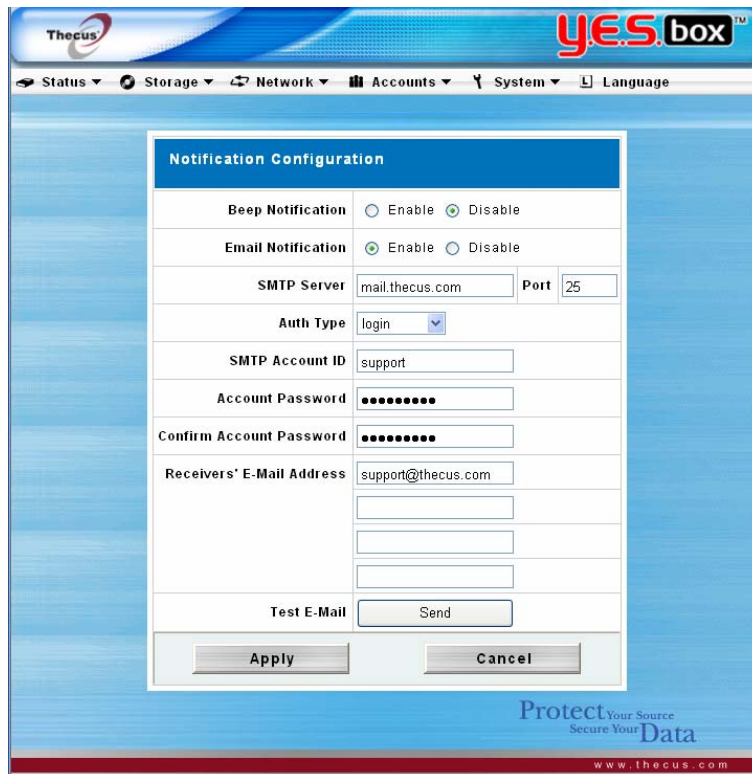
**System Logs**

From the **System** menu, choose the **Logs** item and the **System Logs** screen appears. This screen shows a history of system usage and important events such as RAID status, network information, and system booting. See the following table for a detailed description of each item:

| | |
|---|---|
| **Truncate All Log File** | Clear all log files. |
| **I<<   <   >   >>I** | Use the forward ( **>   >>I** ) and backward ( **I<<   <** ) buttons to browse the log pages. |
| **INFO** | Provides all log information including warning messages and error messages. |
| **WARN** | Shows all warning messages and error messages. |
| **ERROR** | Shows only error messages. |
| **GO** | Specify the number of lines per page and press **Go**. |
| **Ascending** | Shows logs by date in ascending order. |
| **Descending** | Shows logs by date in descending order. |
| **Download All Log File** | Export all logs to an external file. |
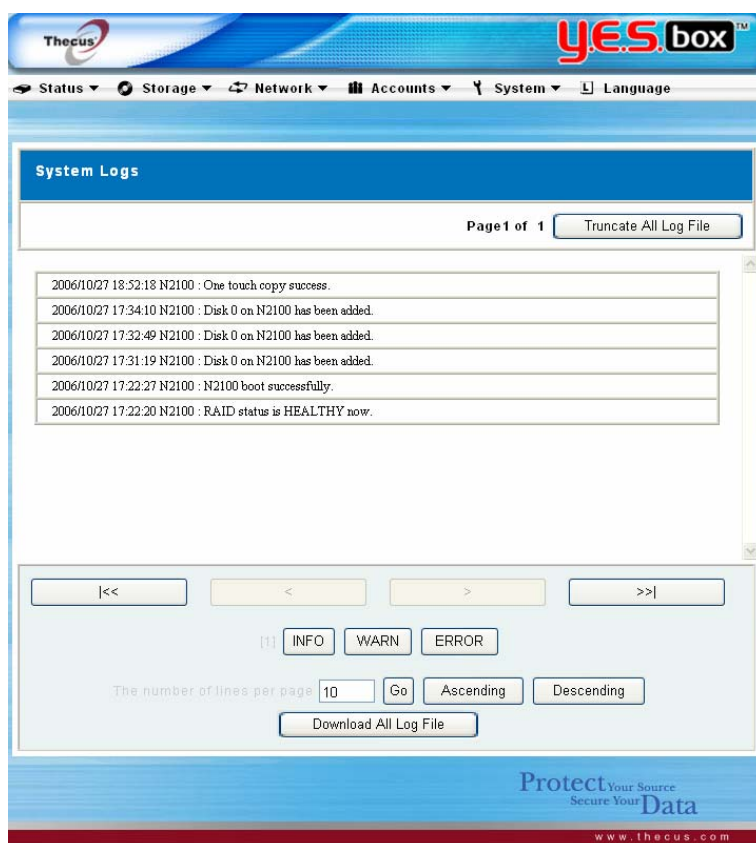
**Time Settings**

From the **System** menu, choose the **Time** item and the **Time** screen appears. Set the desired date, time, time zone and NTP Server. You can change any of these items and press **Apply** to confirm your settings. You can elect to synchronize the system time on the N2100 YES Box with a NTP (Network Time Protocol) server. See the following table for a detailed description of each item.

| | |
|---|---|
| **Date** | Sets the system date. |
| **Time** | Sets the system time. |
| **Time Zone** | Sets the system time zone. |
| **NTP Server** | Select **Yes** to allow the N2100 to synchronize with the NTP server shown below. |
| | Select **Manually** to allow the N2100 to synchronize with an NTP server of your choice. |
| | Select **No** to disallow the N2100 to synchronize with an NTP server. |

*Warning:*

- *If an NTP server is selected or entered, please make sure your N2100's network has been setup to access the NTP server.*

44
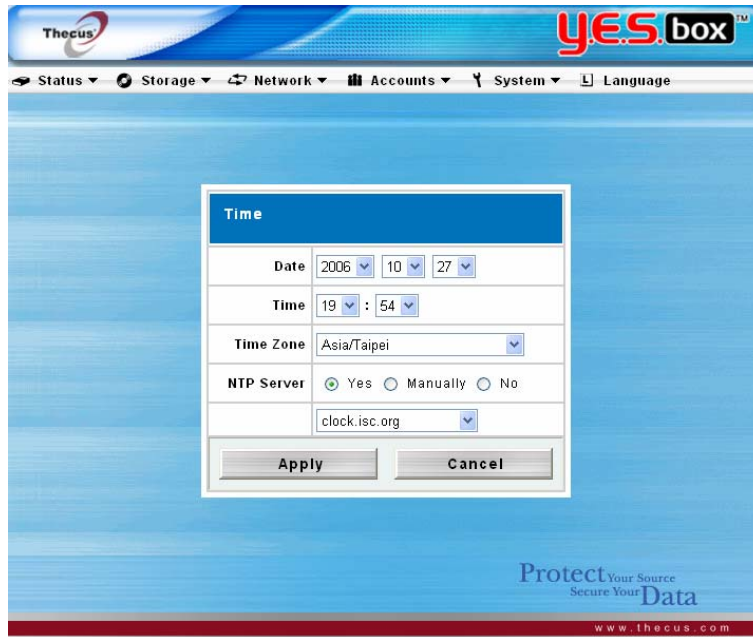
**System Configuration Backup & Restore**

From the **System** menu, choose the **Config Mgmt** item and the **System Configuration Backup/Restore** screen appears. From here you can download or upload system configurations. See the following table for a detailed description of each item.

| | |
|---|---|
| **Download** | Save and export current system configuration. |
| **Upload** | Import a saved configuration file to overwrite current system configuration. |
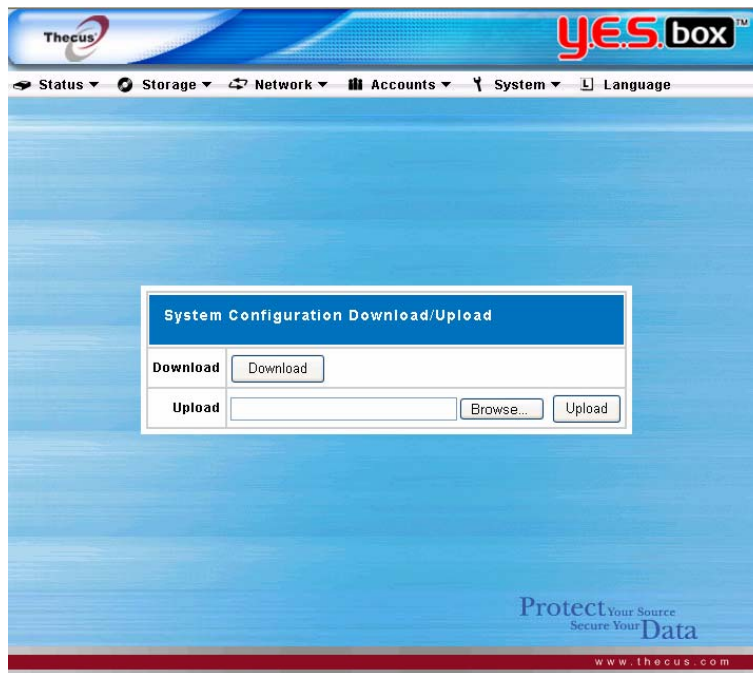
**Module Management**

From the **System** menu, choose the **Module Mgmt** item and the Module
**Management** screen appears. You can install separate software modules into your
N2100.

| | |
|---|---|
| **Module File** | Location of the module file. |
| **Browse** | Click to browse the folder of your PC to find the module files. |
| **Install** | Click to install module into your N2100. |
| **Uninstall** | Click to uninstall module. |
| **Enable/Disable** | Click to enable/disable a module. |
| **Check Update** | Click to check for new versions of the module. |
| | Note: Not all the module supports this function. |
| **Name** | Displays the name of the module. |
| **Version** | Displays the module version. |
| **Description** | The description of the module. |
| **Enable** | Displays whether the module has been enabled or not. |
| **Status** | Displays the status of the module. |

*Note:*

- *Modules will be released by Thecus separately from the standard NAS
  firmware.*
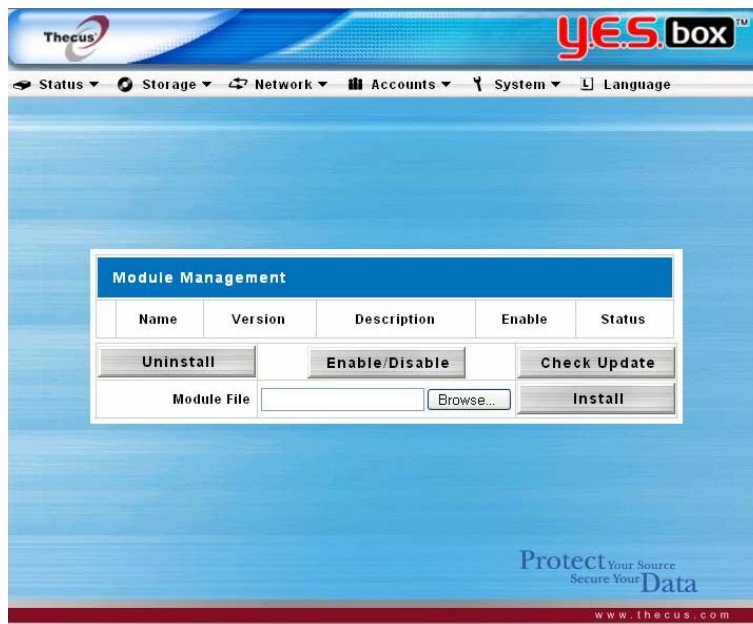
**Reset to Factory Default Settings**

From the **System** menu, choose the **Factory Default** item and the **Reset to Factory Default** screen appears. Press **Apply** to reset the YES Box N2100 to factory default settings.

| *Warning:* |
| :--- |
| - *Resetting to factory defaults will not erase the data stored in the hard disks but will revert all the settings to the factory default values.* |
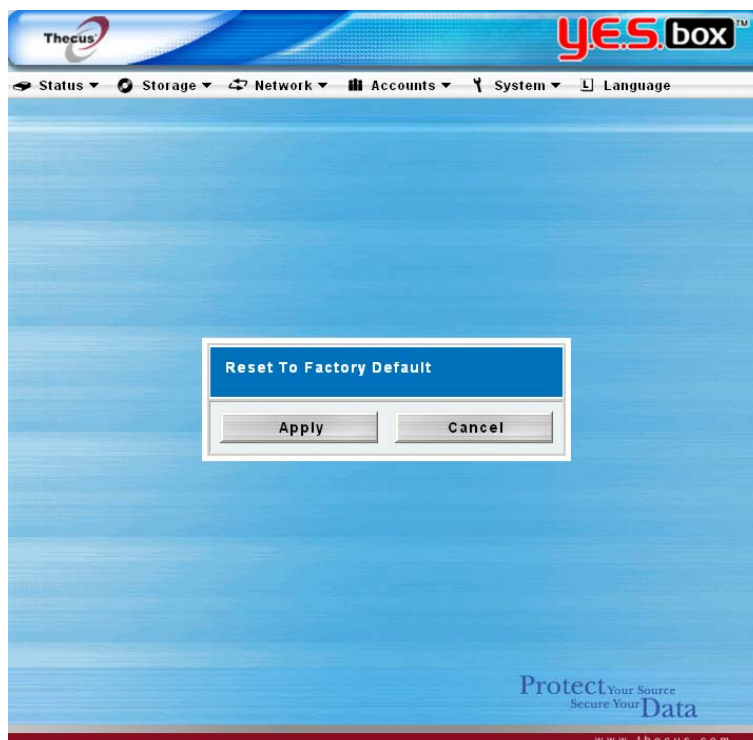
**Upgrading System Firmware**

From the **System** menu, choose the **Firmware Upgrade** item and the **Firmware Upgrade** screen appears.

Follow the steps below to upgrade your firmware
1. Use the **Browse** button to find the firmware file.
2. Press **Apply**.
3. The beeper beeps and the system's Busy LED blinks until the upgrade is complete.

| *Note:* |
| --- |
| - *The beeper only beeps if it is enabled in the **System Notification** menu.* |
| - *Check Thecus website for the latest firmware release and release notes.* |
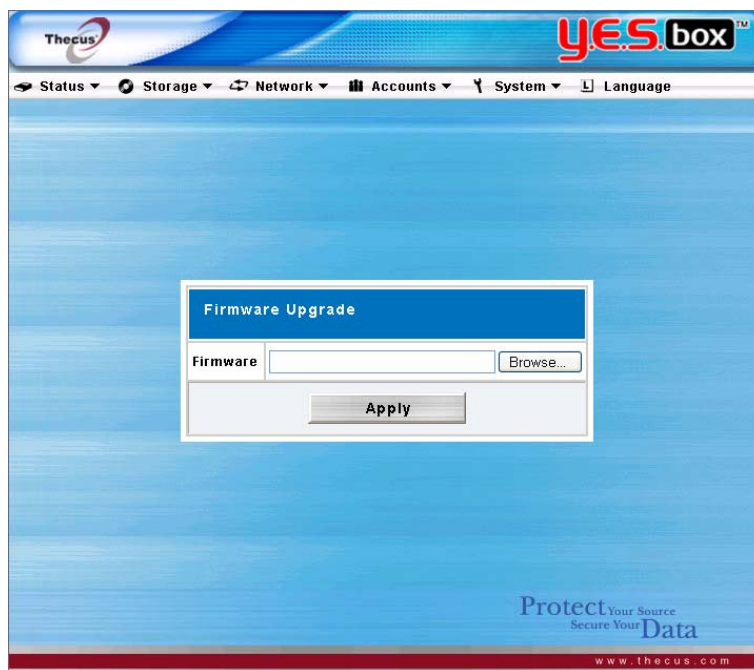


**Change Administrator Password**

From the **System** menu, choose the **Administrator Password** item and the **Change Administrator Password** screen appears. Press **Apply** to confirm password changes. See the following table for a detailed description of each item.

| | |
| --- | --- |
| **New Password** | Type in a new administrator password |
| **Confirm Password** | Type the new password again to confirm. |
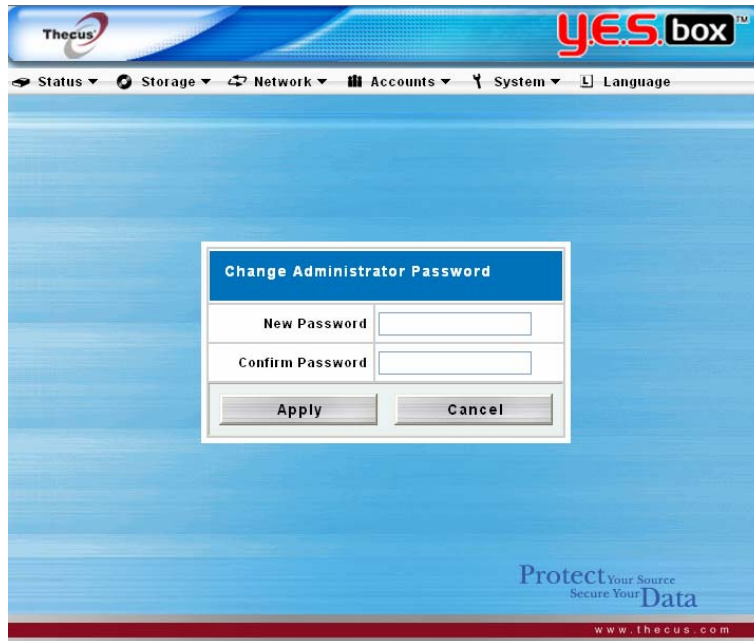
**Shutdown and Reboot System**

From the **System** menu, choose **Reboot & Shutdown** item, and the **Shutdown/Reboot System** screen appears. Press **Reboot** to restart the system or **Shutdown** to turn the system off.
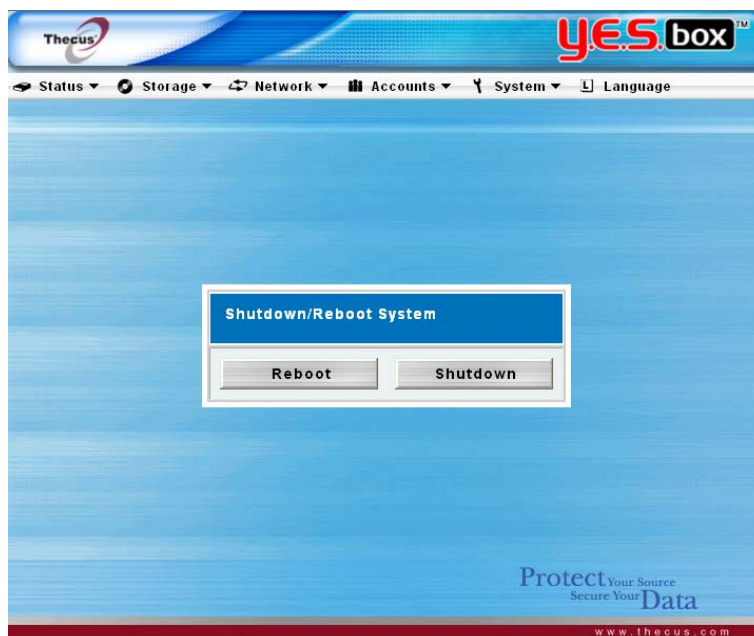


**Logout**

To logout of System Web Management, choose **Logout** from **System** Menu.

**Language Selection**

The YES Box N2100 web user interface supports multiple languages. Choose the **Language** menu and the **Change Language** screen appears. This screen allows you to select preferred language for the system menu. Press **Apply** to confirm your selection.
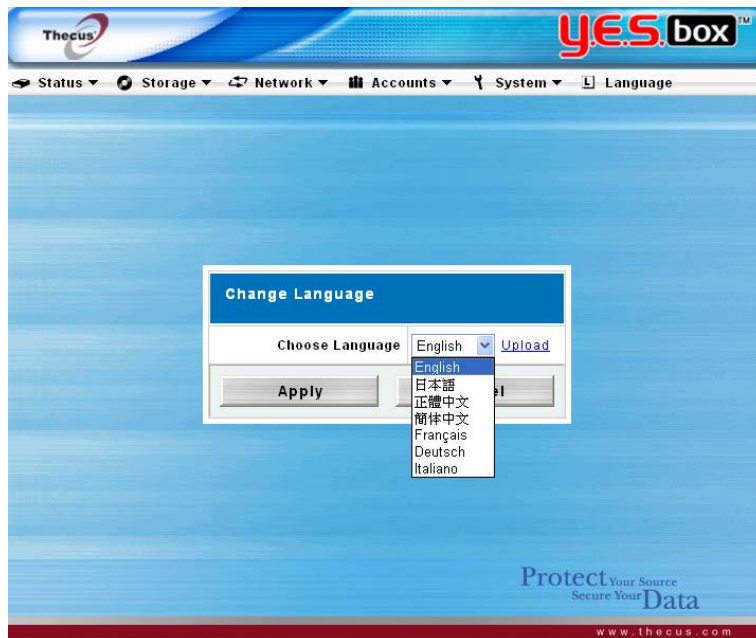
**Chapter 3 How to use YES Box N2100**

Once the YES Box N2100 is setup and operating, users on the network may manage all varieties of digital music, photos, or files using their web browser. To manage your personal files or access public files on the YES Box N2100, just enter the YES Box's IP address into your browser.

**Manage Files & Folders**

The buttons on the login page are **WebDisk**, **Music**, **Gallery**, and **Login** buttons. To access files, music or photos on the YES Box N2100, click on the **WebDisk**, **Music**, or **Gallery** buttons respectively.



**WebDisk Setup**

When any user clicks on the **WebDisk** button, they will see all available public folders.

When they click on the name of a public folder, they will see the files within that folder.
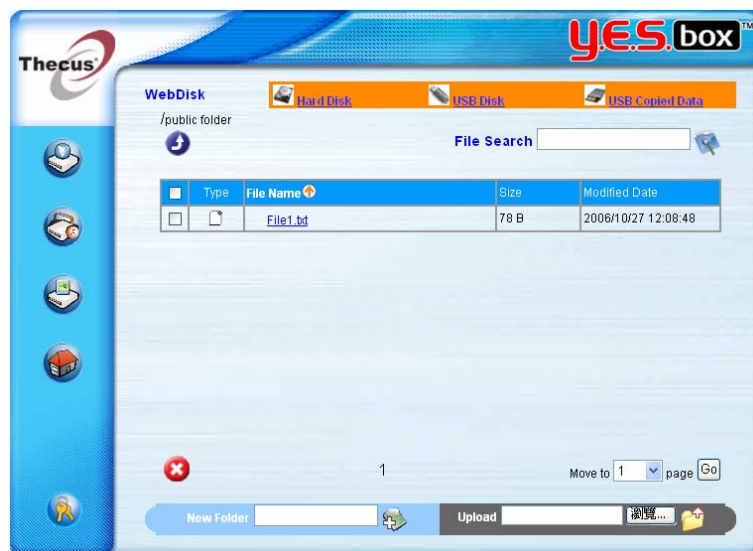


When user clicks on a file name, the file will be downloaded.

| | | |
|---|---|---|
|  | **Back** | Move up to the parent folder. |
|  | **File Search** | Search for specific files or folders. |
|  | **Sort** | Arrange all files and folders by type, name, size, or last modified date. |
|  | **Delete** | Delete the selected files or folders.<br>NOTE: This button will appear only if the user has write access to the folder. |

| | | |
|---|---|---|
|  | **Page Number** | Use this to navigate when multiple pages are required to list the contents of the selected directories. |
|  | **Create New Folder** | Enter a new folder name and press the **Create** button. NOTE: This function will appear only if the user has write access to the folder. |
|  | **Upload Files** | Browse to the desired file location and press the Upload button. NOTE: This function will appear only if the user has write access to the folder. |
|  | **Login** | Click on the Login button to log into the YES Box N2100. |

For more information on how to setup user rights to the folders, please check Folder **Access Control List (ACL)** section.

To access folders with access control, you must first login with a local user account. To log in, please click on the login button on the lower right hand corner.



**iTunes® Server Setup**

To manage your digital music and share it with iTunes clients on the network, click on

the **Music** button from the left panel.

You can use the **WebDisk** function to manage your digital music, or you can manage through SMB/CIFS (see **SMB/CIFS Setup** section).

## Photo Gallery Setup

To manage your photo gallery or see other photo albums, click on the **Gallery** button from the left panel.

You will see your own Photo Gallery and all public Photo Albums on the network.

To manage any picture files, you must first select the item by clicking its check box.

### Manage Your Album and Photos

| | | |
|---|---|---|
| | Make Cover | Make selected photo your cover picture. |
| | Back | Move up to the parent folder. |
| | Add | Add a new album or photos. |
| | Edit | Edit the name and description of the selected album or photo. Each name is limited to 20 characters and each description is limited to 255 characters. |
| | Delete | Delete the selected albums or photos. |

*Note:*

- *Only logged in users will see these icons.*
- *To prevent system errors, the YES Box N2100 sets the following limitations on photo files:*
  - ◆ *Each file upload is limited to a size of 4MB. Files exceeding 4MB will NOT be uploaded and no error message will appear.*
  - ◆ *Only these photo file types will be uploaded: \*.jpg, \*.gif, \*.bmp, \*.png, \*.pcx, \*.psd, \*.bmp.*
  - ◆ *If duplicate file names exist during upload process, system will add a number in front of the original file name ( abc→1abc)*

### Create Album

Click on the **Add** button to create a new album.

Enter a name for the album, and enter a description if you wish. Then, click on the **Create Album** button.



**Password Protect an Album**

Select the album to be protected, click on the **Edit** button, and the **Album Edit** screen will appear. The owner of the album can enter an album password to protect the album, so that only people with the correct password can view the album.

**Uploading Pictures to an Album**

When the album is created, click on the album icon to enter the album. Initially the album is empty. Click on the **Add** button to upload pictures into the album. The **Upload Photos** screen will appear. Users can select and upload up to 8 pictures at a time.
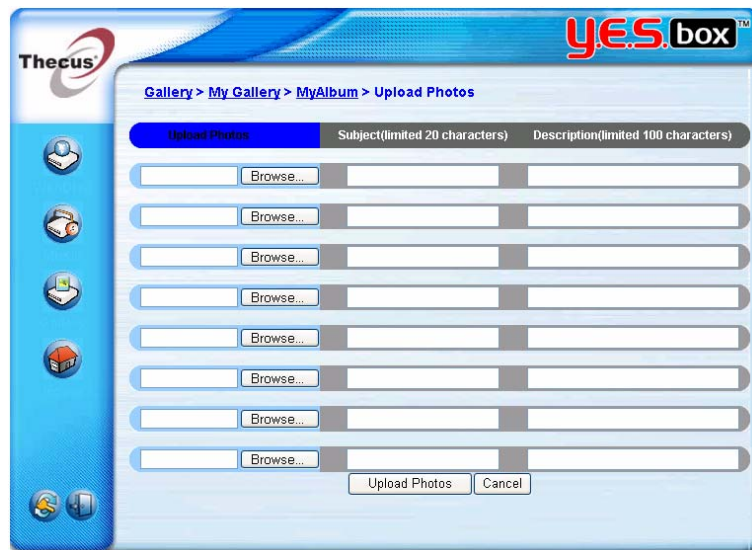


Once the picture is uploaded, you can view it in the album. The owner of the album can Delete or Modify the pictures with the **Delete** or **Modify** buttons on the top right hand corner.
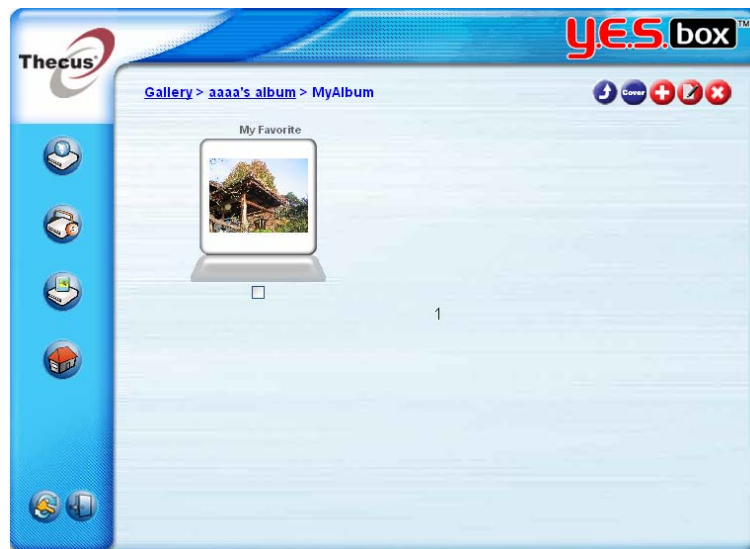
**Windows XP Publish Wizard**

There are many ways for a local user to upload pictures into their photo album. Users of Windows XP can upload thru Windows XP Publish Wizard.

1. Click on the XP Publishing Wizard icon.



2. The **XP Web Publishing Wizard Client** screen appears. Click on the link to install the Publishing Wizard.

3. Windows XP will ask whether you want to run or save this file. Click on the **Run** button.
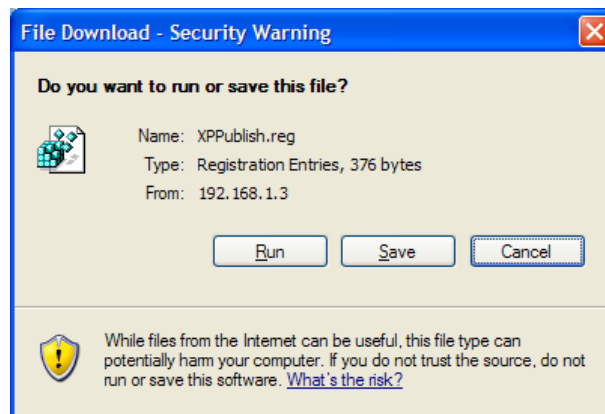


4. Once the Wizard is installed, use the Windows file manager to browse the folder that contains the picture you want to publish. On the left pane, the will be an icon "Publish this folder to the Web".
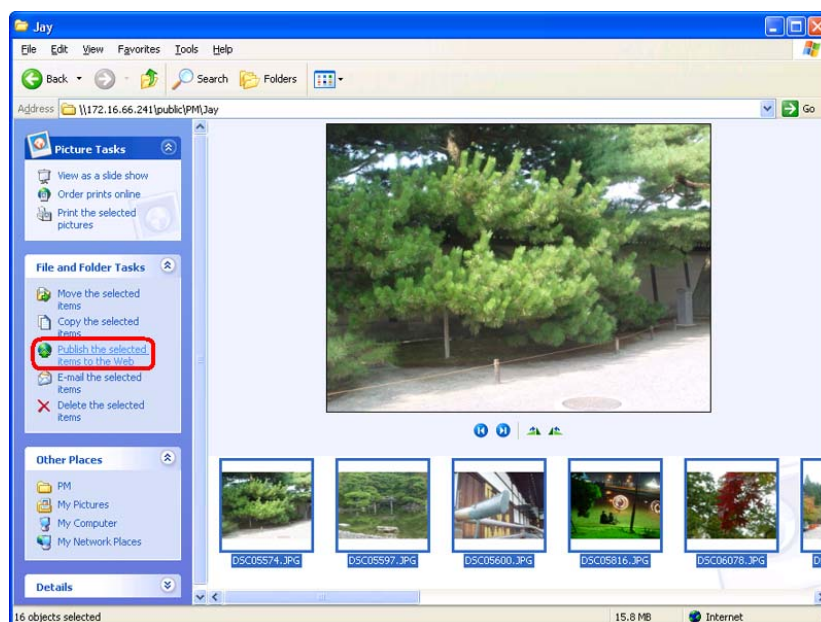


5. Click on this icon and Web Publishing Wizard will start.
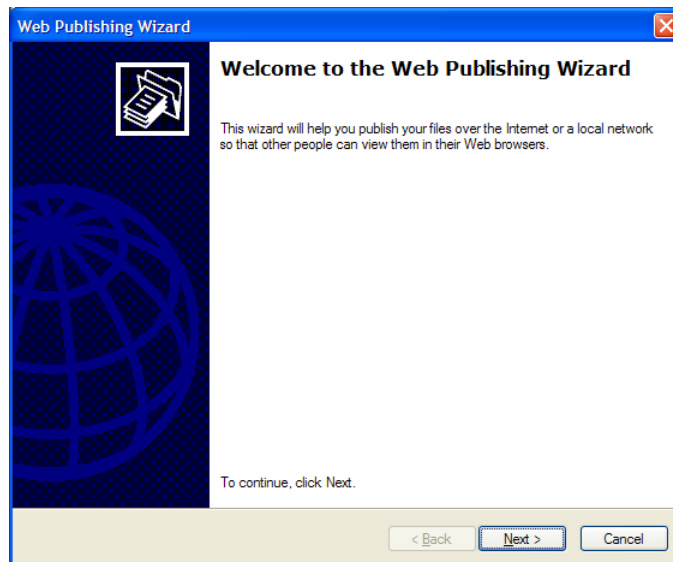
6. Select the pictures you want to publish to the Photo Web Server by placing a check mark on the top left hand corner of the picture. Click on the Next button.
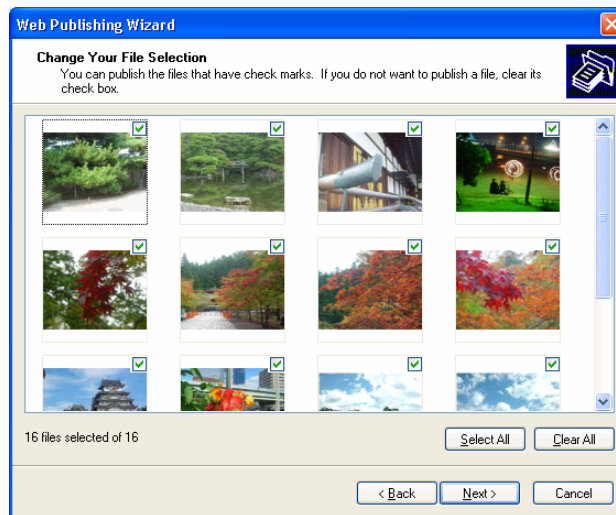


7. You PC will start to connect to the Photo Web Server.
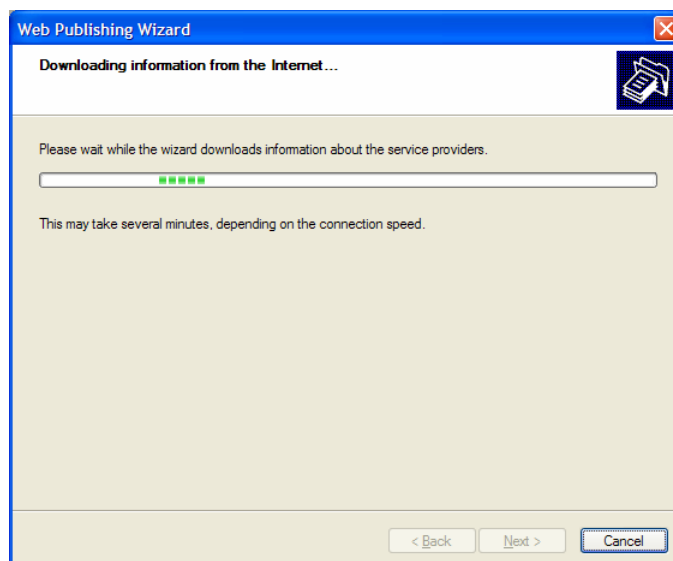


8. Select **Y.E.S. box Photo Gallery Wizard** to publish you pictures to the N2100.
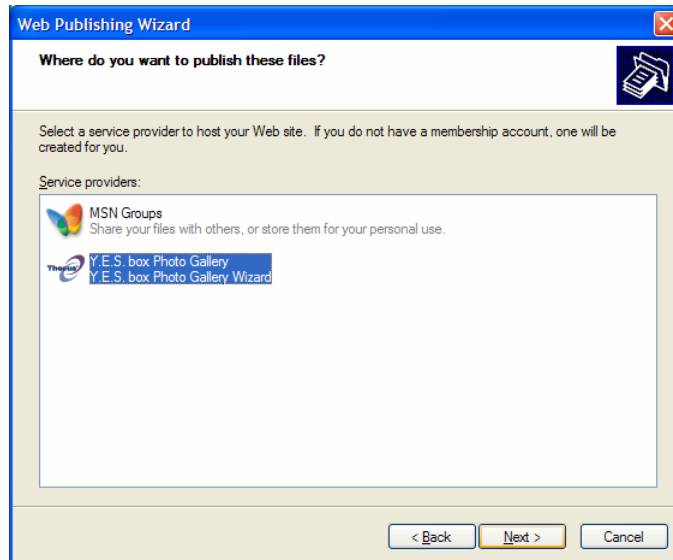
9.   Login into the N2100 with your local username and password.
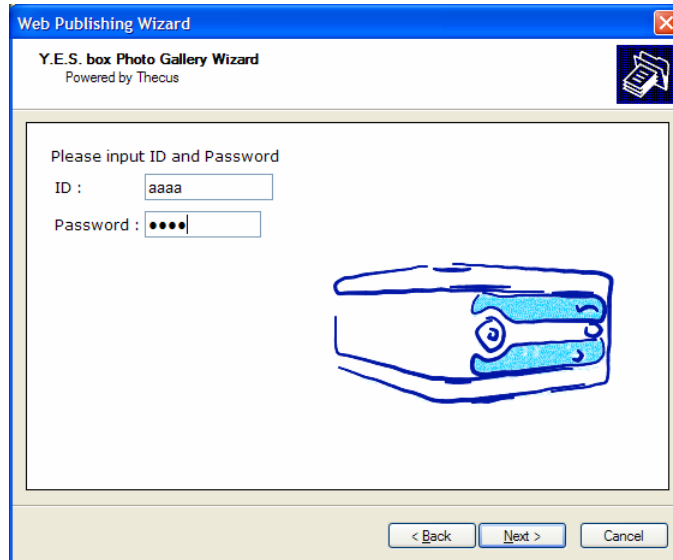


10.  The N2100 will then display the welcome page.
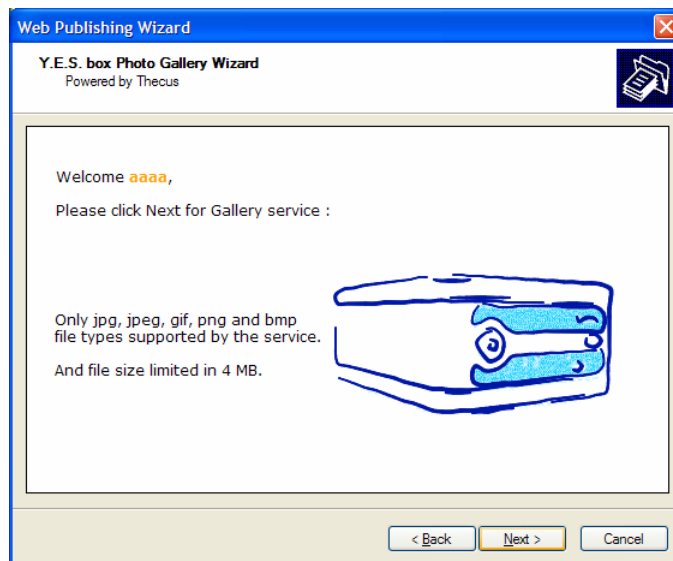


11.  Create your album by entering an album name and click on the **Create Album** button.
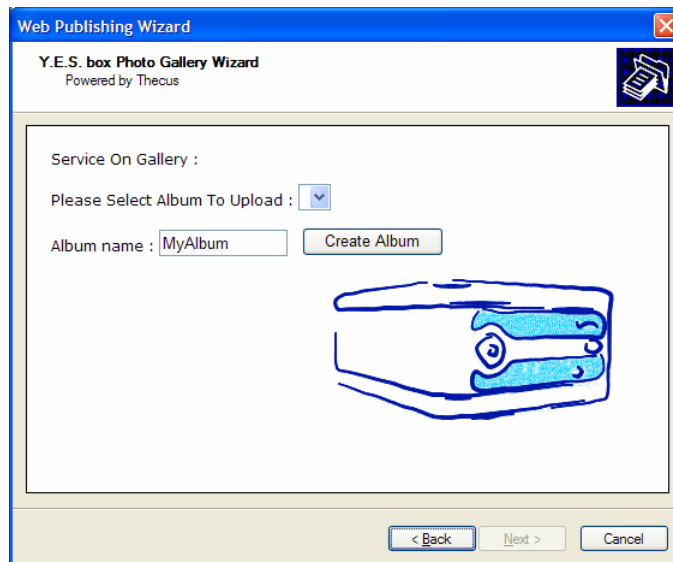
12. Select the album you want to upload your pictures to.
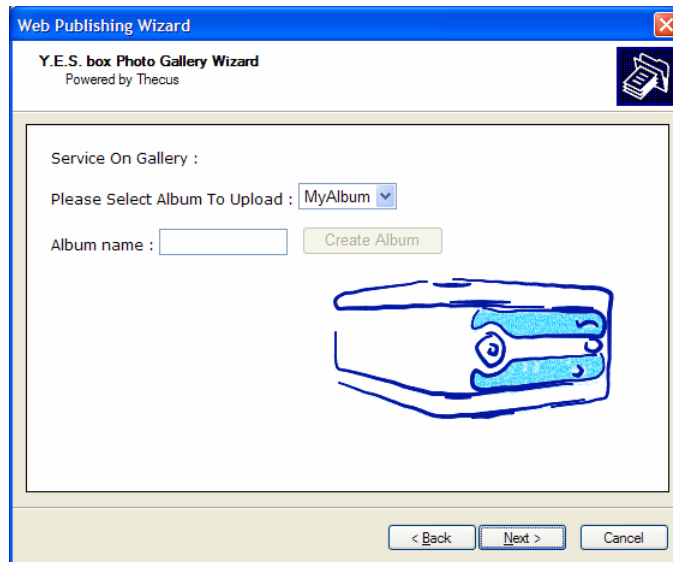


13. Confirm the target album.
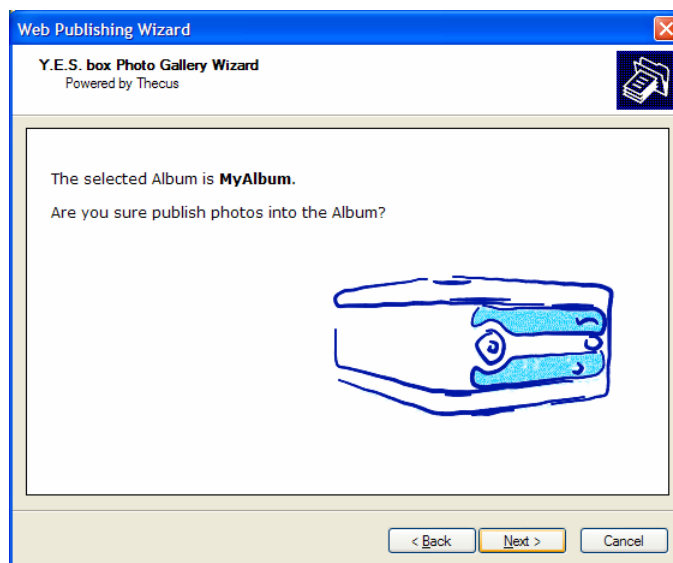


14. Windows will show picture upload in progress.
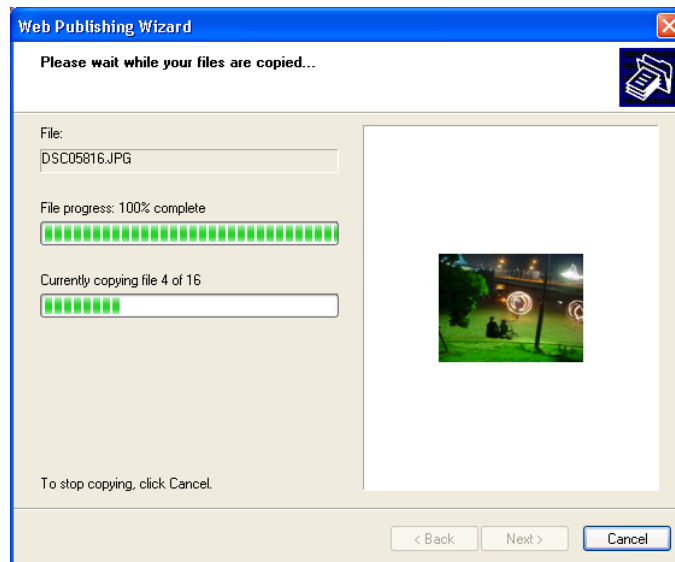
15. When the upload is finished, the Wizard will ask you whether if you want to go to the website. Click on the **Finish** button to go to your Photo Web Server.
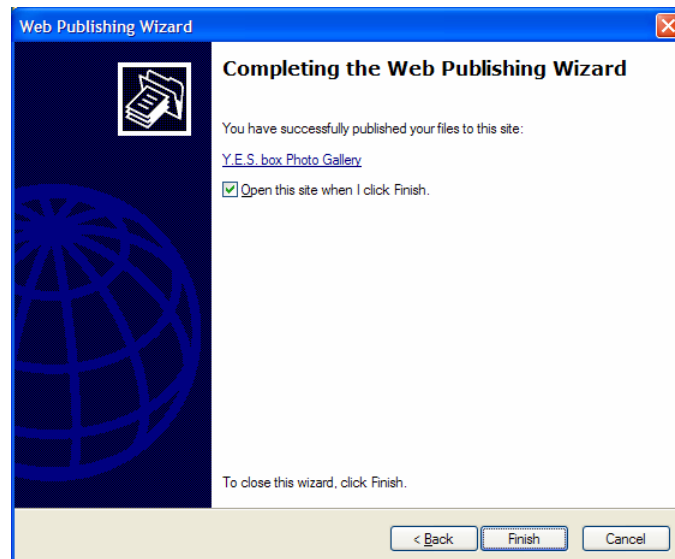


16. Click on the user's icon to go to the user's album.



17. You will see the user's album list. Click on MyAlbum.

18. You will see the pictures just selected in the album.



**EXIF Information**

Click on the one of the pictures. The EXIF information of the picture will be displayed next to the picture.

**Slide Show**

You can click on the **Start Slide Show** icon on the top right hand corner to start the slide show.



To stop the slide show, click on the **Stop Slide Show** icon on the top right hand corner.

**Mapping the Client PC to the YES Box N2100**

**Mapping a Network Drive (Windows)**

You can map share folders on the YES Box N2100 so that you can access them through the My Computer folder in Windows. You can connect to the shared network folders on the YES Box N2100 as follows:

1. Go to the **My Documents** folder in Windows.
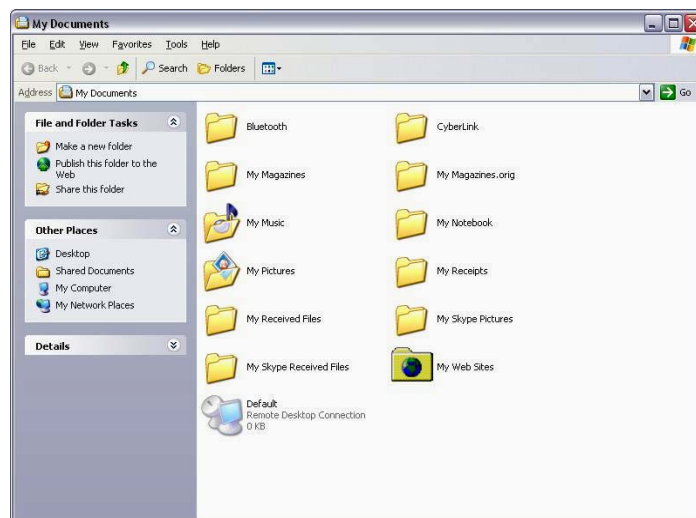


2. In the menu bar, select **Tools** and then **Map Network Drive…**
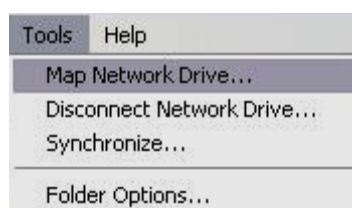
3. The **Map Network Drive** window appears.
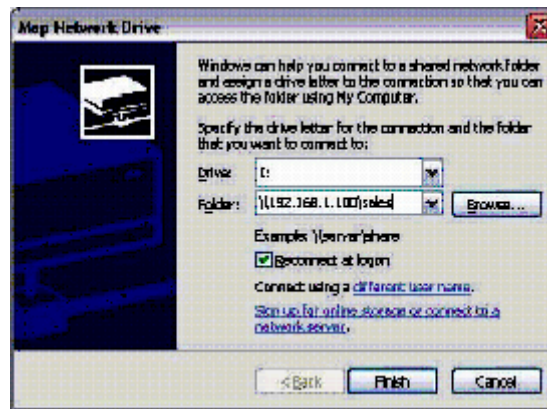


4. Assign a drive letter for the share folder.
5. Use the **Browse** button to find the folder over your network. Alternatively, you may enter the folder name you wish to connect to or its IP address.
6. Click **Finish**. When the **Connect As**… window appears, enter a user name and password.



7. Click **OK**. The share folder appears as the drive you assigned. You can now access this folder as though it were a drive on your computer.
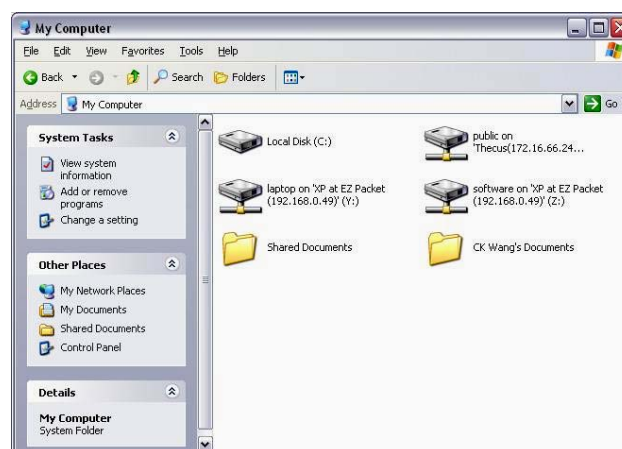
**Mapping a Network Drive (Apple OS X)**

On an Apple computer, you can connect to shared computers and servers using a network address.

1. Choose **Go** > **Connect to Server…**
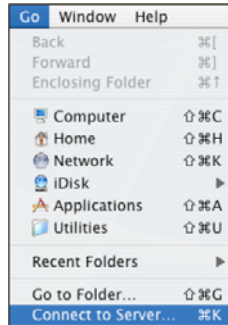


2. Enter the network address for the server in the Server Address text box.
   When connecting using SMB/CIFS protocol, type:
        **smb://192.168.1.100/Folder1**
   When connecting using AFP protocol, type:
        **afp://192.168.1.100/Folder1**
   Click **Connect**.
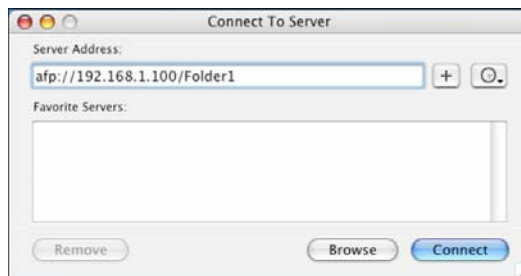


3. When MAC OS X is trying to connect N2100, it will ask for a User Name and Password which has access to the folder.



4. When MAC OS X connected to N2100 successfully, an icon representing the folder will appear on the MAC OS X desktop. You can access the folder by double clicking on the icon.

**File Backup**

There are a number of ways to back up your data to your YES Box N2100.

**Thecus Backup Utility**

The Thecus Backup Utility is on your Installation CD. When you click on the CD, the Backup Utility will be installed under **Program Groups** > **Thecus** > **Thecus Backup Utility**. If it is not installed, you can copy the file (Thecus Backup Utility.exe) to a convenient location on your hard disk and double click to execute it.



Thecus Backup.exe

When you execute this utility for the first time, it will ask you whether to create a DB file. Click **Yes**.

Note: If you can not find Thecus Backup Utility on your CD, please download it from the Thecus website.

1. Click **Add** to create a Backup task.
2. The Add new task dialogbox appears.

| | |
|---|---|
| **Task** | Specifies a name for the current task. |
| **Source** | Click to specify the source folder/file location. |
| **Incremental** | Click to specify whether the backup will be incremental.<br>If unchecked, the backup will be full backup. |
| **Destination** | Click to specify the destination folder/file location. |
| **Excluded extensions** | Files with these file name extensions will be skipped and not back up to the destination. |
| **Comments** | If you with, enter comments here for your record. |
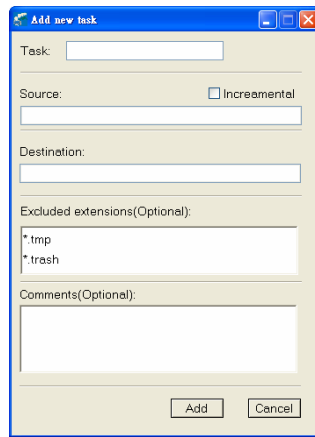
3.  To schedule the task to run at regular intervals, click on the schedule icon for that task. You can schedule the task to run Monthly or Weekly.
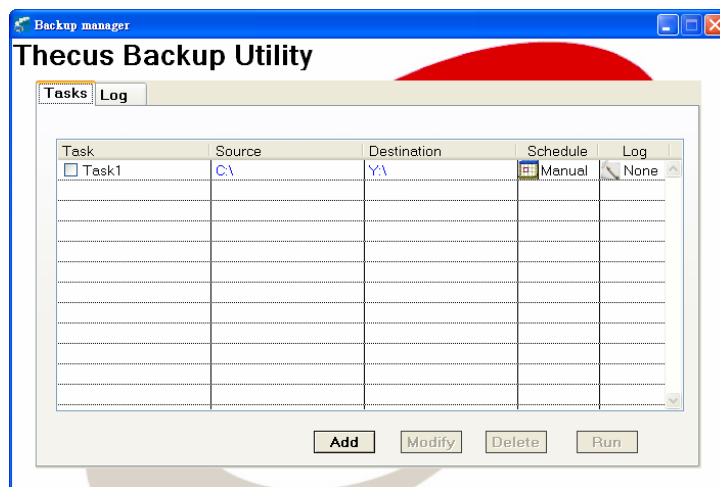


4.  To check the log for that task, click on the log icon for that task.

> **Note:**
> -  *Thecus Backup Utility also supports MAC OS X. Just copy the Thecus Backup Utility.dmg to your MAC OS X machine and double click to execute it.*

**Windows XP Data Backup**

If you use Windows XP Professional, you can also use the Windows Backup Utility (Ntbackup.exe) to backup your files.

**Installing the Windows XP Home Edition Backup Utility**

If you use Windows XP Home Edition, follow these steps to install the utility:

1.  Insert the Windows XP CD into a drive and double-click the **CD icon** in **My**

**Computer**.

2.  When the Welcome to Microsoft Windows XP screen appears, click **Perform Additional Tasks**.

3.  Click **Browse this CD**.

4.  In Windows Explorer, navigate to **ValueAdd** > **Msft** > **Ntbackup**.

5.  Double-click **Ntbackup.msi** to install the backup utility.

**Using Windows Backup Utility**

By default, the backup utility uses a wizard. To begin backup:

1.  Click **Start**, and point to **All Programs** > **Accessories** > **System Tools** > **Backup** to start the wizard.
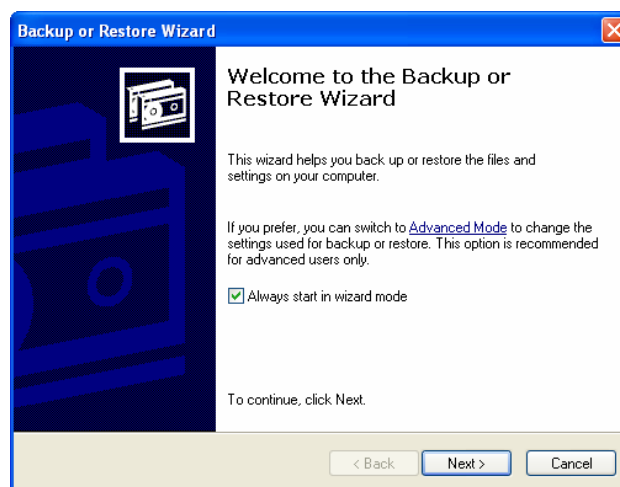


2.  Click **Next** to skip past the opening page. Choose **Backup files and settings** from the second page, and then click **Next**.

3.  Select which option you want to back up.

4.  Click **Next** and in the **Backup Type**, **Destination**, and **Name** page specify a back up location using the **Browse** button.

5.  Find and select the drive that specifies your YES Box N2100 as your backup destination and click **Next**.

6.  Click **Next** to display the wizard's final page and click **Finish** to start backing up.
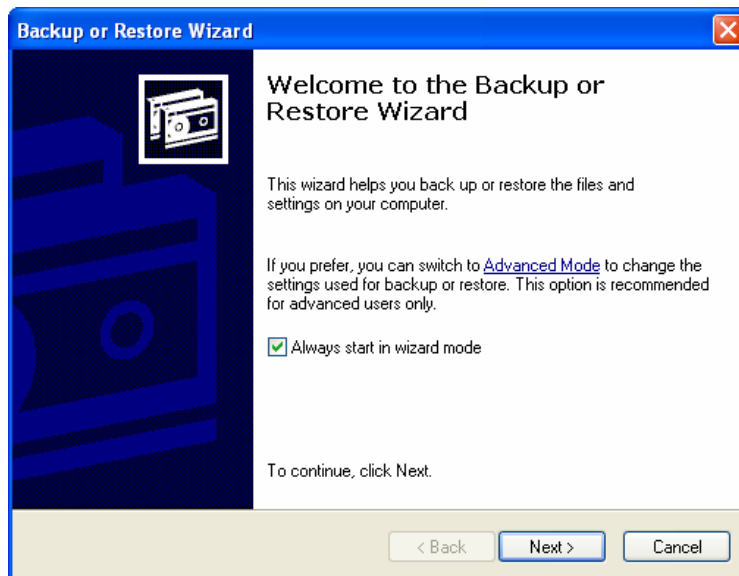
**Mac OS X Backup Utilities**

Mac OS X does not include any backup software. However, there are a number of backup solutions available for the Mac OS X, including: iBackup, Psyncx, iMSafe, Rsyncx, Folder Synchronizer X, Tri-BACKUP, Impression, Intego Personal Backup, SilverKeeper, and Apple's dotMac Backup utility to name just a few. To find even more freeware and shareware backup utilities to choose from, go to VersionTracker or MacUpdate and search on "backup".

## Appendix A: Troubleshooting Guide

This appendix covers troubleshooting, including error detection and how to deal with a damaged hard drive.

### Forgotten Network IP Address

If you forget your network IP address and have no physical access to the system, you can use the setup wizard to retrieve the IP of your N2100.

1. Start the Setup Wizard, and it will automatically detect all Thecus IP storage products on your network.
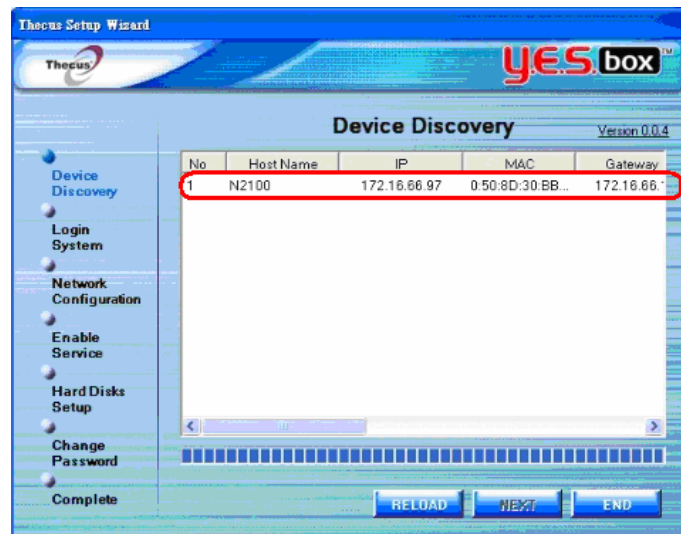


2. You should be able to find the IP address of the N2100 which you have forgotten in the "Device discovery" screen.

### When RAID status is in Degraded mode

When you find the RAID status is in Degraded mode, it means that one of the disk is bad in RAID 1. Follow the procedures below to rebuild your RAID.
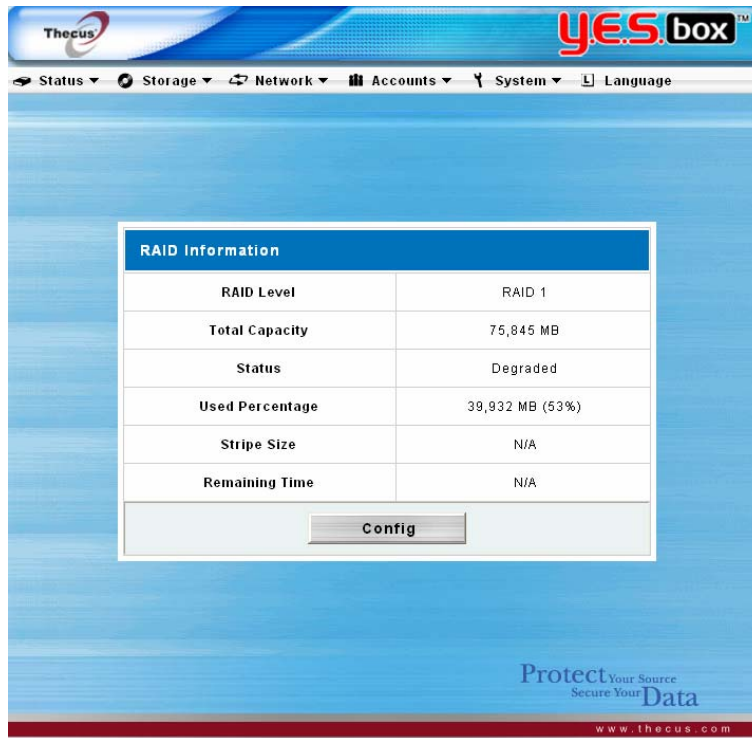
1. Power down the YES Box N2100.
2. Replace the bad disk. To do this, follow the steps outlined in "**Hard Disk Installation**".
3. Power on the YES Box N2100, and log in as admin.
4. Go to **Storage** > **RAID** page, and click on the **Config** button.
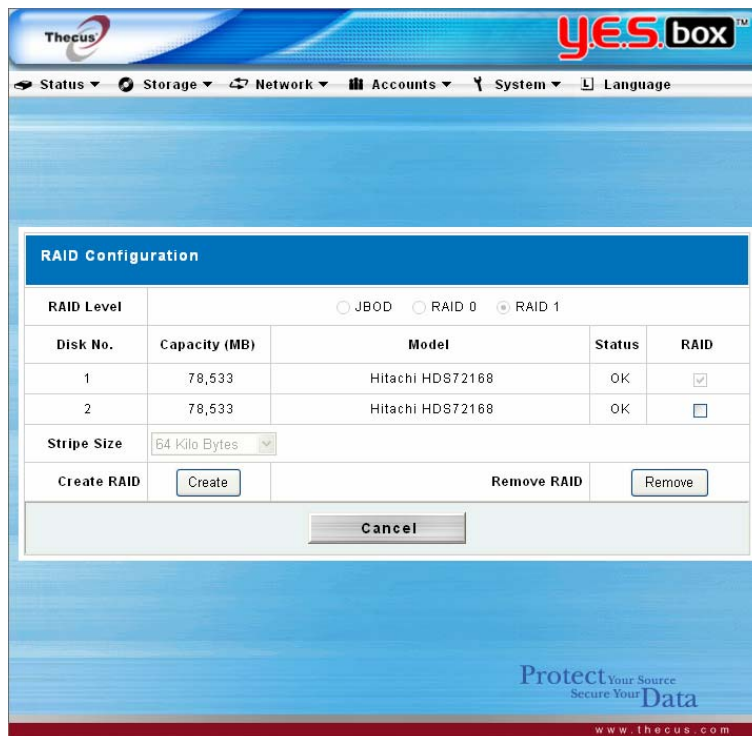


5. Check on the check box new disk in the RAID column to add into RAID, and click on the **Create** button to rebuild RAID.
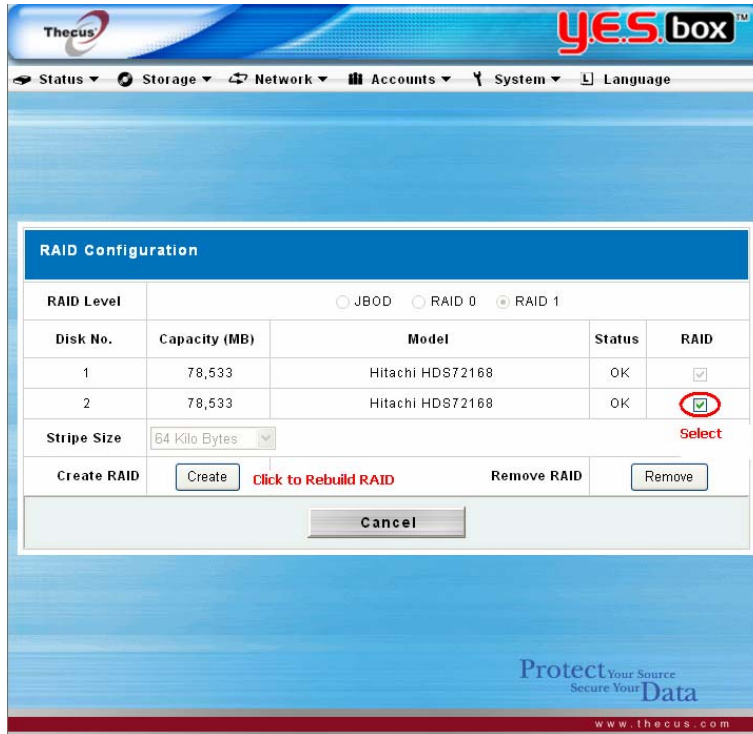
6. System will rebuild your RAID. At this time, your data is still accessible and intact. During RAID rebuild, the performance of the system is lower than normal. If possible, we suggest not using the machine until it is fully rebuilt. The time required to rebuild depends on the size of your hard disks.
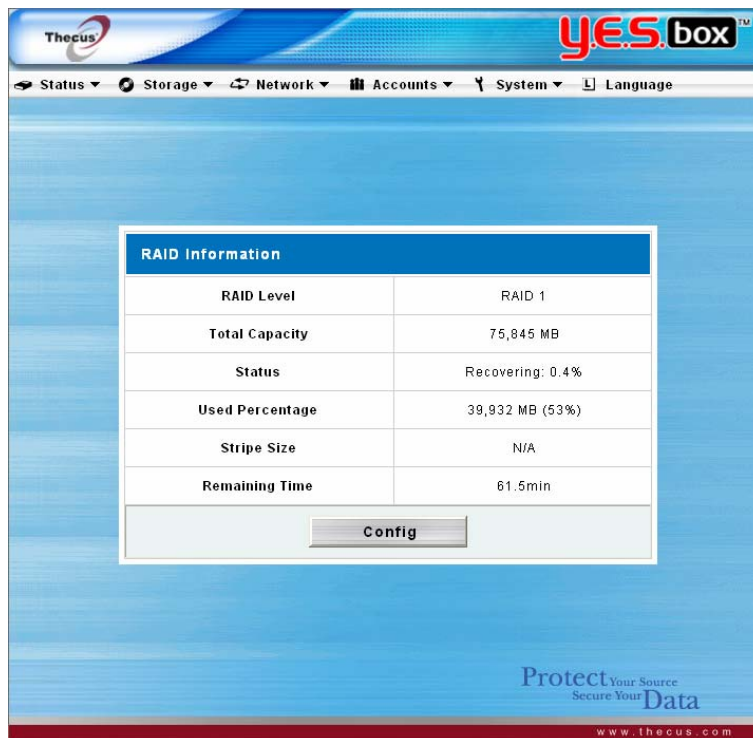
**File System Check Utility**

Press the reset button during booting process, and N2100's LAN 1 IP address will be set to 192.168.1.100 temporarily. At this time all the file services will be stopped.

> ***Warning:***
>
> - *File System Check Utility works only with LAN 1 not LAN 2.*

1. When you point your browser to 192.168.1.100, you will see the following screen.
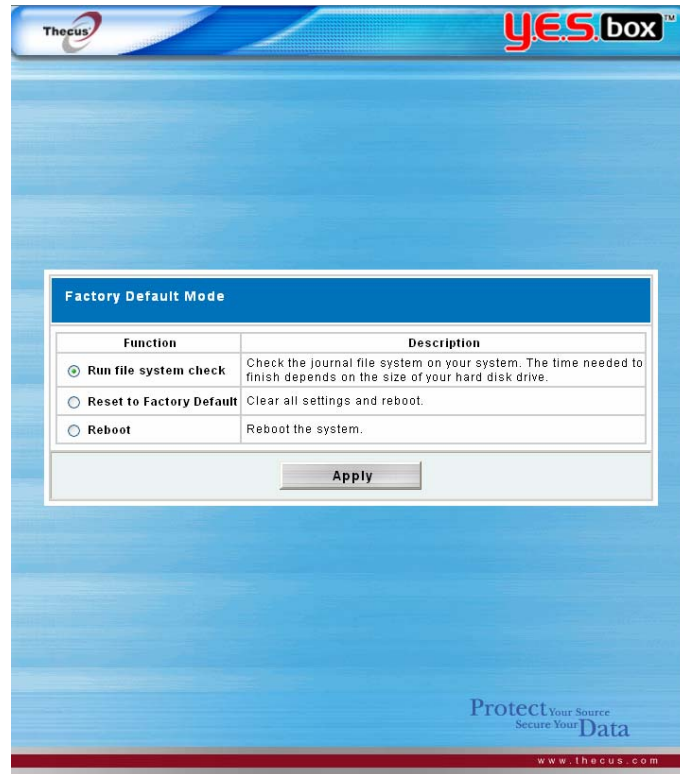


2. If you select "Run file system check" option, the file system check utility will be started, and last 20 lines of the result will be displayed in your browser.
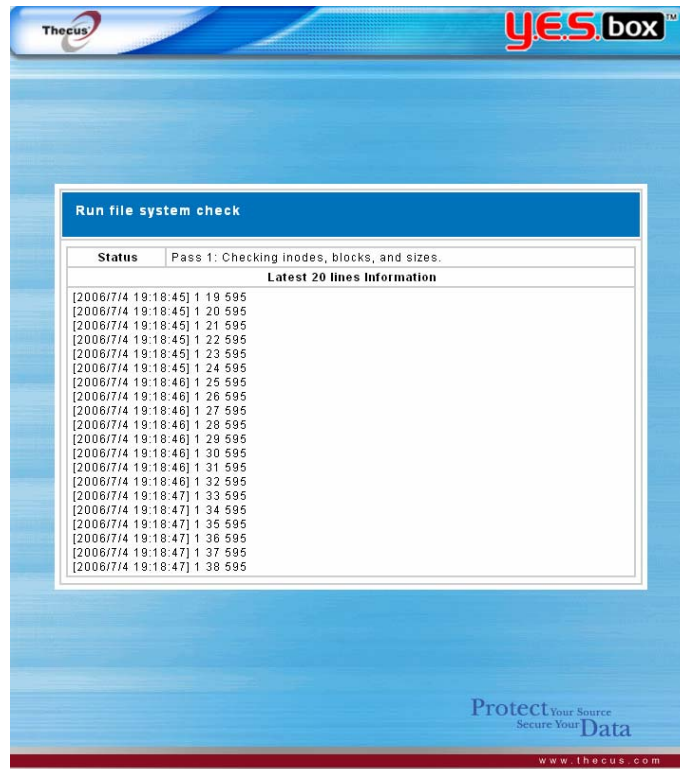
3. When the file system check is finished, the result will be displayed in your browser.

**NOTE:**

- *If the file system is corrupted beyond repair, you may have to remove RAID and recreate the file system.*
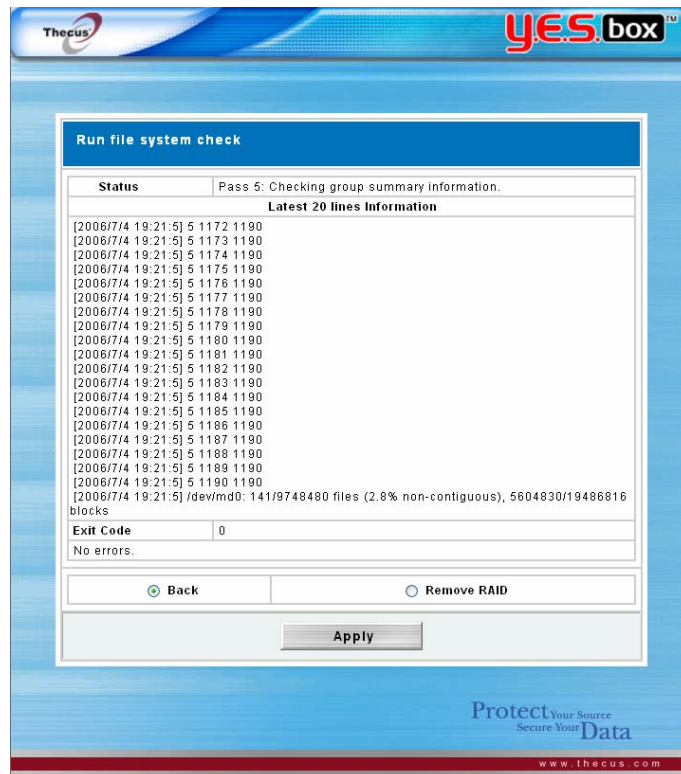
**Forgotten Password**

> Press the reset button during booting process, and N2100's LAN 1 IP address will be set to 192.168.1.100 temporarily. At this time all the file services will be stopped.
>
> 1. When you point your browser to 192.168.1.100, you will see the following screen.
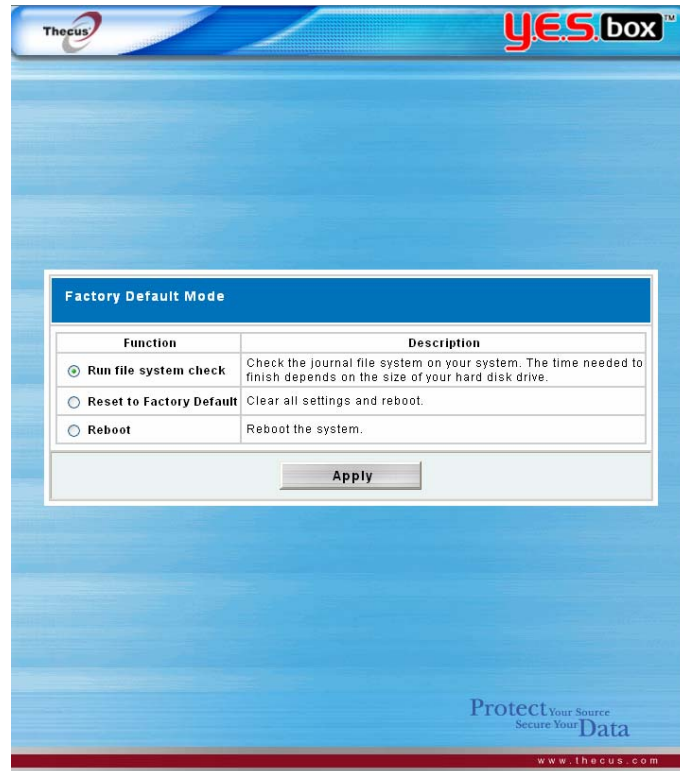
2. If you select "Reset to Factory Default" option, the system will be reset. Below are the default system settings:

Admin password → admin

LAN 1 IP address → 192.168.1.100

LAN 1 IP Gateway → 192.168.1.1

LAN 1 Jumbo Frame Support → Off

LAN 2 IP → 192.168.1.100

LAN 2 Jumbo Frame Support → Off

HTTP Port → 80

HTTPS port → 443

**Error Detection**

There are three ways the system detects an error and lets you know there is a problem.

1. The **Error LED** on the bottom left of the system's front panel glows red.
2. The **Access/Error LED** on the bottom right of a hard disk drive glows a steady red.

> **Note:**
> 
> - *Each hard disk drive has two LED indicators. The top LED is for power and the bottom LED shows either access or error.*

3. A **beeping sound** from the system means the same as the Error LED.

**If you are using JBOD with one disk and would like to add a second disk …**

If you started with one disk in JBOD mode, you can add a second disk at a later time. When the second disk is installed, you can just select the second disk and click on the **Create** button to create a volume equal to the size of two disks installed. The data in the first disk will be preserved. During JBOD expansion, all the file services will be stopped. The time for expansion depends on the size of the disks installed. All the file services will be resumed after the expansion is finished.

**If you are using JBOD with two disks and one of the disk failed…**

If your first disk fails, then all the data is lost.

If your second disk fails, then the system will try to mount the disk, and you might still be able to access the data in the first disk under read only mode. At this time, you should try to recover as much data as you can to a different storage location. Replace the failed disk and rebuild your RAID.

**If you are using RAID 0 and one of the disks failed…**

RAID 0 offers no data protection. If any of disks fails, all data is lost.

**Solving Problems**

When the system detects an error:
1. Login to the YES Box N2100 using your browser.
2. Go to the **System** menu and choose the **Logs** item.
3. The **System Log** screen appears.
4. Click the **Error** button and all recorded errors appear. These log entries help you diagnose the problem. Most errors are due to improper use of the device or hard drive damage. If hard drive damage is the problem, see the section that follows.
5. If you are unable to solve the problem, please contact your dealer.

**N2100 Simple Diagnosis Flowchart**

This flowchart is meant to provide a simple and quick procedure to identify which part of the N2100 has failed.

Procedure:
1.  Don't insert any HDDs into the N2100 system. Attach the power cord and then reset the IP address and admin password to the default settings.
    a) Power on the N2100 and immediately press the Reset button for 10 seconds.
    b) This resets the N2100 to its default IP address and password settings.
    Default IP: 192.168.1.100
    Default admin password: admin



    1.
    The reset button is near the LAN connector.

2.  Attach the power cord and connect the LAN cable between the N2100 and a PC. Don't use a hub.

3.  Turn on the N2100 and check the front panel. The power LED should glow blue after power button is pressed. Then, the Busy LED starts blinking orange for around 60 seconds. After that, the busy LED turns off. If the busy LED keeps blinking orange for more than 3 minutes, the firmware may be corrupted during

improper firmware upgrade procedures. It means the motherboard doesn't work any more and needs to be repaired.

4.  Set the IP address of a PC or NB as 192.168.1.111, and then access the login webpage. Make sure the N2100 and the PC is directly connected through a LAN cable, and not through a hub or a router.

5.  Check if the Admin login webpage shows up and works fine. Then check if the system status is normal and the HDD power LED works fine. In case the results are positive, it means the N2100 system is functioning normally. Otherwise, the N2100 may be damaged.

6.  Suppose the N2100 is bad. If the power LED glows blue and both system and power fans work fine after power button pressed, the motherboard needs to be checked and repaired. Otherwise, the power supply unit has problems.

0. Reset the IP Address and admin password to default setting.
   a) Power on the N2100 and immediately press the Reset button for 10 seconds.
   b) This resets the N2100 to its default IP address and password settings.
      Default IP: 192.168.1.100
      Default admin password: admin



1. Attach the power cord and connect LAN cable

Power supply unit is bad

2. Power LED glows blue and Busy LED keeps blinking?

Y → Firmware corrupted (MB is bad)

N



3. Set the IP address of PC or NB as 192.168.1.111, and then login NAS

MB is bad

4. Admin login & RAID status OK?

N →

5. Power LED glows blue and system fan works?

Y ↑

N

Y

NAS is OK
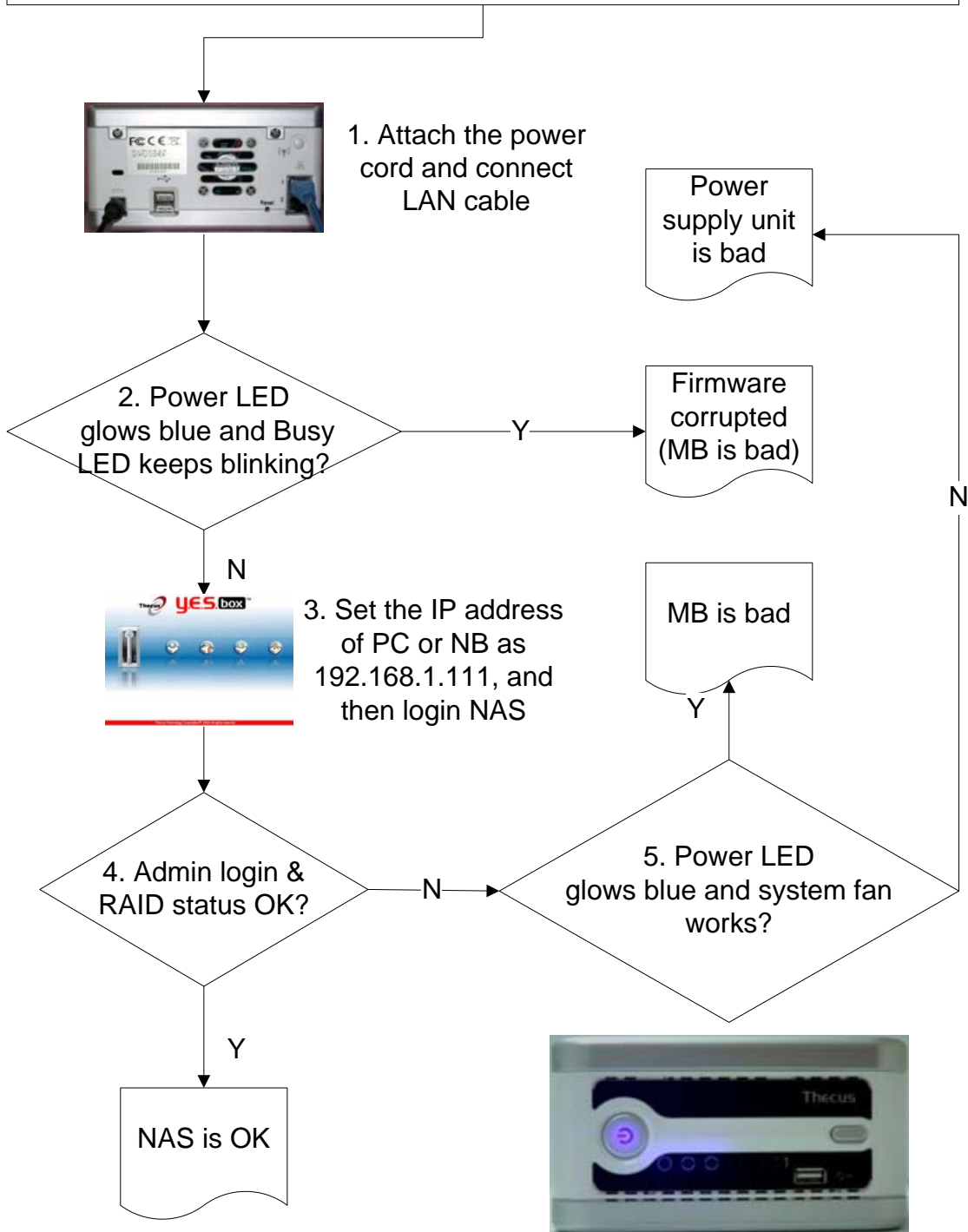
## Appendix B: RAID Basics

This appendix includes basic information about RAID and RAID settings.

## RAID Introduction

A Redundant Array of Independent Disks (RAID) is an array of several hard disks that provide data security and high performance. A RAID system accesses several hard disks simultaneously, which improves I/O performance over a single hard disk. Data security is enhanced by a RAID, since data loss due to a hard disk failure is minimized by regenerating redundant data from the other RAID hard disks.

### Benefits

RAID improves I/O performance, and increases data security through fault tolerance and redundant data storage.

### Improved Performance

RAID provides access to several hard disk drives simultaneously, which greatly increases I/O performance.

### Data Security

Hard disk drive failure unfortunately is a common occurrence. A RAID helps prevent against the loss of data due to hard disk failure. A RAID offers additional hard disk drives that can avert data loss from a hard disk drive failure. If a hard drive fails, the RAID volume can regenerate data from the data and parity stored on its other hard disk drives.

### RAID Configuration

The N2100 YES Box supports both RAID 0 and RAID 1. A RAID system divides data into smaller pieces (stripe) and saves these small pieces on two different hard disks for better performance and protection against single hard disk failure. To setup RAID on your system, you must configure stripe size and the type of RAID you wish to use.

### Stripe Size

The system writes data in stripes across the multiple hard disks of a RAID. Since multiple disks are accessed at the same time, disk striping enhances performance. The stripes can vary in size and are interleaved sequentially.

| Term | Definition |
|------|------------|
| Stripe Width | The number of hard disk drives that are striped to. In a RAID with four hard disks the stripe width is four. |

**Stripe Size**     The length of the interleaved data segments written across multiple hard disks.

**Example:**

Configure four hard disk drives as RAID 0 and the data is striped in segments. Segment One writes to HDD 1, Segment Two writes to HDD 2, and so on as below:

HDD 1

Segment One
Segment Five
Segment Nine

HDD 2

Segment Two
Segment Six
Segment Ten
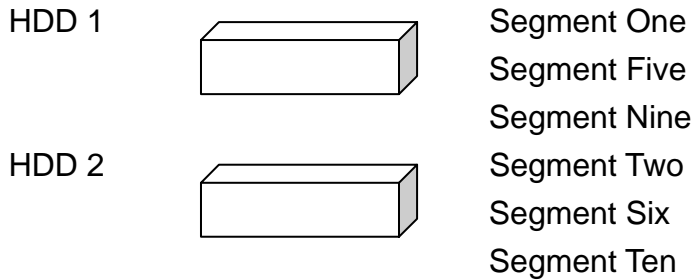
**Choosing a RAID Level**

The YES Box N2100 supports standard RAID levels 0 and 1. You choose a RAID level when you create a system volume. The factors for selecting a RAID level are:

● Your requirements for performance
● Your need for data security
● Number of hard disk drives in the system
● Capacity of hard disk drives in the system

The following is a description of each RAID level and its pros and cons:

| RAID | Application | Pros | Cons | No. of HDDs | Fault Tolerant |
|------|-------------|------|------|-------------|----------------|
| 0 | Best suited for non-critical data that requires high performance. **Description:** Data is divided into blocks and sequentially distributed. | High performance for large files | If any HDD fails, all data is lost | 1~32 | No |
| 1 | Best suited for read-intensive fault-tolerant | Excellent Data Security | Half the hard disk space | 2 | Yes |

| systems. | available. |
| **Description:** Data is duplicated on another HDD (mirroring). | Performan ce impaired during rebuild. |

## RAID 0

RAID 0 is best suited for applications that need high bandwidth but do not require a high level of data security. The RAID 0 level provides the best performance of all the RAID levels, but it does not provide data redundancy.

RAID 0 uses disk striping and breaking up data into blocks to write across all hard drives in the volume. The system can then use multiple hard drives for faster read and write. The stripe size parameter that was set when the RAID was created determines the size of each block. No parity calculations complicate the write operation.

HDD 1

Segment One
Segment Five
Segment Nine

HDD 2

Segment Two
Segment Six
Segment Ten
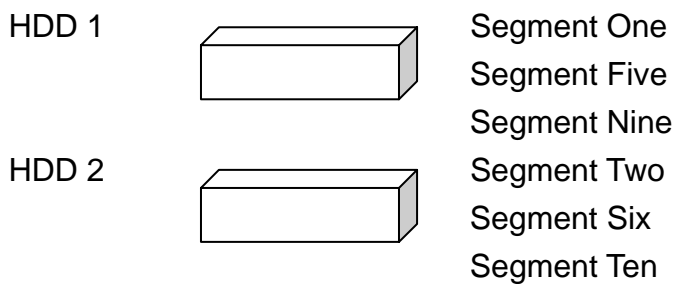
## RAID 1

RAID 1 mirrors all data from one hard disk drive to a second one hard disk drive, providing complete data redundancy. However, the cost of data storage capacity is doubled.

HDD 1

Segment One
Segment Two
Segment Three
Segment Four

HDD 2

Segment One Mirrored
Segment Two Mirrored
Segment Three Mirrored
Segment Four Mirrored
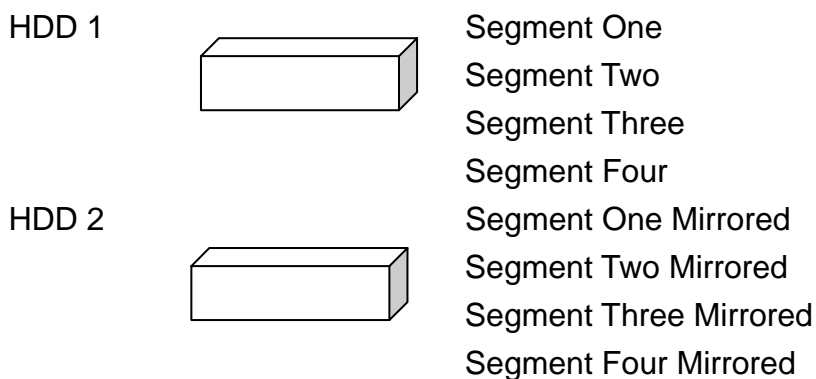
**Appendix C: Product Specifications**

# Hardware Specifications

| | | |
|---|---|---|
| Core Processors | Processor | Intel IOP 600MHz |
| | Wired interface | 2 x 10/100/1000 Mbps Ethernet Port |
| | Wireless Interface (Optional) | Wireless 802.11b/g |
| | SATA Controller | 2 * SATA interface |
| Memory | System | DDR 128MB |
| Mass Storage | HDD | 2 x bays of 3.5" SATA HDD |
| | | Single capacity supported |
| | | 80/120/160/200/250/300/400/500GB |
| Power System | Adapter | AC 100~240Volt, 50/60Hz |
| System | LED | Power LED, |
| | | System LED, |
| | |   Network LED x 2 |
| | |   Hard drive LED, x 2 |
| | | USB one copy button LED |
| Physical/Mechanical | Dimensions | 160(W) mm ×85(H) mm ×200(D) cm |

# Function Specifications

| | | |
|---|---|---|
| Disk Modes | RAID | Spanning (RAID 0) |
| | | Mirroring (RAID 1) |
| | | Expansion (JBOD) |
| Multimedia Support | iTunes® Server | Supported Music Types: AAC, MP3, WAV |
| | Personal Photo Web Server | Enables system users to create their own personal photo web server |
| | Media Server (optional) | Built-in Mediabolic media server for easy playback of multimedia files to any DLNA CERTIFIED or UPnP AV compliant device |

| | | |
|---|---|---|
| Data Access | Client OS Support | Windows 98/ME/NT/2000/XP<br>UNIX/Linux (by SMB/CIFS)<br>Apple OS X/9/8 |
| | Web Disk | Web-based network disk |
| | SMB/CIFS | SAMBA 3 |
| | FTP | File transmission protocol |
| | AFP | Apple File Service |
| User Authentication | Local User | Supports built-in user accounts |
| Administration | Windows client program | Server management utility program |
| | Web-based administration | Web-based server management interface |
| | Email notification | Send the system messages via Email to the system administrator |
| Authorization | Supports authorization of data access by setting Read, Write and Deny options on individual users or groups. | |

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