

Allnet ALL6600

NAS DiskServer

User's Manual

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About This Manual

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

Limited Warranty

Allnet Technology Corp. guarantees all products are thoroughly tested before they leave the factory and should function normally under general conditions. In case of any system malfunction, Allnet Technology Corp. 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. Allnet Technology Corp. 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.

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Chapter 1: Introduction

Thank you for choosing the Allnet ALL6600 NAS DiskServer. The Allnet ALL6600 is an easy-to-use storage appliance that allows a dedicated approach to storing and distributing data on a network. Data reliability is ensured with RAID features that provide data security and recovery—over one Terabyte of storage is available using RAID 5 and RAID 6. Gigabit Ethernet ports enhance network efficiency, allowing the ALL6600 to take over file management functions, increase application and data sharing and provide faster data response. The ALL6600 offers data mobility with a disk roaming feature that lets you hot swap working hard drives for use in another ALL6600, securing the continuity of data in the event of hardware failure. The ALL6600 allows data consolidation and sharing between Windows (SMB/CIFS), UNIX/Linux, and Apple OS X environments. The ALL6600's user-friendly GUI supports multiple languages.

Key Features

- Five-bay hot swappable network attached storage.
- Enhanced system performance with Ultra-Low voltage Intel® Celeron® M Processor for storage computing with 30% energy saving.
- RAID 0, 1, 5, **6**, **10** and JBOD support.
- RAID Migration, RAID Expansion.
- Multi-lingual support.
- Supports SATA II hard drive and eSATA connection for easy expansion.
- 802.3ad based load balancing and failover
- LCD display for system setup and monitoring.
- Block level backup mechanism – Snapshot.

Additional Features

- **USB copy and storage expansion** – Store the content of your USB storage directly into ALL6600, or expand the storage of ALL6600 using USB storage.
- **USB client mode** – Let ALL6600 serve as a direct attached storage (DAS).
- **Backup utility** – Windows and Mac OS PC to server backup utility included.
- **Easy setup** – Windows and Mac OS setup wizard included.
- **Firmware update** – Obtain free feature upgrades from Allnet website.

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Unpacking

Before unpacking the Allnet ALL6600 check that the package is not damaged.

Items in the package include:

- Allnet ALL6600 NAS DiskServer
- Power cord
- RJ45 cable
- USB A to B Cable
- Accessory bag containing keys, disk tray screws, and front panel screw.
- CD with user manual and related documents
- Quick Installation Guide (QIG)

If you have any questions, please contact your local dealer.

Chapter 2: Hardware Overview

The front and back panels of the Allnet ALL6600 feature the device's hardware interface and connections.

The Front Panel

The Allnet ALL6600's front panel has the device's controls, indicators, and hard disk trays.

1	DOM LED	This LED glows orange when the system is being upgraded.
2	WAN LED	This LED glows green when there is network link but no activity on WAN port. A flashing green means there is activity on your WAN port.
3	LAN LED	This LED glows green when there is network link but no activity on LAN port. A flashing green means there is activity on your WAN port.
4	USB COPY LED	This LED glows blue when ALL6600 is copying files from USB mass storage devices, such as USB Disk, USB Camera.
5	Busy LED	This LED blinks orange when the system is booting up, or during maintenance and is unable to provide access to data.
6	USB port	This is for USB 2.0 devices. Compatible devices are digital camera, USB thumb disk, USB printer, and USB wireless dongle. <i>Note: For supported USB wireless dongle, please contact support@Allnet.com</i>
7	Power Switch	Press the power switch briefly to power on the Allnet N4100. Press this switch again to power down. The upper half of button glows blue when the device is powered on. The bottom half of the button of the LED will blink when eSATA is connected and active.



8	Reset Switch	<p>Press this switch for 5 seconds during booting process will reset IP address and admin password.</p> <p>Note: <i>The Reset switch can also reset Admin password and IP address to default settings—see Appendix A: Troubleshooting for instructions.</i></p>
9	HDD Trays	<p>There are five hard disk drive (HDD) trays. Each tray supports a 3.5-inch SATA HDD. The trays have locks for added security and keys are provided with the package.</p>
10	LCD display	<p>This LCD will display current system status and warning messages, such as hostname, IP address, RAID status, fan speeds.</p>
11	▲ Up button	<p>Press this button to scroll up when entering information in LCD display.</p>
12	▼ Down button	<p>Press this button to scroll down when entering information in LCD display.</p>
13	↵ Enter button	<p>Press this button when accepting the information in LCD display.</p>
14	ESC Escape button	<p>Press this button when leaving the LCD menu.</p>

Hard Disk Tray

The Allnet ALL6600's hard disk trays each have a lock, a latch, and two indicators.

1	Lock	The tray lock lets you physically secure the HDD with accessory keys.
2	Latch	Use the latch to open and remove or close and secure the tray.
3	HDD Power LED	This LED glows blue when the HDD is powered on.
4	HDD Access/Error LED	This LED blinks green when the system is accessing data on the HDD. This LED also blinks red if a hard disk error occurs.

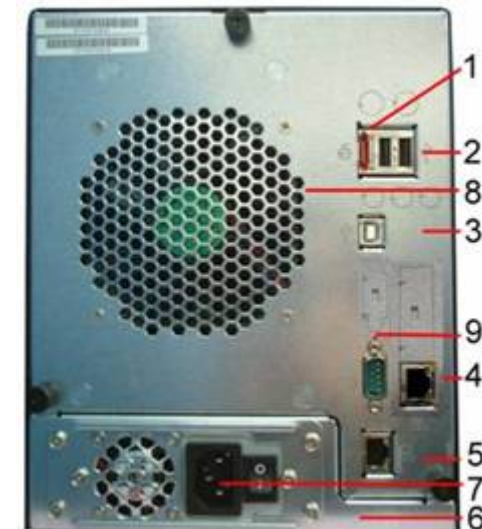


The Back Panel

ALL6600

The Allnet ALL6600's back panel features ports and connectors.

1	eSATA port	For eSATA disk to expand your storage.
2	USB 2.0 port	This is for USB 2.0 devices. Compatible devices are digital camera, USB thumb disk, USB printer, and USB wireless dongle. <i>Note: For supported USB wireless dongle, please contact support@Allnet.com</i>
3	USB 2.0 (Target) port	Using the included USB cable, you can connect ALL6600 to your PC. Your PC's operating system will recognize ALL6600 as a Mass Storage Device.
4	LAN port	This LAN port can be used for connection sharing.
5	WAN port	The WAN port connects to an Ethernet network through a switch or router.



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6	Switch	Power switch to the Power Supply.
7	Power connector	Connector for the included power cord.
8	System Fan	This is the system fan. Its RPM will be shown in the web user interface.
9	Serial Port	This port is for factory use only.

Chapter 3: Installing & Connecting

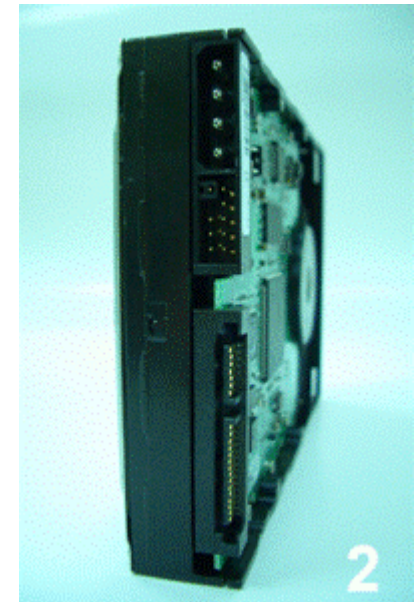
This chapter describes installing and connecting hardware on the Allnet ALL6600.

Installing Hard Drives

The Allnet ALL6600 allows easy installation and changing of hard disk drives for convenient upgrade or repair. Install hard disk drives (HDD) into their trays as follows:

1. Remove an HDD tray from the Allnet ALL6600 NAS DiskServer. (Photo 1)
2. **Important!** Check and make sure the HDD uses the SATA interface. (Photo 2)
3. Slide the new HDD into the tray and fasten the screws. (Photos 3 and 4)
4. Insert the HDD and tray back into the Allnet ALL6600 until it snaps into place and lock it with a key if desired.
5. The LED blinks green when the HDD is accessed. If the Error LED flashes red it signals a problem.

Note: If your HDD was part of a RAID 1 or 5 array previously, it automatically rebuilds. If you replace all the drives with higher capacity drives, you need to go to Administrator login and format the drives.



Making Connections

Make the following connections on the Allnet ALL6600 and then power up.

1. Connect an Ethernet cable from your network to the WAN port on the back panel of the Allnet ALL6600. (Step 1)
2. Connect the provided power cord into the universal power socket on the back panel. Plug the other end of the cord into a surge protector socket. Press the switch to turn on the power supply. (Step 2)
3. Press the power button on the Front Panel to boot up ALL6600. (Step 3)



Checking System Status

After making connections on the Allnet ALL6600 and powering up, check whether the system status is ok or has trouble by observing indicators on the front panel and HDD trays.

System Status OK

The system status is OK if:

1. The WAN & LAN LED glows green (assuming both are connected)
2. The front panel Power LED glows blue.
3. The HDD Power LED on each HDD tray glows blue (assuming all disks are installed).
4. The default IP address of the WAN port is 192.168.1.100.



System Trouble

The system has trouble if:

1. System Busy LED glows orange.
2. Any of the **HDD Access/Error LED glows red.**

If the system has trouble, refer to Appendix A: Troubleshooting.

Warning : There is no user serviceable parts inside. Please contact your distributor for service.



Chapter 4: First Time Setup

Once the hardware is installed, physically connected to your network, and powered on, you can now configure the Allnet ALL6600 so that it is accessible to your network users. There are two ways to set up your ALL6600, using the Setup Wizard or the LCD display. Follow the steps below for initial software setup.

Setup Wizard

Installation Wizard

Insert the installation CD into your CD-ROM drive. The Installation of Setup Wizard will launch from CD automatically please browse your CD-ROM drive and double click on Setup.exe.

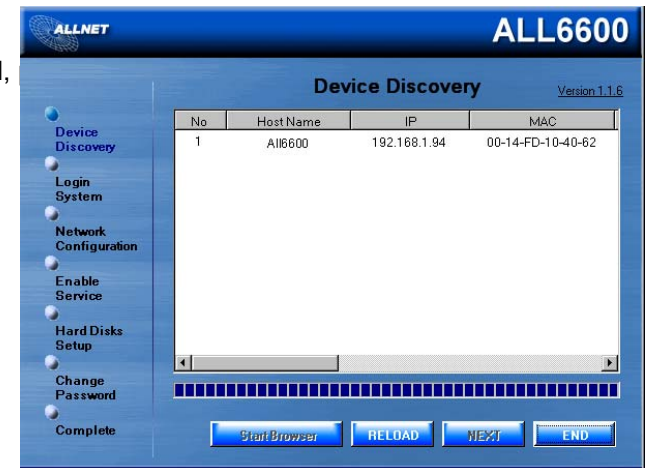
Note : For MAC OS X users, double click on Allnet Setup Wizard 1.1.6.dmg



Device Discovery

The Setup Wizard will start and automatically detect all Allnet IP storage devices on your network. If none are found, check your connection and refer to the Troubleshooting Guide at the back of the ALL6600 User's Manual.

Select the ALL6600 that you like to configure.



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Login

Login with the default administrator account and password. The default account and password are both “admin”.

The screenshot shows the 'Login System' page of the ALL6600 NAS. The page has a blue header with the 'ALLNET' logo and 'ALL6600' text. A sidebar on the left contains a menu with items: Device Discovery, Login System (highlighted), Network Configuration, Enable Service, Hard Disks Setup, Change Password, and Complete. The main content area is titled 'Login System' and includes a version number 'Version 1.1.6'. It features a central login form with two input fields: 'Admin ID:' containing the text 'admin' and 'Password:' containing 'admin'. At the bottom right of the form are three buttons: 'PREV', 'NEXT', and 'END'.

Network Setting

Name your ALL6600 system and configure the network IP address. If you have a DHCP Server on your network, you can configure the ALL6600 to automatically obtain an IP address from your DHCP server. You may also use a static IP and enter the DNS Server address manually.

The screenshot shows the 'Network Configuration' page of the ALL6600 NAS. The page has a blue header with the 'ALLNET' logo and 'ALL6600' text. A sidebar on the left contains a menu with items: Device Discovery, Login System, Network Configuration (highlighted), Change Password, and Complete. The main content area is titled 'Network Configuration' and includes a version number 'Version 1.1.6'. It features a central configuration form with a 'Host Name' field containing 'ALL6600'. Below this is an 'IP Type' section with two radio buttons: 'Fixed IP' (selected) and 'DHCP'. Underneath is an 'IP Setting' section with four input fields: 'IP address:' containing '192.168.1.100', 'Netmask:' containing '255.255.255.0', 'Gateway IP:' containing '192.168.1.100', and 'DNS Server:' which is empty. At the bottom right of the form are two buttons: 'NEXT' and 'END'.

Change Admin Password

Change the default administrator password.

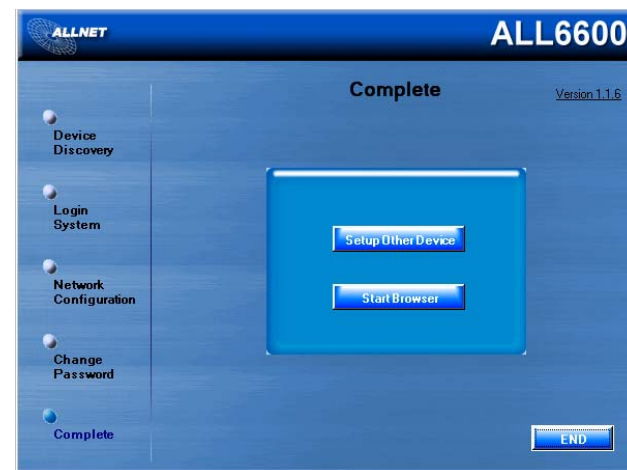
The screenshot shows the 'Change Password' page of the ALL6600 NAS. The page has a blue header with the 'ALLNET' logo and 'ALL6600' text. A sidebar on the left contains a menu with items: Device Discovery, Login System, and Change Password (highlighted). The main content area is titled 'Change Password' and includes a version number 'Version 1.1.6'. It features a central form with a 'New Password:' input field.

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Note : We suggest you change the default password immediately.

Start Browser

Finished! Access the current ALL6600 administrator webpage by pressing the “Start Browser” button.



Enter the administrator's id and password to login into the administrator's graphical user interface.



LCD Operations

ALL6600 is equipped with a LCD display on the front for easy status display and setup.

There are four buttons on the front panel to control the LCD function.

Use the (▲) up arrow, (▼) down arrow, Enter (↵) and ESC keys to select various configuration settings and menu options for the ALL6600 configuration. The following table illustrates the keys on the front control panel.

Icon	Name	Description
▲	Up Arrow key	Select the previous configuration settings option.
▼	Down Arrow key	Select the next configuration settings option.
↵	Enter key	Enter the selected menu option, sub-menu, or parameter setting.
ESC	Escape key	Escape and return to the previous menu.

There are two modes of operation for the LCD display: Display mode and Management mode.

Display Mode

During normal operations, the LCD display will be in Display mode.

Display Item	Description
Host Name	Host Name of the system.
WAN	Current WAN IP setting.
LAN	Current LAN IP setting.
RAID	Current RAID status.
System Fan	Current system fan speed.
2006/06/16 12:00	Current system time.

ALL6600 will rotate these messages every 2 seconds on the LCD display.

Management Mode

During setup and configuration, the LCD display will be in Management mode.

To enter into Management Mode, administrator has to press Enter and “Enter Password” prompt will show on the LCD.

At this time, the administrator has to enter the correct LCD password. System will check whether the correct LCD password has been entered. The default LCD password is “0000”. If correct password is entered, Administrator will enter into Setup Menu.

Menu Tree	Description
WAN Setting	Setting IP address, Netmask of your WAN ports
LAN Setting	Setting IP address, Netmask of your WAN ports.
Link Agg. Setting	Setting Load Balance or Failover (ALL6600 only)
Change Admin Passwd	Change Administrator's password
Reset to default	Reset system to factory default
Exit	Exiting Management Mode and back to Display mode.

Note : You can change your LCD password in System > Administrator Password Screen.

USB Copy

In Management Mode, if user pressed on the Down Arrow Key, LCD Display will show “USB Copy?” If user pressed on the Enter key, then ALL6600 will start copying USB disks connected to the front USB ports and make an instant backup of USB drives, and cameras.

Chapter 5: System Management (for Administrator)

When the system is setup and you are connected to a network, you can configure and manage the network through a browser such as Windows Internet Explorer.

Login

To access the Login webpage:

1. Type in the IP address in your browser's address line.
2. The Login screen appears.
3. Type in your Username and Password. (You have to login here as a System Administrator) (admin / admin)
4. Press **Login**.
5. The About screen from the Status menu appears.

Not : The default IP address is 192.168.1.100.

Note: To access the IP address, your computer must be configured with the correct IP settings. See Appendix for how to configure your IP address.



Status Menu

The **Status** menu provides basic system information such as product model, hardware and software versions and prof system. A description of each menu item follows.



System Status

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



System Status

CPU loading	Displays current CPU workload of ALL6600
CPU Fan Speed	Shows how long the system has been running.
System Fan Speed	Indicates disk location.
Memory Size	Shows the system memory capacity.
Up Time	The amount of time system has been running.

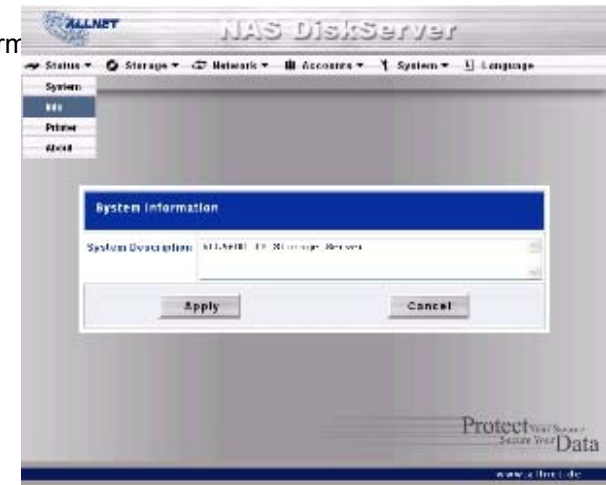
Service Status

AFP Status	The status of Apple Filing Protocol server.
NFS Status	The status of Network File Service Server.
SMB/CIFS Status	The status of SMB/CIFS server.
FTP Status	The status of FTP server.
Nsync Status	The status of Nsync server.
UPnP Status	The status of UPnP service.

System Information

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

System description Shows a description of the system; it also appears on the Login page.



Printer

From the **Status** menu, choose the **Printer** item, and the **Printer Information** screen appears. The **Printer Information** 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	Remove All Documents from printer queue

When Remove All Documents button is pressed, all documents on the print server queue will be removed.



How to connect a printer to your system

Steps to connect to Print Server (example in 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

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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://ALL6600_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, then all your print jobs will be submitted to this printer. Click on **“Next”** button.
9. Click on **“Finish”** button.

Product Information

From the Status menu, choose the About item, and the Product Information screen appears. The Product Information provides the information about the system.

Manufacturer	Displays the name of the manufacturer of the system.
Product No.	Shows the model number of the system.
Firmware version	Shows the version of the firmware.
Up time	Displays the total running time of the system.



Storage Menu

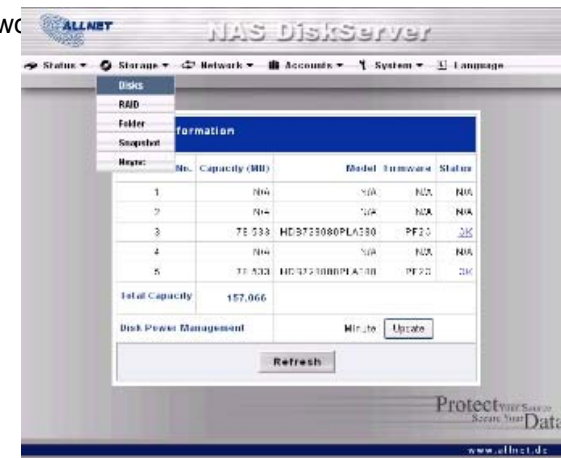
The Storage menu provides disk information and allows you to configure RAID and sharing.



Disks Information Screen

From the Storage menu, choose the Disks item and the Disks Information screen appears. A disk information line will be blank if the disk slot is empty. If there is a problem with a disk the Status column will display "Failed".

- Disk No.** Indicates the disk location.
- Capacity** Shows the disk capacity.
- Model** Displays the hard disk model name.
- Firmware** Shows the firmware version.
- Status** Indicates the status of the disk, the status will be either OK, Warning, or Failed.
- Total capacity** Shows the total disk capacity
- Disk Power Management** Administrator can set the disks to power down after a period of inactivity.



Note : When the Status shows Warning, it usually means there are bad sectors on the Hard Disk Drive. It is shown only as a precaution and you should consider changing the drives.

S.M.A.R.T. Screen

From the **Disks Information** Screen, click on either OK or Warning link. The S.M.A.R.T. information of that particular disk will be shown.

- Power ON Hours** Count of hours in power-on state. The raw value of this attribute shows total count of hours (or minutes, or seconds, depending on manufacturer) in power-on state.
- Reallocated Sector Count** Count of reallocated sectors. When the hard drive finds a read/write/verification error, it marks this sector as "reallocated" and transfers data to a special reserved area (spare area).
This process is also known as remapping and "reallocated" sectors are called remaps. This is why, on a modern hard disks, you can not see "bad blocks" while testing the surface - all bad blocks are hidden in reallocated sectors. However, the more sectors that are reallocated, the more a sudden decrease (up to 10% and more) can be noticed in the disk read/write speed.
- Current Pending Sector** Current count of unstable sectors (waiting for remapping). The raw value of this attribute indicates the total number of sectors waiting for remapping. Later, when some of these sectors are read successfully, the value is decreased. If errors still occur when reading some sector, the hard drive will try to restore the data, transfer it to the reserved disk area (spare area) and mark this sector as remapped. If this attribute value remains at zero, it indicates that the quality of the corresponding surface area is low.
- Cancel** Press the Cancel button to go back to Disks Information Screen.



SMART INFO	
Power On Hours	4203 Hours
Reallocated Sector Count	0
Current Pending Sector	0

CANCEL

Note : *If any of the Reallocated Sector Count or Current Pending Sector of a hard disk drive is not zero, the status of the disk will be shown as warning. This warning is only used to alert the system administrator that there are bad sectors on the disk, and they should replace those disks as soon as possible.*

RAID Information Screen

From the **Storage** menu, choose the **RAID** item, and the RAID Information screen appears. To configure your RAID settings, press the **Config** button and the RAID Configuration screen appears.

RAID level	Shows the type of RAID setting for the system.
Total Capacity	Shows total capacity after the RAID configuration.
Status	Indicates status of the RAID, either Healthy, Degraded, or Damaged.
Data Capacity	Indicates the number of used capacity, number of total capacity, and percentage used by user Data.
Snapshot Capacity	Indicates the number of used capacity, number of total capacity, and percentage used by Snapshot
USB Capacity	Indicates the number of used capacity, number of total capacity, and percentage used by USB target mode.
Capacity Used	Displays the total space available and total space used on your RAID.
Stripe Size	Shows size of disk stripe.
Remaining Time	Indicates time remaining until the RAID is finished building.
Rebuild Speed	Configures the speed of rebuild. When set to Low, the rebuild will be longer, but the system will be more responsive to file requests. When set to High, the rebuild will be faster, but the system
Add new disk as spare disk?	When adding a new disk, whether the system will add the new disk as a spare disk of existing RAID.



RAID Configuration Screen

In the **RAID Information** screen, press “**Config**” to enter the RAID Configuration screen. In addition to RAID disk information and status, this screen lets you make RAID configuration settings. See Appendix C for basic information on RAID.

RAID Level

You can set the storage volume as either None, JBOD, RAID 0, RAID 1 or RAID 5. RAID configuration is usually required when you first set up the device. A brief description of each RAID setting follows:

- None** There is no existing storage volume.
- JBOD** The storage volume is a single HDD with no RAID support. JBOD requires minimum 1 disk.
- RAID 0** Provides data striping but no redundancy. Improves performance but not data safety. At least 2 HDD are required. RAID 0 requires minimum 2 disks.
- RAID 1** Offers disk mirroring. Provides twice the read rate of single disks, but same write rate. Supports 2 HDD. RAID 1 requires minimum 2 disks.
- RAID 5** Data striping and stripe error correction information provided. Excellent performance and good fault tolerance. RAID 5 requires minimum 3 disks.
- RAID 6** Two independent parity computations must be used in order to provide protection against double disk failure. Two different algorithms are employed to achieve this purpose. RAID 6 requires minimum 4 disks.
- RAID 10** RAID 10 has high reliability and high performance. RAID 10 is implemented as a striped array whose segments are RAID 1 arrays. It has the fault tolerant of RAID 1 and the performance of RAID 0. RAID 10 requires 4 disks.



Disk Settings

With the Disk settings you can select stripe size and choose which disks are RAID disks or the Spare Disk as well as enter a name for each disk.

- RAID** Check the boxes of the HDDs you wish to add to the storage volume.
- Spare** Check a box to designate the replacement HDD for the storage volume. This becomes the backup for any damaged HDD.
- 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.
- User Data Percentage** : The percentage of RAID that will be used to store data.

Percentage Target USB Percentage : The percentage of RAID volume that will be used as USB disk.

Snapshot percentage : The rest of the RAID volume will be used to store Snapshot.

Add Linear Under JBOD mode, if administrator wants to add more disk to the current RAID, the administrator selects a disk by click on the RAID column for that disk and click on Add Linear to add the new disk into the RAID volume.

Add Spare Press this button to add a new Spare disk.

Remove Remove RAID volume. All user data, snapshot, and Target USB data will be removed.

Create Press this button to configure a file system and create the RAID storage volume.

RAID

How to Create a RAID

1. In the RAID Configuration screen, Set the RAID storage space as JBOD, RAID 0, RAID 1, RAID 5, RAID 6, or RAID 10—see Appendix C for details.
2. Check the hard disks you wish to create a RAID on. Specify Stripe size—64K is a normal setting.
3. Press **Create** to build the RAID storage volume.

Note: Building a RAID storage space may take time, depending on the size of hard drives and RAID mode.

WARNING: Creating RAID destroys all data in the current RAID, and the data is unrecoverable.

Note: Building a RAID storage space may take time, depending on the size of hard drives and RAID mode.

How to Add a Spare Disk

You can add a spare disk after you already have a RAID set up.

Note: You can only add a spare disk for RAID 5 level.

1. In the RAID Configuration screen add to the Spare check box of the disk you wish to add.
2. Press the **Add spare** button and the system automatically rebuilds.

How to Remove RAID

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

WARNING: Removing RAID destroys all data in the current RAID, and the data is unrecoverable.

What is Target USB?

ALL6600 can operate in dual mode. When connecting to a regular USB disk or thumb drive, ALL6600 is acting as USB host.

When connecting to a PC thru its USB Type B connector on the back panel, ALL6600 can act as a USB disk. This feature allows user to transfer files without using network connection.

When you create RAID, you can assign a portion of space on the RAID to be used as USB disk. When connecting ALL6600 to a PC using the supplied USB A to B cable, the PC will recognize this space as unformatted disk. At this point, the PC can format this portion of disk and create file system on it. Since this disk is created on the RAID, it will be protected by the RAID level you select.

WARNING : When RAID is removed or damaged, all the data on Target USB will be deleted.

RAID Advanced Configuration

RAID Migration Change the RAID Level. The system will decide the possible migration paths, and administrator can select a new RAID level.

RAID Expansion When larger disks have replaced the smaller disks thru rebuild, the file system on the RAID is not changed. Administrator can press this button to check to see if there is room to expand the file system. If yes, then the file system can grow to take advantage of the larger disks.

Note : During RAID Migration and RAID Expansion, all the file services such as SMB/CIFS, AFP, NFS, FTP will not be available. The time to finish these operations depends on the size of your hard disk drives and your RAID volume..

WARNING : RAID Migration and Expansion are inherently risky operations. Please make sure your system is protected by an UPS (Uninterruptible Power Supply) to prevent accidental power failure, which might result data loss.

WARNING : These operation will cause heavy loading on your RAID system. RAID Migration and RAID Expansion will not be available if your RAID is in degraded state.

Folder Screen

From the **Storage** menu, choose the **Folder** item, and the Folder screen appears. This screen allows you to create and configure folders on the RAID storage volume.

Folder Name	Displays the name of the Share folder.
Description	Provides a description of the Folder. This field is optional.
NFS Share	Press NFS share button to configure which hosts on the network are allowed to access this folder using NFS.
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, description.
Del	Press this button to delete the folder.
Add	Press this button and the Add Folder screen appears, from which you can add a new folder.



Note : Nsync folders will be created once the RAID is created. Nsync folder is used by Nsync server. It will be used for Nsync backedup files.

Add Folder Screen

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 add the new folder.

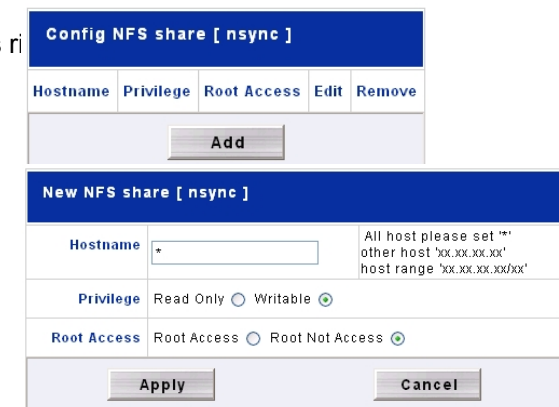
- Folder name** Enter the name of the Folder.
- Description** Provide a description for the Folder.
- Browseable** Choose Yes or No. If Yes, then the share folder will not be browseable in SMB/CIFS screen.
- Public** Choose Yes or No. If yes, then user does not need to have access permission to write to this folder.
When accessing a public folder thru FTP, the behavior is similar to anonymous FTP. Anonymous user can upload/download a file to the folder, but the anonymous user can not delete a file from the folder.
- Share Folder Limit** Enter the maximum size of the folder. The folder will not grow beyond this limit. You can enter a 0 to turn off the share folder limit.



NFS Share

To allow NFS access to the share folder, administrator has to Enable the NFS service, then set up hosts with access ri

- Hostname** Enter the name of the Host or IP address
- Privilege** Host has either read only or writeable access to the folder.
- Root Access** Access the data on the RAID as root.



ACL Screen

In the Folder screen press the ACL button, and the Access Control List screen appears. This screen allows you to control access to this 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 selected user or group from the column in order to re-set their access level
- Submit** Submits and confirms settings.
- Reset** Cancel your new setting.



The process to set up ACL to your share folders ...

1. The ACL screen appears. All network groups and users are listed in the left hand column. From this list select a group or user.
2. With the group or user selected, press one of the buttons from the three access level columns at the top. The group or user then appears in that column and has that level of access to the Folder.

The three levels of access are:

- 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.

3. Continue selecting groups and users and assigning them access levels using the column buttons.
4. To remove a group or user from an access level column, press the **Remove** button in that column
5. When you are finished, press the **Submit** button to submit and confirm your ACL settings.

Note: You must set the ACL for each folder for access by specific users and groups; otherwise the folder is inaccessible to all users and groups.

Edit Share Screen

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

- | | |
|---------------------------|---|
| Share name | Displays the name of the Share (Folder). |
| Comment | Change the description of the Share (Folder). |
| Browseable | Choose Yes or No. If Yes, then the share folder will not be browseable in SMB/CIFS screen. |
| Public | Choose Yes or No. If yes, then user does not need to have access permission to write to this folder.

When accessing a public folder thru FTP, the behavior is similar to anonymous FTP. Anonymous user can upload/download a file to the folder, but the anonymous user can not delete a file from the folder. |
| Share Folder Limit | Enter the maximum size of the folder. The folder will not grow beyond this limit. You can enter a 0 to turn off the share folder limit. |



Snapshot

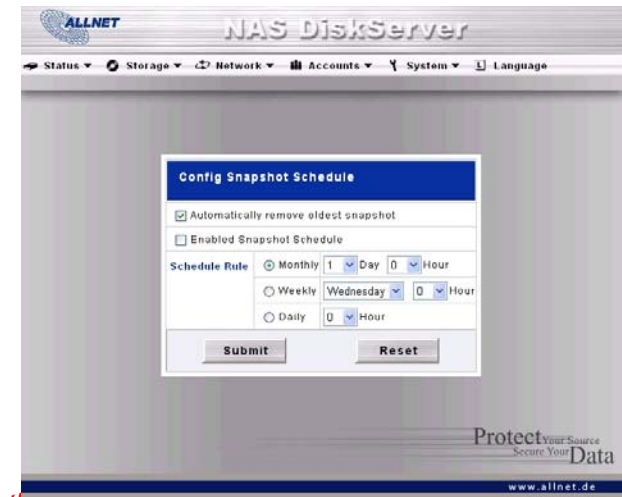
This function will create snapshots of all your share folders. The snapshot versions will be time stamped.

- Manual** Manually create a snapshot.
- Schedule** Create snapshot at designated intervals.

- Automatically remove Oldest snapshot** When a snapshot is created and it is over the system limit. The oldest snapshot will be removed automatically to make room for the new snapshot.
- Enable snapshot schedule** To Enable scheduling mechanism of snapshot.
- Monthly** To create a snapshot in a monthly interval.
- Weekly** To create a snapshot in a weekly interval.
- Daily** To create a snapshot in a daily interval.

Note : Currently the ALL6600 supports 8 versions of snapshots.

WARNING : This operation will cause heavy loading on your RAID system. If your RAID is degraded, please disable this function, replace damaged disk as soon as possible.

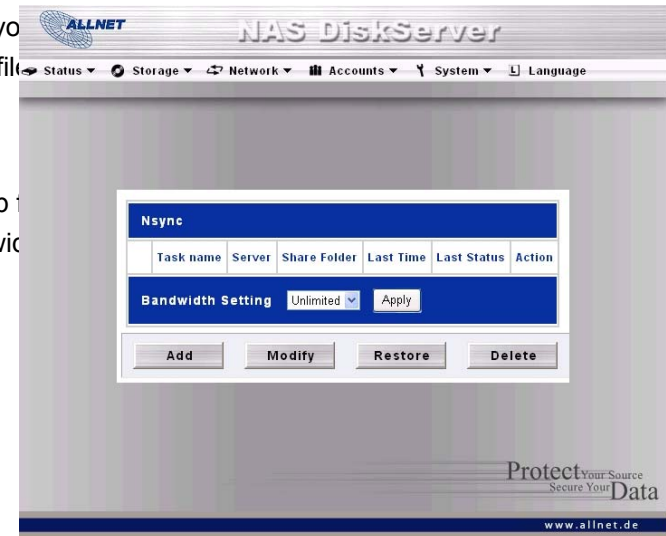


Nsync screen

You can backup a share folder to another ALL6600 (Nsync Target) or any FTP server for safe keeping as long as you have appropriate access right on that target. When using Nsync between two ALL6600, you have the option to transmit files between two ALL6600s.

If the files on your ALL6600 are lost for any reason, you can restore those files from the target ALL6600. To backup files regularly, you can set up a scheduled task to run only once, daily, weekly, or monthly. You can also limit the bandwidth for Nsync tasks, so other users on the network can share the bandwidth equally.

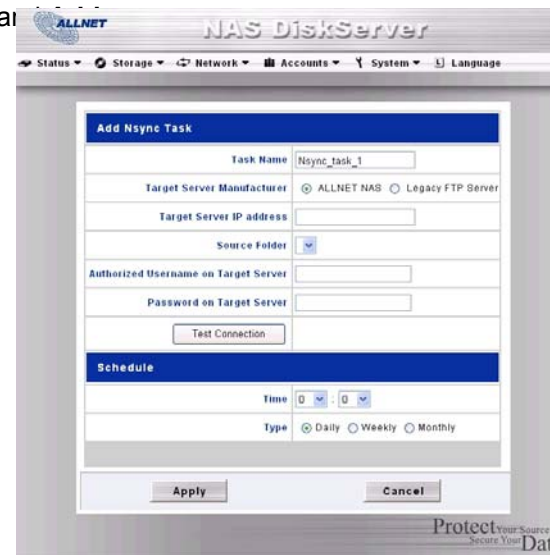
Task name	The name of your Nsync task
Server	The IP address of your target server
Share Folder	The share folder you would want to backup.
Last Time	The time when the last Nsync task was executed.
Last Status	The status of your last Nsync task.
Action	Administrator can run or stop an Nsync task by pressing the Action button.
Add	Click to add a Nsync task
Modify	Click to modify an Nsync task.
Delete	Click to delete an Nsync task.
	Note : <i>When a task is deleted, backup files on Nsync target is also deleted.</i>
Restore	Restore share folder from an Nsync target.
Bandwidth Setting	Bandwidth control on Nsync tasks.



How to Add an Nsync Task

From the **Storage** menu, choose the **Nsync** item, and the Nsync Information screen appears. Click on **Add** button, and the **Nsync Task** screen appears.

- Task Name** The name of your Nsync task.
- Manufacturer** Select whether the target is a Allnet Product (eg. ALL6600) or FTP server.
- Target Server IP Address** The IP address of your target server
- Source Folder** The share folder you want to backup.
- Nsync Task Name** The name of your Nsync task.
- Authorized Username on Target Server** The account name on the target server.
- Password on Target Server** The password for the username on the target server.
- Test Connection** Click to check the connection to the Target Server.
- Schedule** Schedule backup of your share folders.
- Time** The time when the Nsync task will run.
- Type** Select whether to run the Nsync task daily, weekly, or monthly.
 When daily is selected, administrator has to decide the time of day to execute the Nsync start.
 When Weekly is selected, administrator also has to decide what day of a week to execute the task.
 When Monthly is selected, administrator also has to decide what day of a month to execute the task.



Apply To submit the task.

Note : Before starting a Nsync Task, make sure the target server's Nsync Server (or FTP Server) is enabled.

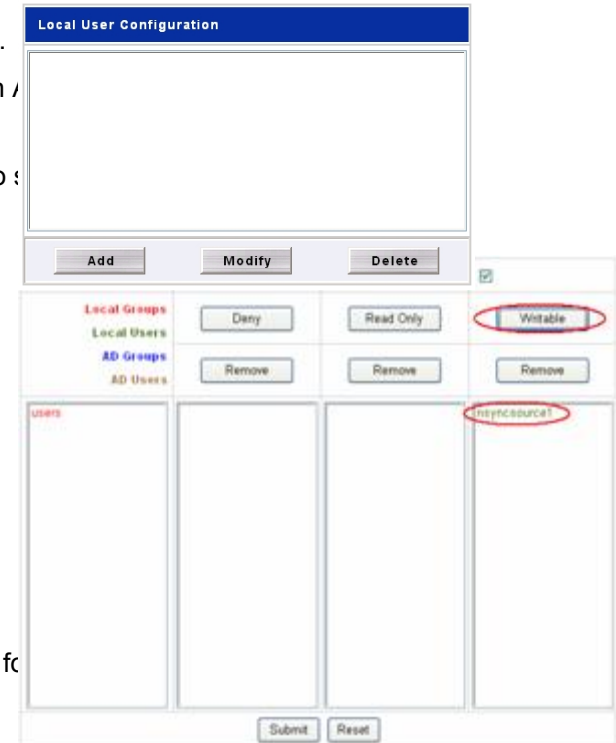
How to set up Nsync Target on ALL6600

On the Nsync target server, the administrator of that server has to set up a user account with writable to nsync folder.

1. On the Nsync server, add a user for Nsync source (ex. nsyncsource1). For instructions on how to add a user on / please go to section on "Add Users" in Chapter 4.
2. On the Nsync server, add that user (ex. nsyncsource1) to writable list of nsync folder. For instructions on how to s ACL for a user, please go to section on "Setting the Access Control List (ACL) for a Folder" in Chapter 4.
3. Once this is done, the target server will start accepting Nsync task from server using that ID and password.

How to set up Nsync Target on Other Device

If you selected "Other Device" when setting up your Nsync task, ALL6600 will use FTP protocol to back up the share fo Please make sure there is a folder named "nsync", and the Auth ID has writable permission in that folder.



Network Menu

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



WAN screen

From the **Network** menu, choose **WAN**, and the WAN Configuration screen appears. This screen displays the network parameters of the system. You are allowed to change any of these items and press **Apply** to confirm your settings. A description of each item follows:

- Host name** Specifies host name of the system.
- Domain name** Specifies the domain name.
- MAC Address** Displays the MAC Address of the WAN port.
- Jumbo Frame Support** Select to enable Jumbo Frame Support. *
- DHCP** Select Enable for automatic IP settings or Disable to make your own IP settings.
- IP** Specifies the IP address of the network connection
- Netmask** Specifies the network mask, which is generally: 255.255.255.0
- Gateway** Specifies Gateway setting of your local area network
- DNS server** Specifies the Domain Name Service (DNS) server.
- IP Sharing Mode** Specifies whether traffic on LAN port will be routed to WAN port.
- Link Aggregation**
 - Failover** : When one port fails, the other one will take over.
 - Load Balance** : Ethernet traffic will flow alternative between two Ethernet ports.



Note : This feature is only available on ALL6600, not on ALL6600 RouStor.

Note: Before enabling Jumbo Frame Support, please make sure your network equipment supports Jumbo Frame. If your equipment is incompatible, you might not be able to connect to ALL6600. In this case, you have to reset the system back to default by the holding down front panel reset button for 15 seconds during boot up process.

Note: Enabling DHCP automatically turns on UPnP—see the Service Support Screen.

Note : To use Link Aggregation feature on ALL6600, please make sure the networking equipment on the other end of Ethernet cable also supports 802.3ad protocol.

LAN screen

From the **Network** menu, choose **LAN**, and the LAN Configuration screen appears. This screen displays the network parameters of the system. You are allowed to change any of these items and press **Apply** to confirm your settings.

LAN Configuration

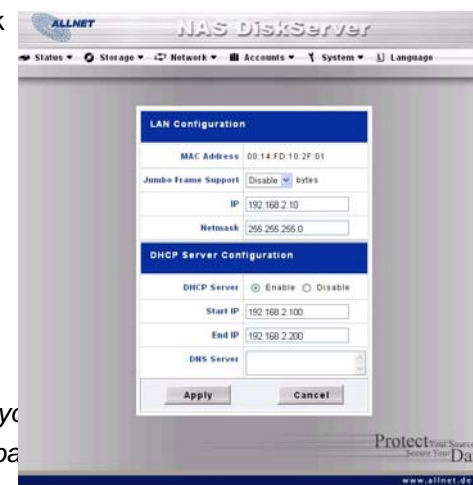
MAC Address	Displays the MAC Address of the LAN port.
Jumbo Frame Support	Select to enable Jumbo Frame Support. * (This feature is only available on ALL6600, not on ALL6600 RouStor)
IP	Specifies the IP address of the network connection
Netmask	Specifies the network mask, which is generally: 255.255.255.0

Note: Before enabling Jumbo Frame Support, please make sure your network equipment supports Jumbo Frame. If your equipment is incompatible, you might not be able to connect to ALL6600. In this case, you have to reset the system back to default by the holding down front panel reset button for 5 seconds during boot up process.

A DHCP server can be configured to assign IP addresses to devices connected to LAN ports.

DHCP Server Configuration

DHCP Server	Select to enable or disable DHCP server.
Start IP	Specifies the starting IP address of the DHCP range.
End IP	Specifies the ending IP address of the DHCP range.
DNS Server	Specifies the DNS server IP address.



Note: The IP Segment of WAN and LAN should not overlap.

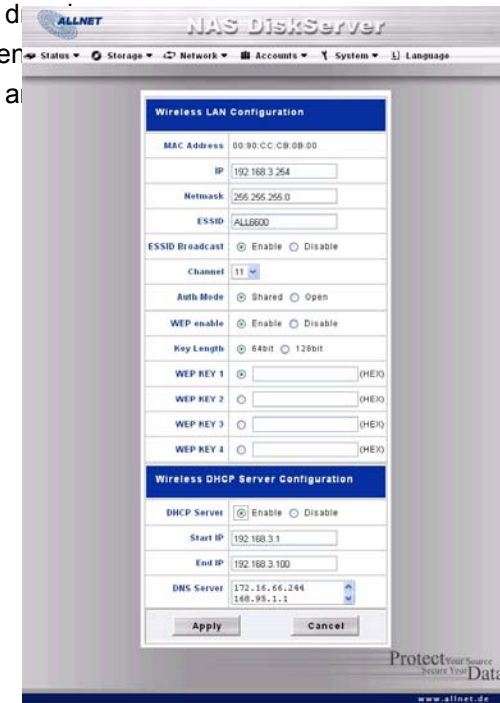
WARNING : The IP address of the LAN interface should not be in the range of the Start IP address and End IP address.

WLAN screen

When a compatible Wireless USB dongle is connected to ALL6600, ALL6600 will become an access point, and the d menu will contain a WLAN menu item. From the **Network** menu, choose **WLAN**, and the WLAN Configuration screen. This screen displays the wireless network parameters of the system. You are allowed to change any of these items and **Apply** to confirm your settings.

WLAN Configuration

- | | |
|------------------------|---|
| MAC Address | Displays the MAC Address of the USB Wireless dongle. |
| IP | Specifies the IP address of the network connection |
| Netmask | Specifies the network mask, which is generally: 255.255.255.0 |
| ESSID | The ESSID (Extended Service Set Identification) is the identifying name of a wireless network. |
| ESSID Broadcast | Specifies whether the ESSID will be broadcasted by ALL6600. It will prevent the Access Point from broadcasting the ESSID. ALL6600 will still respond to a wireless device that wants to communicate if it sends a matching ESSID. |
| Channel | The channels ALL6600 communicates with client device. |
| Auth Mode | Shared : Shared key authentication
Open : Open key authentication |
| WEP enable | Specifies whether to use encryption for transmission. |
| Key Length | Key length specifies the level of encryption.
64 bit : 10 characters from 0 ~ 9 and A ~ F.
128 bit : 26 characters from 0 ~ 9 and A ~ F. |
| WEP KEY 1 | Input up to 4 WEP keys; select the ones you wish to use. When connecting, be sure to enter the same key and select the same index number on your client machine. |
| WEP KEY 2 | |
| WEP KEY 3 | |



WEP KEY 4

A DHCP server can be configured to assign IP addresses to devices connected to LAN ports.

DHCP Server Configuration

DHCP Server	Select to enable or disable DHCP server.
Start IP	Specifies the starting IP address of the DHCP range.
End IP	Specifies the ending IP address of the DHCP range.
DNS Server	Specifies the DNS server IP address.

Note: *The IP Segment of WLAN, WAN and LAN should not overlap.*

Note : *USB wireless dongles supported :*

3Com 3CRUSB10075,

Zyxel G220USB,

PCI GW-US54mini

Note : *Users should obey the international RF regulatory rules as they set up the wireless RF channel on the ALL6600. The RF operating channels for different regions have been specified as following. Allnet has no responsibility for users attempting to violate the international RF regulation.*

11 for N. America

14 Japan

13 Europe (ETSI)

2 Spain

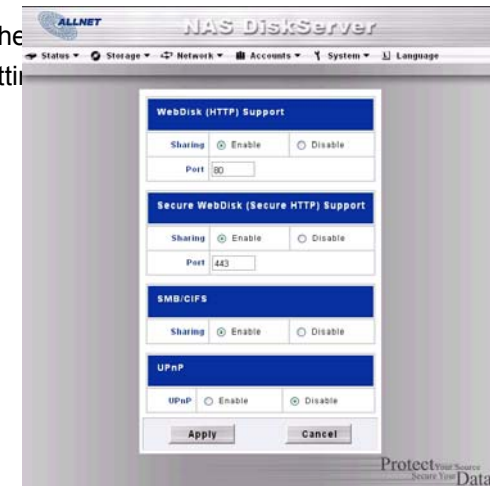
4 France

WARNING : *The IP address of the WLAN interface should not be in the range of the Start IP address and End IP address.*

Services Screen

From the **Network** menu, choose the **Services** item, and the Service Support screen appears. This screen displays the support parameters of the system. You are allowed to change any of these items and press **Apply** to confirm your settings. The description of each item follows:

- WebDisk Support** Enable or Disable **WebDisk** support. Set the port if Enabled.
- Secure WebDisk Support** Enable or Disable secure **WebDisk** support. Set the port if 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 ALL6600.



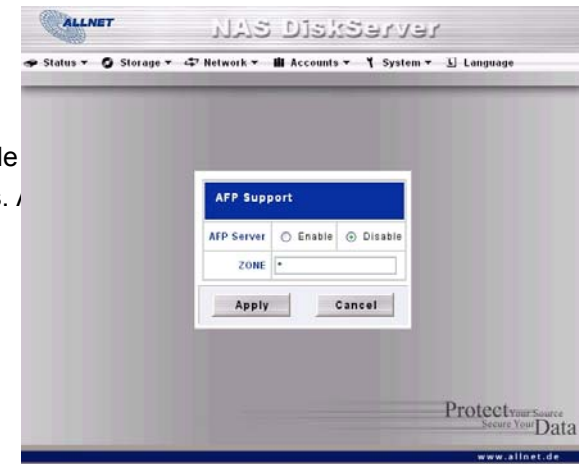
Note 1: Disable WebDisk (HTTP) support and Enable Secure WebDisk (Secure HTTP) support to guarantee secure access.

Note 2: In some environments, due to security concerns, you may wish to disable SMB/CIFS as a precaution against computer viruses.

AFP screen

From the **Network** menu, choose the **AFP** item, and the AFP Support screen appears. This screen displays the Apple Protocol configuration items. You are allowed to change any of these items and press **Apply** to confirm your settings. The description of each item follows:

- AFP Server** Enable or Disable **AFP Server** support.
- Zone** Specifies Zone for Appletalk service.



NFS screen

From the **Network** menu, choose the **NFS** item, and the NFS server setting screen appears.

The ALL6600 can act as a NFS server, enabling users to download and upload files with their favorite NFS clients.

NFS Enable or Disable **NFS** support.

Note: To allow host to access individual folders, please go to Storage > Folders, and click on NFS for individual folder.



FTP Screen

From the **Network** menu, choose the **FTP** item, and the FTP server setting screen appears.

The ALL6600 can act as a FTP server, enabling users to download and upload files with their favorite FTP client program.

FTP Enable or Disable **FTP** support.

FTP ENCODE For user to select their file name encoding. Available options are BIG5, HZ, GB2312, GB18030, ISO, EUC-JP, and UTF-8.

Note: FTP server on ALL6600 is running in Passive Mode by default.

Nsync Target screen

From the **Network** menu, choose the **Nsync Target** item, and the Nsync Target server setting screen appears.

The ALL6600 can act as an Nsync server, enabling another Allnet N4100 or Allnet ALL6600 at a remote location backup files to this ALL6600.

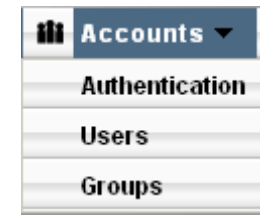
Nsync Target Server Enable or Disable Nsync Target support.

Note: To enable Nsync task to go thru firewall, you have to open port TCP/1194 on your firewall in both directions.



Accounts Menu

Use the Accounts menu to configure Active directory support, local users, and local groups.



ADS/NT Support Screen

From the **Accounts** menu, choose **Authentication** item and the ADS/NT Support screen appears.

If you have a Windows Active Directory Server(ADS) or Windows NT server to handle the domain security in your network, you can simply enable the ADS/NT support feature; the ALL6600 will connect with the ADS/NT server and get all the information about the domain users and groups automatically.

You are allowed to change any of these items and press **Apply** to confirm your settings. A description of each item follows.

WINS Server	Specifies the WINS server if necessary.
Work Group / Domain Name	Specifies the SMB/CIFS Work Group / ADS Domain Name (e.g. ALL6600).
ADS/NT Support	Select Disable to disable authentication through Windows Active Directory Server or Windows NT.
Authentication Method	Select ADS for Windows Active Directory Server, or select NT for Windows NT
ADS/NT Server Name	Specifies the ADS/NT server name (e.g. adservername).
ADS/NT Realm	Specifies the ADS/NT realm (e.g. example.com).
Administrator ID	Enter the administrators ID of Windows Active Directory or Windows NT, which is required for ALL6600 to join domain.
Administrator password	Enter the ADS/NT Administrator password.
Confirm Password	For re-entering password to confirm.



Allnet ALL6600 NAS DiskServer

How to Join an AD domain

Here is an example for setting up ADS support.

Work Group/Domain Name	Allnet
ADS Support	Enable
ADS Server Name	ADServer
ADS Realm	Allnet.com
Administrator ID	Administrator
Administrator Password	*****
Confirm Password	*****

Note : The DNS server specified in the WAN configuration page should be able to correctly resolve the ADS server name.

Note : The time zone setting between ALL6600 and ADS should be identical.

Note : The system time difference between ALL6600 and ADS should be less than five minutes.

Note : The Administrator Password field is for the password of ADS (Active Directory Server) not ALL6600.

Users Screen

From the Accounts menu, choose Users item, and the Local User Configuration screen appears. This screen allows you to configure local user settings. If you change any of these items, press **Apply** to confirm your settings. A description of follows:

Local User Configuration	Lists All users
Add	Add a new user
Modify	Modify an existing user.
Delete	Delete an existing user.

How to Add a User

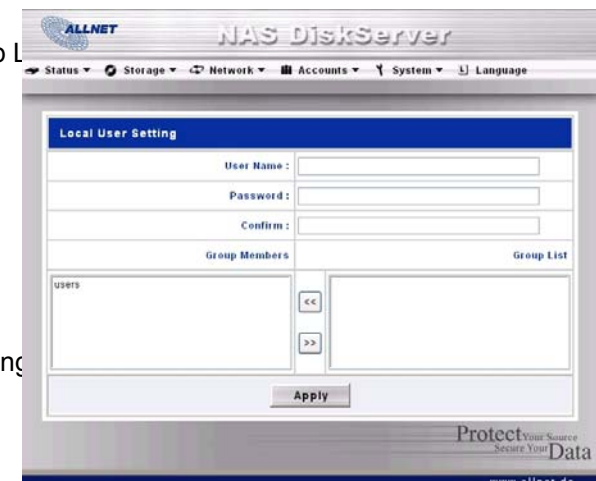
1. Click on Add button in Local User Configuration, and Local User Setting screen appears.
2. In the Local User Setting screen, enter a name in the User Name box.
3. Enter a password in the Password box and re-enter the password in the Confirm box.
4. Select which group the user will belong to. Group 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 >> button to join or leave a group.
5. Press the **Apply** button and the User is created.

How to Remove a User

1. Click on Delete button in Local User Configuration and the user is deleted from the system.

How to Change a User Password

1. In Local User Configuration screen, select an existing user, click on the Modify button, and Local User Setting screen appears
2. Enter a new password and re-enter to confirm and press **Apply** to confirm.



Groups Screen

From the **Accounts** menu, choose **Groups** item, and the Local Groups Configuration screen appears. This screen allows you to make local group settings. If you change any of these items, press **Apply** to confirm your settings. A description of each item follows:

List of All Groups	Lists all groups
Add	Add a new group.
Modify	Modify an existing group.
Delete	Delete an existing group.

How to Add a Group

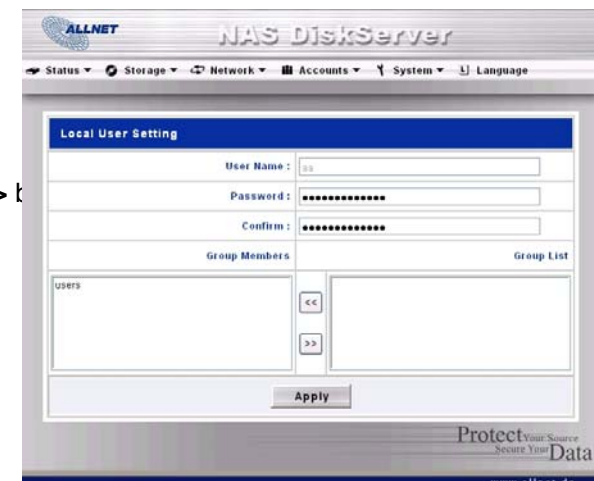
1. Click on **Add** button in Local Group Configuration, and Local Group Setting screen appears.
2. In the Local Group Setting screen, enter a name in the Group Name box.
3. Select users which the group will contain. Members List is a list of users this Group contains. Users List is a list of users this Group does not contain. Use the << or >> button to include or exclude a user.
4. Press the **Apply** button and the Group is created.

How to Modify a Group

1. In the Local Group Configuration screen, select a group name from the list.
2. Click on **Modify** button in Local Group Configuration, and Local Group Setting screen appears.
3. Administrator can remove a user from the group by selecting a user in the Members List and click on the >> button. Administrator can add a user to the group by selecting a user in the Users List and click on the << button.

How to Delete a Group

1. In the Local Group Configuration screen, select a group name from the list.
2. Press **Delete** button to delete the group.



System Menu

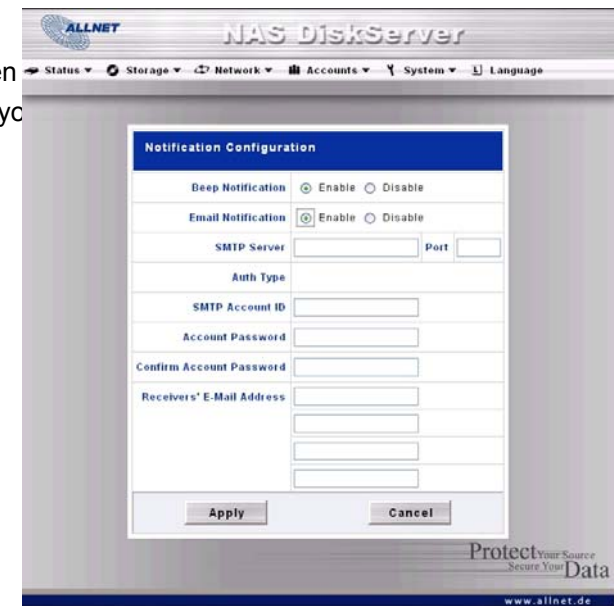
Use the System menu to configure administrative tasks.



Notification Configuration Screen

From the System menu, choose the Notification item, and the Notification Configuration screen appears. This screen make settings for notification in case of system problems. If you change any of these items, press Apply to confirm your changes. A description of each item follows:

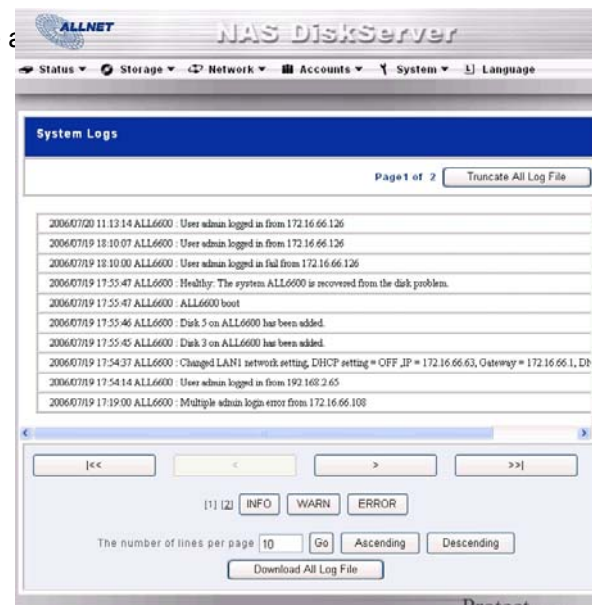
- | | |
|-----------------------------------|---|
| Beep Notification | Enable or Disable system beeper that beeps when a problem occurs. |
| Email Notification | Enable or Disable email notification of system problems. |
| SMTP Server | Set the server hostname/IP and the Port to send outgoing email. |
| Auth type | Authentication method used on your SMTP server. |
| SMTP Account ID | Set SMTP account ID. |
| Account Password | Set a password. |
| Confirm Account password | Confirm the password. |
| Receiver's Email Addresses | Add receivers' email addresses for notification of system problems. |



System Logs Screen

From the System menu, choose the Logs item and the System Logs screen appears. This screen lets you configure and manage system logs, which provide a history of system usage. A description of each item follows:

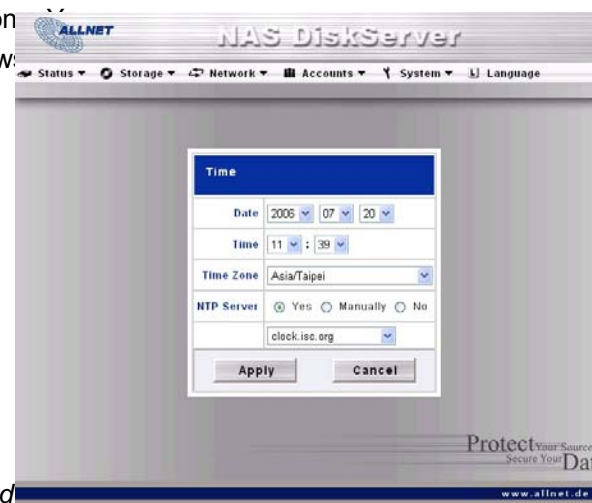
- I<< < > >>I** Use these buttons to browse the log pages.
- INFO** Provides all log information including warning messages and error messages.
- WARN** Shows all warning messages and error messages.
- ERROR** Shows only error messages.
- GO** Specify the number of lines per page and press Go.
- Ascending** Shows logs by date in ascending order.
- Descending** Shows logs by date in descending order.



Time Screen

From the System menu, choose the Time item and the Time screen appears. Set the desired date, time and time zone allowed to you change any of these items and press **Apply** to confirm your settings. A description of each item follows:

- Date** Sets the date on the system.
- Time** Sets the time on the system.
- Time Zone** Sets the time zone on the system.
- NTP Server** Sets the NTP server.
 - Yes** : Use the NTP server in the dropdown list, and ALL6600 will synchronize with the NTP server as soon as Apply button is clicked.
 - Manually** : Administrator can specify a NTP server.
 - No** : Does not use NTP to synchronize system time.



Note : When specifying NTP server, make sure the name of the server can be resolved by the DNS server specified in the WAN section.

Configuration Management Screen

From the System menu, choose the Config Mgmt item and the System Configuration Download/Upload screen appears. From this screen, you can download or upload system configurations. A description of each item follows:

- | | |
|-----------------|--|
| Download | Save the current system configuration by downloading. |
| Upload | Find a saved configuration file with the Browse button and Upload to make it the current system configuration. |

WARNING: Uploading a configuration with different firmware version is not allowed.

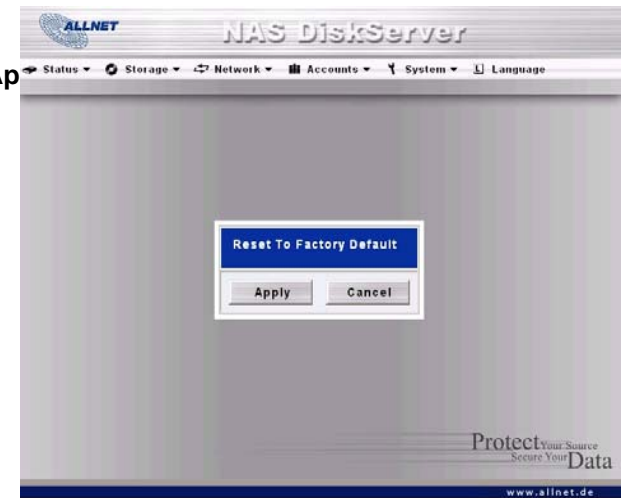


Factory Default Screen

From the System menu, choose the Factory Default item and the Reset to Factory Default screen appears. Press **Apply** to reset the Allnet ALL6600 to factory default settings.

Reset to factory default will erase all the Storage, Network, Accounts, and System settings.

NOTE: Resetting to the factory default will not remove RAID, and erase data on the disks.



Firmware Upgrade Screen

From the System menu, choose the Firmware Upgrade item and the Firmware Upgrade screen appears. During firmware upgrade process, all file services will be stopped temporarily. A description of each item follows:

Firmware Find a firmware configuration file with the Browse button and press **Apply** to upgrade the firmware.

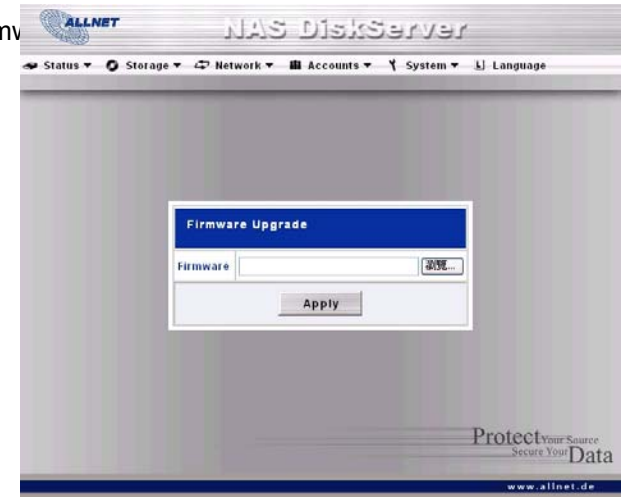
How to Upgrade Firmware

1. Go to Allnet company website to download the latest firmware for ALL6600, and save to your PC.
2. Use the Browse button to find the firmware file to upgrade to.
3. Press **Apply**.
4. The beeper beeps and the system's Busy LED blinks until the upgrade is complete.

Note: The buzzer only beeps if it is enabled in the System Notification menu.

WARNING: During firmware upgrade process, please do not turn off the system. This will lead to catastrophic result.

WARNING: Downgrading is not allowed.



Administrator Password Screen

From the **System** menu, choose the **Administrator Password** item and the Change Administrator Password screen appears. You are allowed to alter your password and Press **Apply** to confirm.

On this screen you can change the administrator password and LCD password at the same time. Administrator password is used to access web user interface. The minimum length of the password is 4, and maximum length is 12.

A description of each item follows:

New Password Type in the new administrator password

Confirm Password Type the new password again to confirm.

Password

LCD password is needed to access LCD on the front panel for simple configurations. The length for the LCD password is always 4, and the allowable characters are 0 ~ 9.



Allnet ALL6600 NAS DiskServer

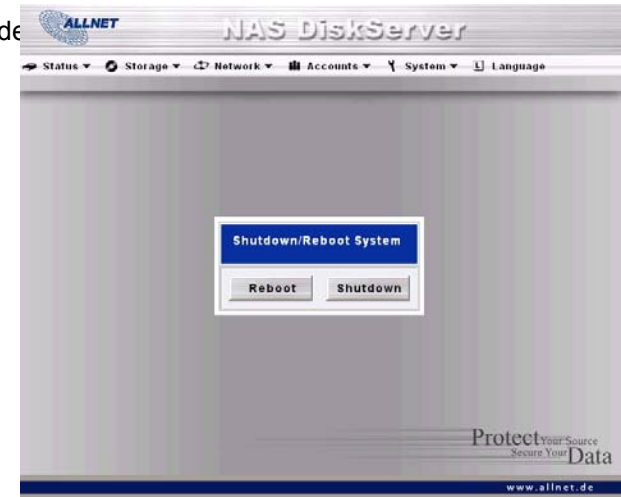
New Password Type in the new administrator password

Confirm Password Type the new password again to confirm.

Reboot & Shutdown Screen

From the **System** menu, choose **Reboot & Shutdown** item, and the Shutdown/Reboot System screen appears. A description of each item follows:

Reboot	Reboots the system
Shutdown	Shuts down the system



Logout Screen

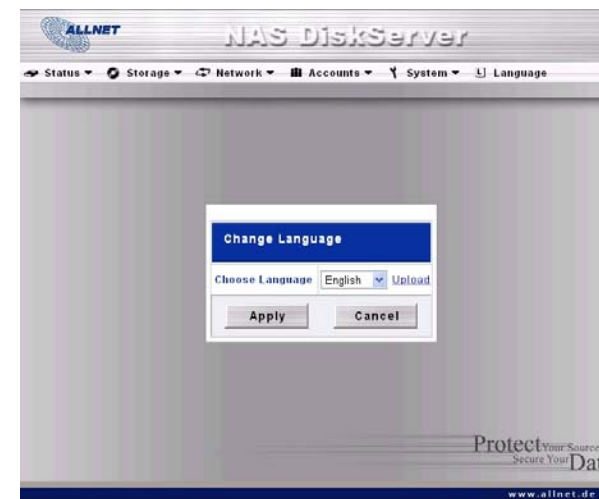
From the **System** menu, choose the **Logout** item and the Logout screen appears. Press the **Apply** button to logout of the system.



Language Menu

Choose the Language menu and the Change Language screen appears. This screen allows you to select the language for the system menus. Choose a language from the pull down menu and press **Apply** to confirm your setting.

Upload is for user to upload other languages in the future, which was not included in the Firmware.



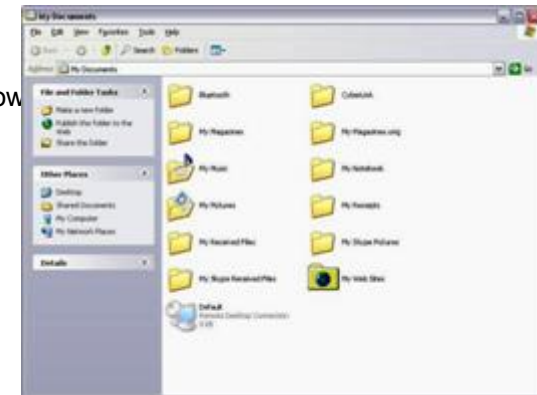
Chapter 6: System Usage (for users)

After the system is setup and you are connected to a network, there are basic operations that help you access and manage the share folders on the Allnet ALL6600.

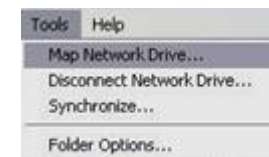
Mapping a Network Drive (Windows)

You can map share folders on the Allnet ALL6600 so you can access them through the My Computer folder in Windows. You can connect to the shared network folders on the Allnet ALL6600 as follows:

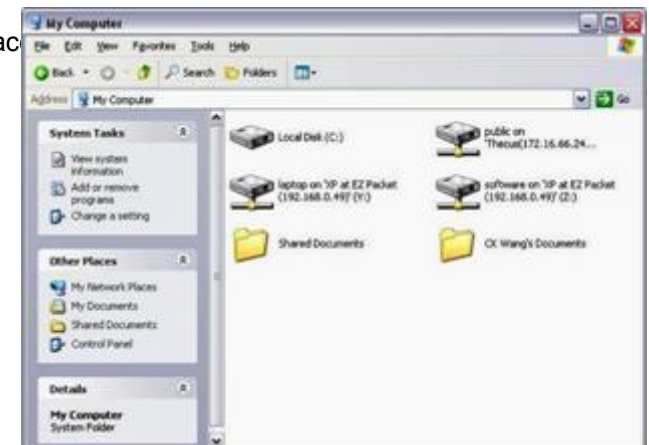
1. Go to the My Documents folder in Windows.



2. On 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, or enter the folder name you wish to connect to or address.
6. Press **Finish**. When the Connect As... window appears, enter a User name and Password.
7. Press **OK**. The share folder appears as the drive you assigned in your My Computer window. You can now access the folder as though it were a drive on your computer.



Mapping a Network Drive (Apple OS X)

Connecting to a Server

On an Apple computer 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:

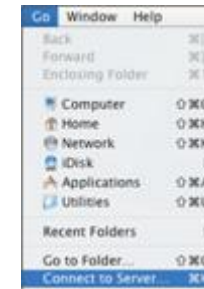
smb://192.168.1.100/Folder1

When connecting using AFP protocol, type:

afp://192.168.1.100/Folder1

Click **Connect**.

3. When MAC OS X is trying to connect ALL6600, it will ask for a User Name and Password which has access to Folder.
4. When MAC OS X connected to ALL6600 successfully, an icon representing the folder will appear on the MAC desktop. You can access the folder by double clicking on the icon.



Using WebDisk

The Allnet ALL6600 provides a WebDisk function that allows you to access the system over the Internet from any browser.

1. Make sure that WebDisk Support or Secure WebDisk Support is enabled in the Service Support screen in the Network menu. See Service Support in Chapter 6: System Management.
2. In the Login page, type in the User ID and password that were previously set for you in the Accounts menu. See Accounts Menu in Chapter 6.
3. The WebDisk page appears showing folders made currently available to you via the Access Control List (ACL) Folder item under Storage menu.
4. Click on a folder name to enter the folder. Click on a file to download the file.



5. The folder's page appears displaying files and folders.

- Name** Displays the names of folders and files.
- Size** Shows the size of folders and files.
- Type** Displays the type of folders and files.
- Modified** Shows the time of most recent modification of folders and files.

6. Buttons on the folder page allow you to create a new folder, upload files and delete files in the folder.

- Up** Goes to the previous folder level.
- New folder** Creates a new folder.
- New file (upload)** Uploads a file from your computer to the current folder.
- Delete Selected Items** Deletes selected files and folders.



7. To create a new folder within the current folder, press the **New folder** button. When the screen appears enter for the folder. Press **OK** to create the folder.



8. To upload a file from your computer to the current folder, press the **New file (upload)** button. When the screen appears, press **Browse** and locate the file to upload. Press **OK** and the file uploads to the current folder.



9. To delete a file or folder, select the file or folder's check box. Press the **Delete selected items** button. You can check the check box as the red circle indicates to select all files and folders in this folder.

Allnet Backup Utility



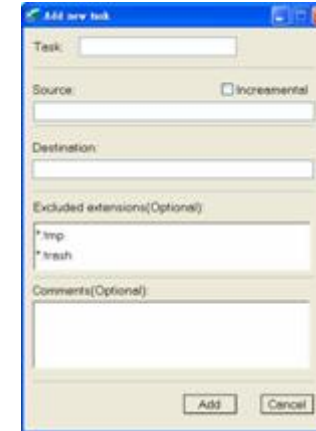
Allnet ALL6600 NAS DiskServer

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

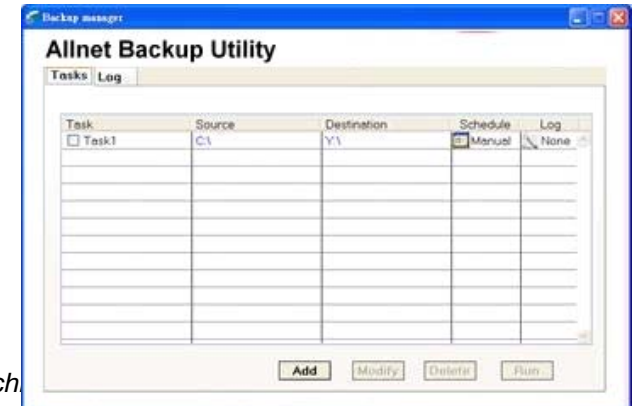
When you execute this Utility for the first time, it will ask you whether to create a DB file. Click Yes.

1. Click on Add to create a Backup task.
2. 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. 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	Enter comments here for your record.



3. To schedule the task to run at regular intervals. Please 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, please click on the log icon for that task.



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

Windows XP Data Backup

If you are using Windows XP Professional, the Windows Backup utility (Ntbackup.exe) is ready to use.

Installing the Windows XP Home Edition Backup Utility

If you are using 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, double-click the ValueAdd folder, then Msft, and then Ntbackup.
5. Double-click Ntbackup.msi to install the Backup utility.

Using the Backup Utility

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

1. Click Start, point to All Programs, point to Accessories, point to System Tools, and click Backup to start the wizard.
2. Click Next to skip past the opening page, Choose Back up 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 ALL6600 system as your backup destination and click Next.
6. Click next to display the wizard's final page and click **Finish** to start backing up.



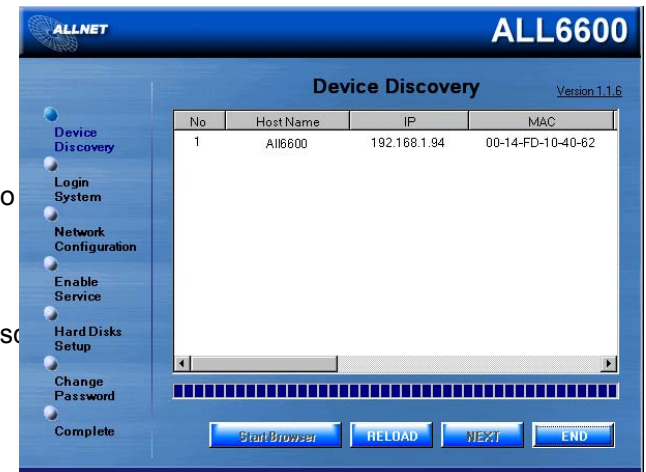
Appendix A: Troubleshooting

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 you have not physical access to the system, you can use the setup wizard to find the IP of your ALL6600.

1. Start the Setup Wizard, it will automatically detect all Allnet IP storage products on your network.
2. You should be able to find the IP address of the ALL6600 which you have forgotten in the “Device discovery” screen.



Forgotten Password

If you forget your password for the administrator, you can reset the ALL6600 to its default settings as follows:

1. Power on the ALL6600 and immediately press the Reset button for 10 seconds.
2. This resets the ALL6600 to its default IP address and password settings.
3. Make sure your network is connected to the Internet and access the ALL6600 Login webpage:
4. Use the Setup Wizard to configure the ALL6600 again.

Note: The default password for “admin” is “admin”.



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 LEDs on its right front, 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.

Solving Problems

When the system detects an error as above:

1. Login to the Allnet ALL6600 browser based software.
2. Go to the System menu and choose Logs item.
3. The System Log screen appears.
4. Press the Error button and all recorded errors appear. The 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.

Hard Drive Replacement

You can easily replace a damaged hard drive in the Allnet ALL6600, and your data is secure with the system's automatic data recovery, provided you are using a RAID 1, RAID 5, RAID 6, or RAID 10 setting.

Hard Drive Damage

When a hard drive is damaged, its bottom LED glows a steady red. If there is data in the RAID volume, then the system also glows red, and the system beeps.

Replacing a Hard Drive

Replace a hard disk drive (HDD) as follows:

1. Remove the tray with the damaged HDD.
2. Unscrew the damaged HDD from the tray and put it aside.
3. Slide the new HDD into the tray and fasten the screws.
4. Insert the HDD and tray back into the Allnet ALL6600 until it snaps into place and lock it with a key if desired.
5. The LED blinks green when the HDD is accessed. If the Error LED flashes red it signals a problem.



RAID Auto-Rebuild

RAID 1, 5, 6, 10 on Allnet ALL6600 provides an auto-rebuild function.

1. When a hard disk fails the system beeps and/or an email notification is sent to specified receivers.
2. Check the hard disk error LEDs to see which disk has failed.
3. Follow the steps mentioned above to replace the failed hard disk.
4. The system automatically recognizes the new hard disk and starts the auto-rebuild to resume its status before the hard disk crash.

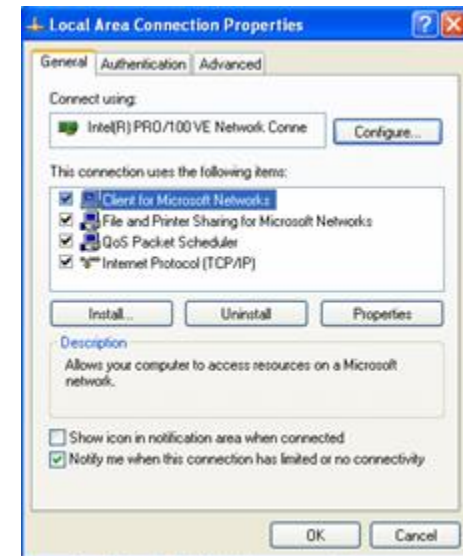
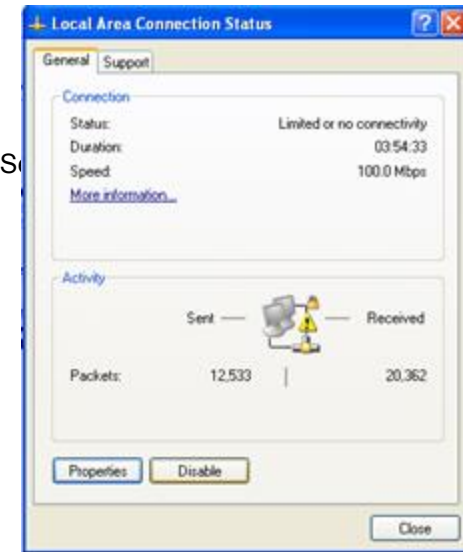
Note: *The system supports hot-swap for RAID 1, 5, 6, 10. The data service is not stopped during auto-rebuild.*

CAUTION: *Do not power off or shutdown the system during auto-rebuild.*

Appendix B: Setting IP Addresses

Windows XP

1. Begin by clicking the Start button at the bottom left of the screen, point to Settings and select Control Panel. Select Network Connections.
 2. Click on the Network Connection icon.
 3. Double click on the current LAN settings to open the properties of your NIC.
 4. Click on the Properties button on the bottom of the Local Area Connection Status window:
-
5. Double click on the Internet Protocol (TCP/IP) item, or you can single click and select Properties:

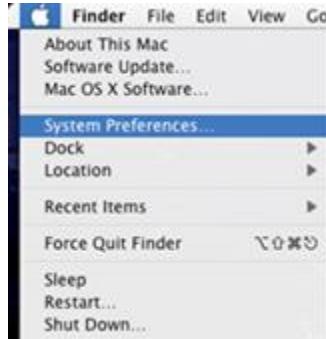


6. Select Using the following IP address. Type the IP address, e.g. 192.168.1.69. Type the Subnet mask, 255.255.255.0

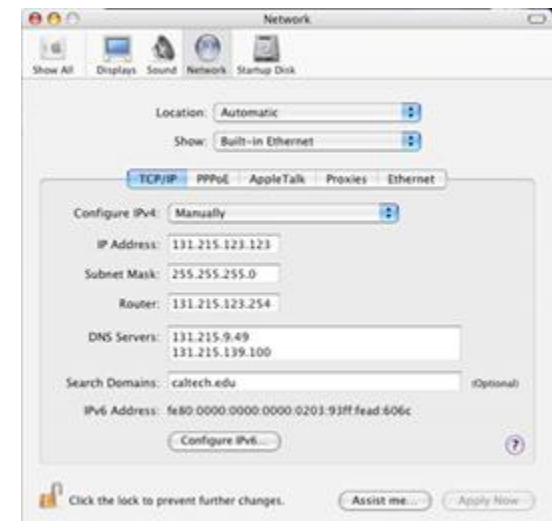


Mac OS X

1. Go to the Apple menu and select System Preferences.



2. Under Internet and Network, select Network.
3. Change the Show pop-up option to Built-in Ethernet.
4. For Location, choose Automatic (or give this connection a name).
5. For Show, Select Built-in Ethernet.
6. Select the TCP/IP tab.
7. Set Configure to Manually.
8. Enter assigned static IP address.
9. Enter Subnet Mask 255.255.255.0
10. Enter Router 131.215.xxx.254 (replace xxx with your subnet).
11. Enter all 3 DNS Servers addresses:
 - 131.215.9.49
 - 131.215.139.100
 - 131.215.254.100
12. Click the Apply Now button then quit the System Preferences application.



Appendix C: RAID Basics

This appendix discusses basic information about RAID and 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 Overview

This provides a simple RAID overview. It is not intended to be official documentation.

Stripe Size

The length of the data segments being written across multiple hard disks. data is written 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.

Choosing a RAID Level

The Allnet ALL6600 supports standard RAID levels 0, 1, 5, 6, 10, and JBOD. You choose a RAID level when you create a system volume. The factors for selecting a RAID level are:

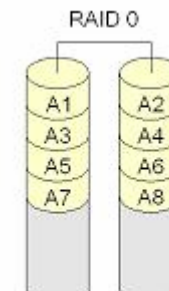
- Your requirements for performance
- Your need for data security
- Number of hard disk drives in the system, capacity of hard disk drives in the system
-

The following is a description of each RAID level:

RAID 0

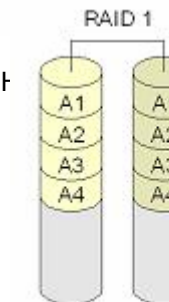
RAID 0 is best suited for applications that need high bandwidth but do not require a high level of data security. The RAID 0 provides the best performance of all the RAID levels, but it does not provide data redundancy.

RAID 0 uses disk striping and breaking up data into blocks to write across all hard drives in the volume. The system can 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.



RAID 1

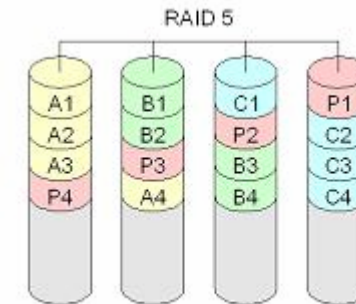
RAID 1 mirrors all data from one hard disk drive to a second one hard disk drive, providing complete data redundancy. If the cost of data storage capacity is doubled.



RAID 5

RAID 5 offers data security and good performance. It is best suited for networks that perform many small I/O transactions at the same time, as well as applications that require data security such as office automation and online customer service. Use it also for applications with high read requests but low write requests.

RAID 5 includes disk striping at the byte level and parity information is written to several hard disk drives. If a hard disk fails, the system uses parity stored on each of the other hard disks to recreate all missing information.

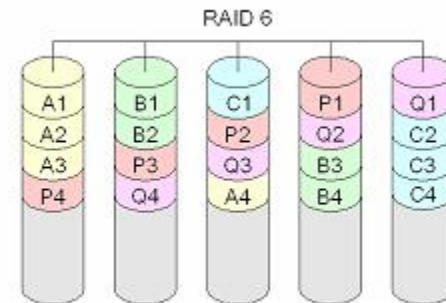


RAID 6

RAID 6 is essentially an extension of RAID level 5 which allows for additional fault tolerance by using a second independent distributed parity scheme (dual parity)

Data is striped on a block level across a set of drives, just like in RAID 5, and a second set of parity is calculated and written across all the drives; RAID 6 provides for an extremely high data fault tolerance and can sustain two simultaneous drive

Perfect solution for mission critical applications

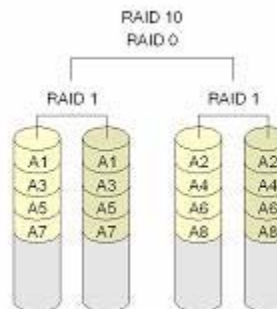


RAID 10

RAID 10 is implemented as a striped array whose segments are RAID 1 arrays. RAID 10 has the same fault tolerance as level 1.

RAID 10 has the same overhead for fault-tolerance as mirroring alone. High I/O rates are achieved by striping RAID 1 segments

Under certain circumstances, RAID 10 array can sustain multiple simultaneous drive failures

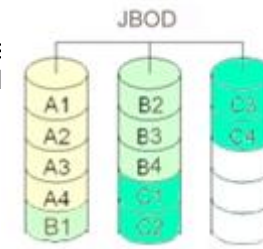


Excellent solution for applications that would have otherwise gone with RAID 1 but need some additional performance boost.

JBOD (Just a Bunch of Disks)

Although a concatenation of disks (also called JBOD, or "Just a Bunch of Disks") is not one of the numbered RAID levels, it is a popular method for combining multiple physical disk drives into a single virtual one. As the name implies, disks are merely concatenated together, end to beginning, so they appear to be a single large disk.

Data on JBOD is not protected, one drive failure could result total data loss.



ALL6600 Disk Usage

When all 5 disks are of the same size, and used in RAID, ALL6600 disk usage percentage is listed below :

RAID Level	Percentage Used
RAID 0	100%
RAID 1	20%
RAID 5	80%
RAID 6	60%
RAID 10 *	50%
JBOD	100%

Note : RAID 10 allows only 4 disks and one as spare disk.

Appendix D: Active Directory

With Windows 2000, Microsoft introduced Active Directory (ADS), which is a large database/information store. Prior to Active Directory the Windows OS could not store additional information in its domain database. Active Directory also solved the problem of locating resources; which previously relied on Network Neighborhood, and was slow. Managing users and groups were among other issues Active Directory solved.

What is Active Directory?

Active Directory was built as a scalable, extensible directory service that was designed to meet corporate needs. A repository for storing user information, accounts, passwords, printers, computers, network information and other data, Microsoft calls Active Directory a "namespace" where names can be resolved.

ADS Benefits

ADS lets the ALL6600 integrate itself with the existing ADS in an office environment. This means the ALL6600 is able to recognize your office users and passwords on the ADS server. Other major benefits ADS support provides include.

1. Easy integration of the ALL6600 into the existing office IT infrastructure.

The ALL6600 acts as a member of the ADS. This feature significantly lowers the overhead of the system administrator. For example, corporate security policies and user privileges on an ADS server can be enforced automatically on the ALL6600.

2. Centralized user/password database.

The ALL6600 does not maintain its own copy of the user/password database. This avoids data inconsistency between the ALL6600 and other servers. For example, without ADS support, an administrator might need to remove a specific user privilege on the ALL6600 and each individual server. With ADS support, the change on an ADS server is known to all of its ADS members.

Appendix E: Specifications**ALL6600 Specifications**

HDDs	5 x 3.5" SATA II HDD, Hot-swappable
eSATA port	1 x eSATA connector for capacity expansion
USB ports	2 x USB A type (Host mode) 1 x USB B type (Client mode)
Ethernet ports	2 x Gigabit RJ-45 Connector
LCD Control Panel	For basic configurations and status display
Network File Protocols	Microsoft Networks (CIFS/SMB) Apple Filing Protocol (AFP 3) Network File System (NFS v3) File Transfer Protocol (FTP) Hyper Text Transfer Protocol (HTTP) Secure Hyper Text Transfer Protocol (HTTPS)
Authentication	Microsoft NT Domain Controller (PDC) Microsoft Active Directory Authentication (AD)
Network Client Type	Microsoft Windows NT/2000/XP/2003 Unix/Linux/BSD MAC OS X, OS 9, OS 8.6
Network Configuration	Fixed IP Address Dynamic IP Address
Disk Management	Power Management (Disk idle spin-down) Disk Status Monitoring (S.M.A.R.T.)
RAID	RAID 0, 1, 5, 6, 10, and JBOD Auto Rebuild Hot Swappable Hot Spare Disk Roaming RAID Level Migration RAID Expansion Disk Capacity Supported : 80/120/160/200/250/300/400/500/750 GB
Folder Management	Share Folder Level Permission File Level Permission

Allnet ALL6600 NAS DiskServer

	Public Folder
Quota Management	Share Folder Quota Control
Backup	Snapshot Allnet Backup Utility (Microsoft Windows XP/2000 /MAC OS X) Allnet Nsync
System Management	Web GUI Multilingual Support (English, French, German, Italian, Traditional Chinese, Simplified Chinese, Japanese, Korean, Spanish) NTP supported
Event Notification	Email Notification Buzzer Notification LCD
Supported USB Devices	USB Printer External HDD/Flash disk USB IEEE 802.11 b/g dongle w/ AP mode support *
Setup Utility	Windows 2000 / XP / 2003 MAC OS X
Safety and Environment	CE, FCC, BSMI, C-Tick, RoHS Compliant
Dimension	230 x 190 x 230 mm (H x W x D)
Physical	Lockable Disk Tray
Operating Environment	0 - 40 °C 20 – 85% Relative Humidity (non-condensing)
Power Supply	Server-rated AC Power Supply 100/220VAC, 50/60 Hz, Auto detect

*For supported USB dongles, please contact sales@allnet.de

Appendix F: Licensing Information

This product included copyrighted third-party software licensed under the terms of GNU General Public License.

Please see THE GNU General Public License for extra terms and conditions of this license.

Source code availability

Allnet Technology Corp. has exposed the full source code of the GPL licensed software. For more information on how you can obtain our source code, please visit our web site, <http://www.allnet.de>

GNU GENERAL PUBLIC LICENSE Version 2, June 1991

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for

ALL6600



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EMI: EN 55022 : 1998/A1 :2000/A2 :2003

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IEC61000-4-3 :2002+A1 :2002 , IEC61000-4-4 : 1995+A1:2000+A2:2001,
IEC61000-4-5 : 1995,+A1:2000 , IEC61000-4-6 : 1996, +A1:2000
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