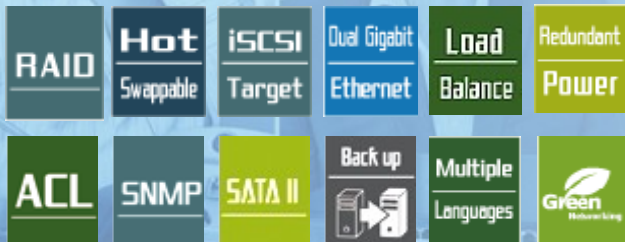


## 2U Rack-Mountable 8-Bay NAS Server with Dual Power

### NAS-7850



# Presentation Outline

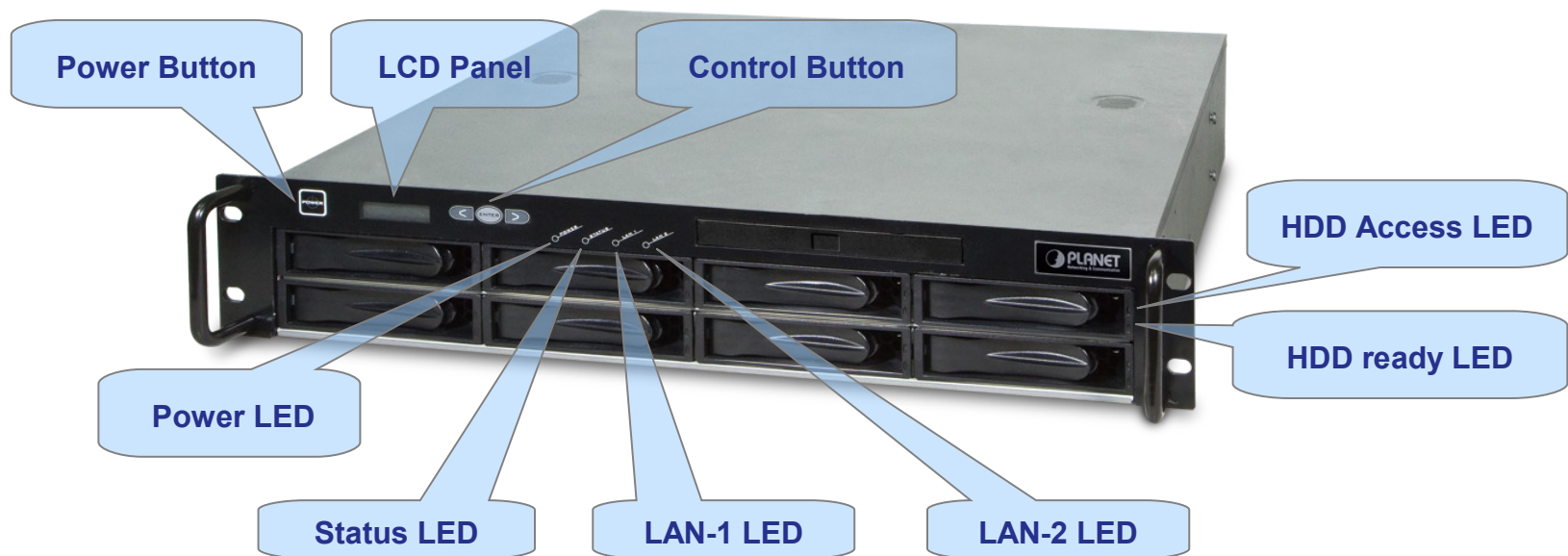
- ◆ **Product Overview**
- ◆ **Product Features**
- ◆ **Management**
- ◆ **Application**
- ◆ **Comparison**



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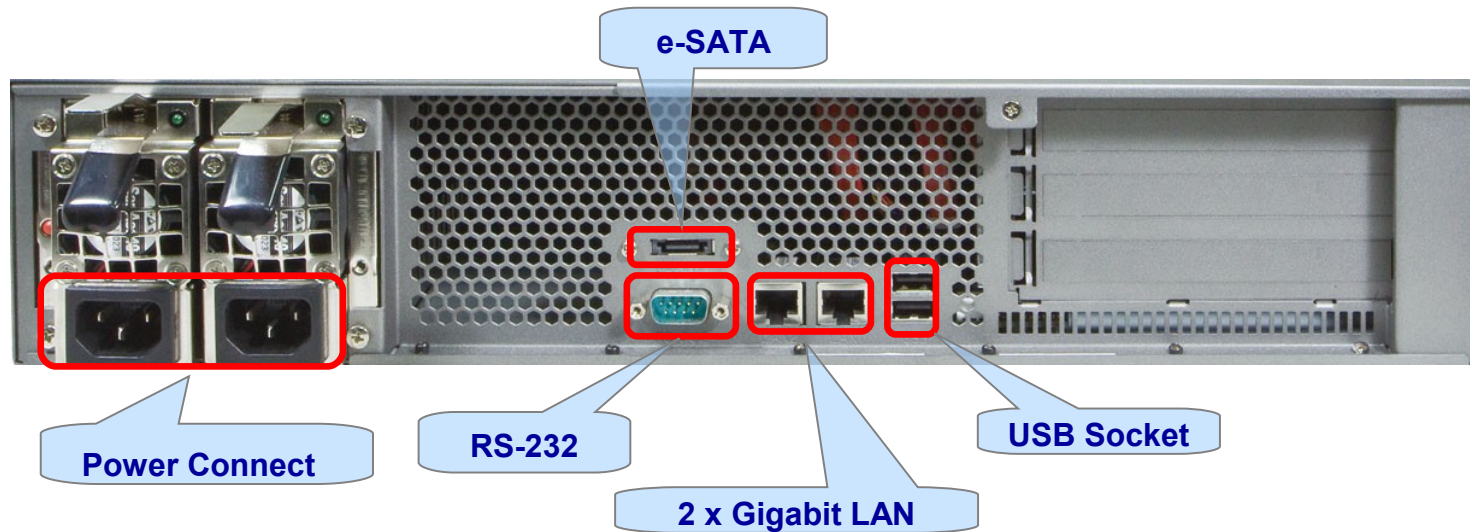
# Product Overview

## ◆ Front View of NAS-7850



# Product Overview

## ◆ Rear View of NAS-7850



# Product Benefits

## ◆ Benefits –

- ✓ **High Performance:** Using single device connection which eliminates the master/ slave issues and allows faster transfer rate without latency and delay
- ✓ **High Data Integrity:** Offers error checking and error correcting capabilities. The end-to-end integrity of transferred commands and data can be guaranteed across the serial bus
- ✓ **High System Reliability:** A dedicated port for each disk drive, providing greater system reliability through individual drive and cable fault isolation
- ✓ **High Usability:** Easier configuration and design with cables that are thinner, have smaller connectors, and are simpler to route and install

# Product Feature

## ◆ Feature –

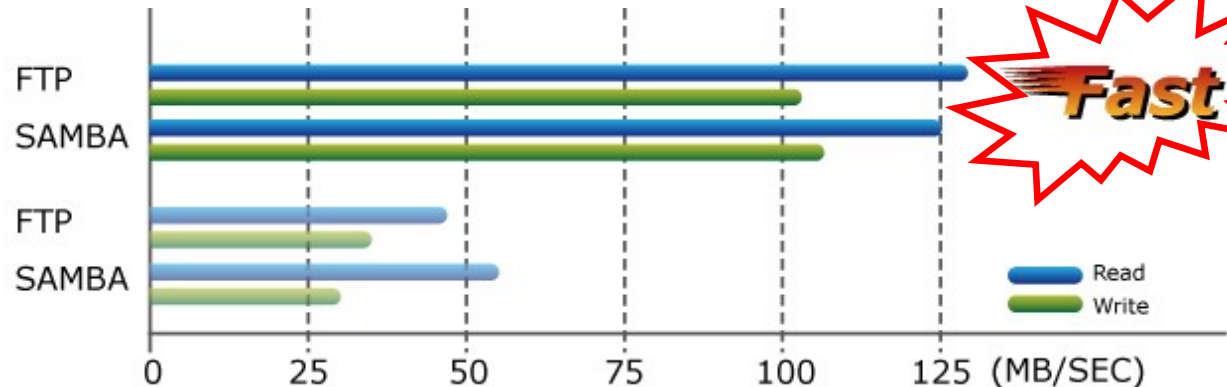
- ✓ High-density **2U 8-bay rack-mount** with **Dual power** supply for reliability and business continuity
- ✓ Multiple volume support for **RAID 0, 1, 5, 6, 10** and **JBOD** background sync and Smart Sync resume
- ✓ Simultaneously supports **NAS** and **IP SAN (iSCSI)** for database and server virtualization applications
- ✓ Two **10/100/1000** Ethernet ports with **load balancing** and **failover**
- ✓ Multi-Protocol system support for **Windows, MAC, Solaric, FreeBSD, Linux** and other **UNIX** derivatives
- ✓ High-end Data Protection adopts the most advanced SATA RAID technology and fully integrates **Anti-virus** engine to protect valuable data on the fly.

# Product Performance

## ◆ Performance

**NAS-7850**  
(RAID 5)

Other NAS  
(RAID 5)



<b>RAID 0</b>	<b>SAMBA (Read)</b>	<b>SAMBA (Write)</b>	<b>FTP (Read)</b>	<b>FTP (Write)</b>
Maximum transfer rate (mB/sec)	123.24	105.52	309.16	106.08
Average time	01:51	02:40	02:14	02:28
<b>RAID 5</b>	<b>SAMBA (Read)</b>	<b>SAMBA (Write)</b>	<b>FTP (Read)</b>	<b>FTP (Write)</b>
Maximum transfer rate (mB/sec)	125.27	104.86	127.6	106.54
Average time	01:58	02:31	02:32	02:13
<b>RAID 6</b>	<b>SAMBA (Read)</b>	<b>SAMBA (Write)</b>	<b>FTP (Read)</b>	<b>FTP (Write)</b>
Maximum transfer rate (mB/sec)	125.21	102.89	214.38	105.91
Average time	01:58	02:38	02:22	02:26
<b>RAID 10</b>	<b>SAMBA (Read)</b>	<b>SAMBA (Write)</b>	<b>FTP (Read)</b>	<b>FTP (Write)</b>
Maximum transfer rate (mB/sec)	114.37	109.31	267.65	107.17
Average time	02:06	02:31	02:04	02:30

# Management

## ◆ User Interface

The screenshot displays the PLANET Advanced Network Storage management interface. The top navigation bar includes the PLANET logo and a set of icons for navigation and management. Below the navigation bar, the server name 'NAS-7450' and the user 'Admin' are displayed. A table lists the contents of the storage, including a folder named 'jasper'. A vertical sidebar on the left is labeled 'File Browsing'. Callouts point to various features: 'Admin Home page' points to the navigation bar; 'Change View Mode' points to the first icon; 'Change Password' points to the second icon; 'Create Folder' points to the third icon; 'Upload File' points to the fourth icon; and 'Help' points to the fifth icon.

**PLANET**  
Networking & Communication

**Advanced Network Storage**

Server Name: NAS-7450 | Admin

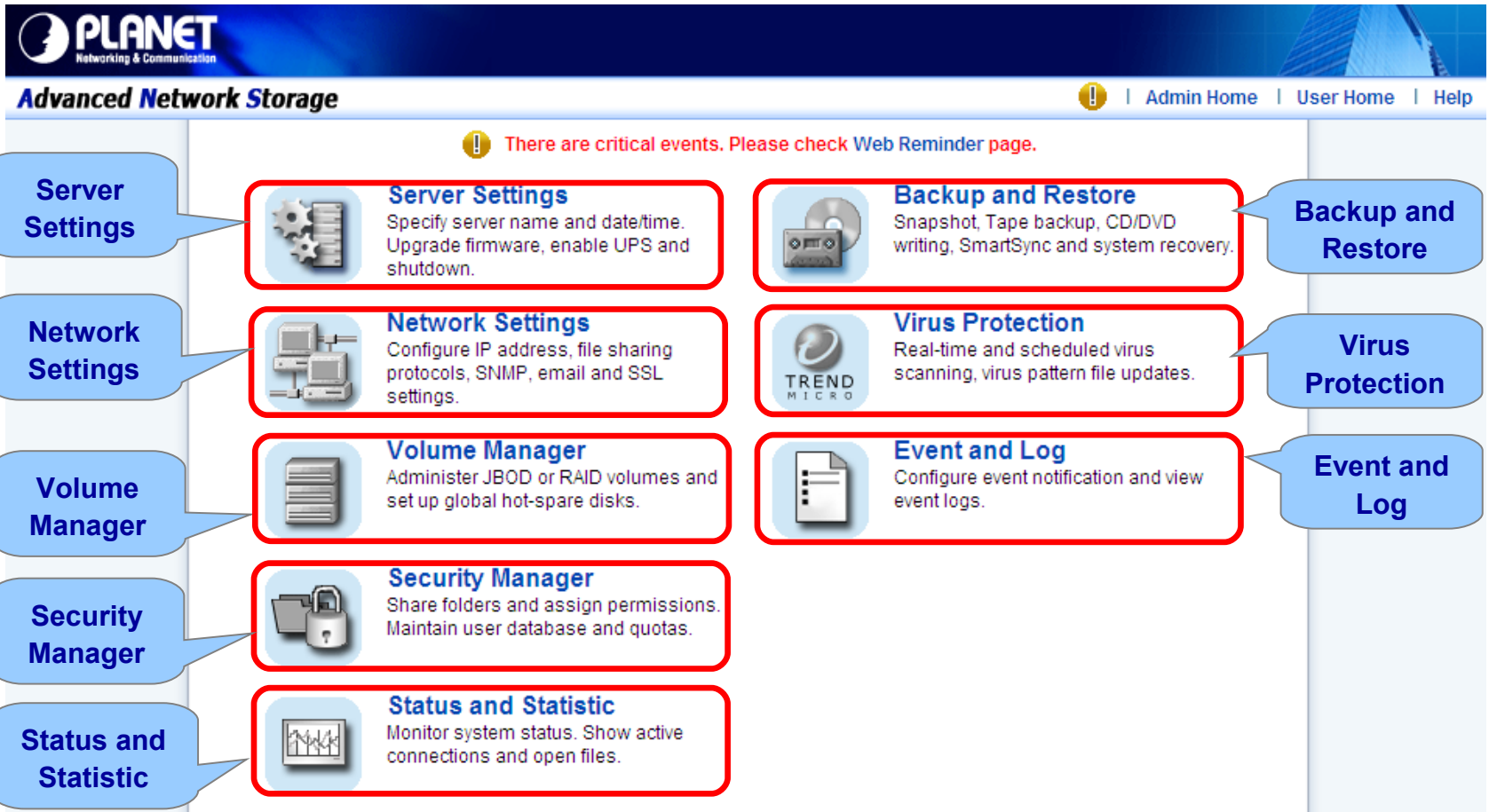
File/Folder	Size	Date/Time	Actions
jasper	-	2011/01/05 19:06:02	Lock, Edit, Delete, Help

File Browsing

Callouts: Admin Home page, Change View Mode, Change Password, Create Folder, Upload File, Help

# Management

## ◆ Administration Interface



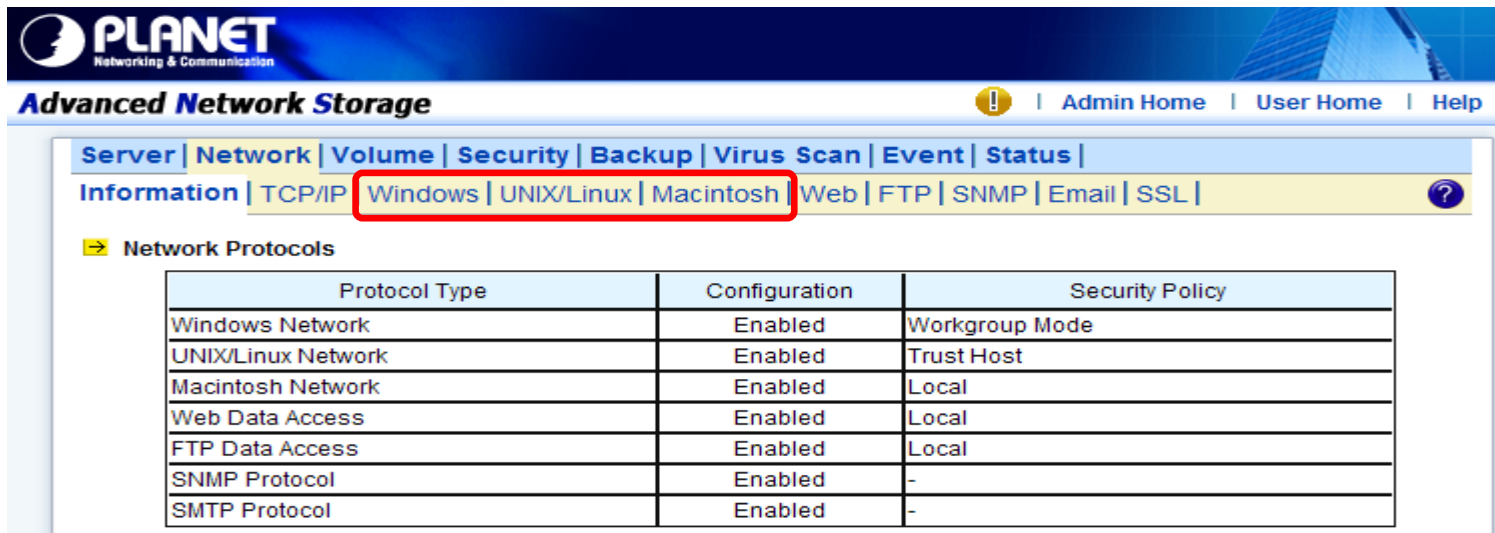
The screenshot shows the PLANET Advanced Network Storage Administration Interface. At the top, there is a navigation bar with the PLANET logo, the text "Advanced Network Storage", and links for "Admin Home", "User Home", and "Help". A warning message states: "There are critical events. Please check Web Reminder page." The main interface is divided into two columns of management tools, each with a corresponding label in a blue callout box on the left and right sides.

Management Tool	Description
Server Settings	Specify server name and date/time. Upgrade firmware, enable UPS and shutdown.
Network Settings	Configure IP address, file sharing protocols, SNMP, email and SSL settings.
Volume Manager	Administer JBOD or RAID volumes and set up global hot-spare disks.
Security Manager	Share folders and assign permissions. Maintain user database and quotas.
Status and Statistic	Monitor system status. Show active connections and open files.
Backup and Restore	Snapshot, Tape backup, CD/DVD writing, SmartSync and system recovery.
Virus Protection	Real-time and scheduled virus scanning, virus pattern file updates.
Event and Log	Configure event notification and view event logs.

# Management

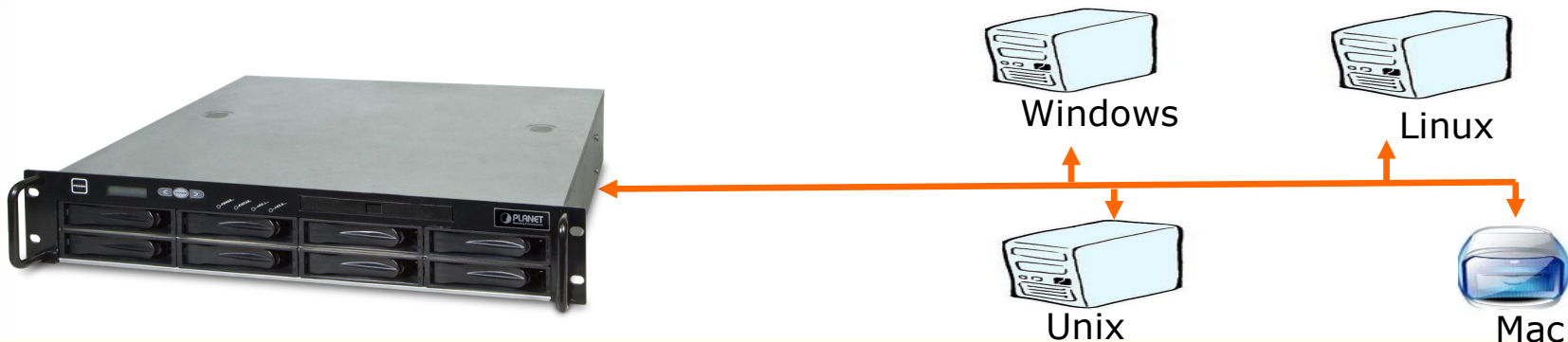
## ◆ Web Configure – Multi-Protocol system Settings

Sharing Files across Windows, Unix, Linux, and Mac



The screenshot shows the PLANET Advanced Network Storage web interface. The navigation menu includes: Server | Network | Volume | Security | Backup | Virus Scan | Event | Status | Information | TCP/IP | **Windows | UNIX/Linux | Macintosh** | Web | FTP | SNMP | Email | SSL. The 'Network Protocols' section contains the following table:

Protocol Type	Configuration	Security Policy
Windows Network	Enabled	Workgroup Mode
UNIX/Linux Network	Enabled	Trust Host
Macintosh Network	Enabled	Local
Web Data Access	Enabled	Local
FTP Data Access	Enabled	Local
SNMP Protocol	Enabled	-
SMTP Protocol	Enabled	-



# Management

## ◆ Web Configure – ACL (Access Control List)

NAS-7850 can set security permission via ACL (Access Control List) and applicable to shared folders and files.

**PLANET**  
Networking & Communication

**Advanced Network Storage** | Admin Home | User Home | Help

Server | Network | Volume | **Security** | Backup | Virus Scan | Event | Status |  
Information | File/Folder | Share | **ACL** | Account | Quota |

➤ ACL Security Control

- Folder Object: /school/1
- Access Control List
  - Inherit from parent folder
  - Propagate to all subfolders and files.

**Control List**

Specify Privileged Accounts

Unselected	Inherited List	Privileged
Guest a jasper jasper1		FC - Admin FC - Admins* MO - Everyone*

Read/Write (RW) | Read/Write (RW)

\* indicates group

# Management

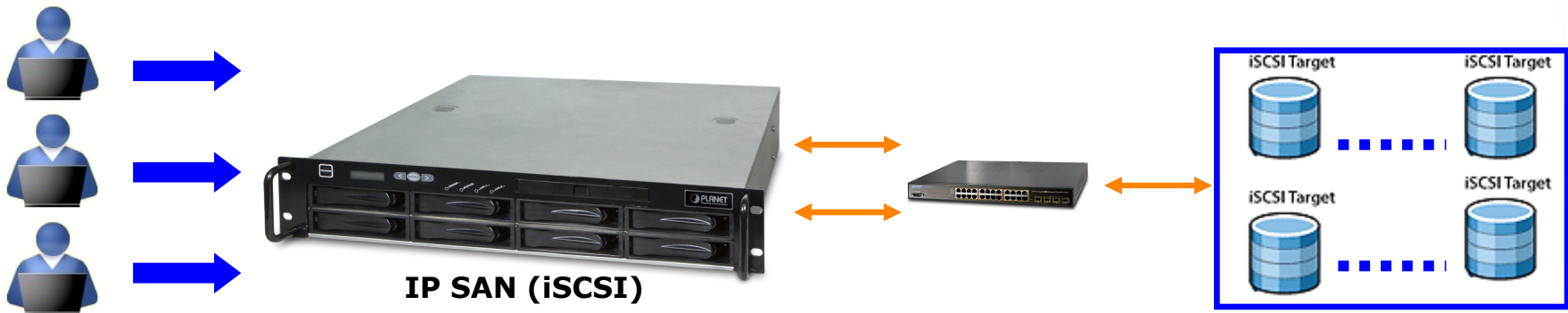
## ◆ Web Configure – iSCSI

- ◆ iSCSI is used to facilitate data transfers over intranets and to manage storage over long distances. iSCSI can be used to transmit data over local area networks (LANs), wide area networks (WANs), or the Internet and can enable location-independent data storage and retrieval.

The screenshot shows the PLANET Advanced Network Storage web interface. The top navigation bar includes 'Server | Network | Volume | Security | Backup | Virus Scan | Event | Status | Information | Create | Delete | Expand | Migrate | Scan | **iSCSI** | ?'. The 'iSCSI' menu item is highlighted with a red box. Below the navigation bar, there is a 'Refresh' button and a section titled 'iSCSI Target List'. This section contains a table with the following data:

iSCSI Qualified Name	Capacity	Comment	Status	Action
NASD8FFA811	1234MB		Ready	

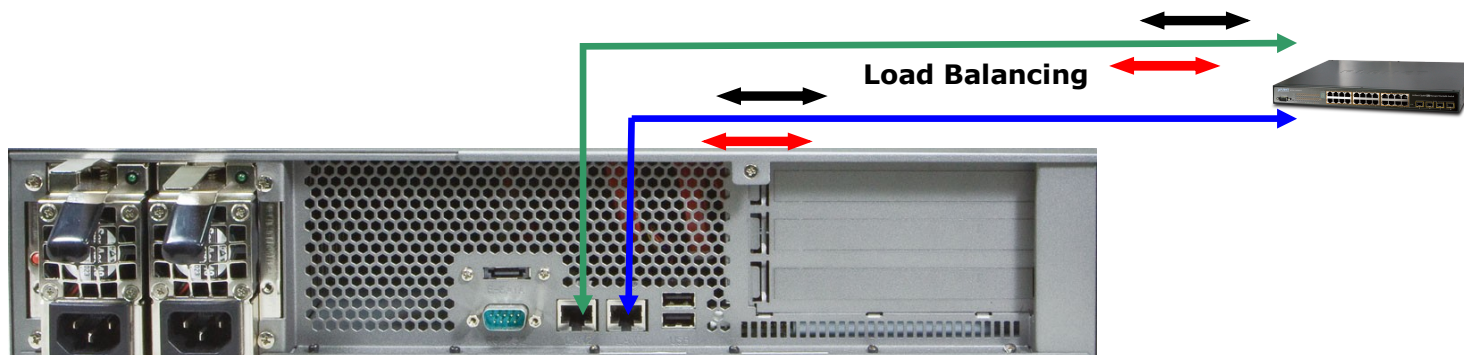
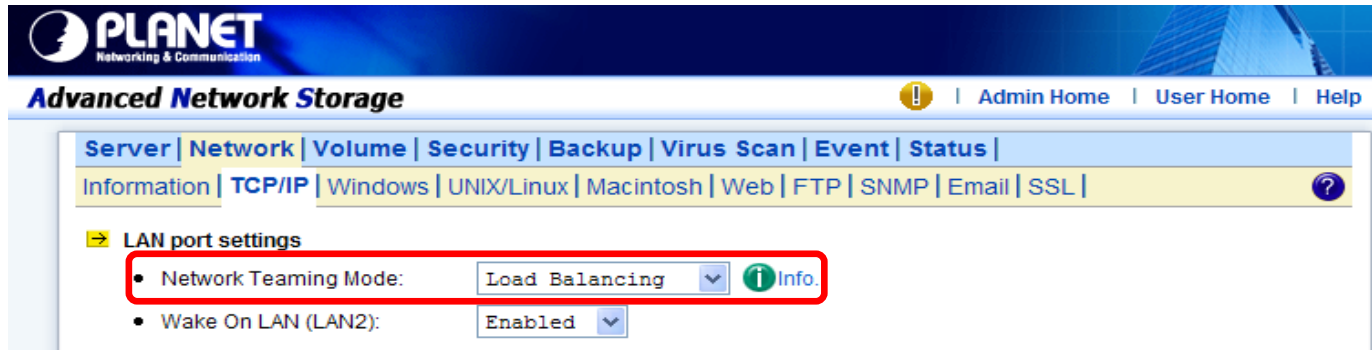
Below the table is an 'Add' button.



# Management

## ◆ Web Configure - Load Balancing

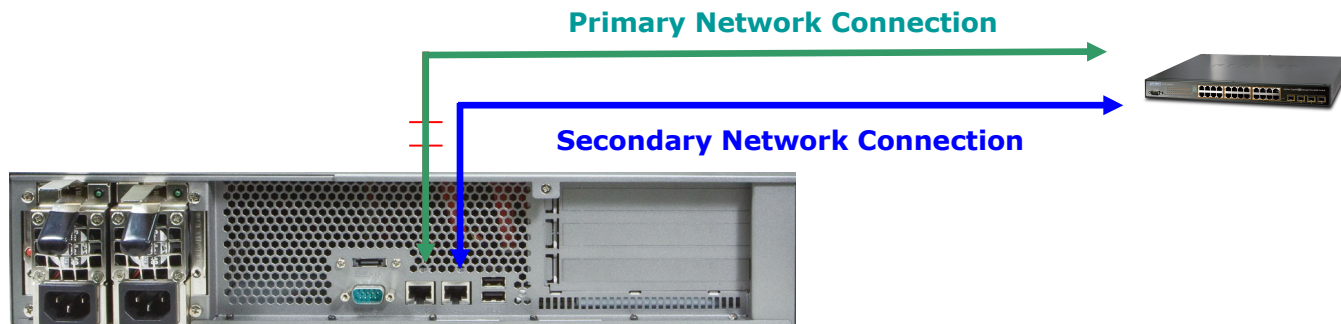
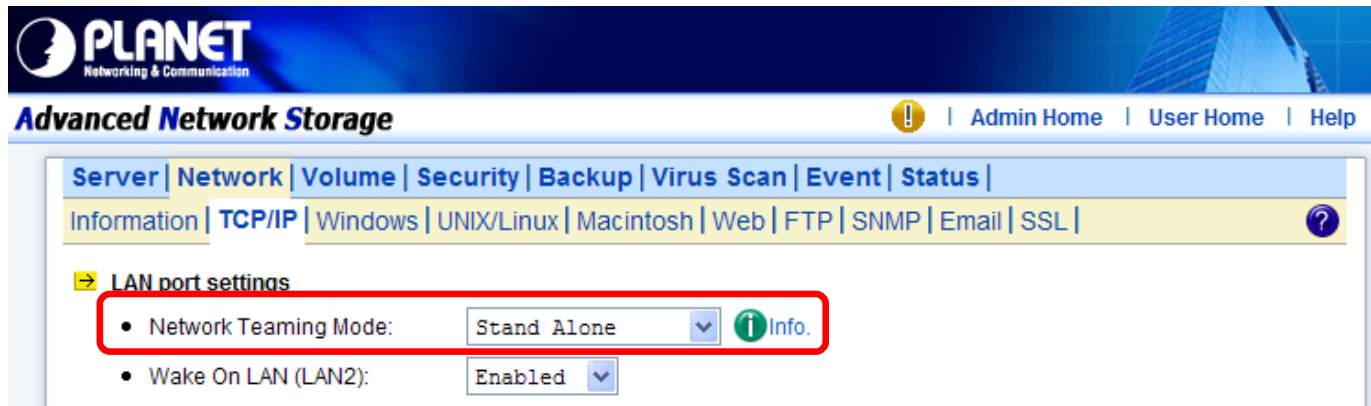
The two LAN ports of the NAS can be configured as load balancing mode for bandwidth aggregation to boost the file transfer speed.



# Management

## ◆ Web Configure – Failover

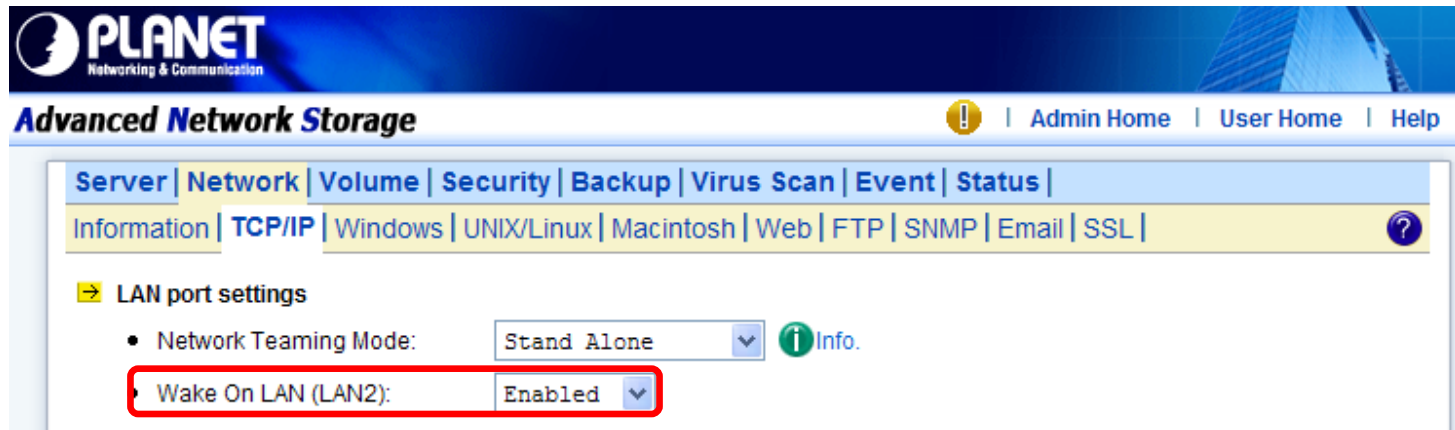
The dual LAN ports can be configured as failover which allows the NAS server to sustain the failure of one network port to provide continuous services.



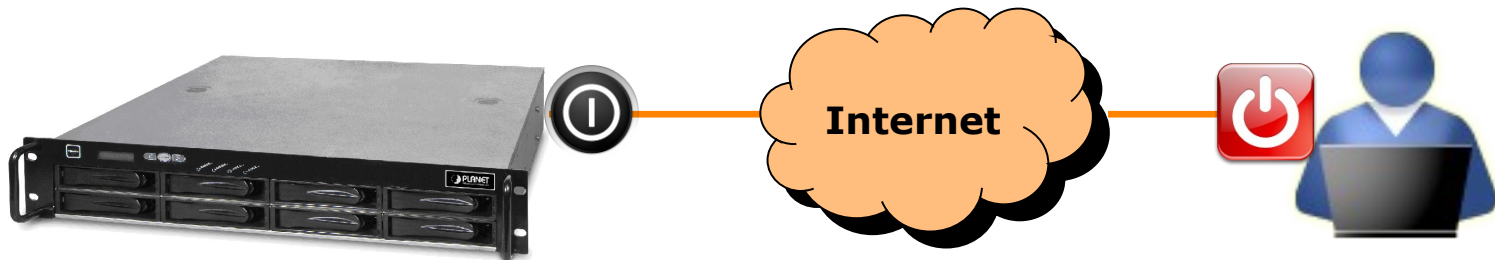
# Management

## ◆ Web Configure – Wake on LAN

Enable this option to power on the NAS remotely by Wake on LAN. Wake on LAN helps you manage your NAS conveniently.



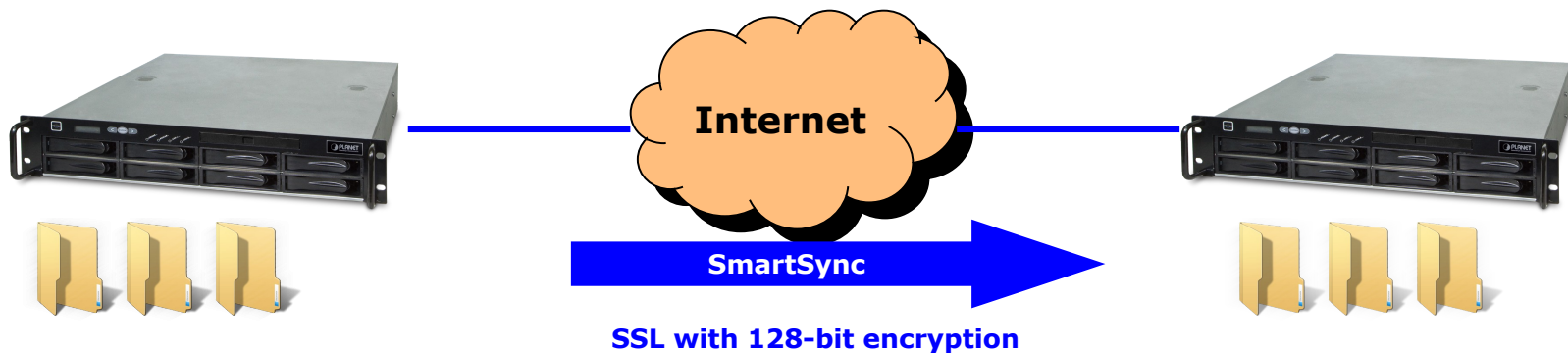
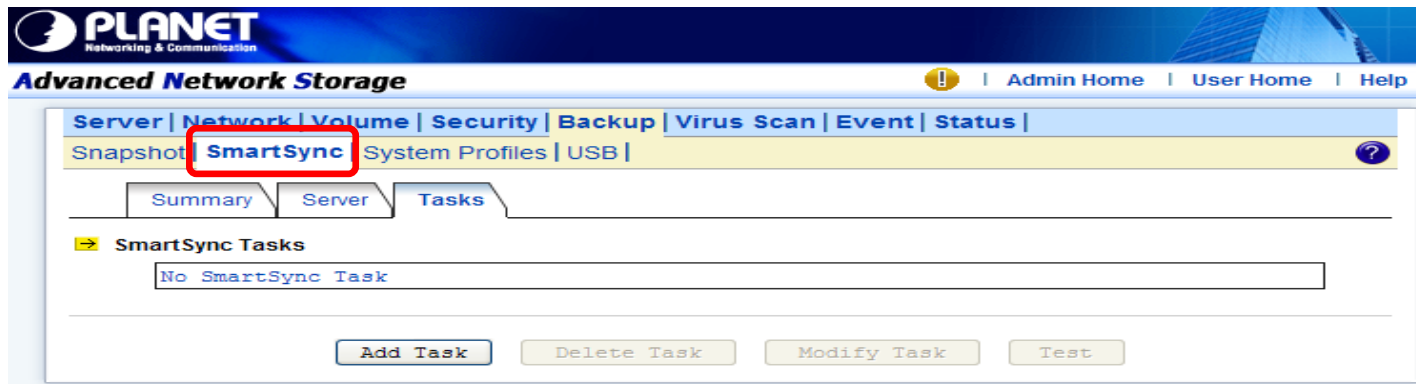
The screenshot shows the PLANET Advanced Network Storage web interface. The top navigation bar includes the PLANET logo and the text "Advanced Network Storage". Below the navigation bar, there are several tabs: Server, Network, Volume, Security, Backup, Virus Scan, Event, Status, Information, TCP/IP, Windows, UNIX/Linux, Macintosh, Web, FTP, SNMP, Email, and SSL. The "LAN port settings" section is expanded, showing two options: "Network Teaming Mode" set to "Stand Alone" and "Wake On LAN (LAN2)" set to "Enabled". The "Wake On LAN (LAN2)" option is highlighted with a red box.



# Management

- ◆ **Web Configure – SmartSync**

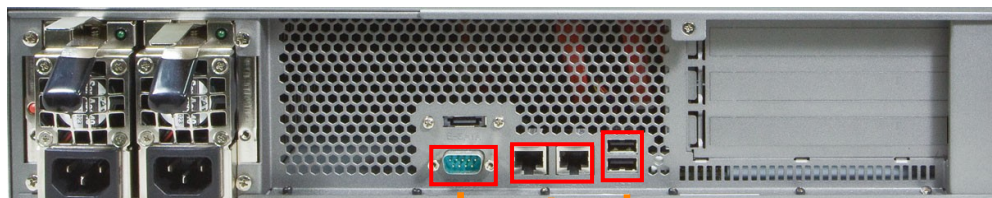
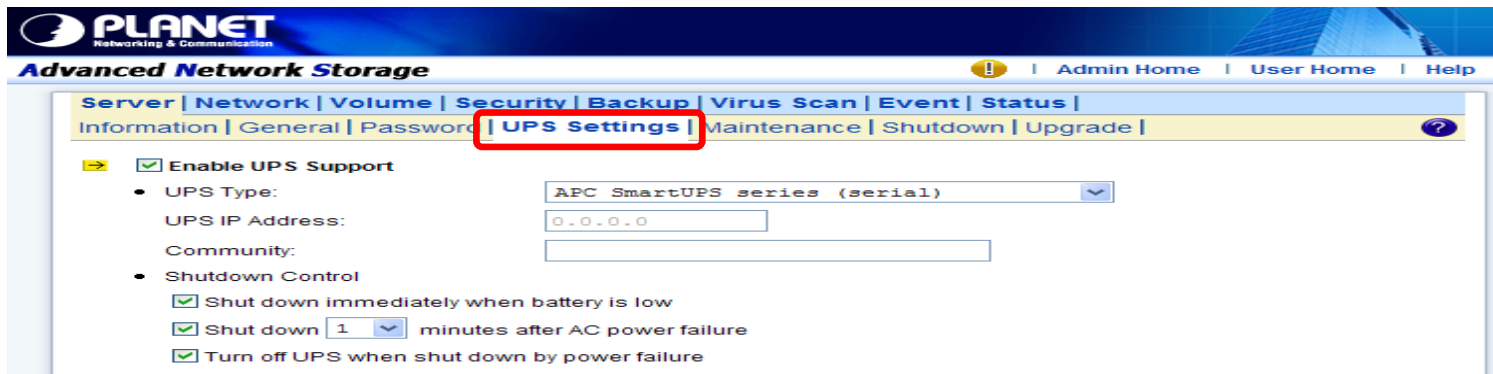
The NAS server is integrated with the SmartSync function for NAS-to-NAS data replication.



# Management

## ◆ Web Configure –UPS Settings

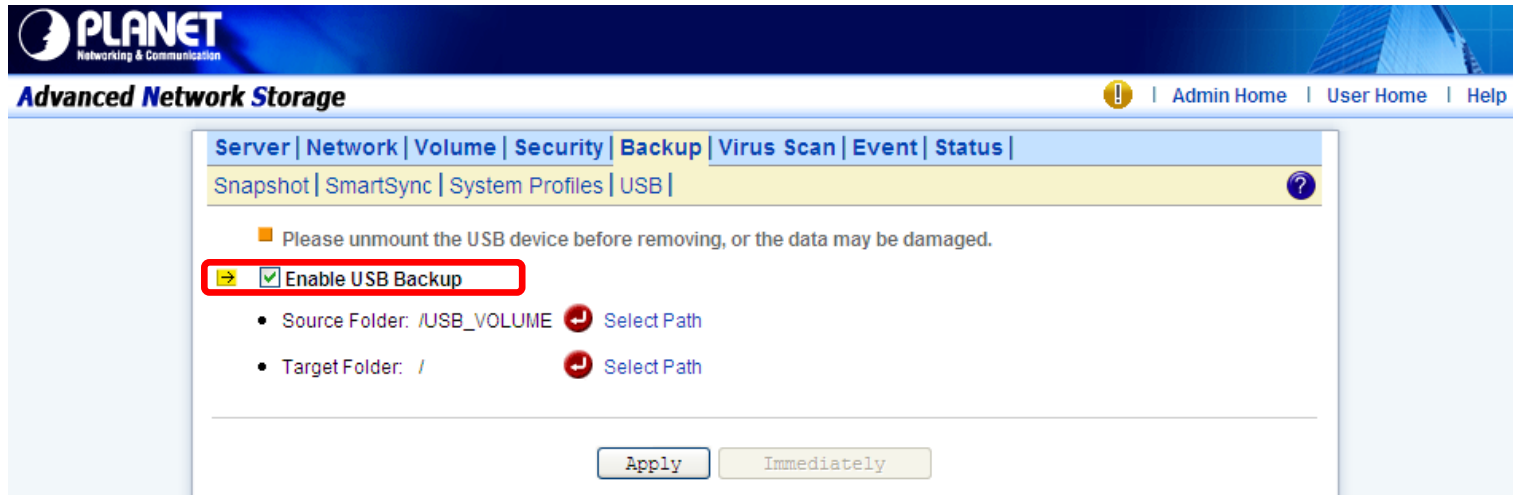
The NAS supports the majority of USB UPS devices which enables the users to store the data in time and avoid critical data loss when power outage occurs during data transfer.



# Management

## ◆ Web Configure – USB Backup

NAS server supports USB pen drive and external hard disk backup in optional models with USB ports.

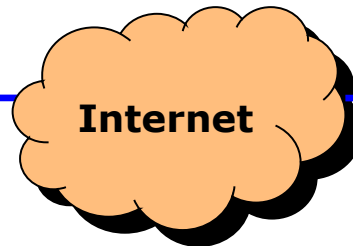
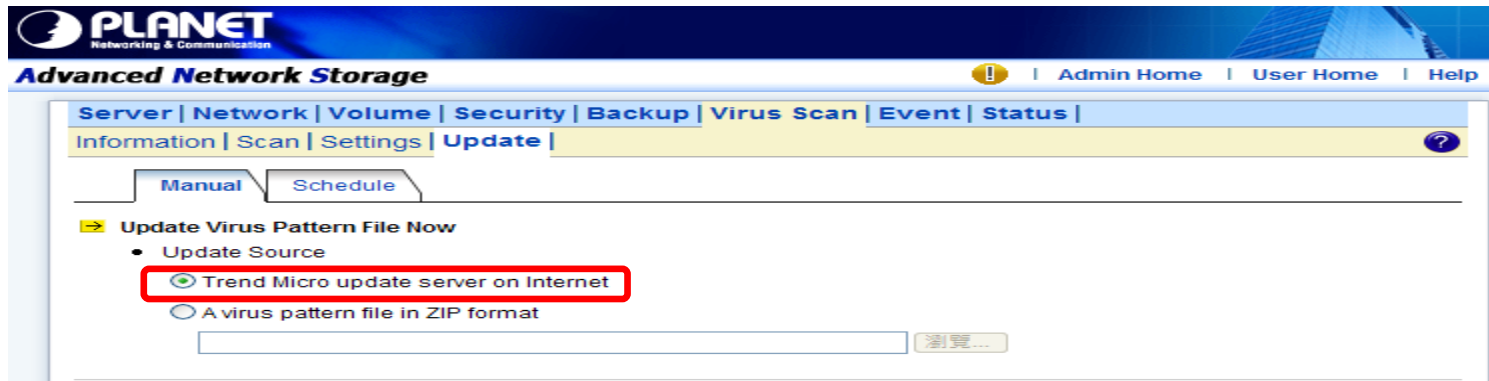


USB HDD

# Management

## ◆ Web Configure – Virus Update

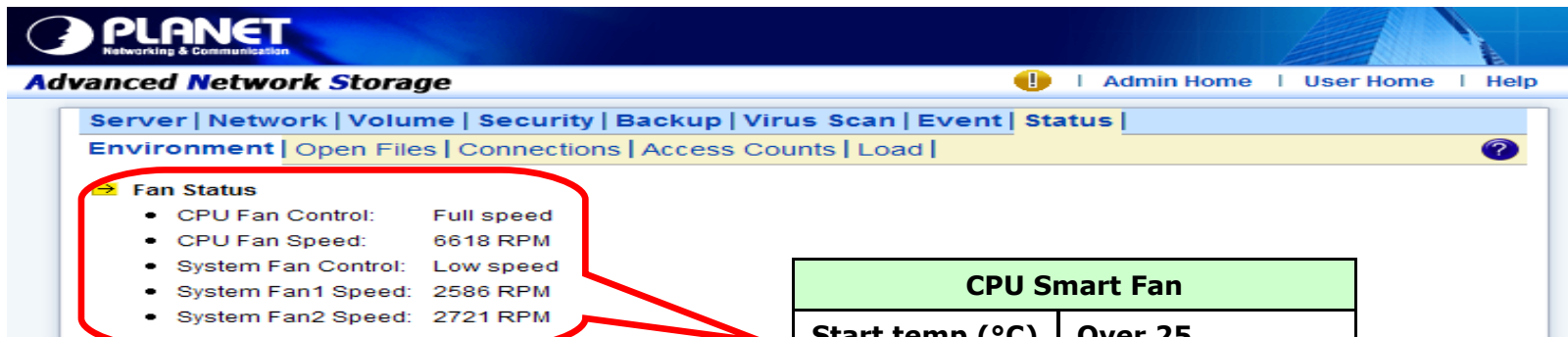
The integrated Trend Micro antivirus software in NAS server is the best-of-breed security product that delivers the reliable antivirus protection to prevent virus from spreading before they get to you.



# Management

## ◆ Web Configure –Fan Status

The fan rotation speed is automatically adjusted according to the server's temperature. You can also define the system temperatures to trigger high speed or low speed rotation of the fan. By manually setting the fan rotation speed, the fan will rotate at the defined speed continuously.



**PLANET** Networking & Communication  
**Advanced Network Storage** | Admin Home | User Home | Help

Server | Network | Volume | Security | Backup | Virus Scan | Event | Status | Environment | Open Files | Connections | Access Counts | Load

⇒ **Fan Status**

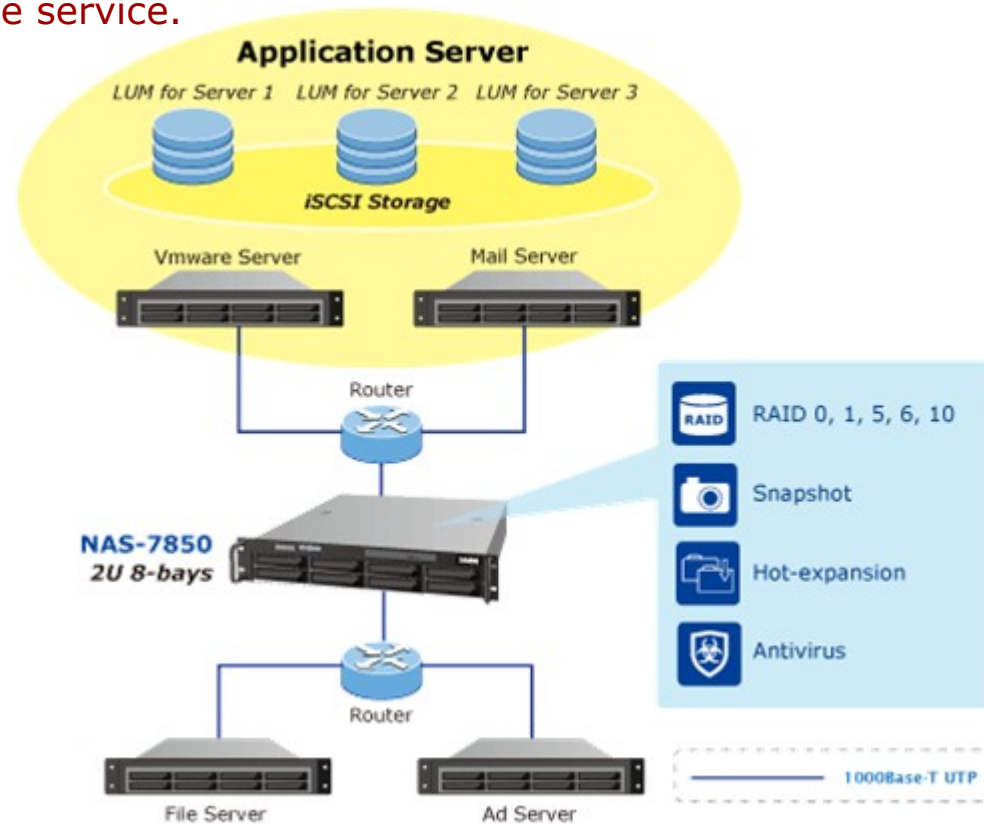
- CPU Fan Control: Full speed
- CPU Fan Speed: 6618 RPM
- System Fan Control: Low speed
- System Fan1 Speed: 2586 RPM
- System Fan2 Speed: 2721 RPM

CPU Smart Fan	
Start temp (°C)	Over 25
Stop temp (°C)	Down 20
System Smart Fan	
Over 45 (°C)	Full speed
Down 45 (°C)	Half speed



# Application

## ◆ The reliable and high-performance Business-class network storage

The NAS-7850 provides connectivity to your existing network without requiring extra client access licenses fees, upgrading or replacing servers. It can be applied to a mixed platform network and offer fault-tolerant, high-performance and high-availability storage service.



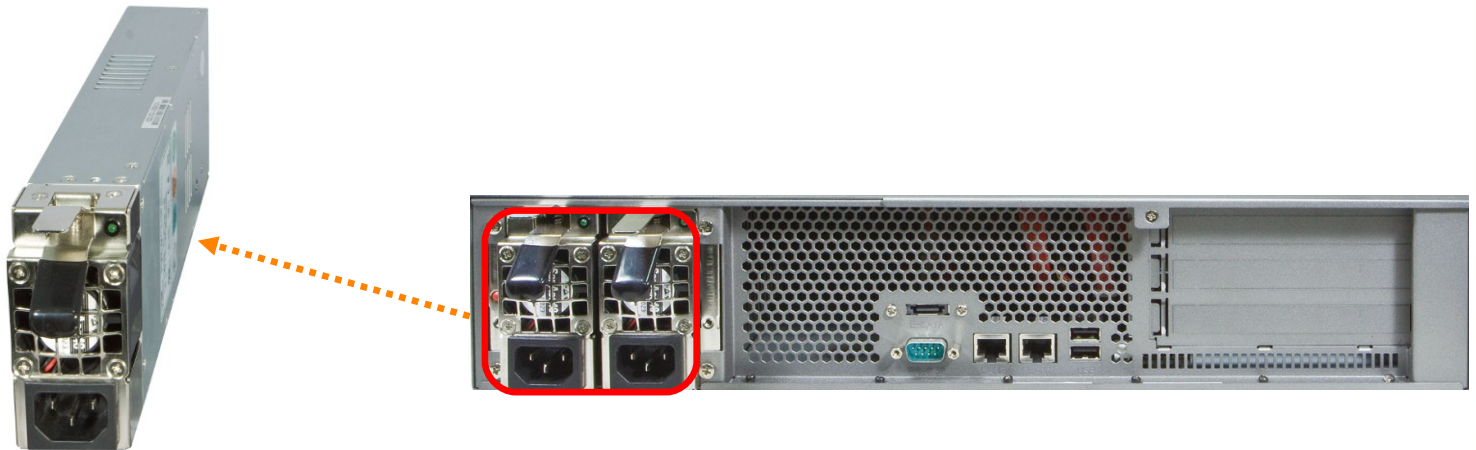
# Comparison

Model Name	PLANET NAS-7850	QNAP TS-809U-RP
		
CPU	Intel Core 2Duo 2.2GHz	Intel Core 2 Duo 2.8 GHz
Flash	1GB	128MB
RAM	2GB	2GB
Power Supply Specification	350W	300W
LCD Display	Yes	Yes
Hot-swappable	Yes	Yes
eSATA	<b>Yes</b>	-
NFS, SMB/CIFS, AFP	Yes	Yes
RAID	RAID 0, 1, 5, 6, 10 and	RAID 0, 1, 5, 10 and JBOD
iSCSI Target Service	Yes	Yes
Wake On LAN	Yes	Yes
Anti-Virus	<b>Yes</b>	-
Max User Accounts	<b>20480</b>	4096
Max Groups	<b>20480</b>	512
Max Shared Folder	<b>512</b>	512
Concurrent Connections	<b>400</b>	256
SMB* (MB/sec)	Read: <b>125.7</b>	Read: 114.9
	Write: <b>104.86</b>	Write: 103.1
FTP* (MB/sec)	Read: <b>127.6</b>	Read: 113.7
	Write: <b>106.54</b>	Write: 100.2

# Accessories

## ◆ **NAS-78RPS**

The NAS-7850 is equipped with two power supply units, each of which is capable of supplying the power for the entire NAS independently. If one of the units fails, the other one will take over to supply the power to ensure continuous operation of the NAS. You can replace the failed power supply unit without turning off the server.



**AC INPUT:100~240V 50-60Hz 5-8A**  
**DC OUTPUT:350W(MAX)**

# Appendix Sales Target

## ◆ Target Markets

- ✓ Enterprise
- ✓ SMB Office
- ✓ System Integrator

## ◆ Target Customers

- ✓ Who buys NAS
  - NAS-7102
  - NAS-7201
  - NAS-7400



# ACTIVATING IP POWER