

QNAP Professional 4-Bay, 1U Rackmount Turbo NAS

Redundant power supply for enhanced reliability
Supports 2.5" and 3.5" Hard Drives for more flexibility



Model List

TS-439U-RP:

2 power supply units included

TS-439U-SP:

1 power supply unit included

(Redundant power supply unit is also available as an optional purchase)

TS-439U Series



July, 2009

<http://www.qnap.com>

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About QNAP

- QNAP, with more than 8 years experience in embedded systems, is devoted to be world's leading company in IA (Internet Appliance) field.
- Successful experience in developing innovative IA products.
 - Most Advanced Digital Surveillance Systems (Digital Video Recorder, Network Video Recorder)
 - Best synergy in storage and surveillance
 - Most Extensive Networking Storage (RAID, NAS)



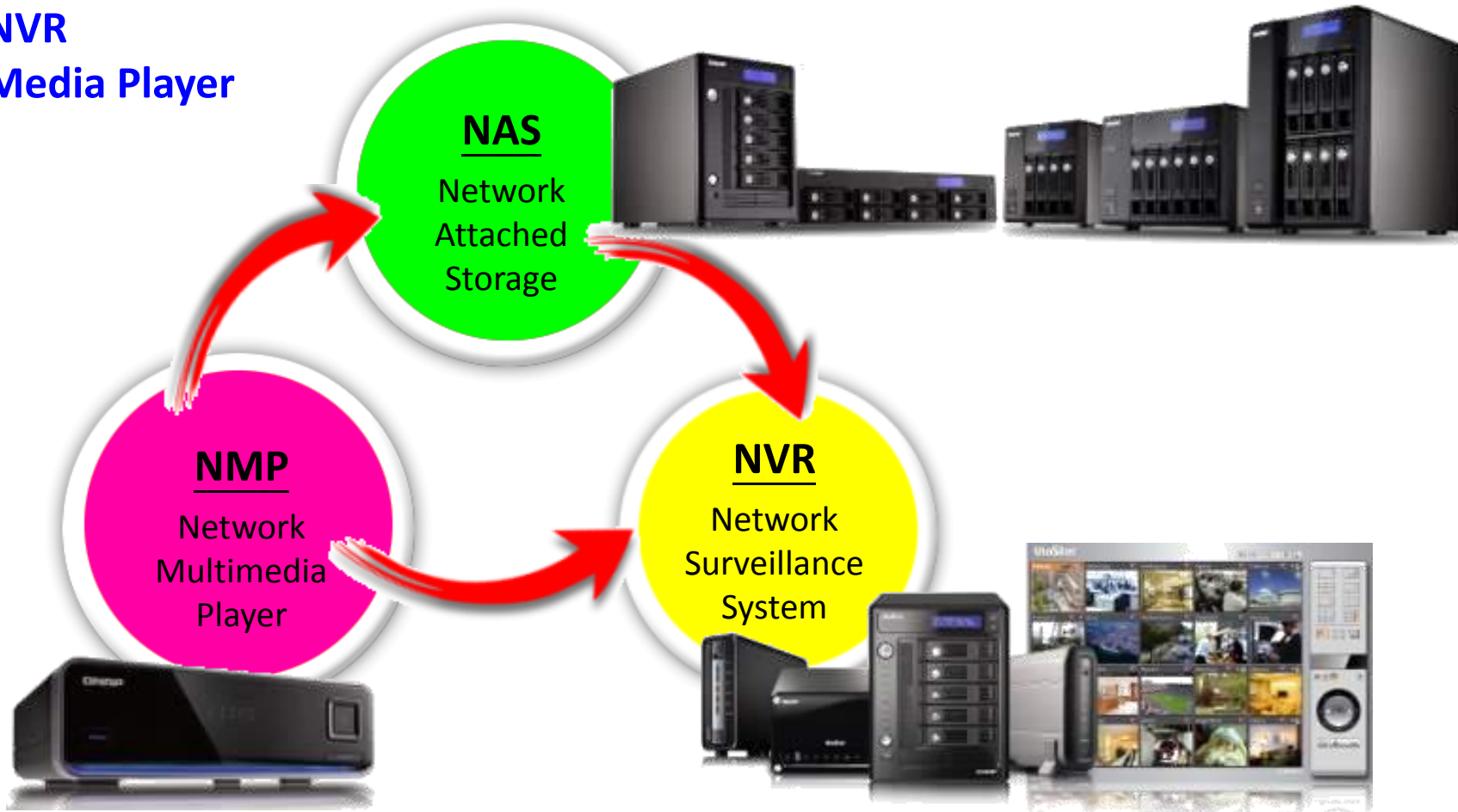
Awards



QNAP Core Technology

QNAP is one of the few NAS suppliers who owns three core technology ---

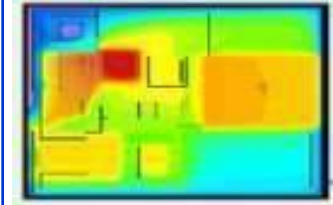
- ✓ NAS
- ✓ NVR
- ✓ Media Player



Core Competence

The Top-notch R&D Team in the Industry!!!

- **Software Team (over 32 engineers)**
 - Pioneer in embedded Linux technology
 - High performance and high reliability server & video technology
 - Extensive experience in RISC I/O processor
 - Experts in TCP/IP offload engine technology
 - Most complete self-developed management software
 - Advanced network distributed management technology
- **Hardware Team (over 12 engineers)**
 - Top notch E/E and ME design engineer team
 - Partner with major chipset vendors: Intel/VIA/Freescale/Marvell/Silicon Image
 - ID/ME/Thermal in house design & simulation capability



Quality, Reliability and Compatibility are the Key Factors for the Success of QNAP and Our Partners

- **Hardware Test:**
 - Rigid stress test, reliability/stability test
 - Performance test, function test
 - Compatibility test
 - EMI test
- **Software Test:**
 - Full function test
 - Compatibility test
 - Real environment 32 clients NetBench test
- **Most Stringent Quality Controlled Manufacturing**
 - SMT/DIP Facility/Assembly Facility
 - Well setup IQC/IPQC/OQC system

32 Clients
Simulation



Chamber



EMI Lab



QNAP Product Line Overview

1. Turbo NAS Series (Network Attached Storage)

Home & SOHO NAS

-All-in-1 Home & SOHO NAS Series



TS-109/119



TS-209/219



TS-409

Intel-based iSCSI NAS for SMB & Enterprise Entry

-High Performance NAS with iSCSI



TS-239 Pro



TS-439 Pro



TS-509 Pro



TS-639 Pro



TS-809 Pro



TS-439U series



TS-809U-RP

2. QNAP NVR Series (Network Video Recorder)

Home NVR

NVR-104
NVR-101
(4-CH)



SOHO/ SMB NVR:

- 8-CH~12CH NVR



VS-101



VS-201



VS-2008/ 2012

Enterprise NVR:

- 16~40 CH NVR



VS-4016U



VS-5012/ 5020



VS-8024/32/40 Series

3. QNAP NMP Series (Network Multimedia Player)

Home NMP

NMP-1000



Why QNAP ?

1. **Outstanding quality**
2. **Leading hardware performance**
3. The most **powerful software functionality** for different application segments including corporate, SMB, and home users
4. The **largest online forum community** for multiple languages: English, German, French, Italian, and Polish
5. **Green technology** with **low power consumption** and **low noise level**

Recognition from Media around the World -1



QNAP TS-809 Pro is powered by **Intel 2.8GHz CPU** and **2GB DDRII memory**, a powerful NAS system designed for business users.

- Dual Gigabit LAN ports
- LCD panel
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Schedule Power on/off

Recognition from Media around the World -2



QNAP TS-439 Pro & TS-639 Pro are powered by **Intel 1.6GHz CPU** and **1GB DDR2 memory**, a powerful NAS system designed for business users.

- Dual Gigabit LAN ports
- LCD panel
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Schedule Power on/off

Recognition from Media around the World -3



QNAP TS-509 Pro is powered by **Intel 1.6GHz CPU** and **1GB DDRII memory**, a powerful NAS system designed for business users.

- Dual Gigabit LAN ports
- LCD panel
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Schedule Power on/off



Recognition from Media around the World -4



Powerful **500MHz** CPU

256MB DDRII
Memory



QNAP TS-409 Series is the **4-bay hot-swappable NAS** with Online RAID Capacity Expansion, Online RAID Migration & **RAID 6** Support

- 4-bay Hot-swappable
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration



Recognition from Media around the World -5



Qnap TS-209 Series is the first **2-bay SOHO NAS** with **hot-swap design** for SOHO and home.

- RAID 0/1/JBOD and Single Disk
- All-in-one NAS Server
- Secure data access and sharing
- Home multimedia features



Recognition from Media around the World -6



QNAP TS-109 Series is the powerful 1-bay NAS with **unique fanless, absolutely quiet design** for SOHO and home.

- Unique fanless design
- Q-RAID 1 mirroring
- All-in-one NAS Server
- Secure data access and sharing
- Home multimedia features
- PHP MySQL supported



QNAP NAS Market Positioning

QNAP NAS Servers are Positioned at High End Market Segmentation. It is a Powerful and Professional All-in-1 NAS Server for Corporate, Mid-sized Business, SOHO, Educational Market and Home Users!!!

1. File Server
2. FTP Server
3. Backup Server
4. Web Server
5. MySQL Server
6. Remote Replication
7. Mirror Station
8. Printer Server
9. Media Server
10. Multimedia Station
11. Download Station
12. iTunes Server



- TS-119
- 1-bay, Fanless NAS Server
- Unique Q-RAID 1



- TS-219/219P
- 2-bay, hot-swappable NAS
- RAID 1 Mirroring



- *TS-439/509/ 639 Pro, TS-439U series and TS-809U-RP*
- Online RAID Capacity Expansion
- Online RAID Level Migration
- RAID 0, 1, 5, 5 + hot spare, 6, JBOD
- Virtual Disk
- RAID Recovery



Other Storage Products in the Market



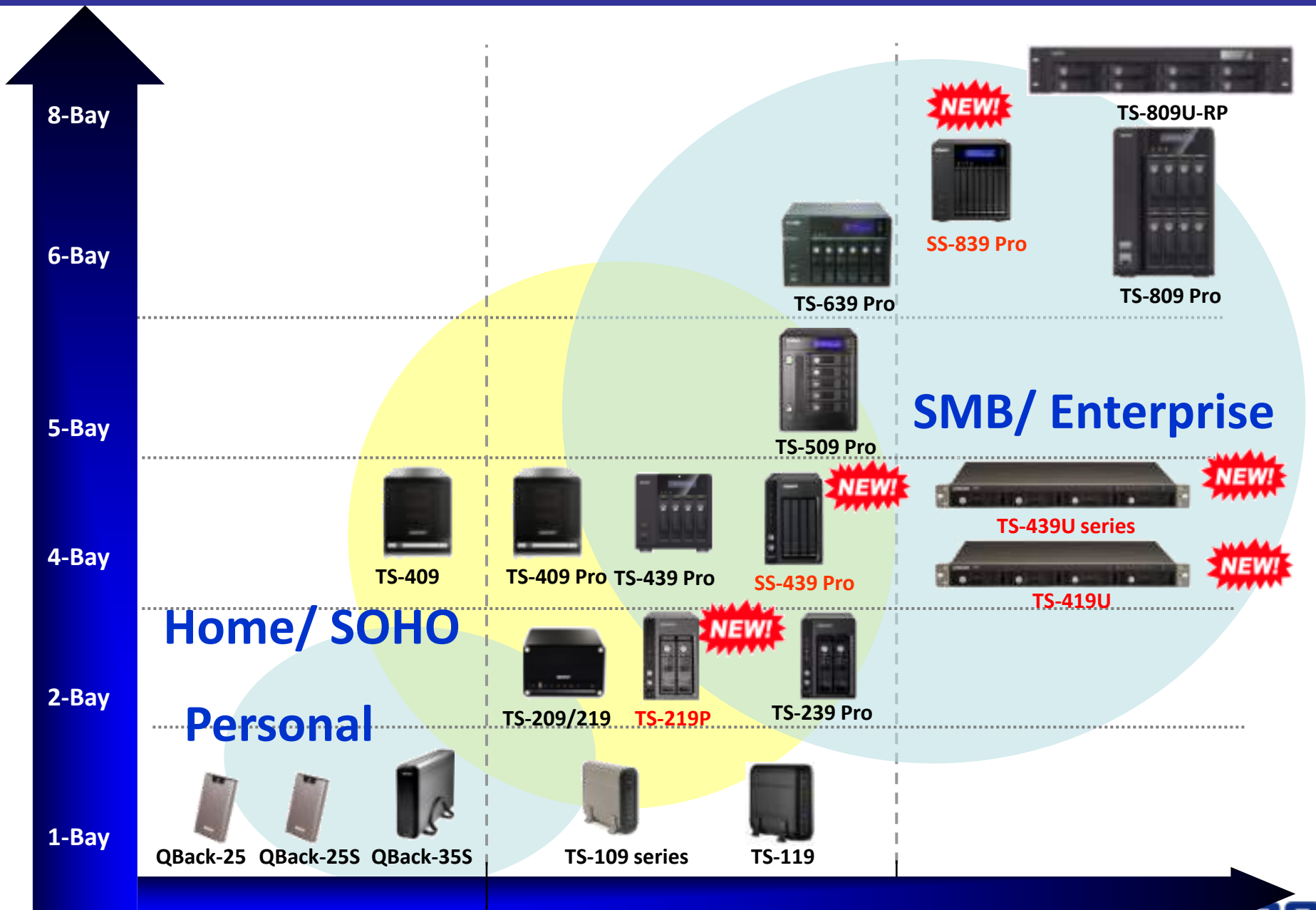
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QNAP All-in-1 Turbo NAS

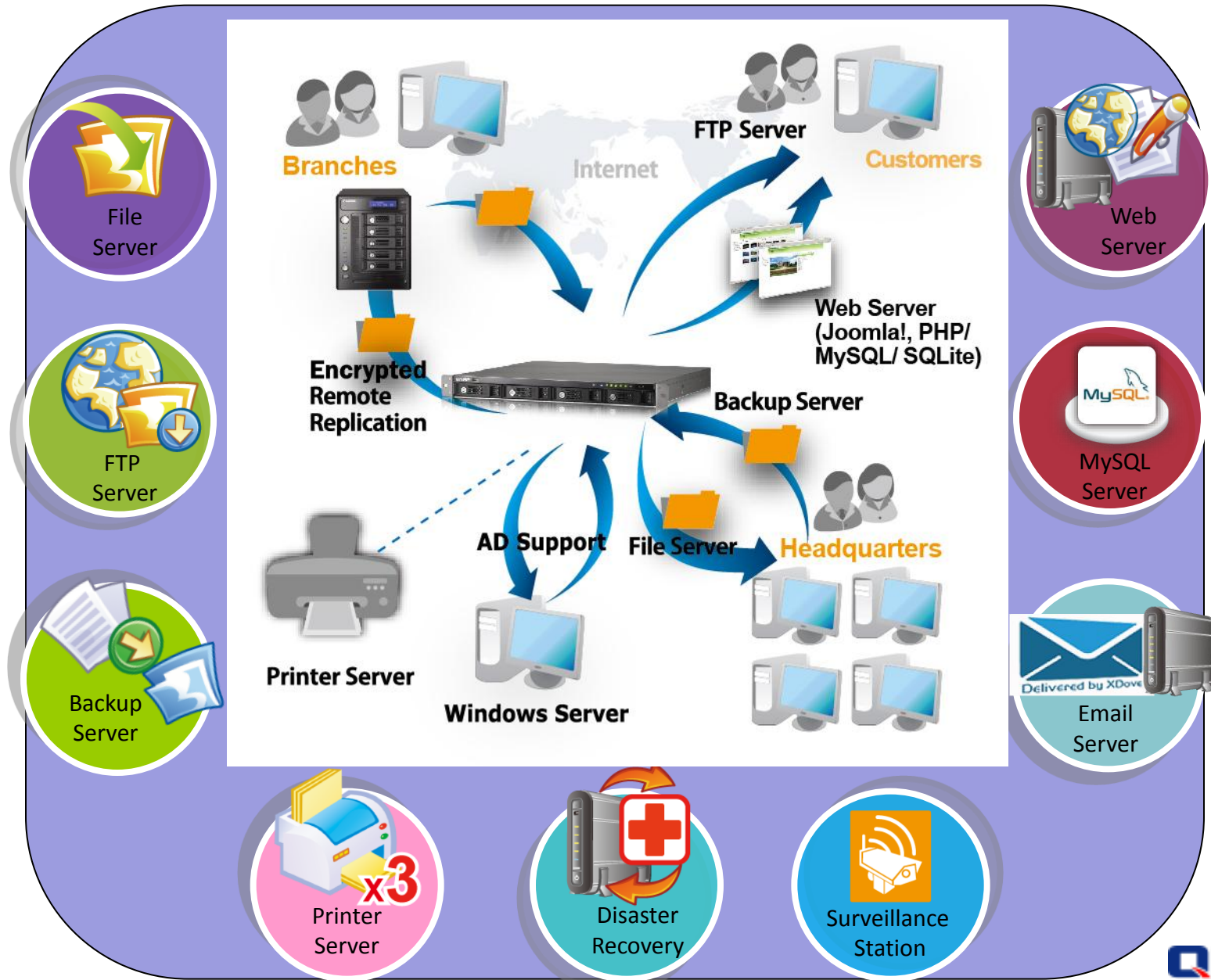


 Environment Friendly
 Quiet Power-saving

New Products in NAS Product Lines



All-in-1 NAS Applications for Enterprise/SMB



Overview: TS-439U Series



- The TS-439U series is an ideal & powerful network storage solution designed for SMB Users.
- Powered by **Intel Atom 1.6 GHz CPU** and **1GB DDRII memory**
- **Redundant Power Supply** (*TS-439U-RP only)
- **2.5" and 3.5" HDD dual support**
- **Dual Gigabit LAN**



Excellent Hardware Design: TS-439U series -1

- 3 x USB 2.0 port supported for high expandability!
- Configurable One Touch Copy Button offers more backup convenience
- LED indicators display status of USB, HDD, LAN and system
- Redundant power supply prevents the NAS from downtime (*TS-439U-RP only)
- Dual Gigabit LAN: Failover, Load-balancing, Multi-IP setting

Model List

TS-439U-RP:

2 power supply units included

TS-439U-SP:

1 power supply unit included

(Redundant power supply unit is also available as an optional purchase)



Excellent Hardware Design: TS-439U series -2

Redundant Power Supply for Reliability Upgrade

The TS-439U series can be equipped with **2 power supply units**, each of which is capable of supplying the power for the NAS independently. If one of the units fails, the other one will take over to supply the power. You can replace the failed power supply unit **without turning off the server**.



Best Price Performance Ratio 1U NAS

Hardware



- Powerful hardware spec

Intel Atom 1.6GHz CPU + 1GB DDRII RAM



- Rack mount design for easy deployment in the server room
- Redundant power supply for higher reliability
- 2.5" and 3.5" HDD dual support for more flexibility
- Dual Gigabit LAN (802.3ad) for MIS people to deploy the network easily (supports 7 bonding modes)
 - Failover
 - Load-balancing
 - Multiple IP setting
- USB port for high expandability
- Hot-swap HDD design for users to manage disks easily

Best Price Performance Ratio 1U NAS

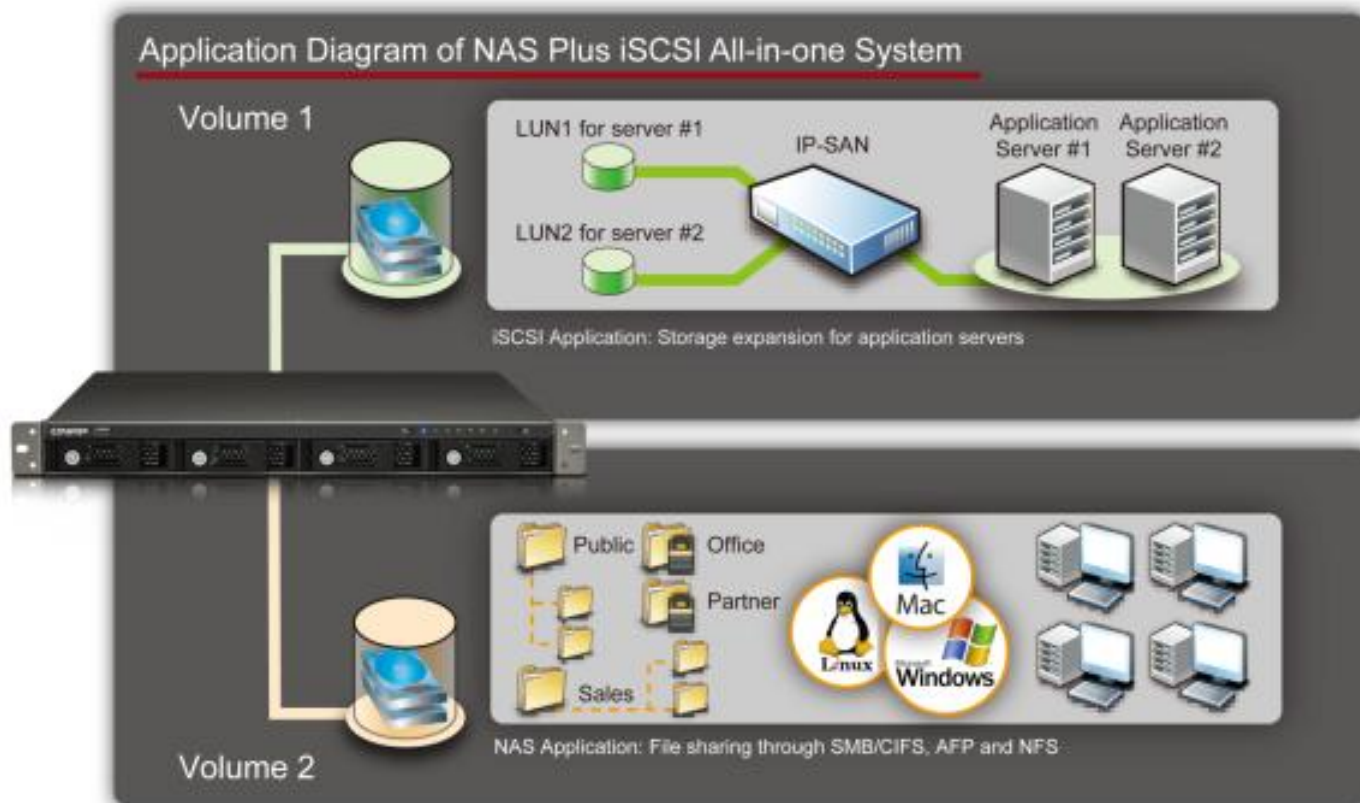
Software



- Built-in iSCSI target service with thin provisioning for flexible storage expansion of the existing application servers
- Virtual disk drive (VDD) for capacity expansion of the NAS
- Advanced disk volume management: online RAID capacity expansion & online RAID level migration
- AES 256-bit volume-based encryption keeps data in a safer way
- RAID Recovery provides reliable data protection
- Easy management tools for IT administration: Wake on LAN (WOL), comprehensive system logs, scheduled power on/ off and instant SMS alert
- SNMP offers centralized management and real-time monitoring of the NAS status
- DOM architecture with embedded fail-safe dual OS

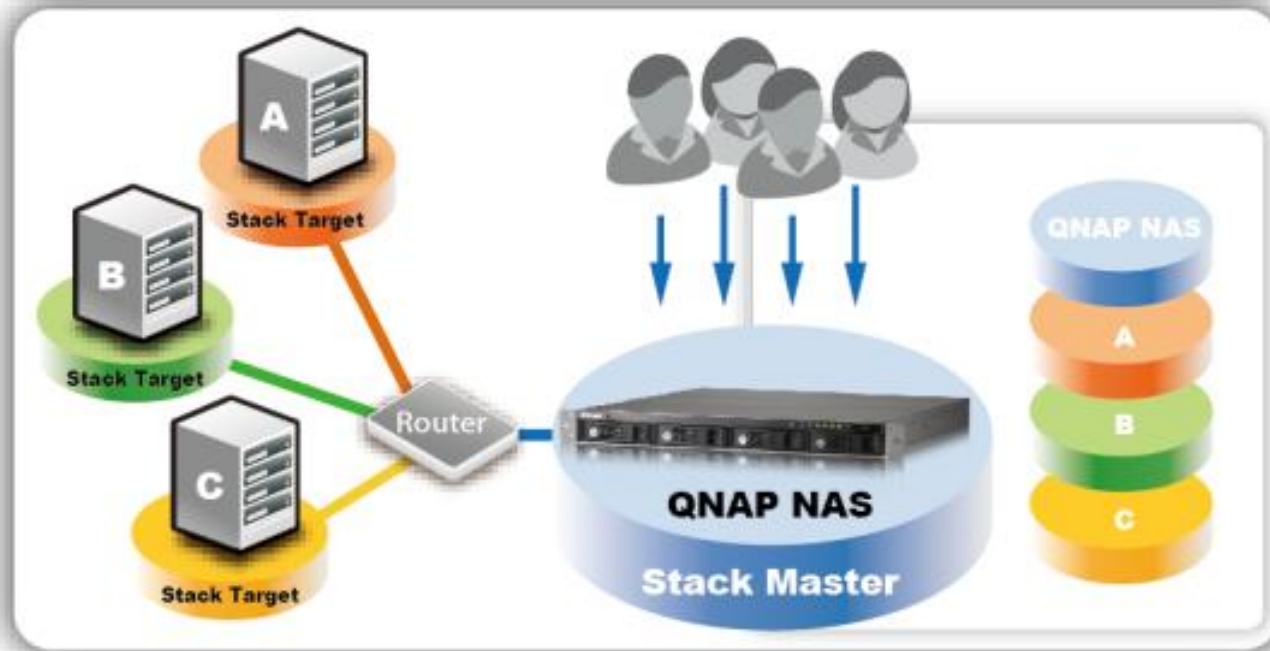
Flexible Built-in iSCSI Target Service

- With the built-in iSCSI target feature, the NAS can be an ideal solution for backup or storage expansion. Small business and SOHO users can easily **create dedicated virtual drives (up to 8 iSCSI target LUN)** on the NAS for their PCs or existing servers. The iSCSI drives on the NAS can be formatted as file system and used as local drives.



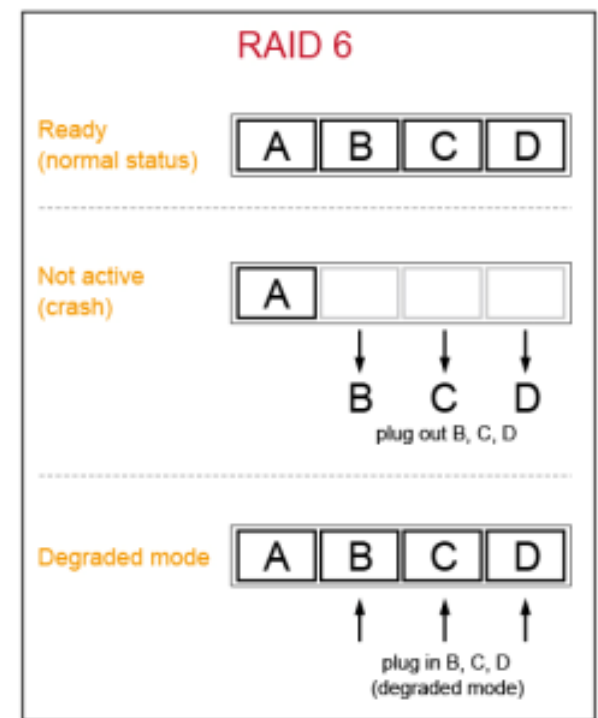
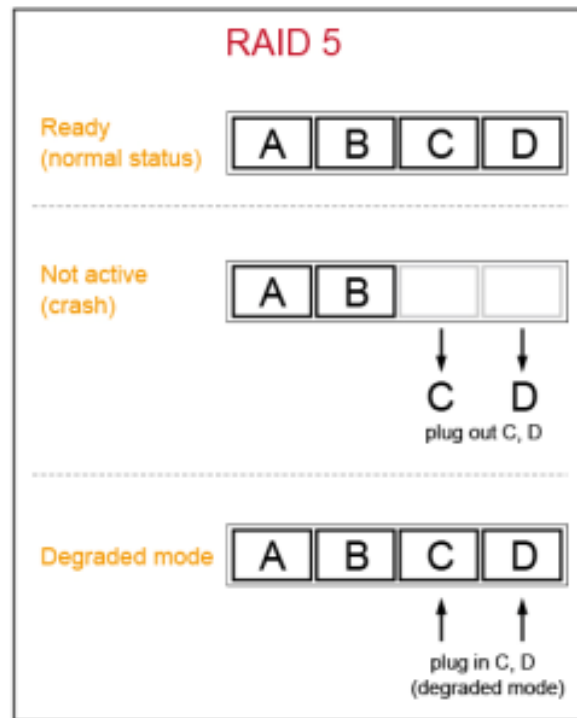
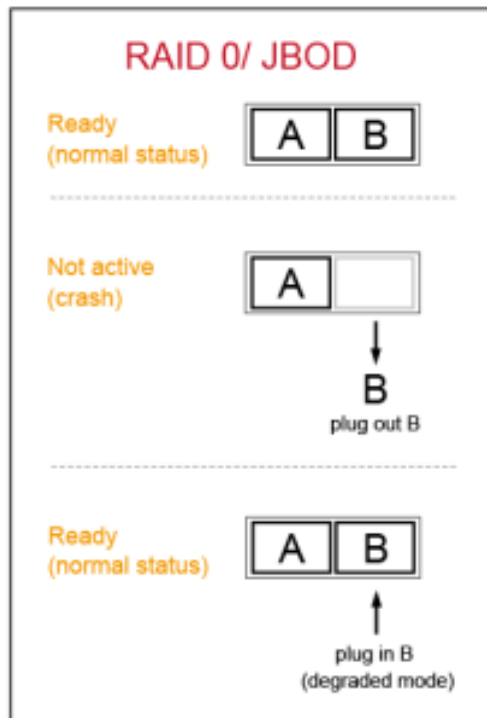
Virtual Disk Expansion

- The VDD (Virtual Disk Drive) feature is supported on the TS-439U-RP that you can use the built-in iSCSI initiator to connect to other iSCSI targets on the network to expand the storage capacity of the NAS.



RAID Recovery

- RAID Recovery is the QNAP exclusive technology. It can recover failed RAID 5 and 6 to the degraded mode and failed RAID 0 and JBOD to the normal state.



Power Management

- Enable redundant power supply (*This function is disabled by default.)

If you have two power supply units installed on the Turbo NAS, you can enable **redundant power supply mode**. When this function is enabled, the system will start to record error messages about the power supply units in “System Logs”.



Hardware

Hardware

- Enable configuration reset switch
- Enable hard disk standby mode (if no access within Status LED will be off)
- Enable light signal alert when the free size of disk is less than the value: MB
- Enable alarm buzzer (beep sound for error and warning alert)
- Enable Redundant Power Supply Mode

Type	Date	Time	Users	Source IP	Computer name	Content
⊖	2009-07-24	15:15:46	System	127.0.0.1	localhost	First power supply failed or removed.

AES 256-bit Volume-based Encryption-1

If the hard disks or NAS machines are stolen, the stored sensitive data might be leaked !!!

On Turbo NAS, the **AES 256-bit Volume-based Encryption** feature allows server managers to encrypt each storage volume. **It can prevent the sensitive data loss caused by thief.** All the data is encrypted by AES 256-bit, malicious persons can only find scramble code on the encrypted hard disks.

Application: bank, government, medical data, financial information, private photos, etc.



AES 256-bit Volume-based Encryption -2

Server managers can choose different levels of security.

A. High security (manually unlock the volume)



Manual unlock:

Server manager log in to management page to input password or import key file to unlock the volume when the system boot up

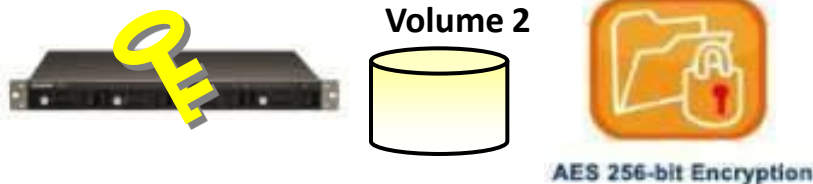


Encryption Key #1

Server manager keep the encryption key

→ If the machine or hard disks are stolen, all the data cannot be accessed without encryption key

B. Mid security (automatically unlock the volume)



Auto Unlock:

The Encryption Key can be saved on the NAS system that the volume can be unlocked and mounted to the system automatically.

Encryption Key #2

The encryption key is saved on the NAS

→ If the hard disks are stolen, the data cannot be accessed.
→ Cannot fully prevent the risk of machine be stolen but it is more convenient

Policy-based Automatic IP Blocking- 1

To prevent the NAS from malicious attacks, the server manager can create an IP filter policy to **allow, deny, or auto-blocking the IP address or network domain** which attempts to connect to the NAS via SSH/ Telnet/HTTP(S)/ FTP/ samba/AFP.

Security



SECURITY LEVEL

NETWORK ACCESS PROTECTION

IMPORT SSL SECURE CERTIFICATE

Security Level

- High: Allow connections from the list only
- Medium: Deny connections from the list
- Low: Allow all connections

Enter the IP address or network from which the connections to this server will be allowed or rejected.



Genre	IP address or network domain	Time left for IP blocking
-------	------------------------------	---------------------------

Enter the IP address or network domain

- Single IP address
- Specify IP addresses of certain network by setting IP address and netmask
 - IP: . . .
 - Netmask: 255 . . .
- IP Range
 - Start IP: . . .
 - End IP: . . .

Create Cancel

Policy-based Automatic IP Blocking- 2

Users can control the access to the server according to the number of times an IP fails to login the server via a certain connection method. The connection type includes SSH, Telnet, HTTP(S), FTP, SAMBA, and AFP.



Security

SECURITY LEVEL

NETWORK ACCESS PROTECTION

IMPORT SSL SECURE CERTIFICATE

Network Access Protection

Enable network access protection

- SSH: In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes
- Telnet: In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes
- HTTP(S): In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes
- FTP: In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes
- SAMBA: In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes
- AFP: In 10 minutes , after unsuccessful attempts for 10 time(s) , block the IP for 5 minutes

Network Service Discovery

- **UPnP Discovery Service**

After enabling this service, your NAS can be discovered by any operating systems that support UPnP.

- **Bonjour**

Bonjour uses industry standard IP protocols to allow devices to automatically discover each other without the need to enter IP addresses or configure DNS servers, and which makes your NAS becomes more compatible with Mac OS X.

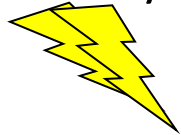


Instant SMS Alert

The instant system alerts would be sent via the SMS Service provided by the SMS Provider.



Server manager could enter **2 sets of mobile phone number** worldwide at most to receive the message and manage the system in time.



System Error!!



Notification

CONFIGURE SMTP SERVER

CONFIGURE SMSC SERVER

ALERT NOTIFICATION

Configure SMSC Server

You can configure the SMSC settings to send instant system alerts via the SMS service provided by the SMS provider.

SMS Service Provider:

Enable SSL Connection

SSL Port:

SMS Server Login Name:

SMS Server Login Password:

SMS Server API_ID:

SNMP (Simple Network Management Protocol)

Simple Network Management Protocol (SNMP) is widely used in network management systems to monitor network attached devices (e.g. NAS). You can set up SNMP trap for alerting via SNMP and there can be up to 3 SNMP trap addresses. Besides, you can also choose the system event log level in SNMP.



SNMP Settings

SNMP

After enabling this service, the NAS will be able to report information via SNMP to the managing systems.

Enable SNMP Service

Port Number:

Community:

Send Event: Information Warning Error

Trap Address 1:

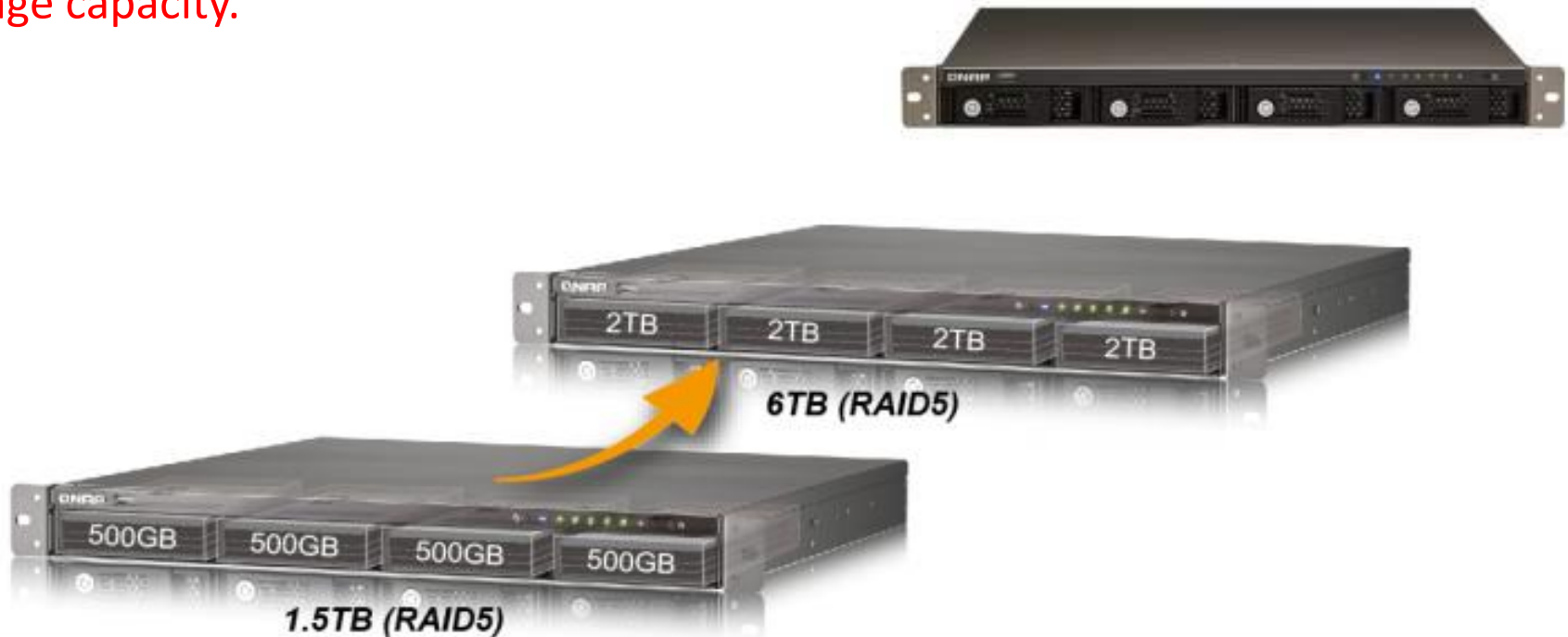
Trap Address 2:

Trap Address 3:

Online RAID Capacity Expansion

Online RAID Capacity Expansion enables users to flexibly expand the storage capacity with all the data reserved.

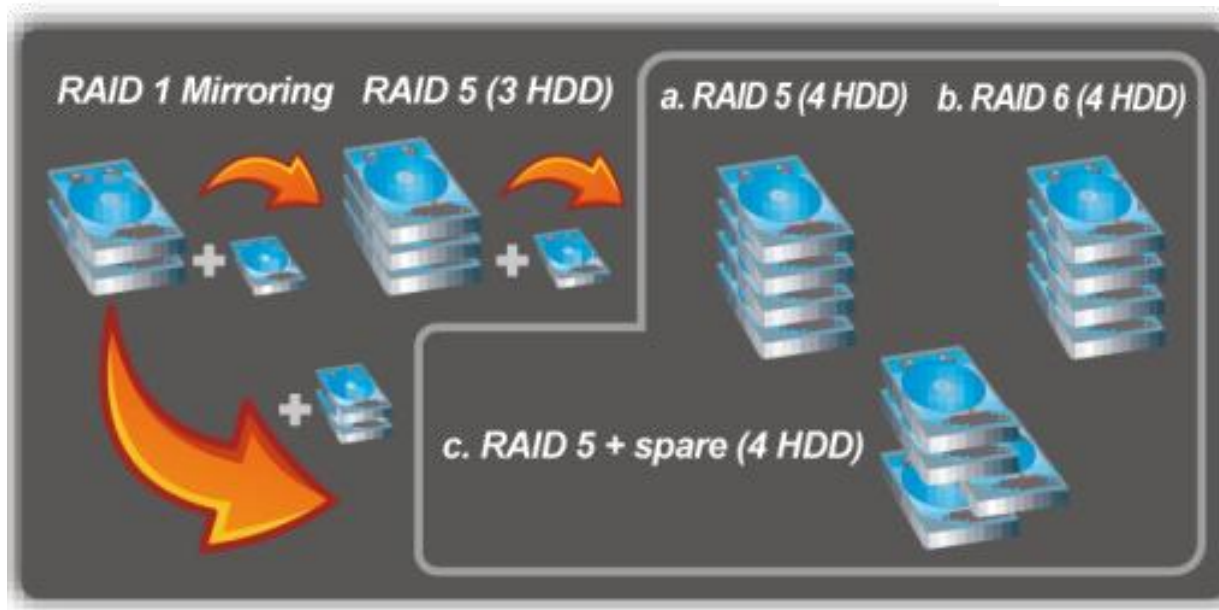
Replace the hard drives on TS-439U-RP step by step to **increase the storage capacity**.



Online RAID Level Migration

Online RAID Level Migration

- Add a hard drive to the disk configuration and migrate to higher RAID configuration for higher level of redundancy.
- Online RAID Level Migration allows users to [transfer and upgrade the RAID level settings easily](#).

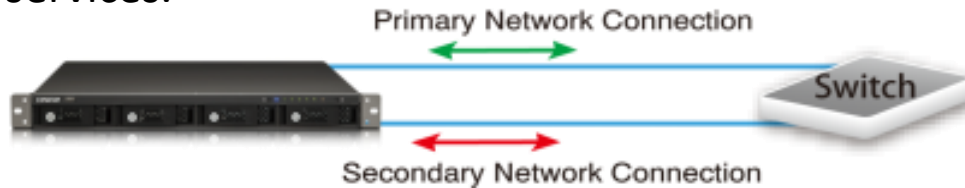


Dual Gigabit LAN Port

Dual Gigabit LAN Ports for More Deployment Options

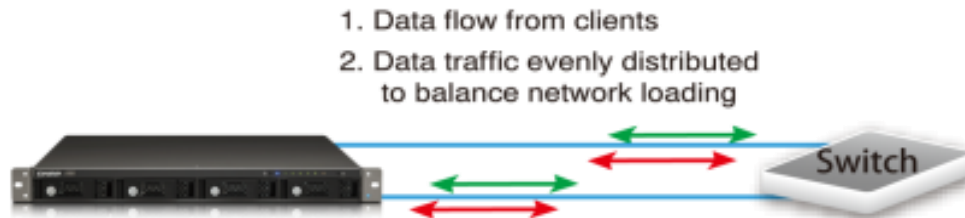
A. Failover

Failover allows the NAS to sustain the failure of one network port to provide continuous services.



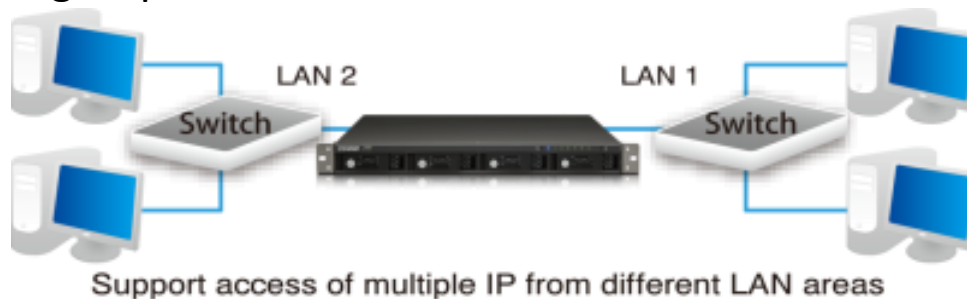
B. Load-Balancing

Bandwidth aggregation is supported to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured)



C. Multi-IP Setting

The NAS can be deployed with two different IP settings for sharing among different workgroups in two different subnets.



Reliable Software Platform

DOM Architecture with Embedded Fail-safe Dual OS



All the OS and applications are embedded on the DOM.

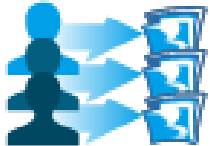
The TS-439U series allows system booting without accessing the physical disk sectors and that prevents unsuccessful system startup caused by bad block sectors or file errors on the hard drives.

→ Unlike other NAS systems, the TS-439U series's OS & applications are embedded on DOM and requires no installation on the hard disks.

Two operating systems are built on the DOM for system booting alternatively upon every system startup. When one fails, the other one will be used to boot up instead, and the failed OS is recoverable from the other healthy OS.

→ Users don't need to worry about unintended system power outage when upgrading the firmware.

Convenient System Tools



Batch Creation of Users and Corresponding Folders

The NAS administrator can create a serial of user accounts and dedicated shared folders in one shot.



Schedule Power on/off

The most flexible schedule power on/off feature is now provided to manage the NAS server's up time according to the working hours. IT administrators can set the time for automatic system power on, power off, or restart on any days of the week.

Volume Status Report

- Users can check the status of the network share folders of the system including the storage capacity, number of folders and files etc.
- Clicking on “Name”, “Size”, “No. of Folders”, “No. of Files”, or “Hidden” to sort the contents in ascending or descending order.

Share Folders



<input type="checkbox"/>	Folder Name	Size	Folders	Files	Hidden	Action
<input type="checkbox"/>	My_VD_Share_1	970 KB	7	9	No	NFS
<input type="checkbox"/>	NFS_share	970 KB	7	9	No	NFS
<input type="checkbox"/>	Network Recycle Bin 1	1 MB	9	12	No	NFS
<input type="checkbox"/>	Network Recycle Bin 2	970 KB	7	9	Yes	NFS
<input type="checkbox"/>	Network Recycle Bin 3	970 KB	7	9	Yes	NFS
<input type="checkbox"/>	Project	24 GB	12	6247	No	NFS
<input type="checkbox"/>	Project1	4 KB	0	0	No	NFS
<input type="checkbox"/>	Public	114 MB	113	23	No	NFS
<input type="checkbox"/>	Qdownload	970 KB	7	9	No	NFS
<input type="checkbox"/>	Qmultimedia	234 MB	28	120	No	NFS

Total: 16 | Display 10 entries per page. 1 / 2

Syslog Server Settings Supported

Syslog is a standard for forwarding log messages in an IP network. Users can save the **event logs** and **connection logs** to a remote syslog server.



System Logs

SYSTEM EVENT LOGS

SYSTEM CONNECTION LOGS

ON-LINE USERS

SYSLOG

Syslog Settings

Enable syslog

You can enable this option to save the event logs and connection logs to a remote syslog server.

Syslog Server IP:

UDP Port:

Select the logs to record

System Event Logs

System Connection Logs (You must enable system connection logs to use this option.)

Import SSL Secure Certificate

The administrator can upload a secure certificate and an **RSA** private key in **X.509PEM** format issued by a trusted provider in order to allow the users to access the NAS by secure SSL login



Home>> System Administration>> Security

Welcome admin | Logout

Englis

Security

SECURITY LEVEL

NETWORK ACCESS PROTECTION

IMPORT SSL SECURE CERTIFICATE

Import SSL Secure Certificate

You can upload a secure certificate issued by a trusted provider. After you have uploaded a secure certificate successfully, you can access the administration interface by SSL connection and there will not be any alert or error message.

If you upload an incorrect secure certificate, you may not be able to login the server via SSL. To resolve the problem, you can restore the secure certificate to default and access the system again.

Status: Uploaded secure certificate being used

Download certificate

Download private key

Restore default certificate

Certificate: Please enter a certificate in X.509PEM format below.

[View sample](#)

Private Key: Please enter a certificate or private key in X.509PEM format below.

[View sample](#)

UPS (Feature Enhancement)

Users can set the time for the server to enter standby mode when an abnormal AC power supply is detected. When the power resumes, the server resumes to the operation status.



UPS Settings

UPS Settings

Enable UPS Support

After the AC power fails for minute(s), turn off the server.

After the AC power fails for minute(s), the server should enter standby mode. When the power resumes, the system resumes to the operation status.

UPS Model:

IP Address of UPS: . . .

UPS Information

UPS Brand: --

UPS Model: --

AC Power Status: --

Battery Capacity: --

Estimated Protection Time: --

CoverFlow-like AJAX Web Interface

Turbo NAS Firmware 3.0

Bring you the best use experience with the AJAX Technology



Brand New User Interface - 1



Multi-Browser Support:

The new UI supports multiple browsers, including Microsoft Internet Explorer 7 & 8, Apple Safari 3 & 4, Mozilla FireFox 3, and Google Chrome.



Real-time Resource Monitor:

Provides you the live view of the CPU Usage, the Disk Usage pie chart, and the bandwidth transfer statistics.

Brand New User Interface -2



Step-by-step Wizard:

It will guide you through the setting process and make it simple and fast.



QNAP RSS Feed:

Get the QNAP latest news via built-in RSS feed, such as up-to-date firmware, application and QPKG release.

Brand New User Interface -3



Instant Language Switch:

Language switching function enables you to change the display language within a second in the AJAX way, no page reloading required.



Bonjour:

Bonjour, also known as zero-configuration networking, uses industry standard IP protocols to allow devices to automatically discover each other without the need to enter IP addresses or configure DNS servers, and which makes your QNAP NAS becomes more compatible with Mac OS X.

Brand New User Interface -4



IP Filter/Network Access Protection:

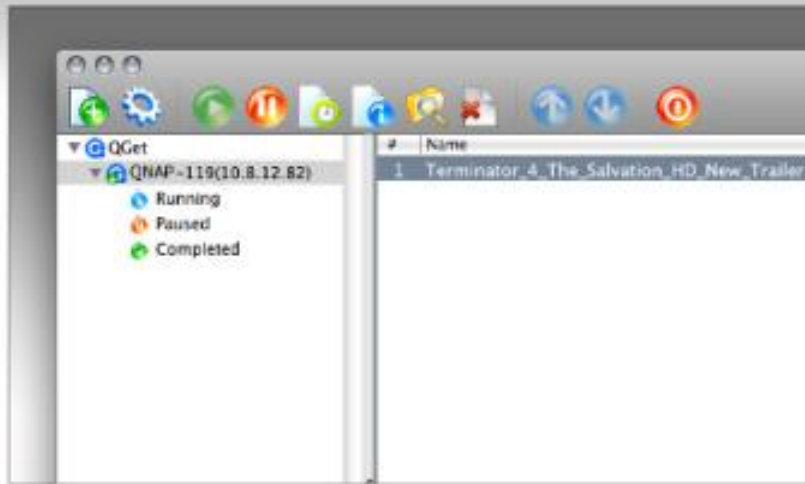
It's simply the best anti-hacking solution that you will never want to miss.



QFinder for Windows & Mac:

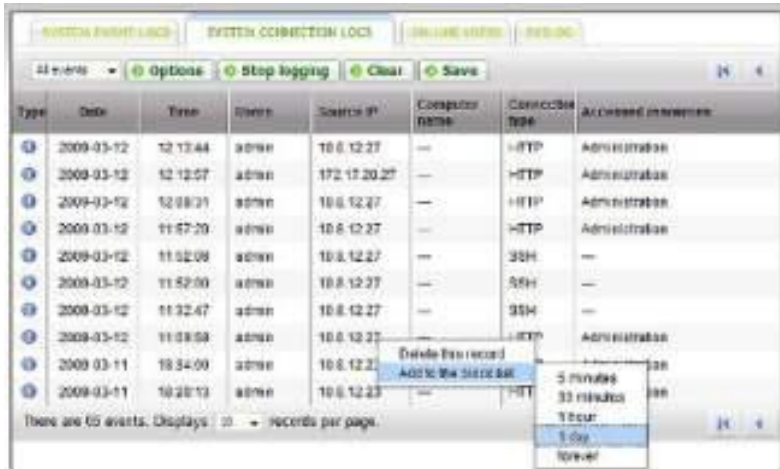
The QFinder and QFinder4Mac allow you to discover and configure your QNAP NAS via Windows and Mac platforms.

Brand New User Interface -5



QGet for Windows & Mac:

The QGet is simply the best client application for Download Station, which allows you to control your download jobs remotely.



Comprehensive Log:

QNAP NAS provides the comprehensive log which records all kinds of events. You can easily manage the log record with the mouse right-click, such as block the source host IP address.

Hard Drive Protection: HDD S.M.A.R.T.-1

HDD S.M.A.R.T. (Self-monitoring Analysis and Reporting Technology) offers a quick overview of the hard drive status which enables users to monitor the hard drives and check potential problems. This tool helps prevent unexpected HDD failure and avoid critical data loss.



Select the hard disk to check the HDD health status.

In the summary page, users can view the health status of the selected drive.

Home>> Disk Management>> HDD SMART

HDD SMART

Monitor hard disk health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

SUMMARY HARD DISK INFORMATION SMART INFORMATION TEST SETTINGS

Summary

Good

No errors were detected on the hard disk.
Your hard disk should be operating properly.

Hard disk model	Western Digital Caviar Green family
Drive capacity	465.76 GB
Hard drive health	Good
Hard drive temperature	38 °C
Test time	--
Test result	Not tested

Hard Drive Protection: HDD S.M.A.R.T. -2

The **S.M.A.R.T.** information helps the server managers to easily monitor the health status of the hard disks.

ID	Description	Value	Worst Value	Threshold	Raw value	Status
1	Raw_Read_Error_Rate	200	200	051	12	OK
3	Spin_Up_Time	142	141	021	5883	OK
4	Start_Stop_Count	100	100	000	253	OK
5	Reallocated_Sector_Ct	200	200	140	0	OK
7	Seek_Error_Rate	200	200	000	0	OK
9	Power_On_Hours	098	098	000	1633	OK
10	Spin_Retry_Count	100	100	000	0	OK
11	Calibration_Retry_Count	100	253	000	0	OK
12	Power_Cycle_Count	100	100	000	80	OK
192	Power-Off_Retract_Count	200	200	000	10	OK
193	Load_Cycle_Count	200	200	000	253	OK
194	Temperature_Celsius	109	091	000	38	OK
196	Reallocated_Event_Count	200	200	000	0	OK
197	Current_Pending_Sector	200	200	000	0	OK
198	Offline_Uncorrectable	200	200	000	0	OK
199	UDMA_CRC_Error_Count	200	200	000	0	OK

Hard Drive Protection: HDD S.M.A.R.T. -3

Server managers can select to execute the diagnostic testing by “**rapid**” or “**complete**” test. The NAS will provide a health status result after the testing process is done.

HDD SMART

Monitor hard disk health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

The screenshot shows the 'HDD SMART' interface with the 'TEST' tab selected. The 'Test method' section has two radio buttons: 'Rapid test' (selected) and 'Complete test'. Below this, the 'Progress' is shown as 10% and the 'Status' is 'Testing' with a green circular arrow icon. A red rounded rectangle highlights the 'Rapid test' radio button, the 'Progress' bar, and the 'Status' text. A 'TERMINATE TEST' button is located at the bottom of the test area.

- Rapid Test: Check the first **1.5 GB** of the hard disk drive
- Complete Test: Check the complete hard disk drive

Hard Drive Protection: Bad Block Scan & Disk Checking

Advanced Hard Drive Protection (HHS)

The embedded **HHS (HDD health scan)** technology help users discover the abnormal issue of hard disks to prevent disaster. It is a **dual insurance** for valuable data on the NAS.



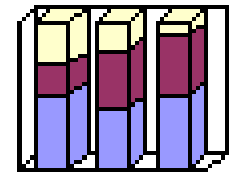
- **Bad Block Scanning** reports bad blocks of a HDD.
- **Disk Checking** performs Linux file system checking and fixes any potential errors.

Comprehensive Event Log System

Comprehensive Event Log System

Detailed logs of **file-level** data access to the Turbo NAS via **Samba, FTP, AFP, HTTP(HTTPS), Telnet, iSCSI and SSH**, and network services accessed by the online users are all recorded.

IT administrators can easily control detailed logs of each file (who, when, and what actions were done).



Home >> System Administration >> System Logs

System Logs

SYSTEM EVENT LOGS SYSTEM CONNECTION LOGS ON-LINE USERS SYSLOG

All events Clear Save

Type	Date	Time	Users	Source IP	Computer name	Content
🚫	2009-05-25	13:39:33	System	127.0.0.1	localhost	Failed to synchronize the time from NTP server.
🚫	2009-05-22	20:36:05	System	127.0.0.1	localhost	Failed to synchronize the time from NTP server.
⚠️	2009-05-21	02:22:10	System	127.0.0.1	localhost	Re-launch process [nvrtd].
⚠️	2009-05-21	01:55:09	System	127.0.0.1	localhost	Re-launch process [nvrtd].
🚫	2009-05-19	15:29:00	System	127.0.0.1	localhost	Failed to synchronize the time from NTP server.
⚠️	2009-05-19	10:08:00	System	127.0.0.1	localhost	Re-launch process [_tthttpd_].
⚠️	2009-05-19	09:28:58	System	127.0.0.1	localhost	Re-launch process [nvrtd].
🕒	2009-05-19	09:25:12	System	127.0.0.1	localhost	[Mirror Disk Volume: Drive 1 2] Recovering journal.
🕒	2009-05-19	09:25:01	System	127.0.0.1	localhost	System started.
🕒	2009-05-19	09:22:30	System	127.0.0.1	localhost	System was shut down on Tue May 19 09:22:30 CST 2009.

There are 161 events. Displays 10 records per page.

The logs can also be exported as Excel (csv) file for analysis.

The Most Complete Backup Solution-1

Encrypted Remote Replication

1. NAS-to-NAS Backup over the Network
2. Advanced Encrypted Remote Replication

QNAP Backup Software -
NetBak Replicator



Remote
Replication



QNAP NAS



Supports Rsync Server

USB one touch copy

Standard Rsync
supported

3rd party backup software
supported

The Most Complete Backup Solution-2

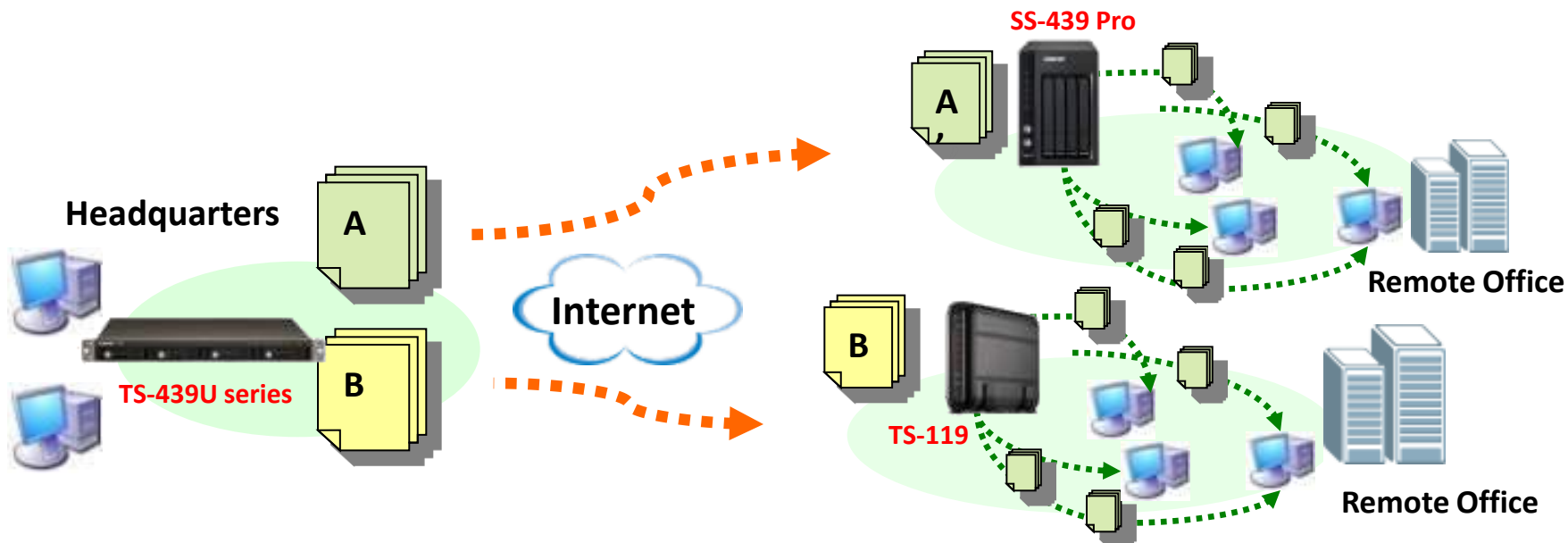
Encrypted Remote Replication

1. NAS-to-NAS Backup over the Network

Files can be backed up from the Turbo NAS to other QNAP NAS products in remote locations.

2. Advanced Encrypted Remote Replication

Advanced options including **data compression**, **block level incremental backup**, and **data synchronization** which save tremendous bandwidth and time for data backup.



The Most Complete Backup Solution-3

Standard Rsync supported

Data on the NAS can be backed up to or from another Turbo NAS or Rsync server over the network securely.

3rd party backup software supported


QNAP's Turbo NAS provides a great alternative for tape replacement. Several well-known backup software have been verified that they could smoothly work with QNAP NAS server.

1. CA BrightStor ARCserve Backup
2. Acronis True Image
3. EMC Retrospect
4. Symantec Backup Exec
5. LaCie SilverKeeper (backup)

The Most Complete Backup Solution-4

QNAP Backup Software - NetBak Replicator

The intelligent automatic backup software- **NetBak Replicator** is provided for the NAS users to perform **real-time synchronization** or **schedule backup** from multiple PCs to the NAS. There is no license issue about user account limitation.



The screenshot shows the NetBak Replicator interface. At the top, there are fields for 'NAS Server' and 'Share Path'. Below these are buttons for 'Backup', 'Export', and 'Log'. The main area is a file explorer showing a tree view of folders on the left and a list of files on the right. The file list includes folders like 'AUDIO', 'Documents and Settings', 'MUSIC', 'Program Files', 'WINDOWS', 'AUTOREP.BAT', and 'CONFIG.SYS'. At the bottom, there are buttons for 'Quit', 'File Filter', 'Schedule', 'Monitor', and 'Show As Details'. The QNAP logo is visible at the bottom left of the window.

Select Backup Destination

Easy Selection: Select All or My Document

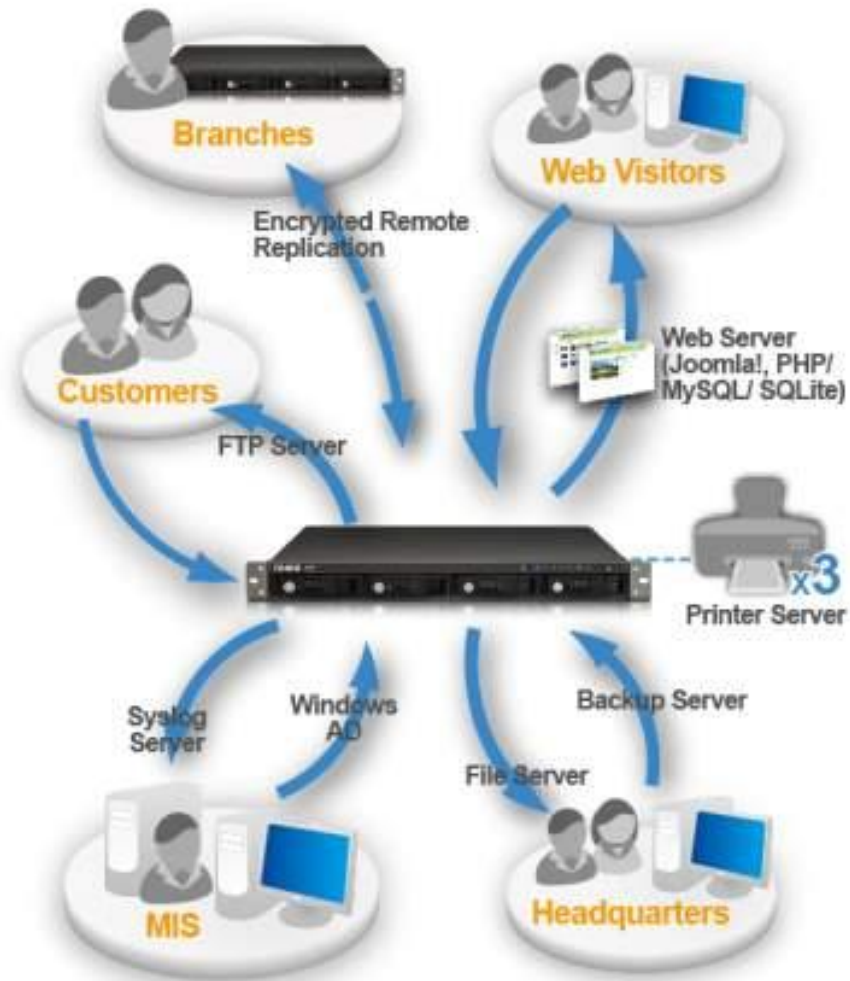
Backup Log: Record Errors

Backup Level: Folder or File Level

Backup option: Real Time/ Schedule/Instant

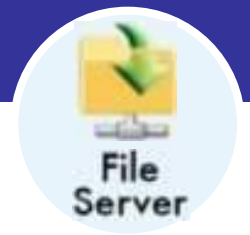
All-in-one Server: Business Application

Powerful All-in-one Server!!!



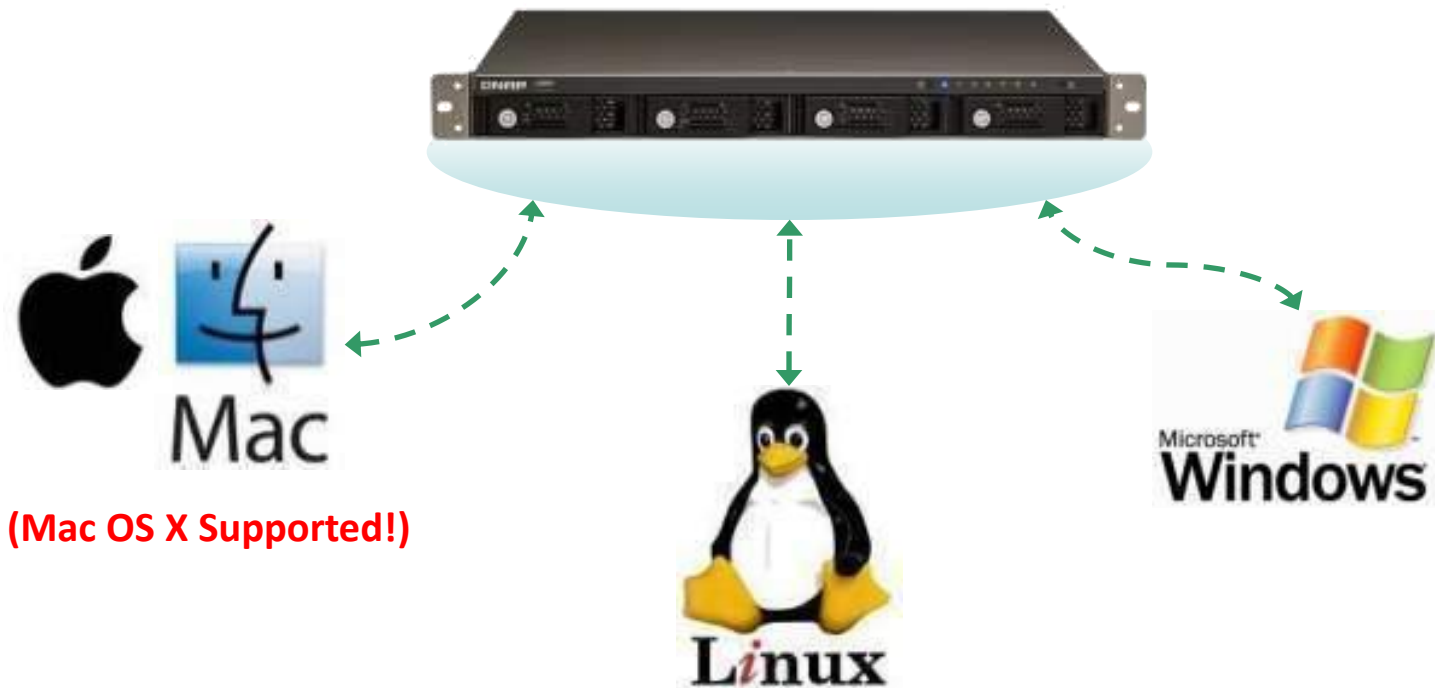
- File Server
- FTP Server
- iSCSI Target
- Backup Server
- Web Server
- MySQL Server
- Remote Replication
- Printer Server
- more...

A. All-in-one Server: File Server -1



1. Sharing File Across Windows, Mac, and Linux:

QNAP's Turbo NAS supports **NFS, AFP, and SMB/CIFS**. You can share files among PCs with different OS easily!

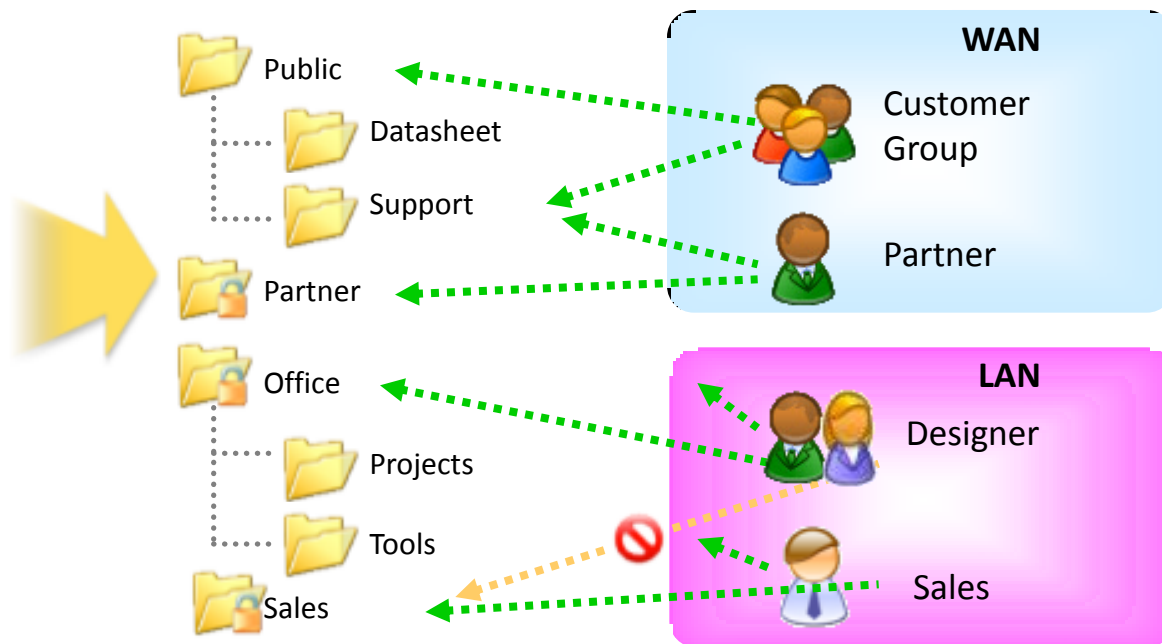


A. All-in-one Server: File Server -2



2. Store Files with Access Right Control

Centralized management of documents. Access right of users and user groups can be configured easily. Only authorized parties can read or modify files, which greatly enhances the security of data access.



A. All-in-one Server: File Server -3

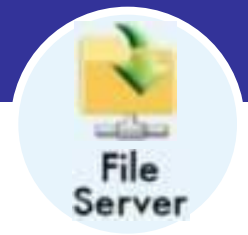


3. Easy-to-use Web-based Management Interface

You can create user ID and password, and define the authority and quota for each user by web browser easily without MIS help.

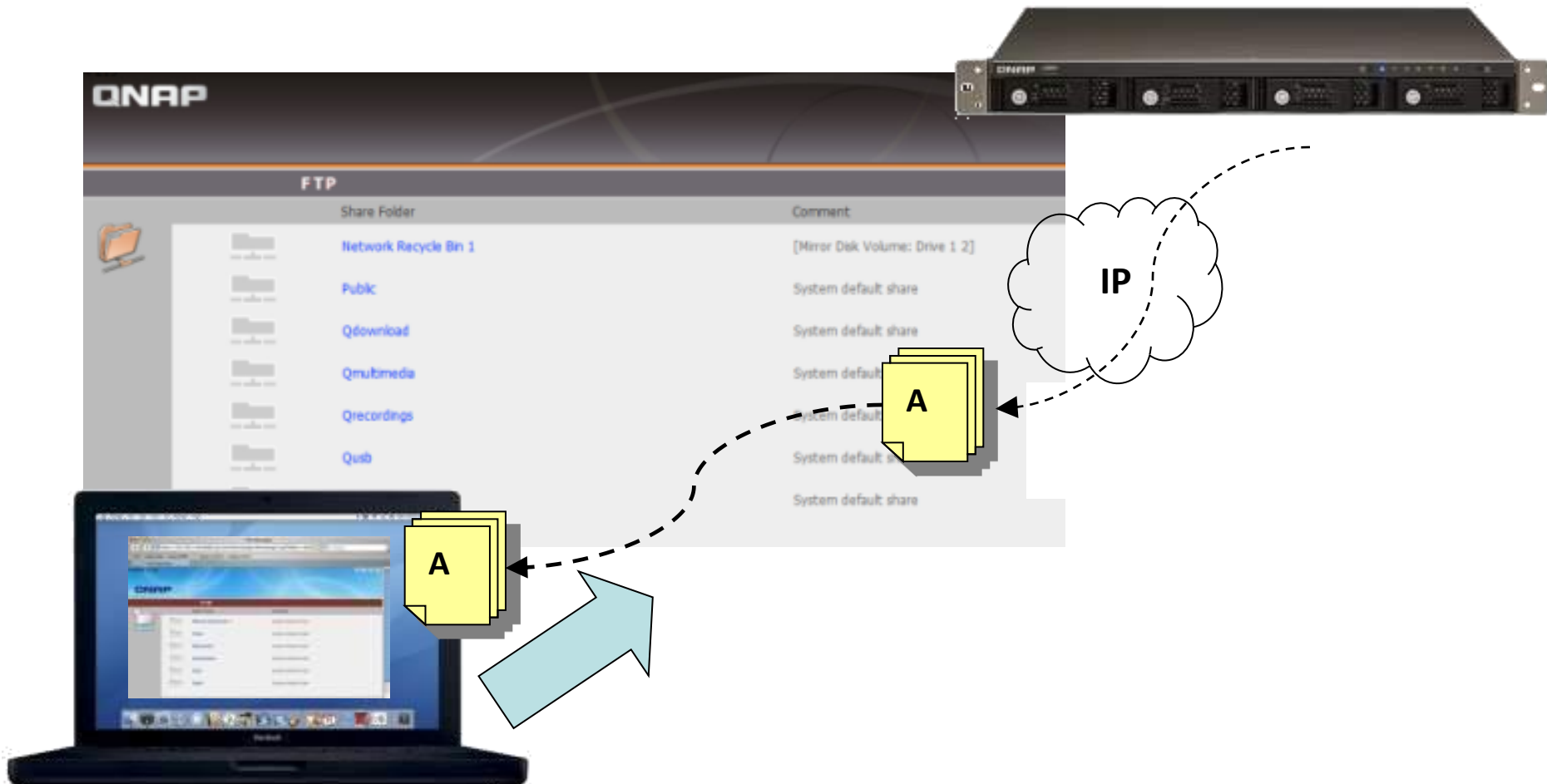
The screenshot displays the QNAP web-based management interface for user management. At the top, there is a navigation bar with "Home >> Access Right Management >> Users" on the left, and "Welcome admin | Logout" and "English" on the right. Below the navigation bar, the "Users" section is visible, featuring a "Local Users" dropdown menu and two buttons: "Create A New User" and "Create Multiple Users". A table lists existing users with columns for "User Name", "Quota", and "Action". The "User Name" column contains "admin" and "ssods". The "Quota" column shows "--" for both. The "Action" column contains icons for edit, delete, and other functions. Two wizard windows are overlaid on the main interface. The "Multiple Users Creation Wizard" window is titled "Account Login Info" and includes fields for "User Name Prefix:", "User Name Start No.:", "User Number:", "Password:", and "Verify Password:". A note below these fields states: "Note: For increased security, password should contain special characters." The "Add A New User" window is titled "Add A New User" and lists the settings it guides through: "User Information", "Quota", "User Group", "Personal Share Folder", and "Privilege". Both wizard windows have "BACK" and "NEXT" buttons at the bottom.

A. All-in-one Server: File Server -4

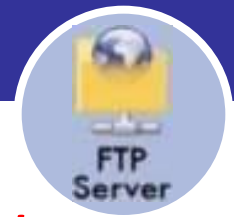


4. Web File Manager:

More than just a disk on your local network, you can also access your stored files anytime, anywhere by web browser!



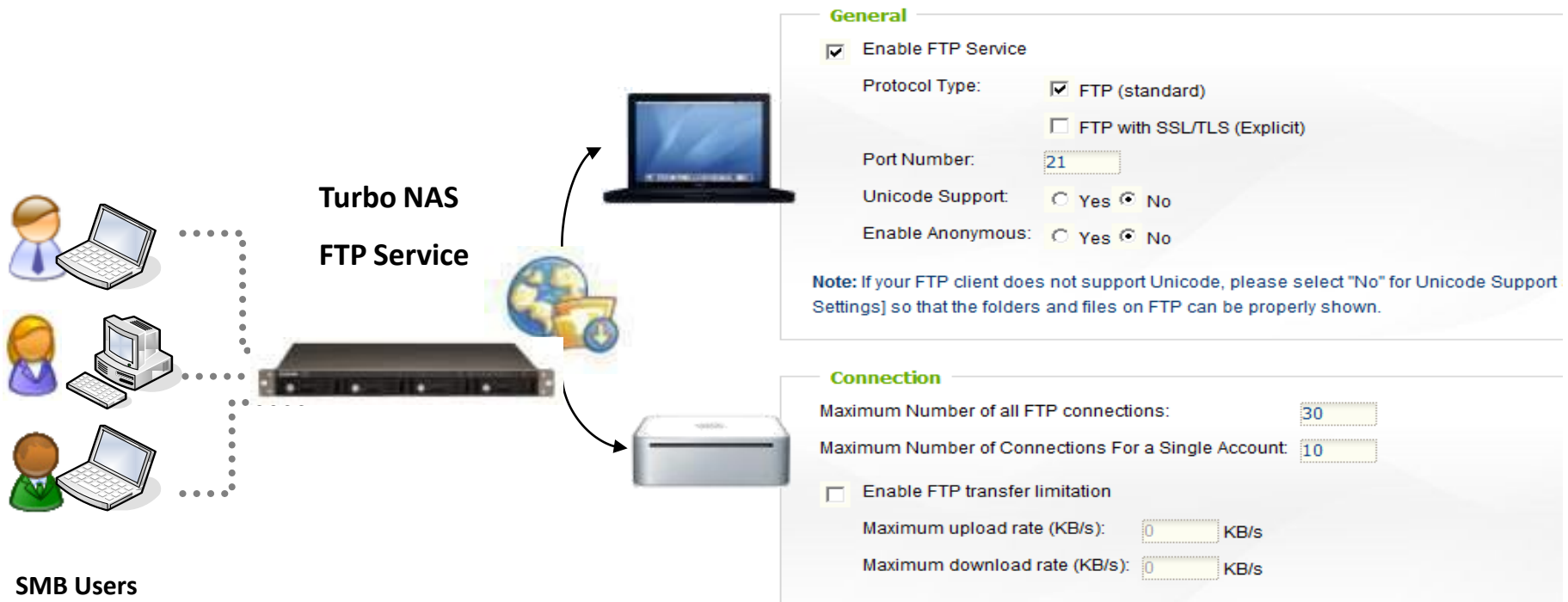
B. All-in-one Server: FTP Server -1



Having troubles with sending large files by e-mails due to the limited capacity?

1. Establish Your Own FTP Server to Share Your Files.

Just a few installation steps, you can manage the access authority of the FTP server and share your files with your customers easily!



B. All-in-one Server: FTP Server -2



2. Sharing File over the Internet Securely

Besides access right control, the FTP server supports secure encryption (**FTP over SSL/ TLS**).

Passive mode FTP port range setup is also supported.

General

Enable FTP Service

Protocol Type: FTP (standard) FTP with SSL/TLS (Explicit)

Port Number:

Unicode Support: Yes No

Enable Anonymous: Yes No

Note: If your FTP client does not support Unicode, please select "No" for Unicode Support Settings] so that the folders and files on FTP can be properly shown.

Connection

Maximum Number of all FTP connections:

Maximum Number of Connections For a Single Account:

Enable FTP transfer limitation

Maximum upload rate (KB/s): KB/s

Maximum download rate (KB/s): KB/s

C. All-in-one Server: Web Server

Create Your Forum, Blog, and Online Store Easily

Exclusive Built-in phpMyAdmin, Joomla!, MySQL & SQLite Dual Support!

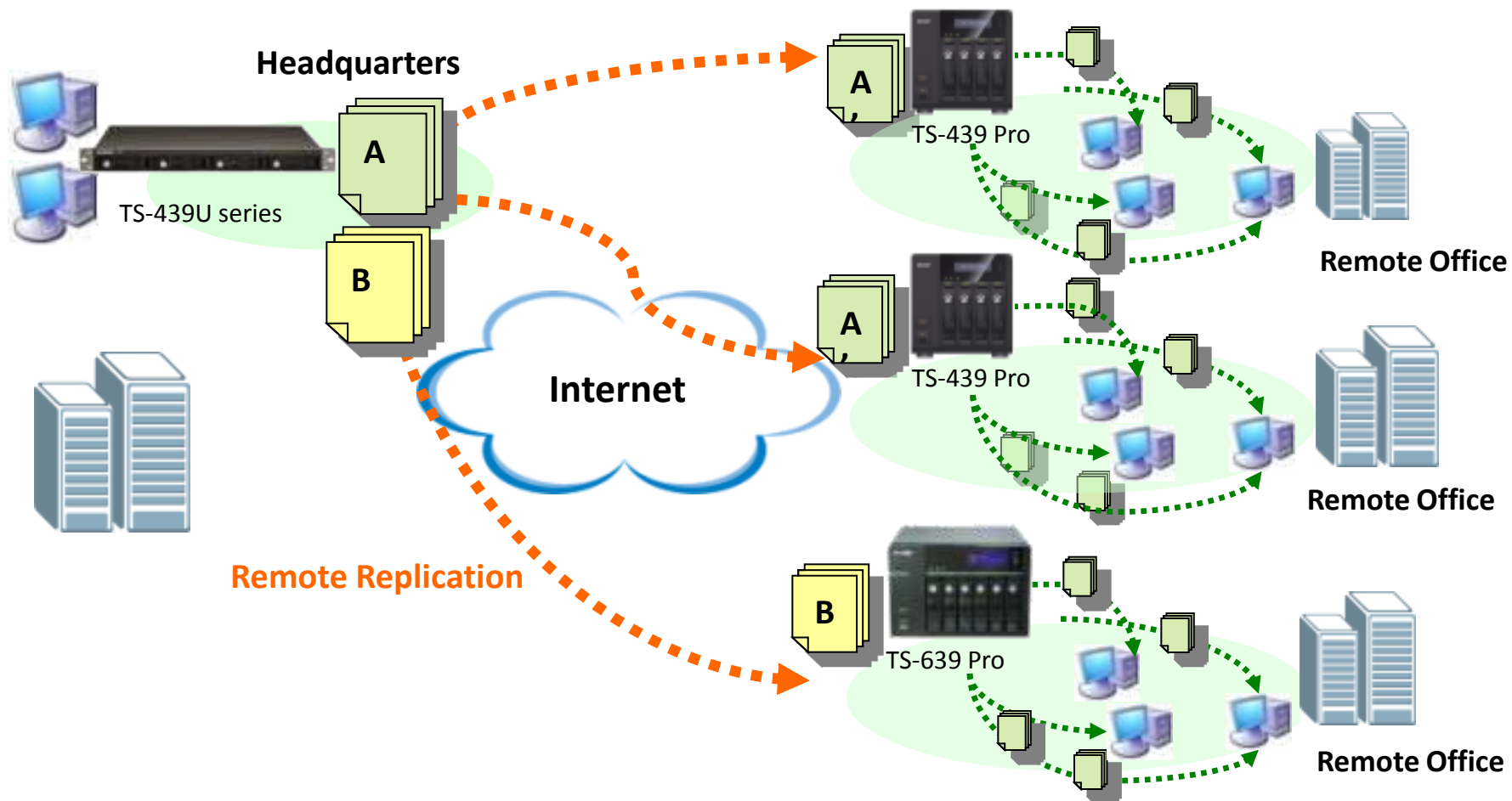
Users can either develop programs by themselves or download a variety of open-sourced applications, such as **online shops, forums, blogs** over the Internet.

The image shows a screenshot of the Joomla! 1.5 website interface. The Joomla! logo is at the top left, with the tagline "...because open source matters". Below the logo is a navigation menu with "About Joomla!", "Features", "News", and "The Community". The main content area is divided into several sections: "Main Menu" with links like Home, Joomla! Overview, Joomla! License, etc.; "Latest News" with a list of news items; "Popular" with a list of popular content; "Welcome to the Frontpage" with a welcome message and a "Powered by Joomla! version 1.5" badge; and "Polls" with a poll titled "Joomla! is used by...". Three callout bubbles are overlaid on the right side of the screenshot: a blue bubble labeled "Blog", a yellow bubble labeled "Web album", and a pink bubble labeled "Community Website".

D. All-in-one Server: Remote Replication

NAS-to-NAS Backup over the Network

Files can be backed up from the Turbo NAS to other QNAP NAS products (or Rsync Servers) in remote locations.



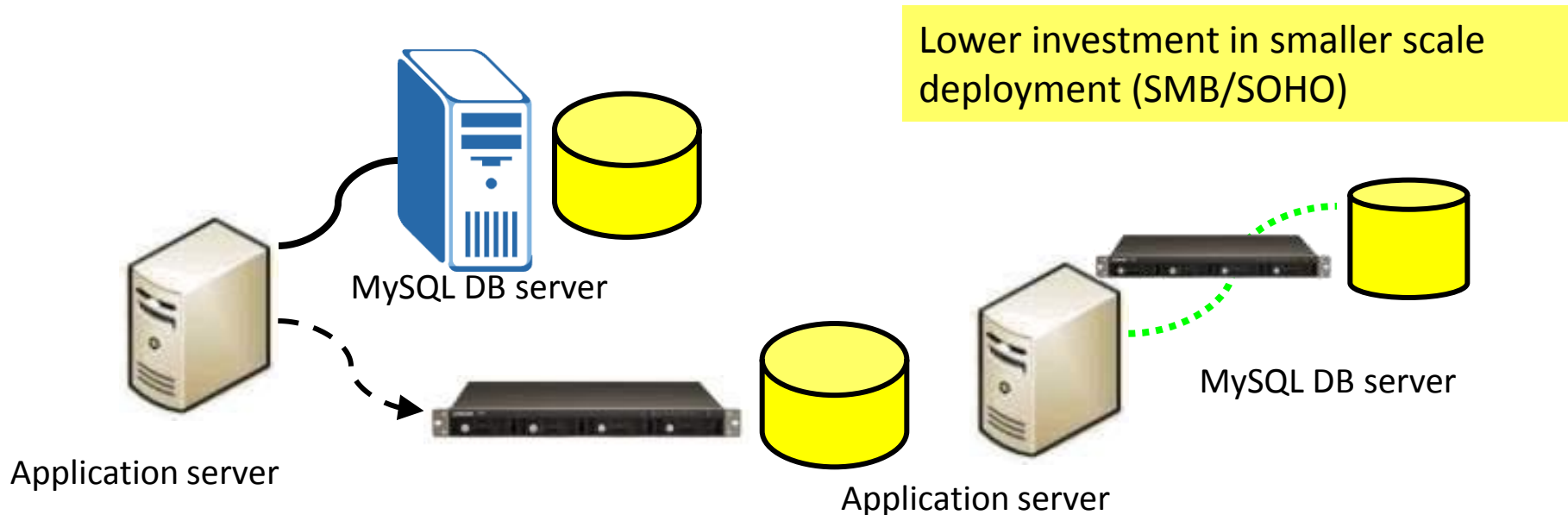
E. All-in-one Server: MySQL Server

Great Solution for System Integrators

QNAP Turbo NAS can be an ideal alternative solution of **standalone MySQL database server**.

It can be flexibly applied in various deployments such as:

- (1) a **database server of another web server in remote site**
- (2) an **additional backup database server** to achieve system redundancy.

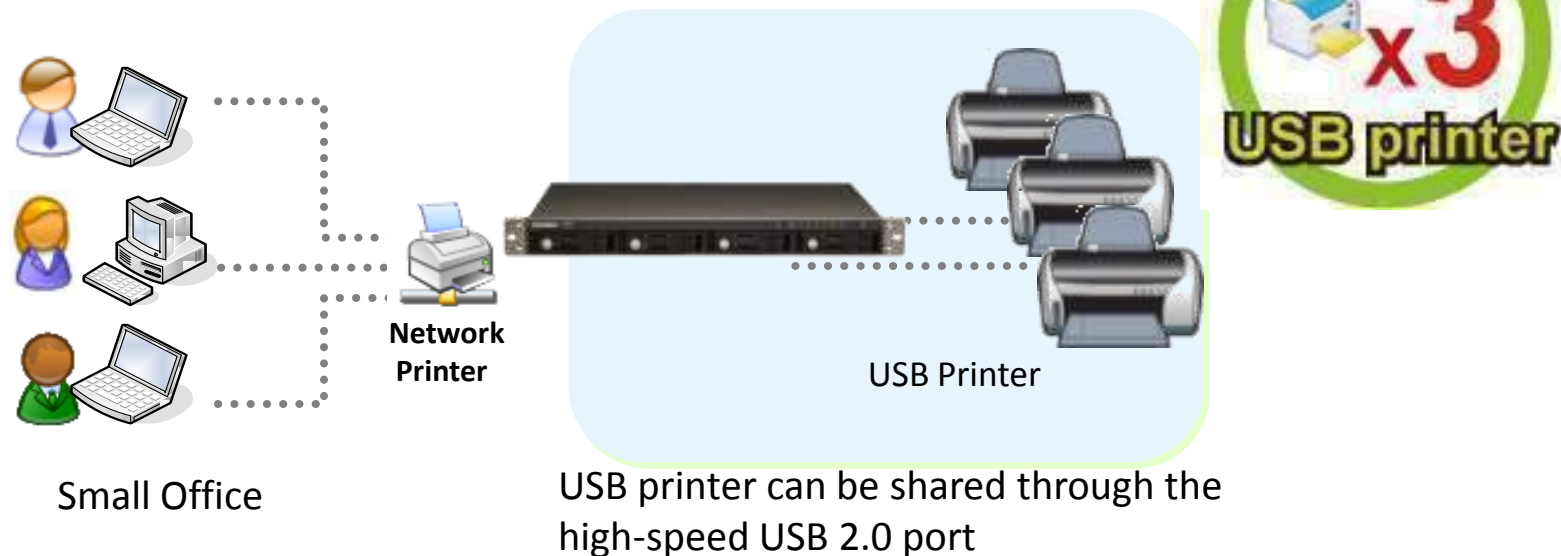


F. All-in-one Server: Printer Server



Share Your Printer Resource by Printer Server

You can share your printer device over the network without duplicating investment by simply connecting a USB printer to NAS's USB port and enabling the printer sharing function.



Surveillance Station

Live Audio & Video Monitoring, Recording and Playback over the Internet

Application:

- Remote monitoring of childcare situation,
- Elder care,
- Home and office security,
- long-term environmental monitoring



Surveillance Station: Features- 1



High quality video recording in **MPEG4** and **Motion JPEG** Format



Real-time monitoring and recording for **up to 30 frames/Sec per channel**



Live 2-way audio supported for real-time monitoring, and voice broadcasting



Complete recording function

- **Motion Detection**

Recording is triggered when a moving object is detected by the camera.

- **Continuous / Schedule recording**
- **Synchronized audio recording**

Surveillance Station: Features- 2



- **Alarm schedule recording**

Different recording modes can be defined for different time periods, e.g. alarm recording at daytime and continuous recording at night time.



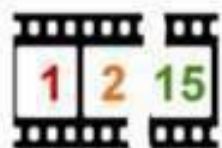
- **E-mail notification**

Alert emails will be sent to administrator immediately when a system error or emergent event takes place.



- **Standard video recording format with Time Stamp**

The recordings are saved in **AVI format (codec provided)** for easy playing by Windows Media Player. **Time stamp** on the video is provided for convenient data search and can be used as legal evidence.

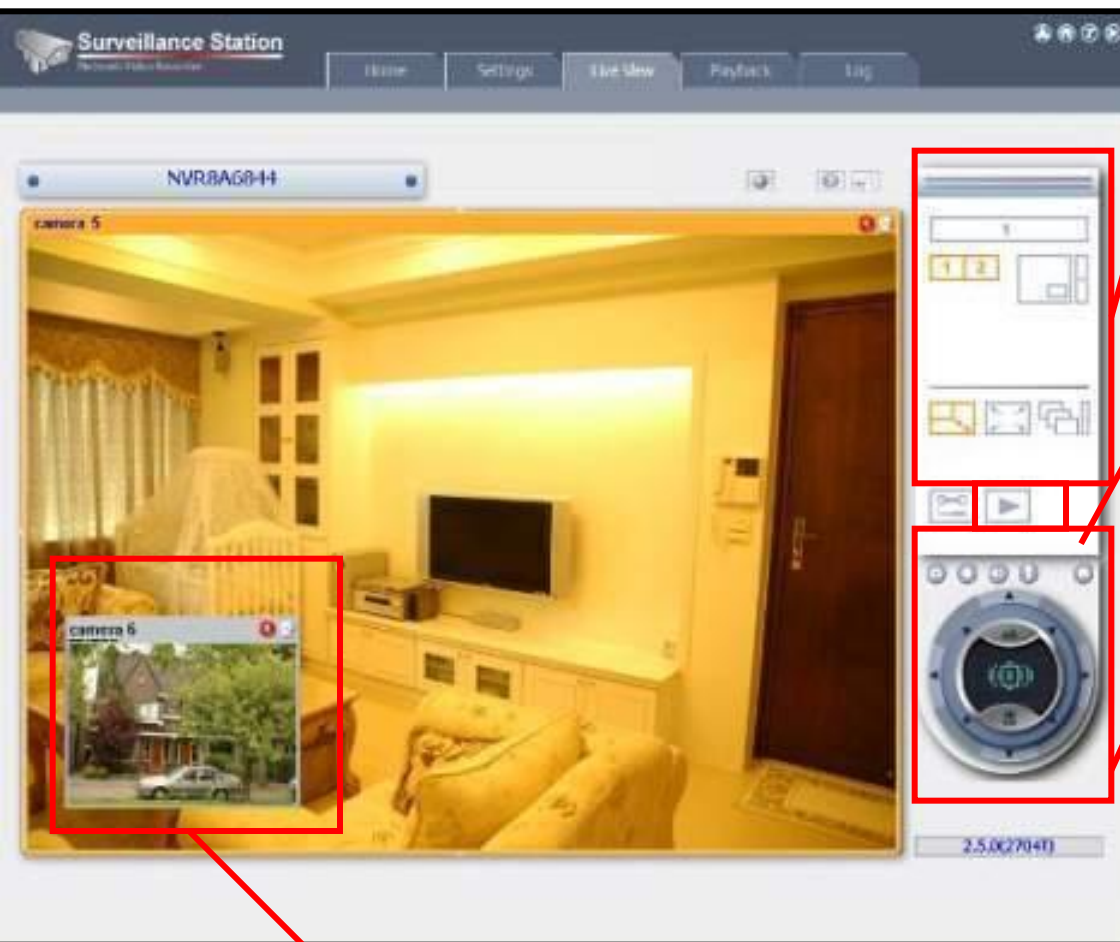


- **Flexible adjustment of the length of recording files**

Users can adjust the length of the recording files flexibly **(1-15 minutes)**

Surveillance Station: Features-3

Live real-time monitoring



Picture-in-picture mode



Varity Live video monitoring

Single-channel, 2-channel and Picture-in-picture (PIP) monitoring modes are supported for flexible and key-location monitoring



Support live 2-way audio

Real-time audio and video monitoring, voice broadcasting



Smart PTZ camera control by direct clicking on the control panel

Users can zoom in/ zoom out and control camera's direction by the "click and go" intuitive control panel. Preset positions can be easily and precisely controlled.

QPKG Software Expansion Platform

Explore the unlimited possibilities of your QNAP NAS!

The QPKG is a convenient platform developed by QNAP to **enable users to install lots of useful software applications**. The software developed from the users and community worldwide

By a few simple clicks and uploading on the user-friendly GUI, all these applications can be installed. **There is no need to go through the hassles of any complicated programming.**



Turbo NAS Series' Valuable Features- 1



Windows AD (Active Directory)

The Windows AD feature enables server manager to import user accounts from AD domain to NAS to reduce the time and effort for account setup, and users can use the same set of login name and password.



SSL Security (HTTPS)

All connections between PC and NAS including user ID, password, files, download tasks etc. are encrypted in SSL tunnels and are well protected



USB UPS Support

The NAS supports both APC and MGE UPS devices which help users store the data in time and avoid critical data loss when power outage occurs during data transfer.

Turbo NAS Series' Valuable Features- 2



QNAP Finder (Powerful utility for setup and management)

- The setting of Turbo NAS Series can be easily accomplished by QNAP Finder.
- Users can also **restart, shut down, remote wake up the server (via WOL) , map disk, etc.** on the single console of the powerful tool.



Wake on LAN

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



Network Recycle Bin

Can you imagine if you delete an important file on the NAS by mistake and lose it forever? You don't need to worry now!

The files deleted from the network shares of the Turbo NAS Series will be moved to a particular recycle bin folder. You can restore your data anytime in case of unintended file deletion.

QNAP NAS Community Forum

QNAP forum is *the largest NAS community* with more than 24,500 members (July, 2009). QNAP users can share experience, find answers, get direct support and receive the latest update information here.

QNAP FORUM QNAP NAS Community Forum
Strive to Bring You the Best User Experience

Search Search
Advanced search

Portal » Board Index

User Control Panel (8 new messages) • View your posts

FAQ Members Logout [QNAPivan]

It is currently Thu Feb 28, 2008 11:51 am
[Moderator Control Panel]

Last visit was: Wed Feb 27, 2008 9:00 pm

View unanswered posts • View new posts • View active topics

Mark forums read

QNAP GENERAL	TOPICS	POSTS	LAST POST
Announcements Welcome note and must-know for QNAP Forum members. Moderator: QNAPDev	7	6	by flowerchild on Fri Jan 25, 2008 3:03 pm
Hello Stranger! Introduce yourself to us and other members here. Moderator: QNAPDev	129	321	by QNAPRay on Tue Feb 26, 2008 8:45 pm
Features Wanted Tell us your most wanted features from QNAP products. Moderator: QNAPDev	329	1301	by Sylver on Thu Feb 28, 2008 8:38 am
User Reviews, Comments, Tips Sharing Share your own product reviews, suggestions, and tips and tricks of using QNAP products with other members here. Moderator: QNAPDev	45	195	by mgreen on Thu Feb 28, 2008 5:25 am
News & Awards Read the latest news from QNAP and our awards. Moderators: QNAPDev, QNAPRay	54	55	by QNAPRay on Wed Feb 27, 2008 5:32 pm

FIRMWARE & UTILITIES (LOGIN REQUIRED)	TOPICS	POSTS	LAST POST
[OFFICIAL] TS-409 Pro Turbo NAS Series Official Firmware (Version 2.0.0 Build 0122) Discussion about the firmware version 2.0.0 Build 0122 of TS-409/409 Pro. Login required to view the...	10	59	by xavierh on Thu Feb 28, 2008 1:38 am

Thank you !!!