

# QNAP Next-Generation Turbo NAS for Business Series

**NEW!**



TS-459U-RP/ SP



TS-859U-RP



**New Products Presentation**

**March 2010**

<http://www.qnap.com>

**QNAP**

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# About QNAP

- QNAP, with more than 9 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)
  - NMP (Network Multimedia Player)



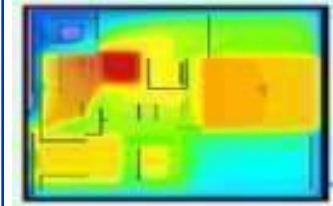
## Awards



# Core Competencies

## *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



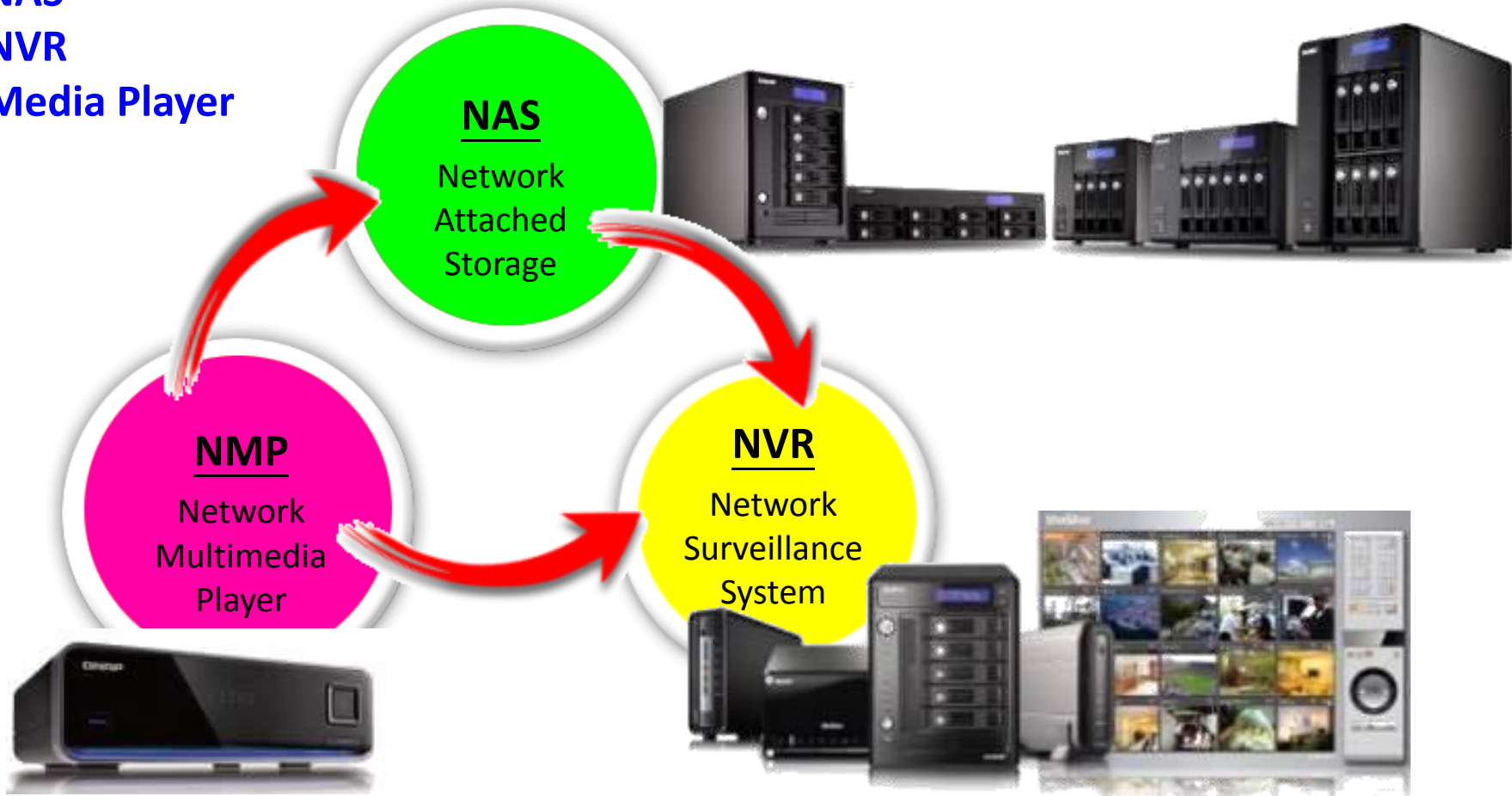
EMI Lab



# QNAP Core Technology

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

- ✓ NAS
- ✓ NVR
- ✓ Media Player



# QNAP Product Lines Overview -1

## 1. Turbo NAS Series (Network Attached Storage)

### Intel-based iSCSI NAS for SMB & Enterprise (Tower)

-Exceptional Performance NAS with **VMware Ready**



TS-239 Pro II   TS-259 Pro   TS-439 Pro II   TS-459 Pro   TS-559 Pro   TS-659 Pro   TS-859 Pro   TS-809 Pro

### Intel-based iSCSI NAS for SMB & Enterprise (Rack Mount)

- Exceptional Performance NAS with **VMware Ready**



TS-459U-RP-SP   TS-859U-RP   TS-809U-RP

### Home & SOHO NAS

-All-in-one SOHO & Home NAS Series



TS-110   TS-119   TS-210   TS-219P   TS-410   TS-419P

# QNAP Product Lines Overview -2

## 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



NMP-1000P



# Recognition from Media around the World -1



Editor's Choice



Editor's Choice



www.itpro.co.uk

**QNAP TS-809 Pro & TS-809U-RP** are powered by **Intel Core 2 Duo 2.8GHz CPU** and **2GB DDRII memory**, a powerful NAS system designed for business users.

- Dual Gigabit LAN ports
- LCD panel for first installation (Touch-N-Go)
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Scheduled Power on/off
- 2.5" & 3.5" HDD Dual Support



# Recognition from Media around the World -2



Tempo Award



Gold Award



Best Performance

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

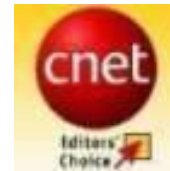
- Dual Gigabit LAN ports
- LCD panel
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Scheduled Power on/off
- 2.5" & 3.5" HDD Dual Support

# 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 for first installation (Touch-N-Go)
- RAID 0/1/5/6/5 + hot spare/JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Wake on LAN & Scheduled Power on/off
- 2.5" & 3.5" HDD Dual Support



# Recognition from Media around the World -4



**QNAP TS-119/219/219P** are all powered by **Marvell 1.2GHz CPU** and **512MB DDRII memory**, a powerful NAS system designed for home and SOHO users.

- 2-Bay Hot-swappable (TS-219/219P only)
- Exclusive Q-RAID 1 (TS-119 only)
- RAID 0/1/JBOD (TS-219/219P only)
- Online RAID Capacity Expansion (TS-219/219P only)
- Online RAID Level Migration (TS-219/219P only)
- Scheduled Power on/off

PRODUCT OF THE YEAR



Product of the year



PC Go Excellent



Benchmark Reviews.com

Silver Tachometer Award



Excellent Hardware



Gold Award



Recommended



Recommended



Best Test



Best Performance



Top Rank



Best Buy

**QNAP**

# Recognition from Media around the World -5



**QNAP TS-110/210/410** are all powered by **Marvell 800MHz CPU** and **256MB DDRII memory**, designed for home and SOHO users.



- 4-Bay Hot-swappable (TS-410 only)
- Exclusive Q-RAID 1 (TS-110 only)
- RAID 0/1/5/5+hot spare/6/JBOD (TS-410 only)
- Online RAID Capacity Expansion (TS-410 only)
- Online RAID Level Migration (TS-410 only)
- Scheduled Power on/off

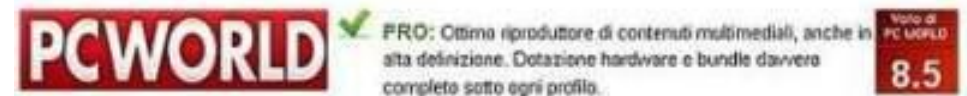
# Recognition from Media around the World -6



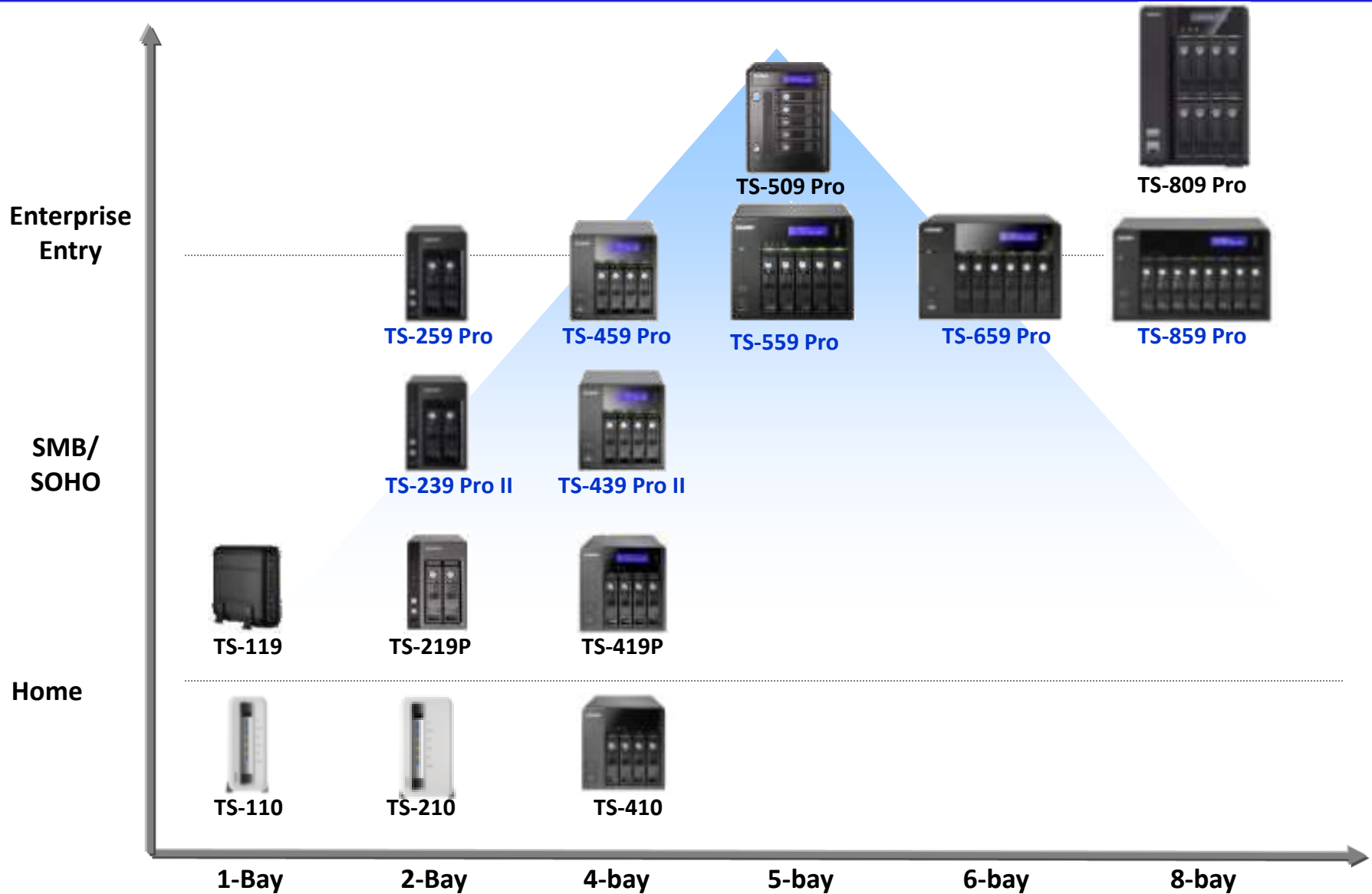
**QNAP NMP-1000** is powered by **Sigma Designs SMP8635** and **256MB DDR memory**, designed for home users to experience the cinema-grade enjoyment in home theater.

- Supports lots of digital music format, including FLAC, PCM, WMA, AC3, DTS, and WAV.

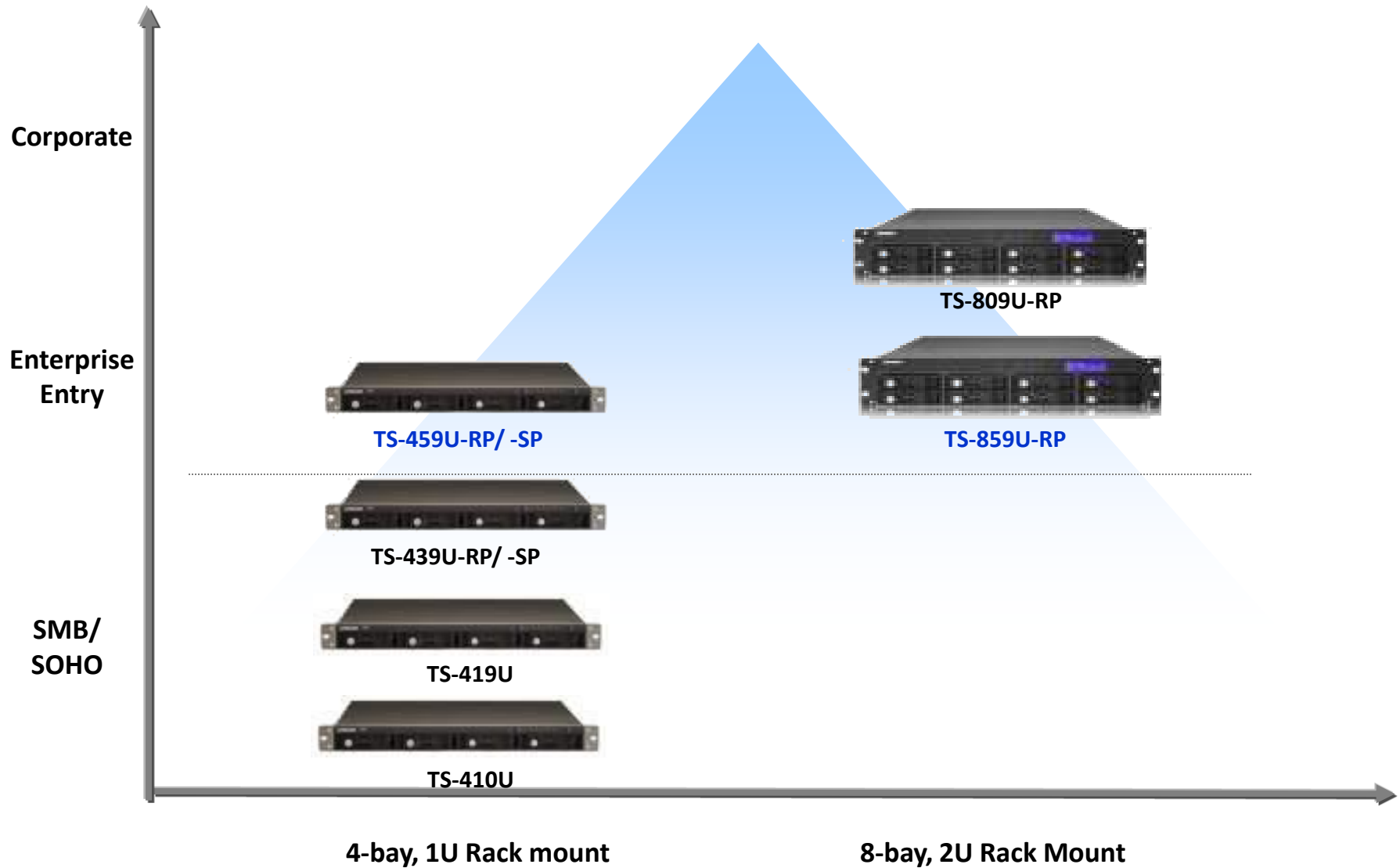
- Supports Dolby TrueHD and DTS HD surrounds audio



# QNAP NAS Product Line Overview (Tower, 2010 Q1)



# QNAP NAS Product Line Overview (Rack Mount, 2010 Q1)



# Overview of TS-X59U Series Turbo NAS -1



TS-459U-RP/ -SP





TS-859U-RP

- Powered by Intel® Atom™ Processor D510 1.66GHz (Dual Core) and 1GB DDRII memory, it delivers exceptional performance with low power consumption. **NEW!**



- All TS-x59U series are **VMware Ready (Certified)** **NEW!**



# Overview of TS-X59U Series Turbo NAS -2

- **New iSCSI and Virtualization Function Deployment**   
(eg. MC/S, MPIO, SPC-3, Windows 2008 Hyper-V cluster supported and thin provisioning)
- **Built-in iSCSI initiator** for stackable capacity expansion.  
(Virtual Disk Expansion, VDD)
- **iSCSI + NAS Combo Solution:** 
  - **iSCSI Application:** Advanced iSCSI and Virtualization Features
  - **NAS Application:** All-in-one Business Server Features
- **Secure Data Protection by AES 256-bit volume-based Data Encryption**

# Overview of TS-X59U Series Turbo NAS -3

- **DOM Architecture and Embedded Fail-safe Dual OS**
- **Advanced RAID Management with Hot-swap Design**
- **Dual Gigabit LAN for Port Trunking / NIC Teaming**  
(7 bonding modes, e.g. **Failover, Load-balancing and Multiple IP setting**)
- **The Most Complete Backup Solution**  
(including **cloud-based and Apple Time Machine backup**)
- **Higher Expandability:**
  - 2 x eSATA ports for TS-x59U Series 
  - 5 x USB 2.0 ports for TS-459U-RP/-SP
  - 4 x USB 2.0 ports TS-859U-RP 

# Overview of TS-X59U Series Turbo NAS- 4

## More features with Firmware V3.2

The new V3.2 NAS firmware provides many powerful functions to offer higher management efficiency.



### New

- Web File Manager 2
- Apple Time Machine Support
- WebDAV
- IPv6
- DFS (Share Folder Aggregation)
- Amazon S3

### Enhancement

- iSCSI Target Enhancement
- Remote Replication Enhancement
- Surveillance Station Enhancement
- UPnP Media Server – TwonkyMedia Server 5.1
- HTTPS for both Web Administration & Web Server

# - More features with Firmware V3.2: IPv6

## IPv6



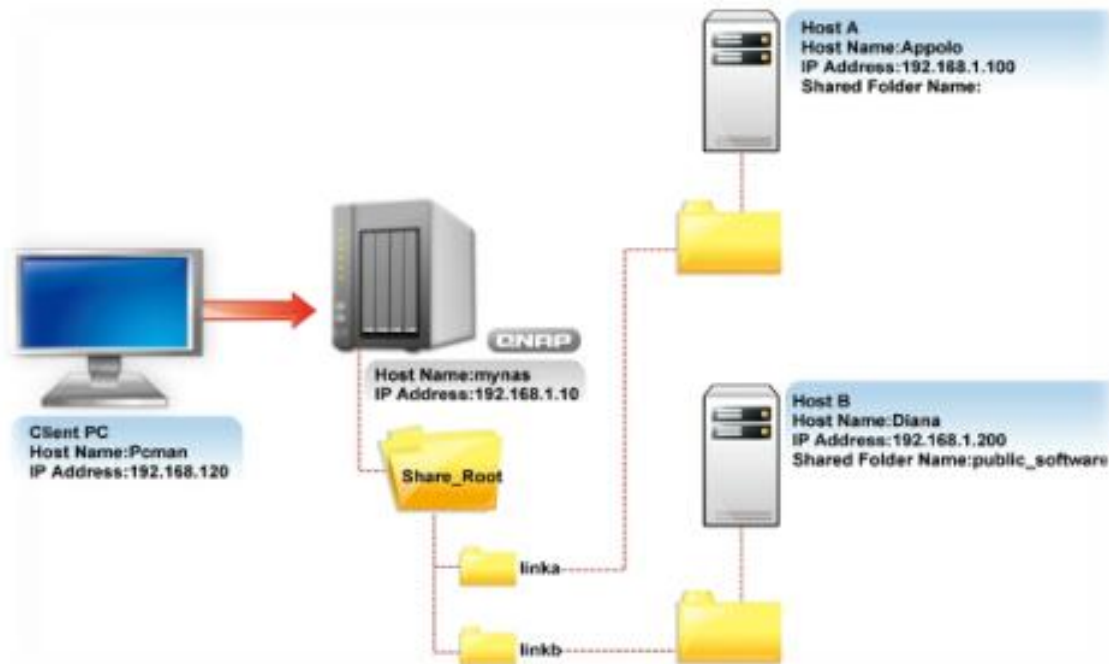
- IPv6 stands for Internet Protocol version 6
- It is supported in the following network protocols
  - HTTP/HTTPS
  - FTP
  - iSCSI/Virtual Disk Drive
  - SSH
- **Dual-stack host**
  - Dual Stack involves running IPv4 and IPv6 at the same time
- **Supports Router Advertisement Daemon (RADVD)**
  - Provides stateless address auto-configuration service for local network
  - Serve as an IPv6 router

# - More features with Firmware V3.2: DFS

## DFS (Share Folder Aggregation)



- DFS stands for Distributed File System
- When used in conjunction with other QNAP NAS or other DFS-capable devices



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=226](http://www.qnap.com/pro_application.asp?ap_id=226)

# - More features with Firmware V3.2: WebDAV

- **WebDAV**

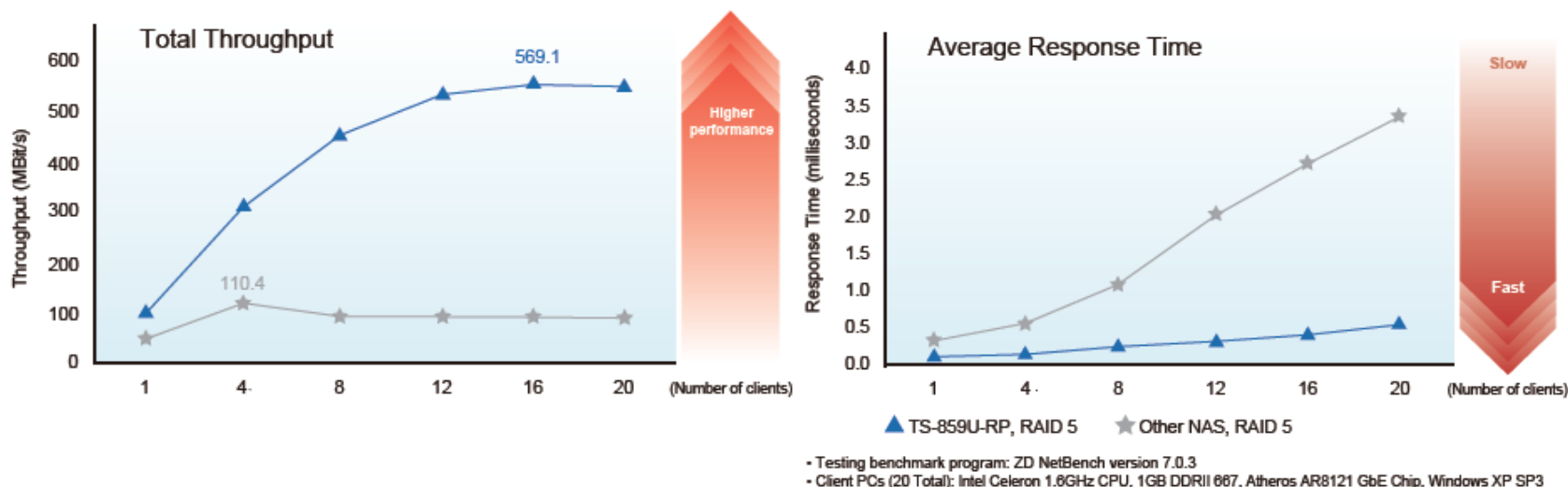
- WebDAV stands for Web-based Distributed Authoring and Versioning
- With WebDAV support, the QNAP NAS users will be able to access the share folders via HTTP/HTTPS protocol remotely.
- Advantages over common network file transfer protocols (FTP, SMB and NFS)
  - Able to use 256-bit AES SSL encryption
  - Bypass firewalls and proxies
  - Faster than Microsoft networking(SMB/CIFS) over VPN



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=229](http://www.qnap.com/pro_application.asp?ap_id=229)

# Exceptional Performance: NetBench

## File Server Performance - NetBench



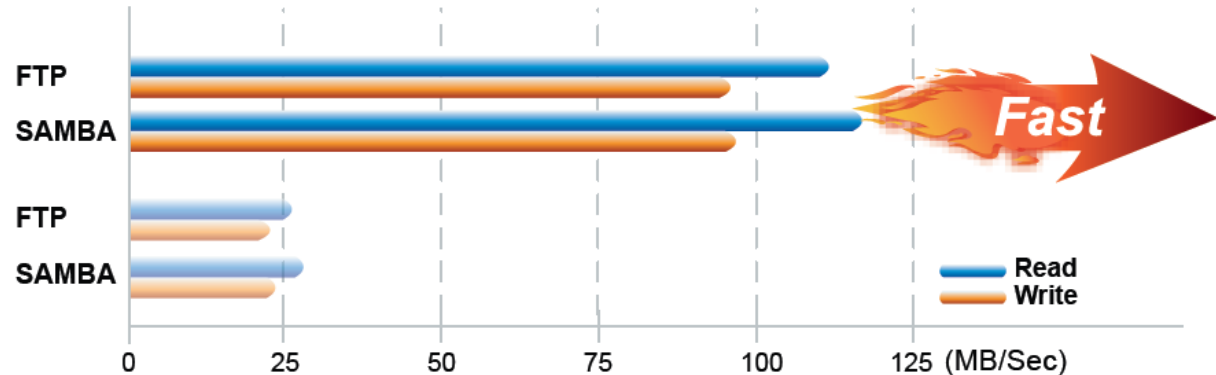
- NetBench is a benchmark program that measures the performance of a file server in handling file I/O requests. It is a **useful indicator of the performance of NAS device/ file server when it is simultaneously accessed by multiple users.**
- The test results show that the **TS-859U-RP delivers exceptional performance (around 569 Mbps when serving 16 clients),** under RAID 5 configuration.

# Exceptional Performance: FTP/ SAMBA

## FTP/ SAMBA

### TS-859U-RP (RAID 5)

### Other NAS (RAID 5)



- FTP/SAMBA Testing Environment: Intel Core2 Quad CPU Q8300 2.50GHz/ 4GB DDRII RAM, WD1500HLFS, Windows 7 Enterprise 32 Bits, Intel PRO 1000 PT Dual Port Server Adapter 82571
- FTP/SAMBA Testing Method: Connect the TS-859U-RP and PC to switch, upload/download 5GB File without Jumbo Frame, FTP Tool: File Zilla

### • Faster W/R Speed in SAMBA/ FTP:

Compared with other NAS, the next generation of Intel ATOM (D510, dual-core) provides exceptional read/ write performance in FTP and SAMBA protocol .



# Efficient Power Management Solution

The Turbo NAS offers efficient power management solutions:

- **Hard Disk Standby :**

Users can configure the hard disks to enter standby mode if there is no disk access within the specified period.

- **Scheduled power on/ off (max. 15 sets):**

The flexible scheduled power on/off feature helps users to manage the NAS server's up time according to the demands.

## Low Power Consumption (with 8 hard drives installed)

Power Consumption

TS-859U-RP (sleep mode)



TS-859U-RP (In operation)



PC server



# VMware Ready



## The Turbo NAS Business Series is **VMware Ready** as the proof of compatibility with **vSphere 4 (ESX 4.0)**

The detailed lists show actual vendor devices that are either physically tested or are similar to the devices tested by VMware or VMware partners. VMware provides support only for the devices that are listed in this document

Click on the 'Model' for details.

Results Found: 11 Results Displayed: 1-11 [Print] [Save/View as PDF][Export as CSV/Excel]

Partner Name	Model	Array Type	Supported Releases
QNAP Systems, Inc	TS-239 Pro II	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-259 PRO	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-439 Pro II	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-459 PRO	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-459U	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-559 PRO	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-659 PRO	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-809 PRO	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-809U	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-859 Pro	NAS	ESX 4.0 U1, ESX 4.0
QNAP Systems, Inc	TS-859U	NAS	ESX 4.0 U1, ESX 4.0



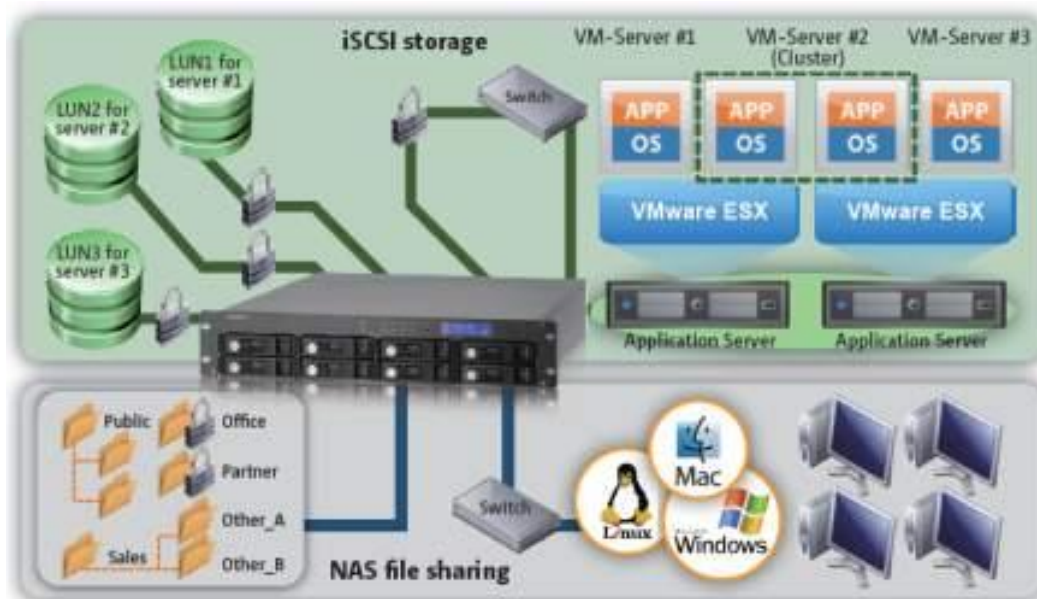
Source from:

[http://www.vmware.com/resources/compatibility/search.php?action=search&deviceCategory=san&productId=1&advancedORbasic=advanced&maxDisplayRows=50&key=&release\[\]=-1&datePosted=-1&partnerId\[\]=316&arrayTypeId\[\]=3&firmware\[\]=-1&isSVA=0&rorre=0](http://www.vmware.com/resources/compatibility/search.php?action=search&deviceCategory=san&productId=1&advancedORbasic=advanced&maxDisplayRows=50&key=&release[]=-1&datePosted=-1&partnerId[]=316&arrayTypeId[]=3&firmware[]=-1&isSVA=0&rorre=0)

# iSCSI + NAS Combo Solution: iSCSI Application

For business users, **a high-performance and flexible storage expansion solution for existing applications is required**. However, DAS (Direct Attached Storage) is not an efficient solution and a Fiber Channel SAN is too expensive and complicated to implement.

The Turbo NAS can be used **for both file sharing and iSCSI storage concurrently**. The Turbo NAS is also **the most affordable and flexible virtualization solution**.



# Advanced iSCSI for Virtualization Deployment

- **Flexible multiple LUN management**

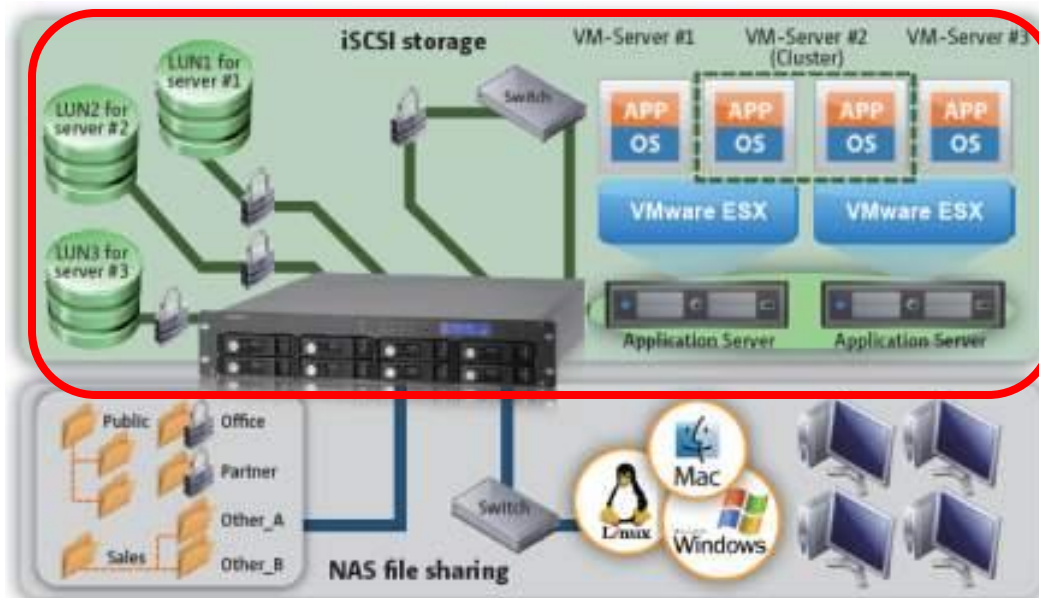
- ✓ Multiple target and multiple LUN per target
- ✓ Map/Un-map LUNs to/from targets

- **Secure IP SAN environment**

- ✓ CHAP Authentication
- ✓ LUN Masking

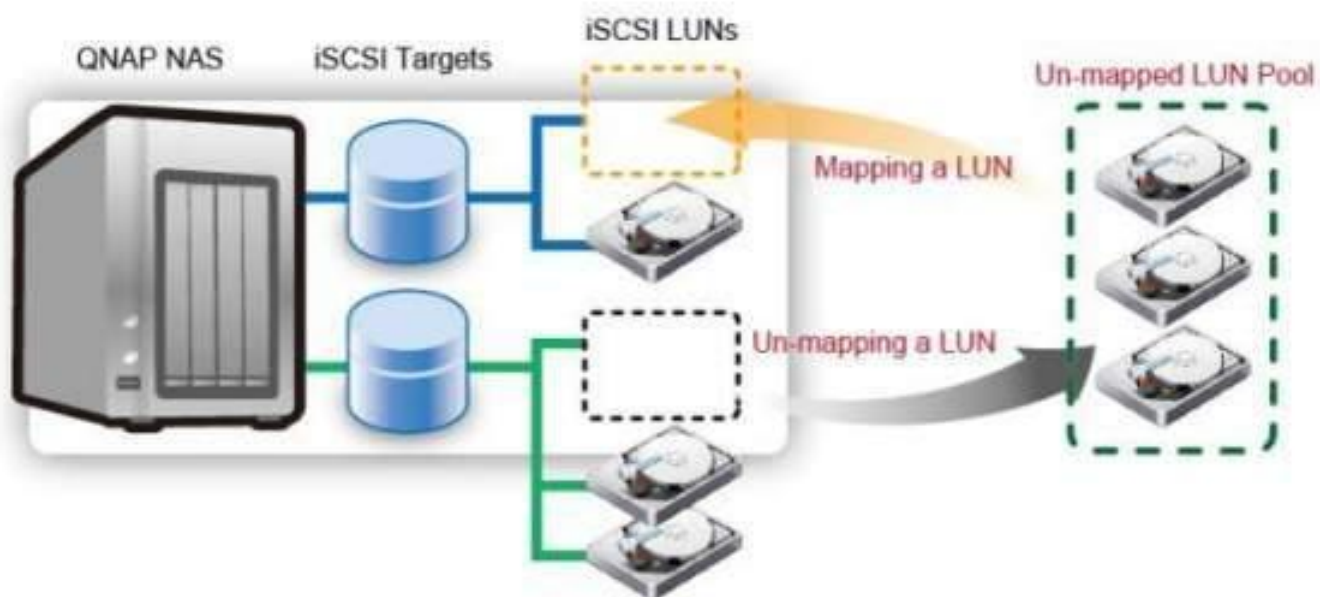
- **Designed for virtualized and clustered environments**

- ✓ Support **SPC-3**
- ✓ Support **MPIO** (Multipath Input Output)
- ✓ Support **MC/S** (Multiple Connections per Session)



# - Flexible Multiple LUN Management

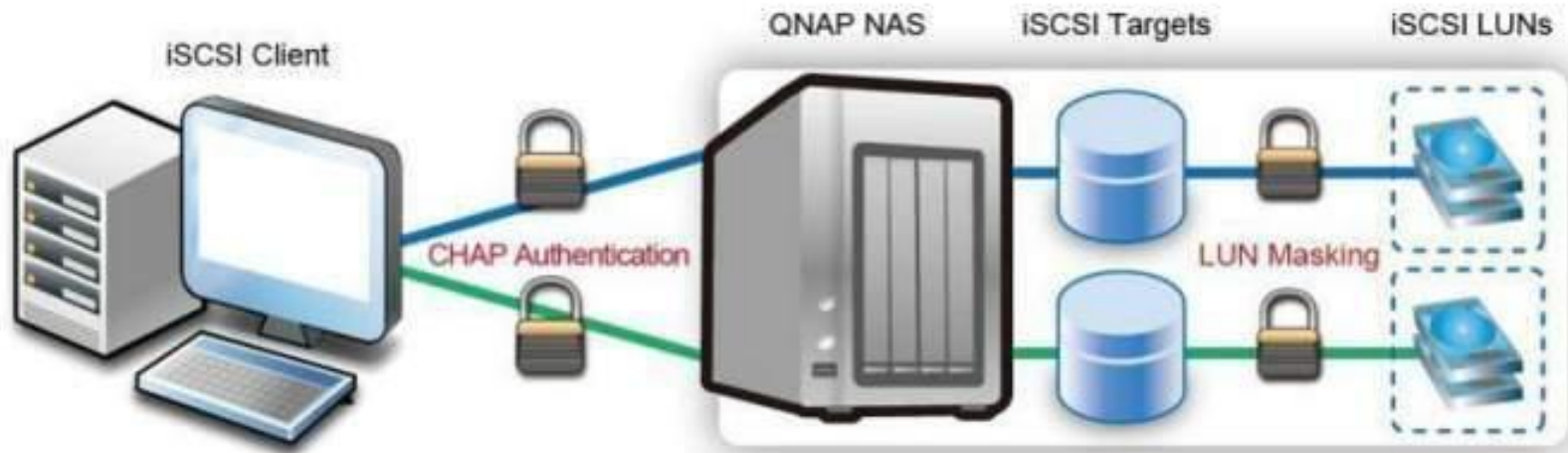
- Multiple LUNs per Target
- LUN Mapping, Un-Mapping



**BENEFITS High Light**  
Flexible management and deployment

# - Secure IP SAN Environment

- CHAP Authentication
- LUN Masking

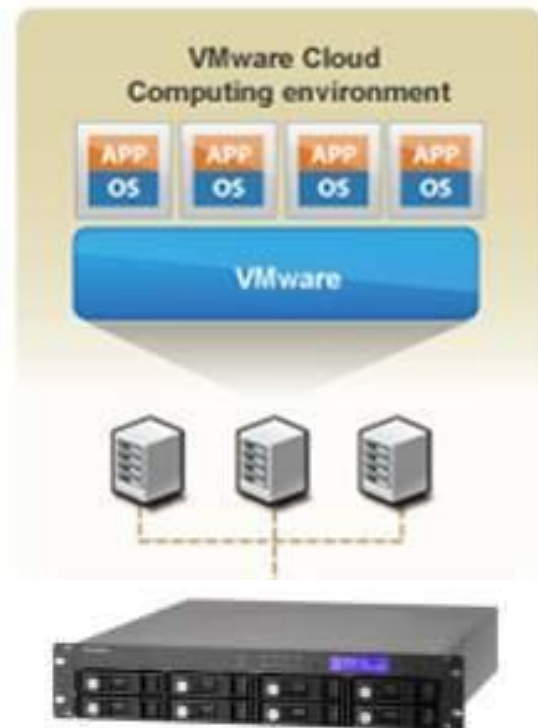


# - Designed for Virtualized and Clustered Environments

QNAP NAS are **SPC-3 compliant**. You can build a shared iSCSI volume for:

- **Windows 2008 failover clustering** and Cluster Shared Volumes Support to build windows server **Hyper-V clusters** and execute virtual machine live migration between Hyper-V hosts.

- **iSCSI datastore for VMware** will allow you to build a **VMware HA clusters**, and also enable **VMware FT**.



# - Advanced MPIO and MC/S Supported

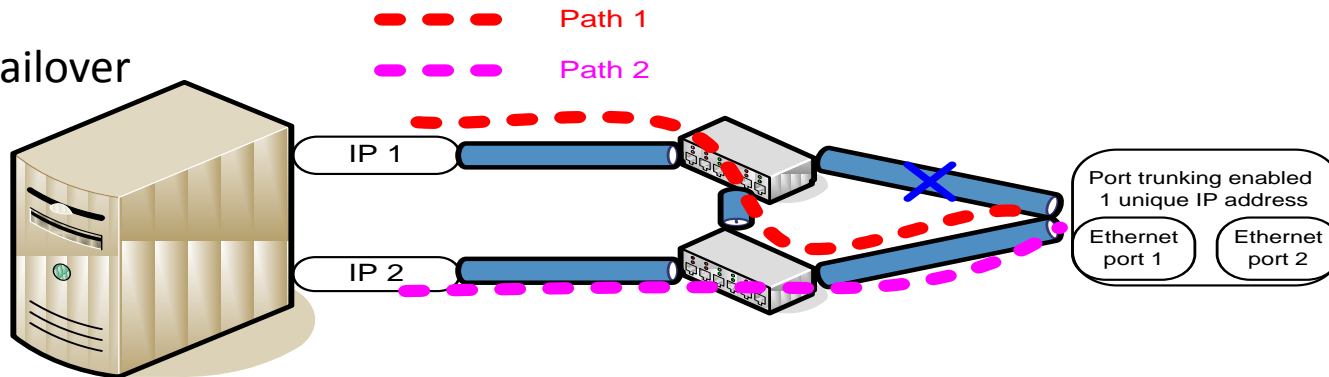
## MPIO (Multipath Input Output):

- ✓ Supported by many applications
- ✓ Failover
- ✓ Load Balancing

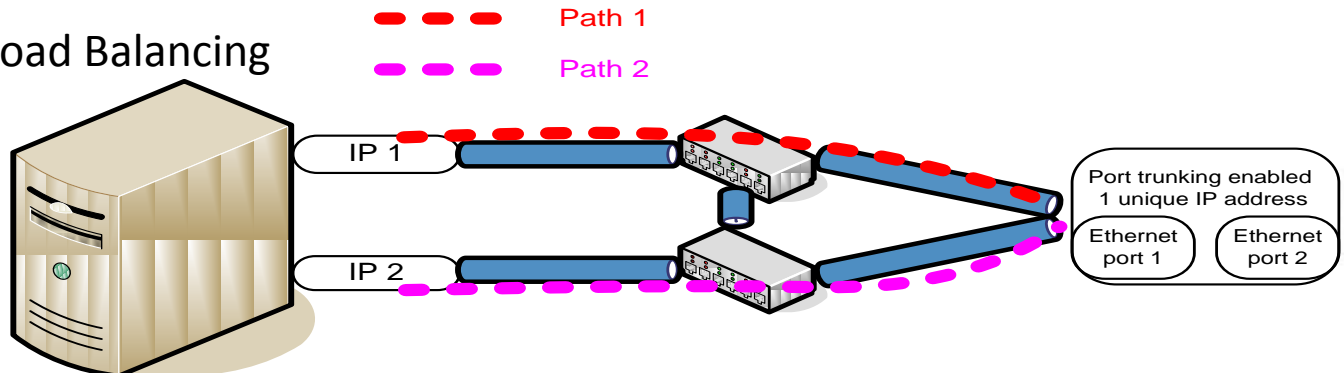
## MC/S (Multiple Connections per Session):

- ✓ Enhanced Performance
- ✓ Failover
- ✓ Load Balancing

### Failover

















### Load Balancing





# Why QNAP iSCSI Solution?

## • QNAP NAS iSCSI Features vs. Other NAS:

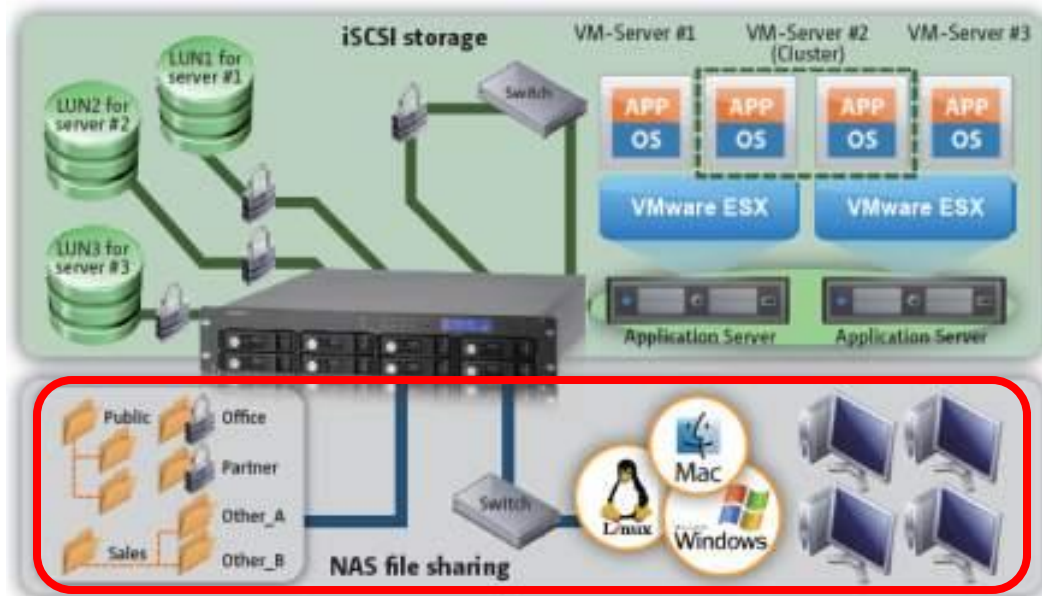
iSCSI feature	QNAP NAS	Other NAS
VMware Ready certified iSCSI array*		
SPC-3 for clustered environment deployment		
MC/S for failover, load balancing and performance gain.		
MPIO for failover and load balancing.		
LUN masking for advanced security		
LUN mapping for flexible management		
Thin Provisioning for efficient disk usage		

\* The submission for Certification of all TS-x59 series is ongoing.

# iSCSI + NAS Combo Solution: NAS Application

## The Feature-rich and Integrated Application for Business

The Turbo NAS supports file sharing across [Windows](#), [Mac](#), [Linux](#) and [UNIX](#) platforms. Versatile business application servers such as [file server](#), [FTP server](#), [printer server](#), [web server](#), and [Windows AD](#) are provided. The dominant management features, e.g. [WebDAV](#), [share folder aggregation](#), [Wake On LAN](#), [scheduled power on/ off](#), [HDD S.M.A.R.T](#), [comprehensive log systems](#) are also available.

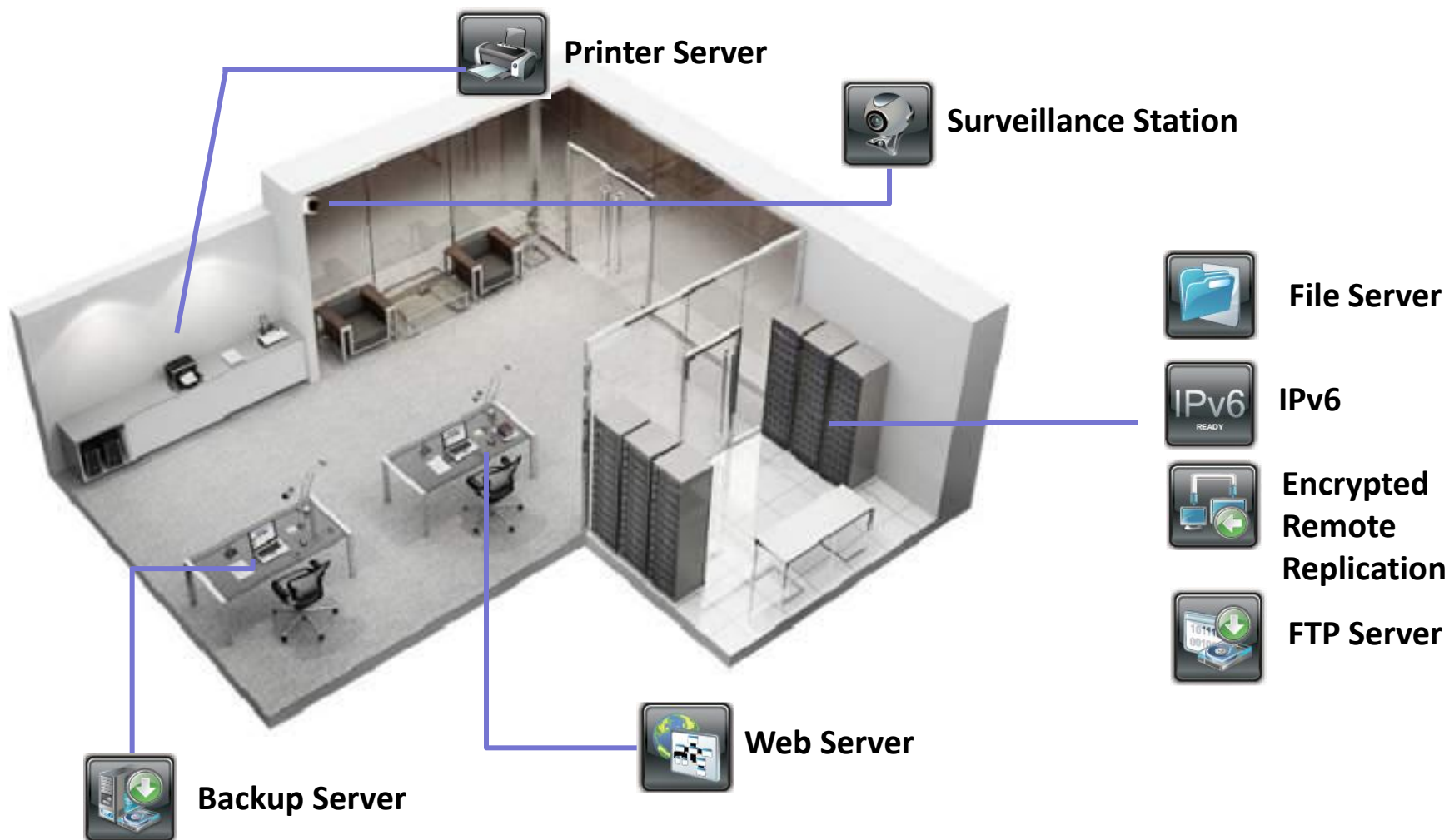


# QNAP All-in-one Turbo NAS Application



# QNAP All-in-one Server Business Application

The Turbo NAS provides diversified server applications in the business environment



# Advanced RAID and Disk Management

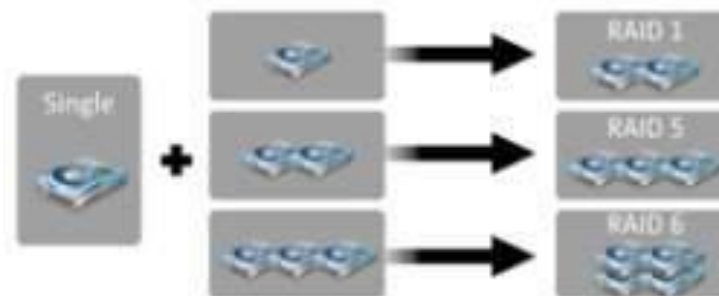
## Online RAID Capacity Expansion

- Online RAID Capacity Expansion enables users to flexibly expand the storage capacity with all the data reserved.
- Replace the hard drives on Turbo NAS Series step by step to increase the storage capacity.



## 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.



## HDD S.M.A.R.T (Self-monitoring Analysis and Reporting Technology)

HDD S.M.A.R.T offers a **quick overview** for the Hard Disk Drive Status which enables users to monitor the status of hard disk drive to check potential problems. This tool helps prevent the unexpected failure of hard disk and avoid critical data loss.

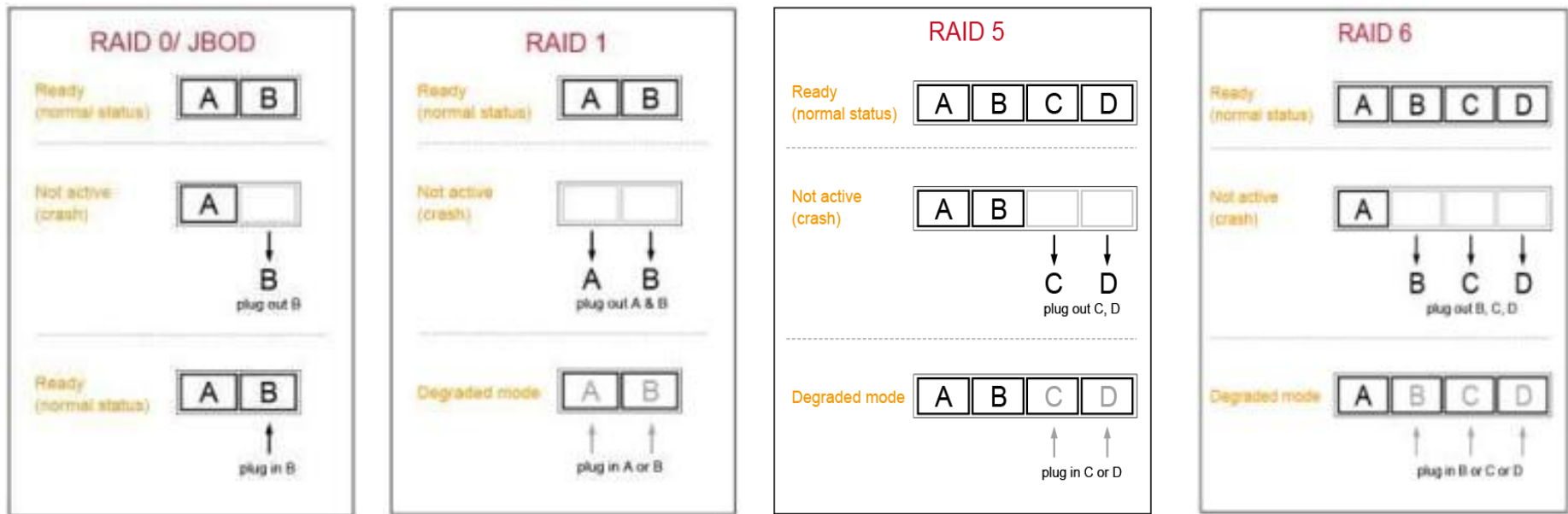
The screenshot shows a web interface for 'HDD SMART'. A yellow callout box on the left says 'Select the hard disk to check the HDD health status.' Another yellow callout box says 'In the summary page, users can view the health status of the selected drive.' The main interface shows a 'Good' status in a green circle. On the right, there is a red cross icon in a blue square. Below the status, there is a table with drive information:

Item	Value	Warning
Hard disk model	Western Digital Green Series	
Drive capacity	400 GB	
Hard drive health	Good	
Hard drive temperature	33°C	
Test time	---	
Test result	Not tested	

# RAID Recovery

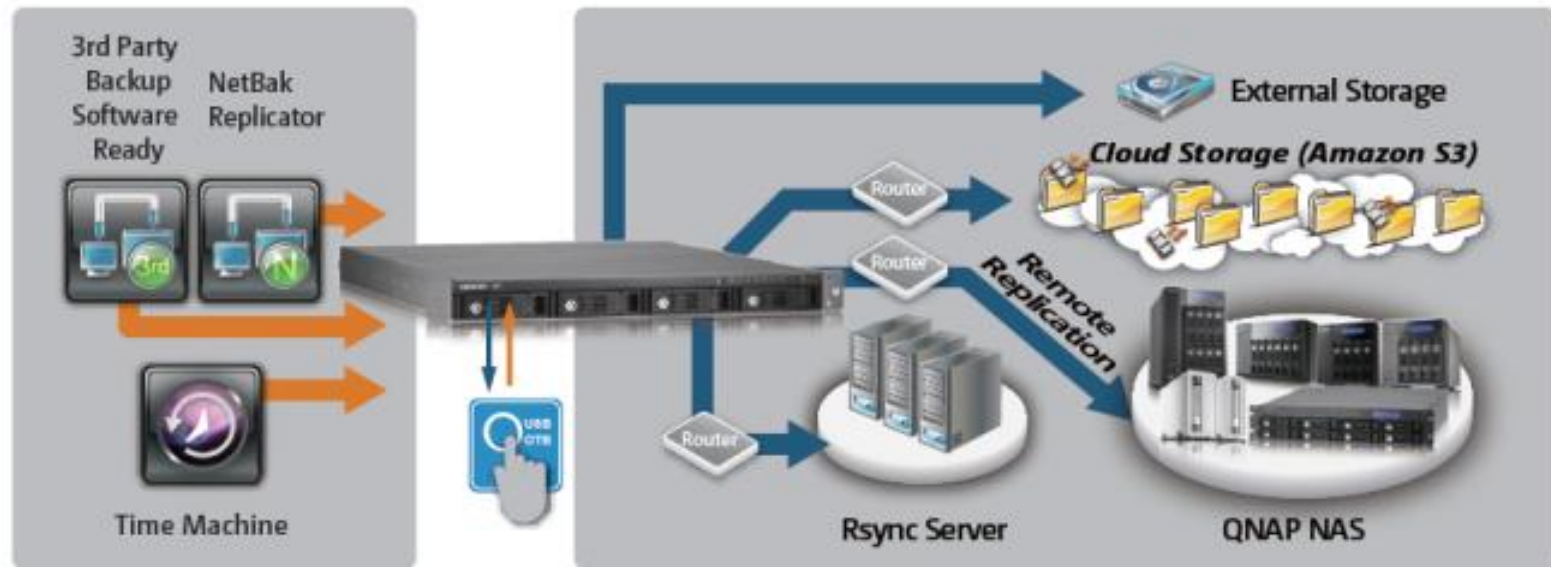
## RAID Recovery

RAID Recovery is QNAP's exclusive technology. It can recover failed RAID 1/ 5/ 6 to the degraded mode and failed RAID 0 and JBOD to the normal state.



# The Most Complete Backup Solution

The NAS offers complete backup solution for data protection, including cloud-based storage backup (Amazon S3), Apple Time Machine support, encrypted remote replication, third party software backup, one-touch-copy backup and QNAP exclusive Windows-based utility NetBak Replicator. The users can choose different backup modes for redundant data backup.



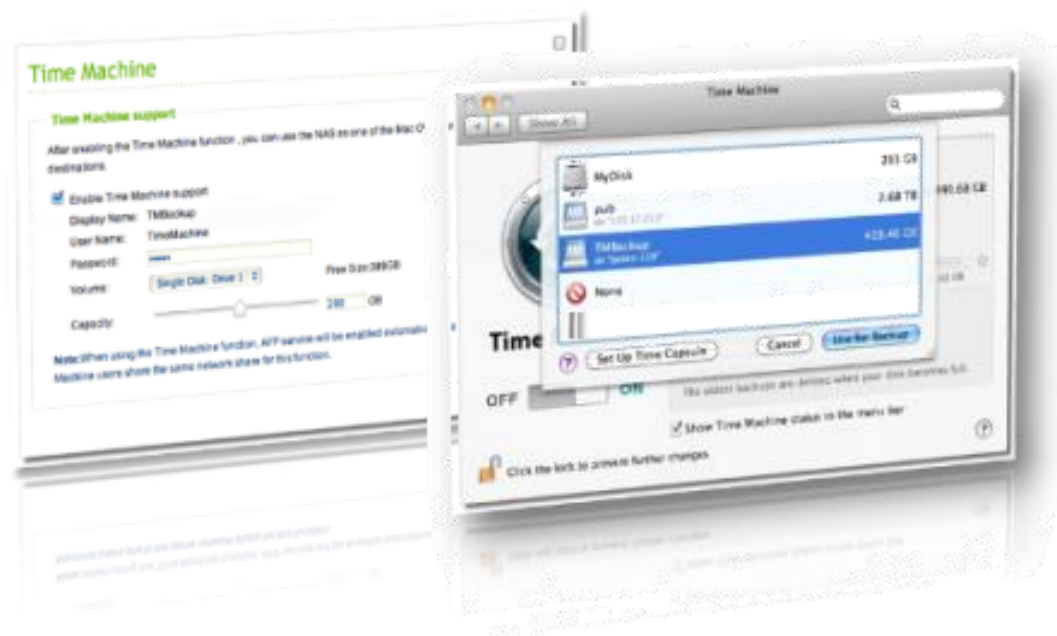
# - Apple Time Machine Support

## Apple Time Machine® Support

**NEW!**



- Easy configuration
- Serves as the Time Machine® backup destination for multiple Macs running OS X (10.5 or later)
- Quota limitation



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=227](http://www.qnap.com/pro_application.asp?ap_id=227)



# - Cloud-based storage backup

## Cloud Storage Backup - Amazon S3

**NEW!**



- An online storage web service offered by AWS (Amazon Web Services)
- Store and retrieve any amount of data, at any time



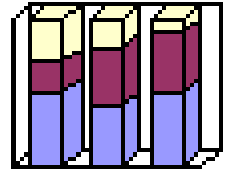
Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=228](http://www.qnap.com/pro_application.asp?ap_id=228)

# 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

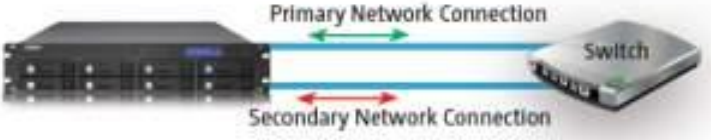


All events | Clear | Save

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.

# Benefits of Dual LAN Deployment

Scenario	Benefit to your company
<p data-bbox="421 401 575 439">Failover</p>  <p>The diagram shows a server rack on the left and a switch on the right. Two horizontal lines connect them: a top blue line with a double-headed arrow labeled 'Primary Network Connection' and a bottom red line with a double-headed arrow labeled 'Secondary Network Connection'.</p>	<p data-bbox="973 472 1740 572">Provides continuous services when one network port failed.</p>
<p data-bbox="353 715 645 758">Load Balancing</p>  <p>The diagram shows a server rack on the left and a switch on the right. Multiple horizontal lines connect them, with blue lines on top and red lines on bottom, indicating traffic being distributed across multiple connections.</p>	<ul data-bbox="973 739 1734 953" style="list-style-type: none"><li>• Aggregates bandwidth to boost the file transfer speed.</li><li>• Data traffic is evenly distributed to balance network loading</li></ul>
<p data-bbox="349 1065 649 1108">Multi-IP Setting</p>  <p>The diagram shows a central server rack connected to two switches. The left switch is labeled 'LAN 1' and has two desktop computers connected to it. The right switch is labeled 'LAN 2' and also has two desktop computers connected to it.</p>	<p data-bbox="973 1132 1696 1232">Allows sharing among different workgroups in two different subnets.</p>

# Authority Control

## Windows AD

The Windows AD feature enables you to retrieve the user accounts from the Windows AD server to the NAS to reduce the time and effort for account setup. Users can use the same set of login name and password to access the NAS.



## Share Folder Aggregation

You can easily access the share folders of other servers on Microsoft Networking through the “portal folder” on the Turbo NAS. This saves your time and effort to login different servers one by one.



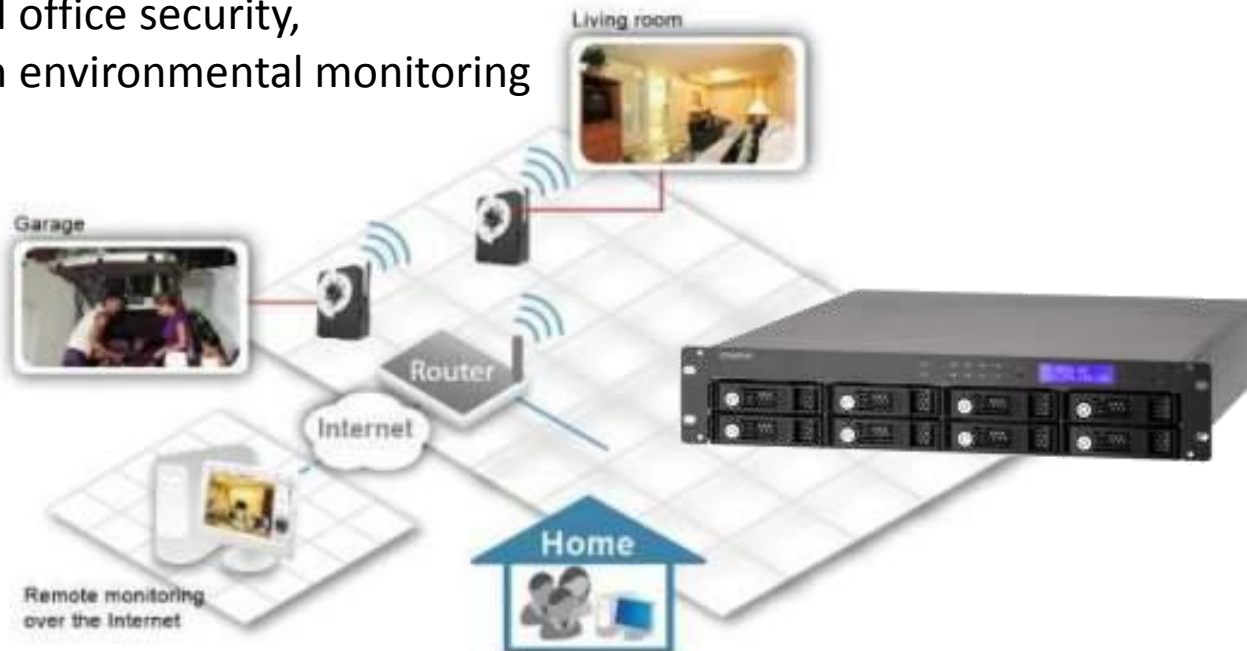
Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=226](http://www.qnap.com/pro_application.asp?ap_id=226)

# 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



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=70](http://www.qnap.com/pro_application.asp?ap_id=70)

# 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.



QPKG Packages & Application: <http://www.qnap.com/QPKG.asp>

# QNAP NAS Community Forum

QNAP forum is **the largest NAS community** with more than **40,200 members** (Feb. 2010). QNAP users can share experience, find answers, get direct support and receive the latest update information here. Meanwhile, you can also find other QNAP NAS aficionado on the QNAP Facebook and twitter page!



- Forum: <http://forum.qnap.com/>
- Twitter: [http://twitter.com/QNAP\\_nas](http://twitter.com/QNAP_nas)
- Facebook: <http://www.facebook.com/QNAPSys>

# Appendix

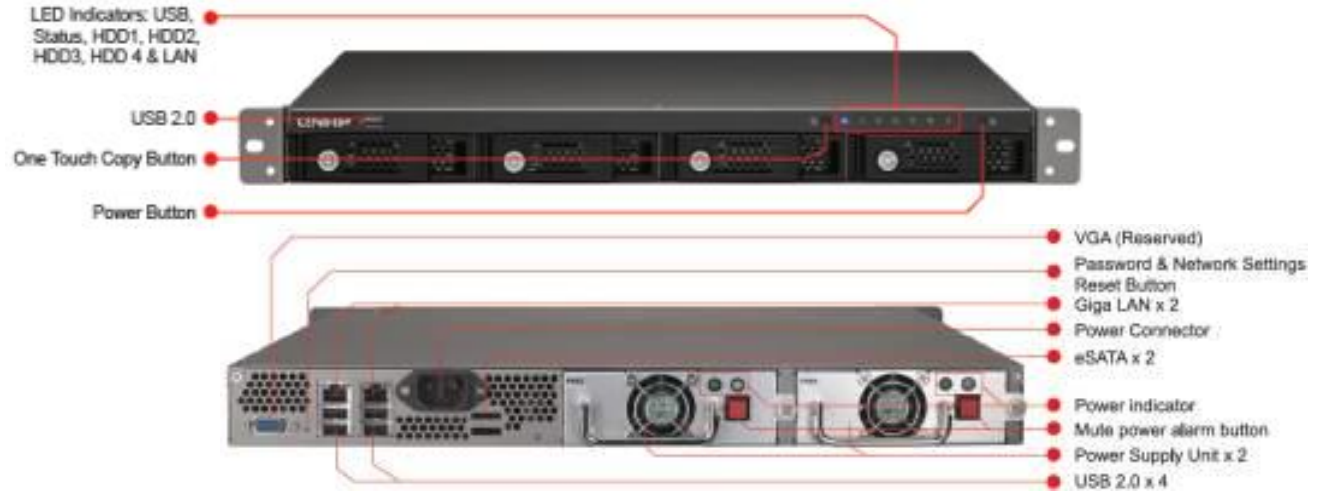


# Product Specifications

# Product Specifications: TS-459U-RP/ SP



•TS-459U-RP/SP: [http://www.qnap.com/pro\\_detail\\_feature.asp?p\\_id=152](http://www.qnap.com/pro_detail_feature.asp?p_id=152)



Hardware	Max. Number of HDDs	4
	Dimensions	<ul style="list-style-type: none"> <li>•44(H) x 439(W) x 499(D) mm</li> <li>•1.73(H) x 16.97(W) x 19.65(D) inch</li> </ul>
	Weights	<ul style="list-style-type: none"> <li>• Net weight: 7.63 kg/ 16.82 lb</li> <li>•Gross weight: 12.1 kg/ 26.68 lb</li> </ul>
	Power	<ul style="list-style-type: none"> <li>•AC Input Power Voltage: 100V-240V</li> <li>•Power Frequency: 50Hz-60Hz</li> <li>•Internal Power Supply: 150W</li> </ul>
	Fan	Smart Fan: 3 (4cm, 12V DC)

Software	Disk Management	Single Disk, JBOD, RAID 0/ 1/5 /5+spare/ 6
	Access Right Management	Max. User Accounts: 4096 Max. Groups: 512 Max. Share Folders: 512
	Support IP Cameras	4
	Touch-N-Go Installation	No

# Product Specifications: TS-859U-RP



• TS-859U-RP: [http://www.qnap.com/pro\\_detail\\_feature.asp?p\\_id=153](http://www.qnap.com/pro_detail_feature.asp?p_id=153)



Hardware	Max. Number of HDDs	8
	Dimensions	<ul style="list-style-type: none"> <li>•88.9(H) x 482.6(W) x 531.5(D) mm</li> <li>•3.5(H) x 19(W) x 20.93(D) inch</li> </ul>
	Weights	<ul style="list-style-type: none"> <li>•Net weight: 12.15Kg/ 26.79 lbs</li> <li>•Gross weight: 16.7Kg/ 36.82 lbs</li> </ul>
	Power	<ul style="list-style-type: none"> <li>•AC Input Power Voltage: 100V-240V</li> <li>•Power Frequency: 47Hz-63Hz</li> <li>•Internal Power Supply: 300W</li> </ul>
	Fan	Smart Fan: 3 (8cm, 12V DC)

Software	Disk Management	Single Disk, JBOD, RAID 0/ 1/ 5/ 5+spare/ 6/ 6+spare
	Access Right Management	Max. User Accounts: 4096 Max. Groups: 512 Max. Share Folders: 512
	Support IP Cameras	4
	Touch-N-Go Installation	Yes

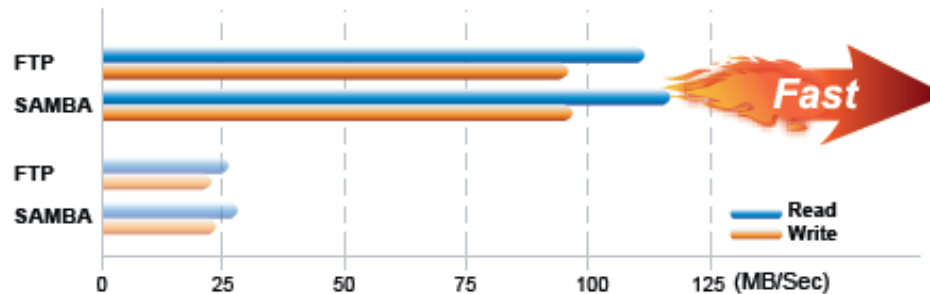
# Performance

# Exceptional Performance: TS-859U-RP

## FTP/ SAMBA

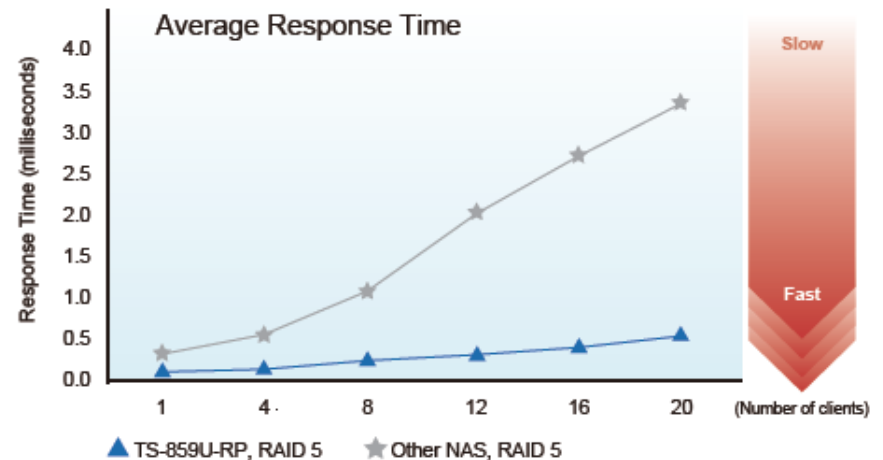
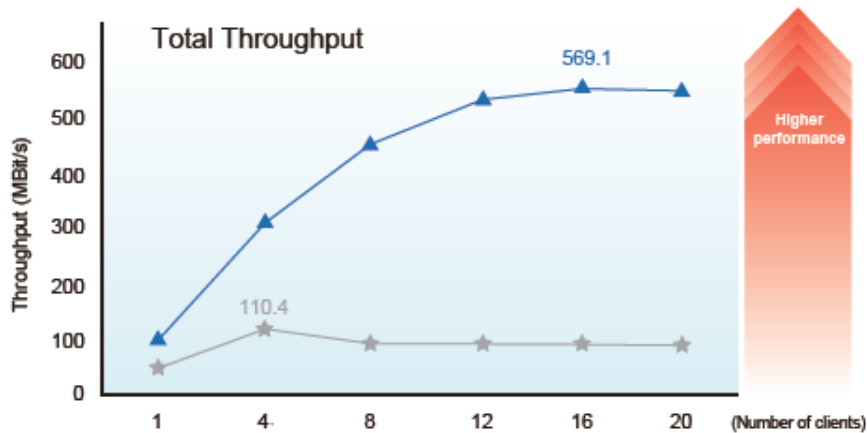
### TS-859U-RP (RAID 5)

### Other NAS (RAID 5)



- FTP/SAMBA Testing Environment: Intel Core2 Quad CPU Q8300 2.50GHz/ 4GB DDRII RAM, WD1500HLFS, Windows 7 Enterprise 32 Bits, Intel PRO 1000 PT Dual Port Server Adapter 82571
- FTP/SAMBA Testing Method: Connect the TS-859U-RP and PC to switch, upload/download 5GB File without Jumbo Frame, FTP Tool: File Zilla

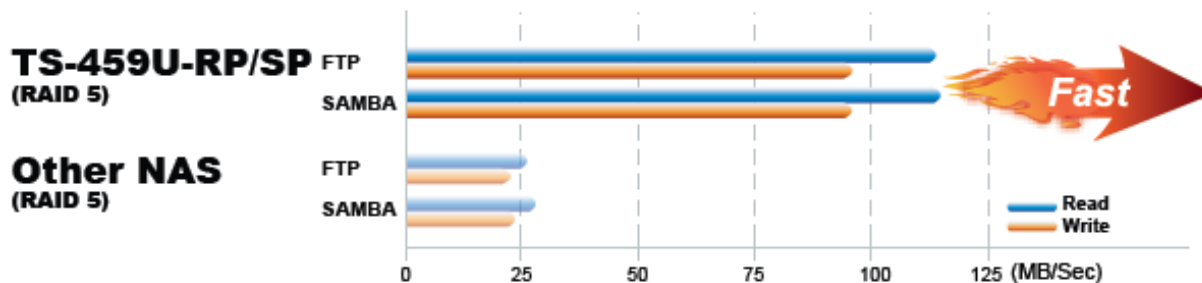
## File Server Performance - NetBench



- Testing benchmark program: ZD NetBench version 7.0.3
- Client PCs (20 Total): Intel Celeron 1.6GHz CPU, 1GB DDRII 667, Atheros AR8121 GbE Chip, Windows XP SP3

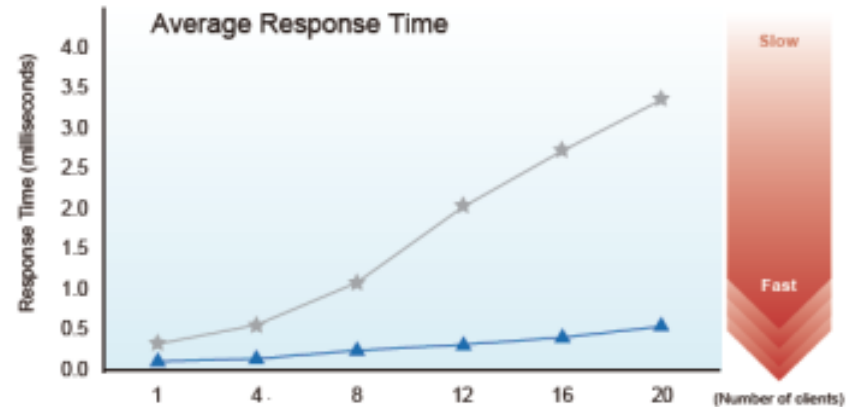
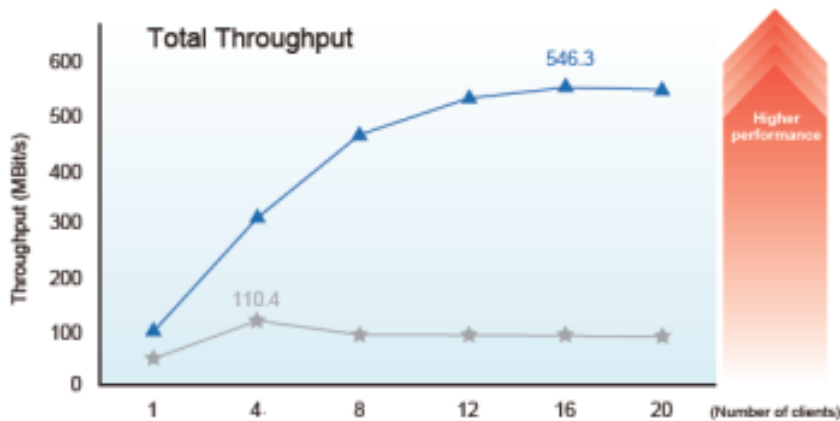
# Exceptional Performance: TS-459U-RP/ SP

## FTP/ SAMBA



- FTP/SAMBA Testing Environment: Intel Core2 Quad CPU Q8300 2.50GHz/ 4GB DDRII RAM, WD1500HLFS, Windows 7 Enterprise 32 Bits, Intel PRO 1000 PT Dual Port Server Adapter 82571
- FTP/SAMBA Testing Method: Connect the TS-459U-RP /SP and PC to switch, upload/download 5GB File without Jumbo Frame, FTP Tool: File Zilla

## File Server Performance - NetBench



▲ TS-459U-RP/SP, RAID 5 ★ Other NAS, RAID 5

- Testing benchmark program: ZD NetBench version 7.0.3
- Client PCs (20 Total): Intel Celeron 1.6GHz CPU, 1GB DDRII 667, Atheros AR8121 GbE Chip, Windows XP SP3

# Efficient Power Management

# Efficient Power Management

The Turbo NAS offers efficient power management solutions:

- **Hard Disk Standby :**

Users can configure the hard disks to enter standby mode if there is no disk access within the specified period.

- **Scheduled power on/ off (max. 15 sets):**

The flexible scheduled power on/off feature helps users to manage the NAS server's up time according to the demands.

- **Power Consumption:**

## Low Power Consumption (with 8 hard drives installed)

Power Consumption

TS-859U-RP (sleep mode)



TS-859U-RP (In operation)



PC server



## Low Power Consumption (with 4 hard drives installed)

Power Consumption

TS-459U-RP/SP (sleep mode)



TS-459U-RP/SP (In operation)



PC server





# All-in-one NAS Server Application

# QNAP All-in-one Turbo NAS Application

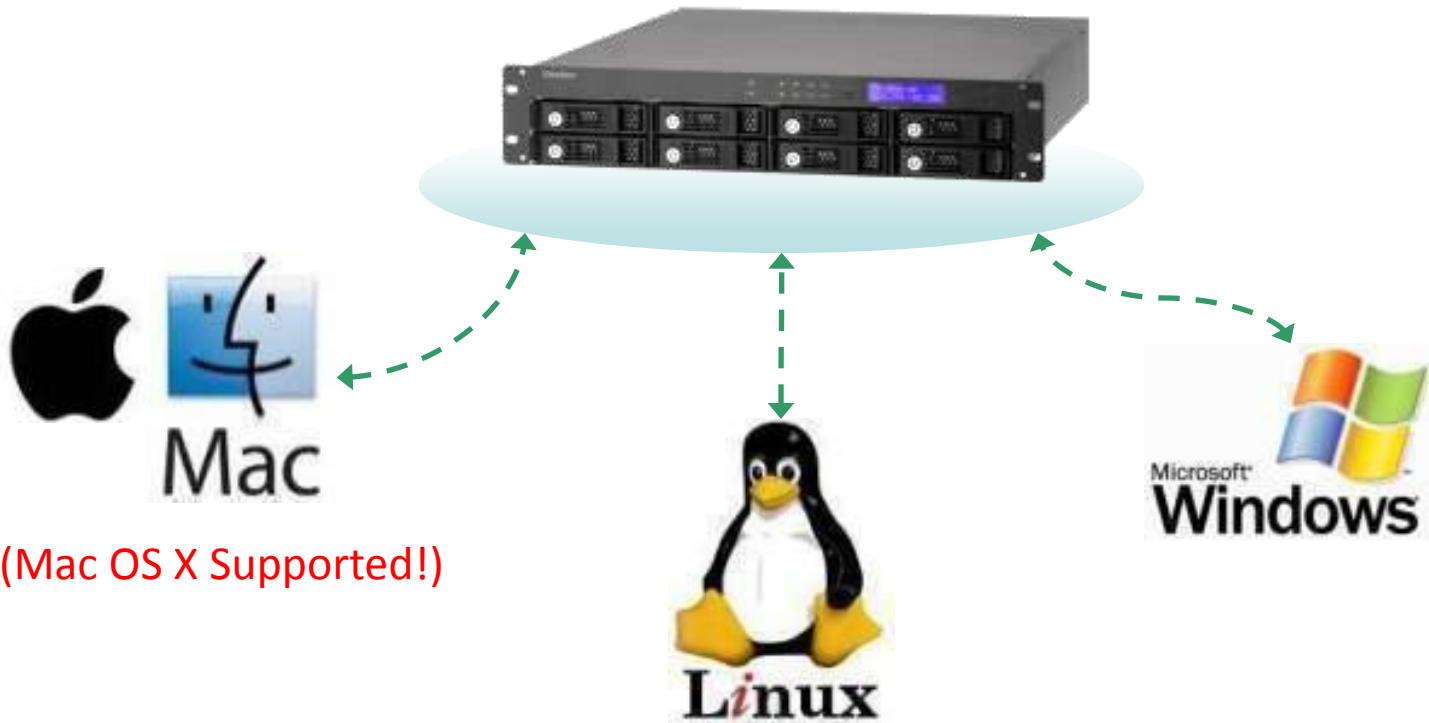


# A. All-in-one Server: File Server -1



## 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!

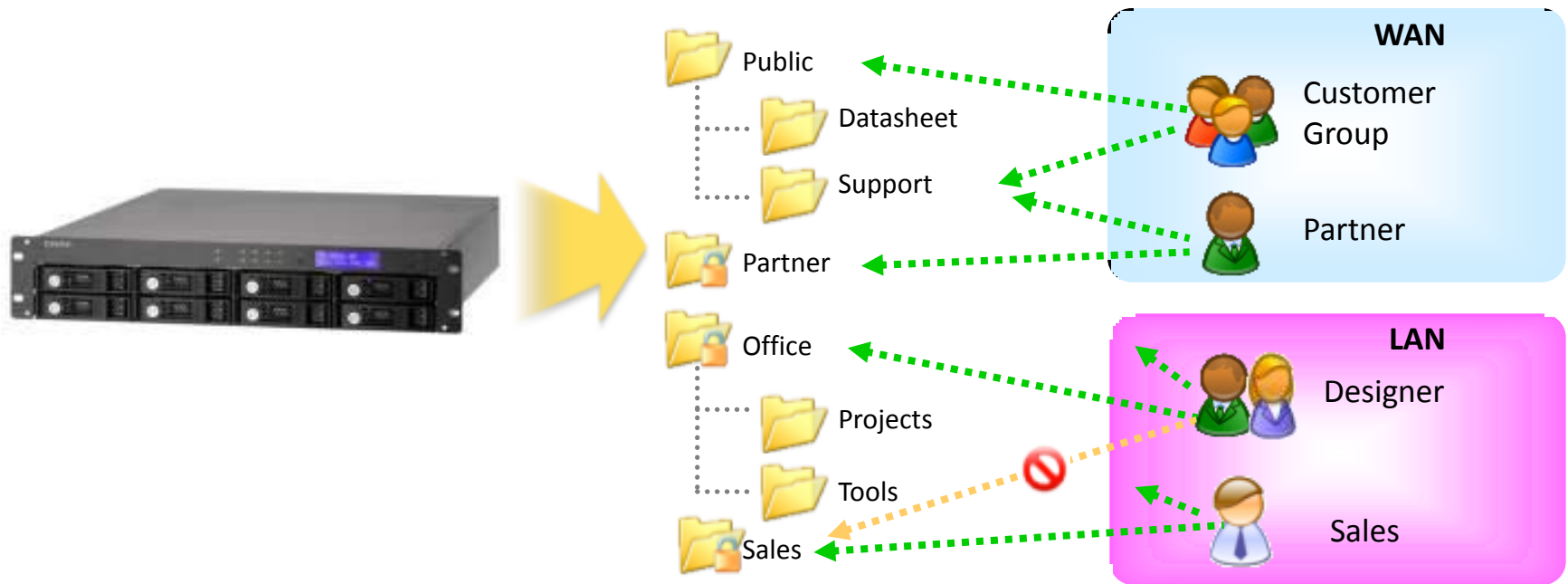


# A. All-in-one Server: File Server -2



## 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 Turbo NAS web management interface. At the top, a navigation bar shows 'Home >> Access Right Management >> Users' and 'Welcome admin | Logout English'. The main heading is 'Users'. Below it, there are buttons for 'Create A New User' and 'Create Multiple Users'. A table lists users with columns for 'User Name', 'Quota', and 'Action'. The 'admin' and 'ssods' users are listed with a quota of '--'. The 'Action' column contains icons for user management. Two wizard windows are overlaid on the interface: 'Multiple Users Creation Wizard' (Step 2 of 5) and 'Add A New User' (Step 1 of 5). The 'Add A New User' wizard lists settings: User Information, Quota, User Group, Personal Share Folder, and Privilege.

User Name	Quota	Action
admin	--	[Icons]
ssods	--	[Icons]

**Multiple Users Creation Wizard**  
Step 2 of 5  
Account Login Info  
User Name Prefix: [ ]  
User Name Start No.: [ ]  
User Number: [ ]  
Password: [ ]  
Verify Password: [ ]  
Note: For increased security, password should contain special characters.  
[BACK] [NEXT]

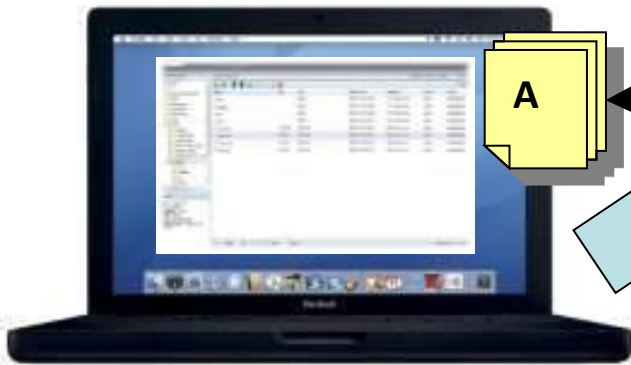
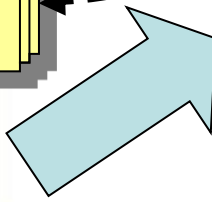
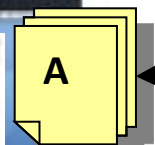
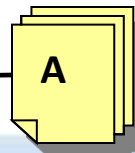
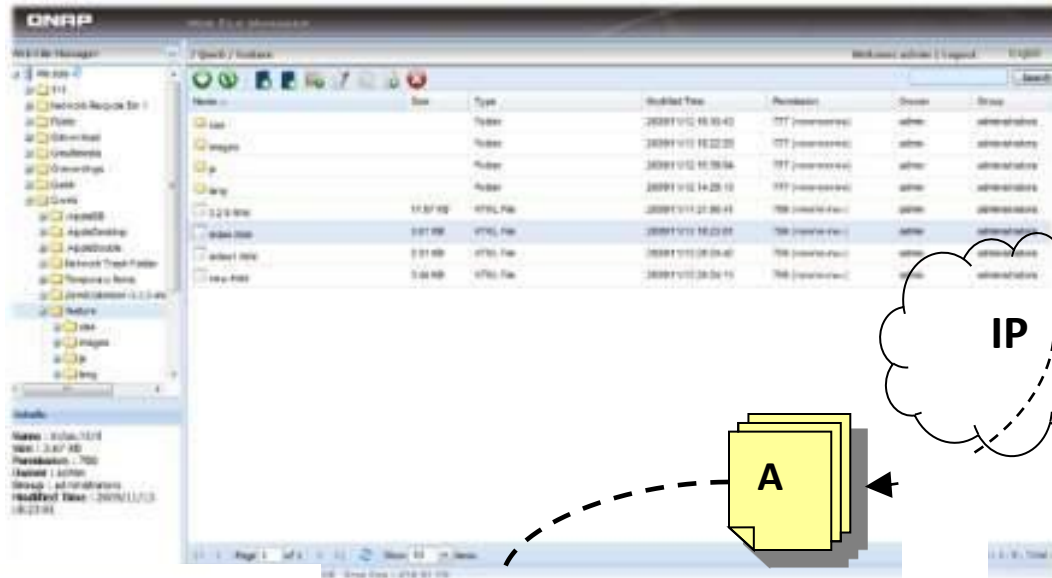
**Add A New User**  
Step 1 of 5  
Add A New User  
This wizard guides you through the following settings:  
• User Information  
• Quota  
• User Group  
• Personal Share Folder  
• Privilege  
[NEXT] [CANCEL]

# 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!



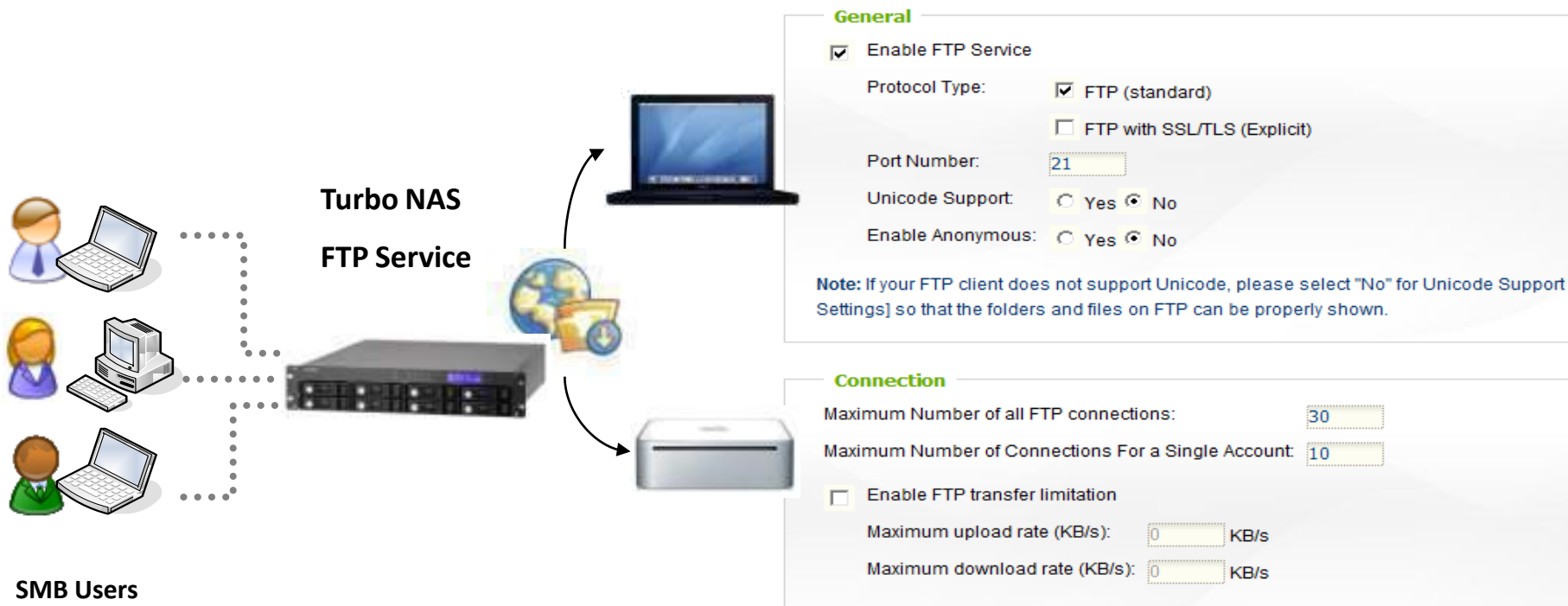
# B. All-in-one Server: FTP Server -1



*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 screenshot displays the Joomla! 1.5 website interface. At the top, the Joomla! logo is accompanied by the tagline "...because open source matters". Navigation tabs for "About Joomla!", "Features", "News", and "The Community" are visible. The main content area includes a "Main Menu" with links to Home, Joomla! Overview, Joomla! License, and more. A "Latest News" section lists recent updates, and a "Popular" section highlights Joomla! Overview, Extensions, and Joomla! License Guidelines. A "Welcome to the Frontpage" message from the Administrator is also present. On the right, a "Polls" section shows Joomla! is used by various site types like Community Sites and Public Brand Sites. The left sidebar shows a "phpBB" forum interface with a search bar and a list of forum topics.

Blog

Web album

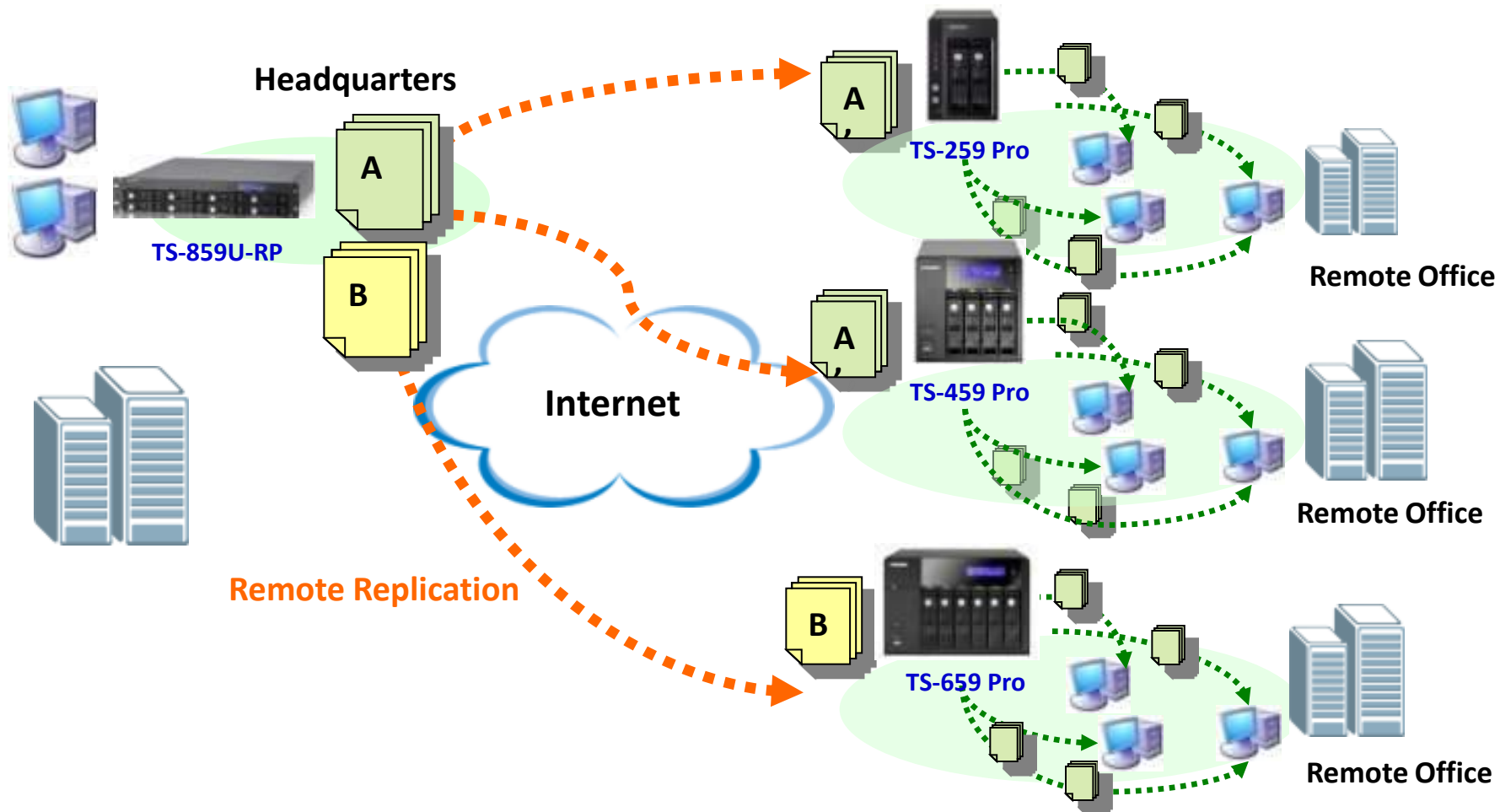
Community Website

# D. All-in-one Server: Remote Replication

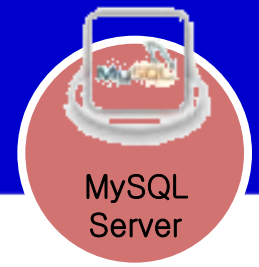


## NAS-to-NAS Backup over the Network

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

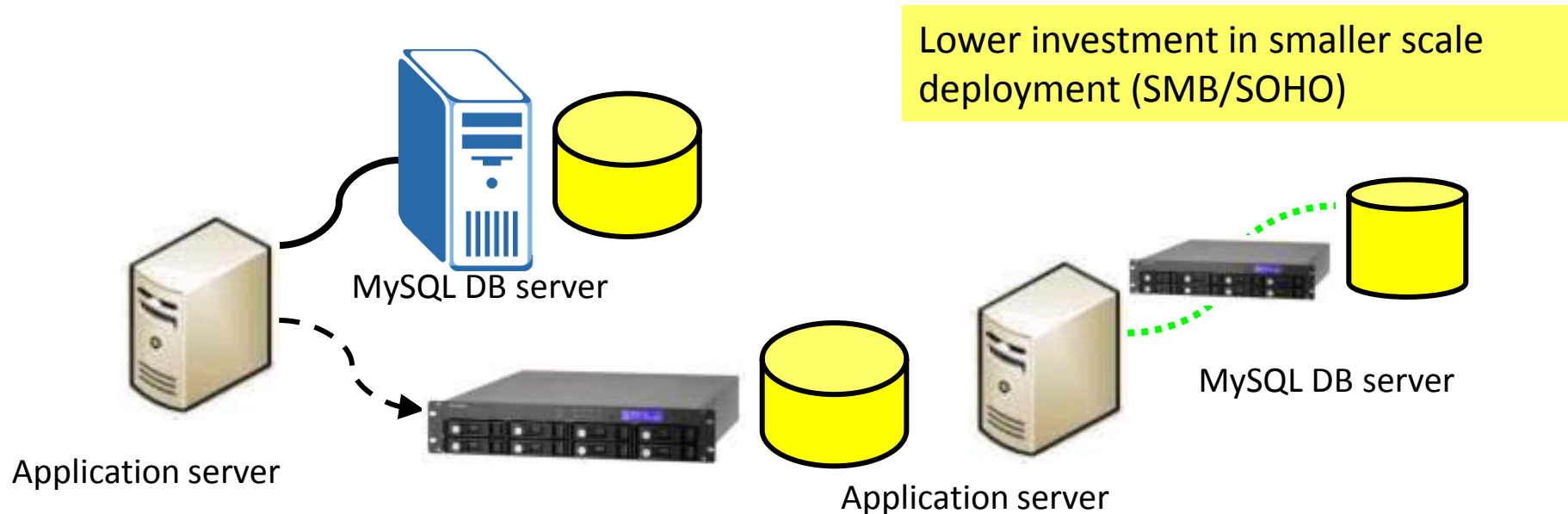


## Great Solution for System Integrators

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.

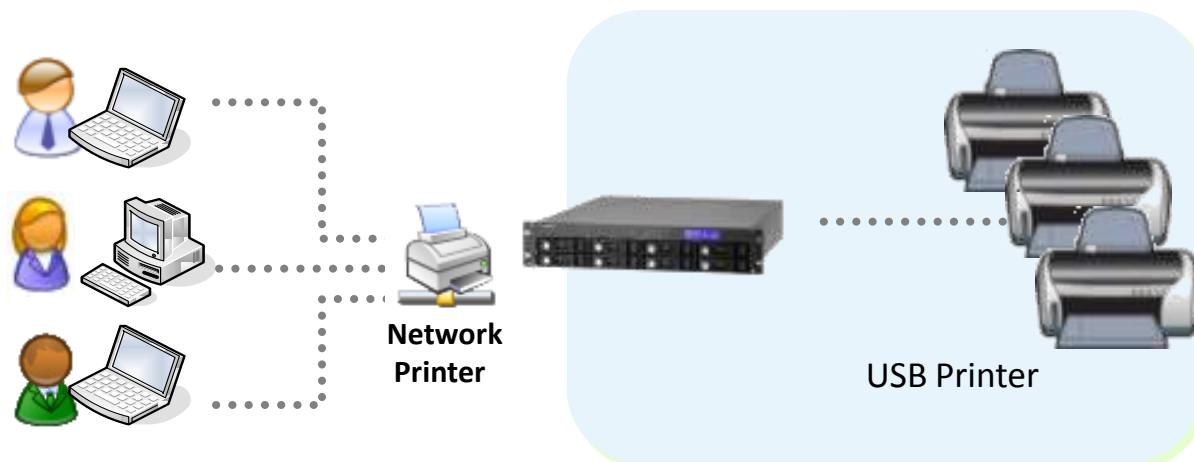


# F. All-in-one Server: Printer Server



## 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.



Small Office

USB printer can be shared through the high-speed USB 2.0 port

# G. All-in-one Server: Surveillance Station- 1



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

New Enhancement:

- Windows 64-bit OS support
- Y-cam support

Application:

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



# G. All-in-one Server: Surveillance Station- 2



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**

# G. All-in-one Server: Surveillance Station- 3



- **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.



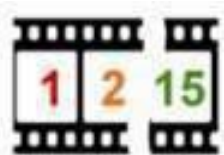
- **E-mail notification**

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)**

# G. All-in-one Server: Surveillance Station- 4



## Live real-time monitoring



Picture-in-picture mode



**Variety 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.



**Dominant Features:**  
**Hard Drive Protection: HDD S.M.A.R.T.**

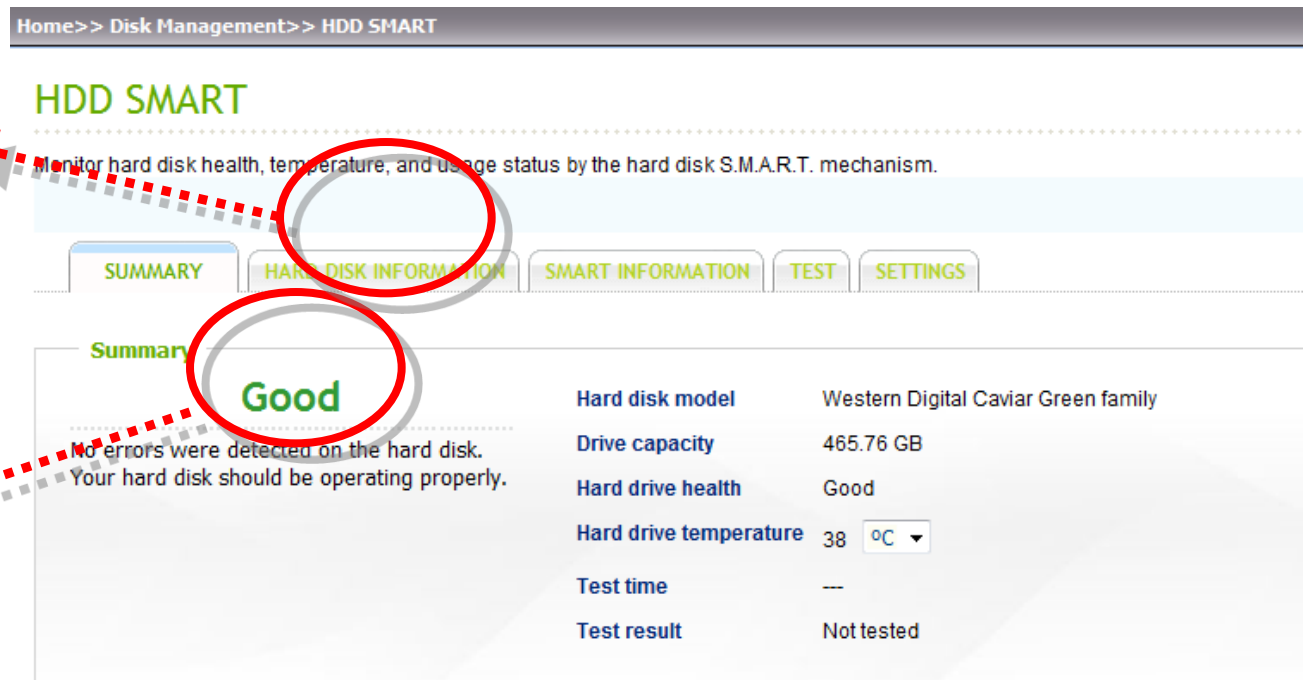
# Hard Drive Protection: HDD S.M.A.R.T.-1

## HDD S.M.A.R.T.

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.



The screenshot displays the 'HDD SMART' interface. At the top, a breadcrumb trail reads 'Home >> Disk Management >> HDD SMART'. Below this, the title 'HDD SMART' is shown in green. A light blue banner contains the text: 'Monitor hard disk health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.' Below the banner are five tabs: 'SUMMARY', 'HARD DISK INFORMATION', 'SMART INFORMATION', 'TEST', and 'SETTINGS'. The 'SUMMARY' tab is active, showing a 'Summary' section with a large green 'Good' status. Below this, a message states: 'No errors were detected on the hard disk. Your hard disk should be operating properly.' To the right, a table lists drive specifications:

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

Users 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 following elements:

- Navigation tabs: SUMMARY, HARD DISK INFORMATION, SMART INFORMATION, TEST (selected), SETTINGS
- Section header: Test
- Test method:  Rapid test  Complete test
- Progress: 10%
- Status: Testing
- Button: TERMINATE TEST

A red rounded rectangle highlights the area containing the test method selection and the progress/status information.

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

# Hard Drive Protection: HDD S.M.A.R.T. -4

Users can set the schedule for S.M.A.R.T. test (rapid or complete) to ensure the health of the hard disks. The regular job can be done by the NAS automatically according to the configured policy.

## HDD SMART

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

**Settings**

Enable Temperature Alarm:  °C

**SMART Test schedule**

Enable Rapid Test: At  (hh)  (mm), once every  day(s).

Enable Complete Test: At  (hh)  (mm), once every  day(s).

Alert emails will be automatically sent to server managers in case of any potential problems

# 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.

**Dominant Features:  
The Most Complete Backup Solution**

# The Most Complete Backup Solution-1

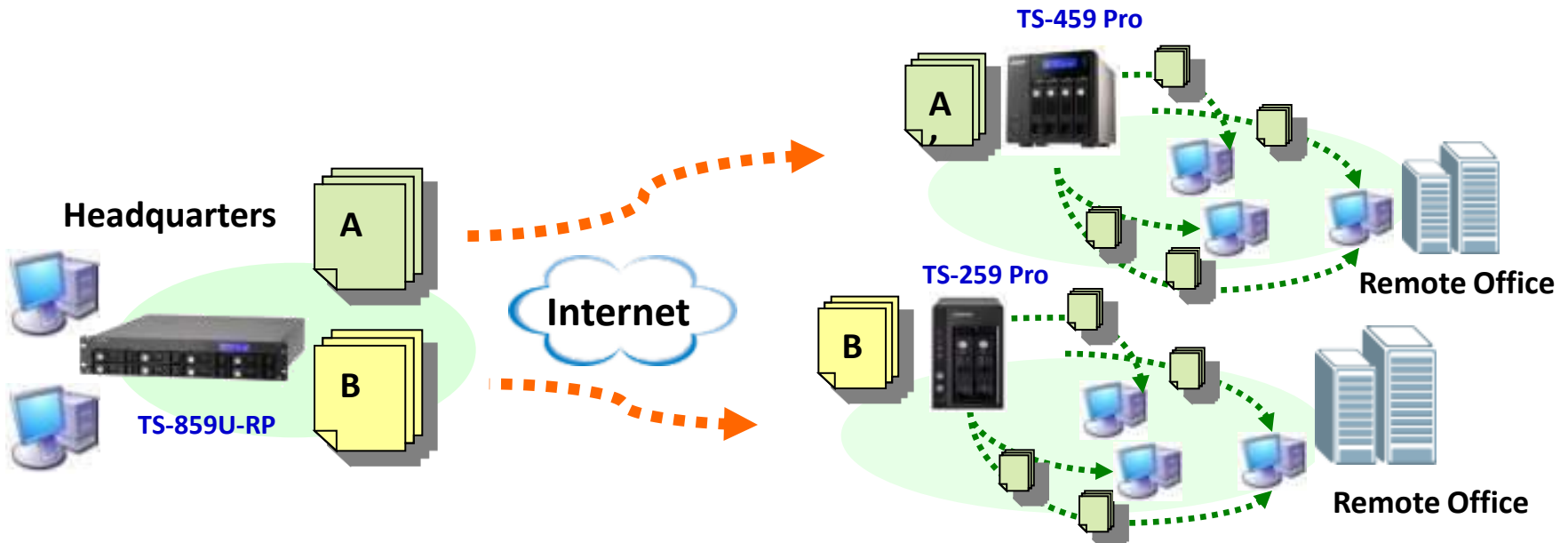
## Encrypted Remote Replication

### 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-2

## 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-3

## 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 application window. At the top, it displays the title 'NetBak Replicator' and 'For client'. Below the title bar, there are fields for 'NAS Server' (192.168.1.100) and 'Share Path' (C:\temp). The main interface includes a 'Backup' button, a 'Folder' field, and a 'Log' button. A file explorer view shows a list of folders and files, including 'Desktop', '2A\_ID\_Design', '2A\_Product\_Photo', '2A\_VisualDesign', 'area', 'Libri\_image', 'Misc\_bak', 'NFK\_Design', 'Product\_schering\_bak', 'QCAP', and 'Web\_Design'. A 'File Name' list shows 'AUTOEXEC.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 in the bottom left corner.

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

# The Most Complete Backup Solution-4

## Apple Time Machine® Support

- Easy configuration
- Serves as the Time Machine® backup destination for multiple Macs running OS X (10.5 or later)
- Quota limitation



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=227](http://www.qnap.com/pro_application.asp?ap_id=227)

# The Most Complete Backup Solution-5

## Cloud Storage Backup - Amazon S3

- An online storage web service offered by AWS (Amazon Web Service)
- Store and retrieve any amount of data, at any time.



Application Note: [http://www.qnap.com/pro\\_application.asp?ap\\_id=228](http://www.qnap.com/pro_application.asp?ap_id=228)

# **Dominant Features: Policy-based Automatic IP Blocking**

# 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** [X]

Single IP address

Specify IP addresses of certain network by setting IP address and netmask

IP: [ ] . [ ] . [ ] . [ ]

Netmask: 255 . 255 . 0 . 0

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

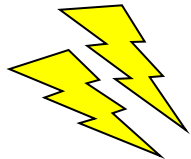
# **Dominant Features: Instant SMS Alert**



# Instant SMS Alert

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

Users 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

### Configure SMSC Server

You can configure the SMSC settings to send instant system alerts via the

SMS Service Provider  <http://www.clickatell.com>

Enable SSL Connection

SSL Port:

SMS Server Login Name:

SMS Server Login Password:

SMS Server API\_ID:




**Dominant Features:**  
**SNMP (Simple Network Management Protocol)**

# SNMP (Simple Network Management Protocol)

Enable SNMP service on the NAS to actively send the information, warning or error of the NAS to max 3 SNMP trap addresses installed SNMP management tool. Moreover, MIB of NAS can be downloaded and imported to your PC with SNMP tool. Your PC can then acquire the info of the NAS actively, e.g. cpu-usage, temperature.



Event log  
(info, error, warning)



## 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:

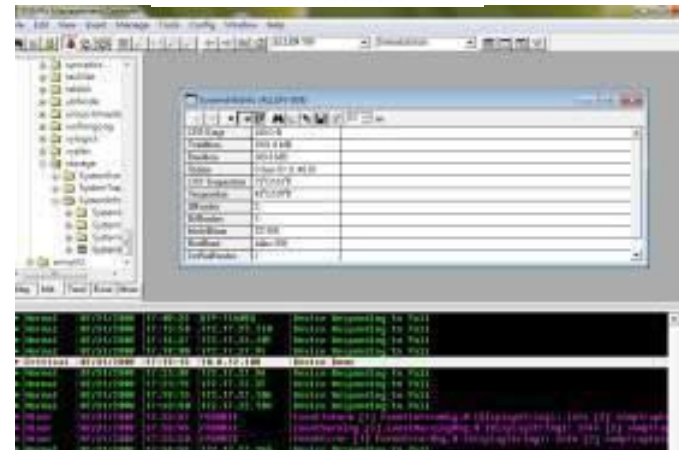
Community:

Send Event:  Information  Warning  Error

Trap Address 1:

Trap Address 2:

Trap Address 3:

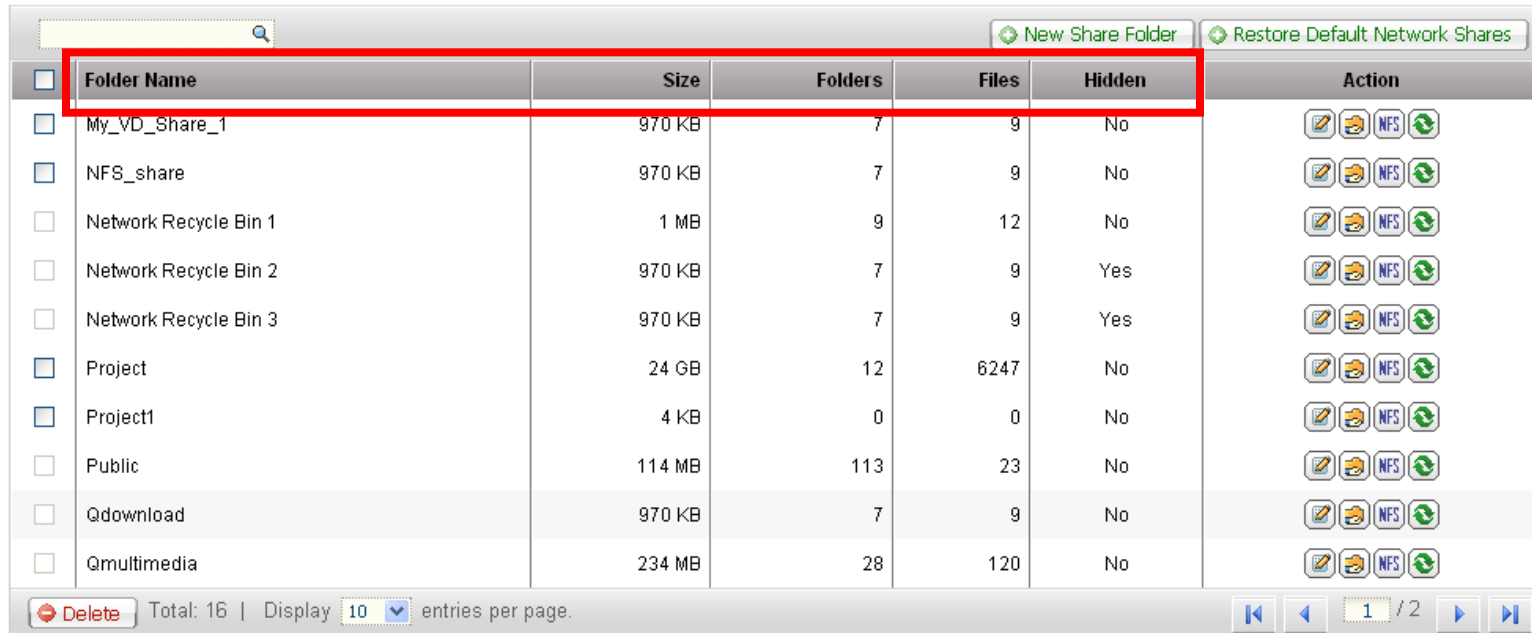


# **Dominant Features: Volume Status Report**

# 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

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

**Dominant Features:  
Syslog Server Setting Supported**

# 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.)

# **Dominant Features: Import SSL Secure Certificate**



# 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 English

## 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](#)

**Thank You**