

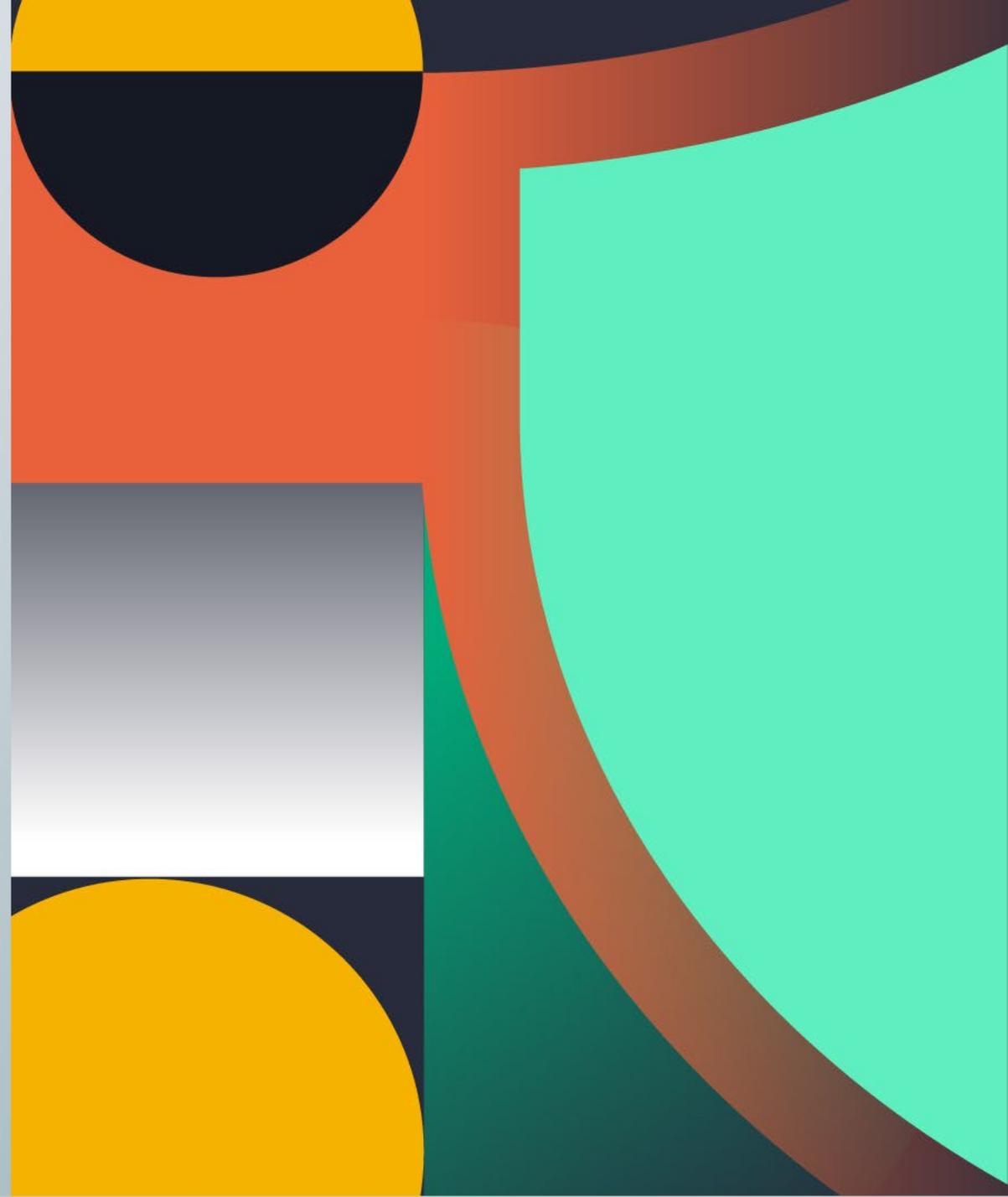


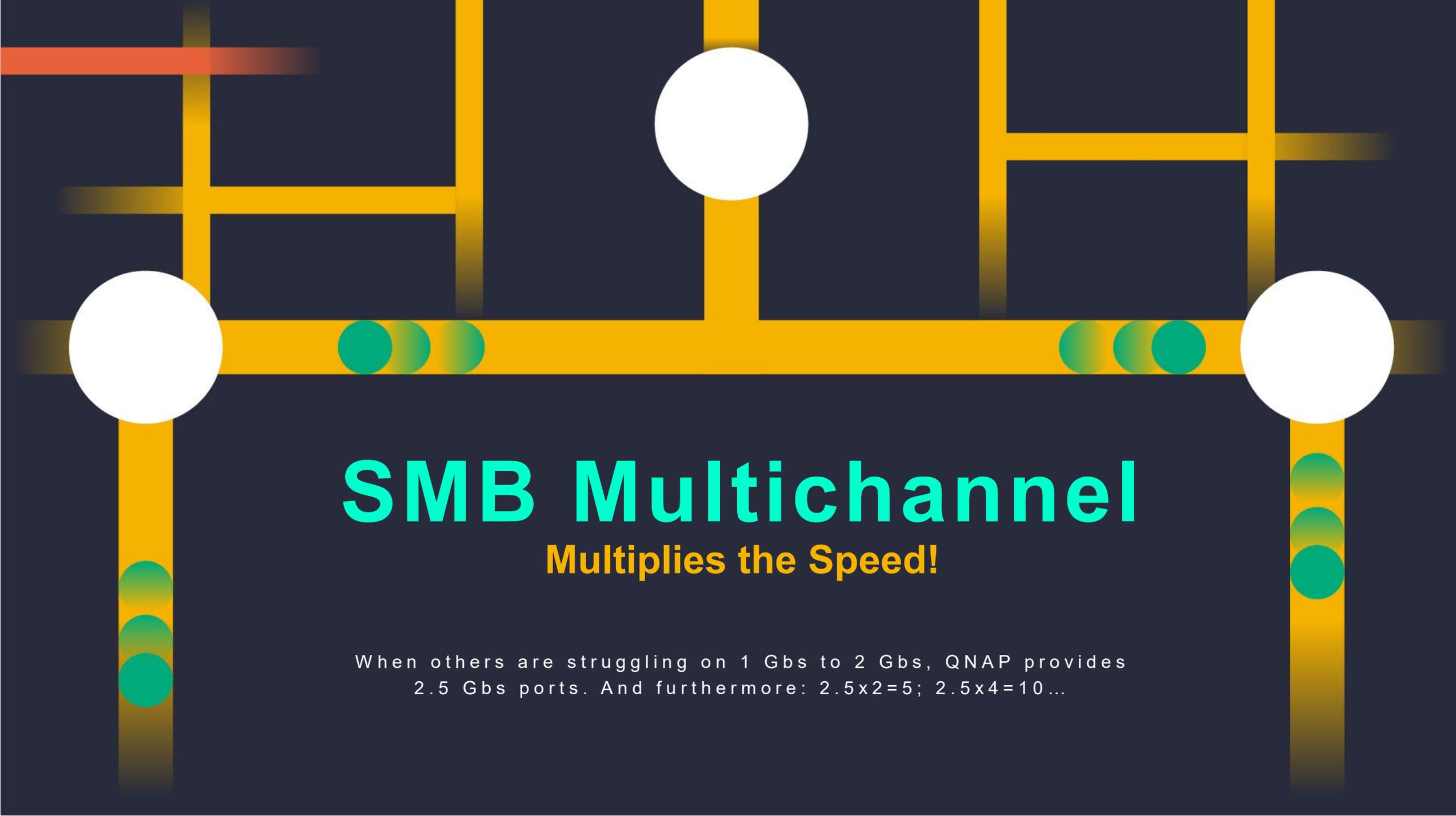
QNAP

QTS 5.1.0

**Boosted performance, flexible management,
and higher security.**

Efficiency and Security





SMB Multichannel

Multiplies the Speed!

When others are struggling on 1 Gbs to 2 Gbs, QNAP provides
2.5 Gbs ports. And furthermore: $2.5 \times 2 = 5$; $2.5 \times 4 = 10$...

SMB Multichannel

Full throughputs by aggregating the network bandwidths!

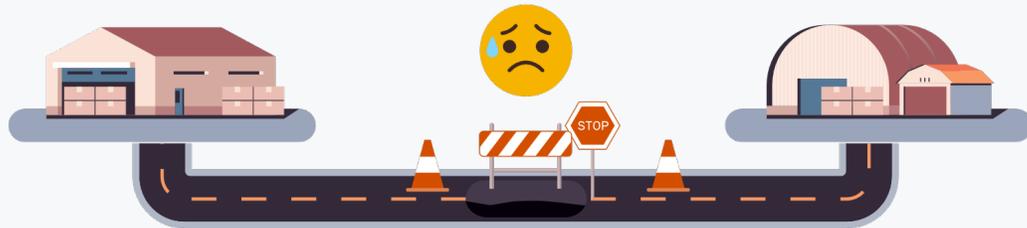
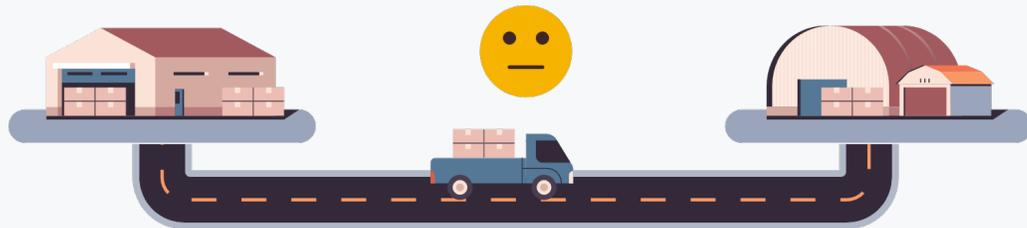
Crystal Disk Mark	2.5G x1	2.5G x2
1MB Throughput Write (MB/s)	294	592
1MB Throughput Read (MB/s)	295	590



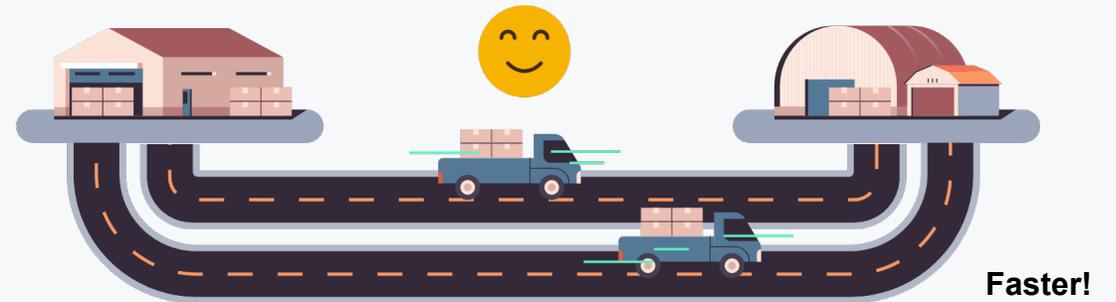
SMB Multichannel

A SMB 3 client automatically establishes multiple connections to the SMB server for single SMB session, and with the multiple connections achieves bandwidth aggregation and network fault tolerance.

Without Multichannel

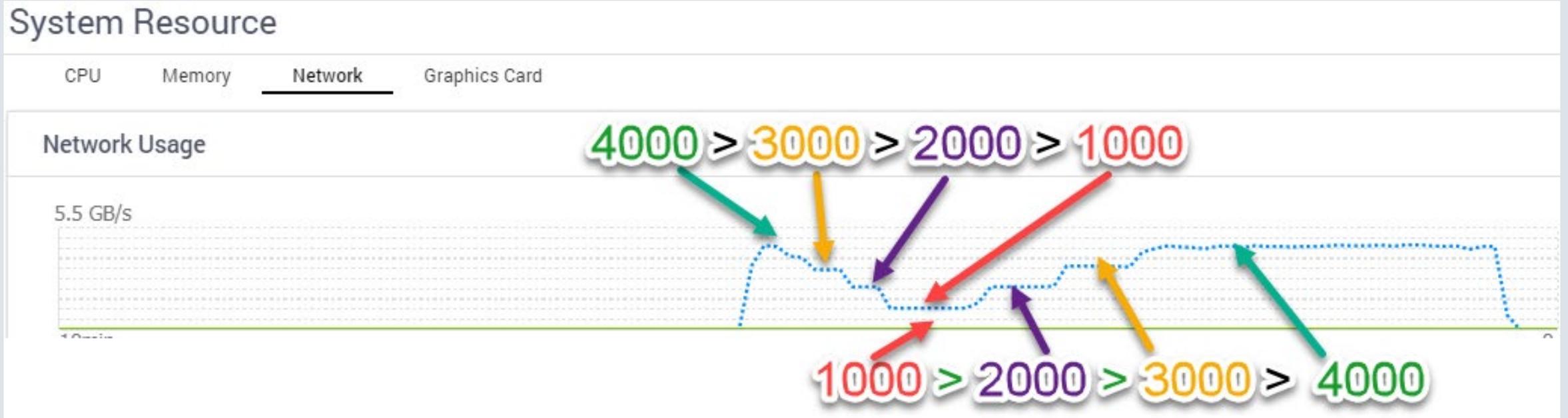


With Multichannel



SMB Multichannel – Network Fault Tolerance

Simultaneously apply a set of network connections, and the client can still continue without interruption despite the loss of some network connections.



SMB Multichannel V.S. Link Aggregation

SMB Multichannel

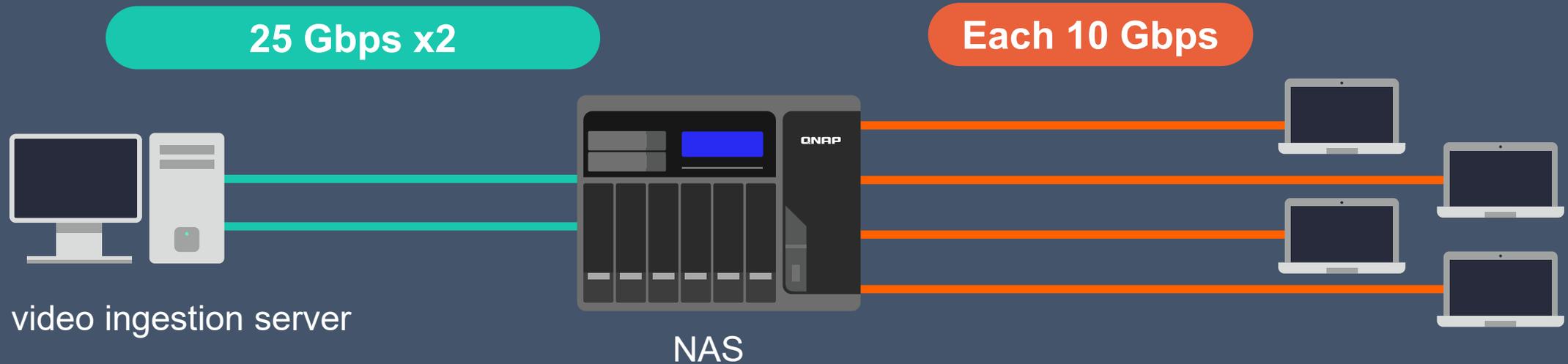
- General facilities
- SMB only
- Faster and fault tolerance

Link Aggregation (Port Trunking / LACP)

- Special NIC and switch are needed (**IEEE802.3ad**)
- Works for different protocols
- Fault tolerance



Video Editing Scenario



Now with Multichannel
PC user can reach 50Gbps performance

Test Environment:
TS-h1290FX(7302P), Micron 7400 U.3 SSDx12
Windows Server 2019 AMD 7232P 3.0GHz, QXG-25G2SF-CX6LX

Enable in Control Panel

The screenshot shows the Windows Control Panel window titled "Control Panel". The left sidebar is expanded to "Network & File Services", with "Win/Mac/NFS/WebDAV" selected and highlighted with a red box. The main content area shows the "Microsoft Networking" tab. Under "Microsoft Networking", the checkbox "Enable file service for Microsoft networking" is checked. Below it, the "Server description (Optional)" field contains "NAS Server" and the "Workgroup" field contains "WORKGROUP". There are three radio button options: "Standalone server" (selected), "AD domain member (To enable Domain Security, please click here.)", and "LDAP domain authentication (To enable Domain Security, please click here.)". Below these is the text "Current Samba ID: -". A link "Set this NAS as a domain controller" is present. At the bottom of the settings, the checkbox "Enable SMB Multichannel" is checked and highlighted with a red box, with an information icon to its right. Below this checkbox is a paragraph of text: "The system automatically identifies multiple available network adapters, maps the optimal network path, and then dynamically adds network adapters, if required. To select the network adapters based on your network bandwidth requirements, go to [SMB Multichannel Settings](#)." Below the text is an "Advanced Options" button. At the very bottom of the window is an "Apply" button.

Control Panel

← ControlPanel

System

Privilege

Network & File Services

Applications

Network & Virtual Switch

Network Access

Win/Mac/NFS/WebDAV

Telnet / SSH

SNMP

Service Discovery

QuFTP Service

Recycle Bin

Microsoft Networking

Apple Networking

NFS Service

WebDAV

Enable file service for Microsoft networking

Server description (Optional):

Workgroup:

Standalone server

AD domain member (To enable Domain Security, please click here.)

LDAP domain authentication (To enable Domain Security, please click here.)

Current Samba ID: -

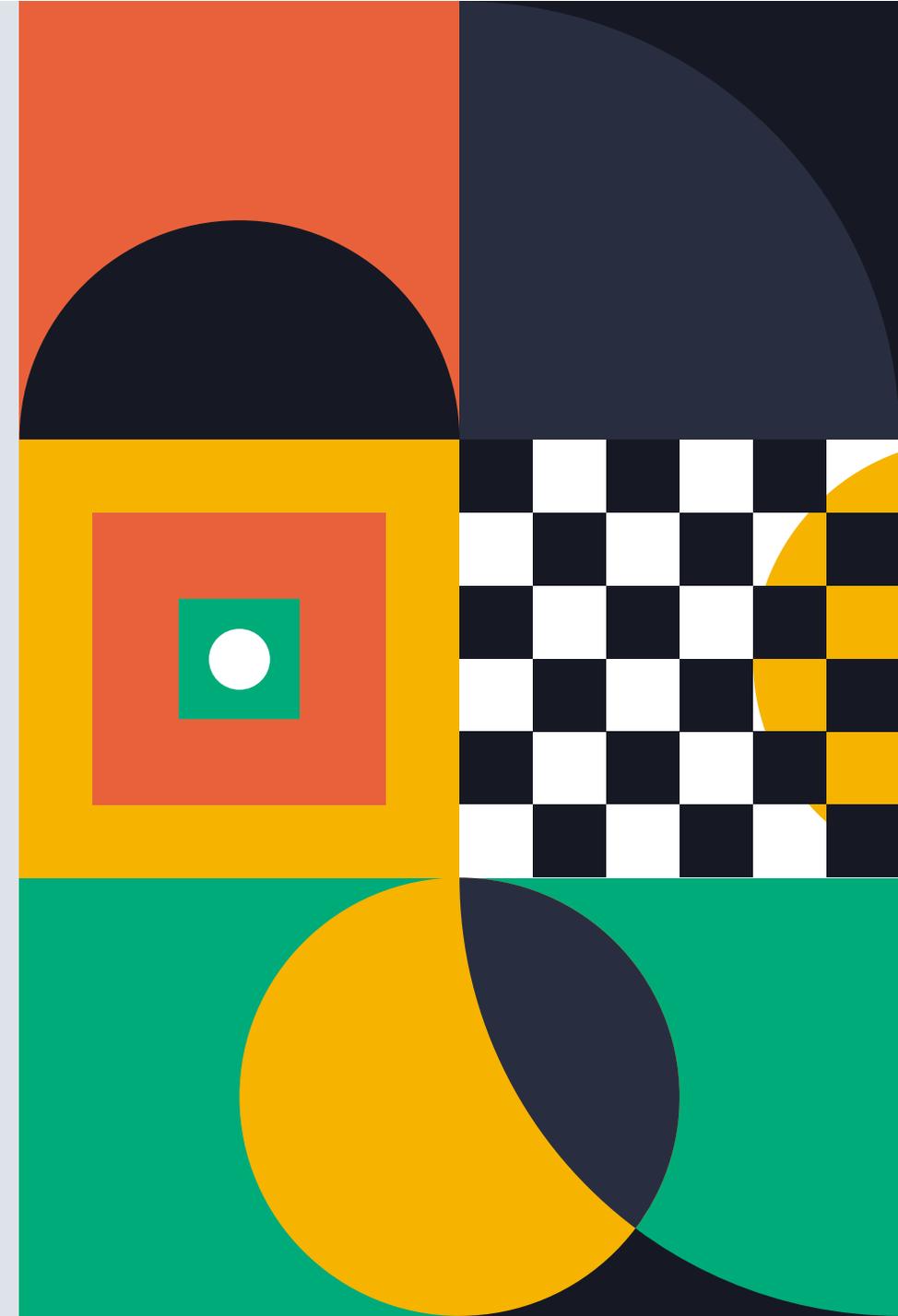
[Set this NAS as a domain controller](#)

Enable SMB Multichannel [i](#)

The system automatically identifies multiple available network adapters, maps the optimal network path, and then dynamically adds network adapters, if required. To select the network adapters based on your network bandwidth requirements, go to [SMB Multichannel Settings](#).

Other Information

- Theoretically, SMB multichannel aggregates all the bandwidth bundled. In practical, the performance varies upon the **CPU, Storage, Memory, and I/O controller** of the host and the client machines.
- **Clients supported:**
 - Win8.1 or later
 - Win Server 2012 or later
 - macOS Big Sur 11.3.1 or later
- **SMB 3 is required for both the server and the client sides.**
- **The current version does not support RSS, RDMA, or NIC Teaming.**



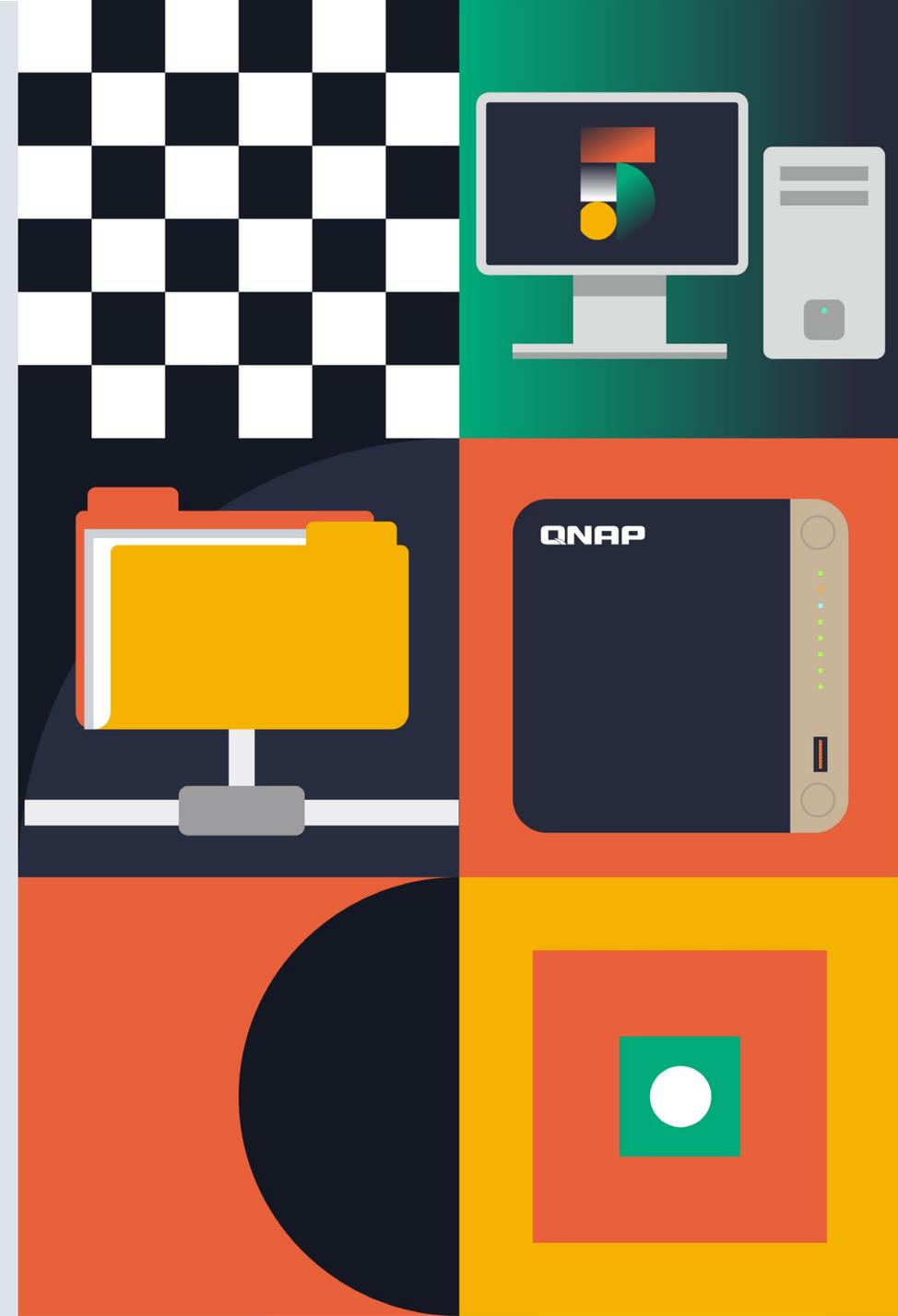
Secure and Still Fast!

SMB Signing with GMAC algorithm



SMB Signing

- **SMB signing** essentially signs each packet with a digital signature so the client and server can confirm authenticity and prevent hacking.
- However, such action requires heavy calculation and had impacted the performance of data transmission.
- QTS 5.1.0 now will automatically negotiate the better-performing cipher method when connecting to client computer that supports AES-128-GMAC (**Windows Server 2022** and **Windows 11** for SMB 3.1.1 signing).



SMB Signing with GMAC: Secure and Fast!

In 10 GBs network, AES-NI enabled CPU, new GMAC algorithm outperforms the former CMAC one significantly.

CMAC

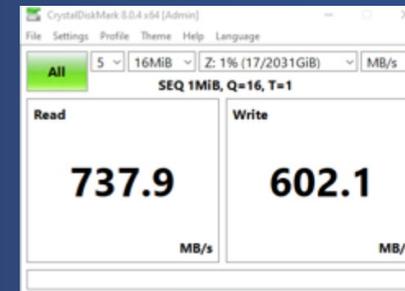
GMAC

x86



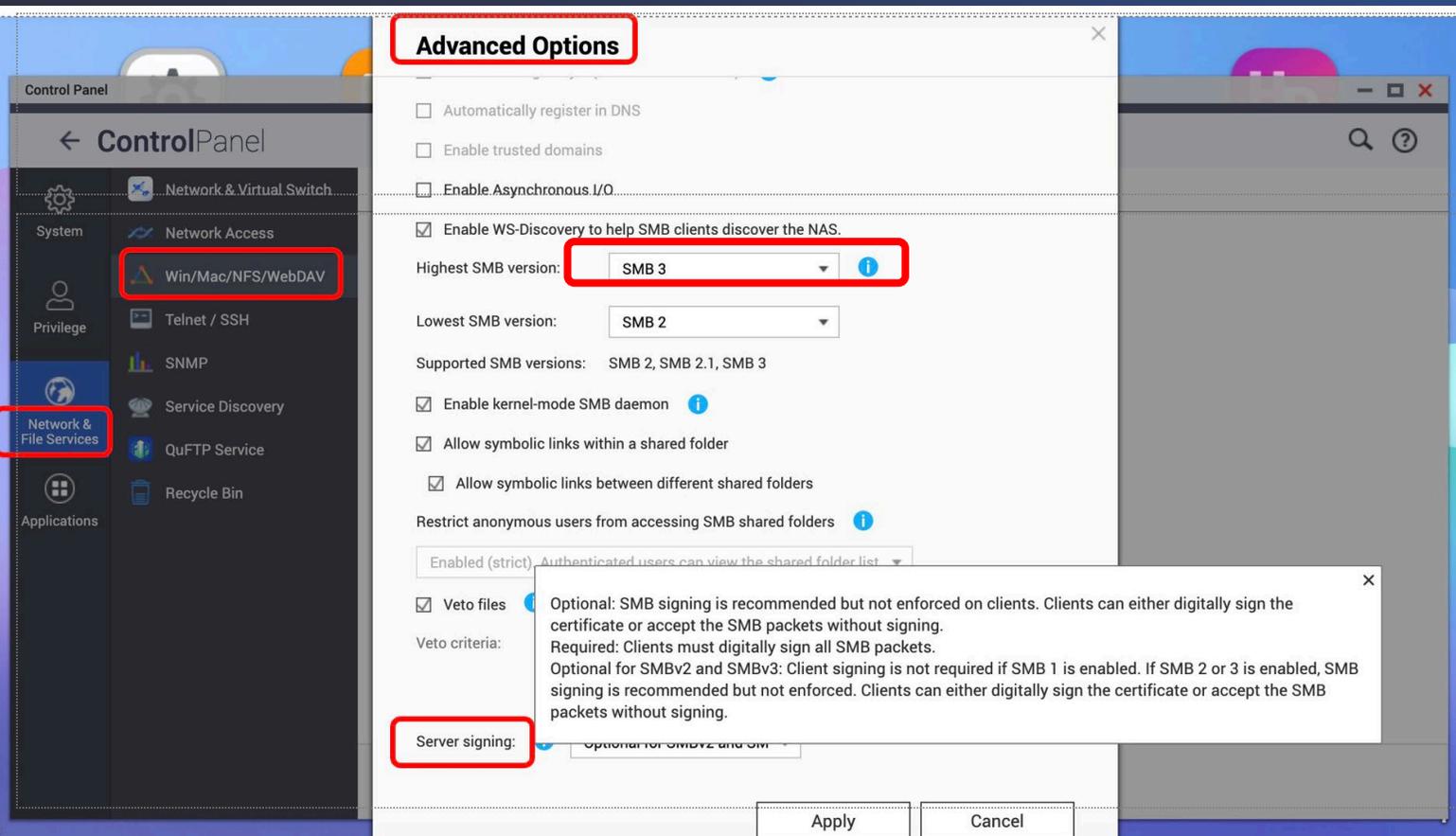
X2 Faster

ARM 64



X10 Faster

SMB Signing: Enabled either by the client or the server configuration



	Server require signing	Server not require signing
Client require signing	Signed	Signed
Client not require signing	Signed	Not signed

Authentication with QANP Authenticator

**Passwordless, or combine
password as 2 factor authentication.**



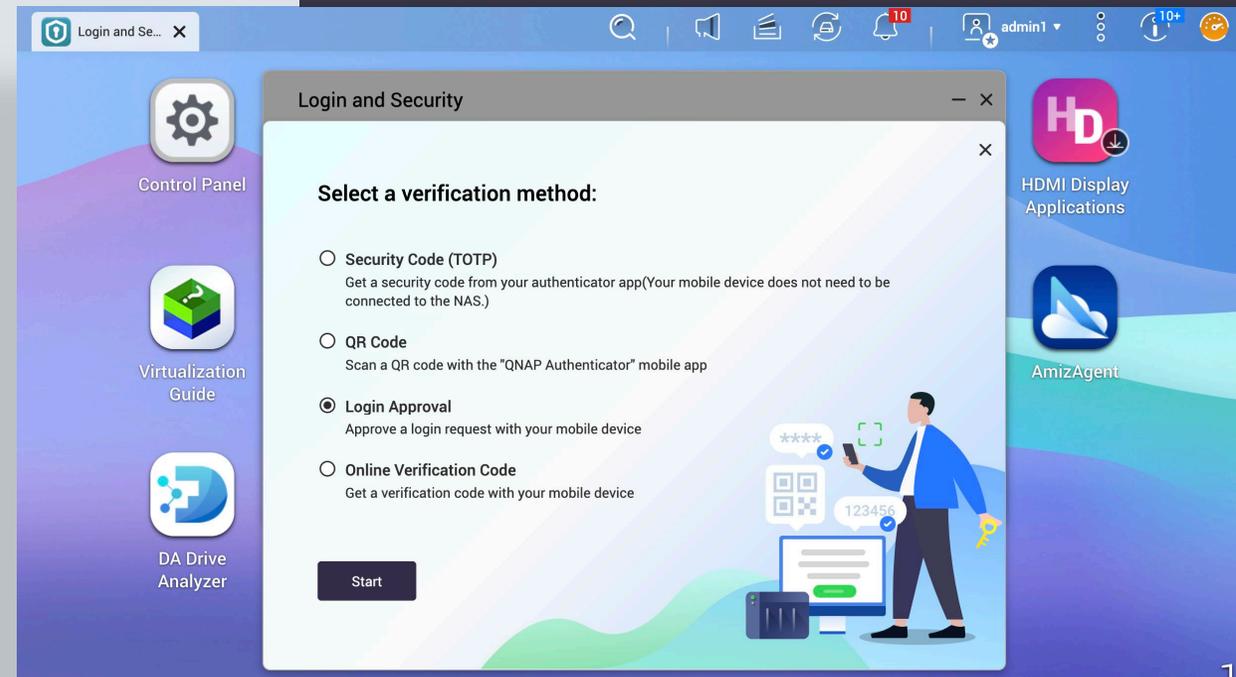
QNAP Authenticator

New 2 Step Verification

1. Password

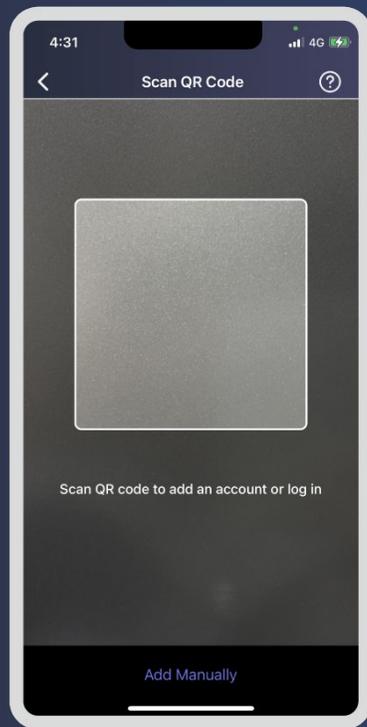
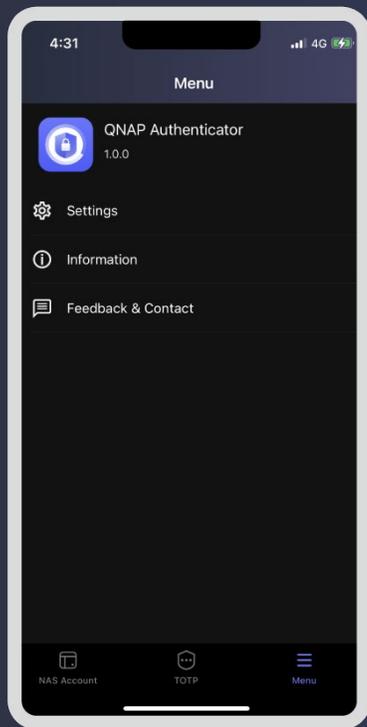
2. Options with

- Security Code (TOTP, Time-based One-Time Password; Mobile device does not need to connect to NAS)
- QR Code
- Login Approval
- Online Verification Code



QNAP Authenticator: Passwordless

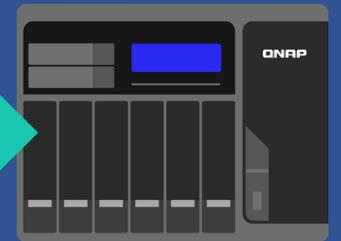
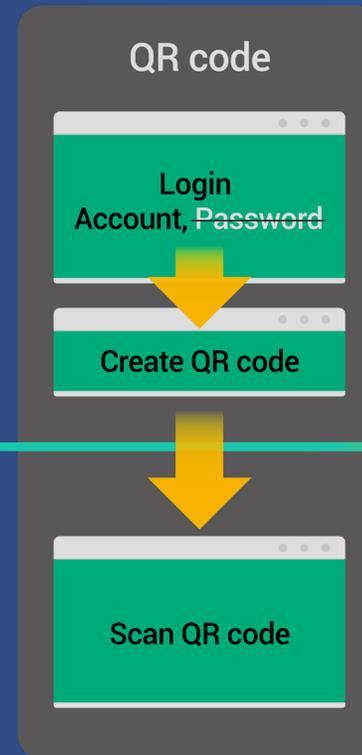
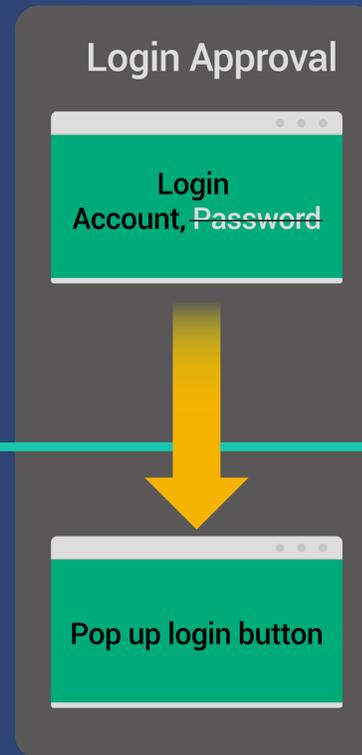
If 2 Step Verification is not necessary, QNAP Authenticator can still let you not to memorize password by “Log-in Approval” or QR Code



QNAP Web Page



QNAP Authenticator



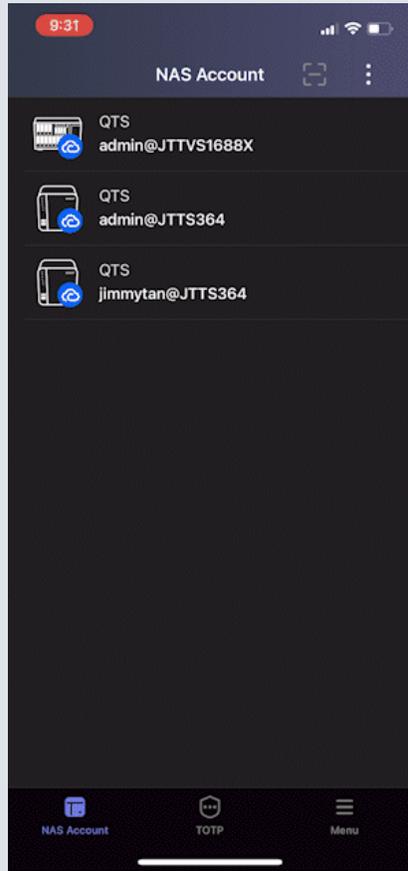
User NAS

Configure from “Login & Security”

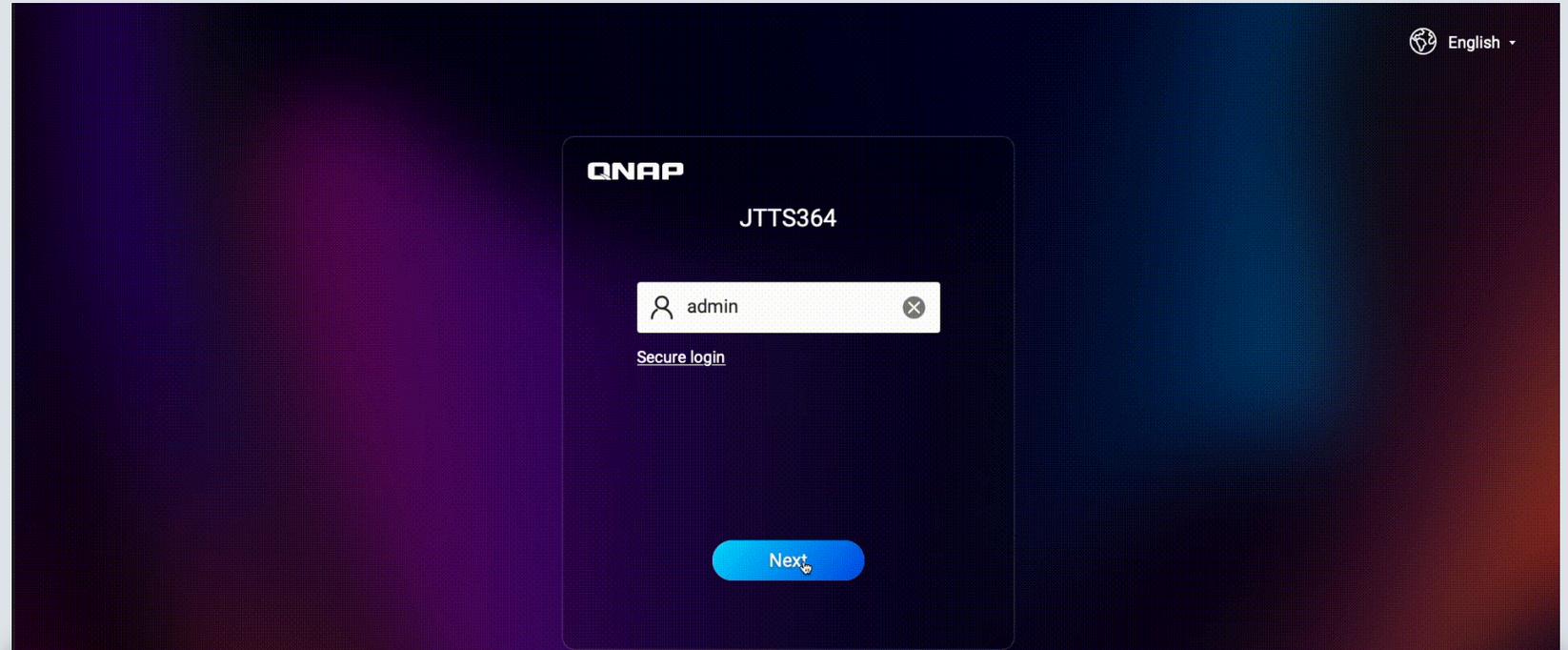
The image shows a QNAP OS desktop environment. In the top right corner, the user profile 'admin1' is visible. A dropdown menu is open, showing options: Last login time: 2023/03/22 14:15, Language, Desktop Preferences, Personal Settings, Login and Security (highlighted), Locate my NAS, Restart, Shutdown, and Logout. A blue arrow points from the 'Login and Security' menu item to a settings window titled 'Login and Security'. The window has tabs for Password, 2-Step Verification (selected), Passwordless Login, and SSH Keys. The '2-Step Verification' section is active, displaying the text: 'Protect your account with 2-Step Verification. 2-Step Verification (also known as two-factor authentication) adds an extra layer of protection to your account in case someone steals your password. After setting up 2-Step Verification, you will need both your password and an authenticator app on your mobile device to log in to this device.' Below this is a 'Recovery email:' field with an information icon, a checkbox for 'Send to my personal e-mail address', and a red note: 'To enable this feature, you must provide your personal email address in "Profile" or specify another email address here as the recovery email address.' A 'Get Started' button is at the bottom.

[Note] to send a recovery email, the QTS should **login to QNAP ID**, or the **SMTP service** should be enabled on Notification Center

QR Code Log-in Demo

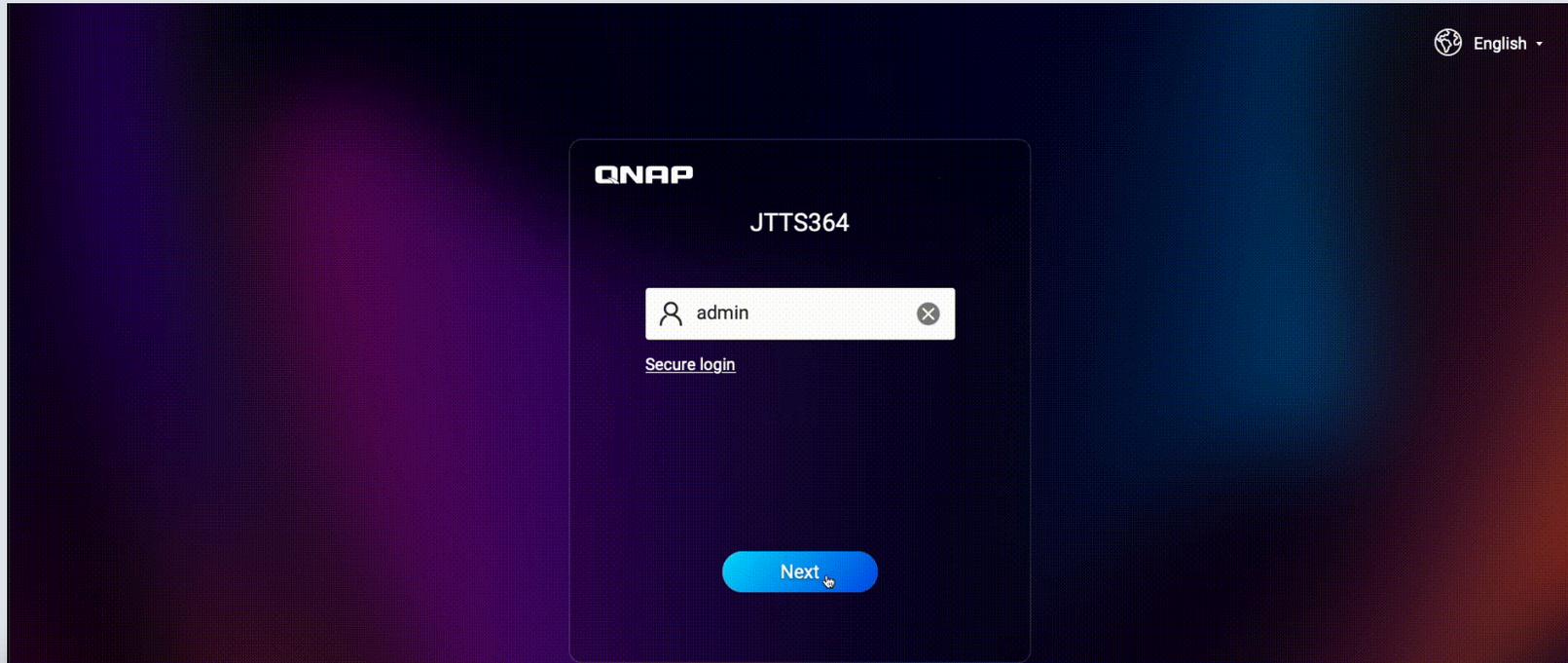


(Mobile device can reach the NAS via network)

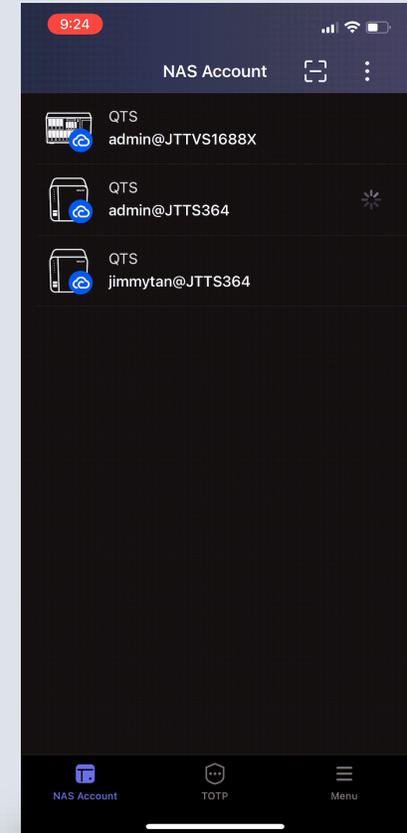


NAS Log-in Page

Log-in Approval Demo



NAS Log-in Page



(Mobile device can reach the NAS via network)

Manageable Privileges – Delegated Administration

Do you give out your safe combination to the electrician when he fixes the light in the garage?



Delegated Administration

- Administrator group users have the highest privileges including access sensitive data.
- User group users have almost none administrative privileges.



- Sole administrator may cause heavy workloads and poor responsiveness.
- Many administrators may cause improper authority and pose the risk of data leakage.

New 8 Roles delegatable to the User group users

Administrator

Have full authority of the NAS, and the only role who can delegate roles.

System Management

Have the most administrative capability under Administrator including all privilege of other delegated roles.

Backup Management

Manage and monitor backup jobs of the NAS.

Backup Operation

Execute backup jobs of specified shared folders.

User and Group Management

Create or delete local accounts for individual users and groups.

Shared Folder Management

Manage shared folders and grant access rights for users or groups.

Application Management

Install, update, and manage apps in the App Center.

Access Management

Manage overall accessibility of the NAS.

System Monitoring

Oversee utilization of NAS system and storage resources.

Delegated Administration: System Management

Have the most administrative capability under Administrator including all privilege of other delegated roles.

Scenario:

- IT director John is the administrator and delegates the role **System Management** to the User group "IT Staff".
- John sets permission of the shared folder "Confidential" as "deny access" for User group "IT Staff".
- Bob in "IT Staff" group can now update the firmware but not touch the data of "Confidential".

Permissions	Remarks
<ul style="list-style-type: none">• Use Control Panel of the NAS• Possess most administrative tasks under the administrator's control• Have privileges of all the other delegated roles	<ul style="list-style-type: none">• Have restrictions on SSH, telnet, and role delegation• Unable to open apps that are only accessible to administrators

Delegated Administration: Backup Management

Manage and monitor backup jobs of the NAS.

Scenario:

- IT lead Eric has a business trip to the overseas branch. He delegates the role Backup Management to the colleague Jean to handle the backup tasks until his return.
- Jean can maintain backup jobs created by Eric without administrator permission.

Permissions	Remarks
<ul style="list-style-type: none">• Execute owned and the other's backup jobs with Hyper Data Protector and Hybrid Backup Sync.• Restore owned backup jobs.	<ul style="list-style-type: none">• Can not restore the other's backup jobs.

Delegated Administration: Backup Operation

Execute backup jobs of specified shared folders.

Scenario:

- Departmental Manager, Heidi, is delegated with the role “Backup Operation”.
- She can manage the backup jobs of her own scope and frequency since she knows better about her departmental data.

Permissions	Remarks
<ul style="list-style-type: none">• Create and execute backup jobs with Hyper Data Protector and Hybrid Backup Sync for the folders with access permissions.• Restore data with the owned backup jobs.	<ul style="list-style-type: none">• Can only access folders with read/write permission as backup source and destination when processing backup jobs

Delegated Administration: Backup Management v.s. Backup Operation

Backup Management

- Can execute but not restore the backup jobs already created by the others even without access right of the target shared folders.
- Role for a position to monitor overall backup routines of the NAS.

Backup Operation

- Can only backup or restore the shared folders with access permission.
- Role for data owner who has more knowledge of owned data.

Delegated Administration: User and Group Management

Create or delete local accounts for individual users and groups.

Scenario:

- The HR staff Henry is arranging on-boarding for the new employees. Being delegated with both **User and Group Management** and **Shared Folders Management** roles, he can create local user accounts and assign them to specific groups; no need to wait for the support from the IT staff and can complete onboarding efficiently.

Permissions	Remarks
<ul style="list-style-type: none">• Create, edit, and delete local users and groups.• Edit properties of domain users and groups.• Manage users and user groups in Qmanager mobile app.	<ul style="list-style-type: none">• “Shared Folder Management” role is also necessary for efficiently managing user accounts and granting shared folder access permissions in a workflow

Delegated Administration: Shared Folder Management

Manage shared folders and grant access rights for users or groups.

Scenario:

- Marketing Department Manager Emily kicks off a new project, and she as a **Shared Folder Management** role creates a shared folder for this new project for streamlined collaboration. Also delegated with **User and Group Management** role, Emily can grant or remove folder access permissions if the original member quits or new members join the project.

Permissions	Remarks
<ul style="list-style-type: none">Create, edit, and delete shared foldersCreate and edit shared folders in Qmanager mobile app	<ul style="list-style-type: none">Unable to create a shared folder if the delegated user is not assigned the role "User and Group Management"Unable to configure advanced permissions and folder aggregationUnable to create a snapshot shared folder.

Delegated Administration: Application Management

Install, update, and manage apps in the App Center.

Scenario:

- Administrator Alice assigns Application Management role to R&D department manager Zack so he can easily access the App Center and install necessary apps for development based on project needs.
- Hence, Zack downloads QuObject to create object storage environment on the NAS for new app development and testing.

Permissions	Remarks
<ul style="list-style-type: none">• Access the App Center on the NAS and through Qmanager app• Install, update, and view apps	<ul style="list-style-type: none">• Unable to manually install apps or configure settings in the App Center• Unable to open apps that are only accessible to administrators• Unable to access networking apps, such as Network and Virtual Switch

Delegated Administration: Access Management

Manage overall accessibility of the NAS.

Scenario:

- To improve security control and react to security incidents more quickly, several members in the IT team are assigned **Access Management** role. They are more aware of company IT policy to manage firewall and security settings, and can work as a team to share workloads, especially improving troubleshooting efficiency in an emergency to prevent data leaking. They can receive security notification in a timely manner and solve problems in the shortest time.

Permissions	Remarks
<ul style="list-style-type: none">• Configure security settings in Control Panel• Use all features of QuFirewall	<ul style="list-style-type: none">• Unable to access networking settings and the Network and Virtual Switch

Delegated Administration: System Monitoring

Oversee utilization of NAS system and storage resources.

Scenario:

- Given the permission of **System Monitoring** role, the 3rd party maintenance provider, IT assistant or each department manager can regularly check the status of the department NAS system to ensure system performance and operation stability.

Permissions	Remarks
<ul style="list-style-type: none">• View NAS system condition and information from Resource Monitor and Dashboard• Use the Resource Monitor in Qmanager	<ul style="list-style-type: none">• Cannot modify any data or configuration of the NAS

Delegate in Control Panel

Control Panel

← ControlPanel

Delegated Administration allows you to assign certain tasks to non-administrator users for better flexibility and efficiency.
[Learn more about the scope of permissions for each role.](#)

Roles Local Users

	Name	Delegated Roles
✓	System Management	
	Application Management	
	Access Management	
	System Monitoring	
	User and Group Management	
	Shared Folder Management	
	Backup Management	
	Backup Operation	

Page 1 / 1

No data to display

Apply Permission Viewer

Not Wait Until RAID Rebuild - Predictive Migration

When 10T HDD requires around 1 week to rebuild, spending less than 1 day to migrate in advance makes sense...



Predictive Migration: Protect Your Data Before Drive Fails.



- When a drive has failed, RAID will rebuild its data to the new drive. Depending on the CPU or Drive bottlenecks, RAID rebuild can take days to weeks to complete, due to the process of heavy calculation.
- On the other hand, before a drive fails, when the system can detect the risk of drive failing, it may start to migrate the data to the spare drive. Such process should complete within hours, because it copies the files and synchronizes without calculating from the RAID strips.

Predictive Migration

Depending on the drive health analytical tools, selected conditions can trigger data migration to the spare disk.

- S.M.A.R.T.
- WDDA
- IHM
- DA Drive Analyzer
- SSD Estimated remaining life

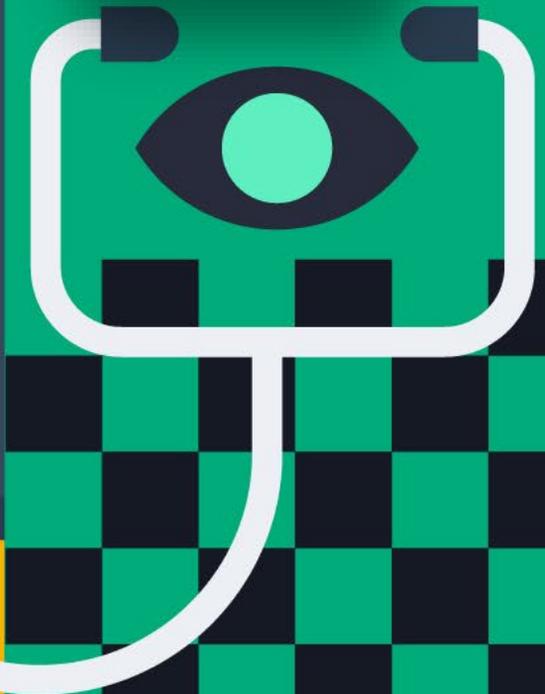
The screenshot displays the 'Storage & Snapshots' management interface. The left sidebar shows a navigation menu with categories like Overview, Storage, Snapshot Backup, and iSCSI & Fibre Channel. The main content area is titled 'Global Settings' and contains a section for 'Predictive Migration'. This section includes a toggle switch that is turned on and a table of trigger events and their corresponding results.

Trigger Event	Result
S.M.A.R.T.	Warning
WDDA	Warning
IHM	Warning
DA Drive Analyzer	Warning
SSD Estimated remaining life	Ignore this test result

Below the table, there is a field for 'S.M.A.R.T. polling time (minutes)' set to 5. At the bottom right of the settings window, there are 'Apply' and 'Close' buttons.

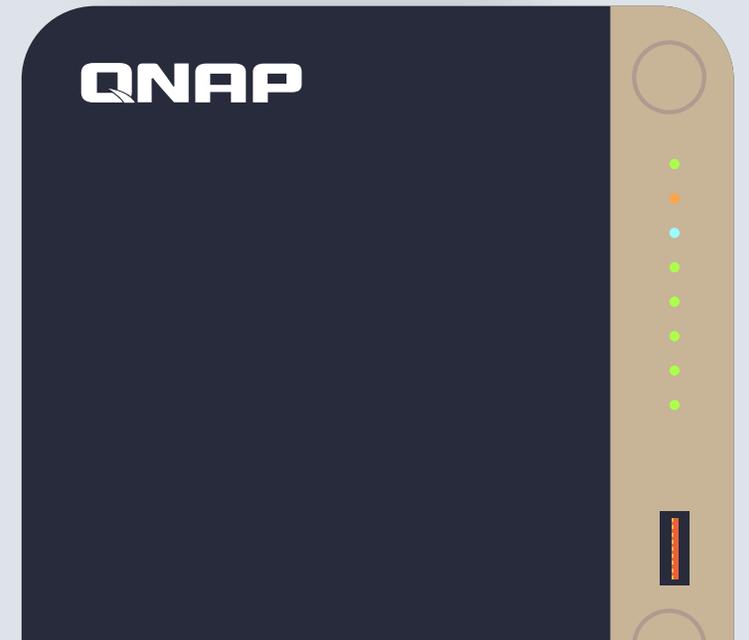
AI Prediction for Drive Health - DA Drive Analyzer

Prevent the long service down time or data loss because of the sudden failure of the drive.



DA Drive Analyzer

- If the annual failure rate of a drive is 2%, then an 8-bays device may be at risk of 16% every year.
- Along with the growth of the drive size, RAID rebuild and service down time can be weeks.
- Studies show drives may fail without any S.M.A.R.T. warning.
- Industrial expert ULINK Technology apply Machine Learning on 1.8 M drives to provide the drive health prediction for you to manage the replace plan.



DA Drive Analyzer for NAS 1.1.0

- Integration with “Storage & Snapshot”.
- Integration with Predictive Migration.
- Improved APP UI.
- Upload log to show service readiness.
- In-APP purchase workflow optimization.
- DA Desktop Suite now supports PC and Mac (as monitor of NAS).
- DA Portal new features.
- One slot monitoring for free.

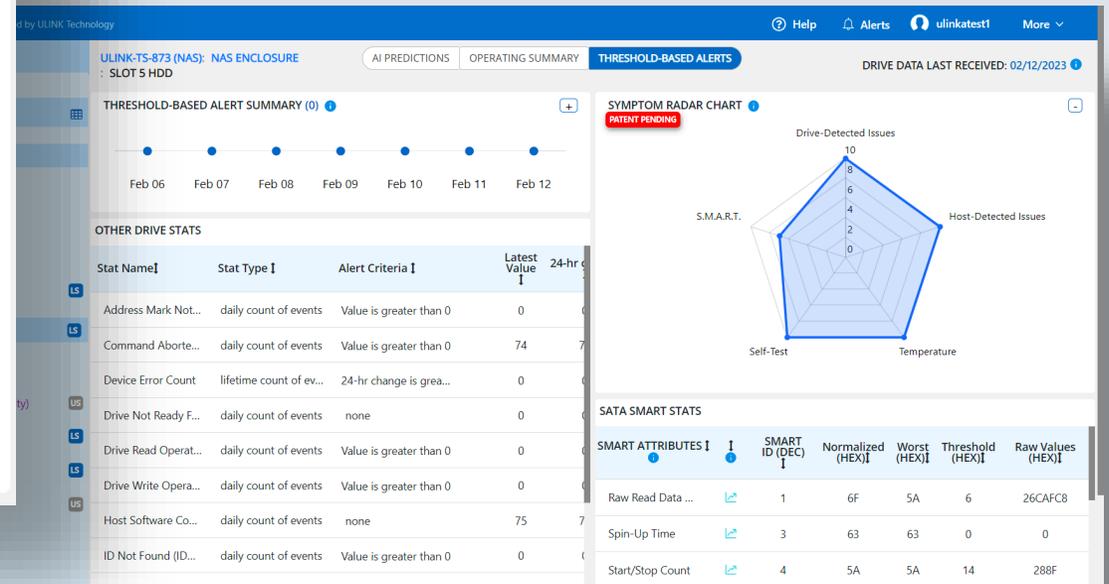
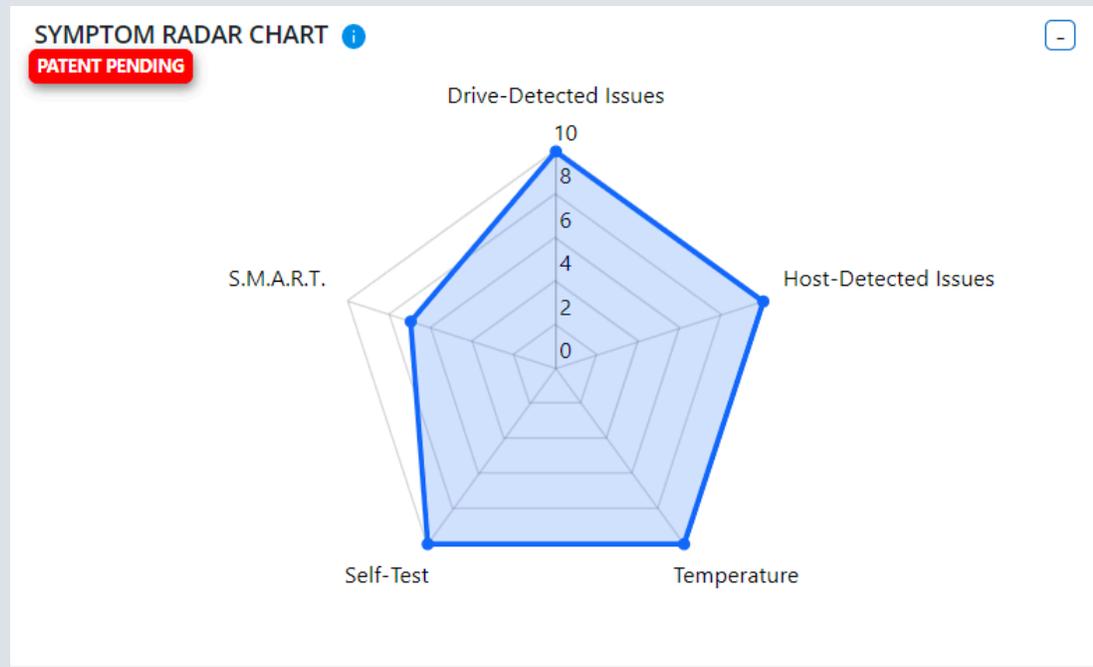
The screenshot displays the DA Drive Analyzer-Alpha web interface. The top navigation bar includes the product name, a 'Buy License' button, and the user 'Main registered user: ulinkatest2'. The main content area is divided into several sections:

- Overview:** Shows 'DA Drive Analyzer-Alpha' with 'Enclosures: 1, Drives: 5 (HDD: 3, SSD: 2, NVMe: 0)'. A status bar indicates 'Analyzing... 1 Drive'. A summary table shows: Faulty: 0, Critical (90% risk of failure): 0, Warning (70% risk of failure): 1, Normal: 3, and Unlicensed: 0.
- Important: Review Drive Status:** A table lists drive details for '3.5" Slot 3 (NAS Host)'.

Drive (Enclosure)	Status	Manufacturer	Capacity
3.5" Slot 3 (NAS Host)	Warning	WDC	465.76 GB
- License:** Shows 'Total activated licenses: 4' (Valid: 4, Expired: 0) and 'Total activated license seats: 17' (Total used: 5, Total unused: 12). A link for 'License Seat Assignment' is provided.

DA Portal New Feature – Radar Chart

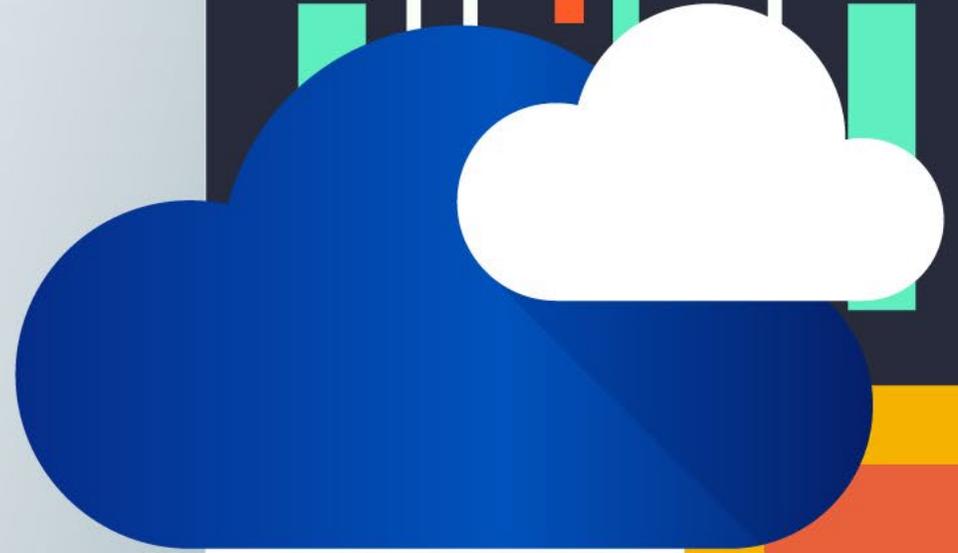
A visualization of drive symptoms which will help users cluster and characterize drive symptoms. The radar chart will contain 5 axes: Self-Test, Host-Detected Issues, S.M.A.R.T., Temperature, and Drive-Detected Issues. Each axis will have a score that is calculated based on a cluster of related drive health indicators/symptoms.





Centralized System Monitor – AMIZ Cloud

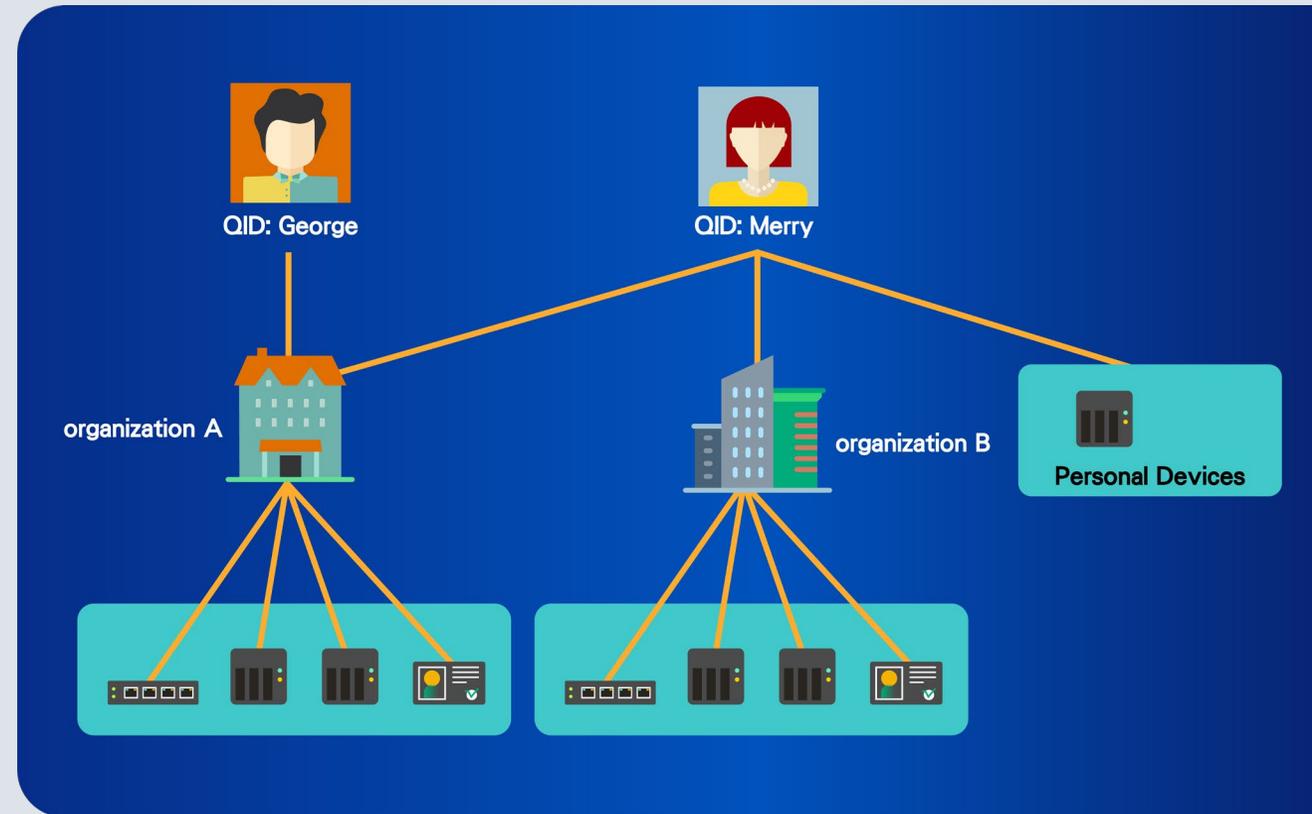
Daily glance and action in time.



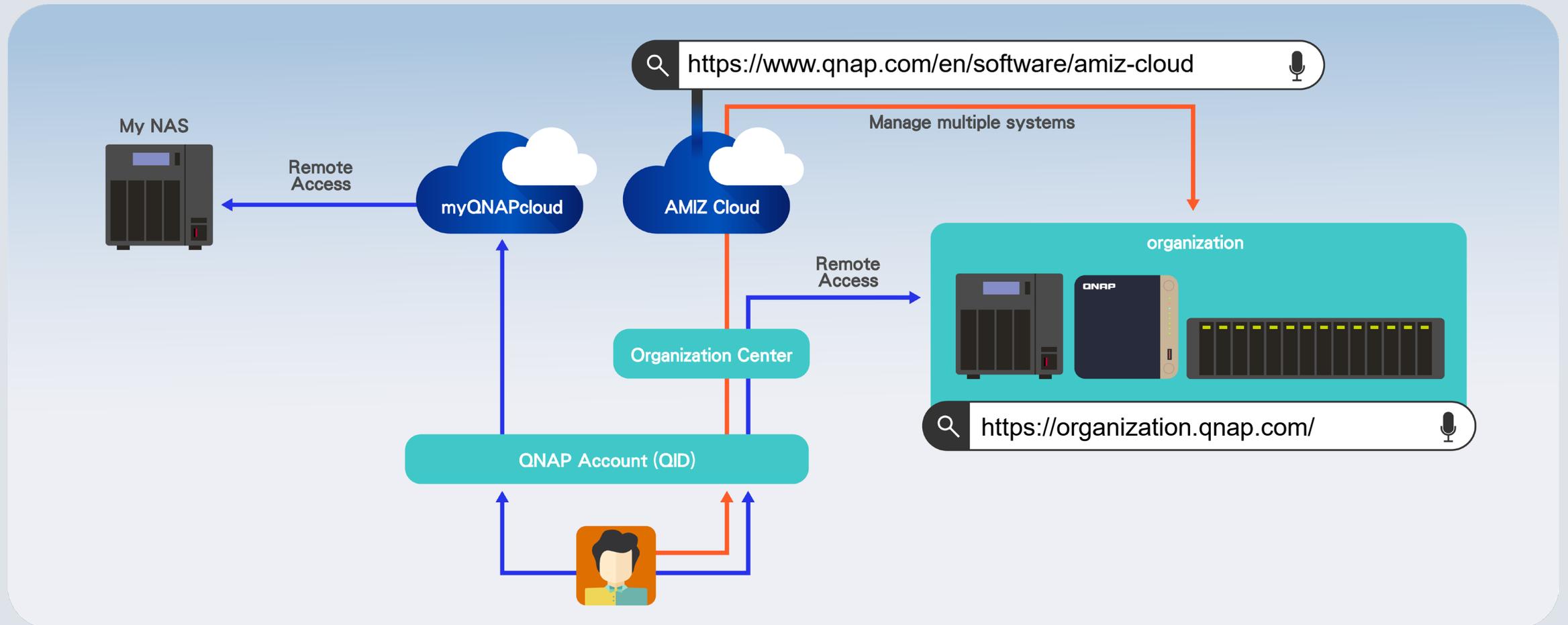


AMIZ Cloud

- One portal, multiple systems.
- Organized management (via Organization Center).
- Dashboard of system health
- Customized threshold alerts with various notification methods
- Central App management
- Basic system management



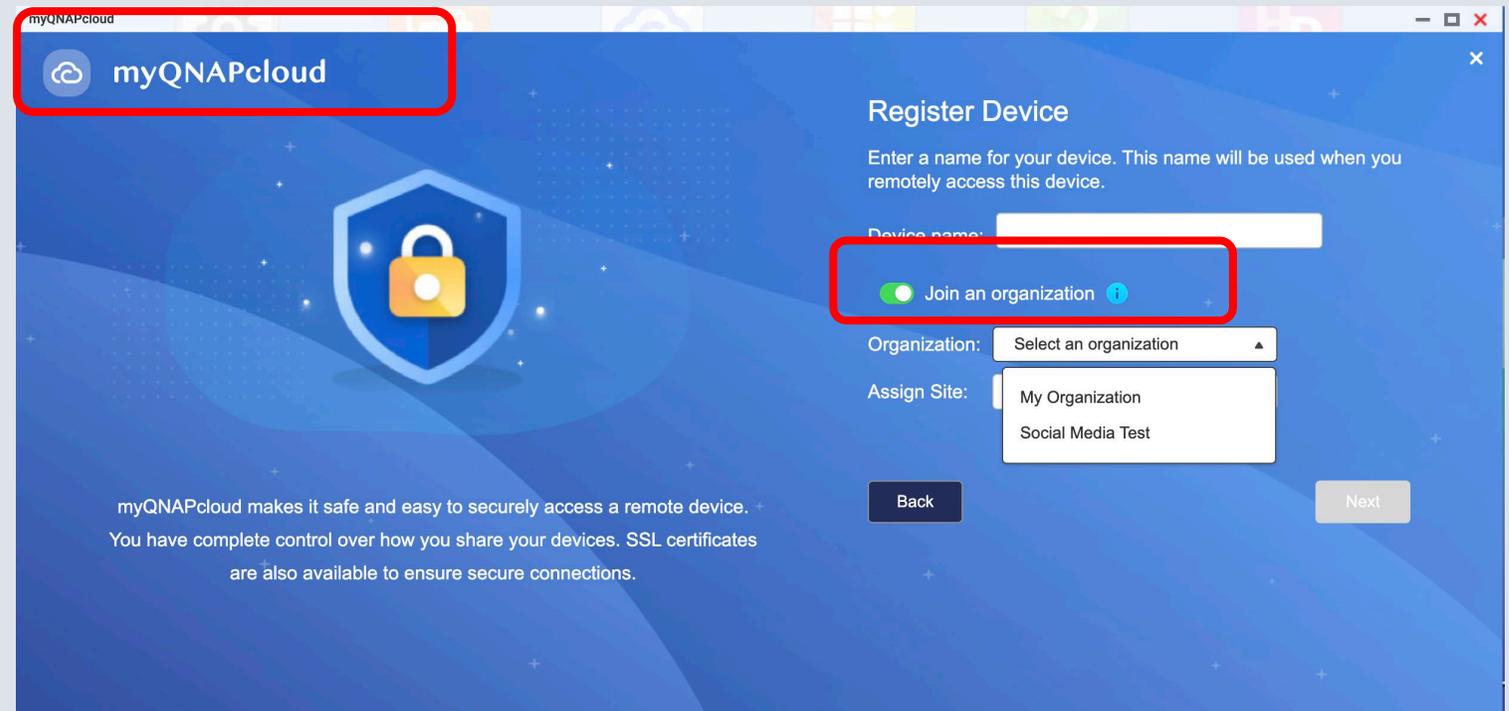
Grouped by Organization Center, Managed in Amiz Cloud



Initializing myQNAPcloud App to Join AMIZ Cloud

An agent will be installed on NAS which collects system information to AMIZ Cloud for you to manage the NAS.

2FA is needed when acting on NAS from AMIZ Cloud.



AMIZ Cloud: Dashboard

One glance and is aware of the current status.

The screenshot displays the AMIZ Cloud dashboard for a Storage MPM. The interface includes a sidebar with navigation options like Overview, Dashboard, Nodes, Monitor, and Manage. The main content area is divided into several sections:

- Dashboard:** Shows overall system health with a 'Caution' status. It includes a 'NAS: 2' summary and a 'Performance' section with CPU and Memory usage gauges.
- Capacity:** Shows 'Storage Pool Usage' and 'Volume Usage' with green status indicators.
- Device Information:** Provides detailed status for 'Disks: 5' (Caution), 'Storage pool: 2' (Fully Operational), and 'Volumes: 2' (Fully Operational).

System Health Summary:

Category	Offline	Alert	Warning	Good
NAS: 2	1	0	1	0

Performance Metrics:

Metric	>= 90%	80 - 90%	< 80%
CPU Usage	0	0	1
Memory Usage	0	0	1

Capacity Metrics:

Metric	>= 90%	80 - 90%	< 80%
Storage Pool Usage	0	0	2
Volume Usage	0	0	2

Device Information Summary:

Component	Disks	Storage Pool	Volumes
Status	Caution	Fully Operational	Fully Operational
Error	0	0	0
Warning	1	0	0
Good	4	2	2
Miscellaneous	0	0	0

AMIZ Cloud: Detail of Individual Device

Check further when signal warns.

The screenshot displays the AMIZ Cloud management interface for a specific device named 'timts877'. The interface is organized into several sections:

- Header:** Includes the AMIZ Cloud logo, a dropdown menu for 'Storage MPM', and utility icons for 'Actions', notifications, and user profile.
- Left Sidebar:** Contains navigation menus for 'Overview' (Dashboard), 'Nodes' (Devices (2), NAS (2), QuCPE (0), Virtual Machines (0), Containers (0)), 'Monitor' (Metric Alerts), and 'Manage' (AMIZ Cloud Join Keys, Security, Device Applications, Settings, Organization).
- Device Overview:** Shows the device icon, name 'timts877', and a sub-menu with 'Overview' (selected), 'Summary', 'Information' (General, Hardware, Networks, Storages), 'Monitor' (Performance, Logs), and 'Tasks'.
- Summary Section:** Features four monitoring charts:
 - Memory Usage:** A bar chart showing memory usage percentage over time, with values consistently below 40%.
 - Swap Usage:** A bar chart showing swap usage percentage over time, with values consistently near 0%.
 - Network Throughput:** A line chart showing network throughput in KB/s over time, with values ranging from 0 to 13.45 KB/s.
 - Enclosure:** Contains two sub-charts:
 - Temperature:** A line chart showing temperature in Celsius and Fahrenheit over time, with values ranging from 20.00°C to 50.00°C.
 - Fan Speed:** A line chart showing fan speed in RPM over time, with values ranging from 1000 to 2000 RPM.

AMIZ Cloud: Customized Alerts

Set up policy and it alerts when reaching the thresholds.

The screenshot displays the AMIZ Cloud management interface. The top navigation bar includes the AMIZ Cloud logo, a dropdown menu for 'Storage MPM', and an 'Actions' button. The left sidebar contains navigation options: Overview (Dashboard), Nodes (Devices (2), NAS (2), QuCPE (0), Virtual Machines (0), Containers (0)), Monitor (Metric Alerts), and Manage (AMIZ Cloud Join Keys, Security, Device Applications, Settings, Organization). The main content area is titled 'Create Metric Alert Policy' and is divided into three sections: 'Name and Description', 'Metrics and Criteria', and 'Send Alerts'.

Name and Description

Policy name:

Description (optional):

Metrics and Criteria

Metric:

Duration:

Condition:

Warning threshold: MB/s

Error threshold: MB/s

Note: Specify at least one threshold.

Select Devices

Send Alerts

Email **Apps via Qmiix**

Select apps to send notifications. AMIZ Cloud will send alert notifications to the selected apps via Qmiix.:

- [Send to Slack via Qmiix](#)
- [Send to Line via Qmiix](#)
- [Send an SMS via Qmiix](#)
- [Send to Zoom via Qmiix](#)
- [Send to Skype via Qmiix](#)
- [Send to Microsoft Teams via Qmiix](#)

AMIZ Cloud: Manage Application from Central Portal

Update, Start, Stop, Remove

The screenshot shows the AMIZ Cloud central portal interface. The top navigation bar includes the AMIZ Cloud logo, a dropdown menu for 'Storage MPM', and an 'Actions' dropdown. The left sidebar contains navigation options: Overview, Dashboard, Nodes (Devices (2), NAS (2), QuCPE (0), Virtual Machines (0), Containers (0)), Monitor (Metric Alerts), and Manage (AMIZ Cloud Join Keys, Security, Device Applications, Settings, Organization). The main content area is titled 'Device Applications' and features a search bar, a display mode selector (set to 'By application'), and a table of applications. An 'Action' dropdown menu is open over the first row, showing options: Update, Start, Stop, and Remove.

Application	Updatable	Notices	Started	Action
<input checked="" type="checkbox"/> myQNAPcloud Link	0	0	2	Update, Start, Stop, Remove
<input type="checkbox"/> myQNAPcloud	0	0	2	
<input type="checkbox"/> QDevelop	0	0	2	0
<input type="checkbox"/> QuLog Center	0	0	2	0
<input type="checkbox"/> Malware Remover	0	0	2	0
<input type="checkbox"/> QTS SSL Certificate	0	0	2	0
<input type="checkbox"/> Notification Center	0	0	2	0
<input type="checkbox"/> Q'center Agent	0	0	1	0
<input type="checkbox"/> AMIZ Cloud Agent	0	0	2	0

Page 1 / 2 | Display items: 1-20, Total: 28 | Show 20 items

AMIZ Cloud: Basic Control from Central Portal

Update Firmware, Restart, Shutdown

The screenshot displays the AMIZ Cloud central portal interface. The top navigation bar includes the AMIZ Cloud logo, a dropdown menu for 'Storage MPM', and an 'Actions' button. The left sidebar contains navigation options: Overview (Dashboard), Nodes (Devices (2), NAS (2), QuCPE (0), Virtual Machines (0), Containers (0)), Monitor (Metric Alerts), and Manage (AMIZ Cloud Join Keys, Security, Device Applications, Settings, Organization). The main content area shows 'NAS: 2' with a status summary: Good:0, Warning:1, Alert:0, Offline:1. A search bar for 'Search by hostname' and an 'Action' dropdown menu are present. The table lists two NAS devices:

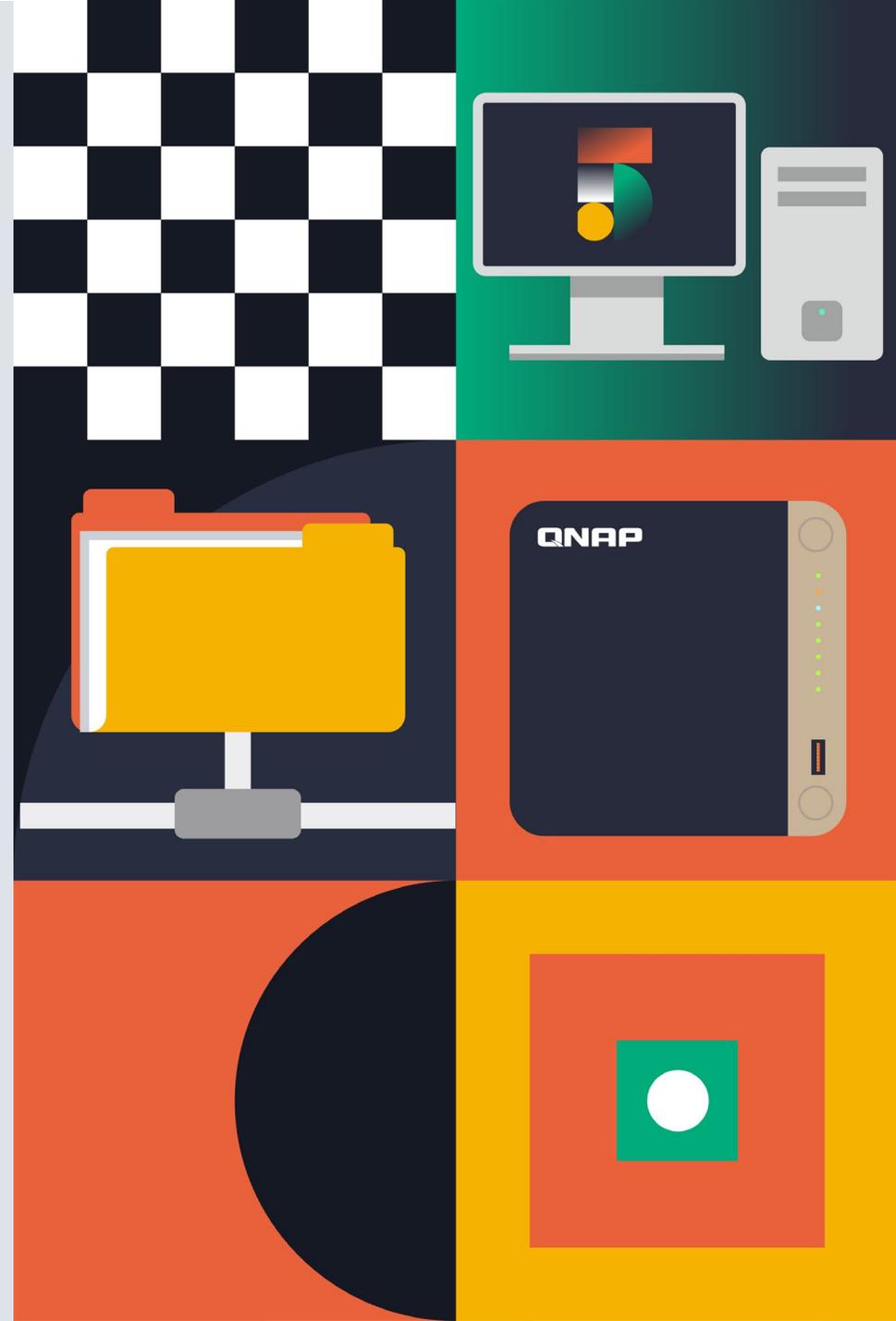
Hostname	Status	myQNAPcloud Device Name	Firmware Version	CPU Usage	Memory Usage	...
NAS68B613	Offline	andytower	h5.1.0.2271 (2023/01/07)	--	--	2
timts877	Warning	timmy	5.1.0.2267 (2023/01/03)	0.48%	26.83%	2

The 'Action' dropdown menu is open, showing options: Update Firmware, Restart, Shutdown, and Remove. The bottom of the page shows pagination: Page 1 / 1 and 'Display items: 1-2, Total: 2 | Show 20 items'.



Efficiency with Files – File Station

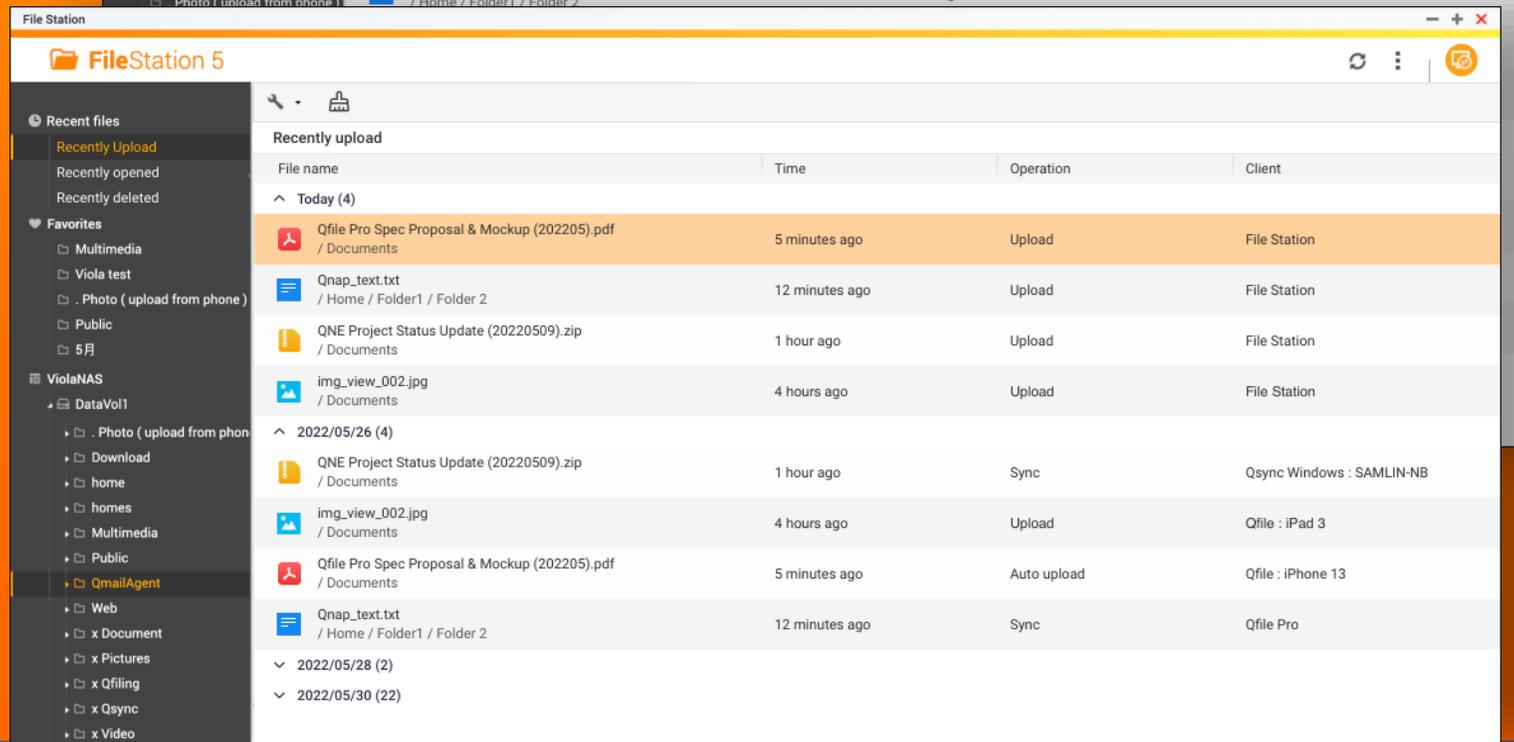
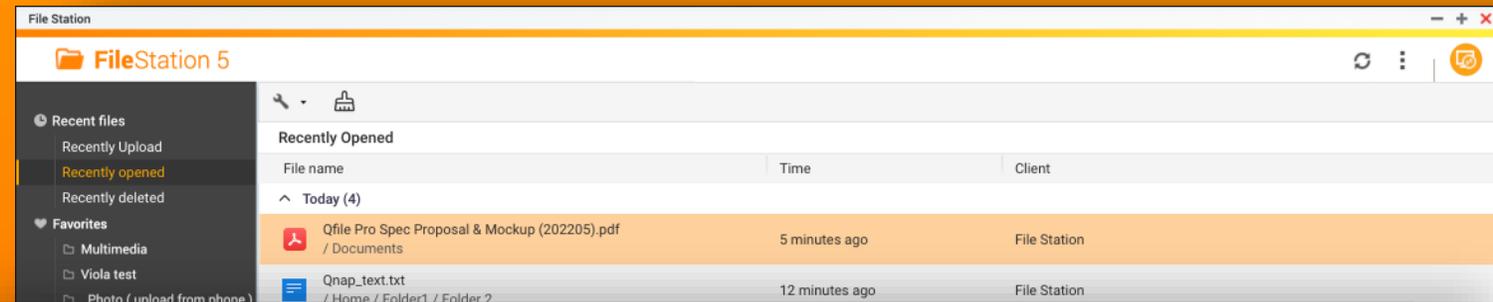
Just handy.



File Station – Recent Files Browsing

Easily locate the files with the fresh impression:

- Recently uploaded
- Recently opened
- Recently deleted



File Station – Qsirch Integration

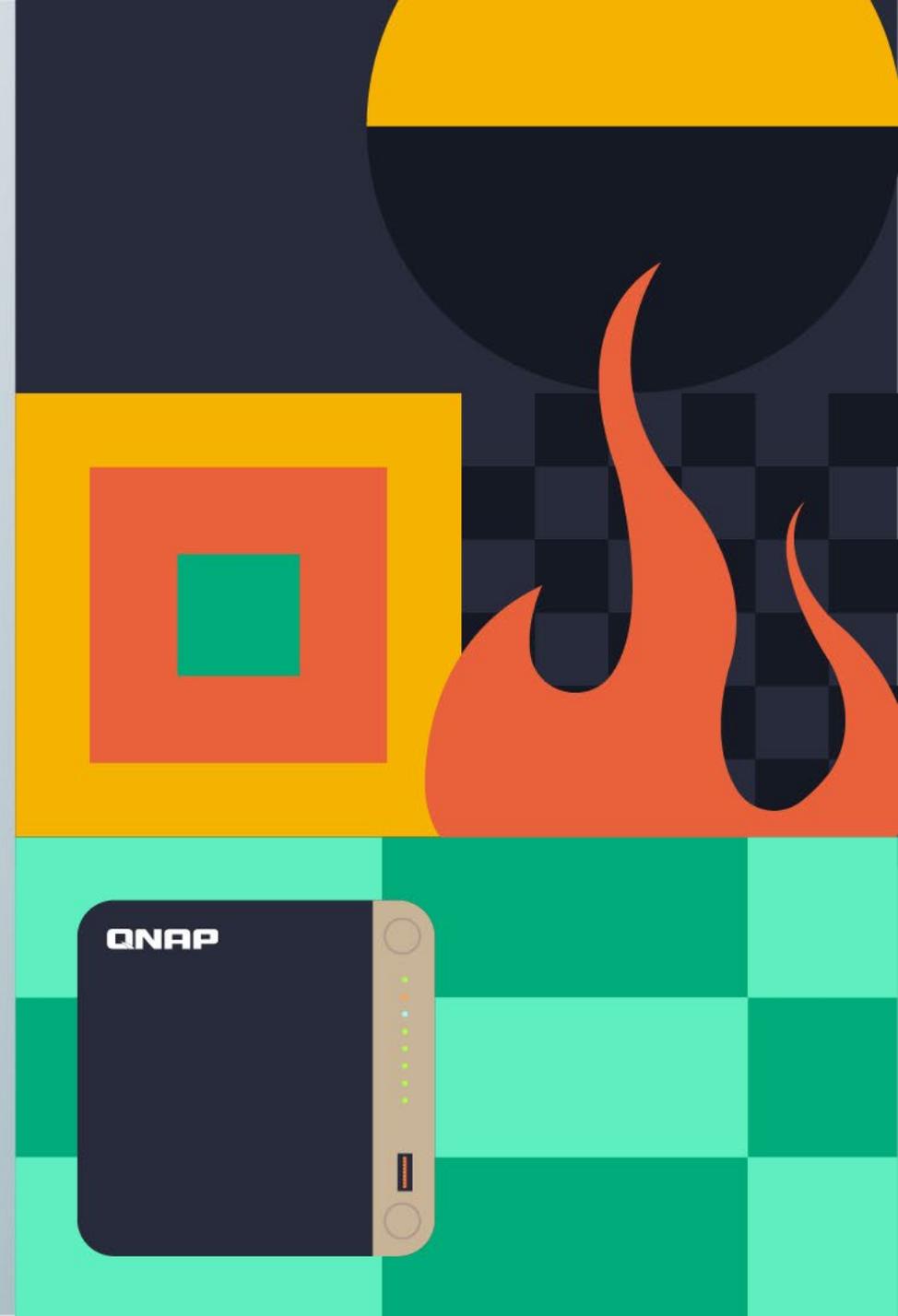
With Qsirch app installed in NAS, File Station can take advantage of the outstanding search capability.

The image displays three screenshots of the File Station interface demonstrating the Qsirch search integration. The top-left screenshot shows the search bar with a dropdown menu for 'Qsirch' and a tooltip that reads 'Search filename, content, and metadata'. The top-right screenshot shows the search results panel with filters for File name, Location, Type, Modified Date, Size, and Owner/Group. The bottom screenshot shows the search results for the query 'QNAP', displaying a table of 8 files.

Name	Modified	Type	Size	Permission	Owner	Group
ErrorReport-demo.gs.qnap.co...	2021-02-02 04:49:01 pm	CSV File	98 B	666 (rw-rw-rw-)	admin	administrators
MigrationReport-demo.gs.qna...	2021-02-02 04:49:01 pm	CSV File	335 B	666 (rw-rw-rw-)	admin	administrators
ErrorReport-demo.gs.qnap.co...	2021-02-02 04:49:01 pm	CSV File	995 B	666 (rw-rw-rw-)	admin	administrators
MigrationReport-demo.gs.qna...	2021-02-02 04:49:01 pm	CSV File	1.21KB	666 (rw-rw-rw-)	admin	administrators
ErrorReport-demo.gs.qnap.co...	2021-02-02 04:49:01 pm	CSV File	98 B	666 (rw-rw-rw-)	admin	administrators
MigrationReport-demo.gs.qna...	2021-02-02 04:49:01 pm	CSV File	335 B	666 (rw-rw-rw-)	admin	administrators
ErrorReport-demo.gs.qnap.co...	2021-02-02 04:49:01 pm	CSV File	98 B	666 (rw-rw-rw-)	admin	administrators
MigrationReport-demo.gs.qna...	2021-02-02 04:49:01 pm	CSV File	691 B	666 (rw-rw-rw-)	admin	administrators

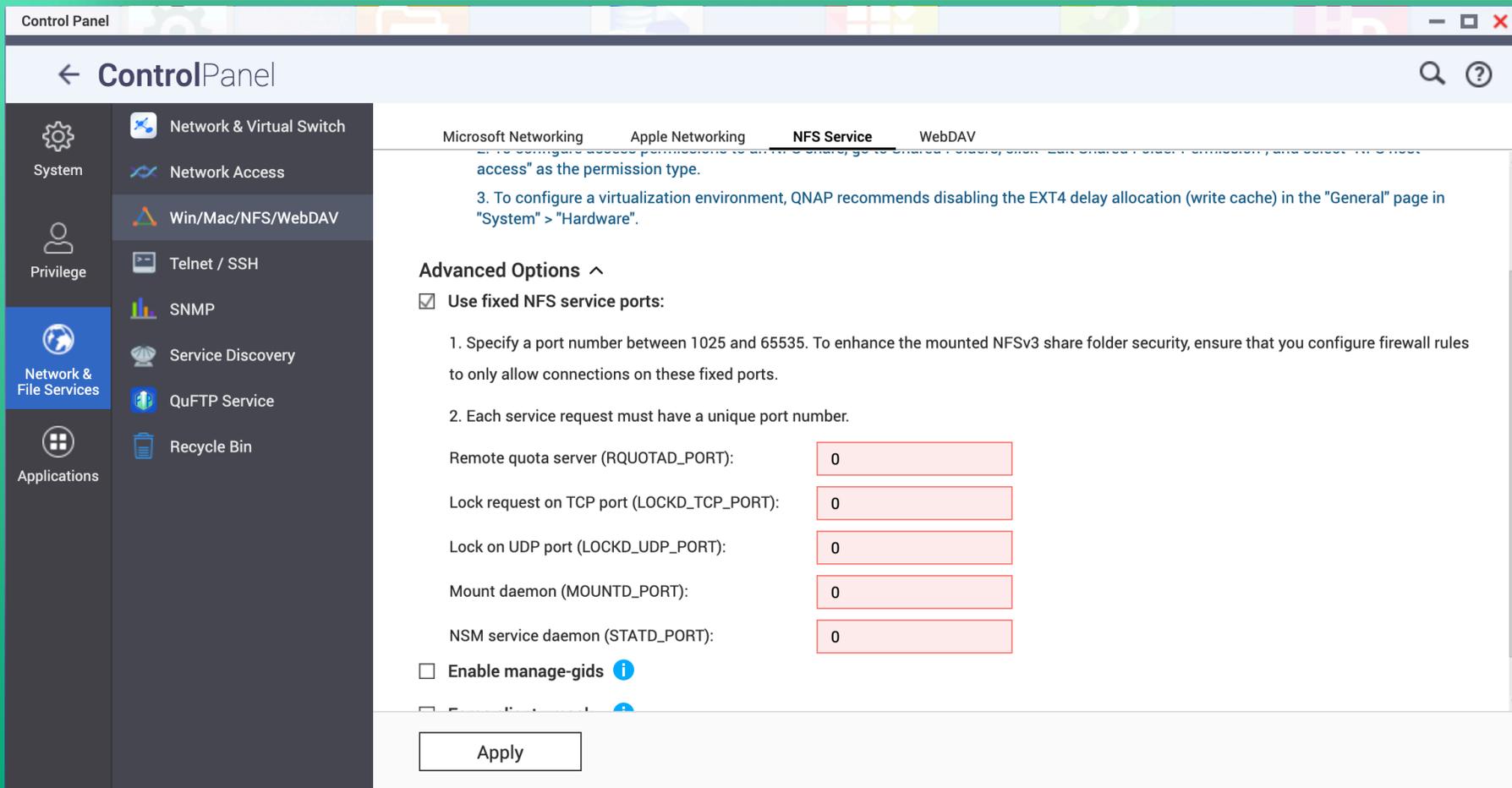
Firewall Friendly – NFS Fixed Ports Option

Don't need to reconfigure firewall after NFS service restarts.



Option for Fixed NFS Service Ports

NFS dynamically assigns service ports which can cause problem of firewall configuration. New advanced option to set the static ports saves the trouble of firewall reconfiguration when NFS restarts.



The screenshot shows the QNAP Control Panel interface. The left sidebar contains navigation options: System, Privilege, Network & File Services (selected), and Applications. The main content area is titled 'ControlPanel' and shows the 'NFS Service' configuration page. The 'Advanced Options' section is expanded, and the checkbox for 'Use fixed NFS service ports' is checked. Below this, there are instructions and input fields for setting fixed ports:

- 1. Specify a port number between 1025 and 65535. To enhance the mounted NFSv3 share folder security, ensure that you configure firewall rules to only allow connections on these fixed ports.
- 2. Each service request must have a unique port number.

The following ports are currently set to 0:

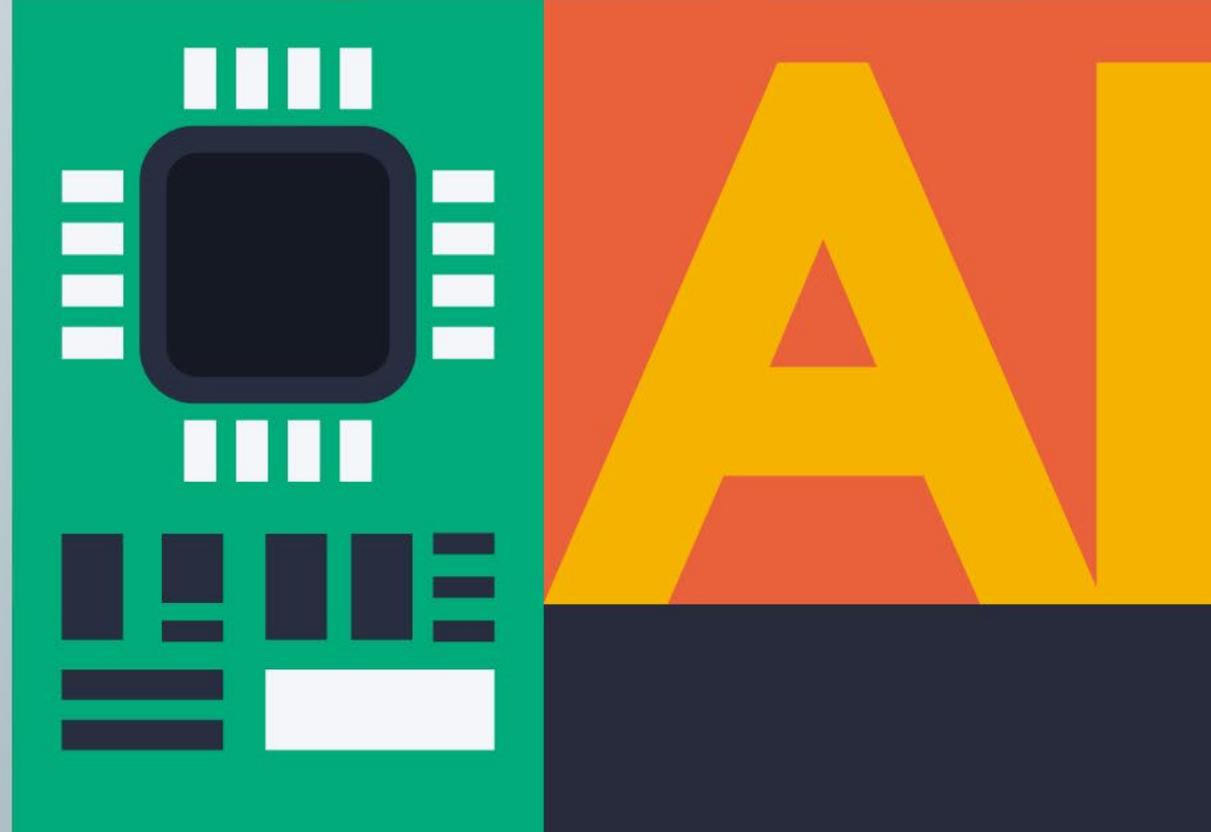
- Remote quota server (RQUOTAD_PORT): 0
- Lock request on TCP port (LOCKD_TCP_PORT): 0
- Lock on UDP port (LOCKD_UDP_PORT): 0
- Mount daemon (MOUNTD_PORT): 0
- NSM service daemon (STATD_PORT): 0

There is also an unchecked checkbox for 'Enable manage-gids'.

An 'Apply' button is located at the bottom of the configuration page.

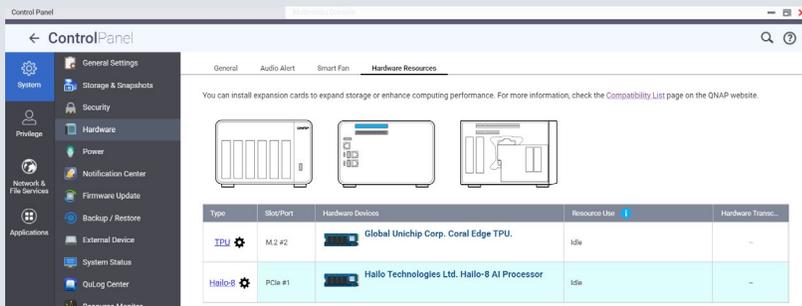
Premium AI Acceleration – Hailo-8 M.2 Key Support

26 TOPS (trillion operations per second)!

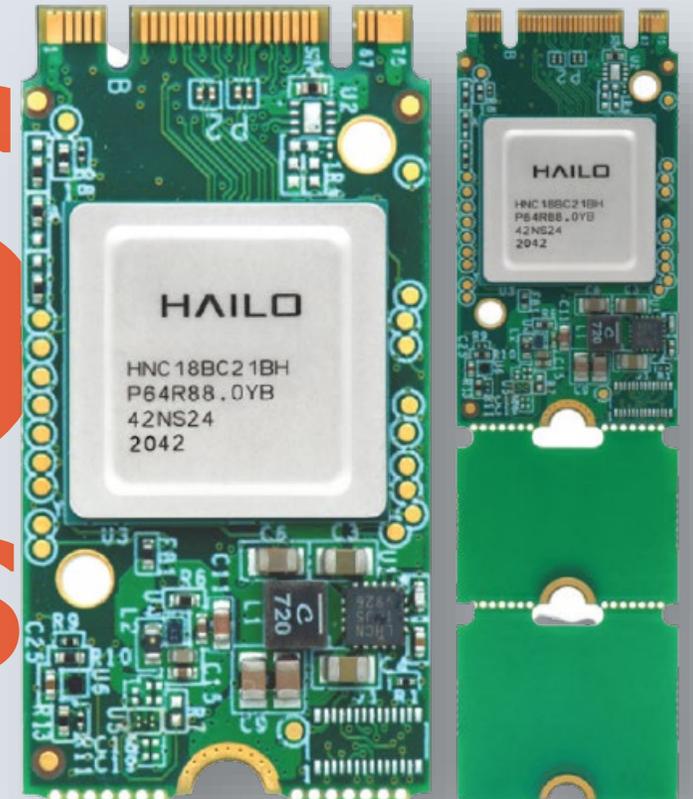


Hailo-8 M.2 B+M Key Support: Accelerate AI operation

- AI related applications such as QVR Human or QuMagie can now be benefited from Hailo-8 AI acceleration.
- Supports M.2 B+M formfactor and Hailo-8™ Century Evaluation Platform.



26
TOPS
(trillion operations per second)



The QNAP logo is displayed in a bold, black, sans-serif font. The letter 'Q' features a small, white, curved graphic element on its left side.

**Efficiency
and Security**

QTS 5.1.0

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