

QNAP

What's new for QuWAN 2.1

Optimize multi-site SD-WAN and
remotely deploy VPN on mobile
devices with QuWAN and QVPN





Agenda

- What's new for QuWAN 2.1
- Key feature introduction:
 - QVPN server on QuWAN
 - Hub capable
 - Duplicated IP detect
- Other features

What's new for QuWAN 2.1



Enhancement in QuWAN 2.1

• QVPN server on QuWAN

- Server setting, choose the Hub device in the org for QVPN server
- Privilege, create/managed account and sending login information to user
- Online user monitor, checking the QBelt user login information
- Quick start for introducing QVPN server

• Hub capable

- Private IP can be Hub role
- Including NAT check function

• Duplicate IP detect

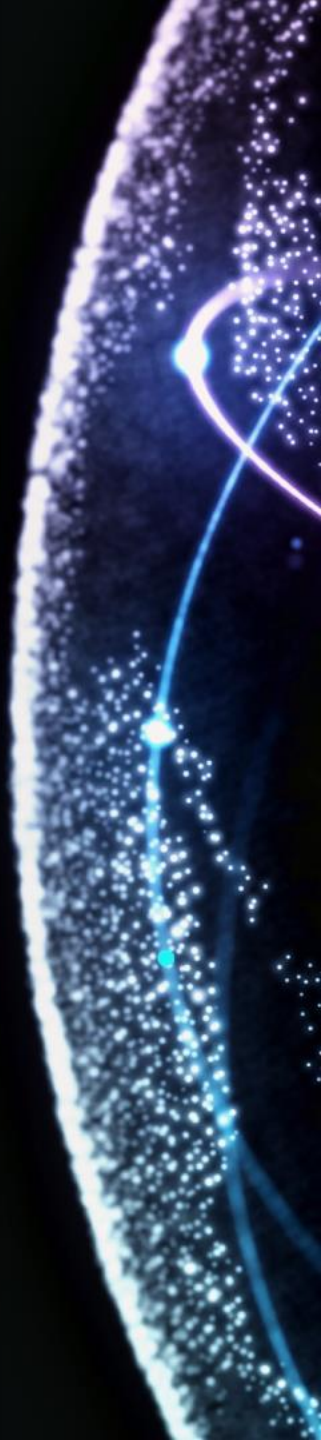
- Notice user for wrong/duplicate IP address

• Can setup segment for source IP in firewall rule

• Assign Service Class for QoS default rule

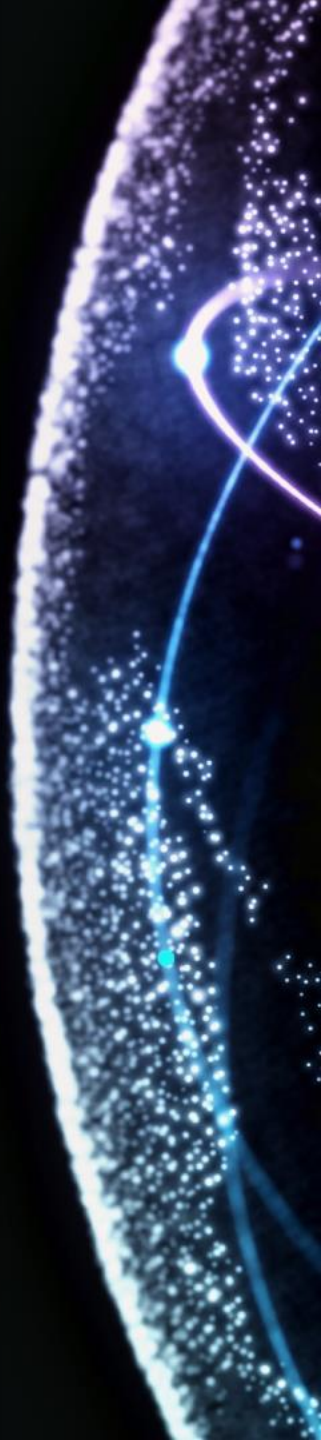
• Reporting time period enhancement

- Page change will not change time period setting
- Default report display time period change to 1 week



Enhancement in QuWAN 2.1 (con't)

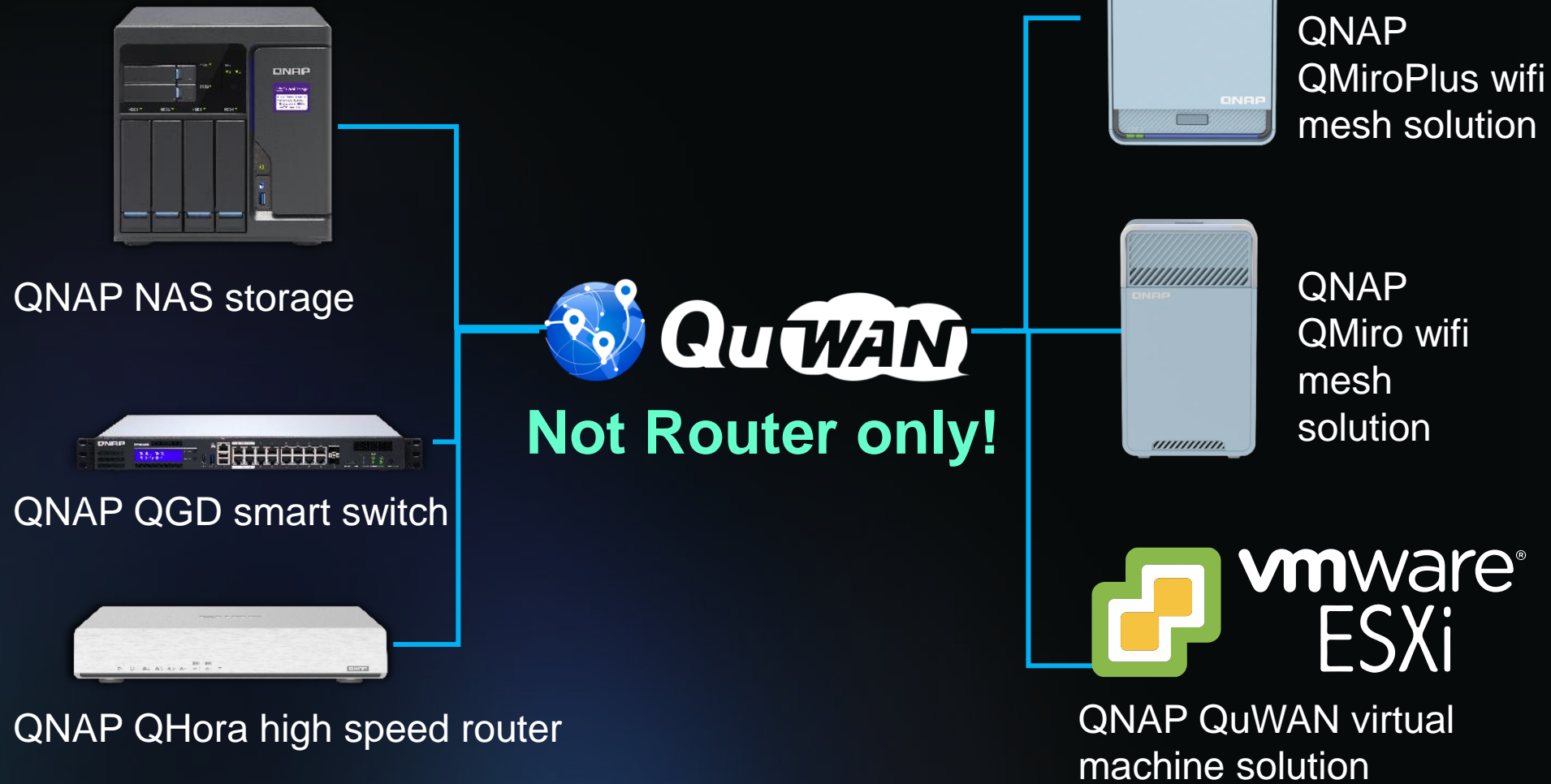
- QuWAN/device service port management(QNE/QTS/vRouter only)
- UX enhancement
 - Change the color of icon on the map makes more clear
 - Device connection health display
- Log message enhancement
 - VPN server user friendly wording for VPN connection status
 - VPN server format changing for user account/password changing log



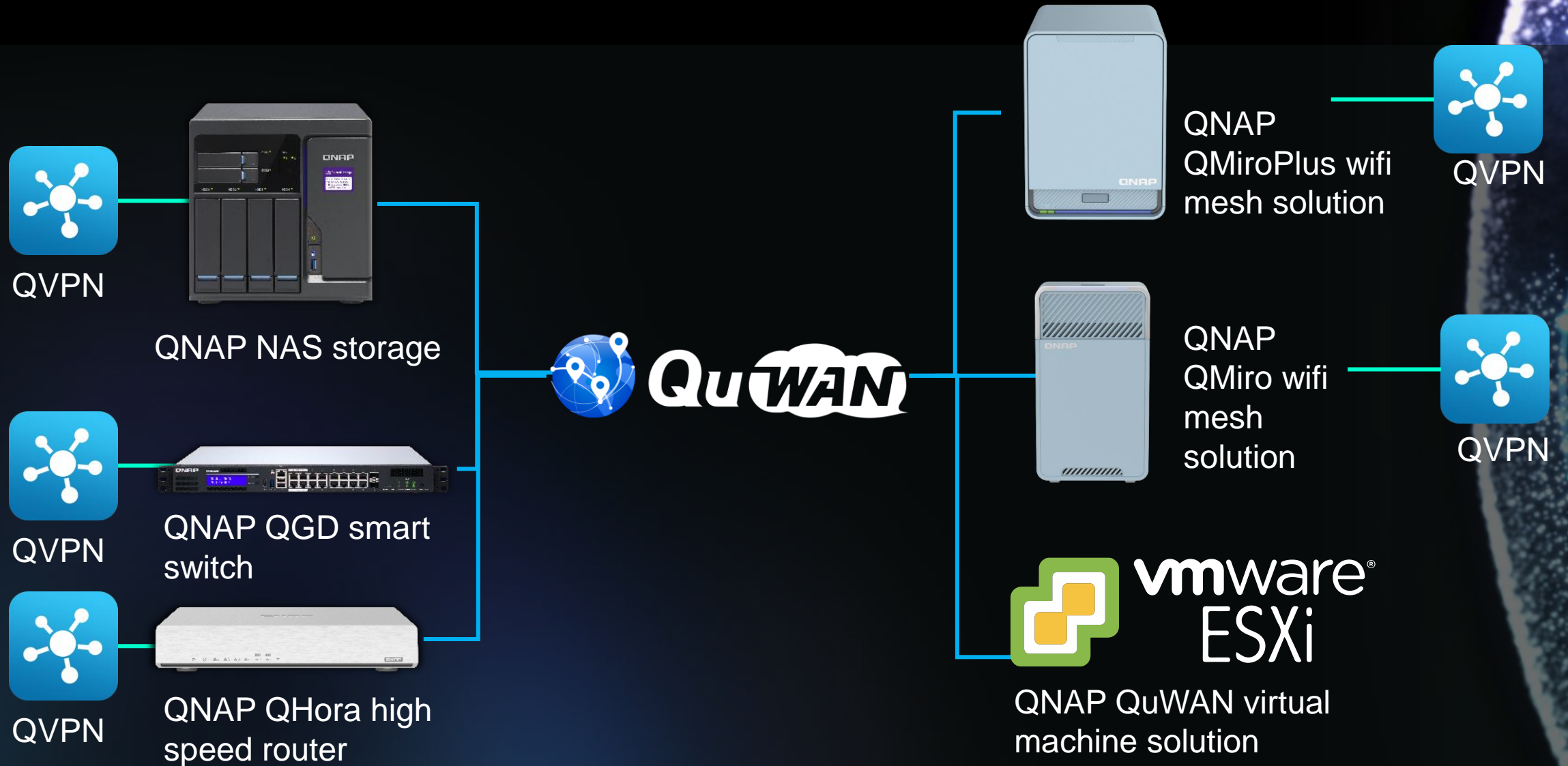
Key feature
introduction:
QVPN server
on QuWAN



QuWAN is the most platform flexible SD-WAN solution



QVPN can expend QuWAN coverage



For QTS you need setup QBelt by yourselves under QuWAN deployment

QVPN



Enter server IP
Service port
PSK

.
. .
. .



QuWAN

Install QVPN service
Find the IP address
Setup firewall/NAT on QuWAN
Setup for client
Check the routing

.
. .
. .

What if need multiple QTS with VPN connections?

I need to setup multiple connections for back up



Adding server A config...
Adding server B config...
Adding server C config...

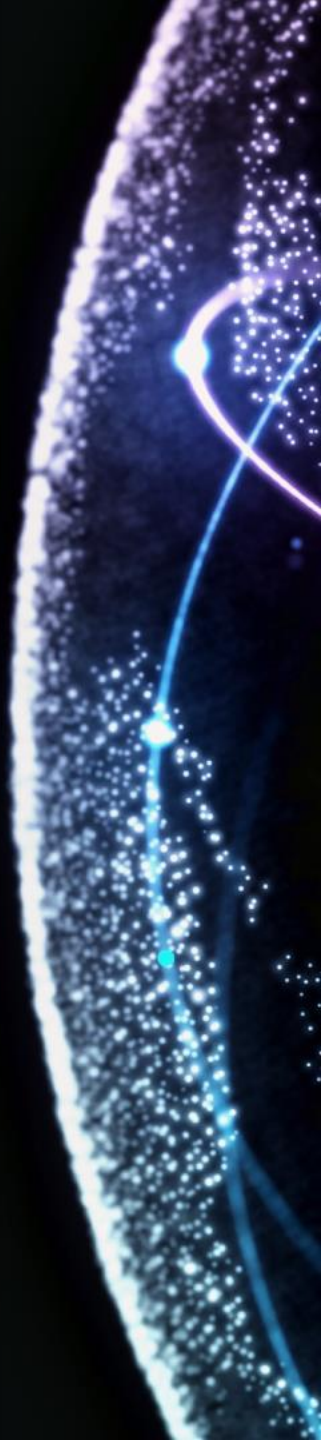


The advantage of QVPN server on QuWAN

- Can centralized user account management
- Can setup multiple QVPN server at the same time
- Can manage QVPN server at the same time
- Can monitor client's connection info on cloud directly
- User don't need to remember a lot of IP address for server
- Auto health check to decide which server is suitable for QVPN client
- Keep manual options for user to choose which QVPN server they like to connected(on QVPN client)

Notice:

QuWAN 2.1 QVPN server support on the QNE/QTS and QuWAN vRouter currently



GUI introduction

The screenshot displays the QuWAN Orchestrator interface. On the left is a blue sidebar with navigation options: Overview, QuWAN Device, QuWAN Topology, VPN Server Settings (highlighted with a yellow box), System Notifications, Event Logs, Packet Capture, Common Configuration, Firmware Management, and License Subscriptions. The main content area is titled "VPN Server Settings / QuWAN QBelt VPN Server" and includes a "QuWAN QBelt VPN Server Quick Start" link (also highlighted with a yellow box). A top-right banner prompts users to "Download the QVPN Device Client application" with links for "Utilities" and "Mobile App". Below this is a table of VPN server configurations with columns for Hub, Region, VPN User IP Range, UDP Service Port, Maximum VPN Users, DNS Servers, VPN Server Status, Toggle Status, and Action. The table contains three rows: 0813QTS, 0909, and syunKVM. The first two are active, while the third is inactive.

QuWAN Orchestrator

Org: Adamtest | FrankLiao

VPN Server Settings / QuWAN QBelt VPN Server

[QuWAN QBelt VPN Server Quick Start](#)

Download the QVPN Device Client application
[Utilities](#) | [Mobile App](#)

Enable | Disable | Selected: 0 | Search

<input type="checkbox"/>	Hub	Region	VPN User IP Range	UDP Service Port	Maximum VPN Users	DNS Servers	VPN Server Status	Toggle Status	Action
<input type="checkbox"/>	0813QTS	My global region	198.18.6.2~198.18.6.255	5533	25	198.18.6.1	✓ Toggle Status	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	0909	My global region	198.18.6.2~198.18.6.255	5533	25	198.18.6.1	✓ Toggle Status	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	syunKVM	123	198.18.6.2~198.18.6.255	5533	25	198.18.6.1	✗ Inactive	<input type="checkbox"/>	

Quick start introduction for QuWAN QVPN

VPN Server Settings / QuWAN QBelt VPN Server ⓘ

[QuWAN QBelt VPN Server Quick Start](#)

Enable Disable Selected: 0

Hub ▾ Region ▾ VPN User IP Range UDP Service Maximum VPN Users ▾

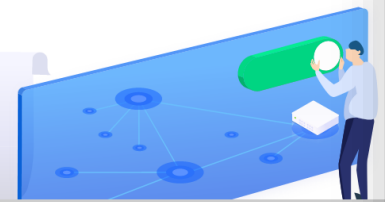
Guiding user to know how to setup the QVPN server on QuWAN

QuWAN QBelt VPN Server Quick Start

Step 1: Enable the VPN server and add a VPN user.

Once you enable the QuWAN QBelt VPN server, you can add VPN users to access the server.

- Username: Specify a username for the VPN user.
- Email address: Specify the email address of the VPN user.
- Accessible hubs: Select from multiple available QuWAN hubs that are configured as VPN servers. VPN users can only connect to the selected hubs. QNAP routers cannot function as VPN servers.
- Segment: Select a predefined segment belonging to the VPN user to apply the segmentation firewall rules. One segment can be shared between several VPN users.
- Multidevice connection: Enable to allow the VPN user access to the VPN server from multiple devices using the same account.



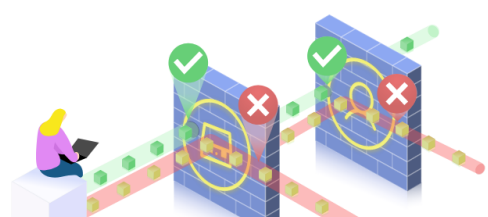
Next

QuWAN QBelt VPN Server Quick Start

Step 2: Configure the firewall settings

QuWAN Orchestrator provides two levels of firewall security. The device-level firewall automatically allows all incoming traffic and the segmentation firewall automatically denies all traffic to ensure security within different segments of the organization.

To allow VPN users remote access to internal resources within the organization as well as external web resources, ensure that both the device-level and segmentation firewall rules allow traffic. QNAP recommends creating a customized segment and creating firewall rules within a segment for VPN users to safeguard different segments in the organization. To configure device-level firewall settings, go to QuWAN Device, select your region and device, and then click Firewall. To configure segmentation firewall settings, go to Common Configuration > Segment, and then add or modify firewall rules.



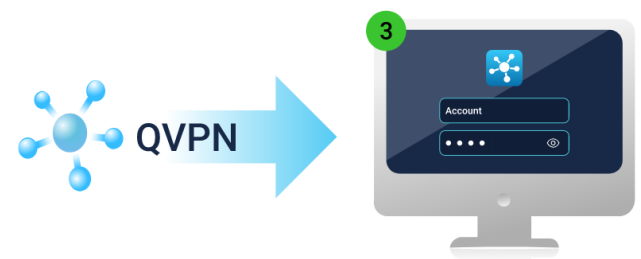
Back Next

QuWAN QBelt VPN Server Quick Start

Step 3: Connect to the VPN server using QVPN Device Client

To access the VPN servers, users must download and install the QVPN Device Client application on their device. Users must configure the username, password, and organization information on the application to set up a VPN connection to a QuWAN hub.

[Utilities](#) [Mobile App](#)



Back Close

Setup QVPN server on QuWAN

Press Action for each QVPN server for editing the setting

The screenshot displays the 'VPN Server Settings / QuWAN QBelt VPN Server' interface. A modal window titled 'Configure "0813QTS" VPN Server Settings' is open, showing the following configuration details:

- Region: My global region
- VPN User IP range: * 198 . 18 . 6 . 2
- Subnet mask: * 255.255.255.0 (/24)
- UDP service port: 5533 | [Service Management](#)
- Maximum VPN Users * 25
- DNS servers: * 198.18.6.1 (DNS limitation: 3)

At the bottom of the modal are 'Save' and 'Cancel' buttons. In the background, a table lists VPN servers with columns for 'Toggle Status' and 'Action'. The 'Toggle Status' and 'Action' columns for the '0813QTS' server are highlighted with yellow boxes, and a red arrow points from the 'Action' column to the modal window.

Hub	Region	Toggle Status	Action
<input type="checkbox"/>	My global region	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	My global region	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	123	<input type="checkbox"/>	

Create QVPN QBelt user on QuWAN

Add QVPN QBelt user on the Privilege setting

VPN Server Settings / Privilege Settings

Add VPN User Send New Password Delete VPN User

<input type="checkbox"/>	Username ▲	Segment ▼	Accessible Hubs
<input type="checkbox"/>	0811	global	0813QTS
<input type="checkbox"/>	0817	global	0813QTS



Accessible Hubs Segment

3 selected ▼ global ▼

- All
- syunKVM
- 0909
- 0813QTS

Add VPN User

Total VPN users:1

Username	Email address:	Accessible Hubs	Segment	Multidevice Connection
 Frank	franktest@test.com	3 selected ▼	global ▼	<input checked="" type="checkbox"/> Enabled 

Managed QVPN QBelt client on QuWAN

VPN Server Settings / Privilege Settings

Add VPN User Send New Password Delete VPN User Selected: 1 Search

Username	Segment	Accessible Hubs	Multidevice Connection	Action
<input type="checkbox"/> Edisonhsu	global	0813QTS	Enabled	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/> Frank	global	All hubs (syunkVM, 0909...)	Enabled	<input checked="" type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> ...	global	0813QTS	Enabled	<input type="checkbox"/> <input type="checkbox"/>

Edit VPN User Settings

Editing the VPN user settings will terminate the current VPN connection between the VPN server and user. Inform the VPN user to connect to the server after applying the changes.

* Required field

VPN User Information

Username: Frank

Email address:

Segment * global

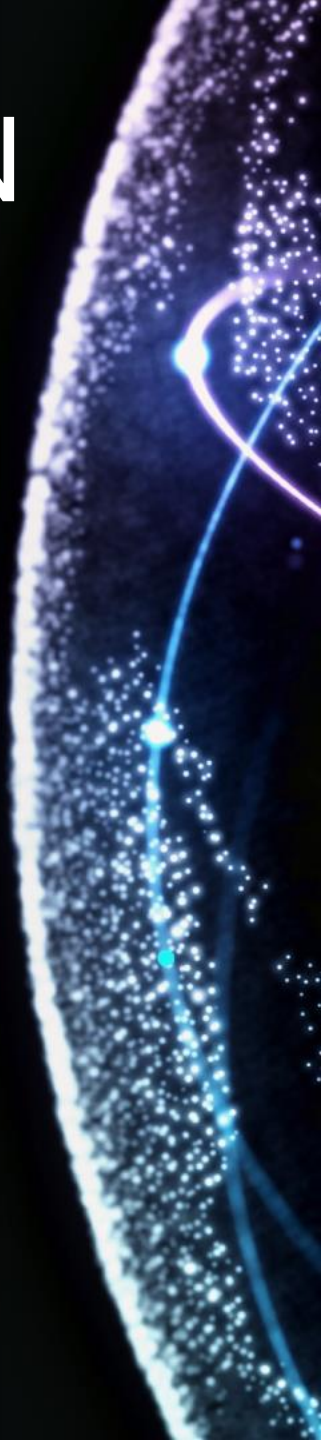
QuWAN QBelt VPN Server Settings

Accessible Hubs * 3 selected

Enable multidevice connection

Save Cancel


Managed QVPN QBelt user on the Privilege setting





QuWAN QVPN notification mail

Send out the user notification mail from QuWAN directly

[QuWAN Orchestrator] VPN Management Notification 收件匣 x

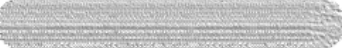
 **QNAP QuWAN Orchestrator** <quwan-noreply@qnap.com>
寄給 我 ▾






Hello Frank,

QuWAN (QNAP SD-WAN) has invited you to join QuWAN Network as QVPN Client. Please install QVPN Client on your personal device at [QNAP QVPN Utilities](#), or [QNAP QVPN mobile](#). Enjoy a safe remote connection everywhere you go.

Adamtest's Organization ID:
5fa9fbe 

User Name:
Frank

Password:
DL 

Setup QBelt for QuWAN on the QVPN client

Copy and past the QBelt info on the notification email to QVPN client

The image displays a sequence of five screenshots from the QVPN Device Client, illustrating the steps to join a QuWAN QBelt VPN server:

- Profile Selection:** The 'Saved Profiles' list shows 'QuWAN QBelt VPN' highlighted with a red box.
- Profile Details:** The selected profile 'Franktedt' is shown with details: WAN interface: Port 1, 123.51.249.15, Username: Frank, Organization name: Adamtest, and Regional hub: 0813QTS.
- Join Server Form:** The 'Join QuWAN QBelt VPN Server' screen prompts for 'Specify the organization ID, username, and password.' Fields include Organization ID (udjbrbdwjjcnrk), Username (Frank), and Password (masked).
- Profile and Hub Settings:** The 'Profile and Hub Settings' screen shows Profile Name (Franktedt), Regional hub (Auto selected), and 'Connect Immediately After Save' (toggled off).
- Final Settings:** The final settings screen shows a ping of 32ms, WAN interface: Port 1, and 'Connect Immediately After Save' (toggled off).

QBelt on QuWAN online user info

Check QBelt connection info on QuWAN

Current VPN Connection

Connected to Franktedt



My Device Franktedt

MAP Apps



Google

Host/IP
Time Connected 00:00:04

Disconnect

Disconnect VPN Users

Are you sure you want to disconnect the selected VPN users?

Total VPN users: 1

1. Frank

Apply Cancel

VPN Server Settings / Online VPN Users

Disconnect Selected: 0

Search

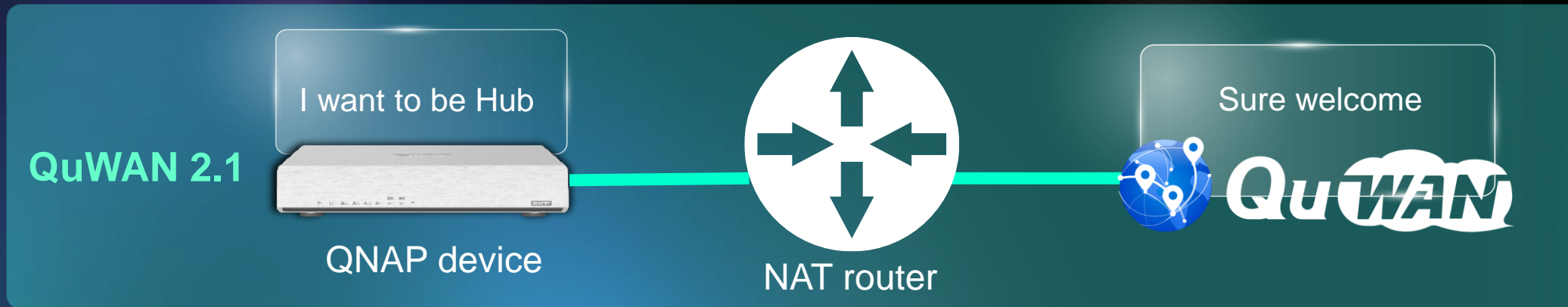
<input type="checkbox"/>	Login Date	Login time	Username	VPN User Device Name	Region	Hub	Source IP	VPN User IP	Action
<input type="checkbox"/>	2021/09/13	13:47:35	adam	My phone	My global region	test	1.2.3.4	198.18.6.2	<input type="checkbox"/>
<input type="checkbox"/>	2021/09/13	13:58:01	Frank	My PC	My global region	Test01	2.6.7.8	198.18.6.5	<input type="checkbox"/>

Key feature
introduction:
Hub capable



Why we need Hub capable?

Some devices can only be setup behind NAT. Before they can only be Edges but now they can be Hubs, to be additional nodes for Edges.



Note: NAT router need setup port forwarding rule for QuWAN service

Can change role from Edge to Hub on the QuWAN, also provided port forwarding check

Edit Device Topology Settings

Device name: 0908horaa

Region: My global region

WAN IP attribute: Behind NAT **Check**

Device role: Hub Edge

Description:

Save **Cancel**

Service Port Check

Check the status of VPN-accessible service ports to configure your device as a hub.

IPSec NAT-T: UDP 61007 , ISAKMP / IKE: UDP 500

[Service Management Settings](#)

Check **Cancel**

Edit Device Topology Settings

Device name: 0908horaa

Region: My global region

WAN IP attribute: Behind NAT

Device role: Hub Edge

Description:

Save **Cancel**

The service port check feature allows you to verify if the IPSec NAT-T and ISAKMP / IKE service ports are accessible. There are 4 types of WAN IP attributes. The system identifies and displays the WAN IP attribute.

- Public IP: All the WAN-enabled ports on the device are assigned a public IP address. Device role: Hub or edge
- Behind NAT: One of the WAN-enabled ports on the device is assigned a private IP address. Device role: Edge
- Behind NAT (Device role - Hub or edge): All the IPSec NAT-T and ISAKMP / IKE service ports on the WAN-enabled ports are accessible even if the IP address is not public.
- Public IP (IPSec / IKE passthrough failure): IPSec NAT-T and ISAKMP / IKE service ports are not accessible on the WAN-enabled ports. Device role: Edge

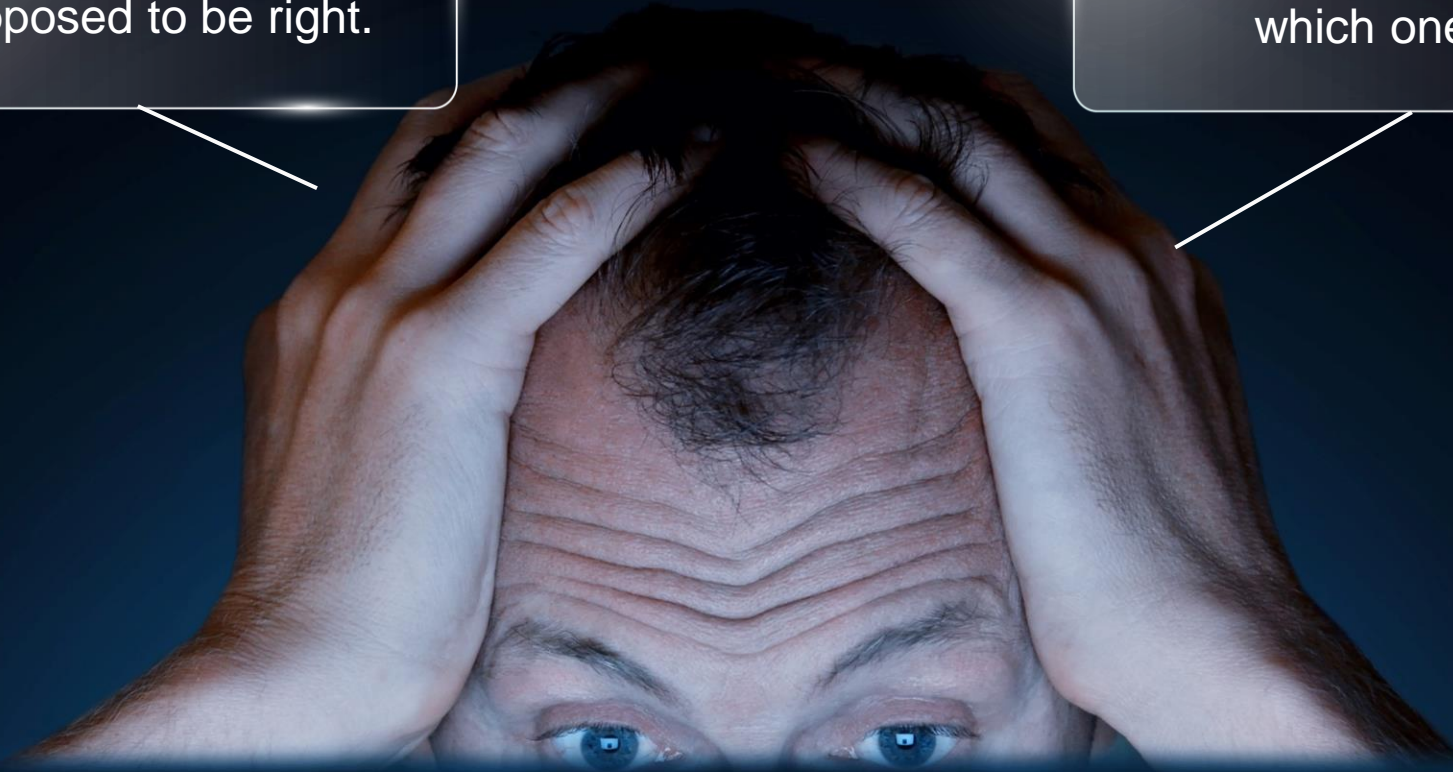
Key feature
introduction:
Duplicated IP
detect



Why we need duplicated IP detect?

Why can't I finish the IP setup? it is supposed to be right.

OK, now I know the setup conflicted, but with which one?



Show you the conflicted IP/device info for the setting

VPN Server Settings / QuWAN QBelt VPN Server

Configure "syunkVM" VPN Server Settings

Region: 123

VPN User IP range: * 198 . 18 . 6 . 2

Subnet mask: * 255.255.254.0 (/23)

✘ You cannot add the entered IP subnet. QuWAN reserves the following IP subnet: 127.0.0.0/8, 169.254.0.0/16, 198.18.0.0/15, 224.0.0.0/8

UDP service port: 5533 | [Service Management](#)

Maximum VPN Users * 25

DNS servers: * 198.18.6.1 (DNS limitation: 3)

[Save](#) [Cancel](#)

QuWAN Device

Region: H

Port 5 Configuration

Port Settings: WAN LAN

Segment: * global

Fixed IP address: * 192.168.100.1

Subnet Mask: * 255.255.254.0 (/23)

✘ The IP subnet conflicts with the LAN port "7" IP subnet of "raymond-pub-630".

Enable service DHCP Server

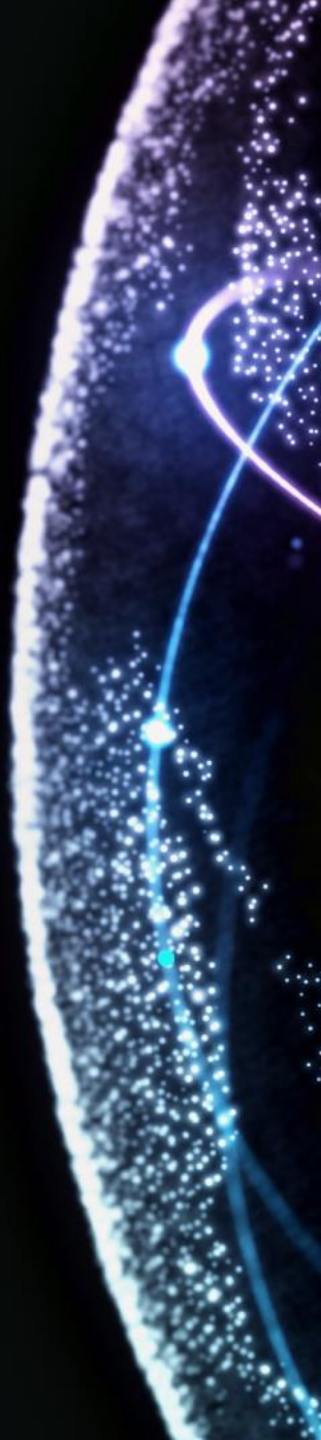
Start IP: *

End IP: *

[Save](#) [Cancel](#)

What QuWAN going to check

- WAN/LAN/VLAN interface
- VPN server
- Static route
- Reserved IP pool check
 - 127.0.0.0/8
 - 169.254.0.0/16



Other features



Can setup segment for source IP in firewall rule

Common Configuration / Segment

Segment Rules

Name	Description	Edit Qu
adamtest	-	0 rules

QuWAN Device

Region: / QuWAN device:

[Dashboard](#) [System Status](#) [Traffic Report](#) [QuWAN Device Settings](#)

Segment

Segment name: [Segment Settings](#)

Add Firewall Rule

* Required field

Rule Name *

Source

Any

Define

Type: * None

IP

Segment name

Client OS:

global

custom

0729

Frank

Destination

Any

Define

Application i

Any

Define

Action

Assign Service Class for QoS default rule

Common Configuration / Segment

raymond-test

raymond-test

[0 rules](#)

[1 rules](#)

⌵

QuWAN Service Class and Weight Percentage

Used: 100% Remaining: 0%

Service Class 1:
(Default service class)

29 %

Service Class 6:

7 %

Service Class 2:

20 %

Service Class 7:

1 %

Service Class 3:

Service Class 1

Service Class 8:

6 %

Service Class 4:

Service Class 2

Service Class 9:

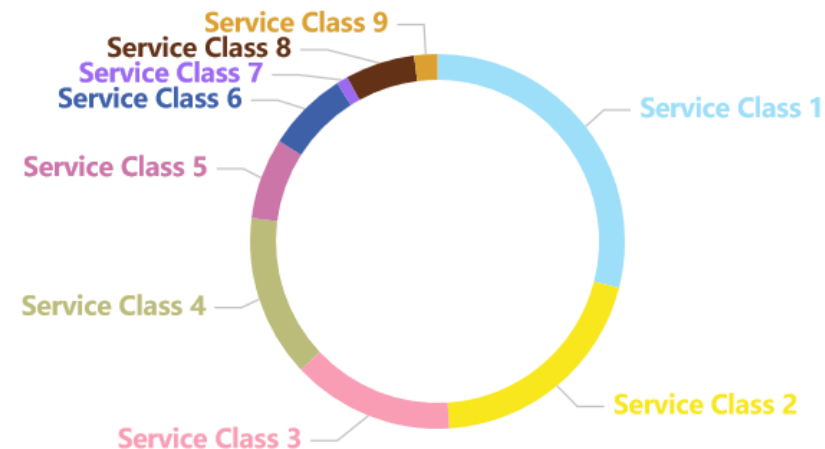
2 %

Service Class 5:

Service Class 3

Default service class:

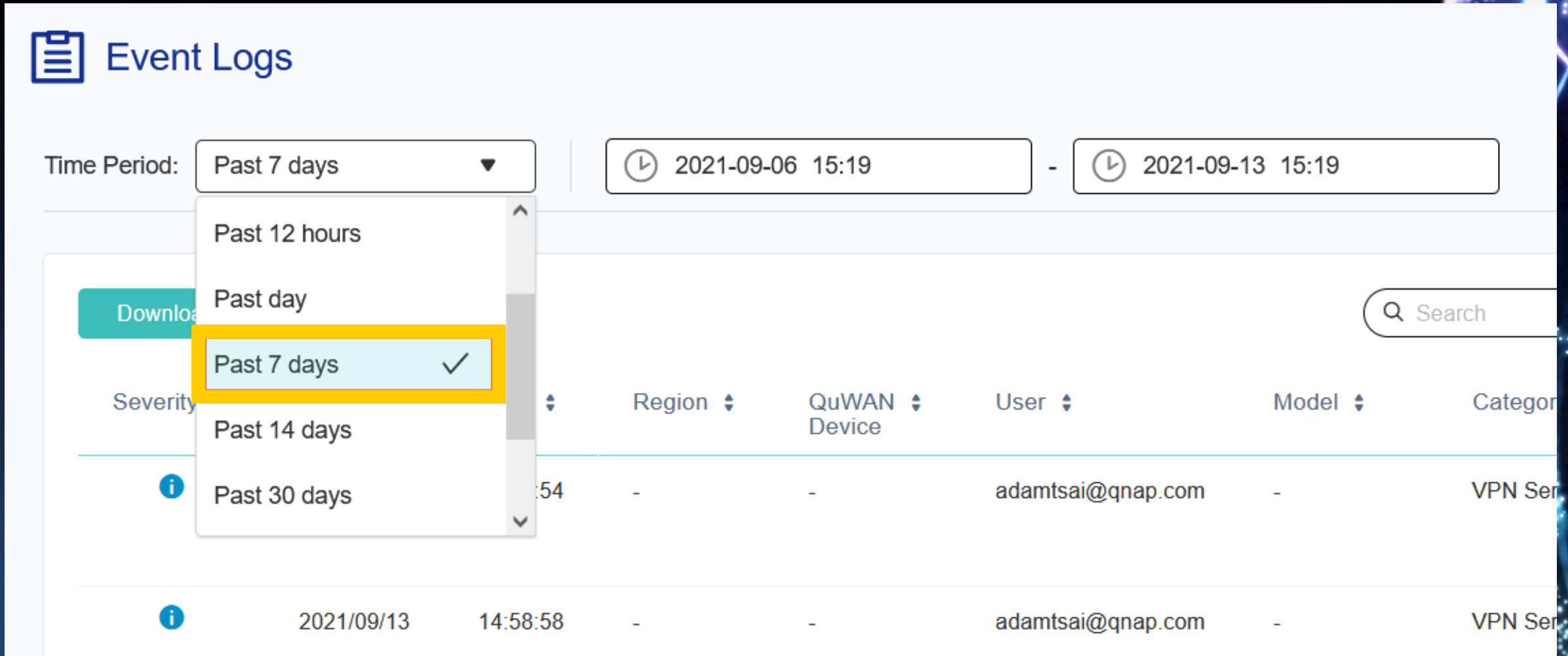
Service Cla...





Apply

Cancel

Reporting time period enhancement



The screenshot displays the 'Event Logs' interface. At the top left, there is a document icon and the text 'Event Logs'. Below this, the 'Time Period' is set to 'Past 7 days'. A date range is specified as '2021-09-06 15:19' to '2021-09-13 15:19'. A dropdown menu is open, showing options: 'Past 12 hours', 'Past day', 'Past 7 days' (highlighted with a yellow box and a checkmark), 'Past 14 days', and 'Past 30 days'. To the right of the dropdown is a search bar with the text 'Search'. Below the search bar is a table with columns: Severity, Region, QuWAN Device, User, Model, and Category. The table contains two rows of data, both with an information icon in the Severity column and 'VPN Ser' in the Category column.

Severity	Region	QuWAN Device	User	Model	Category
	-	-	adamtsai@qnap.com	-	VPN Ser
	2021/09/13	14:58:58	-	-	VPN Ser

QuWAN/device service port management (QNE, vRouter only)

Navigation: < Report | QuWAN Device Settings | Quality of Service | Firewall | Static Route | Service Management >

Service Management

Service	Ports	Protocol	Description	Action
^ Custom Ports Total: 0				+ Custom Service
<input type="text"/>	<input type="text"/> i	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
^ QuWAN Service Ports i Total: 3				
ISAKMP /IKE	<input type="text" value="500"/>	UDP	<input type="text"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
IPSec NAT Traversal	61002	UDP		<input type="checkbox"/>
QuWAN QBelt VPN Server	5533	UDP		<input type="checkbox"/>


UX enhancement

Total: 5 ✕


- My global region - 0813QTS ^
 - WAN status: ● Partially connected
 - VPN status: ● Hub-to-hub: Partially connected (1 / 2)
● Hub-to-edge: Partially connected (2 / 6)
 - WAN Port 1: ↕ 88.3 Kbps / ↘ 85.6 Kbps
- My global region - 0908horaa ∨
- My global region - 0909 ∨
- My global region - SyunQNE002 ∨
- My global region - testter ∨





Region	QuWAN Device Name	Device Role	WAN status	VPN status	QuWAN Device Status
My global region	0813QTS	Hub	● Partially connected (1/2)	● Hub-to-hub: Partially connected (1 / 2) ● Hub-to-edge: Partially connected (2 / 6)	✔ Active

Log message enhancement

 Event Logs

Time Period: | -

[Download CSV](#) 

Severity	Date	Time	Region	QuWAN Device	User	Model	Category	Content
	2021/09/13	11:43:16	My global region	0813QTS	[REDACTED]	QNAP Device	VPN Server	[QuWAN] Disconnected VPN user. VPN user: {Frank}, Device name: [REDACTED].
	2021/09/13	11:01:45	My global region	0908huraa	[REDACTED]	QHora-301W	QuWAN Topology	[QuWAN] Finished checking the WAN attribute.
	2021/09/13	10:43:07	-	-	[REDACTED]	-	VPN Server	[QuWAN] Changed password. Username: {Frank}, Email address: {frankliao@qnap.com}.
	2021/09/13	10:41:09	-	-	[REDACTED]	-	VPN Server	[QuWAN] Added VPN user. Username: {Frank}, Email

Page 1 / 1 | Display item: 1-20, Total 20 | Show 50 Items

QNAP



QuWAN is Your Best Choice!

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