

QNAP

進化的 QuWAN 2.1

QuWAN 搭配 QVPN
靈活度更上層樓，雲端佈
署行動裝置 VPN 連線





大綱

- QuWAN 2.1的新功能
- 重點功能介紹
 - QVPN server on QuWAN
 - Hub capable
 - Duplicated IP detect
- 其他功能

QuWAN 2.1 的新功能



進化的QuWAN 2.1

• QVPN server on QuWAN

- 在Orchestrator直接指定Hubs做為QVPN server
- 可直接在Orchestrator建立/管理QVPN clients帳號
- QBelt建立狀況及Clients資料都可在Orchestrator上追蹤
- 內建Quick start讓使用者知道怎麼建立QuWAN QVPN server

• Hub capable

- Private IP 也可設定成Hub
- 內建NAT port forwarding檢查，確保設備可轉換成Hub

• IP衝突偵測

- 提醒使用者發生IP相衝或IP設定錯誤

• 在Firewall裡可選擇Segment做為來源IP

• 指定特定Service Class做為QoS預設值

• 修正事件紀錄時間區間設定

- 頁面切換不會更動已選擇時間
- 預設時間區間修改為一週

進化的QuWAN 2.1 (con't)

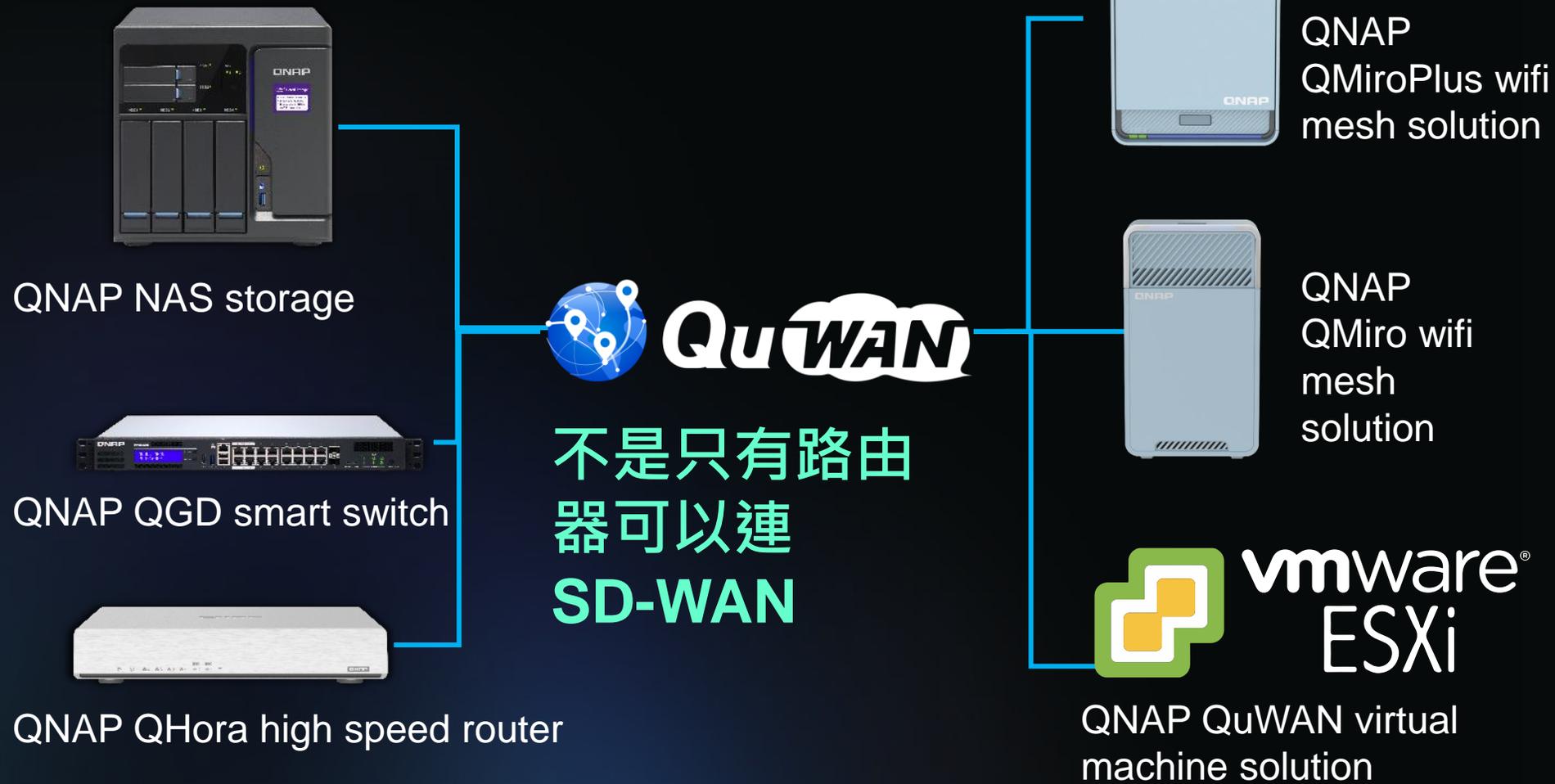
- 新增QuWAN/設備服務埠管理(QNE/QTS/vRouter only)
- UX介面升級
 - 地圖圖示顏色讓使用者更清楚知道設備連線狀況
 - 設備連線狀態清楚呈現
- 新增Log內容
 - 更易懂的VPN server/連線相關log
 - QuWAN QVPN server使用者帳號及密碼相關log格式修正



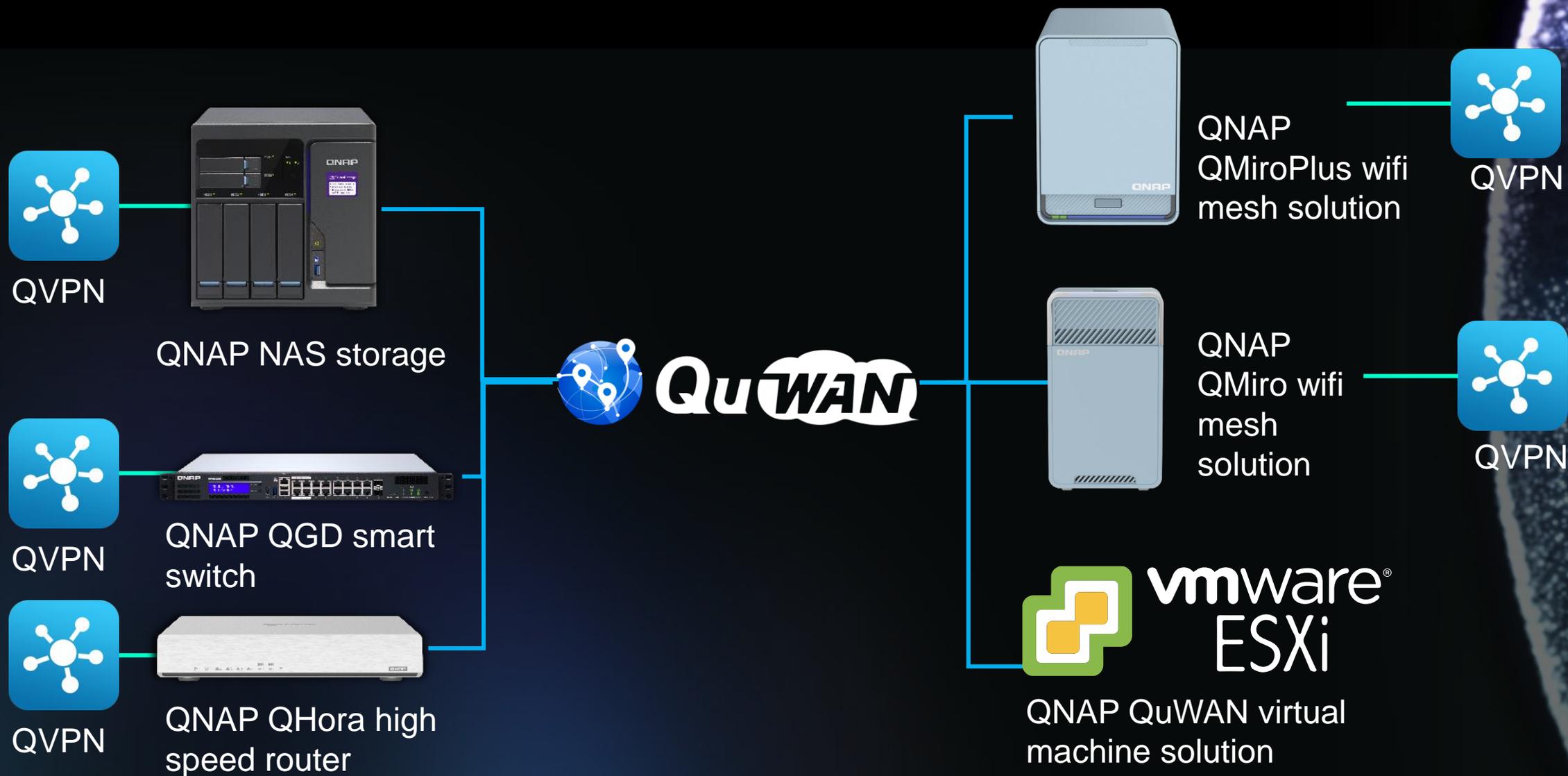
A digital globe with a network overlay. The globe is composed of a grid of blue dots and lines, representing a global network. The background is dark blue with a subtle grid pattern. The text is positioned on the left side of the image.

重點功能介紹:
QVPN server
on QuWAN

QuWAN 是硬體平臺支援度最高的SD-WAN



QVPN可讓QuWAN覆蓋範圍更廣



過往QTS平台在QuWAN架構下必須手動設定很多QVPN功能

QVPN



QuWAN

Enter server IP
Service port
PSK

.
. .
. .

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

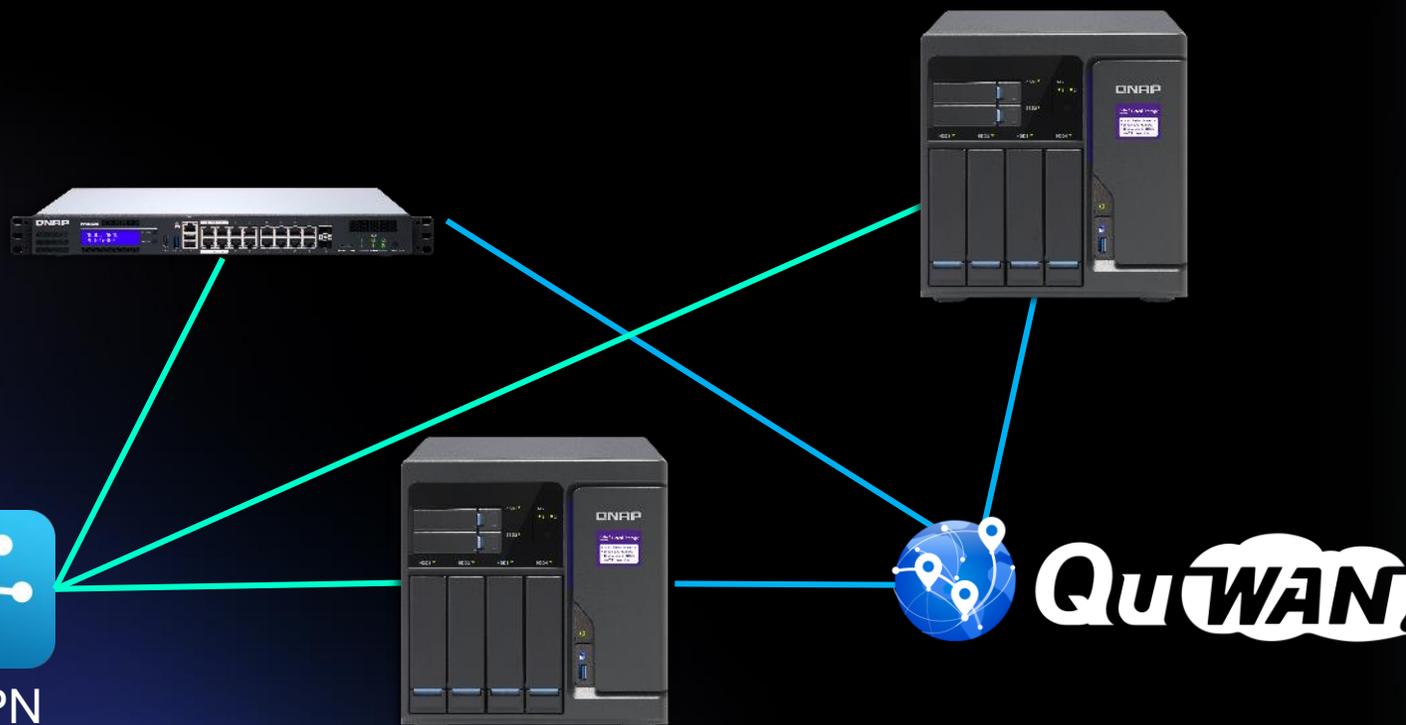
.
. .
. .

如果同時有多台QTS設備QBelt連線需求呢？

我需要設定多條連線免
得需要備援



新增 server A 設定...
新增 server B 設定...
新增 server C 設定...

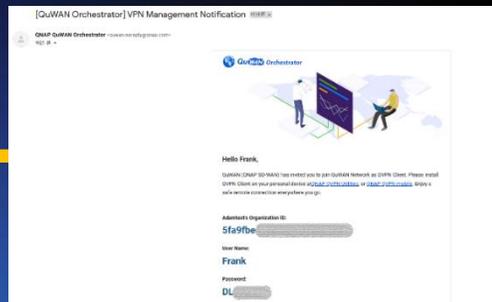


我們讓QuWAN + QVPN更靈活簡易，從雲端直接幫行動置裝置設定QBelt連線

太棒了，我不需要自己設定多條QBelt了，也不需要決定要連那一台server



QuWAN



這是你的設定檔

QuWAN支援QVPN server的優勢

- 可集中管理QVPN使用者
- 可同時設定多台QVPN server
- 可同時管理多台QVPN server
- 可在雲端直接掌握所有QVPN使用者連線情況
- 使用者不需要記錄多組QVPN server IP addresses
- 搭配QVPN client app上server連線狀況顯示，可直接連線當下最佳狀態的server
- 保留使用者想自行選擇要連線的server選項(在QVPN client上)

Notice:

QuWAN 2.1 QVPN server 目前僅支援QNE/QTS and QuWAN vRouter平台

GUI介紹

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". A yellow box highlights a "QuWAN QBelt VPN Server Quick Start" link. In the top right, there is a banner for "Download the QVPN Device Client application" with links for "Utilities" and "Mobile App". Below this, there are "Enable" and "Disable" buttons, and a "Selected: 0" indicator. A search bar is also present. The main table lists VPN servers with columns for Hub, Region, VPN User IP Range, UDP Service Port, Maximum VPN Users, DNS Servers, VPN Server Status, Toggle Status, and Action.

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"/>	

QuWAN QVPN快速入門

讓使用者迅速瞭解怎麼啟用QuWAN上面的QVPN server

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

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.

- ✓ Peter
- ✓ peter@abc.com
- ✓ Peter's Hub
- ✓ Peter's Segment

Next

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

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](#)

QVPN

3

Account

Back Close

在QuWAN上設定QVPN server

按下各QVPN server的action鍵就可編輯server設定

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 (with a refresh icon and a link to '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. A red arrow points from the 'Action' column of the server list to the modal. The server list in the background includes:

Hub	Region	Toggle Status	Action
<input type="checkbox"/>	0813QTS	My global region	<input checked="" type="checkbox"/>
<input type="checkbox"/>	0909	My global region	<input checked="" type="checkbox"/>
<input type="checkbox"/>	syunKVM	123	<input type="checkbox"/>

在QuWAN上建立QVPN QBelt使用者

可以在權限設定頁裡新增QVPN QBelt使用者

The image shows a composite screenshot of the QuWAN VPN interface. The top part displays the 'VPN Server Settings / Privilege Settings' page with a table of existing users and a modal for adding a new user. The bottom part shows the 'Add VPN User' modal with input fields for username and email, and a table for selecting accessible hubs and segments. A yellow box highlights the 'Add VPN User' button and the '3 selected' dropdown in the modal. Another yellow box highlights the '3 selected' dropdown and the 'global' segment dropdown in the privilege settings table.

VPN Server Settings / Privilege Settings

Buttons: 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

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

Privilege Settings

Accessible Hubs	Segment
3 selected	global
<input checked="" type="checkbox"/> All	
<input checked="" type="checkbox"/> syunKVM	
<input checked="" type="checkbox"/> 0909	
<input checked="" type="checkbox"/> 0813QTS	

在QuWAN上管理QVPN QBelt使用者

VPN Server Settings / Privilege Settings

[Add VPN User](#) [Send New Password](#) [Delete VPN User](#) Selected: 1

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

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](#)

也可以在權限設定頁裡管理
QVPN QBelt使用者

QuWAN QVPN通知信

由QuWAN雲端直接發出使用者通知信

[QuWAN Orchestrator] VPN Management Notification 收件匣 x

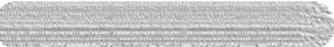
 **QNAP QuWAN Orchestrator** <quwan-noreply@qnap.com>
寄給我 ▾





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 

在QVPN client上設定QuWAN QBelt

將通知信上的登入資訊貼到QVPN client建立QBelt連線

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

- Profile Selection:** The 'Saved Profiles' screen shows the 'QuWAN QBelt VPN' profile selected.
- Profile Details:** The details for the 'Franktedt' profile are shown, including the WAN interface (Port 1), username (Frank), and regional hub (0813QTS).
- Join Server:** The 'Join QuWAN QBelt VPN Server' screen prompts for the organization ID (udjbrbdwjjcnrk), username (Frank), and password.
- Profile and Hub Settings:** The 'Profile and Hub Settings' screen shows the profile name (Franktedt), regional hub selection (Manually select the hub), and WAN interface (Port 1).
- Final Settings:** The final 'Profile and Hub Settings' screen shows the profile name (Franktedt), regional hub (32ms 0813QTS), and WAN interface (Port 1).

QuWAN上管理QBelt使用者

在雲端直接瀏覽QBelt連線狀況

Current VPN Connection

Connected to Franktedt

My Device Franktedt

MAP Apps

Google

Host/IP

Time Connected 00:00:04

Disconnect

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"/>	2021/09/13	13:58:01	Frank	My PC	My global region	Test01	2.6.7.8	198.18.6.5	

Disconnect VPN Users

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

Total VPN users: 1

1. Frank

Apply Cancel

A digital globe with a network overlay. The globe is composed of a grid of blue dots and lines, representing a global network. The background is dark blue with a subtle grid pattern. The text is positioned on the left side of the image.

重點功能介紹：
Hub capable

為什麼需要Hub capable?

有些設備就是只能架設在NAT後面，但還是希望要設定為Hub供做Org裡的Edge有別的節點選擇。



Note: 必須在NAT上開啟相對應port forwarding規則給QuWAN

QuWAN上可直接把Edge改成Hub， 並且提供port forwarding連線測試功能

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

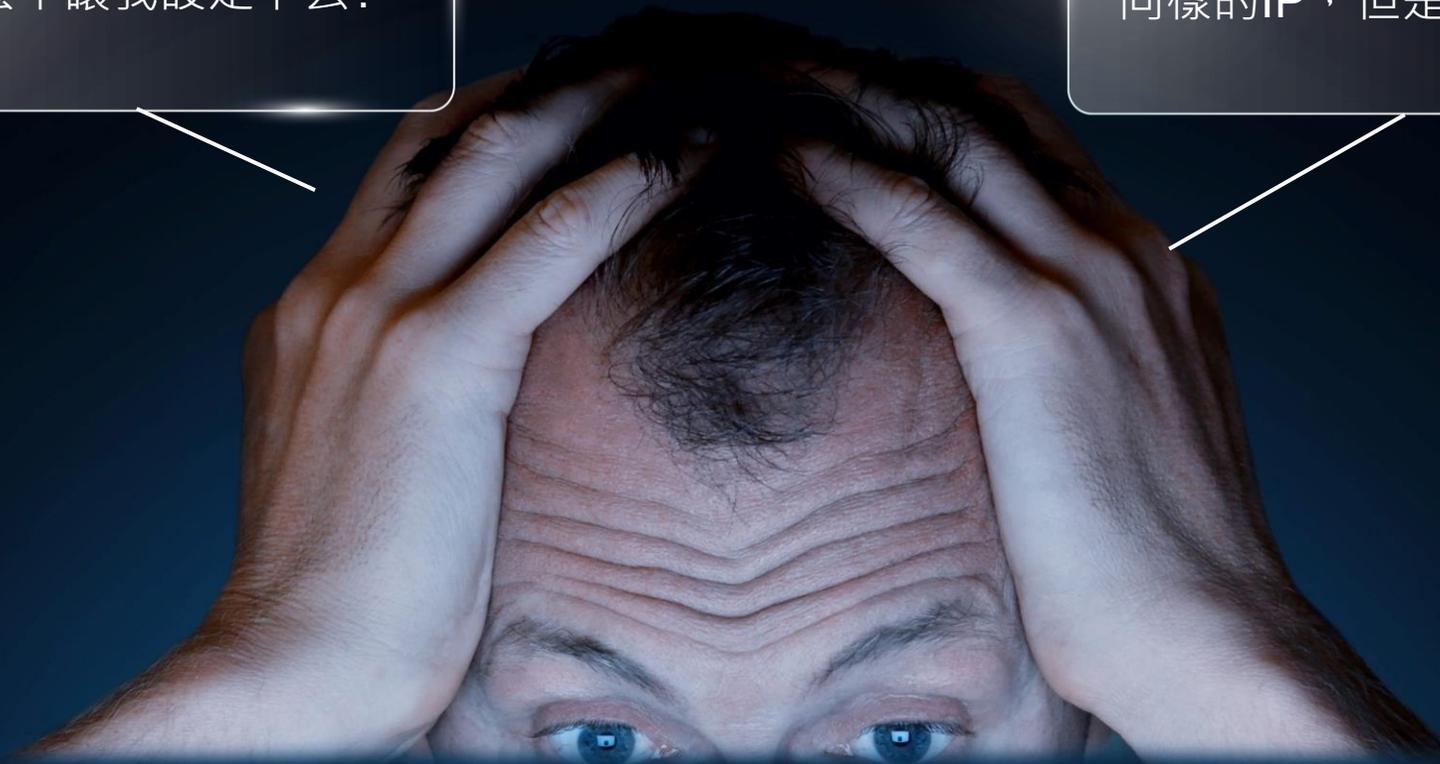
A digital globe with a network overlay. The globe is composed of a grid of blue dots and lines, representing a global network. The background is dark blue with a subtle grid pattern. The text is positioned on the left side of the image.

重點功能介紹:
Duplicated IP
detect

為什麼需要IP衝突偵測？

這IP應該是對的，為什麼不讓我設定下去？

感覺是跟其他設備設定到同樣的IP，但是是跟誰？



介面上提示相衝的IP及設備資訊

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

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

QuWAN會檢查那些部分？

- WAN/LAN/VLAN 介面
- VPN server
- Static route
- 被保留的IP pool
 - 127.0.0.0/8
 - 169.254.0.0/16



其他功能



在Firewall裡可選擇Segment做為來源IP

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:

Destination

Any

Define

Application i

Any

Define

Action

指定特定Service Class做為QoS預設值

Common Configuration / Segment

raymond-test

raymond-test

[0 rules](#)

[1 rules](#)

W

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:

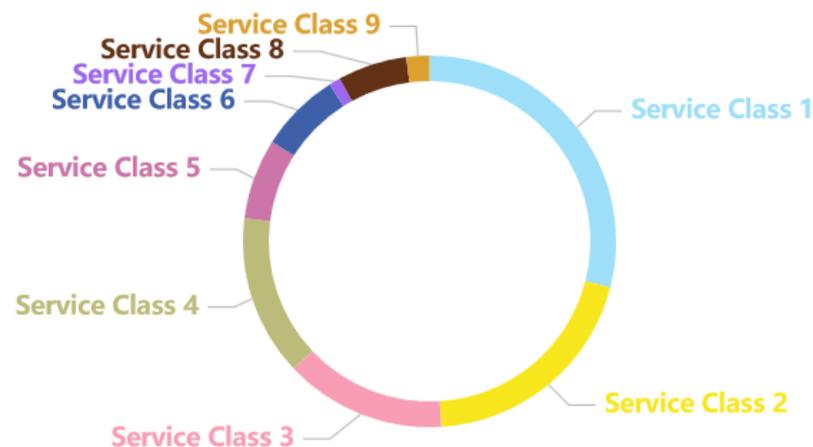
2 %

Service Class 5:

Service Class 3

Default service class:

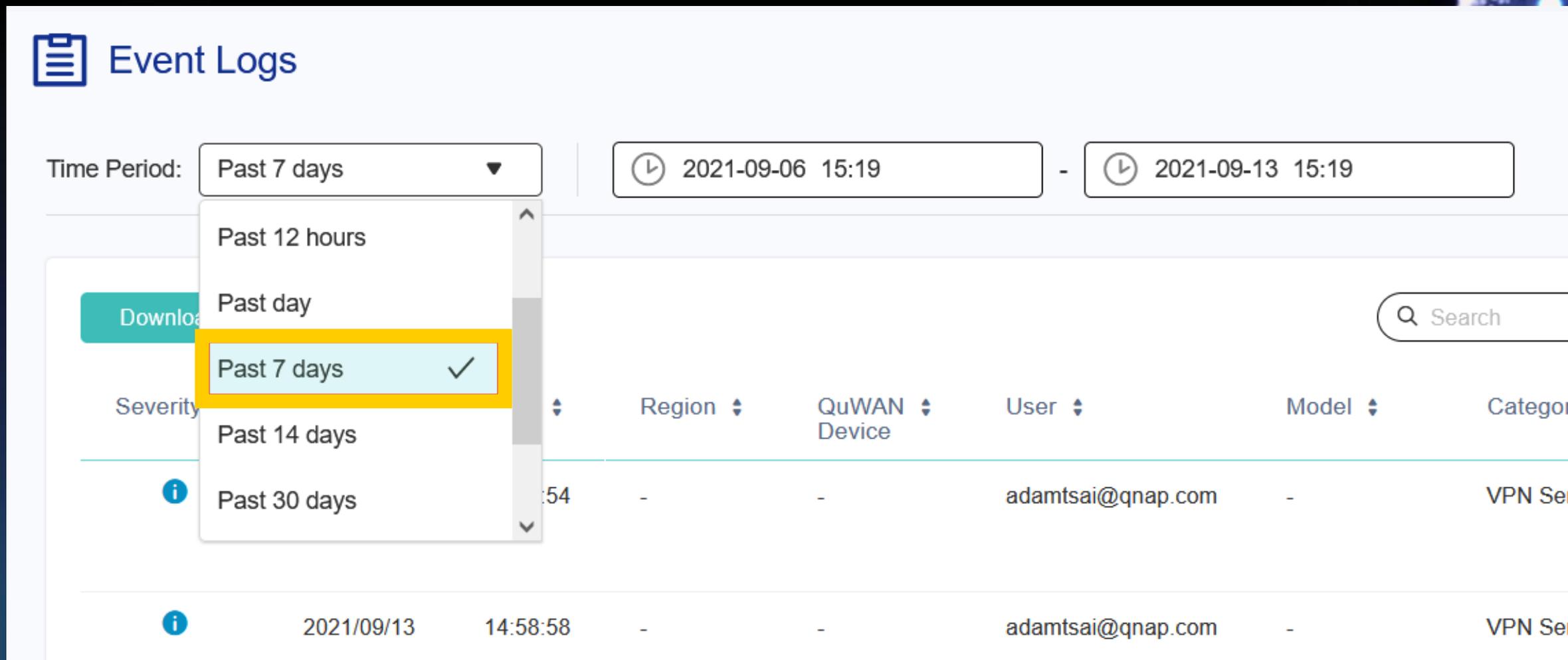
Service Cla...



Apply

Cancel

修正事件紀錄時間區間設定



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 a magnifying glass icon and 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 (i) in the first column.

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

新增QuWAN/設備服務埠管理 (QNE/QTS/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>i</i>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
^ QuWAN Service Ports <i>i</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介面升級

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

新增Log內容

Event Logs

Time Period: Past day | 2021-09-12 15:24 - 2021-09-13 15:24

[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 [REDACTED].

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

QNAP



QuWAN

是您最好的選擇！

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