QNAP VPN (Virtual Private Network)

Secure network experience
What is VPN (Virtual Private Network)
The general Internet style
What is VPN?

UNENCRYPTED

ENCRIPTED

ANONYMOUS
When you connect through the VPN
Who needs the VPN service

- Businesspersons
- Multi-National corporations (File exchange, Backup)
- Sensitive data (Financial transaction)
- Gamers (Regional restrictions)
VPN does make you feel secure

- Offers the flexibility to employees to take advantage of the company`s Intranet over an existing Internet connection. (also between student and school)
- Secure communication is easier
- Privacy protection
- Reduces business travel costs
- Access to regionally restricted contents
QVPN Service
Build your VPN server
New topology of QVPN Overview
Q1, 2018 QNAP will release proprietary VPN protocol - QBelt

Secure Encrypted Connection: DTLS + SSL + AES-256 encryption

New protocol: decrease the chance of being detected

Works on all your devices

Easy to Use
QBPelt VPN Server

QBPelt

Enable QBPelt server

Server Port: 4433

Preshared key (shared secret): QBPelt

Maximum number of clients: 25

Network Interface: Vodafone

DNS Server: NAS default

Apply
PPTP VPN Server

**PPTP**

- Enable PPTP VPN server

**VPN client IP pool**

| IP Pool | 10 | 0 | 0 | 2 | 10 | 0 | 0 | 254 |

- Maximum number of clients: 15
- Authentication: MS-CHAPv2
- Encryption: High (AES 128-bit)
- Network interface: Vobalone
- DNS Server: NAS default

**Apply**
OpenVPN Server

OpenVPN

Enable OpenVPN server

VPN client IP pool

Server Port

Maximum number of clients

Encryption

Network interface

DNS Server

Use this connection as a default gateway for remote devices

Enable compressed VPN link

Download Certificate

Apply
Select the suitable DNS service

Set manually or apply NAS default setting

Choose the fastest public DNS server

Choose the appropriate DNS according to your usage situation

- **Public DNS**: Obtain the fastest public DNS service
- **NAS default**: Use the NAS default settings and adapt to your network environment. This option is recommended if you want to make your VPN connection more secure.
- **Manually assign**: Enter your own preferred DNS

**Public DNS**
Obtain the fastest public DNS service

- OpenDNS: 208.67.222.222
- DNSMadeOn: 84.200.69.80
- DNSPod: 119.29.29.29
- COMODO: 8.26.56.26
- 94.195.254.201: 9.9.9.9
- Level3: 209.244.0.3
- Google: 8.8.8.8
- Norton: 198.153.192.1
Specify the user’s login privileges

Use QTS accounts and privileges
## QNAP supported protocol

<table>
<thead>
<tr>
<th></th>
<th>PPTP</th>
<th>L2TP/IPsec</th>
<th>OpenVPN</th>
<th>QBelt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encryption</td>
<td>128-bit</td>
<td>256-bit</td>
<td>128-bit / 256-bit</td>
<td>256-bit</td>
</tr>
<tr>
<td>Supported</td>
<td>Windows / Android</td>
<td>Windows / macOS iOS / Android</td>
<td>OpenVPN app/utility: Windows / macOS iOS / Android</td>
<td>QNAP app/utility: Windows / macOS iOS / Android</td>
</tr>
<tr>
<td>Security</td>
<td>Basic encryption</td>
<td>Highest encryption</td>
<td>Highest encryption</td>
<td>Highest encryption</td>
</tr>
<tr>
<td>Conclusion</td>
<td>simple and convenient, but low security and less supported platforms</td>
<td>simple, only one more setting needed. (PSK)</td>
<td>Most secure, However, the setting is complicated and difficult</td>
<td>Provide high security and highly integrated tool for you. (including QNAP advanced function)</td>
</tr>
</tbody>
</table>
The most common problems when you build a VPN server.
The router does not know which device to relay the traffic to!

Blocked by firewall
QNAP NAS helps you setup the VPN easily.
Manually setup the router

**Port Forwarding**
- Control everything
  - All router support
  - Set the required port to forward
  - More secure (only open the required port)
  - enable VPN passthrough
  - too many steps and complicated

**DMZ**
- Super easy
  1. Set the forwarding IP
  2. All ports/packets forwarded
  - Security concern => all ports exposed

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Security concern => all ports exposed
UPnP auto enables VPN port forwarding

myQNAPcloud will take care of it!

Sets automatically

UPnP router required
The best tool when IP is dynamic

**myQNAPcloud DDNS** → **UPnP (Auto Router Configuration)**

- **WAN IP**
  - **xxx.myqnapcloud.com:port**
  - **NAS Web**
  - **FTP Server**
  - **VPN Server**

- **LAN IP1**
- **LAN IP2**
  - **port**
  - **port**
  - **port**
  - **port**
  - **port**
How to set your client device to connect to NAS via VPN
Click the Start menu >> [ Setting ]

Choose [ Network & Internet ]

Choose [ VPN ] >> [ Add a VPN connection ]

Select the VPN type: for PPTP, only entering the credential is required; for L2TP, one more setting of Pre-shared key is required.
Windows utility (myQNAPcloud connect)

QNAP myQNAPcloud Connect 1.3.2

myQNAPcloud Connect bridges you and your own cloud through the cloud.

Add | Delete | Edit

Qnap NAS VPN Connection Utility

- PPTP
- L2TP

Sam8825T3
- Server Address: 60.251
- Username: admin
- Password: *********

1. NAS
2. Local routing device

Connect when the VPN connection is lost
Connect the VPN when I start windows
Connect the VPN after closing this window

OK | Cancel
Windows utility (myQNAPcloud connect)

Connect to your NAS easier
Provide the shortcut or supported service.

QNAP myQNAPcloud Connect 1.3.2
myQNAPcloud Connect bridges you and your own cloud through the cloud

Status: Please click the icon to show services.

QNAP
New Windows utility will soon be available

Create the secure connection to the NAS via QNAP proprietary VPN protocol - QBelt.

- Search the surrounding QNAP NAS.
- Use this VPN connection to access other NAS (credential required)
- Create the next VPN tunnel via original VPN connection.
Use macOS to connect to VPN

1. System Preferences => Network
2. Click the plus sign to add a VPN interface, Type is L2TP over IPsec
3. Next, click "Authentication Settings...", then set the Password & Shared Secret

Use macOS to connect to VPN
New macOS utility will soon be available
Use Android to connect to VPN

1. Settings
2. Wireless & Networks
3. VPN
4. Add network
5. Select VPN type for L2TP, you must insert the IPsec pre-shared key
6. Insert the credential when you connect
New Android app will soon be available

Create the secure connection to the NAS via QNAP proprietary VPN protocol - QBelt.

- Search the surrounding QNAP NAS.
- Use this VPN connection to access other NAS (credential required)
- Create the next VPN tunnel via original VPN connection.
- Launch other app through the secure VPN connection
Use iOS to connect to VPN

1. Settings
2. Click VPN
3. Add VPN configuration
4. The type should be L2TP
5. Insert credential & Secret (pre-shared key)
New iOS app will soon be available

Create the secure connection to the NAS via QNAP proprietary VPN protocol - QBelt.

- Search the surrounding QNAP NAS.
- Use this VPN connection to access other NAS (credential required)
- Create the next VPN tunnel via original VPN connection.
- Launch other app through the secure VPN connection
Let your NAS connect to remote NAS/VPN server via the VPN Client function
Your NAS can reach almost everywhere

Your NAS can connect to another VPN easier. (Yours / shared NAS from your friend / public VPN server)

- PPTP
- L2TP / IPsec
- OpenVPN
- QBelt (QNAP only)
Support all VPN-Client format

Set the necessary VPN parameter

Allows your NAS to use this VPN as the system default gateway.

Allows other local networked devices connect to the same VPN connection.
Request for secure backup between 2 NAS

QBelt VPN
Secures your Data

QNAP
## QVPN Service

### Connection Logs

<table>
<thead>
<tr>
<th>Date</th>
<th>Uptime</th>
<th>Username</th>
<th>Protocol</th>
<th>VPN Client IP</th>
<th>Public IP</th>
<th>Server Country</th>
<th>Tx</th>
<th>Rx</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018/01/21</td>
<td>--</td>
<td>admin</td>
<td>PPTP</td>
<td>178.208.182.75</td>
<td>178.208.182.75</td>
<td>GB</td>
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<td>--</td>
<td>Get geolocation</td>
</tr>
<tr>
<td>2018/01/21</td>
<td>--</td>
<td>admin</td>
<td>PPTP</td>
<td>178.208.182.75</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>Login OK</td>
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<tr>
<td>2018/01/21</td>
<td>0:23</td>
<td>admin</td>
<td>OpenVPN</td>
<td>10.11.122.196</td>
<td>178.208.177.189</td>
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<td>15.17 KB</td>
<td>22.5 KB</td>
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<td>2018/01/21</td>
<td>1</td>
<td>admin</td>
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<td>178.208.177.189</td>
<td>GB</td>
<td>--</td>
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<tr>
<td>2018/01/16</td>
<td>3:17</td>
<td>admin</td>
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<td>10.0.0.2</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>Login OK</td>
</tr>
<tr>
<td>2018/01/16</td>
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<td>admin</td>
<td>PPTP</td>
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<td>--</td>
<td>Logout</td>
</tr>
<tr>
<td>2018/01/16</td>
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<td>1.92 KB</td>
<td>4.51 KB</td>
<td>Logout</td>
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</tbody>
</table>
Cross the world with your NAS!

integrated with the service provider - VyprVPN
QVPN is Your Best Choice