

05. Networks

Networks are the core organizational unit in PUQVPNCP. Each network defines a VPN subnet with its own protocol settings, firewall rules, bandwidth limits, and upstream routing.

Networks List

Navigate to **Networks > List of networks** to see all configured networks.

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🔍 Networks

25

entries per page

Filter:

Name	Clients	WireGuard	OpenVPN	IKEv2	Network	Upstream	Bandwidth	
7-5092	2	OFF	OFF	OFF	10.0.8.0/24	77.87.125.200	100M / 100M	✎ ⚙️ 🗑️
77_87_125_209	10	OFF	OFF	OFF	10.0.111.0/24 2a11:ff00::101/120	77.87.125.200	Unlimited / Unlimited	✎ ⚙️ 🗑️
Default	7	OFF	OFF	OFF	10.0.1.0/24	77.87.125.200	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net1	100	OFF	OFF	OFF	10.100.0.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net10	100	ON	ON	ON	10.100.9.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net11	99	ON	ON	ON	10.100.10.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net12	100	ON	ON	ON	10.100.11.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net13	100	ON	ON	ON	10.100.12.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net14	95	ON	ON	ON	10.100.13.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net15	100	OFF	OFF	OFF	10.100.14.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net16	100	OFF	OFF	OFF	10.100.15.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net17	100	OFF	OFF	OFF	10.100.16.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net18	100	OFF	OFF	OFF	10.100.17.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net19	9	OFF	OFF	OFF	10.100.18.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️
loadtest_net2	100	OFF	OFF	OFF	10.100.1.0/24	77.87.125.201	Unlimited / Unlimited	✎ ⚙️ 🗑️

Networks list — shows protocols, IP, upstream, and bandwidth for each network

The table displays:

Column	Description
Name	Network identifier
Clients	Number of client accounts
WireGuard / OpenVPN / IKEv2	Protocol enabled status (ON/OFF)
Network	Subnet CIDR

Column	Description
IP	Server IP for the network
Upstream	Internet exit point (direct IP or WireGuard tunnel)
Bandwidth	Download/Upload limits in Mbit

Creating a Network

Navigate to **Networks > Add network** or click the **+** button.

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Networks / Create

Network

Name

Default_1

Description

Subnet (IPv4 CIDR)

10.0.2.0/24

WireGuard IP

10.0.2.1

OpenVPN IP

10.0.2.254

IKEv2 IP

10.0.2.253

Upstream

77.87.125.200 (ens18) ⭐

VPN Domain

vpn.example.com

Overrides global VPN Domain for this network. Used in all protocol client configs.

DNS 1

10.0.2.1

DNS 2

77.87.125.200

Bandwidth Download (Mbit, 0=unlimited)

0

Bandwidth Upload (Mbit, 0=unlimited)

0

☐ Disable NAT

☐ Client-to-Client

Allow clients to communicate with each other within this network. Only works when clients are connected using the same protocol.

☐ IPv6

Protocols (WireGuard, OpenVPN, IKEv2) can be configured after creating the network.

Create a new network

Required Fields

Field	Description	Example
Name	Unique network name (alphanumeric + underscore)	office_vpn
Subnet (IPv4 CIDR)	Network subnet	10.0.0.0/24
WireGuard IP	Server IP for WireGuard interface	10.0.0.1
OpenVPN IP	Server IP for OpenVPN interface	10.0.0.254

Field	Description	Example
IKEv2 IP	Server IP for IKEv2	10. 0. 0. 253

Optional Fields

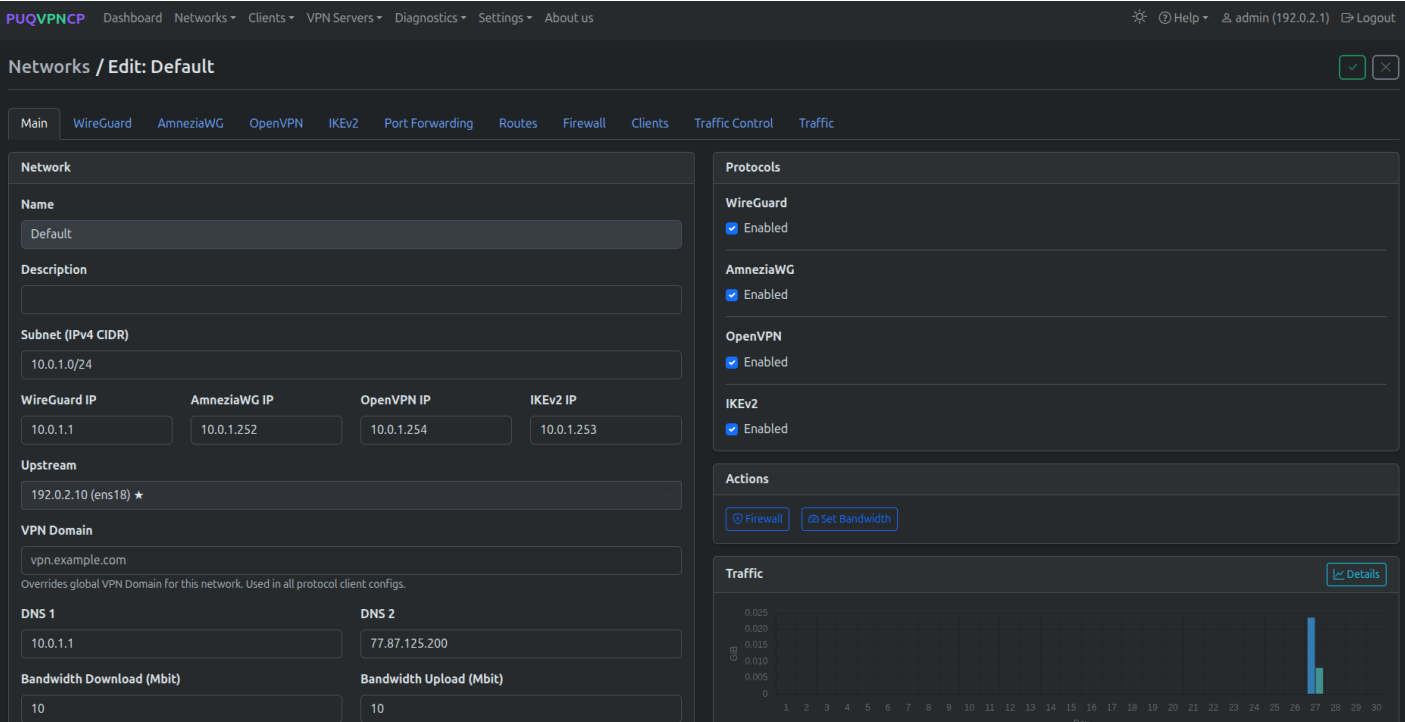
Field	Description
Description	Free-text description
Upstream	Select internet exit: server IP (direct) or WireGuard upstream tunnel
VPN Domain	Override the global VPN domain for this network
DNS 1 / DNS 2	DNS servers pushed to VPN clients
Bandwidth Download / Upload	Network-wide bandwidth limit (Mbit, 0 = unlimited)
Disable NAT	Disable SNAT for this network (for bridged setups)
Client-to-Client	Allow clients within the same network to communicate
IPv6	Enable IPv6 dual-stack

“ **Note:** VPN protocols (WireGuard, AmneziaWG, OpenVPN, IKEv2) can be enabled after creating the network.

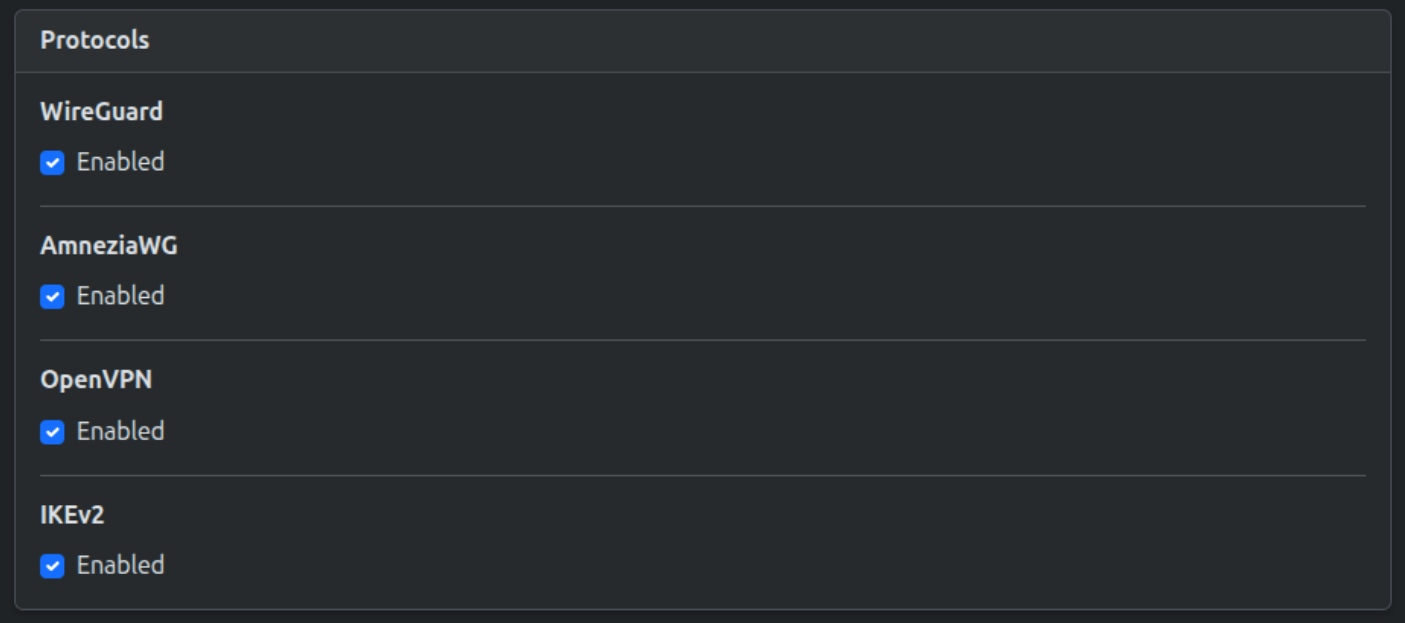
Editing a Network

Click the edit button on any network to open the tabbed editor.

Main Tab



Network edit — Main tab with protocols, actions, and traffic overview



Protocols selector — WireGuard, AmneziaWG, OpenVPN, IKEv2

The Main tab shows:

- **Network settings** (left) — all fields from creation, plus the Upstream selector
- **Protocols** (right) — checkboxes to enable/disable WireGuard, AmneziaWG, OpenVPN, IKEv2
- **Actions** — Firewall and Set Bandwidth buttons
- **Traffic** — monthly traffic chart with download/upload totals

WireGuard Tab

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Networks / Edit: TETS

MainWireGuardOpenVPNIKEv2Port ForwardingRoutesFirewallClientsTraffic ControlTraffic

WireGuard Configuration

Listen Port

51823

Allowed IPs

Empty = use global setting. Default: 0.0.0.0/0

MTU

0

0 = use global setting

Persistent Keepalive (sec)

0

0 = use global setting

Interface

wg51823

Policy Routing

auto

Mark / Table

71823 (0x1188f)

CONNMARK

PREROUTING + OUTPUT

Private Key

GDhz/GTRPnZsp/6r9UvLfVLBeLUaRAfb9CGfr0x3GXY=

Public Key

ZLN9mopWyV94HS6mRrr4r1T6VwehPAAdKMnvXg1AgXXo=

Regenerate Keys

Derive Public Key

WireGuard Info

Public key

ZLN9mopWyV94HS6mRrr4r1T6VwehPAAdKMnvXg1AgXXo=

Port

51823

Online Peers

0

Network edit — WireGuard tab

Field	Description
Listen Port	WireGuard UDP port for this network
Allowed IPs	Allowed IPs for peers (empty = use global <code>0.0.0.0/0</code>)
MTU	Tunnel MTU (0 = use global setting)
Persistent Keepalive	Keepalive interval in seconds (0 = use global)
Interface	Auto-generated WireGuard interface name (e.g., <code>wg51823</code>)
Policy Routing	Mark/Table values and CONNMARK rules (auto-configured)
Private / Public Key	WireGuard key pair. Can be regenerated or derived.

AmneziaWG Tab

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Networks / Edit: Default

✓✕

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AmneziaWG Configuration

Listen Port

51821

Allowed IPs

0.0.0.0/0

Empty = use global setting

MTU

0

0 = use global setting

Persistent Keepalive (sec)

0

0 = use global setting

🔑 Obfuscation Parameters

🔗 Random Magic Headers

Jc (Junk packets)

4

Jmin (Junk min size)

40

Jmax (Junk max size)

70

S1 (Init packet padding)

15

S2 (Response packet padding)

20

H1 (Init)

3184648606

H2 (Response)

2507263013

H3 (Cookie)

2838080179

H4 (Data)

2612253850

Interface

awg51821

Policy Routing

91821 (0x166ad)

🔄 Auto

Private Key

oDKSAruH0t3kQxwgCLBsh2BB5uvBK1xeHBUwMOLmL=

Public Key

ZDTxLvq7G5gQA9Pbx8wXmTZmpAs6IR0p3tSLzm70Y=

🔑 Regenerate Keys

🔗 Derive Public Key

AmneziaWG Info

Public key

ZDTxLvq7G5gQA9Pbx8wXmTZmpAs6IR0p3tSLzm70Y=

Port

51821

Status

Running

Online Peers

1

Network edit — AmneziaWG tab with obfuscation parameters and interface info

Field	Description
Listen Port	AmneziaWG UDP port for this network
Allowed IPs	Allowed IPs for peers (empty = use global <code>0.0.0.0/0</code>)
MTU	Tunnel MTU (0 = use global setting)
Persistent Keepalive	Keepalive interval in seconds (0 = use global)
Interface	Auto-generated AmneziaWG interface name (e.g., <code>awg51821</code>)
Magic Headers (H1-H4)	Custom or randomized packet headers to bypass DPI
Junk Packet Controls	Jc count, Jmin/Jmax size range, and S1/S2 junk sizes
Private / Public Key	Key pair for AmneziaWG encryption

OpenVPN Tab

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✓✕

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OpenVPN Configuration

Port

1197

Protocol

UDP

Interface

ovpn1197

Policy Routing

auto

Mark / Table

1197 (0x2bbd)

CONNMARK

PREROUTING + OUTPUT

Client Push

Tunnel

Full (redirect-gateway def1)

DNS

10.0.0.1, 77.87.125.200

Per-Network Overrides

Empty = use global setting

Cipher

— global —

Auth Digest

— global —

Compression

— global —

MTU (tun-mtu)

0

0 = use global

MSS Fix

0

0 = use global

Global settings:

OpenVPN settings page

OpenVPN Info

Status

Running

Interface

ovpn1197

Port

1197

Protocol

udp

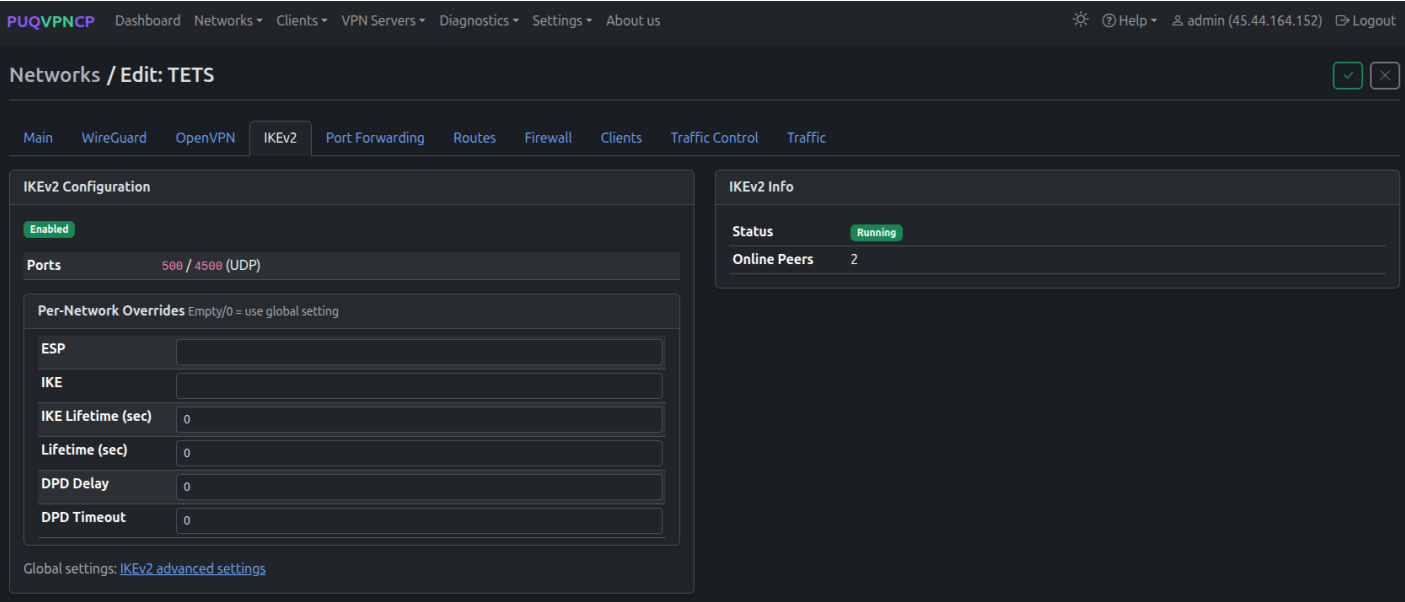
Online Peers

0

Network edit — OpenVPN tab

Field	Description
Port	OpenVPN port for this network
Protocol	UDP or TCP
Interface	Auto-generated interface name (e.g., <code>ovpn1197</code>)
Policy Routing	Mark/Table and CONNMARK (auto-configured)
Client Push	Full or split tunnel, DNS settings
Per-Network Overrides	Cipher, Auth Digest, Compression, MTU, MSS Fix

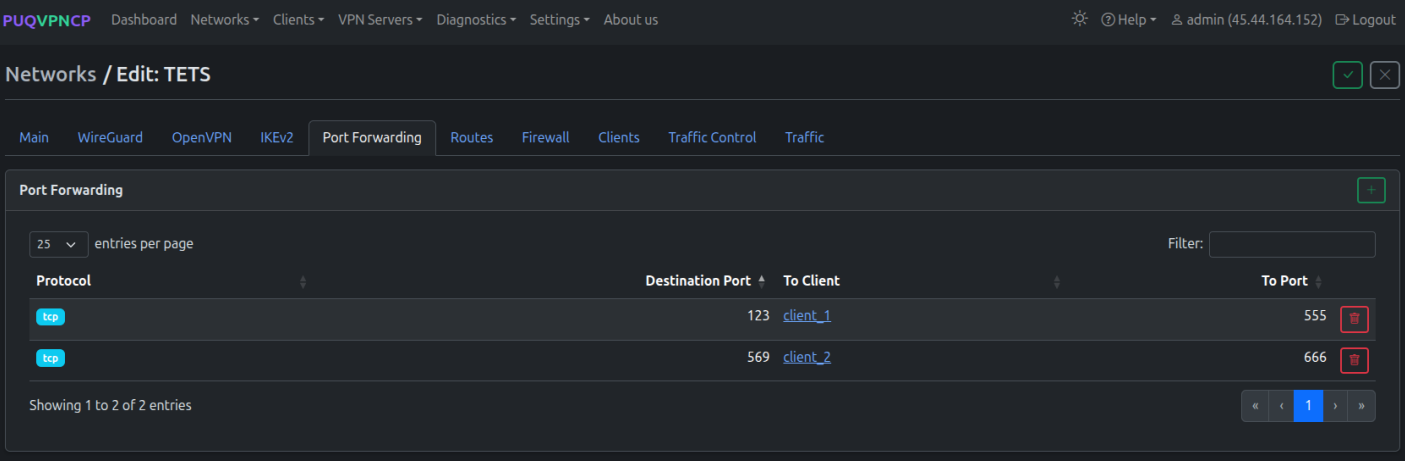
IKEv2 Tab



Network edit — IKEv2 tab

Field	Description
Enabled	IKEv2 enabled for this network
Ports	500 / 4500 UDP (standard IPsec)
Per-Network Overrides	ESP, IKE proposals, lifetimes, DPD settings

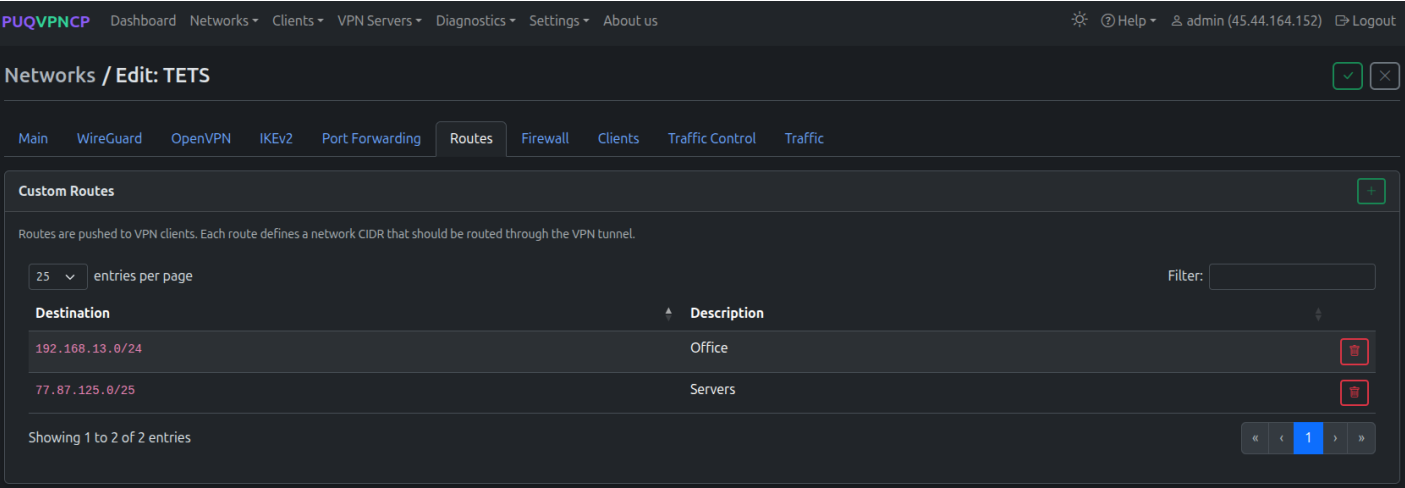
Port Forwarding Tab



Network edit — Port Forwarding tab

Create DNAT rules to forward external ports to specific VPN clients. Each rule maps an external port to a client IP and destination port.

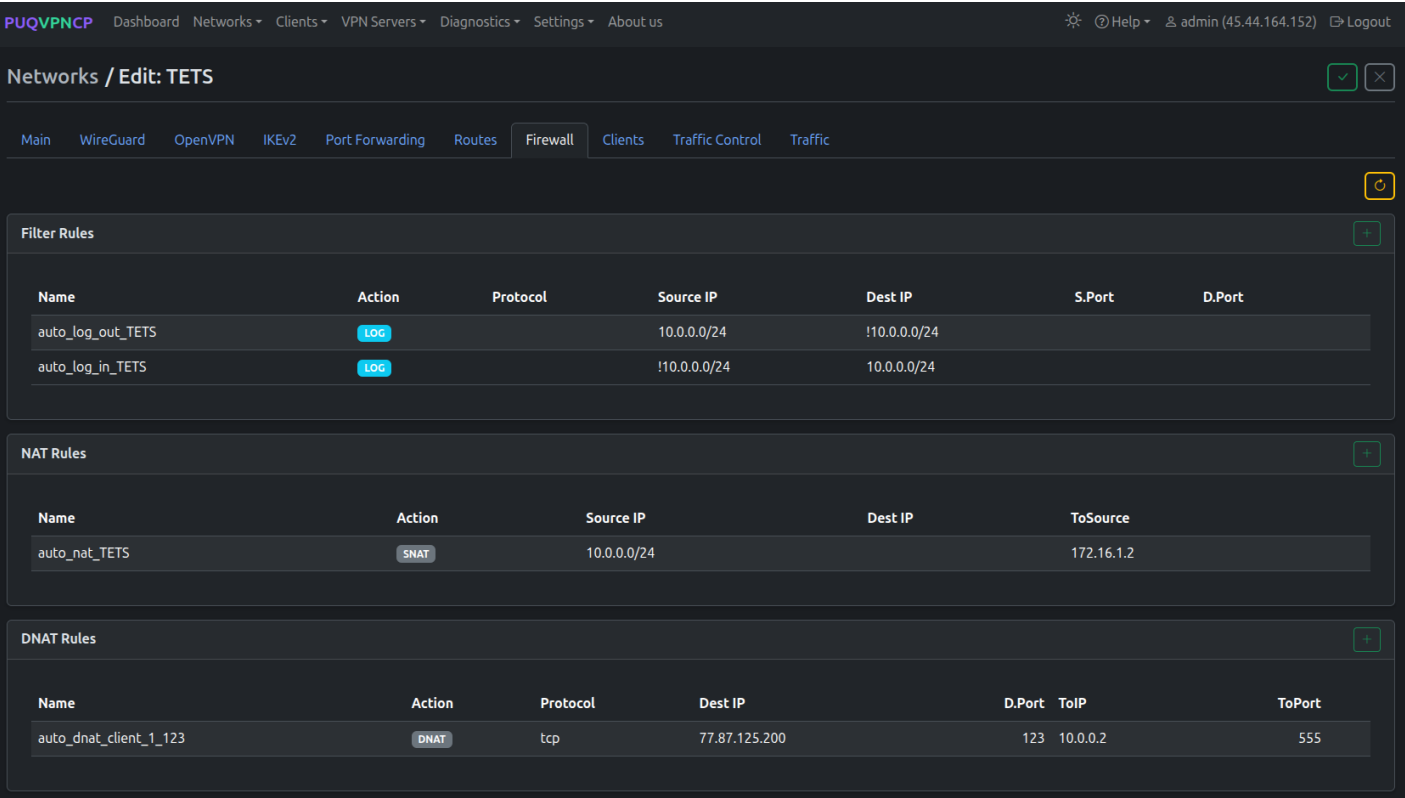
Routes Tab



Network edit — Routes tab

Define custom routes that are pushed to VPN clients. Each route specifies a destination CIDR and description. Useful for split-tunnel configurations.

Firewall Tab



Network edit — Firewall tab

Per-network firewall rules organized by type:

- **Filter Rules** — traffic logging and filtering
- **NAT Rules** — SNAT rules (auto-generated for upstream)
- **DNAT Rules** — port forwarding rules (auto-generated from Port Forwarding tab)
- **Mangle Rules** — traffic marking for TC and policy routing (auto-generated)

Mangle Rules

Name	Action	Source IP	Dest IP	SetMark
auto_mangle_dst_client_1	MARK	0.0.0.0/0	10.0.0.2	4110
auto_mangle_src_client_1	MARK	10.0.0.2	0.0.0.0/0	2110
auto_mangle_dst_client_2	MARK	0.0.0.0/0	10.0.0.3	4111
auto_mangle_src_client_2	MARK	10.0.0.3	0.0.0.0/0	2111
auto_mangle_dst_client_3	MARK	0.0.0.0/0	10.0.0.4	4119
auto_mangle_src_client_3	MARK	10.0.0.4	0.0.0.0/0	2119
auto_mangle_dst_tv	MARK	0.0.0.0/0	10.0.0.5	4120
auto_mangle_src_tv	MARK	10.0.0.5	0.0.0.0/0	2120
auto_wg_connmark	CONNMARK	in: wg51823		71823
auto_wg_restore_fwd	CONNMARK			71823 (restore)
auto_wg_restore_local	CONNMARK			71823 (restore)
auto_ovpn_connmark	CONNMARK	in: ovpn1197		11197
auto_ovpn_restore_fwd	CONNMARK			11197 (restore)
auto_ovpn_restore_local	CONNMARK			11197 (restore)

Network edit — Mangle rules for traffic control

Clients Tab

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Clients

25entries per page

Filter:

Name	Username	IP	Status	Bandwidth	
client_1	user1	10.0.0.2	🟢	1M / 1M	
client_2	user2	10.0.0.3	🟢	3M / 3M	
client_3	user3	10.0.0.4	🟢	3M / 3M	
tv	tv	10.0.0.5	🟢	3M / 3M	

Showing 1 to 4 of 4 entries

«
<
1
>
»

Network edit — Clients tab

Lists all clients in this network with their name, username, IP, status, and bandwidth.

Traffic Control Tab

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🔌 Traffic Control

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Interfaces

3 (wgup0, wg51823, ovpn1197)

Client TC Classes

24

Total Bytes

1.44 MiB

Total Drops

0

Total Overlimits

193

🔍 wgup0 8 classes

Client	Handle	Direction	Rate	Bytes	Packets	Drops	Overlimits	Throughput
tv	1:3120	Upload IPv6	3 Mbit	0 B	0	0	0	0 bit/s
tv	1:2120	Upload IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_1	1:2110	Upload IPv4	1 Mbit	213.1 KiB	620	0	45	2.5 kbit/s
client_2	1:3111	Upload IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_2	1:2111	Upload IPv4	3 Mbit	1.23 MiB	13618	0	148	2.7 kbit/s
client_1	1:3110	Upload IPv6	1 Mbit	0 B	0	0	0	0 bit/s
client_3	1:3119	Upload IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_3	1:2119	Upload IPv4	3 Mbit	0 B	0	0	0	0 bit/s

Network edit — Traffic Control tab (upload classes)

Real-time traffic control statistics showing TC classes for each client and direction:

- **Interfaces** — WireGuard, AmneziaWG, OpenVPN, and upstream interfaces
- **Per-client rows** — Handle, Direction, Rate, Bytes, Packets, Drops, Overlimits, Throughput

🔍 wg51823 8 classes

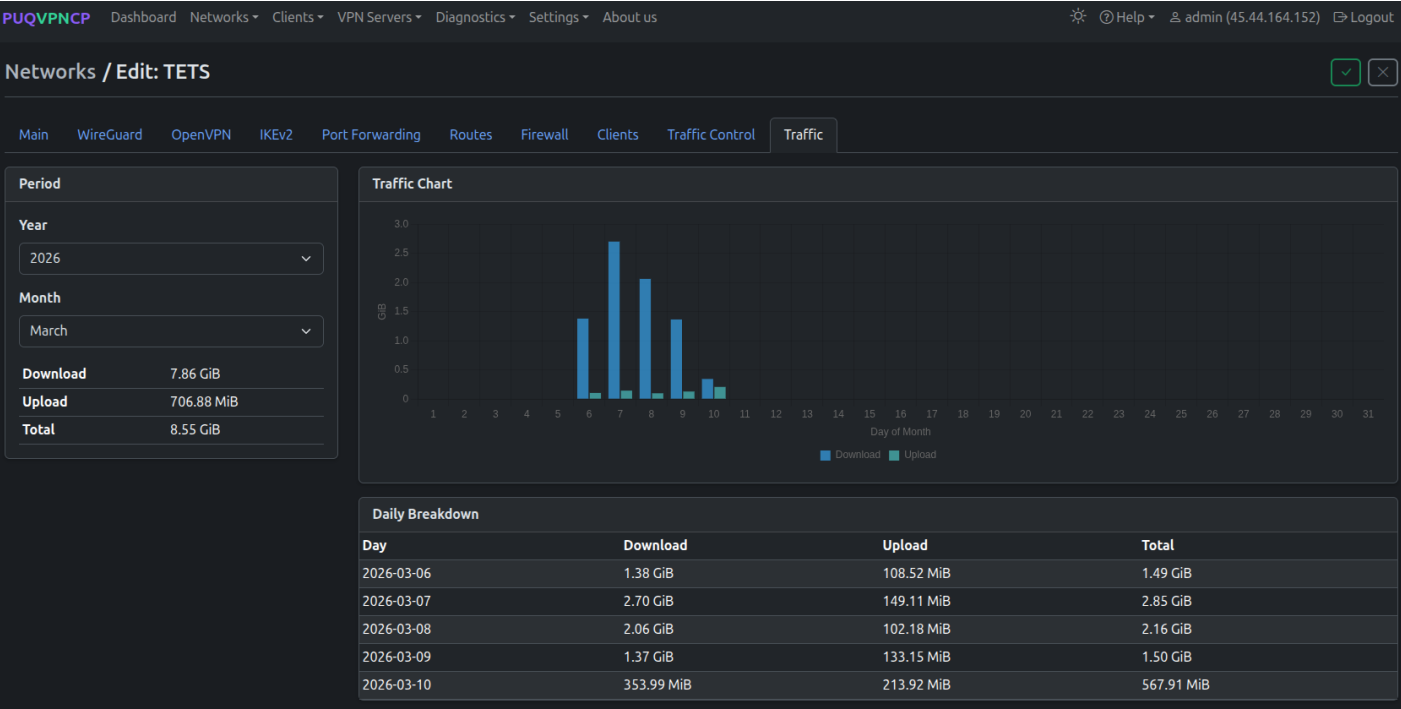
Client	Handle	Direction	Rate	Bytes	Packets	Drops	Overlimits	Throughput
client_1	1:4110	Download IPv4	1 Mbit	0 B	0	0	0	0 bit/s
tv	1:6120	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_2	1:4111	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_1	1:6110	Download IPv6	1 Mbit	0 B	0	0	0	0 bit/s
tv	1:4120	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_2	1:6111	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_3	1:4119	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_3	1:6119	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s

🔍 ovpn1197 8 classes

Client	Handle	Direction	Rate	Bytes	Packets	Drops	Overlimits	Throughput
client_1	1:4110	Download IPv4	1 Mbit	0 B	0	0	0	0 bit/s
tv	1:6120	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_2	1:4111	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_1	1:6110	Download IPv6	1 Mbit	0 B	0	0	0	0 bit/s
tv	1:4120	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_2	1:6111	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s
client_3	1:4119	Download IPv4	3 Mbit	0 B	0	0	0	0 bit/s
client_3	1:6119	Download IPv6	3 Mbit	0 B	0	0	0	0 bit/s

Traffic Control — download classes

Traffic Tab



Network edit — Traffic tab with monthly chart and daily breakdown

Monthly traffic statistics with:

- **Traffic Chart** — daily download/upload bar chart
- **Period selector** — year and month
- **Download / Upload / Total** — aggregated numbers
- **Daily Breakdown** — per-day traffic table