

15. Monitoring

Overview

PUQVPNCP provides comprehensive traffic monitoring:

- **Built-in traffic statistics** — per-client and per-network, stored in local JSON files
- **rsyslog integration** — iptables traffic logging via syslog
- **InfluxDB export** — push metrics to InfluxDB for Grafana dashboards
- **Prometheus-compatible metrics** — HTTP metrics endpoint

Configuration

Navigate to **Settings > Monitoring**.

Traffic Logging

PUQVPNCP

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Monitoring

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Traffic Logging

Enabled

Traffic Incoming

NO

NO

Traffic logging is very resource intensive and affects system performance.

Connection States

ESTABLISHED

RELATED

NEW

INVALID

UNTRACKED

YES

YES

NO

NO

NO

If none is selected it will log all connections.

Log Fields

Interface IN

Interface OUT

LEN

TOS

MARK

YES

YES

YES

YES

YES

Already logged by default: TIMEGENERATED, PUBLIC, NETWORK, SRC, SPT, DST, DPT, PROTO

Monitoring configuration — traffic logging

Setting	Description
Logging	Enable iptables traffic logging via rsyslog
Log format	Log format template

Remote Syslog

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✓

Apply

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Remote Syslog

rsyslog 8.2504.0-1PID: 3462036

EnabledServerPort

NO

77.87.125.208

514

Remote syslog configuration

Forward traffic logs to a remote syslog server for centralized logging.

InfluxDB

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✓

Apply

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InfluxDB

telegraf 1.25.0-1not running

Enabled

URL

Token

NO

https://idb01.puq.pl

xix4Hu_ZbN9q5ydaqD-a81YsgDvpgUQGdYmu3b9g5reGqUTUNyceauDr

Bucket

Organization

puqvpncp

puqvpncp

InfluxDB configuration

Setting	Description
Enabled	Enable InfluxDB export
URL	InfluxDB server URL (e.g., <code>https://idb01.example.com</code>)
Token	Authentication token
Organization	InfluxDB organization
Bucket	Target bucket

Metrics Endpoint

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Metrics

Metrics for Grafana

Enabled

NO

Requires InfluxDB to be enabled.

Metrics measurements (collected every 30s via /metrics):

Measurement	Tags	Fields	Description
client	network, client, status, online_wg, online_ikev2, online_openvpn, transfer_rx, transfer_tx, download, upload	count	One row per client. transfer_rx/tx = live session bytes. download/upload = current month total.
network	network, clients_total, clients_enabled, clients_online_wg, clients_online_ikev2, clients_online_openvpn, wg_enabled, ikev2_enabled, openvpn_enabled	count	Per-network summary: client counts and enabled protocols
system	networks, clients_total, clients_enabled, clients_online, fw_pre_rules, fw_post_rules, license_valid	count	Global system overview

Traffic logging measurement (real-time iptables events via rsyslog -- telegraf):

Measurement	Tags	Fields	Description
traffic	PUBLIC, NETWORK, SRC, DST, PROTO, SPT, DPT, CLIENT, IN, OUT, LEN, MARK, TOS	count	Each iptables LOG event = 1 row. CLIENT tag is auto-mapped from SRC IP to client name.

Data flow: VPN traffic -- iptables LOG (prefix P=ip,N=network) -- kernel -- rsyslog (parse & format) -- telegraf UDP:8094 (enrich with CLIENT tag) -- InfluxDB

Metrics endpoint configuration

Enable a Prometheus-compatible HTTP metrics endpoint at `http://127.0.0.1:8098/metrics`.

Monitoring Status

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Configuration saved. Click **Apply** to activate changes (firewall rebuild + service restart, ~30-60s).

Settings
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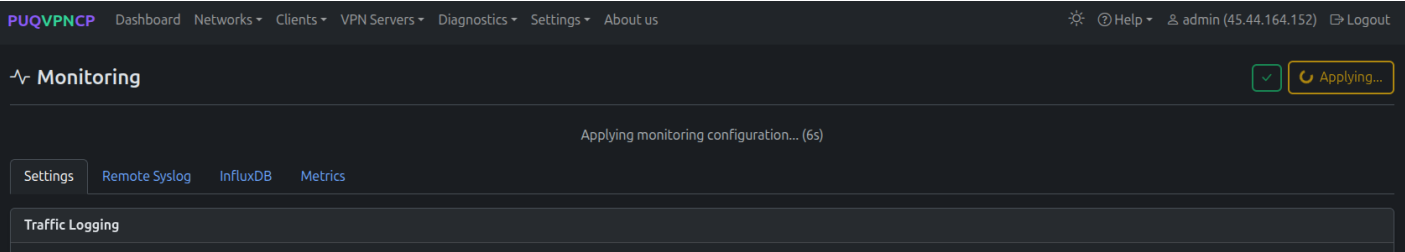
Traffic Logging

Monitoring services status

Shows the current state of all monitoring components:

- rsyslog service status
- telegraf service status
- InfluxDB connection status
- Metrics endpoint status

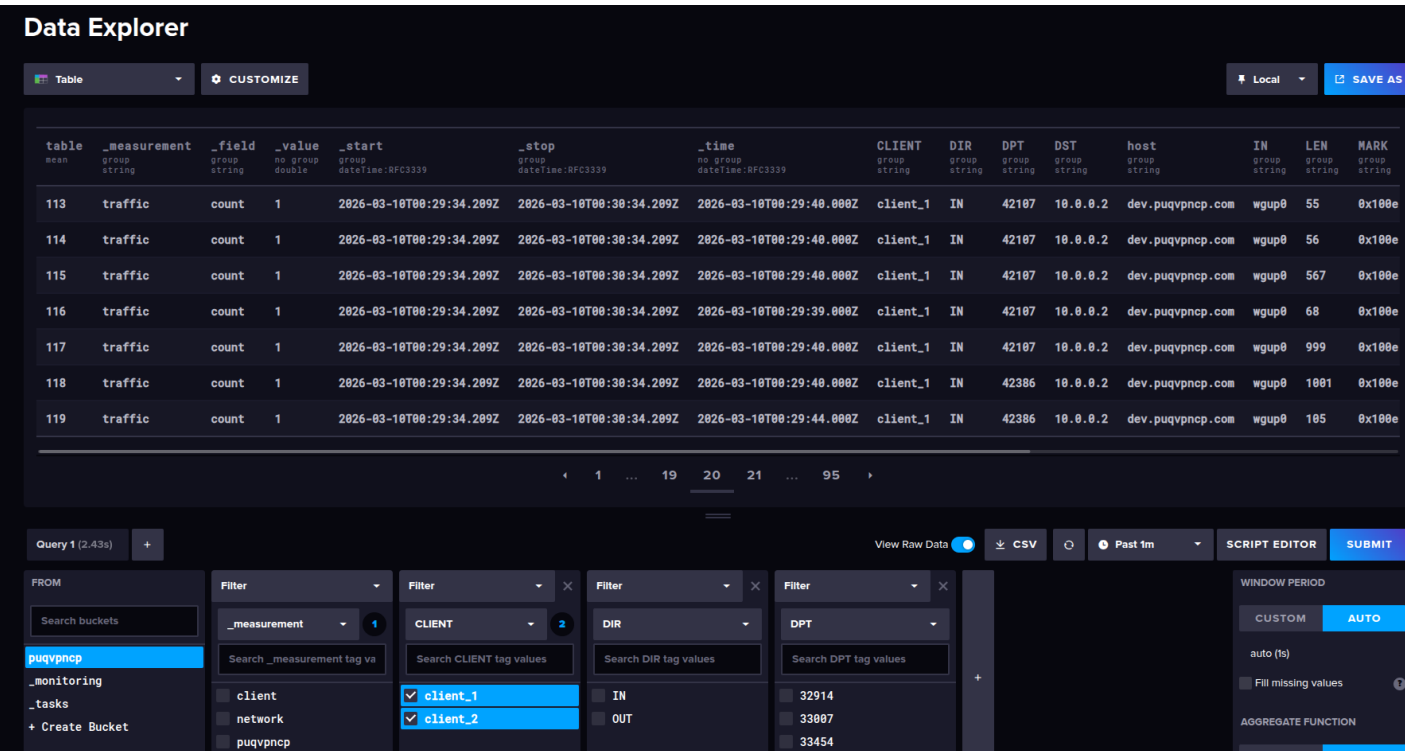
After changing monitoring settings and clicking **Save**, the configuration is applied with a countdown:



Applying monitoring configuration

Grafana Integration

Connect Grafana to your InfluxDB instance to create custom VPN dashboards.



Example Grafana dashboard with VPN traffic metrics

Available Metrics

Metric	Description
client_download_bytes	Per-client download traffic
client_upload_bytes	Per-client upload traffic
network_download_bytes	Per-network download traffic
network_upload_bytes	Per-network upload traffic
online_wireguard	WireGuard online peer count

Metric	Description
online_openvpn	OpenVPN connected session count
online_ikev2	IKEv2 active SA count

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