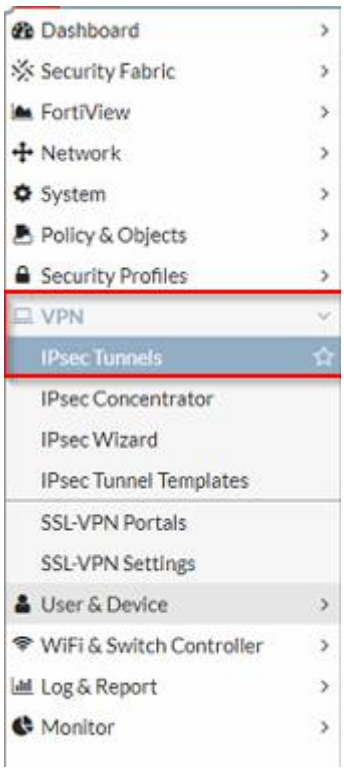
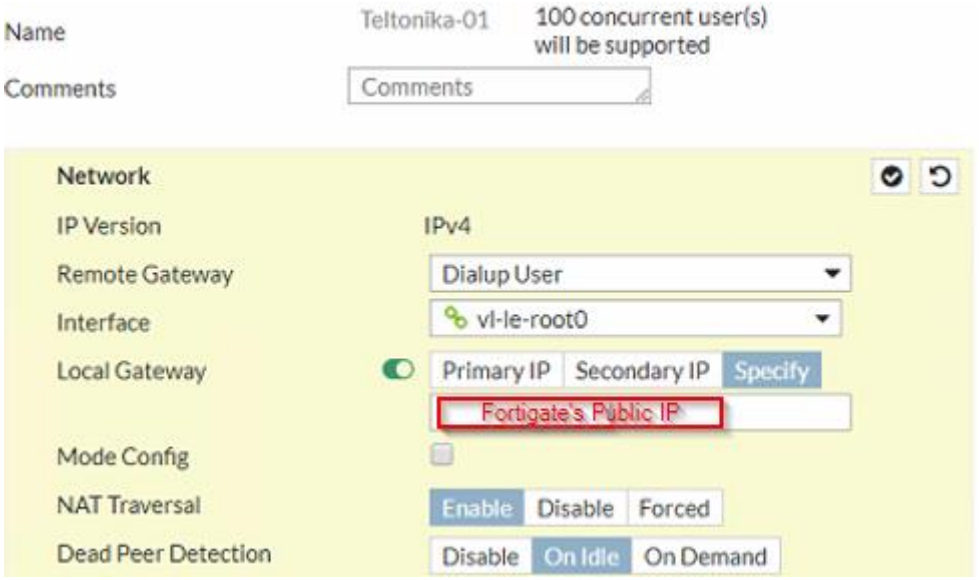
RUT9xx IPsec with Fortigate

1. Setting up IPsec on Fortigate



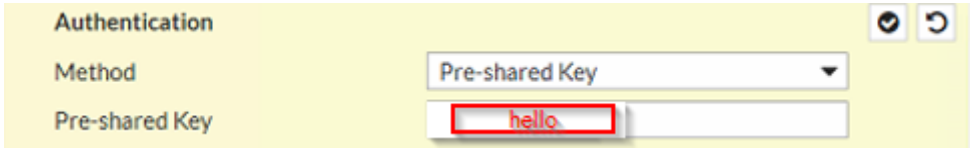
1.1. VPN -> IPsec tunnels > Network

- Remote Gateway: **Dialup User**
- Interface: **Select your interface**
- Local Gateway: **Specify**
  - **Fortigate's public IP**
- Mode Config: **Uncheck**
- NAT Traversal: **Enable**
- Dead Peer Detection: **On Idle**



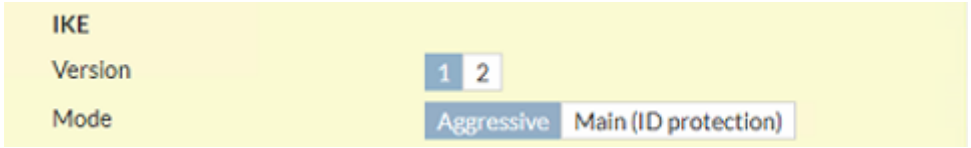
1.2. VPN -> IPsec tunnels > Authentication

- Method: **Pre-shared Key**
- Pre-shared Key: **Enter secret key**



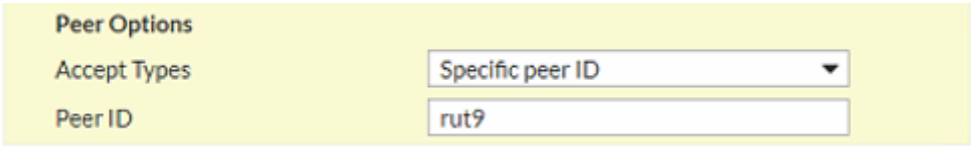
1.3. VPN -> IPsec tunnels > IKE

- Version: **1**
- Mode: **Aggressive**



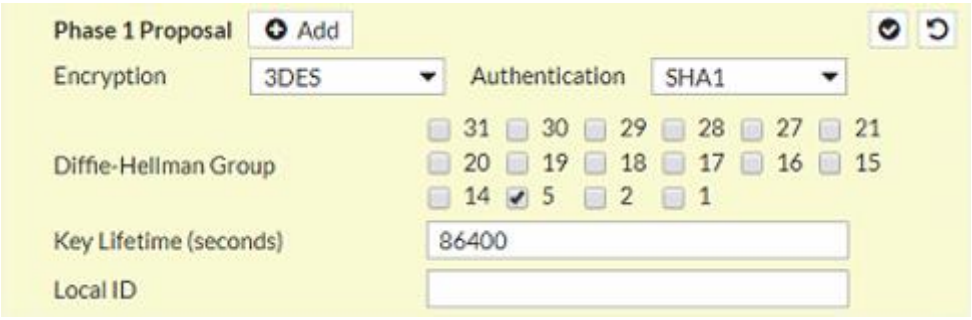
1.4. VPN -> IPsec tunnels > Peer Options

- Accept Types: **Specific peer ID**
- Peer ID: **Any string**



1.5. VPN -> IPsec tunnels > Phase 1 Proposal

- Encryption: **3DES**
- Authentication: **SHA1**
- Diffie-Hellman Group: **5**
- Key Lifetime (Seconds): **86400**
- Local ID: **Blank**

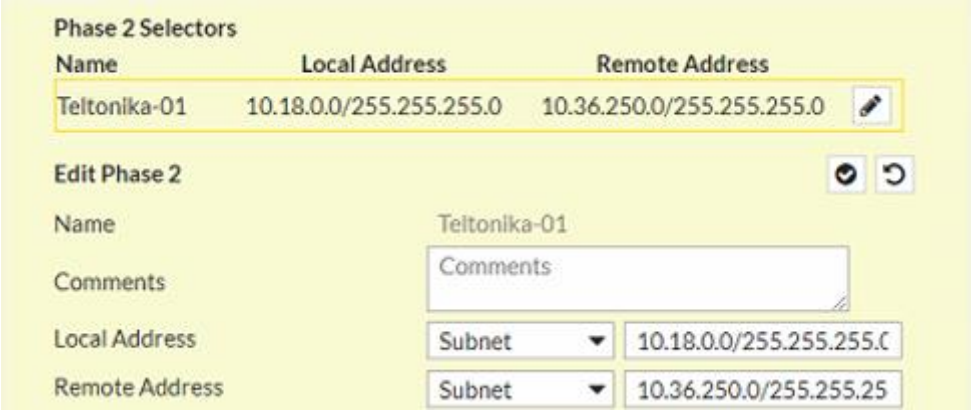


1.6. VPN -> IPsec tunnels > XAUTH

- Type: **Disabled**

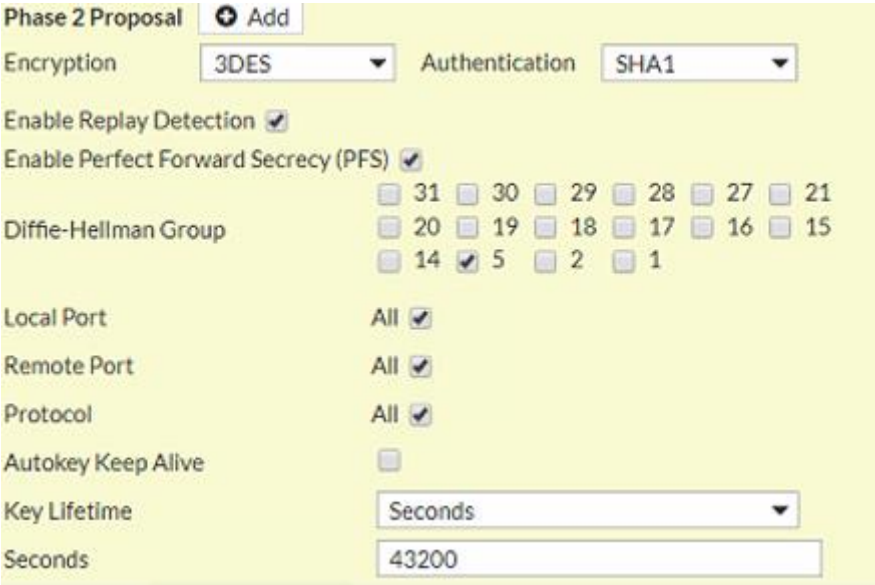
1.7. VPN -> IPsec tunnels > Phase 2 Selectors

- Name: **Name for your tunnel (Can be anything)**
- Local Address: **Local Fortigate's network address and subnet mask**
- Remote Address: **Teltonika's router local network address and subnet mask**



1.8. VPN -> IPsec tunnels > Phase 2 Selectors > Advanced > Phase 2 Proposal

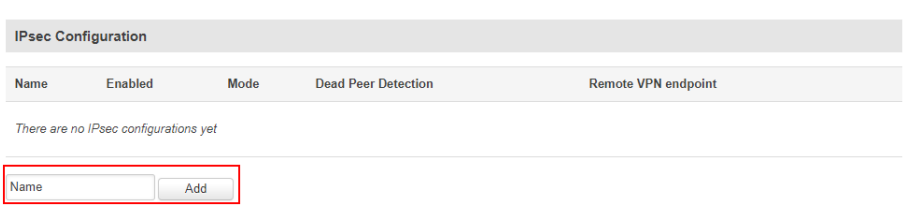
- Encryption: **3DES**
- Authentication: **SHA1**
- Enable Replay Detection: **Check**
- Enable Perfect Forward Secrecy (PFS): **Check**
- Diffie-Hellman Group: **5**
- Local Port: **All**
- Remote Port: **All**
- Protocol: **All**
- Autokey Keep Alive: **Uncheck**
- Key Lifetime: **Seconds**
- Seconds: 43200



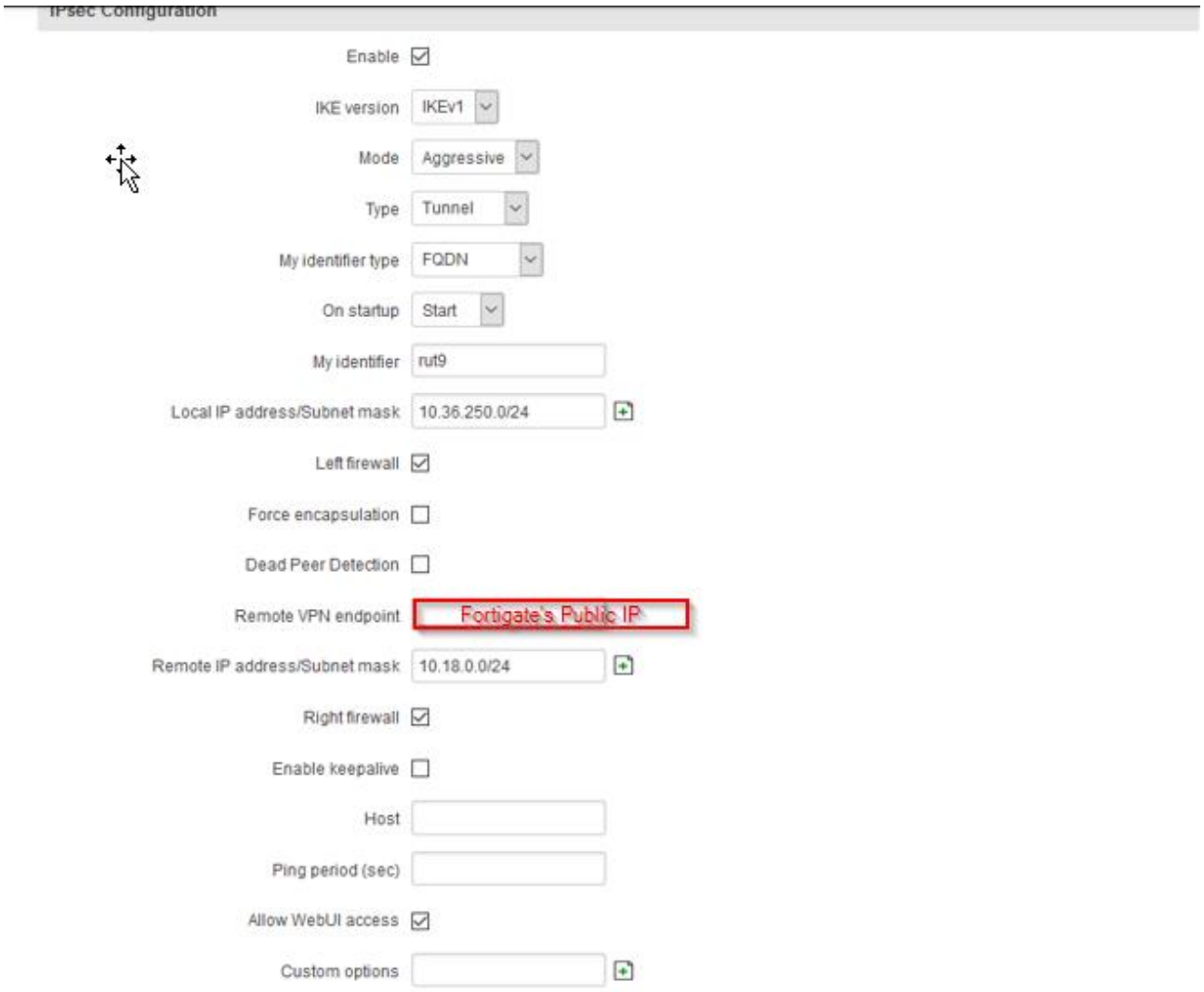
2. Setting up IPsec on RUT9XX

2.1. Creating an IPsec instance

- Log in to router's Web UI, go to **Services -> VPN -> IPsec**
- Enter any **name** for the instance and hit '**Add**'

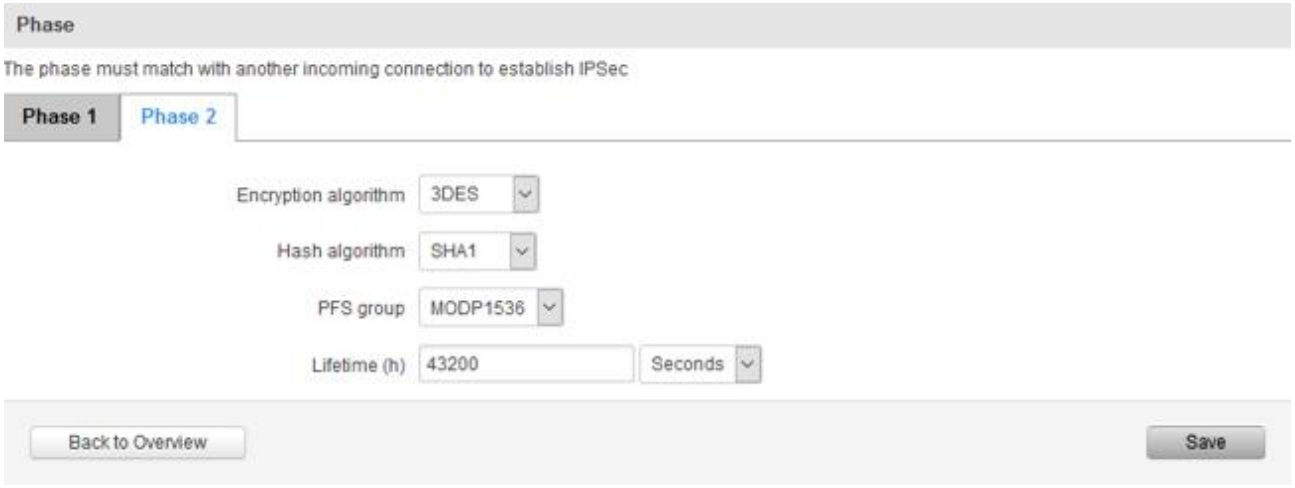


- Click **Edit** on the newly created instance.
- Select **Enable**
- IKE version: **IKEv1**
- Mode: **Aggressive**
- Type: **Tunnel**
- My identifier type: **FQDN**
- My identifier: same as **Peer ID** on **Fortigate**
- Local IP address/Subnet mask: **LAN IP** address and **prefix** (for ex. 10.36.250.0/24)
- Select **Left firewall**
- Remote VPN endpoint: **Fortigate's Public IP**
- Remote IP address/Subnet mask: **Local address** and **prefix** set up on Fortigate
- Select **Right firewall**



- Phase 1:
  - Encryption algorithm: **3DES**
  - Authentication: **SHA1**
  - DH group: **MODP1536**
  - Lifetime (h): **86400 Seconds**

- Phase 2:
  - Encryption algorithm: **3DES**
  - Hash algorithm: **SHA1**
  - PFS group: **MODP1536**
  - Lifetime (h): **43200 Seconds**



- Hit **Save**

2.2. Creating a pre-shared key:

- Under **Services -> VPN -> IPsec**, under **Pre-shared keys** hit **Add**
- Put in the **pre-shared key.** It **has to match** the one you put on **step 1.2**
- Secret's ID selector: **Fortigate's Wan IP (Public IP)**
- Hit **Save**

3. Topology

4. Testing the connection

4.1. On the router

- Go to **Services -> CLI**
- Username: **root**
- Password: your **router's password**
- Once logged in, put in ***ipsec status*** and hit **Enter**
- You should see a **tunnel formed** as in the example below:

```
root@Teltonika:~# ipsec status
Shunted Connections:
passthrough0:  192.168.1.0/24 === 192.168.1.0/24 PASS
Security Associations (1 up, 0 connecting):
        tetr[1]: ESTABLISHED 4 seconds ago, 117.2[rut240]...14.9[amir]
        tetr{1}:  INSTALLED, TUNNEL, reqid 1, ESP in UDP SPIs: c729fe50_i c48178d8_o
        tetr{1}:   192.168.1.0/32 === 10.192.0.254/32
```

4.2. On Fortigate

- You should see a **New Dialup Connection** appear besides your ipsec tunnel instance **VPN – IPsec Tunnels**