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Installation and Configuration Guide

Step-by-step instructions for installing the module, preparing the Mikrotik router, and configuring WHMCS products and servers.

- Setup Guide: Mikrotik Preparation and Configuration
- WHMCS Installation and Update
- Product Configuration
- Add Server (Router Mikrotik) in WHMCS

Setup Guide: Mikrotik Preparation and Configuration

Mikrotik WireGuard VPN module **WHMCS**

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Prerequisites

- **RouterOS version 7 or higher** is required.
- Access to the Mikrotik router via terminal (SSH, Winbox terminal, or WebFig terminal).

> **Important:** Enter the following commands one by one and wait for each command to complete before proceeding to the next.

Step I. Check RouterOS Version

Verify that your router is running RouterOS 7 or higher:

```
system/package/print
```

Step II. Create Root Certificate

Authority

Create a local CA certificate for SSL:

```
/certificate add name=LocalCA common-name=LocalCA key-usage=key-cert-sign,crl-sign
```

Step III. Sign the CA Certificate

```
/certificate sign LocalCA
```

Step IV. Create Webfig Certificate

Replace `XXX.XXX.XXX.XXX` with the router's **public IP address**:

```
/certificate add name=Webfig common-name=XXX.XXX.XXX.XXX
```

Step V. Sign the Webfig Certificate

```
/certificate sign Webfig ca=LocalCA
```

Step VI. Enable SSL for the Web Interface

```
/ip service set www-ssl certificate=Webfig disabled=no
```

Step VII. Enable API-SSL

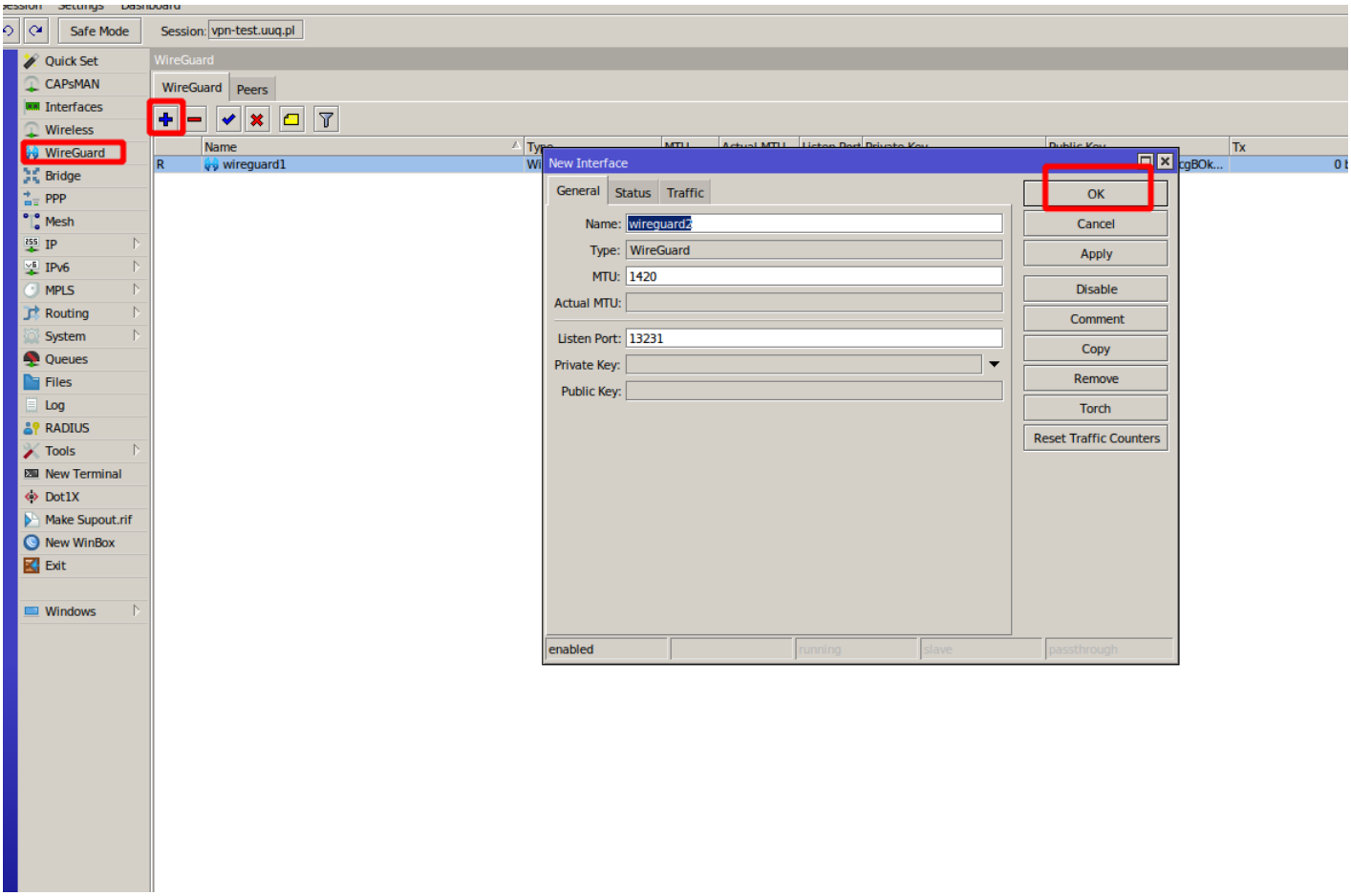
```
/ip service set api-ssl certificate=Webfig disabled=no
```

Step VIII. WireGuard VPN Server Setup

Create and enable the WireGuard VPN server interface through the RouterOS interface.

You can do this via Winbox or WebFig:

1. Navigate to **WireGuard** section
2. Click **Add New** (+)
3. Set the interface name (e.g., `wireguard1`)
4. Set the **Listen Port** (e.g., `13231`)
5. Enable the interface



mikrotik-wireguard-setup.png

Step IX. Configure Firewall, NAT and Routing

> **Important:** Please be aware that to ensure proper functionality of VPN connections, it is essential for you, as an administrator, to correctly configure the Mikrotik router. This entails configuring **NAT**, **Firewall**, **routing**, and all the required settings for VPN to operate correctly.

Example NAT masquerade rule (adjust to your network):

```
/ip firewall nat add chain=srcnat out-interface=ether1 action=masquerade
```

Example firewall rule to allow WireGuard traffic:

```
/ip firewall filter add chain=input protocol=udp dst-port=13231 action=accept comment="Allow WireGuard"
```

Next Steps

After completing the Mikrotik preparation, proceed to Add server (router Mikrotik) in WHMCS.

WHMCS Installation and Update

Mikrotik WireGuard VPN module **WHMCS**

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System requirements

Requirement	Minimum
WHMCS	8.x+, 9.x+.
PHP	7.4, 8.1, 8.2, 8.3, 8.4
ionCube Loader	v15+
Mikrotik RouterOS	7.x+

> **Note:** The module uses ionCube encoding. Make sure ionCube Loader is installed and active on your server.

Installation

> **Note:** The module now uses **ionCube 15**, which provides universal out-of-the-box support for all encodings.
>
> All versions can be found at this link:
> `https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Mikrotik-WireGuard-VPN/`

> Older module versions for WHMCS 8 are available in the archive directory: `https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Mikrotik-WireGuard-VPN/archive/`

1. Download the latest version from the PUQ download page:

```
wget https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Mikrotik-WireGuard-VPN/PUQ_WHMCS-Mikrotik-WireGuard-VPN-latest.zip
```

2. Unzip the archive:

```
unzip PUQ_WHMCS-Mikrotik-WireGuard-VPN-latest.zip
```

3. Copy the `puqMikrotikWireGuardVPN` directory into your WHMCS installation under `modules/servers/`:

```
cp -r puqMikrotikWireGuardVPN /path/to/whmcs/modules/servers/
```

   The resulting directory structure should look like:

```
modules/
  servers/
    puqMikrotikWireGuardVPN/
      puqMikrotikWireGuardVPN.php
      hooks.php
      lib/
      templates/
      lang/
      ...
```

Update

The update process is identical to the installation:

1. Download the latest archive from the download page:

```
wget https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Mikrotik-WireGuard-VPN/PUQ_WHMCS-Mikrotik-WireGuard-VPN-latest.zip
```

2. Unzip the archive:

```
unzip -o PUQ_WHMCS-Mikrotik-WireGuard-VPN-latest.zip
```

3. Replace the existing `puqMikrotikWireGuardVPN` directory in your WHMCS installation:

```
cp -r puqMikrotikWireGuardVPN /path/to/whmcs/modules/servers/
```

> **Warning:** When updating from v2.x to v3.x+, product reconfiguration is required due to the new settings storage format.

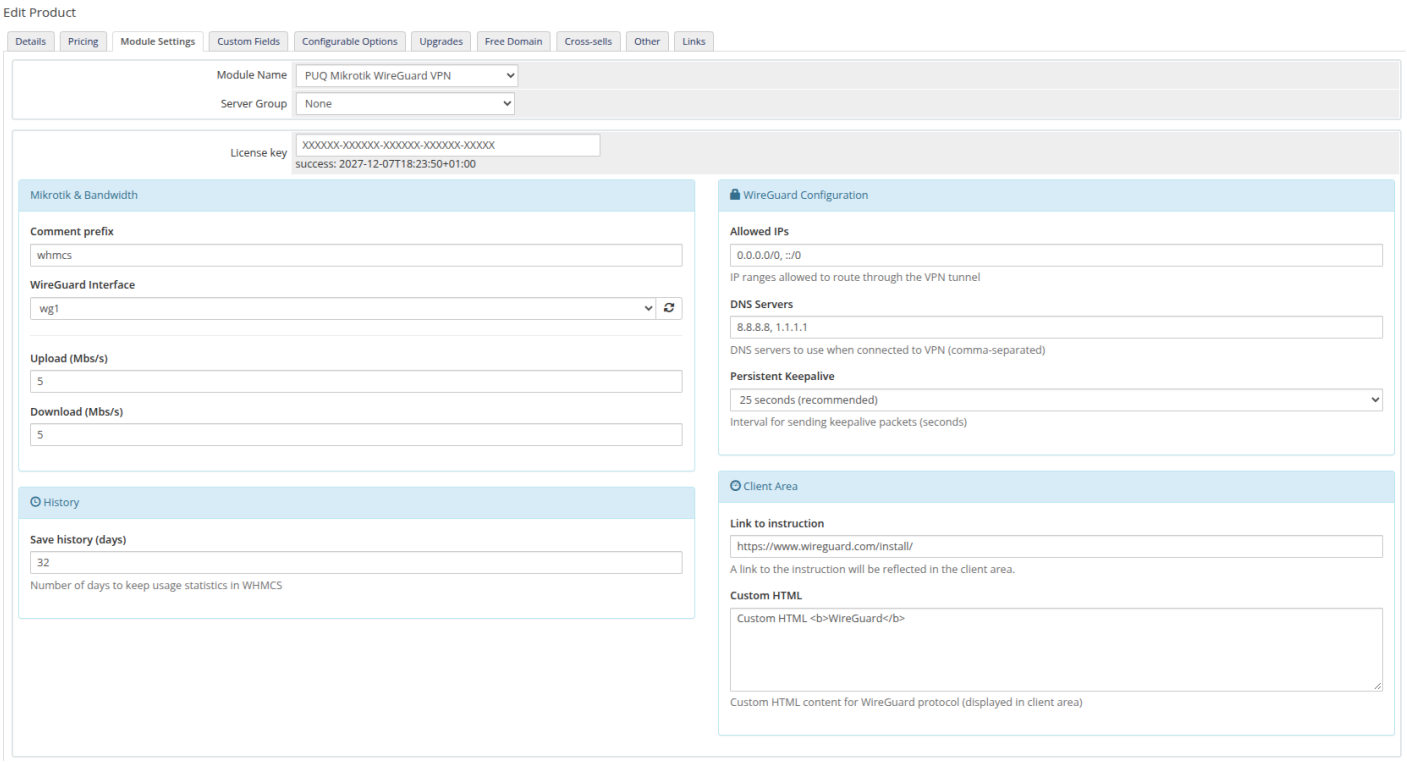
Product Configuration

Mikrotik WireGuard VPN module **WHMCS**

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Add new product to WHMCS

1. Log in to your WHMCS Admin Area.
2. Navigate to **System Settings → Products/Services → Create a New Product**.
3. Fill in the product details (name, description, pricing).
4. Go to the **Module Settings** tab.
5. Select **PUQ Mikrotik WireGuard VPN** from the **Module Name** dropdown.
6. Enter your **License key** in the corresponding field.
7. Configure the remaining module parameters.
8. Click **Save Changes**.



product-configuration.png

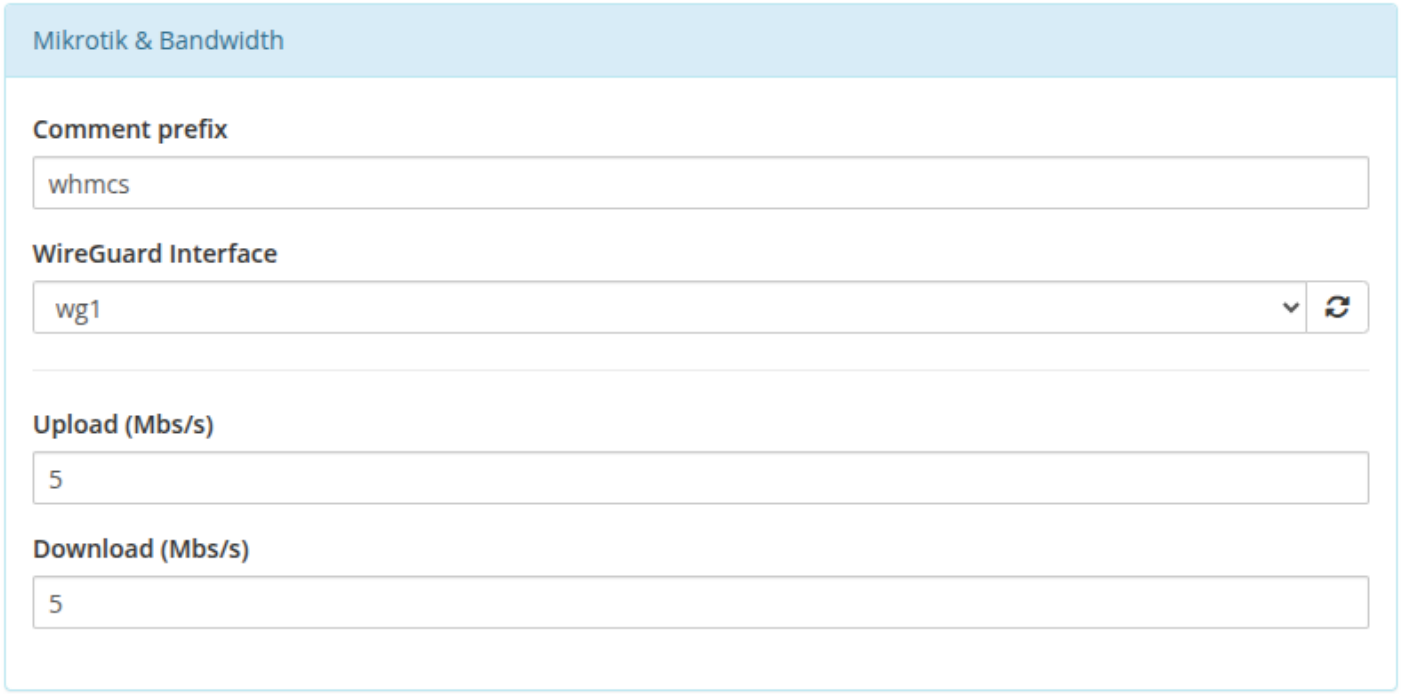
Configuration parameters

Parameter	Description	Default
License key	Pre-purchased license key for the module.	
WireGuard Interface	Name of the WireGuard interface on the Mikrotik router (must be pre-created)	`wg1`
Comment prefix	Prefix added to VPN peer and queue comments on Mikrotik	`whmcs`
Upload (Mbs/s)	Upload bandwidth speed limit in Mbps	`5`
Download (Mbs/s)	Download bandwidth speed limit in Mbps	`5`
Allowed IPs	IP ranges allowed to route through the VPN tunnel	`0.0.0.0/0, ::/0`
DNS Servers	DNS servers to use when connected to VPN (comma-separated)	`8.8.8.8, 1.1.1.1`
Persistent Keepalive	Interval for sending keepalive packets (seconds)	`25 seconds`
Disable statistics collection	When enabled, traffic statistics will not be collected and the statistics page will be hidden from the client area	Unchecked
Save history (days)	Number of days to keep usage statistics in WHMCS (minimum 32 days)	`32`
Link to instruction	URL to setup instructions (displayed in client area as "User manual" button)	Empty
Custom HTML	Custom HTML content for WireGuard protocol (displayed in client area)	Empty

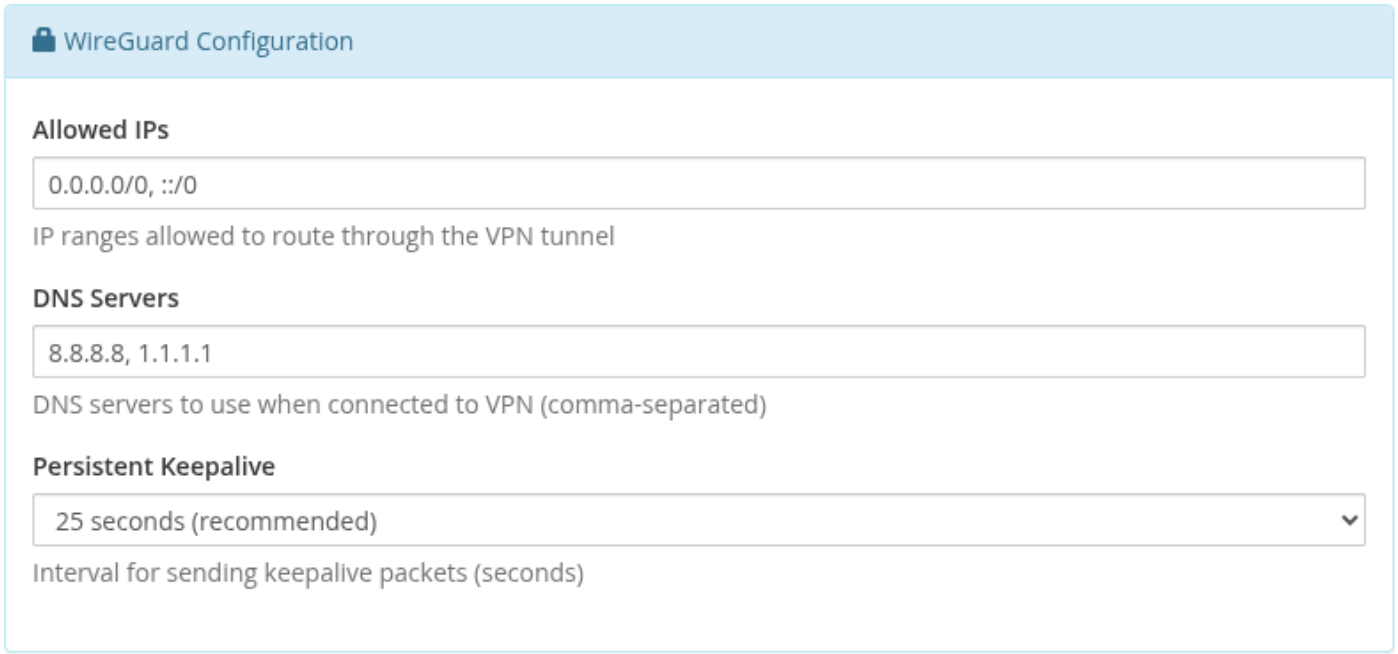
Allowed IPs examples:

- `0.0.0.0/0, ::/0` — route all IPv4 and IPv6 traffic through VPN (full tunnel)
- `10.0.0.0/8, 192.168.0.0/16` — route only specific networks (split tunnel)

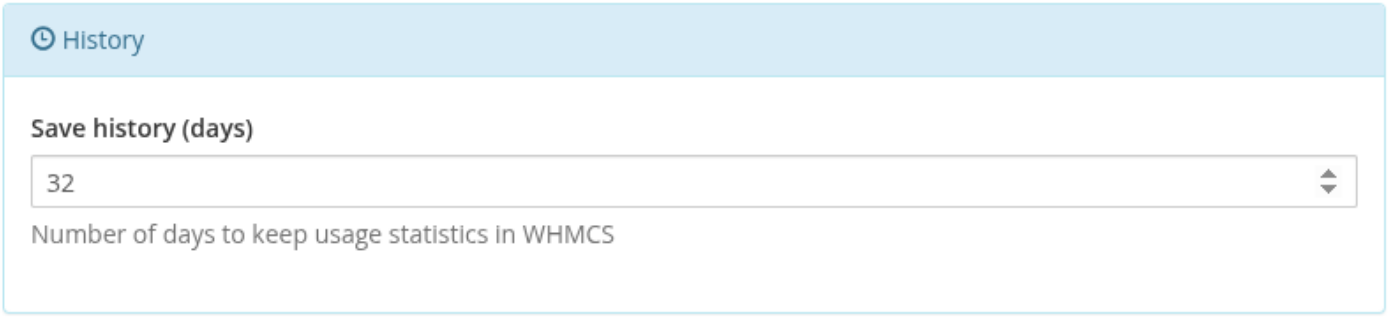
Recommended: Set "Link to instruction" to `https://www.wireguard.com/install/` — the official WireGuard client downloads page.



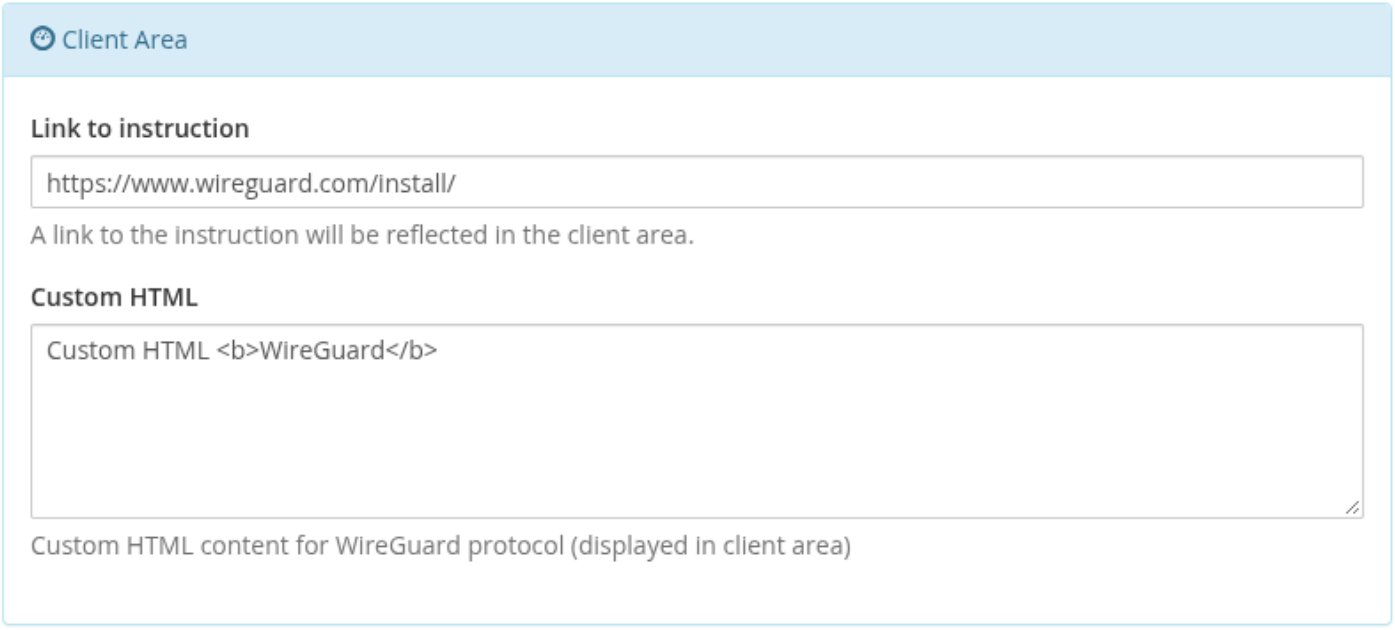
product-config-mikrotik-bandwidth.png



product-config-wireguard.png



product-config-history.png



product-config-client-area.png

Metric Billing

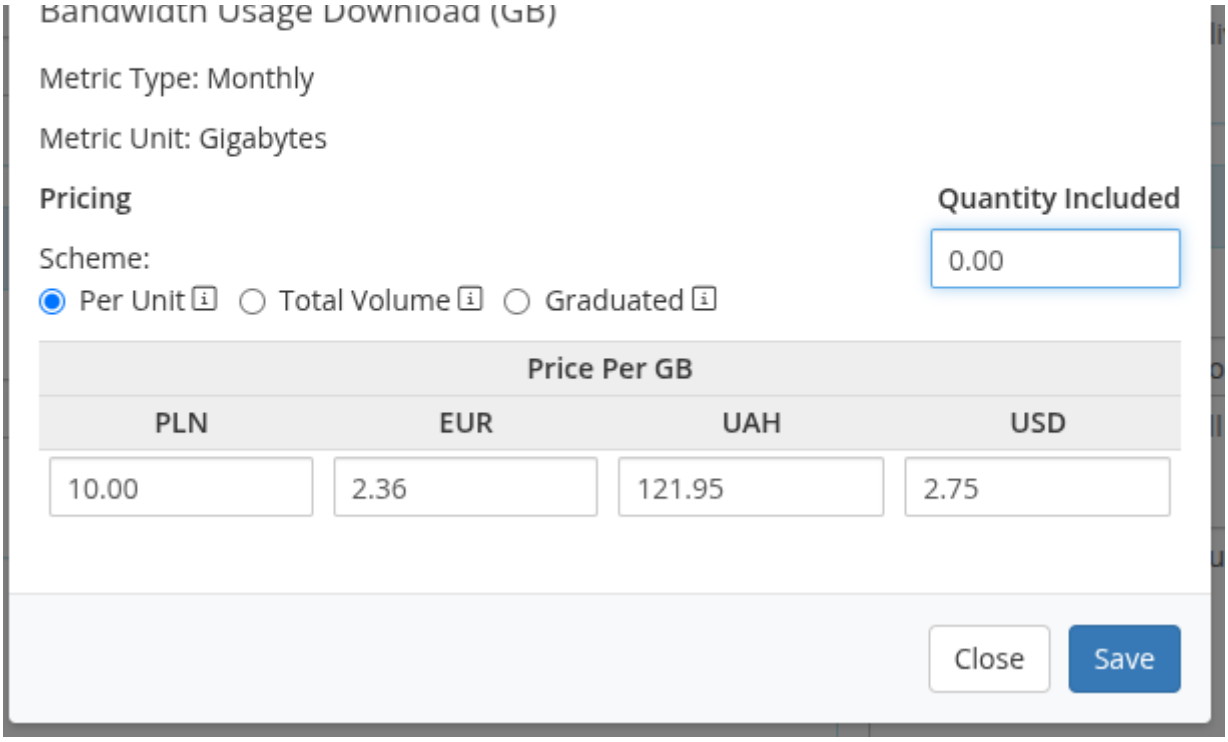
The module supports usage-based billing through WHMCS Metric Billing. Two metrics are available:

- **Bandwidth Usage Download (GB)** — monthly download traffic in gigabytes
- **Bandwidth Usage Upload (GB)** — monthly upload traffic in gigabytes

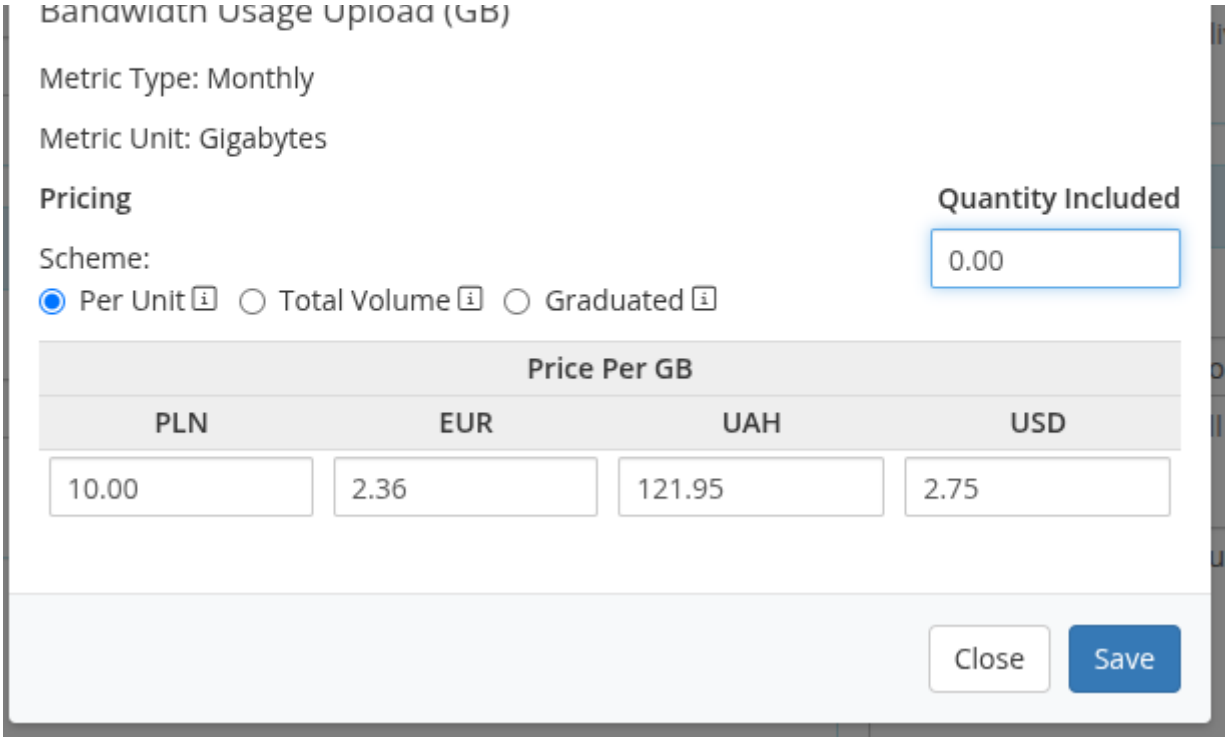
To enable metric billing, go to the product's **Metric Billing** section and toggle the desired metrics **ON**, then click **Configure Pricing** to set the per-GB price.



metric-billing.png



metric-billing-download.png



metric-billing-upload.png

Add Server (Router Mikrotik) in WHMCS

Mikrotik WireGuard VPN module **WHMCS**

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Navigate to **System Settings > Servers > Add New Server** in WHMCS admin area.

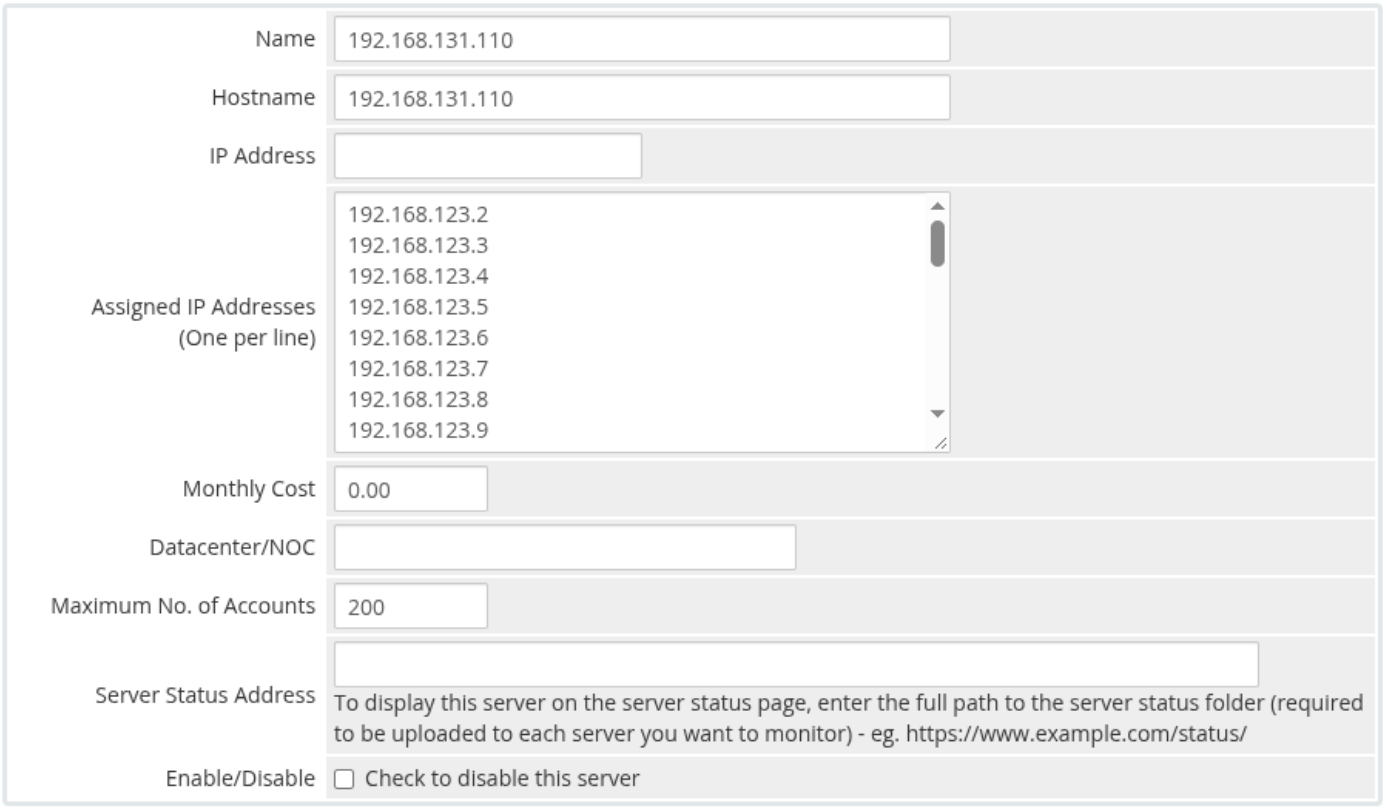
Step 1: Name and Hostname

- **Name** — a descriptive name for your convenience (e.g., "Mikrotik VPN Router 1")
- **Hostname** — the hostname that resolves to your Mikrotik router's IP address (e.g., `vpn.mydomain.com`). You can also use a dedicated domain. The important thing is that the chosen hostname resolves to the IP address of the Mikrotik router in your DNS.

Step 2: Assigned IP Addresses

In the **Assigned IP Addresses** field, enter a list of IP addresses that will be issued to VPN clients — one IP per line.

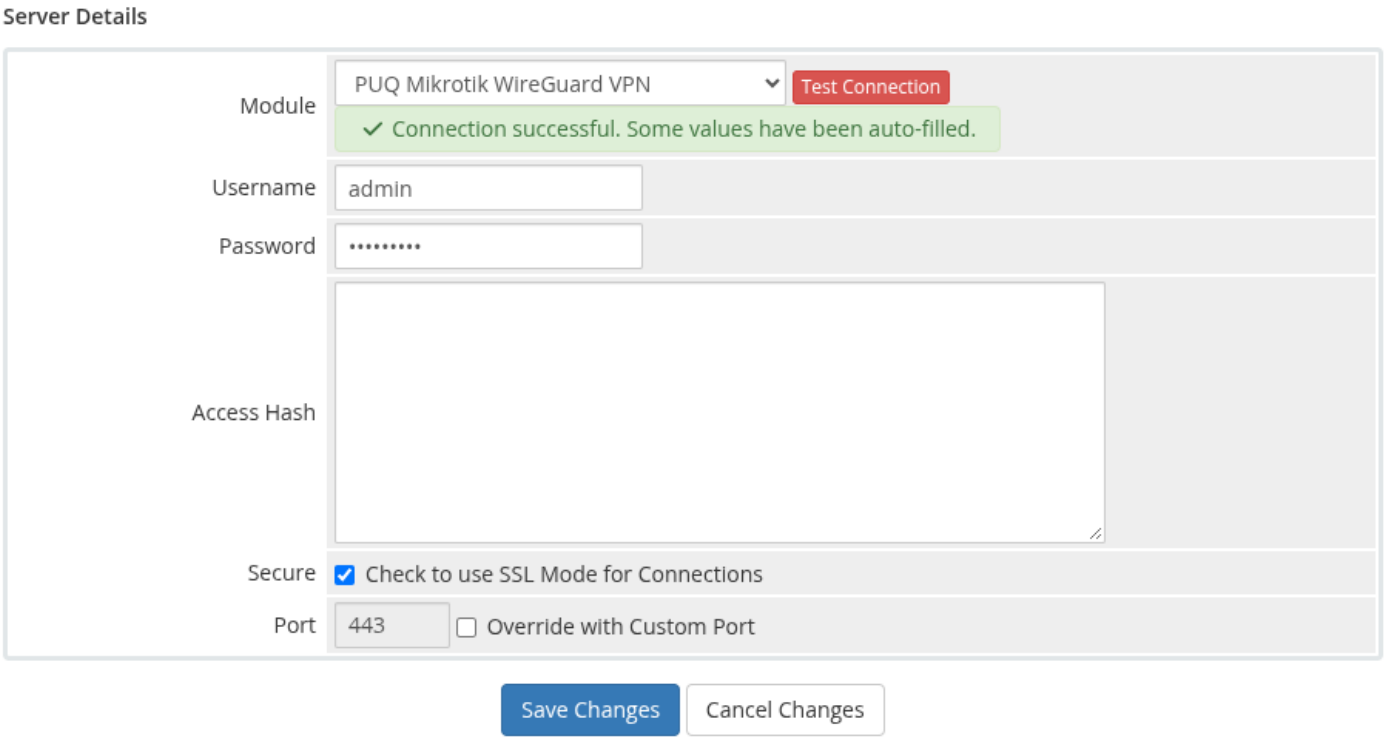
These IPs will be assigned to WireGuard peers as their tunnel addresses. The module automatically allocates the first available (unused) IP from this pool for each new service.



whmcs-server-ips.png

Step 3: Server Details

1. Select the **"PUQ Mikrotik WireGuard VPN"** module from the Module dropdown
2. Enter the correct **username** and **password** for the Mikrotik router
3. Set the **port** (default: `443` for HTTPS REST API)
4. Check the **Secure** checkbox if using HTTPS (recommended)



whmcs-server-details.png

Step 4: Test Connection

Click the **"Test Connection"** button to verify that WHMCS can communicate with the Mikrotik router via REST API.

A successful connection will confirm that:

- The Mikrotik router is reachable
- The credentials are correct
- The REST API is enabled and responding

Next Steps

After adding the server, proceed to Product Configuration in WHMCS.