Mikrotik WireGuard VPN WISECP module

The module is designed to provide IT companies with an opportunity to enhance their service offerings by providing paid WireGuard VPN accounts. Upon installation, the module will handle the complete management of WireGuard VPN account creation, editing, and suspension. It will seamlessly integrate with the WISECP billing system, facilitating the exchange of essential data for customer settlements, activations, and service suspensions.

- Description
- Changelog
- Installation and configuration guide
  - Setup (install/update)
  - License Activation
  - Mikrotik preparation and configuration
  - Add server (Mikrotik) in WISECP
  - Service/Product configuration
- WireGuard Clients configuring
  - WireGuard Official clients
  - Mikrotik WireGuard client configuration
- Client Area
  - Product Home Screen
- Admin Area
  - Order Detail

Description

Mikrotik WireGuard VPN module

WISECP

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The Mikrotik WireGuard VPN module provides the ability to sell the Virtual Private Network service to customers.

> **Requirements**
> WISECP: v3.1.5+, php: v8.x, Ioncube: V12+
> MikroTik: v7+

Supports protocols:

- WireGuard

Module Functions:

- Auto create and deploy VPN account/accounts
- Suspend/Unsuspend/Delete/Change Package
- Requires a MikroTik device or MikroTik CHR.
- Possibility to set Bandwidth speed limits
- Module supports multilingualism (**Arabic, Bosnian, Czech, German, Greek, English, Spanish, Persian, French, Hungarian, Indonesian, Italian, Georgian, Latvian, Dutch, Polish, Portuguese, Romanian, Ukrainian**)
- Link to instructions for setting up the service in the client area.
- Mechanism for working with servers and server groups

Available options in the admin panel:

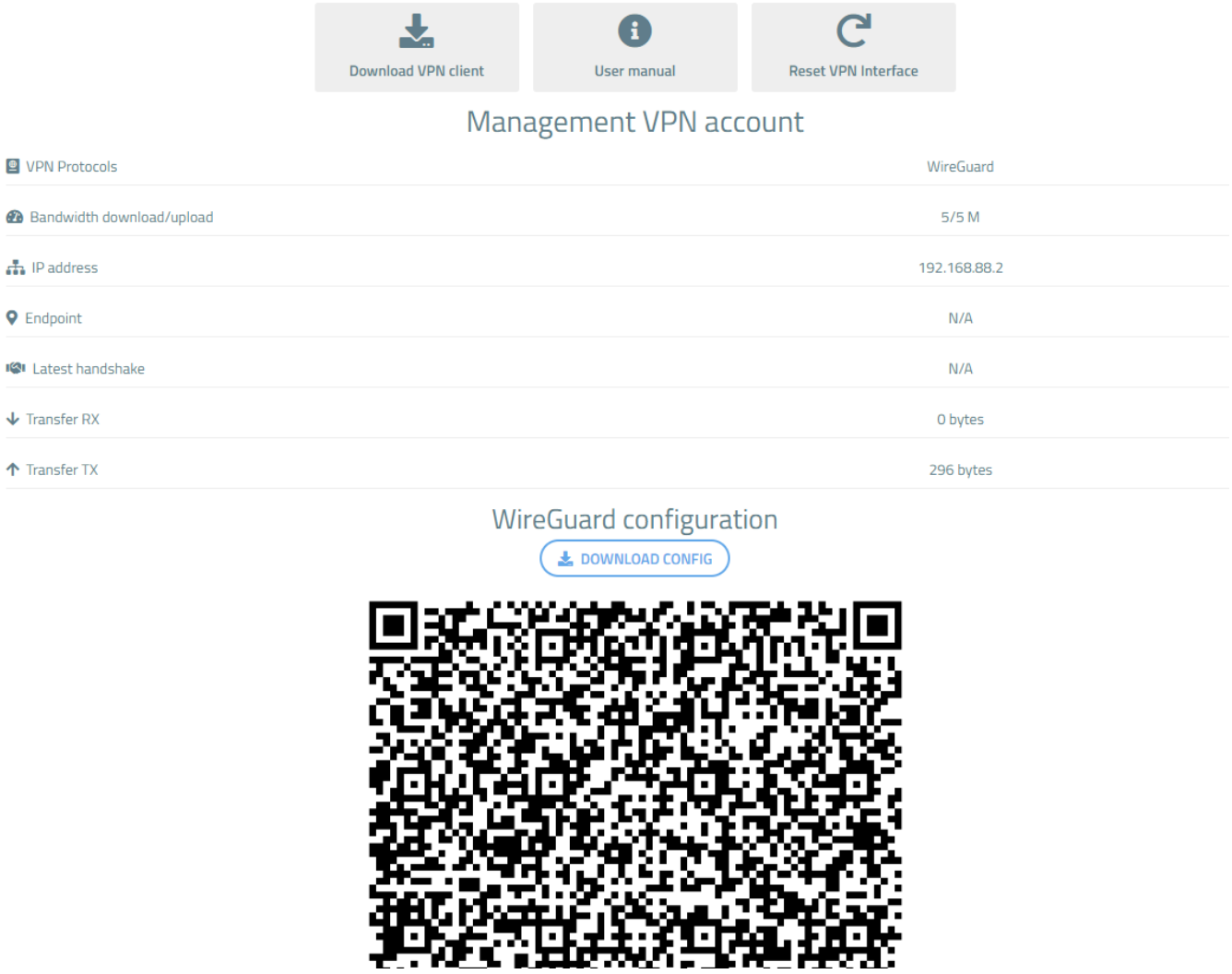
- Create users
- Suspend users
- Unsuspend users
- Delete users

- Change Package
- VPN connection status
- VPN interface reboot function (to reset a frozen connection)
- Text and QR code configuration types

Available options in the client panel:

- Links in the form of buttons to the instruction and VPN clients
- General information about the service
- Option to download WireGuard configuration as a file
- QR code for WireGuard configuration
- VPN connection status
- Text and QR code configuration types
- VPN interface reboot function (to reset a frozen connection)

Screenshot of the client area



Screenshot of the Admin area

Mikrotik WireGuard VPN 5 Order Detail

Detail | Core | Blocks | Order Addons | Requirements | Upgrade / Downgrade | History | Cancellation / Refund

API Module PUQ Mikrotik WireGuard VPN

Reset VPN Interface

API answer OK

publicKey	Status	EndPoint	Latest handshake	Transfer RX	Transfer TX
X386BmIbADIkEh77it7x73amX/g7ZWbdOxZJA3O3SkM=	enabled	184.151.246.219:38059	1m53s	363.1 KB	1.51 MB



```
[Interface]
        Address = 192.168.88.2
        DNS = 8.8.8.8,1.1.1.1
        PrivateKey = oCzuOvKrg8s955HVzlNtK0xnZJCP1r3ITnqEU8AmQWA=

[Peer]
        PersistentKeepalive = 25
        Endpoint = vpn-test.uuq.pl:13232
        PublicKey = QWQRKYAA3TTHkR8/c7JuOwGoJ9GdjfnOSswXXDXZARg=
        AllowedIPs = 0.0.0.0/0, ::/0
```

Public Key X386BmIbADIkEh77it7x73amX/g7ZWbdOxZJA3O3SkM=

Private Key oCzuOvKrg8s955HVzlNtK0xnZJCPlr3ITnqEU8AmQWA=

Server vpn-test.uuq.pl

Dedicated IP 192.168.88.2

Changelog

Mikrotik WireGuard VPN module

WISECP

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v1.3 Released 26-03-2025

1. Added the ability to display MTU in the configuration file
2. Added the ability to delete tabs in the configuration file

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v1.2 Released 17-06-2024

1. Added VPN interface reboot function (to reset a frozen connection)
2. Improved adaptation to the mobile version of the client area
3. Some changes in translations

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v1.1 Released 15-02-2024

1. Fixed a bug with some cases where it was not possible to delete the server
2. Improved security

---

v1.0 Released 06-12-2023

First version

Installation and configuration guide

Setup (install/update)

Mikrotik WireGuard VPN module

WISECP

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To install and update a module, you must perform one and the same action.

1. Download the latest version of the module.

```
wget https://download.puqcloud.com/WISECP/Product/PUQ_WISECP-Mikrotik-WireGuard-VPN/php81/PUQ_WISECP-Mikrotik-WireGuard-VPN-latest.zip
```

All versions are available: https://download.puqcloud.com/WISECP/Product/PUQ_WISECP-Mikrotik-WireGuard-VPN/

2. Unzip the archive with the module.

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

3. Copy and Replace "puqMikrotikWireGuardVPN" from "PUQ_WISECP-Mikrotik-WireGuard-VPN" to "WISECP_WEB_DIR/coremio/modules/Product/"

License Activation

Mikrotik WireGuard VPN module

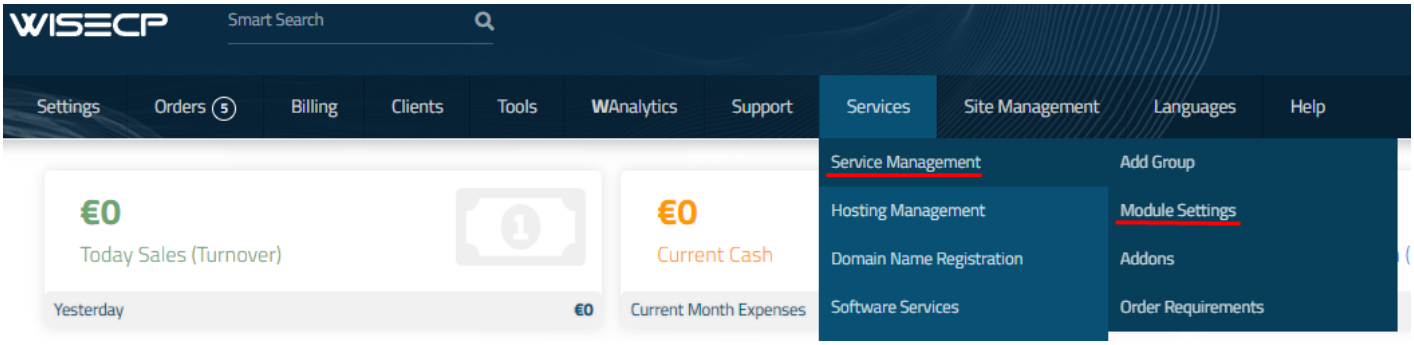
WISECP

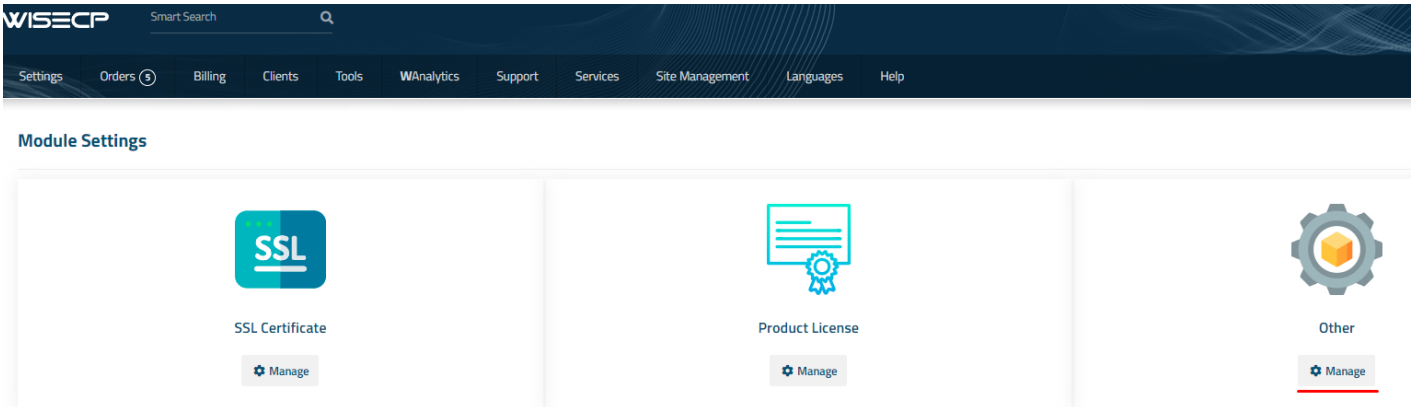
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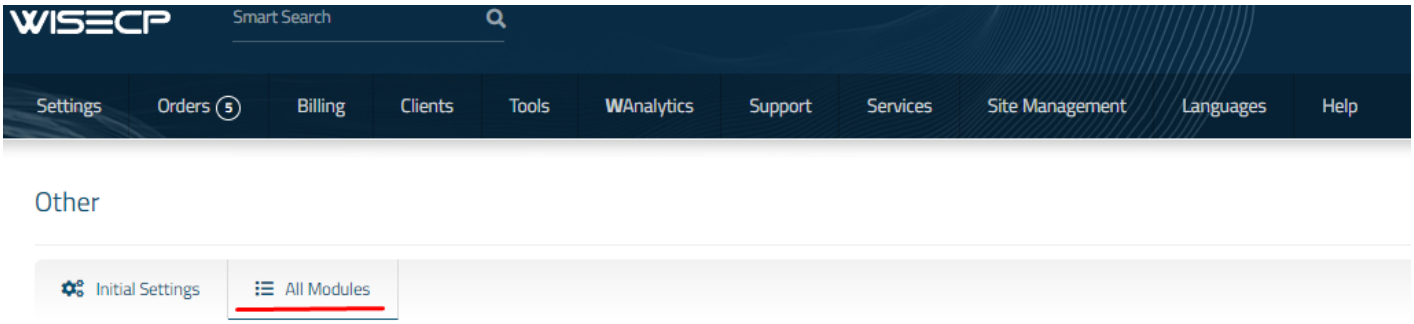
1. Log in to the administrative area of your **WISECP**.

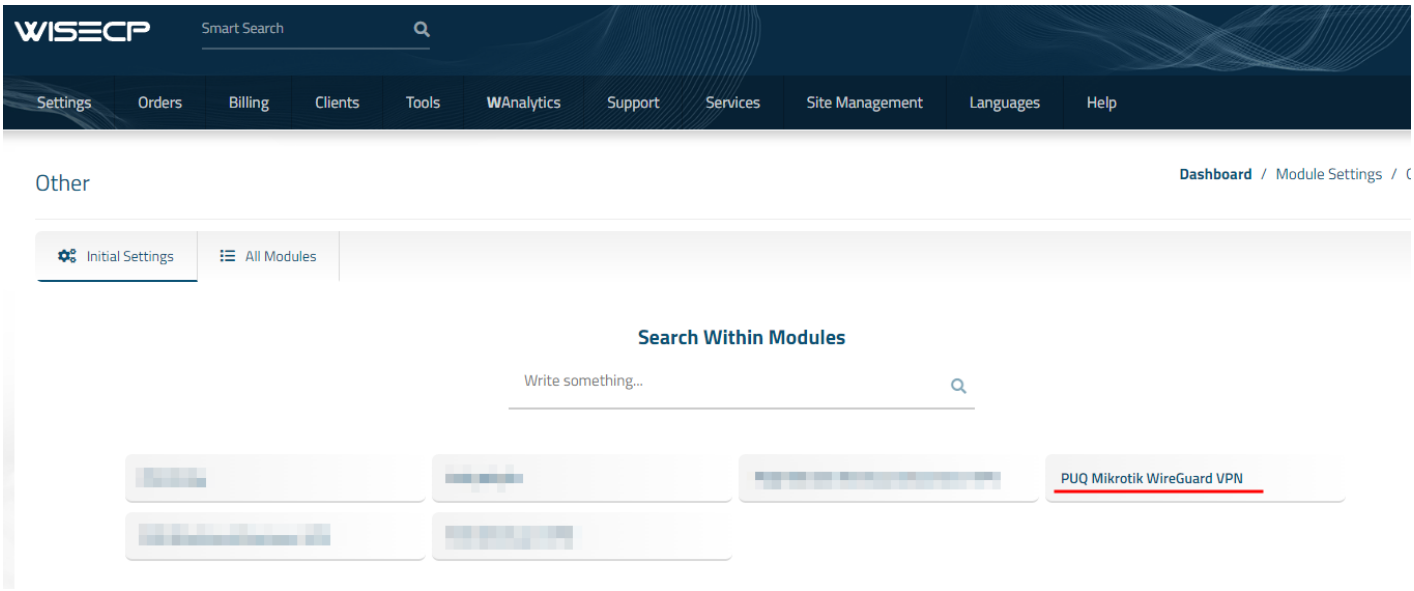
2. Go to module configuration.

```
Services -> Service Management -> Module Settings -> Other -> All Modules -> PUQ Mikrotik WireGuard VPN
```

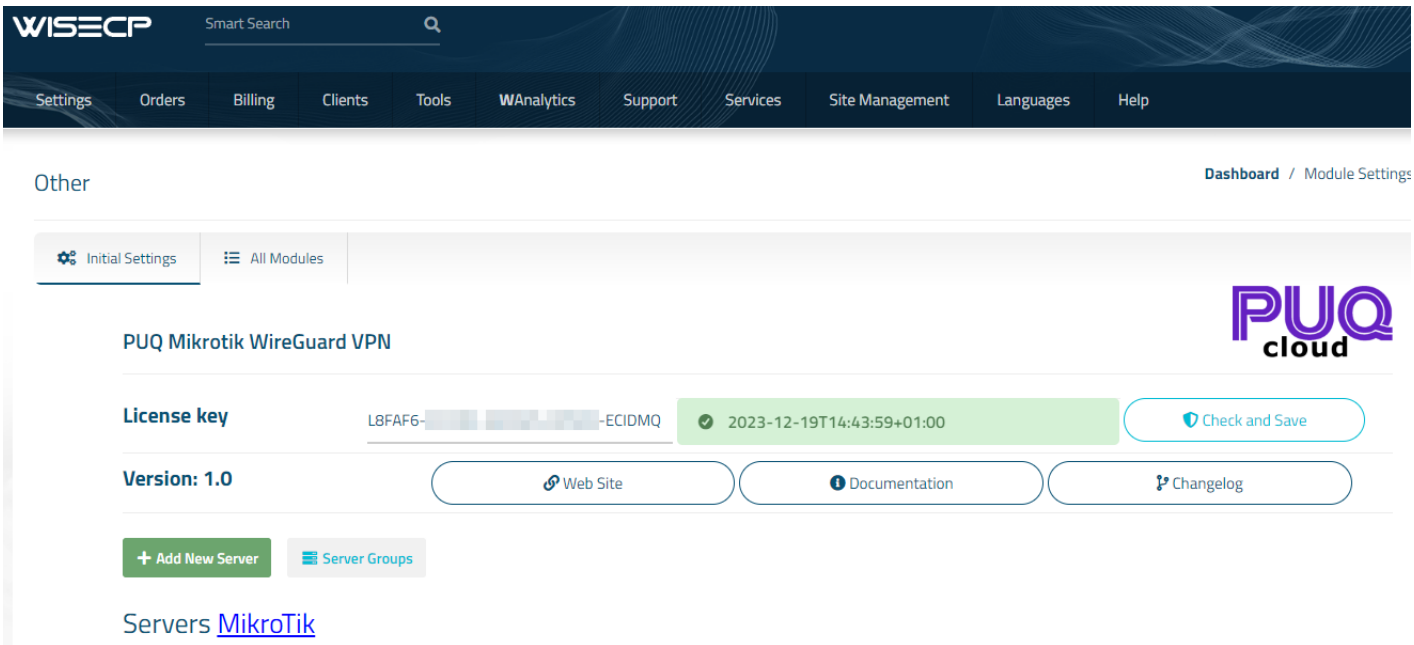








3. On the open page, enter the purchased license key for this product and click the '**Check and Save**' button to validate the key and save it.



Mikrotik preparation and configuration

Mikrotik WireGuard VPN module **WISECP**

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Note: **Enter the following commands one by one and wait for the command to complete.**

Check RouterOS version

Make sure that the version of RouterOS is 7+

```
system/package/print
```

Enabling HTTPS Create your own root CA on your router

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

Sign the newly created CA certificate

```
/certificate
sign LocalCA
```

Create a new certificate for Webfig (non-root certificate)

> Note: as common-name=XXX.XXX.XXX.XXX You enter public IP adddress of the router.

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

Sign the newly created certificate for Webfig

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

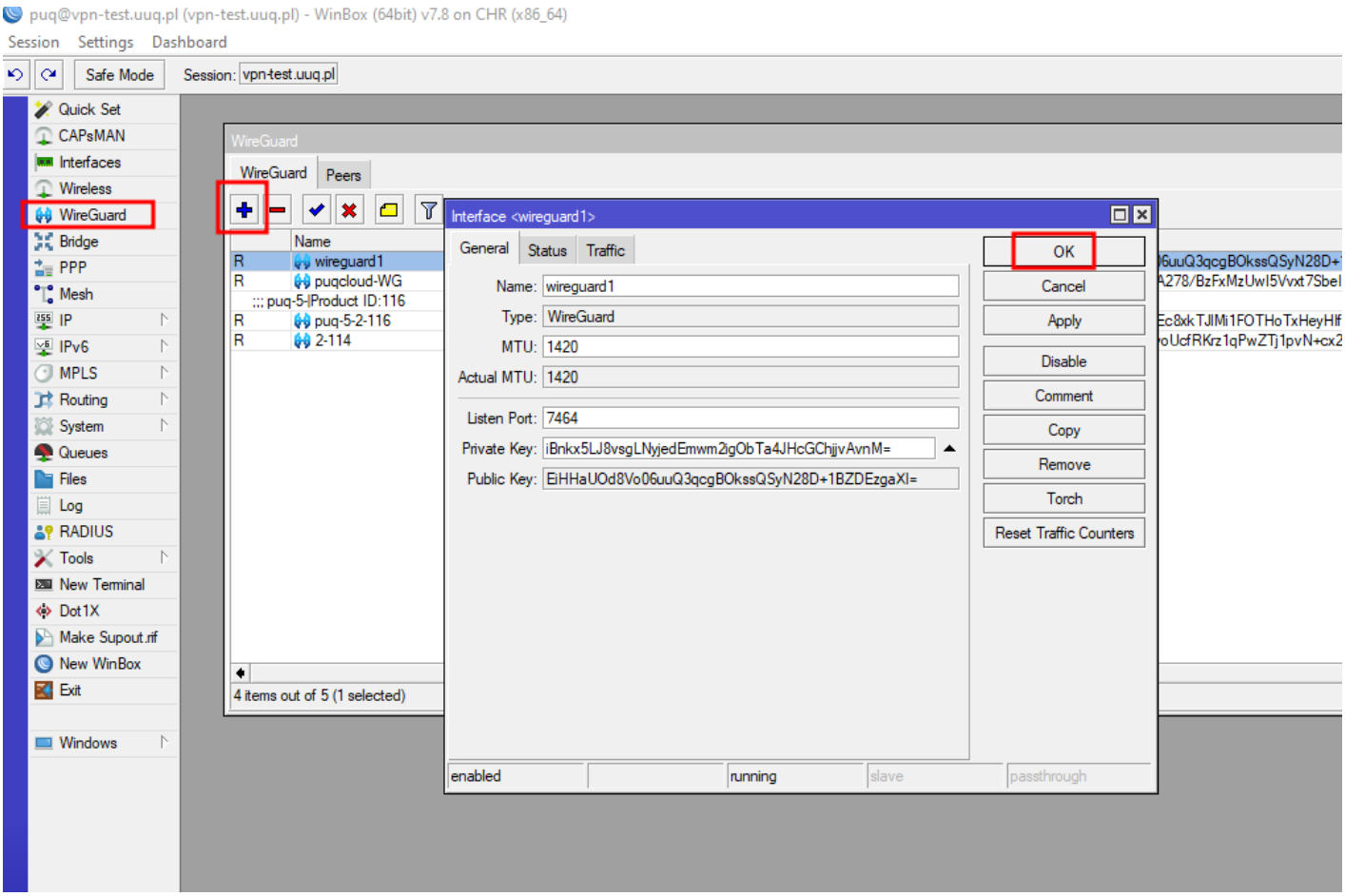
Enable SSL (*www-ssl)* and specify to use the newly created certificate for Webfig

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

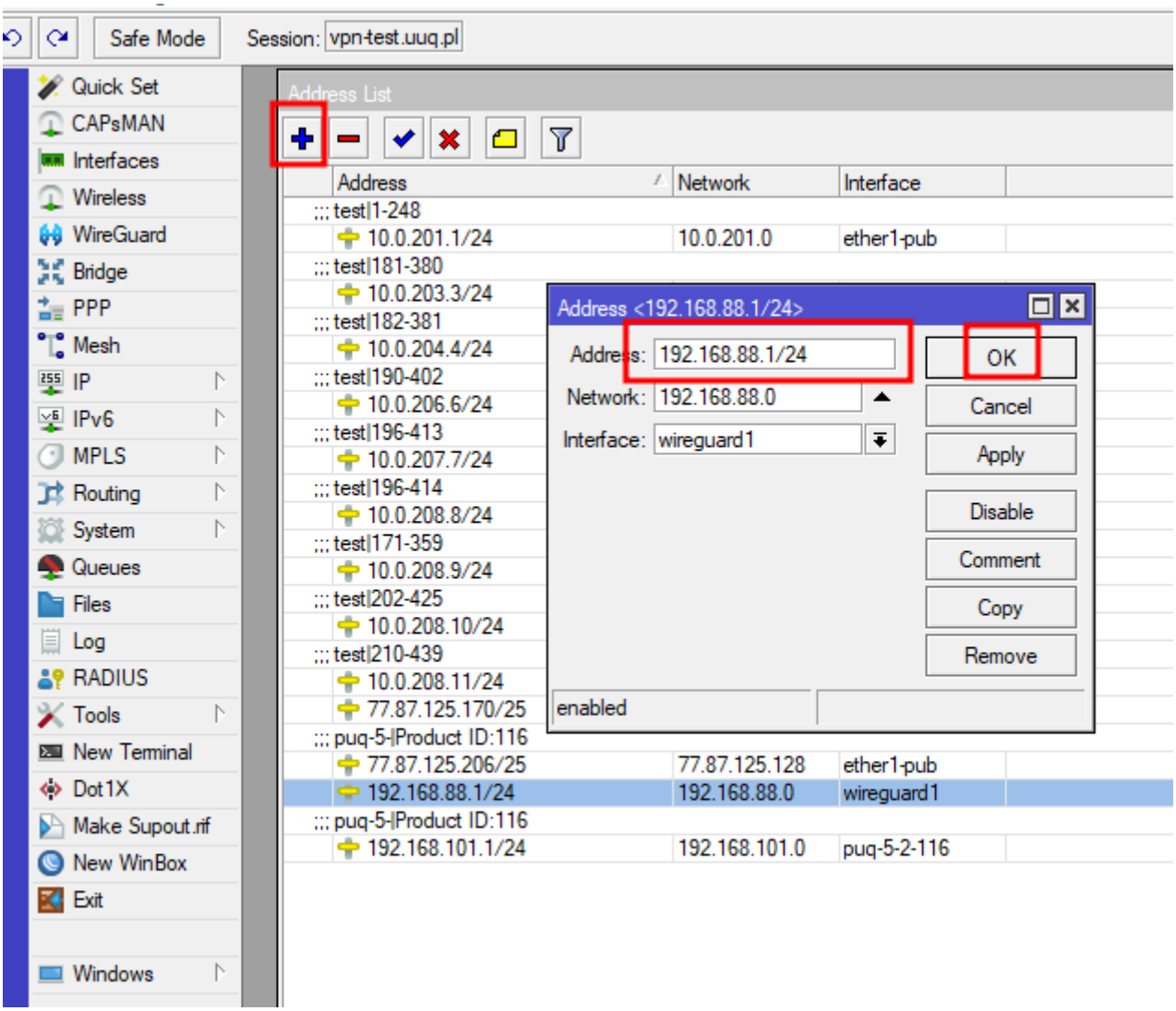
Enable api-ssl and specify to use the newly created certificate for Webfig

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

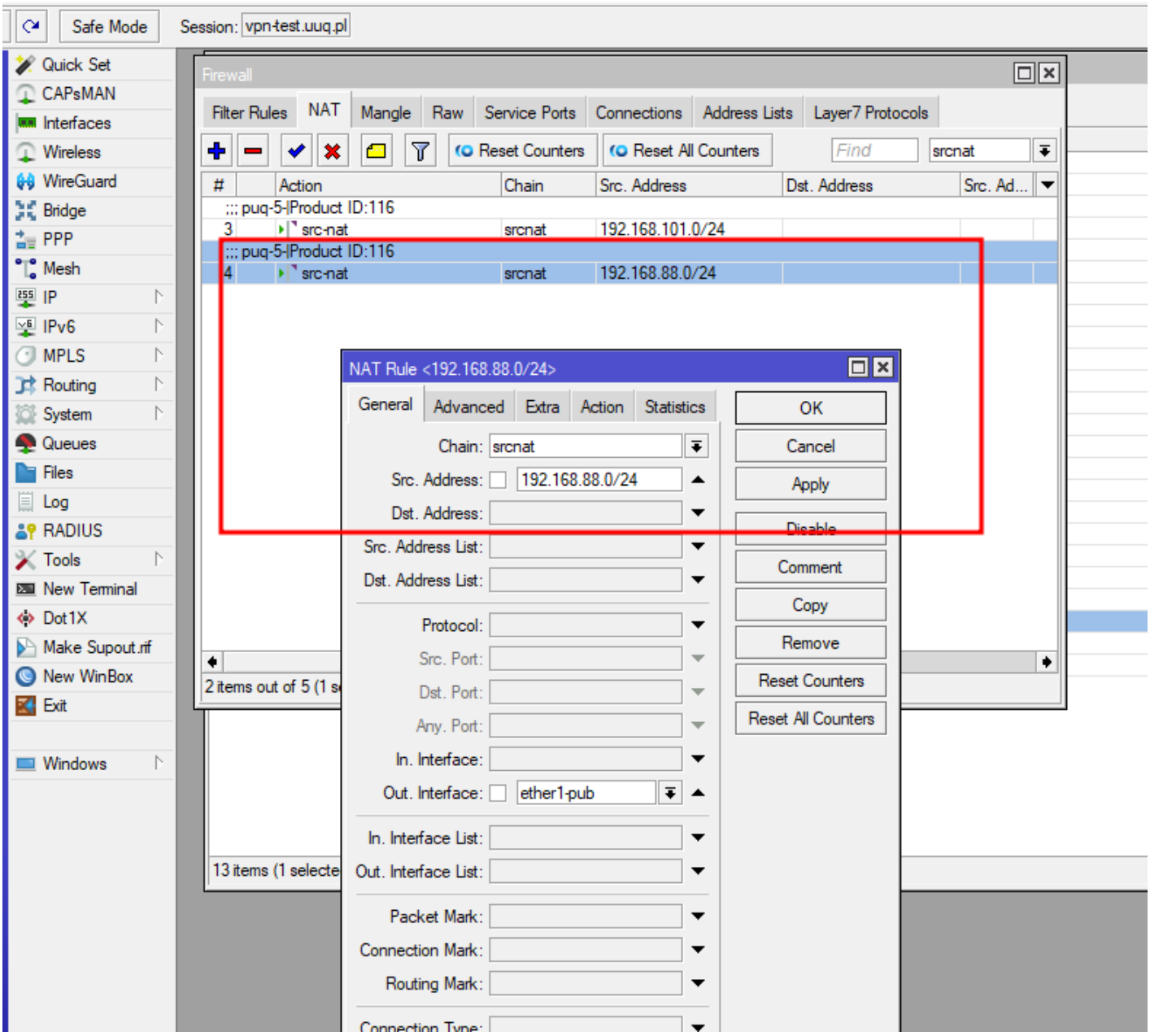
Enable WireGuard VPN server



Add IP address on Wireguard interface



Configuring NAT rules on the firewall


Safe Mode
Session: vpn-test.uuq.pl
Quick Set
CAPsMAN
Interfaces
Wireless
WireGuard
Bridge
PPP
Mesh
IP
IPv6
MPLS
Routing
System
Queues
Files
Log
RADIUS
Tools
New Terminal
Dot1X
Make Supout.rif
New WinBox
Exit
Windows
Firewall
Filter Rules
NAT
Mangle
Raw
Service Ports
Connections
Address Lists
Layer7 Protocols
Reset Counters
Reset All Counters
Find
srcnat
Action Chain Src. Address Dst. Address Src. Ad...
;;; puq-5-|Product ID:116
3 src-nat srcnat 192.168.101.0/24
;;; puq-5-|Product ID:116
4 src-nat srcnat 192.168.88.0/24
2 items out of 5 (1 s
13 items (1 selecte
NAT Rule <192.168.88.0/24>
General
Advanced
Extra
Action
Statistics
Chain: srcnat
Src. Address: 192.168.88.0/24
Dst. Address:
Src. Address List:
Dst. Address List:
Protocol:
Src. Port:
Dst. Port:
Any. Port:
In. Interface:
Out. Interface: ether1-pub
In. Interface List:
Out. Interface List:
Packet Mark:
Connection Mark:
Routing Mark:
Connection Type:
OK
Cancel
Apply
Disable
Comment
Copy
Remove
Reset Counters
Reset All Counters

Installation and configuration guide

Add server (Mikrotik) in WISECP

Mikrotik WireGuard VPN module

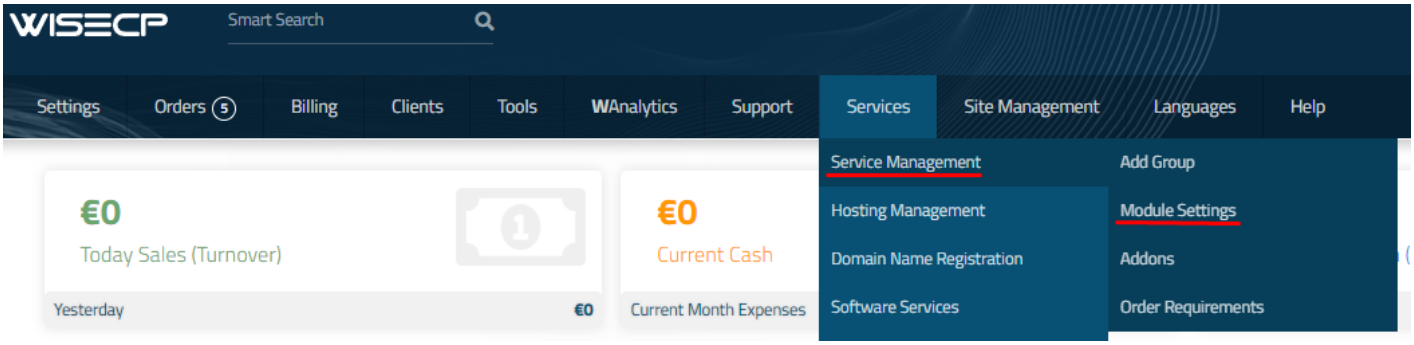
WISECP

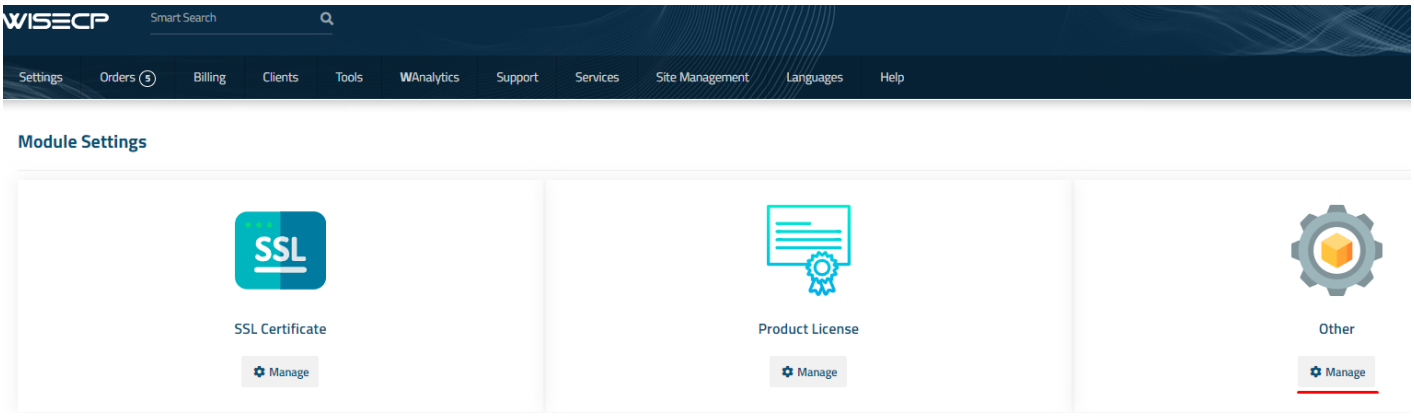
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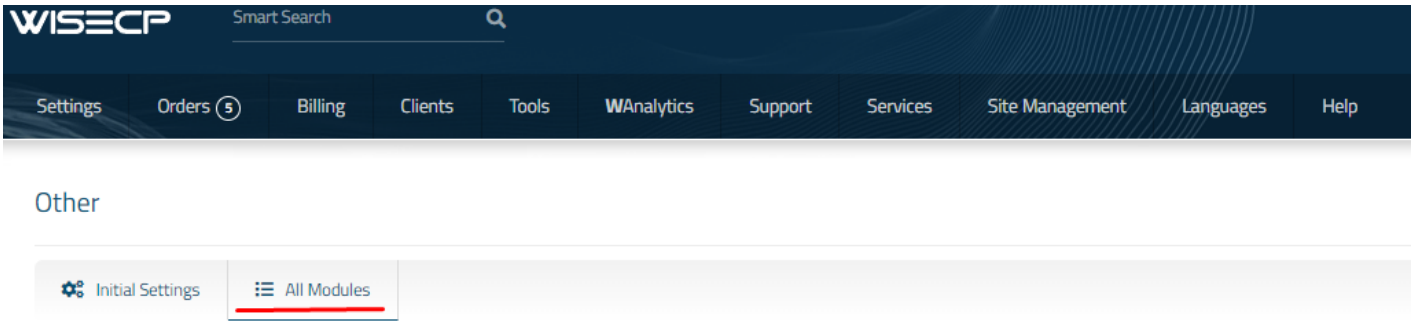
1. Log in to the administrative area of your **WISECP**.

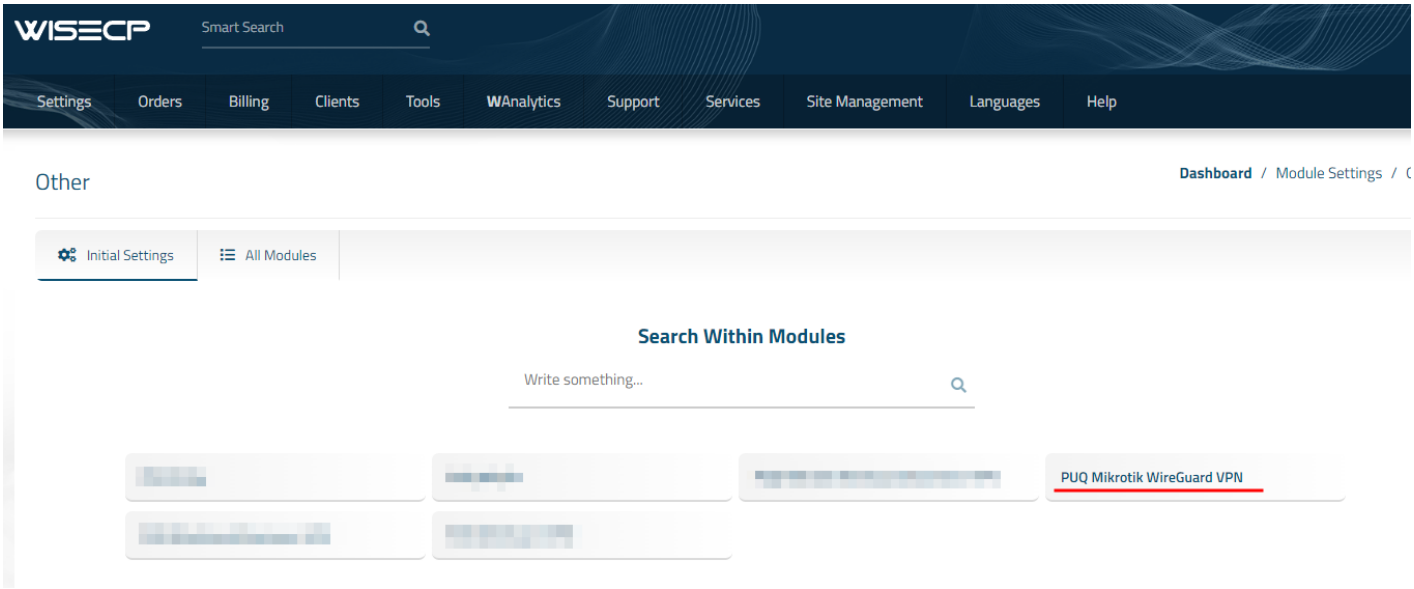
2. Go to module configuration.

```
Services -> Service Management -> Module Settings -> Other -> All Modules -> PUQ Mikrotik WireGuard VPN
```

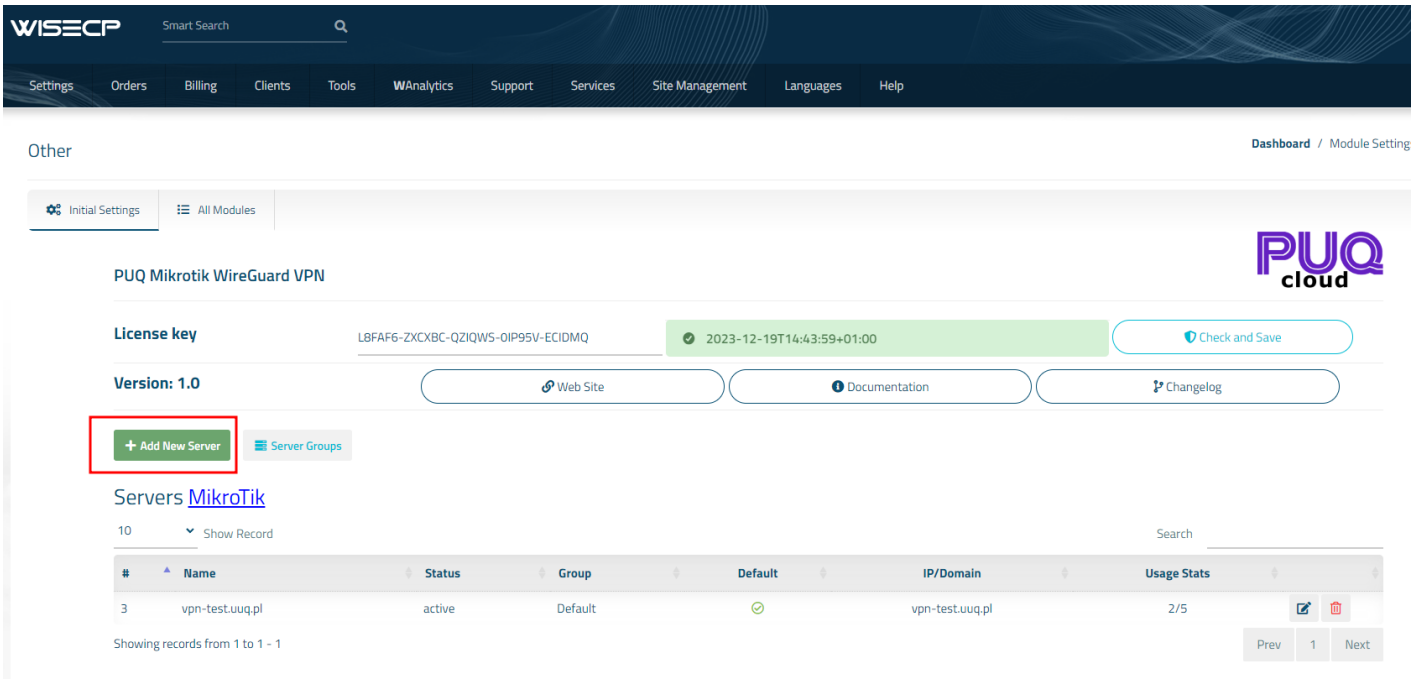








3. In the opened page, click the '**Add Server**' button.



4. On the opened page, enter all the necessary information:

- **Name**: Displayed name of the server.
- **Maximum Number of Accounts**: The number of services that can be on this server.
- **Server Group**: Optionally, choose the server group.
- **DNS 1 and DNS 2**: are DNS servers that will be specified in the configuration of WireGuard clients.
- **Assigned IP Addresses**: a list of IP addresses that will be assigned to WireGuard VPN clients, with each address on a new line.
- **IP Address or Domain**: The address of the MikroTik router you are connecting to.
- **Username:** is the username for the account on MikroTik.
- **Password:** is the password for the account on MikroTik.
- Check the **SSL** box if you want to use SSL-encrypted connection. If necessary, specify the port and perform a connection test.

PUQ Mikrotik WireGuard VPN

PUQ cloud

Go to Back

Add New Server

Name	vpn-test.uuq.pl
Maximum Number of Accounts	122
Server Group	Default
Default	Set as default server in group
DNS 1	77.87.125.10
DNS 2	77.87.125.20
Assigned IP Addresses (One per line)	192.168.88.2 192.168.88.3 192.168.88.10 192.168.88.20 192.168.88.30
IP Address or Domain	vpn-test.uuq.pl
Username	wisecp-dev-MWG
Password	
SSL	Connect using SSL
Port	443 Change standard port
Test Connection	Test Connection

Add New Server

Turn Back

Service/Product configuration

Mikrotik WireGuard VPN module **WISECP**

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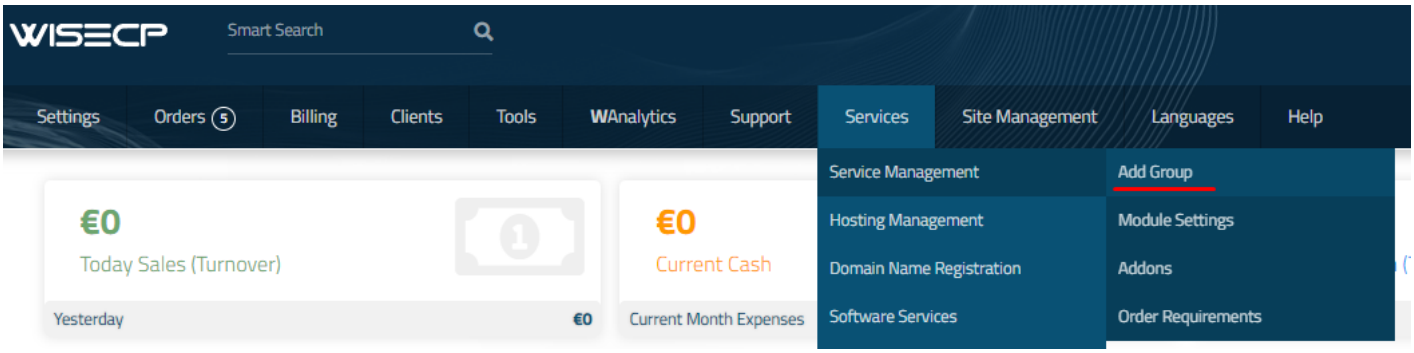
> If you do not have a **Service Group** where you want to place the new service, you need to create a new **Service Group**

1. Log in to the administrative area of your **WISECP**.

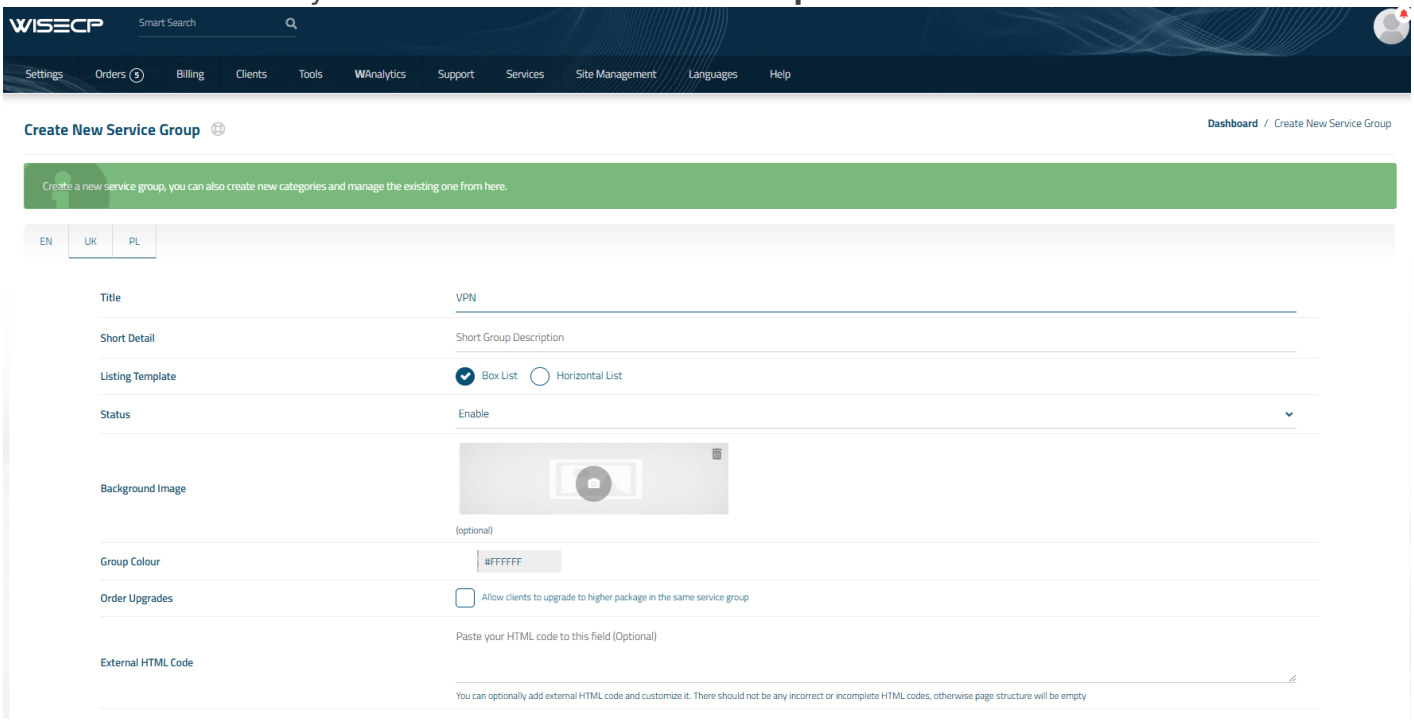
2. Create New Service Group

Go to

```
Services -> Service Management -> Add Group
```



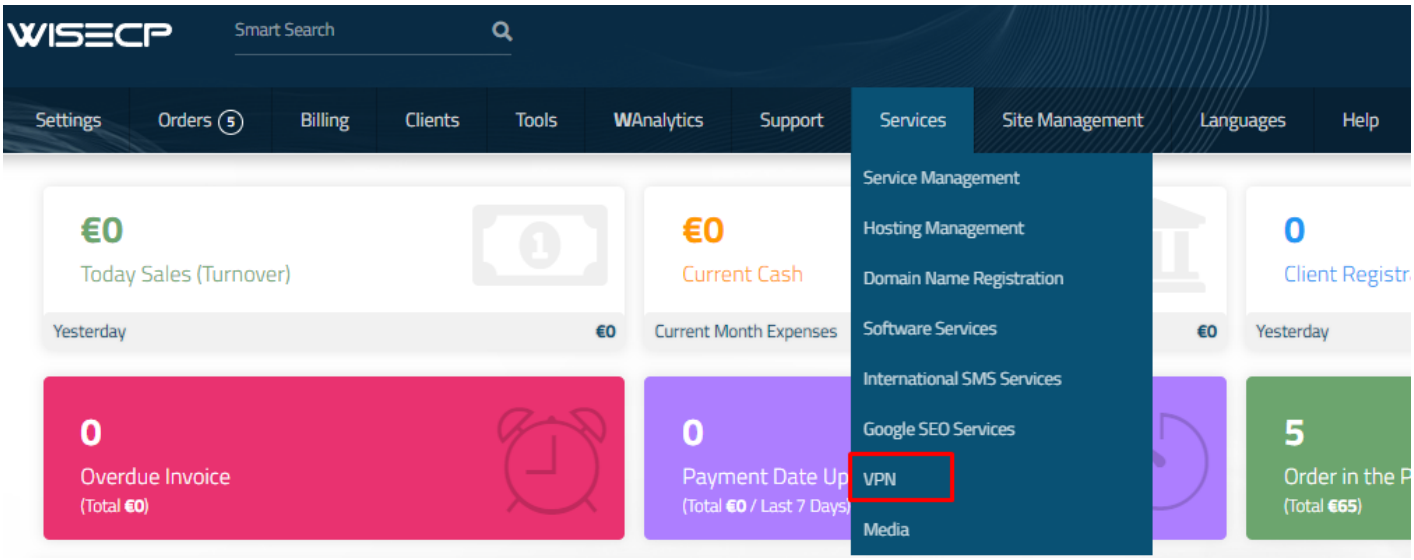
Enter all the necessary data and click the '**Create Group**' button.



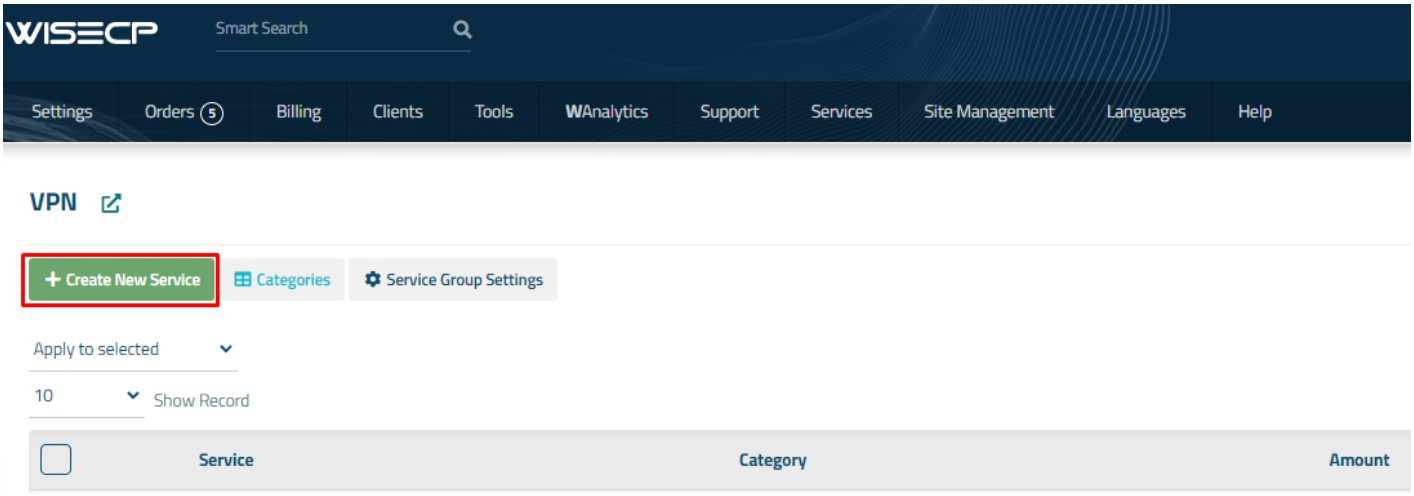
3. Adding a New Service

Go to

```
Services -> our service group where you need to add the new service.
```

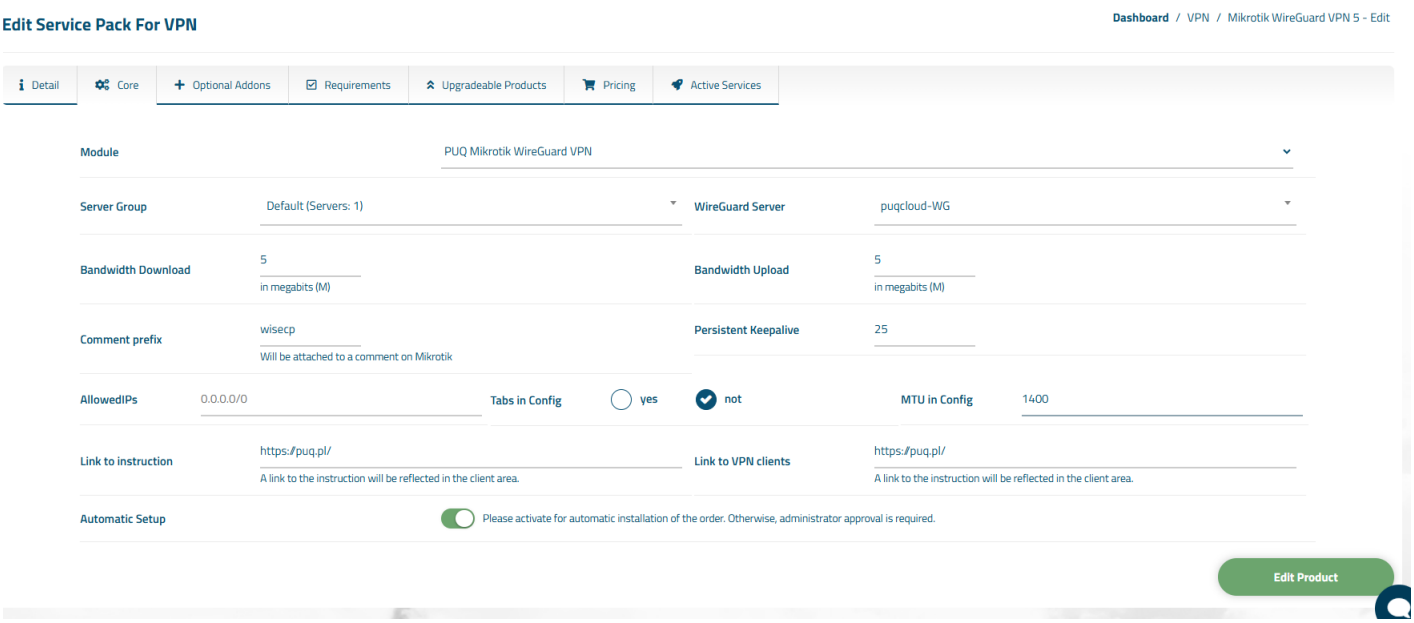


In the opened window, click the '**Create New Service**' button.



On the opened page, enter all the necessary details for your new service and navigate to the '**Core** ' tab.

Select the '**PUQ Mikrotik WireGuard VPN**' module from the drop-down list of modules.



4. Fill in the configuration options according to your preferences.

- **Server Group** is the group of servers from which a server will be chosen for provisioning the service
- **WireGuard Server** is the name of the **WireGuard** server that was created in **MikroTik**

> **Attention:**
> The **WireGuard Server field** is updated only after saving or adding the service.
> You will need to revisit this section to select the **WireGuard Server** and save the service.
> Additionally, the **WireGuard Server** must be created on all servers within the group.

- **Bandwidth Download** and **Bandwidth Upload** represent the connection speed that

will be restricted by these parameters, in megabits per second, respectively.

- **Comment Prefix** will be added at the comment in **MikroTik**
- **Persistent Keepalive** and **AllowedIPs:** parameters of configuration WireGuard clients
- **Tabs in Config -** Configuration file format with tabs or not
- **MTU in Config -**Display MTU in config file
- **Link to Instruction** Provide the link to the instruction for the service, and it will be displayed in the client area as a separate button
- **Link to VPN Clients** Provide the link to the page for downloading VPN clients for the service, and it will be displayed in the client area as a separate button
- **Automatic Setup** Please activate for automatic installation of the order. Otherwise, administrator approval is required.

WireGuard Clients configuring

WireGuard Official clients

Mikrotik WireGuard VPN module

WISECP

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You can download from the

https://www.wireguard.com/install/

Please always download latest versions. The following list is intended as a general direction only.

Windows [7, 8.1, 10, 11, 2008R2, 2012R2, 2016, 2019, 2022 – v0.5.3]

Download Windows Installer

Browse MSIs

---

macOS [app store – v1.0.15]

Download from App Store

Android [play store – vunknown – out of date & f-droid – v1.0.20220516]

Download from Play Store

Download from F-Droid

---

iOS [app store – v1.0.15]

Download from App Store

Debian/Ubuntu

```
$ sudo apt install wireguard
```

Mikrotik WireGuard client configuration

Mikrotik WireGuard VPN module

WISECP

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Make sure you have an up to date **routerOS** system.

Version must be at least: 7.6

```
[admin@VPN-CLIENT] > system package print
Columns: NAME, VERSION
# NAME      VERSION
0 routeros  7.6
```

Open a single-use shipment on the **WireGuard** section for the client's configuration request

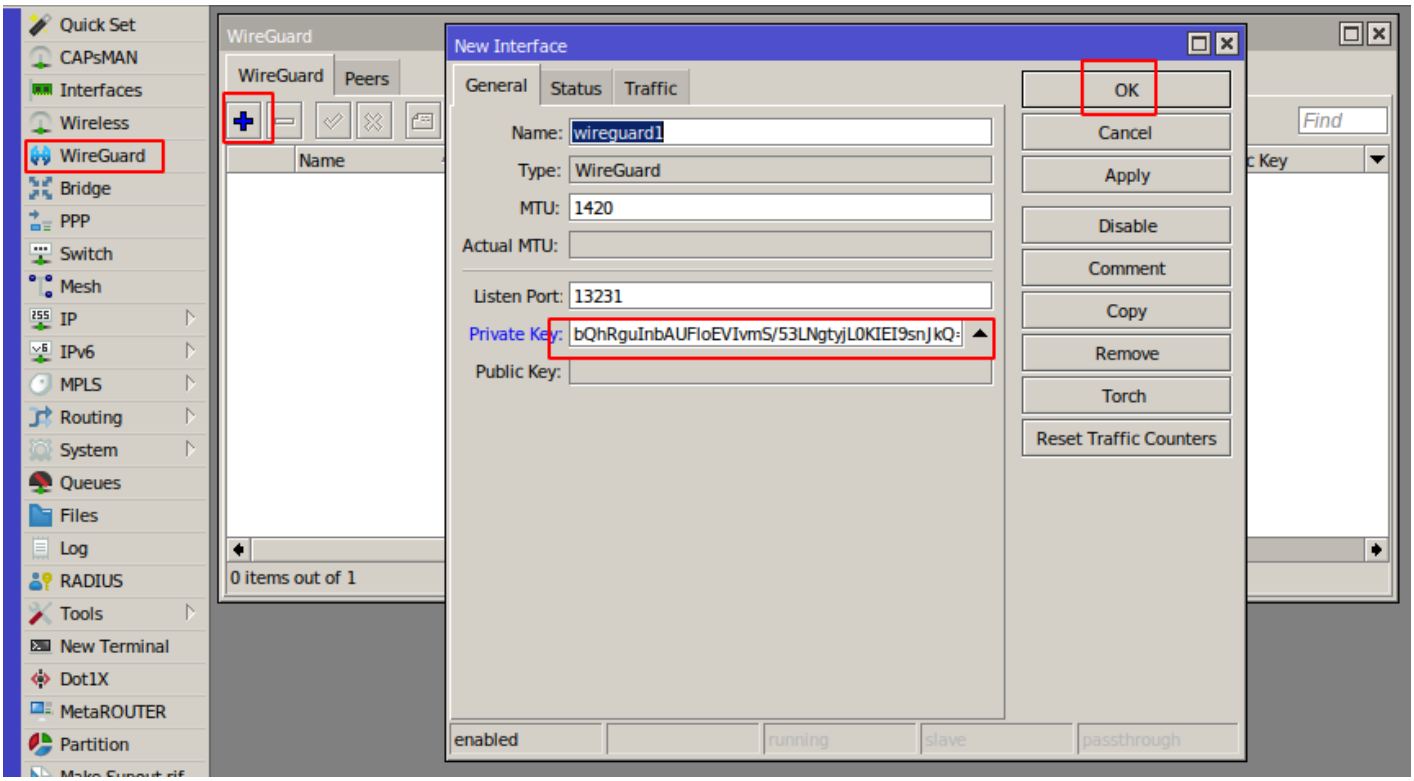
Dowload config file

```
[Interface]
        Address = 10.0.110.15/24
        DNS = 10.0.110.1,77.87.125.200
        PrivateKey = KGbQhRguInbAUFloEVIvmS/53LNgtyjL0KIEI9snJkQ=

[Peer]
        AllowedIPs = 0.0.0.0/0
        PersistentKeepalive = 5
        Endpoint = 77.87.125.200:51930
        PublicKey = xbrwVHxNZ8UsjHQyyzFwmOEy1UC+wvKQ0FG/cLoJh2w=
```

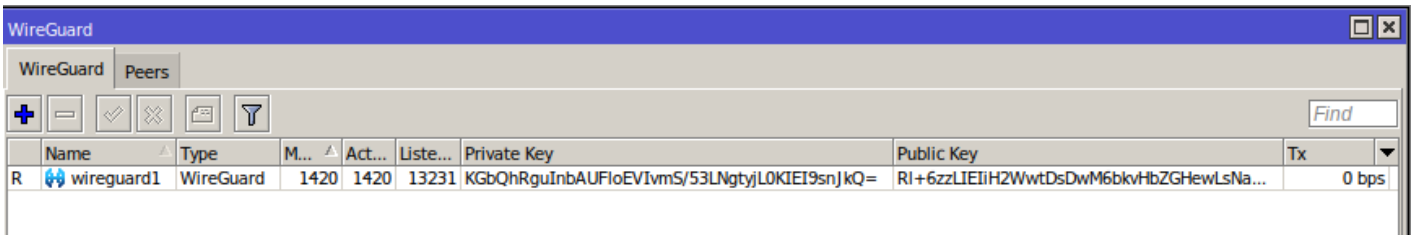
Login to **Mikrotik** via Winbox

Click on the menu item **WireGuard** In the window that opens, in the **WireGuard** tab, click the plus to add a new **WireGuard** interface

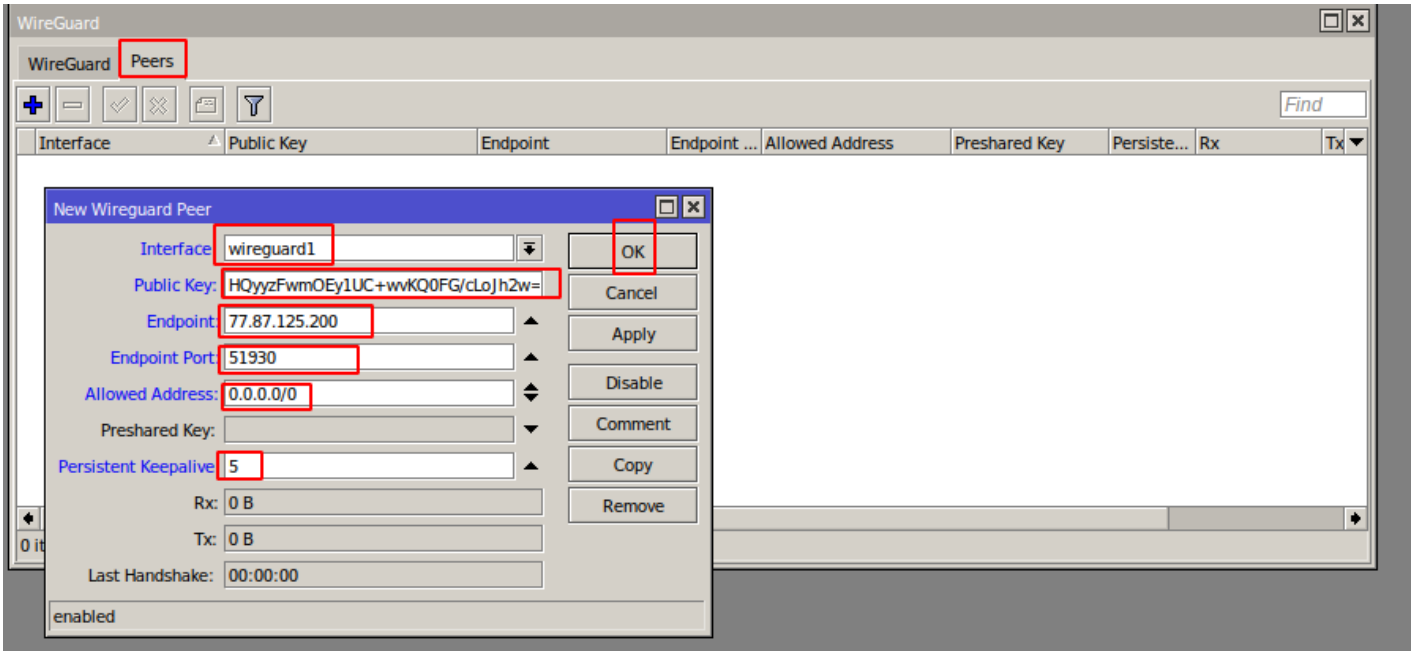


Copy the private key from the text configuration from the **[Interface]** section to the **PrivateKey** field in the **WireGuard** interface settings in **Mikrotik**

Click **OK** to create the interface



Go to the peers tab.
Click plus to add a new peer



Interface - Select the previously created **WireGuard** interface

Public key - Copy the public key from the text configuration from the **[Peer]** section to the Public key field

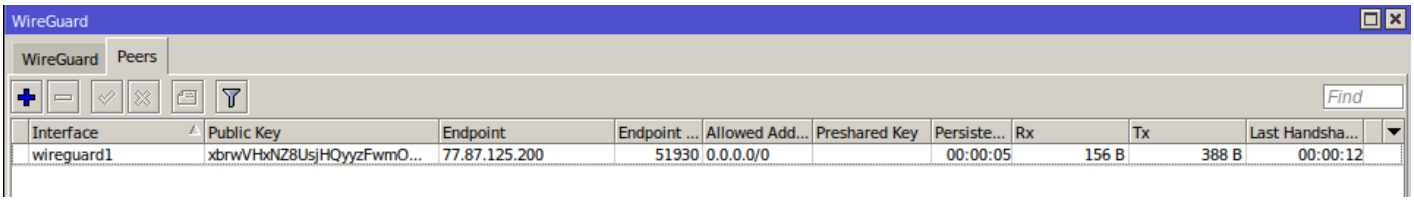
Endpoint - Copy the server **address** from the text configuration from the **[Peer]** section to the endpoint field

Endpoint Port - Copy the server **port** from the text configuration from the **[Peer]** section to the Endpoint Port field

Allowed Address - Copy **AllowedIPs** from the text configuration from the **[Peer]** section to the Allowed Address field

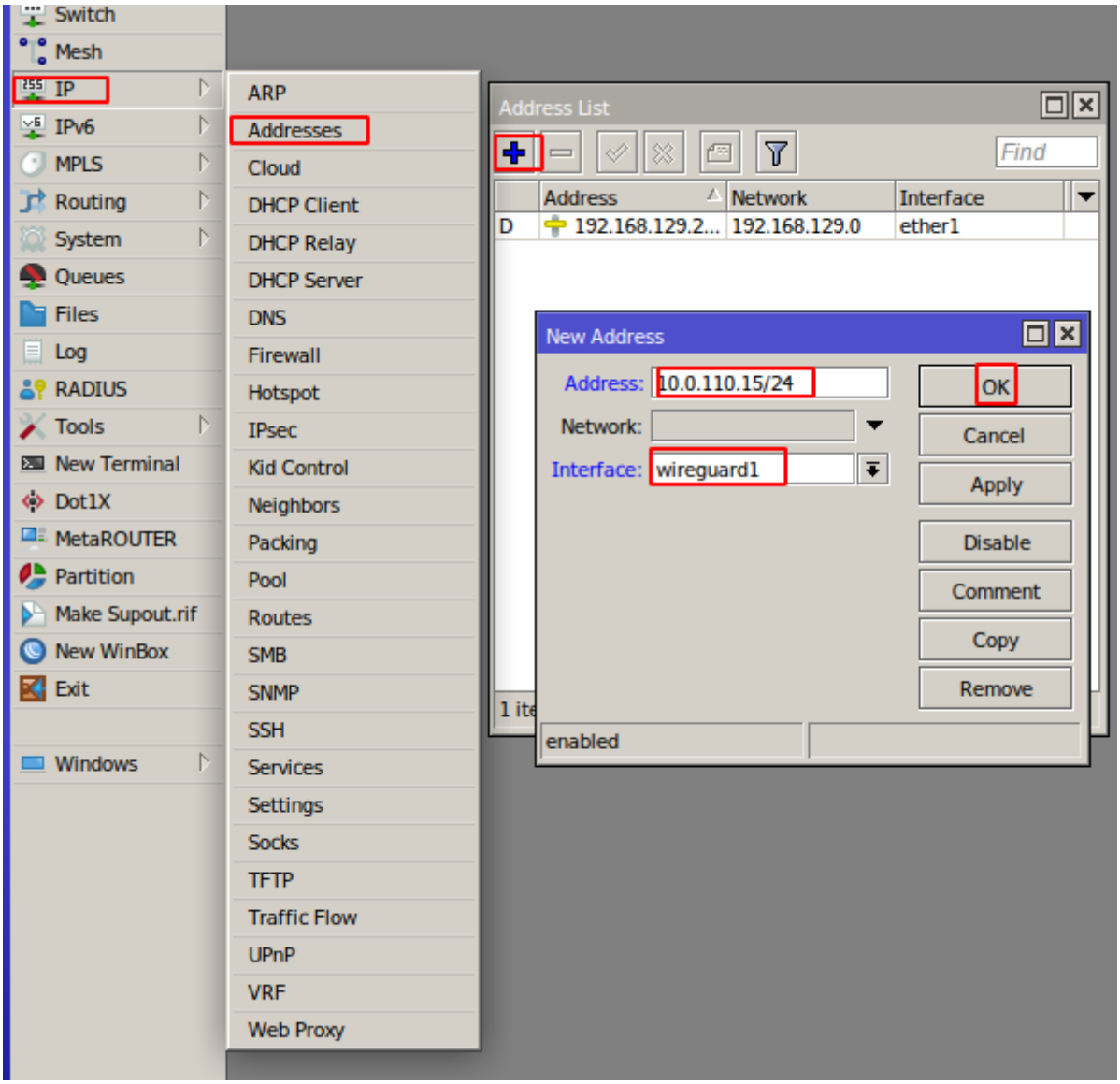
Persistent Keepalive - Copy the **PersistentKeepalive** from the text configuration from the **[Peer]** section to the Persistent Keepalive field

Click **OK** to create a peer



In order to have communication with the server, you need to set the address on the **WireGuard** interface

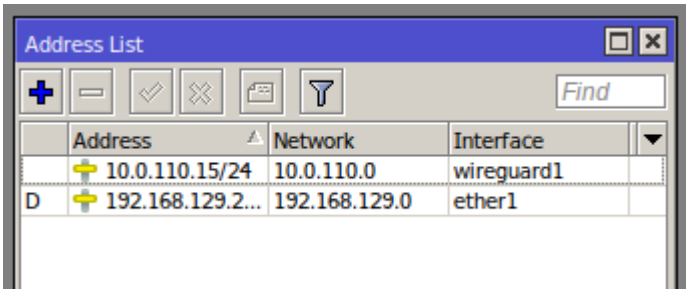
Go to the menu item **IP->Addresses** In the window that opens, click the plus to assign an IP address to the WireGuard interface



Addresse - Copy the Address from the text configuration from the **[Interface]** section to the Address field

Interface - Select the previously created **WireGuard** interface

Press the OK button to confirm



> You also need to configure the traffic routes you need at your discretion.

Client Area

Product Home Screen

Mikrotik WireGuard VPN module **WISECP**

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Available options in the client panel:

- Links in the form of buttons to the instruction and VPN clients
- General information about the service
- Option to download WireGuard configuration as a file
- QR code for WireGuard configuration
- VPN connection status
- VPN interface reboot function (to reset a frozen connection)

Screenshot of the client area

Download VPN client | User manual | Reset VPN Interface

Management VPN account

VPN Protocols	WireGuard
Bandwidth download/upload	5/5 M
IP address	192.168.88.2
Endpoint	N/A
Latest handshake	N/A
Transfer RX	0 bytes
Transfer TX	296 bytes

WireGuard configuration

DOWNLOAD CONFIG



```
[Interface]
        Address = 192.168.88.2
        DNS = 8.8.8.8,1.1.1.1
        PrivateKey = oCzuOvKrgBs955HVzlNtK0xnZJCP1r3ITnqEU8AmQWA=

[Peer]
        PersistentKeepalive = 25
        Endpoint = vpn-test.uuq.pl:13232
        PublicKey = QWQRKYAA3TTHkR8/c7JuOwGoJ9GdjfnOSswXXDXZARg=
        AllowedIPs = 0.0.0.0/0, ::/0
```



Download VPN client



User manual



Reset VPN Interface

Management VPN account

VPN Protocols

WireGuard

Bandwidth download/upload

5/5 M

IP address

192.168.88.2

Endpoint

N/A

Latest handshake

N/A

Transfer RX

0 bytes

Transfer TX

296 bytes



↑ Transfer TX

296 bytes

WireGuard configuration

DOWNLOAD CONFIG



```
[Interface]
        Address = 192.168.88.2
        DNS = 8.8.8.8,1.1.1.1
        PrivateKey = oCzuOvKrg8s955HVzlNtK0xnZJCPlr3I

[Peer]
        PersistentKeepalive = 25
        Endpoint = vpn-test.uuq.pl:13232
        PublicKey = QWQRKYAA3TTHkR8/c7JuOwGoJ9GdjfnOS
        AllowedIPs = 0.0.0.0/0, ::/0
```

Admin Area

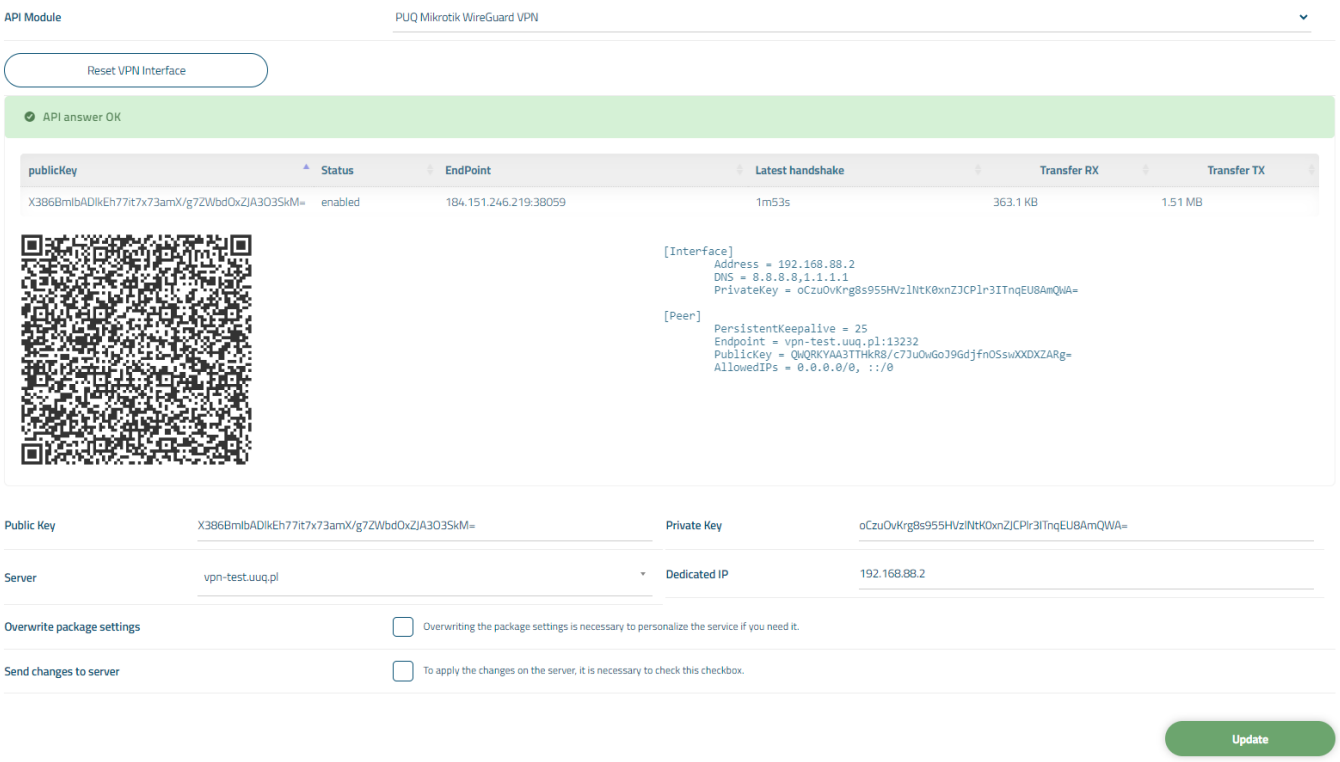
Admin Area

Order Detail

Mikrotik WireGuard VPN module **WISECP**

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Navigate to the service you want to manage, then go to the '**Core**' tab.



In the opened tab, you have a view of the online status of the service. The available online information includes:

- Connection status to the API
- Information about the VPN account on the **MikroTik** router
- Information about the account

Also, below are fields with the client's personal data.

You can also individually override package options for the client by checking the '**Overwrite package settings**' box.

After modifying the configuration options, check the '**Send changes to server**' box to save the data to the **MikroTik** server.

