

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.

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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


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



Screenshot of the Admin area

- 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
X386BmlbADlkEh77lt7x73amX/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 = oCzuOvKrg8s955HVz1NtK0xnZJCP1r3ITnqEU8AmQWA=

[Peer]
PersistentKeepalive = 25
Endpoint = vpn-test.uuq.pl:13232
PublicKey = QWQRKYAA3TTHkR8/c7Ju0wGoJ9GdjfnOSswXXDXZARg=
AllowedIPs = 0.0.0.0/0, ::/0

Public Key	X386BmlbADlkEh77lt7x73amX/g7ZWbdOxZJA3O3SkM=	Private Key	oCzuOvKrg8s955HVz1NtK0xnZJCP1r3ITnqEU8AmQWA=
Server	vpn-test.uuq.pl	Dedicated IP	192.168.88.2

Changelog

Mikrotik WireGuard VPN module

WISECP

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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
-

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/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

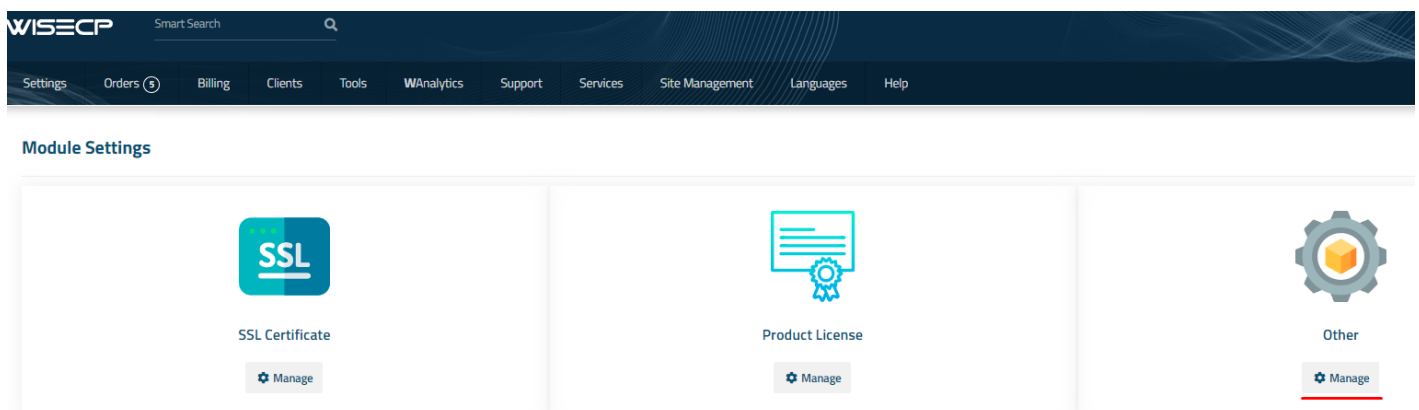
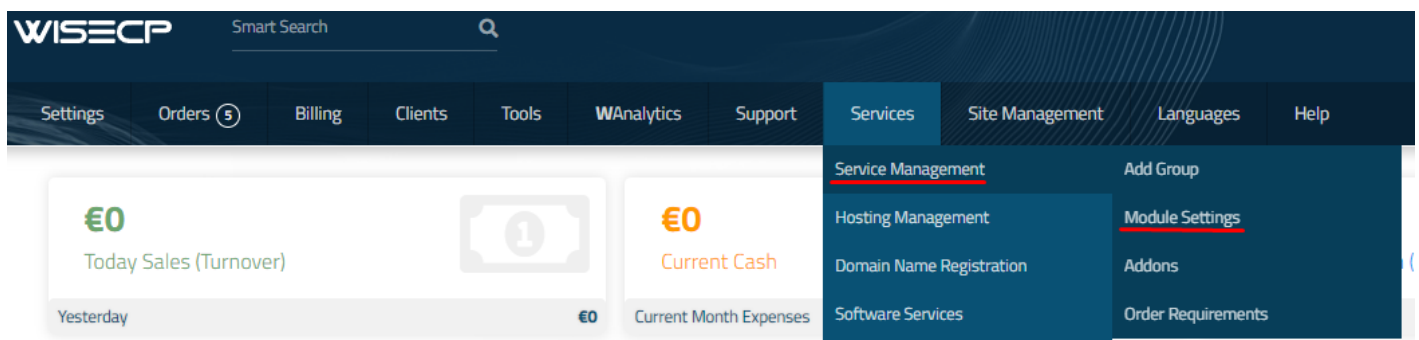
Mikrotik WireGuard VPN module

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



Other

Other

Dashboard / Module Settings / C

Search Within Modules

Write something...



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.

Other

Dashboard / Module Settings

PUQ Mikrotik WireGuard VPN



License key

LBFAF6- -ECIDMQ 2023-12-19T14:43:59+01:00

Check and Save

Version: 1.0

Web Site

Documentation

Changelog

+ Add New Server

Server Groups

Servers [MikroTik](#)

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 address 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
```

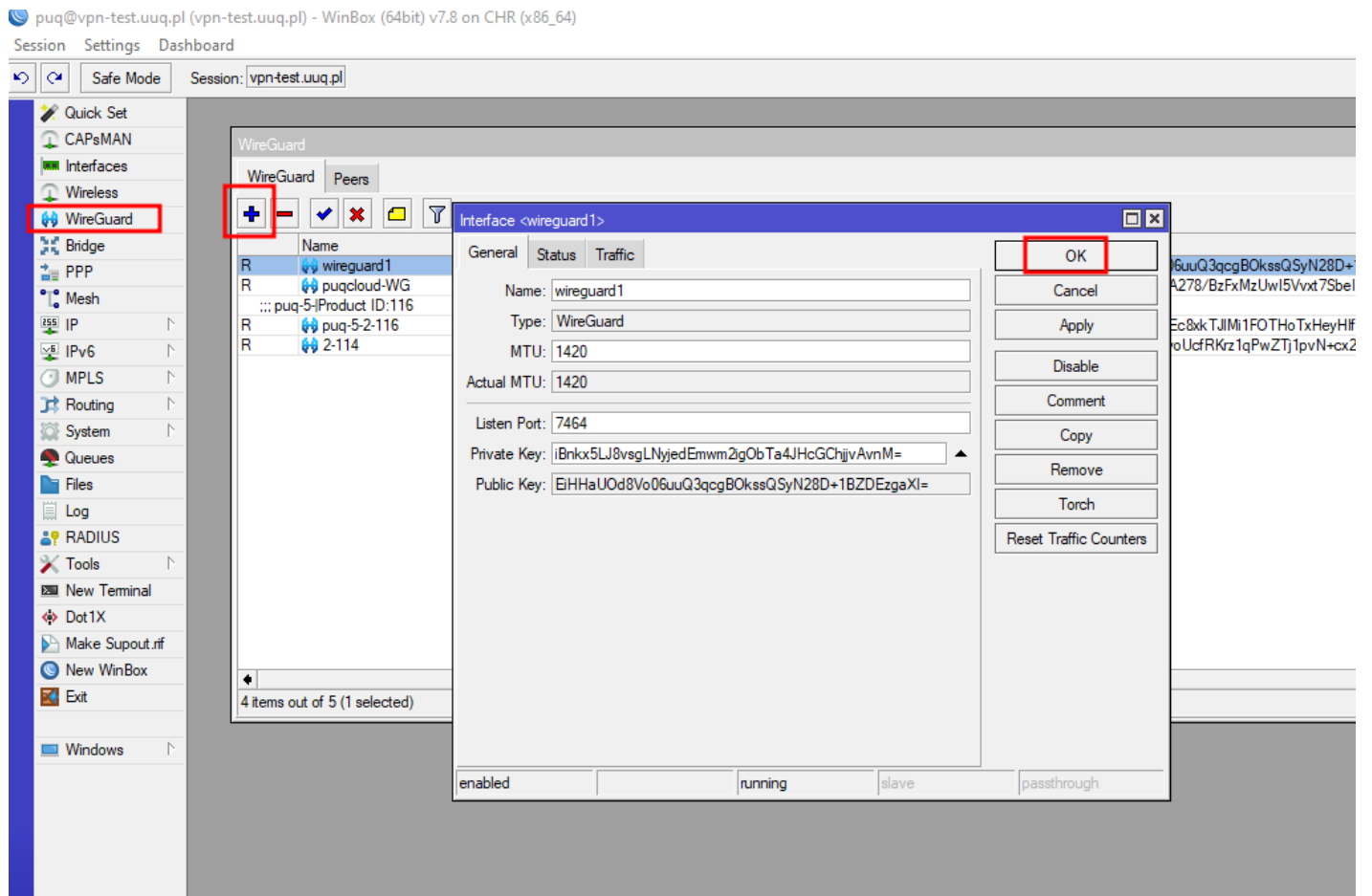
Enable SSL (*www-ssl*) and specify to use the newly created certificate for Webfig

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

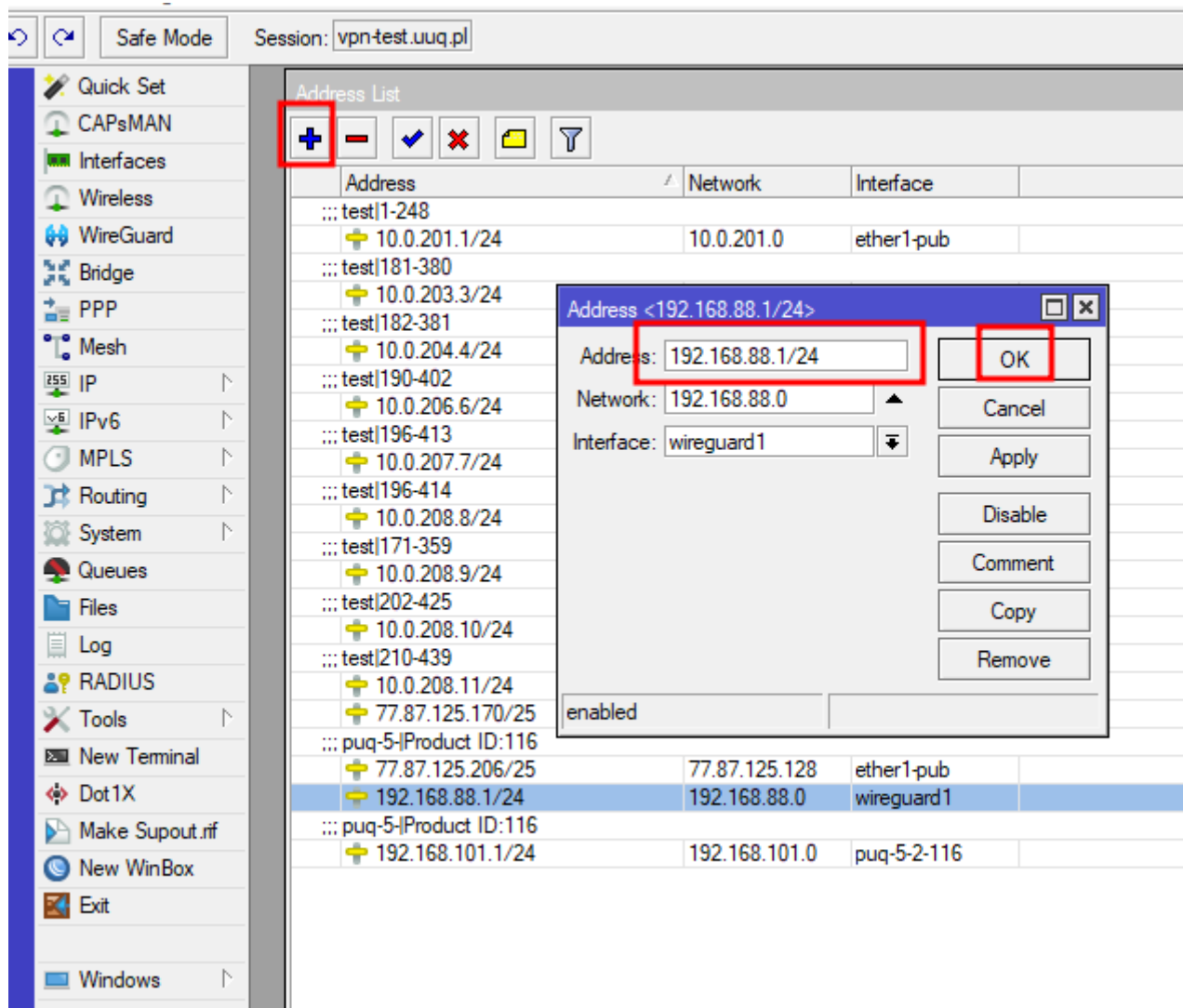
Enable api-ssl and specify to use the newly created certificate for Webfig

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

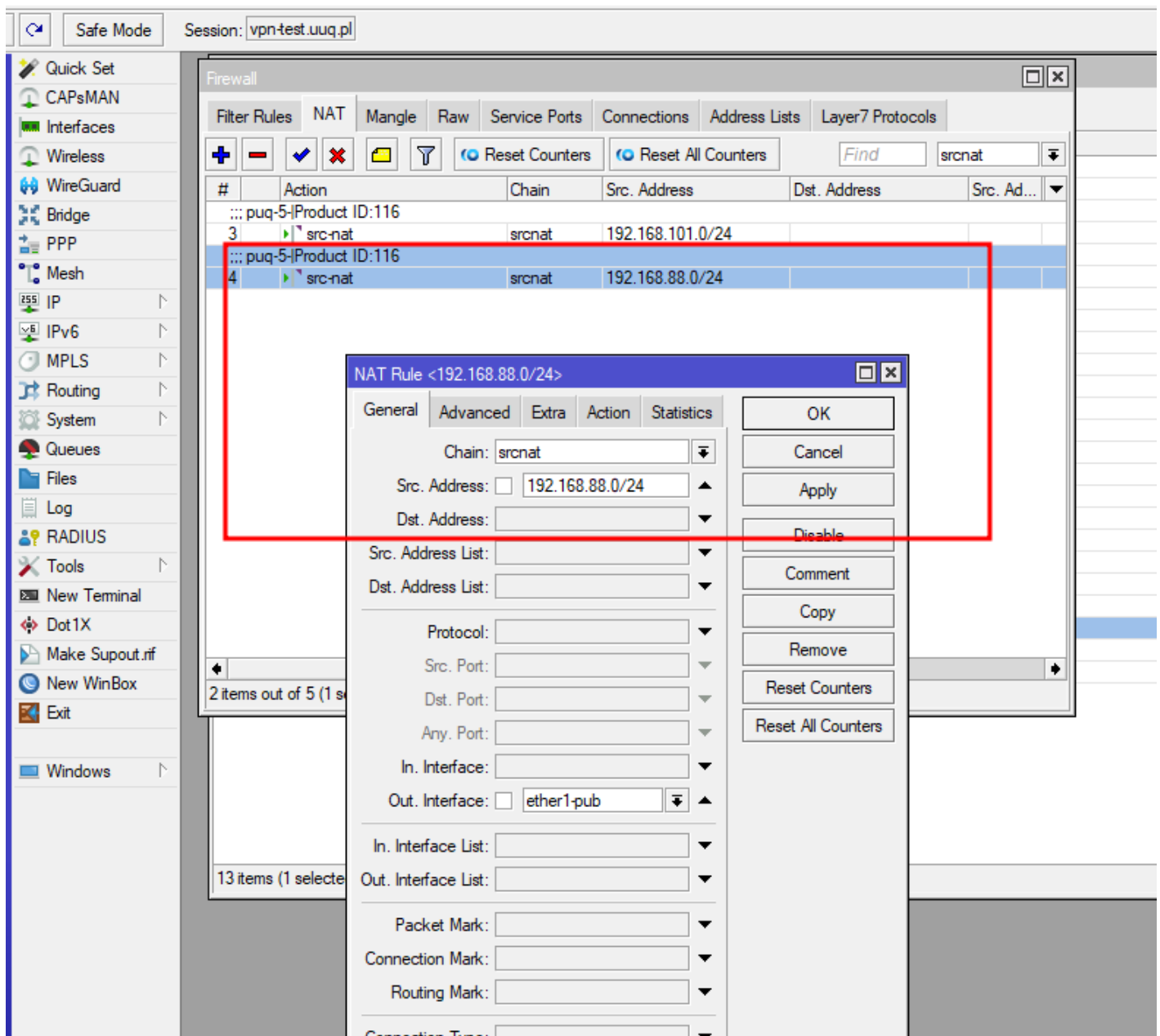
Enable WireGuard VPN server



Add IP address on Wireguard interface



Configuring NAT rules on the firewall



Add server (Mikrotik) in WISECP

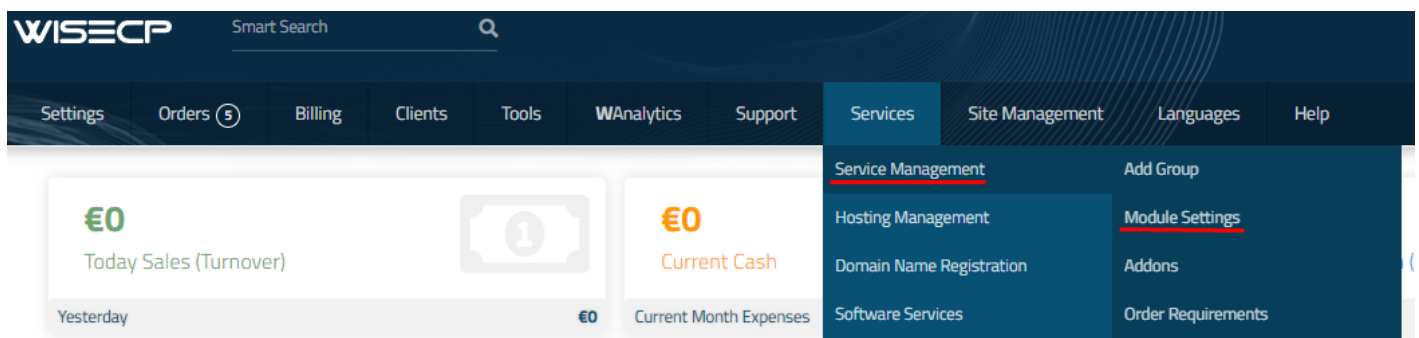
Mikrotik WireGuard VPN module

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



WISCP Smart Search


Settings Orders (5) Billing Clients Tools WAnalytics Support Services Site Management Languages Help

Module Settings




SSL Certificate

Manage



Product License

Manage



Other

Manage

WISCP Smart Search

Settings Orders (5) Billing Clients Tools WAnalytics Support Services Site Management Languages Help

Other

Initial Settings

All Modules

WISCP Smart Search

Settings Orders Billing Clients Tools WAnalytics Support Services Site Management Languages Help

Other

Dashboard / Module Settings / C

Initial Settings

All Modules

Search Within Modules

Write something...

PUQ Mikrotik WireGuard VPN

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

WISecP Smart Search

Settings Orders Billing Clients Tools WAnalytics Support Services Site Management Languages Help

Other Dashboard / Module Setting

Initial Settings All Modules

PUQ Mikrotik WireGuard VPN

License key L8FAF6-ZXCXBC-QZIQWS-OIP95V-ECIDMQ 2023-12-19T14:43:59+01:00 [Check and Save](#)

Version: 1.0 [Web Site](#) [Documentation](#) [Changelog](#)

[+ Add New Server](#) [Server Groups](#)

Servers [MikroTik](#)

10 [Show Record](#) Search

#	Name	Status	Group	Default	IP/Domain	Usage Stats	
3	vpn-test.uuq.pl	active	Default	✓	vpn-test.uuq.pl	2/5	Edit Delete

Showing records from 1 to 1 - 1 [Prev](#) [1](#) [Next](#)

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

[← Go to Back](#)

Add New Server

Name	vpn-test.uuq.pl
Maximum Number of Accounts	122
Server Group	Default 
Default	<input type="checkbox"/> 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	<div></div>
SSL	<input checked="" type="checkbox"/> Connect using SSL
Port	443 <input type="checkbox"/> 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

The screenshot displays the WISECP administrative interface. At the top, there is a dark blue header with the WISECP logo, a 'Smart Search' bar, and a navigation menu with items: Settings, Orders (5), Billing, Clients, Tools, WAnalytics, Support, Services (highlighted), Site Management, Languages, and Help. Below the header, the dashboard features several widgets. On the left, there are two summary cards: 'Today Sales (Turnover)' showing '€0' for 'Yesterday' and 'Current Month Expenses' showing '€0'. On the right, a dropdown menu is open under the 'Services' tab, listing 'Service Management', 'Hosting Management', 'Domain Name Registration', and 'Software Services'. A sub-menu is visible under 'Service Management', with 'Add Group' highlighted in red, along with 'Module Settings', 'Addons', and 'Order Requirements'.

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

WISECP

Smart Search

Q

SettingsOrders (5)BillingClientsToolsWAnalyticsSupportServicesSite ManagementLanguagesHelp

Create New Service Group

Dashboard / Create New Service Group

Create a new service group, you can also create new categories and manage the existing one from here.

ENUKPL

Title

VPN

Short Detail

Short Group Description

Listing Template

☒ Box List ☐ Horizontal List

Status

Enable

Background Image

(optional)

Group Colour

#FFFFFF

Order Upgrades

☐ Allow clients to upgrade to higher package in the same service group

External HTML Code

Paste your HTML code to this field (Optional)

You can optionally add external HTML code and customize it. There should not be any incorrect or incomplete HTML codes, otherwise page structure will be empty

3. Adding a New Service

Go to

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

WISECP

Smart Search

Q

SettingsOrders (5)BillingClientsToolsWAnalyticsSupportServicesSite ManagementLanguagesHelp

€0

Today Sales (Turnover)

Yesterday

€0

Current Cash

Current Month Expenses

0

Overdue Invoice

(Total €0)

0

Payment Date Up

(Total €0 / Last 7 Days)

0

Client Registr

Yesterday

5

Order in the P

(Total €65)

Service Management

Hosting Management

Domain Name Registration

Software Services

International SMS Services

Google SEO Services

VPN

Media

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
- **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

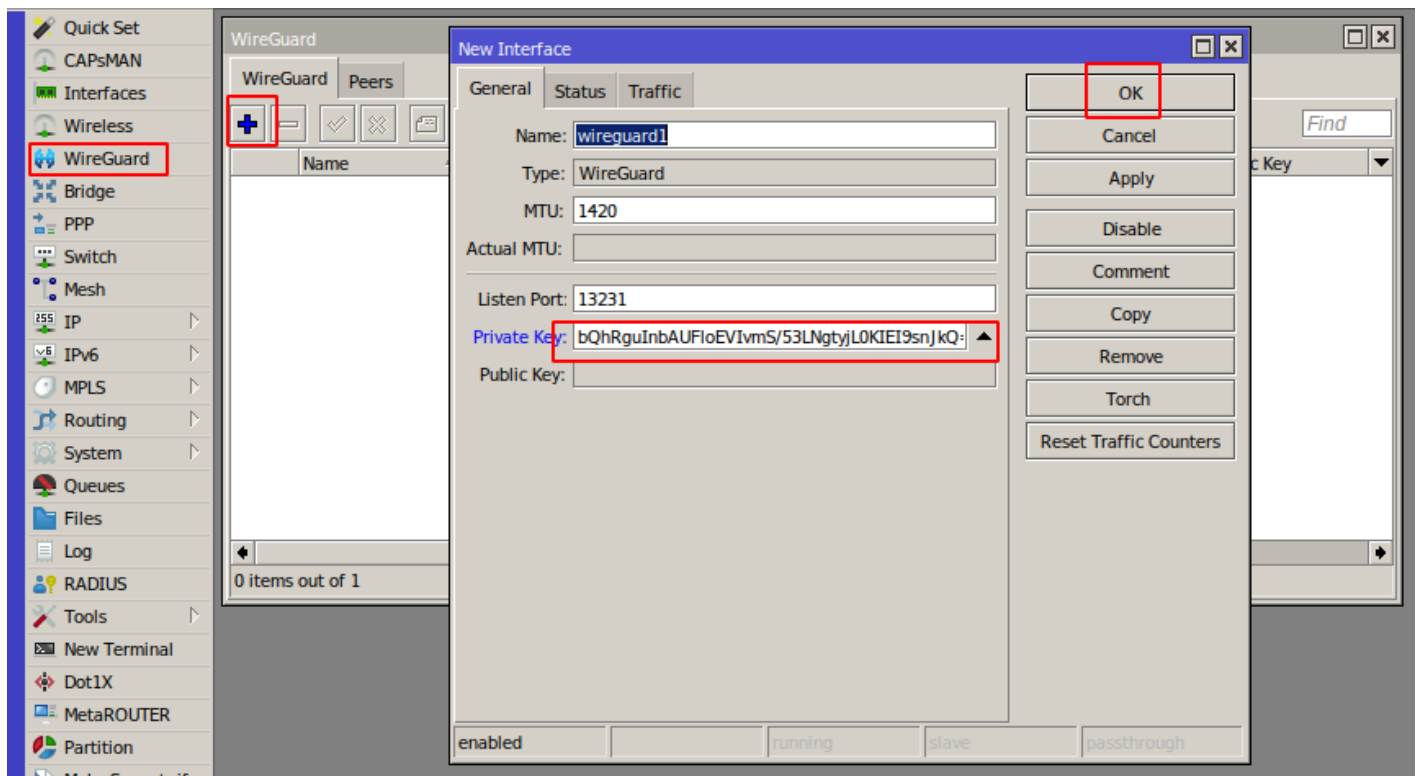
Download config file

```
[Interface]
  Address = 10.0.110.15/24
  DNS = 10.0.110.1,77.87.125.200
  PrivateKey = KgbQhRguInbAUFloEVImS/53LNgtYjL0KIEI9snJkQ=

[Peer]
  AllowedIPs = 0.0.0.0/0
  PersistentKeepalive = 5
  Endpoint = 77.87.125.200:51930
  PublicKey = xbrwVHxNZ8UsjHQyyzFwm0Ey1UC+wwKQ0FG/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

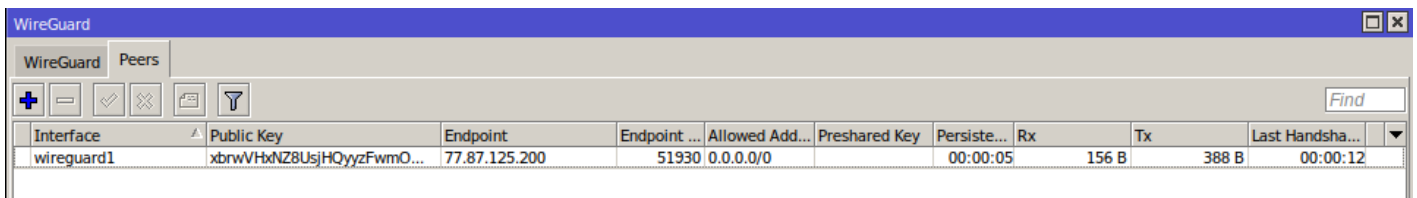
Endpoint - Copy the server **address** from the text configuration from the **[Peer]** section to the endpoint field

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



The image shows the 'WireGuard' window in Mikrotik WinBox. It has a 'WireGuard' tab and a 'Peers' tab. Below the tabs is a toolbar with icons for adding, removing, and filtering. A table lists the configuration for the 'wireguard1' interface.

Interface	Public Key	Endpoint	Endpoint ...	Allowed Add...	Preshared Key	Persiste...	Rx	Tx	Last Handsha...
wireguard1	xbrwVHxNZ8UsjHQyyzFwmO...	77.87.125.200	51930	0.0.0.0/0		00:00:05	156 B	388 B	00:00:12

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



Adresse - 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 = oCzuOvKrg8s955HVz1NLK0xnZJCP1r3ITnqEUSAmQwA=

[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



296 bytes

WireGuard configuration

 [DOWNLOAD CONFIG](#)



```
[Interface]
  Address = 192.168.88.2
  DNS = 8.8.8.8,1.1.1.1
  PrivateKey = oCzuOvKrg8s955HVz1NtK0xnZJCPlr3I

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

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.

API Module PUQ Mikrotik WireGuard VPN

Reset VPN Interface

API answer OK

publicKey	Status	EndPoint	Latest handshake	Transfer RX	Transfer TX
X386BmlbADikEh77it7x73amX/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 = oCzuOvKrg8s955HVzINtk0xnZJCPlr3ITnqEU8AmQWA=

[Peer]

PersistentKeepalive = 25
Endpoint = vpn-test.uuq.pl:13232
PublicKey = QwQ8KYAA3TTHkR8/c73uOwGo39Gdjfn0SswXXDXZARg=
AllowedIPs = 0.0.0.0/0, ::/0

Public Key

X386BmlbADikEh77it7x73amX/g7ZWbdOxZJA3O3SkM=

Private Key

oCzuOvKrg8s955HVzINtk0xnZJCPlr3ITnqEU8AmQWA=

Server

vpn-test.uuq.pl

Dedicated IP

192.168.88.2

Overwrite package settings

☐ Overwriting the package settings is necessary to personalize the service if you need it.

Send changes to server

☐ To apply the changes on the server, it is necessary to check this checkbox.

Update


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.



[Peer]

PersistentKeepalive = 25
Endpoint = vpn-test.uuq.pl:13232
PublicKey = QMQRKYAA3TTHkR8/c7Ju0wGo39Gdjfn0Ssw0XDZXARg=
AllowedIPs = 0.0.0.0/0, ::/0

Public Key	X386BmlbADikEh77it7x73amX/g7ZWbdOxZJA3O3SkM=	Private Key	oCzuOvKrg8s955HVziNtkDxnZICPlr3ITnqEUBAmQWA=
Server	vpn-test.uuq.pl	Dedicated IP	192.168.88.2
Server Group	Default (Servers: 1)	WireGuard Server	wireguard2
Bandwidth Download	5 in megabits (M)	Bandwidth Upload	5 in megabits (M)
Comment prefix	wisecp Will be attached to a comment on Mikrotik	Persistent Keepalive	25
AllowedIPs	0.0.0.0/0		
Link to instruction	https://puq.pl/ A link to the instruction will be reflected in the client area.	Link to VPN clients	https://puq.pl/ A link to the instruction will be reflected in the client area.
Overwrite package settings	<input checked="" type="checkbox"/> Overwriting the package settings is necessary to personalize the service if you need it.		
Send changes to server	<input type="checkbox"/> To apply the changes on the server, it is necessary to check this checkbox.		

Update