

# Installation and configuration guide

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# WHMCS setup(install/update)

## WireGuard VPN module **WHMCS**

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## System requirements

The module is encoded with **ionCube**.

### Requirements:

- PHP **8.2 or higher**
- WHMCS **9.x or higher**
- ionCube Loader **v13 or newer** (v14, v15)

### Older module versions for WHMCS 8

Older versions of the module are stored by PHP version in separate directories:

PHP 7.4

[https://download.puqcloud.com/WHMCS/servers/PUQ\\_WHMCS-WireGuard-VPN/php74/](https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-WireGuard-VPN/php74/)

PHP 8.1

[https://download.puqcloud.com/WHMCS/servers/PUQ\\_WHMCS-WireGuard-VPN/php81/](https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-WireGuard-VPN/php81/)

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

## 1. Download the latest version of the module.

PHP 8.2

---

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-WireGuard-VPN/php82/PUQ_WHMCS-  
WireGuard-VPN-latest.zip
```

All versions are available: [https://download.puqcloud.com/WHMCS/servers/PUQ\\_WHMCS-WireGuard-VPN/](https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-WireGuard-VPN/)

## 2. Unzip the archive with the module.

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

## 3. Copy and Replace "puqWireGuardVPN" from "PUQ\_WHMCS-WireGuard-VPN" to "WHMCS\_WEB\_DIR/modules/servers/"

# PUQVPNCP installation and configuration

## WireGuard VPN module **WHMCS**

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Official documentation:

[PUQVPNCP Documentation](#)

[PUQVPNCP Download](#)

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## 1. Install the required packages

```
apt-get update
apt-get install wireguard wireguard-dkms wireguard-tools -y
apt-get install iproute2 iptables -y
apt-get install bind9 -y
```

## 2. Download the latest version of the package

<https://download.puqcloud.com/cp/puqvpncp/>

## 3. Install the puqvpncp package

```
wget https://download.puqcloud.com/cp/puqvpncp/puqvpncp_1.1-2_amd64.deb
dpkg -i puqvpncp_1.1-2_amd64.deb
```

## 4. After installation, connect to your server via a web

browser.

http://SERVER\_IP:8098

Username: admin

Password: admin

The screenshot shows the PUQVPNCP web interface. At the top, there is a navigation bar with a logo, a help button, a user profile (ruslan 79.184.10.59), and a logout button. The main content area is divided into several sections:

- Dashboard:** Contains links for VPN servers, Requirements, VPN accounts, Settings, and About us.
- Server Information:** Displays system details such as Hostname (dev.softkeel.com), OS Name (Debian GNU/Linux 11 (bullseye)), Architecture (amd64), CPU (Common KVM processor), CPU Threads (4), Load (0.02, 0.03, 0.14), Memory (7956 MB Used: 78%), and Timezone (Europe/Warsaw).
- PUQVPNCP Status:** Shows Status (OK), Version (1.0), WireGuards (109), VPN Accounts (548/550), and License (2023-11-13T18:38:43+01:00). It includes buttons for License and Reload.
- WireGuard:** Shows version 1.0.20210223-1 and dkms 1.0.20210219-1, with a Configure button.
- Firewall:** Shows iptables 1.8.7-1 and iproute2 5.10.0-4, with a Configure button.
- DNS server:** Shows bind9 1:9.16.33-1~deb11u1, Running: PID: 3092940, with a Configure button.

The active domain name that resolves the server's IP address. Port 80 and 443 are always open, and not busy with another process.

In order for the system to start the procedure for obtaining an SSL certificate from Let's Encrypt, it is necessary.

In the configuration file, enable the use of SSL and enter the domain name.

```
nano /etc/puqvpnncp/puqvpnncp.conf

LetsEncrypSSL=yes
Domain=XXXXXX.XXX
```

Restart the PUQVPNCP service

```
service puqvpnncp restart
```

After these steps, the first time you connect to the server via the https protocol, the system will request an SSL certificate and automatically renew it if necessary.

ATTENTION. After activating SSL, the system will only work in the https protocol on port 443. A redirect is also set from port 80 to port 443.

To connect to the server via the https protocol, use only the domain that was set in the configuration file. Otherwise, you will get an error that SSL is not working correctly.

## 6. License configuration is available in the menu item **Settings->License**

By default, the system limits 50 users and the API is disabled.

In order to activate the license key, the key must be entered in the "License Key" field and click on the "Save" button

### License

Save

### Creation of access API License

VPN servers API Access Hashes, go to the section Settings->API

Delete Check now

### API Access Hashes

Successfully

Name  IP

**Everything went well. Please save the hash. It has only been shown once.**

Access hash

Name	IP	Created data	Last Login	
test2	1.1.1.1	2022-11-18T10:38:37+01:00		<input type="button" value="Delete"/>
TEST	79.184.10.59	2022-11-15T15:23:05+01:00	2022-11-17T09:36:57+01:00	<input type="button" value="Delete"/>
piotr2	79.184.10.59	2022-11-17T14:26:40+01:00	2022-11-17T14:42:08+01:00	<input type="button" value="Delete"/>
Piotr	79.184.10.59	2022-11-16T14:23:48+01:00		<input type="button" value="Delete"/>

Enter the name and IP address of the WHMCS server and click the **ADD** button

### **Attention.**

**The generated Access hash will only be shown once. Copy it, it will be needed during configuration of the product server in the WHMCS system.**

Accept the fact that once the Access Hashes API is created, it will only be shown once. Each API Access Hash only works from a specific IP address.

## 8. Creation of access API

Add new WireGuard is available in the menu item **VPN servers->WireGuard->Click Create**

PUQVPNCP ? HELP ? ruslan (79.184.7.48) Logout

Dashboard

VPN servers

WireGuard

VPN accounts

Settings

About us

## WireGuard

[Create](#)

Find By Name	Peers	Find By Interface	Find By Network	Internal Traffic	Port	External IP	DNS	Peer Download	Peer Upload		
1-4819	0	wg7	10.0.6.1/24	YES	51827	77.87.125.209	8.8.8.8 1.1.1.1	3M	4M	<a href="#">Edit</a>	<a href="#">Delete</a>
1-4820	1	wg8	10.0.7.1/24	YES	51828	77.87.125.200	8.8.8.8 1.1.1.1	3M	4M	<a href="#">Edit</a>	<a href="#">Delete</a>
77_87_125_209	7	wg110	10.0.110.1/24	YES	51930	77.87.125.200	10.0.110.1	12M	12M	<a href="#">Edit</a>	<a href="#">Delete</a>

PUQVPNCP ? HELP ? ruslan (79.184.7.48) Logout

Dashboard

VPN servers

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About us

## WireGuard / Add WireGuard

[Add](#)

**Name**

**Private key**

**Public key**

**Interface name**

**IP/MASK**

**Internal Traffic**

**Port**

**External IP**

**DNS 1**

**DNS 2**

**Peers configuration**

Bandwidth download (in M) per peer

Bandwidth upload (in M) per peer

Enter or edit the parameters of the new server/interface and click the **ADD** button

# Add server (PUQVPNCP) in WHMCS

## WireGuard VPN module **WHMCS**

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Add a new server to the system WHMCS.

Login to Your WHMCS panel and create new server in WHMCS (*System Settings->Products/Services->Servers*)

System Settings->Servers->Add New Server

[Products/Services](#)

• [Configure the correct](#) **Name** and **Hostname**

[Product Addons](#)

**Name is just for Your convenience and You can put there anything You like ie:**

**Mygreat-PUQVPNCP routr**

[Domain Registrars](#)

**You can choose whatever hostname You want. Valid entries look similar to: vpn.mydomain.com, ourgreatvpn.mydomain.net. You can also dedicate whole domain ie: myVPNservices.com if You like. The important thing is to resolve the chosen IP address of the PUQVPNCP in DNS server for Your domain.**

## Servers

### Edit Server

Name	<input type="text" value="WireGuardVPNServer"/>
Hostname	<input type="text" value="test-puqvpncp.uuq.pl"/>
IP Address	<input type="text"/>
Assigned IP Addresses (One per line)	<input type="text"/>
Monthly Cost	<input type="text" value="0.00"/>
Datacenter/NOC	<input type="text"/>
Maximum No. of Accounts	<input type="text" value="200"/>
Server Status Address	<input type="text"/> To display this server on the server status page, enter the full path to the server status folder (required to be uploaded to each server you want to monitor) - eg. <a href="https://www.example.com/status/">https://www.example.com/status/</a>
Enable/Disable	<input type="checkbox"/> Check to disable this server

## Enter the correct data in the Access Hash field

- In the **Server Details** section, select the "**PUQ WireGuard VPN**" module and enter the correct API Access Hash.
- To check, click the "**Test connection**" button

If you save the correct login and password for PUQVPNCP in the server settings, then the Login to PUQ VPN Control Panel button will open for you without entering a login and password.

Server Details

Module	PUQ WireGuard VPN	<input type="button" value="Test Connection"/>
	✓ Connection successful. Some values have been auto-filled.	
Username	<input type="text"/>	
Password	<input type="text"/>	
Access Hash	<pre>73aed93685cae7325ad1b43a93c633ac1df6ba88326f7f578b0fb6516061c868cd03f0d7629d19eb</pre>	
Secure	<input checked="" type="checkbox"/> Check to use SSL Mode for Connections	
Port	<input type="text" value="443"/>	<input type="checkbox"/> Override with Custom Port

# Product Configuration

## WireGuard VPN module **WHMCS**

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### Add new product to WHMCS

System Settings->Products/Services->Create a New Product

In the **Module settings** section, select the **"PUQ WireGuard VPN"** module

- **License key:** A pre-purchased license key for the **"PUQ WireGuard VPN"** module. For the module to work correctly, the key must be active

VPN Server

VPN Server

Please select your server from the list. The list is loaded inconsistently from the server, you may need to log in to the panel to make changes.

- Please select your server from the list. The list is loaded inconsistently from the server

Link settings

Link to instruction

<https://doc.puq.info/books/wireguard-vpn-whmcs-module/page/description>

A link to the instructions will be shown in the client area.

Link to VPN clients

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

- **Link to instruction** - If you have prepared instructions for your customers on how to use the service, then a link to the instructions is provided here (If filled, it will be shown in the client area)
- **Link to VPN clients** - Link to download the VPN client. For example <https://www.wireguard.com/install/> (If filled, it will be shown in the client area)
- **Disable One-time link** - When this option is enabled, a one-time link to the VPN clients will be disabled in the client area, preventing the customer from using a single-use link for downloading the VPN clients.

E-mail configuration

VPN users settings

Bandwidth Download (Mbit)

100

Bandwidth Upload (Mbit)

100

E-mail configuration

Custom Welcome Email

puqWireGuard Custom welcome email template

Custom Change localization Email

puqWireGuard Custom change package Email template

User

Username rule

Username template using macros.

Base macros:

- {client\_id} - Client ID
- {random\_digit\_x} - Random digits, where x is length (example: {random\_digit\_4})
- {random\_letter\_x} - Random letters (A-Z, a-z), where x is length (example: {random\_letter\_6})

Date & time macros:

- {unixtime}, {year}, {month}, {day}, {hour}, {minute}, {second}

Example:

{client\_id}-{service\_id}-{random\_digit\_4}

Password rule

12:1234567890QWERTYUIOP{}ASDFGHJKL:"ZXCVBNM<>qwertyuiop[]asdfghjkl;zxvbnm,./!\*%&?\*()\_+|

Password generation rule in format **length:charset**.

Example:

12:1234567890

This will generate a 12-character password using the provided characters.

- **Custom Welcome Email** - Drop-down list of available e-mail templates for the action of creating a new client account. Please note that it is necessary to disable the standard welcome email in order to avoid double notification
- **Custom Change localization Email** - Drop-down list of available e-mail templates for the localization change action (package change) for the client account. Please note that you need to disable the standard package change email to avoid double notification.

## VPN users settings

- **Bandwidth Download** - Bandwidth Download of VPN accounts **(package change)**
- **Bandwidth Upload** - BandwidthUpload of VPN accounts **(package change)**

## Metric Billing

**Configure Pricing** ✕

Bandwidth Usage In (GB)

Metric Type: Monthly

Metric Unit: Gigabytes

**Pricing**

Scheme:  Per Unit  Total Volume  Graduated

Quantity Included:

Price Per GB			
PLN	EUR	UAH	USD
<input style="width: 90%;" type="text" value="17.00"/>	<input style="width: 90%;" type="text" value="10.00"/>	<input style="width: 90%;" type="text" value="150.00"/>	<input style="width: 90%;" type="text" value="9.00"/>

**Configure Pricing** ✕

Bandwidth Usage Out (GB)

Metric Type: Monthly

Metric Unit: Gigabytes

**Pricing**

Scheme:  Per Unit  Total Volume  Graduated

Quantity Included:

Price Per GB			
PLN	EUR	UAH	USD
<input style="width: 90%;" type="text" value="18.00"/>	<input style="width: 90%;" type="text" value="10.00"/>	<input style="width: 90%;" type="text" value="150.00"/>	<input style="width: 90%;" type="text" value="9.00"/>

- **Bandwidth Usage In (GB):**
  - **Metric Type:** Monthly
  - **Metric Unit:** Gigabytes (GB)
  - **Pricing Scheme**

:

- **Per Unit:** Billing for each gigabyte of traffic.
- **Total Volume:** Billing for the total volume of traffic.
- **Graduated:** Billing on a graduated scale.
- **Quantity Included:** Allows you to set how many gigabytes are included in the plan.
- **Price Per GB:** Allows you to specify the cost per gigabyte of traffic in various currencies.
- **Bandwidth Usage Out (GB):**
  - **Metric Type:** Monthly
  - **Metric Unit:** Gigabytes (GB)
  - **Pricing Scheme:**
    - **Per Unit:** Billing for each gigabyte of traffic.
    - **Total Volume:** Billing for the total volume of traffic.
    - **Graduated:** Billing on a graduated scale.
  - **Quantity Included:** Allows you to set how many gigabytes are included in the plan.
  - **Price Per GB:** Allows you to specify the cost per gigabyte of traffic in various currencies.

## Overages Billing

Overages Billing	<input checked="" type="checkbox"/> Check to Enable
Soft Limits	Disk Usage <input type="text" value="0"/> MB <input type="text" value="Bandwidth"/> <input type="text" value="1"/> GB <input type="text" value="GB"/>
Overage Costs	Disk Usage <input type="text" value="0.0000"/> Bandwidth <input type="text" value="10.0000"/> (Price Per Unit Over Above)

- **Check to Enable:** Enables overage billing.
- **Soft Limits:**
  - **Disk Usage:** not use.
  - **Bandwidth:** Sets a soft limit for bandwidth usage (units: MB, GB, TB). For example, you can set a soft limit of 1 GB for bandwidth.
- **Overage Costs:**
  - **Disk Usage:** not use.
  - **Bandwidth:** Specifies the cost per unit over the soft limit for bandwidth usage.
  - **Price Per Unit Over Above:** Sets the pricing for overage units.

# Localization change Configuration

## WireGuard VPN module **WHMCS**

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To ensure the functionality of changing localization, you need to make some settings. We will give an example of such a configuration with two independent installations where "(UA) PUQ WireGuard VPN" and "(PL) PUQ WireGuard VPN" are two different packages that have two independent groups of servers and have different locations. In our example, we simulate two localizations and the ability to change client packages, which allow changing localization, it is also worth noting that in our configuration example, many servers are used in each of the two groups, where the server is selected according to the least loaded one, which is necessary for correct load distribution between servers.

Attention! For the correct operation of this functionality, available servers are required. If the server is unavailable, changing the package when changing the locale will fail.

1. Add necessary services according to your requirements. ([How to add servers](#))

2. Add your servers to specific server groups.

PL 1	-	0/200 (0%)	Not Available	Login to PUQ VPN Control Panel			
Add your servers for the first group:							
PL 2	-	1/8 (13%)	Not Available	Login to PUQ VPN Control Panel			
Add your servers for the second group:							

Server groups look like this:

Note. Currently only the "Add to the least full server" scenario is implemented.

3. Select the appropriate server groups in the corresponding product.

Choose your servers group for the first product:

Details Pricing **Module Settings** Custom Fields Configurable Options Upgrades Free Domain Cross-sells Other Links

Module Name PUQ WireGuard VPN

Server Group **UA PUQVPNC**

License key  
success: 2027-01-26T14:21:02+01:00

**VPN Server**

VPN Server  
1-4847

Please select your server from the list. The list is loaded inconsistently from the server, you may need to log in to the panel to make changes.

**VPN users settings**

Bandwidth Download (Mbit)  
100

Bandwidth Upload (Mbit)  
100

**Link settings**

Link to instruction  
<https://doc.puq.info/books/wireguard-vpn-whmcs-module/page/d>  
A link to the instruction will be reflected in the client area.

Link to VPN clients  
<https://www.wireguard.com/install/>

**E-mail configuration**

Custom Welcome Email  
puqWireGuard Custom welcome email template

Custom Change localization Email  
puqWireGuard Custom change package Email template

Choose your servers group for the second product:



## Edit Product

Details Pricing Module Settings Custom Fields Configurable Options **Upgrades** Free Domain Cross-sells Other Links

Packages Upgrades

PUQ WireGuard VPN - (UA) PUQ WireGuard VPN

Use Ctrl+Click to select multiple packages

Configurable Options  Check to allow Upgrading/Downgrading of configurable options

Upgrade Email None

Note. Please note that in order to avoid double notification, notification by means of WHMCS is disabled, because a custom notification will be used.

# Email Template (puqWireGuard Custom welcome email template)

WireGuard VPN module **WHMCS**

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Create an email template for customer notifications.

System Settings->Email Templates->Create New Email Template

- **Email Type:** Product/service

**Unique Name:** puqWireGuard Custom welcome email template

<b>Subject:</b> Create New Email Template
Welcome to Your New VPN Service - Connection Information Enclosed
<b>Email Type</b> Product/Service
<b>Body:</b> Dear {\$client_name},  Congratulations and welcome to your new VPN service! We are excited to have you on board, and we appreciate your trust in us to provide you with a secure, private, and fast online experience.  To get started, please find your VPN connection details below:  Username: {\$user} Password: {\$password}

Server Hostname: {\$server\_hostname}

Available connection protocols: {\$protocol}

One-time link where you will find all comprehensive information:

{\$otl}

Here you will find all the information about the possibility of connecting to a VPN service. Attention! You can use this link only once, if you need to get the login data from the link again, use the client panel to generate a new link.

Android app download link: <https://play.google.com/store/apps/details?id=com.wireguard.android>

iPhone app download link: <https://apps.apple.com/us/app/wireguard/id1441195209>

To quickly connect after downloading the official WireGuard app for your device, scan the QR code below.

{\$qrcode\_small}

small size

{\$qrcode\_medium}

medium size

{\$qrcode\_large}

large size

{\$qrcode\_max}

max size

You can use these credentials to connect to our VPN service using your preferred VPN client or app. If you need assistance with setting up the connection or require a step-by-step guide, please visit our support page: [your-company-support-page-link].

For your convenience, we have also attached a detailed user manual to this email. The manual will provide you with comprehensive instructions on how to use our service and configure your VPN connection.

Please keep this email safe, as it contains sensitive information about your VPN account. We strongly advise you not to share your login credentials with anyone.

Once again, thank you for choosing our VPN service. We are committed to providing you with the best online experience, and we look forward to serving you.

{signature}

# Email Template (puqWireGuard Custom change package Email template)

WireGuard VPN module **WHMCS**

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Create an email template for customer notifications.

System Settings->Email Templates->Create New Email Template

- **Email Type:** Product/service

**Unique Name:** puqWireGuard Custom change package Email template

### Create New Email Template ✕

**Subject:**

You have changed the location in your VPN service - connection information is attached

**Body:** Product/Service ▼

Dear {\$client\_name},

You received this email because your connection location has changed.

To continue, find your VPN connection information below:

Username: {\$user}  
Password: {\$password}  
Server Hostname: {\$server\_hostname}  
Available connection protocols: {\$protocol}

One-time link where you will find all comprehensive information:

{\$otl}

Here you will find all the information about the possibility of connecting to a VPN service. Attention! You can use this link only once, if you need to get the login data from the link again, use the client panel to generate a new link.

Android app download link: <https://play.google.com/store/apps/details?id=com.wireguard.android>

iPhone app download link: <https://apps.apple.com/us/app/wireguard/id1441195209>

To quickly connect after downloading the official WireGuard app for your device, scan the QR code below.

{\$qrcode\_small}

small size

{\$qrcode\_medium}

medium size

{\$qrcode\_large}

large size

{\$qrcode\_max}

max size

You can use these credentials to connect to our VPN service using your preferred VPN client or app. If you need assistance with setting up the connection or require a step-by-step guide, please visit our support page: [your-company-support-page-link].

For your convenience, we have also attached a detailed user manual to this email. The manual will provide you with comprehensive instructions on how to use our service and configure your VPN connection.

Please keep this email safe, as it contains sensitive information about your VPN account. We

strongly advise you not to share your login credentials with anyone.

Once again, thank you for choosing our VPN service. We are committed to providing you with the best online experience, and we look forward to serving you.

{signature}

Subject: You have changed the location in your VPN service - connection information is attached

# Important Information About Generating a Unique Open Link for QR Code Delivery in an Email Template

WireGuard VPN module **WHMCS**

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## Introduction

This process allows for the generation of unique open links for QR codes that can be incorporated into email templates in WHMCS. This is convenient for ensuring secure access to your user's configuration data.

## Security Mechanism

The security mechanism built into this process has multiple layers of protection that ensure the safety of the data. Details about the implementation of the protection are not disclosed to maintain maximum security.

## Activity Notifications

If there are attempts to unauthorized access to the QR code, the administrator will receive corresponding notifications in the WHMCS activity log. This ensures full control and visibility of any attempts to access the QR code.

**Important:** It's essential to react to these notifications in the activity log and take

appropriate security measures.

## Notification Levels

- **High level of danger:** Notifications in the form of "Someone is trying to get a QR code, but the verification words are wrong. [additional data follows]". This indicates an attempt to access the QR code using incorrect verification parameters.
- **Low level of danger:** Notifications in the form of "It looks like someone is trying to get a QR code. [additional data follows]". This indicates an attempt to access, but without any attempt to use verification parameters.

## Reacting to Notifications

It's necessary to take appropriate security measures when receiving high-level danger notifications. Upon receiving low-level danger notifications, pay attention, but it's not critical. In any case, you will always be aware of attempts to access the QR code, and you will have the IP address of the device making such requests.

## Conclusion

Using this mechanism ensures the safety and control of access to a user's configuration data via QR code.