

# Configure WireGuard VPN with Omada SDN Controller

## Overview

WireGuard VPN is a modern VPN technology that offers high performance and easy configuration. Based on the UDP protocol, WireGuard VPN uses modern encryption algorithms to improve working efficiency and is suitable for remote access application scenarios.

This article describes how to configure WireGuard VPN with the Omada SDN Controller.

## Configuration

### Step 1. Configure WireGuard VPN on the Omada SDN Controller.

1. Launch the Omada SDN Controller, and select a site from the drop-down list of [Organization](#). Go to [Settings > VPN > WireGuard](#).
2. Click [Create New WireGuard](#) and configure the parameters.

Edit Wireguard

Name :

test

Status :

☒ Enable

MTU :

1420

(576-1440)

Listen Port :

51820

(1-65535)

Local IP Address :

192.168.0.2

Private Key :




z+OGT9Gdtl6jcphWHUz6Bawx1W

Apply

Cancel

Name	Specify the name that identifies the WireGuard interface.
Status	Specify whether to enable the WireGuard interface.
MTU	Specify the MTU value of the WireGuard interface. The default value 1420 is recommended.
Listen Port	Specify the port number that the WireGuard interface listens to. The default value is 51820.
Local IP Address	Specify the IP address of the WireGuard interface.
Private Key	Specify the private key of the WireGuard interface. The value will be automatically generated on the device, and you can also modify it manually.

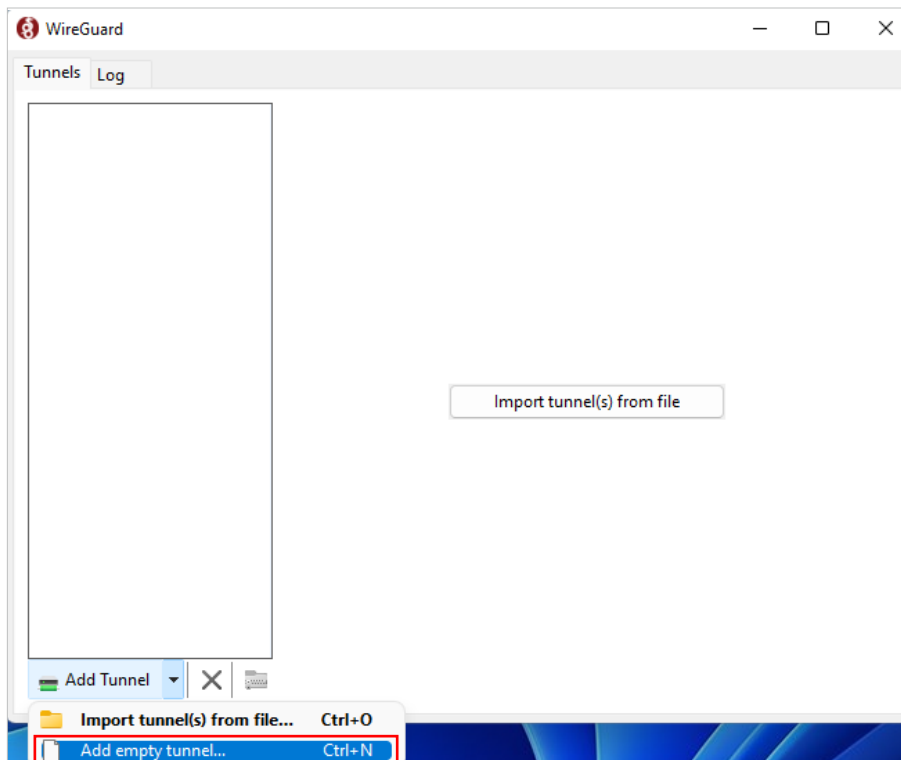
3. Click **Apply**. The WireGuard VPN entry will be displayed.

NAME	ENABLE	MTU	LISTEN PORT	PRIVATE KEY	PUBLIC KEY	ACTION
test		1420	51820	z+OGT9Gdtl6jcpHWHU z6Bawx1WJ4FO7yme9 F9vUunlE=	Ulv24MDAJMZYjAXAf XEYX+P/hU4SwwcNG px6NIX5rTY=	 

## Step 2. Configure the WireGuard VPN on the PC.

Here this article uses a Windows PC as an example.

- On the PC, download and install the WireGuard VPN software from <https://www.wireguard.com/install>.
- Open the WireGuard VPN software and choose **Add Tunnel** > **Add empty tunnel**.



3. Record the public key information and fill in the following parameters:

### [Interface]

**Address** = *10.0.0.1/24* (Fill in the interface IP address for the WireGuard VPN. You can fill in what you like.)

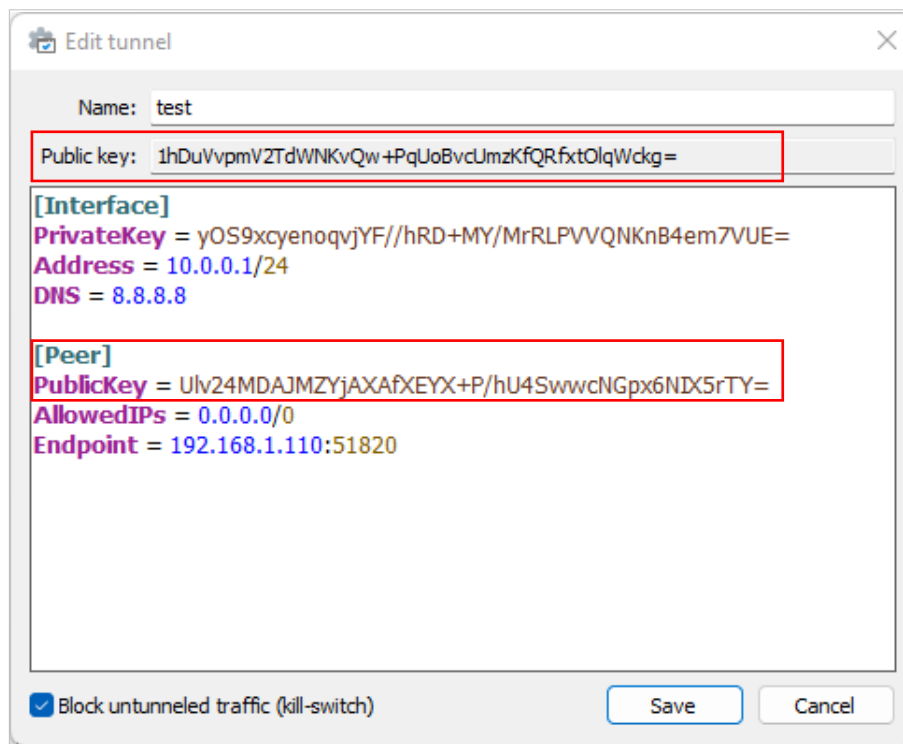
**DNS** = *8.8.8.8* (Fill in the DNS Server. If not specified, the PC will be unable to access the Internet.)

### [Peer]

**PublicKey** = *Ulv24MDAJMZYjAXAfXEYX+P/hU4SwwcNGpx6NIX5rTY=* (Fill in the public key of the WireGuard VPN configured on the Omada SDN Controller.)

**AllowedIPs** = *0.0.0.0/0* (0.0.0.0/0 means that all data sent by the PC goes to the VPN, reaches the peer and is then forwarded by the Omada Router.)

**Endpoint** = *192.168.1.110:51820* (Fill in the Omada Router's WAN IP address and corresponding port.)



The 'Edit tunnel' window shows the configuration for a tunnel named 'test'. The 'Public key' field is highlighted with a red box. Below it, the '[Interface]' section contains 'PrivateKey', 'Address' (10.0.0.1/24), and 'DNS' (8.8.8.8). The '[Peer]' section, also highlighted with a red box, contains 'PublicKey', 'AllowedIPs' (0.0.0.0/0), and 'Endpoint' (192.168.1.110:51820). At the bottom, there is a checkbox for 'Block untunneled traffic (kill-switch)' which is checked, and 'Save' and 'Cancel' buttons.

Name: test

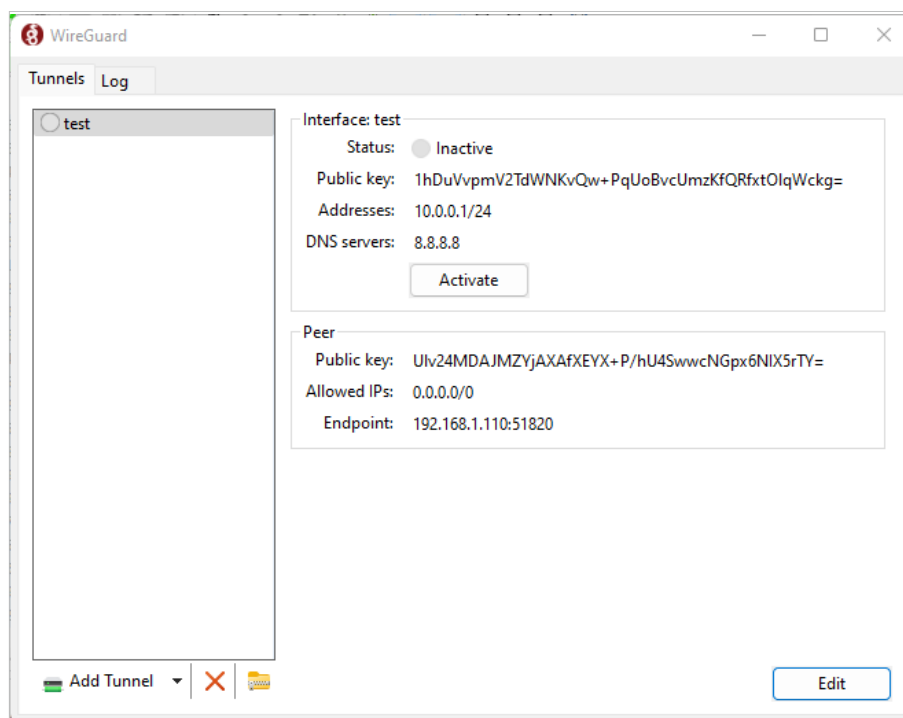
Public key: 1hDuVvpmV2TdWNVKvQw+PqUoBvcUmzKfQRfxtOlqWckg=

**[Interface]**  
PrivateKey = yOS9xcyenoqvjYF//hRD+MY/MrRlPVVQNKnb4em7VUE=  
Address = 10.0.0.1/24  
DNS = 8.8.8.8

**[Peer]**  
PublicKey = Ulv24MDAJMZYjAXAfXEYX+P/hU4SwwcNGpx6NIX5rTY=  
AllowedIPs = 0.0.0.0/0  
Endpoint = 192.168.1.110:51820

☒ Block untunneled traffic (kill-switch) Save Cancel

4. Save the above configuration as shown below.



The WireGuard application window shows a list of tunnels on the left with 'test' selected. On the right, the configuration for the 'test' interface is displayed. The status is 'Inactive'. The 'Public key', 'Addresses' (10.0.0.1/24), and 'DNS servers' (8.8.8.8) are listed. Below this is an 'Activate' button. The 'Peer' section shows the 'Public key', 'Allowed IPs' (0.0.0.0/0), and 'Endpoint' (192.168.1.110:51820). At the bottom, there is an 'Add Tunnel' button and an 'Edit' button.

WireGuard

Tunnels Log

test

Interface: test  
Status: Inactive  
Public key: 1hDuVvpmV2TdWNVKvQw+PqUoBvcUmzKfQRfxtOlqWckg=  
Addresses: 10.0.0.1/24  
DNS servers: 8.8.8.8  
Activate

Peer  
Public key: Ulv24MDAJMZYjAXAfXEYX+P/hU4SwwcNGpx6NIX5rTY=  
Allowed IPs: 0.0.0.0/0  
Endpoint: 192.168.1.110:51820

Add Tunnel Edit

### Step 3. Configure peer information on the Omada SDN Controller.

1. Launch the Omada SDN Controller, and select a site from the drop-down list of [Organization](#). Go to [Settings](#) > [VPN](#) > [WireGuard](#) > [Peers](#).

2. Click [Create New Peer](#). Configure the parameters and click [Apply](#).

**Edit Peer**

Name :

Status : ☒ Enable

Interface :

Endpoint :  (Optional)

Endpoint Port :  (Optional)

Allow Address :  /  [Add Subnet](#)

Persistent Keepalive :  (0-65535 second)

Comment :  (0-128 characters)

Public Key :

Preshared Key :  (Optional)

<a href="#">Name</a>	Specify the name that identifies the peer.
<a href="#">Status</a>	Specify whether to enable the peer.
<a href="#">Interface</a>	Choose the WireGuard interface to which the peer belongs.
<a href="#">Endpoint</a>	Specify the IP address of the peer. This parameters is required when the Omada Router actively connects to other WireGuard Server.
<a href="#">Endpoint Port</a>	Specify the port number of the peer. This parameters is required when the Omada Router actively connects to other WireGuard Server.
<a href="#">Allowed Address</a>	Specify the address segment that allows traffic to pass through. It is the same as the WireGuard VPN interface IP configured on the PC.
<a href="#">Persistent Keepalive</a>	Specify the tunnel keepalive packet interval.
<a href="#">Comment</a>	Enter the description of the peer.
<a href="#">Public Key</a>	Fill in the public key of the peer PC.
<a href="#">Preshared Key</a>	Specify an shared key if needed.

**Step 4. Connect to the Omada SDN Controller using WireGuard VPN.**

Click [Activate](#) of the WireGuard VPN on the PC to connect to the Omada SDN Controller. The Status will change from [Inactive](#) to [Active](#), indicating that the VPN connection has been successfully established.

