Configure WireGuard VPN with Omada SDN Controller

Overview

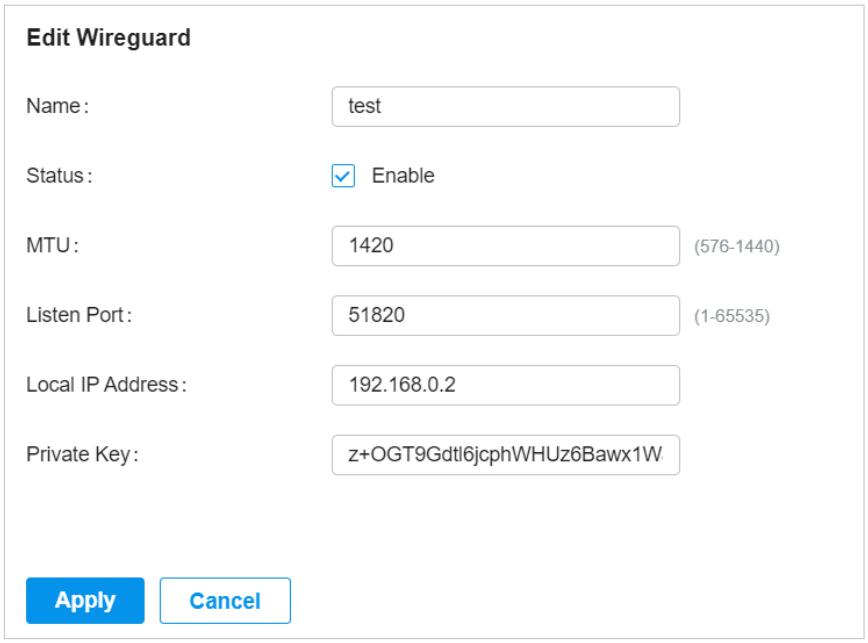
WireGuard VPN is a modern VPN technology that offers high performance and easy configuration. Based on the UDP protocol, WireGuard VPN uses modern encryption algorithms to improve working efficiency and is suitable for remote access application scenarios.

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

Configuration

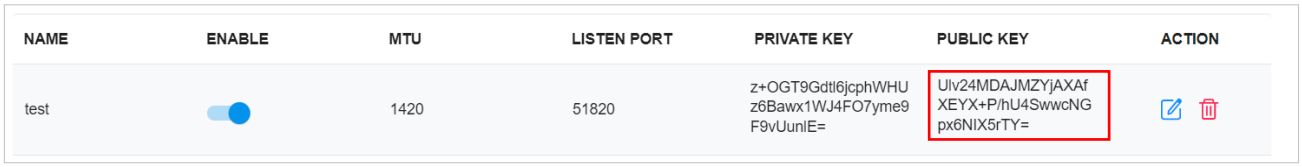
Step 1. Configure WireGuard VPN on the Omada SDN Controller.

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.



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.

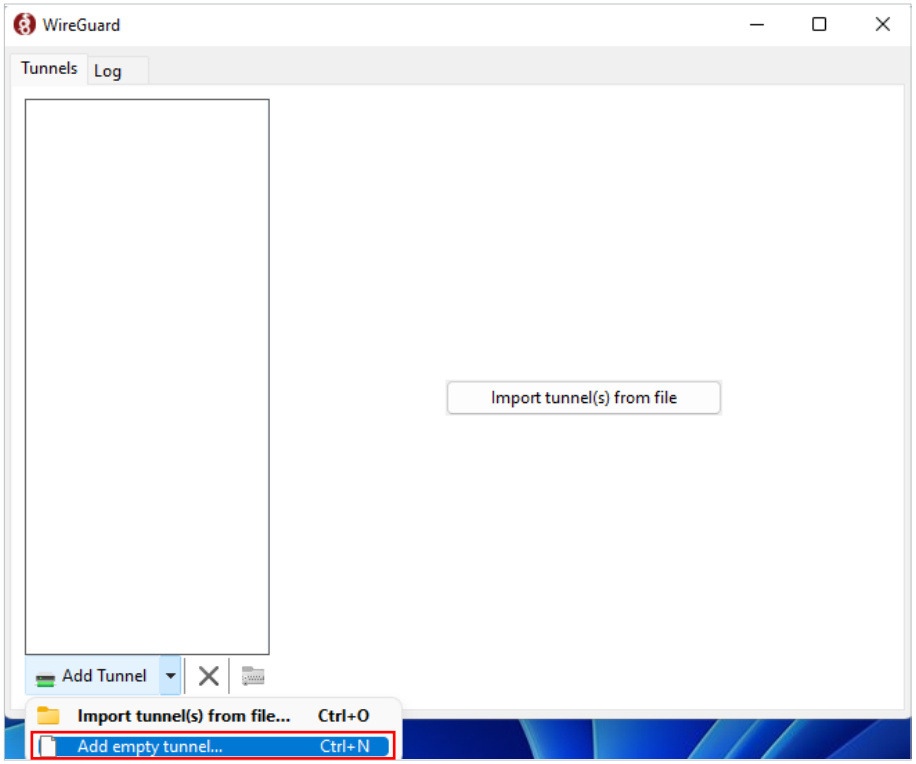
3. Click Apply. The WireGuard VPN entry will be displayed.



Step 2. Configure the WireGuard VPN on the PC.

Here this article uses a Windows PC as an example.

1. On the PC, download and install the WireGuard VPN software from https://www.wireguard.com/install.
2. 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.)

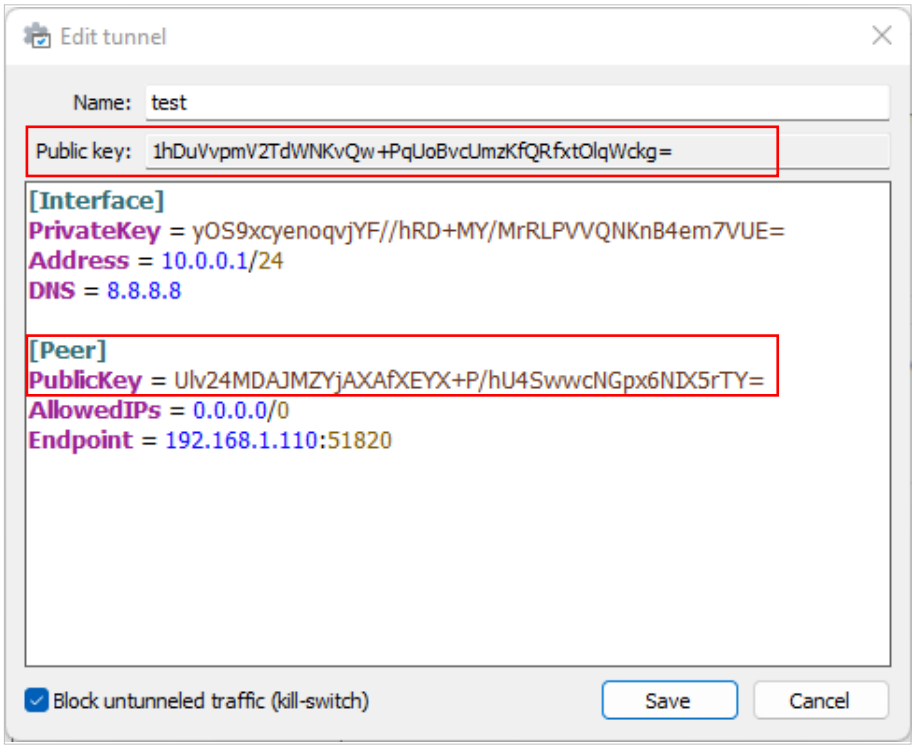
DNS = *8.8.8.8* (Fill in the DNS Server. If not specified, the PC will be unable to access the Internet.)

[Peer]

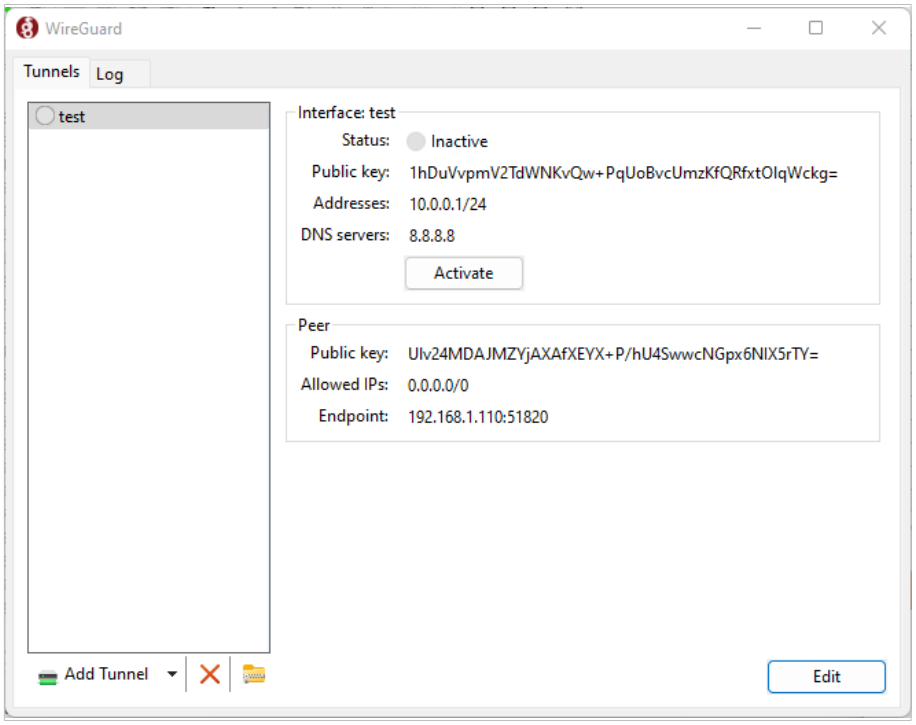
PublicKey = *Ulv24MDAJMZYjAXAfXEYX+P/hU4SwwcNGpx6NIX5rTY=* (Fill in the public key of the WireGuard VPN configured on the Omada SDN Controller.)

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.)



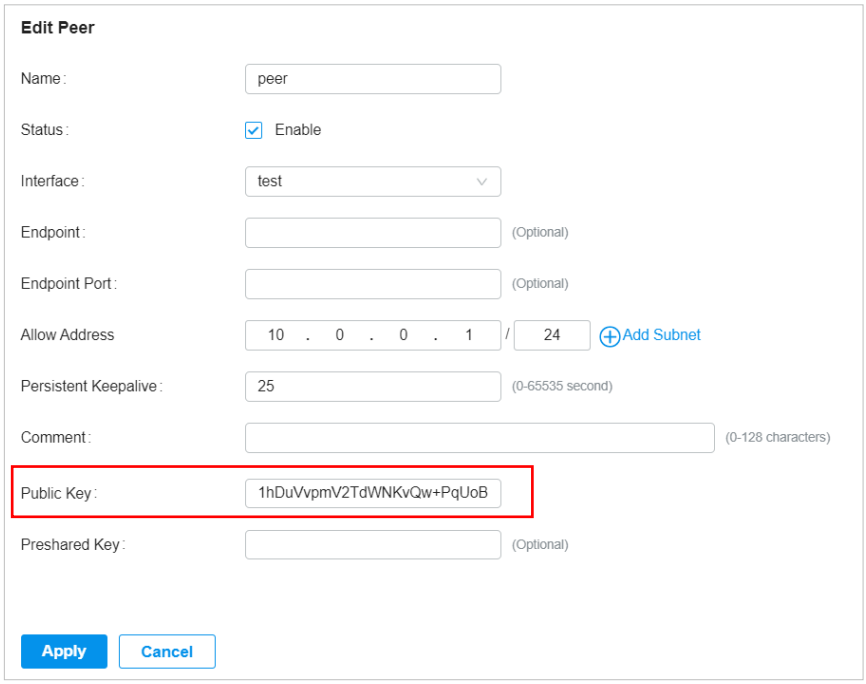
4. Save the above configuration as shown below.



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.



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