

OpenVPN Bridge Application

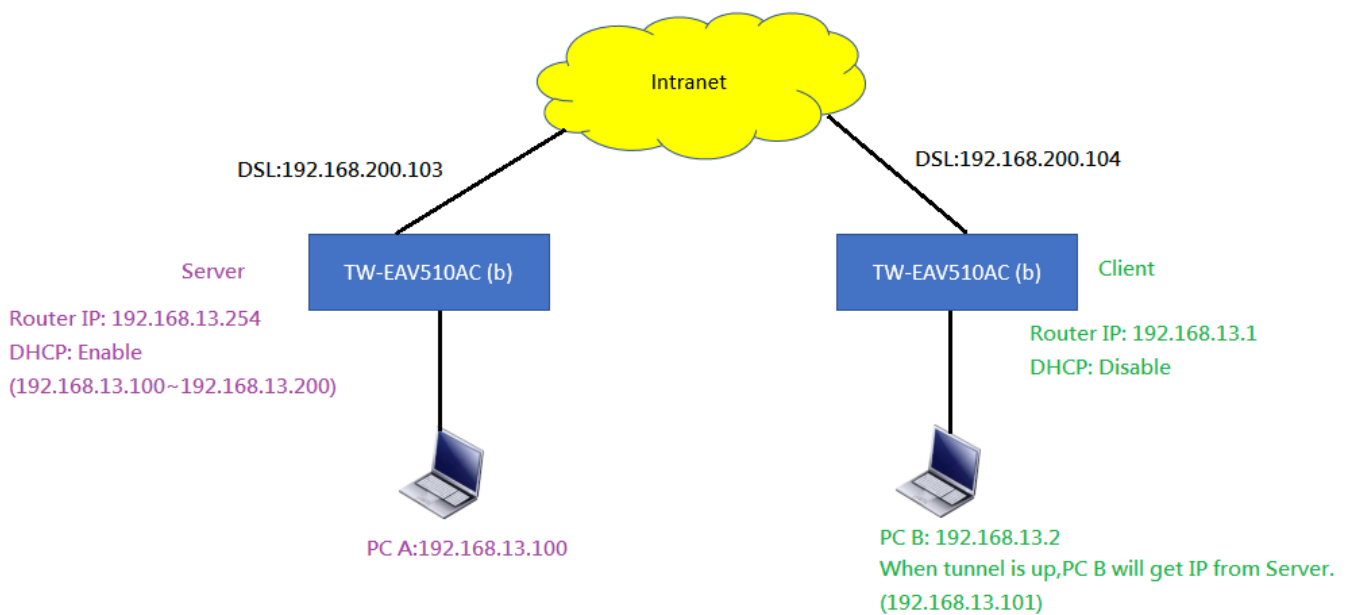
- Case 1: Site to Site with same subnet.
- Case 2: Remote to Site with same subnet.

Case1:

Server:TW-EAV510AC (b)

Client: TW-EAV510AC (b)

Network topology: Site to Site with same subnet.



At Server site:

Router IP: 192.168.13.254

DSL: 192.168.200.103

PC: 192.168.13.100

1. Check DSL connection and Server Router get IP: 192.168.200.103.

Device Status

This page shows the current status and some basic settings of the device.

System	
Device Name	TW-EAV510 AC (b)
Uptime	4 min
Date/Time	Wed Feb 13 10:47:55 CST 2019
Firmware Version	2.53.d37
DSP Version	v136h720
CPU Usage	0%
Memory Usage	40%
Name Servers	192.168.200.99
IPv4 Default Gateway	192.168.200.99
DSL	
Operational Status	ADSL2+ Annex A.SHOWTIME.
Upstream Speed	1196 kbps
Downstream Speed	25326 kbps
LAN Configuration	
IP Address	192.168.13.254
Subnet Mask	255.255.255.0
DHCP Server	Enabled
MAC Address	00:E0:4C:02:05:21

WAN Configuration						
Interface	VPI/VCI	Encapsulation	Protocol	IP Address	Gateway	Status
ADSL0	0/33	LLC	mer1483			down
ADSL1	0/100	LLC	mer1483			down
ADSL2	0/35	LLC	mer1483	192.168.200.103	192.168.200.99	up
PTM0	---	---	IPoE			down
EWAN	---	---	IPoE			down

- LAN setting: 192.168.13.254 and DHCP range is 192.168.13.100~192.168.13.200.

The screenshot displays the web interface of a TeleWell 3G/LTE Wireless xDSL Firewall Router. On the left is a navigation menu with 'Site contents' expanded to show folders for Status, LAN, WLAN, WAN, Services, VPN, Advance, Diagnostics, Management, Statistics, Language, Reboot, and Logout. The main content area is titled 'LAN Interface Settings' and includes a description: 'This page is used to configure the LAN interface of your Device. Here you may change the setting for IP addresses, subnet mask, etc..'. Below this are fields for 'Interface Name' (br0), 'IP Address' (192.168.13.254), and 'Subnet Mask' (255.255.255.0). There are also radio buttons for 'IGMP Snooping' (Disabled/Enabled) and 'Ethernet to Wireless Blocking' (Disabled/Enabled). The second section is 'DHCP Settings', described as 'This page is used to configure DHCP Server and DHCP Relay.'. It features a 'DHCP Mode' section with radio buttons for NONE, DHCP Relay, and DHCP Server (selected). A descriptive paragraph follows: 'Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.'. Below this are fields for 'IP Pool Range' (192.168.13.100 - 192.168.13.200), 'Max Lease Time' (86400 seconds), 'Domain Name' (Home), and 'Gateway Address' (192.168.13.254). A 'DNS option' section has radio buttons for 'Use DNS Relay' (selected) and 'Set Manually'. At the bottom are buttons for 'Apply Changes', 'Port-Based Filter', and 'MAC-Based Assignment'.

- On VPN>OpenVPN Server:
 - Please select OVPN Bridged.
 - Set Cryptographic Suite setting.
 - Create an account for client. (We add Remote Access account -test/test here.)

- Site contents
 - Status
 - LAN
 - WLAN
 - WAN
 - Services
 - VPN
 - PPTP
 - L2TP
 - IPsec
 - GRE Settings
 - OpenVPN Server
 - OpenVPN CA
 - OpenVPN Client
 - Advance
 - Diagnostics
 - Management
 - Statistics
 - Language
 - Reboot
 - Logout

OpenVPN Server Configuration

This page is used to configure the parameters for OpenVPN.

OpenVPN Mode OVPN Routed OVPN Bridged

Name: OVPN_server

Active: Yes No

Interface: Any

Protocol: TCP

Port Number: 1194

Cryptographic Suite

Cipher: DES in CBC mode

HMAC: MD5

Izo Compression: Adaptive

Keepalive: Disable

Interval: 60 seconds

IP Addresses Assigned to Peer: Enable

Start from: 192.168.13.

Save

Server Account

Name: test

Username: test

Connection Type: Remote Access LAN to LAN

Tunnel: Disable Enable

Password: ****

Peer Network IP:

Peer Netmask:

Add Edit

OpenVPN Server Table

Edit	Name	Enable	Username	Connection Type	Peer Network IP	Peer Netmask	Select
<input checked="" type="radio"/>	test	Enable	test	Remote Access			<input type="checkbox"/>

Delete Selected

4. On VPN>OpenVPN CA. Export CA file to client site.

At client site:

Router IP : 192.168.13.1

DSL: 192.168.200.104

PC B: 192.168.13.2 (DHCP disable)

When OVPN bridge tunnel success, PC B will get 192.168.13.101 from Sever DHCP.

1. Check DSL connection and Client Router will get DSL IP : 192.168.200.104


Device Status

This page shows the current status and some basic settings of the device.

System	
Device Name	TW-EAV510 AC (b)
Uptime	56 min
Date/Time	Wed Feb 13 10:52:08 CST 2019
Firmware Version	2.53.d37
DSP Version	v136h720
CPU Usage	0%
Memory Usage	41%
Name Servers	192.168.200.99
IPv4 Default Gateway	192.168.200.99
DSL	
Operational Status	ADSL2+ Annex A,SHOWTIME.
Upstream Speed	1261 kbps
Downstream Speed	25363 kbps
LAN Configuration	
IP Address	192.168.13.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled
MAC Address	60:03:47:47:9F:D4

WAN Configuration						
Interface	VPI/VCI	Encapsulation	Protocol	IP Address	Gateway	Status
ADSL0	0/33	LLC	mer1483			down
ADSL2	0/35	LLC	mer1483			down
ADSL1	0/32	VCMUX	mer1483	192.168.200.104	192.168.200.99	up
FTMD	---	---	IPoE			down
EWAN	---	---	IPoE			down

2. LAN setting: 192.168.13.1 and DHCP is disabled.


3G/LTE Wireless xDSL Firewall Router

Site contents

- └ Status
- └ LAN
- └ WLAN
- └ WAN
- └ Services
- └ VPN
 - └ PPTP
 - └ L2TP
 - └ IPsec
 - └ GRE Settings
 - └ OpenVPN Server
 - └ OpenVPN CA
 - └ OpenVPN Client
- └ Advance
- └ Diagnostics
- └ Management
- └ Statistics
- └ Language
- └ Reboot
- └ Logout

LAN Interface Settings

This page is used to configure the LAN interface of your Device. Here you may change the setting for IP addresses, subnet mask, etc..

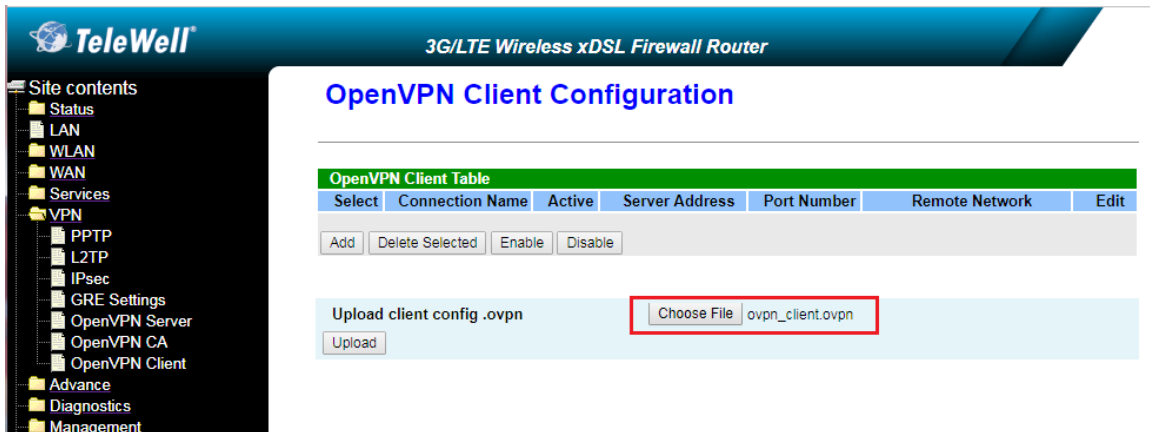
Interface Name	br0
IP Address	<input type="text" value="192.168.13.1"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
IGMP Snooping	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Ethernet to Wireless Blocking	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

DHCP Settings

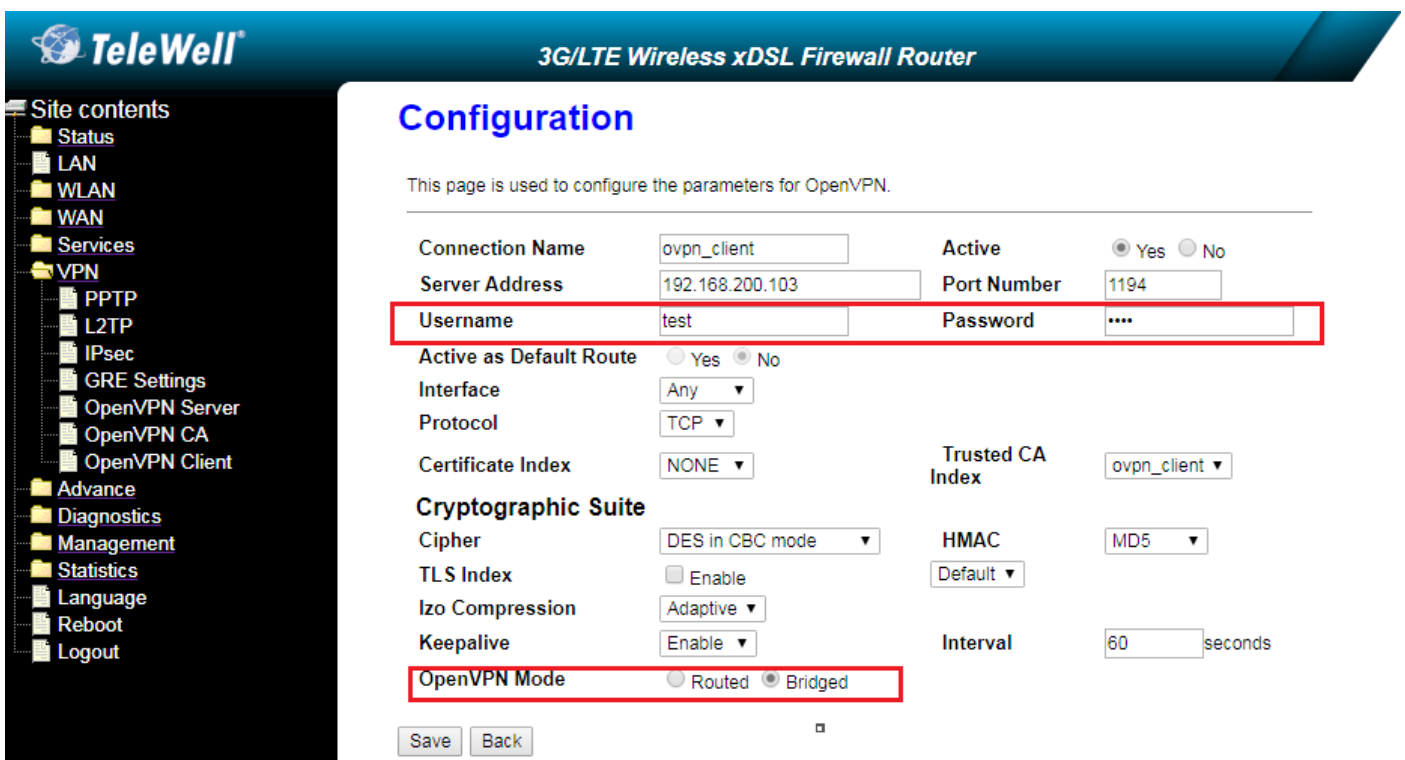
This page is used to configure DHCP Server and DHCP Relay.

DHCP Mode NONE DHCP Relay DHCP Server

- On VPN>OpenVPN client, please load the CA file from Server site.



- Input Username/Password=test/test and make sure OpenVPN mode is set to Bridged.



- When tunnel success, PC B can try to release and renew IP. It will get Server DHCP IP: 192.168.13.101. (IP/Subnet/Gateway= 192.168.13.101/255.255.255.0/192.168.13.254)

```
Ethernet adapter Ethernet:
Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::1809:3050:6767:a1c8%3
IPv4 Address. . . . . : 192.168.13.101
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.13.254
```


6. PC B can ping to PC A(192.168.13.100) and access both Server and Client Router as below:

Ping:

```
C:\Users\FAE>ping 192.168.13.100

Pinging 192.168.13.100 with 32 bytes of data:
Reply from 192.168.13.100: bytes=32 time=3ms TTL=128
Reply from 192.168.13.100: bytes=32 time<1ms TTL=128
Reply from 192.168.13.100: bytes=32 time<1ms TTL=128
Reply from 192.168.13.100: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.13.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 0ms
```

UI access:

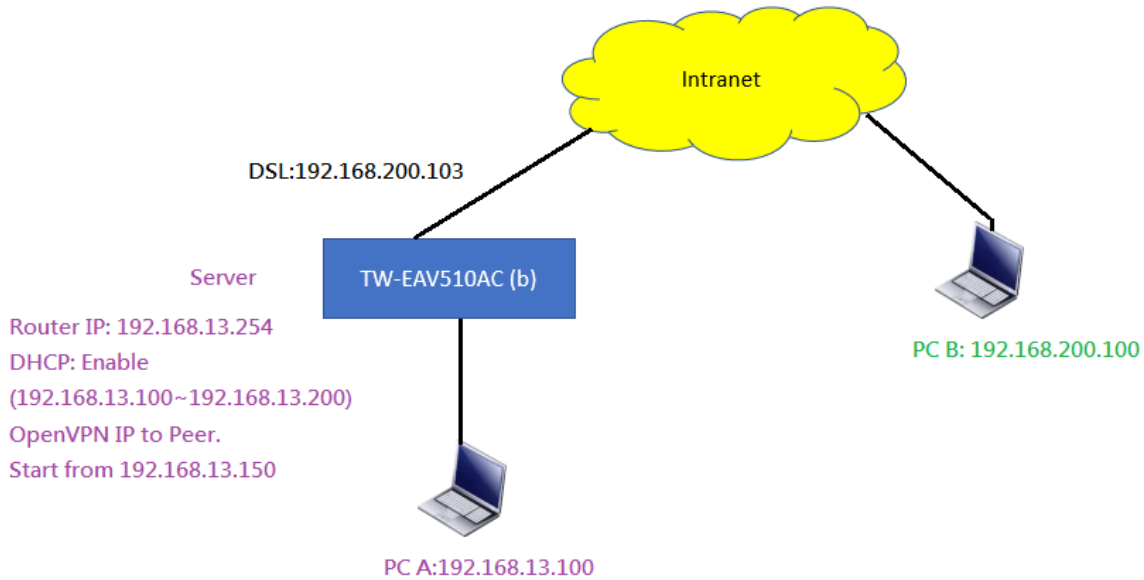


Case 2:

Server:TW-EAV510AC (b)

Client: Windows 10 with OpenVPN software.

Network topology: Remote to Site with same subnet.



At Sever site:

Router IP: 192.168.13.254

DHCP: Enable

(192.168.13.100~192.168.13.200)

1. On VPN>OpenVPN Server:

1.1)Please enable OVPN Bridged

1.2) Set Cryptographic Suite setting and enable IP Address Assigned to Peer.

1.3) Create an account for client. (We add Remote Access account -test/test here.)

OpenVPN Server Configuration

This page is used to configure the parameters for OpenVPN.

OpenVPN Mode

OVPN Routed

OVPN Bridged

Name: OVPN_server

Active: Yes No

Port Number: 1194

Interface: Any

Protocol: TCP

Cryptographic Suite

Cipher: AES-256 in CBC mode

HMAC: MD5

Izo Compression: Adaptive

Keepalive: Disable

Interval: 60 seconds

IP Addresses Assigned to Peer: Enable

Start from: 192.168.13.150

Save

Server Account

Name: test

Username: test

Connection Type: Remote Access LAN to LAN

Tunnel: Disable Enable

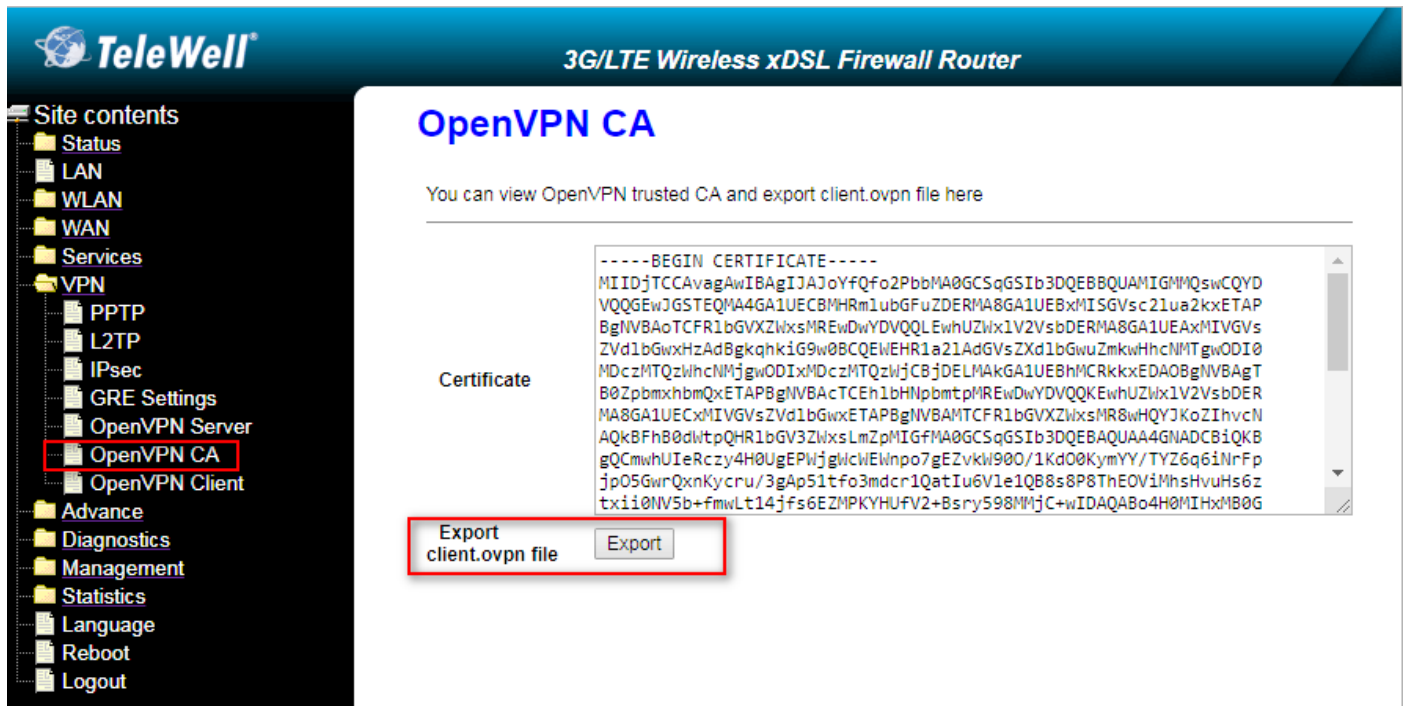
Password: ****

Peer Network IP: []

Peer Netmask: []

Add Edit

2. On VPN>OpenVPN CA. Export CA file and share with client PC.



At client site:

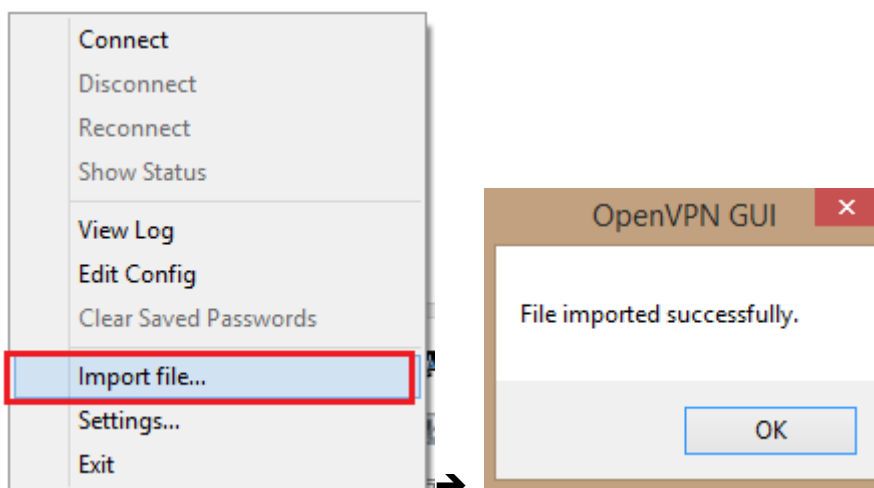
PC B with IP: 192.168.200.100 (Same as Intranet.)

PC B platform: Windows 10

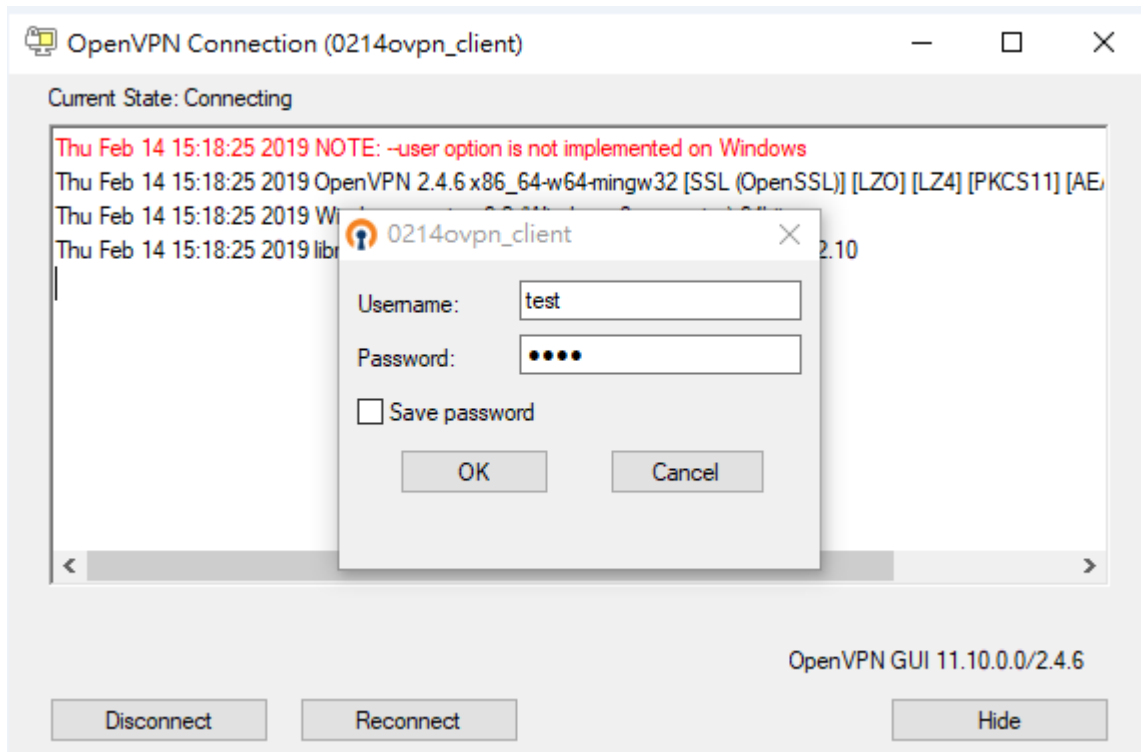
OpenVPN software: OpenVPN (v2.4.6)

On PC B:

1. Open Software, right click and select "Import file". Load the CA from Server site .



- Press "Connect" and then input username/password=test/test.



- After success, PCB will get 192.168.13.157 as below. And you can also ping Server Router IP: 192.168.13.254 and PC A 192.168.13.100.

