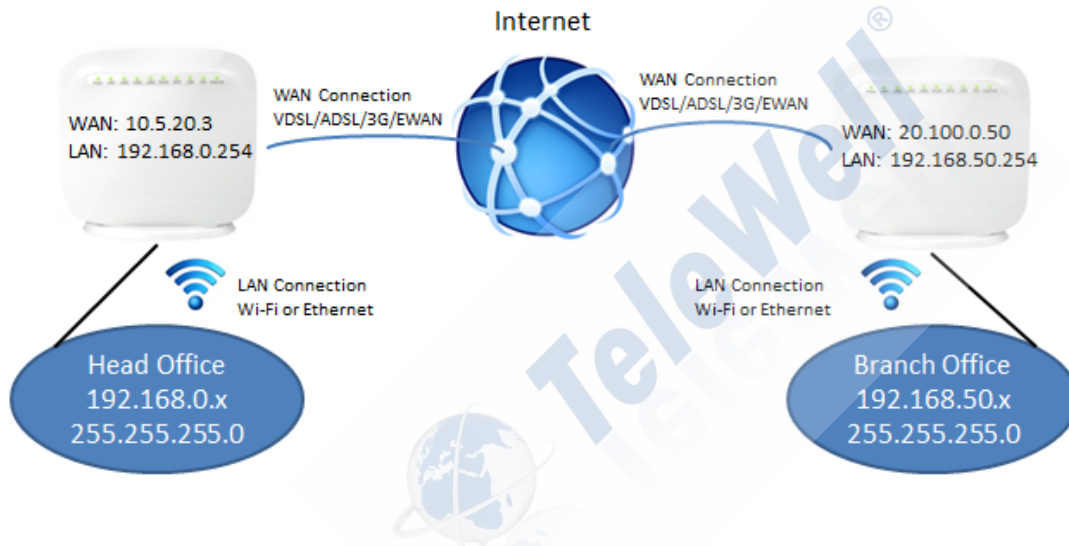


How to setup IPsec tunnel between two TW-EAV510 devices

Note 1: Please make sure that both LAN side networks are in different subnet.

Note 2: The TW-EAV510 can only support pure IPsec encryption. In case, it won't work with Microsoft Windows due to it is IPsec with L2TP.

We will take the following network topology as an example for reference.



The WAN IP address can be found at **Device Info** -> **WAN**. Also it depends on what interface you use, it could be VDSL/ADSL, 3G or EWAN.

WAN Info

Interface	Description	Type	VlanMuxId	IPv6	Igmp	MLD	NAT	Firewall	Status	IPv4 Address	IPv6 Address
atm0.1	ipoe_0_0_33	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
atm0.2	br_0_0_33	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconnect		
atm1.1	ipoe_0_0_100	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
atm1.2	br_0_0_100	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconnect		
ptm0.1	ipoe_4_1_1	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
ptm0.2	br_4_1_1	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconnect		
eth2	ipoe_eth2	IPoE	Disabled	Disabled	Disabled	Disabled	Enabled	Enabled	Connected	10.5.20.3	
ppp7	3G dongle	PPPoE	Disabled	Disabled	Disabled	Disabled	Enabled	Disabled	Unconnect		

Note 3: The IPsec supports IPv4 Address only.

Step for setting the IPSec (The setting is for TW-EAV510 in head office, only IP address will different for Branch Office's setting):

Step 1: Go to **Advanced Setup** -> **IPSec**, then click button "Add New Connection".

IPSec Tunnel Mode Connections

Add, remove or enable/disable IPSec tunnel connections from this page.

Connection Name	Remote Gateway	Local Addresses	Remote Addresses	Remove
<input type="button" value="Add New Connection"/> <input type="button" value="Remove"/>				

Step 2: Edit details in IPSec setting

IPSec Settings

IPSec Connection Name	<input type="text" value="ToBranch1"/>	
Tunnel Mode	ESP	
Remote IPSec Gateway Address (IPv4 address in dotted decimal)	<input type="text" value="20.100.0.50"/>	← This is the WAN IP address on Branch Office's TW-EAV510.
Tunnel access from local IP addresses	Subnet	← This is the Local subnet on Head Office's TW-EAV510.
IP Address for VPN	<input type="text" value="192.168.0.0"/>	
IP Subnetmask	<input type="text" value="255.255.255.0"/>	
Tunnel access from remote IP addresses	Subnet	← This is the Local subnet on Branch Office's TW-EAV510.
IP Address for VPN	<input type="text" value="192.168.50.0"/>	
IP Subnetmask	<input type="text" value="255.255.255.0"/>	
Key Exchange Method	Auto(IKE)	
Authentication Method	Pre-Shared Key	
Pre-Shared Key	<input type="text" value="12345678"/>	← It is the Pre-Shared Key that will be used for IPSec tunnel. Must make sure both sides are use the same key
Perfect Forward Secrecy	Disable	
Advanced IKE Settings	<input type="button" value="Show Advanced Settings"/>	
<input type="button" value="Apply/Save"/>		

Four parts with red mark are the major items which need to be check and edit according to your network topology. All other settings are related to security level how deep you want; just make sure both sides use the same security level settings.

When all settings are done, click button "Apply/Save" to activate your IPsec setting.

IPsec Tunnel Mode Connections

Add, remove or enable/disable IPsec tunnel connections from this page.

Connection Name	Remote Gateway	Local Addresses	Remote Addresses	Remove
ToBranch1	20.100.0.50	192.168.0.0	192.168.50.0	<input type="checkbox"/>

Note 4: Check in advanced setup -> LAN IP settings that DSL Router IP Address is the same LAN subnet like in this config sample 192.168.50.254 (LAN pool 192.168.50.100-200)

Note 5: Disable IPv6 (Advanced Setup -> LAN -> IPv6 autoconfig)

IPv6 LAN Auto Configuration

Note: Stateful DHCPv6 is supported based on the assumption of prefix length less than 64. Interface ID does NOT support ZERO COMPF

Static LAN IPv6 Address Configuration

Interface Address (prefix length is required):

IPv6 LAN Applications

Enable DHCPv6 Server

Enable RADVD

Enable MLD Snooping

Step 3: Repeat the Step 1 and 2 on Branch Office's TW-EAV510

Step 4: Once both sites finish the above settings, the IPsec tunnel should be established immediately. And both parties just work like in the same network, easy to share everything securely.

Note 6: If the IPsec tunnel doesn't work, please go to Management -> System Log, click the button "View System Log" to check anything wrong with IPsec's setting. When the IPsec tunnel works ok, in system log is the info as below.

Nov 8 12:01:20	daemon	info	SRC=222.186.3.15 DST=80.220.117.190 LEN=40 TOS=0x00 PREC=0x00 TTL=98 ID=256 PROTO=T racoon: INFO: IPsec-SA established: ESP/Tunnel 188.67.198.152[0]->80.220.117.190[0] spi=156242718(0x950131e)
Nov 8 12:01:20	daemon	info	racoon: INFO: IPsec-SA established: ESP/Tunnel 80.220.117.190[0]->188.67.198.152[0] spi=129852710(0x7bd6526)