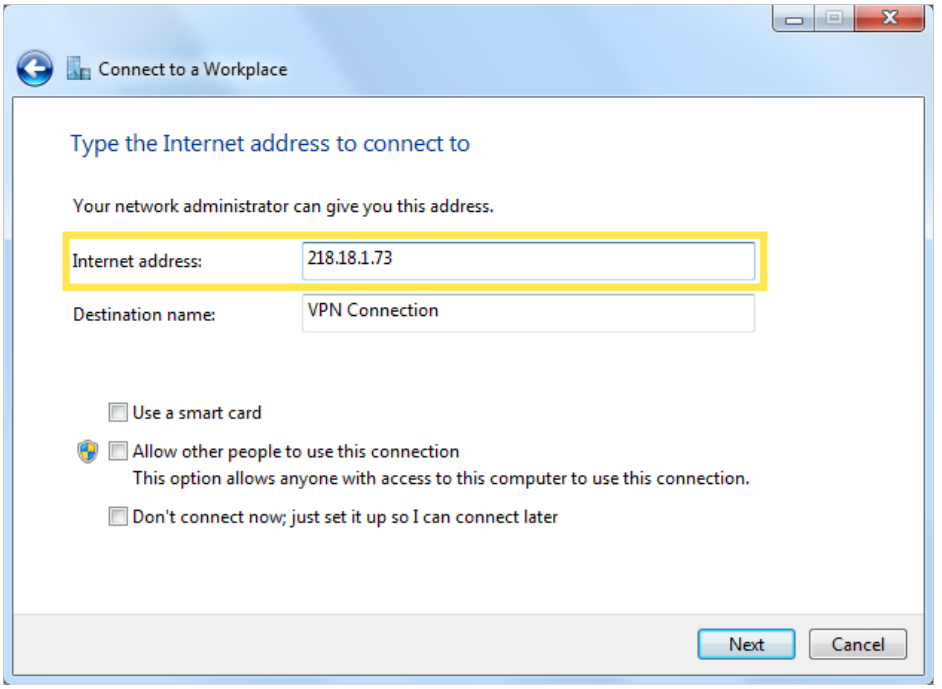
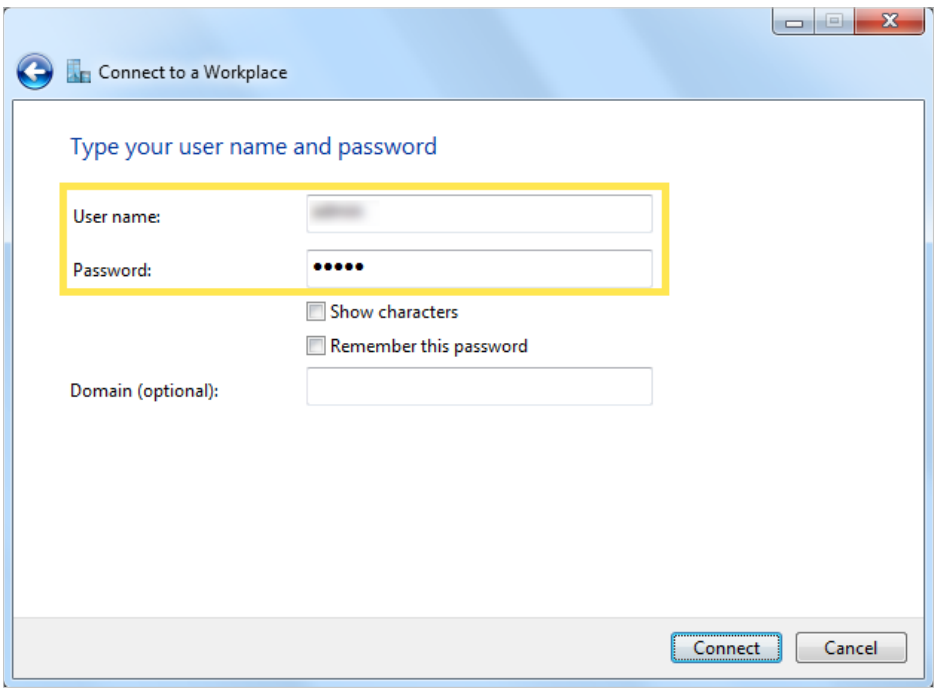
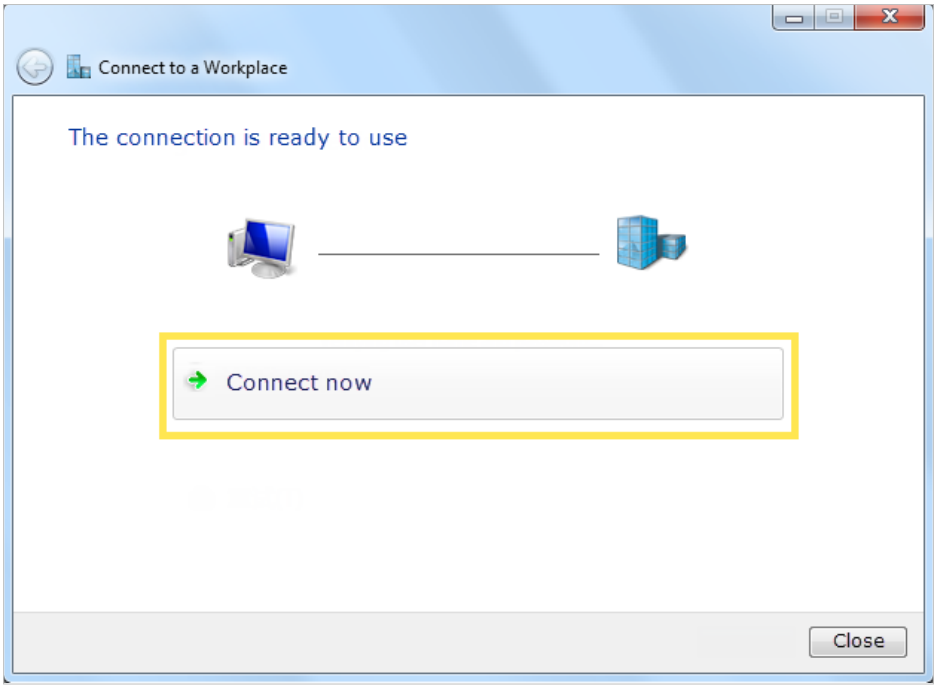


6. Enter the User name and Password you have set for the PPTP VPN server on your router, and click Connect.



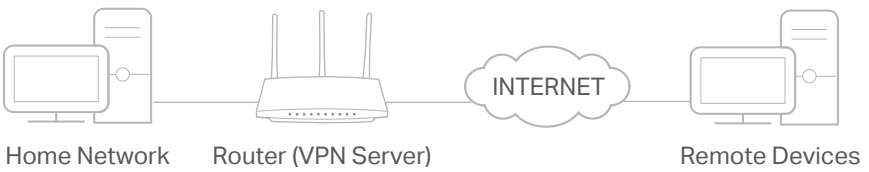
7. Click Connect Now when the VPN connection is ready to use.



14. 3. Use L2TP/IPSec VPN to Access Your Home Network

L2TP/IPSec VPN Server is used to create a L2TP/IPSec VPN connection for remote devices to access your home network.

To use the VPN feature, you need to set up L2TP/IPSec VPN Server on your router, and configure the L2TP/IPSec connection on remote devices. Please follow the steps below to set up the L2TP/IPSec VPN connection.

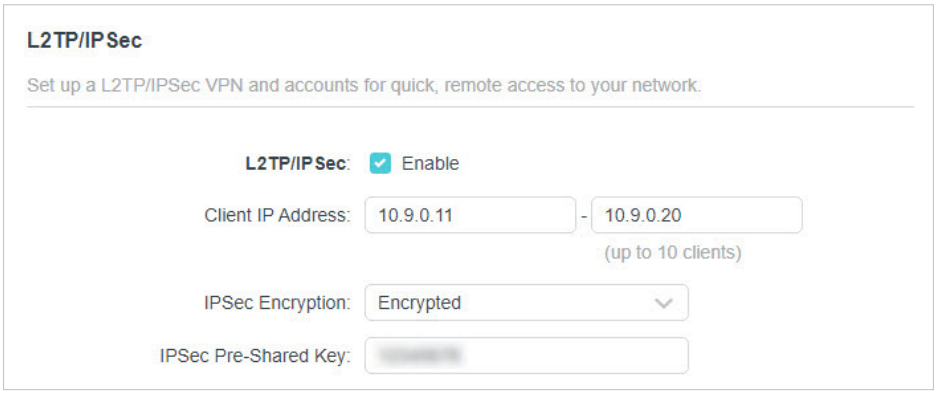


Step 1. Set up L2TP/IPSec VPN Server on Your Router

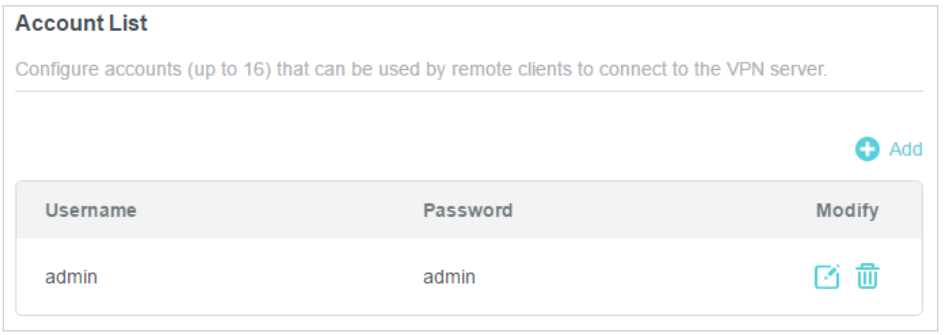
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > VPN Server > L2TP/IPSec, and enable L2TP/IPSec.

Note:

- Firmware update may be required to support L2TP/IPSec VPN Server.
- Before you enable VPN Server, we recommend you configure Dynamic DNS Service (recommended) or assign a static IP address for router's WAN port and synchronize your System Time with internet.

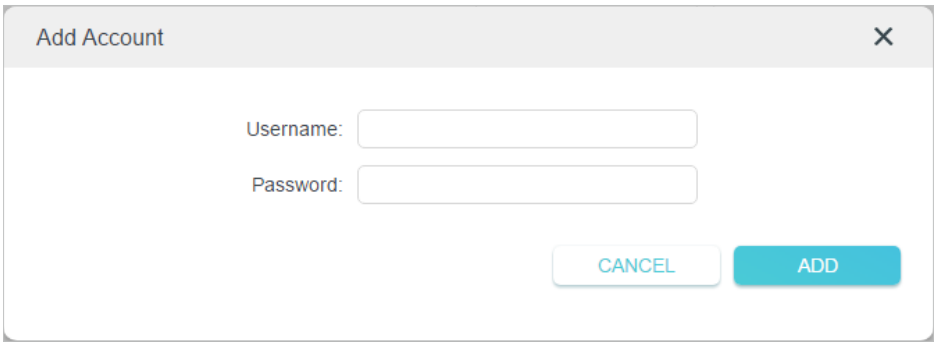


3. In the Client IP Address field, enter the range of IP addresses (up to 10) that can be leased to the devices by the L2TP/IPSec VPN server.
4. Keep IPSec Encryption as Encrypted and create an IPSec Pre-Shared Key.
5. Click SAVE.
6. Configure the L2TP/IPSec VPN connection account for the remote device. You can create up to 16 accounts.



4) Click Add.

5) Enter the Username and Password to authenticate devices to the L2TP/IPSec VPN Server.

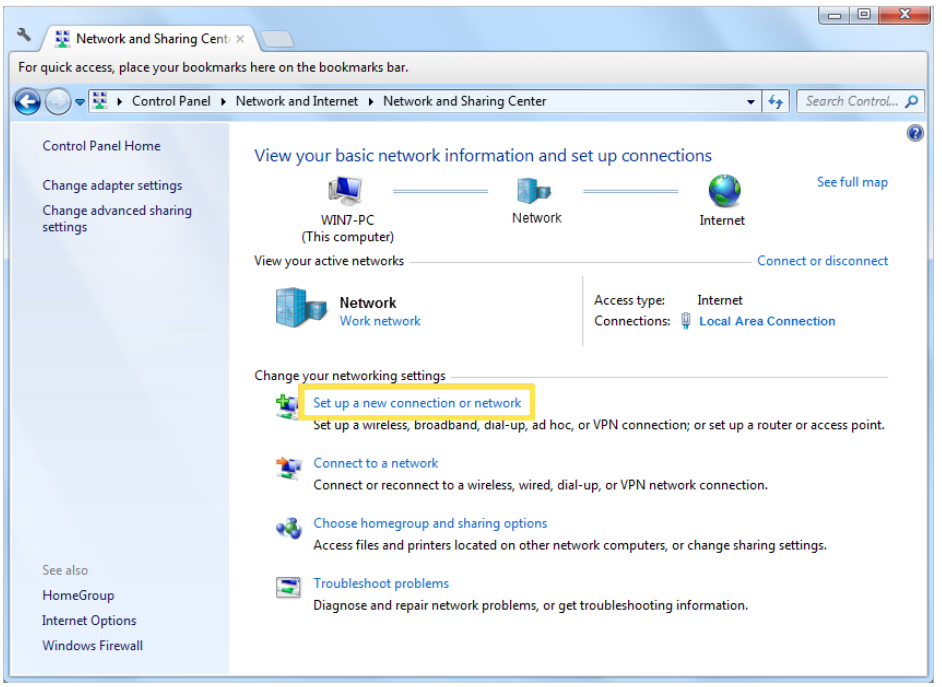


6) Click ADD.

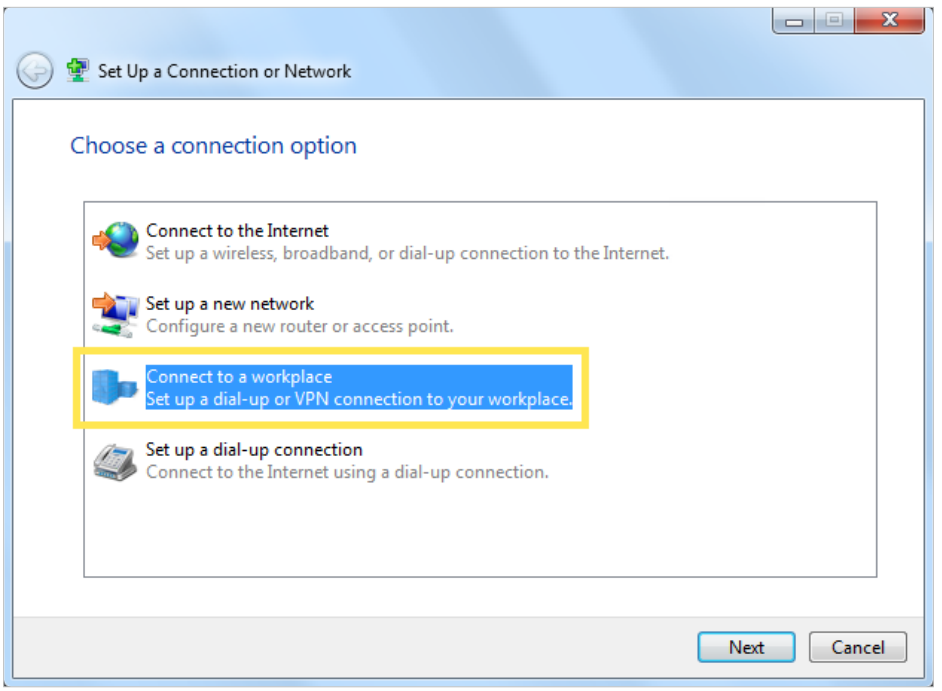
Step 2. Configure L2TP/IPSec VPN Connection on Your Remote Device

The remote device can use the Windows or Mac OS built-in L2TP/IPSec software or a third-party L2TP/IPSec software to connect to L2TP/IPSec Server. Here we use the Windows built-in L2TP/IPSec software as an example.

1. Go to Start > Control Panel > Network and Internet > Network and Sharing Center.
2. Select Set up a new connection or network.

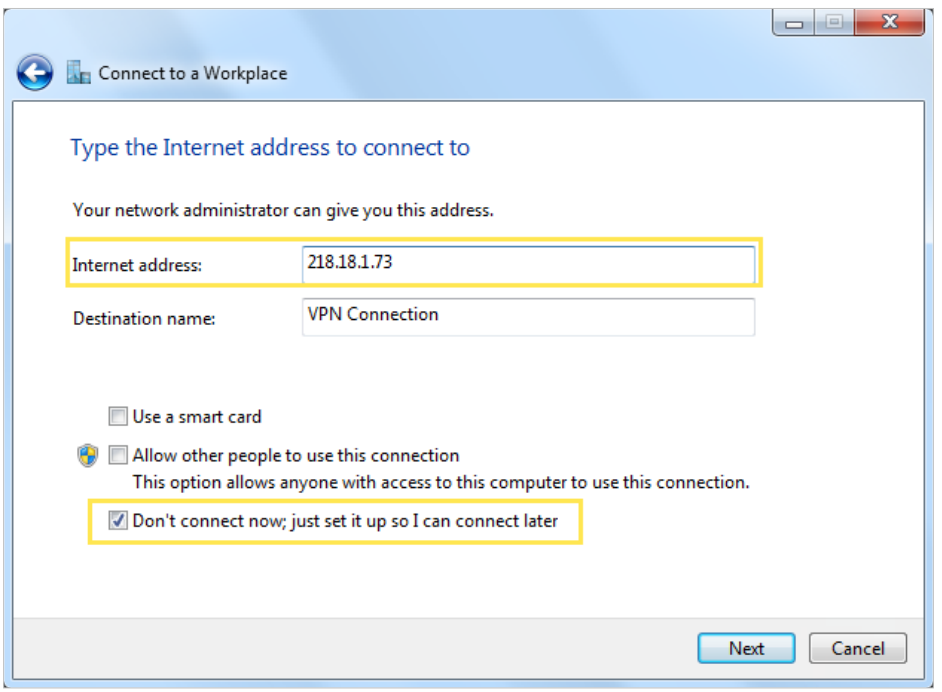


3. Select Connect to a workplace and click Next.

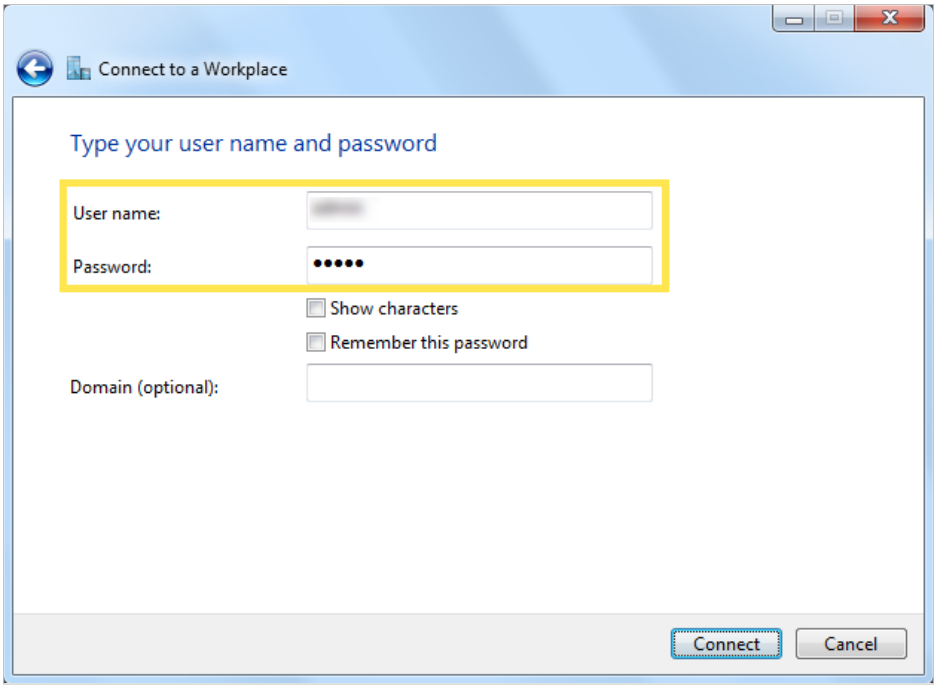


4. Select Use my Internet connection (VPN).

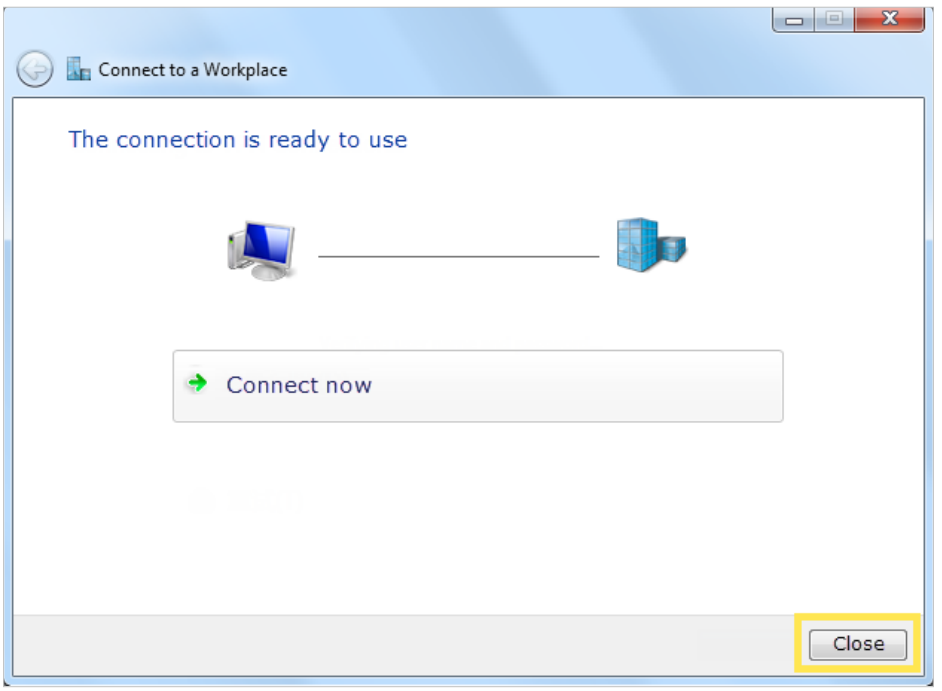
5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field, and select the checkbox Don't connect now; just set it up so I can connect later. Click Next.



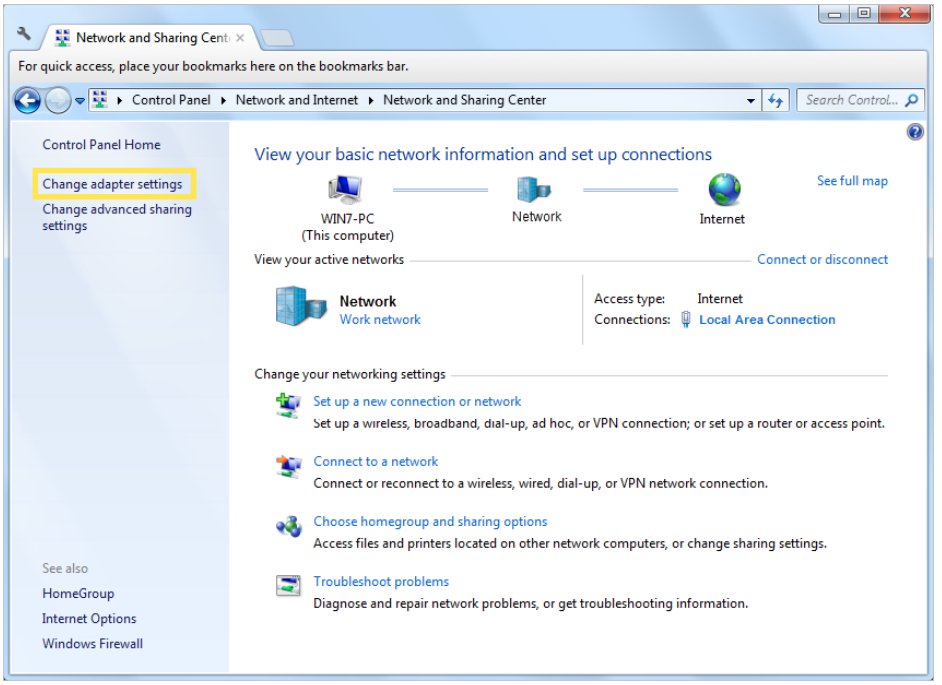
6. Enter the User name and Password you have set for the L2TP/IPSec VPN server on your router, and click Connect.



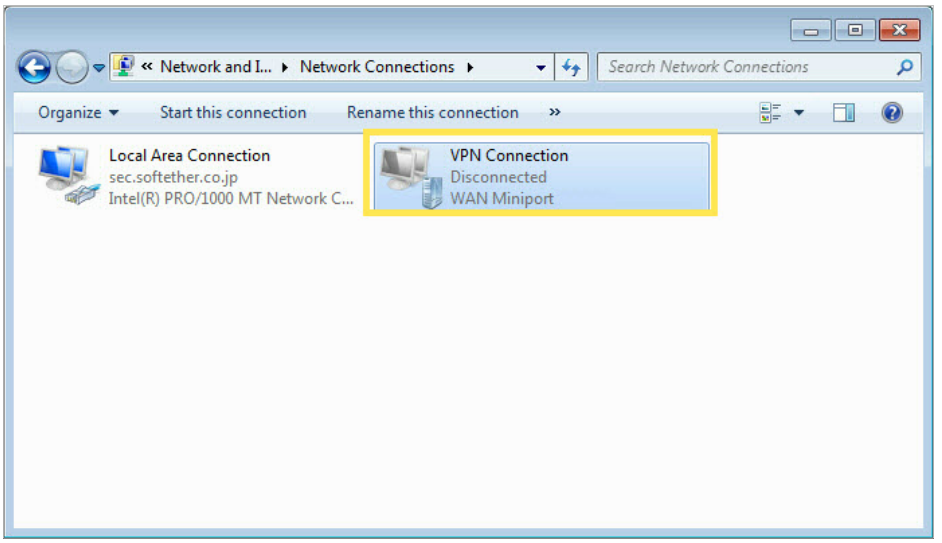
7. Click Close when the VPN connection is ready to use



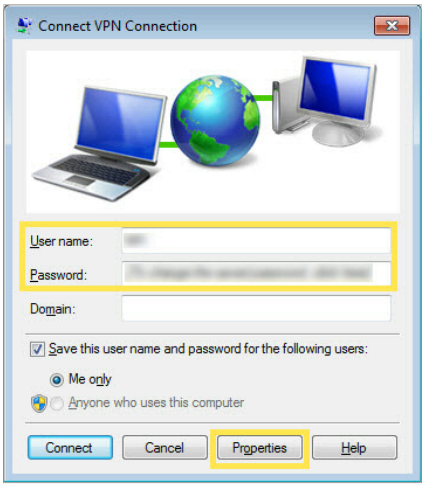
8. Go to Network and Sharing Center and click Change adapter settings.



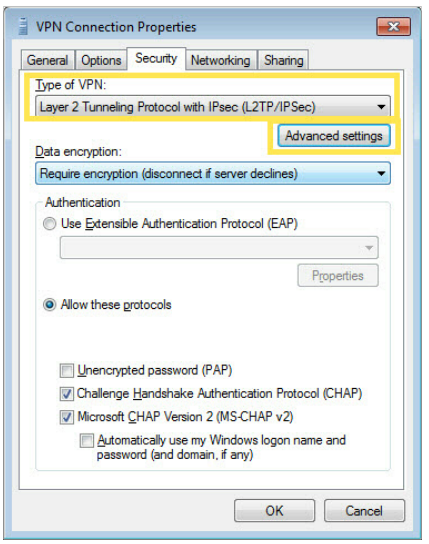
9. Find the VPN connection you created, then double-click it.



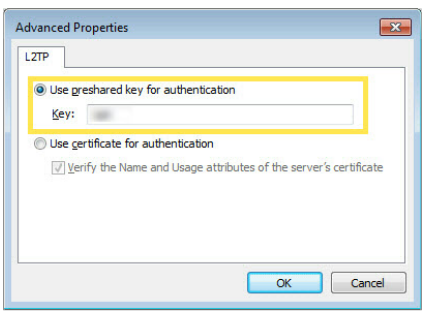
10. Enter the User name and Password you have set for the L2TP/IPSec VPN server on your router, and click Properties.



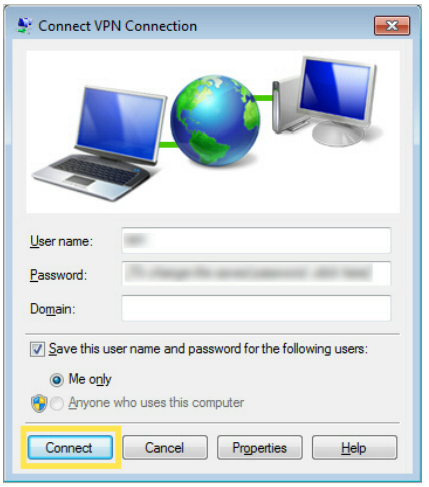
11. Switch to the Security tab, select Layer 2 Tunneling Protocol with IPsec (L2TP/IPSec) and click Advanced settings.



12. Select Use preshared key for authentication and enter the IPSec Pre-Shared Key you have set for the L2TP/IPSec VPN server on your router. Then click OK.



Done! Click Connect to start VPN connection.

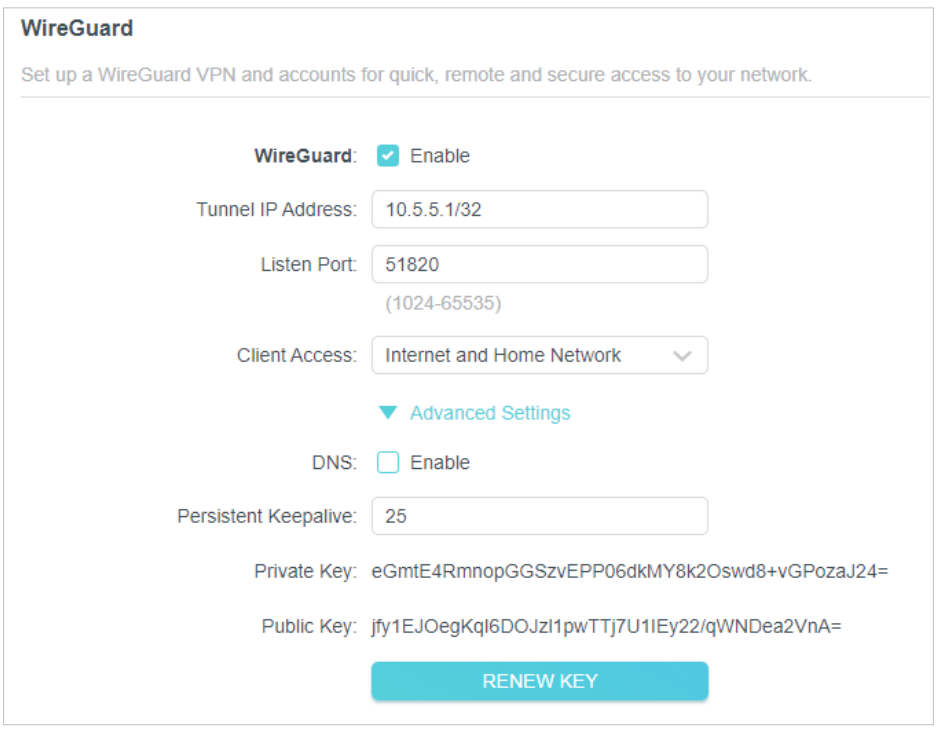


14. 4. Use WireGuard VPN to Access Your Home Network

WireGuard VPN Server is used to create a Wire Guard VPN connection for remote devices to access your home network.

Step 1. Set up WireGuard VPN Server on Your Router

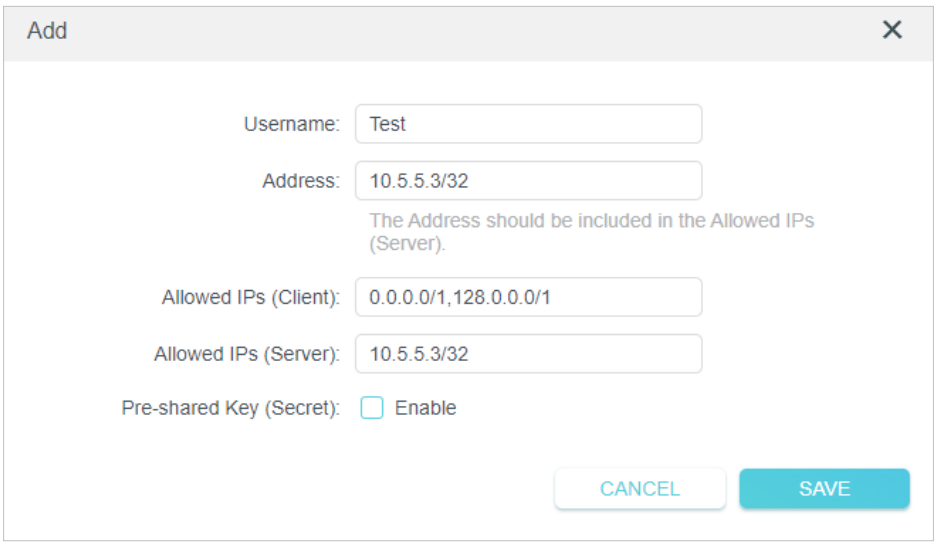
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > VPN Server > WireGuard, and tick the Enable box of WireGuard.



3. Set the tunnel IP address and listen port. Do NOT change it unless necessary.
4. Select your Client Access type. Select Home Network Only if you only want the remote device to access your home network; select Internet and Home Network if you also want the remote device to access internet through the VPN Server.
5. (Optional) Click Advanced Settings to display more settings. If DNS is turned on, the router will become the DNS server of the VPN client that establishes a connection with it. Change the Persistent Keepalive time (25 seconds by default) to send out heartbeat regularly, you can also click RENEW KEY to update the private key and public key.

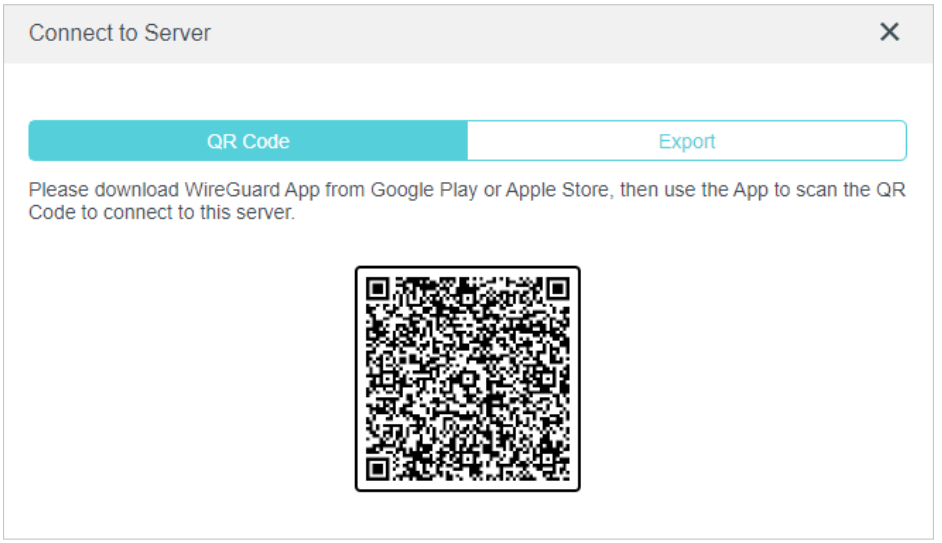
Step 2. Create accounts that can be used by remote clients to connect to the VPN server.

1. Locate the Account List section. Click Add to create an account.



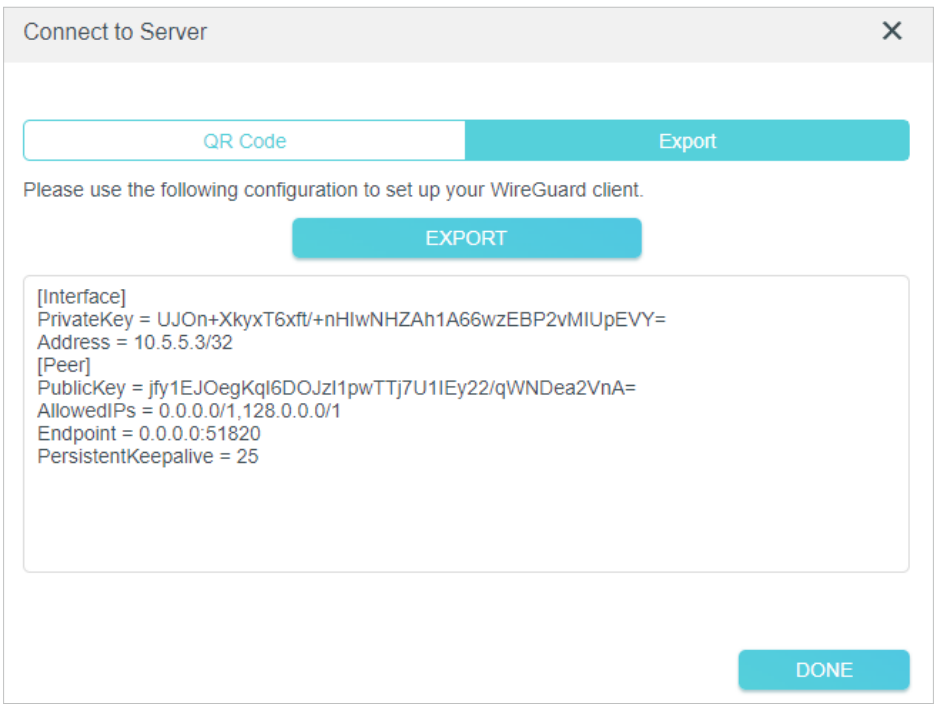
2. Give a name to this account.
3. Enter the address of the virtual interface assigned to this account. Do NOT change it unless necessary.
4. Traffic sent from the WireGard VPN client to the allowed IPs (client) will be transmitted through the tunnel. By default, all network traffic from clients will be transmitted through the tunnel. Do NOT change it unless necessary.
5. Traffic sent from the WireGard VPN server to the allowed IPs (server) will be transmitted through the tunnel. Do NOT change it unless necessary.
6. Enable or disable pre-shared key.
7. Click SAVE.

Note: One account can only be used by one WireGuard VPN client at the same time to connect to the WireGuard VPN server.

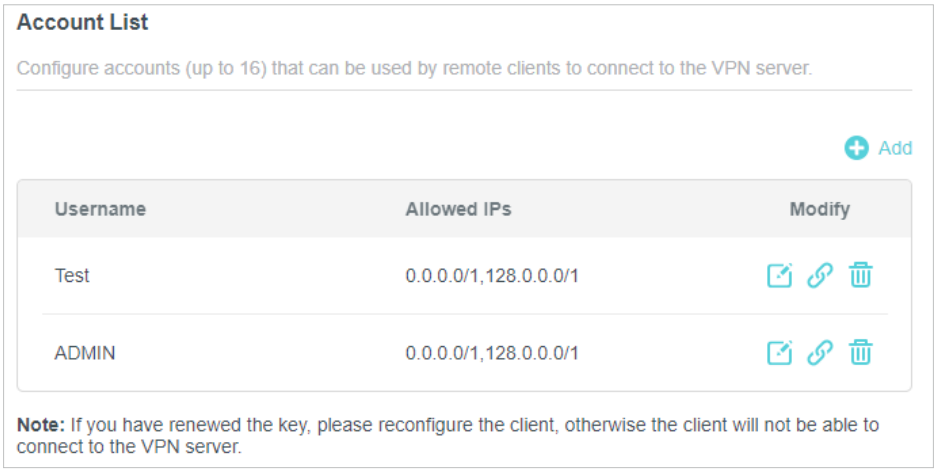


8. Connect to the WireGuard server.

- For mobile phones, download WireGuard App from Google Play or Apple Store, then use the App to scan the QR Code to connect to this server.
- For other devices (e.g. TP-Link WireGuard VPN client), Click EXPORT to save the WireGuard VPN configuration file which will be used by the remote device to access your router.



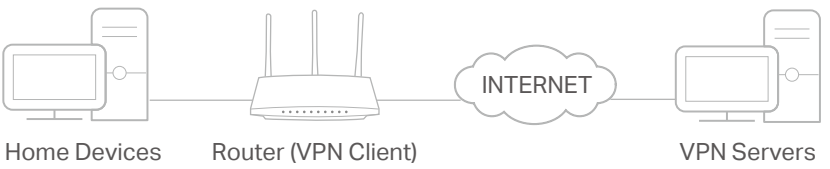
9. On the account list, you can click the button to modify the VPN server settings, connect to the server, or delete the account.



14. 5. Use VPN Client to Access a Remote VPN Server

VPN Client is used to create VPN connections for devices in your home network to access a remote VPN server.

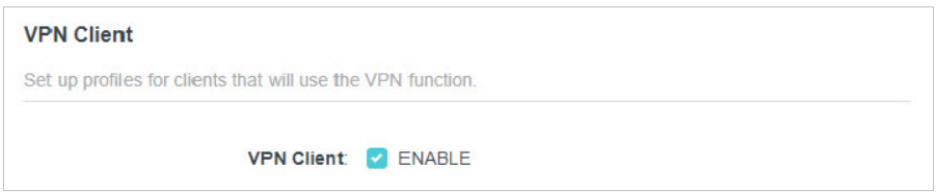
To use the VPN feature, simply configure a VPN connection and choose your desired devices on your router, then these devices can access the remote VPN server. Please follow the steps below:



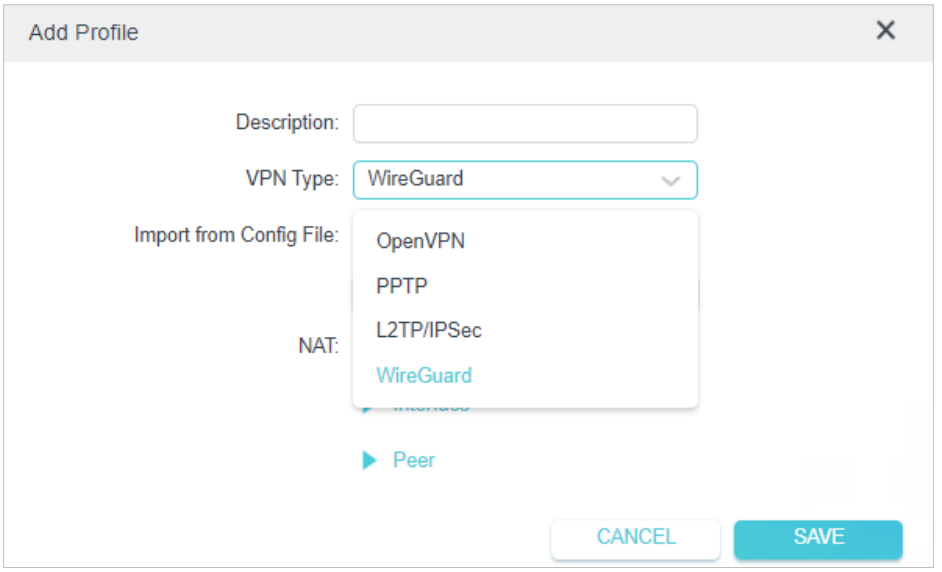
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > VPN Client.

Note: Firmware update may be required to support VPN Client.

3. Enable VPN Client, then save the settings.

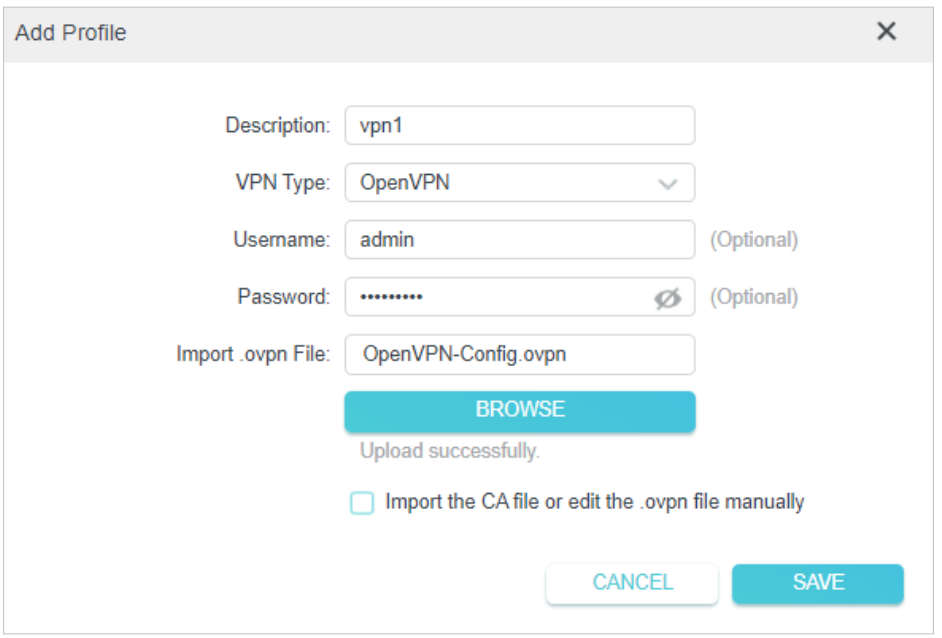


4. Add VPN servers, and enable the one you need.
   1) In the Server List section, click Add.
   2) Specify a description for the VPN, and choose the VPN type.

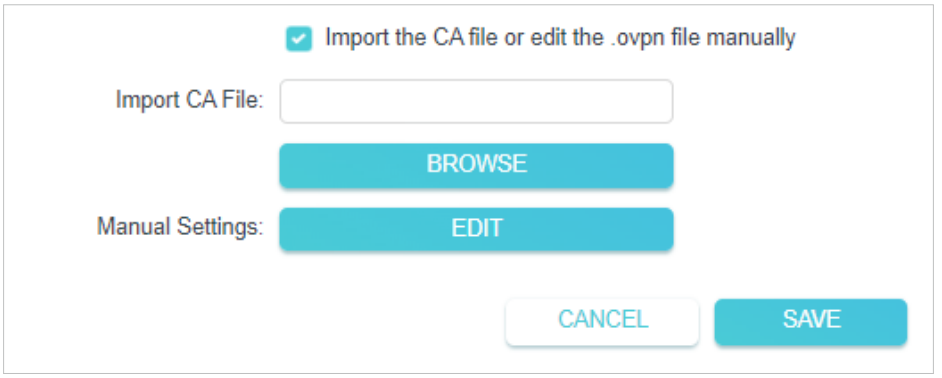


3) Enter the VPN information provided by your VPN provider.

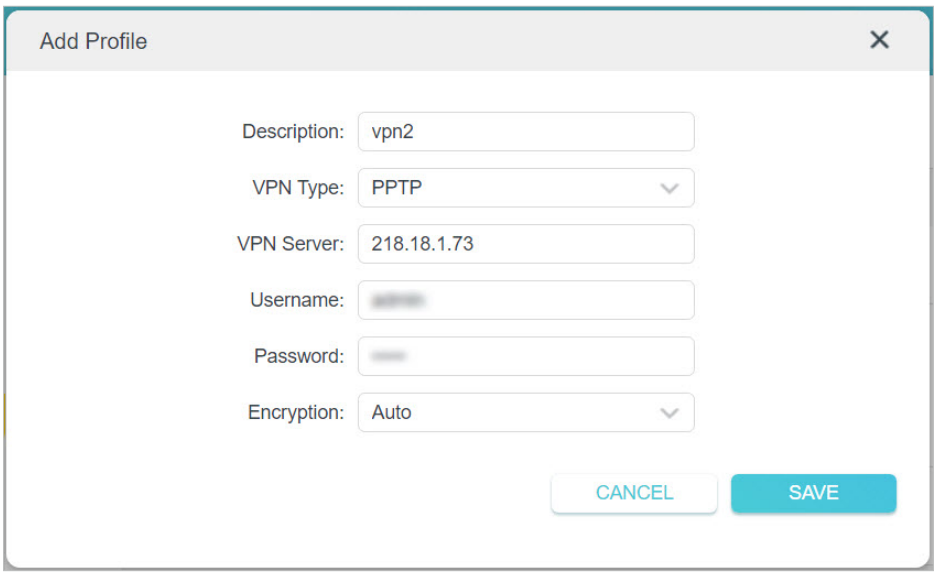
- OpenVPN: Enter the VPN username and password if required by your VPN provider, otherwise simply leave them empty. Then import the configuration file provided by your VPN provider.



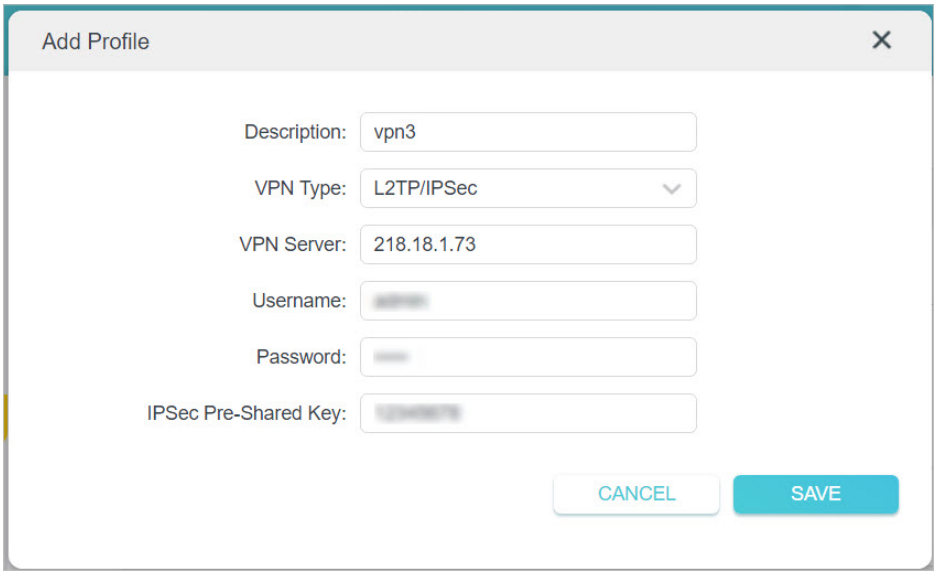
Note: You can also check the box of Import the CA file or edit the . ovpn file manually, then upload the CA file or manually configure the settings.



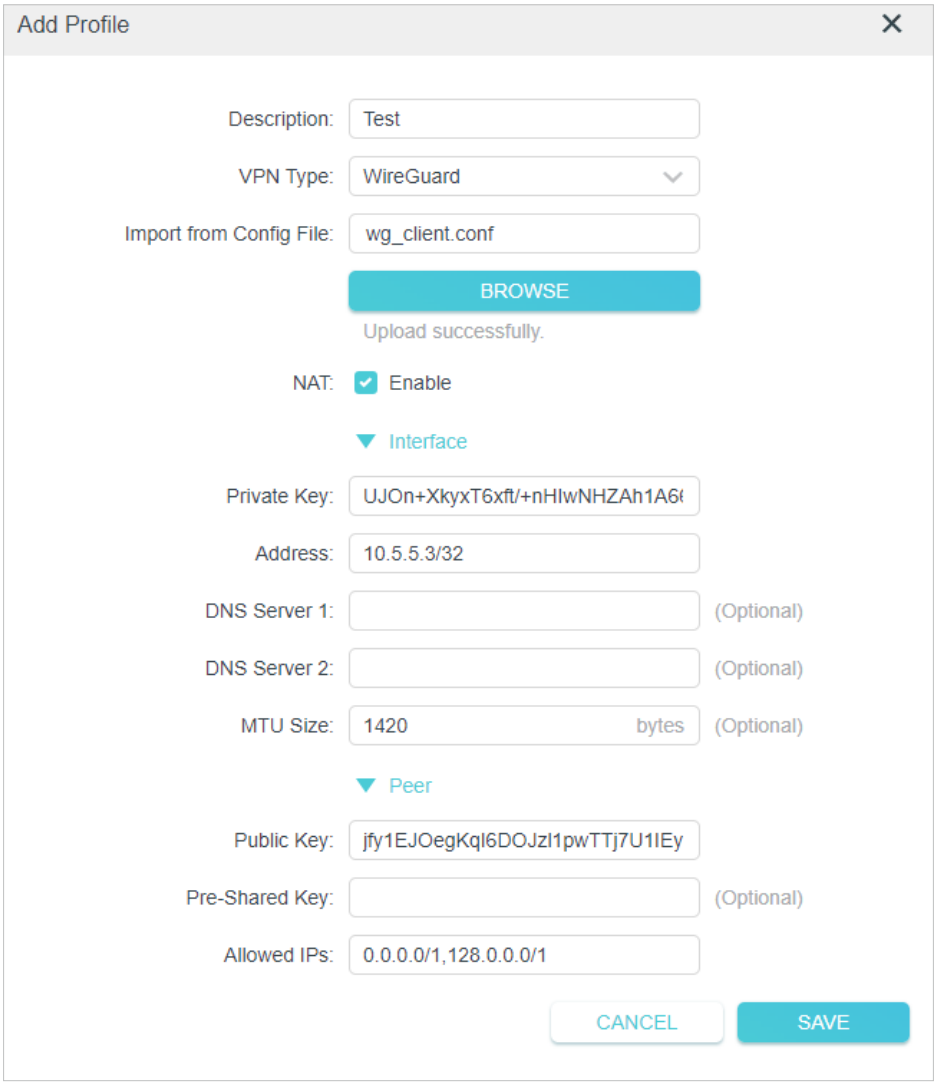
- PPTP: Enter the VPN server address (for example: 218.18.1.73) and the VPN username and password provided by your VPN provider.



- L2TP/IPSec VPN: Enter the VPN server address (for example: 218.18.1.73), VPN username and password, and IPSec pre-shared key provided by your VPN provider.

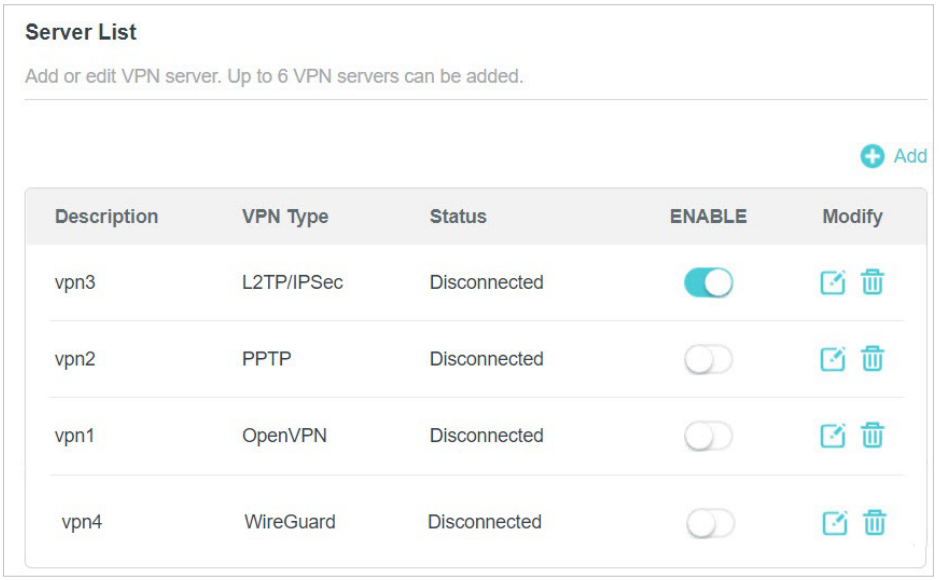


- WireGuard VPN: Give a description, and click BROWSE to import the WireGuard VPN server configuration. Then you will see the detailed parameters. Do NOT change the parameters unless necessary.



4) Save the settings.

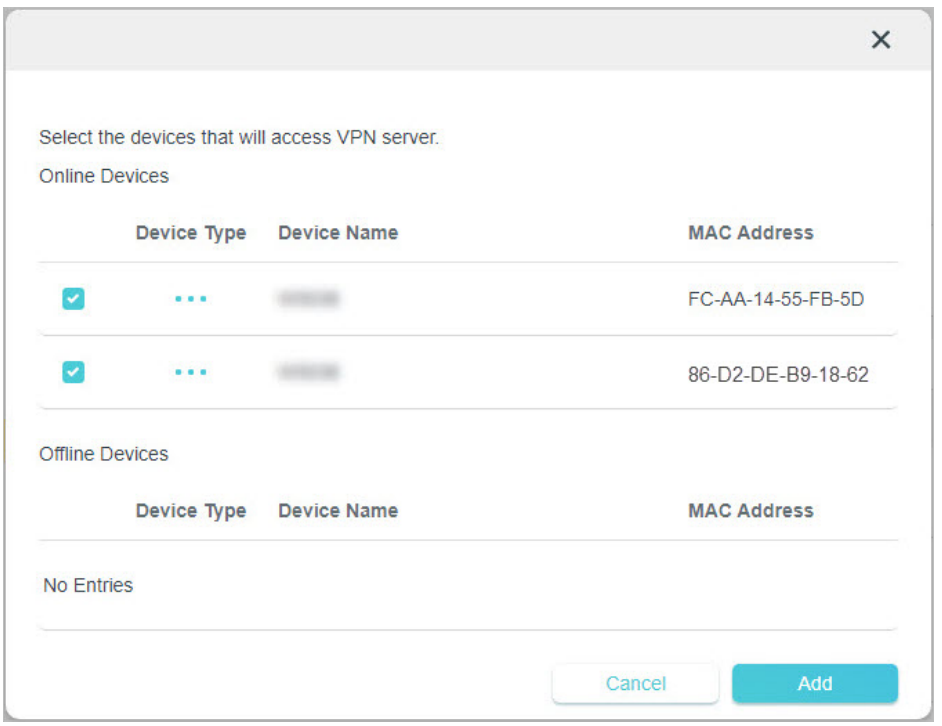
5) In the server list, enable the one you need.



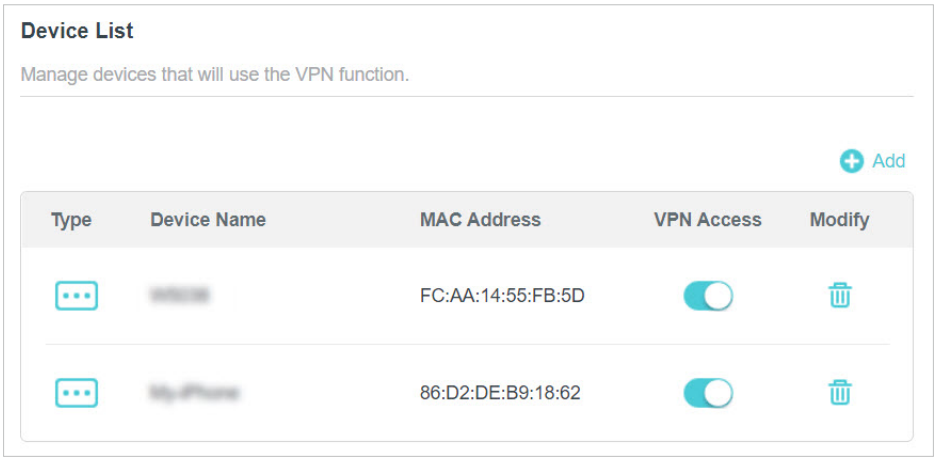
5. Add and manage the devices that will use the VPN function.

1) In the Device List section, click Add.

2) Choose and add the devices that will access the VPN server you have configured.



6. Save the settings.



Done! Now the devices you specified can access the VPN server you enabled.

Chapter 15

Customize Your Network Settings

This chapter guides you on how to configure advanced network features.

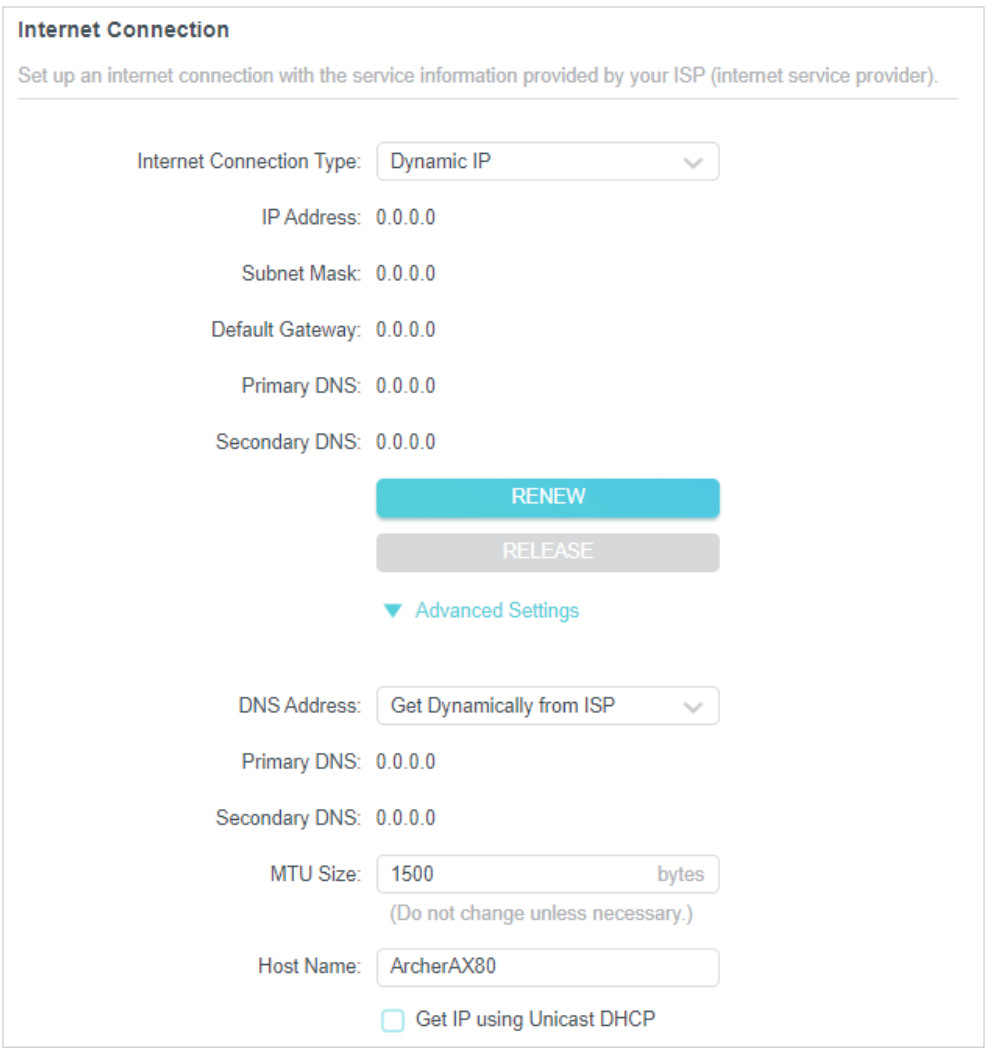
It contains the following sections:

15. 1. Change the Internet Settings

After setting up your internet, you can also easily change the internet settings if needed in the future.

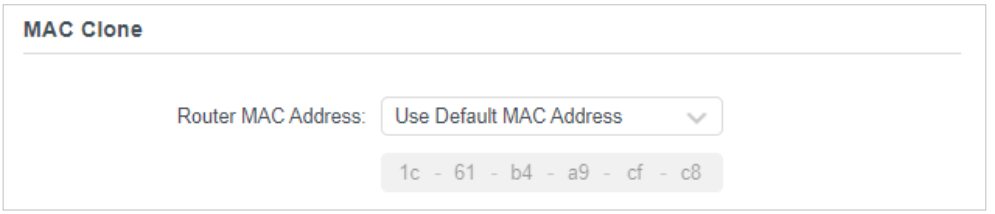
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > Internet.

- **To change the internet connection settings:**



1. Select the internet connection type and configure the settings according to the information provided by your ISP.
2. Optional. Reveal the advanced settings and change the settings if needed. It's recommended to keep the default settings.
3. Click SAVE.

- **To change the MAC address of the router:**



You have three options, Use Default MAC Address, Clone Current Device MAC, Use Custom MAC Address.

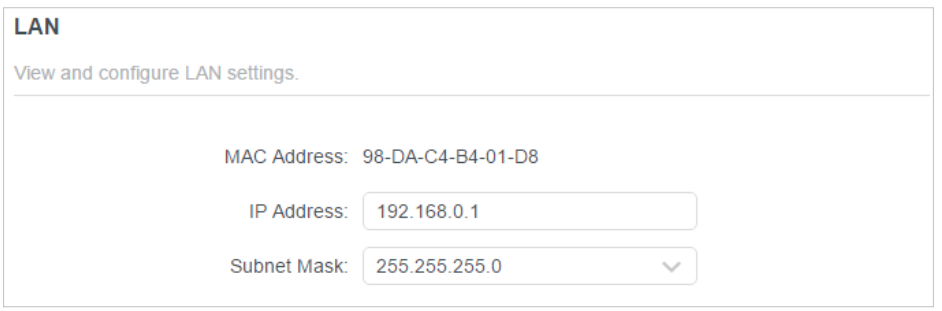
- **To change the Internet Port Negotiation Speed Setting**

You can change the internet port speed mode. Auto Negotiation is recommended.

15. 2. Change the LAN Settings

The router is preset with a default LAN IP 192.168.0.1, which you can use to log in to its web management page. The LAN IP address together with the Subnet Mask also defines the subnet that the connected devices are on. If the IP address conflicts with another device on your local network or your network requires a specific IP subnet, you can change it.

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > LAN.
3. Type in a new IP Address appropriate to your needs. And leave the Subnet Mask as the default settings.



4. Click SAVE.

Note: If you have set the Port Forwarding, DMZ or DHCP address reservation, and the new LAN IP address is not in the same subnet with the old one, then you should reconfigure these features.

15. 3. Configure to Support IPTV Service

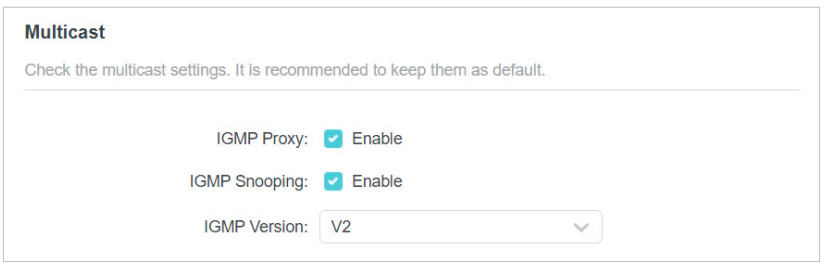
I want to:

Configure IPTV setup to enable Internet/IPTV/Phone service provided by my internet service provider (ISP).

How can I do that?

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > IPTV/VLAN.
3. **If your ISP provides the networking service based on IGMP technology**, e.g., British Telecom(BT) and Talk Talk in UK:

   1) Tick the IGMP Proxy and IGMP Snooping checkbox, then select the IGMP Version, either V2 or V3, as required by your ISP.



   2) Click SAVE.

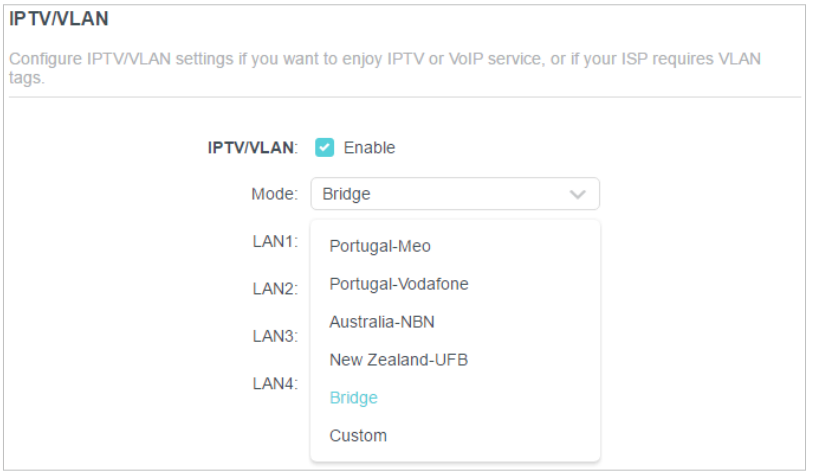
   3) After configuring IGMP proxy, IPTV can work behind your router now. You can connect your set-top box to any of the router's Ethernet port.

   If IGMP is not the technology your ISP applies to provide IPTV service:

   1) Tick Enable IPTV/VLAN.

   2) Select the appropriate Mode according to your ISP.

   - Select Bridge if your ISP is not listed and no other parameters are required.
   - Select Custom if your ISP is not listed but provides necessary parameters.



3) After you have selected a mode, the necessary parameters, including the LAN port for IPTV connection, are predetermined. If not, select the LAN type to determine which port is used to support IPTV service.

4) Click SAVE.

5) Connect the set-top box to the corresponding LAN port which is predetermined or you have specified in Step 3.

Done!

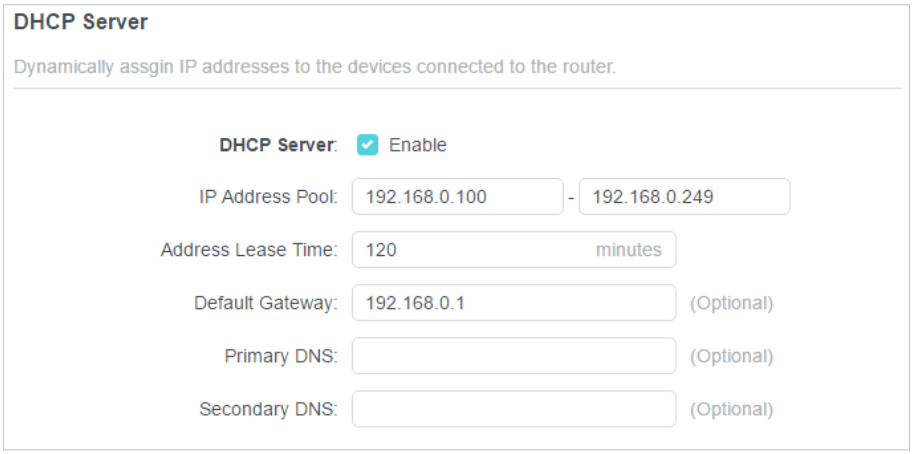
Your IPTV setup is done now! You may need to configure your set-top box before enjoying your TV.

15. 4. Specify DHCP Server Settings

By default, the DHCP (Dynamic Host Configuration Protocol) Server is enabled and the router acts as a DHCP server; it dynamically assigns TCP/IP parameters to client devices from the IP Address Pool. You can change the settings of the DHCP Server if necessary, and you can reserve LAN IP addresses for specified client devices.

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > DHCP Server.

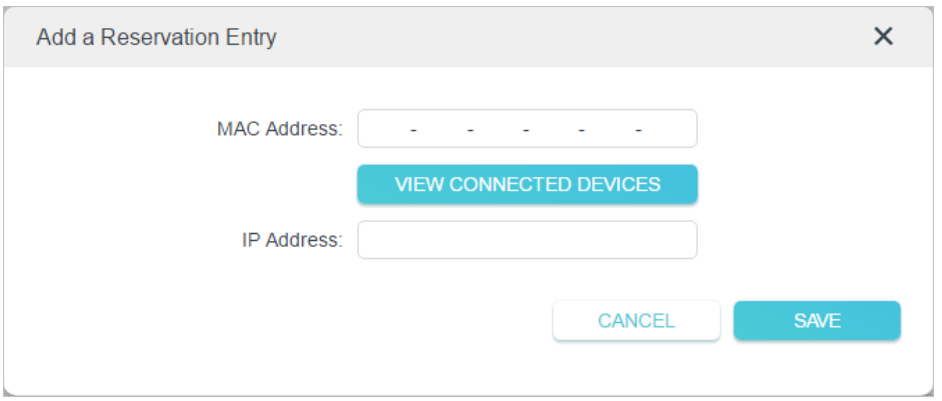
- **To specify the IP address that the router assigns:**



1. Tick the Enable checkbox.
2. Enter the starting and ending IP addresses in the IP Address Pool.
3. Enter other parameters if the ISP offers. The Default Gateway is automatically filled in and is the same as the LAN IP address of the router.
4. Click SAVE.

- **To reserve an IP address for a specified client device:**

1. Click Add in the Address Reservation section.



2. Click VIEW CONNECTED DEVICES and select the you device you want to reserve an IP for. Then the MAC Address will be automatically filled in. Or enter the MAC address of the client device manually.
3. Enter the IP address to reserve for the client device.
4. Click SAVE.

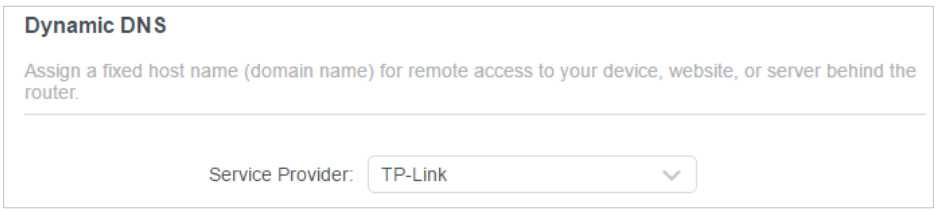
15. 5. Set Up a Dynamic DNS Service Account

Most ISPs assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change from time to time

and you don't know when it changes. In this case, you might apply the DDNS (Dynamic Domain Name Server) feature on the router to allow you and your friends to access your router and local servers (FTP, HTTP, etc.) using a domain name without checking and remembering the IP address.

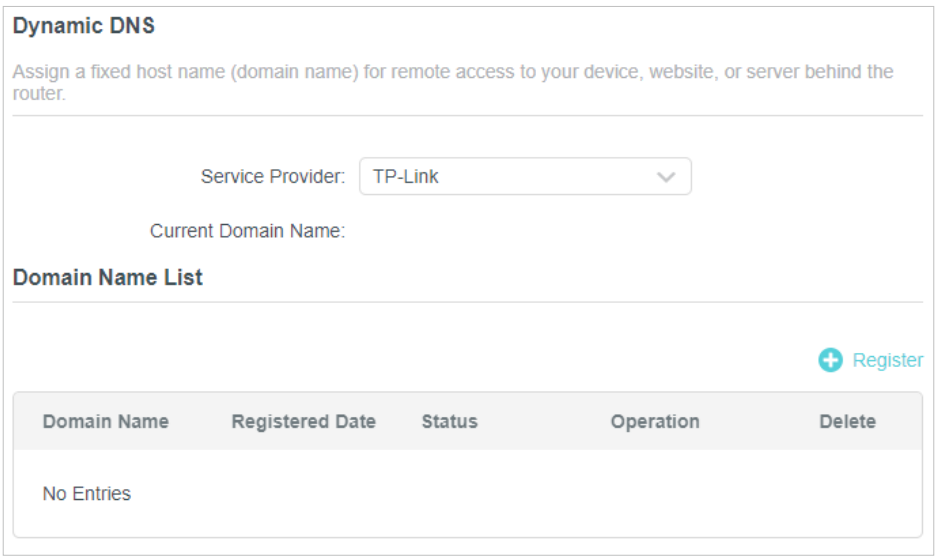
Note: DDNS does not work if the ISP assigns a private WAN IP address (such as 192.168.1.x) to the router.

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > Dynamic DNS.
3. Select the DDNS Service Provider: TP-Link, NO-IP or DynDNS. It is recommended to select TP-Link so that you can enjoy TP-Link's superior DDNS service. Otherwise, please select NO-IP or DynDNS. If you don't have a DDNS account, you have to register first by clicking Register Now.

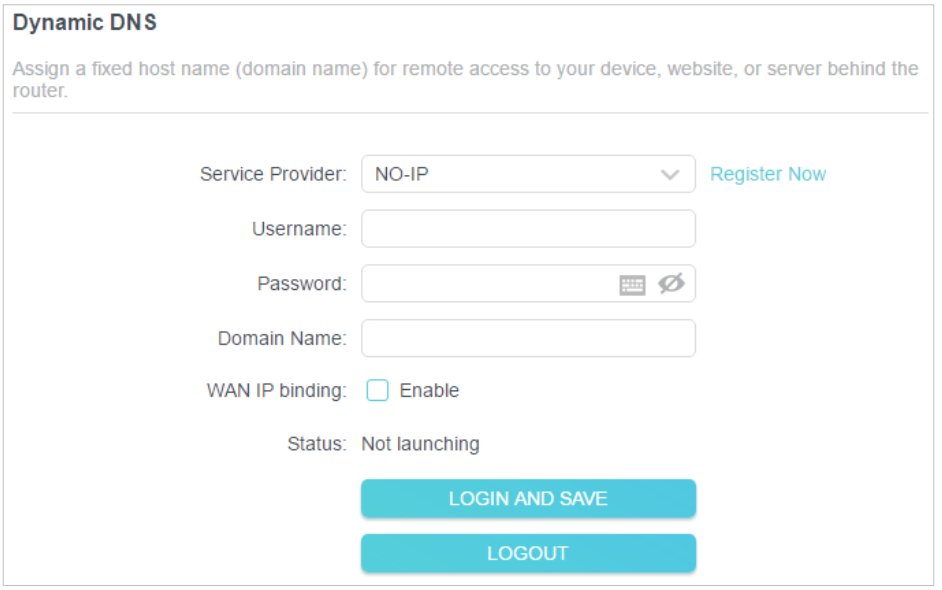


Note: To enjoy TP-Link's DDNS service, you have to log in with a TP-Link ID. If you have not logged in with one, click log in.

4. Click Register in the Domain Name List if you have selected TP-Link, and enter the Domain Name as needed.



If you have selected NO-IP or DynDNS, enter the username, password and domain name of your account.



5. Click LOGIN AND SAVE.

Tips: If you want to use a new DDNS account, please click Logout first, and then log in with a new account.

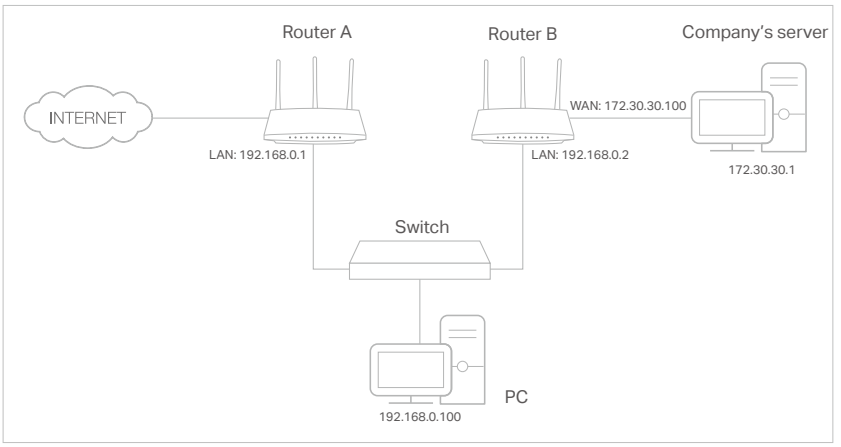
15. 6. Create Static Routes

Static routing is a form of routing that is configured manually by a network administrator or a user by adding entries into a routing table. The manually-configured routing information guides the router in forwarding data packets to the specific destination.

I want to:

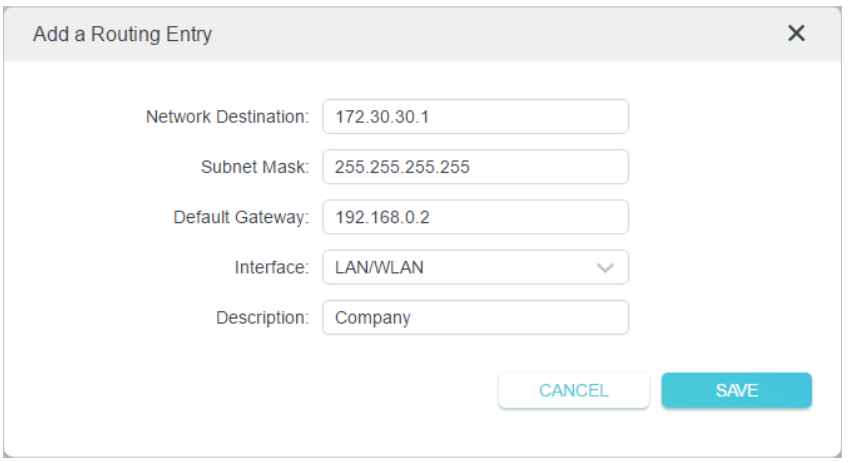
Visit multiple networks and servers at the same time.

For example, in a small office, my PC can surf the internet through Router A, but I also want to visit my company's network. Now I have a switch and Router B. I connect the devices as shown in the following figure so that the physical connection between my PC and my company's server is established. To surf the internet and visit my company's network at the same time, I need to configure the static routing.



How can I do that?

1. Change the routers' LAN IP addresses to two different IP addresses on the same subnet. Disable Router B's DHCP function.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for Router A.
3. Go to Advanced > Network > Routing.
4. Click Add and finish the settings according to the following explanations:



Network Destination: The destination IP address that you want to assign to a static route. This IP address cannot be on the same subnet with the WAN IP or LAN IP of Router A. In the example, the IP address of the company network is the destination IP address, so here enter 172.30.30.1.

Subnet Mask: Determines the destination network with the destination IP address. If the destination is a single IP address, enter 255.255.255.255; otherwise, enter the subnet mask of the corresponding network IP. In the example, the destination network is a single IP, so here enter 255.255.255.255.

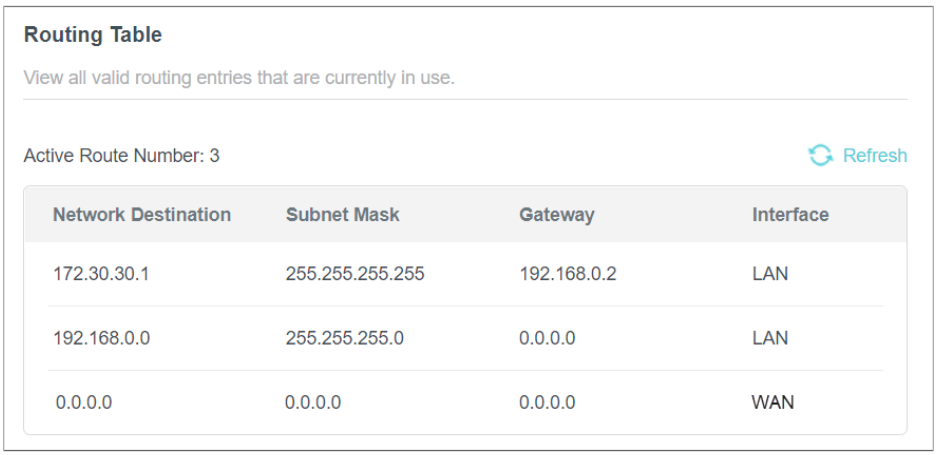
Default Gateway: The IP address of the gateway device to which the data packets

will be sent. This IP address must be on the same subnet with the router's IP which sends out data. In the example, the data packets will be sent to the LAN port of Router B and then to the Server, so the default gateway should be 192.168.0.2.

Interface: Determined by the port (WAN/LAN) that sends out data packets. In the example, the data are sent to the gateway through the LAN port of Router A, so LAN/WLAN should be selected.

Description: Enter a description for this static routing entry.

5. Click SAVE.
6. Check the Routing Table below. If you can find the entry you've set, the static routing is set successfully.



Done!

Open a web browser on your PC. Enter the company server's IP address to visit the company network.

Chapter 16

Manage the Router

This chapter will show you the configuration for managing and maintaining your router.

It contains the following sections:

16. 1. Update the Firmware

TP-Link aims at providing better network experience for users.

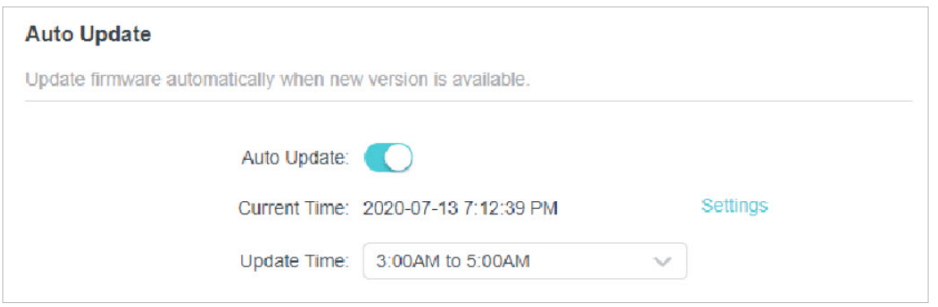
We will inform you through the web management page if there's any new firmware available for your router. Also, the latest firmware will be released at the TP-Link official website www.tp-link.com, and you can download it from the Support page for free.

Note:

- Back up your router's configurations before firmware update.
- Do NOT turn off the router during the firmware update.

16. 1. 1. Auto Update

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > System > Firmware Update.
3. Enable Auto Update.



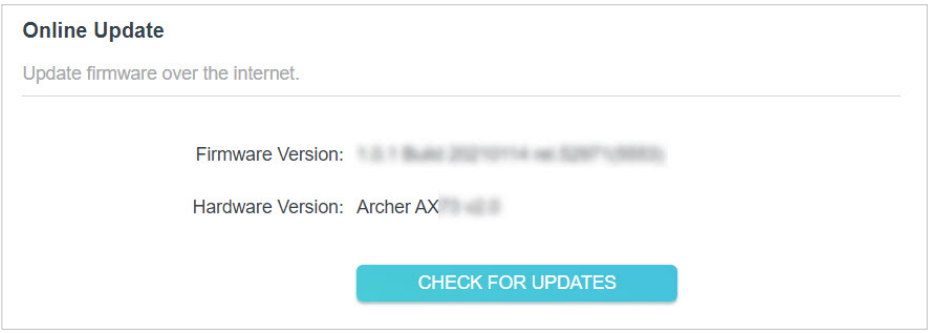
4. Specify the Update Time and save the settings.

The router will update firmware automatically at the specified time when new version is available.

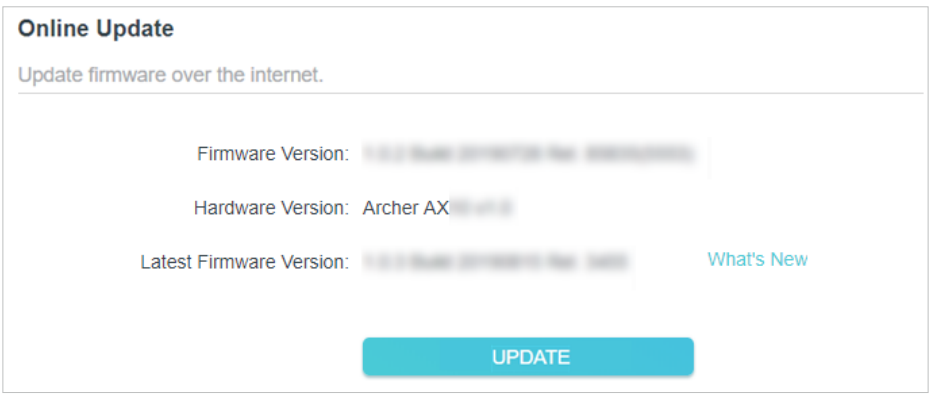
16. 1. 2. Online Update

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. When the latest firmware is available for your router, the update icon will display in the top-right corner of the page. Click the icon to go to the Firmware Update page.

   Alternatively, you can go to Advanced > System > Firmware Update, and click CHECK FOR UPDATES to see whether the latest firmware is released.



3. Focus on the Online Update section, and click UPDATE if there is new firmware.



4. Wait a few minutes for the update and reboot to complete.

Tips: If there's a new and important firmware update for your router, you will see the prompt notification on your computer as long as a web browser is opened. Click to update, and log in to the web management page with the username and password you set for the router. You will see the Firmware Update page.

16. 1. 3. Local Update

1. Download the latest firmware file for the router from www.tp-link.com.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > System > Firmware Update.
4. Focus on the Local Update section. Click BROWSE to locate the downloaded new firmware file, and click UPDATE.