User Guide

BBA Tri-band Routers

 1910020940 REV1.0.0

Contents

About This Guide

This guide is a complement of Quick Installation Guide. The Quick Installation Guide instructs you on quick internet setup, and this guide provides details of each function and shows you the way to configure these functions appropriate to your needs.

Note: Features available in the router may vary by model and software version. Router availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual Router experience.

Conventions

In this guide the following conventions are used:

Convention	Description
Underlined	Underlined words or phrases are hyperlinks. You can click to redirect to a website or a specific section.
Teal	Contents to be emphasized and texts on the web page are in teal, including the menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, Advanced > Wireless > WDS means the WDS function page is under the Wireless menu that is located in the Advanced tab.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	• Click to edit the corresponding entry. • Click to delete the corresponding entry. • click to enable or disable the corresponding entry. • Click to view more information about items on the page.

More Info

The latest software, management app and utility can be found at Download Center at https://www.tp-link.com/support/download/.

The Quick Installation Guide can be found where you find this guide or inside the package of the router.

Specifications can be found on the product page at https://www.tp-link.com.

TP-Link Community is provided for you to discuss our products and share knowledge at https://community.tp-link.com.

Our Technical Support contact information can be found at the Contact Technical Support page at https://www.tp-link.com/support/.

*Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary as a result of 1) environmental factors, including building materials, physical objects, and obstacles, 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead, and 3) client limitations, including rated performance, location, connection, quality, and client condition.

*Use of Wi-Fi 6 (802.11ax), and features including OFDMA, MU-MIMO, 1024-QAM, and HT160 require clients to also support the corresponding features.

*Saving clients' battery power requires clients to also support the 802.11ax Wi-Fi standard. Actual power reduction may vary as a result of network conditions, client limitations, and environmental factors.

*Use of WPA3 requires clients to also support the corresponding feature.

*This router may not support all the mandatory features as ratified in Draft 3.0 of IEEE 802.11ax specification.

*Further software upgrades for feature availability may be required.

Chapter 1

Get to Know About Your Router

This chapter introduces what the router can do and shows its appearance.

It chapter contains the following sections:

1. 1. Product Overview

TP-Link AX router, with next-generation 802.11ax Wi-Fi Technology, achieves Wi-Fi performance at its ultimate level. The revolutionary combination of OFDMA and 1024QAM improve throughput by 4 times and dramatically increase the whole network capacity and efficiency. It's also backwards compatible with 802.11a/b/g/n/ac.

Moreover, it is simple and convenient to set up and use the TP-Link router due to its intuitive web interface and the powerful Aginet app.

Note: The appearance of the product is for illustration only, it may be different from your device, please refer to the actual product.

1. 2. Appearance

1. 2. 1. Top Panel

The router's LEDs (view from left to right) are located on the front. You can check the router's working status by following the LED Explanation table.

Some Common LEDs Explanation

LED	Status	Indication
(Power)	On	The system has started up successfully.
	Flashing slowly	The system is starting up or the firmware is being upgraded. Do not disconnect or power off your router.
	Flashing quickly	WPS connection is in process.
	Off	Power is off.
(2.4GHz Wireless)	On	The 2.4GHz wireless band is enabled.
	Off	The 2.4GHz wireless band is disabled.
(5GHz Wireless)	On	The 5GHz wireless band is enabled.
	Off	The 5GHz wireless band is disabled.
(Internet)	Green On	Internet service is available.
	Orange On	The router's WAN port is connected, but the internet service is not available.
	Off	The router's WAN port is unplugged.
(Ethernet)	On	At least one powered-on device is connected to the router's LAN port.
	Off	No powered-on device is connected to the router's LAN port.
(USB)	On	The USB device is identified and ready to use.
	Flashing	A new USB device is being identified.
	Off	No USB device is plugged in to the USB port.

1. 2. 2. The Back Panel

The following parts (view from left to right) are located on the back panel.

Some Common Buttons and Ports Explanation

Item	Description
Power Port	For connecting the router to a power socket via the provided power adapter.
Power On/Off Button	Press this button to power on or off the router.
2.5 Gbps WAN/LAN Port	For connecting to a DSL/Cable modem, or an Ethernet jack.
1 Gbps WAN/LAN Port	For connecting to a DSL/Cable modem, or an Ethernet jack.
LAN Ports (1/2/3)	For connecting your PC or other wired devices to the router.
USB Port	For connecting to a USB storage device.
WPS/Wi-Fi Button	Press the button for 1 second, and immediately press the WPS button on your client to start the WPS process.
	Press and hold the button for 2 seconds to turn on or off the wireless function of your router.
Reset Button	Press and hold the button until all LEDs turn on to reset the router to its factory default settings.
LED Button	Press the button for 1 second to turn on or off the LEDs of your router.
Antennas	Used for wireless operation and data transmit. Upright them for the best Wi-Fi performance.

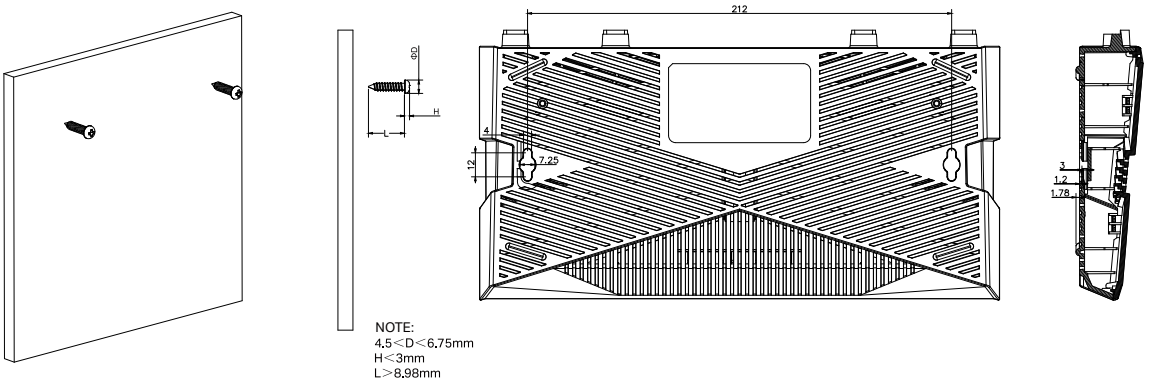
Chapter 2

Connect the Hardware

This chapter contains the following sections:

2. 1. Position Your Router

- The product should not be located in a place where it will be exposed to moisture or excessive heat.
- Place the router in a location where it can be connected to multiple devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way so they do not create a tripping hazard.
- The router can be placed on a shelf or desktop.
- Keep the router away from devices with strong electromagnetic interference, such as Bluetooth devices, cordless phones and microwaves.
- Generally, the router is placed on a horizontal surface, such as on a shelf or desktop. The device also can be mounted on the wall as shown in the following figure.



Note:

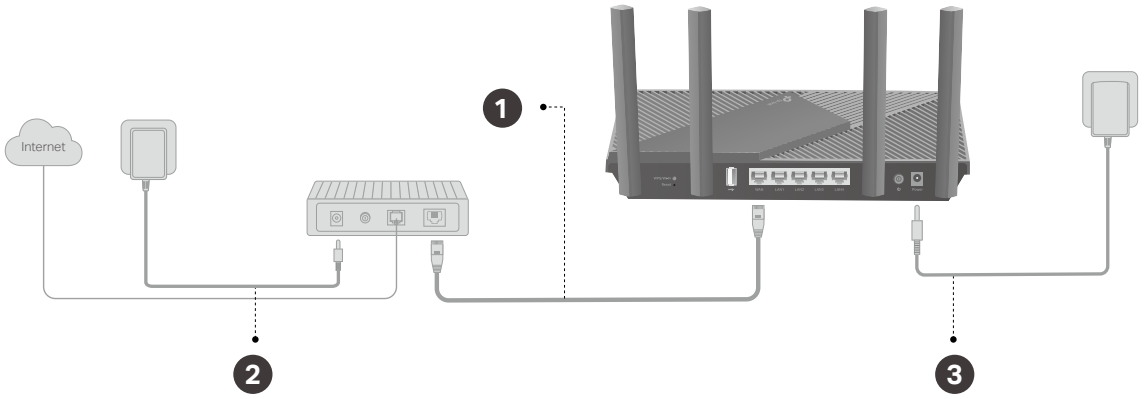
The diameter of the screw head, 4.5mm<D<6.75mm, and the distance of two screws is 212 mm. The screw that project from the wall need around 3mm based, and the length of the screw need to be at least 8.98mm to withstand the weight of the product.

2. 2. Connect Your Router

Before you start, turn off your modem, if any, and remove the backup battery if it has one. And place the router horizontally and orient the antennas vertically.

Follow the steps below to connect your router.

If your internet comes from an Ethernet outlet instead of a DSL / Cable / Satellite modem, connect the router's WAN/LAN port to it, then follow steps 3 and 4 to complete the hardware connection.



1. Connect the modem to the router's WAN port with an Ethernet cable.
2. Turn on the modem, and then wait about **2 minutes** for it to restart.
3. Connect the power adapter to the router and turn on the router.
4. Verify that the hardware connection is correct by checking the following LEDs.

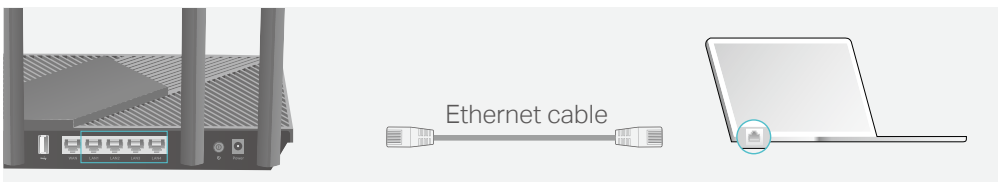
Note:

Note: If the 2.4GHz LED and 5GHz LED are off, press and hold the WPS/Wi-Fi button on the back for more than 2 seconds. Both the LEDs should turn solid on.

5. Connect your computer to the router.

- **Method 1: Wired**

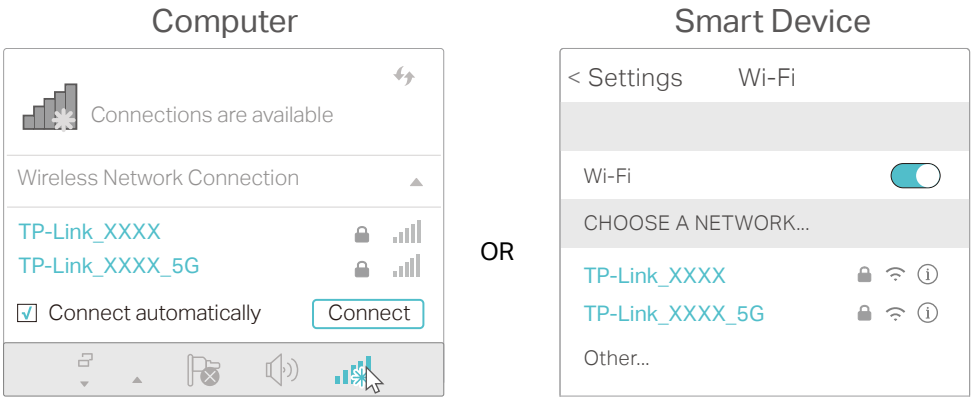
Turn off the Wi-Fi on your computer and connect the devices as shown below.



- **Method 2: Wirelessly**

1) Find the SSID (Network Name) and Wireless Password printed on the label at the bottom of the router.

2) Click the network icon of your computer or go to Wi-Fi Settings of your smart device, and then select the SSID to join the network.



- **Method 3: Use the WPS button**

Wireless devices that support WPS, including Android phones, tablets, and most USB network cards, can be connected to your router through this method.

Note:

- WPS is not supported by iOS devices.
- The WPS function cannot be configured if the wireless function of the router is disabled. Also, the WPS function will be disabled if your wireless encryption is WEP. Please make sure the wireless function is enabled and is configured with the appropriate encryption before configuring the WPS.

1) Tab the WPS icon on the device's screen. Here we take an Android phone for instance.

2) Within two minutes, press the WPS button on your router.

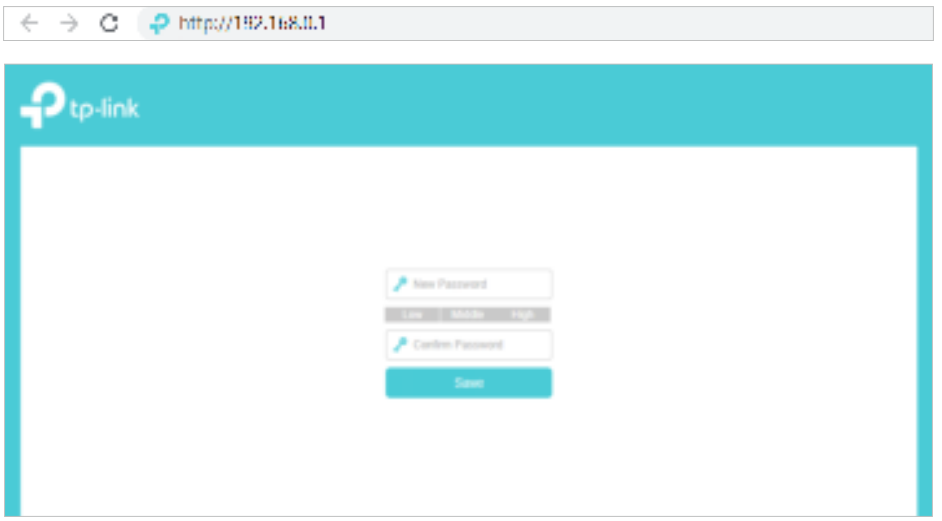
Chapter 3

Log In to Your Router

With a web-based utility, it is easy to configure and manage the router. The web-based utility can be used on any Windows, Mac OS or UNIX OS with a Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

Follow the steps below to log in to your router.

1. Set up the TCP/IP Protocol in Obtain an IP address automatically mode on your computer.
2. Visit http://tplinkwifi.net or http://192.168.0.1, and create a login password for secure management purposes. Then click Save to log in.



Note:

- If the login window does not appear, please refer to the FAQ Section.

Chapter 4

Set Up Internet Connection

This chapter introduces how to connect your router to the internet. The router is equipped with a web-based Quick Setup wizard. It has necessary ISP information built in, automates many of the steps and verifies that those steps have been successfully completed. Furthermore, you can also set up an IPv6 connection if your ISP provides IPv6 service.

It contains the following sections:

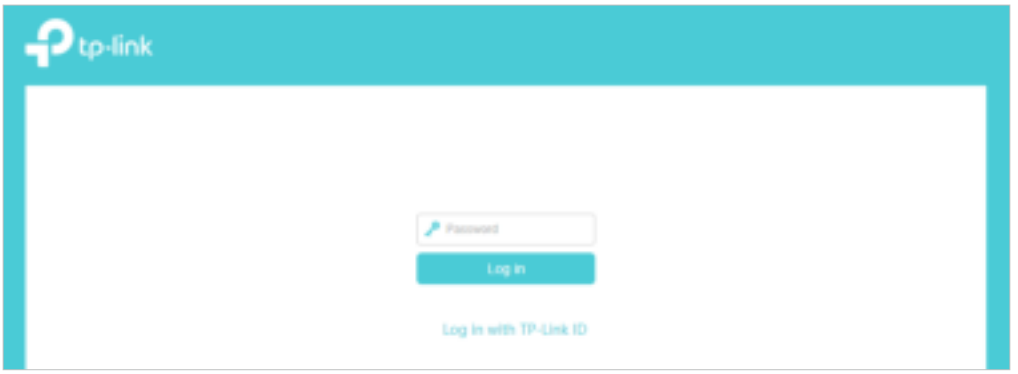
4. 1. Use Quick Setup Wizard

The Quick Setup Wizard will guide you to set up your router.

Tips:
If you need the IPv6 internet connection, please refer to the section of Set Up an IPv6 Internet Connection.

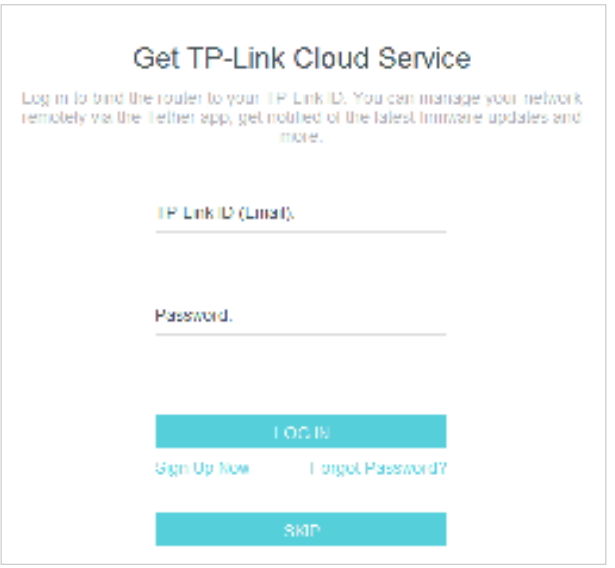
Follow the steps below to set up your router.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.



2. Follow the step-by-step instructions to complete Quick Setup configuration or go to Quick Setup for configuration to connect your router to the internet. Then follow the step-by-step instructions to connect your router to the internet.

3. To enjoy a more complete service from TP-Link (remote management, TP-Link DDNS, and more.), log in with your TP-Link ID or click Sign Up Now to get one. Then follow the instructions to bind the cloud router to your TP-Link ID.



Note:

- To learn more about the TP-Link Cloud service, please refer to the TP-Link Cloud Service section.
- If you do not want to register a TP-Link ID now, you may click Skip to proceed.
- If you have changed the preset wireless network name (SSID) and wireless password during the Quick Setup process, all your wireless devices must use the new SSID and password to connect to the router.

4. 2. Quick Setup Via TP-Link Aginet App

The Aginet app runs on iOS and Android devices, such as smartphones and tablets.

1. Launch the Apple App Store or Google Play store and search "TP-Link Aginet" or simply scan the QR code to download and install the app.

2. Launch the Aginet app and log in with your TP-Link ID.

Note: If you don't have a TP-Link ID, create one first.

3. Tap the Create a Network button and select how you will connect your device to the internet. Follow the steps to complete the setup and connect to the internet.
4. Connect your devices to the newly configured wireless networks of the router and enjoy the internet!

4. 3. Manually Set Up Your Internet Connection

In this part, you can check your current internet connection settings. You can also modify the settings according to the service information provided by your ISP.

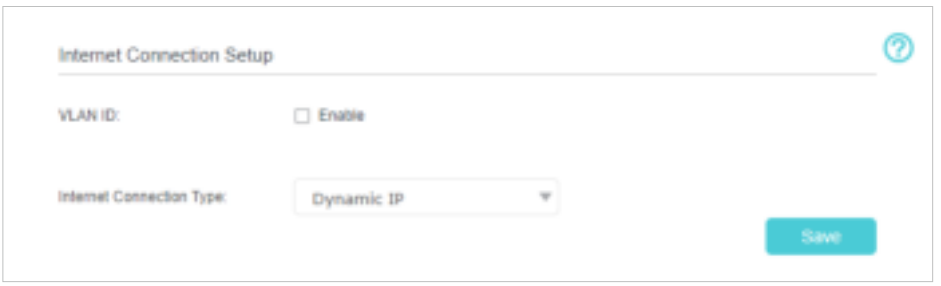
Follow the steps below to check or modify your internet connection settings.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > Internet.
3. Follow the instructions on the page to continue the configuration. Parameters on the figures are just used for demonstration.

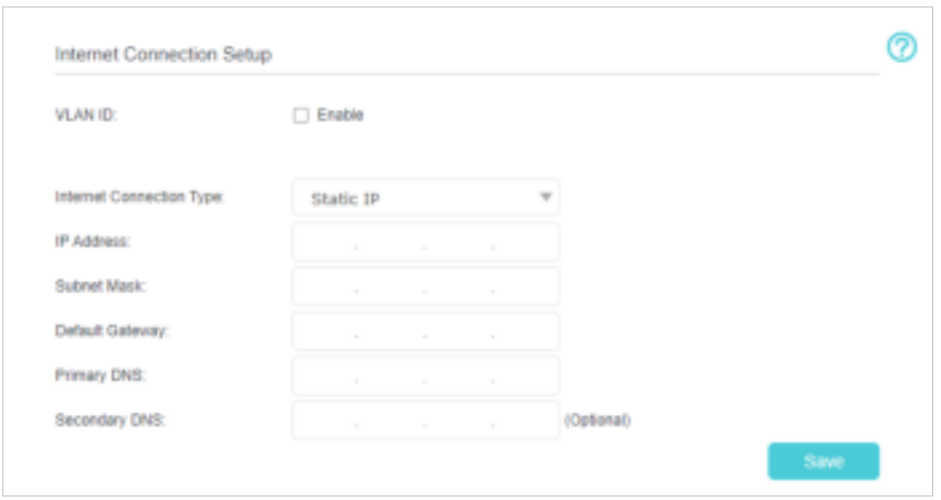
Note:

Since different connection types require different cables and connection information, you can also refer to the demonstrations to determine your connection type.

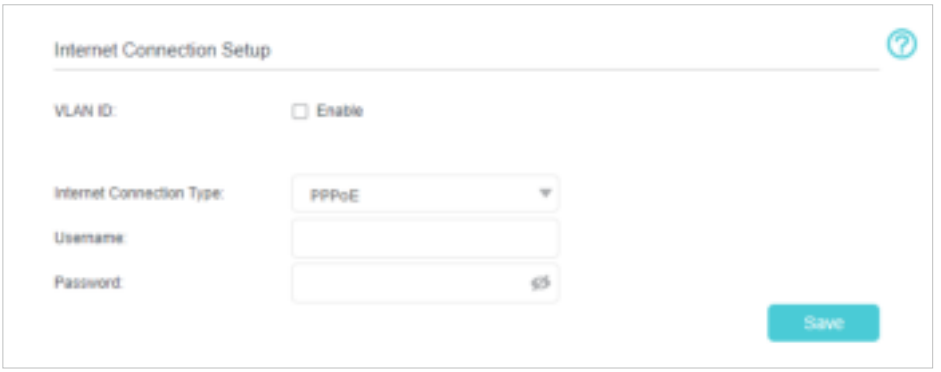
1) If you choose Dynamic IP, the IP address and Subnet Mask are assigned automatically by the ISP. Dynamic IP users are usually equipped with a cable TV or fiber cable.



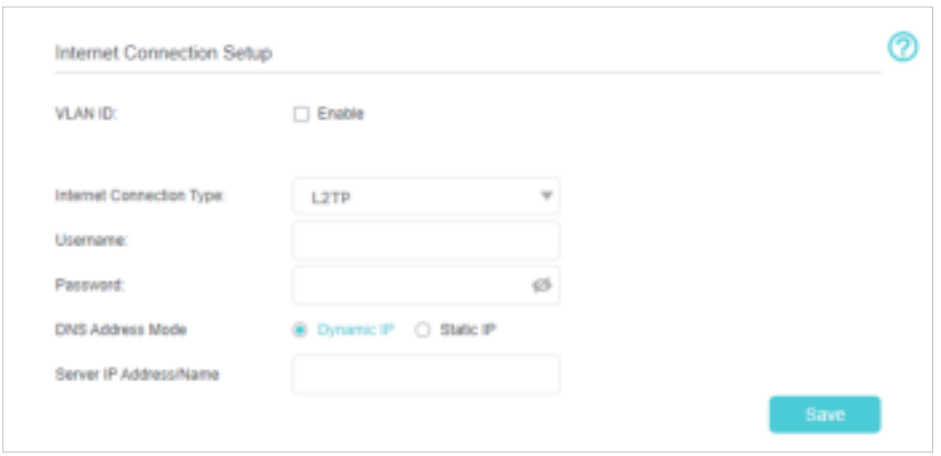
2) If you choose Static IP, enter the information provided by your ISP in the corresponding fields.



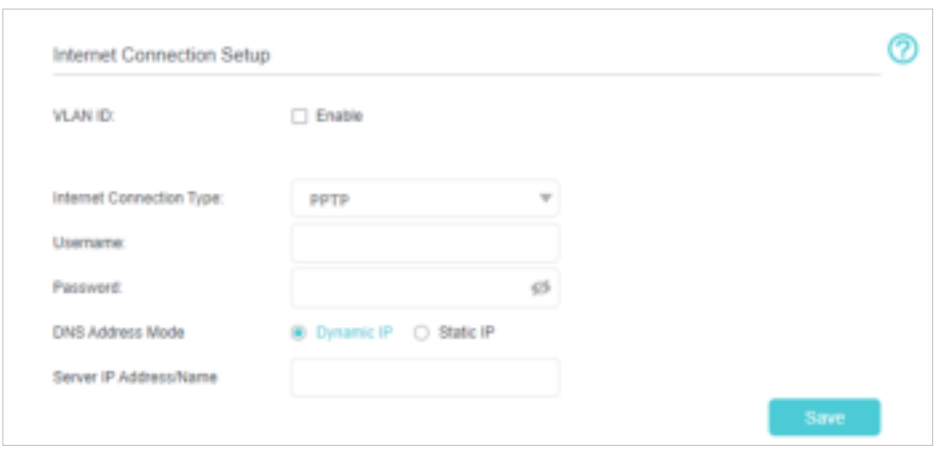
3) If you choose PPPoE, enter the username and password provided by your ISP. PPPoE users usually have DSL cable modems.



4) If you choose L2TP, enter the username and password and choose the Secondary Connection provided by your ISP. Different parameters are needed according to the Secondary Connection you have chosen.



5) If you choose PPTP, enter the username and password, and choose the Secondary Connection provided by your ISP. Different parameters are needed according to the Secondary Connection you have chosen.



4. Click Save.

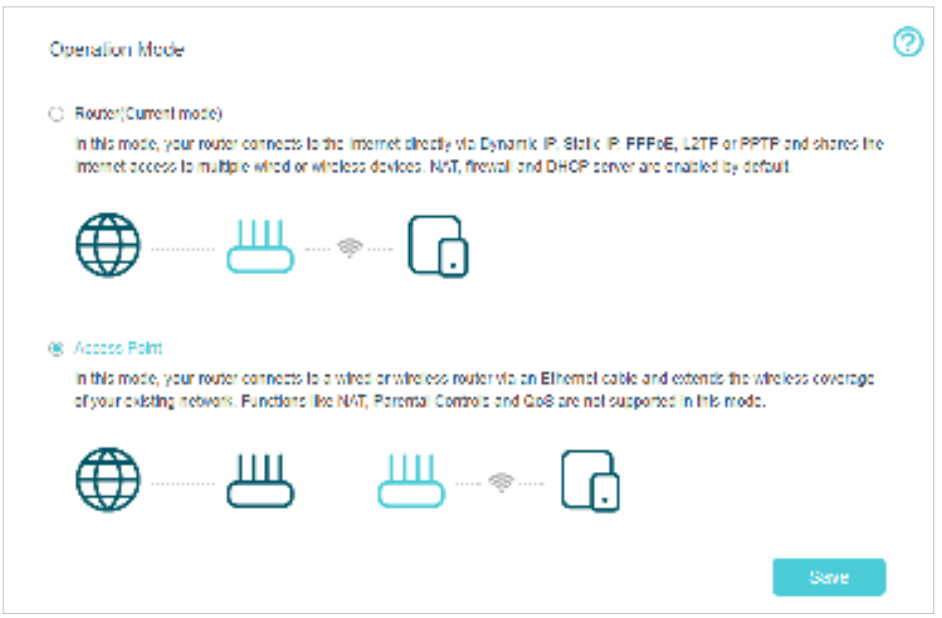
Tips:

- If you use Dynamic IP and PPPoE and you are provided with any other parameters that are not required on the page, please go to Advanced > Network > Internet to complete the configuration.
- If you still cannot access the internet, refer to the FAQ section for further instructions.

4. 4. Set Up the Router as an Access Point

The router can work as an access point, transforming your existing wired network to a wireless one.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Operation Mode, select Access Point and click Save. The router will reboot and switch to Access Point mode.



3. After rebooting, connect the router to your existing wired router via an Ethernet cable.
4. Log in again to the web management page http://tplinkwifi.net or http://192.168.0.1, and go to Quick Setup.
5. Configure your wireless settings and click Next.
6. Confirm the information and click Save. Now, you can enjoy Wi-Fi.

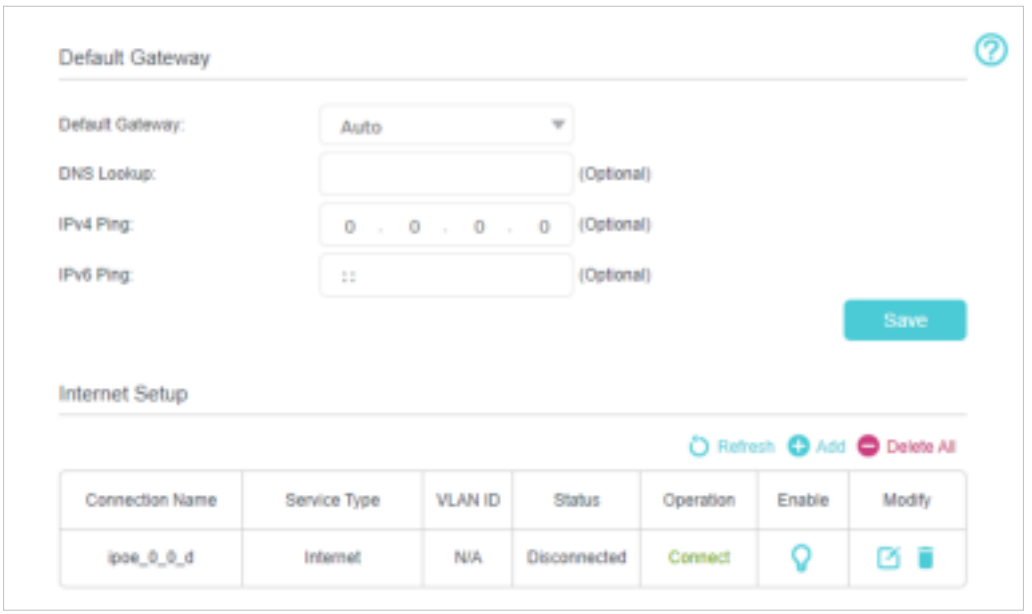
Tips:

- Functions, such as Parental Controls, QoS and NAT Forwarding, are not supported in the Access Point mode.
- Functions, such as Guest Network, are the same as those in the Router mode.

4. 5. Set Up an IPv6 Internet Connection

Your ISP provides information about one of the following IPv6 internet connection types: PPPoE(SLAAC/DHCPv6/AUTO/Passthrough), Dynamic IP(SLAAC/DHCPv6/AUTO/Passthrough), Static IP.

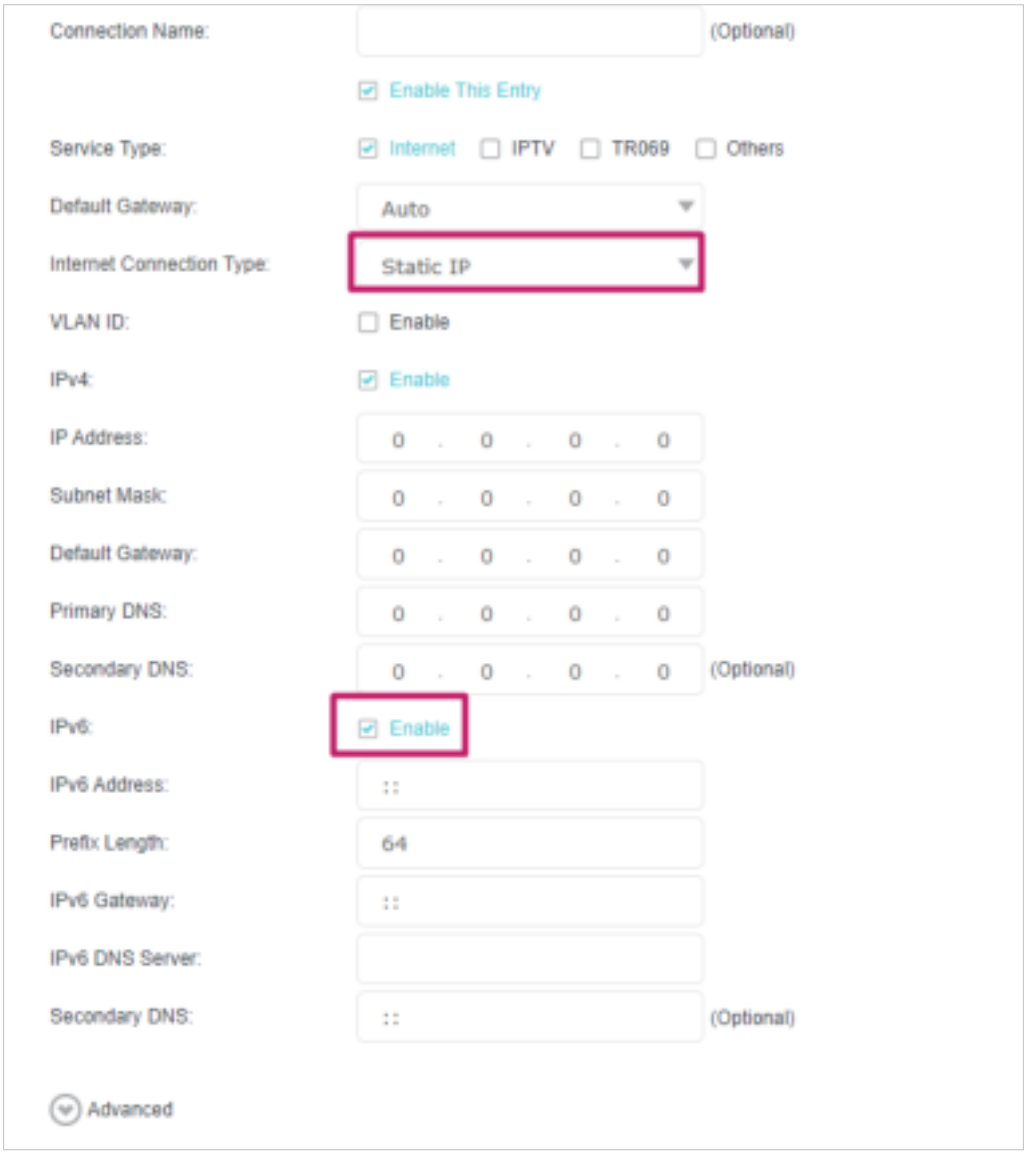
1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > Internet.
3. Click Add and enable IPv6 and select the internet connection type provided by your ISP.



Tips:
If you do not know what your internet connection type is, contact your ISP or judge according to the already known information provided by your ISP.

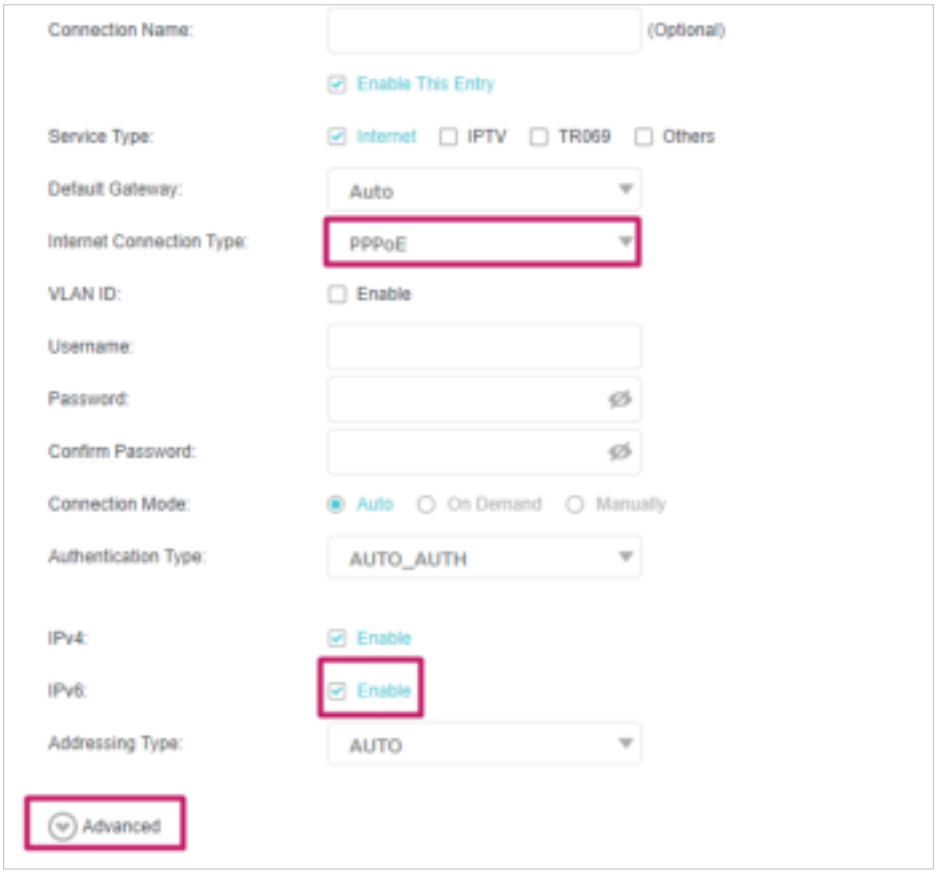
4. Fill in information as required by different connection types.

   1) Static IP: Fill in blanks and click OK.

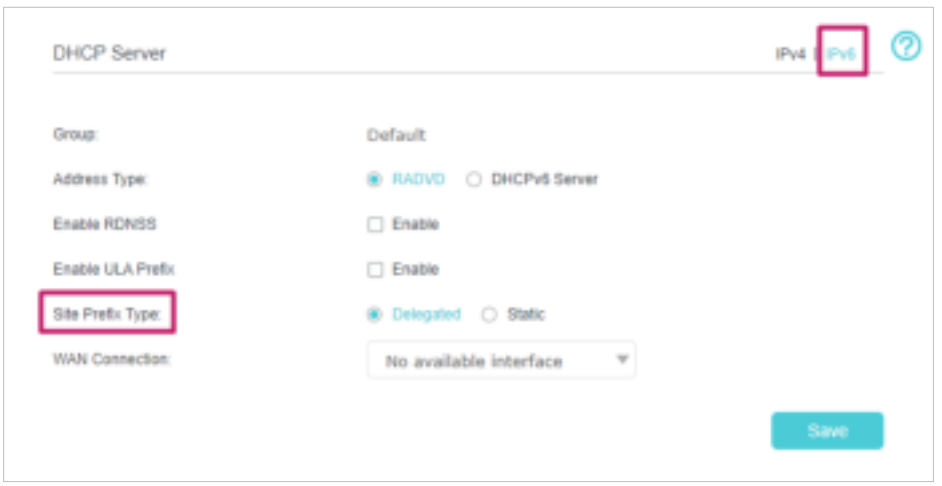


2) Dynamic IP(SLAAC/DHCPv6/AUTO/Passthrough): Click Advanced to input further information if your ISP requires. Click OK.

3) PPPOE(SLAAC/DHCPv6/AUTO/Passthrouth): Click Advanced to input further information if your ISP requires. Click OK.



5. Configure LAN ports. Go to Advanced > Network > LAN Settings. Fill in Site Prefix Type provided by your ISP, and click Save.



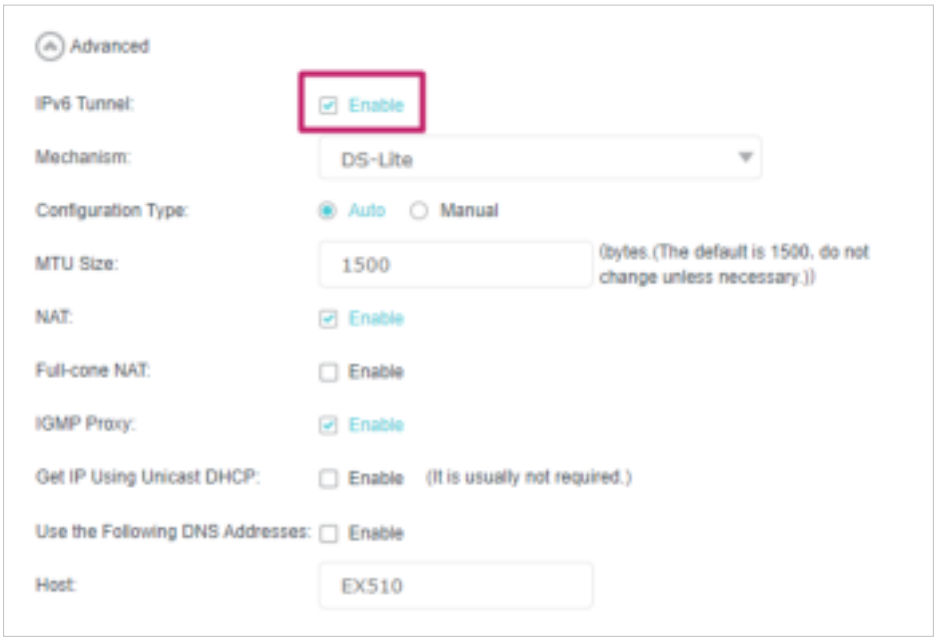
6. Click Advanced > Status to check whether you have successfully set up an IPv6 connection.

Tips:
Visit the FAQ section if there is no internet connection.

4. 6. IPv6 Tunnel

IPv6 Tunnel is a transition mechanism that enables IPv6-only hosts to reach IPv4 services or vice versa and allows isolated IPv6 hosts and networks to reach each other over IPv4-only infrastructure before IPv6 completely supplants IPv4. It is a temporary solution for networks that do not support native dual-stack, where both IPv6 and IPv4 run independently.

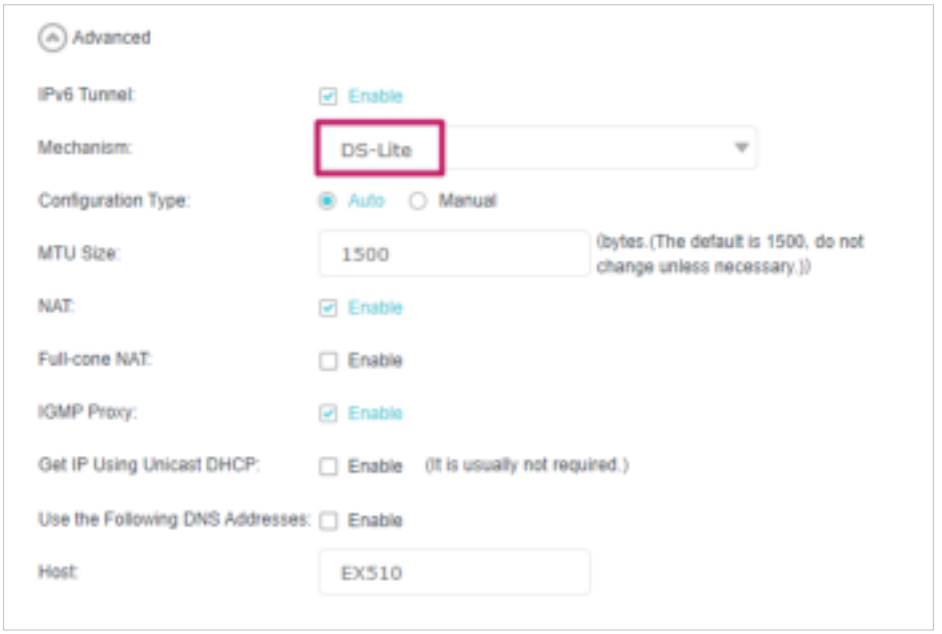
1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > Internet.
3. Click Add and enable IPv6 and Click Advanced to view more advanced settings.
4. Select the checkbox to enable IPv6 Tunnel.



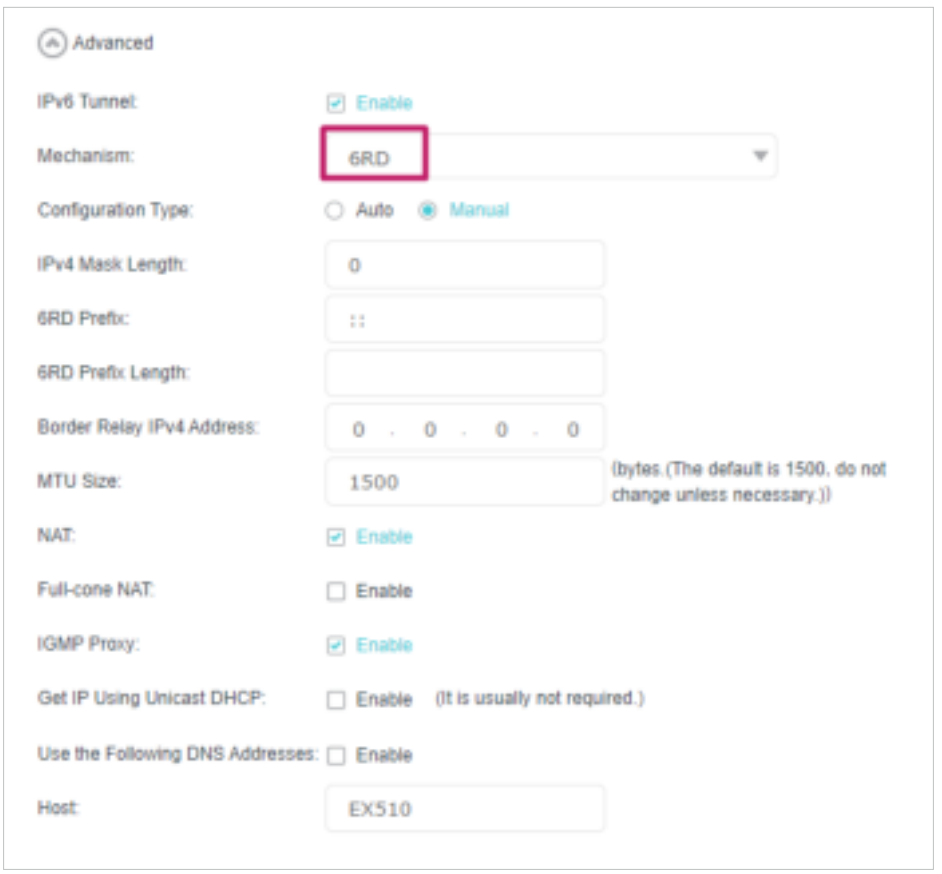
Tips:
Please check the IPv6 tunnel settings each time while reconfiguring WAN connection, as WAN connection configuration may take effect on tunnel settings.

5. Fill in information as required by different tunneling mechanisms.

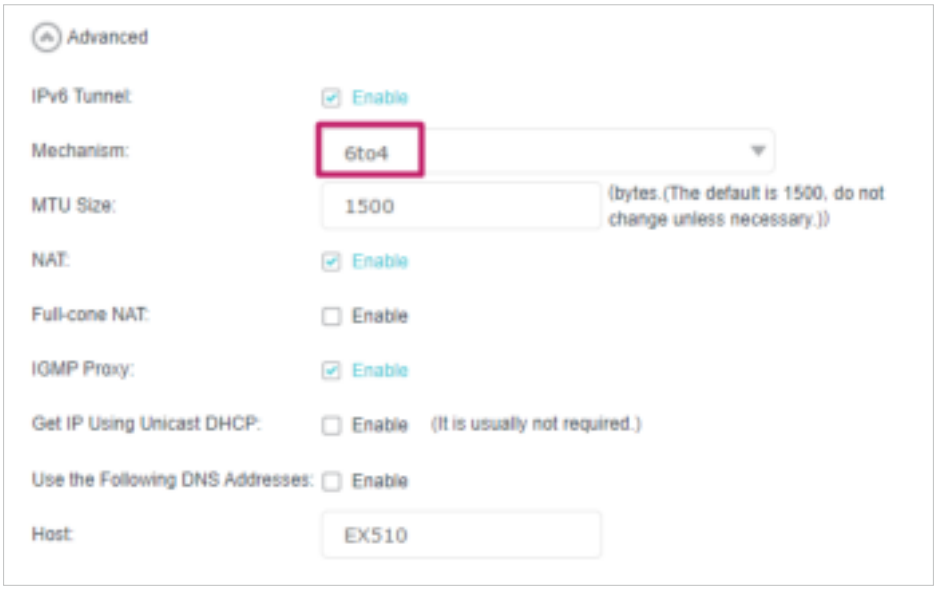
   1) DS-Lite: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses DS-Lite deployment for assigning address.



2) 6rd: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses 6rd deployment for assigning address.



3) 6to4: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses 6to4 deployment for assigning address.


Advanced
IPv6 Tunnel:
Enable
Mechanism:
6to4
MTU Size:
1500
(bytes.(The default is 1500, do not change unless necessary.))
NAT:
Enable
Full-cone NAT:
Enable
IGMP Proxy:
Enable
Get IP Using Unicast DHCP:
Enable
(It is usually not required.)
Use the Following DNS Addresses:
Enable
Host:
EX510

Chapter 5

Setup Your Network via TP-Link Aginet App

This chapter guides you on how to setup your router and mesh device via TP-Link Aginet app, as well as regulatory information. Features available in Aginet app may vary by model and software version. Aginet app availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual mesh experience.

5. 1. Set Up Your Router

The intuitive Aginet app guides you through an easy setup process that gets each unit up and all your routers connected.

Follow the steps below to set up your router.

1. Download and install the Aginet app

Scan the QR code below or go to Google Play or the App Store to download the Aginet app. Install the app on your Android or iOS smartphone or tablet.

2. Log in or sign up with TP-Link ID.

Open the Aginet app. Use your TP-Link ID to log in. If you don't have a TP-Link ID, tap Don't have an account? and sign up first.

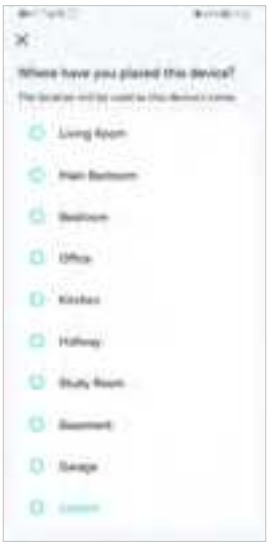
Note: If you forgot your login password, tap Forgot Password. The Aginet app will guide you through the rest.

3. Plug in and power on router.

Power off your modem. Connect your router to the modem and power them both on. If you don't have a modem, connect the Ethernet outlet directly to your router.

4. Select a location.

Select a location for this router. If its location is not listed, you can create a new one by choosing Custom. This will be the name of your router.



5. Set up internet connection.

Select the internet connection type and enter the information. If you are not sure, contact your internet service provider.

6. Create your Wi-Fi network.

Set a network name and a password. These will be the name and password you use to connect your routers to Wi-Fi.

7. Connect to your Wi-Fi network.

Connect your phone/tablet to the router's Wi-Fi.



8. Setup complete.

Your network is now up. Connect all devices to the network. You can also Add Agent to expand the Wi-Fi coverage.


5. 2. Dashboard

After you successfully set up your mesh network, you will see the dashboard of the Aginet app. Here you can get an overview of the network status, create family profiles, and customize your home network and set up various advanced features.

1. Tap to get an overview of the network status.

2. Tap to create family profiles.

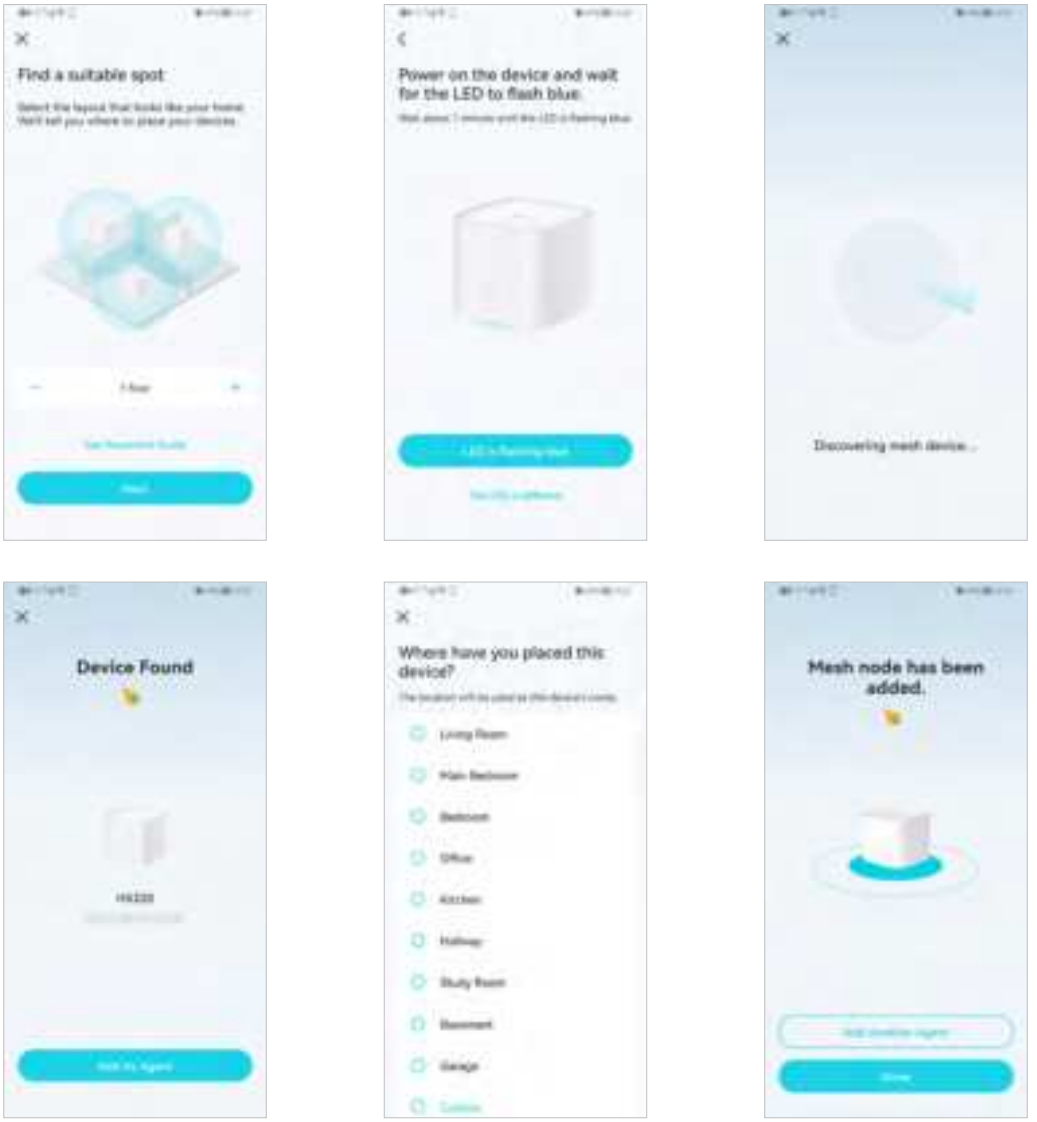
3. Tap for more features.

5. 3. Add More Mesh Devices

After creating a mesh network, you can add more mesh devices to the network to expand the Wi-Fi coverage and manage them easily on your Aginet app.

1. In Network, tap + > Add Agent. Then select the Mesh Device.

2. Follow app instructions to complete the setup.



5. 4. Check Mesh Device Status

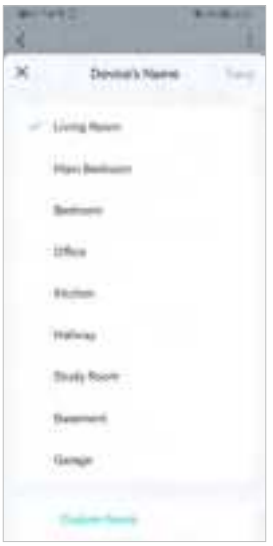
In Network, you can check the working status (online/offline) of all the mesh devices, check the details (speed/mesh device's IP address & MAC address/connected clients) of each mesh device, change the mesh device's location/name, and more.

1. Tap to check all mesh devices' status.

2. Tap a mesh device to check more details.

3. Check download/upload speed of the mesh device.

4. Tap and change or customize the location/name of the mesh device.



5. Check the clients connected to the mesh device.

6. Tap the client's name. Change or customize client's information.

5. 5. Remove/Reboot Mesh Devices

You can reset your mesh device to factory default settings or reboot your mesh device to clear cache and enhance running performance easily in the Aginet app. Follow the steps below.

Note:

Rebooting your mesh device will keep the current settings on it.
Removing your mesh device will reset it to factory default settings and you will need to set up your mesh device again. You can also press and hold the Reset button for at least 5 second to quickly reset your mesh device to factory default settings.

In Network, tap . Select a mesh device.

7. Tap to remove or reboot the mesh device.

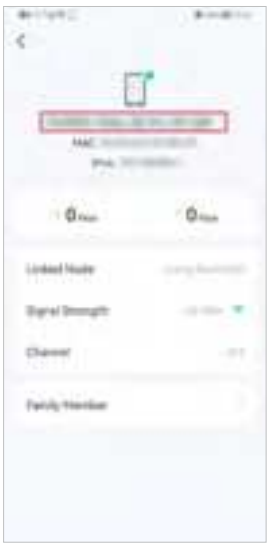
Note:

If the LED light of mesh device does not turn flashing blue after tapping Remove, press and hold the Reset button for at least 5 second to reset it.

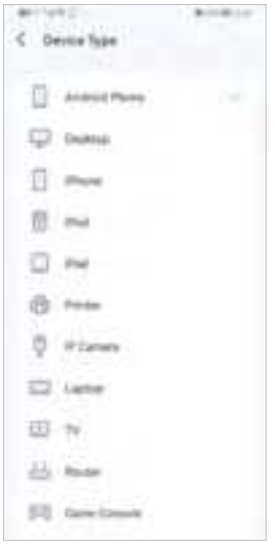
5. 6. Manage Connected Devices

In Network, you can mange your connected devices easily, such as changing the device name and type.

1. Tap a connected device to check the details (e.g. real-time upload and download speeds, device name/profile, etc.).



2. Change the Device Type and Device Name as needed.

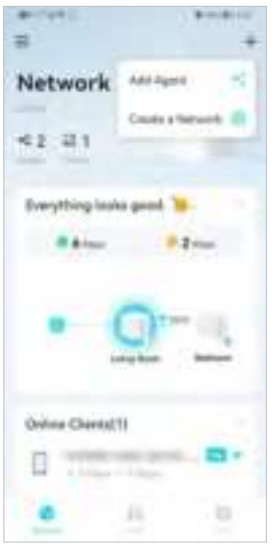


5. 7. Create a New Network

In the Aginet app, you can create different mesh networks with your TP-Link ID and manage them conveniently from the Aginet app with one account. You can also help family or friends manage their networks with your Aginet app. Two methods are provided as below to create a new network.

Method 1. Create a new network from the Overview page

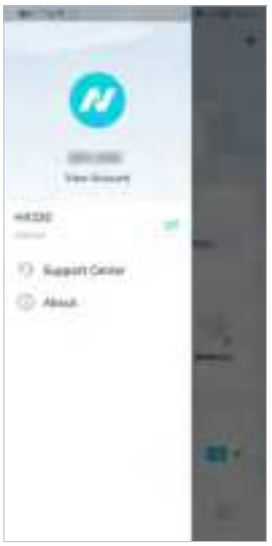
1. Tap + > Create a Network.
2. Then follow app instructions to complete the setup.



Method 2. Create a new network from the Menu page

1. Tap to open the menu. Tap > Add a Network.

2. Then follow app instructions to complete the setup.

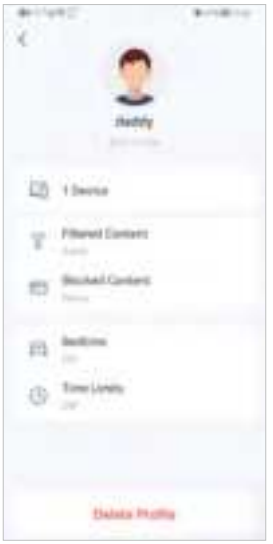


5. 8. Parental Controls

Parental Controls helps you set time limits and filter content to flexibly control your kids when they're online.

1. In Family, tap Create a Profile.

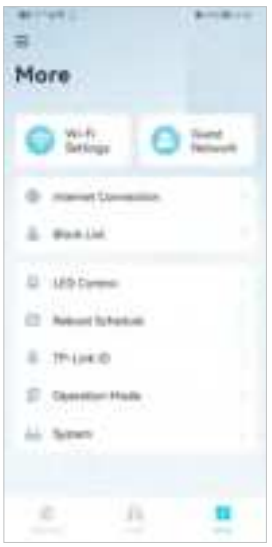
2. Then follow app instructions to complete the setup.

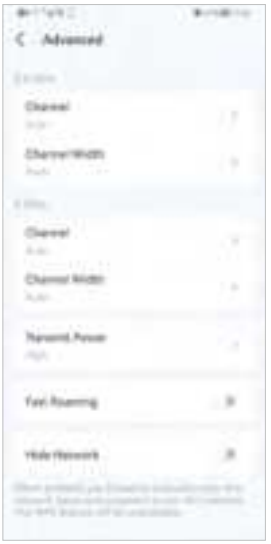

5. 9. Wi-Fi Settings

You can change the network name and password of your main network at any time and share the network easily with family and friends.

1. In More, Tap Wi-Fi Settings.



2. Manage main network (e.g. change your main network's Wi-Fi name and password, hide the network from Wi-Fi list, etc.).
1. Tap Advanced. For better Wi-Fi performance, set the channel width for 2.4GHz / 5GHz / 6GHz Wi-Fi as needed. (It is recommended to use the default settings.)



5. 10. Guest Network

You can create and share a separate network for guests to guarantee the security and privacy of your main network.

1. In More, Tap Guest Network.

2. Set a Wi-Fi name and password for the guest network.

5. 11. Internet Connection

In Internet Connection, You can modify WAN settings (IPv4 & IPv6), enable MAC Clone mode.

1. In More, Tap Internet Connection.

2. View IPv4 details or change the internet connection type.

3. Enable IPv6 to set up an IPv6 internet connection.

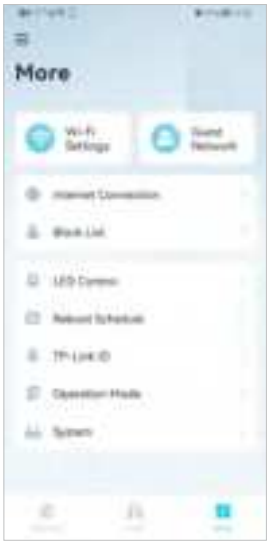
4. Tap Advanced and enable MAC Clone as needed.

Tip: For more about MAC Clone, refer to https://www.tp-link.com/support/faq/2925/

5. 12. Block List

Add devices to the block list to prevent the devices from accessing your network, ensuring the safety of your personal information shared in the network.

1. In More, Tap Block List.

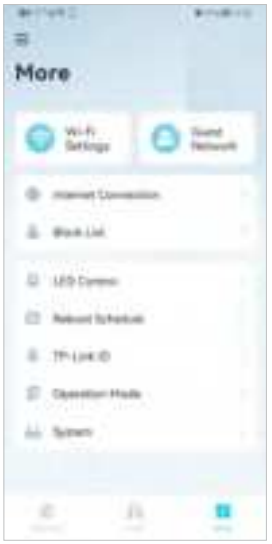


2. Tap + and add clients or other devices to the block list.

5. 13. Upgrade Your Router

TP-Link is dedicated to improving product features and providing a better customer experience. An up-to-date firmware provides better and more stable network performance. Always update your router to the latest firmware version when prompted in the Aginet app.

1. In More, Tap System and Firmware Update.



2. Download and install the firmware (if any) and follow app instructions to update your router to the latest version.

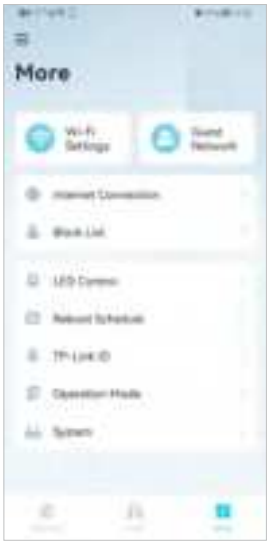
5. 14. Advanced Features

Additional features are available under the Advanced menu. You can control mesh device's LED, enable reboot schedule, bind your TP-Link ID, change the operation mode, configure system settings.

1. In More, Tap LED Control.

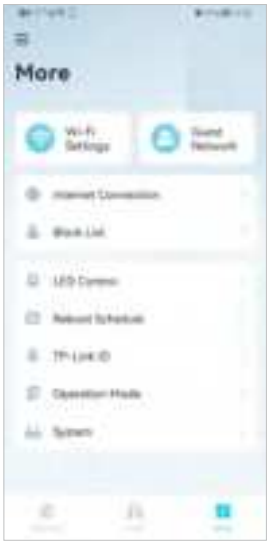
2. Toggle off LED to turn off the light on mesh device. Configure the LED Off Time to turn off the LED light at bedtime only.

3. Enable Reboot Schedule as needed.



4. Bind your TP-Link ID.

5. Change the Operation Mode as needed.


More


Operation Mode

Chapter 6

Customize Your Network Settings

This chapter introduces how to change the default settings or adjust the basic configuration of the router using the web management page.

It contains the following sections:

6. 1. Configure LAN Settings

6. 1. 1. Change the LAN IP Address

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 in your local network or your network requires a specific IP subnet, you can change it.

Follow the steps below to change your IP address.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > LAN Settings page and select IPv4.

3. Enter a new IP Address appropriate to your needs.
4. Select the Subnet Mask from the drop-down list. The subnet mask together with the IP address identifies the local IP subnet.
5. Keep IGMP Snooping enabled by default. IGMP snooping is the process of listening to IGMP (Internet Group Management Protocol) network traffic. The function prevents hosts on a local network from receiving traffic for a multicast group they have not explicitly joined.
6. You can configure the router's Second IP and Subnet Mask for LAN interface through which you can also access the web management page.
7. Keep the rest settings as the default settings.
8. Click Save to make the settings effective.

6. 1. 2. Use the Router as a DHCP Server

You can configure the router to act as a DHCP server to assign IP addresses to its clients. To use the DHCP server function of the router, you must configure all computers on the LAN to obtain an IP Address automatically.

Follow the steps below to configure DHCP server.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > LAN Settings page and select IPv4.

3. Enable DHCP function and select DHCP Server.
4. Specify the IP Address Pool, the start address and end address must be on the same subnet with LAN IP. The router will assign addresses within this specified range to its clients. It is from 192.168.0.2 to 192.168.0.249 by default.
5. Enter a time duration in the Address Lease Time field. The Address Lease Time is the amount of time in which a DHCP client can lease its current dynamic IP address assigned by the router. After the dynamic IP address expires, the user will be automatically assigned a new dynamic IP address.
6. Keep the rest settings as the default settings and click Save.

Note:

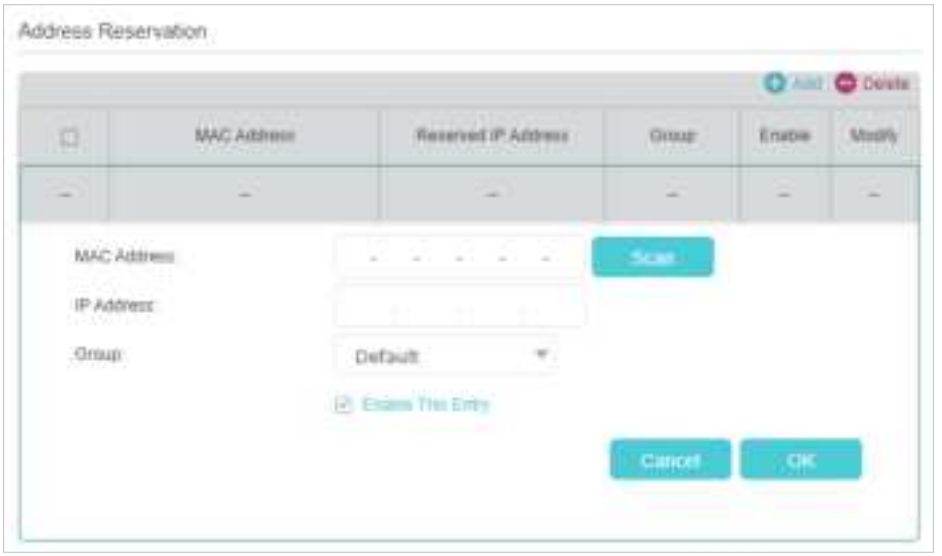
1. The router can be configured to work as a DHCP Relay. A DHCP relay is a computer that forwards DHCP data between computers that request IP addresses and the DHCP server that assigns the addresses. Each of the device's interfaces can be configured as a DHCP relay. If it is enabled, the DHCP requests from local PCs will be forwarded to the DHCP server that runs on WAN side.
2. You can also appoint IP addresses within a specified range to devices of the same type by using Condition Pool feature. For example, you can assign IP addresses within the range (192.168.0.50 to192.168.0.80) to Camera devices, thus facilitating the network management. Enable DHCP feature and configure the parameters according to your situation on the Advanced > Network > LAN Settings page.

6. 1. 3. Reserve LAN IP Addresses

You can view and add a reserved address for a client. When you specify an IP address for a device on the LAN, that device will always receive the same IP address each time when it accesses the DHCP server. If there are some devices in the LAN that require permanent IP addresses, please configure Address Reservation on the router for the purpose.

Follow the steps below to reserve an IP address for your devices.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > LAN Settings page, and select IPv4.
3. Scroll down to the Address Reservation section, and click Add to add an address reservation entry for your device.



4. Enter the MAC Address of the device for which you want to reserve IP address.
5. Specify the IP address which will be reserved by the router.
6. Select the Enable This Entry check box and click OK to make the settings effective.

6. 2. Configure IPv6 LAN Settings

Based on the IPv6 protocol, the router provides two ways to assign IPv6 LAN addresses:

- Configure the RADVD (Router Advertisement Daemon) address type
- Configure the DHCPv6 Server address type

6. 2. 1. Configure the RADVD Address Type

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > LAN Settings.
3. Select IPv6 to configure IPv6 LAN parameters.

1) Select RADVD as the address type to make the router assign IPv6 address prefixes to hosts.

Note:
Do not select the Enable RDNSS and Enable ULA Prefix check boxes unless required by your ISP. Otherwise you may not be able to access the IPv6 network. For more information about RDNSS and ULA Prefix, contact our technical support.

2) Keep Site Prefix Type as the default setting Delegated. If your ISP has provided a specific IPv6 site prefix, select Static and enter the prefix.

3) Keep WAN Connection as the default settings.

4. Click Save to make the settings effective.

6. 2. 2. Configure the DHCPv6 Server Address Type

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > LAN Settings.
3. Select IPv6 to configure IPv6 LAN parameters.

1) Select DHCPv6 Server as the address type to make the router assign IPv6 addresses to hosts.
2) Specify the Starting/Ending IPv6 Address for the IPv6 suffixes. The router will generate IPv6 addresses within the specified range.
3) Keep Address Lease Time as the default setting.
4) Keep Site Prefix Type as the default value Delegated. If your ISP has provided a specific IPv6 site prefix, select Static and enter the prefix.
5) Keep WAN Connection as the default setting.

4. Click Save to make the settings effective.

6. 3. Set Up a Dynamic DNS Service Account

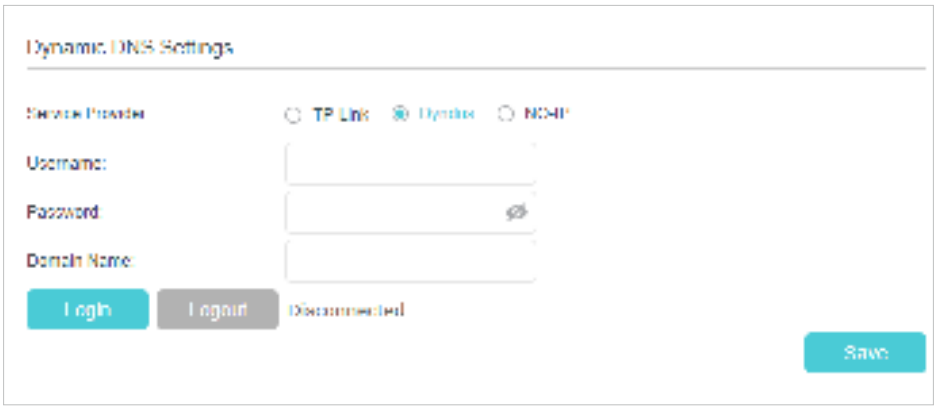
Most ISPs (Internet service providers) assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change any time and you don't know when it changes. In this case, you might need the DDNS (Dynamic Domain Name Server) feature on the router to allow you and your friends to access your router and local servers (FTP, HTTP, etc.) using domain name, in no need of 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.

To set up DDNS, please follow the instructions below:

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Network > Dynamic DNS.
3. Select the Service Provider (TP-Link/Dyndns/NO-IP).

4. Log in with your DDNS account, select a service provider. Enter the username, password and domain name of the account (such as lisa.ddns.net).



5. Click Log in and Save.

Tips: If you want to use a new DDNS account, please log out first, then log in with the new account.

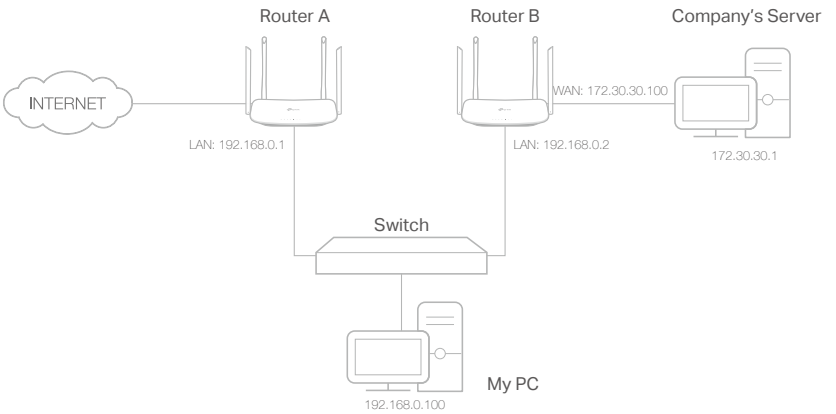
6. 4. Create Static Routes

A static route is a pre-determined path that network information must travel to reach a specific host or network. Data from one point to another will always follow the same path regardless of other considerations. Normal internet usage does not require this setting to be configured.

I want to:

Visit multiple networks and multiple 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 another Router B. I connect the devices as shown in the following image 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. Make sure the routers use different LAN IP addresses on the same subnet. Disable Router B's DHCP function.
6. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the Router A.
2. Go to Advanced > Network > Static Routing. Select your current WAN Interface and click Save.

3. Click Add to add a new static routing entry. 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 the Router A. In the example, the IP address of the company network is the destination IP address, so here we 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 we enter 255.255.255.255.
- 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 the 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 the data packets. In the example, the data is sent to the gateway through the LAN port of Router A, so LAN should be selected.

4. Select the Enable This Entry check box to enable this entry.
5. Click Save to make the settings effective.

Done!

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

6. 5. RIP Settings

To activate RIP for the WAN interface, select the desired RIP version and operation and place a check in the 'Enabled' checkbox. To stop RIP on the WAN Interface, uncheck the 'Enabled' checkbox. Click the 'Save' button to start/stop RIP and save the configuration.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > RIP Settings.
3. Configure RIP settings.

- MD5 Authentication - Enable MD5 Authentication to enhance the rip RA packets security.
- MD5 Key ID 0 - Setting the MD5 Key ID 0 value.
- MD5 Key ID 1 - Setting the MD5 Key ID 1 value.
- Interface - The WAN interface name of the RIP rule table's entry used in.
- Version - The RIP version (RIPv1/RIPv2) of the RIP rule table's entry used.
- AcceptRA - Enable it to make the RIP rule entry can accept the Router Advertisement.
- SendRA - Enable it to make the RIP rule entry can send the Router Advertisement.
- Enabled - Enable it to make the RIP rule entry active for IPv4.
- RipngEnabled - Enable it to make the RIP rule entry active for IPv6, which is also known as Ripng.
- Modify - Click here to modify the RIP rule entry.

6. 6. Specify Wireless Settings

6. 6. 1. Change Basic Wireless Settings

The router's wireless network name (SSID) and password, and security option are preset in the factory. The preset SSID and password can be found on the product label. You can customize the wireless settings according to your needs.

Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.

➢ **To enable or disable the wireless function:**

1. Go to Basic > Wireless.
2. The wireless radio is enabled by default. If you want to disable the wireless function of the router, just clear the Enable check boxes. In this case, all the wireless settings will be invalid.

➢ **To change the wireless network name (SSID) and wireless password:**

1. Go to Basic > Wireless.
2. Enter a new SSID (32 characters at most) in the Network Name (SSID) field and a new password in the Password field and click Save. The SSID and password are case-sensitive.

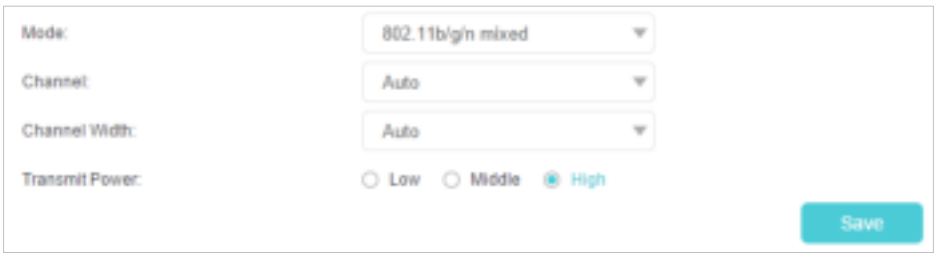
Note:
If you use a wireless device to change the wireless settings, you will be disconnected after the new settings are effective. Please write down the new SSID and password for future use.

➢ **To hide SSID:**

1. Go to Basic > Wireless.
2. Select Hide SSID, and your SSID will not be broadcast. Your SSID won't display on your wireless devices when you scan for local wireless networks and you need to manually join the network.

➢ **To change the mode or channel:**

1. Go to Advanced > Wireless > Wireless Settings.



2. Select the wireless network mode or channel and click Save to make the settings effective.

Mode: Select the desired transmission mode.

- 802.11b/g/n mixed: Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.
- 802.11b/g/n/ax mixed: Select if you are using a mix of 802.11b, 11g, 11n and 11ax wireless clients.
- 802.11a/n/ac mixed: Select if you are using a mix of 802.11a, 11n, and 11ac wireless clients.
- 802.11a/n/ac/ax mixed: Select if you are using a mix of 802.11a, 11n, 11ac and 11ax wireless clients.

Note: When 802.11n only mode is selected, only 802.11n wireless stations can connect to the router. It is strongly recommended that you select 802.11b/g/n mixed (for 2.4GHz) and 802.1 a/n/ac/ax mixed (for 5GHz), and all of 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax wireless stations can connect to the router.

Channel: Select the channel you want to use from the drop-down list. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

Channel Width: Select the channel width from the drop-down list. The default setting is Auto, which can adjust the channel width for your clients automatically.

Transmit Power: Select Low, Middle, or High to specify the data transmit power. The default and recommended setting is High.

➢ **To change the security option:**

1. Go to Advanced > Wireless > Wireless Settings.

2. Select an option from the Security drop-down list and configure the related parameters. The router provides four options, No Security, WPA-PSK[TKIP]+WPA2-PSK[AES], WPA2-PSK[AES], WPA2-PSK[AES]+WPA3-Personal. WPA3 uses the newest standard and the security level is the highest. We recommend you don't change the default settings unless necessary.

3. Click Save to make the settings effective.

➢ **To enable network roaming:**

Network roaming helps devices choose better AP based on actual conditions to balance network demands.

1. Go to Advanced > Wireless > Wireless Settings.
2. Locate the Band Steering section, select the Enable check box to make the settings effective.

6. 6. 2. Advanced Wireless Settings

Advanced wireless settings are for those who want more network controls. You can follow the instructions below to configure your router.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for your router.
2. Go to Advanced > Wireless > Advanced Settings.

➢ **To change basic advanced settings:**

Locate the Advanced Settings section and configure the advanced settings according to the explanation below, and then click Save.

- Beacon Interval: Enter a value between 40 and 1000 in milliseconds to determine the duration between which beacon packets are broadcast by the router to synchronize the wireless network. The default is 100 milliseconds.

- RTS Threshold: Enter a value between 1 and 2347 to determine the packet size of data transmission through the router. By default, the RTS (Request to Send) Threshold size is 2347. If the packet size is greater than the preset threshold, the router sends Request to Send frames to a particular receiving station and negotiates the sending of a data frame, or else the packet will be sent immediately.
- DTIM Interval: Enter a value between 1 and 255 to determine the interval of the Delivery Traffic Indication Message (DTIM). 1 indicates the DTIM Interval is the same as Beacon Interval.
- Group Key Update Period: Enter the number of seconds to control the time interval for the encryption key automatic renewal. The default is 0, indicating no key renewal.
- WMM: This feature guarantees the packets with high-priority messages being transmitted preferentially. WMM is enabled compulsively under 802.11n or 802.11ac mode.
- Short GI: This feature is enabled by default and recommended to increase the data capacity by reducing the Guard Interval (GI) time.
- AP Isolation: Select this check box to enable the AP Isolation feature that allows you to confine and restrict all wireless devices on your network from interacting with each other, but still able to access the internet.
- Air time fairness: Select this checkbox to enable the Airtime Fairness(ATF) feature that allows you to optimize the throughput of each flow. The ATF traffic scheduler uses the per-destination airtime targets to balance airtime usage across flow destinations.
- Fast Roaming (802.11r): This feature allows a client device to roam quickly in environments implementing the WPA2 Enterprise security, by ensuring that the client device does not need to re-authenticate to the RADIUS server every time it roams from one access point to another. It's recommended that you keep the feature enabled for better roaming experiences.

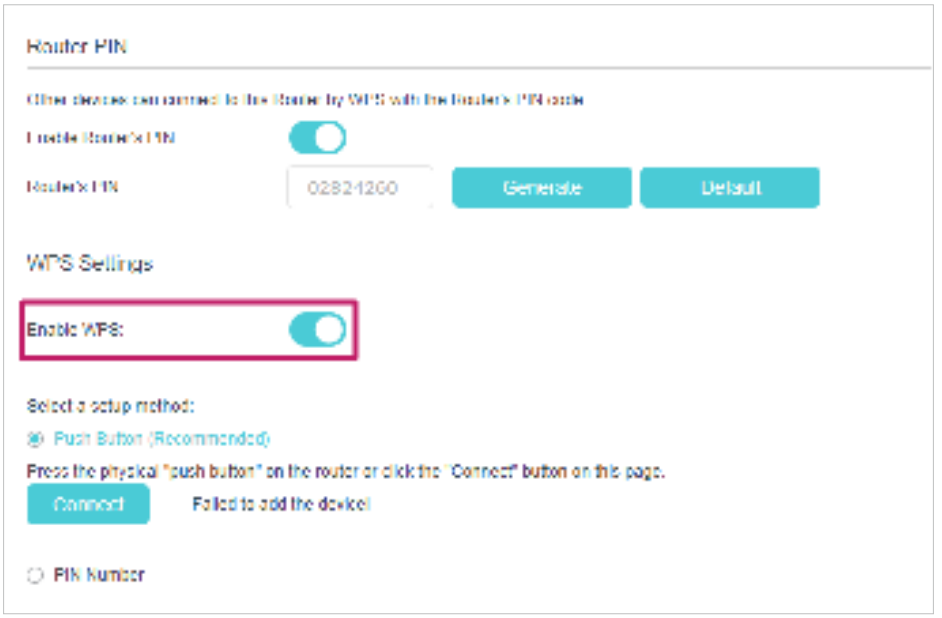
Note:

If you are not familiar with the settings mentioned above, it's strongly recommended that you keep the provided default settings; otherwise it may result in lower wireless network performance.

➢ **To enable or disable WPS function:**

WPS (Wi-Fi Protected Setup) provides you with an easier approach to set up a security-protected Wi-Fi connection. This function is enabled by default, but if you do not need this function, clear the WPS Enable check box.

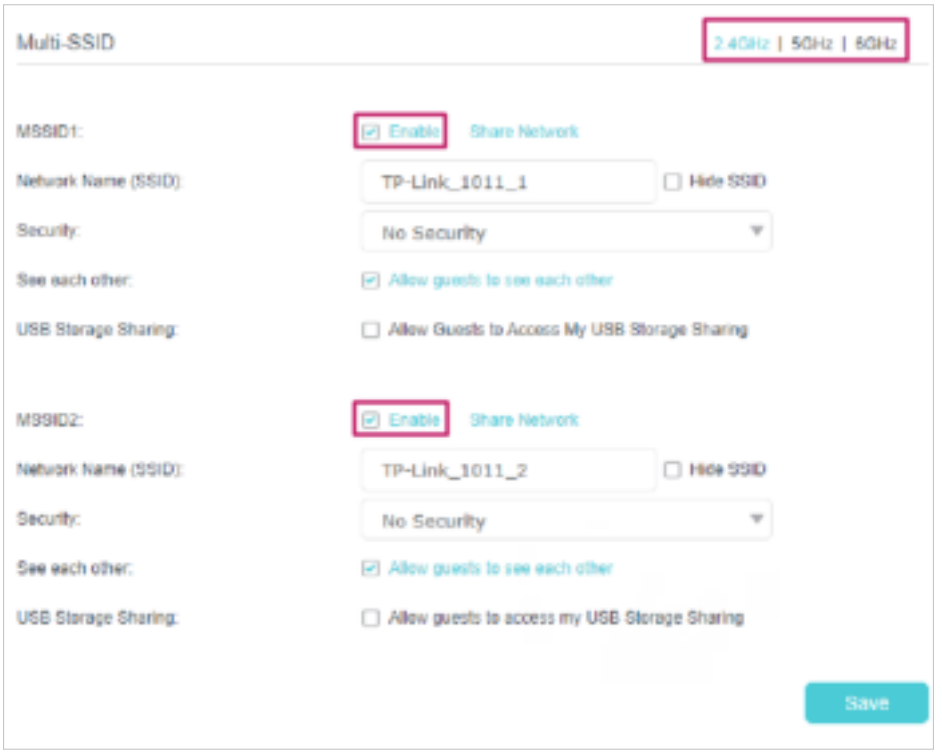
1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for your router.
2. Go to Advanced > Wireless > WPS.



➢ **To create multi-SSID network:**

The router supports additional up to three multi-SSID wireless networks for client access in each wireless band. You can specify the access and security settings to ensure network security and privacy according to your situation.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for your router.
2. Go to Advanced > Wireless > Multi-SSID.
   1) Locate the Multi-SSID section, and enable 2.4GHz / 5GHz / 6GHz to open the corresponding setup page.
   2) Select the Enable MSSID 1 or 2 check box(es) to enable the corresponding multi-SSID network.



3) Enter a new Network Name (SSID) or use the default name, this field is case sensitive. Don't select Hide SSID unless you want your guests to manually input the SSID for Wi-Fi access.

4) Select the Security option for the multi-SSID network, WPA/WPA2 Personal is recommended, and you can set a password for the network.

If you want to allow the clients in your Multi-SSID network to communicate with each other via methods such as Network Neighborhood and Ping, select the Allow Guests to See Each Other check box.

If you want to allow the clients in your Multi-SSID network to access your router's USB storage sharing via methods such as Network Neighborhood and FTP, select the Allow Guests to Access My USB Storage Sharing check box.

5) Repeat step 1) to step 4) to set other wireless networks if needed, and click Save to make the settings effective.

6. 6. 3. View Wireless Information

➢ **To view the detailed wireless network settings:**

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Status page. You will find the Wireless panel.
3. Click 2.4GHz / 5GHz / 6GHz to view the wireless details.

Tips: You can also see the wireless details by clicking the router icon on Basic> Network Map.

➢ **To view the detailed information of the connected wireless clients:**

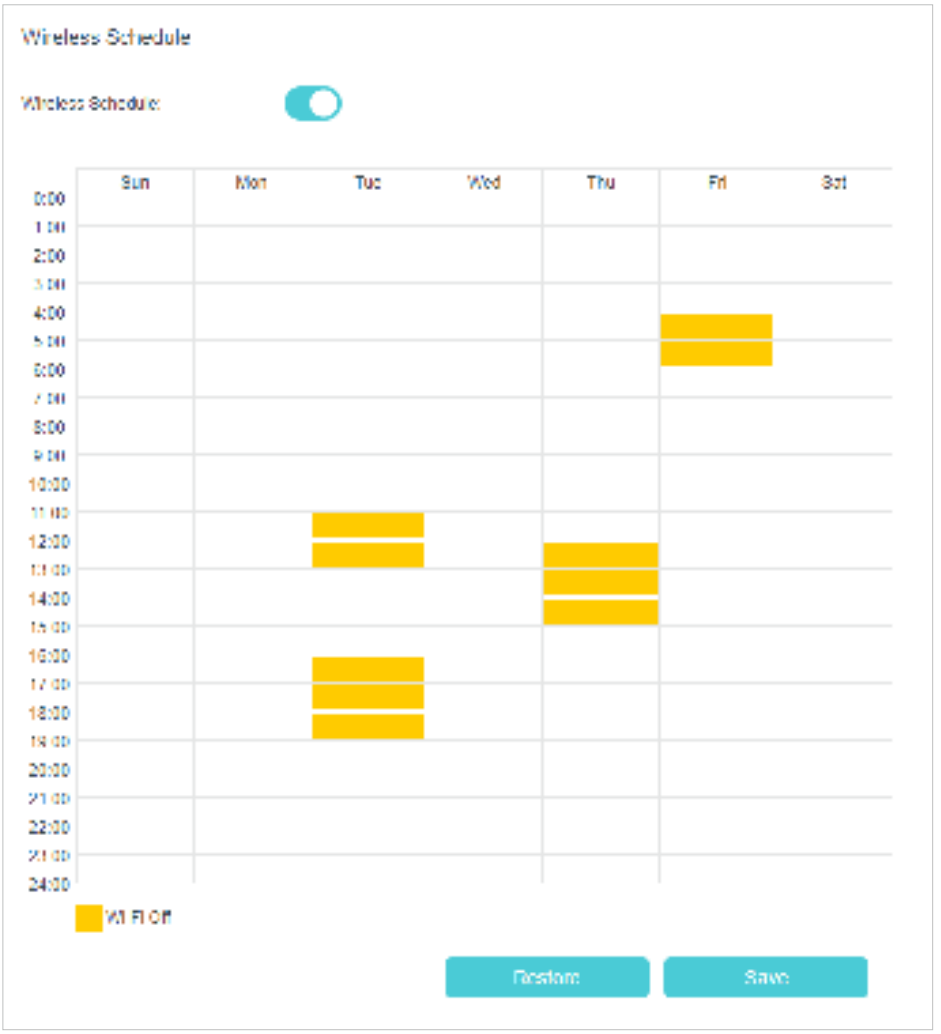
1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Wireless > Statistics page.
3. You can view the detailed information of the wireless clients, including its connection type and security option as well as the packets transmitted.

Tips: You can also see the wireless details by clicking the wireless clients icon on Basic > Network Map.

6. 7. Schedule Your Wireless Function

You can automatically turn off your wireless networks when you do not need the wireless connection.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Wireless > Wireless Schedule.
3. Enable the Wireless Schedule function.



4. Click Add to set the Wireless Off Time, and click Save to make the settings effective.

Note:

1. Make sure that the time of the router is correct before using this function. For details, refer to Set System Time.
2. The wireless LED will turn off if the corresponding wireless network is disabled.
3. The wireless network will be automatically turned on after the time period you set.

6. 8. Use WPS for Wireless Connection

You can use WPS (Wi-Fi Protected Setup) to add a new wireless device to your existing network quickly and easily.

Method 1: Use the WPS button

Use this method if your client device has a WPS button.

1. Press the WiFi/WPS button of the router.
2. Press the WPS button of the client device directly.
3. The WPS LED flashes for about 2 minutes during the WPS process.

4. When the WPS LED is on, the client device has successfully connected to the router.

Method 2: Use the "Connect" button on the web management page

Use this method if your client device has a WPS button.

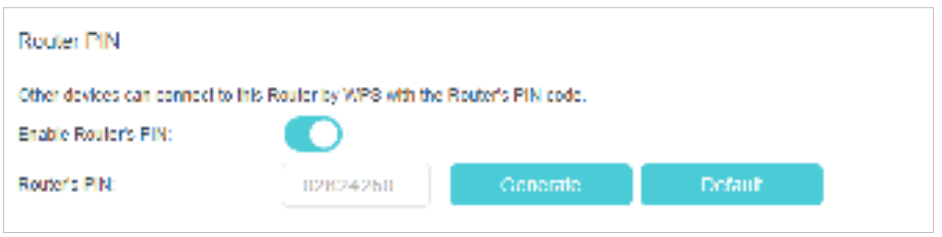
1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Wireless > WPS page.

3. Click Connect on the page.
4. Press the WPS button of the client device directly.
5. The WPS LED of the router flashes for about 2 minutes during the WPS process.
6. When the WPS LED is on, the client device has successfully connected to the router.

Method 3: Enter the router's PIN on your client device

Use this method if your client device asks for the router's PIN.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Advanced > Wireless > WPS, and enable Router's PIN.



3. Take a note of the current PIN of the router. You can also click the Generate button to get a new PIN.
4. Enter the router's PIN on the client device. (The default PIN is also printed on the label of the router.)
5. The WPS LED flashes for about 2 minutes during the WPS process.

6. When the WPS LED is on, the client device has successfully connected to the router.

Note:

1. The WPS LED on the router will light on for five minutes if the device has been successfully added to the network.
2. The WPS function cannot be configured if the wireless function of the router is disabled. Please make sure the wireless function is enabled before configuring WPS.

Method 4: Enter the client device's PIN on the router

1. Visit http://tplinkwifi.net, and log in with the password you set for the router.
2. Go to Advanced > Wireless > WPS, and click PIN Number.
3. Enter the Client's PIN.

4. Then click the Connect button.
5. Device has been added successfully! or the similar information will appear on the web page, which means the client device has successfully connected to the router.

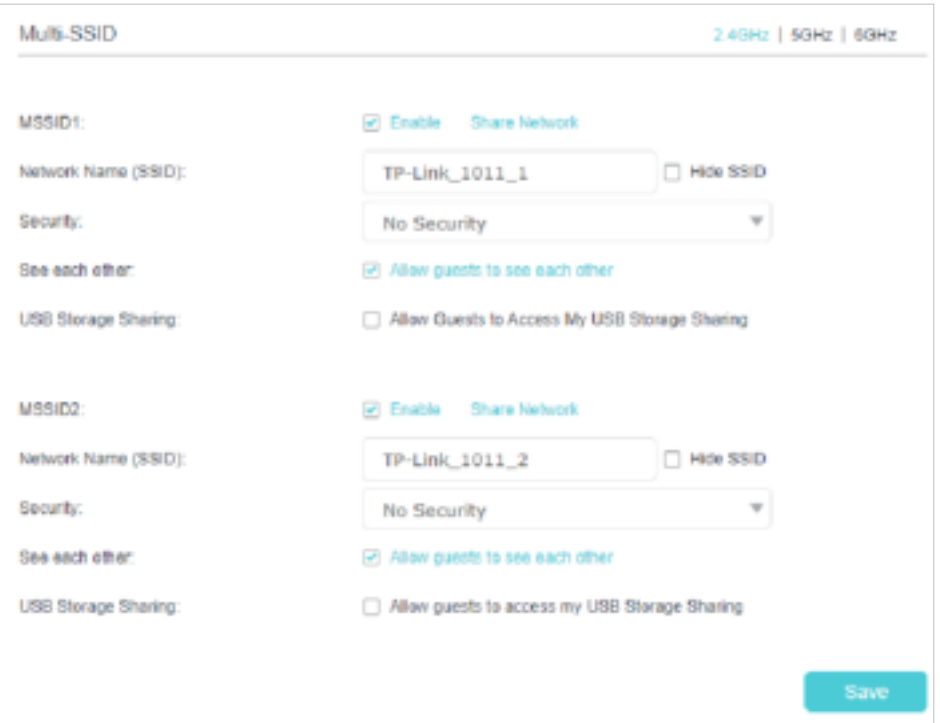
Chapter 7

Multi-SSID

Multi-SSID function allows you to provide Wi-Fi access for your visitors without disclosing your main network. When you have guests in your house, apartment, or workplace, you can create a multi-SSID wireless network for them. In addition, you can customize the network settings to ensure your network security and privacy.

➢ **To create a multi-SSID network:**

1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with the password you set for the AP.
2. Go to Basic > Multi-SSID or Advanced > Wireless > Multi-SSID.
3. Create the multi-SSID network as needed.



1) Select the Enable check box to create the corresponding multi-SSID network. You can create three multi-SSID wireless networks at most.
2) Enter a new Network Name (SSID) or use the default name, this field is case-sensitive. Don't select Hide SSID unless you want your guests to manually input the SSID for Wi-Fi access.
3) Select the Security option for the multi-SSID wireless network, WPA/WPA2/WPA3 Personal (Recommended) is recommended, and you can set a password for the network.

4. Click Save to make the settings effective. Now your guests can access your multi-SSID wireless network using the SSID and password specified.

Chapter 8

TP-Link Cloud Service

TP-Link Cloud service provides a better way to manage your cloud devices. Log in to your router with a TP-Link ID, and you can easily monitor and manage your home network when you are out and about via the Aginet app. To ensure that your router stays new and gets better over time, the TP-Link Cloud will notify you when an important firmware upgrade is available. Surely you can also manage multiple TP-Link Cloud devices with a single TP-Link ID.

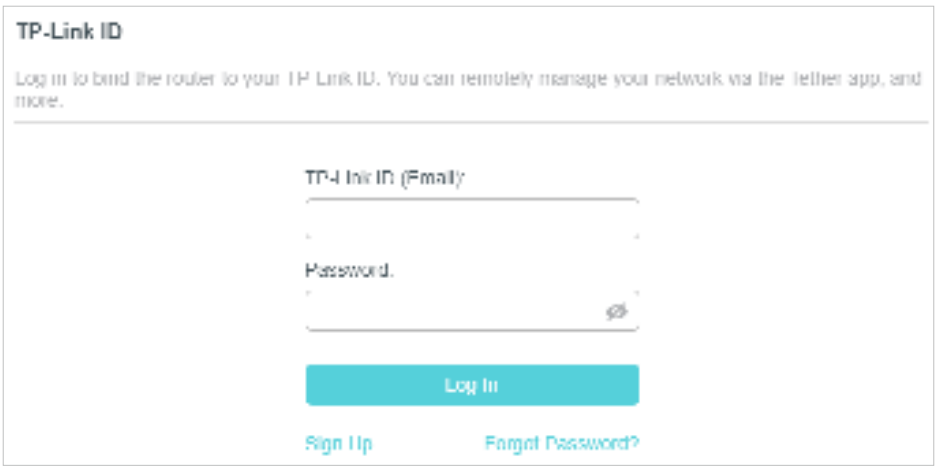
This chapter introduces how to register a new TP-Link ID, bind or unbind TP-Link IDs to manage your router, and the Aginet app with which you can manage your home network no matter where you may find yourself.

It contains the following sections:

8. 1. Register a TP-Link ID

If you have skipped the registration during the Quick Setup process, you can:

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with the password you set for the router.
2. Go to Basic > TP-Link Cloud.
3. Click Sign Up and follow the instructions to register a TP-Link ID.



4. After activating your TP-Link ID, come back to the TP-Link Cloud page to log in. The TP-Link ID used to log in to the router for the first time will be automatically bound as an Admin.

Note:

- To learn more about the Admin and User TP-Link ID, refer to Manage the User TP-Link IDs.
- Once you have registered a TP-Link ID on the web management page, you can only register another TP-Link ID via the Aginet APP. Please refer to Manage the Router via the TP-Link Aginet App to install the app.
- If you want to unbind the admin TP-Link ID from your router, please go to Basic > TP-Link Cloud, an click Unbind in the Device Information section.

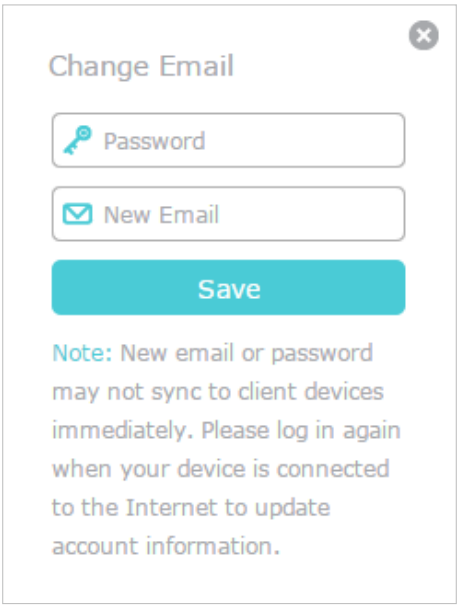
8. 2. Change Your TP-Link ID Information

Follow the steps below to change your email address and password of your TP-Link ID as needed.

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID.
2. Go to Basic > TP-Link Cloud, and focus on the Account Information section.

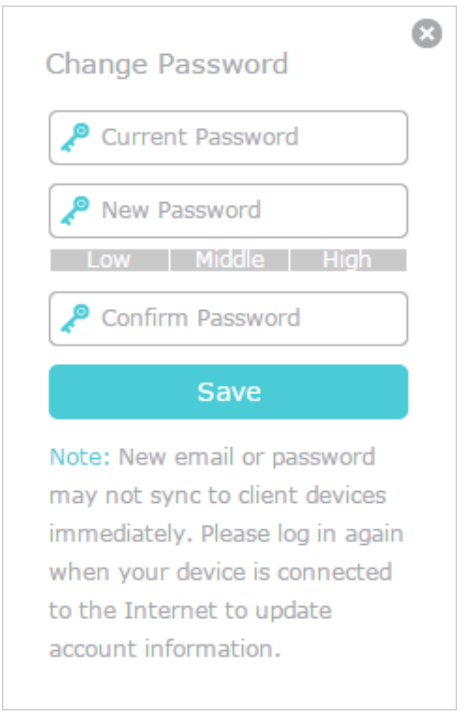
- **To change your email address**:

1. Click behind the Email.
2. Enter the password of your TP-Link ID, then a new email address. And click Save.



- **To change your password:**

1. Click behind the Password.
2. Enter the current password, then a new password twice. And click Save.



8. 3. Manage the User TP-Link IDs

The TP-Link ID used to log in to the router for the first time will be automatically bound as the Admin account. An admin account can add or remove other TP-Link IDs to or

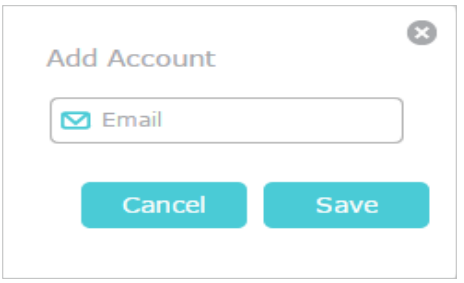
from the same router as Users. All accounts can monitor and manage the router locally or remotely, but user accounts cannot:

- Reset the router to its factory default settings either on the web management page or in the Aginet app.
- Add/remove other TP-Link IDs to/from the router.

8. 3. 1. Add TP-Link ID to Manage the Router

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID.
2. Go to Basic > TP-Link Cloud, and focus on the Bound Accounts section.
3. Click Bind, enter another TP-Link ID as needed and click Save.

Note: If you need another TP-Link ID, please register a new one via the Aginet app. Refer to Manage the Router via the TP-Link Aginet App to install the app and register a new TP-Link ID.



4. The new TP-Link ID will be displayed in the Bound Accounts table as a User.

8. 3. 2. Remove TP-Link ID(s) from Managing the Router

1. Visit http://tplinkwifi.net or http://192.168.0.1, and log in with your TP-Link ID.
2. Go to Basic > TP-Link Cloud, and focus on the Bound Accounts section.
3. Tick the checkbox(es) of the TP-Link ID(s) you want to remove and click Unbind.