

# **User Guide**

AXE5400 Tri-Band Wi-Fi 6E Router Archer AXE5400

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## **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

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 > System > Firmware Update means the Firmware Update page is under the System menu that is located in the Advanced tab.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Ø Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	<ul> <li>Click to edit the corresponding entry.</li> <li>Click to delete the corresponding entry.</li> <li>Click to enable or disable the corresponding entry.</li> <li>Click to view more information about items on the page.</li> </ul>

In this guide the following conventions are used:

#### More Info

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

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 <a href="https://www.tp-link.com">https://www.tp-link.com</a>.

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

Our Technical Support contact information can be found at the Contact Technical Support page at <a href="https://www.tp-link.com/support">https://www.tp-link.com/support</a>.

- \* 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), Wi-Fi 6E, and features including OFDMA, 1024-QAM, and HE160 require clients to also support the corresponding features. Seven 160MHz channels may not be all available in the 6 GHz band in some regions/countries due to regulatory restrictions.
- \* 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.
- \* HomeShield includes the Free Basic Plan. Fees apply for the Pro Plan. Visit **tp-link.com/homeshield** for more information.
- \* 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:

- Product Overview
- Appearance

## 1.1. Product Overview

TP-Link AXE router, with the 802.11ax Wi-Fi technology and the brand-new 6 GHz band, achieves Wi-Fi performance at its ultimate level. The revolutionary combination of OFDMA and 1024QAM improve throughput by 4 times and dramatically increase capacity and efficiency of the whole network. Access to the 6 GHz band brings more bandwidth, faster speeds, and lower latency, opening up resources for future innovations like in AR/VR, 8K streaming and more.

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

### 1.2. Appearance

#### 1.2.1. Top Panel



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

Name	Status	Indication
	On	The system has started up successfully.
Power	Flashing	The system is starting up, updating the firmware, or establishing WPS connection. Do not disconnect or power off your router.
	Off	Power is off.

#### **LED** Explanation

Name	Status	Indication
2.4 GHz	On	The 2.4 GHz wireless band is enabled.
2.4 GHZ	Off	The 2.4 GHz wireless band is disabled.
5 GHz	On	The 5 GHz wireless band is enabled.
5 GHZ	Off	The 5 GHz wireless band is disabled.
	On	The 6 GHz wireless band is enabled.
6 GHz	Off	The 6 GHz wireless band is disabled.
	White On	Internet service is available.
Internet	Orange On	The router's Internet port is connected, but the internet service is not available.
	Off	The router's Internet port is unplugged.
LAN	On	At least one powered-on device is connected to the router's Ethernet port.
	Off	No powered-on device is connected to the router's Ethernet port.
WPS	On/Off	This light remains on for 5 minutes when a WPS connection is established, then turns off.
	Blinking	WPS connection is in progress. This may take up to 2 minutes.

#### 1. 2. 2. Back Panel



Item	Description
LAN Port (1-3)	For connecting your PC or other wired devices to the router.
1 Gbps WAN/LAN Port	For connecting to a DSL/Cable modem, or an Ethernet jack.
2.5 Gbps WAN/LAN Port	For connecting to a DSL/Cable modem, or an Ethernet jack.
LED/Wi-Fi	Press and hold this button for more than 2 seconds to turn on or off the wireless function of your router. Press the LED button for 1 second to turn on or off the LED of your router.
Reset Button	Press and hold the button for about 6 seconds until the Power LED blinks to reset the router to its factory default settings.
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.

The following parts (view from up to down) are located on the back panel.

## Chapter 2

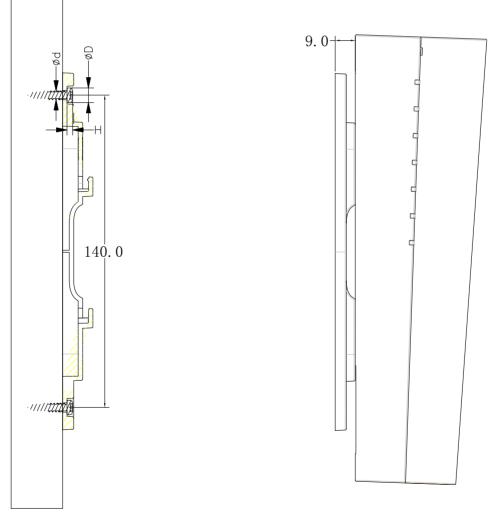
## **Connect the Hardware**

This chapter contains the following sections:

- Position Your Router
- <u>Connect Your Router</u>

## 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:

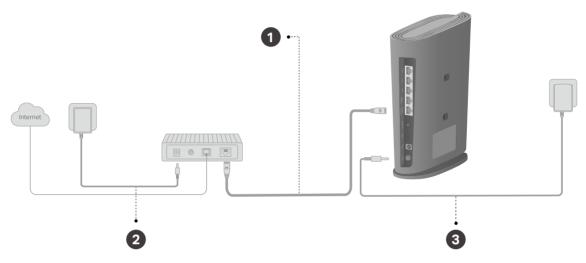
The diameter of the screw head, 4.67mm<D<8mm, and the distance of two screws is 140mm. The screw that project from the wall need around 5mm based, and the length of the screw need to be at least 20mm to withstand the weight of the product.

## 2.2. Connect Your Router

#### Before you start:

- 1) Turn off your modem, if any, and remove the backup battery if it has one.
- 2) Place the router horizontally and orient the antennas vertically.

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



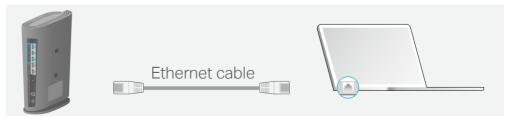
- 1. Connect the **powered-off modem** to the router's **2.5 Gbps WAN/LAN port** with an Ethernet cable.
- 2. Turn on the modem, and then wait about 2 minutes for it to restart.
- 3. Connect the power adapter to the router and turn on the router.
- 4. Verify that the hardware connection is correct by checking the following LEDs.



**Note**: If the 2.4 GHz, 5 GHz, and 6 GHz LEDs are off, press and hold the Wi-Fi button on the back for more than 2 seconds. These LEDs should turn solid on.

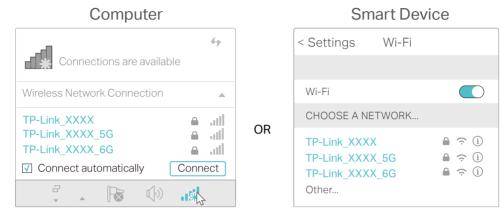
- 5. Connect your computer to the router.
- Method 1: Wired

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



#### • Method 2: Wirelessly

- 1) Find the SSIDs (Network Names) 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) Tap 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 <u>http://tplinkwifi.net</u>, and create a login password for secure management purposes. Then click Let's Get Started to log in.

**Note:** If the login window does not appear, please refer to the <u>FAQ</u> Section.

$\leftrightarrow \rightarrow \mathbf{C}      \text{http://tplinkwifi.}$	net	=	
	Create an administrator password For security purposes, create a local password for login before starting the quick setup.		
	Let's Get Started		

## 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:

- Use Quick Setup Wizard
- Quick Setup Via TP-Link Tether App
- <u>Manually Set Up Your Internet Connection</u>
- <u>Set Up the Router as an Access Point</u>
- <u>Set Up an IPv6 Internet Connection</u>

## 4.1. Use Quick Setup Wizard

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

Ø 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 <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.
- Follow the step-by-step instructions to complete Quick Setup configuration or go to Advanced > 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.

Get	TP-Link Cloud Service
	er to your TP-Link ID. You can manage your network er app, get notified of the latest firmware updates and more.
TP-L	Link ID (Email):
Pass	sword:
Sign	LOG IN
Sign	Up Now Forgot Password?

Note:

- To learn more about the TP-Link Cloud service, please refer to the <u>TP-Link Cloud Service</u> 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 Tether App

The Tether 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 Tether" or simply scan the QR code to download and install the app.



2. Launch the Tether 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 + button and select Wireless Router > Standard Routers. 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 <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Internet.
- 3. Select your internet connection type from the drop-down list.



- 4. Follow the instructions on the page to continue the configuration. Parameters on the figures are just used for demonstration.
  - 1) If you choose Dynamic IP, you need to select whether to clone the MAC address. Dynamic IP users are usually equipped with a cable TV or fiber cable.

Internet Connection	
Set up an internet connection with the se	rvice information provided by your ISP (internet service provider).
Internet Connection Type:	Dynamic IP
	Select this type if your ISP doesn't provide any information for internet connection.
MAC Clone	
Set the MAC address of your router. Use only a specific MAC address.	the default address unless your ISP allows internet access from
Router MAC Address:	Use Custom MAC Address
	58 - 11 - 22 - CE - A1 - 45

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

Internet	
Set up an internet connection with the se	ervice information provided by your ISP (internet service provider).
Internet Connection Type:	Static IP V
	Select this type if your ISP provides specific IP parameters.
IP Address:	
Subnet Mask:	
Default Gateway:	
Primary DNS:	
Secondary DNS:	(Optional)

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

Internet		
Set up an internet connection with the se	ervice information provided by your ISP (internet ser	vice provider).
Internet Connection Type:	PPPoE V	
	Select this type if your ISP only provides a usernal password.	me and
Username:		
Password:	Ø	

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.

Set up an internet connection with the se	ervice information provided by your ISP	(internet service provider
Internet Connection Type:	L2TP v	
	Select this type if your ISP provides L information and an account. Some IS parameters.	
Username:		
Password:	Ø	
	Oynamic IP	
	Static IP	
VPN Server IP/Domain Name:		

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.

Internet Connection Type:	PPTP V
	Select this type if your ISP provides PPTP VPN server information and an account. Some ISPs also provide specific parameters.
Username:	
Password:	m ø
	Dynamic IP
	Static IP

6) If you choose DS-Lite, enter the AFTR Name or choose auto filled in.

Internet Connection			
Set up an internet connection with the se	rvice information prov	ided by your ISP (internet service pro	ovider).
Internet Connection Type:	DS-Lite	~	
	For you have subsc	ribed DS-Lite service from ISP.	
AFTR Name:	Auto	$\checkmark$	

7) Choose v6plus if you have subscribed v6plus service from your ISP.

Internet Connection		
Set up an internet connection with the set	vice information prov	rovided by your ISP (internet service provider
Internet Connection Type:	v6plus	~
	For you have subso	oscribed v6plus service from ISP.

8) Choose MAP-E(OCN) if you have subscribed MAP-E service from your ISP.

Internet Connection	
Set up an internet connection with the se	rvice information provided by your ISP (internet service provider).
Internet Connection Type:	MAP-E(OCN)
	For you have subscribed MAP-E service from OCN.

#### 5. 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 <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Operation Mode, select Access Point Mode and click SAVE. The router will reboot and switch to Access Point mode.

Operation Mode
Select an operation mode according to your needs.
O Wireless Router Mode (Current)
In this mode, the router can provide internet access for multiple wired and wireless devices. This mode is required most commonly.
Access Point Mode
In this mode, the router changes an existing wired (Ethernet) network into a wireless one.
Internet LAN

- 3. After rebooting, connect the router to your existing wired router via an Ethernet cable.
- 4. Log in again to the web management page <a href="http://tplinkwifi.net">http://tplinkwifi.net</a>, and go to Advanced <a href="http://tplinkwifi.net">Advanced</a> <a href="http://tplinkwifi.net">Quick Setup</a>.
- 5. Configure your wireless settings and click Next.
- 6. Confirm the information and click SAVE. Now, you can enjoy Wi-Fi.
- Ø 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, Dynamic IP(SLAAC/DHCPv6), Static IP, 6to4 tunnel, Pass-Through (Bridge).

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

```
Ø 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 SAVE.

Pv6 Internet		
et up an IPv6 internet connection using	the information provided by your IS	SP (internet service provide
IPv6:		
Internet Connection Type:	Static IP	<b>~</b>
IPv6 Address:		
Default Gateway:		
Primary DNS:		
Secondary DNS:		
MTU Size:	1500	
	bytes. (The default is 1500, do no	t change unless necessary

2) Dynamic IP(SLAAC/DHCPv6): Click Advanced to input further information if your ISP requires. Click SAVE and then click Renew.

Set up an IPv6 internet connection using	g the information provided by your ISP	(internet service provider)
IPv6:		
Internet Connection Type:	Dynamic IP(SLAAC/DHCPv6)	
IPv6 Address:		
Primary DNS:		
Secondary DNS:		
	RENEW	
	RELEASE	
	Advanced Settings	

3) PPPoE: By default, the router uses the IPv4 account to connect to the IPv6 server. Click Advanced to input further information if your ISP requires. Click SAVE and then click Connect.

#### Note:

If your ISP provides two separate accounts for the IPv4 and IPv6 connections, manually enter the username and password for the IPv6 connection.

<b>v6 Internet</b> et up an IPv6 internet connection using	g the information provided	by your ISP (internet service provide
IPv6: Internet Connection Type:	PPPoE	~
memer connection type.	Share the same PPP	PoE session with IPv4
Username:		
Password:		
IPv6 Address:		
	Advanced Settings	
	CONNECT	
	DISCONNEC	т

4) 6to4 Tunnel: An IPv4 internet connection type is a prerequisite for this connection type (Manually Set Up Your Internet Connection). Click Advanced to input further information if your ISP requires. Click SAVE and then click Connect.

IPv6 Internet		
Set up an IPv6 internet connection usin	g the information provided by your ISP	(internet service provider).
IPv6:		
Internet Connection Type:	6to4 Tunnel 🗸 🗸	
IPv4 Address:	0.0.0.0	
IPv4 Subnet Mask:	0.0.0.0	
IPv4 Default Gateway:	0.0.0.0	
TUNNEL ADDRESS:	::	
	Advanced Settings	
	CONNECT	1
	DISCONNECT	

5) Pass-Through (Bridge): Click SAVE and skip to Step 6.

IPv6 Internet		
Set up an IPv6 internet connection using	the information provided by y	our ISP (internet service provider).
IPv6:		
Internet Connection Type:	Pass-Through (Bridge)	$\sim$

5. Configure LAN ports. Windows users are recommended to choose from the first two types. Fill in Address Prefix provided by your ISP, and click SAVE.

IPv6 LAN		
Configure the LAN IPv6 address of the the clients.	router and set the configuration type to	assign IPv6 addresses to
Assigned Type:		
	<ul> <li>SLAAC+Stateless DHCP</li> <li>SLAAC+RDNSS</li> </ul>	
Address Prefix:		/64
Address:	FE80::9ADA:C4FF:FEB4:1D8/64	

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

Ø Tips:

Visit the FAQ section if there is no internet connection.

## Chapter 5

## **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 Tether 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 Tether app with which you can manage your home network no matter where you may find yourself.

It contains the following sections:

- Register a TP-Link ID
- <u>Change Your TP-Link ID Information</u>
- Manage the User TP-Link IDs
- Manage the Router via the TP-Link Tether App

### 5.1. Register a TP-Link ID

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

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.
- 2. Go to Advanced > TP-Link ID or click TP-Link ID on the very top of the page.
- 3. Click Sign Up and follow the instructions to register a TP-Link ID.

TP-Link ID		
Log in to bind the router to your T more.	P-Link ID. You can remotely manage your network via the T	ether app, and
	TP-Link ID (Email):	
	Password:	
	Log In	
	Sign Up Forgot Password?	

- 4. After activating your TP-Link ID, come back to the TP-Link ID 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 Tether APP. Please refer to Manage the Router via the TP-Link Tether App to install the app.
- If you want to unbind the admin TP-Link ID from your router, please go to Advanced > TP-Link ID, an click Unbind in the Device Information section.

## 5.2. 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, and log in with your TP-Link ID.
- 2. Go to Advanced > TP-Link ID, 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.

Change Er	nail
🔎 Passwo	rd
New En	nail
	Save
	email or password nc to client devices
	. Please log in again
when your o	device is connected
to the Inter	net to update

- To change your password:
- 1. Click 🗹 behind the Password.

2. Enter the current password, then a new password twice. And click SAVE.

nange P	assword
🔎 Curren	nt Password
P New P	assword
Low	Middle   High
P Confirm	m Password
	Save
lote: New	email or password nc to client devices

### 5.3. 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 Tether app.
- Add/remove other TP-Link IDs to/from the router.

#### 5. 3. 1. Add TP-Link ID to Manage the Router

- 1. Visit http://tplinkwifi.net, and log in with your TP-Link ID.
- 2. Go to Advanced > TP-Link ID, 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 Tether app. Refer to <u>Manage the Router via the</u> <u>TP-Link Tether App</u> to install the app and register a new TP-Link ID.

Add Account	
🗹 Email	
Cancel	Save

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

			🕀 Bind 🛛 🖨 Unbind
ID	Email	Binding Date	Role
1	thangour, reading con-		Admin
2	August Attract (1) con		User

#### 5. 3. 2. Remove TP-Link ID(s) from Managing the Router

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID.
- 2. Go to Advanced > TP-Link ID, 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.

Bound Accounts							
				🕂 Bind 😑 Unbind			
	ID	Email	Binding Date	Role			
	1	Barger, redna.com		Admin			
	2	shangeunlighting@183.com	10011-0001-00	User			

## 5.4. Manage the Router via the TP-Link Tether App

The Tether 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 Tether" or simply scan the QR code to download and install the app.



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

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

- 3. Connect your device to the router's wireless network.
- 4. Go back to the Tether app, select the model of your router and log in with the password you set for the router.
- 5. Manage your router as needed.
- Note: If you need to remotely access your router from your smart devices, you need to:
- Log in with your TP-Link ID. If you don't have one, refer to Register a TP-Link ID.
- Make sure your smartphone or tablet can access the internet with cellular data or a Wi-Fi network.

## Chapter 6

## **Wireless Settings**

This chapter guides you on how to configure the wireless settings.

It contains the following sections:

- <u>Specify Wireless Settings</u>
- <u>Schedule Your Wireless Function</u>
- Use WPS for Wireless Connection
- Advanced Wireless Settings

## 6.1. Specify Wireless Settings

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

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

Personalize settings for each band or en: and 5GHz bands.	able Smart Connect to config	gure the san	ne settings for 2.4GHz
OFDMA:	Enable 🕜		
TWT:	Enable 🕜		
Smart Connect:	Z Enable 🕜		
2.4GHz/5GHz:	Enable		Share Network
Network Name (SSID):	TP-Link_7B00		Hide SSID
Security:	WPA2-PSK[AES]	~	
Password:	03717660		
Transmit Power:	High	~	
2.4GHz Channel Width:	20/40MHz	~	
2.4GHz Channel:	Auto	~	
5GHz Channel Width:	20/40/80/160MHz	~	
5GHz Channel:	Auto	~	
	The channel width and cha DFS channels. This will re- regulatory radar detection	quire some	waiting time to meet
6GHz:	🖸 Enable 💡		Share Network
Network Name (SSID):	TP-Link_7B00_6G		Hide SSID
Security:	WPA3-Personal	~	
Version:	WPA3-SAE		
Password:	03717660		
Transmit Power:	High	~	
Channel Width:	20/40/80/160MHz	~	
Channel:	Enable PSC (2)		
	Auto	~	

#### • To enable or disable OFDMA:

OFDMA enables multiple users to transmit data simultaneously, and thus greatly improves speed and efficiency. Noted that only when your clients also support OFDMA, can you fully enjoy the benefits. It is disabled by default.

1. Go to Advanced > Wireless > Wireless Settings.

#### 2. Enable OFDMA.

#### • To enable or disable TWT:

TWT (Target Wake Time) allows 802.11ax routers and clients to negotiate their periods to transmit and receive data packets. Clients only wake up at TWT sessions and remain in sleep mode for the rest of the time, which significantly extend their battery life. It is disabled by default.

1. Go to Advanced > Wireless > Wireless Settings.

2. Enable TWT.

#### • To use the Smart Connect function:

Smart Connect combines the 2.4 GHz and 5 GHz bands and assigns your devices between them to balance network demands, while leaving the brand-new 6 GHz band exclusive for your Wi-Fi 6E devices to unleash the most out of the latest Wi-Fi.

- 1. Go to Advanced > Wireless > Wireless Settings.
- 2. Enable Smart Connect.



- 3. Keep the default values or set a new SSID and password, and click SAVE. This SSID and password will be applied for the 2.4 GHz and 5 GHz wireless networks. If you want to configure the wireless settings separately for each band, deselect the checkbox to disable this feature.
- To enable or disable the wireless function:
- 1. Go to Wireless or Advanced > Wireless > Wireless Settings.
- 2. The wireless bands are enabled by default. If you want to disable a wireless band, just deselect its Enable checkbox.
- To change the wireless network name (SSID) and wireless password:
- 1. Go to Wireless or Advanced > Wireless > Wireless Settings.
- 2. Create a new SSID in Network Name (SSID) and customize the password for the network in Password. The value is case-sensitive.

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

#### • To hide SSID:

- 1. Go to Wireless or Advanced > Wireless > Wireless Settings.
- 2. Select Hide SSID, and your SSID won't display when you scan for local wireless networks on your wireless device and you need to manually join the network.

#### • To change the security option:

- 1. Go to Advanced > Wireless > Wireless Settings.
- 2. Select an option from the Security drop-down list. We recommend you don't change the default settings unless necessary.

#### • To change the transmit power:

- 1. Go to Advanced > Wireless > Wireless Settings.
- 2. Select an option from the Transmit Power drop-down list: High, Middle or Low. The default and recommended setting is High.

#### • To change channel settings:

- 1. Go to Advanced > Wireless > Wireless Settings.
- 2. Select a Channel Width (bandwidth) for the wireless network. It is recommended to just leave it as default.
- 3. Select an operating Channel for the wireless network. It is recommended to leave the channel to Auto if you are not experiencing the intermittent wireless connection issue.

For the 6 GHz network, you can select the Enable PSC checkbox. When PSC (Preferred Scanning Channel) is enabled, only channels with higher connectivity will be reserved to ensure 6 GHz device connections.

#### • To change the transmission mode:

- 1. Go to Advanced > Wireless > Wireless Settings.
- 2. For the 2.4 GHz and 5 GHz networks, disable Smart Connect, then select a transmission Mode according to your wireless client devices. It is recommended to just leave it as default.

The 6 GHz network only supports 802.11ax mode, which cannot be changed.

### 6.2. Schedule Your Wireless Function

The wireless network can be automatically off at a specific time when you do not need the wireless connection.

1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.

- 2. Go to Advanced > Wireless > Wireless Schedule.
- 3. Enable the Wireless Schedule feature.

Wireless	Schedule				
Schedule v	hen to automatical	ly turn off y	your wireless networ	k.	
			Enable		

4. Click Add to specify a wireless off period during which you need the wireless off automatically, and click SAVE.

Add Schedule	×	
Wireless Off Time: From	10 V PM V	
То	6 V AM V (next day)	
Repeat:	(S) (M) (T) (W) (T) (F) (S)	
	CANCEL	

Note:

- The Effective Time Schedule is based on the time of the router. You can go to Advanced > System > Time & Language to modify the time.
- The wireless network will be automatically turned on after the time period you set.

### 6.3. Use WPS for Wireless Connection

Wi-Fi Protected Setup (WPS) provides an easier approach to set up a security-protected Wi-Fi connection.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Make sure the Wi-Fi of your router is on and go to Advanced > Wireless > WPS.

#### 6. 3. 1. Connect via the Client's PIN

Enter the PIN of your device and click Connect. Then your device will get connected to the router.

WPS:	
Method 1:	Using a PIN
	Client's PIN
	O Router's PIN
	Enter your personal device's PIN here and click $\ensuremath{\textbf{CONNECT}}$
	CONNECT

#### 6. 3. 2. Connect via the Router's PIN

Select Router's PIN in Method 1 to enable Router's PIN. You can use the default PIN or generate a new one.

Router's PIN:		
	Enter the router's PIN on your persona Router's PIN: 38337406	I device.
	GET NEW PIN	
	DEFAULT	

Note:

PIN (Personal Identification Number) is an eight-character identification number preset to each router. WPS supported devices can connect to your router with the PIN. The default PIN is printed on the label of the router.

#### 6. 3. 3. Push the WPS Button

Click Start on the screen or directly press the router's WPS button. Within two minutes, enable WPS on your personal device. Success will appear on the screen and the WPS LED of the router should change from flashing to solid on, indicating successful WPS connection.

Method 2:	Using the button below
	Click the button below, then enable WPS on your personal device within 2 minutes.
	Start
Method 3:	Using the router's WPS button
	Press the router's WPS button, then enable WPS on your personal device within 2 minutes.

## 6.4. Advanced Wireless Settings

Check advanced wireless settings for your device.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Wireless > Additional Settings.
- 3. Configure advanced wireless settings.

ck advanced wireless settings for you	ur device.
WMM:	Enable
AP Isolation:	Enable
Airtime Fairness:	Enable
Beacon Interval:	100
RTS Threshold:	2346
DTIM Interval:	1
Group Key Update Period:	0 s

• WMM - WMM function can guarantee the packets with high-priority messages being transmitted preferentially.

- AP Isolation This function isolates all connected wireless stations so that wireless stations cannot access each other through WLAN.
- Airtime Fairness This function can improve the overall network performance by sacrificing a little bit of network time on your slow devices.
- Beacon Interval Enter a value between 40 and 1000 in milliseconds to determine the duration between beacon packets that are broadcasted by the router to synchronize the wireless network. The default value is 100 milliseconds.
- RTS Threshold- Enter a value between 1 and 2346 to determine the packet size of data transmission through the router. By default, the RTS (Request to Send) Threshold size is 2346. If the packet size is greater than the preset threshold, the router will send RTS frames to a particular receiving station and negotiate the sending of a data frame.
- DTIM Interval The value determines the interval of DTIM (Delivery Traffic Indication Message). Enter a value between 1 and 15 intervals. The default value is 1, which indicates the DTIM Interval is the same as Beacon Interval.
- Group Key Update Period Enter a number of seconds (minimum 30) to control the time interval for the encryption key automatic renewal. The default value is 0, meaning no key renewal.

## 6.5. Create An IoT Network

Create a dedicated wireless network to manage your IoT devices together, such as smart lights and cameras.

- 1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Wireless or Advanced > Wireless > IoT Network.
- 3. Create an IoT network as needed.
  - 1) Tick the Enable checkbox for the 2.4GHz or 5GHz wireless network.
  - 2) Customize the SSID. Don't select Hide SSID unless you want your guests to manually input the SSID for guest network access.
  - 3) Select the Security type (None, WPA2-PSK[AES], WPA2-PSK[AES]+WPAPSK[ TKIP], WPA3-Personal, WPA3-Personal+WPA2-PSK[AES]) and customize your own password. If None is selected, no password is needed to access your guest network.

IoT Network		
Create a dedicated wireless network to n cameras.	nanage your IoT devices together, such	h as smart lights and
2.4GHz:	Enable	Share Network
Network Name (CCID):	TD Link LT 7000	Hide SSID
Network Name (SSID):	TP-Link_IoT_7B00	
Security:	WPA2-PSK[AES]	
Password:	03717660	
5GHz:	Enable	Share Network
	Make sure your IoT devices can con	nect to a 5 GHz network.
Network Name (SSID):	TP-Link_IoT_7B00_5G	Hide SSID
Security:	WPA2-PSK[AES]	
Password:	03717660	

# **Guest Network**

This function allows you to provide Wi-Fi access for guests without disclosing your main network. When you have guests in your house, apartment, or workplace, you can create a guest network for them. In addition, you can customize guest network options to ensure network security and privacy.

It contains the following sections:

- <u>Create a Network for Guests</u>
- <u>Customize Guest Network Options</u>

## 7.1. Create a Network for Guests

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Wireless > Guest Network or click Wireless on the top page. Locate the Guest Network section.
- 3. Create a guest network as needed.
  - 1) Tick the Enable checkbox for the 2.4GHz, 5 GHz or 6GHz wireless network.
  - 2) Customize the Network Name(SSID). Don't select Hide SSID unless you want your guests to manually input the SSID for guest network access.
  - 3) Enable Bandwidth Control for one or all networks as you needed and customize the download bandwidth and upload bandwidth for the network.
  - 4) Select the Effective Time (No Limit, 4 Hours, 1 Day, Custom). The guest network will be automatically turned off after the effective time. The default No Limit indicates that the guest network will always remain on.
  - 5) Select the Security type and customize your own password. If No security is selected, no password is needed to access your guest network.

Guest Network		
Enable the wireless bands you want you	r guests to use and complete the related	information.
2.4GHz:	Enable	Share Network
Network Name (SSID):	TP-Link_Guest_7B00	Hide SSID
Bandwidth Control:	Enable	
Download Bandwidth:	Mbps	
Upload Bandwidth:	Mbps	
5GHz:	Enable	Share Network
Network Name (SSID):	TP-Link_Guest_7B00_5G	Hide SSID
Bandwidth Control:	Enable	
6GHz:	Enable	Share Network
Network Name (SSID):	TP-Link_Guest_7B00_6G	Hide SSID
Bandwidth Control:	Enable	
Effective Time:	No Limit 🗸	
Security:	No Security 🗸	
	This security type is not considered se more secure encryption.	cure. Consider selecting a

- 4. Click SAVE. Now your guests can access your guest network using the SSID and password you set!
- 5. You can also click Sharing Network to share the SSID and password to your guests.

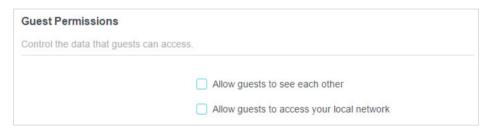


Tips:

To view guest network information, go to Network Map and locate the Guest Network section. You can turn on or off the guest network function conveniently.

## 7.2. Customize Guest Network Options

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Wireless > Guest Network. Locate the Guest Permissions section.
- 3. Customize guest network options according to your needs.



Allow guests to see each other

Tick this checkbox if you want to allow the wireless clients on your guest network to communicate with each other via methods such as network neighbors and Ping.

Allow guests to access your local network

Tick this checkbox if you want to allow the wireless clients on your guest network to communicate with the devices connected to your router's LAN ports or main network via methods such as network neighbors and Ping.

4. Click SAVE. Now you can ensure network security and privacy!

# **Network Map**

Network Map outlines device connectivity of your network visually and helps you manage general settings of the network.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Network Map.
- 3. Click each network device icon to check and manage general network settings.
- Click Internet to check internet status.

Internet	246 55 6 ⇒   ⇒   ₹ Archer AXE5400	Mesh Devices	Clients
Internet Status			
Connection Type: WAN MAC Address:		Internet IP Address: Online Duration:	21 Minutes

• Click the router to check device status and network settings. You can turn on or off the wireless network or guest network, or click Edit to change related settings.

~~~	2.40 60	eo	•
<b>—</b> —	— (Ш)—	&	
Internet	Archer AXE5400	Mesh Devices	Clients
Router Information			
Device Name:	Archer AXE5400	IPv4 LAN IP:	192.168.0.1
LAN MAC Address:	00-0A-EB-13-7B-00	IPv6 LAN IP:	FE80::20A:EBFF:FE13:7B00/ 64
Wireless			🕑 Edit
2.4GHz Wireless:		5GHz Wireless:	
Network Name (SSID):	TP-Link_7B00	Network Name (SSID):	TP-Link_7B00_5G
Password:	03717660	Password:	03717660
Channel:	Auto (Current: 10)	Channel:	Auto (Current: 36)
6GHz Wireless:			
Network Name (SSID):	TP-Link_7B00_6G		
Password:	03717660		
Channel:	Auto (Current: 37)		
Guest Network			🕑 Edit
2.4GHz Wireless:	$\bigcirc$	5GHz Wireless:	$\bigcirc$
Network Name (SSID):	TP-Link_Guest_7B00	Network Name (SSID):	TP-Link_Guest_7B00_5G
6GHz Wireless:	$\bigcirc$		
Network Name (SSID):	TP-Link_Guest_7B00_6G		
IoT Network			🕑 Edit
2.4GHz Wireless:	$\bigcirc$	5GHz Wireless:	$\bigcirc$
Network Name (SSID):	TP-Link_IoT_7B00	Network Name (SSID):	TP-Link_IoT_7B00_5G
Password:	03717660	Password:	03717660
Performance			
CPU Load	Current: 22%	Memory Usage	Current: 51%

• Click Mesh Devices to view the devices that form a mesh network with the router.

Internet	Archer AXE5400	56 66 (c)	Mesh Devices	Clie	ents
All (1)	$\sim$				
Connected Clients				Vie	w Deny List
Device Info	Real-time Rate	Tx/Rx Rate(Mbps)	Duration	Speed Limit	Block

• Click Clients to view the client devices in your network. You can block devices so they cannot access your network, or set Speed Limit to limit their upload and download speeds.

<b>—</b>	246 중   	5G 6G	de la construcción de la constru			
Internet (1)	Archer AXE5400		Mesh Devices		Clien	its
Connected Clients					View	Deny Lis
Connected Clients	Real-time Rate	Tx/Rx Rate(Mbps)	Duration	Speed L		Block

#### To limit the speeds of a device:

- 1. Click in the Speed Limit column.
- 2. Enable Speed Limit.
- 3. Set the download and upload speed limit according to your needs.
- 4. Click SAVE. The speeds of the device will be limited.

	Speed Limit		×
Connec			Black
Device	Limit the download speed and upload Speed Limit:		Block
	Download Speed Limit:	1Mbps  Web browsing, sending emails, making social media posts	$\otimes$
	Upload Speed Limit:	200 Kbps	0

# **HomeShield**

Customize your home network with enhanced security using a kit of features built in TP-Link HomeShield. Whether protecting your sensitive data or limiting the access of kids and guests, TP-Link HomeShield provides you the tools you need to fully manage your network.

It contains the following sections:

- Network Security
- Parental Controls
- <u>Network Analysis & Optimization</u>

## 9.1. Network Security

TP-Link HomeShield provides many tools to protect your network from malicious attacks.



#### **Network Analysis**

Analyze and optimize your network



#### IoT Protection

Get real-time security for your Internet of Things



# Intrusion Prevention System

Identifies and block network intruders



### Malicious Content Filter

Block malicious content



#### **DDoS Protection**

Protects your home network from DDoS attacks

- To use this feature, download Tether to enjoy the HomeShield service
- 1. Scan the QR code or get the Tether app from the Apple App Store or Google Play.



- 2. Launch the Tether app and log in with your TP-Link ID. If you don't have an account, create one first.
- 3. Log in to your router and tap the HomeShield tab to use this feature.

# 9.2. Parental Controls

Parental Controls allows you to set up unique restrictions on internet access for each member of your family. You can block inappropriate content, set daily limits for the total time spent online and restrict internet access to certain times of the day.



#### **Child Protection**

Keep your child away from inappropriate content



#### **Family Incentive Program**

Manage screen time and create rewards



#### **Family Time**

Pause the internet to enjoy family time

#### • To use this feature, download Tether to enjoy the HomeShield service

1. Scan the QR code or get the Tether app from the Apple App Store or Google Play.



- 2. Launch the Tether app and log in with your TP-Link ID. If you don't have an account, create one first.
- 3. Log in to your router and tap the HomeShield tab to use this feature.

## 9.3. Network Analysis & Optimization

TP-Link HomeShield provides many tools for you to analyze and optimize your network.



#### Weekly and Monthly Reports

Get weekly and monthly reports of your network usage



#### Quality of Service (QoS)

Prioritizes devices to give faster performance



#### Scan

Run a scan for a better network performance and security anytime

- To use this feature, download Tether to enjoy the HomeShield service
- 1. Scan the QR code or get the Tether app from the Apple App Store or Google Play.



- 2. Launch the Tether app and log in with your TP-Link ID. If you don't have an account, create one first.
- 3. Log in to your router and tap the HomeShield tab to use this feature.

# EasyMesh with Seamless Roaming

This product is compatible with EasyMesh. This chapter introduces the EasyMesh feature.

It contains the following sections:

- Add a Router as a Satellite Device
- Add a Range Extender as a Satellite Device
- Manage Devices in the EasyMesh Network

EasyMesh routers and extenders work together to form one unified Wi-Fi network. Walk through your home and stay connected with the fastest possible speeds thanks to EasyMesh's seamless coverage.

Note: Routers and range extenders must be compatible with EasyMesh or OneMesh™. Firmware upgrades may be required.

### 10. 1. Add a Router as a Satellite Device

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

EasyMesh
Connect EasyMesh and OneMesh devices to create a mesh network for seamless Wi-Fi coverage and centralized management.
EasyMesh:
Tip: Enable Smart Connect to work with EasyMesh for better seamless roaming.
What's EasyMesh?
EasyMesh Network
Set up and manage your EasyMesh network.
Current Mode: Main Router 4 Change Mode
In this mode, you can add EasyMesh and OneMesh devices to boost Wi-Fi coverage.
ADD SATELLITE DEVICES

3. Click ADD SATELLITE DEVICES, select TP-Link Router, then click NEXT.

Add Satellite Devices		×
Which type of satellite devices do you want to add?		
TP-Link Router (Includes TP-Link EasyMesh and OneMesh routers)		
TP-Link Extender (Includes TP-Link EasyMesh and OneMesh extenders)		
Others (Includes EasyMesh devices of other brands)		
	CANCEL	NEXT

4. Follow the page instructions to prepare your satellite router, then click DONE.

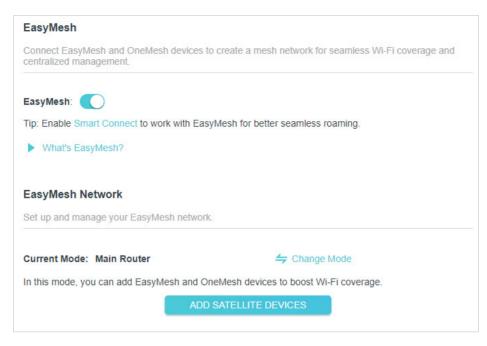


5. Click ADD. When prompted "This device has been added successfully", click OK, then click FINISH.

Add TP-Li	nk Satellite Ro	outers		×
How to char		atellite routers, and add the Satellite Router mode?	em to the mesh network.	
				Searching
Туре	Name	MAC Address	Signal	Add
≝	Archer C80	34-60-F9-61-ED-9B	att	ADD
			BACK	FINISH

### 10.2. Add a Range Extender as a Satellite Device

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



- 3. Plug in the extender next to the main router.
- 4. With in 2 minutes, press the WPS button on main router and on the extender. Wait until the WPS process is complete.
- 5. Done! You can check the mesh device on the router's web page too.

EasyMesh					
Connect EasyMesh and OneMes centralized management.	sh devices to create	a mesh netw	ork for seam	less Wi-Fi cov	erage and
EasyMesh:					
Tip: Enable Smart Connect to wo	ork with EasyMesh f	or better sean	nless roamin	g.	
What's EasyMesh?					
EasyMesh Network					
Set up and manage your EasyMe	esh network.				
Current Mode: Main Router			nange Mode		
In this mode, you can add EasyN	lesh and OneMesh	devices to bo	ost Wi-Fi co	verage.	
Note: TP-Link satellite routers wi	II follow the main ro	uter's LED Co	ontrol Setting	S.	
Satellite Devices: 1					
Device Info	IP Address	Location	Clients	Connectio n	Modify
00-AA-EB-07-20-66	192.168.0.22	Not set	0	all	区前
ADD SATELLITE DEVICES					

## 10.3. Manage Devices in the EasyMesh Network

In an EasyMesh network, you can manage all mesh devices and connected clients on your main router's web page.

- To view mesh devices and connected clients in the network:
- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Network Map.
- 3. Click 💆 to view all mesh devices, and click 🛒 to view all connected clients.
- To manage an EasyMesh device in the network:
- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > EasyMesh.



3. Click the Modify button to view detailed information and change its settings.

EasyMesh Device	)			
Device Info		Clients		
Name:		ID	Device Name	IP Address/MAC Address
Location:	- Please Select -	1	iPhone-Hotspot	192.168.0.71 D0-A6-37-83-DA-99
IP Address:	SAVE 192.168.0.22			
MAC Address:	00-AA-EB-07-20-66			
Signal Strength:	atl			
Link Speed:	7 Mbps (2.4GHz) 1 Gbps (5GHz)			
	REMOVE			
	MANAGE			

- Change device information.
- Click Manage to redirect to the web management page of this device.
- Click Remove to delete this device from the EasyMesh network.

# **Network Security**

This chapter guides you on how to protect your home network from cyber attacks and unauthorized users by implementing these three network security functions. You can protect your home network from cyber attacks, block or allow specific client devices to access your network using Access Control, or you can prevent ARP spoofing and ARP attacks using IP & MAC Binding.

It contains the following sections:

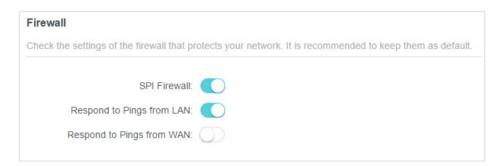
- Protect the Network from Cyber Attacks
- <u>Access Control</u>
- IP & MAC Binding
- <u>ALG</u>
- Device Isolation

\*For a more comprehensive home network protection system, refer to the <u>HomeShield</u> chapter.

## 11.1. Protect the Network from Cyber Attacks

The SPI (Stateful Packet Inspection) Firewall protects the router from cyber attacks and validate the traffic that is passing through the router based on the protocol. This function is enabled by default.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Security > Firewall. It's recommended to keep the default settings.



## 11.2. Access Control

Access Control is used to block or allow specific client devices to access your network (via wired or wireless) based on a list of blocked devices (Blacklist) or a list of allowed devices (Whitelist).

#### I want to:

Block or allow specific client devices to access my network (via wired or wireless).

#### How can I do that?

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Security > Access Control.
- 3. Toggle on to enable Access Control.
- 4. Select the access mode to either block (recommended) or allow the device(s) in the list.

#### To block specific device(s):

1) Select Blacklist.

Access Control	
Control the access to your network from	the specified devices.
Access Control:	
Access Mode:	Blacklist
	Configure a blacklist to only block access to your network from the specified devices.
	O Whitelist

- 2) Click 🕂 Add and select devices you want to be blocked and Click ADD.
- 3) The Operation Succeeded message will appear on the screen, which means the selected devices have been successfully added to the blacklist.



#### To allow specific device(s):

1) Select Whitelist and click SAVE.

Access Control	
Control the access to your network from	the specified devices.
Access Control:	
Access Mode:	O Blacklist
	Whitelist
	Configure a whitelist to only allow access to your network from the specified devices.

2) Your own device is in the whitelist by default and cannot be deleted. Click 🕂 Add to add other devices to the whitelist.

Device Name	MAC Address	Modify
		,
	00-19-66-35-E1-B0	面
ONNOVIN	00-13-00-00-21-00	
	Device Name	

- Add connected devices
- 1) Click Select From Device List.
- 2) Select the devices you want to be allowed and click ADD.

Add Devices		×
<ul> <li>Select From Device List</li> <li>Add Manually</li> </ul>		
Yan 192.168.1.221 38-CA-DA-3A-D8-B1	NICOLUO-PC 192.168.1.126 8C-DC-D4-3E-69-CC	
	CANCEL ADD	

- 3) The Operation Succeeded message will appear on the screen, which means the selected devices have been successfully added to the whitelist.
- Add unconnected devices
- 1) Click Add Manually.
- 2) Enter the Device Name and MAC Address of the device you want to be allowed and click ADD.

Add Devices	×
Select From Device List Add Manually Device Name: MAC Address:	
	CANCEL ADD

3) The Operation Succeeded message will appear on the screen, which means the device has been successfully added to the whitelist.

#### Done!

Now you can block or allow specific client devices to access your network (via wired or wireless) using the Blacklist or Whitelist.

### 11.3. IP & MAC Binding

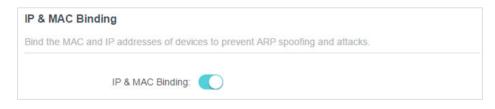
IP & MAC Binding, namely, ARP (Address Resolution Protocol) Binding, is used to bind network device's IP address to its MAC address. This will prevent ARP Spoofing and other ARP attacks by denying network access to an device with matching IP address in the Binding list, but unrecognized MAC address.

#### I want to:

Prevent ARP spoofing and ARP attacks.

#### How can I do that?

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Security > IP & MAC Binding.
- **3.** Enable IP & MAC Binding.



4. Bind your device(s) according to your need.

#### To bind the connected device(s):

1) Click 😌 Add in the Binding List section.

Binding List			
Add or delete binding en	tries.		
			🔂 Add
Device Name	MAC Address	IP Address	Modify
No Entries			

2) Click VIEW CONNECTED DEVICES and select the device you want to bind. The MAC Address and IP Address fields will be automatically filled in.

Add Binding Entry							×
MAC Address:	2	-	-	-	- )		
(	VIEW	CONI	NECTE	D DEV	/ICES		
IP Address:							
				С	ANCEL	S	AVE

3) Click SAVE.

#### To bind the unconnected device:

1) Click 🔂 Add in the Binding List section.

Binding List			
Add or delete binding ent	ries.		
			🔂 Add
Device Name	MAC Address	IP Address	Modify
No Entries			

- 2) Enter the MAC Address and IP Address that you want to bind.
- 3) Click SAVE.

#### Done!

Now you don't need to worry about ARP spoofing and ARP attacks!

### 11.4. ALG

ALG allows customized NAT traversal filters to be plugged into the gateway to support address and port translation for certain application layer "control/data" protocols such as FTP, TFTP, H323 etc. It is recommended to keep the default settings.

You may need to disable SIP ALG when you are using voice and video applications to create and accept a call through the router, since some voice and video communication applications do not work well with SIP ALG.

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

ALG Check the ALG (Application Layer Gatew	ay) settings. It is recommended to keep them as default.
PPTP Passthrough:	
L2TP Passthrough:	
IPSec Passthrough:	
FTP ALG:	
TFTP ALG:	
RTSP ALG:	
H323 ALG:	
SIP ALG:	

### 11.5. Device Isolation

Some devices, such as IoT devices, are vulnerable to security threats. To keep your important devices and data safe, you can isolate these devices to protect your network from being infected.

While isolated, isolated devices (these devices) can still access the internet and communicate with other isolated devices. However, isolated devices (these devices) cannot transfer data with devices on your home, including managing gateway devices, accessing USB devices, etc.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Security > Device Isolation.
- 3. Enable Device Isolation and click Add.

solate devices (such as I	oT devices) to protect your network from secu	rity threats.
Dev	rice Isolation: 🔵 💡	
lote: We recommend dis	sabling AP Isolation which may isolate all device	ces from each other
lote: We recommend dis	sabling AP Isolation which may isolate all device	ces from each other.
	sabling AP Isolation which may isolate all devic	ces from each other.
lote: We recommend dis solated Devices: 0 Device Type	Device Name MAC Ac	<b>3</b> Ad

4. Choose your device and click ADD.

Add Devices		×
Main Network (0/1)		
Device Type	Device Name	MAC Address
	network device	58-11-22-CE-A1-45
		CANCEL ADD

# **NAT Forwarding**

The router's NAT (Network Address Translation) feature makes devices on the LAN use the same public IP address to communicate with devices on the internet, which protects the local network by hiding IP addresses of the devices. However, it also brings about the problem that an external host cannot initiatively communicate with a specified device on the local network.

With the forwarding feature the router can penetrate the isolation of NAT and allows devices on the internet to initiatively communicate with devices on the local network, thus realizing some special functions.

The TP-Link router supports four forwarding rules. If two or more rules are set, the priority of implementation from high to low is Port Forwarding, Port Triggering, UPNP and DMZ.

It contains the following sections:

- Share Local Resources on the Internet by Port Forwarding
- Open Ports Dynamically by Port Triggering
- <u>Make Applications Free from Port Restriction by DMZ</u>
- Make Xbox Online Games Run Smoothly by UPnP

## 12.1. Share Local Resources on the Internet by Port Forwarding

When you build up a server on the local network and want to share it on the internet, Port Forwarding can realize the service and provide it to internet users. At the same time Port Forwarding can keep the local network safe as other services are still invisible from the internet.

Port Forwarding can be used for setting up public services on your local network, such as HTTP, FTP, DNS, POP3/SMTP and Telnet. Different services use different service ports. Port 80 is used in HTTP service, port 21 in FTP service, port 25 in SMTP service and port 110 in POP3 service. Please verify the service port number before the configuration.

#### I want to:

Share my personal website I've built in local network with my friends through the internet.

For example, the personal website has been built on my home PC (192.168.0.100). I hope that my friends on the internet can visit my website in some way. The PC is connected to the router with the WAN IP address 218.18.232.154.



#### How can I do that?

- 1. Assign a static IP address to your PC, for example 192.168.0.100.
- 2. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 3. Go to Advanced > NAT Forwarding > Port Forwarding.
- 4. Click 🔂 Add.

Port Forwarding						
Specify ports to make specific devices or services on your local network accessible over the internet.						
						🕀 Add
Service Name	e Device IP Address	External Port	Internal Port	Protocol	Status	Modify
No Entr	ries					

- 5. Click VIEW COMMON SERVICES and select HTTP. The External Port, Internal Port and Protocol will be automatically filled in.
- 6. Click VIEW CONNECTED DEVICES and select your home PC. The Device IP Address will be automatically filled in. Or enter the PC's IP address 192.168.0.100 manually in the Device IP Address field.
- 7. Click SAVE.

Add a Port Forwarding Entry		×
Service Name:	НТТР	
	VIEW COMMON SERVICES	
Device IP Address:	192.168.0.100	
	VIEW CONNECTED DEVICES	
External Port:	80	
Internal Port:	80	
Protocol:	TCP V	
	Enable This Entry	
	CANCEL	SAVE

- Ø Tips:
- It is recommended to keep the default settings of Internal Port and Protocol if you are not clear about which port and protocol to use.
- If the service you want to use is not in the common services list, you can enter the corresponding parameters
  manually. You should verify the port number that the service needs.
- You can add multiple port forwarding rules if you want to provide several services in a router. Please note that the External Port should not be overlapped.

#### Done!

Users on the internet can enter http:// WAN IP (in this example: http:// 218.18.232.154) to visit your personal website.

#### Ø Tips:

- The WAN IP should be a public IP address. For the WAN IP is assigned dynamically by the ISP, it is recommended to apply and register a domain name for the WAN referring to <u>Set Up a Dynamic DNS Service Account</u>. Then users on the internet can use http:// domain name to visit the website.
- If you have changed the default External Port, you should use http:// WAN IP: External Port or http:// domain name: External Port to visit the website.

## 12.2. Open Ports Dynamically by Port Triggering

Port Triggering can specify a triggering port and its corresponding external ports. When a host on the local network initiates a connection to the triggering port, all the external ports will be opened for subsequent connections. The router can record the IP address of the host. When the data from the internet return to the external ports, the router can forward them to the corresponding host. Port Triggering is mainly applied to online games, VoIPs, video players and common applications including MSN Gaming Zone, Dialpad and Quick Time 4 players, etc.

Follow the steps below to configure the Port Triggering rules:

1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.

ort Triggeri	ng					
	allow devices of allow the inter			imically open spe red it.	ecific external p	ports and
						0
Service Name	Triggering Port	Triggering Protocol	External Port	External Protocol	Status	Modify
No Entries						

2. Go to Advanced > NAT Forwarding > Port Triggering and click 😌 Add.

3. Click VIEW COMMON SERVICES, and select the desired application. The Triggering Port, Triggering Protocol and External Port will be automatically filled in. The following picture takes application MSN Gaming Zone as an example.

Add a Port Triggering Entry		×
Service Name:	MSN Gaming Zone	
	VIEW COMMON SERVICES	
Triggering Port:	47624	
Triggering Protocol:	All 🗸	
External Port:	2300-2400,28800-29000	
	(XX or XX-XX,1-65535,at most 5 pairs)	
External Protocol:	All 🗸	
	Enable This Entry	
	CANCEL	SAVE
	CANCEL	SAVE

#### 4. Click SAVE.

Ø Tips:

- You can add multiple port triggering rules according to your network need.
- The triggering ports can not be overlapped.
- If the application you need is not listed in the Existing Applications list, please enter the parameters manually. You should verify the external ports the application uses first and enter them into External Port field according to the format the page displays.

# 12.3. Make Applications Free from Port Restriction by DMZ

When a PC is set to be a DMZ (Demilitarized Zone) host on the local network, it is totally exposed to the internet, which can realize the unlimited bidirectional communication between internal hosts and external hosts. The DMZ host becomes a virtual server with all ports opened. When you are not clear about which ports to open in some special applications, such as IP camera and database software, you can set the PC to be a DMZ host.

Note:

When DMZ is enabled, the DMZ host is totally exposed to the internet, which may bring some potential safety hazards. If DMZ is not in use, please disable it in time.

#### I want to:

Make the home PC join the internet online game without port restriction.

For example, due to some port restriction, when playing the online games, you can log in normally but cannot join a team with other players. To solve this problem, set your PC as a DMZ host with all ports open.

#### How can I do that?

- 1. Assign a static IP address to your PC, for example 192.168.0.100.
- 2. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 3. Go to Advanced > NAT Forwarding > DMZ and tick to enable DMZ.
- 4. Click VIEW CONNECTED DEVICES and select your PC. The Device IP Address will be automatically filled in. Or enter the PC's IP address 192.168.0.100 manually in the DMZ Host IP Address field.

DMZ			
Expose a specific device in your local network to the internet for applications such as online gaming and real-time communications.			
DMZ:	Enable		
DMZ Host IP Address:	192.168.0.100		
	VIEW CONNECTED DEVICES		

#### 5. Click SAVE.

#### Done!

The configuration is completed. You've set your PC to a DMZ host and now you can make a team to game with other players.

# 12.4. Make Xbox Online Games Run Smoothly by UPnP

The UPnP (Universal Plug and Play) protocol allows applications or host devices to automatically find the front-end NAT device and send request to it to open the corresponding ports. With UPnP enabled, the applications or host devices on the local network and the internet can freely communicate with each other thus realizing the seamless connection of the network. You may need to enable the UPnP if you want to use applications for multiplayer gaming, peer-to-peer connections, real-time communication (such as VoIP or telephone conference) or remote assistance, etc.

Tips:

- UPnP is enabled by default in this router.
- Only the application supporting UPnP protocol can use this feature.
- UPnP feature needs the support of operating system (e.g. Windows Vista/ Windows 7/ Windows 8, etc. Some of
  operating system need to install the UPnP components).

For example, when you connect your Xbox to the router which has connected to the internet to play online games, UPnP will send request to the router to open the

corresponding ports allowing the following data penetrating the NAT to transmit. Therefore, you can play Xbox online games without a hitch.



If necessary, you can follow the steps to change the status of UPnP.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > NAT Forwarding > UPnP and toggle on or off according to your needs.

UPnP	
Enable UPnP (Universal Plug and Play) to allow devices on your local network to dynamically open ports for applications such as multiplayer gaming and real-time communications.	
UPnP:	

# **VPN Server&Client**

The router offers several ways to set up VPN connections:

**VPN Server** allows remote devices to access your home network in a secured way through the internet. The router supports three types of VPN Server:

**OpenVPN** is somewhat complex but with higher security and more stability, suitable for restricted environments such as campus network and company intranet.

**PPTP VPN** is easy to use with the built-in VPN software of computers and mobile devices, but it is vulnerable and may be blocked by some ISPs.

**L2TP/IPSec VPN** is more secure but slower than PPTP VPN, and may have trouble getting around firewalls.

**WireGuard VPN** is a modern VPN technology that offers high performance and easy configuration. Compared to OpenVPN, VPN performance has been greatly improved. It is very suitable for remote access application scenarios.

VPN Client allows devices in your home network to access remote VPN servers, without the need to install VPN software on each device.

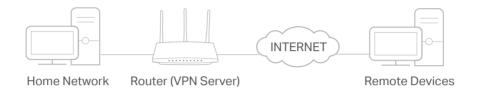
This chapter contains the following sections:

- <u>Use OpenVPN to Access Your Home Network</u>
- <u>Use PPTP VPN to Access Your Home Network</u>
- <u>Use L2TP/IPSec VPN to Access Your Home Network</u>
- <u>Use WireGuard to Access Your HomeNetwork</u>
- <u>Use VPN Client to Access a Remote VPN Server</u>

## 13. 1. Use OpenVPN to Access Your Home Network

OpenVPN Server is used to create an OpenVPN connection for remote devices to access your home network.

To use the VPN feature, you need to enable OpenVPN Server on your router, and install and run VPN client software on remote devices. Please follow the steps below to set up an OpenVPN connection.



#### Step1. Set up OpenVPN Server on Your Router

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

OpenVPN		
Set up an OpenVPN for secure, remote	access to your network.	
Note: No certificate has been created.	Generate one below before enabling OpenVPN.	
OpenVPN:	Enable	
Service Type:	• UDP	
	○ ТСР	
Service Port:	1194	
VPN Subnet:	10.8.0.0	
Netmask:	255.255.255.0	
Client Access:	Home Network Only	

Note:

- 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.
- The first time you configure the OpenVPN Server, you may need to generate a certificate before you enable the VPN Server.
- 3. Select the Service Type (communication protocol) for OpenVPN Server: UDP, TCP.
- 4. Enter a VPN Service Port to which a VPN device connects, and the port number should be between 1024 and 65535.
- 5. In the VPN Subnet/Netmask fields, enter the range of IP addresses that can be leased to the device by the OpenVPN server.

- 6. 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.
- 7. Click SAVE.
- 8. Click GENERATE to get a new certificate.

Certificate		
Generate the certificate.		
	GENERATE	

Note: If you have already generated one, please skip this step, or click GENERATE to update the certificate.

9. Click EXPORT to save the OpenVPN configuration file which will be used by the remote device to access your router.

Configuration File		
Export the configuration file.		
	EXPORT	

#### Step 2. Configure OpenVPN Connection on Your Remote Device

1. Visit <u>http://openvpn.net/index.php/download/community-downloads.html</u> to download the OpenVPN software, and install it on your device where you want to run the OpenVPN client utility.

Note: You need to install the OpenVPN client utility on each device that you plan to apply the VPN function to access your router. Mobile devices should download a third-party app from Google Play or Apple App Store.

- 2. After the installation, copy the file exported from your router to the OpenVPN client utility's "config" folder (for example, C:\Program Files\OpenVPN\config on Windows). The path depends on where the OpenVPN client utility is installed.
- 3. Run the OpenVPN client utility and connect it to OpenVPN Server.

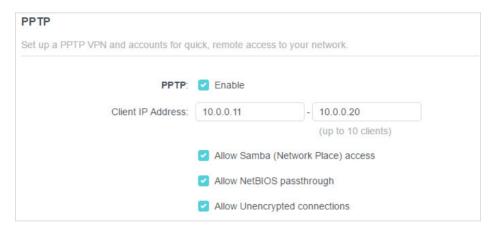
### 13.2. Use PPTP VPN to Access Your Home Network

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

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

Step 1. Set up PPTP VPN Server on Your Router

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



Note: 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 PPTP VPN server.
- 4. Set the PPTP connection permission according to your needs.
  - Select Allow Samba (Network Place) access to allow your VPN device to access your local Samba server.
  - Select Allow NetBIOS passthrough to allow your VPN device to access your Samba server using NetBIOS name.
  - Select Allow Unencrypted connections to allow unencrypted connections to your VPN server.

5. Click SAVE.

6. Configure the PPTP VPN connection account for the remote device. You can create up to 16 accounts.

Account List				
Configure accounts (up to 16) that can be used by remote clients to connect to the VPN server.				
		🔂 Add		
Username	Password	Modify		
admin	admin	(1) 日本		

- 1) Click Add.
- 2) Enter the Username and Password to authenticate devices to the PPTP VPN Server.

Add Account			×
	Username: Password:		
		CANCEL	ADD

3) Click ADD.

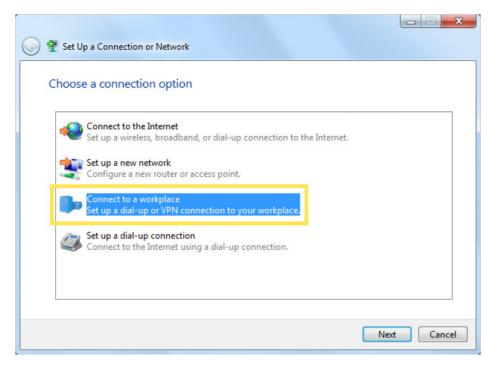
### Step 2. Configure PPTP VPN Connection on Your Remote Device

The remote device can use the Windows built-in PPTP software or a third-party PPTP software to connect to PPTP Server. Here we use the Windows built-in PPTP 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.

Network and Sharing Cent	×				
For quick access, place your bookmarks here on the bookmarks bar.					
🔾 🗢 👯 🕨 Control Panel 🕨	Network and Internet   Network and Sharing Cen	nter 🗸 😽 Search Control 🔎			
Control Panel Home Change adapter settings Change advanced sharing settings	View your basic network information	n and set up connections			
	Connect to a network Connect or reconnect to a wireless, wi	Connect or disconnect Access type: Internet Connections: Local Area Connection ad hoc, or VPN connection; or set up a router or access point.			
See also HomeGroup Internet Options Windows Firewall	Troubleshoot problems Diagnose and repair network problem	ns, or get troubleshooting information.			

3. Select Connect to a workplace and click Next.



4. Select Use my Internet connection (VPN).

🚱 🌆 Connect to a Workplace	
How do you want to connect?	
<ul> <li>Use my Internet connection (VPN)</li> <li>Connect using a virtual private network (VPN) connection through the Internet.</li> </ul>	
i - I - I - I - I - I - I - I - I - I -	
Dial directly Connect directly to a phone number without going through the Internet.	
i i i	
What is a VPN connection?	
	Cancel

5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field. Click Next.

Connect to a Workplace		
Type the Internet addre		
Internet address:	218.18.1.73	
Destination name:	VPN Connection	
	use this connection yone with access to this computer to use this connection. ust set it up so I can connect later	
	Next	Cancel

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

🚱 🌆 Connect to a Workp	place	
Type your user na	ame and password	
User name:	1811	
Password:	•••••	
	Show characters Remember this password	
Domain (optional):		
		Connect Cancel
		Connect Cancel

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

🕞 🌆 Connect to a Workplace	
The connection is ready to use	
in in iteration in	
Connect now	
	Close

#### Use L2TP/IPSec VPN to Access Your Home 13.3. **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.



**Remote Devices** 

### 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.

L2TP/IPSec			
Set up a L2TP/IPSec VPN and accounts	for quick, remote a	ccess to your network.	
L2TP/IP Sec	Enable		
Client IP Address:	10.9.0.11	- 10.9.0.20	
		(up to 10 clients)	
IPSec Encryption:	Encrypted	$\sim$	
IPSec Pre-Shared Key:			

- 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.

Account List			
Configure accounts (up to 16)	that can be used by remote clients to connect	t to the VPN server.	
		🕀 🕁	
Username	Password	Modify	
admin	admin	区面	

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

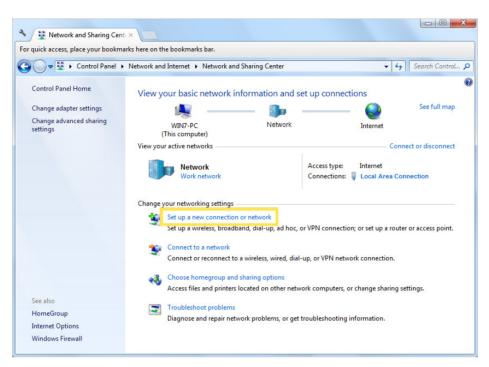
Add Account			×
	Username:		
		CANCEL	ADD

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.

hoos	e a connection option
	Connect to the Internet Set up a wireless, broadband, or dial-up connection to the Internet.
2	Set up a new network Configure a new router or access point.
<b>B</b> •	Connect to a workplace Set up a dial-up or VPN connection to your workplace.
٩	Set up a dial-up connection Connect to the Internet using a dial-up connection.
	Connect to the internet using a dial-up connection.

4. Select Use my Internet connection (VPN).

🚱 🌆 Connect to a Workplace	
How do you want to connect?	
<ul> <li>Use my Internet connection (VPN)</li> <li>Connect using a virtual private network (VPN) connection through the Internet.</li> </ul>	
🧶 — 🎱 — 🦫	
Dial directly Connect directly to a phone number without going through the Internet.	
i 💭 i 🧊	
What is a VPN connection?	
	Cancel

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.

0	Le Connect to a Workplace		
	Type the Internet addr	ress to connect to	
	Your network administrator	can give you this address.	
	Internet address:	218.18.1.73	
	Destination name:	VPN Connection	
	Use a smart card		
		o use this connection wone with access to this computer to use this connection.	
	🗹 Don't connect now; j	ust set it up so I can connect later	
		Nex	t Cancel

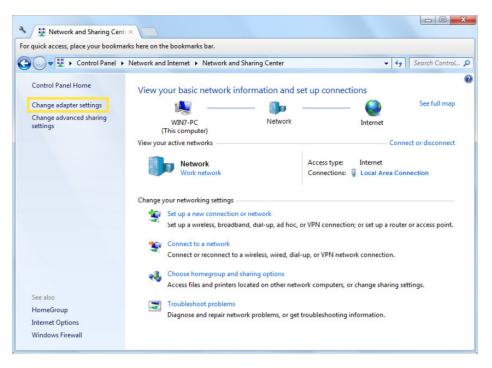
6. Enter the User name and Password you have set for the L2TP/IPSec VPN server on your router, and click Connect.

0	Connect to a Workplac	e	
	Type your user nam	e and password	
	User name:	1000	
	Password:	•••••	
		Show characters Remember this password	
	Domain (optional):		
			Connect Cancel

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

Ge 🔓 Connect	to a Workplace	
The conr	nection is ready to use	
	ing ing	
	Connect now	
		Close

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



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

			-	×
🔾 🗢 😰 « Network and I 🕨 Network Connections 🕨 🔹 🦘	Search Network Cor	nnecti	ons	1
Organize   Start this connection Rename this connection   >>>			•	?
Local Area Connection VPN Connection				
sec.softether.co.jp Intel(R) PRO/1000 MT Network C Disconnected WAN Miniport				

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

🐓 Connect VPN Connection
User name:
Password:
Domain:
Connect Cancel Properties Help

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

ieneral Options	Security	Networking	Sharing	
Type of VPN:				
Layer 2 Tunnelin	ng Protocol	with IPsec (L2	TP/IPSec)	•
Data encryption:			Advance	d settings
Require encrypti	on (disconr	nect if server d	eclines)	-
Authentication				
O Use Extensi	ble Authent	ication Protoc	ol (EAP)	
			Prop	perties
Allow these	protocols			
Unencry	oted passw	ord (PAP)		
Challenge	e <u>H</u> andshal	ke Authenticat	ion Protocol (C	HAP)
Microsoft	CHAP Ver	sion 2 (MS-CH	AP v2)	
		e my Windows Iomain, if any)	logon name a	nd
100	0.5	158 18		

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.

dvanced Pi L2TP	operties			×
Ouse pr Key:	eshared key for a	uthentication		
	rtificate for authe ify the Name and		utes of the serve	r's certificate
			ОК	Cancel

Done! Click Connect to start VPN connection.

Connect VP	N Connection
<u>U</u> ser name:	
Password:	
Do <u>m</u> ain:	
Me only	ser name and password for the following users: , who uses this computer
Connect	Cancel Properties Help

### 13.4. Use WireGuard to Access Your HomeNetwork

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

#### Step 1. Set up WireGuard Server on Your Router

- 1. Visit <u>http://tplinkwifi.net</u>, 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.

WireGuard	
Set up a WireGuard VPN and accounts	for quick, remote and secure access to your network.
WireGuard:	Enable
Tunnel IP Address:	10.5.5.1/32
Listen Port:	51820
	(1024-65535)
Client Access:	Internet and Home Network
	▼ Advanced Settings
DNS:	Enable
Persistent Keepalive:	25
Private Key:	8lhtL6c10yyZYVBZIRZPvQeHaykyDnT4SP4ahj0u2l8=
Public Key:	2ktbma4EqbTqCYLszHJShSfYHdhS+yQxISDDfb4eAX4=
	RENEW KEY

3. Fill in the following parameters:

- Tunnel IP Address: 192.168.0.1 (This is the IP address of the WireGuard VPN interface, it is recommended not to have the same LAN IP as the router.)
- Listen Port: Enter 51820 (The default port is 51820, which can be modified).
- 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.
- (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.

ntigure accounts (up to 16) tr	hat can be used by remote clients to connect	t to the VPN server.
		🕒 Ad
Username	Allowed IPs	Modify
No Entries		

A	bb		×
	Username:		
	Address:	10.5.5.2/32	
		The Address should be included in the Allowed IPs (Sever).	
	Allowed IPs (Client):	0.0.0/1,128.0.0/1	
	Allowed IPs (Server):	10.5.5.2/32	
	Pre-shared Key (Secret):	Enable	

- 2. Give a Username to this account.
- 3. View 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.

Connect to Server	×
QR Code	Export
Please download WireGuard App from Google Pl Code to connect to this server.	ay or Apple Store, then use the App to scan the QR
	DONE

- 8.8. 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.

Connect to Server	×
QR Code	Export
Please use the following configuration to set up yo	
	PORT
[Interface] PrivateKey = UJOn+XkyxT6xft/+nHIwNHZAh1Ad Address = 10.5.5.3/32 [Peer] PublicKey = jfy1EJOegKql6DOJzl1pwTTj7U1IEy AllowedIPs = 0.0.0.0/1,128.0.0.0/1 Endpoint = 0.0.0.051820 PersistentKeepalive = 25	

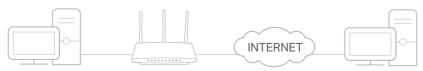
9. On the account list, you can click the button to modify the VPN server settings connect to the server, or delete the account.

Account List		
Configure accounts (up to 16) t	hat can be used by remote clients to connect to	the VPN server.
		c Ado
Username	Allowed IPs	Modify
Test	0.0.0/1,128.0.0.0/1	🖸 🖉 👜
ADMIN	0.0.0/1,128.0.0.0/1	[] & 司
lote: If you have renewed the onnect to the VPN server.	key, please reconfigure the client, otherwise the	client will not be able to

### 13.5. 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:



Home Devices

Router (VPN Client)



- 1. Visit <u>http://tplinkwifi.net</u>, 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.

VPN Client	
Set up profiles for clients that will use the	VPN function.
VPN Client	ENABLE

- 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.

Add Profile		×
Description:	vpn1	
VPN Type:	OpenVPN v	
Username:	OpenVPN	(Optional)
Password:	PPTP	(Optional)
Configuration File:	L2TP/IPSec	
	BROWSE	
	CANCEL	SAVE

- 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.

Add Profile		×
Description:	vpn1	
VPN Type:	OpenVPN 🗸	
Username:	acimin	(Optional)
Password:		(Optional)
Configuration File:	OpenVPN-Config.ovpn	
	BROWSE	
	Upload successfully.	
	CANCEL	SAVE
	CANOLL	SAVE

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

Add Profile		×
Description:	vpn2	
VPN Type:	PPTP V	
VPN Server:	218.18.1.73	
Username:		
Password:		
Encryption:	Auto 🗸	
	CANCEL	SAVE

 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.

Add Profile		×
Description:	vpn3	
VPN Type:	L2TP/IPSec V	
VPN Server:	218.18.1.73	
Username:		
Password:		
IPSec Pre-Shared Key:	120408078	
	CANCEL	SAVE

- 4) Save the settings.
- 5) In the server list, enable the one you need.

erver List				
d or edit VPN serv	er. Up to 6 VPN serve	rs can be added.		
Description	VPN Type	Status	ENABLE	Modify
vpn3	L2TP/IPSec	Disconnected		0
vpn2	PPTP	Disconnected	$\bigcirc$	0
vpn1	OpenVPN	Disconnected	$\bigcirc$	四面

- 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.

				>
elect the nline De		l access VPN server.		
	Device Type	Device Name	MAC	Address
			FC-AA	-14-55-FB-5D
			86-D2	-DE-B9-18-62
ffline De	evices			
	Device Type	Device Name	MAC	Address
lo Entrie	es			
			Cancel	Add

### 6. Save the settings.

evice Lis	st			
lanage dev	ices that will use the VPN	function.		
				🕂 Ado
Туре	Device Name	MAC Address	VPN Access	Modify
•••	1000	FC:AA:14:55:FB:5D		莭
•••	Mp-Phone	86:D2:DE:B9:18:62		乛

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

### Chapter 14

# **Customize Your Network Settings**

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

It contains the following sections:

- <u>Change the LAN Settings</u>
- <u>Configure to Support IPTV Service</u>
- <u>Specify DHCP Server Settings</u>
- <u>Set Up a Dynamic DNS Service Account</u>
- <u>Create Static Routes</u>

### 14.1. 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 <u>http://tplinkwifi.net</u>, 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.

LAN	
View and configure LAN settings.	
MAC Address:	98-DA-C4-B4-01-D8
IP Address:	192.168.0.1

### 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.

### 14.2. 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 <u>http://tplinkwifi.net</u>, 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.

Check the multicast settings. It is recomi	mended to keep them a	s default.	
IGMP Proxy:	Enable		
IGMP Snooping:	Enable		
IGMP Version:	V2	$\sim$	
Wireless Multicast Forwarding:	Enable		

- 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.

PTV/VLAN		
Configure IPTV/VLAN settings if you wai ags.	nt to enjoy IPTV or VoIP service, or if your ISP requires VL	AN.
IPTV/VLAN:	C Enable	
Mode:	Bridge	
LAN1:	Portugal-Meo	
LAN2:	Portugal-Vodafone	
LAN3:	Australia-NBN	
	New Zealand-UFB	
LAN4:	Bridge	
	Custom	

- 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.

### 14.3. 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 <u>http://tplinkwifi.net</u>, 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:

devices connected to the route	er.
Enable	
192.168.0.100 - 1	92.168.0.249
120 r	ninutes
192.168.0.1	(Optional)
	(Optional)
	(Optional)
	192.168.0.100 - 1 120 r

- 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.

Add a Reservation Entry							×
MAC Address:		858	851	873	-		
1	VIEV	V CON	NECTE	ED DE	VICES		
IP Address:							
				0	CANCEL	SAVE	

- 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.

### 14.4. 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 <u>http://tplinkwifi.net</u>, 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.

Dynamic DNS			
Assign a fixed host name (domain name router.	) for remote access	to your device, website, or server	behind the
Service Provider:	TP-Link	~	

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.

Dynamic DNS				
Assign a fixed host name router.	e (domain name) for re	emote access	to your device, website, or serve	er behind the
Se	ervice Provider: TP-	Link	~	
Current	Domain Name:			
Domain Name List				
				Register
Domain Name	Registered Date	Status	Operation	Delete
No Entries				

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

Dynamic DNS		
Assign a fixed host name (domain nam router.	e) for remote access to your device, we	bsite, or server behind the
Service Provider:	NO-IP ~	Register Now
Username:		
Password:	Ø	
Domain Name:		
WAN IP binding:	Enable	
Status:	Not launching	
	LOGIN AND SAVE	l.
	LOGOUT	

#### 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.

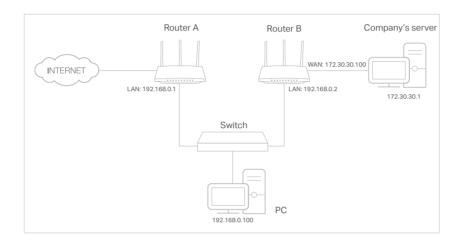
### 14.5. Create Static Routes

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 <u>http://tplinkwifi.net</u>, 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:	172.30.30.1	
Subnet Mask:	255.255.255.255	
Default Gateway:	192.168.0.2	
Interface:	LAN/WLAN 🗸	
Description:	Company	

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.

outing Table			
ew all valid routing entries	that are currently in use.		
ctive Route Number: 3			S Refresi
Network Destination	Subnet Mask	Gateway	Interface
172.30.30.1	255.255.255.255	192.168.0.2	LAN
192.168.0.0	255.255.255.0	0.0.0.0	LAN
0.0.0.0	0.0.0.0	0.0.0.0	WAN

### Done!

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

### Chapter 15

# **Manage the Router**

This chapter will show you the configuration for managing and maintaining your router. It contains the following sections:

- Update the Firmware
- Backup and Restore Configuration Settings
- <u>Change the Login Password</u>
- Password Recovery
- Local Management
- <u>Remote Management</u>
- <u>System Log</u>
- <u>Test the Network Connectivity</u>
- Set System Time and Language
- Set the Router to Reboot Regularly
- <u>Control the LED</u>

### 15.1. 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 <u>www.tp-link.com</u>, and you can download it from the <u>Support</u> page for free.

Note:

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

### 15.1.1. Auto Update

- 1. Visit <u>http://tplinkwifi.net</u>, 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.

Auto Update				
Update firmware automatically when ne	w version is available.			
Auto Update:				
Current Time:	2020-07-13 7:12:39 PM		Settings	
Update Time:	3:00AM to 5:00AM	$\sim$		

4. Specify the Update Time and save the settings.

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

### 15.1.2. Online Update

- 1. Visit <u>http://tplinkwifi.net</u>, 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 of 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.

Online Update		
Update firmware over the internet.		
Firmware Version:	1.5.1 Build 20210114 on 32071(3000)	
Hardware Version:	Archer AX	
	CHECK FOR UPDATES	

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

Online Update		
Update firmware over the internet.		
Firmware Version:		
Hardware Version:	Archer AX	
Latest Firmware Version:		What's New
	UPDATE	

#### 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.

### 15.1.3. Local Update

- 1. Download the latest firmware file for the router from <u>www.tp-link.com</u>.
- 2. Visit <u>http://tplinkwifi.net</u>, 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.

.ocal Update		
Jpdate firmware from a local file.		
New Firmware File:		
	BROWSE	
	UPDATE	

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

Note: If you fail to update the firmware for the router, please contact our Technical Support.

### 15.2. Backup and Restore Configuration Settings

The configuration settings are stored as a configuration file in the router. You can backup the configuration file to your computer for future use and restore the router to a previous settings from the backup file when needed. Moreover, if necessary you can erase the current settings and reset the router to the default factory settings.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System Tools > Backup & Restore.

### • To backup configuration settings:

Click BACK UP to save a copy of the current settings to your local computer. A '.bin' file of the current settings will be stored to your computer.

BACK UP	
	BACK UP

- To restore configuration settings:
- 1. Click BROWSE to locate the backup configuration file stored on your computer, and click RESTORE.

Restore		
Restore settings from a backup file.		
File:		
	BROWSE	
	RESTORE	

#### 2. Wait a few minutes for the restoring and rebooting.

Note: During the restoring process, do not turn off or reset the router.

### • To reset the router except your login password and TP-Link ID:

1. In the Factory Default Restore section, click RESTORE.

Factory Default Restore		
Restore all settings to default values.		
Restore all configuration settings to defa	ult values, except your login and cloud	account information.
	an randos, enterprijean regin and erea	
	RESTORE	

#### 2. Wait a few minutes for the resetting and rebooting.

#### Note:

- During the resetting process, do not turn off the router.
- · After reset, you can still use the current login password or the TP-Link ID to log in to the web management page.

#### • To reset the router to factory default settings:

#### 1. Click FACTORY RESTORE to reset the router.



#### 2. Wait a few minutes for the resetting and rebooting.

#### Note:

- During the resetting process, do not turn off or reset the router.
- We strongly recommend you backup the current configuration settings before resetting the router.

### 15.3. Change the Login Password

## The account management feature allows you to change your login password of the web management page.

**Note:** If you are using a TP-Link ID to log in to the web management page, the account management feature will be disabled. To manage the TP-Link ID, go to Advanced > TP-Link ID.

1. Visit <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.

## 2. Go to Advanced > System > Administration and focus on the Change Password section.

Change Password	
Change the router's local management password.	
Old Password:	
New Password:	
Confirm New Password:	1111-1 1

3. Enter the old password, then a new password twice (both case-sensitive). Click SAVE.

4. Use the new password for future logins.

### 15.4. Password Recovery

# This feature allows you to recover the login password you set for you router in case you forget it.

**Note:** If you are using a TP-Link ID to log in to the web management page, the Password Recovery feature will be disabled. To manage the TP-Link ID, go to Advanced > TP-Link ID.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System > Administration and focus on the Password Recovery section.
- 3. Tick the Enable box of Password Recovery.
- 4. Specify a mailbox (From) for sending the recovery letter and enter its SMTP Server address. Specify a mailbox (To) for receiving the recovery letter. If the mailbox (From) to send the recovery letter requires encryption, Tick the Enable box of Authentication and enter its username and password.

Tips:

- SMTP server is available for users in most webmail systems. For example, the SMTP server address of Gmail is smtp.gmail.com.
- Generally, Authentication should be enabled if the login of the mailbox requires username and password.

Password Recovery		
Reset local management password via p	reset questions and answers.	
Password Recovery:	Z Enable	
From:		
To:		
SMTP Server:		
Authentication:	Enable	
Username:		
Password:	m Ø	

#### 5. Click SAVE.

To recover the login password, please visit <u>http://tplinkwifi.net</u>, click Forgot Password? on the login page and follow the instructions to set a new password.

### 15.5. Local Management

This feature allows you to limit the number of client devices on your LAN from accessing the router by using the MAC address-based authentication.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Administration and complete the settings In Local Management section as needed.
- Access the router via HTTPS and HTTP:

Tick the Enable box of Local Management via HTTPS to access the router via HTTPS and HTTP, or keep it disabled to access the router only via HTTP.

Local Management		
Access and manage the router from loca	al network devices.	
Local Management via HTTPS:	Enable	

• Allow all LAN connected devices to manage the router:

Select All Devices for Local Managers.

Local Management		
Access and manage the router from loc	al network devices.	
Local Management via HTTPS:	Enable	

• Allow specific devices to manage the router:

1. Select All Devices for Local Managers and click SAVE.

Local Management		
Access and manage the router from loca	al network devices.	
Local Management via HTTPS:	C Enable	
Local Managers:	Specified Devices	
		Add Device
Description	MAC Address	Operation
No Entries		

#### 2. Click Add Device.

Add Device								×
	Description:							
		VIEV		NECT	ED DE	VICES		
	MAC Address:	(7)	8753	858	853	-		
					0	CANCEL	SAVE	
								_

- 3. Click VIEW CONNECTED DEVICES and select the device to manage the router from the Connected Devices list, or enter the MAC address of the device manually.
- 4. Specify a Description for this entry.
- 5. Click SAVE.

### 15.6. Remote Management

This feature allows you to control remote devices' authority to manage the router.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Administration and complete the settings in Remote Management section as needed.
- Forbid all devices to manage the router remotely:

Do not tick the Enable checkbox of Remote Management.



Allow all devices to manage the router remotely:

Remote Management		
Access and manage the router over the	internet.	
Note: Remote Management is not supp want to use Remote Management, plea		
Remote Management:	Enable	
HTTPS Port:	443	
HTTP Port:	80	
Web Address for Management:	https://0.0.0.0:443	
Remote Managers:	All Devices V	

- 1. Tick the Enable checkbox of Remote Management.
- 2. Keep the HTTPS and HTTP port as default settings (recommended) or enter a value between 1024 and 65535.
- 3. Select All Devices for Remote Managers.
- 4. Click SAVE.

Devices on the internet can log in to <u>http://Router's WAN IP address:port number</u> (such as <u>http://113.116.60.229:1024</u>) to manage the router.

- Ø Tips:
- You can find the WAN IP address of the router on Network Map > Internet.
- The router's WAN IP is usually a dynamic IP. Please refer to <u>Set Up a Dynamic DNS Service Account</u> if you want to log in to the router through a domain name.
- Allow a specific device to manage the router remotely:

Remote Management		
Access and manage the router over the	internet.	
Note: Remote Management is not supp want to use Remote Management, plea		
Remote Management:	C Enable	
HTTPS Port:	443	
HTTP Port:	80	
Web Address for Management:	https://0.0.0.0:443	
Remote Managers:	Specified Device	
Only this IP Address:		

- 1. Tick the Enable checkbox of Remote Management.
- 2. Keep the HTTPS and HTTP port as default settings (recommended) or enter a value between 1024 and 65535.
- 3. Select Specified Device for Remote Managers.
- 4. In the Only this IP Address field, enter the IP address of the remote device to manage the router.
- 5. Click SAVE.

Devices using this WAN IP can manage the router by logging in to <u>http://Router's WAN</u> IP:port number (such as http://113.116.60.229:1024).

Tips: The router's WAN IP is usually a dynamic IP. Please refer to <u>Set Up a Dynamic DNS Service Account</u> if you want to log in to the router through a domain name.

#### 15.7. System Log

When the router does not work normally, you can save the system log and send it to the technical support for troubleshooting.

- To save the system log locally:
- 1. Visit <u>http://tplinkwifi.net</u>, and log in your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > System Log.
- 3. Choose the type and level of the system logs as needed.

View a deta	ailed record of system act	ivities.		
	Current Tir	me: 2020-07-13 7:15:50 PM		
Log Type:	All	~		
Search	0	2	G Refresh	olear Al
2020-0 2020-0 2020-0 2020-0 2020-0 2020-0 2020-0 2020-0 2020-0	7-13 18:56:54 Access Co 7-13 18:56:54 Access Co 7-13 18:56:54 Access Co 7-13 18:56:20 Access Co 7-13 18:56:20 Access Co 7-13 18:56:20 Access Co	[3431] Function enabled	bled Itrack table succeeded	

4. In the Save Log section, click SAVE TO LOCAL to save the system logs to a local disk.

Save Log		
Send system log to a specific email a	iddress or save locally.	
	MAIL LOG	
	SAVE TO LOCAL	

• To send the system log to a mailbox at a fixed time:

For example, I want to check my router's working status at a fixed time every day, however, it's too troublesome to log in to the web management page every time I want to go checking. It would be great if the system logs could be sent to my mailbox at 8 a.m. every day.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System Tools > System Log.
- 3. In the Save Log section, click MAIL LOG.
- 4. Enter the information required:

Mail Log		×
	Set your mail information below.	
Email From:	Require Password	
Username:		
Email Password:		
SMTP Server:		
Email To:		
	Mail Log Automatically	
Frequency:	Every Day 🗸 🗸	
Mail Time:	00 🗸 : 00 🗸	
	CANCEL	SAVE

1) Email From: Enter the email address used for sending the system log.

#### 2) Select Require Password.

Tips: Generally, Require Password should be selected if the login of the mailbox requires username and password.

- 3) Username: Enter the email address used for sending the system log.
- 4) Email Password: Enter the password to login the sender's email address.
- 5) SMTP Server: Enter the SMTP server address.

Tips: SMTP server is available for users in most webmail systems. For example, the SMTP server address of Hotmail is smtp-mail.outlook.com.

- Email To: Enter the recipient's email address, which can be the same as or different from the sender's email address.
- 7) Select Mail Log Automatically.

© Tips: The router will send the system log to the designated email address if this option is enabled.

8) Frequency: This determines how often the recipient will receive the system log.

5. Click SAVE.

#### **15.8.** Test the Network Connectivity

Diagnostics is used to test the connectivity between the router and the host or other network devices.

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

Diagnostics		
Troubleshoot network connectivity proble	ems.	
Diagnostic Tools:	Ping	~
IP Address/Domain Name:		
Ping Count:	4	
Ping Packet Size:	64	Bytes
	S	TART

- 3. Enter the information:
  - 1) Choose Ping or Traceroute as the diagnostic tool to test the connectivity;
  - Ping is used to test the connectivity between the router and the tested host, and measure the round-trip time.
  - Traceroute is used to display the route (path) your router has passed to reach the tested host, and measure transit delays of packets across an Internet Protocol network.
  - 2) Enter the IP Address or Domain Name of the tested host.
  - 3) Modify the Ping Count number and the Ping Packet Size. It's recommended to keep the default value.
  - 4) If you have chosen Traceroute, you can modify the Traceroute Max TTL. It's recommended to keep the default value.

4. Click START to begin the diagnostics.

The figure below indicates the proper connection between the router and the Yahoo server (www.Yahoo.com) tested through Ping.

```
PING 192.168.0.1 (192.168.0.1): 64 data bytes
Reply from 192.168.0.1 (bytes=64 ttl=64 seq=1 time=0.322 ms
Reply from 192.168.0.1: bytes=64 ttl=64 seq=2 time=0.308 ms
Reply from 192.168.0.1: bytes=64 ttl=64 seq=3 time=0.286 ms
Reply from 192.168.0.1: bytes=64 ttl=64 seq=4 time=0.334 ms
--- Ping Statistic "192.168.0.1" ---
Packets: Sent=4, Received=4, Lost=0 (0.00% loss)
Round-trip min/avg/max = 0.286/0.312/0.334 ms
ping is stopped.
```

The figure below indicates the proper connection between the router and the Yahoo server (www.Yahoo.com) tested through Traceroute.

```
traceroute to 192.168.0.1, 5 hops max, 38 byte packets
1 Archer (192.168.0.1) 0.045 ms 0.015 ms 0.008 ms
Trace Complete.
traceroute is stopped.
```

### 15.9. Set System Time and Language

System time is the time displayed while the router is running. The system time you configure here will be used for other time-based functions like Parental Controls. You can choose the way to obtain the system time as needed.

System language is the language displayed when you log into the router. You can change the system language as needed.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Time & Language.
- To get time from the internet:
- 1. Enable 24-Hour Time if you want the time to display in a 24-hour way.
- 2. In the Set Time field, select Get from Internet.

System Time	
Set the router's system time.	
Current Time:	2020-05-28 07:22:42
24-Hour Time:	
Set Time:	Get from Internet
Time Zone:	(UTC-08:00) Pacific Time (US & Canada)
NTP Server I:	time.nist.gov
NTP Server II:	time-nw.nist.gov (Optional)

3. Select your local Time Zone from the drop-down list.

- 4. In the NTP Server I field, enter the IP address or domain name of your desired NTP Server.
- 5. (Optional) In the NTP Server II field, enter the IP address or domain name of the second NTP Server.
- 6. Click SAVE.
- To get time from your computer:
- 1. In the Set Time field, select Get from Managing Device.

System Time	
Set the router's system time.	
Current Time:	2020-05-28 07:23:54
24-Hour Time:	
Set Time:	Get from Managing Device 🗸

- 2. The time of your computer will then be displayed and click SAVE.
- To manually set the date and time:
- 1. In the Set Time field, select Manually.

System Time				
Set the router's system time.				
Current Time:	2020-05-28 07:24:11			
24-Hour Time:				
Set Time:	Manually	~		
Date:	05/28/2020			
Time:	07 🗸 : 17	~	: 19	~

- 2. Set the current Date (In MM/DD/YYYY format).
- 3. Set the current Time (In HH/MM/SS format).
- 4. Click SAVE.
- To set Daylight Saving Time:
- 1. Tick the Enable box of Daylight Saving Time.

Automatically synchronize the system tin	ne with da	ylight sav	ing time.		
Daylight Saving Time:	Enab	le			
Start:2020	Mar	~	2nd	~	
	Sun	~	10:00	~	
End:2020	Nov	~	First	~	
	Sun	~	09:00	$\sim$	

- 2. Select the correct Start date and time when daylight saving time starts at your local time zone.
- 3. Select the correct End date and time when daylight saving time ends at your local time zone.
- 4. Click SAVE.
- To set system language:

Select the language from the dropdown list, then click SAVE.

English	~	
	English	English

#### 15. 10. Set the Router to Reboot Regularly

The Scheduled Reboot feature cleans the cache to enhance the running performance of the router.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Reboot.
- 3. Tick the Enable box of Reboot Schedule.

Reboot Schedule		
Set when and how often the router rebo	ots automatically.	
Reboot Schedule:	<ul> <li>Enable</li> </ul>	
Note: Make sure Time Settings are corre	ect before using this function.	
Current Time: 2020-05-28 07:25:44		
Reboot Time:	03 🗸 : 00	~
Repeat:	Every Week	~
	Monday	~

- 4. Specify the Reboot Time when the router reboots and Repeat to decide how often it reboots.
- 5. Click SAVE.

#### 15.11. Control the LED

The LED of the router indicates its activities and status. You can enable the Night Mode feature to specify a time period during which the LED is off.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > LED Control.
- 3. Enable Night Mode.
- 4. Specify the LED off time, and the LED will be off during this period every day.
- 5. Click SAVE.

LED Control					
Turn the router's LEDs on or off.					
LED Status:					
Night Mode					
Set a time period when the LEDs will be	off automa	tically.			
Night Mode:	Enable	е			
Note: Make sure Time Settings are corre	ect before	using this	function.		
Current Time: 2020-05-28 07:27:05					
LED Off From:	22	<b>v</b> ]:	00	~	
To:	06	~):	00	~	(next day)

## FAQ

#### Q1. What should I do if I forget my wireless password?

The default wireless password is printed on the label of the router. If the password has been altered:

- 1. Connect your computer to the router using an Ethernet cable.
- 2. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 3. Go to Wireless to retrieve or reset your wireless password.

#### Q2. What should I do if I forget my web management password?

- If you are using a TP-Link ID to log in, or you have enabled the Password Recovery feature of the router, click Forgot password on the login page and then follow the instructions to reset it.
- Alternatively, press and hold the Reset button of the router for about 6 seconds until the Power LED blinks to restore factory default settings, and then visit <u>http://tplinkwifi.net</u> to create a new login password.

#### Note:

- Please refer to Password Recovery to learn how to configure Password Recovery.
- You'll need to reconfigure the router to surf the internet once the router is reset, and please mark down your new password for future use.

## Q3. What should I do if I can't log in to the router's web management page?

This can happen for a variety of reasons. Please try the methods below to log in again.

- Make sure your computer is connected to the router correctly and the corresponding LED indicator(s) light up.
- Make sure the IP address of your computer is configured as Obtain an IP address automatically and Obtain DNS server address automatically.
- Make sure <a href="http://tplinkwifi.net">http://192.168.0.1</a> is correctly entered.
- Check your computer's settings:
  - 1) Go to Start > Control Panel > Network and Internet, and click View network status and tasks.
  - 2) Click Internet Options on the bottom left.
  - 3) Click Connections and select Never dial a connection.

eneral Se	curity	Privacy	Content	Connections	Programs	Advanced
	set up tup.	o an Inter	net connec	tion, click	Set	up
Dial-up and	Virtua	Private 1	Network se	ttings		
🎒 Bro	adbar	nd Conn	ection		Add	i
					Add V	PN
					Remo	ve
Choose Se server for			ed to config	jure a proxy	Sett	ings
Never	dial a (	connectio	n			
O Dial w	neneve	er a netwo	ork connect	ion is not prese	ent	
Alway	s dial m	ny default	connection	1		
Current		None			Set de	efault
Local Area	Netwo	rk (LAN) s	settings -			
			r to dial-up r dial-up se	connections. ettings.	LAN se	ttings

4) Click LAN settings and deselect the following three options and click OK.

	nfiguration may override manual settings. To ensure the I settings, disable automatic configuration.
Automatic	ally detect settings
Use autor	natic configuration script
Address	
Proxy server	
1.	xy server for your LAN (These settings will not apply to
	VPN connections).

5) Go to Advanced > Restore advanced settings, click OK to save the settings.

eneral	Security	Privacy	Content	Connections	Programs	Advance	
Setting	s						
Settings  Accessibility  Always expand ALT text for images Enable Caret Browsing for new windows and tabs Move system caret with focus/selection changes Reset text size to medium for new windows and tabs Reset text size to medium while zooming* Reset zoom level for new windows and tabs Browsing Automatically recover from page layout errors with Compa Close unused folders in History and Favorites* Disable script debugging (Internet Explorer) Display a notification about every script error							
		1.0.0		on selection		-	
*Tak	kes effect a	after you	restart Int	ernet Explorer			
				Restore	advanced s	ettings	
Rese cond	ition.	Explorer	's settings	to their default	Rest		

- Use another web browser or computer to log in again.
- Reset the router to factory default settings and try again. If login still fails, please contact the technical support.

**Note**: You'll need to reconfigure the router to surf the internet once the router is reset.

## Q4. What should I do if I can't access the internet even though the configuration is finished?

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

#### If IP Address is a valid one, please try the methods below and try again:

- Your computer might not recognize any DNS server addresses. Please manually configure the DNS server.
  - 1) Go to Advanced > Network > DHCP Server.
  - 2) Enter 8.8.8.8 as Primary DNS, click SAVE.
  - Tips: 8.8.8 is a safe and public DNS server operated by Google.

DHCP Server			
Dynamically assgin IP addresses to the	devices connected to	the router.	
DHCP Server.	Enable		
IP Address Pool:	192.168.0.100	- 192.168.0	.249
Address Lease Time:	120	minutes	
Default Gateway:	192.168.0.1		(Optional)
Primary DNS:	8.8.8.8		(Optional)
Secondary DNS:			(Optional)

- Restart the modem and the router.
  - 1) Power off your modem and router, and leave them off for 1 minute.
  - 2) Power on your modem first, and wait about 2 minutes until it gets a solid cable or Internet light.
  - 3) Power on the router.
  - 4) Wait another 1 or 2 minutes and check the internet access.
- Reset the router to factory default settings and reconfigure the router.
- Upgrade the firmware of the router.
- Check the TCP/IP settings on the particular device if all other devices can get internet from the router.

As the picture below shows, if the IP Address is 0.0.0.0, please try the methods below and try again:

Status	
Internet status overview is displayed on	this page.
Internet	
Status:	WAN port is unplugged
Internet Connection Type:	Dynamic IP
IP Address:	0.0.0.0
Subnet Mask:	0.0.0.0
Default Gateway:	0.0.0.0
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0

- Make sure the physical connection between the router and the modem is proper.
- Clone the MAC address of your computer.

- 1) Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- Go to Internet or Advanced > Network > Internet and focus on the MAC Clone section.
- 3) Choose an option as needed (enter the MAC address if Use Custom MAC Address is selected), and click SAVE.

MAC Clone			
	Router MAC Address:	Use Default MAC Address	$\sim$
		Use Default MAC Address	
		Clone Current Device MAC Use Custom MAC Address	

#### Ø Tips:

- Some ISP will register the MAC address of your computer when you access the internet for the first time through their Cable modem, if you add a router into your network to share your internet connection, the ISP will not accept it as the MAC address is changed, so we need to clone your computer's MAC address to the router.
- The MAC addresses of a computer in wired connection and wireless connection are different.

#### • Modify the LAN IP address of the router.

#### Note:

Most TP-Link routers use 192.168.0.1/192.168.1.1 as their default LAN IP address, which may conflict with the IP range of your existing ADSL modem/router. If so, the router is not able to communicate with your modem and you can't access the internet. To resolve this problem, we need to change the LAN IP address of the router to avoid such conflict, for example, 192.168.2.1.

- 1) Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2) Go to Advanced > Network > LAN.
- 3) Modify the LAN IP address as the follow picture shows. Here we take 192.168.2.1 as an example.
- 4) Click SAVE.

LAN			
View and configure LAN settings.			
MAC Address:	98-DA-C4-B4-01-D8		
IP Address:	192.168.2.1		
Subnet Mask:	255.255.255.0	~	

• Restart the modem and the router.

- 1) Power off your modem and router, and leave them off for 1 minute.
- 2) Power on your modem first, and wait about 2 minutes until it get a solid cable or Internet light.
- 3) Power on the router.
- 4) Wait another 1 or 2 minutes and check the internet access.
- Double check the internet connection type.
  - 1) Confirm your internet connection type, which can be learned from the ISP.
  - 2) Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
  - 3) Go to Advanced > Network > Internet.
  - 4) Select your Internet Connection Type and fill in other parameters.
  - 5) Click SAVE.

Internet		
Set up an internet connection with the se	ervice information provided by your ISI	P (internet service provider).
Internet Connection Type:	Dynamic IP V	
IP Address:	Static IP	
Subnet Mask:	Dynamic IP	
Default Gateway:	PPPoE	
Primary DNS:	L2TP PPTP	
Secondary DNS:	0.0.0.0	
	RENEW	
	RELEASE	

- 6) Restart the modem and the router again.
- Please upgrade the firmware of the router.

If you've tried every method above but still cannot access the internet, please contact the technical support.

## Q5. What should I do if I can't find my wireless network or I cannot connect the wireless network?

#### If you fail to find any wireless network, please follow the steps below:

• Make sure the wireless function of your device is enabled if you're using a laptop with built-in wireless adapter. You can refer to the relevant document or contact the laptop manufacturer.

- Make sure the wireless adapter driver is installed successfully and the wireless adapter is enabled.
  - On Windows 7
  - 1) If you see the message No connections are available, it is usually because the wireless function is disabled or blocked somehow.
  - 2) Click Troubleshoot and windows might be able to fix the problem by itself.
  - On Windows XP
  - 1) If you see the message Windows cannot configure this wireless connection, this is usually because windows configuration utility is disabled or you are running another wireless configuration tool to connect the wireless.
  - 2) Exit the wireless configuration tool (the TP-Link Utility, for example).
  - 3) Select and right click on My Computer on desktop, select Manage to open Computer Management window.
  - 4) Expand Services and Applications > Services, find and locate Wireless Zero Configuration in the Services list on the right side.
  - 5) Right click Wireless Zero Configuration, and then select Properties.
  - 6) Change Startup type to Automatic, click on Start button and make sure the Service status is Started. And then click OK.

#### If you can find other wireless network except your own, please follow the steps below:

- Check the WLAN LED indicator on your wireless router/modem.
- Make sure your computer/device is still in the range of your router/modem. Move it closer if it is currently too far away.
- Go to Wireless or Advanced > Wireless > Wireless Settings, and check the wireless settings. Double check your wireless Network Name and SSID is not hided.

#### If you can find your wireless network but fail to connect, please follow the steps below:

- Authenticating problem/password mismatch:
  - Sometimes you will be asked to type in a PIN number when you connect to the wireless network for the first time. This PIN number is different from the Wireless Password/Network Security Key, usually you can only find it on the label of your router.



- 2) If you cannot find the PIN or PIN failed, you may choose Connecting using a security key instead, and then type in the Wireless Password/Network Security Key.
- 3) If it continues to show note of Network Security Key Mismatch, it is suggested to confirm the wireless password of your wireless router.

Note: Wireless Password/Network Security Key is case sensitive.

- Windows unable to connect to XXXX / Can not join this network / Taking longer than usual to connect to this network:
  - Check the wireless signal strength of your network. If it is weak (1~3 bars), please move the router closer and try again.
  - Change the wireless Channel of the router to 1, 6 or 11 to reduce interference from other networks.
  - Re-install or update the driver for your wireless adapter of the computer.

#### FCC compliance information statement



Product Name: AXE5400 Tri-Band Wi-Fi 6E Router Model Number: Archer AXE5400

Component Name	Model
I.T.E. Power Supply	T120200-2B1

#### Responsible party: TP-Link USA Corporation

Address: 10 Mauchly, Irvine, CA 92618 Website: http://www.tp-link.com/us/ Tel: +1 626 333 0234 Fax: +1 909 527 6804 E-mail: sales.usa@tp-link.com

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

#### FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

FCC regulations restrict operation of this device to indoor use only. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10000 feet. Operation of transmitters in the 5.925-6.425 GHz band is prohibited for control of or communications with unmanned aircraft systems.

FCC compliance information statement

Product Name: I.T.E. Power Supply Model Number: T120200-2B1 Responsible party: TP-Link USA Corporation Address: 10 Mauchly, Irvine, CA 92618 Website: http://www.tp-link.com/us/ Tel: +1 626 333 0234 Fax: +1 909 527 6804 E-mail: sales.usa@tp-link.com

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

We, **TP-Link USA Corporation**, has determined that the equipment shown as above has been shown to comply with the applicable technical standards, FCC part 15. There is no unauthorized change is made in the equipment and the equipment is properly maintained and operated.

Issue Date: 2023-11-01

# CE Mark Warning

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

#### **OPERATING FREQUENCY(the maximum transmitted power)**

2400 MHz -2483.5 MHz (20dBm) 5150 MHz -5250 MHz (23dBm) 5250 MHz -5350 MHz (23dBm) 5470 MHz -5725 MHz (30dBm) 5945MHz -6425 MHz (23dBm)

#### Frequency band: 5150 - 5250 MHz:

Indoor use: Inside buildings only. Installations and use inside road vehicles and train carriages are not permitted. Limited outdoor use: If used outdoors, equipment shall not be attached to a fixed installation or to the external body of road vehicles, a fixed infrastructure or a fixed outdoor antenna. Use by unmanned aircraft systems (UAS) is limited to within the 5170 - 5250 MHz band.

#### Frequency band: 5250 - 5350 MHz:

Indoor use: Inside buildings only. Installations and use in road vehicles, trains and aircraft are not permitted. Outdoor use is not permitted.

#### Frequency band: 5470 - 5725 MHz:

Installations and use in road vehicles, trains and aircraft and use for unmanned aircraft systems (UAS) are not permitted.

#### **EU Declaration of Conformity**

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011/65/EU and (EU)2015/863.

The original EU Declaration of Conformity may be found at https://www.tp-link.com/en/support/ce/

#### **RF Exposure Information**

This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

The device complies with RF specifications when the device used at 20 cm from your body.

#### **National Restrictions**

AT	BE	BG	СН	CY	CZ	DE	DK
EE	EL	ES	FI	FR	HR	HU	IE
IS	IT	LI	LT	LU	LV	ΜТ	NL
NO	PL	PT	RO	SE	SI	SK	UK(NI)

#### UKCA Mark UK CA

#### **UK Declaration of Conformity**

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Regulations 2017.

The original UK Declaration of Conformity may be found at https://www.tp-link.com/support/ukca

#### **National Restrictions**

Attention: This device may only be used indoors in Great Britain.



#### **Canadian Compliance Statement**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada

applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) L'appareil ne doit pas produire de brouillage;

2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### Caution:

1. The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

DFS (Dynamic Frequency Selection) products that operate in the bands 5250-5350 MHz, 5470-5600MHz, and 5650-5725MHz.

#### Avertissement:

1. Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

Les produits utilisant la technique d'atténuation DFS (sélection dynamique des fréquences) sur les bandes 5250-5350 MHz, 5470-5600MHz et 5650-5725MHz.

#### **Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

#### Déclaration d'exposition aux radiations:

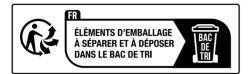
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

ISED regulations restrict operation of this device to indoor use only. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10000 feet. Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

Les réglementations ISED limitent le fonctionnement de cet appareil à une utilisation en intérieur uniquement. L'utilisation de cet appareil est interdite sur les plates-formes pétrolières, les voitures, les trains, les bateaux et les avions, sauf que l'utilisation de cet appareil est autorisée dans les avions long courrier en vol au-dessus de 10 000 pieds. L'exploitation d'émetteurs dans la bande 5,925-7,125 GHz est interdite pour le contrôle ou les communications avec des systèmes d'avions sans pilote.

#### Industry Canada Statement

CAN ICES-3 (B)/NMB-3(B)



#### Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

#### NCC Notice & BSMI Notice:

注意!

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變 更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。

前述合法通信,指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干 擾。

應避免影響附近雷達系統之操作。

高增益指向性天線只得應用於固定式點對點系統。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行 清潔。
- 注意防潮,請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用,以確保本產品的操作可靠並防止過熱,請勿堵塞 或覆蓋開口。

- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風,否則不可放在 密閉位置中。
- 請不要私自打開機殼,不要嘗試自行維修本產品,請由授權的專業人士進 行此項工作。

#### 限用物質含有情況標示聲明書

	設備名稱: AXE5400 Tri-Band Wi-Fi 6E Router 型號(型式): Archer AXE5400 Equipment name Type designation (Type)										
			限	用物質及其化學	符號						
	Restricted substances and its chemical symbols										
單元 Unit	鉛 Lead (Pb)	Lead Mercury Cadmium Hexavalent Polybrominated Polybrominate chromium biphenyls diphenyl ether									
РСВ	$\bigcirc$	0 0 0 0 0 0									
外殼	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$					
電源供應器	—	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0					
天線	0	0	0	0	0	0					
備考1. 〝超出	10.1 wt %	ź 及 ゙超出(	).01 wt % 係指	·····································	比含量超出百分比含	量基準值					
Note 1: "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.											
備考2. ℃	係指該項	限用物質之	百分比含量未超的	出百分比含量基準	隼值。						
Note 2: "Opercentage				ntent of the res	tricted substance d	oes not exceed the					

備考3. "一"係指該項限用物質為排除項目。

Note 3: The "-" indicates that the restricted substance corresponds to the exemption.

Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

## EHC

#### Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended
- Do not use the device where wireless devices are not allowed.

- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
- Operating Temperature: 0°C ~ 40°C (32°F ~ 104°F)
- This product uses radios and other components that emit electromagnetic fields. Electromagnetic fields and magnets may interfere with pacemakers and other implanted medical devices. Always keep the product and its power adapter more than 15 cm (6 inches) away from any pacemakers or other implanted medical devices. If you suspect your product is interfering with your pacemaker or any other implanted medical device, turn off your product and consult your physician for information specific to your medical device.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

#### Explanation of the symbols on the product label

Symbols may vary from products.

Note: The product label can be found at the bottom of the product and its I.T.E. power supply.

Symbol	Explanation
	Class II equipment
Ē	Class II equipment with functional earthing
$\sim$	Alternating current
	DC voltage
\$- <b>®-</b> \$	Polarity of output terminals
$\bigtriangleup$	Indoor use only
4	Dangerous voltage
/łj	Caution, risk of electric shock
VI	Energy efficiency Marking

Symbol	Explanation
	Protective earth
<u> </u>	Earth
	Frame or chassis
	Functional earthing
	Caution, hot surface
$\bigwedge$	Caution
	Operator's manual
(	Stand-by
$\bigcirc$	"ON"/"OFF" (push-push)
$\ominus$	Fuse
	Fuse is used in neutral N
	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.
Gu	Caution, avoid listening at high volume levels for long periods
	Disconnection, all power plugs
m	Switch of mini-gap construction

Symbol	Explanation
μ	Switch of micro-gap construction (for US version)
	Switch of micro-gap / micro-disconnection
	construction (for other versions except US)
З	Switch without contact gap (Semiconductor switching
	device)