



User Guide

AXE16000 Quad-Band Wi-Fi 6E Router
Archer AXE300

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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

In this guide the following conventions are used:

Convention	Description
<u>Underlined</u>	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.
 Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	<ul style="list-style-type: none"> Click to edit the corresponding entry. Click to delete the corresponding entry. click to enable or disable the corresponding entry. Click to view more information about items on the page.

More Info

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

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

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

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

Our Technical Support contact information can be found at the [Contact Technical Support](https://www.tp-link.com/support) page at <https://www.tp-link.com/support>.

- * Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary as a result of 1) environmental factors, including building materials, physical objects, and obstacles, 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead, and 3) client limitations, including rated performance, location, connection, quality, and client condition.
- * Use of Wi-Fi 6 (802.11ax), 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 are located on the top. You can check the router's working status by following the LED Explanation table.

LED Explanation

Status	Indication
Pulsing Yellow	The system is starting up or the router is being reset.
Solid Blue	The router is working normally.
Solid Red	No internet connection.
Pulsing Red	No internet connection and the Wi-Fi is off.
Solid Yellow	The Wi-Fi is off.

Status	Indication
Pulsing Blue	The firmware is being upgraded or WPS connection is being established. Do not disconnect or power off your router.

1.2.2. Back Panel and Side Panel



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

Item	Description
POWER Port	For connecting the router to a power socket via the provided power adapter.
10Gbps WAN/LAN Combo Port	The combo port pairs a RJ45 port with an SFP+ port. Only one port in the pair can be used at a time. RJ45 port: For connecting to your modem, the Ethernet outlet or other internet devices. Used as the WAN or LAN port. SFP+ port: For connecting to your optical module.
10Gbps WAN/LAN Port	For connecting to your modem, the Ethernet outlet or other internet devices. Used as the WAN or LAN port.
LAN Port (1-4)	For connecting your PC or other wired devices to the router.
2.5Gbps WAN/LAN Port	For connecting to your modem, the Ethernet outlet or other internet devices. Used as the WAN or LAN port.

Note:

10Gbps WAN/LAN Combo port, 10Gbps WAN/LAN port, and 2.5Gbps WAN/LAN port cannot be used as the WAN port at the same time. If you choose to one of the ports as the WAN port for internet service, the other ports will be used as LAN port by default. It's recommended to use the RJ45 port in the 10Gbps WAN/LAN Combo pair as the WAN port.

Item	Description
Power On/Off Button	Press this button to power on or off the router.
RESET Button	Press and hold the button for about 6 seconds until the LEDs blink to reset the router to its factory default settings.

USB 3.0 Port	For connecting your USB storage devices to the router.
Item	Description
LED Button	Press the button for 1 second to turn on or off the LEDs of your router.
Wi-Fi Button	Press and hold the button for more than 2 seconds to turn on or off the wireless function of your router.
WPS Button	Press the button for 1 second, and immediately initiate WPS on your client device to start the WPS process.

Chapter 2

Connect the Hardware

This chapter contains the following sections:

- [Position Your Router](#)
- [Connect Your Router](#)

2.1. Position Your Router

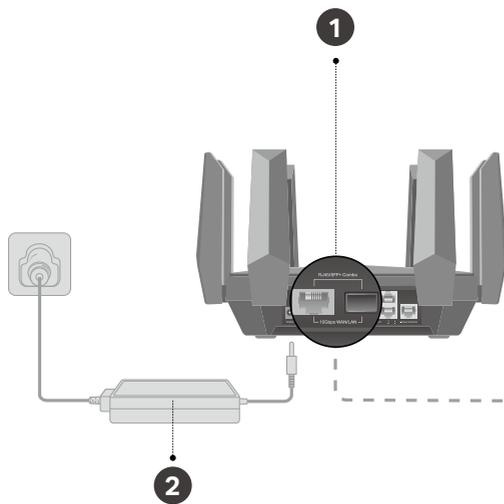
- The product should not be located in a place where it will be exposed to moisture or excessive heat.
- Place the router in a location where it can be connected to multiple devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way so they do not create 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.

2.2. Connect Your Router

1. Connect the router's 10Gbps Combo port to the internet via Ethernet or fiber network.

Note:

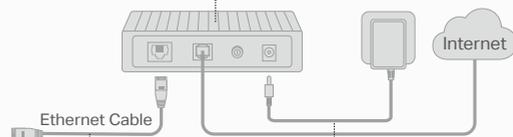
Note: If you want to change the WAN port for internet service, go to the Tether app or web management page to configure it.



○ Connect via Ethernet

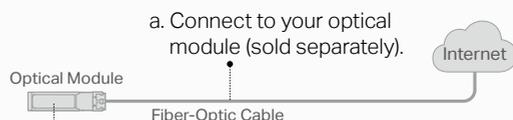
Note: If your internet comes from an Ethernet outlet instead of a modem, simply connect the router's 10Gbps RJ45 port to it.

- Turn off your modem, and remove the backup battery if any.



- Connect to the router's 10Gbps RJ45 port.
- Turn on your modem, and wait about 2 minutes for it to restart.

○ Connect via fiber network



- Connect to the router's 10Gbps SFP+ port.

2. Connect the power adapter to the router and turn on the router.
3. Verify the LEDs are solid red or blue before moving on.

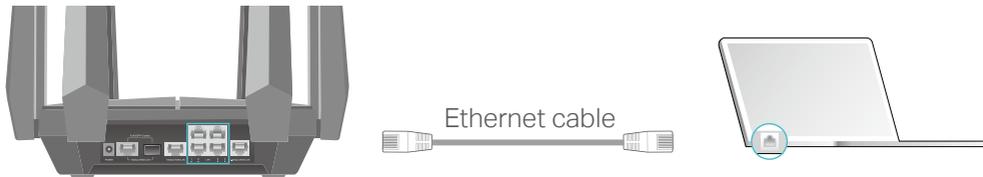
Note:

If the LEDs are pulsing red or solid yellow, press and hold the Wi-Fi button on the front for more than 2 seconds. The LEDs should turn solid red or blue.

4. Connect your computer to the router.

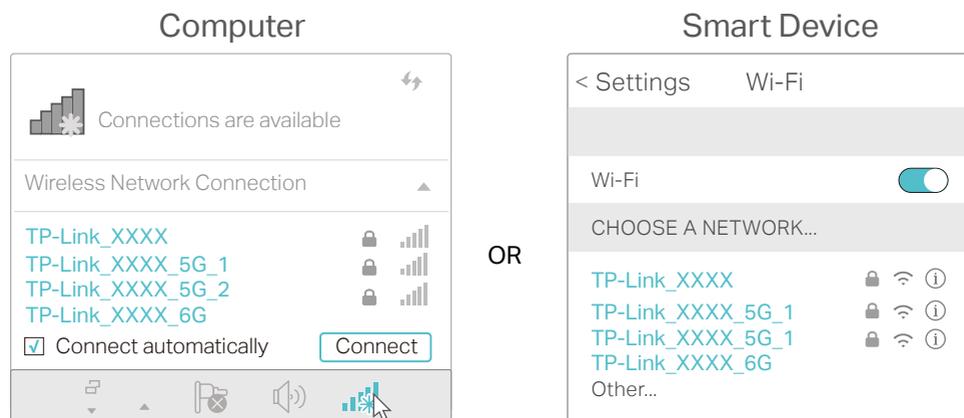
• **Method 1: Wired**

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.



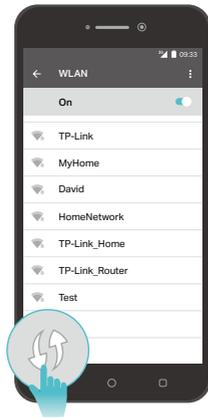
• **Method 3: Use the WPS button**

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

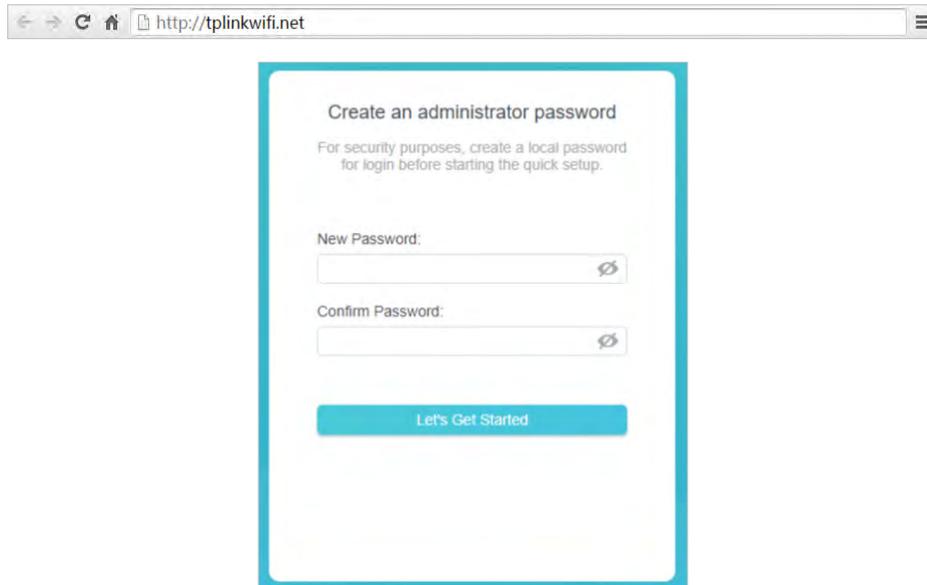
Log In to Your Router

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 <http://tplinkwifi.net>, 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 [FAQ](#) Section.

A screenshot of a web browser window showing the login page for a TP-Link router. The browser's address bar displays "http://tplinkwifi.net". The page content is titled "Create an administrator password" and includes a sub-header: "For security purposes, create a local password for login before starting the quick setup." Below this, there are two input fields: "New Password:" and "Confirm Password:", each with a toggle icon for password visibility. At the bottom of the form is a blue button labeled "Let's Get Started".

← → ↻ 🏠 http://tplinkwifi.net

Create an administrator password

For security purposes, create a local password for login before starting the quick setup.

New Password:

Confirm Password:

[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](#)
- [Manually Set Up Your Internet Connection](#)
- [Set Up the Router as an Access Point](#)
- [Set Up an IPv6 Internet Connection](#)

4.1. Use Quick Setup Wizard

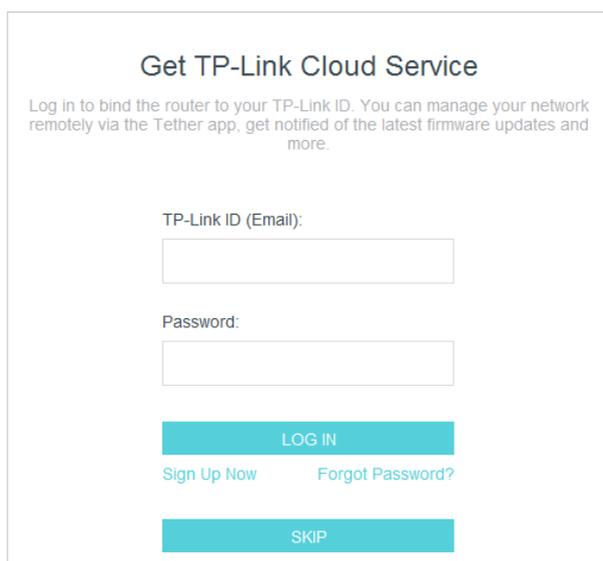
The Quick Setup Wizard will guide you to set up your router.

☞ **Tips:**

If you need the IPv6 internet connection, please refer to the section of [Set Up an IPv6 Internet Connection](#).

Follow the steps below to set up your router.

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

Log in to bind the router to your TP-Link ID. You can manage your network remotely via the Tether app, get notified of the latest firmware updates and more.

TP-Link ID (Email):

Password:

LOG IN

[Sign Up Now](#) [Forgot Password?](#)

SKIP

📌 **Note:**

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

4.2. Quick Setup Via TP-Link 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.

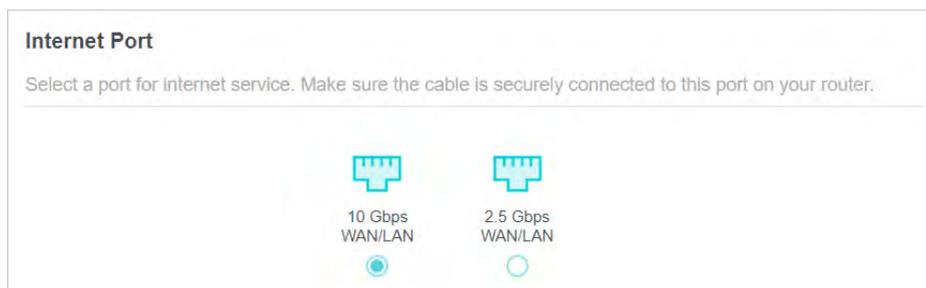
3. Tap the **+** button and select **Router > Wireless Router**. Follow the steps to complete the setup and connect to the internet.
4. Connect your devices to the newly configured wireless networks of the router and enjoy the internet!

4.3. Manually Set Up Your Internet Connection

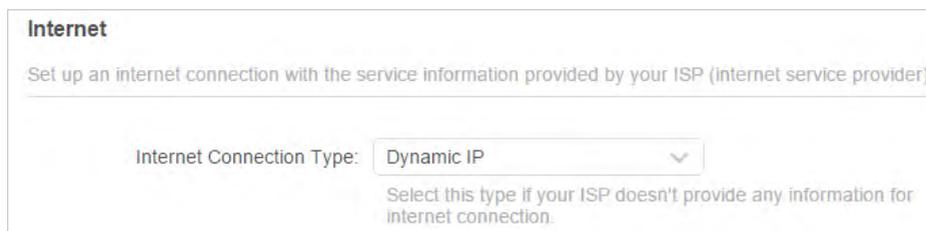
In this part, you can check your current internet connection settings. You can also modify the settings according to the service information provided by your ISP.

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

1. Visit <http://tplinkwifi.net>, and log in with your TP-Link ID or the password you set for the router.
2. Go to **Internet**.
3. Select a port for internet service. Make sure the cable is securely connected to this port on your router.



4. Select your internet connection type from the drop-down list.



5. 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

Set up an internet connection with the service information provided by your ISP (internet service provider).

Internet Connection Type: ▼
Select this type if your ISP doesn't provide any information for internet connection.

Set the MAC address of your router. Use the default address unless your ISP allows internet access from only a specific MAC address.

MAC Clone

Router MAC Address: ▼

- 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 service information provided by your ISP (internet service provider).

Internet Connection Type: ▼
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 service information provided by your ISP (internet service provider).

Internet Connection Type: ▼

Select this type if your ISP only provides a username and password.

Username:

Password:  

- 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.

Internet

Set up an internet connection with the service information provided by your ISP (internet service provider).

Internet Connection Type: ▼

Select this type if your ISP provides L2TP VPN server information and an account. Some ISPs also provide specific IP parameters.

Username:

Password:  

Dynamic 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

Set up an internet connection with the service information provided by your ISP (internet service provider).

Internet Connection Type: 

Select this type if your ISP provides PPTP VPN server information and an account. Some ISPs also provide specific IP parameters.

Username:

Password:  

Dynamic IP

Static IP

VPN Server IP/Domain Name:

6. Click **SAVE**.

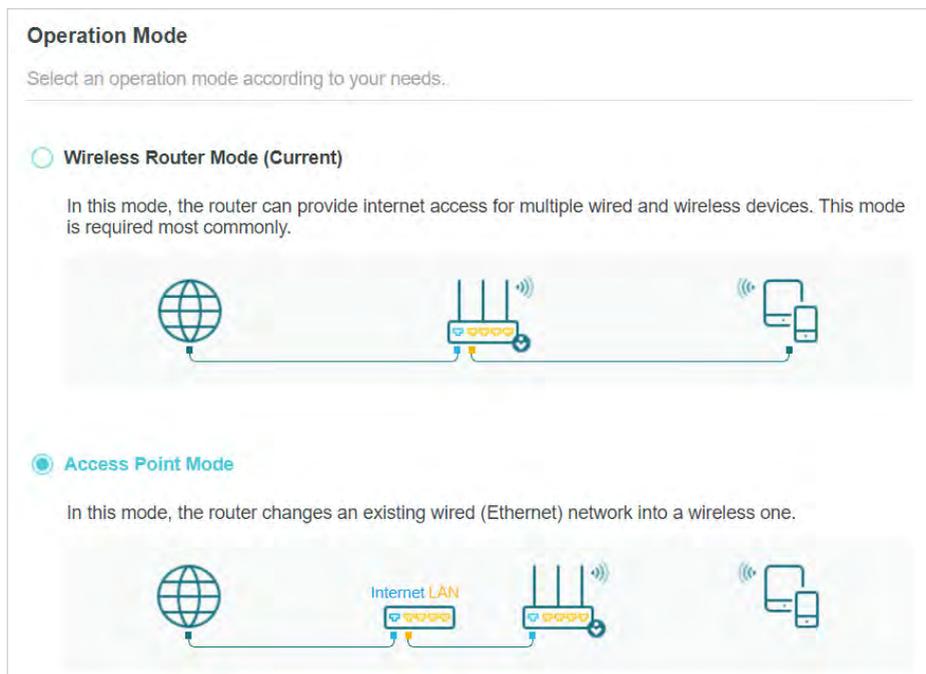
 **Tips:**

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

4.4. Set Up the Router as an Access Point

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

1. Visit <http://tplinkwifi.net>, 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** and click **SAVE**. The router will reboot and switch to Access Point mode.



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

☞ **Tips:**

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

4.5. Set Up an IPv6 Internet Connection

Your ISP provides information about one of the following IPv6 internet connection types: PPPoE, Dynamic IP(SLAAC/DHCPv6), Static IP, 6to4 tunnel, Pass-Through (Bridge).

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 > IPv6**.
3. Enable IPv6 and select the internet connection type provided by your ISP.

☞ **Tips:**

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

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

- 1) **Static IP:** Fill in blanks and click **SAVE**.

IPv6 Internet

Set up an IPv6 internet connection using the information provided by your ISP (internet service provider).

IPv6:

Internet Connection Type: Static IP

IPv6 Address:

Default Gateway:

Primary DNS:

Secondary DNS:

MTU Size: 1500

bytes. (The default is 1500, do not change unless necessary.)

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

IPv6 Internet

Set up an IPv6 internet connection using 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.

IPv6 Internet

Set up an IPv6 internet connection using the information provided by your ISP (internet service provider).

IPv6:

Internet Connection Type: PPPoE

Share the same PPPoE session with IPv4

Username:

Password:

IPv6 Address: ::

[▶ Advanced Settings](#)

- 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 using 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](#)

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

IPv6 Internet

Set up an IPv6 internet connection using the information provided by your ISP (internet service provider).

IPv6:

Internet Connection Type: Pass-Through (Bridge)

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 router and set the configuration type to assign IPv6 addresses to the clients.

Assigned Type: DHCPv6
 SLAAC+Stateless DHCP
 SLAAC+RDNSS

Address Prefix: /64

Address: FE80::9ADA:C4FF:FEB4:1D8/64

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

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.

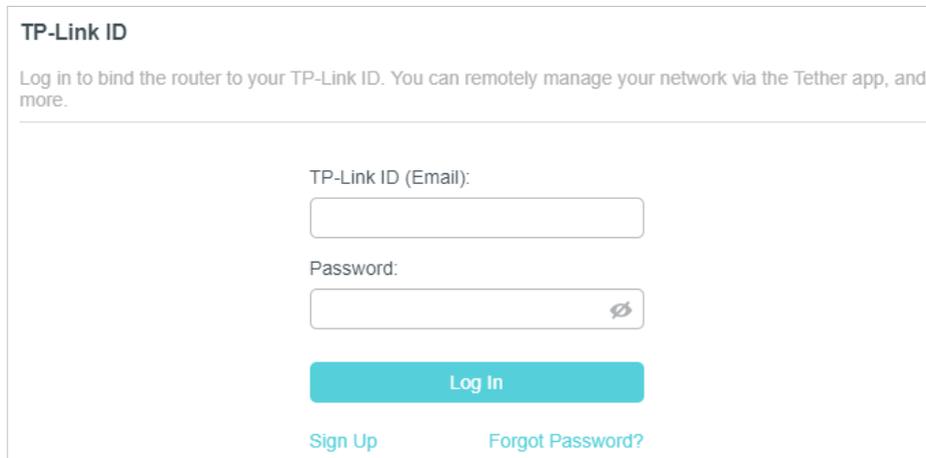
It contains the following sections:

- [Register a TP-Link ID](#)
- [Change Your TP-Link ID Information](#)
- [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 <http://tplinkwifi.net>, 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 TP-Link ID. You can remotely manage your network via the Tether app, and more.

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](#), and click [Unbind](#) in the [Device Information](#) section.

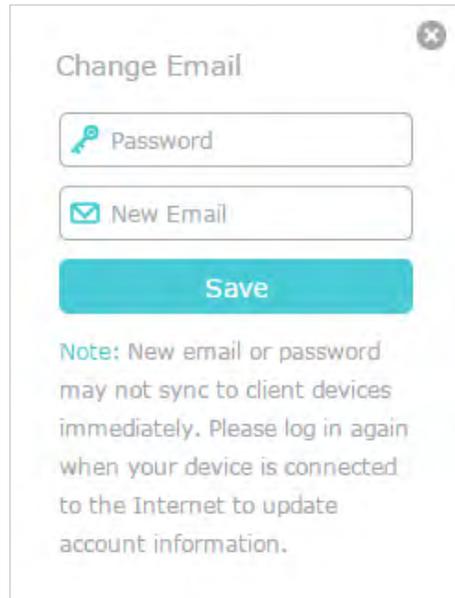
5.2. Change Your TP-Link ID Information

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 Email

Key Password

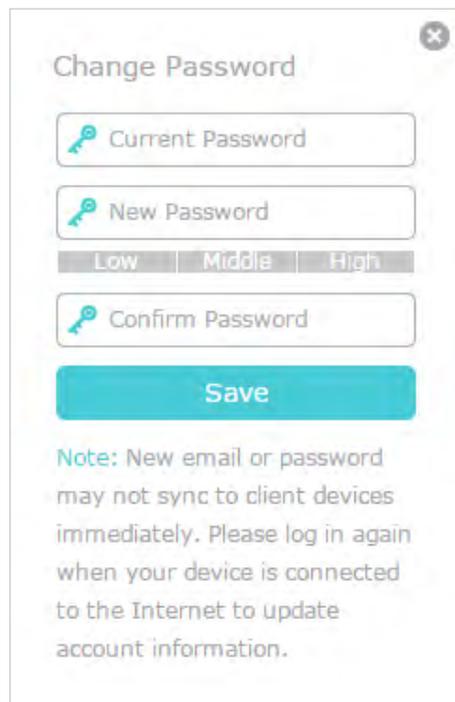
Envelope New Email

Save

Note: New email or password may not sync to client devices immediately. Please log in again when your device is connected to the Internet to update account information.

- **To change your password:**

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



Change Password

Key Current Password

Key New Password

Low Middle High

Key Confirm Password

Save

Note: New email or password may not sync to client devices immediately. Please log in again when your device is connected to the Internet to update account information.

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

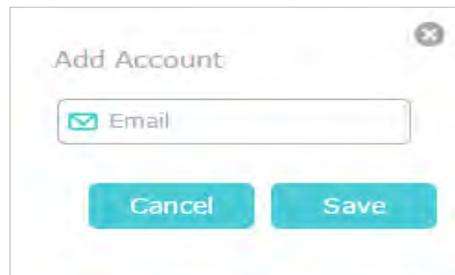
from the same router as **Users**. All accounts can monitor and manage the router locally or remotely, but user accounts cannot:

- 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 [Manage the Router via the TP-Link Tether App](#) to install the app and register a new TP-Link ID.



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

Bound Accounts				
+ Bind - Unbind				
<input type="checkbox"/>	ID	Email	Binding Date	Role
<input type="checkbox"/>	1	admin@tplink.com	2023/10/10	Admin
<input type="checkbox"/>	2	admin@tplink.com	2023/10/10	User

5.3.2. Remove TP-Link ID(s) from Managing 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. Tick the checkbox(es) of the TP-Link ID(s) you want to remove and click **Unbind**.

Bound Accounts				
+ Bind - Unbind				
<input type="checkbox"/>	ID	Email	Binding Date	Role
<input type="checkbox"/>	1	admin@tp-link.com	2020-01-01	Admin
<input checked="" type="checkbox"/>	2	user@tp-link.com	2020-01-01	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:

- [Specify Wireless Settings](#)
- [Schedule Your Wireless Function](#)
- [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 <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 > Wireless Settings](#).

Wireless Settings

Personalize settings for each band or enable Smart Connect to configure the same settings for 2.4GHz and 5GHz bands.

OFDMA: Enable ?

TWT: Enable ?

Smart Connect: Enable ?

2.4GHz/5GHz: Enable Sharing Network

Network Name (SSID): Hide SSID

Security:

Password:

2.4GHz Channel Width:

2.4GHz Channel:

5GHz Channel Width:

5GHz Channel:

The channel you've selected may overlap with DFS channels. This will require some waiting time to meet regulatory radar detection requirements.

6GHz: Enable Sharing Network

Network Name (SSID): Hide SSID

Security:

Password:

Channel Width:

Channel: Enable PSC ?

Mode: 802.11ax only

- **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 <http://tplinkwifi.net>, 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 when to automatically turn off your wireless network.

Wireless Schedule: Enable

- 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

To (next day)

Repeat: S M T W T F S

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.

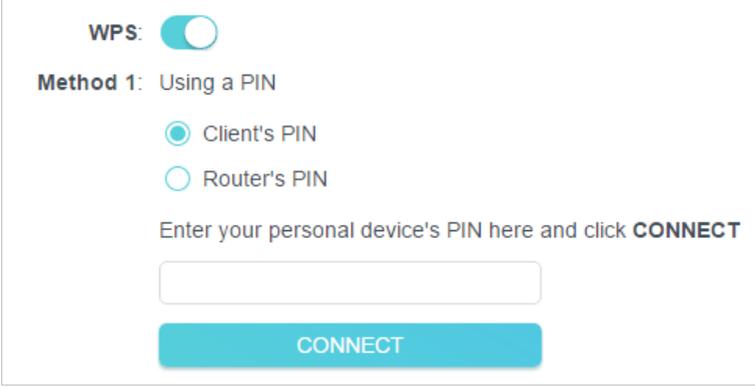
6.3. Use WPS for Wireless Connection

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

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

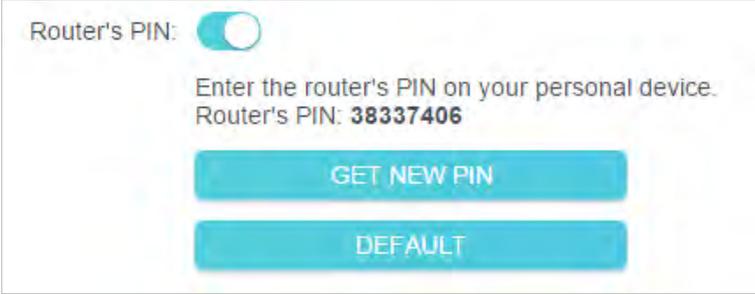
Client's PIN
 Router's PIN

Enter your personal device's PIN here and click **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 personal device.
Router's PIN: **38337406**

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.

**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 <http://tplinkwifi.net>, 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.

Additional Settings

Check advanced wireless settings for your device.

WMM: Enable

AP Isolation: Enable

Airtime Fairness: Enable

Beacon Interval:

RTS Threshold:

DTIM Interval:

Group Key Update Period: 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.

Chapter 7

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:

- [Create a Network for Guests](#)
- [Customize Guest Network Options](#)

7.1. Create a Network for Guests

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](#) > [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-1 or 5GHz-2 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 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 your guests to use and complete the related information.

2.4GHz: Enable [Sharing Network](#)

Network Name (SSID): Hide SSID

5GHz: Enable [Sharing Network](#)

Network Name (SSID): Hide SSID

6GHz: Enable [Sharing Network](#)

Network Name (SSID): Hide SSID

Security: ▼

Password:

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.

2.4GHz: Enable [Sharing Network](#)

Network Name (SSID):



SSID:

TP-Link_Guest_3933

Password:

[Save Picture](#)

 **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 <http://tplinkwifi.net>, 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.

Guest Permissions

Control the data that guests can access.

Allow guests to see each other

Allow guests to access your local network

- [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!

Chapter 8

USB Settings

This chapter describes how to use the USB ports to share files and media from the USB storage devices over your home network locally, or remotely through the internet.

The router supports USB external flash drives and hard drives.

It contains the following sections:

- [Access the USB Storage Device](#)
- [Media Sharing](#)
- [Time Machine](#)

8. 1. Access the USB Storage Device

Insert your USB storage device into the router's USB port and then access files stored there locally or remotely.

 **Tips:**

- If you use USB hubs, make sure no more than 4 devices are connected to the router.
- If the USB storage device requires using bundled external power, make sure the external power has been connected.
- If you use a USB hard drive, make sure its file system is FAT32, exFat, NTFS or HFS+.
- Before you physically disconnect a USB device from the router, safely remove it to avoid data damage: Go to [Advanced > USB > USB Storage Device](#) and click [Remove](#).

8. 1. 1. Access the USB Device Locally

Insert your USB storage device into the router's USB port and then refer to the following table to access files stored on your USB storage device.

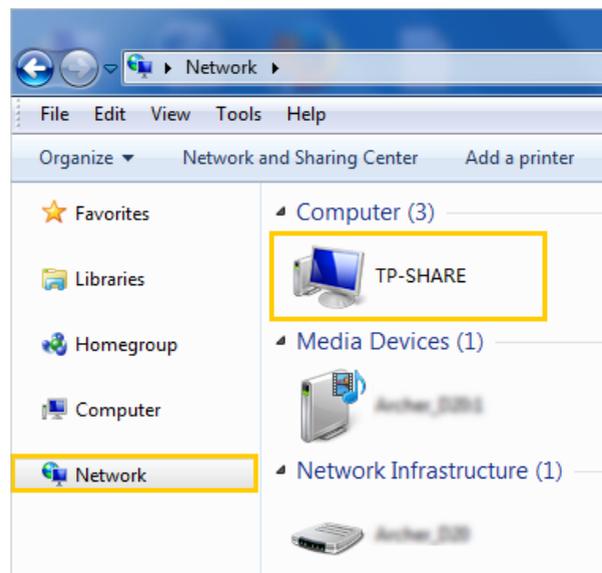
Windows computer

- **Method 1:**

Go to [Computer > Network](#), then click the Network Server Name ([TP-SHARE](#) by default) in the [Computer](#) section.

 **Note:**

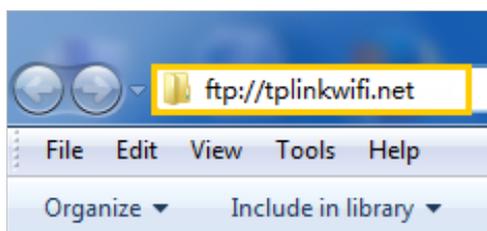
Operations in different systems are similar. Here we take Windows 7 as an example.



Windows
computer

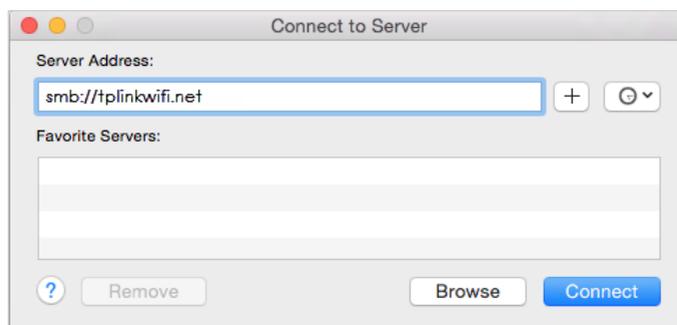
- **Method 2:**

Open the [Windows Explorer](#) (or go to [Computer](#)) and type the server address `\\tplinkwifi.net` or `ftp://tplinkwifi.net` in the address bar, then press [Enter](#).



Mac

- 1) Select [Go > Connect to Server](#).
- 2) Type the server address `smb://tplinkwifi.net`.
- 3) Click [Connect](#).



- 4) When prompted, select the [Guest](#) radio box. (If you have set up a username and a password to deny anonymous access to the USB disks, you should select the [Registered User](#) radio box. To learn how to set up an account for the access, refer to [To Set Up Authentication for Data Security](#).)

Tablet

Use a third-party app for network files management.

 **Tips:**

You can also access your USB storage device by using your Network/Media Server Name as the server address. Refer to [To Customize the Address of the USB Storage Device](#) to learn more.

8.1.2. Access the USB Device Remotely

You can access your USB disk outside the local area network. For example, you can:

- Share photos and other large files with your friends without logging in to (and paying for) a photo-sharing site or email system.
- Get a safe backup for the materials for a presentation.
- Remove the files on your camera's memory card from time to time during the journey.

Note:

If your ISP assigns a private WAN IP address (such as 192.168.x.x or 10.x.x.x), you cannot use this feature because private addresses are not routed on the internet.

Follow the steps below to configure remote access settings.

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 > USB > USB Storage Device**.
3. Tick the **Internet FTP** checkbox, and then click **SAVE**.

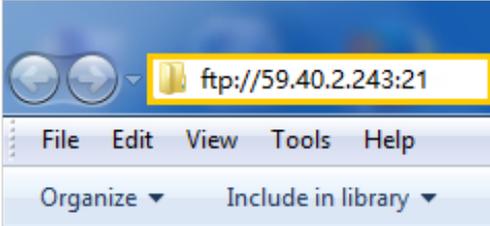
Access Method

Select the method for accessing your USB storage device. The device can then be reached via the access address.

Network/Media Server Name:

Enable	Access Method	Address	Port
<input checked="" type="checkbox"/>	Samba for Windows	\\TP-Share	---
<input checked="" type="checkbox"/>	Local FTP	ftp://192.168.0.1:21	21
<input checked="" type="checkbox"/>	Internet FTP	ftp://0.0.0.0:21 Set DDNS	<input type="text" value="21"/>

4. Refer to the following table to access your USB disk remotely.

Computer	<ol style="list-style-type: none"> 1) Open the Windows Explorer (or go to Computer, only for Windows users) or open a web browser. 2) Type the server address in the address bar: Type in <code>ftp://<WAN IP address of the router>:<port number></code> (such as <code>ftp://59.40.2.243:21</code>). If you have specified the domain name of the router, you can also type in <code>ftp://<domain name>:<port number></code> (such as <code>ftp://MyDomainName:21</code>) <div data-bbox="644 527 1134 753" style="text-align: center;">  </div> <ol style="list-style-type: none"> 3) Press Enter on the keyboard. 4) Access with the username and password you set in To Set Up Authentication for Data Security. <p>Tips: You can also access the USB disk via a third-party app for network files management, which can resume broken file transfers.</p>
	Tablet

Tips:

Click [Set Up a Dynamic DNS Service Account](#) to learn how to set up a domain name for you router.

8.1.3. Customize the Access Settings

By default, all the network clients can access all folders on your USB disk. You can customize your sharing settings by setting a sharing account, sharing specific contents and setting a new sharing address on the router's web management page.

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](#) > [USB](#) > [USB Storage Device](#).

- **To Customize the Address of the USB Storage Device**

You can customize the server name and use the name to access your USB storage device.

1. In the [Access Method](#) session, make sure [Samba for Windows](#) is ticked, and enter a [Network/Media Server Name](#) as you like, such as [MyShare](#), then click [SAVE](#).

Access Method

Select the method for accessing your USB storage device. The device can then be reached via the access address.

Network/Media Server Name:

Enable	Access Method	Address	Port
<input checked="" type="checkbox"/>	Samba for Windows	\\TP-Share	---
<input checked="" type="checkbox"/>	Local FTP	ftp://192.168.0.1:21	21
<input type="checkbox"/>	Internet FTP	ftp://0.0.0.0:21 Set DDNS	<input type="text" value="21"/>

2. Now you can access the USB storage device by visiting <\\MyShare> (for Windows) or <smb://MyShare> (for Mac).

- **To Only Share Specific Content**

Focus on the [File Sharing](#) section. Specify sharing folders that you want to share and click [SAVE](#).

Sharing Contents:

Share Selected Folders

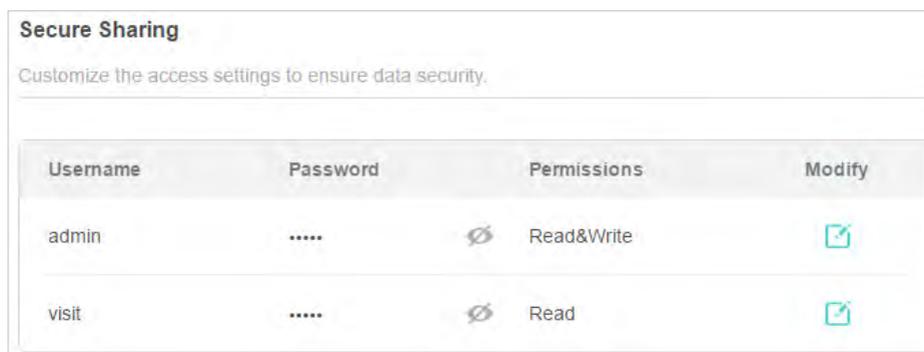
G:/Document

G:/Pictures

- **To Set Up Authentication for Data Security**

You can set up authentication for your USB storage device so that network clients will be required to enter username and password when accessing the USB storage device.

1. In the [File Sharing](#) section, enable [Secure Sharing](#).



- Click to modify the access account. The username and password are both **admin** for default administrator account, and both **visit** for default visitor account. Accessing as an administrator can read and modify the shared folders while visitors can only read the shared folders.

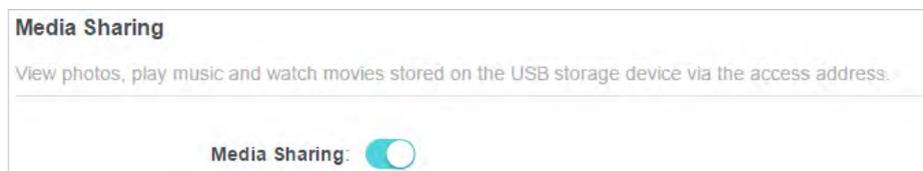
Note:

- For Windows users, do not set the sharing username the same as the Windows username. Otherwise, Windows credential mechanism may cause the following problems:
 - If the sharing password is also the same as the Windows password, authentication will not work since the Windows will automatically use its account information for USB access.
 - If the sharing password is different from the Windows password, the Windows will be unable to remember your credentials and you will always be required to enter the sharing password for USB access.
- Due to Windows credential mechanism, you might be unable to access the USB disk after changing Authentication settings. Please log out from the Windows and try to access again. Or you can change the address of the USB disk by referring to [To Customize the Address of the USB Storage Device](#).

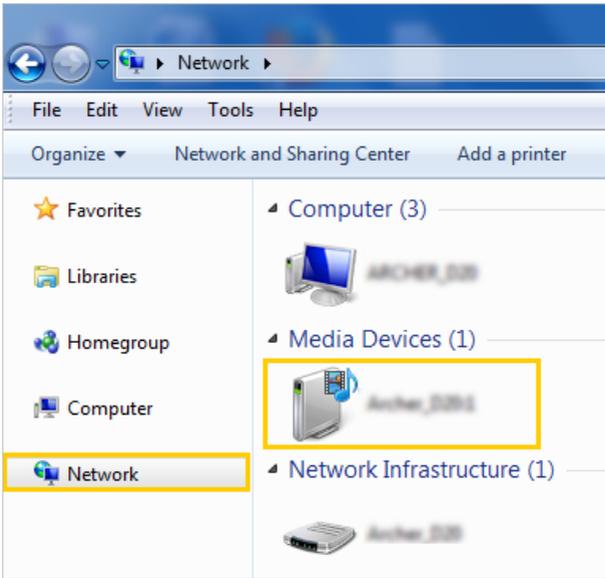
8.2. Media Sharing

The feature of **Media Sharing** allows you to view photos, play music and watch movies stored on the USB storage device directly from DLNA-supported devices, such as your computer, tablet and PS2/3/4.

- Visit <http://tplinkwifi.net>, and log in with your TP-Link ID or the password you set for the router.
- Go to **Advanced > USB > USB Storage Device**.
- Enable **Media Sharing**.



- When your USB storage device is inserted into the router, your DLNA-supported devices (such as your computer and pad) connected to the router can detect and play the media files on the USB storage devices.
- Refer to the following table for detailed instructions.

Windows Computer	<ul style="list-style-type: none"> Go to Computer > Network, then click the Media Server Name (Model number-share by default) in the Media Devices section. <p>Note: Here we take Windows 7 as an example.</p>  <p>The screenshot shows the Windows 7 Network folder. The 'Network' folder in the left sidebar is highlighted with a yellow box. In the main pane, the 'Media Devices (1)' section is expanded, and a device named 'Archos_2081' is highlighted with a yellow box. Other sections include 'Computer (3)', 'Network Infrastructure (1)', 'Favorites', 'Libraries', 'Homegroup', and 'Computer'.</p>
Tablet	<ul style="list-style-type: none"> Use a third-party DLNA-supported player.

8.3. Time Machine

Time Machine backs up all files on your Mac computer to a USB storage device connected to your router.

- Visit <http://tplinkwifi.net>, and log in with your TP-Link ID or the password you set for the router.
- Go to **Advanced** > **USB** > **Time Machine**.

Time Machine

Back up all files on your Mac to a USB storage device connected to your router.

Time Machine: Enable

Backup Location: ---

● Please select a location for Time Machine backups

SELECT

Storage Limit for Backups: GB

(Enter "0" for no limit.)

3. Tick the checkbox to enable [Time Machine](#).
4. Click [Select](#) to select a location for Time Machine backups.
5. Set the [Size Limit for Backups](#).
 **Note:** 0 means no limit for the space.
6. Click [SAVE](#).

Chapter 9

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](#)
- [Network Analysis & Optimization](#)

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.



OR



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.

Chapter 10

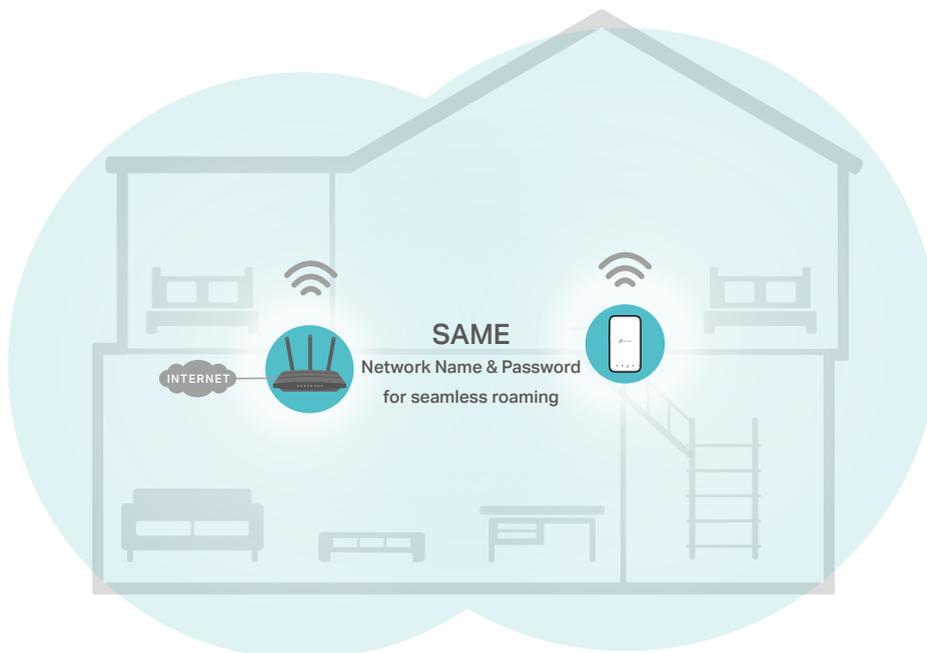
OneMesh with Seamless Roaming

This chapter introduces the TP-Link OneMesh™ feature.

It contains the following sections:

- [Set Up a OneMesh Network](#)
- [Manage Devices in the OneMesh Network](#)

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



Unified Wi-Fi Network

Router and extenders share the same wireless settings, including network name, password, access control settings and more.

Seamless Roaming

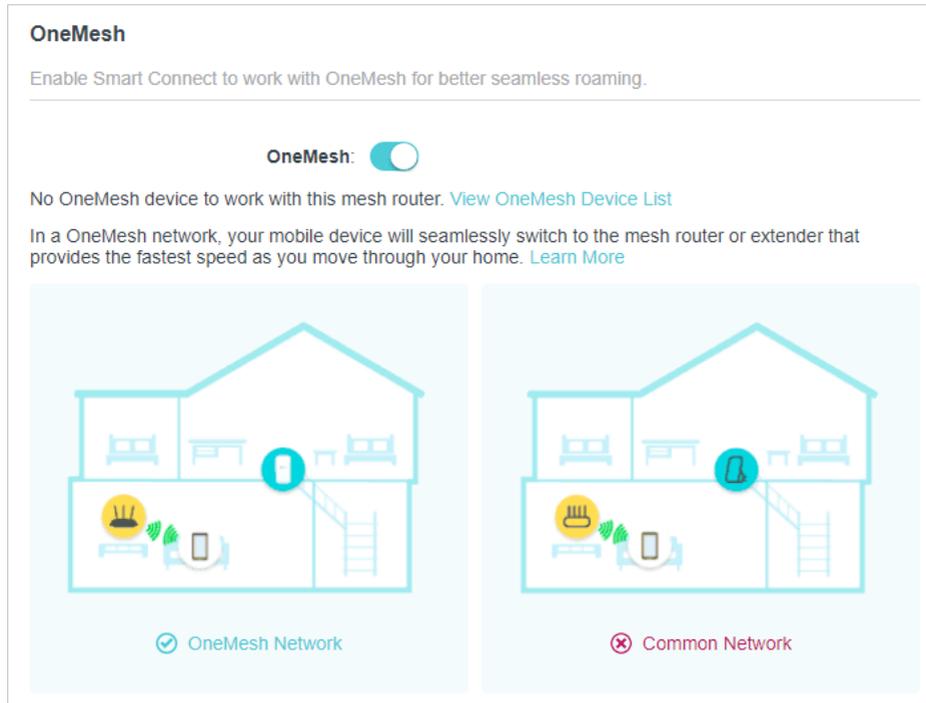
Devices automatically switch between your router and extenders as you move through your home for the fastest possible speeds.

Easy Setup and Management

Set up a OneMesh network with a push of WPS buttons. Manage all network devices on the Tether app or at your router's web management page.

10.1. Set Up a OneMesh Network

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 > OneMesh**.
3. Enable **OneMesh**.



4. Connect a OneMesh extender to this router by following the setup instructions in the extender's manual. The extender will be listed on the router's [OneMesh](#) page.

▮ Note: To check full list of TP-Link OneMesh devices, visit <https://www.tp-link.com/onemesh/compatibility>.

5. If you have set up the extender to join the OneMesh network, it will be listed on the router's [OneMesh](#) page.



Otherwise, you need to find it in the [Available OneMesh Devices](#) list and click [Add](#) to add it to the OneMesh network.



Done! Now your router and extender successfully form a OneMesh network!

10.2. Manage Devices in the OneMesh Network

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

- **To view mesh devices and connected clients in the network:**

1. Visit <http://tplinkwifi.net>, 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 a OneMesh device in the network:**

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 > OneMesh](#).



3. Click the OneMesh device to view detailed information.

The screenshot shows a web interface for managing a OneMesh device. The device name is 'RE'. The location is set to '- Please Select -'. The IP address is 192.168.0.50, and the MAC address is 3C-84-6A-91-2F-B4. The signal strength is shown as a bar chart with four bars, and the link speed is 130Mbps (2.4GHz) / 0Kbps (5GHz). There are two buttons: 'Leave OneMesh' and 'Manage Device'. A 'Clients' table is also visible, listing two devices: 'My-iPhone' and 'My-PC'.

ID	Device Name	IP Address/MAC Address
1	My-iPhone	C4-61-8B-CE-BF-32 192.168.0.56
2	My-PC	BB-C1-8E-BE-BF-33 192.168.0.58

4. Manage the OneMesh device as needed. You can:

- Change device information.
- Click [Manage Device](#) to redirect to the web management page of this device.
- Click [Leave OneMesh](#) to delete this device from the OneMesh network.

Chapter 11

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:

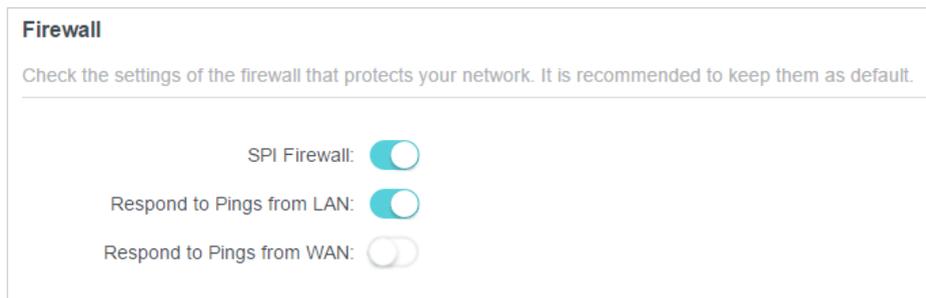
- [Protect the Network from Cyber Attacks](#)
- [Access Control](#)
- [IP & MAC Binding](#)

*For a more comprehensive home network protection system, refer to the [HomeShield](#) 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 <http://tplinkwifi.net>, 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 <http://tplinkwifi.net>, 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.

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.

Device Type	Device Name	MAC Address	Modify
	Yan	38-CA-DA-3A-D8-B1	

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:

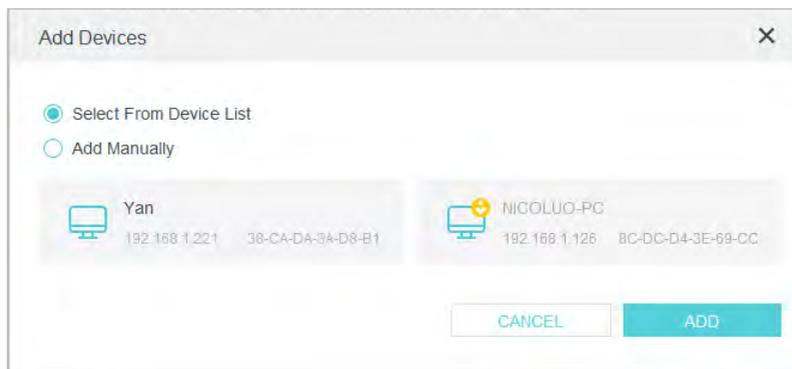
Access Mode: Blacklist
 Whitelist
 Configure a whitelist to only allow access to your network from the specified devices.

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

Device Type	Device Name	MAC Address	Modify
	UNKNOWN	00-19-66-35-E1-B0	

- **Add connected devices**

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

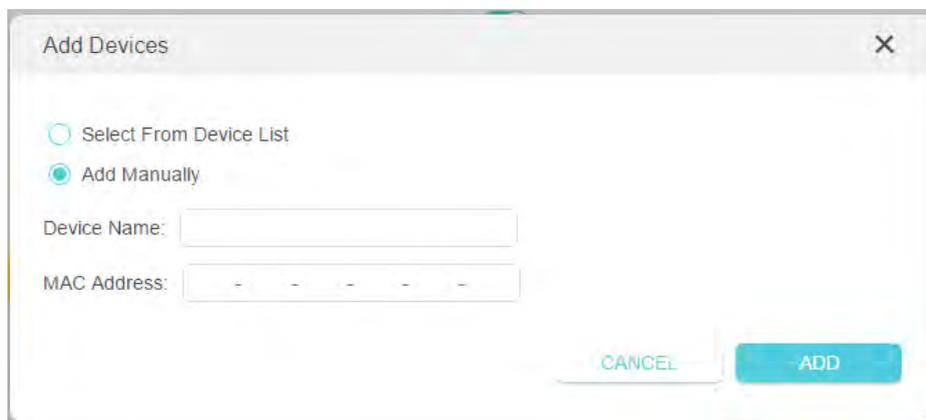


3) The **Operation Succeeded** message will appear on the screen, which means the selected devices have been successfully added to the whitelist.

- **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**.



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

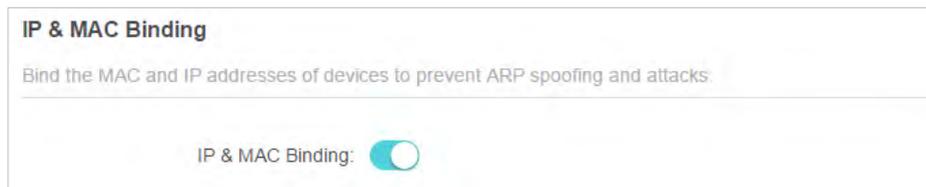
IP & MAC Binding, namely, ARP (Address Resolution Protocol) Binding, is used to bind network device's IP address to its MAC address. This will prevent ARP Spoofing and other ARP attacks by denying network access to an device with matching IP address in the Binding list, but unrecognized MAC address.

I want to:

Prevent ARP spoofing and ARP attacks.

How can I do that?

1. Visit <http://tplinkwifi.net>, 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](#).



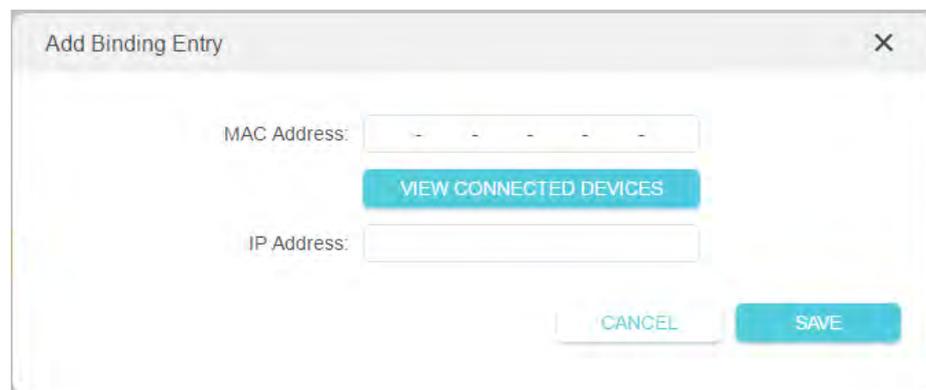
4. Bind your device(s) according to your need.

To bind the connected device(s):

- 1) Click [+](#) [Add](#) in the [Binding List](#) section.



- 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.



- 3) Click [SAVE](#).

To bind the unconnected device:

- 1) Click  Add in the [Binding List](#) section.



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

Done!

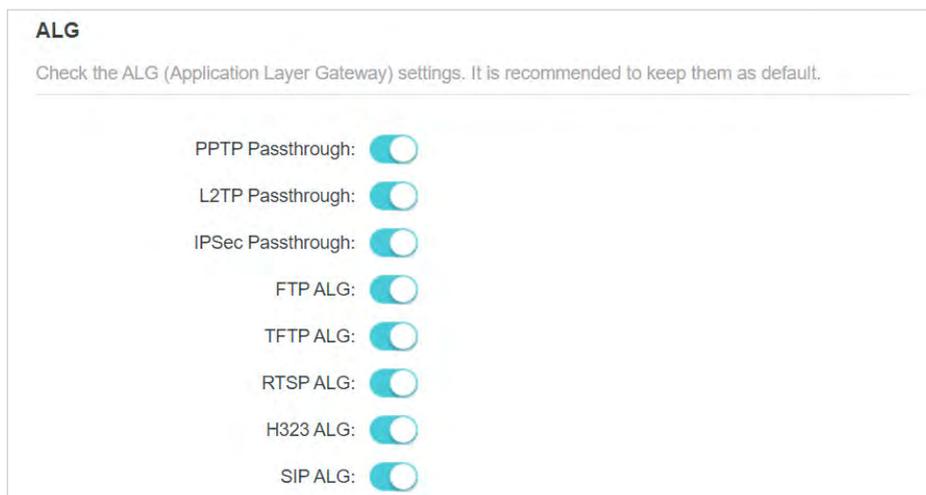
Now you don't need to worry about ARP spoofing and ARP attacks!

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 <http://tplinkwifi.net>, and log in with your TP-Link ID or the password you set for the router.
2. Go to [Advanced](#) > [Security](#) > [ALG](#).



Chapter 12

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](#)
- [Make Applications Free from Port Restriction by DMZ](#)
- [Make Xbox Online Games Run Smoothly by UPnP](#)

12. 1. Share Local Resources on the Internet by Port Forwarding

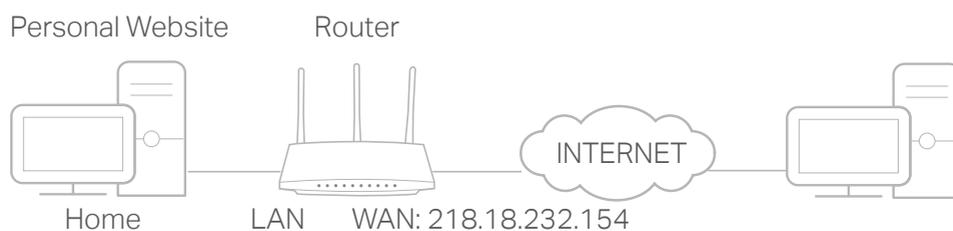
When you build up a server on the local network and want to share it on the internet, Port Forwarding can realize the service and provide it to internet users. At the same time Port Forwarding can keep the local network safe as other services are still invisible from the internet.

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 <http://tplinkwifi.net>, 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	Device IP Address	External Port	Internal Port	Protocol	Status	Modify
No Entries						

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:

[VIEW COMMON SERVICES](#)

Device IP Address:

[VIEW CONNECTED DEVICES](#)

External Port:

Internal Port:

Protocol:

Enable This Entry

[CANCEL](#) [SAVE](#)

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.

📌 **Tips:**

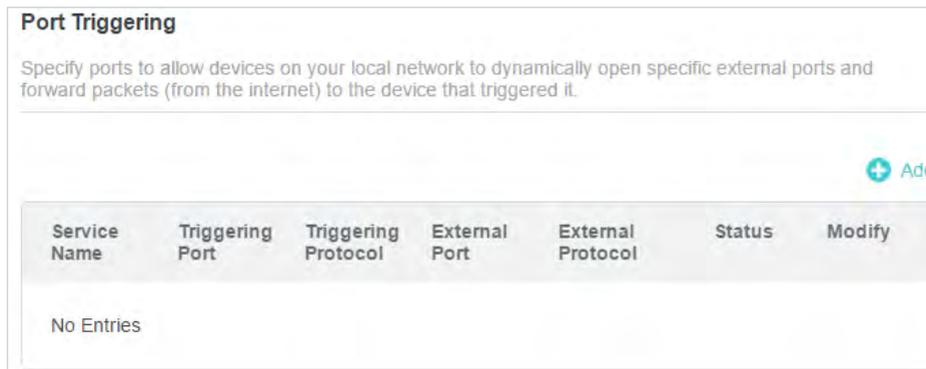
- The WAN IP should be a public IP address. For the WAN IP is assigned dynamically by the ISP, it is recommended to apply and register a domain name for the WAN referring to [Set Up a Dynamic DNS Service Account](#). Then users on the internet can use [http:// domain name](http://domain name) to visit 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 <http://tplinkwifi.net>, and log in with your TP-Link ID or the password you set for the router.
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.

4. Click **SAVE**.

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 <http://tplinkwifi.net>, 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:

[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

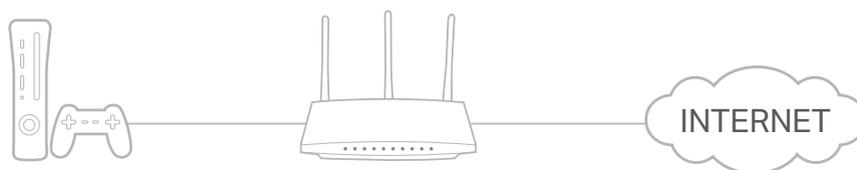
The UPnP (Universal Plug and Play) protocol allows applications or host devices to automatically find the front-end NAT device and send request to it to open the corresponding ports. With UPnP enabled, the applications or host devices on the local network and the internet can freely communicate with 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).

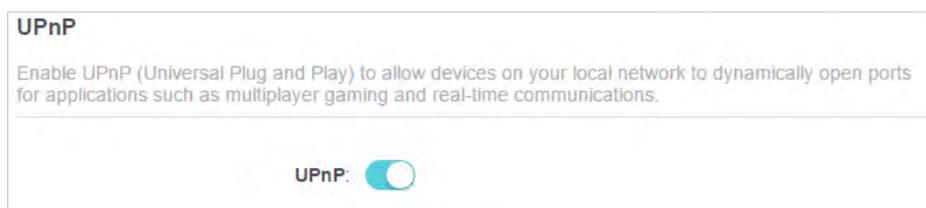
[For example](#), when you connect your Xbox to the router which has connected to the internet to play online games, UPnP will send request to the router to open the

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 <http://tplinkwifi.net>, 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.



Chapter 13

VPN Server

The VPN (Virtual Private Networking) Server allows you to access your home network in a secured way through internet when you are out of home. The router offers two ways to setup VPN connection: OpenVPN and PPTP (Point to Point Tunneling Protocol) VPN.

OpenVPN is somewhat complex but with greater security and more stable. It is suitable for restricted environment, such as campus network and company intranet.

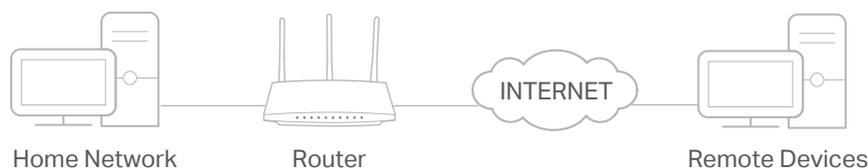
PPTP VPN is more easily used and its speed is faster, it's compatible with most operating systems and also supports mobile devices. Its security is poor and your packets may be cracked easily, and PPTP VPN connection may be prevented by some ISP.

It contains the following sections, please choose the appropriate VPN server connection type as needed.

- [Use OpenVPN to Access Your Home Network](#)
- [Use PPTP VPN to Access Your Home Network](#)

13.1. Use OpenVPN to Access Your Home Network

In the OpenVPN connection, the home network can act as a server, and the remote device can access the server through the router which acts as an OpenVPN Server gateway. To use the VPN feature, you should enable OpenVPN Server on your router, and install and run VPN client software on the remote device. Please follow the steps below to set up an OpenVPN connection.



Step1. Set up OpenVPN 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 > 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
 TCP

Service Port:

VPN Subnet:

Netmask:

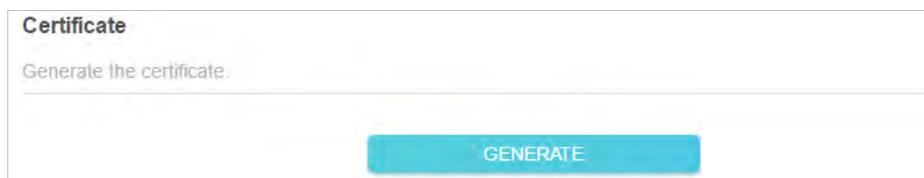
Client Access: ▼

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.



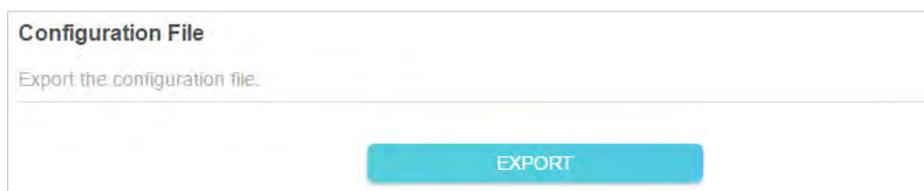
Certificate

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 <http://openvpn.net/index.php/download/community-downloads.html> 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 VPN connection for remote device. To use the VPN feature, you should enable PPTP VPN Server on your router, and configure the PPTP connection on the remote device. Please follow the steps below to set up a PPTP VPN connection.

Step 1. Set up PPTP 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](#) > [PPTP](#), and tick the [Enable](#) box of [PPTP](#).

PPTP

Set up a PPTP VPN and accounts for quick, remote access to your network.

PPTP: Enable

Client IP Address: -
(up to 10 clients)

Allow Samba (Network Place) access

Allow NetBIOS passthrough

Allow Unencrypted connections

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

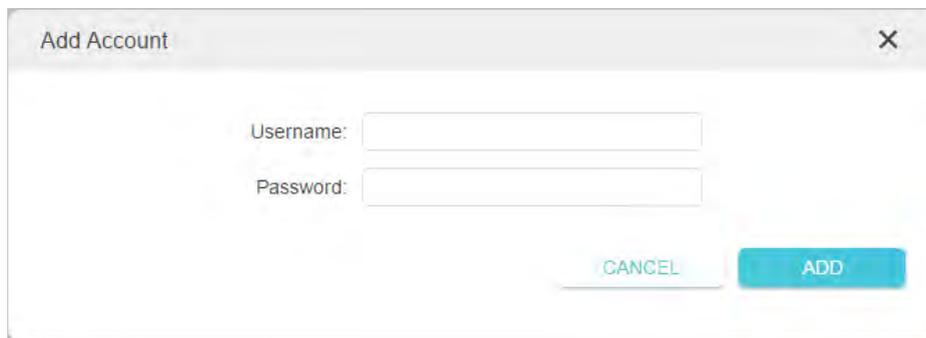
Configure accounts (up to 16) that can be used by remote clients to connect to the VPN server.

[+ Add](#)

Username	Password	Modify
admin	admin	✎ 🗑️

1) Click [+ Add](#).

2) Enter the [Username](#) and [Password](#) to authenticate devices to the PPTP VPN Server.

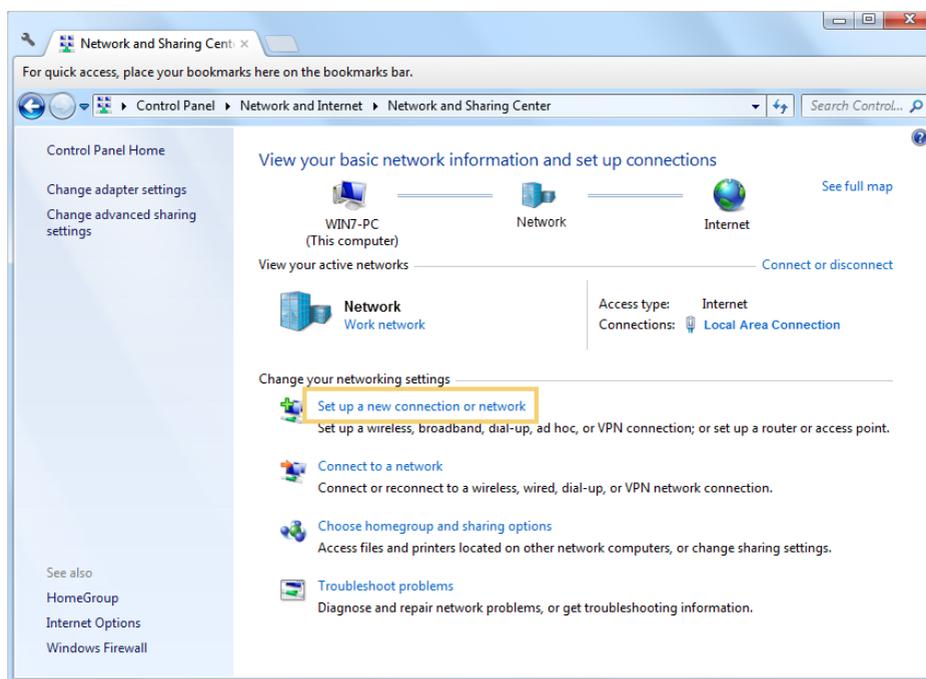


3) Click **ADD**.

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](#).



3. Select [Connect to a workplace](#) and click **Next**.