TP-LINK®

AD7200
User Guide

AD7200 Multi-Band Wi-Fi Router

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About This Guide

This guide provides details of each function and shows how to configure the router appropriate to your needs. In addition to this guide, a Quick Installation Guide is also released with each TP-LINK router, you are suggested to configure your router for quick Internet setup by following the published Quick Installation Guide before you get started with a further configuration.

Conventions

In this guide the following conventions are used:

Convention	Description
router	Stands for AD7200 Multi-Band Wi-Fi Router without any explanation.
parameters	Parameters provided in the screenshots are just references for setting up the device, which may differ from the actual situation. You can set the parameters according to your demand.
screenshots	The demonstrated screenshots may look a little different from the actual web page of your device due to the various firmware versions. Please just configure your product based on the actual web page.
Blue Italic	Hyperlinks are in blue italic. You can click to redirect to a website or a specific section.
Blue	Contents to be emphasized and texts on the web page are in blue, including the menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, Advanced > Wireless > MAC Filtering means the MAC Filtering function page is under the Wireless menu that is located in the Advanced tab.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	• click to edit the corresponding entry. • click to delete the corresponding entry. • click to enable or disable the corresponding entry.

Chapter *1*

Get to Know About Your Router

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

This chapter contains the following sections:

- *Product Overview*
- *Main Features*
- *Panel Layout*
- *Position Your router*

1. 1. Product Overview

What This Product Does

TP-LINK's AD7200 Multi-Band Wi-Fi Router integrates 4-port Switch, Firewall, NAT-router and Wireless AP. With the Multi-Band technology, the AD7200 delivers Wi-Fi to multiple devices simultaneously for faster speed, which can fully meet the need of Small Office/Home Office (SOHO) networks and the users demanding higher networking performance. Your wireless connections are radio band selectable to avoid interference in your area, and the four built-in Gigabit ports supply high-speed connection to your wired devices.

802.11ad - The Latest Generation of Wi-Fi

TP-LINK's AD7200 comes with the latest generation Wi-Fi standard – 802.11ad, backward compatible with 802.11n and 802.11ac. With the fastest combined Wi-Fi speed of up to 7200Mbps, the AD7200 lets you simultaneously game online and stream video in 4K ultra HD across multiple devices without lag.

7153Mbps Concurrent Tri-Band - More Bandwidth, Less Interference

Combined 7153Mbps Wi-Fi speed over one 2.4GHz (800Mbps) , one 5GHz (1733Mbps) and one 60GHz (4620Mbps) band, AD7200 offers you the flexibility of three dedicated networks and ensures amazing wireless performance. Simple tasks such as sending e-mails or web browsing can be handled by the 2.4GHz band while bandwidth intensive tasks like online gaming or HD video streaming can be processed by the 60GHz or 5GHz band – all at the same time.

Multifunctional USB Port – Easy Storage and Sharing

Using the AD7200's multi-functional USB 3.0 port, you can share a printer with multiple computers and devices on your network and can also share files & media at home or via the FTP server while away from home.

Guest Network

Guest Network Access provides secure Wi-Fi access for guests sharing your home or office network in a controlled manner without exposing private Wi-Fi access codes or other personal data.

IPv6 Supported

AD7200 supports IPv6, which is the foundation of the next generation of the Internet and enables a range of new services and improved user experience.

Parental Control

Parental Controls allow parents or administrators to deploy restricted access for children or staff. With URL blocking, you can easily set up a black or white list to limit the level of web access.

Tether APP

TP-LINK Tether provides the easiest way to access and manage your router with your devices.

1. 2. Main Features

Wireless and Wired Performance

- Supports 802.11ad - The latest generation of Wi-Fi, compatible with 802.11n and 802.11ac
- Simultaneous 2.4GHz 800Mbps, 5GHz 1733Mbps and 60GHz 4620Mbps connections for 7153Mbps of total available bandwidth
- 8 external antennas and high power amplifiers provide stable signals and optimal wireless coverage
- Beamforming technology delivers highly efficient wireless connection
- Provides WPA/WPA2, WPA-PSK/WPA2-PSK authentication, TKIP/AES encryption security
- Shares data and Internet access for users, supporting Dynamic IP/Static IP/PPPoE/PPTP/L2TP Internet access
- Supports USB Storage Sharing, Print Server, FTP Server, Media Server. Shares a printer locally and files & media with networked devices or remotely via FTP server
- Built-in NAT and DHCP server supporting static IP address distributing
- Guest Network access provides secure Wi-Fi access for guests sharing your home or office network
- Parental Controls allow parents or administrators to establish restricted access policies for children or staff
- Quality of Service (QoS) makes it easier for you to manage the bandwidth of devices connected to the router
- Supports IP/MAC filter and URL filter, Access Control list
- SPI and NAT firewall protects end-user devices from potential attacks from the Internet
- Easy one-touch WPA wireless security encryption with the WPS button
- Wi-Fi On/Off Button allows users to turn their wireless radio on or off
- Supports firmware upgrade and Web management
- Supports Virtual Server, DMZ host and Port Triggering

- Supports Dynamic DNS, UPnP and Static Routing
- Provides Automatic-connection and Scheduled Connection on certain time to the Internet
- Supports system log and Traffic Statistics
- Supports IPv6

1. 3. Panel Layout

1. 3. 1. Top View

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

LED Explanation

Name	Status	Indication
(Power)	On	System initialization completes.
	Flashing	System initialization or firmware upgrade is in process. Do not disconnect or power off the router.
	Off	Power is off.
(2.4GHz Wireless)	On	The 2.4GHz wireless band is working properly.
	Off	The 2.4 GHz wireless band is disabled.

LED Explanation

Name	Status	Indication
(5GHz Wireless)	On	The 5GHz wireless band is working properly.
	Off	The 5GHz wireless band is disabled.
(60GHz Wireless)	On	The 60GHz wireless band is working properly.
	Off	The 60GHz wireless band is disabled.
(Ethernet)	On	At least one Ethernet port is connected.
	Off	No Ethernet port is connected.
(Internet)	Blue On	Internet is available.
	Orange On	The router's Internet port is connected, but the Internet is not available.
	Off	The router's Internet port is not connected.
(WPS)	On/Off	Turns On when a WPS synchronization is established and automatically turns Off about 5 minutes later.
	Flashing	A wireless device is trying to connect to the network via WPS. This process may take up to 2 minutes.
(USB)	On	The USB device is identified and ready to use.
	Flashing	The USB device is being identified.
	Off	No USB device is plugged into the USB port or the USB device is not identified or USB device has been safely ejected.

The following buttons (view from left to right) are also located on the front panel.

Button Description

Buttons	Description
(Wi-Fi Button)	Press this Wi-Fi button for about 2 seconds to turn on or off the wireless function of your router.
(WPS Button)	Press this WPS button, and immediately press the WPS button on your client device. The WPS LED of the router should change from flashing to solid on, indicating successful WPS connection.
(LED Button)	Press the LED button for about 1 second to turn on or off the LEDs of your router.

1. 3. 2. The Back Panel

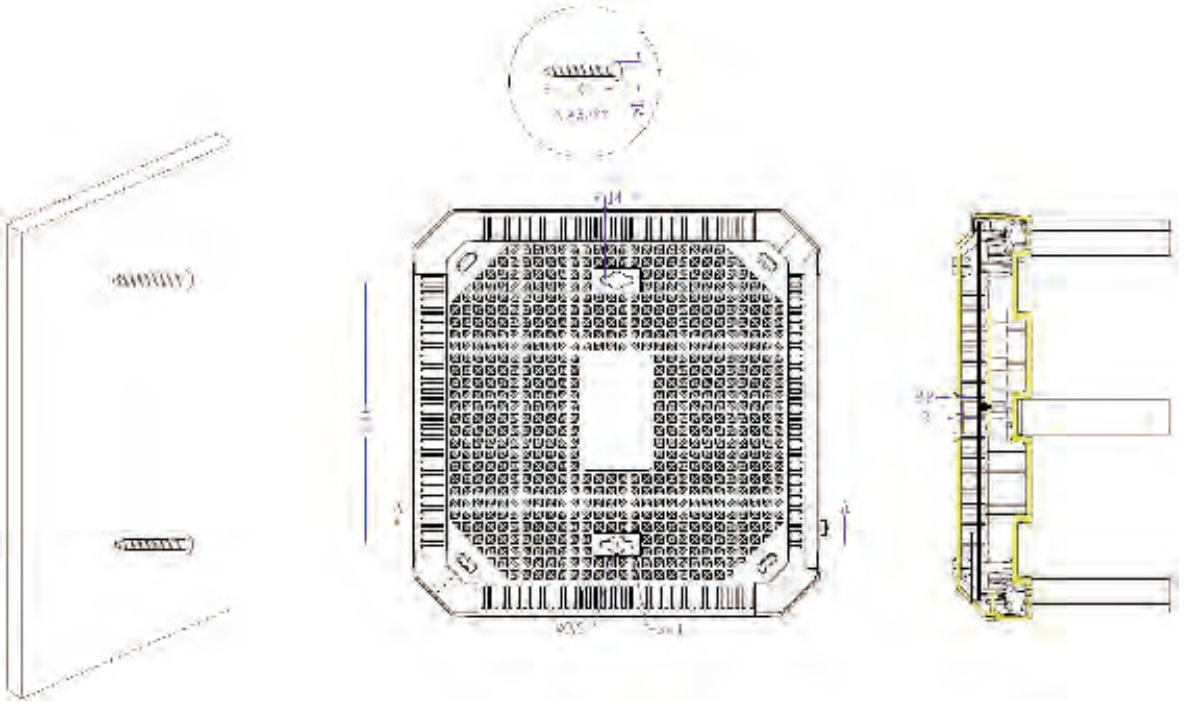
The following parts (view from left to right) are located on the rear panel.

Item	Description
Reset Button	When you need to reset the router, press and hold the Reset button for about 10 seconds until all LEDs go on, then release the button.
Internet Port	This port is where you'll connect to the DSL/Cable modem, or Ethernet.
Ethernet Ports (1/2/3/4)	Connect your Etherent devices, like PCs, to these ports.
USB 3.0 Port	Connect your USB storage device or USB printer to this port.
Power On/Off Button	Press this button to power on or off the router.
Power Port	This port is where you will connect the power socket via the provided power adapter.

1. 4. Position Your router

- Place your router in a well-ventilated place far from any heater or heating vent
- Avoid direct irradiation of any strong light (such as sunlight)
- Keep at least 2 inches (5 cm) of clear space around your router

Generally, your router is placed on a horizontal surface. It also can be mounted on the wall as shown below.



Note:

The diameter of the screw, 3.5mm<D<6mm, and the distance of two screws is 149.6mm. The screw that project from the wall need around 4mm based, and the length of the screw need to be at least 30mm to withstand the weight of the product.

Chapter 2

Connect the Hardware

This chapter contains the following sections:

- *Position Your Router*
- *Connect Your Router*

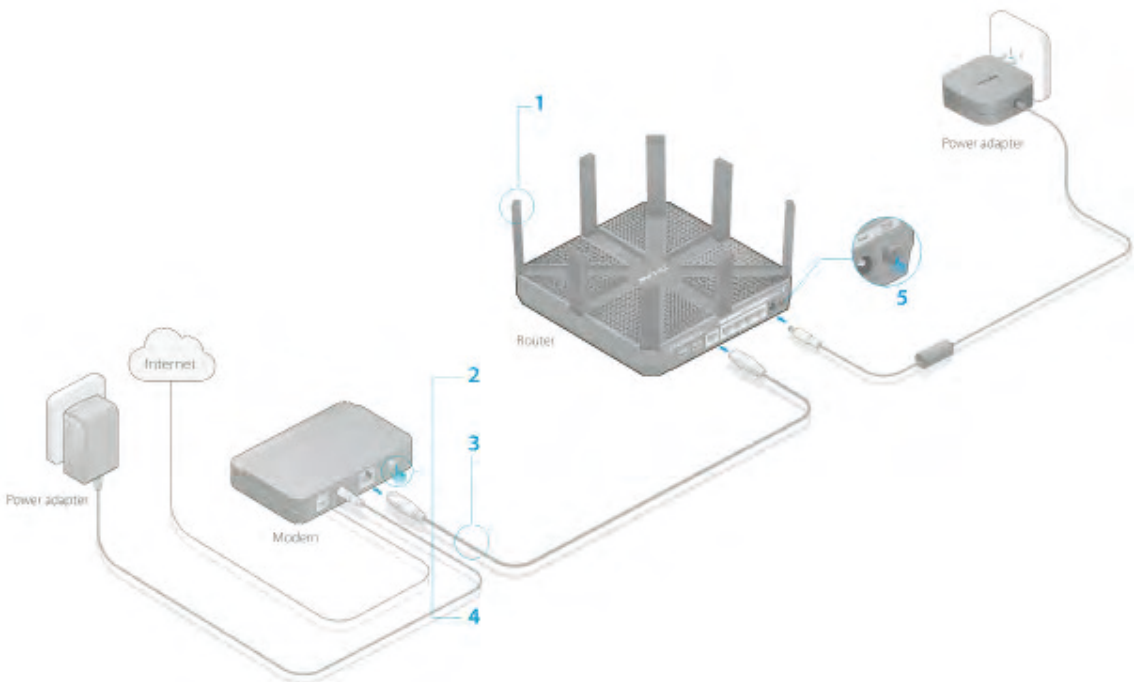
2. 1. Position Your Router

- The Product should not be located where it will be exposed to moisture or excessive heat.
- Place the router in a location where it can be connected to the various 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 away from the strong electromagnetic radiation and the device of electromagnetic sensitive.

2. 2. Connect Your Router

1. Follow the steps below to connect your router.

If your Internet connection is through an Ethernet cable from the wall instead of through a DSL / Cable / Satellite modem, connect the Ethernet cable directly to the router's Internet port, then follow steps 5 and 6 to complete the hardware connection.



1) Place the router horizontally and extend the antennas to the maximum angle.

Note:

For best performance, horizontal installation is recommended. Antenna direction and position can affect performance in vertical installation situations.

2) Turn off the modem, and remove the backup battery if it has one.

3) Connect the modem to the Internet port on your router with an Ethernet cable.

4) Turn on the modem, and then wait about **2 minutes** for it to restart.

5) Turn on the router.

6) Verify that the following LEDs are on and stable before continuing with the configuration.

Tips:

1. If all the LEDs are off, press the LED On/Off button for about 1 second, then check the LEDs again.
2. If the 2.4GHz, 5GHz, and 60GHz LEDs are off, press the Wi-Fi On/Off button for about 2 seconds, then check the LEDs again in a few seconds.

2. 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**

Connect wirelessly by using the SSID (Network Name) and Wireless Password/PIN printed on the product label at the bottom of the router.

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

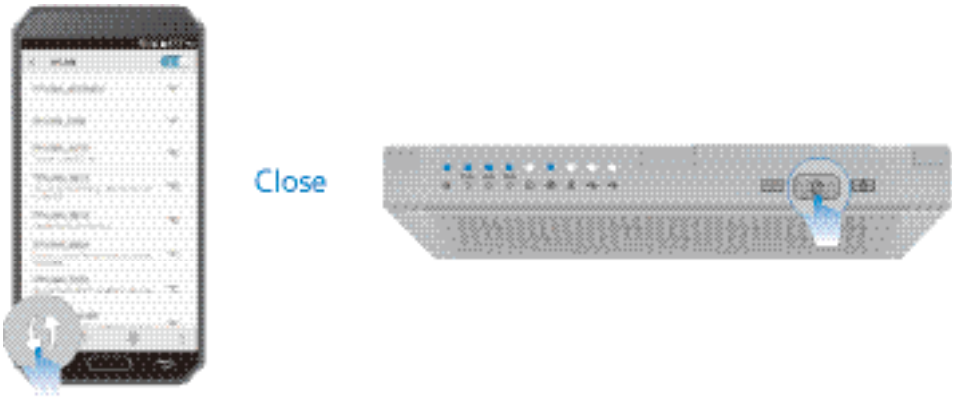
Wireless devices that support WPS, including Android phones, tablets, most USB network cards, can be connected to your router through this method. (WPS is not supported by IOS devices.)

Note:

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

1. Tab the WPS icon on the device's screen.

2. Immediately press the WPS button on your router.


Close

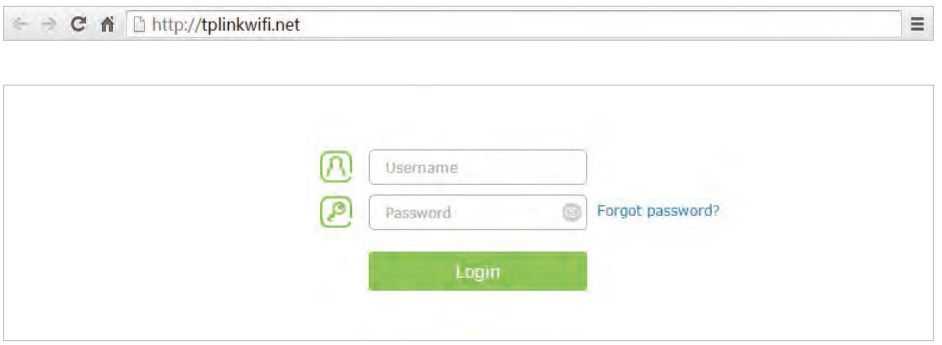
Chapter *3*

Log into Your Router

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

Follow the steps below to log into 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 log in with the username and password you've set for the router. The default one is admin for both username and password.



Note:
If the login window does not appear, please refer to *FAQ*.

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 many 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 provided IPv6 service.

This chapter contains the following sections:

- *Quick Setup*
- *Manually Configure Your Internet Connection Settings*
- *Setting Up an IPv6 Internet Connection*

4. 1. Quick Setup

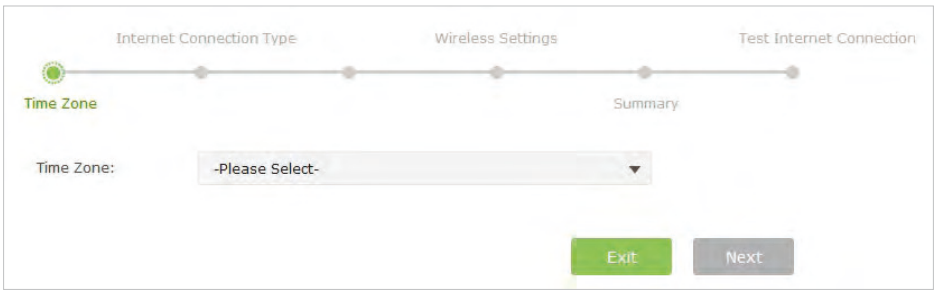
The Quick Setup Wizard will guide you through the process to set up your router to access the Internet.

Tips:

If you need the IPv6 Internet connection, please refer to the section of *"4. 3. Setting Up an IPv6 Internet Connection"*.

Follow the steps below to set up your router to access the Internet.

1. Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
2. Click Quick Setup on the top of the page.
3. Select your Time Zone from the drop-down list and click Next.

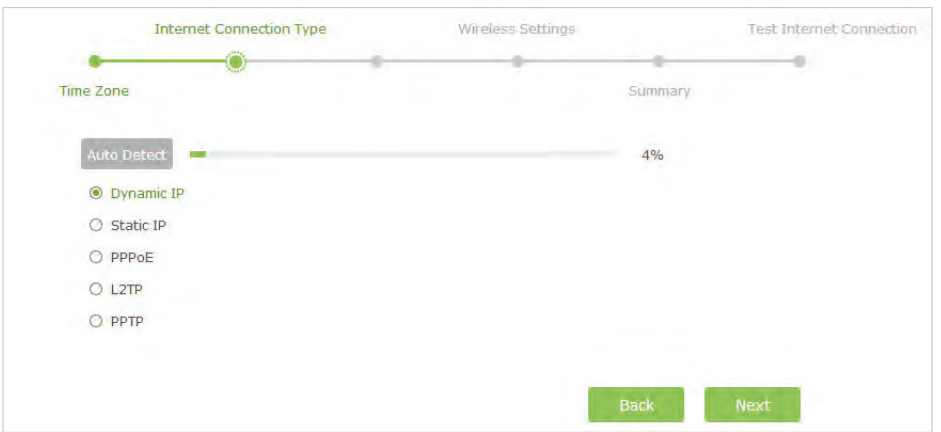


4. Click Auto Detect and the router will detect your connection type automatically.

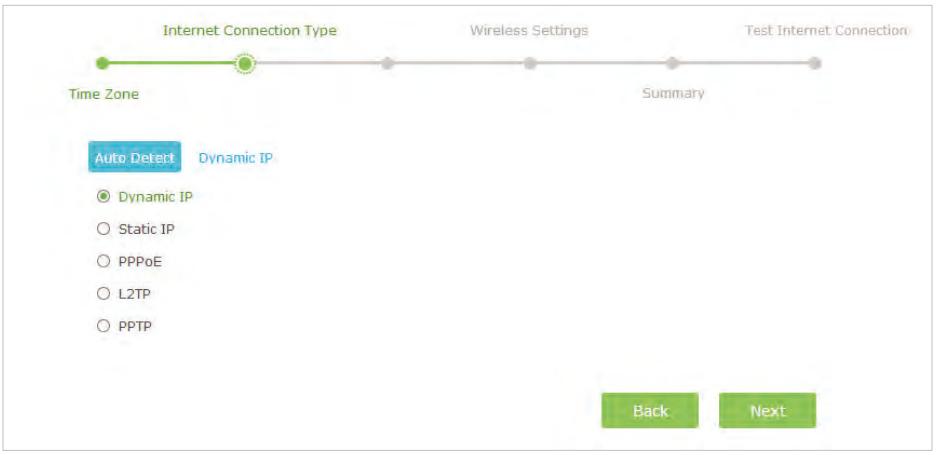
Note:

You can also choose the connection type manually. Contact your ISP if you are not sure about the Internet connection information.

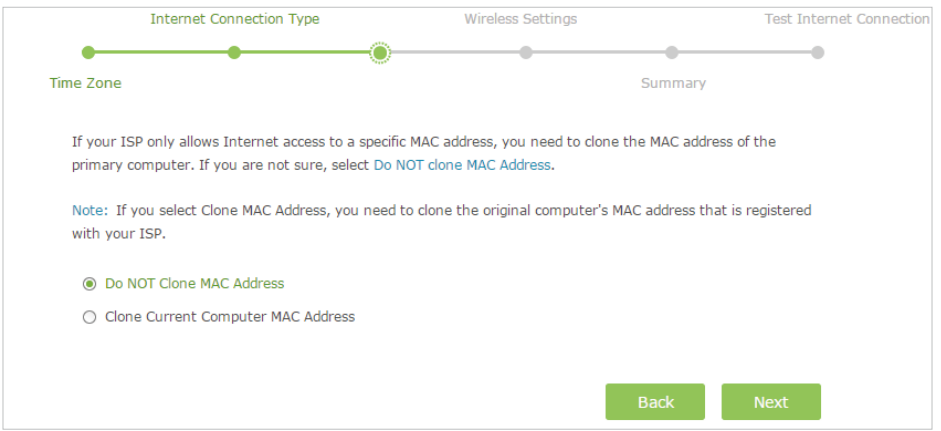
- If you use DSL line and you are only provided an account name and a password by your ISP, choose PPPoE.
- If you use cable TV or fiber cable, choose Dynamic IP.
- If you are provided more information such as IP address, Subnet Mask and Default Gateway, choose Static IP.



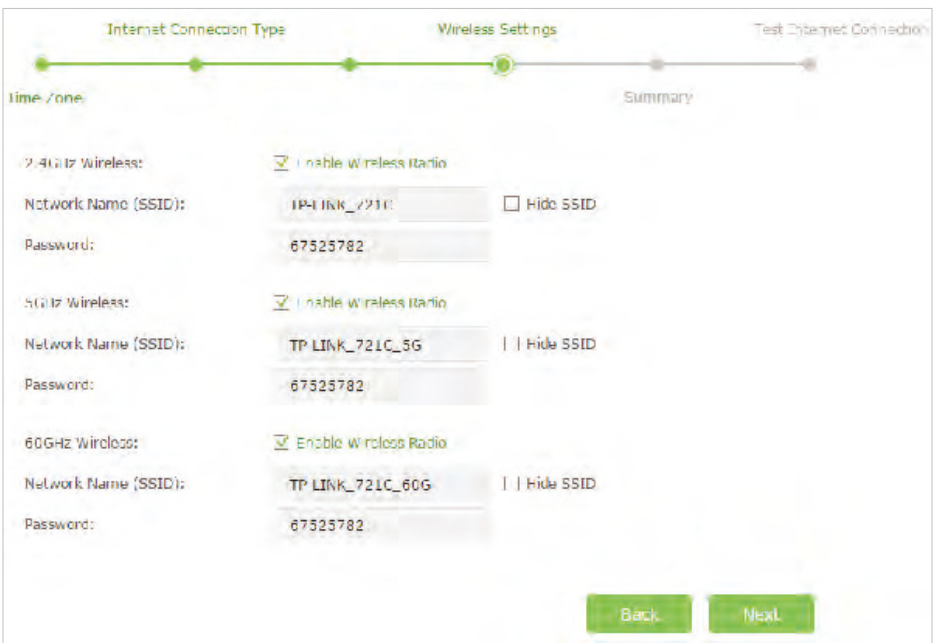
5. In this case, the router automatically detects Dynamic IP as the connection type. Click Next.



6. Follow the instructions on the page to decide whether to clone MAC Address. Click Next.



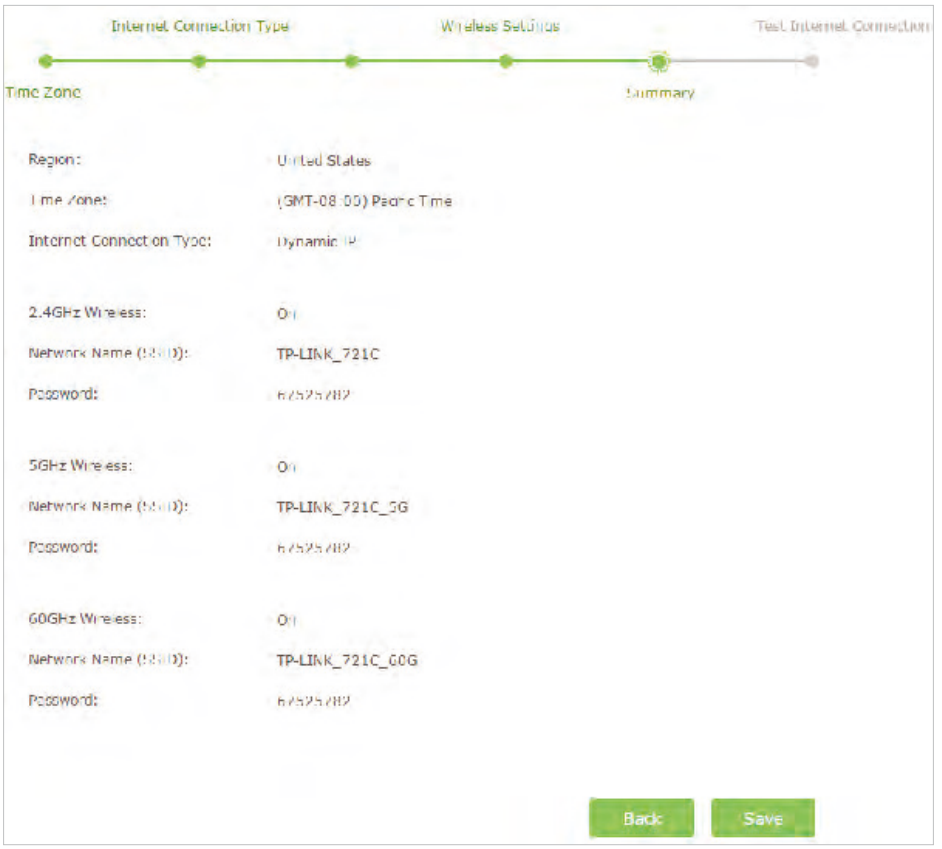
7. Configure your wireless settings and click Next.



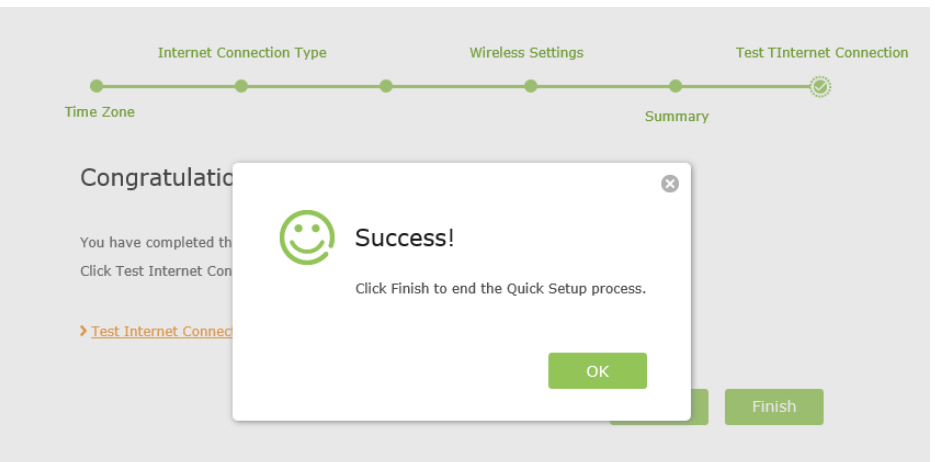
Note:

1. You may customize your 2.4GHz/5GHz/60GHz SSID and password. Once done, the wireless connection will disconnect automatically, and you must then use the new SSID/password to regain access to the Internet.
2. Tick Hide SSID if you want to hide this wireless network name.

8. Confirm the information and click Save.



9. Click Test Internet Connection. If you successfully connect to the Internet, the screen will display as follows.



10. Now your computer and Wi-Fi devices can connect to the Internet!

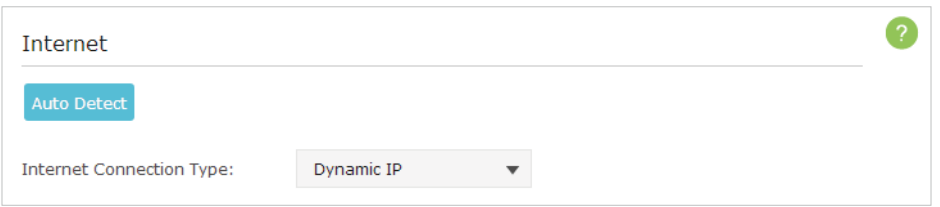
Tips:
You can connect your computer to the router's Etherent port using an Ethernet cable to join the local area network. You can also find and select the wireless network name on your Wi-Fi device to join the Wi-Fi network.

4. 2. Manually Configure Your Internet Connection Settings

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.

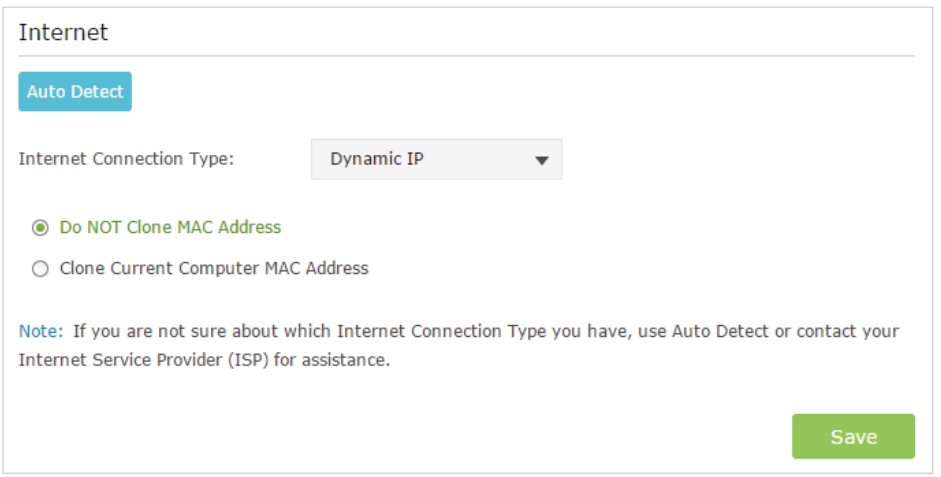
Follow the steps below to check or modify your Internet connection settings.

1. Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
2. Go to Basic > Internet.
3. Select your Internet connection type from the drop-down list.

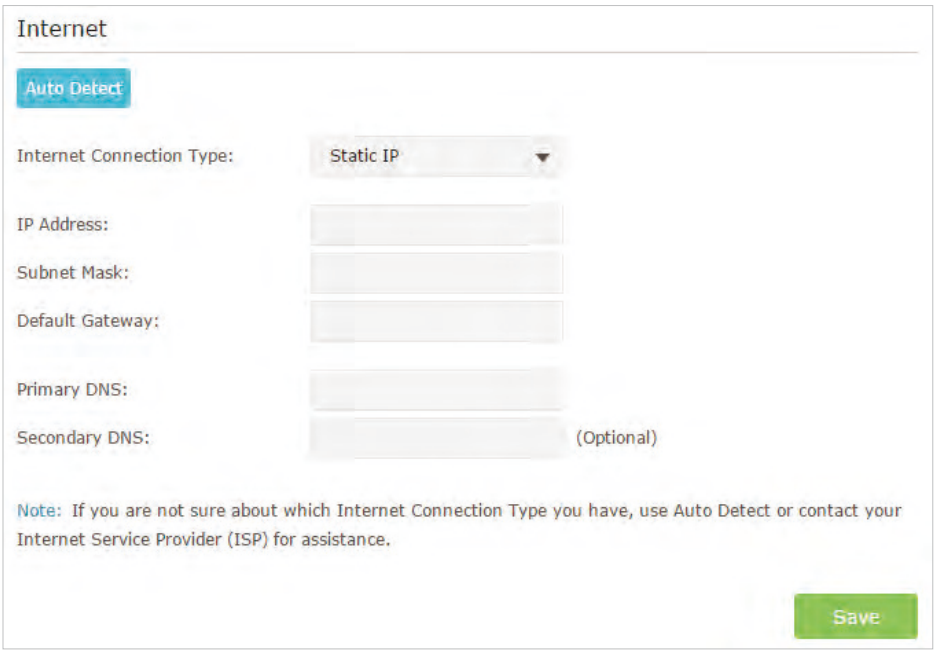


Note:
If you are unsure what your connection type is, click Auto Detect. Since different connection types need different cables and connection information, you can also refer to the demonstrations in Step 4 to judge your connection type.

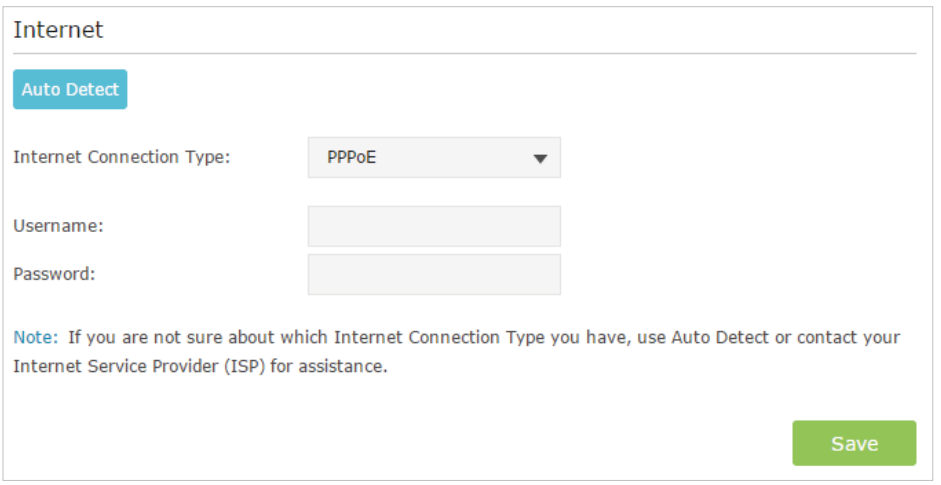
4. Follow the instructions on the page to continue the configuration. Parameters on the figures are just used for demonstration.
   1) If you choose Dynamic IP, you need to select whether to clone the MAC address or not. Dynamic IP users are usually equipped with cable TV or fiber cable.



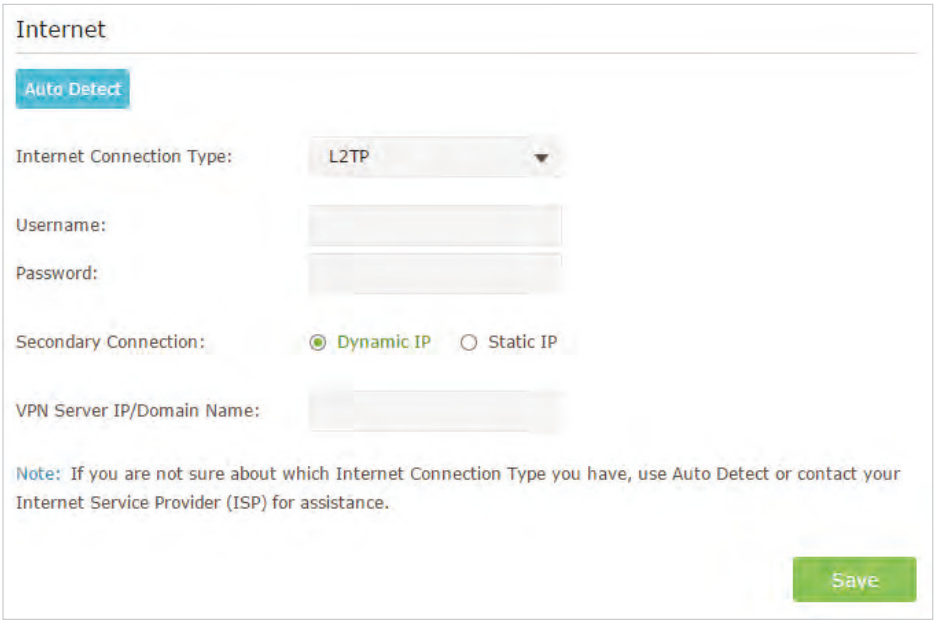
2) If you choose Static IP, enter the information provided by your ISP in the corresponding fields.



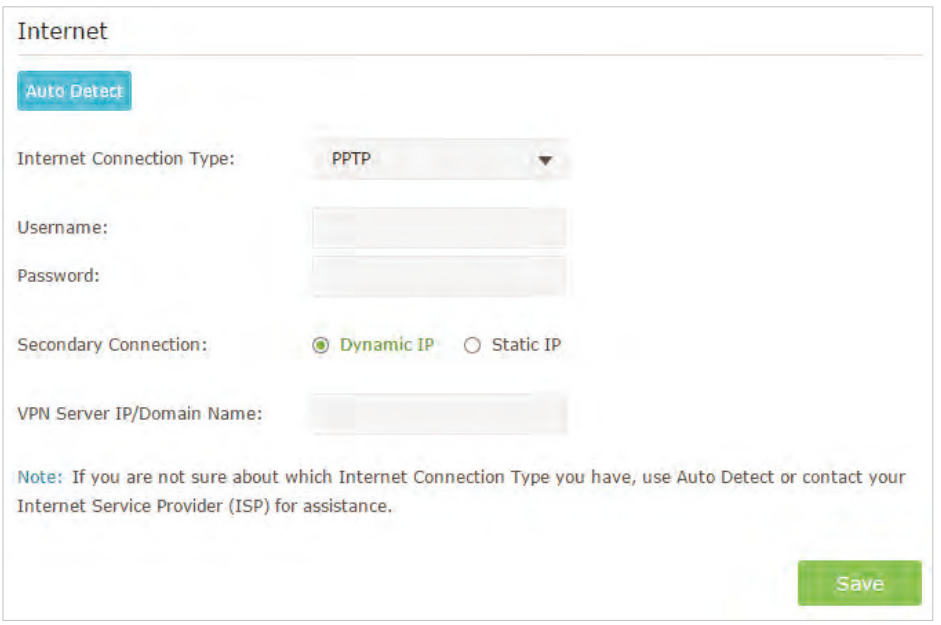
3) If you choose PPPoE, enter the username and password provided by your ISP. PPPoE users usually have DSL cable.



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.



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

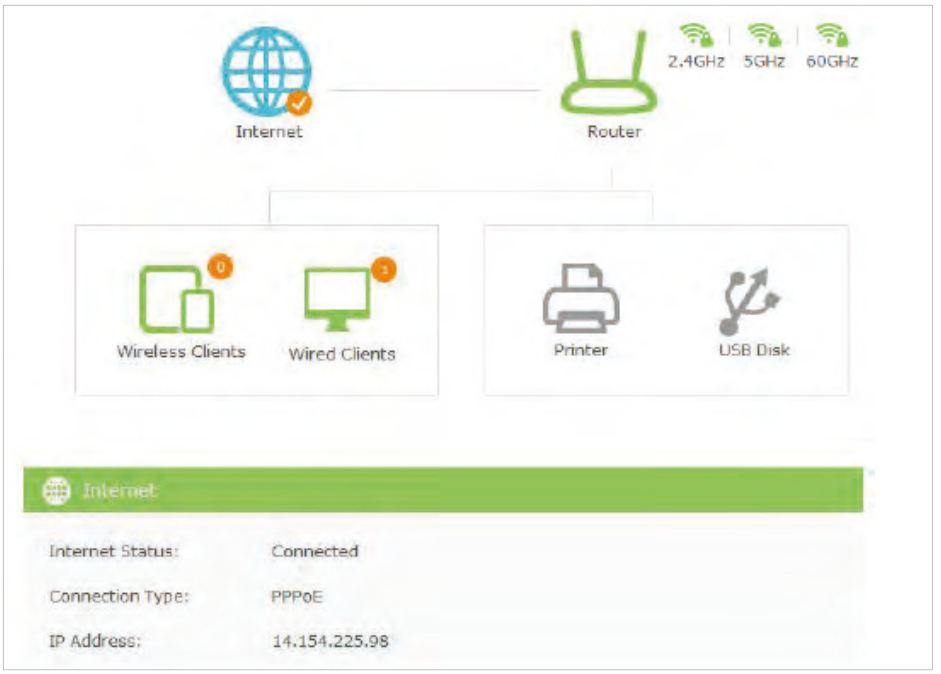


5. Click Save to make the settings take effect. To check your Internet connection, click Network Map on the left of the page.

Note:

It may take 1-2 minutes to make the settings valid.

6. After the connection succeed, the screen will display as follows. Here we take PPPoE as an example.



Tips:

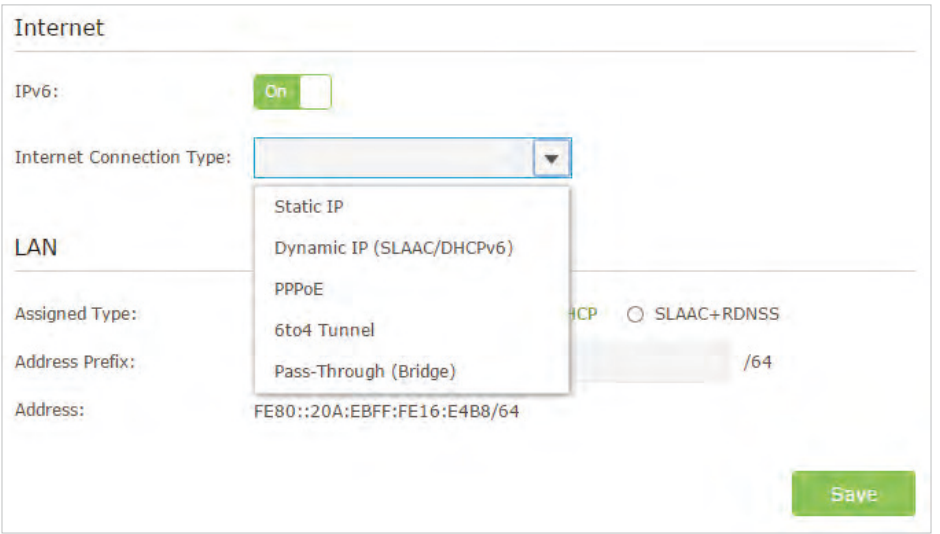
1. If you use Dynamic IP and PPPoE and you are provided any other parameters that are not required on the page, please go to Advanced > Network > Internet to complete the configuration.
2. If you still cannot connect to the Internet, refer to *FAQ* for further instructions.

4. 3. Setting Up an IPv6 Internet Connection

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

1. Visit *http://tplinkwifi.net*, then log in with the username and password you set for the router.
2. Go to Advanced > IPv6.

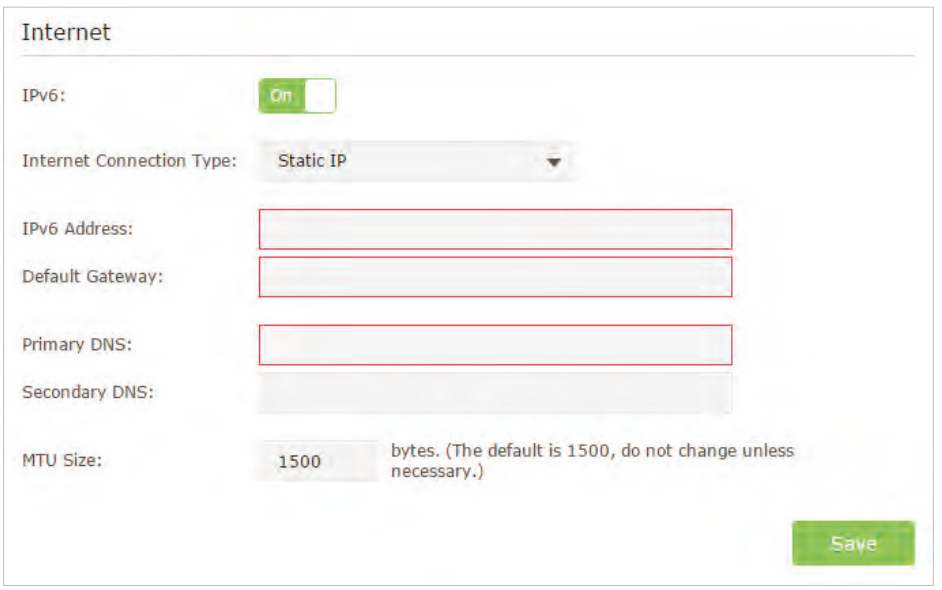
3. Select the Internet connection type provided by ISP.



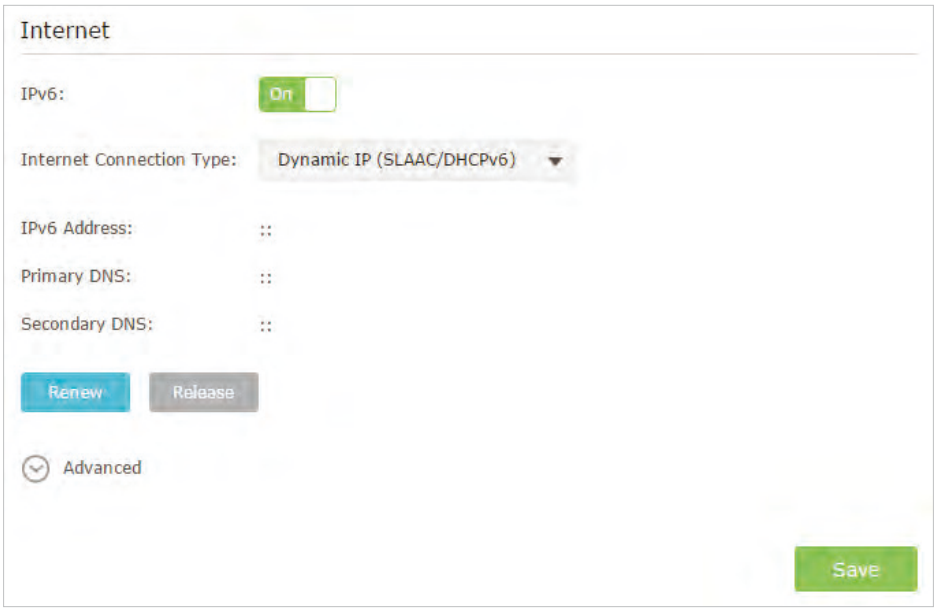
Tips:
If you do not know what your Internet connection type is, contact your ISP or judge according to already known information provided by your ISP.

4. Fill in information as required by different connection type. (Red blanks must be filled.)

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

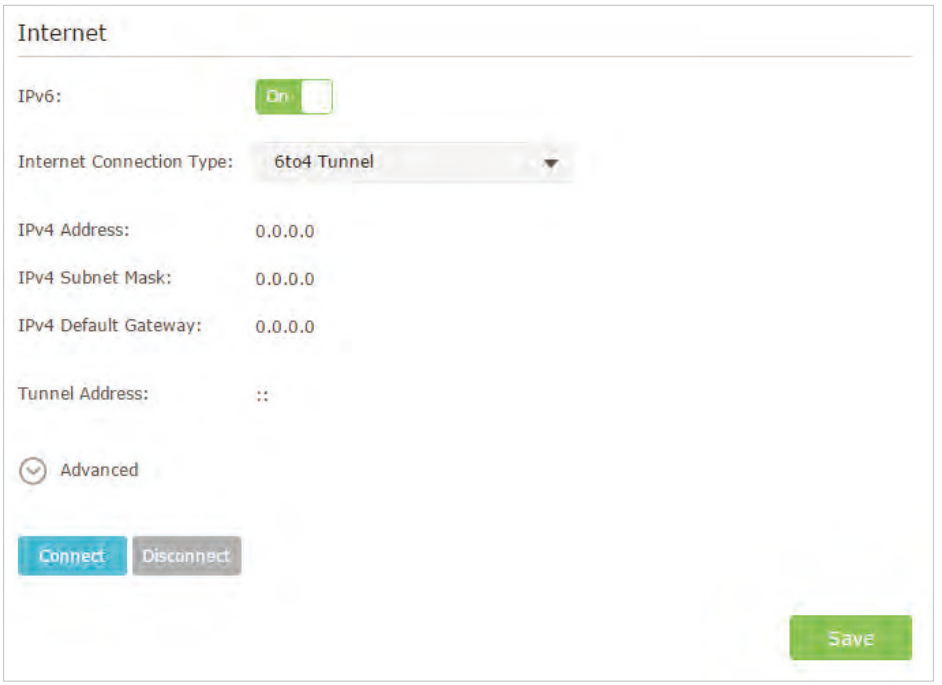


2) Dynamic IP(SLAAC/DHCPv6): Click Advanced to have more configuration if ISP requires. Click Save to save the settings and then click Renew to finish the configuration.

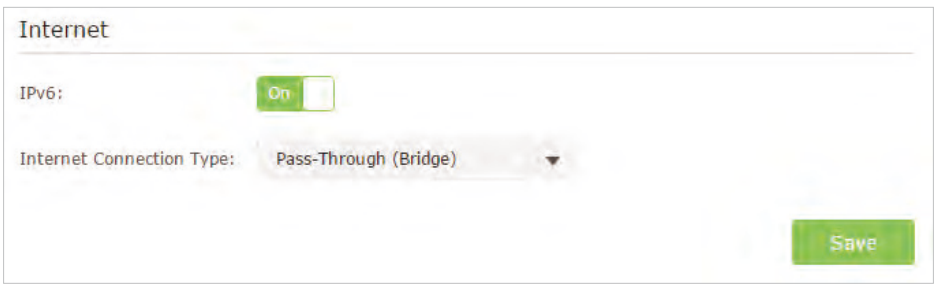


3) PPPoE: Fill in the Username and Password. Click Advanced to have more configuration if ISP requires. Click Save to save the settings and then click Connect to finish the configuration.

4) 6to4 Tunnel: An IPv4 Internet connection type is a prerequisite for this connection type. (*4. 2*) Click Advanced to have more configuration if ISP requires. Click Save to save the settings and then click Connect to finish the configuration.



5) Pass-Through (Bridge): Click Save and skip to step 6.

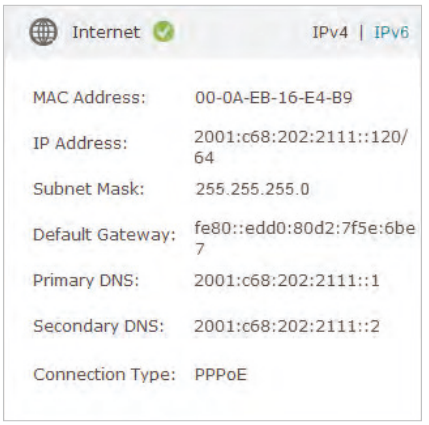


5. Configure LAN ports. Windows users are recommended to choose from the first two types. Fill in Address Prefix provided by ISP, and click Save to save the settings.

Tips:

Find Help on the management interface to know more about items.

6. Click Status to check whether you succeed or not. The following figure is an example of a successful PPPoE configuration.



Tips:

Visit *FAQ* if there is no Internet connection.

Chapter *5*

Guest Network

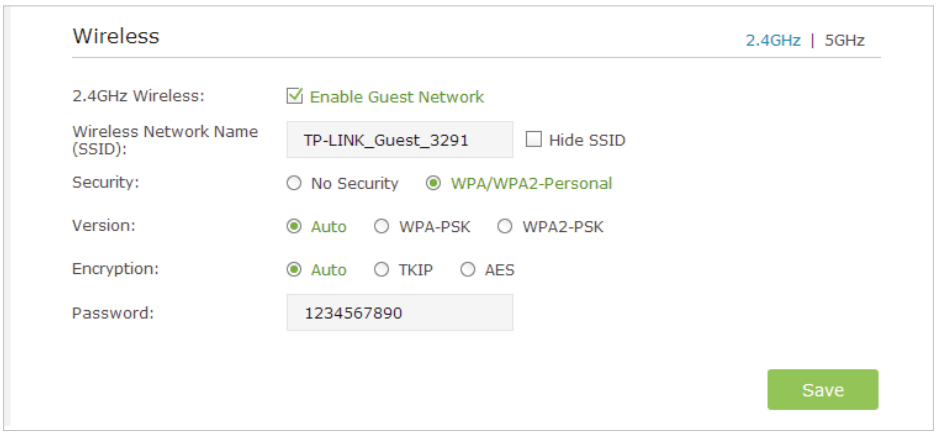
This function allows you to provide Wi-Fi access for guests without disclosing your main network. When you have guests in your house, apartment, or workplace, you can create a guest network for them. In addition, you can limit the network authorities for guests to ensure network security and privacy.

This chapter contains the following sections:

- *Create Guest Network*
- *Customize Guest Network Options*

5. 1. Create Guest Network

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to *Advanced* > *Guest Network*.
3. Create a 2.4GHz or 5GHz guest network according to your needs.
   1) Enable Wireless Network 2.4GHz or Wireless Network 5GHz.
   2) Set an easy-to-identify SSID. Don't select Hide SSID unless you want your guests and other people to manually input this SSID for Wi-Fi access.
   3) Set Security to WPA/WPA2 Personal, keep the default Version and Encryption values, and set an easy-to-remember Password.



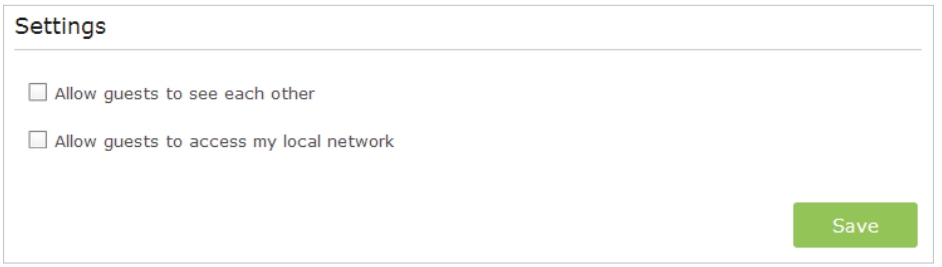
4. Click Save. Now your guests can access your guest network using the SSID and password you set!

Tips:

To view guest network information, go to *Advanced* > *Status* and find the Guest Network section.

5. 2. Customize Guest Network Options

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Guest Network.
3. Customize guest network options according to your needs.



- Allow guests to see each other

  Tick this checkbox to allow the clients in your guest network to access each other.

- Allow guests to access my local network

  Tick this checkbox to allow the clients in your guest network to access your local network, not just Internet access.

4. Click Save. Now users in your guest network can enjoy only the network authorities you've assigned!

Tips:

To view guest network information, go to Advanced > Status and find the Guest Network section.

Chapter *6*

USB Application

This chapter describes how to share and access USB devices connected to the router among different clients.

The router only supports USB external flash drives, hard drives, USB printers and USB 3G/4G modems.

This chapter contains the following sections:

- *Local Storage Sharing*
- *Remote Access via FTP Server*
- *Media Sharing*
- *Printer Sharing*
- *Offline Download*

6. 1. Local Storage Sharing

Share your USB storage devices with different users on the network.

6. 1. 1. Access the USB Disk

1. Connect Your USB Disk

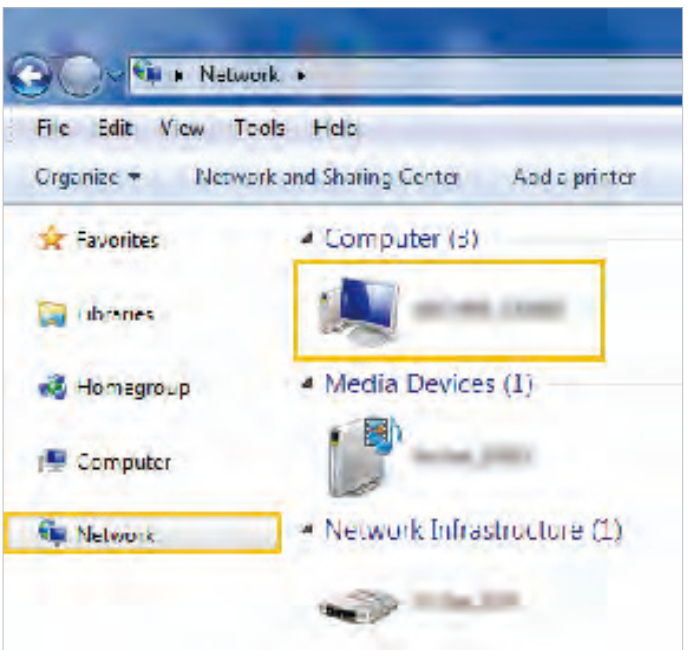
Insert your USB storage device into the router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

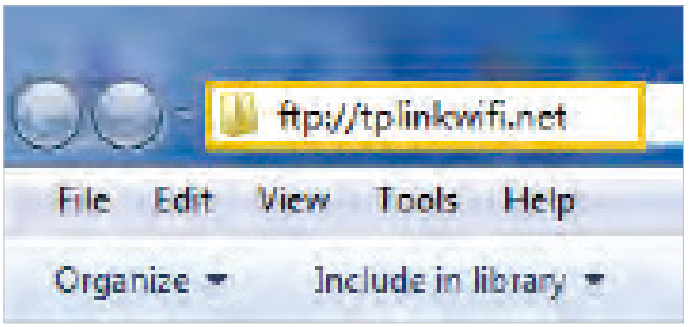
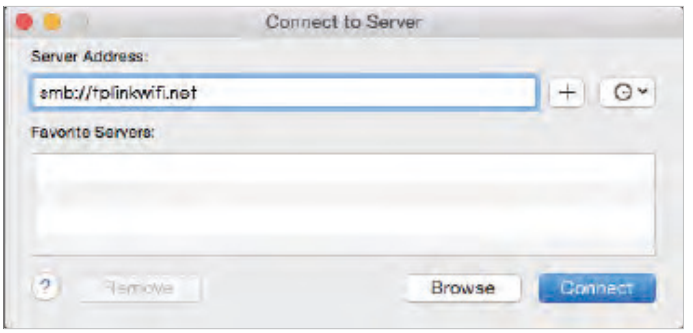
Tips:

- 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 or NTFS.
- Before you physically disconnect a USB device from the router, safely remove it to avoid data damage: Go to Advanced > USB Settings > Device Settings and click Safely Remove.

2. Access Your USB Disk

By default, all the network clients can access all folders on your USB disk. Refer to the following table for access instructions. You can also customize your sharing content and set a sharing account by referring to *Customize Your Settings*.

Windows computer	➢ **Method 1:** Go to Computer > Network, then click the Network Server Name (AD7200-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*.)
Pad	Use a third-party app for network files management.

Tips:

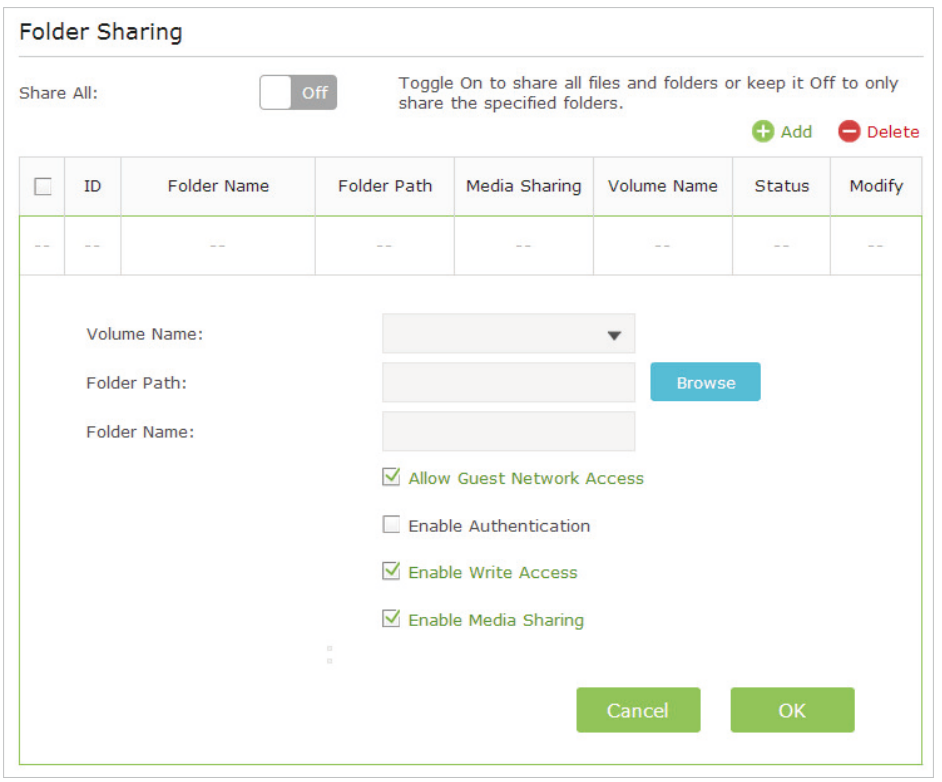
You can also access your USB disk by using your Network/Media Server Name as the server address. Refer to *To Customize the Address of the USB Disk* to learn more.

6. 1. 2. Customize Your Settings

➢ To Only Share Specific Content

By default, Share All is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

1. Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.
2. Go to Basic > USB Settings > Sharing Access. Focus on the Folder Sharing section.
3. Click the button to disable Share All, then click Add to add a new sharing folder.



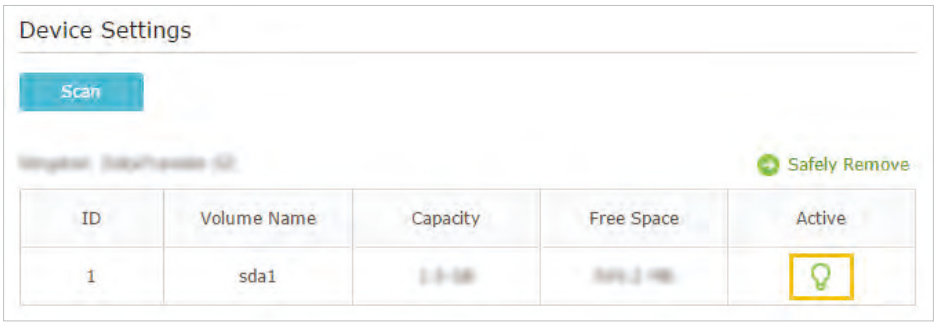
4. Select the Volume Name and Folder Path, then enter a Folder Name as you like.
5. Decide the way you share the folder:
   - Allow Guest Network Access: If you tick this check box, guest network users can access this folder.
   - Enable Authentication: If you tick this check box, you will be required to use a username and password to access the folder. Refer to *To Set up Authentication for Data Security* to learn more.
   - Enable Write Access: If you tick this check box, network clients can modify the folder.

- Enable Media Sharing: If you tick this check box, you can view photos, play music and watch movies in the folder directly from DLNA-supported devices. Refer to *Media Sharing* to learn more.

6. Click OK.

Tips:

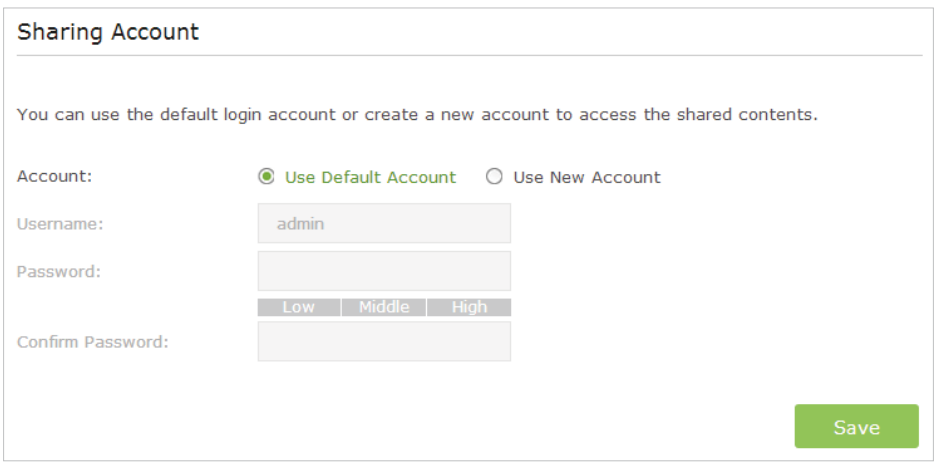
The router can share 32 volumes at most. You can click on the page to detach the corresponding volume you do not need to share.



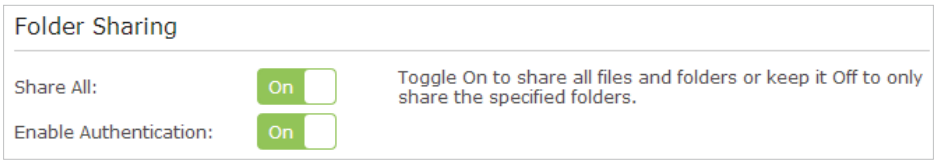
➢ To Set up Authentication for Data Security

If you enable Authentication, network clients will be required to enter the username and password you set when accessing the USB disk.

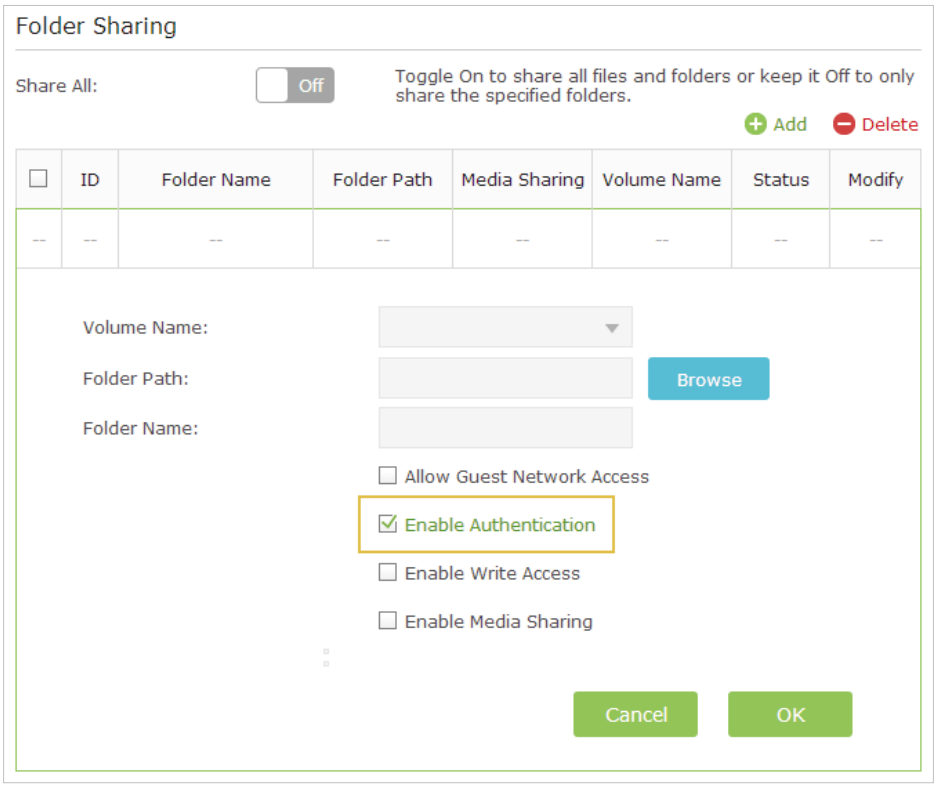
1. Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.
2. Go to Advanced > USB Settings > Sharing Access. Focus on the Sharing Account section.



3. Choose Use Default Account (admin) or Use New Account and click Save.
4. Enable Authentication to apply the account you just set.
   - If you leave Share All enabled, click the button to enable Authentication for all folders.



- If Share All is disabled, enable Authentication for specific folders.



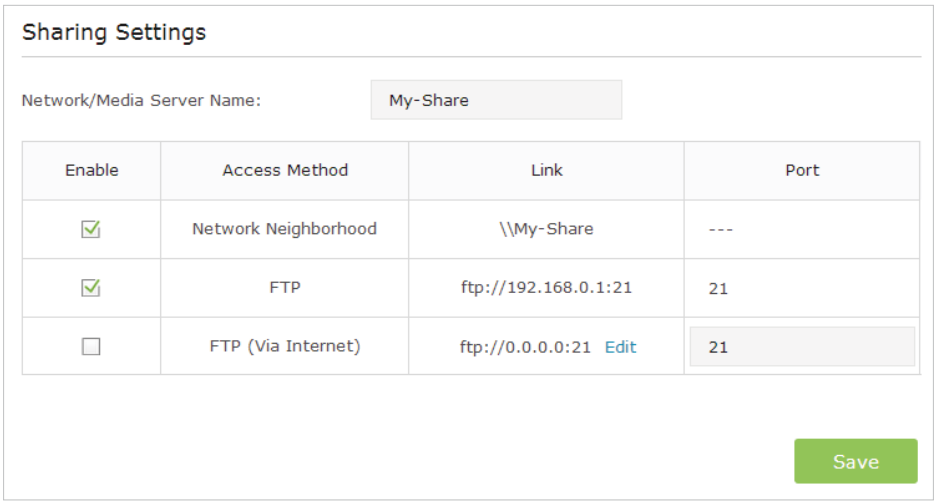
Note:

Due to Windows credential mechanism, you might be unable to access the USB disk after changing Authentication settings. Please log out from Windows and try to access again. For more details, please refer to *FAQ*.

➢ To Customize the Address of the USB Disk

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

1. Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.
2. Go to Advanced > USB Settings > Sharing Access. Focus on the Sharing Settings section.
3. Make sure Network Neighborhood is ticked, and enter a Network/Media Server Name as you like, such as My-Share, then click Save.



3. Now you can access the USB disk by visiting \\My-Share (for Windows) or smb://My-Share (for Mac).

6. 2. Remote Access via FTP Server

You can access your USB disk outside the local area network.

For example:

- 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.

6. 2. 1. Access the USB Disk

1. **Connect Your USB Disk**

   Insert your USB storage device into the router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

   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 or NTFS.
   - Before you physically disconnect a USB device from the router, safely remove it to avoid data damage: Select Advanced > USB Settings > Device Settings and click Safely Remove.

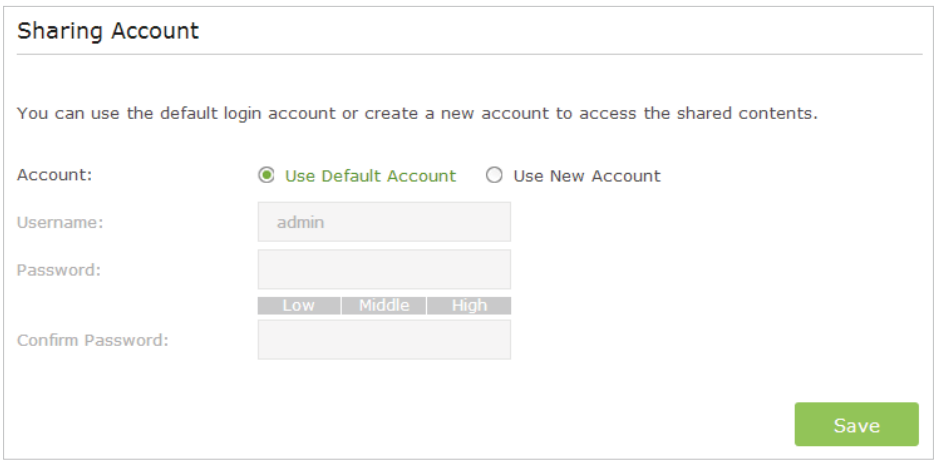
2. Enable Authentication for Data Security

It is strongly recommended that you set and apply a sharing account for data security.

1) Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.

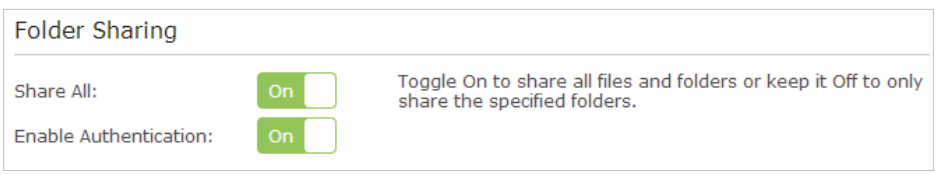
2) Go to Advanced > USB Settings > Sharing Access. Focus on the Sharing Account section.

3) Choose to Use default Account (admin) or Use New Account and click Save.

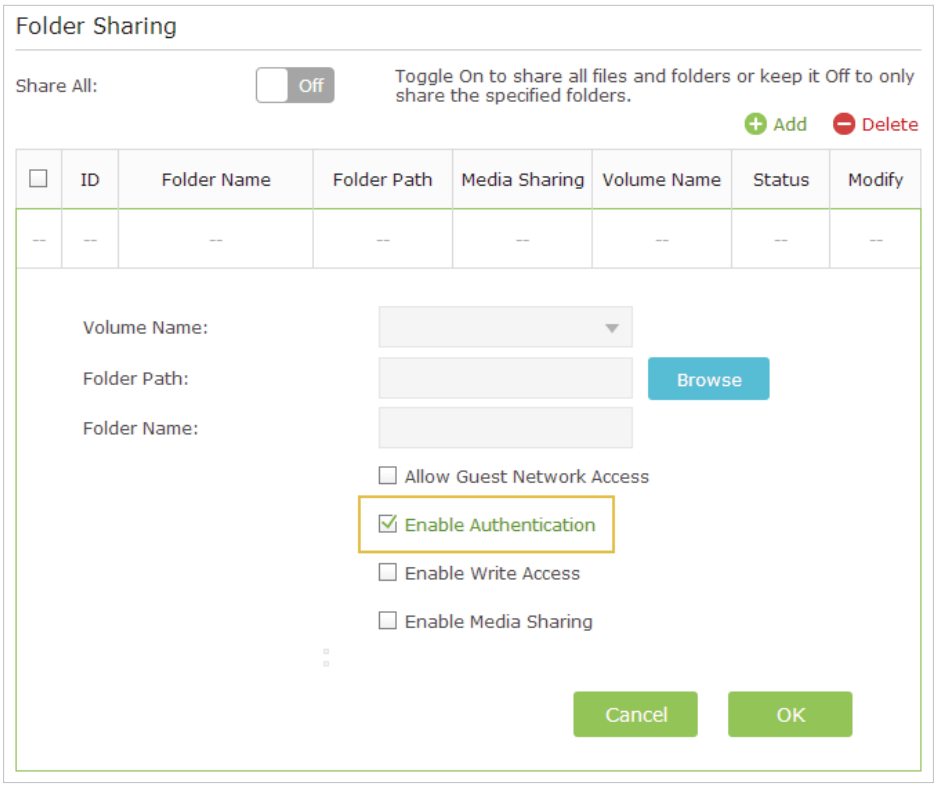


4) Enable Authentication to apply the sharing account.

- If you leave Share All enabled, click the button to enable Authentication for all folders.

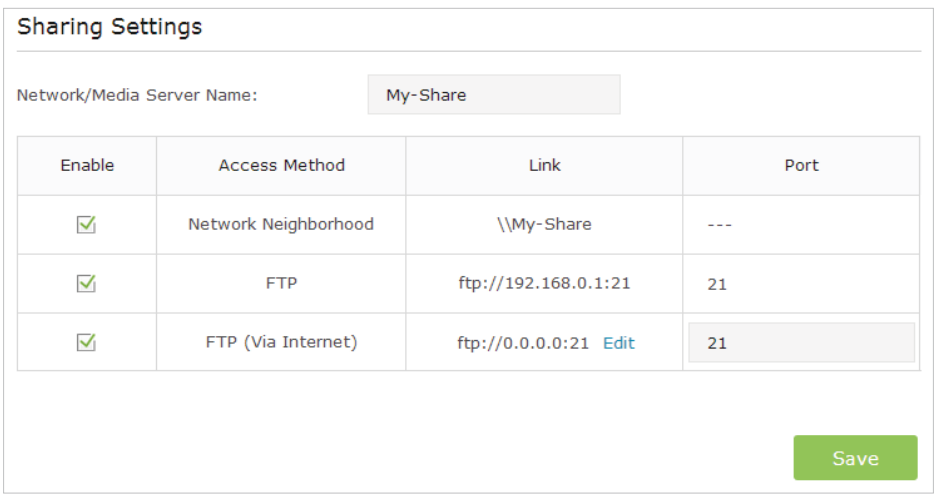


- If Share All is disabled, enable Authentication for specific folders.



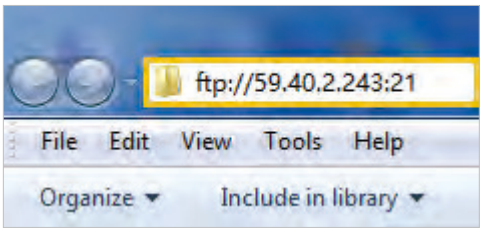
3. **Enable the FTP (via Internet)**

   Select the check box to enable FTP (via Internet), then click Save.



4. **Access Your USB Disk via Internet**

   Now different clients with Internet connection can access the USB disk:

Computer	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 ftp://<WAN IP address of the router>:<port number> (such as ftp://59.40.2.243:21). If you have specified the domain name of the router, you can also type in ftp://<domain name>:<port number> (such as ftp://MyDomainName:21)  The Address Bar of the Windows Explorer (Windows 7) 3) Press [Enter] on the keyboard. 4) Access with the username and password you've set in *Step 2 Enable Authentication for Data Security*. **Tips:** You can also access the USB disk via a third-party app for network files management, which can resume broken file transfers.
Pad	Use a third-party app for network files management.

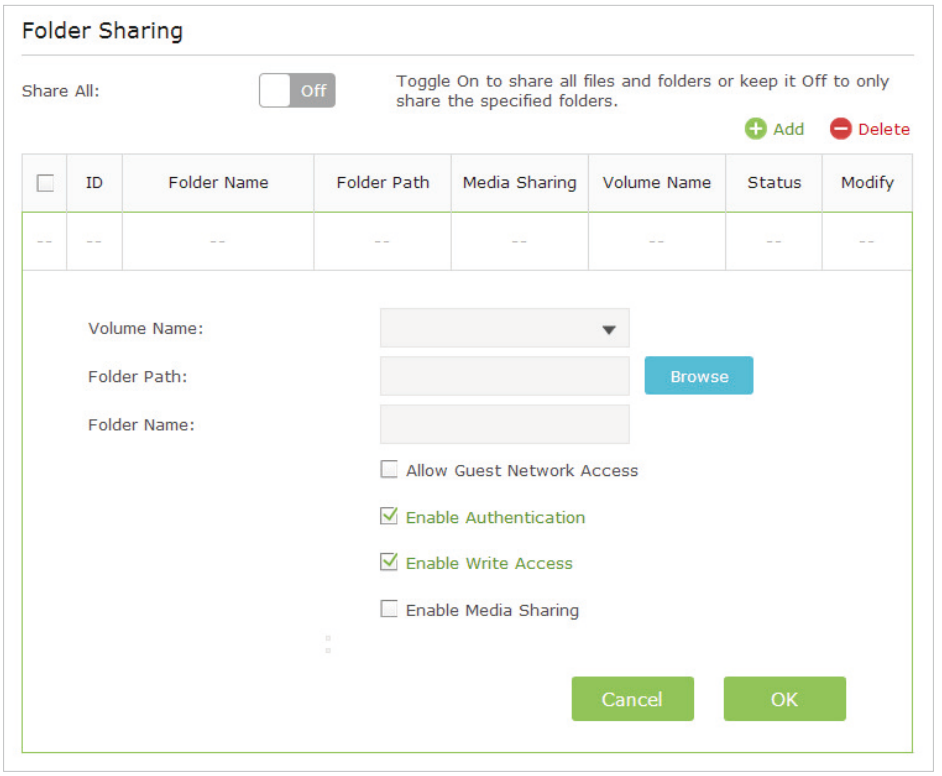
Tips:
Refer to *Set Up a Dynamic DNS Service Account* to learn how to set up a domain name for you router.

6. 2. 2. Customize Your Settings

➢ To Only Share Specific Content

By default, Share All is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

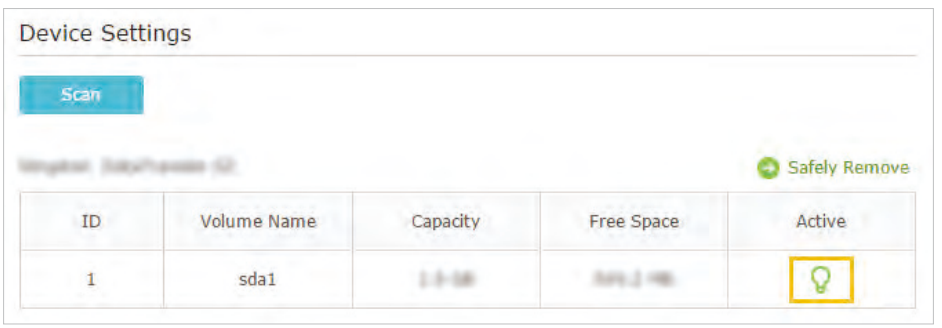
1. Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.
2. Go to Basic > USB Settings > Sharing Access. Focus on the section of Folder Sharing. Click the button to disable Share All, then click Add to add a new sharing folder.
3. Select the Volume Name and Folder Path, then specify the Folder Name as you like.
4. Tick Enable Authentication. If you allow network clients to modify this folder, Tick Enable Write Access.



5. Click OK.

Tips:

The router can share 32 volumes at most. You can click on the page to detach the corresponding volume you do not need to share.



6. 3. Media Sharing

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

6. 3. 1. Access the USB Disk

1. Connect Your USB Disk

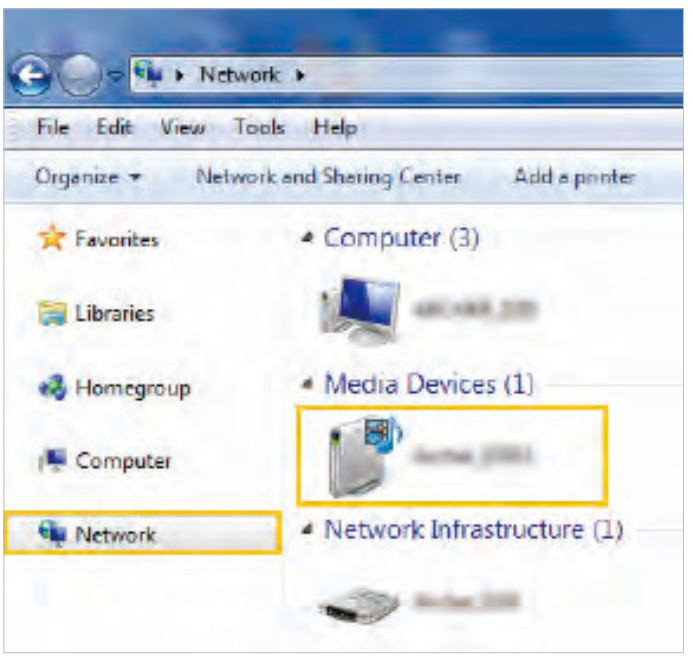
Insert your USB storage device into the router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

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 or NTFS.
- Before you physically disconnect a USB device from the router, safely remove it to avoid data damage: Go to Advanced > USB Settings > Device Settings and click Safely Remove.

2. Play the Media on Your USB Disk

Now the DLNA-supported devices (such as your computer and pad) connected to the router can detect and play the media files on the USB disks.

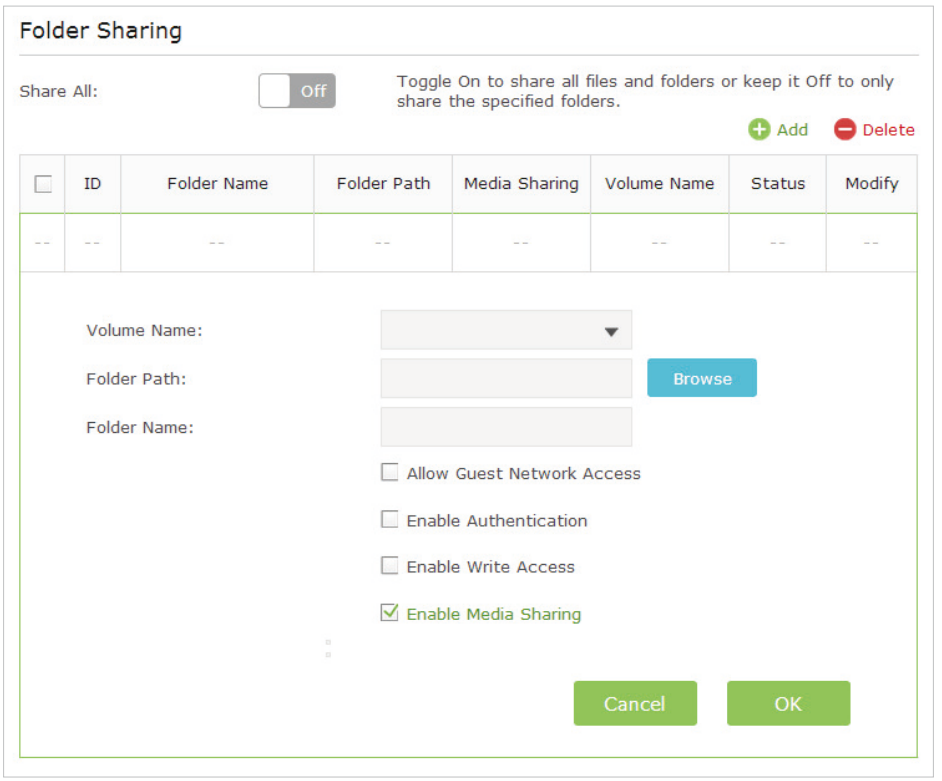
Windows computer	Go to Computer > Network, then click the Media Server Name (AD7200-Share by default) in the Media Devices section. Note: Here we take Windows 7 as an example. 
Pad	Use a third-party DLNA-supported player.

6. 3. 2. Customize Your Settings

➢ To Only Share Specific Content

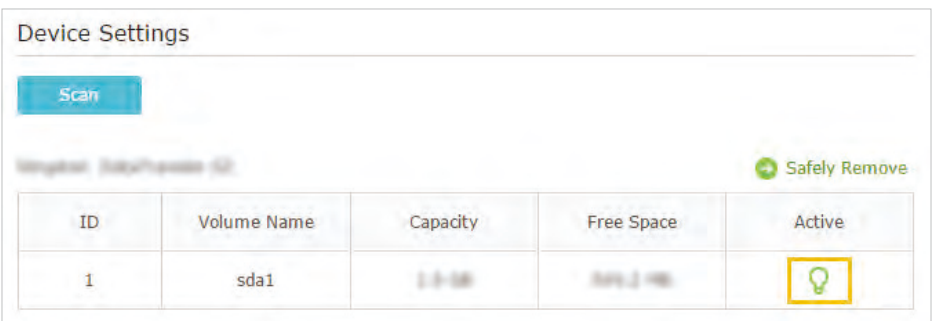
By default, Share All is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

1. Visit *http://tplinkwifi.net*, then log in with the username and password you've set for the router.
2. Go to Basic > USB Settings > Sharing Access. Focus on the Folder Sharing section.
3. Click the button to disable Share All, then click Add to add a new sharing folder.
4. Select the Volume Name and Folder Path, then enter a Folder Name as you like.
5. Tick Enable Media Sharing and click OK.



Tips:

The router can share 32 volumes at most. You can click on the page to detach the corresponding volume you do not need to share.



6. 4. Printer Sharing

The Printer Sharing feature helps you share a printer with different computers connected to the router.

Note:

Printers unlisted on this page may be incompatible with the router:
http://www.tp-link.com/common/compatible/print-server/.

1. **Install the Driver of the Printer**

   Make sure you have installed the driver of the printer on each computer that needs printer service.

   If you do not have the driver, contact the printer manufacturer.

2. **Connect the Printer**

   Cable a printer to the USB port with the USB cable. Wait several seconds until the USB LED becomes solid on.

3. **Install the TP-LINK USB Printer Controller Utility**

   TP-LINK USB Printer Controller Utility helps you access the shared printer. Download and install the utility on each computer that needs printer service.

   1) Visit *http://www.tp-link.com/app/usb/*.

   2) Click PC Utility (for Windows users) or Mac Utility to download the installation file and uncompress it.

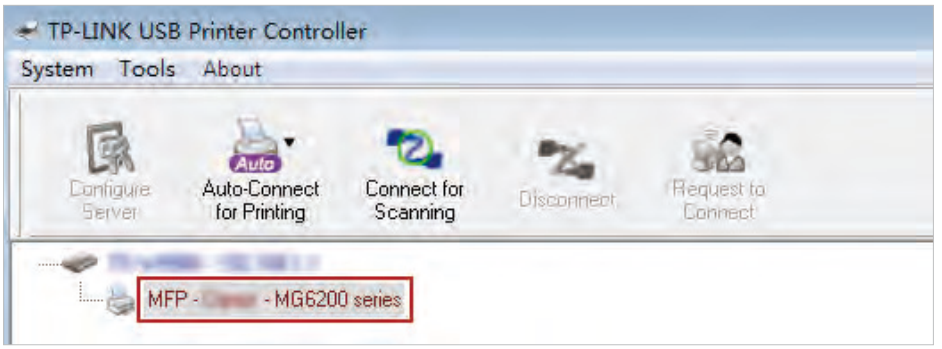
   3) Open the uncompressed folder, then click TP-LINK USB Printer Controller Setup (for Windows users) or TP-Link UDS Printer Controller Installer (for Mac users) to install the utility.

4. **Access the Printer**

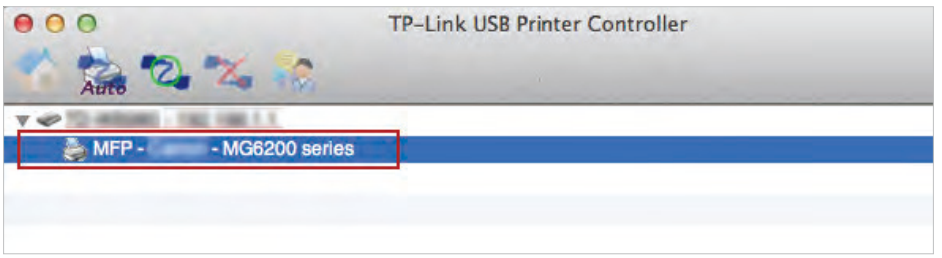
   You should set the shared printer as Auto-Connect Printer on every computer that needs printer service.

   1) Double-click the icon on your desktop to launch the USB Printer Controller.

   2) Highlight the printer you share.

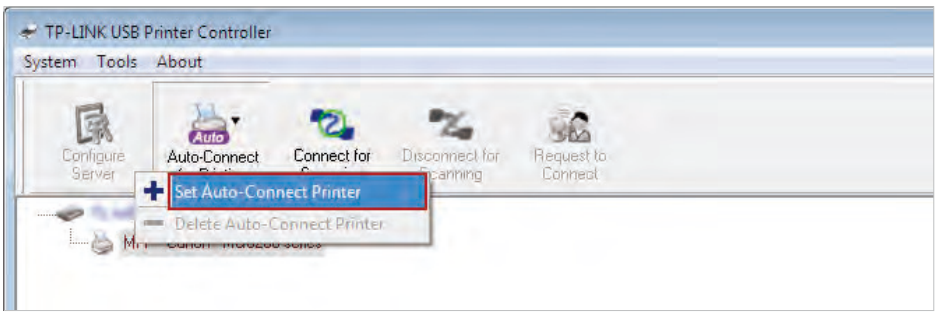


Windows

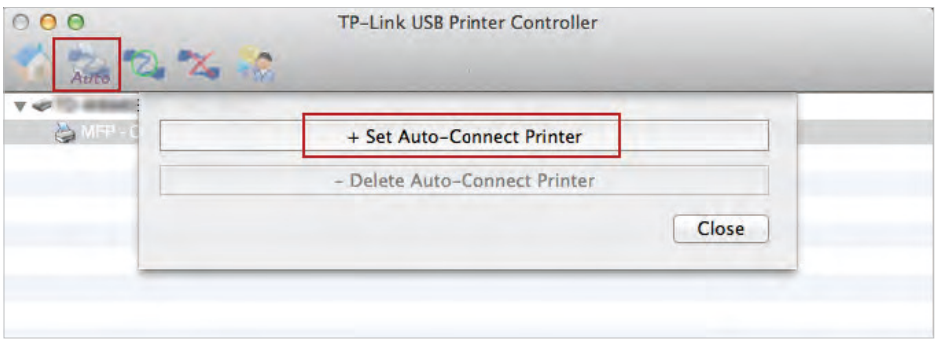


Mac

3) Click the Auto-Connect for printing tab to pull down a list, then select Set Auto-Connect Printer.

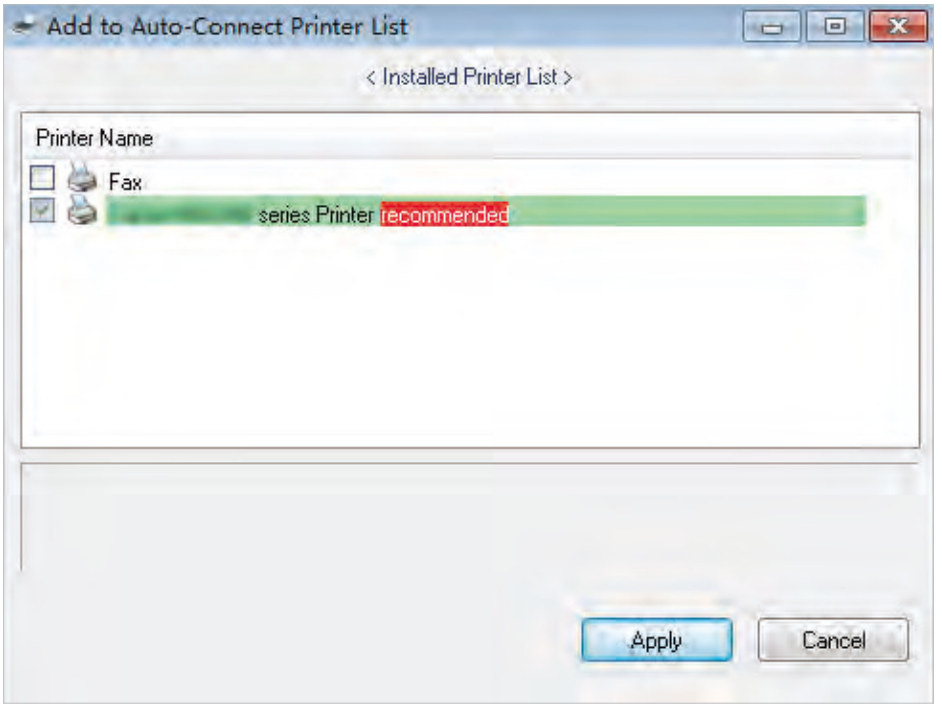


Windows

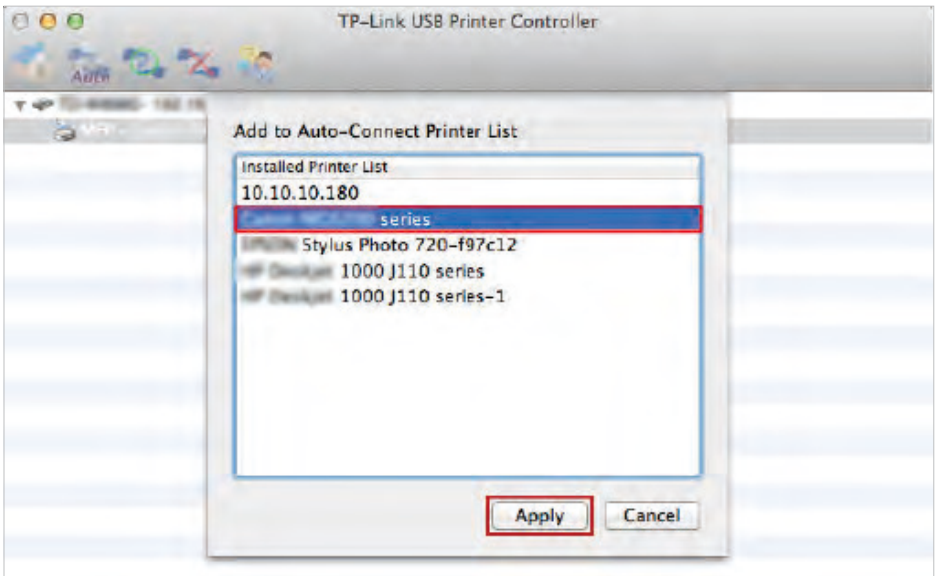


Mac

4) Select the printer you share, then click Apply.

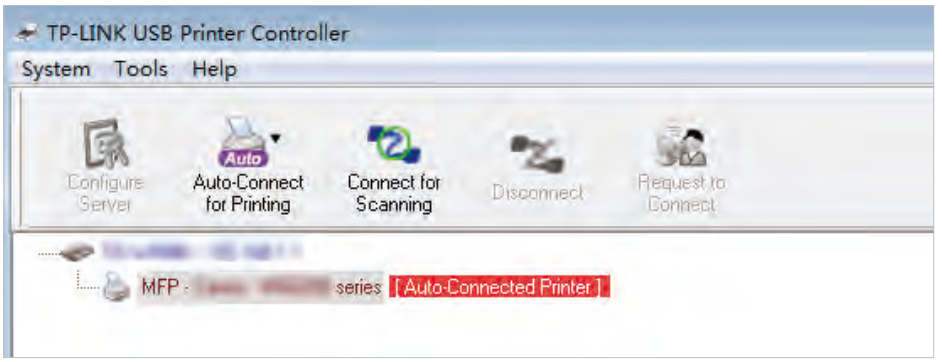


Windows

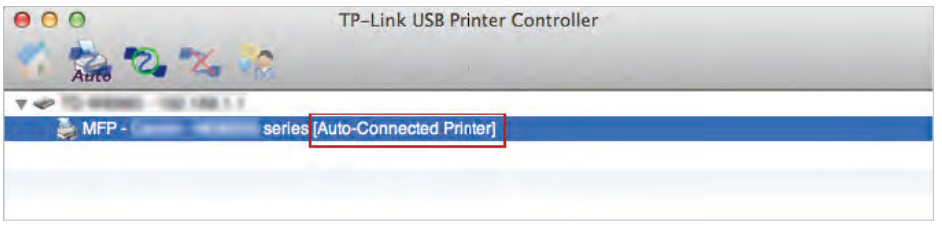


Mac

5) You will see the printer marked as Auto-Connect Printer. Now you can print with this printer.



Windows



Mac

Tips:

The Print Server also allows different clients to share the scan feature of MFPs (Multi-Function Printers). To scan with TP-LINK USB Printer Controller, right-click the printer and select Network Scanner. Then, a scanning window will pop up. Finish the scanning process by following the on-screen instructions.

6. 5. Offline Download

With Offline Download enabled, the router can download files without keeping your computer powered on all the time.

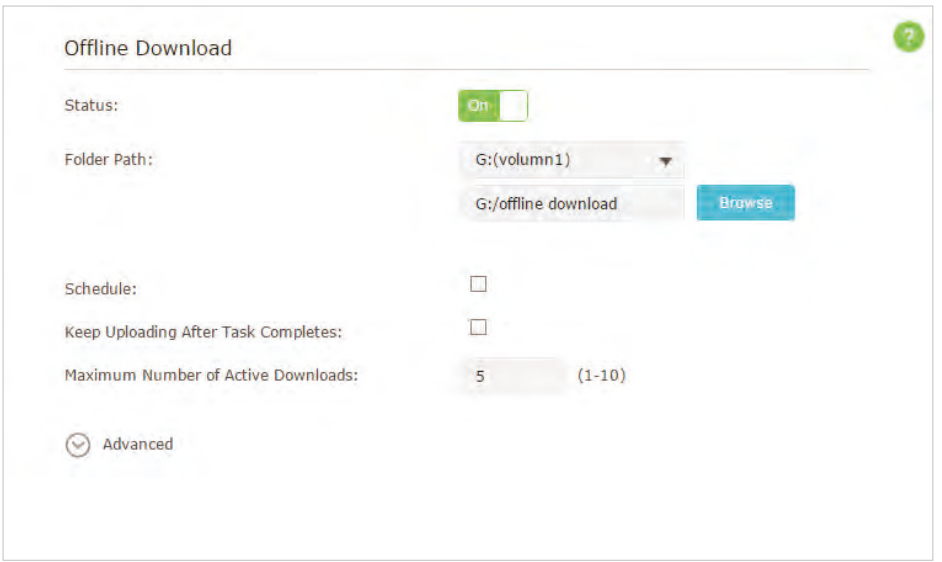
Follow the steps below to add offline download tasks:

1. Insert your USB storage device into the router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

   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 Settings > Device Settings and click Safely Remove.

2. Visit *http://tplinkwifi.net*, then log in with the username and password you set for the router.

3. Go to Advanced > USB Settings > Offline Download and toggle On to enable the Offline Download feature.



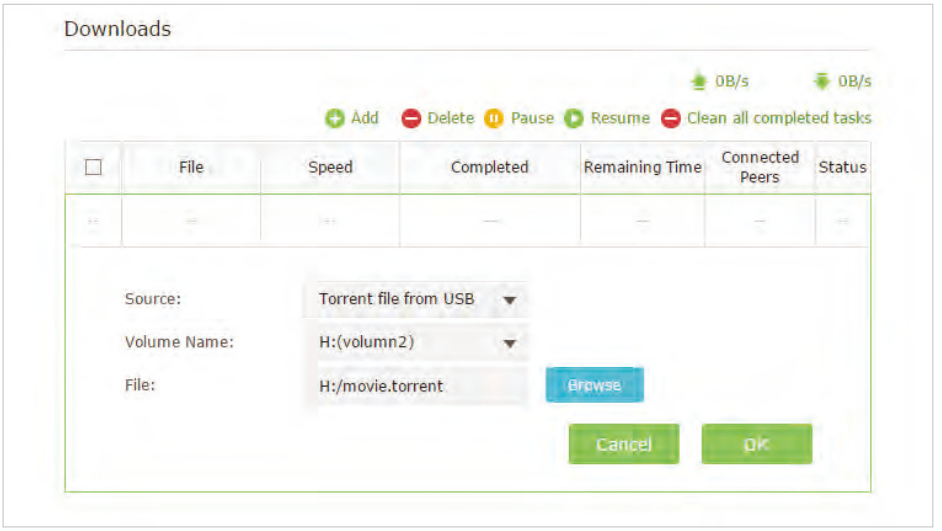
4. Select a directory path to store or cache your downloads.

   Note:

   Don't change the directory path or unmount the USB storage device when uploading or downloading files; otherwise some fatal errors may occur.

5. Customize the settings as needed. Click Save to make the settings effective after changing the settings.
   - Schedule: You can select the checkbox to enable the feature and click to specify the time period(s) to download or upload files.
   - Keep Uploading After Task Completes: You can select the checkbox to keep uploading data of the completed download(s) to others.
   - Maximum Number of Active Downloads: You can enter a value between 1 and 10 to set the maximum number of active downloads. The default value is 5.

6. Click Add, then choose the source of your download. If it is a torrent file, select its location; if it is a URL, enter it. Click OK.



7. If the source is a URL for aMule, specify the aMule server IP address and port number under Advanced > aMule Server.

Chapter 7

Parental Controls

This function allows you to block inappropriate, explicit and malicious websites, and controls access to specified websites at specified time.

I want to:

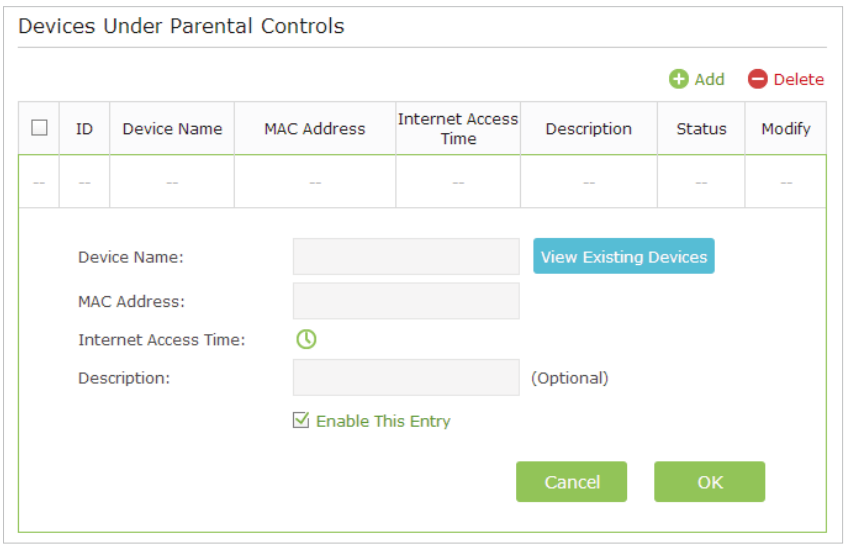
Control what types of websites my children or other home network users can visit and even the times of day they are allowed to access the Internet.

For example, I want to allow my children's devices (e.g. a computer or a tablet) to access only *www.tp-link.com* and *Wikipedia.org* from 18:00 (6PM) to 22:00 (10PM) at the weekend and not other times.

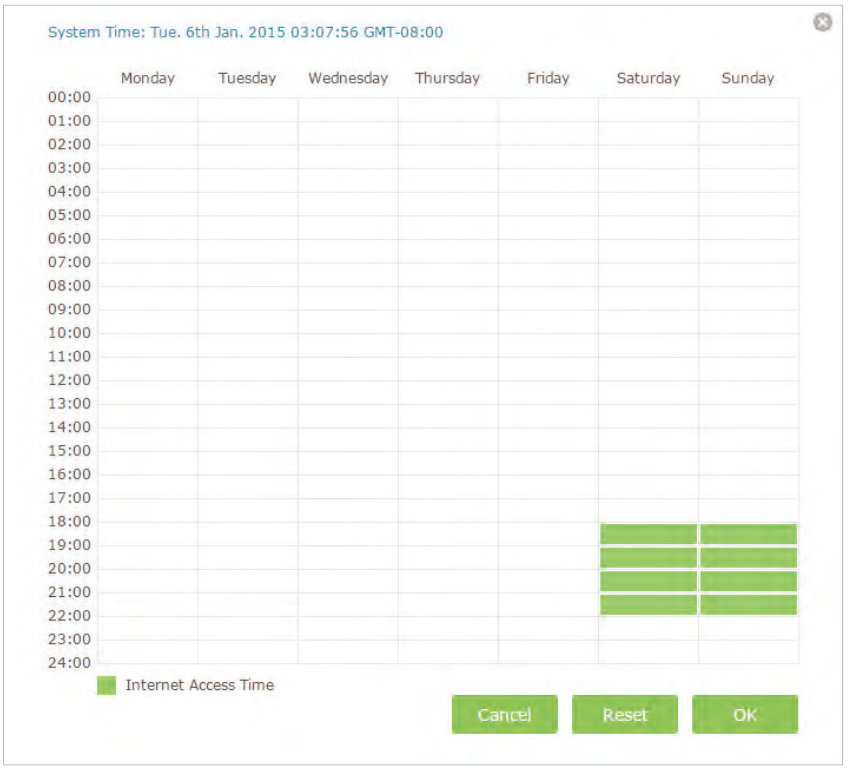
How can I do that?

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Parental Controls and enable Parental Controls.

3. Click Add. And then Click View Existing Devices, and select the access device. Or, input the Device Name and MAC Address manually.

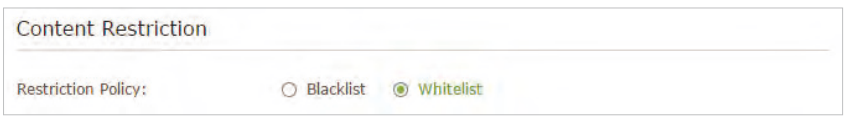


4. Click the icon to set the Internet Access Time. Drag the cursor over the appropriate cell(s) and click OK.



5. Enter a Description for the entry. Keep the Enable This Entry checkbox selected. Click OK.

6. Select Whitelist as the restriction policy.



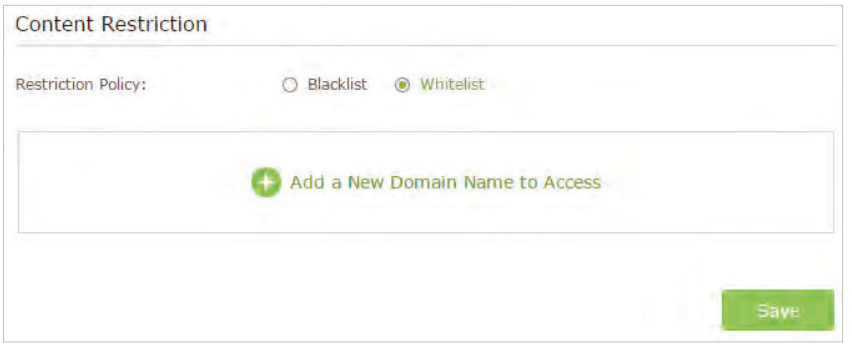
Tips:

1. In Blacklist mode, the controlled devices cannot access any websites containing the specified keywords during the Internet Access Time period.
2. In Whitelist mode, the controlled devices can only access websites containing the specified keywords during the Internet Access Time period.

7. Click Add a New Domain Name to Access. Enter a keyword or a website and click Save.

   You can add up to 32 keywords for either Blacklist or Whitelist. Below are some sample entries to allow access.

   - Enter a web address (e.g. wikipedia.org) or a web address keyword (e.g. wikipedia) to only allow or block access to the websites containing that keyword.
   - Specify the domain suffix (eg. .edu or .org) to allow access only to the websites with that suffix.
   - If you wish to block all Internet browsing access, do not add any keyword to the Whitelist.



Done!

Now you can control your children's Internet access according to your needs.

Chapter 8

QoS

This chapter introduces how to create a QoS (Quality of Service) rule to specify prioritization of traffic and minimize the impact caused when the connection is under heavy load.

This chapter contains the following sections:

- *Prioritize Internet Traffic with QoS*
- *Update the Database*

8. 1. Prioritize Internet Traffic with QoS

QoS (Quality of Service) is designed to ensure the efficient operation of the network when come across network overload or congestion.

I want to:

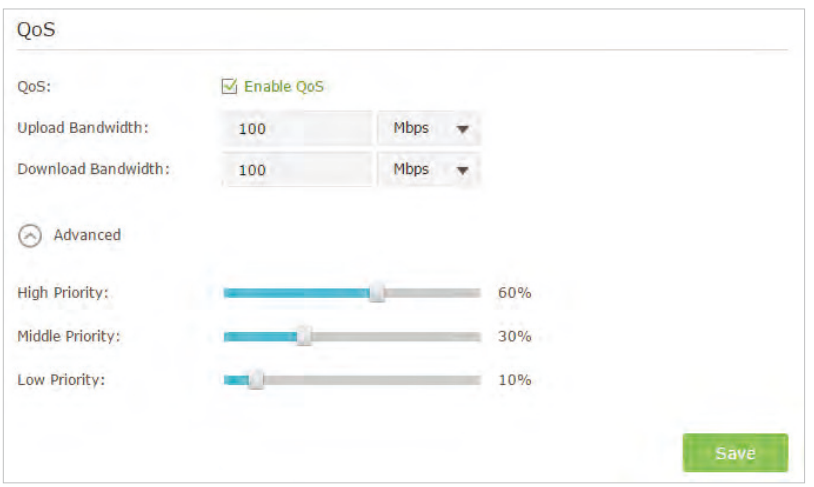
Specify priority levels for some devices or applications.

For example, I have several devices that are connected to my wireless network. I would like to:

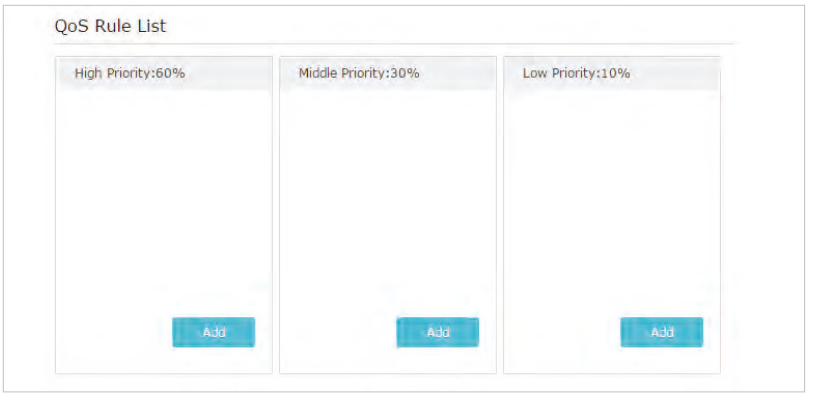
- Set my ftp server with faster surfing speed;
- Set my phone an intermediate speed on the Internet.

How can I do that?

1. Enable QoS and set bandwidth allocation.
   1) Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
   2) Go to Advanced > QoS > Settings.
   3) Select Enable QoS.
   4) Input the maximum upload and download bandwidth provided by your service provider. 1Mbps is equal to 1000Kbps.
   5) Click Advanced and drag the scroll bar to set the bandwidth priority percentage.
   Note:
   Add each priority up no more than 100%. High Priority is greater than Middle Priority, and Middle Priority is greater than Low Priority.
   6) Click Save.



2. Add QoS Rules.



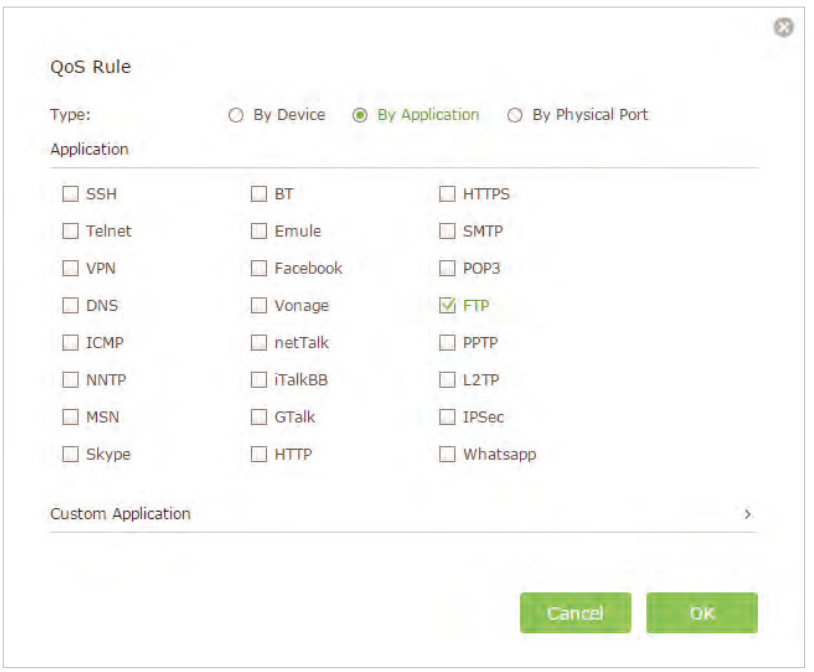
1) Set a High Priority rule for the ftp server.

a . Click Add in the High Priority section.

Tips:

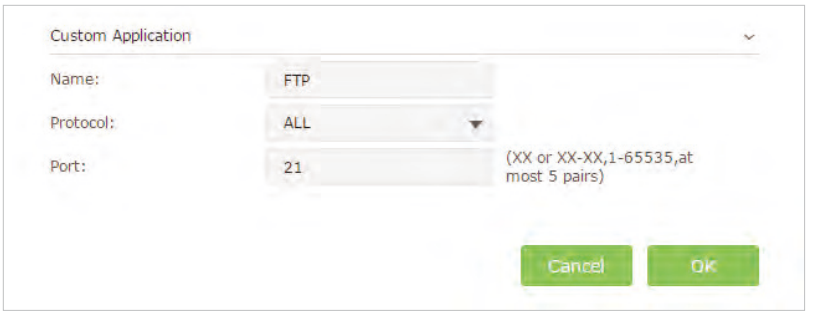
In the QoS rule field, displays three rule type include By Device, By Application and By Physical Port.

b . Select By Application and then select FTP in the list. Scroll down and click OK.



Tips:

If your application isn't listed on the screen, click Custom Application to add application manually.

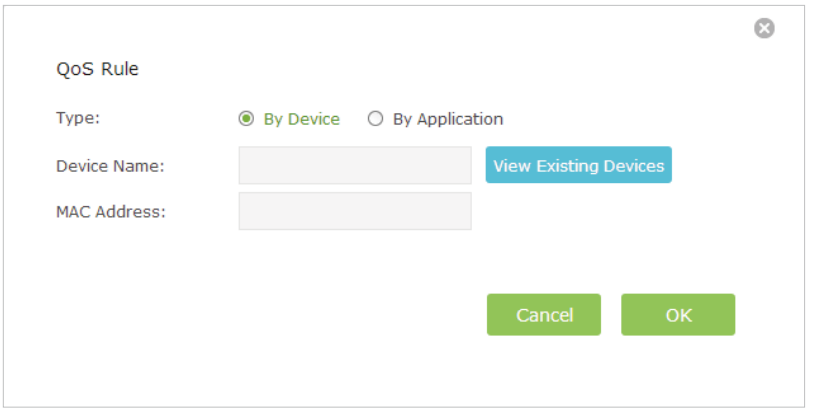


- Name: Enter a name for your applicaiton.
- Protocol: Select the protocol for your application, if your are not sure, select ALL.
- Port: Enter the destination port for your application, usually each application has a fixed port, please ensure you enter the correct the port. In this case, the destination port for ftp is 21.

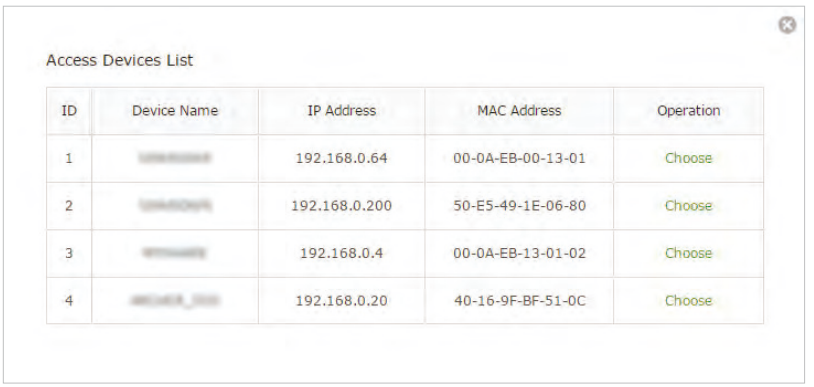
2) Set a Middle Priority rule for the phone.

a . Click Add in the Middle Priority section.

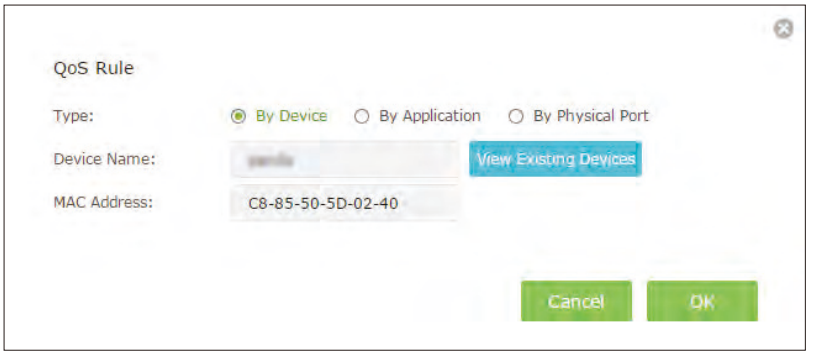
b . Select By Device and then click View Existing Devices.



c . Choose the respective device from the list.

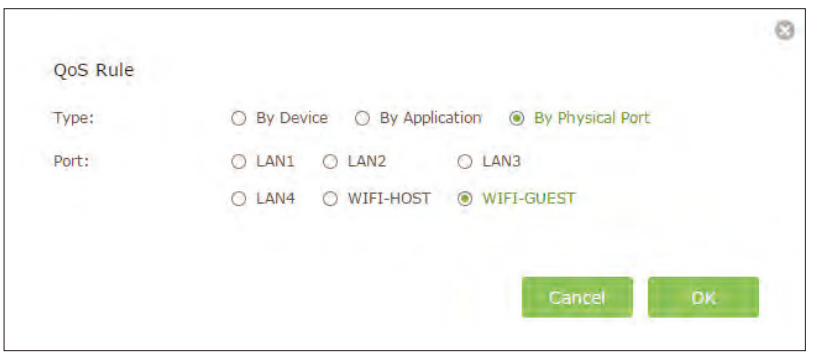


d . Click OK.

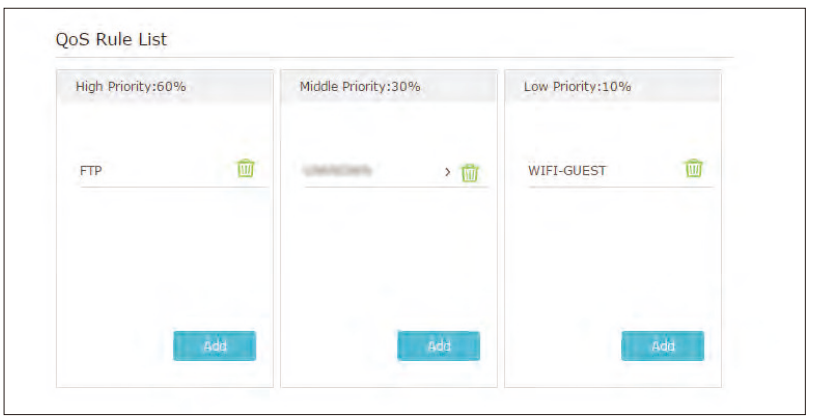


3) Set a Low Priority rule for the WIFI-GUEST.

a . Select By Physical Port and then select WIFI-HOST. Click OK.



4) The QoS rules list will display in the table.



Tips:

If you want to delete a QoS rule, click 🗑 to remove the responding rule from the list.

Done! Now QoS is implemented to Prioritize Internet Traffic.

8. 2. Update the Database

This function can help to add or update the applications of the router supports. If the applications you need are not listed in the Application list, you can try to download the

new version and upgrade. New database versions are posted at *www.tp-link.com* and can be downloaded for free.

1. Download the latest QoS database from our website (*www.tp-link.com*).
2. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
3. Go to Advanced > QoS > Database. Click Browse to select the database upgrade file, then click Upgrade. Wait until the upgrade is completed and do not operate during the process.

Chapter *9*

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 against DoS (Denial of Service) attacks from flooding your network with server requests using DoS Protection, 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.

This chapter contains the following sections:

- *Protect the Network from Cyber Attacks*
- *Access Control*
- *IP & MAC Binding*

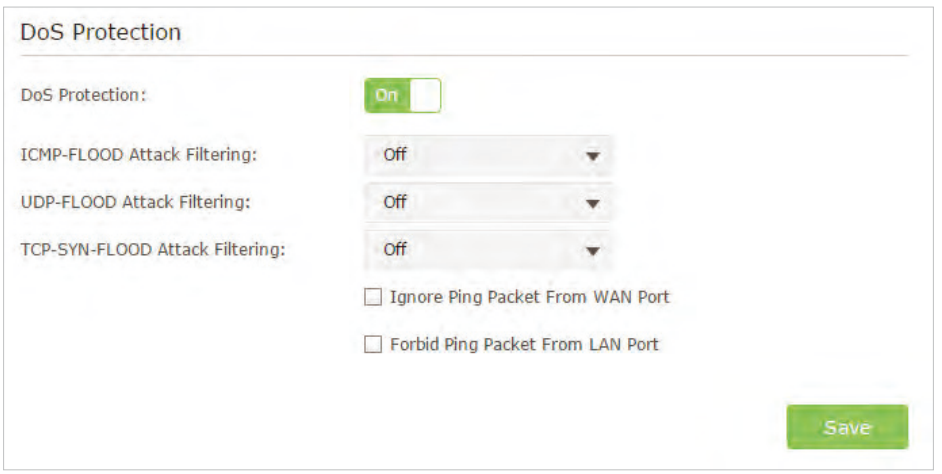
9. 1. Protect the Network from Cyber Attacks

The SPI (Stateful Packet Inspection) Firewall and DoS (Denial of Service) Protection protect the router from cyber attacks.

The SPI Firewall can prevent cyber attacks and validate the traffic that is passing through the router based on the protocol. This function is enabled by default, and it's recommended to keep the default setting.

DoS Protection can protect your home network against DoS attacks from flooding your network with server requests. Follow the steps below to configure DoS Protection.

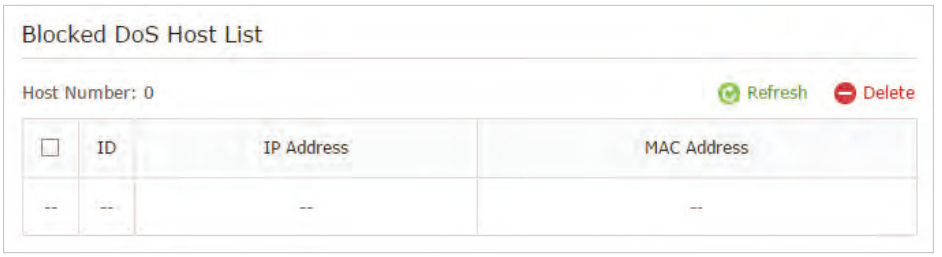
1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Security > Settings.



3. Enable DoS Protection.
4. Set the level (Off, Low, Middle or High) of protection for ICMP-FLOOD Attack Filtering, UDP-FlOOD Attack Filtering and TCP-SYN-FLOOD Attack Filtering.
   - ICMP-FLOOD Attack Filtering - Enable to prevent the Internet Control Message Protocol (ICMP) flood attack.
   - UDP-FlOOD Attack Filtering - Enable to prevent the User Datagram Protocol (UDP) flood attack.
   - TCP-SYN-FLOOD Attack Filtering - Enable to prevent the Transmission Control Protocol-Synchronize (TCP-SYN) flood attack.

Tips:

The level of protection is based on the number of traffic packets. The protection will be triggered immediately when the number of packets exceeds the preset threshold value (the value can be set on Advanced > System Tools > System Parameters > DoS Protection Level Settings), and the vicious host will be displayed in the Blocked DoS Host List.



5. If you want to ignore the ping packets from WAN/LAN port, select Ignore Ping Packet From WAN/LAN Port .
6. Click Save to make the settings effective.

9. 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 the username and password you set for the router.
2. Go to Advanced > Security > Access Control.
3. Enable Access Control.

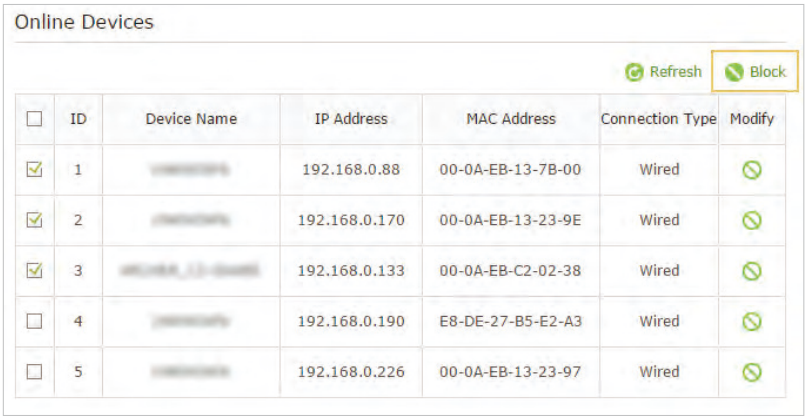
4. Select the access mode to either block (recommended) or allow the device(s) in the list.

   To block specific device(s)

   1) Select Blacklist and click Save.

   2) Select the device(s) to be blocked in the Devices Online table by ticking the box.

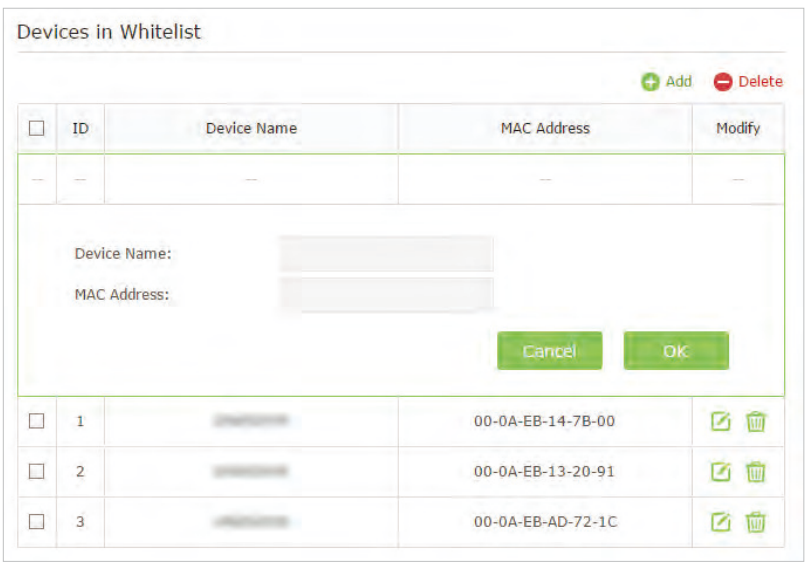
3) Click Block above the Devices Online table. The selected devices will be added to Devices in Blacklist automatically.



To allow specific device(s)

1) Select Whitelist and click Save.

2) Click Add in the Devices in Whitelist section. Enter the Device Name and MAC Address (You can copy and paste the information from the following list if the device is connected to your network).



3) Click OK.

Done!

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

9. 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?

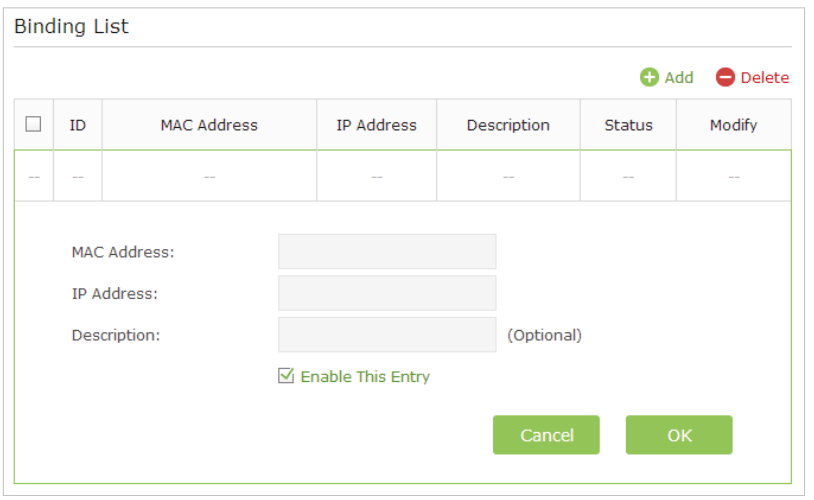
1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Security > IP & MAC Binding.
3. Enable ARP Binding.

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

   To bind the connected device(s): Click to add the corresponding device to the Binding List.

   To bind the unconnected device

   1) Click Add in Binding List section.



   2) Enter the MAC address and IP address that you want to bind.

   3) Tick the Enable This Entry check box and click OK.

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

Chapter *10*

NAT Forwarding

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

With forwarding feature the router can penetrate the isolation of NAT and allows the external hosts on the Internet to initiatively communicate with the devices in the local network, thus to realize some special functions.

TP-LINK router includes four forwarding rules. If two or more rules are set, the priority of implementation from high to low is Virtual Servers, Port Triggering, UPnP and DMZ.

This chapter contains the following sections:

- *Share Local Resources on the Internet by Virtual Servers*
- *Open Ports Dynamically by Port Triggering*
- *Make Applications Free from Port Restriction by DMZ*
- *Make Xbox Online Games Run Smoothly by UPnP*

10. 1. Share Local Resources on the Internet by Virtual Servers

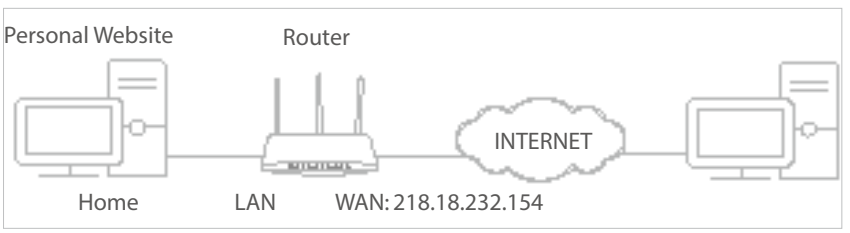
When you build up a server in the local network and want to share it on the Internet, Virtual Servers can realize the service and provide it to the Internet users. At the same time Virtual Servers can keep the local network safe as other services are still invisible from the Internet.

Virtual Servers can be used for setting up public services in your local network, such as HTTP, FTP, DNS, POP3/SMTP and Telnet. Different service uses different service port. 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:

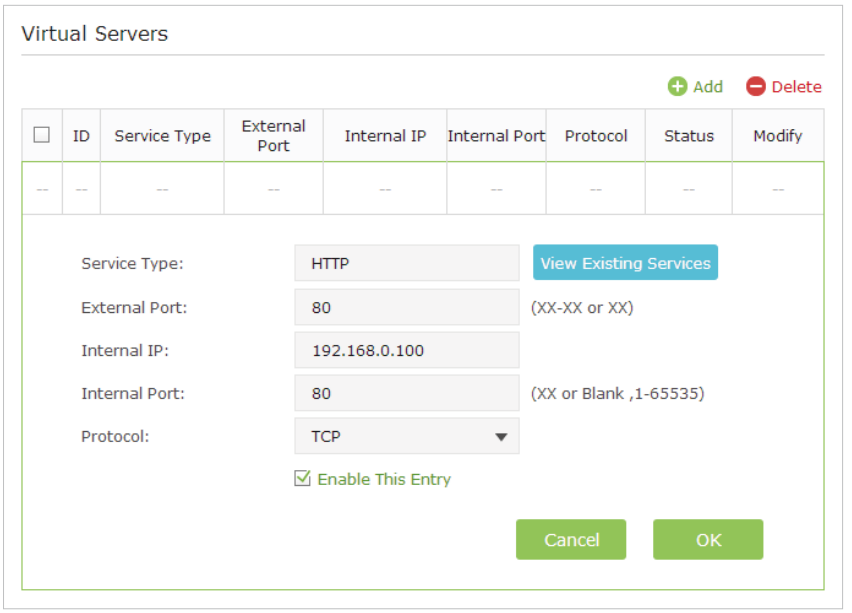
Share my personal website I've built in local network with my friends through the Internet.

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 the username and password you set for the router.
3. Go to Advanced > NAT Forwarding > Virtual Servers.
4. Click Add. Click View Existing Services and select HTTP. The External Port, Internal Port and Protocol will be automatically filled with contents. Enter the PC's IP address 192.168.0.100 into the Internal IP field.
5. Click OK.



Tips:

1. 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.
2. If the service you want to use is not in the Service Type, you can enter the corresponding parameters manually. You should verify the port number that the service needs.
3. You can add multiple virtual server 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:

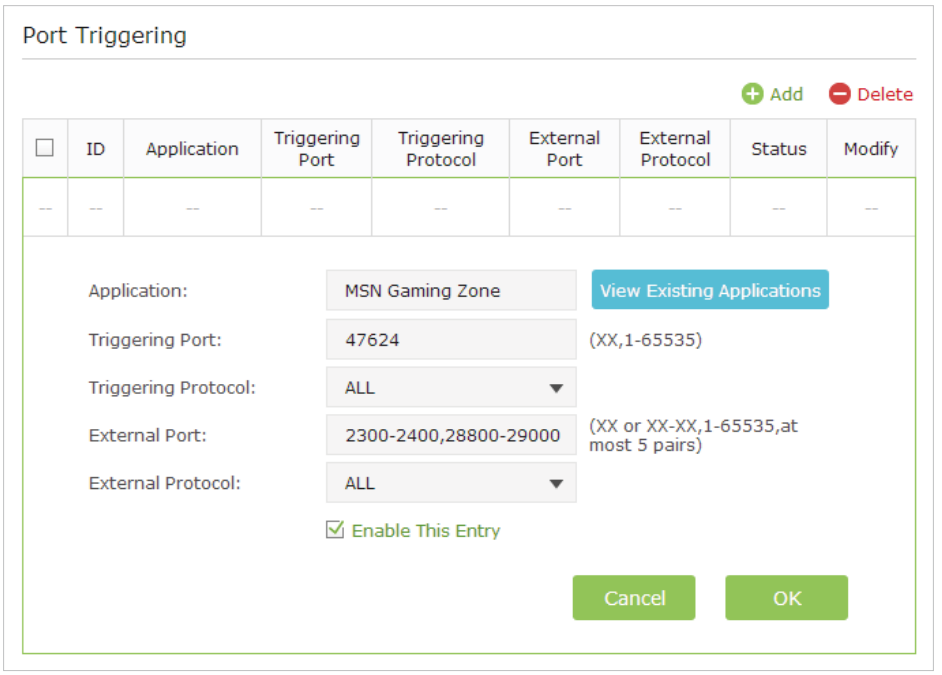
1. WAN IP should be a public IP address. For the WAN IP is assigned dynamically by ISP, it is recommended to apply and register a domain name for the WAN refer to *Set Up a Dynamic DNS Service Account*. Then users on the Internet can use http:// domain name to visit the website.
2. If you have changed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

10. 2. Open Ports Dynamically by Port Triggering

Port Triggering can specify a triggering port and its corresponding external ports. When a host in 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 and video players, common applications include 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 the username and password you set for the router.
2. Go to Advanced > NAT Forwarding > Port Triggering and click Add.
3. Click View Existing Applications, and select the desired application. The External Port, Internal Port and Protocol will be automatically filled with contents. The following picture takes application MSN Gaming Zone as an example.
4. Click OK.



Tips:

1. You can add multiple port triggering rules according to your network need.
2. The triggering ports can not be overlapped.
3. 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.

10. 3. Make Applications Free from Port Restriction by DMZ

When a PC is set to be a DMZ (Demilitarized Zone) host in 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 hazard. If DMZ is not in use, please disable it in time.

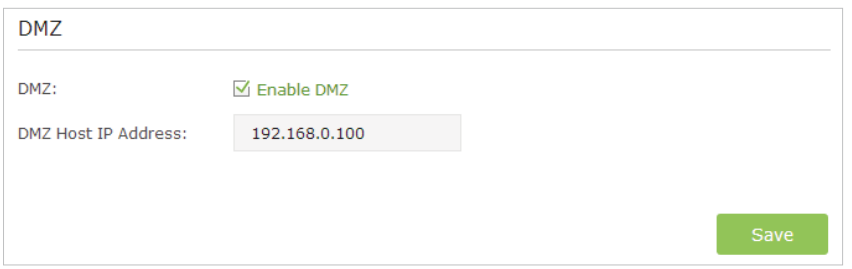
I want to:

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 login normally but cannot join a team with other players. To solve this problem, set your PC as a DMZ with all ports opened.

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 the username and password you set for the router.
3. Go to Advanced > NAT Forwarding > DMZ and select Enable DMZ.
4. Enter the IP address 192.168.0.100 in the DMZ Host IP Address filed.



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.

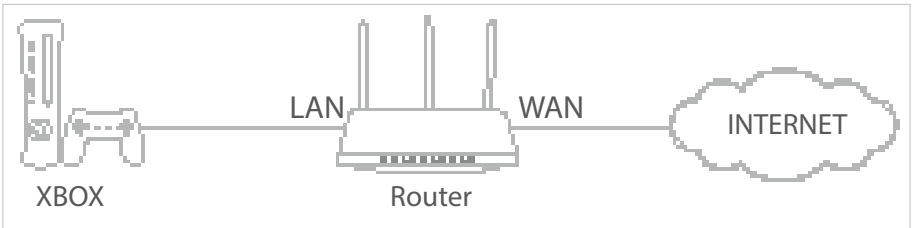
10. 4. Make Xbox Online Games Run Smoothly by UPnP

UPnP (Universal Plug and Play) protocol allows the 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 both sides of NAT device can freely communicate with each other 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:

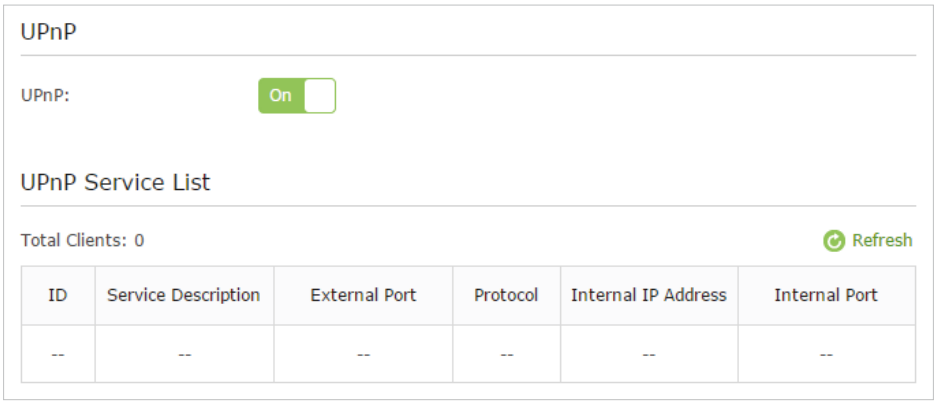
1. UPnP is enabled by default in this router.
2. Only the application supporting UPnP protocol can use this feature.
3. UPnP feature needs the support of operating system (e.g. Windows Vista/ Windows 7/ Windows 8, etc. Some of operating system need to install the UPnP components).

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 the username and password you set for the router.
2. Go to Advanced > NAT Forwarding > UPnP and toggle on or off according to your needs.



Chapter *11*

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.

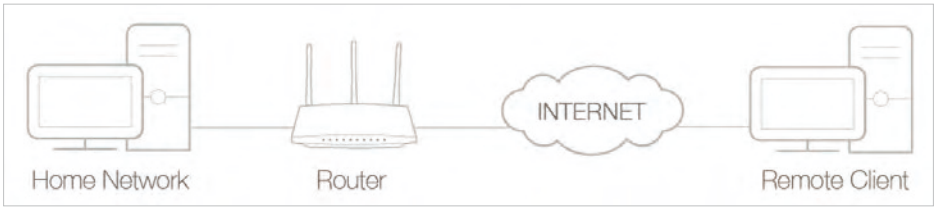
PPTP VPN is more easily used and its speed is faster, it's compatible with most operating systems and also supports mobile devices. Its security is poor and your packets may be cracked easily, and PPTP VPN connection may be prevented by some ISP.

This chapter contains the following sections, please choose the appropriate VPN server connection type according to your needs.

- *Use OpenVPN to Access Your Home Network*
- *Use PPTP VPN to Access Your Home Network*

11. 1. Use OpenVPN to Access Your Home Network

In the OpenVPN connection, the home network can act as a server, and the remote client 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 client. Please follow the steps below to set up an OpenVPN connection.



Step1. Set up OpenVPN Server on Your Router

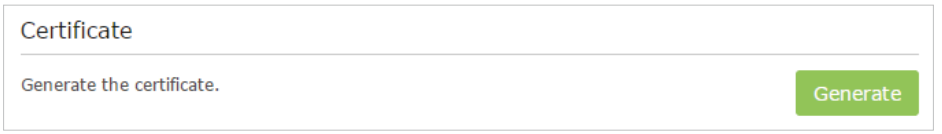
1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > VPN Server > OpenVPN, and select Enable VPN Server.

Note:

1. 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.
2. The first time you configure the OpenVPN Server, you must synchronize your System Time with Internet, and then Generate a certificate before you enable the VPN Server.

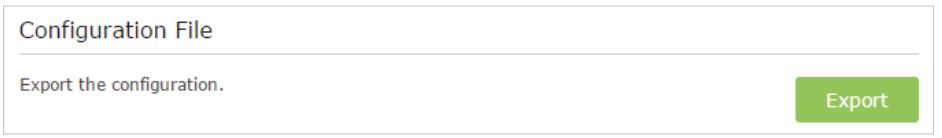
3. Select the Servive Type (communication protocol) for OpenVPN Server: UDP, TCP.
4. Enter a VPN Service Port to which a VPN client connects, and the port number should be between 1024 and 65535.
5. In VPN Subnet/Netmask field, enter the range of IP addresses that can be leased to the client by the OpenVPN server.
6. Select your Client Access type: select Home Network Only if you only want the remote client to access your home network, select Internet and Home Network if the remote client also want to access Internet through VPN Server.

7. Click Save.
8. Click Generate to generate a new certificate.



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. Remote client will use this configuration file to access your router.



Step 2. Configure OpenVPN Connection on Your Remote Client

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

Note:
You need to install the OpenVPN client utility on each client that you plan to use for VPN connections to your router. Mobile devices should download third-party app from Google Play or APP Store.

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

11. 2. Use PPTP VPN to Access Your Home Network

PPTP VPN Server is used to create a VPN connection for remote client. To use the VPN feature, you should enable PPTP VPN Server on your router, and configure the PPTP connection on the remote client. Please follow the steps below to set up a PPTP VPN connection.

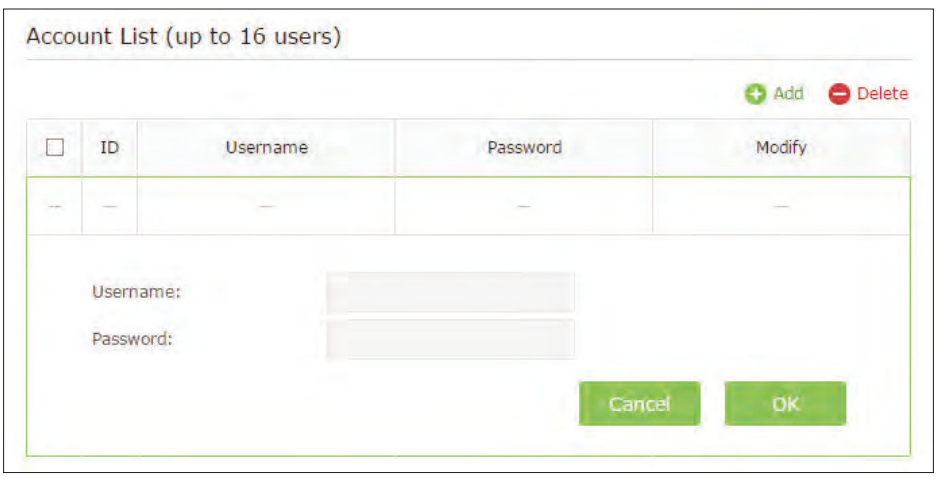
Step 1. Set up PPTP VPN Server on Your Router

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > VPN Server > PPTP VPN, and select Enable VPN Server.

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 filed, enter the range of IP addresses (up to 10 clients) that can be leased to the client by the PPTP VPN server.
4. Click Advanced to set the PPTP connection permission according to your needs.
   - Select Allow Samba (Network Place) access to allow your VPN client to access your local Samba server.
   - Select Allow NetBIOS passthrough to allow your VPN client 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 client, you can create up to 16 accounts.



1) Click Add.

2) Enter the Username and Password to authenticate clients to the PPTP VPN Server.

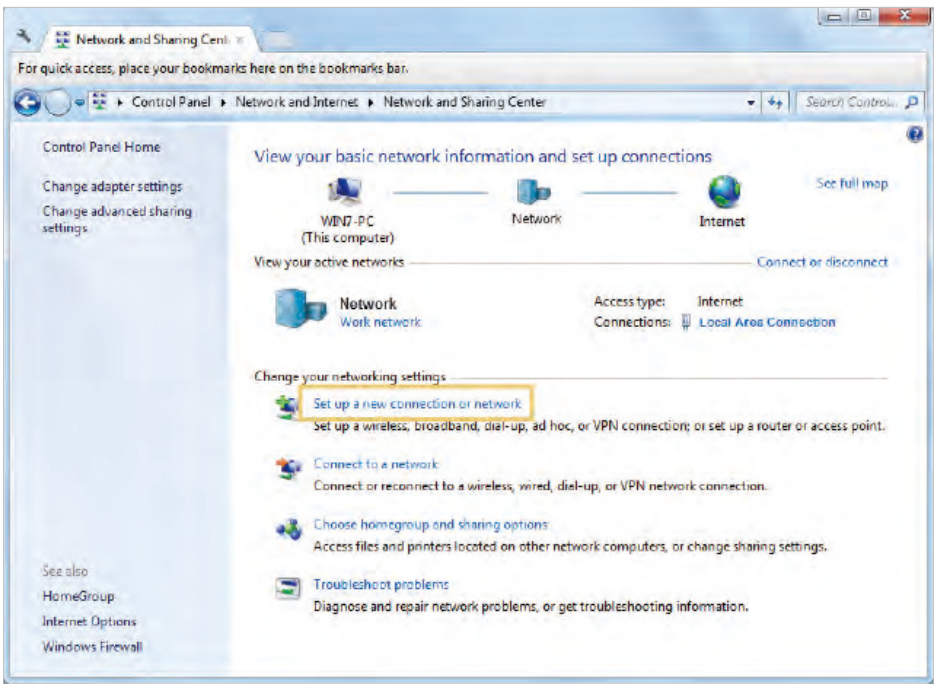
3) Click OK.

Step 2. Configure PPTP VPN Connection on Your Remote Client

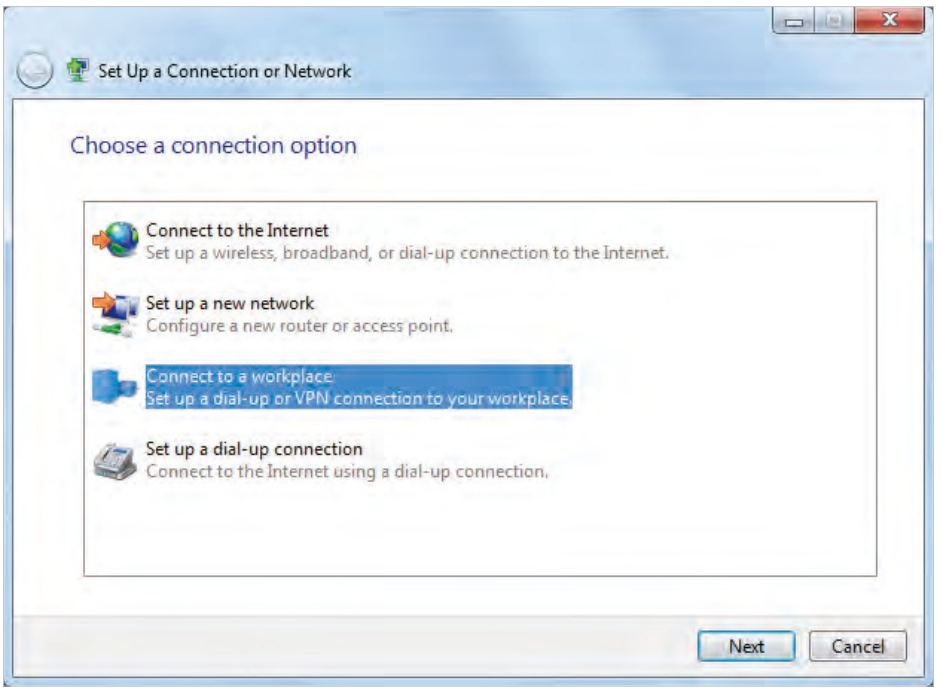
Remote client can use Windows built-in PPTP software or third-party PPTP software to connect to PPTP Server. Here we use Windows built-in PPTP software as an example.

1. Go to Start > Control Panel > Network and Internet > Network and Sharing Center.

2. Select Set up a new connection or network.

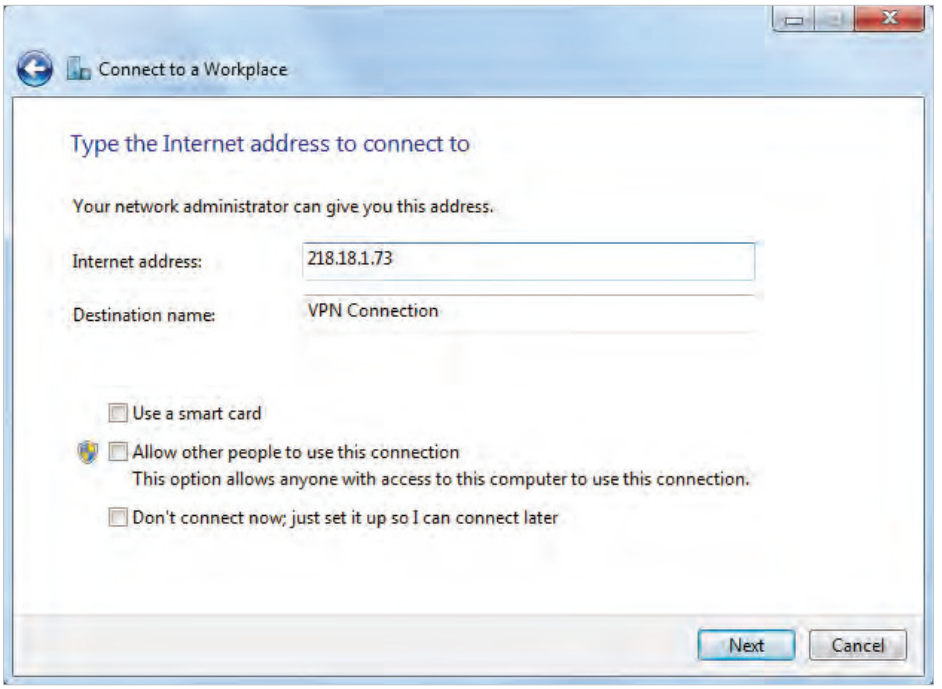


3. Select Connect to a workplace and click Next.

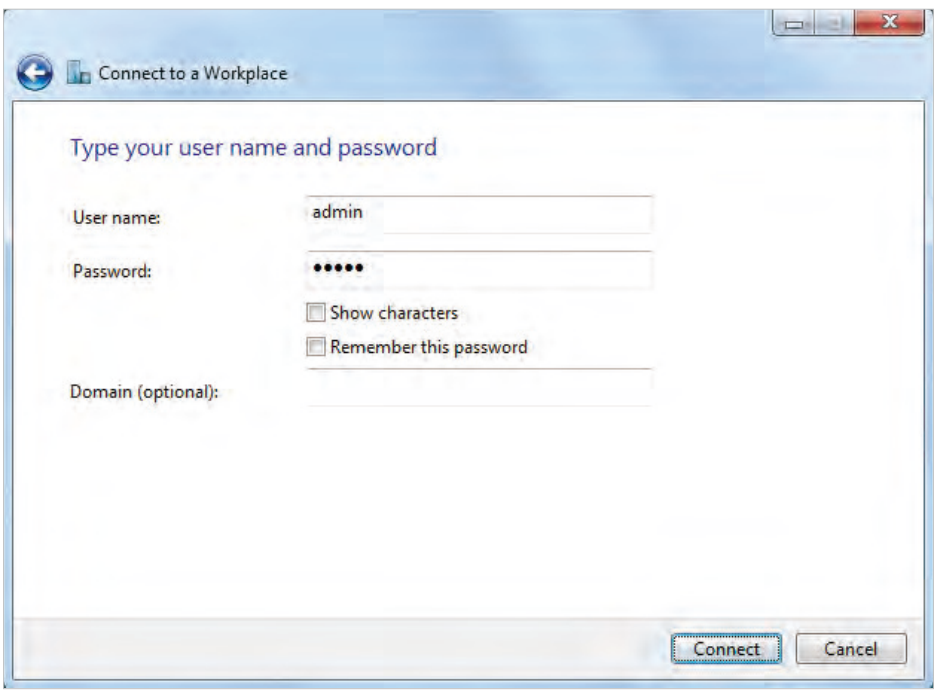


4. Select Use my Internet connection (VPN).

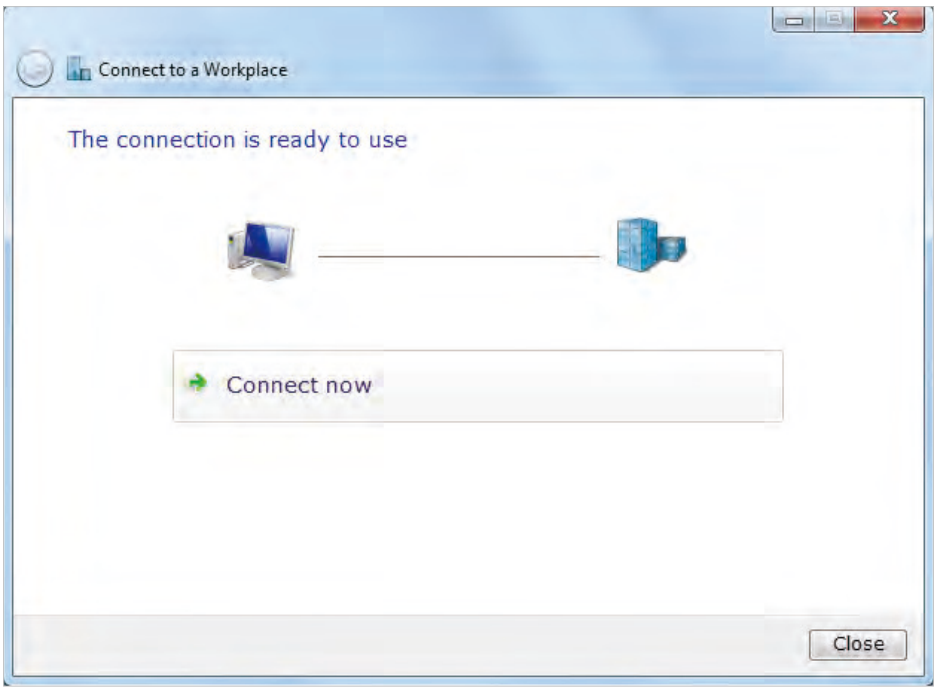
5. Enter the WAN IP address of the router (for example: 218.18.1.73) in the Internet address field. Click Next.



6. Enter the User name and Password, it's the username and password you have set on your router, and click Connect.



7. The PPTP VPN connection is created and ready to use.



Chapter *12*

Customize Your Network Settings

This chapter guides you on how to configure advanced networking features that are available for this router.

This chapter contains the following sections:

- *Change the LAN Settings*
- *Configure to Support IPTV Service*
- *Specify DHCP Server Settings*
- *Set Up a Dynamic DNS Service Account*
- *Create Static Routes*
- *Specify Wireless Settings*
- *Use WPS for Wireless Connection*

12. 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-based management page. The LAN IP address together with the Subnet Mask also defines the subnet that the connected devices are on. If the IP address conflicts with another device on your local network or your network requires a specific IP subnet, you can change it.

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

4. Click Save.

Note:

If you have set the Virtual Server, 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 them.

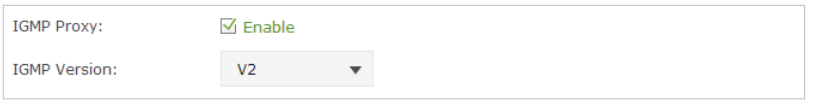
12. 2. Configure to Support IPTV Service

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 *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Network > IPTV.
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 checkbox and select the IGMP Version, either V2 or V3, according to the information provided by your ISP.



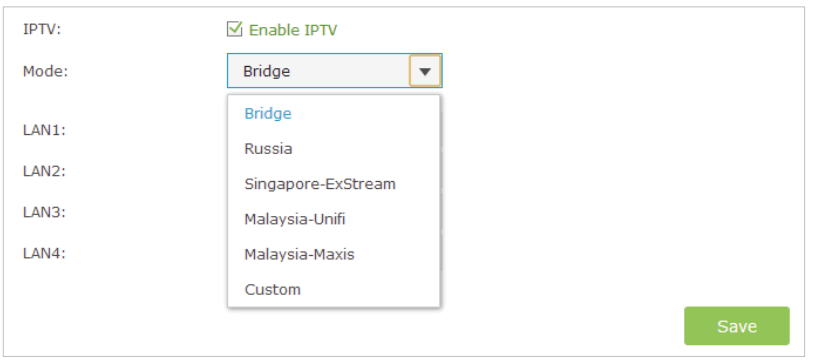
2) Click Save.

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

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

1) Tick the Enable IPTV check box.

2) Select the appropriate Mode according to your ISP. Select Bridge if your ISP is not listed and no other parameters are required, and then skip to Step 4. Select Custom if your ISP is not listed but provides necessary parameters.



3) After you have selected a mode, the necessary parameters are predetermined. You can perform other configuration, e.g. enter the IPTV Multicast VLAN ID and select the IPTV Multicast VLAN Priority in Russia mode according to your ISP.

4) For Russia, Singapore-ExStream, Malaysia-Unifi and Malaysia-Maxis mode, connect the set-top box to the predetermined LAN port. For Bridge and Custom mode, select the LAN type and connect the set-top box to the corresponding port.

5) Click Save.

Done!

Your IPTV setup is done now! You may need other configurations on your set-top box before enjoying your TV.

Tips

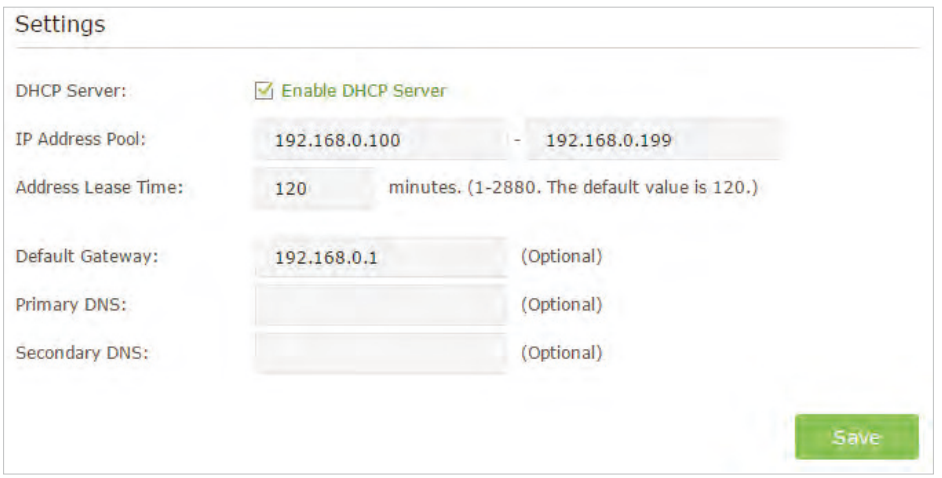
Qos and IPTV cannot be enabled at the same time.

12. 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 *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Network > DHCP Server.

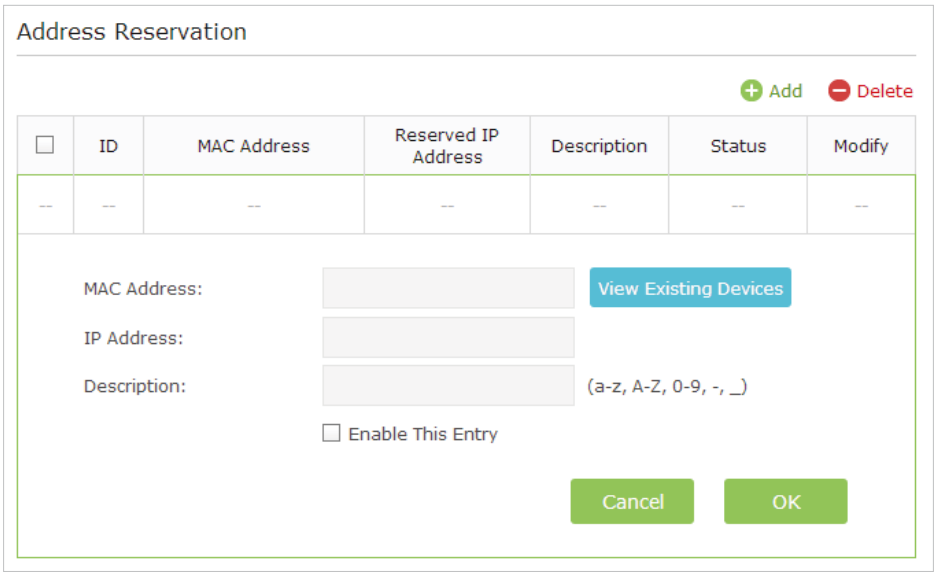
➢ **To specify the IP address that the router assigns:**



1. Make sure that the Enable DHCP Server checkbox is selected.
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 and is the same as the LAN IP address of the router.
4. Click Save to make the settings effective.

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

1. Click the Add button in Address Reservation section.



2. Click View Exsiting Devices or enter the MAC address of the client device.
3. Enter the IP address to set to the client device.
4. Enter the Description for the rule.
5. Tick the Enable This Entry checkbox and click OK.

12. 4. Set Up a Dynamic DNS Service Account

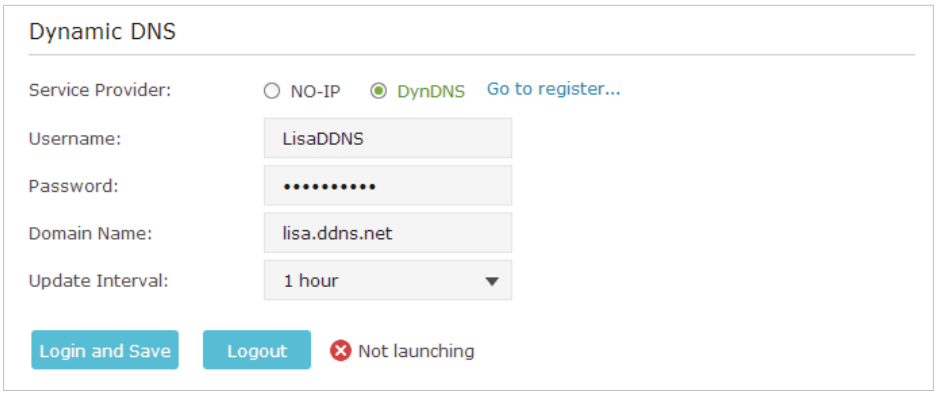
Most ISPs (Internet Service Providers) assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change any time and you don't know when it changes. In this case, you might need the DDNS (Dynamic Domain Name Server) feature on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

Note:

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

To set up DDNS, please follow the instructions below:

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Network > Dynamic DNS.
3. Select the DDNS Service Provider (NO-IP or DynDNS). If you don't have a DDNS account, select a service provider and click Go to register.



4. Enter the username, password and domain name of the account (such as lisadns.ddns.net).
5. Click Login and Save.

Tips:

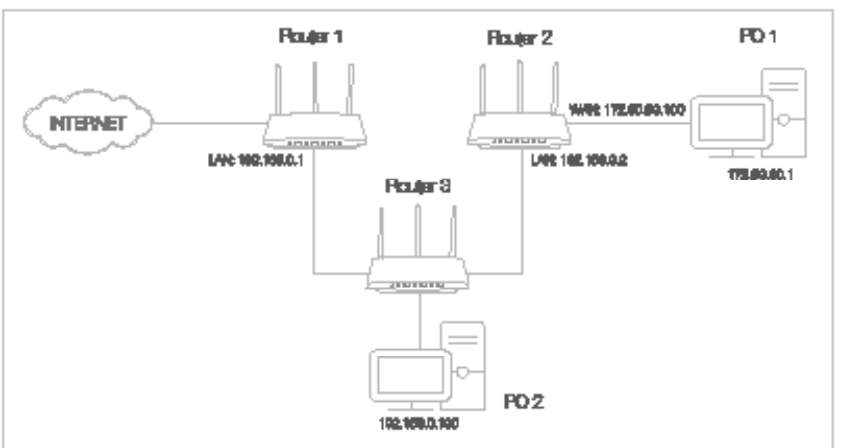
If you want to use a new DDNS account, please Logout first, then login with the new account.

12. 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.

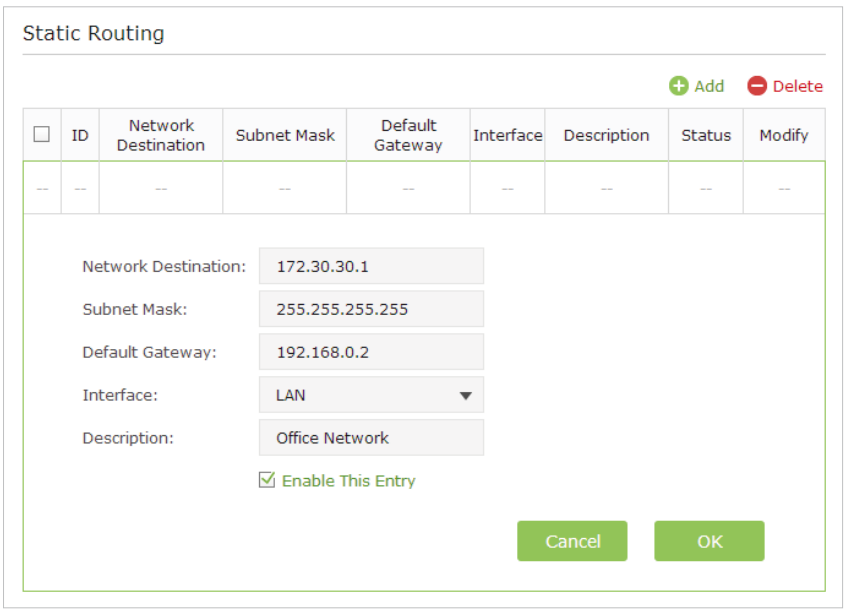
I want to: Visit multiple networks and multiple servers at the same time.

For example, in a small office, my PC can surf the Internet, but I also want to visit my company's network. Now I have a switch and another router. I connect the devices as shown in the following figure so that the physical connection between my PC and my company's server is achieved. 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 router's LAN IP addresses to two different IP addresses on the same subnet. Disable Router 2's DHCP function.
2. Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
3. Go to Network > Advanced Routing.
4. Click Add and finish the settings according to the following explanations:



Network Destination: The destination IP address that you want to assign to a static route. This IP address cannot be on the same subnet with the WAN IP or LAN IP of the router. In the example, the IP address of the company network is the destination IP address, so here enters 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 enters 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 the data. In the example, the data packets will be sent to the LAN port of Router 2 and then to the Server, so the default gateway should be 192.168.0.2.

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

Description: Enter a description for this static routing entry.

5. Click OK to save the settings.
6. Check the System Routing Table below. If you can find the entry you've set in the System Routing Table, the static routing is set successfully.

System Routing Table

Active Routes Number: 3 Refresh

ID	Network Destination	Subnet Mask	Gateway	Interface
1	192.168.0.2	255.255.255.255	0.0.0.0	lan
2	172.30.30.1	255.255.255.255	192.168.0.2	lan
3	192.168.0.0	255.255.255.0	0.0.0.0	lan

Done!

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

12. 6. Specify Wireless Settings

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

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

➢ **To enable or disable the wireless function of 2.4GHz, 5GHz or 60GHz:**

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

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

1. Go to Basic > Wireless.
2. Create a new SSID in Network Name (SSID) and customize the password for the network in Password. The default SSID is TP-LINK_XXXX for 2.4GHz, TP-LINK_XXXX_5G for 5GHz, TP-LINK_XXXX_60G for 60GHz, and the value is case-sensitive.

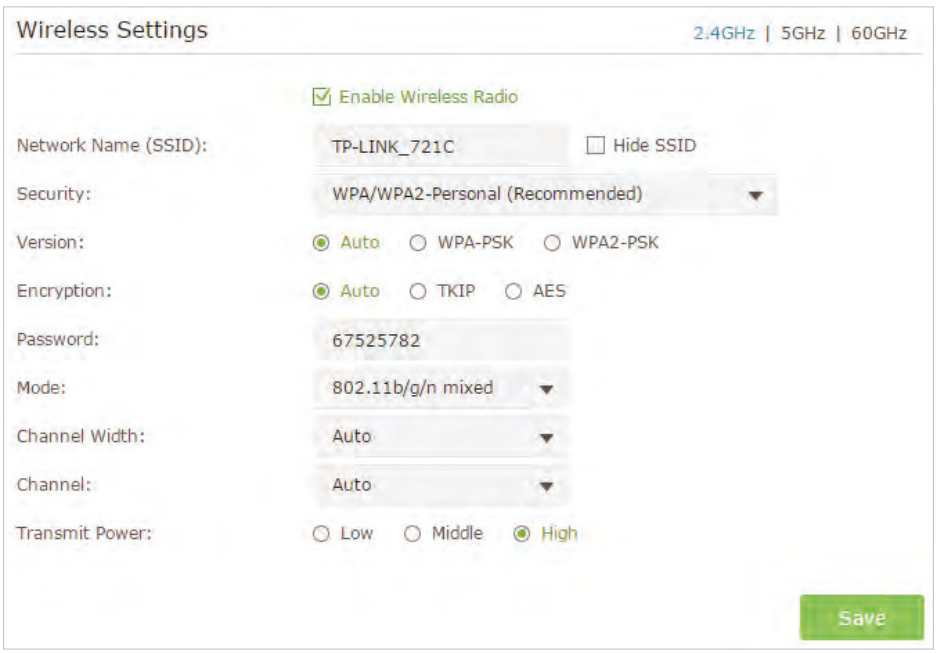
Note:
If you use a wireless device to change the wireless settings, you will be disconnected when the settings are effective. Please write down the new SSID and password for future use.

➢ To hide SSID :

1. Go to Basic > Wireless.
2. Select Hide SSID, and your SSID will not be broadcast. Your SSID won't display when you scan for local wireless network 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 the wireless network 2.4GHz, 5GHz or 60GHz.
3. Select an option from the Security drop down list. The router provides several security options. We recommend you don't change the default settings unless necessary. If you select other options, configure the related parameters according to the help page.

In addition

- Mode - Select a transmission mode according to your wireless client devices. 802.11b/g/n mixed, 802.11g/n mixed or 802.11n only for 2.4GHz; and 802.11a/n/ac mixed, 802.11n/ac mixed or 802.11ac only for 5GHz. It is recommended to just leave it as default.
- Channel Width - Select a channel width (bandwidth) for 2.4GHz and 5GHz network.

- Channel - 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.
- Transmit Power - Select either High, Middle or Low to specify the data transmit power for 2.4GHz and 5GHz network. The default and recommended setting is High.

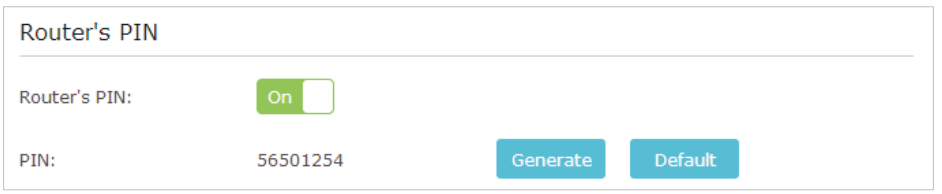
12. 7. Use WPS for Wireless Connection

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

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

12. 7. 1. Set the Router's PIN

Router's PIN is enabled by default to allow wireless devices to connect to the router using the PIN. You can use the default one or generate a new one.

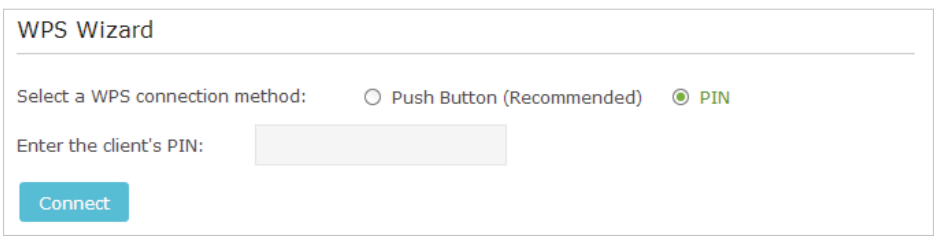


Note:

1. If you want to enable/disable the WPS feature, go to System Tools > System Parameters > WPS, select or clear the Enable WPS check box.
2. 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 labeled on the bottom of the router.

12. 7. 2. Use the WPS Wizard for Wi-Fi Connections

1. Select a setup method:
   - **Push Button(Recommended)**: Click the Connect button on the screen. Within two minutes, push the WPS button on the client device.
   - **PIN**: Enter the client's PIN, and click Connect.



2. Success will appear on the above screen and the WPS LED on the router will keep on for five minutes if the client has been successfully added to the network.

Chapter *13*

Manage the Router

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

This chapter includes the following sections:

- *Set Up System Time*
- *Test the Network Connectivity*
- *Upgrade the Firmware*
- *Backup and Restore Configuration Settings*
- *Change the Administrator Account*
- *Password Recovery*
- *Local Management*
- *Remote Management*
- *System Log*
- *Monitor the Internet Traffic Statistics*
- *Control LEDs*

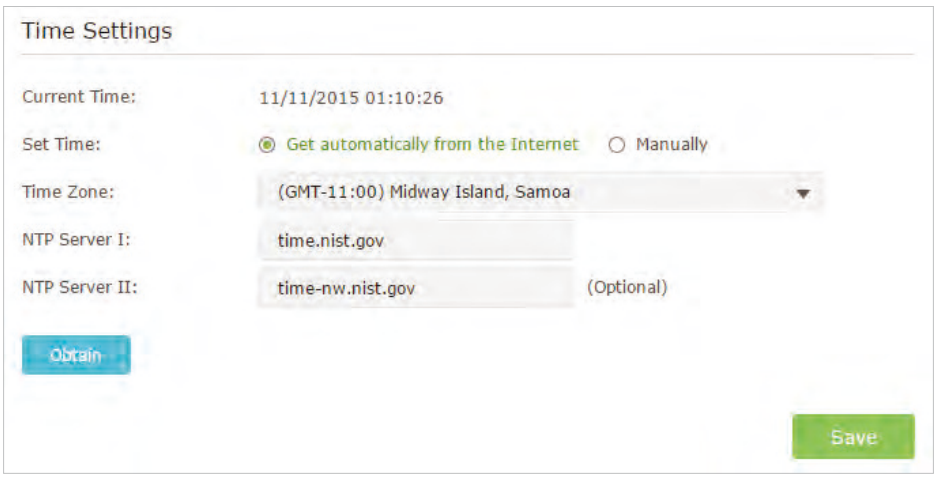
13. 1. Set Up System Time

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 you prefer to obtain the system time.

Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router. Go to Advanced > System Tools > Time Settings.

➢ **To get time from the Internet:**

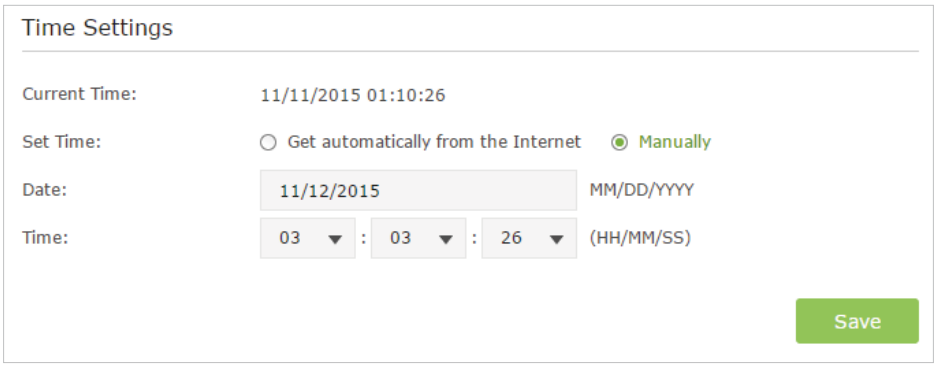
1. In the Set Time field, select Get automatically from the Internet.



2. Select your local Time Zone from the drop-down list.
3. In the NTP Server I fileld, enter the IP address or domain name of your desired NTP Server.
4. In the NTP Server II fileld, enter the IP address or domain name of the second NTP Server. (Optional)
5. Click Obtion to get the current Interent time.
6. Click Save to make the settings effective.

➢ **To manually set the date and time:**

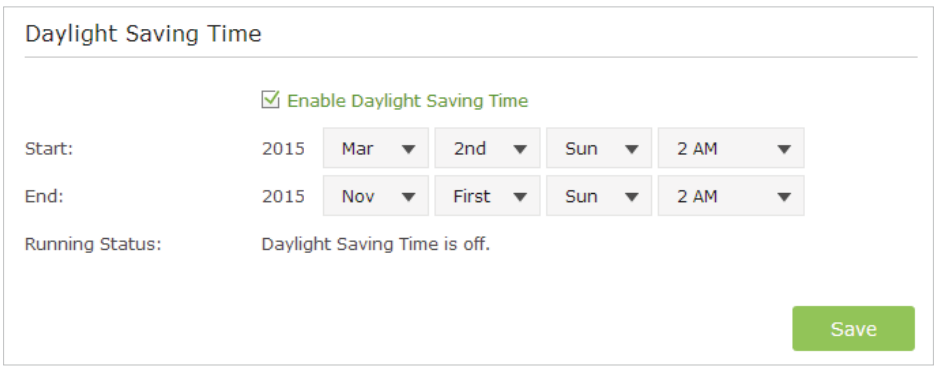
1. In the Set Time field, select Manually.



2. Set the current Date (In MM/DD/YYYY format).
3. Set the current Time (In HH/MM/SS format).
4. Click Save to make the settings effective.

➢ **To set up Daylight Saving Time:**

1. Select Enable Daylight Saving Time.

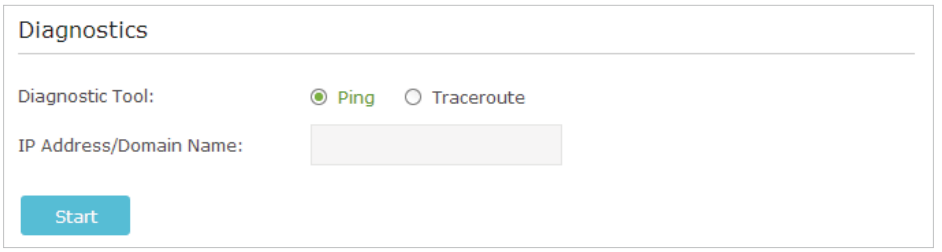


2. Select the correct Start date and time when daylight saving time starts at your local time zone.
3. Select the correct End date and time when daylight saving time ends at your local time zone.
4. Click Save to make the settings effective.

13. 2. Test the Network Connectivity

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

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Diagnostics.



3. Enter the information with the help of page tips:

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.

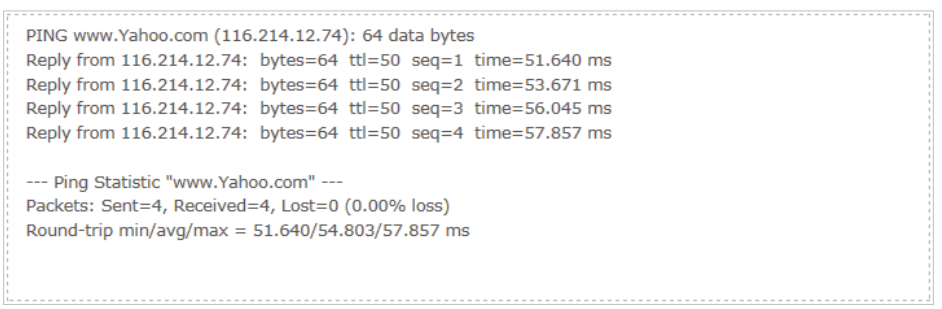
2) Enter the IP Address or Domain Name of the tested host.

4. Click Start to begin the diagnostics.

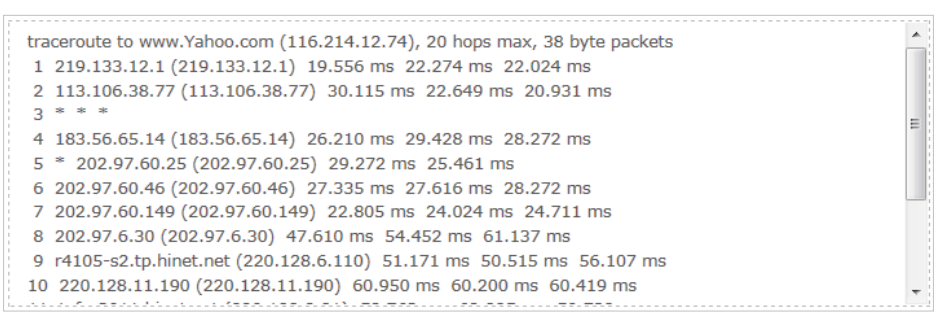
Tips:

Click Advanced, you can modify the ping count, ping packet size or the Traceroute Max TTL. It's recommended to keep the default value.

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



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



13. 3. Upgrade the Firmware

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

We will inform you throught the web management page if there's any update firmware available for your router. Also, the latest firmware will be released at TP-LINK official website, you can download it from the Support page of our website *www.tp-link.com* for free.

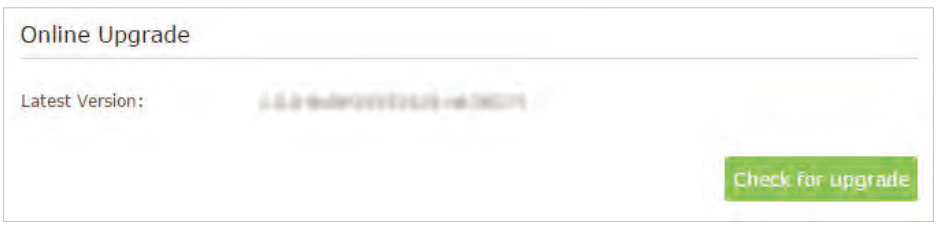
Note:

1. Make sure that you have a stable connection between the router and your computer. It is NOT recommended to upgrade the firmware wirelessly.
2. Make sure you remove all attached USB storage devices from the router before the firmware upgrade to prevent data loss.
3. Backup your router configuration before firmware upgrade.
4. Do NOT turn off the router during the firmware upgrade.

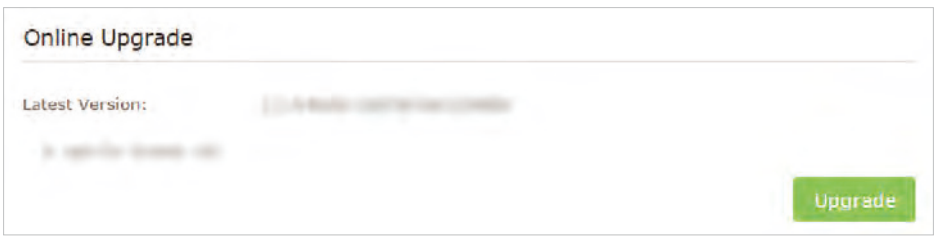
13. 3. 1. Online Upgrade

1. Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
2. When the latest firmware is available for your router, the update icon will display in the top-right corner of the page. Click the icon to the Firmware Upgrade page.

   Alternatively, you can go to Advanced > System Tools > Firmware Upgrade, and click Check for upgrade to see whether the latest firmware is released.



3. Focus on the Online Upgrade section, and click Upgrade.

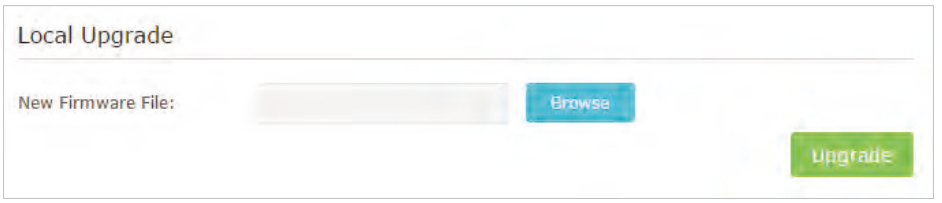


4. Wait a few moments to complete the upgrade and reboot.

13. 3. 2. Local Upgrade

1. Download the latest firmware file for the router from *www.tp-link.com*.

2. Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
3. Go to Advanced > System Tools > Firmware Upgrade.
4. Focus on the Device Information section. Make sure the downloaded firmware file is matched with the Hardware Version.
5. Focus on the Local Upgrade section. Click Browse to locate the downloaded new firmware file, and click Upgrade.



6. Wait a few moments for the upgrading and rebooting.

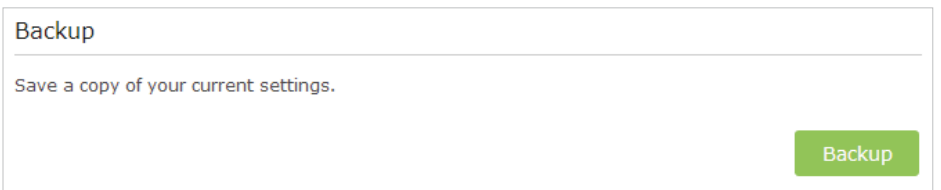
13. 4. Backup and Restore Configuration Settings

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 *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Backup & Restore.

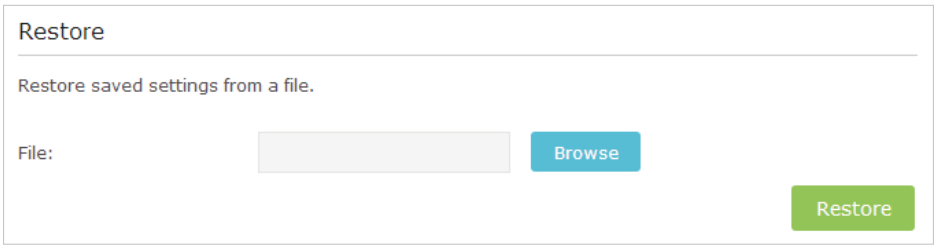
➢ **To backup configuration settings:**

Click Backup 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.



➢ **To restore configuration settings:**

1. Click Browse to locate the backup configuration file stored on your computer, and click Restore.



2. Wait a few moments for the restoring and rebooting.

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

➢ **To reset the router to factory default settings:**

1. Click Factory Restore to reset the router.

2. Wait a few moments for the resetting and rebooting.

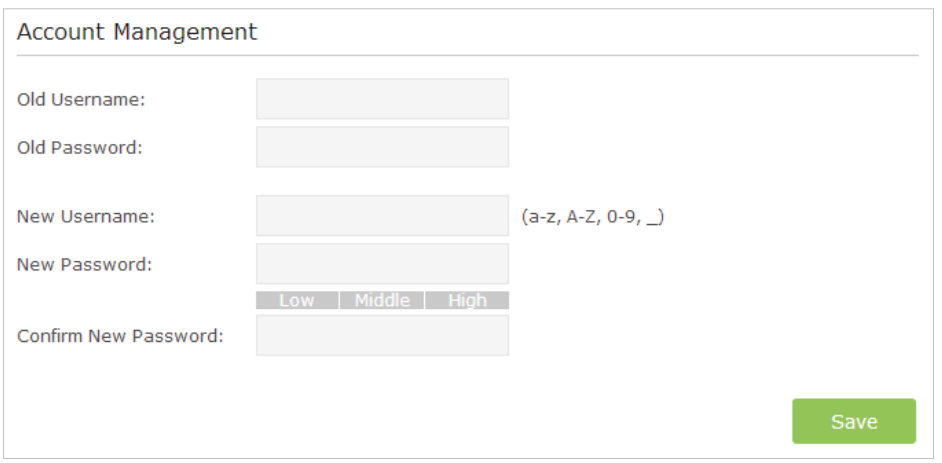
Note:

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

13. 5. Change the Administrator Account

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

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Administration and focus on the Account Management section.



3. Enter the old username and old password. Enter the new username and enter the new password twice (both case-sensitive). Click Save.
4. Use the new username and password for the following logins.

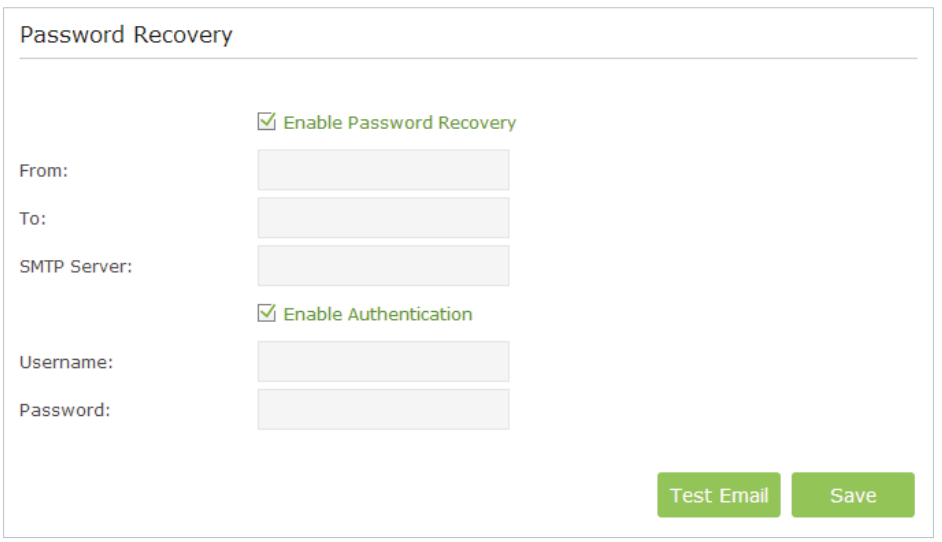
13. 6. Password Recovery

This feature allows you to recover your default login username and password in case you forget them.

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Administration and focus on the Password Recovery section.
3. Select the Enable Password Recovery checkbox.
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, select Enable 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. You can refer to their Help page to learn the SMTP server address.
- Generally, Enable Authentication should be selected if the login of the mailbox requires username and password.



5. Click Save to make the settings effective.

You can click Test Email to test whether the configuration is successful. To recover the default login username and password, please refer to *FAQ*.

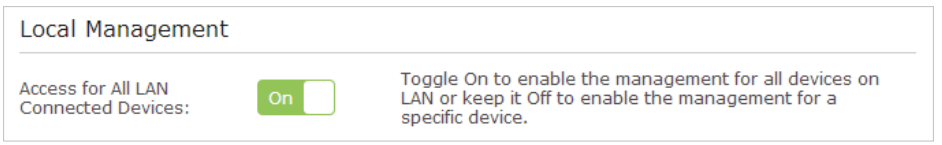
13. 7. Local Management

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 *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
2. Go to Advanced > System Tools > Administration and complete the settings In Local Management section according to your needs.

- **Allow all LAN connected devices to manage the router:**

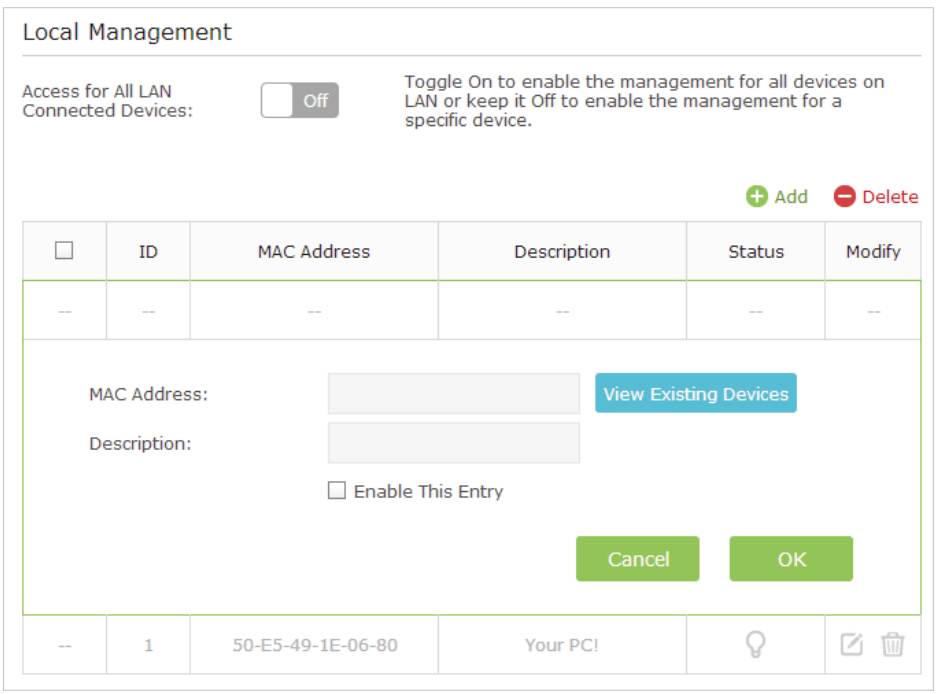
  Toggle on Access for All LAN Connected Devices.



- **Allow specific devices to manage the router:**

  1) Toggle off Access for All LAN Connected Devices.

  2) Click Add.



  3) Click View Existing Devices and select the device to manage the router from the Existing Devices list, or enter the MAC address of the device manually.

  4) Specify a Description for this entry.

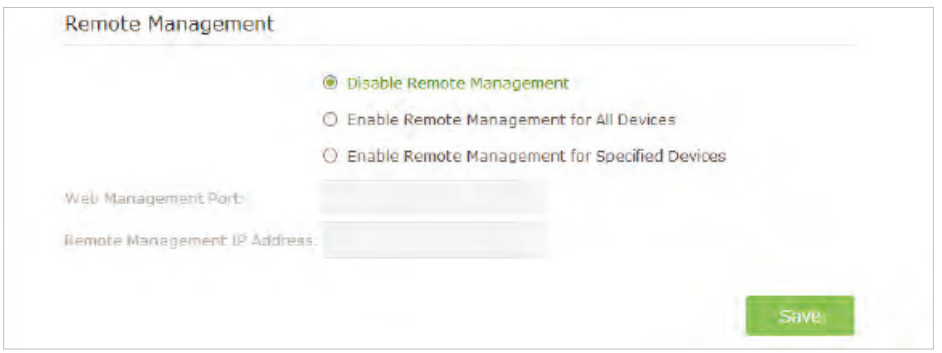
  5) Tick the Enable This Entry checkbox.

6) Click OK to make the settings effective.

13. 8. Remote Management

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

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Administration and complete the settings in Remote Management section according to your needs.



- **Forbid all devices to manage the router remotely:** Select Disable Remote Management and click Save.
- **Allow all devices to manage the router remotely:**
  1) Select Enable Remote Management for All Devices.
  2) Enter Web Management Port (1024-65535 or 80).
  3) Click Save.

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

Tips:

1. You can find the WAN IP address of the router on Basic > Network Maps > Internet.
2. The router's WAN IP is usually a dynamic IP. Please refer to *Set Up a Dynamic DNS Service Account* if you want to log in to the router through a domain name.

- **Allow specific devices to manage the router remotely:**
  1) Select Enable Remote Management for Specified Devices.
  2) Enter Web Management Port (1024-65535 or 80).
  3) In Remote Management IP address, enter the IP address of the remote device to manage the router.
  4) Click Save.
  5) Device with Remote Management IP address can manage the router by logging in to *http://Router's WAN IP:port number* (such as *http://113.116.60.229:1024*).

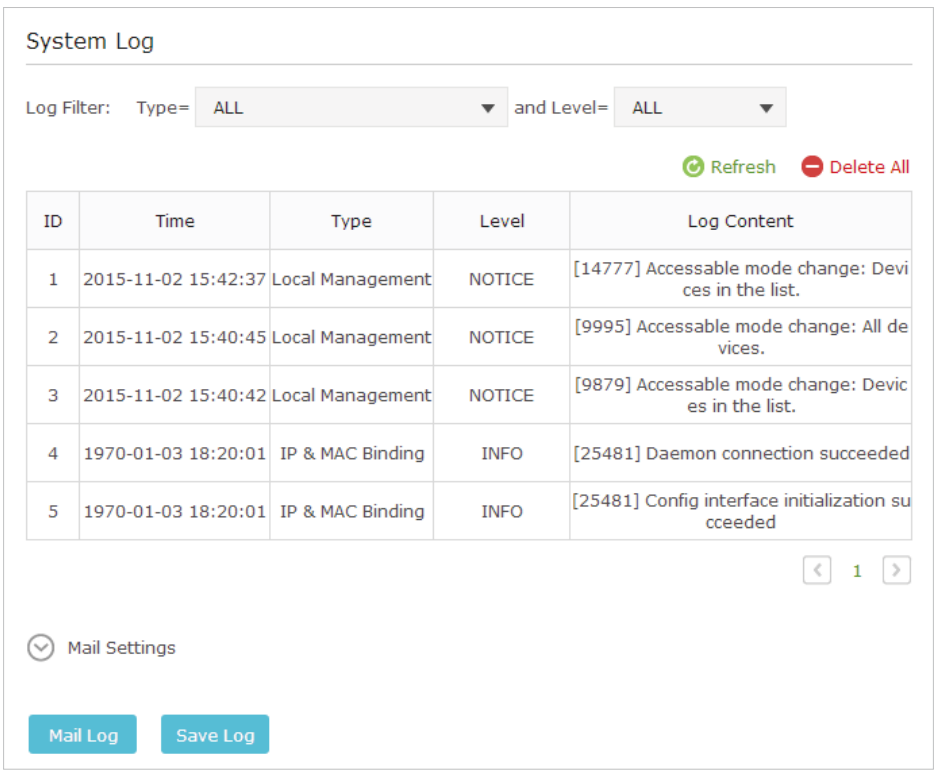
Tips:
The router's WAN IP is usually a dynamic IP. Please refer to *Set Up a Dynamic DNS Service Account* if you want to log in to the router through a domain name.

13. 9. System Log

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

➢ To Save the System Log in Local:

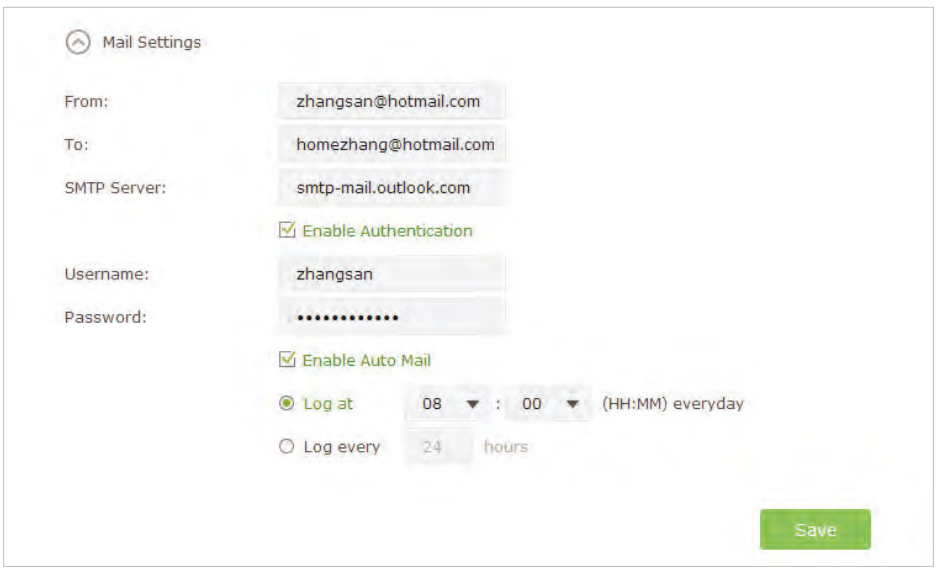
1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > System Log.
3. Choose the type and level of the system logs according to your need.
4. Click Save Log to save the system logs to local.



➢ 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 interface 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 *http://tplinkwifi.net*, and log in with the username and password you've set for the router.
2. Go to Advanced > System Tools > System Log.
3. Click Mail Settings.
4. Enter the information with the help of page tips:



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

2) To: Enter the recipient's email address, which can be the same as or different from the sender's email address.

3) 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. You can refer to their Help page to learn the SMTP server address.

4) Select Enable Authentication.

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

5) Username: Enter the email address used for sending the system log.

6) Password: Enter the password to login the sender's email address.

7) Select Enable Auto Mail.

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

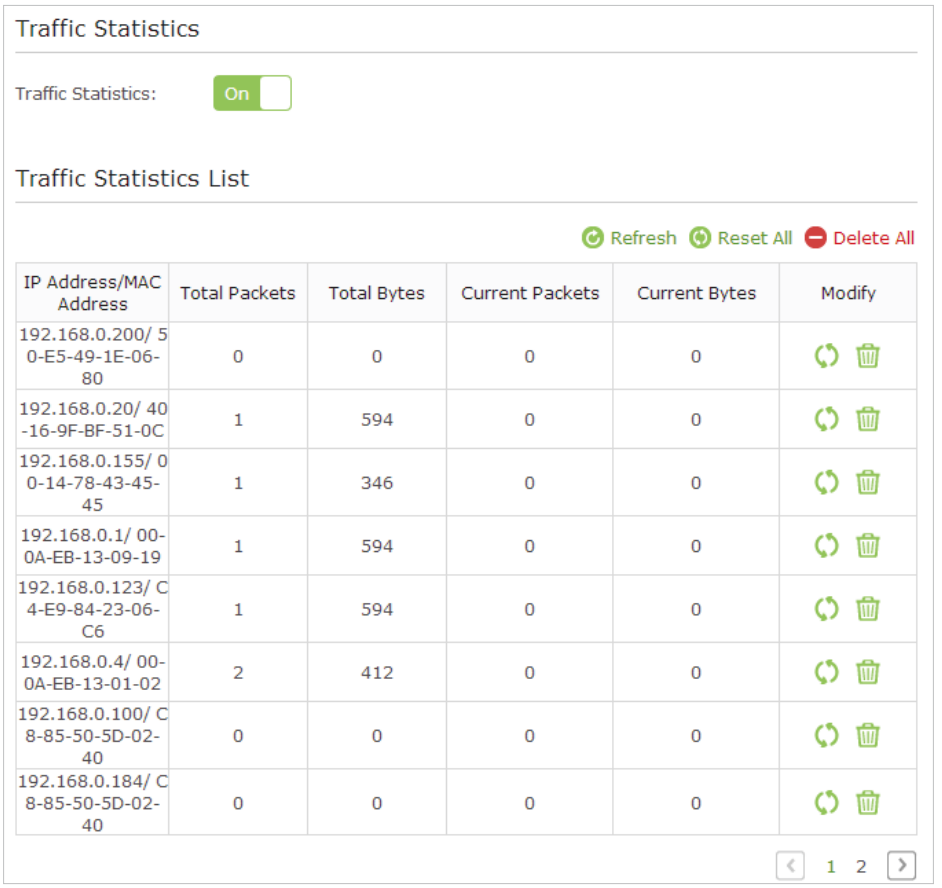
8) Set a fixed time. The recipient will receive the system log sent at this time every day.

5. Click Save.

13. 10. Monitor the Internet Traffic Statistics

The Traffic Statistics page displays the network traffic of the LAN, WAN and WLAN sent and received packets, allows you to monitor the volume of Internet traffic statistics.

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > System Tools > Traffic Statistics.
3. Toggle on Traffic Statistics, and then you can monitor the traffic statistics in Traffic Statistics List section.



IP Address/MAC Address	Total Packets	Total Bytes	Current Packets	Current Bytes	Modify
192.168.0.200/ 50-E5-49-1E-06-80	0	0	0	0	
192.168.0.20/ 40-16-9F-BF-51-0C	1	594	0	0	
192.168.0.155/ 00-14-78-43-45-45	1	346	0	0	
192.168.0.1/ 00-0A-EB-13-09-19	1	594	0	0	
192.168.0.123/ C4-E9-84-23-06-C6	1	594	0	0	
192.168.0.4/ 00-0A-EB-13-01-02	2	412	0	0	
192.168.0.100/ C8-85-50-5D-02-40	0	0	0	0	
192.168.0.184/ C8-85-50-5D-02-40	0	0	0	0	

Click Refresh to update the statistic information on the page.

Click Reset All to reset all statistic values in the list to zero.

Click Delete All to delete all statistic information in the list.

Click to reset the statistic information of the specific device.

Click to delete the specific device item in the list.

13. 11. Control LEDs

The router LEDs indicate router activities and behavior. You can turn on or turn off the router from the management web-page.

➢ **To turn on or off the LEDs:**

- Press the LED button on the router about 2 seconds to turn on or off the LEDs.
- Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router. Click the LED icon on the top right of the page.

➢ **To turn off LEDs during Night Mode Period:**

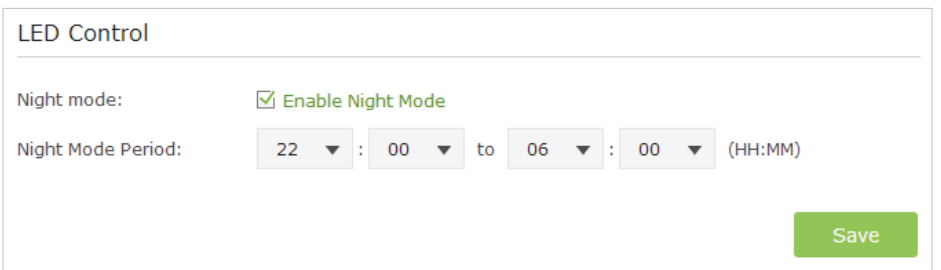
1) Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.

2) Go to Advanced > System Tools > System Parameters.

3) In the LED Control section, select the Enable Night Mode checkbox.

4) Specify a time period in the Night Mode Period according to your need, and the LEDs will be off during this period.

5) Click Save to make the settings effective.



FAQ

Q1. What can I do if I forgot my wireless password?

If it is your first time to connect the wireless network, use the password labeled at the bottom of the router. If the password has been altered, please connect the router to the computer using a cable and follow the steps below:

1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Wireless > Wireless Settings, locate the password on the loading page, and mark down your new password for future use.

Q2. How to retrieve the default username and password of the web management page (without resetting the router) ?

The default username and password of the web management page are admin (in lower case). **If you have enabled Password Recovery**, please follow the steps below:

Note: Make sure the Internet access is available before using this method.

1. Visit *http://tplinkwifi.net*.
2. Click Forget password > Send Code, the verification code will be sent to the mailbox you set.
3. Log into your mailbox to copy the verification code.
4. Paste the verification code on the window which pops up in Step 2.
5. Click Confirm (the default login username and password will be reset as admin after the click).
6. Use admin (in lower case) as both username and password to login.

Tips: Please refer to *Password Recovery* to learn how to configure Password Recovery.

If you have altered the username and password but Password Recovery is disabled:

1. Reset the router to factory default settings: Press and hold the Reset button for about 7 seconds and then release;
2. Visit *http://tplinkwifi.net*, enter admin (in lower case) as both username and password to login.

Note: 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. I cannot log into the router's web management page, what can I do?

This can happen for a variety of reasons, please try the methods below to login again.

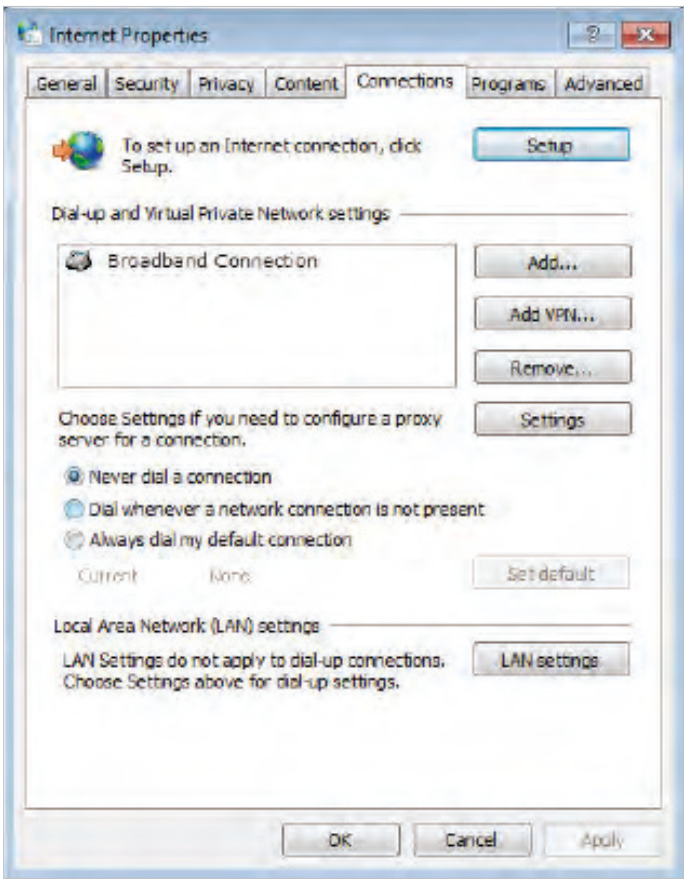
- Make sure the router connect to the computer correctly and the corresponding LED indicator(s) light up.

- Make sure the IP address of your computer is configured as Obtain an IP address automatically and Obtain DNS server address automatically.
- Make sure you enter the correct IP address to login: *http://tplinkwifi.net*.
- Check your computer's settings:

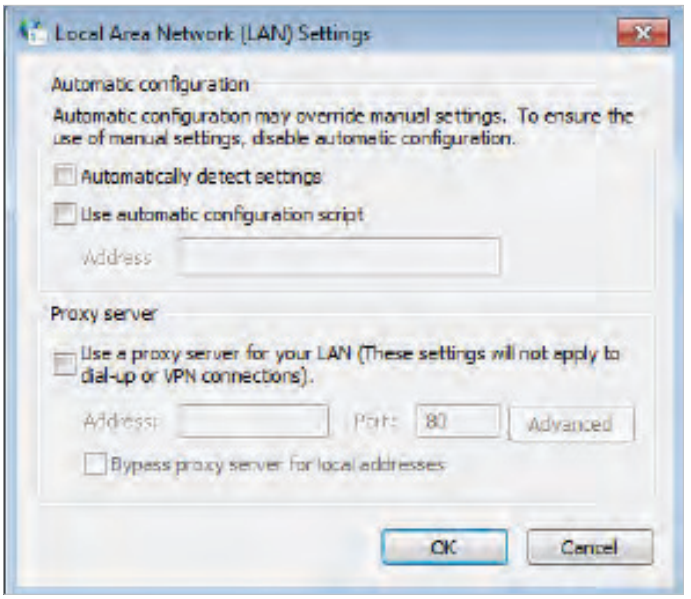
  1) Go to *Start* > *Control Panel* > *Network and Internet*, and click View network status and tasks.

  2) Click Internet Options on the bottom left.

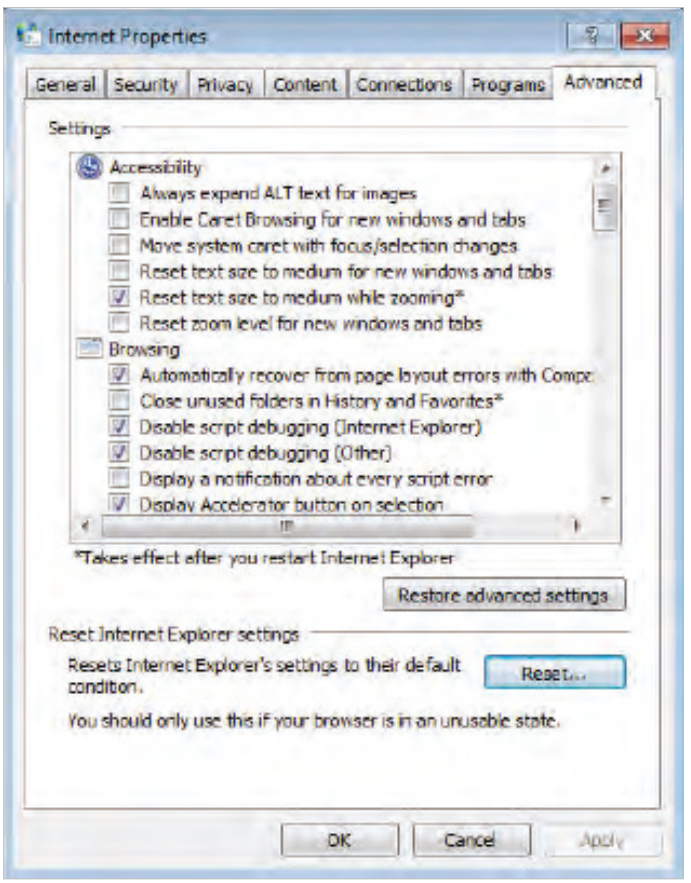
  3) Click Connections and select Never dial a connection.



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



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



- Use another web browser or computer to login 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. How to use the WDS Bridging function to extend my wireless network?

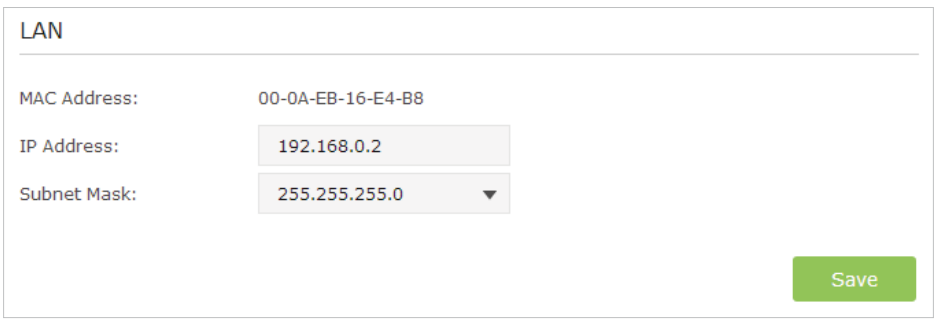
For example, my house covers a large area. The wireless network coverage of the router I'm using (the root router) is limited. I want to use an extended router to extend the wireless network of the root router.

Note:

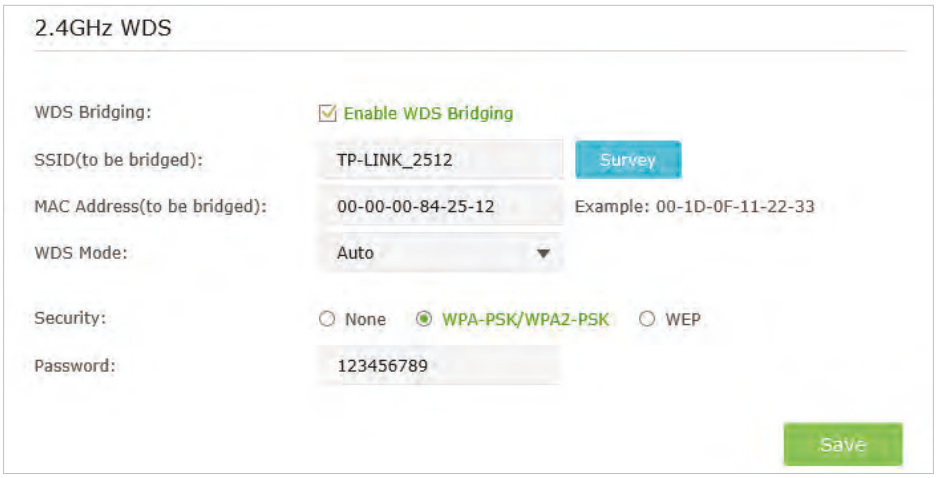
- WDS bridging only requires configuration on the extended router.
- WDS bridging function can be enabled either in 2.4GHz frequency or 5GHz frequency for a dual-band router. We use the WDS bridging function in 2.4GHz frequency as example.

1. Visit *http://tplinkwifi.net*, and log into with the username and password you set for the router.
2. Configure the IP address of the router:
   1) Go to Advanced > *Network* > LAN, configure the IP address of the extended router to be in the same subnet with the root router; (For example, the IP address of the root router is 192.168.0.1, the IP address of the extended router can be 192.168.0.2~192.168.0.254. We take 192.168.0.2 as example.)
   2) Click Save.

   Note: Log into the web management page again if the IP address of the router is altered.



3. Survey the SSID to be bridged:
   1) Go to Advanced > System Tools > System Parameters and focus on the 2.4GHz WDS section, click Enable WDS Bridging.
   2) Click Survey, locate the root router's SSID and click Choose (Here we take TP-LINK_2512 as example).
   3) If the root router has wireless password, you should enter the wireless password of the root router.
   4) Click Save.



4. Disable DHCP:

1) Go to Network > DHCP Server.

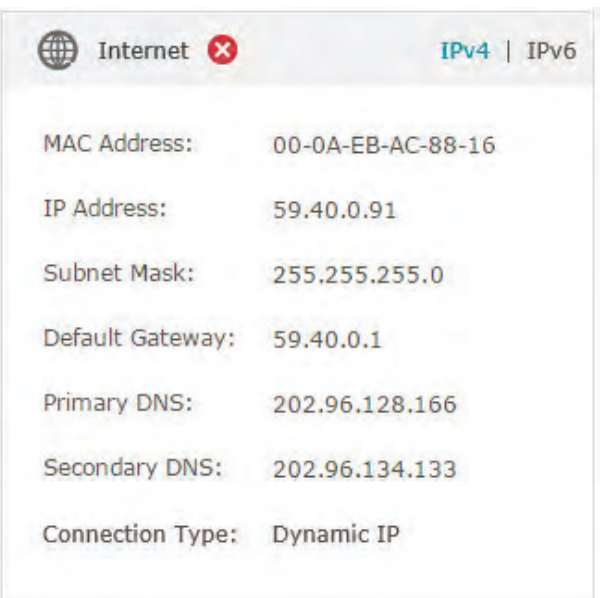
2) Deselect Enable DHCP Server and click Save.

Now you can go to Advanced > Status > Wireless to check the WDS status. When the WDS status is Run, it means WDS bridging is successfully built.

Q5. I cannot access the Internet even though the configuration is finished, what can I do?

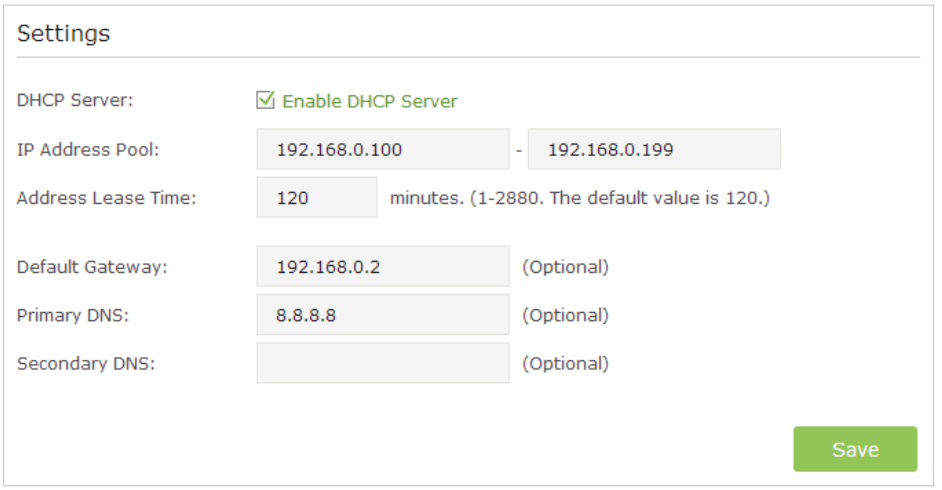
1. Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
2. Go to Advanced > Status to check Internet status:

As the follow picture shows, 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 DNS server.
  1) Go to Advanced > Network > DHCP Server.
  2) Enter 8.8.8.8 as Primary DNS, click Save.

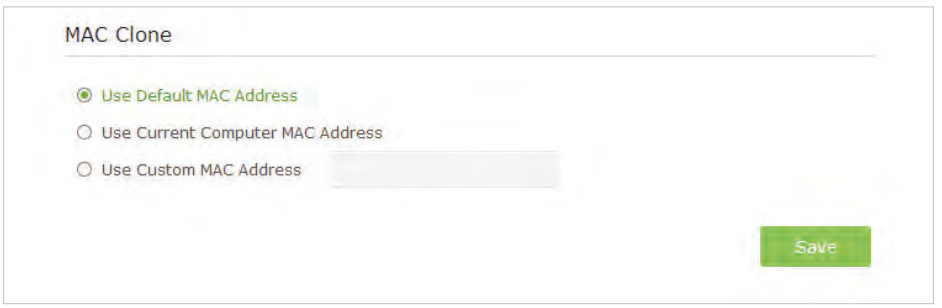
  Tips: 8.8.8.8 is a safe and public DNS server operated by Google.



- Power cycle the modem and the TP-LINK router.
  1) Power off your modem and TP-LINK router, leave them off for 1 minute.
  2) Power on your modem first, wait about 2 minutes until it gets a solid cable or Internet light.
  3) Power back TP-LINK router.
  4) Wait another 1 or 2 minutes and check the Internet access.
- Reset the router to factory default settings and reconfigure the router with the help of *Quick Setup*.
- Upgrade the firmware of the router with the help of *Upgrade the Firmware*.
- 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:

- Make sure the physical connection between the router and the modem is proper
- Clone the MAC address of your computer.
  1) Visit *http://tplinkwifi.net*, and log in with the username and password you set for the router.
  2) Go to Advanced > Network > Internet and focus on the MAC Clone section.
  3) Choose an option to your need (Enter the MAC address if Use Custom MAC Address is selected), and click Save.



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:

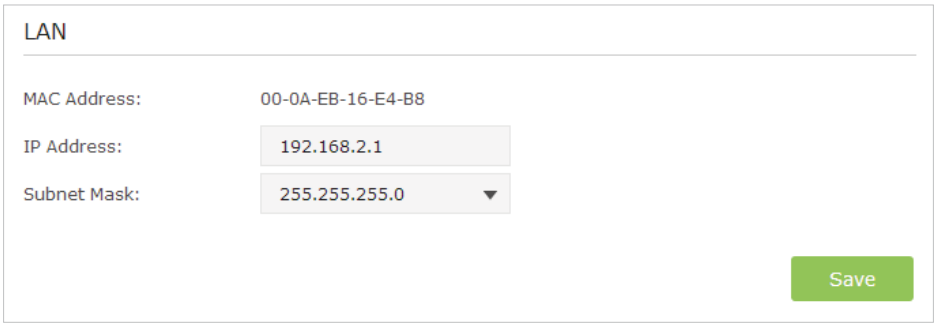
Most TP-LINK routers use 192.168.0.1/192.168.1.1 as their default LAN IP address, it may conflict with the IP range of your existent ADSL modem/router. If so, the router is not able to communicate with your modem and cause you can't access the Internet. To resolve this problem, we need to change the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

1) Visit *http://tplinkwifi.net*, and log in with the username and password you've 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.



- Power cycle the modem and the TP-LINK router.

  1) Power off your modem and TP-LINK router, leave them off for 1 minute.

  2) Power on your modem first, wait about 2 minutes until it get a solid cable or Internet light.

  3) Power back TP-LINK router.

  4) Wait another 1 or 2 minutes and check the Internet access.

- Double check the Internet Connection Type.

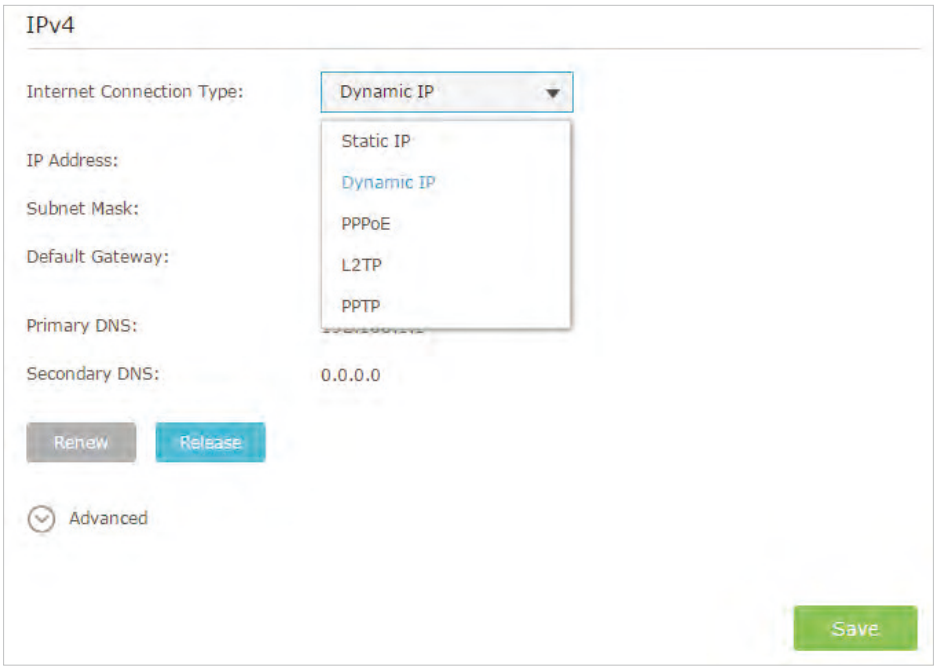
  1) Confirm your Internet Connection Type, which can be learned from the ISP.

  2) Visit *http://tplinkwifi.net*, and log in with the username and password you've set for the router.

  3) Go to Advanced > Network > Internet.

  4) Select your Internet Connection Type and fill in other parameters with the help of page tips.

  5) Click Save.



6) Power cycle the modem and the TP-LINK router again.

- Please refer to *Upgrade the Firmware* to upgrade the firmware of the router.

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

Q6. I cannot find my wireless network or I cannot connect the wireless network, what can I do?

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) Clicking on 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.

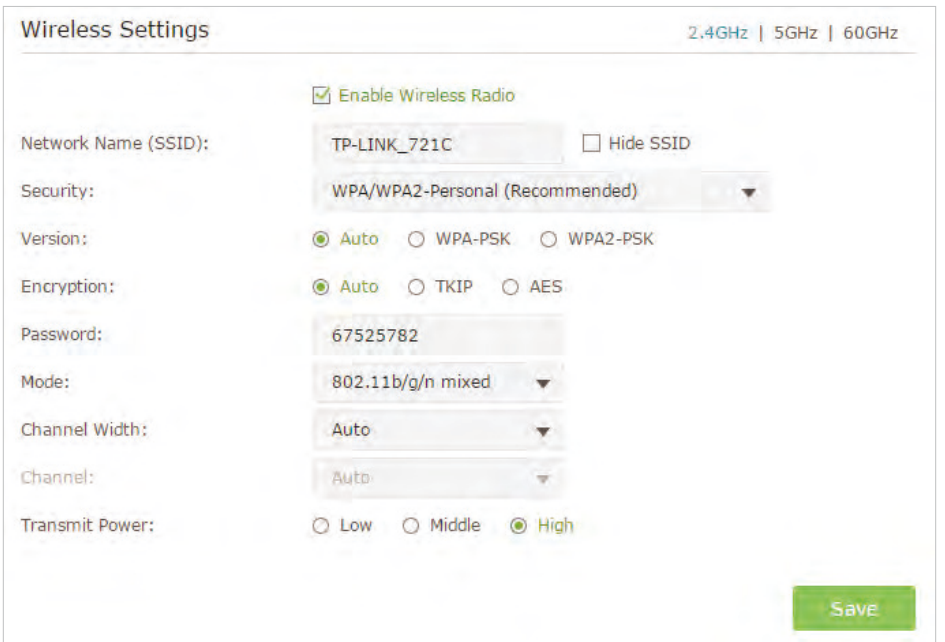
4) Expand Services and Applications > Services, find and locate Wireless Zero Configuration in the Services list on the right side.

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



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

- **Authenticating problem/password mismatch:**

  1) 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 back of your wireless 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.

Q7. What can I do if I cannot access the USB disk after I modify the Authentication settings?

This situation probably happens on your Windows computer due to its special credential mechanism. Once you successfully access the USB disk, the connection will be temporarily recorded and you will be refused to access the USB disk with another account.

You can follow either method below to solve this problem:

- **Method 1**: Log off (sign out) from the Windows to delete the temporary connection record.
- **Method 2: (Only for Local Storage Sharing)** Change the Address of the USB Disk by referring to *To Customize the Address of the USB Disk*.

Q8. What can I do if I am still required to enter the password for USB access even though I have selected Remember my credentials in my Windows computer?

Because of Windows special credential mechanism, if the USB access username you set is the same as the Windows account name, Windows will be unable to remember the password you set for the USB.

To solve this problem, you can set a different USB access username or make the USB access password the same as your Windows account. After you modify the access account, remember to log off (sigh out) from the Windows.

Q9. Why am I never required to enter the account information for USB access even though I have enabled the Authentication feature?

This situation probably happens to your Windows computer due to its special credential mechanism. If your USB access username and password are both the same as your Windows account, the Windows will automatically use its account information to access the USB disk. Therefore, you will have no need to enter the username and password.

Specifications

Hardware	
Ethernet Ports	Four 10/100/1000Mbps LAN Ports One 10/100/1000Mbps WAN Port
USB Port	Two USB 3.0 Port
Button	WPS Button, Reset Button, Wi-Fi On/Off Button, LED On/Off Button, Power On/Off Button
External Power Supply	12V/4.2A
Dimensions (W x D x H)	230mm×230mm×43mm
Antenna	Four 2.4GHz dipole antennas: 3dBi,1.6dBi,1.5dBi,1.1dBi; four 5GHz dipole antennas: 3.4dBi,3.3dBi,2.7dBi,2.6dBi; one 60GHz dipole antenna (32 array unit): 14dBi
Wireless	
Wireless Standards	IEEE 802.11ac/n/a 5GHz, IEEE 802.11b/g/n/ac 2.4GHz, IEEE 802.11ad 60GHz
Frequency	2.4GHz, 5GHz, 60GHz
Signal Rate	4620Mbps at 60GHz, 1733Mbps at 5GHz, 800Mbps at 2.4GHz
Transmit Power	CE: <20dBm(2.4GHz), <23dBm(5150GHz to 5350GHz), <30dBm(5470GHz to 5725GHz) FCC: <30dBm(2.4GHz&5GHz), <24dBm(EIRP, 60GHz)
Reception Sensitivity	5GHz: 11a 6Mbps: -94dBm; 11a 54Mbps: -76dBm; 11ac HT20 MCS8: -69dBm; 11ac HT40 MCS9: -64dBm; 11ac HT80 MCS9: -61dBm 2.4GHz: 11g 6Mbps: -95dBm; 11g 54Mbps: -78dBm; 11n HT20 MCS8: -70dBm; 11n HT40 MCS9: -66dBm 60GHz: MCS0: -87dBm; MCS12: -75dBm
Wireless Function	Enable/Disable Wireless Radio, WDS Bridge, WMM, Wireless Statistics
Wireless Security	64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA-PSK2 encryptions
Software	
WAN Type	Dynamic IP/Static IP/PPPoE/PPTP(Dual Access)/L2TP(Dual Access)
DHCP	Server, DHCP Client List, Address Reservation
Quality of Service	WMM, Bandwidth Control
Port Forwarding	Virtual Server, Port Triggering, UPnP, DMZ
Dynamic DNS	DynDns, NO-IP
VPN	PPTP, Open VPN
Access Control	Parental Control, Local Management Control, Host list, Access Schedule, Rule Management
Firewall Security	DoS, SPI Firewall, IP Address Filter/Domain Filter, IP and MAC Address Binding
Protocols	Supports IPv4 and IPv6
USB Sharing	Supports Samba(Storage)/FTP Server/Media Server/Printer Server
Management	Access Control, Local Management, Remote Management
Guest Network	2.4GHz guest network x 1, 5GHz guest network x 1
Environment	
Operating Temperature	0℃~40℃ (32℃ ~104℃)
Storage Temperature	-40℃~70℃ (-40℃~158℃)
Operating Humidity	10%~90% non-condensing

FCC STATEMENT

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 26 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

This device is restricted in indoor environment only.

CE Mark Warning

CE1177

RF Exposure Information

This device meets the EU requirements (1999/5/EC 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.

Restricted to indoor use.

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

1） This device may not cause interference, and

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

Le présent appareil est conforme aux CNR d'Industrie 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'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter (IC: 8853A-AD7200/ Model: AD7200) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list (Appendix A), having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 8853A-AD7200/ Model: AD7200) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste (Annexe A), et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

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;

2） For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

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;

2） Le gain maximal d'antenne permis pour les dispositifs avec antenne(s) amovible(s) utilisant la bande 5725-5850 MHz doit se conformer à la limitation P.I.R.E spécifiée pour l'exploitation point à point et non point à point.

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 31cm 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 31 cm de distance entre la source de rayonnement et votre corps.

Industry Canada Statement

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

Korea Warning Statements

당해 무선설비는 운용중 전파혼신 가능성이 있음.

BSMI Notice

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。

NCC Notice

注意！

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，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或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行；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。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

電磁波曝露量MPE標準值1mW/cm^2，本產品使用時建議應距離人體：26 cm。

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

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don’t disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.
- Adapter shall be installed near the equipment and shall be easily accessible.
- The plug considered as disconnect device of adapter.
- 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.

For EU/EFTA, this product can be used in the following countries:

AT	BE	BG	CH	CY	CZ	DE	DK
EE	ES	FI	FR	GB	GR	HR	HU
IE	IS	IT	LI	LT	LU	LV	MT
NL	NO	PL	PT	RO	SE	SI	SK

Explanation of the symbols on the product label

Symbol	Explanation
⎓	DC voltage
	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.

DECLARATION OF CONFORMITY

For the following equipment:

Product Name: **AD7200 Multi-band Wi-Fi Router**

Model Number: **AD7200**

Trademark: **TP-LINK**

We declare under our own responsibility that the above product satisfies all the technical regulations applicable to the product within the scope of Council Directives:
Directive 1999/5/EC, Directive 2011/65/EU, Directive 2009 /125 /EC

The above product is in conformity with the following standards or other normative documents:
EN 300328 V1.9.1
EN 301489-1 V1.9.2 & EN 301489-17 V2.2.1
EN 55022: 2010+AC: 2011
EN 55024: 2010
EN 61000-3-2: 2014
EN 61000-3-3: 2013
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 +A2: 2013
EN 62311: 2008, EN 50385: 2002
EN 50581: 2012
(EC) No 278/2009
(EC) No 1275/2008
(EU) No 801/2013

The product carries the CE Mark:

CE1177

Person responsible for making this declaration:

Huang Jing
Regulatory Compliance Manager

Date of issue: 2016/02/25