User Guide

AC1200 Wireless MU-MIMO VDSL/ADSL Modem Router
Archer VR400

REV3.0.0 1910012826

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About This Guide

This guide is a complement to Quick Installation Guide. The Quick Installation Guide provides instructions for quick internet setup, while this guide contains details of each function and demonstrates how to configure them in typical scenarios.

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

Conventions

In this guide, the following conventions are used:

Convention	Description
Underline	Hyperlinks are in teal and underlined. You can click to redirect to a website or a specific section.
Teal	Key information appears in teal, including management page text such as menus, items, buttons and so on.
>	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. • click to view more information about items on the page.

Speed/Coverage Disclaimer

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

*Use of MU-MIMO requires clients to also support MU-MIMO.

More Info

- The latest firmware and management app are available from the Download Center at https://www.tp-link.com/support/download/.
- The Quick Installation Guide (QIG) can be found where you find this guide or inside the product packaging.
- Specifications can be found on the product page at https://www.tp-link.com.
- TP-Link Community is provided for you to share knowledge and discuss our products at https://community.tp-link.com.
- Our Technical Support contact information can be found at the Contact Technical Support page at https://www.tp-link.com/support.

Chapter 1

Get to Know Your Modem Router

This chapter introduces the modem router by detailing its main features and appearance.

It contains the following sections:

- Product Overview
- Physical Appearance

1. 1. Product Overview

TP-Link's modem router is a combined wired/wireless network connection device with wireless router and DSL modem capabilities.

With DSL and LAN/WAN ports, the modem router is compatible with DSL connections and fiber/cable access.

Ethernet ports and adjustable antennas enable the modem router to provide wired and wireless access for multiple computers and mobile devices.

With an array of additional features, the modem router is the perfect hub for your home or business network.

1. 2. Physical Appearance

1. 2. 1. LED



The modem router's LEDs are located on the front panel. You can check the modem router's working status by following the LED Explanation table.

LED Explanation

Name	Status	Indication
Power	On	The system has started up successfully.
	Flashing	The system is starting up or firmware is being upgraded. Do not disconnect or power off your modem router.
	Off	Power is off. Please ensure that the power adapter is connected correctly.
DSL	On	DSL synchronization is complete.
	Flashing	DSL synchronization is in progress.
	Off	DSL synchronization failed. Please refer to 1 for troubleshooting.
Internet	On	Internet service is available.
	Off	Internet connection is incorrect or the modem router is operating in Bridge mode. Please refer to 2 for troubleshooting.
WiFi	On	The wireless 2.4GHz/5GHz band is working properly.
	Off	The wireless 2.4GHz/5GHz band is disabled.
LAN	On	At least one LAN port is connected to a powered-on device.
	Off	No LAN port is connected to a powered-on device.
USB	On	The USB device is ready to use.
	Flashing	The USB device is being identified.
	Off	No USB device is plugged into the USB port.

Note:

1. If the DSL LED is off, please check your internet connection. Refer to Connect Your Modem Router for more information about how to connect to the internet correctly. If you have already made a successful connection, please contact your ISP to make sure your internet service is available now.
2. If the Internet LED is off, please check your DSL LED first. If your DSL LED is also off, please refer to 1. If your DSL LED is ON, reconnect your modem router correctly by referring to related guide.
3. Turn on or off the LEDs by pressing the LED On/Off button on the top panel.

1. 2. 2. Ports and Antennas



The modem router's back panel shows the connection ports, buttons and antennas. Refer to the following for detailed instructions.

Item	Description
Power Port	For connecting the modem router to power socket via the provided power adapter.
WiFi Button	Press to turn Wi-Fi on or off.
WPS/Reset Button	Press for 1 second to start a WPS synchronization. Press and hold for at least 5 seconds until all LEDs turn on momentarily to reset the modem router to factory default settings.
USB Port	For connecting to USB modems.
LAN1, LAN2, LAN3, and LAN4/WAN Ports	For connecting to your PCs or other Ethernet network devices. In wireless router mode, the LAN4/WAN port is used for connecting to a Cable/FTTH/VDSL/ADSL device.
DSL Port	For connecting the modem router to the Internet. Connect the port to the splitter or directly connect the port to the phone jack via a phone cable. For details, please refer to Connect Your Modem Router.
Antennas	Used for wireless operation and data transmission.

Chapter 2

Connect the Hardware

This chapter contains the following sections:

- Position Your Modem Router
- Connect Your Modem Router

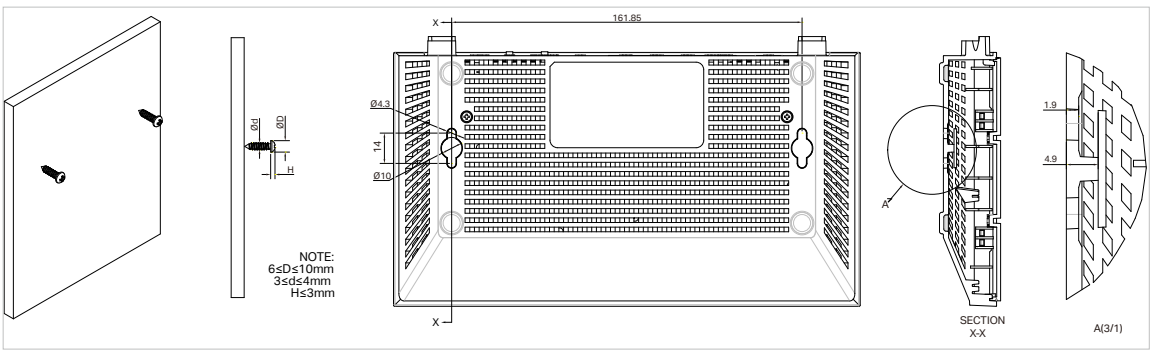
2. 1. Position Your Modem Router

With the modem router, you can access your network from anywhere within the wireless network coverage. However, the wireless signal strength and coverage varies depending on the environment your modem router is in. Obstacles may limit the range of the wireless signal, for example, concrete structures, thick walls.

For best Wi-Fi performance, and to keep your network secure:

- Do not locate the modem router in a place where it will be exposed to moisture or excessive heat.
- Keep the product away from strong electromagnetic radiation and devices that emit electromagnetic waves.
- Place the modem 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.

Generally, the router is placed on a horizontal surface, such as on a shelf or desktop. The device also can be mounted on the wall as shown in the following figure.



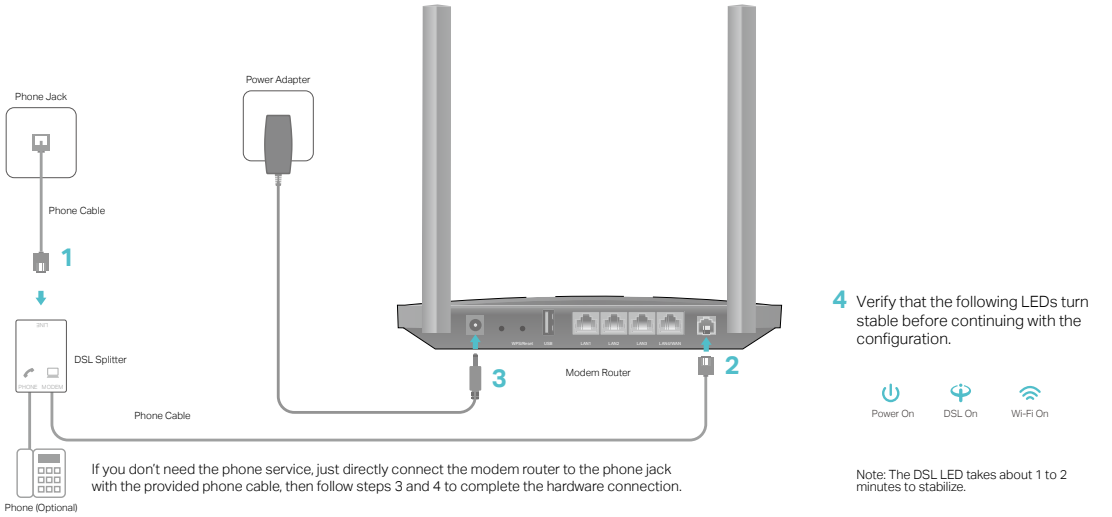
Note:

The diameter of the screw, 6mm<D<10mm, and the distance of two screws is 161.85mm. The screw that project from the wall need around 4mm based, and the length of the screw need to be at least 20mm to withstand the weight of the product.

2. 2. Connect Your Modem Router

Follow the steps below to connect your modem router.

1. Connect the DSL line and power adapter. The electrical outlet shall be installed near the device and shall be easily accessible.



2. Connect your computer to the modem router.

Method 1: Wired

Connect your computer's Ethernet port to the LAN port on the modem router via the Ethernet cable.

Method 2: Wirelessly

Use the default SSID (Wireless Network Name) and Wireless Password printed on the product label of the modem router to connect wirelessly.

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:

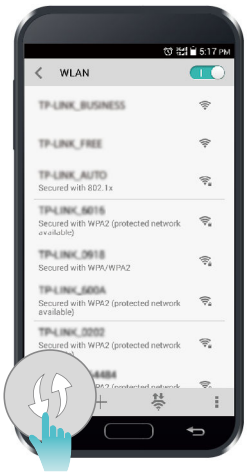
The WPS function cannot be configured if the wireless function of the router is disabled. Also, the WPS function will be disabled if your wireless encryption is WEP. Please make sure the wireless function is enabled and is configured with the appropriate encryption before configuring the WPS.

1) Tap the WPS icon on the device's screen.

2) Immediately press the WPS button on your modem router.

3) The WPS LED flashes for about two minutes during the WPS process.

4) When the WPS LED stabilizes and remains on, the client device has successfully connected to the modem router.


5:17 PM
WLAN
TP-LINK_BUSINESS
TP-LINK_FREE
TP-LINK_AUTO
Secured with 802.1x
TP-LINK_5016
Secured with WPA2 (protected network available)
TP-LINK_0918
Secured with WPA/WPA2
TP-LINK_600A
Secured with WPA2 (protected network available)
TP-LINK_0202
Secured with WPA2 (protected network


POWER
WiFi
WPS/Reset
USB
LAN1
LAN2
LAN3
LAN4/WAN
DSL

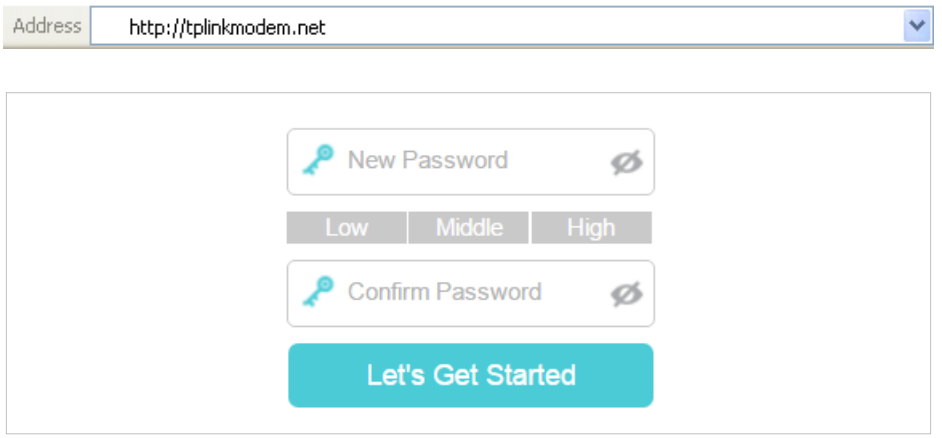
Chapter 3

Log In to Your Modem Router

With the web management page, it is easy to configure and manage the modem router. The web management page 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 in to your modem router.

1. If the TCP/IP Protocol on your computer is set to the static (fixed) IP address, you need to change its settings to obtain an IP address automatically. Refer to Appendix: Troubleshooting to configure your computer.
2. Launch a web browser and go to http://tplinkmodem.net or http://192.168.1.1. Create a strong password and click Let's Get Started to log in.



Note:

If you have registered a TP-Link ID and bind your cloud router to it, the login password you created here should be ineffective. Please log in to the cloud router using your TP-Link ID.

Chapter 4

Set Up Internet Connections

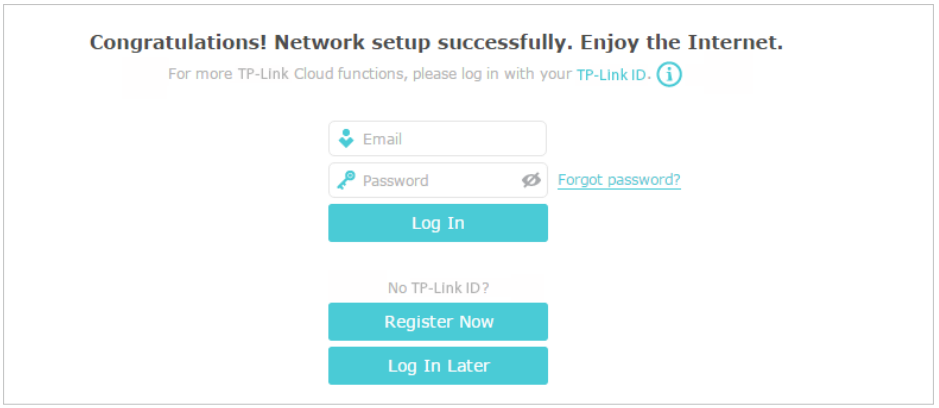
This chapter introduces how to connect your modem router to the internet. The modem router is equipped with a web-based Quick Setup wizard. It has many ISP information built in, automates many of the steps and verifies that those steps have been successfully completed. Furthermore, you can also set up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

This chapter includes the following sections:

- Use Quick Setup Wizard
- Manually Set Up an Internet Connection
- Test Internet Connectivity
- Set Up an IPv6 Connection
- More Operation Modes

4. 1. Use Quick Setup Wizard

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password your set for the router.
2. Click Quick Setup on the top of the page. Then follow the step-by-step instructions to connect your router to the internet.
3. To enjoy a more complete service from TP-Link (remote management, TP-Link DDNS, etc.), log in with your TP-Link ID or click Register Now to get one. Then follow the instructions to bind the modem router to your TP-Link ID.

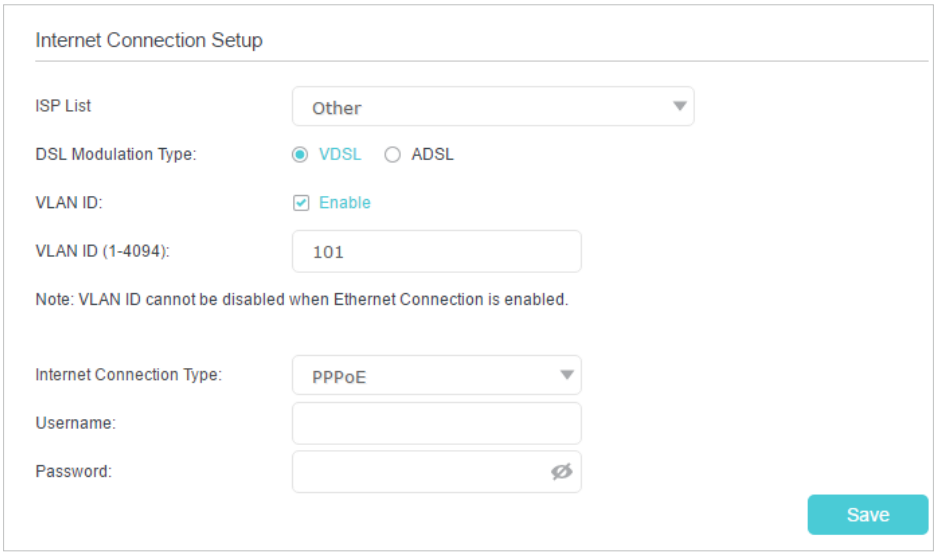


Note:

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

4. 2. Manually Set Up an Internet Connection

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password your set for the router.
2. Go to Basic > Internet page. Select your ISP, and related information will be automatically filled in. For some ISPs, you may need to manually specify some information provided. If you can't find your ISP in the ISP List, select Other and then enter the information provided by your ISP.



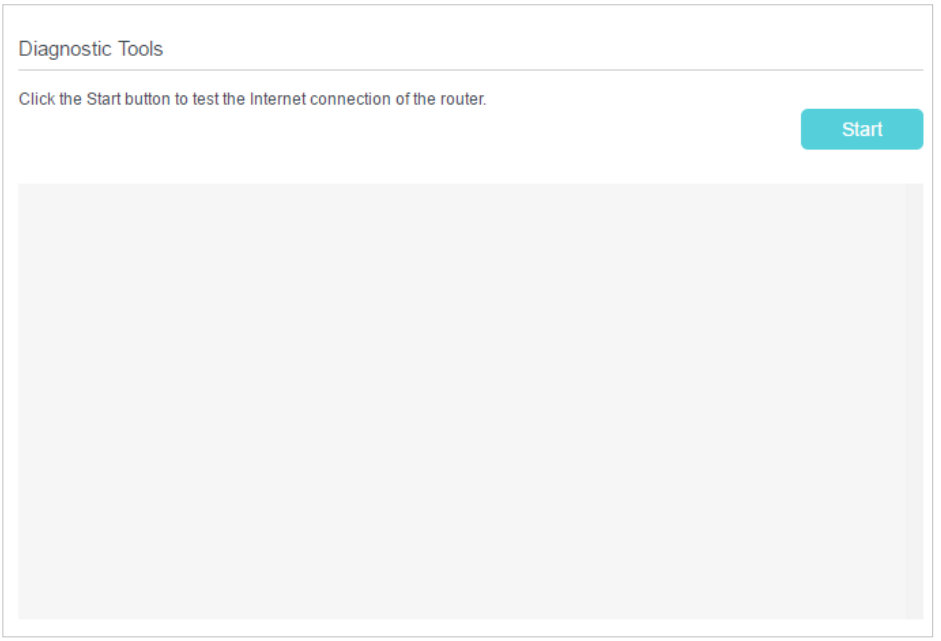
3. Click Save to make the settings effective, and you can refer to Test Internet Connectivity to test the internet connection.

Tips: You can view and edit all internet connection settings on the Advanced > Network > Internet page.

4. 3. Test Internet Connectivity

After manually setting up the internet connection, you need to test the internet connectivity. The modem router provides a diagnostic tool to help you locate the source of any problems.

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



3. Click Start to test the internet connectivity and you will see the test result in the gray box.

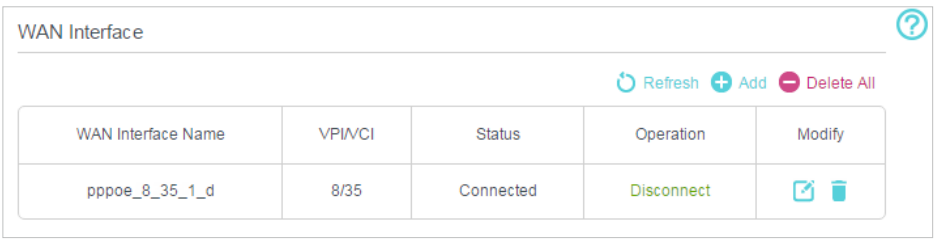
4. 4. Set Up an IPv6 Connection

If your ISP has provided a DSL line that supports IPv6 connection as well as some detailed IPv6 parameters, you can manually set up an IPv6 connection.

If your ISP provides an IPv4-only connection or IPv6 tunnel service, permit IPv6 connection by referring to Set Up the IPv6 Tunnel.

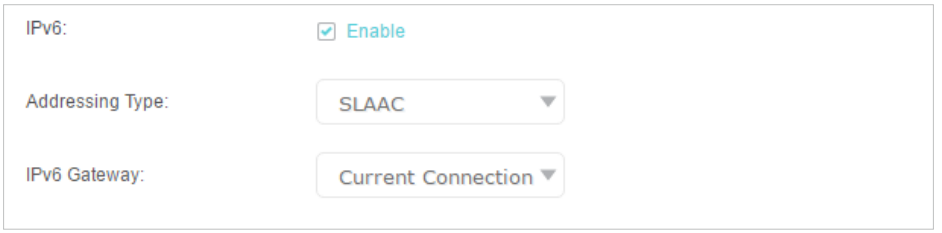
Follow the steps below to set up an IPv6 connection:

1. Make sure you have set up an IPv4 connection either manually or by using the Quick Setup wizard before setting up an IPv6 connection.
2. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password your set for the router.
3. Go to Advanced > Network > Internet page.



4. Select your WAN Interface Name (Status should be Connected) and click the (Edit) icon.

5. Scroll down the page, enable IPv6, and configure the IPv6 parameters.



- Addressing Type: Consult your ISP for the addressing type (DHCPv6 or SLAAC). SLAAC is the most commonly used addressing type.
- IPv6 Gateway: Keep the default setting as Current Connection.

Note: If your ISP has provided the IPv6 address, click Advanced to reveal more settings. Check to use IPv6 specified by ISP and enter the parameters provided by your ISP.

6. Click OK to make the settings effective. Now IPv6 service is available for your network.

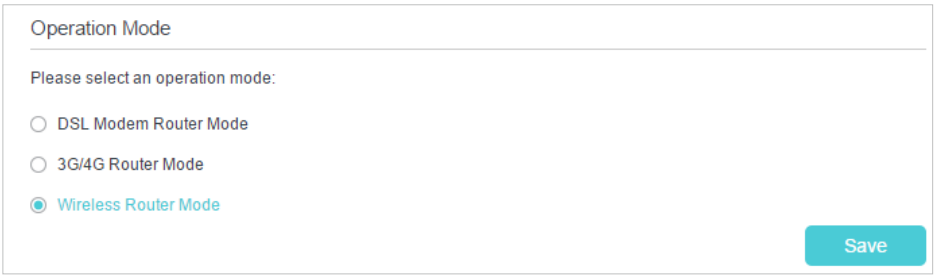
4. 5. More Operation Modes

The modem router supports two more operation modes: Wireless Router mode and 3G/4G Router mode. You can change the mode according to your needs.

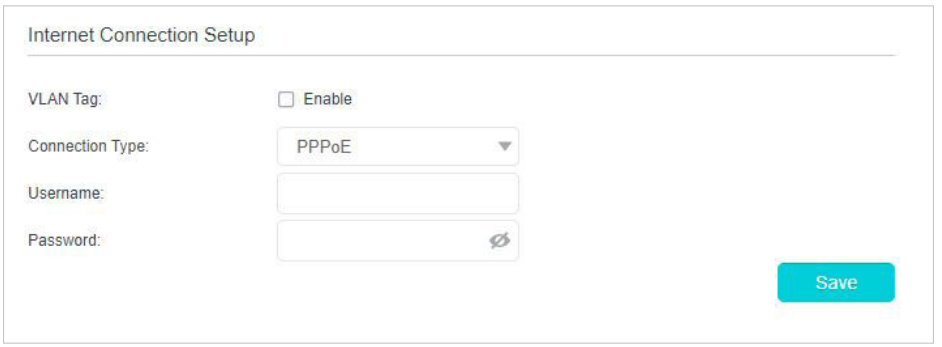
4. 5. 1. Wireless Router Mode

If you already have a modem or your internet comes via an Ethernet jack on the wall, you can set up the modem router as a regular wireless router to share the internet.

1. Find the WAN port (labeled as LAN4/WAN) on the modem router, and connect it to your existing modem or the Ethernet jack on the wall. Then connect the power adapter and turn on the modem router. If you connect an existing modem, reboot it to get the modem router connected to the internet.
2. Connect your computer to the modem router. For details, refer to Connect Your Modem Router.
3. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password your set for the router.
4. Go to Advanced > Operation Mode, select the Wireless Router Mode, and click Save. The modem router will reboot.



5. Go to Basic > Internet, select the Connection Type, and enter the information provided by your ISP.



6. Click Save to make the settings effective.

Tips:

1. You can view and edit all internet connections on Advanced > Network > Internet page.
2. In the Wireless Router Mode, you can also permit IPv6 connection by setting up an IPv6 connection or the IPv6 tunnel just as in the DSL Modem Router Mode. For details, refer to Set Up an IPv6 Connection and Set Up the IPv6 Tunnel.

4. 5. 2. 3G/4G Router Mode

The modem router can be used as a 3G/4G wireless router if you have a 3G/4G USB modem. There are two ways to use your 3G/4G network:

- As a backup solution for internet access

Use this way if you have set up an internet connection successfully and want to use the 3G/4G network as a backup network. Your modem router will be directly connected to the 3G/4G network when the original network service fails. For detailed instructions, refer to As a Backup Solution for Internet Access.

- As the only way to access the internet

Use this way if wired internet access is not available and you can only use the 3G/4G network to access the internet. For detailed instructions, refer to As the Only Way to Access the Internet.

Tips:

In the 3G/4G Router Mode, you can also permit IPv6 connection by setting up the IPv6 tunnel just as in the DSL Modem Router Mode. For details, refer to Set Up the IPv6 Tunnel.

Chapter 5

TP-Link Cloud Service

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

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

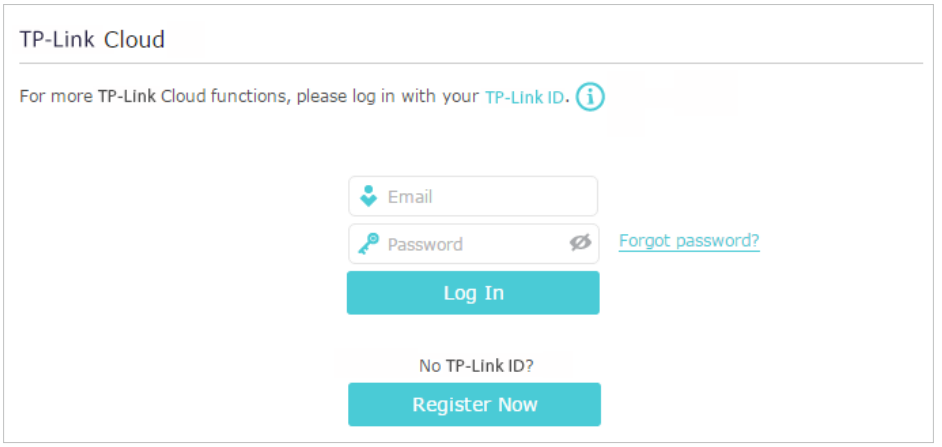
It contains the following sections:

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

5. 1. Register a TP-Link ID

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

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



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

Note:

- To learn more about the Admin and User TP-Link ID, refer to Manage the User TP-Link IDs.
- Once the router is bound to your TP-Link ID, you need to log in to the router with the TP-Link ID.
- You can register another TP-Link ID via the Tether APP. Please refer to Manage the Router via TP-Link Tether App to install the app and register a new one
- If you want to unbind the admin TP-Link ID from your router, please go to Basic > TP-Link Cloud, click Unbind in the Device Information section.

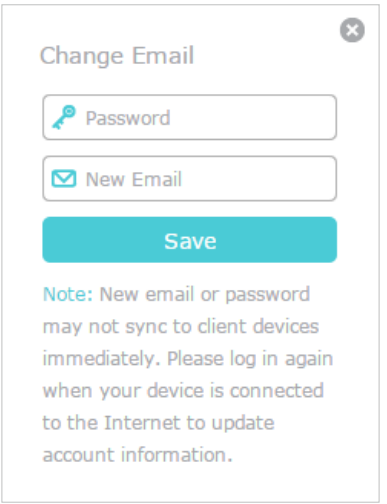
5. 2. Change Your TP-Link ID Information

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

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

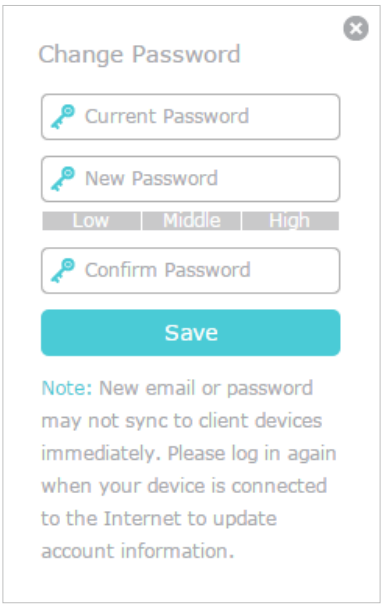
- **Change your email address**

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



- **Change your password**

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



5. 3. Manage the User TP-Link IDs

The first-time login TP-Link ID will be bound automatically to your router as an Admin account. An admin account can add or remove other TP-Link IDs to the same router as Users. Admin account and User accounts both can monitor and manage the router locally or remotely, except that user accounts cannot:

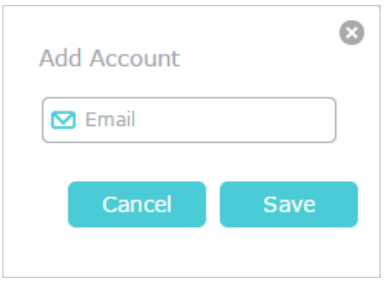
- Reset the router to its factory default settings from the web management page or the Tether app.

- Add/remove other TP-Link IDs to/from the router.

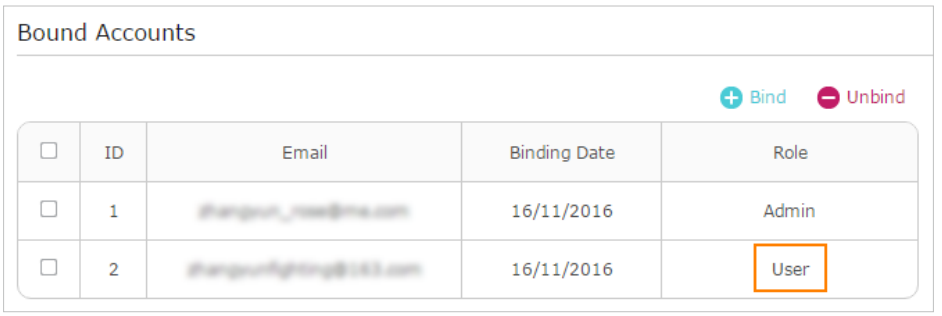
5. 3. 1. Add an TP-Link ID to Manage the Router

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

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

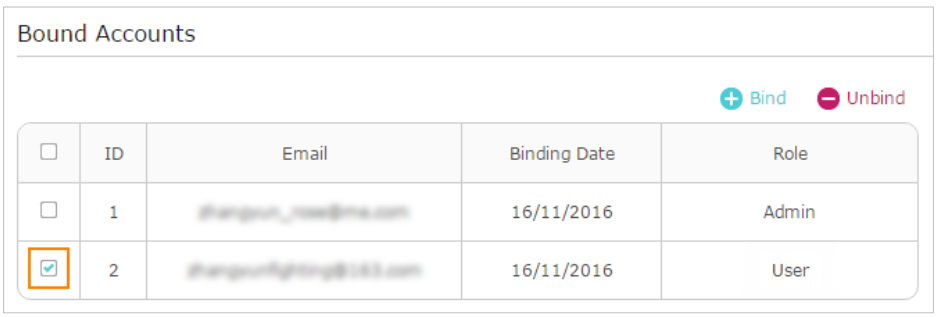


4. The new TP-Link ID will be displayed in the Bound Accounts table as a User.



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

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



5. 4. Manage the Router via TP-Link Tether App

The Tether app runs on iOS and Android devices like smartphones and tablets.

1. Open the Apple App Store or Google Play and search the key word TP-Link Tether or simply scan the QR code to download and install the app.



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

Note: If you don't have an account, create one first.

3. Connect your device to the router's wireless network.
4. Go back to the Tether app and select the model of your router.
5. Manage your router as needed.

Chapter 6

OneMesh™ with Seamless Roaming

This chapter introduces the TP-Link OneMesh™ feature.

It contains the following sections:

- Set Up a OneMesh™ Network
- Manage Devices in the OneMesh™ Network

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

Unified Wi-Fi Network

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

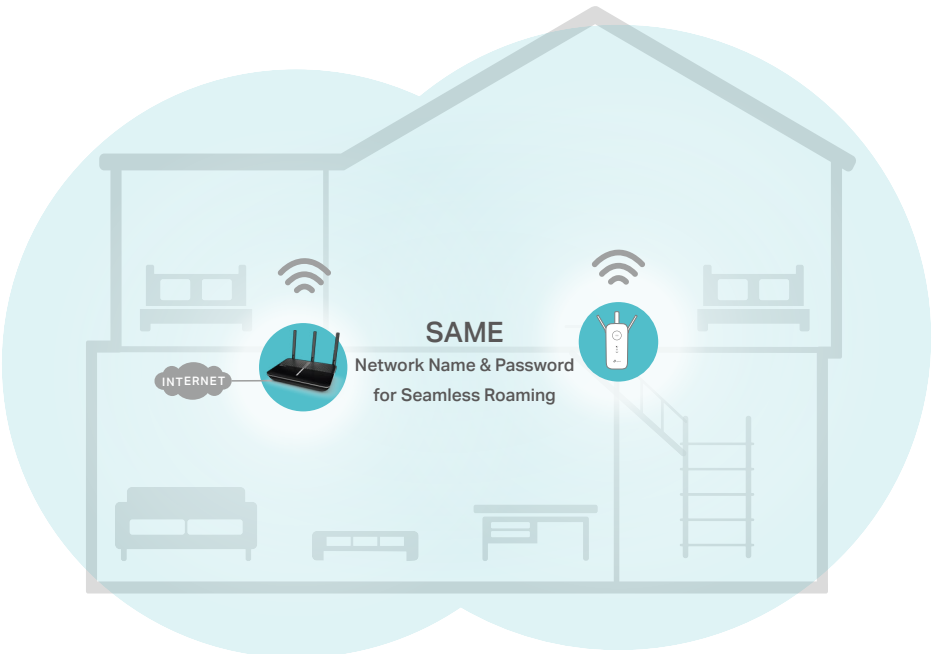
Seamless Roaming

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

Easy Setup and Management

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

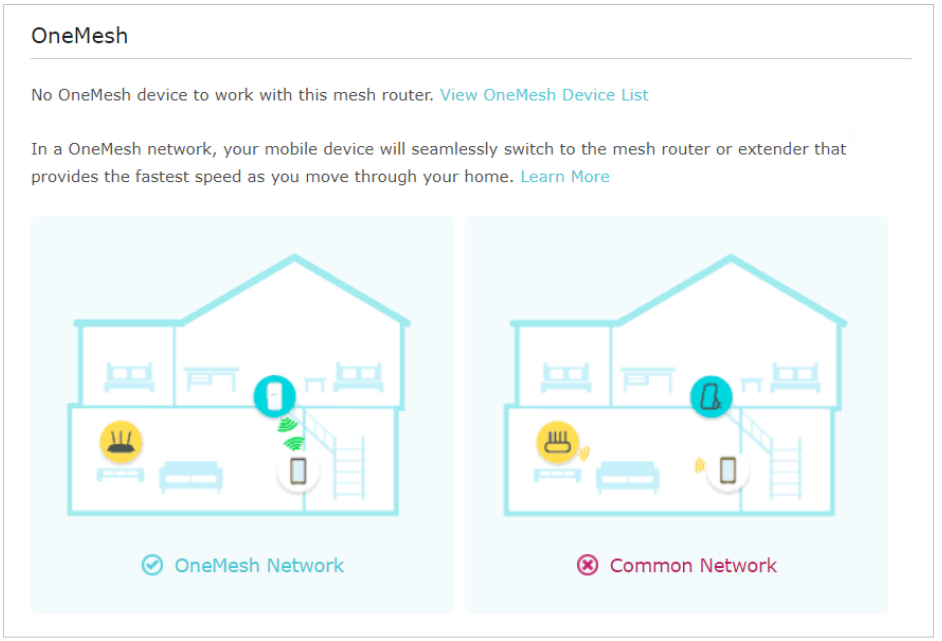
Unified OneMesh™ Network



6. 1. Set Up a OneMesh™ Network

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

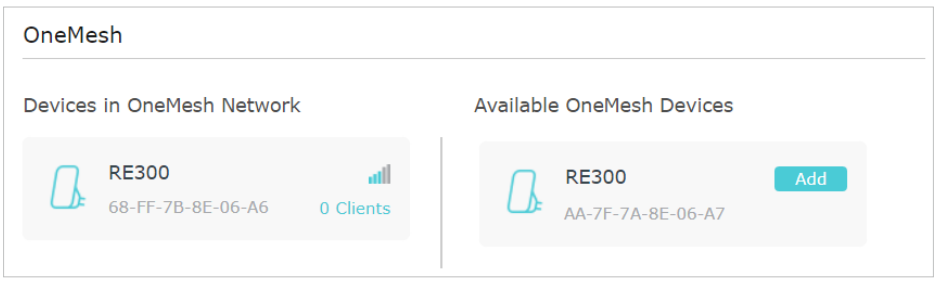
Note:
Early firmware versions may not support OneMesh™. If you can't find the OneMesh page, please upgrade your router to the latest firmware version. For upgrade instructions, refer to Upgrade the Firmware.



3. Connect one or more OneMesh™ extenders to this router by following the setup instructions in the extenders' manuals.

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

4. If you have set up an extender to join the OneMesh™ network, it will be listed in the Devices in OneMesh Network list. Otherwise, you need to find it in the Available OneMesh Devices list and click Add to add it to the OneMesh™ network.



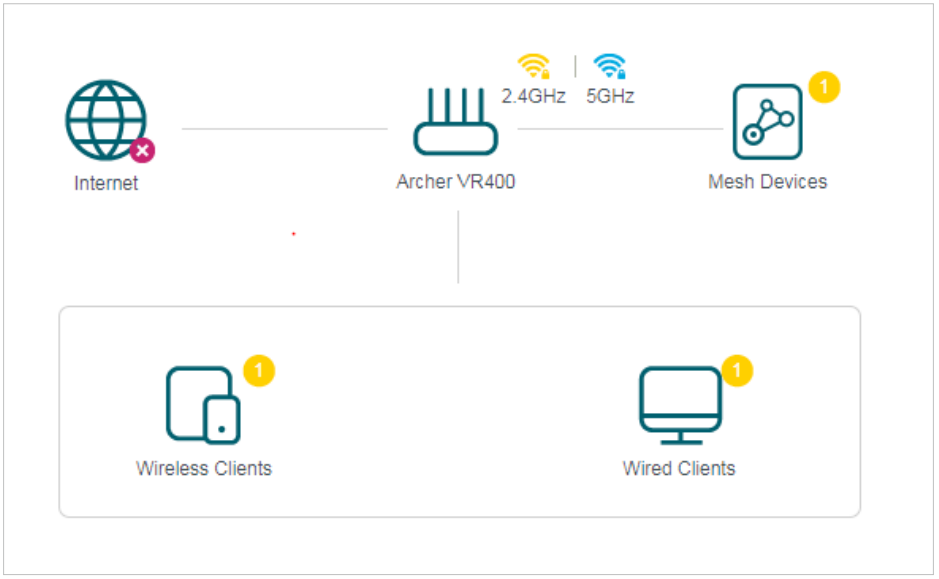
Now your router and extenders successfully form one OneMesh™ network!

6. 2. Manage Devices in the OneMesh™ Network

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

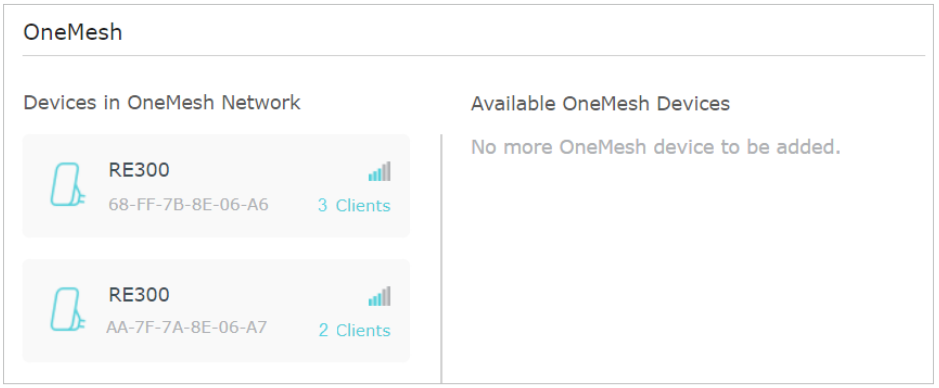
- **To view all mesh devices and clients in the OneMesh™ network:**

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > Network Map.
3. Click the Mesh Devices, Wired Clients, or Wireless Clients icon to view the related device or client list.



- **To manage each OneMesh™ device in the network:**

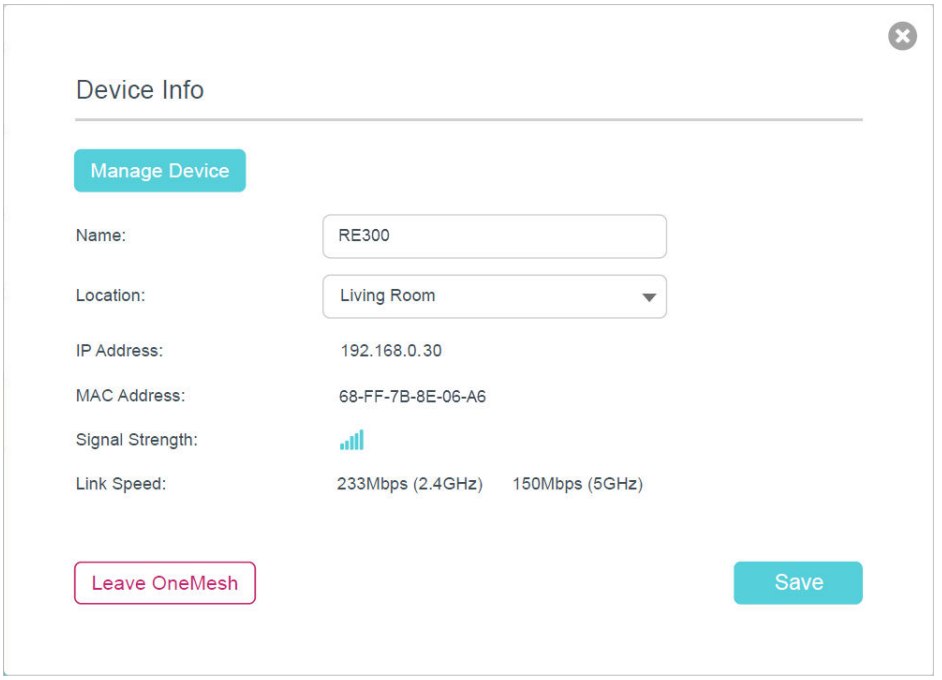
1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > OneMesh or Advanced > Wireless > OneMesh.



3. Click a OneMesh™ device to view the device information, or click <number> Clients to view the clients connected to this device.

   On the Device Info page, you can:

- Click Manage Device to redirect to the web mangement page of this OneMesh™ device.
- Click Leave OneMesh to delete this device from the OneMesh™ network.



Chapter 7

IPTV

IPTV is the abbreviation of Internet Protocol Television. The service can only be delivered through the Internet, and our modem router provides a specific LAN port for IPTV.

By automatically separating IPTV from Internet surfing, you can enjoy a high quality of video streaming and fast browsing speeds at the same time.

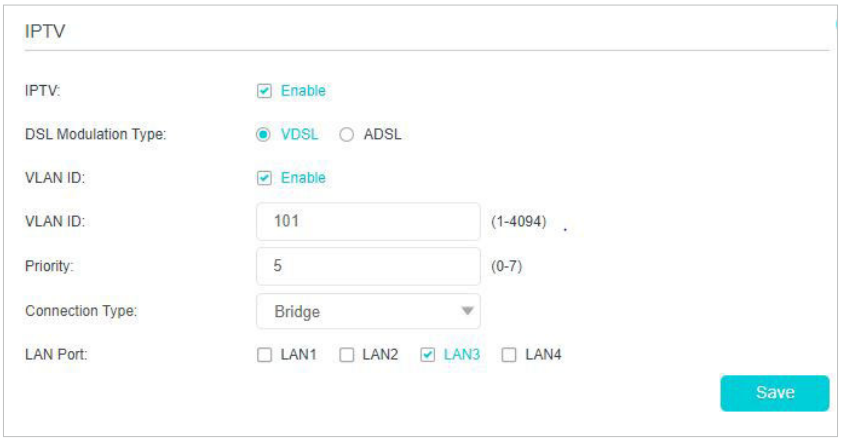
I want to:

Configure the modem router to enable Internet Protocol Television (IPTV) Services.

For example, I already bought IPTV service, but this service can only be delivered through the Internet. Therefore, I need to configure my modem router first.

How can I do that?

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > IPTV to open the configuration page.



3. Click Enable IPTV to enable this function.
4. Select your DSL modulation type.
5. If you select VDSL modulation type, check to enable VLAN and set the VLAN ID. If you select ADSL, fill in PVC parameters (VPI and VCI). VLAN ID and PVC parameters are all provided by your IPTV service provider.
6. Specify a LAN port for IPTV connection and connect the set-top box to this port.
7. Click Save to make the settings effective.

Done!

Modem router configuration is complete! You may still need to configure settings on your set-top box before enjoying your IPTV service.

Chapter 8

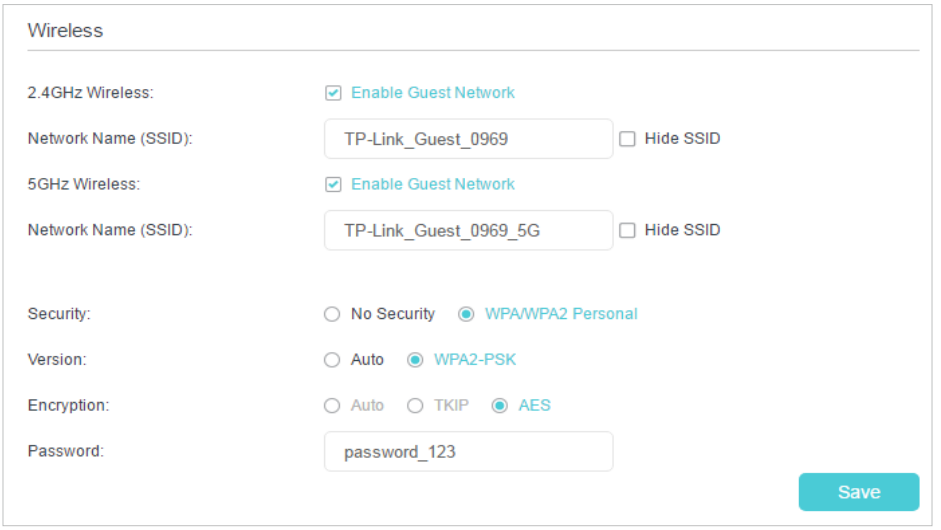
Guest Network

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 assign network authorities and bandwidth for guests to ensure network security, privacy, and fluency.

- Create a Network for Guests
- Customize Guest Network Options

8. 1. Create a Network for Guests

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Guest Network. Locate the Wireless Settings section.
3. Create 2.4GHz and 5GHz guest network according to your needs.



1) Enable 2.4GHz Wireless or 5GHz Wireless or enable both according to your needs.

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.

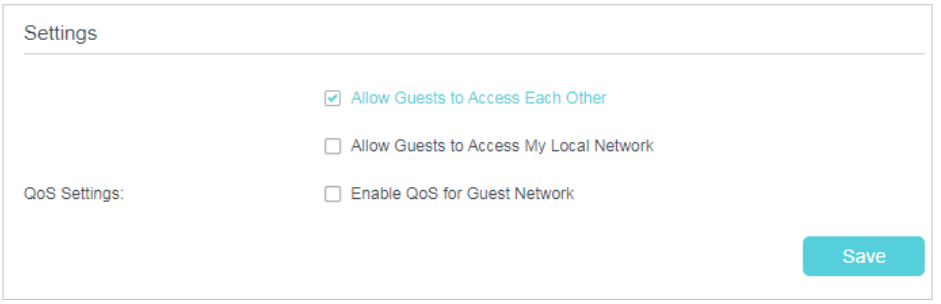
3) Set Security to WPA/WPA2 Personal, keep the default Version and Encryption values, and set an easy-to-remember password. 2.4GHz and 5GHz guest networks share the same password.

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.

8. 2. Customize Guest Network Options

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



3. Assign network authorities and bandwidth according to your needs.

   - Allow Guests to Access Each Other

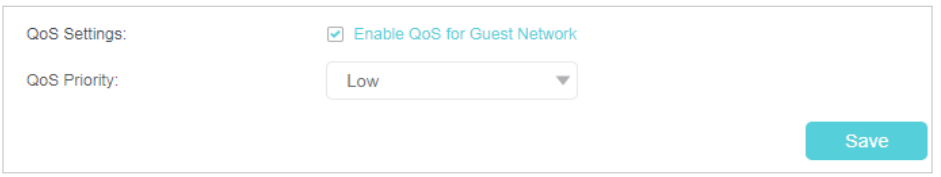
   Select this check box to allow the clients in your guest network to access each other's files.

   - Allow Guests to Access My Local Network

   Select this check box to allow the clients in your guest network to access your local network, not just the internet.

   - Enable QoS for Guest Network

   Select this check box to set the QoS Priority of the guest network. This option is available only when QoS is enabled on the Advanced > QoS page.



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

Tips:

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

Chapter 9

3G/4G Settings

This chapter describes how to set up 3G/4G network for your modem router.

- As a Backup Solution for Internet Access
- As the Only Way to Access the Internet

The modem router can be used as a 3G/4G wireless router if you have a 3G/4G USB modem. There are two ways to use your 3G/4G network:

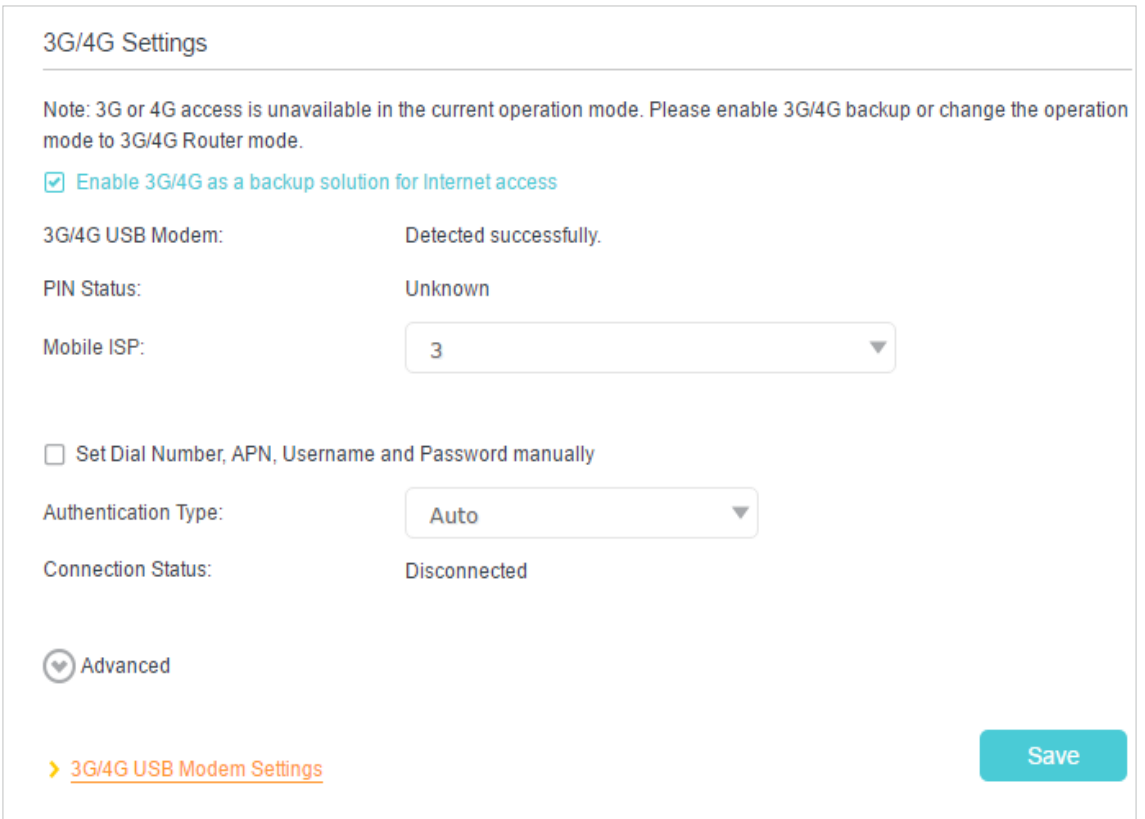
- As a backup solution for internet access
- As the only way to access the internet

9. 1. As a Backup Solution for Internet Access

Using 3G/4G network as a backup solution for internet access, your modem router will be directly connected to the 3G/4G network when the original network service fails.

Follow the steps below to set your 3G/4G network as a backup for internet access:

1. Plug your USB modem into the USB port of your modem router.
2. Visit http://tplinkmodem.net, then log in with your TP-Link ID or the password you set for the modem router.
3. Go to Advanced > USB Settings > 3G/4G Settings, and select the box of Enable 3G/4G as a backup solution for Internet access.



4. Verify that your 3G/4G USB Modem is successfully identified.

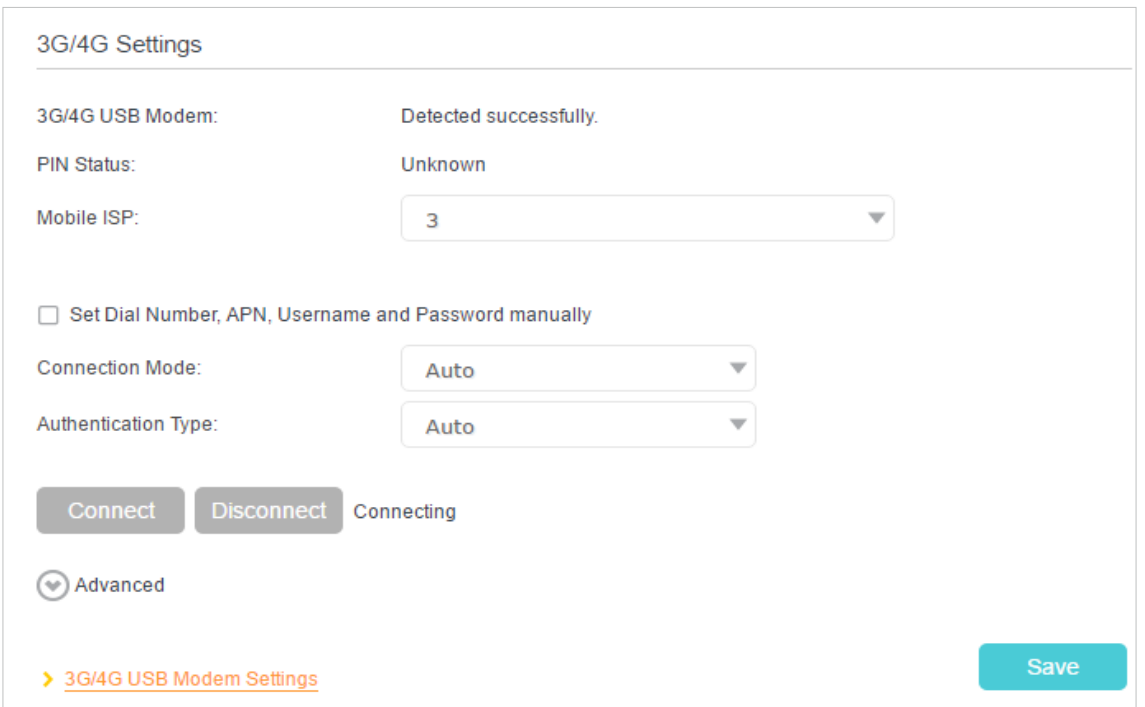
Note: The 3G/4G USB modem will not be identified if it is incompatible with the modem router. Find the 3G/4G Compatibility List on the web page: http://www.tp-link.com/en/comp-list.html. If your USB modem is incompatible, contact our technical support.

5. Verify that the modem router has correctly recognized your Mobile ISP. When your Mobile ISP is correct, you have successfully set 3G/4G network as a backup solution for internet access. Otherwise, select the box Set the Dial Number, APN, Username and Password manually and enter the information provided by your 3G/4G network service provider.
6. Click Advanced to have more configurations if needed.
7. Click Save to make the settings effective.

9. 2. As the Only Way to Access the Internet

If you want the 3G/4G network to be your only way to access the internet, follow the steps below to configure:

1. Plug your USB modem into the USB port of your modem router.
2. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the modem router.
3. Go to Advanced > Operation Mode and choose 3G/4G Router Mode.
4. Click Save and when the modem router is successfully rebooted, the settings will be effective.
5. Go to Advanced > USB Sharing > 3G/4G Settings.



6. Verify that your 3G/4G USB Modem is successfully detected.

Note: If your 3G/4G USB modem is incompatible with the modem router, it will not be identified. Find the 3G/4G Compatibility List on the web page: http://www.tp-link.com/en/comp-list.html. If your USB modem is incompatible, contact our technical support.

7. Verify that the modem router has correctly recognized your Mobile ISP. When your Mobile ISP is correct, you can enjoy the internet! Otherwise, select the box Set the Dial Number, APN, Username and Password manually and enter the information provided by your 3G/4G network service provider.
8. Select the Connection Mode. The default mode is Always on. You can choose Connect on demand or Connect manually.
   - If you choose Connect manually, you need to click the Connect or Disconnect button to manually turn on or off the internet.
   - If you choose Connect on demand, the network will automatically turn off when there is no internet request in Max Idle Time, and turn on again when you try to connect to the internet.
9. Click Advanced to have more configurations if needed.
10. Click Save to make the settings effective.

Chapter 10

Parental Controls

This function allows you to block inappropriate, explicit and malicious websites and limit internet access during specified time periods.

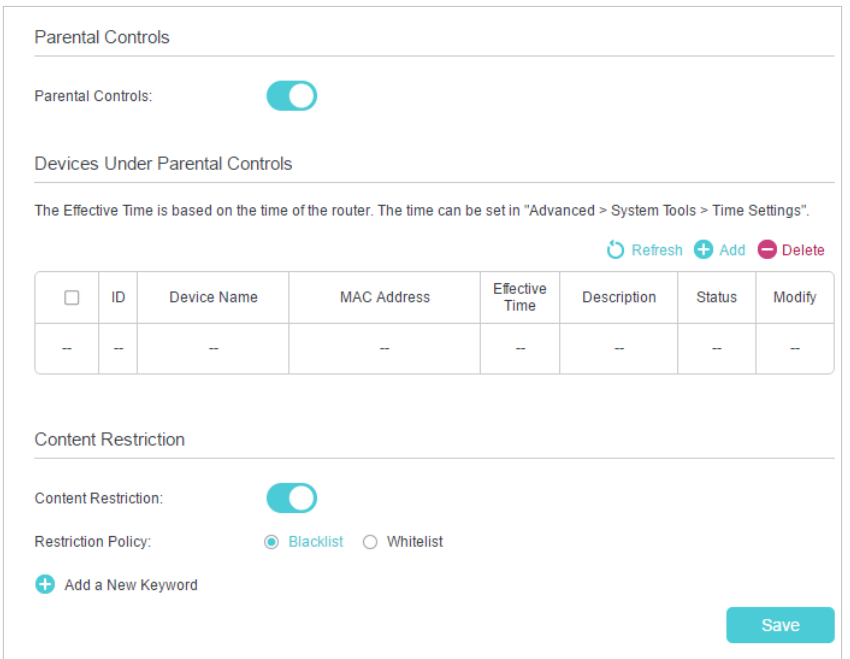
I want to:

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

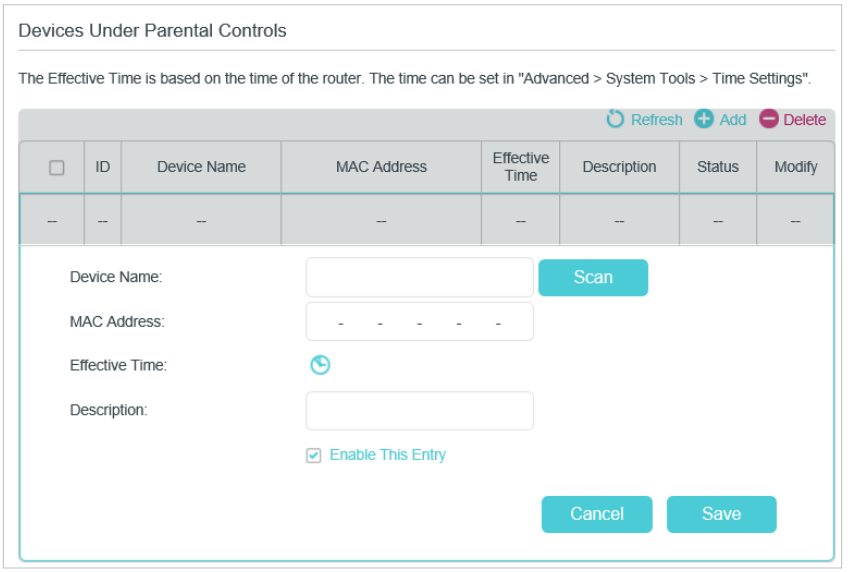
For example, I want to allow my children's devices (for example, a computer or a tablet) to access only www.tp-link.com and wikipedia.org from 18:00 (6PM) to 22:00 (10PM) on weekdays and not other time.

How can I do that?

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic or Advanced > Parental Controls and enable Parental Controls.

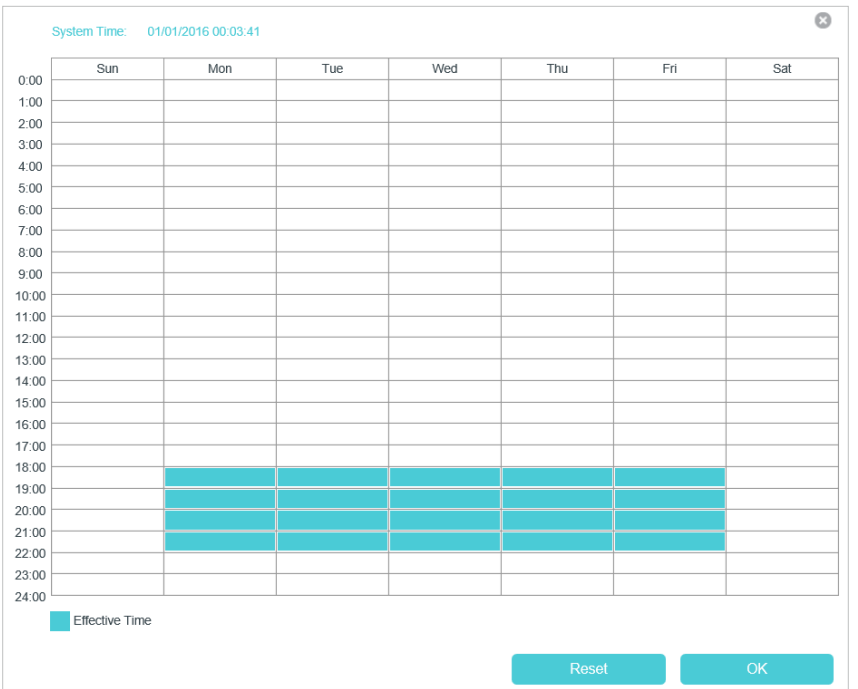


3. Click Add.



4. Click Scan, and add the device to be controlled. Or, enter the Device Name and MAC Address manually.
5. Click the icon to set the Effective Time. Drag the cursor over the appropriate cell(s) and click OK.

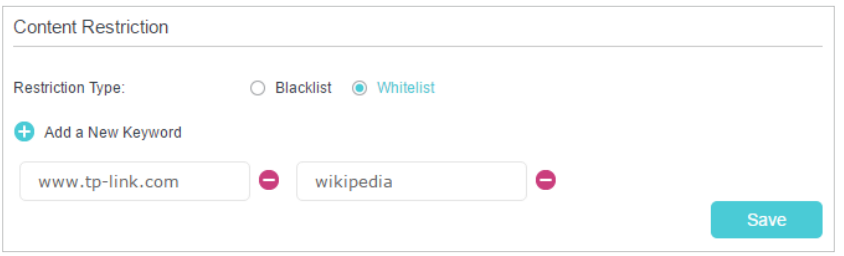
Note: The time of Parental Controls is based on the system time of the modem router. Please go to Advanced > System Tools > Time Settings to set the correct time..



6. Enter a Description for the entry.
7. Select the check box to enable this entry and click OK.
8. Enable Content Restriction and select the restriction mode.

1) In Blacklist mode, the controlled devices cannot access any websites containing the specified keywords during the Effective Time period.

2) In Whitelist mode, the controlled devices can only access websites containing the specified keywords during the Effective Time period.



9. Click Add a New Keyword. You can add many keywords for both Blacklist and Whitelist. Below are some sample entries to allow access.

   1) Enter a web address (for example, www.tp-link.com) or a web address keyword (for example, wikipedia) to only allow or block access to the websites containing that keyword.

   2) Specify the domain suffix (for example, .edu or .org) to allow access only to the websites with that suffix.

10. Enter the keywords or websites you want to add and click Save.

Done!

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

Chapter 11

QoS

This chapter explains how to create a QoS (Quality of Service) rule to prioritize your online activities, which minimizes the impact caused by heavy internet traffic.

It contains the following sections:

- Prioritize Internet Traffic with QoS
- Update the Database

11. 1. Prioritize Internet Traffic with QoS

QoS (Quality of Service) is designed to ensure the efficient operation of the network when network congestion is encountered.

I want to:

Specify priority levels for some devices or applications.

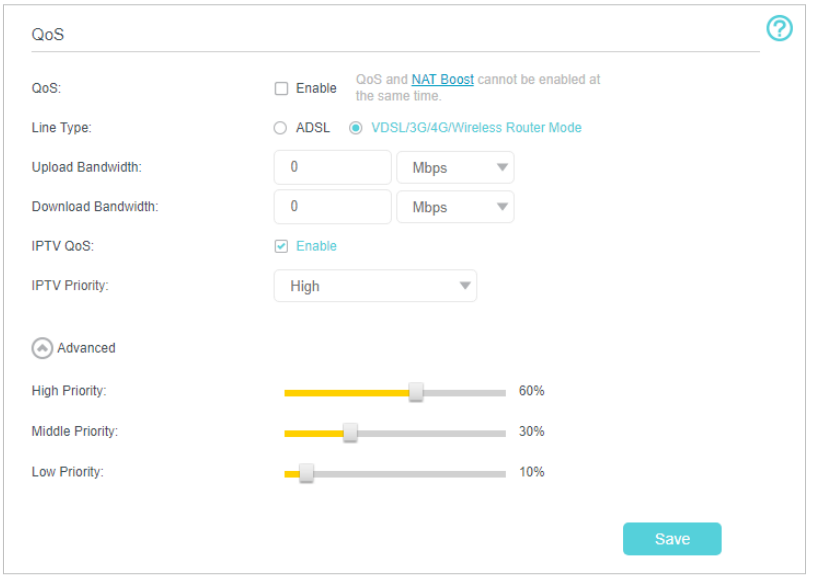
For example, I have several devices that are connected to my wireless network. I would like to set an intermediate speed on the internet for my phone.

How can I do that?

1. Enable QoS and set bandwidth allocation.
   1) Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
   2) Go to Advanced > QoS > Settings.
   3) Select Enable QoS.

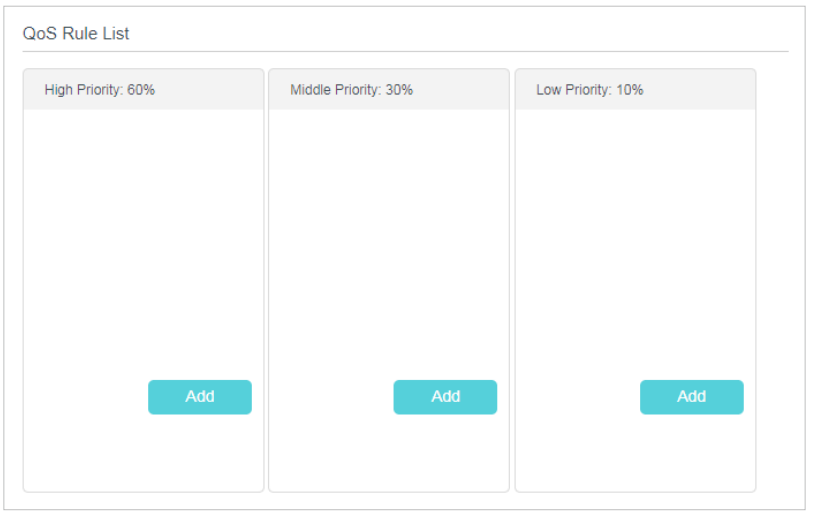
   Note:
   1. Qos and NAT Boost cannot be enabled at the same time. To disable NAT Boost, go to Advanced > NAT Forwarding > NAT Boost , unclick it and save your settings.
   2. NAT Boost ensure that the router has the best throughput. When NAT Boost is enabled, QoS and Traffic Monitor will be disabled automatically.

   4) Choose your Line Type.
   5) Input the maximum upload and download bandwidth provided by your internet service provider. 1Mbps equals to 1000Kbps.
   6) If you want to prioritize the IPTV traffic, select Enable, the IPTV Priority will be high.
   7) Click Advanced and drag the scroll bar to set the bandwidth priority percentage.
   8) Click Save.

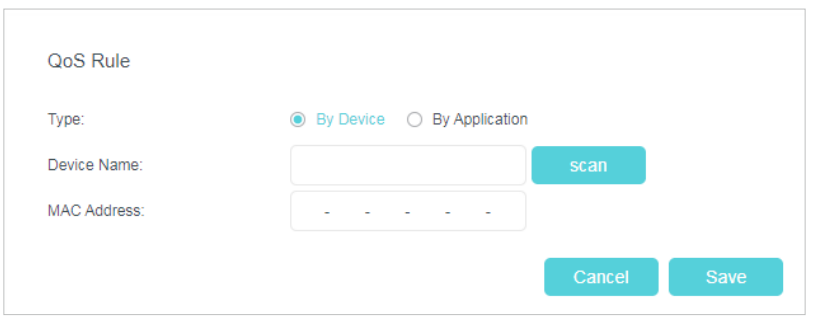


2. Add a middle priority QoS rule for the phone.

1) Click Add in the Middle Priority area.



2) Select By Device and click Scan, then choose the respective device from the list.



3) Click Save.

3. Refer to the steps above to apply other QoS rules if any.

Note:

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

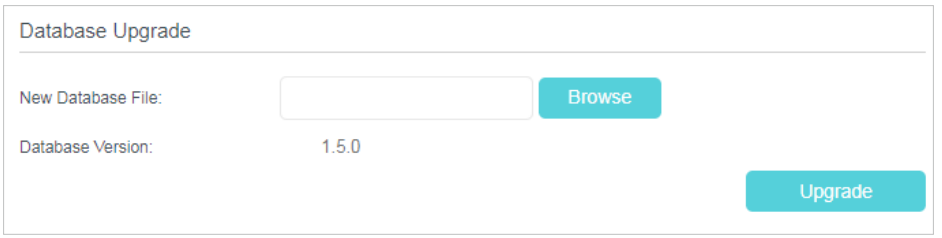
Done!

Now QoS is implemented to prioritize internet traffic.

11. 2. Update the Database

This function can help to add or update the applications 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 the database. 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://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > QoS > Database. Click Browse to select the database upgrade file, and then click Upgrade. Wait until the upgrade is complete and do not operate the router during the process.



Chapter 12

Network Security

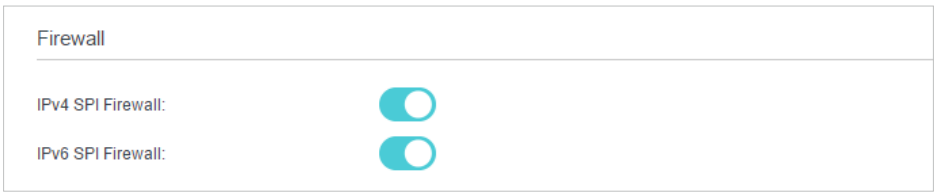
This chapter guides you on how to protect your home network from unauthorized users by implementing these network security functions. You can block or allow specific client devices to access your wireless network using MAC Filtering, or using Access Control for wired and wireless networks, or you can prevent ARP spoofing and ARP attacks by using IP & MAC Binding and you can protect your IPv6 network by preventing access from the internet using IPv6 Firewall.

- Firewall & DoS Protection
- Service Filtering
- Access Control
- IP & MAC Binding
- IPv6 Firewall

12. 1. Firewall & DoS Protection

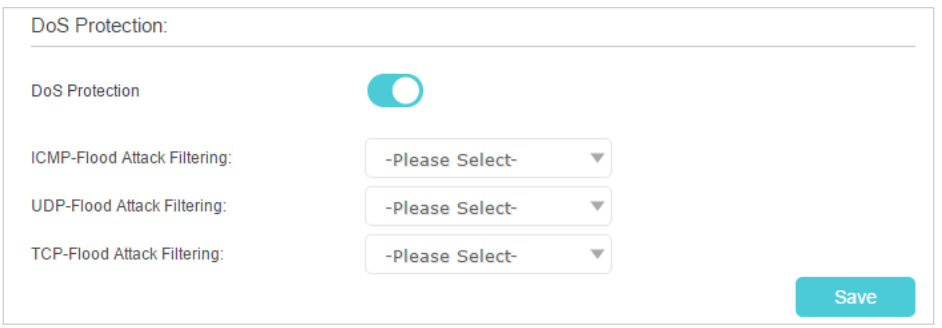
The SPI (Stateful Packet Inspection) Firewall and DoS (Denial of Service) Protection protect the router from cyber attacks.

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 settings.



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.

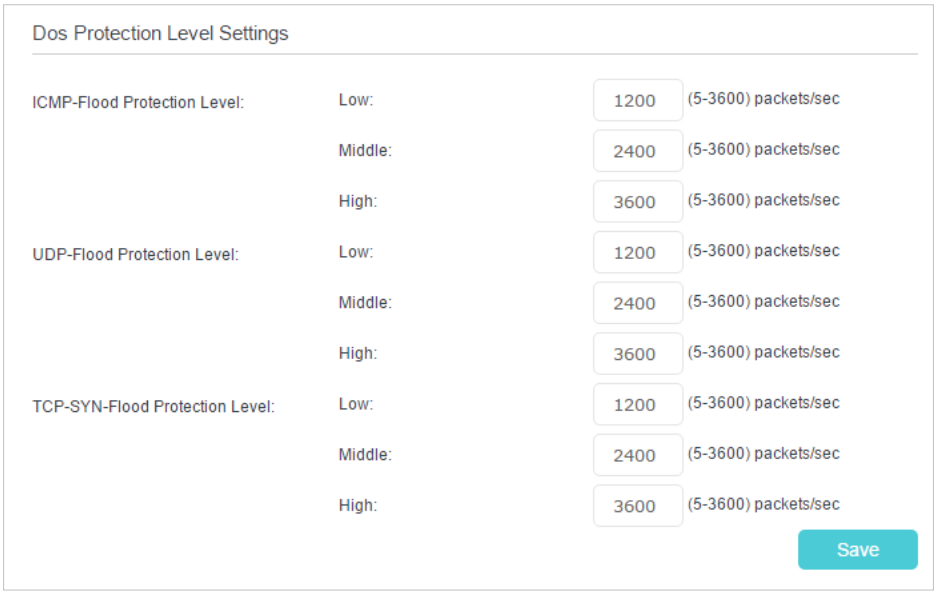
1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Security > Firewall & DoS Protection.



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

Tips:

1. The level of protection is based on the number of traffic packets. Specify the level at DoS Protection Level Settings.



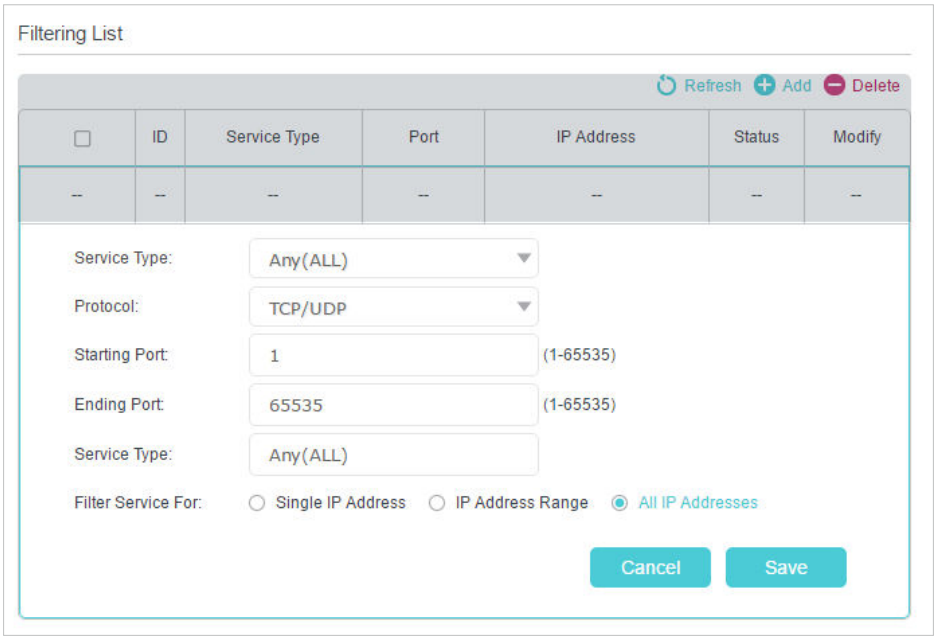
2. The protection will be triggered immediately when the number of packets exceeds the preset threshold value, and the vicious host will be displayed in the Blocked DoS Host List.



12. 2. Service Filtering

With Service Filtering, you can prevent certain users from accessing the specified service, and even block internet access completely.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Security > Service Filtering.
3. Toggle on Service Filtering.
4. Click Add.



5. Select a Service Type from the drop-down list and the following four fields will be auto-populated. Select Custom when your desired service type is not listed, and enter the information manually.
6. Specify the IP address(es) that this filtering rule will apply to.
7. Click Save.

Note: If you want to disable this entry, click the icon.

12. 3. Access Control

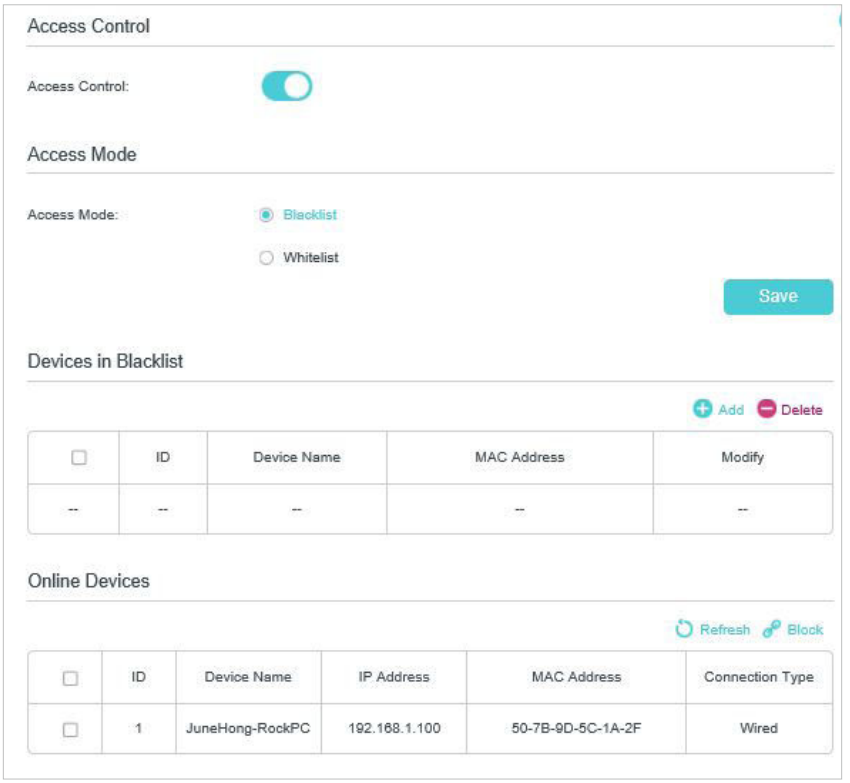
Access Control is used to block or allow specific client devices to access your network (via wired or wireless) based on a list of blocked devices (Blacklist) or a list of allowed devices (Whitelist).

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://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Security > Access Control and enable Access Control.



3. 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.

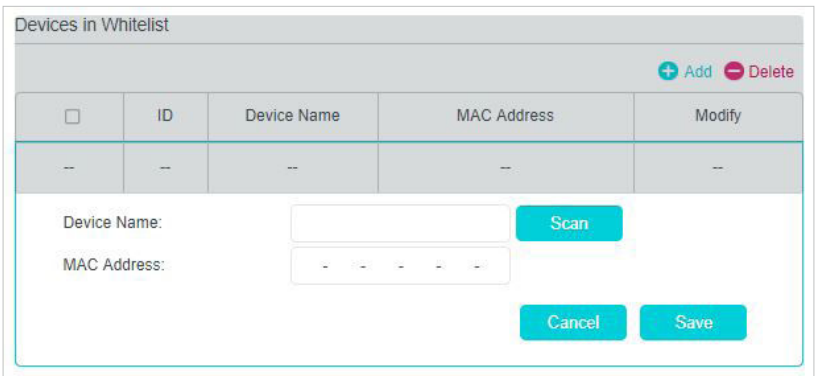
2) Select the device(s) to be blocked in the Online Devices table.

3) Click Block above the Online Devices 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.



1) Click San and the Device Name and MAC Address will be automatically filled in. Or enter the Device Name and MAC Address manually.

2) Click Save.

Done!

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

12. 4. IP & MAC Binding

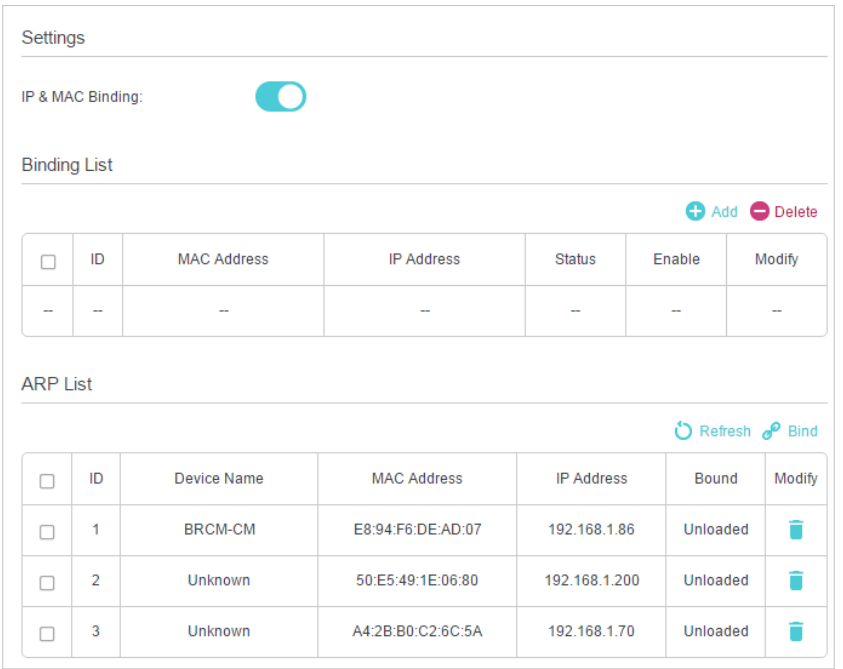
IP & MAC Binding, namely, ARP (Address Resolution Protocol) Binding, is used to bind a network device's IP address to its MAC address. This will prevent ARP spoofing and other ARP attacks by denying network access to a device with a matching IP address in the Binding list, but an unrecognized MAC address.

I want to:

Prevent ARP spoofing and ARP attacks.

How can I do that?

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



3. Bind your device(s) according to your needs.

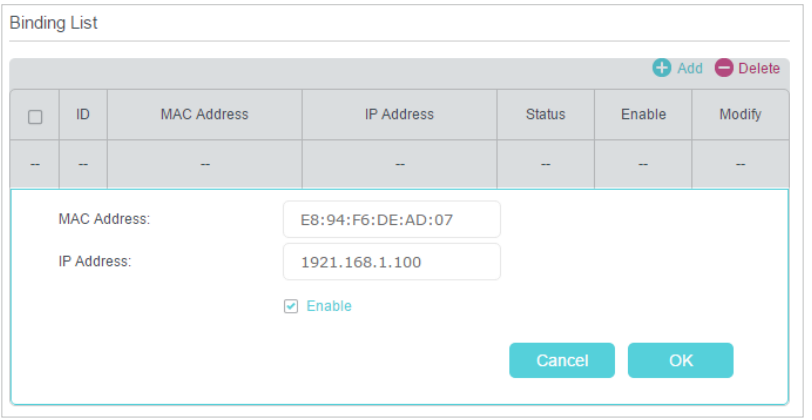
To bind the connected device(s)

1) Select the device(s) to be bound in the ARP List.

2) Click Bind to add to the Binding List.

To bind the unconnected device

1) Click Add.



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

3) Select the check box to enable the entry and click OK.

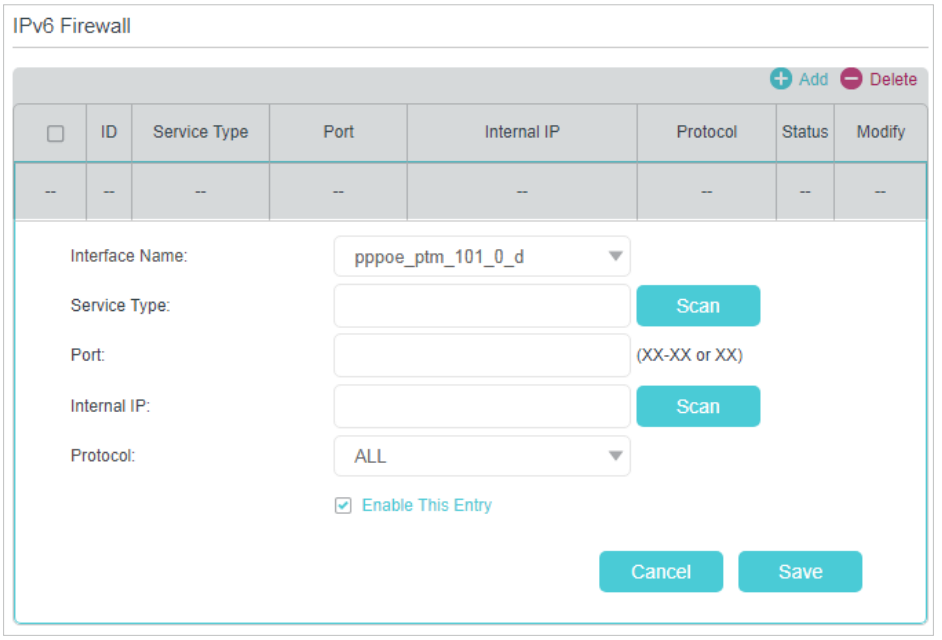
Done!

Enjoy the internet without worrying about ARP spoofing and ARP attacks.

12. 5. IPv6 Firewall

IPv6 Firewall protects your IPv6 network by preventing access from the internet. However, when you are hosting a service, such as a file sharing server in your local network, you can choose to allow access to the server from the internet by adding entries on this page. This feature is available only when you've set up an IPv6 connection.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Security > IPv6 Firewall.
3. Click Add.



4. Select an interface name from the drop-down list. Interface names are names of the internet connections you have set up.
5. Click Scan to select a service from the list to automatically populate the Port field with an appropriate port number. It is recommended to keep the default Port if you are unsure about which one to use. If the service is not listed, manually enter the Service Type and the Port number (e.g., 21 or 21-25).
6. Click Scan to select the local host device running the service. If the device is not listed, enter its global IPv6 address in the Global IPv6 Address field
7. Select a protocol for the service from the drop-down list.
8. Select Enable This Entry and click Save.

Note: If you want to disable this entry, click the icon.

Chapter 13

NAT Forwarding

Modem router's NAT (Network Address Translation) feature makes the devices in the LAN use the same public IP address to communicate in 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.

The modem router can use a forwarding feature to remove the isolation of NAT and allow external internet hosts to intuitively communicate with the devices in the local network, thus enabling some special features.

TP-Link modem 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. The modem router also has NAT Boost feature to ensure that the router has the best throughput.

This chapter contains the following sections:

- Speed Up Internet Connections through NAT Boost
- Translate Address and Port by ALG
- Share Local Resources over the Internet by Virtual Server
- Open Ports Dynamically by Port Triggering
- Make Applications Free from Port Restriction by DMZ
- Make Xbox Online Games Run Smoothly by UPnP

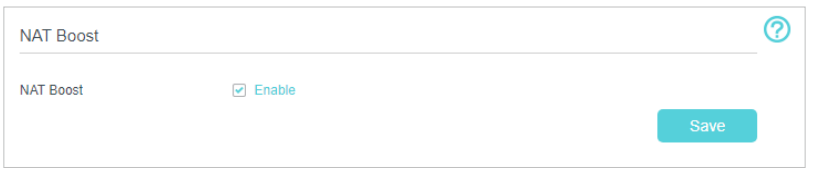
13. 1. Speed Up Internet Connections through NAT Boost

NAT Boost is designed to speed up Internet connections. It ensures that the router has the best throughput.

Note:

NAT Boost, QoS, and Traffic Monitor cannot be enabled simultaneously. When NAT Boost is enabled, QoS and Traffic Monitor will be disabled automatically.

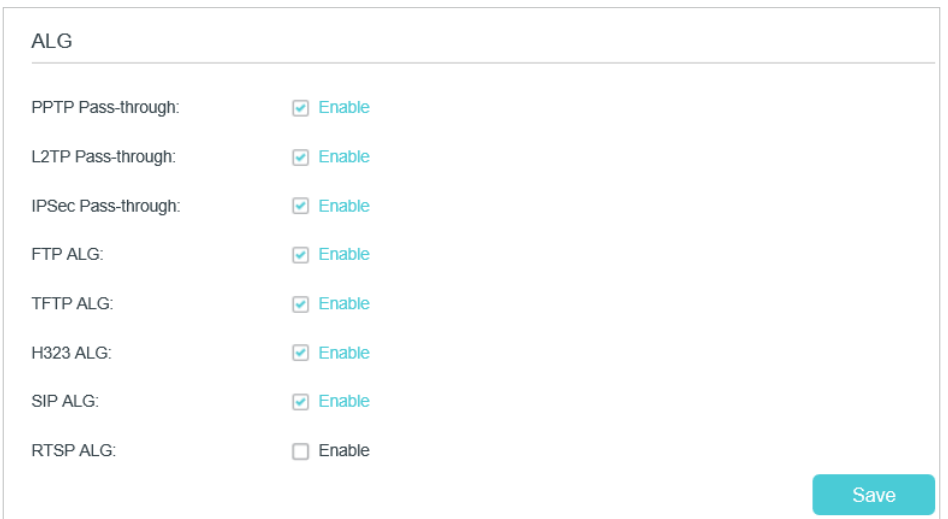
1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > NAT Forwarding > NAT Boost.
3. Enable NAT Boost and click Save.



13. 2. Translate Address and Port by ALG

ALG (Application Layer Gateway) allows customized NAT (Network Address Translation) traversal filters to be plugged into the gateway to support address and port translation for certain application layer “control/data” protocols: FTP, TFTP, H323 etc. Enabling ALG is recommended.

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



- PPTP Pass-through: If enabled, it allows Point-to-Point sessions to be tunneled through an IP network and passed through the router.
- L2TP Pass-through: If enabled, it allows Layer 2 Point-to-Point sessions to be tunneled through an IP network and passed through the router.
- IPSec Pass-through: If enabled, it allows IPSec (Internet Protocol Security) to be tunneled through an IP network and passed through the router. IPSec uses cryptographic security services to ensure private and secure communications over IP networks.
- FTP ALG: If enabled, it allows FTP (File Transfer Protocol) clients and servers to transfer data via NAT.
- TFTP ALG: If enabled, it allows TFTP (Trivial File Transfer Protocol) clients and servers to transfer data via NAT.
- H323 ALG: If enabled, it allows Microsoft NetMeeting clients to communicate via NAT.
- SIP ALG: If enabled, it allows clients communicate with SIP (Session Initiation Protocol) servers via NAT.
- RTSP ALG: If enabled, it allows RTSP (Real-Time Stream Protocol) clients and servers to transfer data via NAT.

13. 3. Share Local Resources over the Internet by Virtual Server

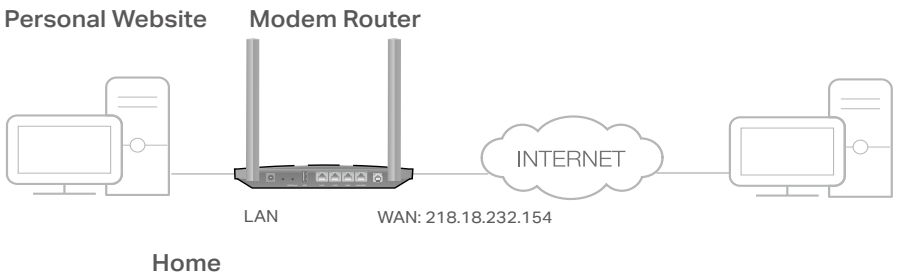
When you build up a server in the local network and want to share it on the internet, Virtual Server can realize the service and provide it to the internet users. At the same time virtual server can keep the local network safe as other services are still invisible from the internet.

Virtual server 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:

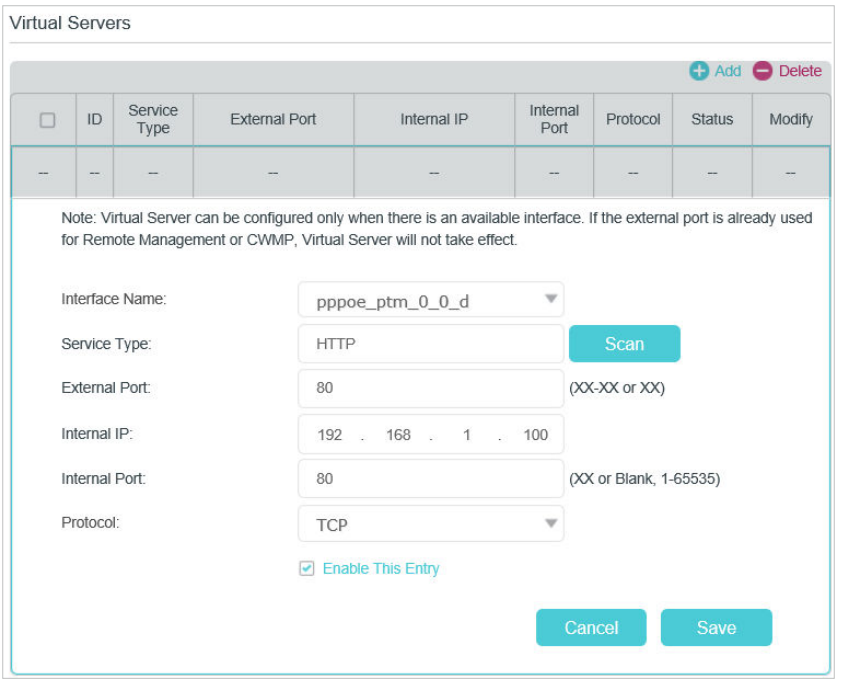
Share my personal website I've built in a local network with my friends through the internet.

For example, the personal website has been built on my home PC (192.168.1.100). I hope that my friends can visit my website. The PC is connected to the modem 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 192.168.1.100.
2. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > NAT Forwarding > Virtual Servers, click Add.



4. Click Scan, and choose HTTP. The external port, internal port and protocol will be automatically filled with contents. Enter the PC's IP address 192.168.1.100 in the Internal IP field.
5. Click Save to save the settings.

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 from a modem router. Please note that the External Port cannot be overlapped.

Done!

Internet users can enter http://WAN IP (in this example: http://218.18.232.154) to visit your personal website.

Tips:

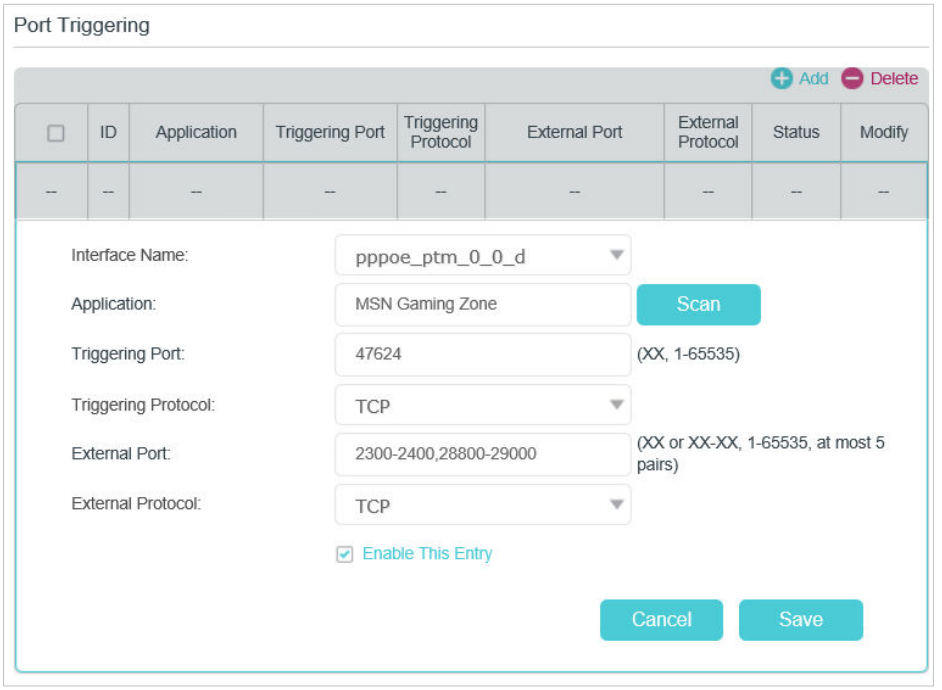
1. For a WAN IP that is assigned dynamically by ISP, it is recommended to apply and register a domain name for the WAN by DDNS, go to Set Up a Dynamic DNS Service Account for more information. Then you can use http://domain name to visit the website.
2. If you have changed the default External Port, you should use http://WAN IP: External Port or http://domain name: External Port to visit the website.

13. 4. 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 modem router can record the IP address of the host. When the data from the internet returns to the external ports, the modem 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, Quick Time 4 players, and so on.

Follow the steps below to configure the port triggering rules:

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > NAT Forwarding > Port Triggering and click Add.



3. Click Scan, and select the desired application. The triggering port and protocol, the external port and protocol will be automatically filled with contents. Here we take MSN Gaming Zone as an example.
4. Click Save to save the settings.

Tips:

1. You can add multiple port triggering rules according to your network need.
2. 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.

13. 5. 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, like IP camera and database software, you can set the PC to be a DMZ host.

Note:

DMZ is most applicable when you don't know which ports to open. When it 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 192.168.1.100.
2. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > NAT Forwarding > DMZ and select the checkbox to enable DMZ.



4. Enter the IP address 192.168.1.100 in the DMZ Host IP Address filed.
5. Click Save to save the settings.

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.

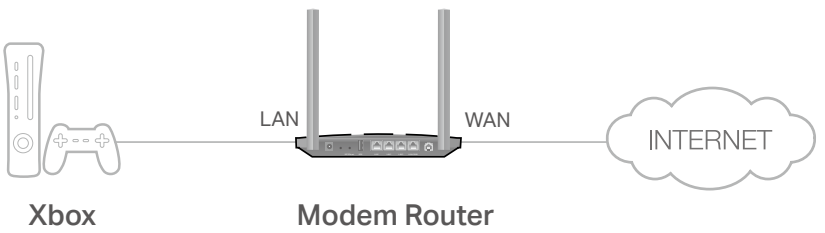
13. 6. Make Xbox Online Games Run Smoothly by UPnP

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 in the 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 such as multiplayer gaming, peer-to-peer connections, real-time communication (for example, VoIP or telephone conference), or remote assistance.

Tips:

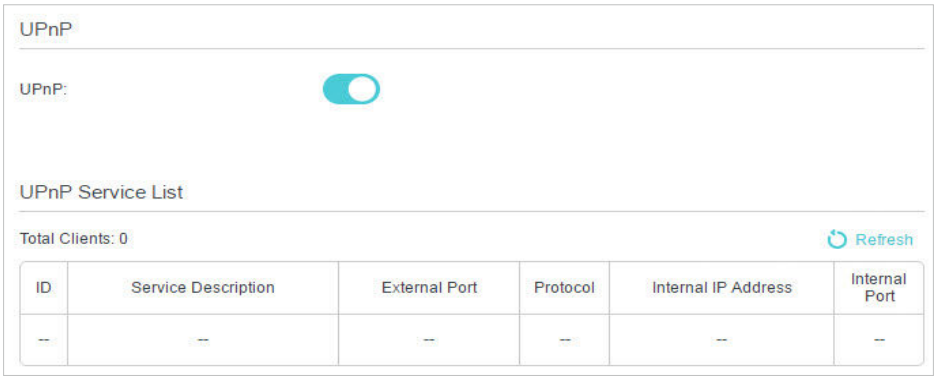
1. UPnP is enabled by default in this modem router.
2. Only the application supporting UPnP protocol can use this feature.
3. UPnP feature needs the support of operating system (e.g. Windows Vista/ Windows 7/ Windows 8, etc. Some of operating system need to install the UPnP components).

For example, when you connect your Xbox to the modem router which has connected to the internet to play online games, UPnP will send request to the modem 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://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router;
2. Go to Advanced > NAT Forwarding > UPnP and toggle on or off according to your needs.


UPnP
UPnP:
UPnP Service List
Total Clients: 0
Refresh
ID
Service Description
External Port
Protocol
Internal IP Address
Internal Port
--
--
--
--
--
--

Chapter 14

VPN Server

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

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

PPTP VPN is easier to use and its speed is faster. It's compatible with most operating systems and also supports mobile devices. However, its security is poor and packets may be cracked easily. PPTP VPN may be blocked by some ISPs.

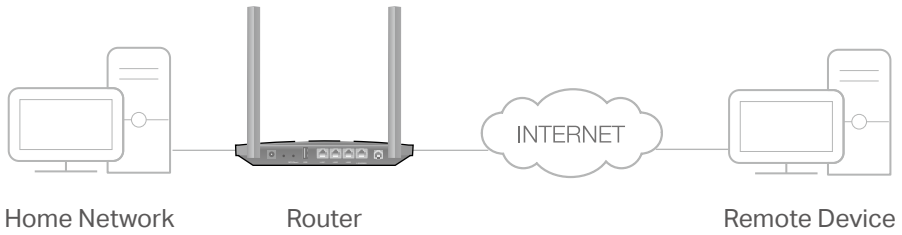
IPSec (IP Security) is a set of services and protocols defined by IETF (Internet Engineering Task Force) to provide high security for IP packets and prevent attacks.

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
- Use IPSec VPN to Access Your Home Network

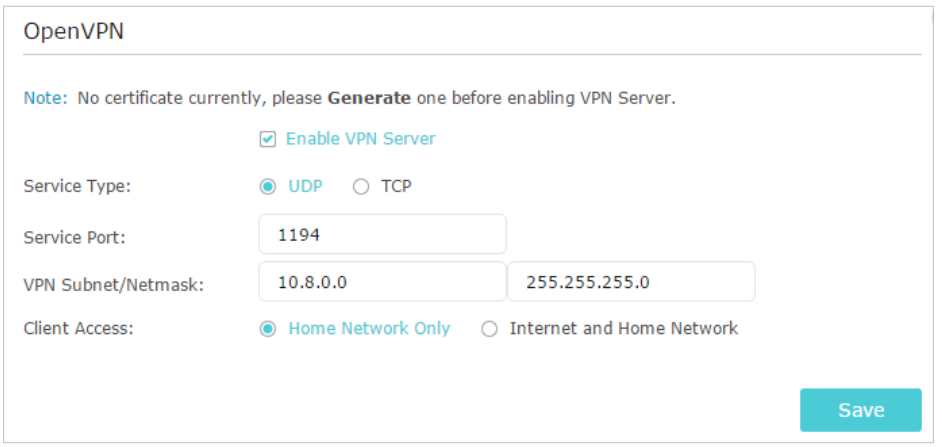
14. 1. Use OpenVPN to Access Your Home Network

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



Step 1. Set up OpenVPN Server on Your Router

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > VPN > OpenVPN, 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 your router's WAN port and synchronize your System Time via the internet.
- The first time you configure the OpenVPN Server, you may need to Generate a certificate before you enable the VPN Server.

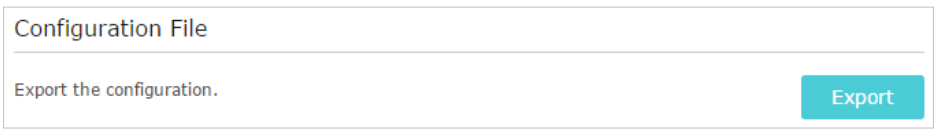
3. Select the Service Type (communication protocol) for OpenVPN Server: UDP, TCP.
4. Enter a VPN Service Port to which a VPN device connects. The port number should be between 1024 and 65535.
5. In the VPN Subnet/Netmask fields, enter the range of IP addresses that can be leased to the device by the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

6. Select your Client Access type. Select Home Network Only if you only want the remote device to access your home network; select Internet and Home Network if you also want the remote device to access the internet through the VPN Server.
7. Click Save.
8. Click Generate to get 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 which will be used by the remote device to access your router.



Step 2. Configure OpenVPN Connection on Your Remote Device

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

Note:
You need to install the OpenVPN client utility on each device that you want to be able to use the VPN function. Mobile devices should download a third-party app from Google Play or Apple App Store.

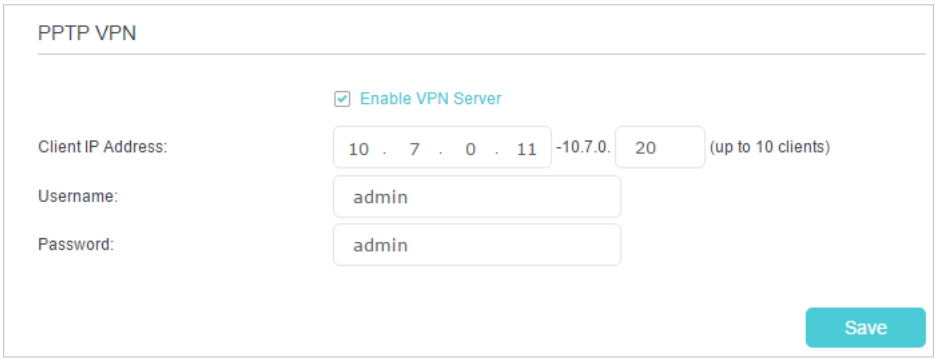
2. After the installation, copy the file exported from your router to the OpenVPN client utility's "config" folder (for example, C:\Program Files\OpenVPN\config on Windows). The path depends on where the OpenVPN client utility is installed.
3. Run the OpenVPN client utility and connect it to OpenVPN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

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

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

Step 1. Set up PPTP VPN Server on Your Router

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



Note:

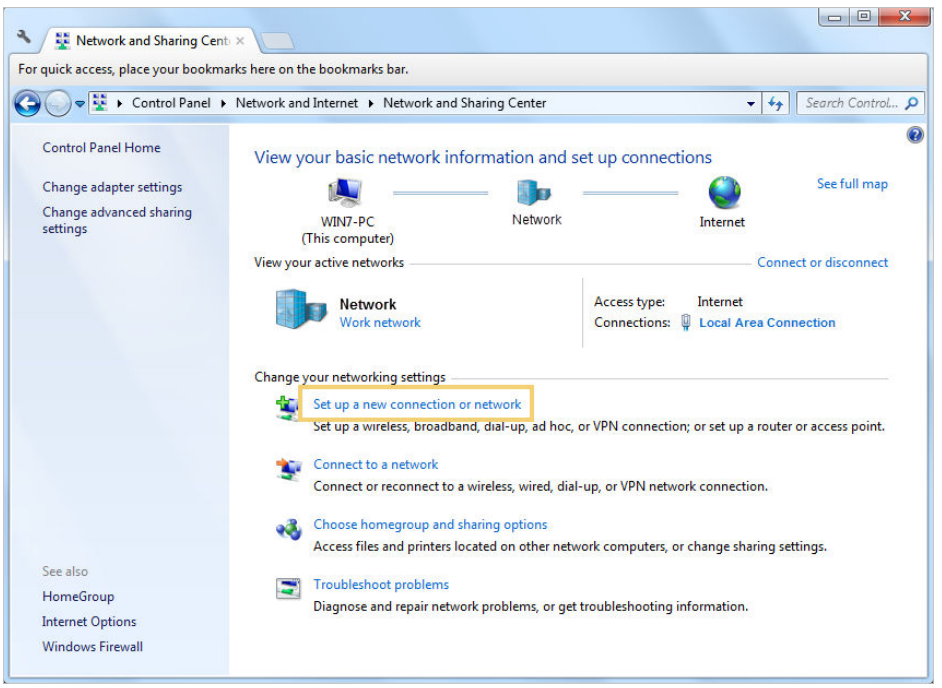
Before you enable VPN Server, we recommend you configure Dynamic DNS Service (recommended) or assign a static IP address for router's WAN port and synchronize your System Time with internet.

3. In the Client IP Address field, enter the range of IP addresses (up to 10) that can be leased to the devices by the PPTP VPN server.
4. Enter the Username and Password to authenticate clients to the PPTP VPN server.
5. Click Save.

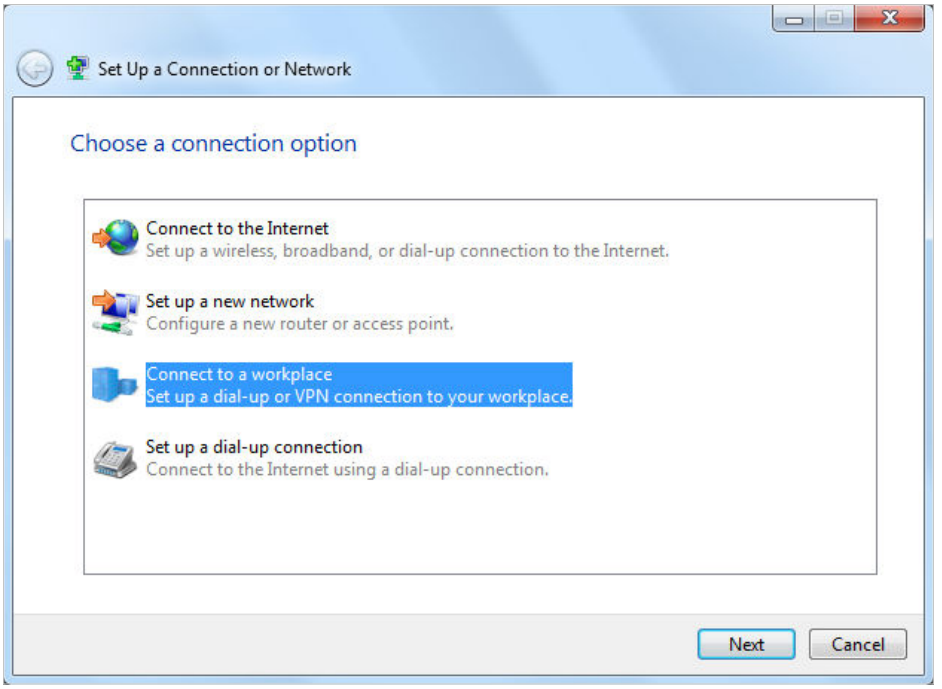
Step 2. Configure PPTP VPN Connection on Your Remote Device

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

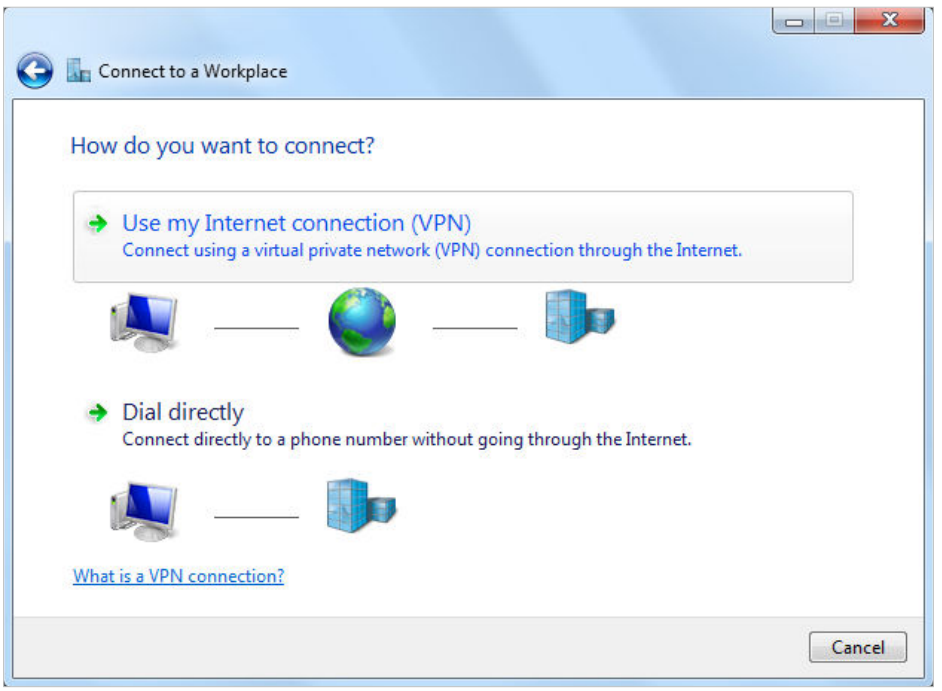
1. Go to Start > Control Panel > Network and Internet > Network and Sharing Center.
2. Select Set up a new connection or network.



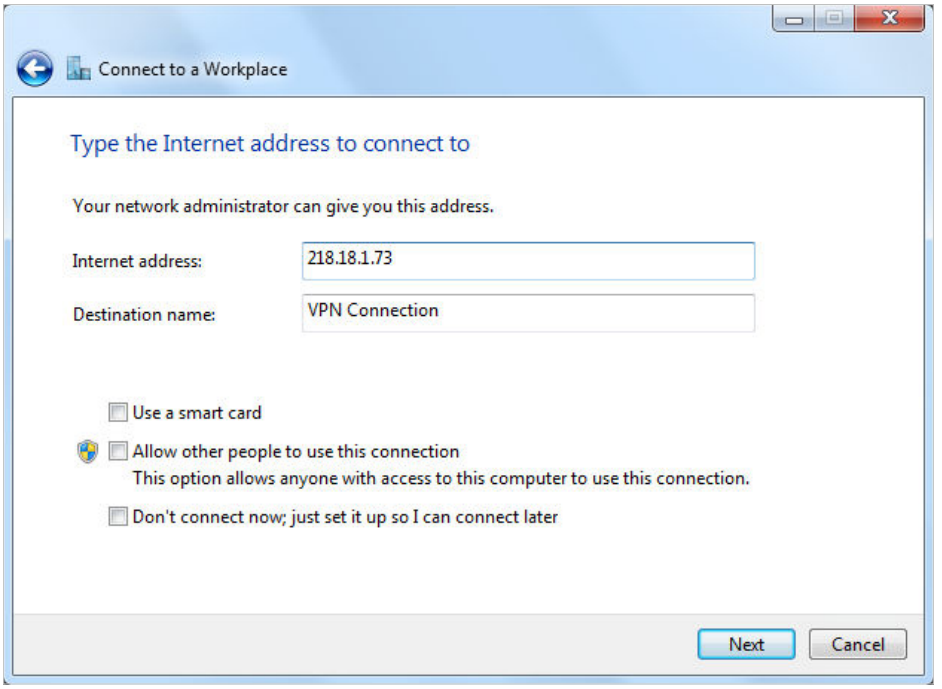
3. Select Connect to a workplace and click Next.



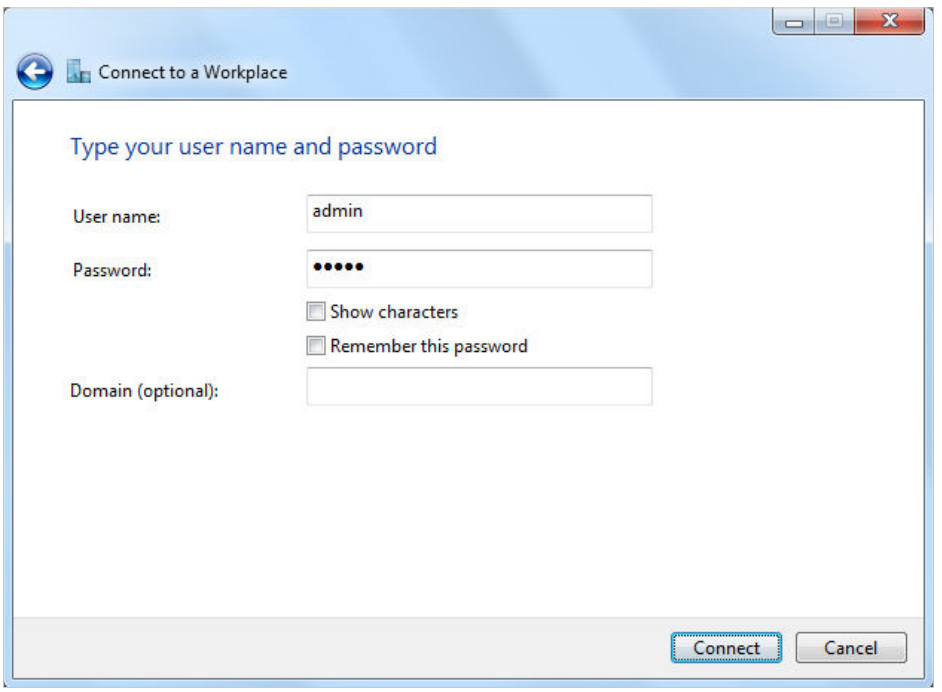
4. Select Use my Internet connection (VPN).



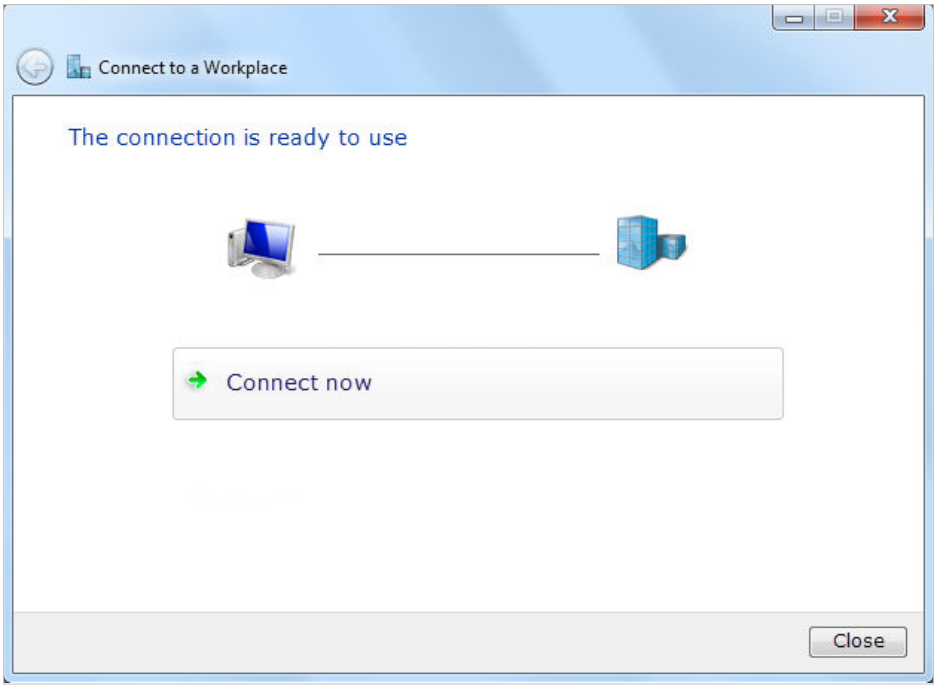
5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field. Click Next.



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



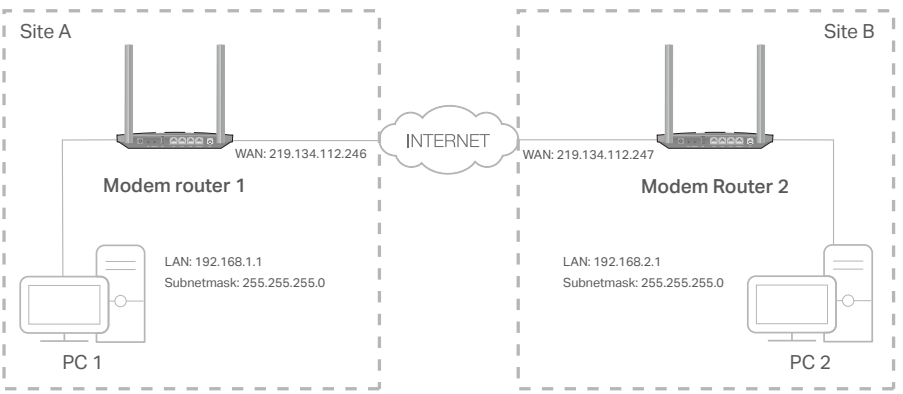
7. The PPTP VPN connection is created and ready to use.



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

IPSec VPN is used to create a VPN connection between local and remote networks. To use IPSec VPN, you should check that both local and remote routers support IPSec VPN feature. Then, follow the steps below to set up an IPSec VPN connection.

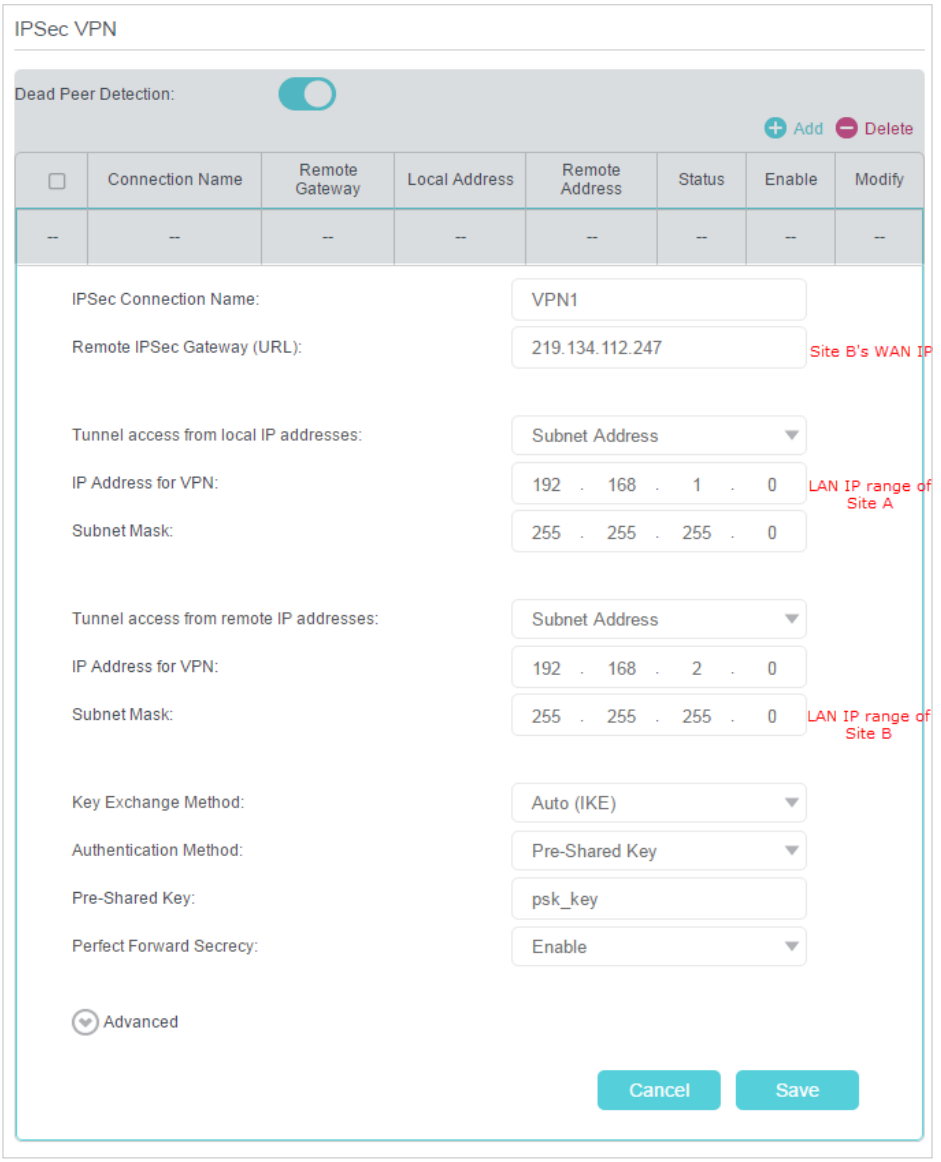
1. The typical VPN topology is here. Site A refers to local network, and Site B refers to the remote network that is to be connected. Record Site A and Site B's LAN and WAN IP addresses before you start configuration.



2. Configuration on Site A (local network).

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

   2) Go to Advanced > VPN > IPSec VPN, and click Add.



3) In the IPSec Connection Name column, specify a name.

4) In the Remote IPSec Gateway (URL) column, Enter Site B's WAN IP address.

5) Configure Site A's LAN.
In the Tunnel access from local IP addresses column, we take Subnet Address as an example. Input the LAN IP range of Site A in the IP Address for VPN column, and input Subnet Mask of Site A.

6) Configure Site B's LAN.
In the Tunnel access from remote IP addresses column, we take Subnet Address as an example. Input the LAN IP range of Site B in the IP Address for VPN column, and input Subnet Mask of Site B.

7) Select the Key Exchange Method for the policy. We select Auto(IKE) here.

8) Enter the Pre-Shared Key for IKE authentication. Then keep Perfect Forward Secrecy enabled.

Note: Make sure Site A and Site B use the same key.

9) Leave the Advanced Settings as default value. Then click Save.

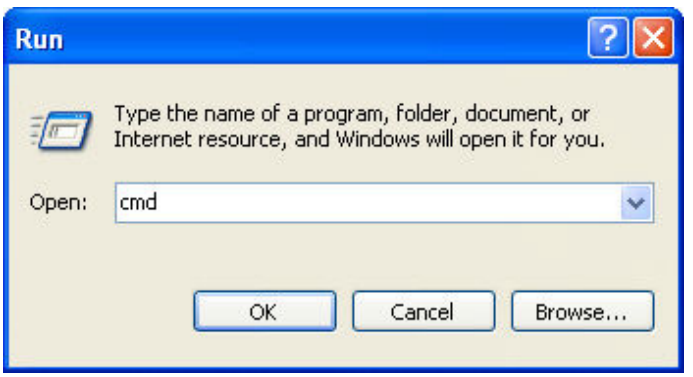
	Connection Name	Remote Gateway	Local Address	Remote Address	Status	Enable	Modify
☐	VPN1	219.134.112.247	192.168.1.0	192.168.2.0	Down		

Note: The Status column is Down after the configuration, and it will change to UP only when Site A and Site B are communicating via the VPN connection.

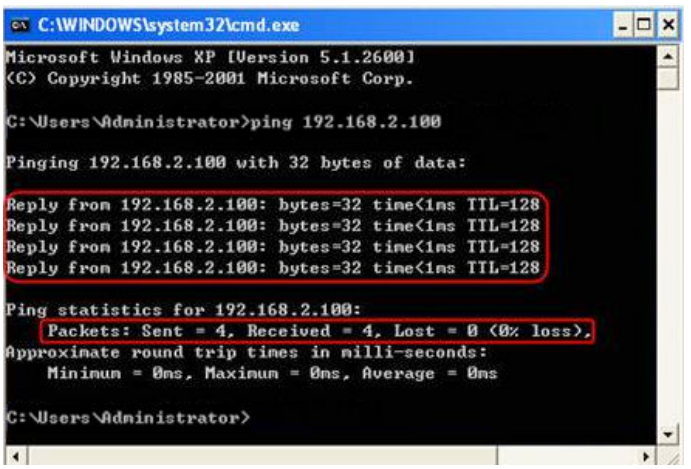
3. Configuration on Site B (remote network). Refer to step 2 configuration on Site A and make sure that Site A and Site B use the same pre-shared keys and Perfect Forward Secrecy settings.
4. Check the VPN connection. You can ping site B' LAN IP from your computer in site A to verify that the IPSec VPN connection is set up correctly.

Tips: To check the VPN connection, you can do the following.

1. On the host in Site A, press [Windows Logo] + [R] to open Run dialog. Input "cmd" and hit OK.



2. In the CLI window, type in "ping 192.168.2.x" ("192.168.2.x" can be IP address of any host in Site B). Then press [Enter].



3. If Ping proceeds successfully (gets replies from host in Site B), the IPSec connection is working properly now.

5. Now IPSec VPN is implemented to establish a connection.

Note:

1. The product supports a maximum of ten simultaneous connections.
2. If one of the site has been offline for a while, for example, if Site A has been disconnected, on Site B you need to click Disable and then click Enable after Site A back on line in order to re-establish the IPSec tunnel.

Chapter 15

Specify Your Network Settings

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

It contains the following sections:

- LAN Settings
- IPv6 LAN Settings
- Wireless Settings
- Set Up a Dynamic DNS Service Account
- Create Static Routes
- Set Up the IPv6 Tunnel

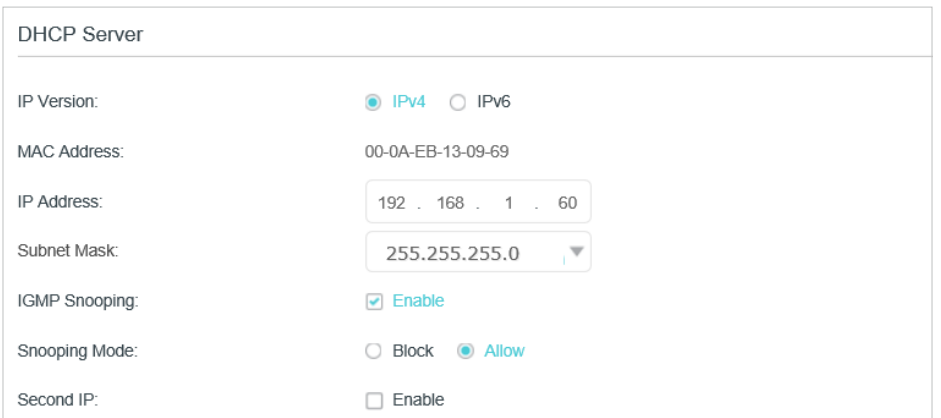
15. 1. LAN Settings

15. 1. 1. Change the LAN IP Address

The modem router is preset with a default LAN IP 192.168.1.1, which you can use to log in to its web management page. The LAN IP address together with the Subnet Mask also defines the subnet that the connected devices are on. If the IP address conflicts with another device in your local network or your network requires a specific IP subnet, you can change it.

Follow the steps below to change your IP address.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > LAN Settings page and select IPv4.



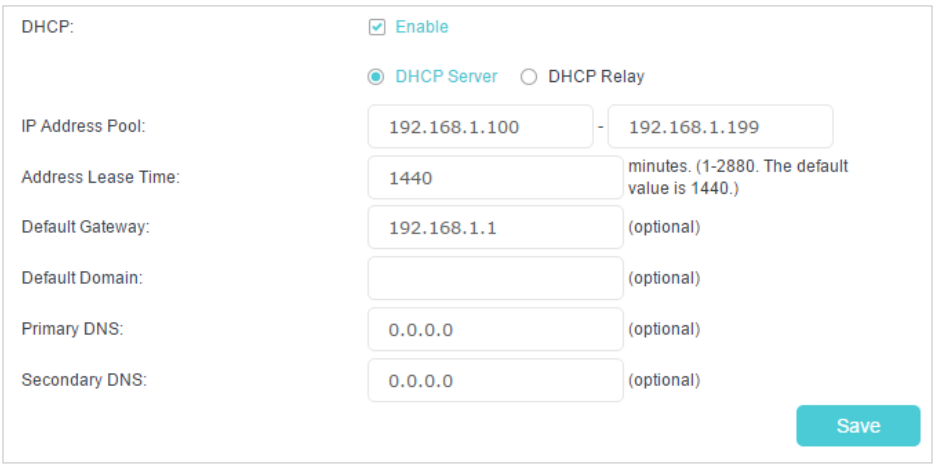
3. Type in a new IP Address appropriate to your needs.
4. Select the Subnet Mask from the drop-down list. The subnet mask together with the IP address identifies the local IP subnet.
5. Keep IGMP Snooping enabled by default. IGMP snooping is the process of listening to IGMP (Internet Group Management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

15. 1. 2. Use the Modem Router as a DHCP Server

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

Follow the steps below to configure DHCP server.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > LAN Settings page and select IPv4.



3. Select DHCP to enable the DHCP function and select DHCP Server.
4. Specify the IP Address Pool, the start address and end address must be on the same subnet with LAN IP. The modem router will assign addresses within this specified range to its clients. It is from 192.168.1.100 to 192.168.1.199 by default.
5. Enter a value for the Address Lease Time. The Address Lease Time is the amount of time in which a DHCP client can lease its current dynamic IP address assigned by the modem router. After the dynamic IP address expires, the user will be automatically assigned a new dynamic IP address. The default is 1440 minutes.
6. Keep the rest of the settings as default and click Save.

Note:

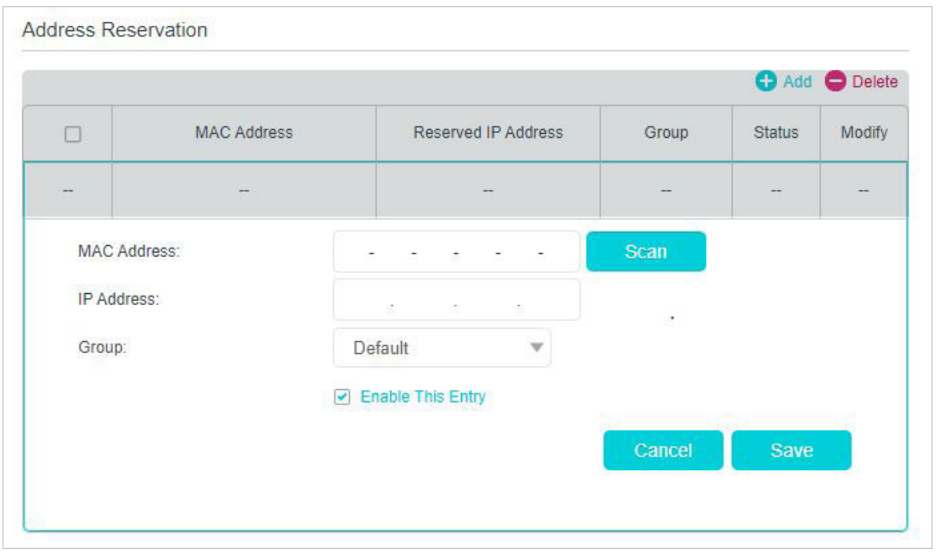
1. The modem router can be configured to work as a DHCP Relay. A DHCP relay is a computer that forwards DHCP data between computers that request IP addresses and the DHCP server that assigns the addresses. Each of the device's interfaces can be configured as a DHCP relay. If it is enabled, the DHCP requests from local PCs will be forwarded to the DHCP server that runs on WAN side.
2. You can also appoint IP addresses within a specified range to devices of the same type by using Condition Pool feature. For example, you can assign IP addresses within the range (192.168.1.50 to192.168.1.80) to Camera devices, thus facilitating the network management. Enable DHCP feature and configure the parameters according to your situation on the Advanced > Network > LAN Settings page.

15. 1. 3. Reserve LAN IP Addresses

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

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > LAN Settings page and select IPv4.
3. Scroll down to locate the Address Reservation table and click Add to add an address reservation entry for your device.



4. Click Scan and select the device for which you want to reserve IP address. Or enter the MAC Address manually.
5. Specify the IP Address which will be reserved by the router.
6. Check to Enable this entry and click Save to make the settings effective.

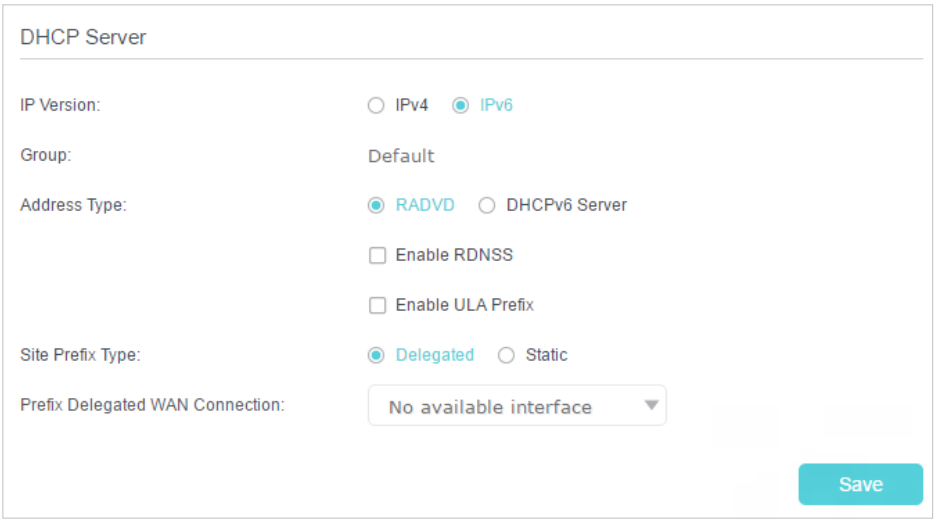
15. 2. IPv6 LAN Settings

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

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

15. 2. 1. Configure the RADVD Address Type

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > LAN Settings.
3. Select IPv6 to configure IPv6 LAN parameters.



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

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

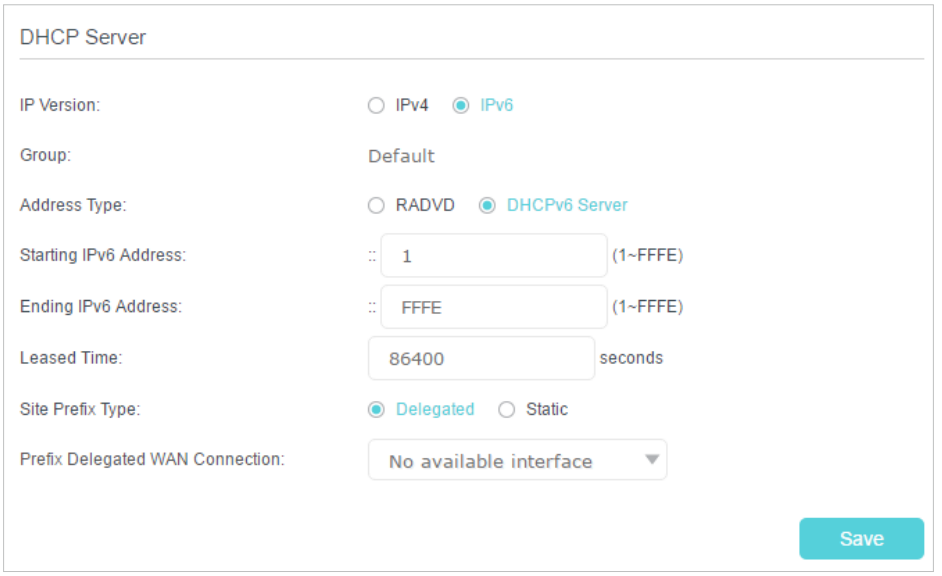
2) Keep Site Prefix Type as the default value Delegated. If your ISP has provided a specific IPv6 site prefix, select Static and enter the prefix.

3) Keep Prefix Delegated WAN Connection as the default value.

4. Click Save to make the settings effective.

15. 2. 2. Configure the DHCPv6 Server Address Type

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > LAN Settings.
3. Select IPv6 to configure IPv6 LAN parameters.



1) Select the DHCPv6 Server address type to make the modem router assign IPv6 addresses to hosts.

2) Specify the Start/End IPv6 Address for the IPv6 suffixes. The modem router will generate IPv6 addresses within the specified range.

3) Keep Leased Time as the default value.

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

5) Keep Prefix Delegated WAN Connection as the default value.

4. Click Save to make the settings effective.

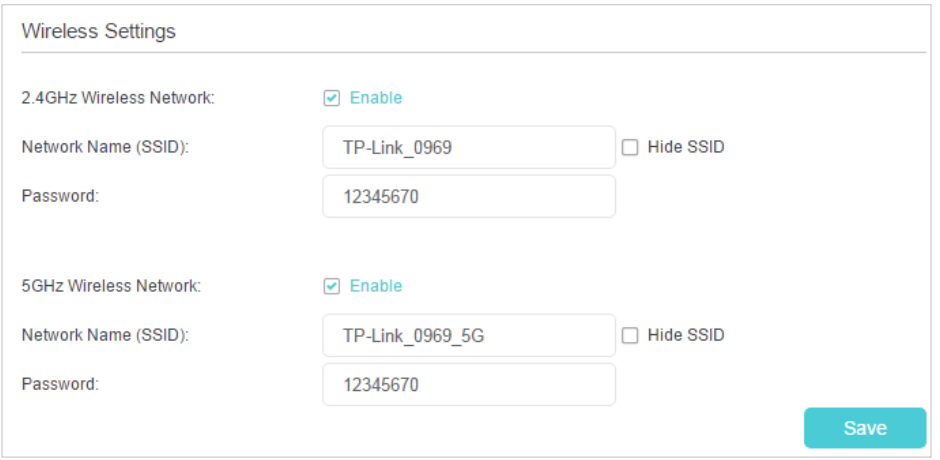
15. 3. Wireless Settings

15. 3. 1. Specify Basic Wireless Settings

The modem 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.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.

2. Go to Basic > Wireless page.



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

Enable the 2.4 GHz or 5GHz Wireless Network. If you don't want to use the wireless function, just deselect the box. If you disable the wireless function, all the wireless settings won't be effective.

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

Enter a new SSID using up to 32 characters. The value is case-sensitive.

Note:

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

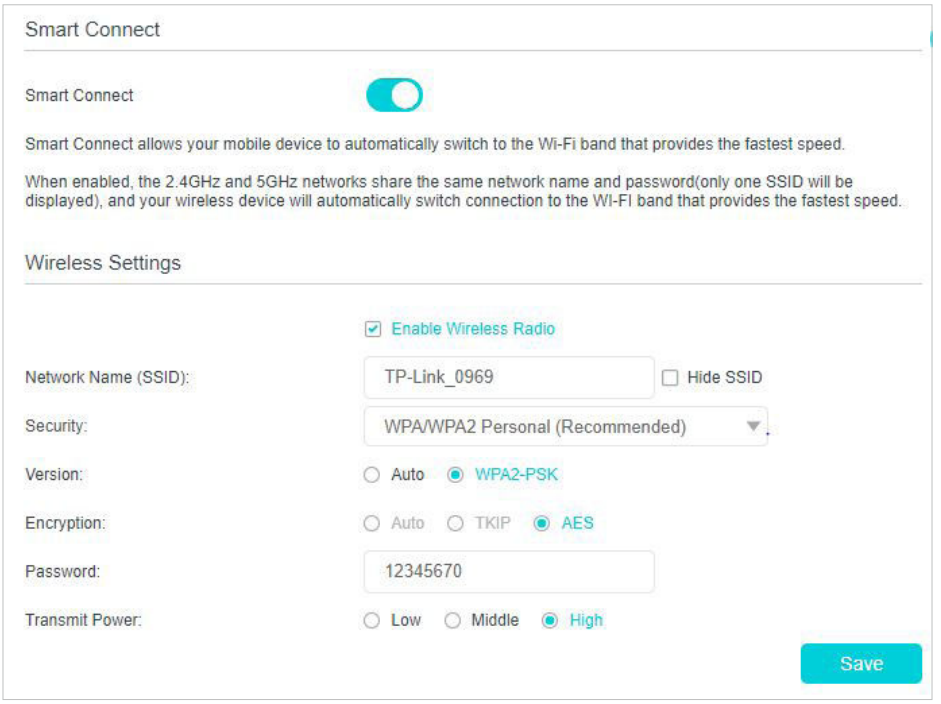
- **To hide SSID:**

Select Hide SSID, and your SSID will not be broadcast. Your SSID won't display on your wireless device when you scan for local wireless network list and you need to manually join the network.

- **To use the smart connect function**

The smart connect function lets you to enjoy a more high-speed network by assigning your devices to best wireless bands based on actual conditions to balance network demands.

1. Go to Advanced > Wireless > Wireless Settings page.
2. Enable Smart Connect.
3. Keep the default or set a new SSID and password, and click Save. This SSID and password will be applied both for 2.4GHz and 5GHz wireless networks.



- **To change the mode or channel:**

Go to Advanced > Wireless > Wireless Settings page and select the wireless network 2.4GHz or 5GHz.

Mode: Select the desired mode.

- 802.11n only: Select only if all of your wireless clients are 802.11n devices.
- 802.11gn mixed: Select if you are using both 802.11g and 802.11n wireless clients.
- 802.11bgn mixed: Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

Note: When 802.11n only mode is selected, only 802.11n wireless stations can connect to the modem router. It is strongly recommended that you select 802.11bgn mixed, and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the modem router.

- 802.11ac/n mixed (5GHz): Select if you are using both 802.11ac and 802.11n wireless clients.
- 802.11a/n/ac mixed (5GHz): Select if you are using a mix of 802.11a, 802.11n and 802.11ac wireless clients. It is strongly recommended that you select 11a/n/ac mixed.

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

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

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

- **To change the security option:**

1. Go to Advanced > Wireless > Wireless Settings page.
2. Select the wireless network 2.4GHz or 5GHz.
3. Select an option from the Security drop-down list. The router provides four options, None, WPA/WPA2 Personal (Recommended), WPA/WPA2 Enterprise, WEP. WPA2 uses the newest standard and the security level is the highest. We recommend you don't change the default settings unless necessary.

15. 3. 2. Use WPS for Wireless Connection

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

Method 1: Use the WPS button

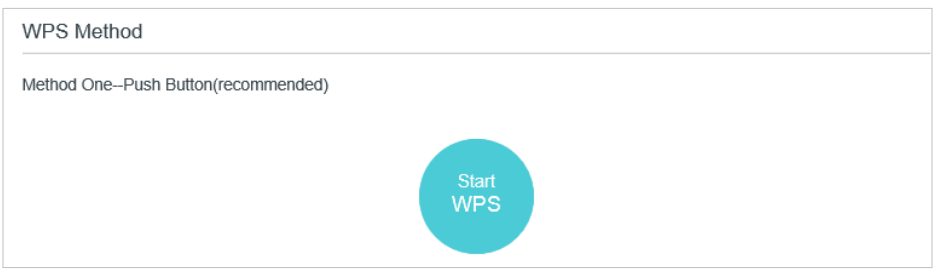
Use this method if your client device has a WPS button.

1. Press the WPS button the modem router for 1 second.
2. Press the WPS button of the client device directly.
3. The WPS LED flashes for about 2 minutes during the WPS process.
4. When the WPS LED is on, the client device has successfully connected to the modem router.

Method 2: Use the WPS button on the web management page

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Wireless > WPS page.



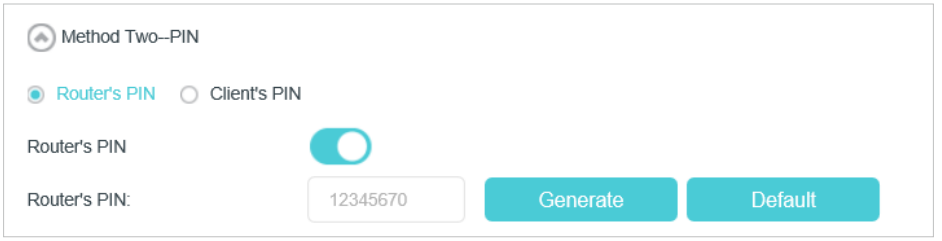
3. Click Start WPS on the page.
4. Press the WPS button of the client device directly.

5. The WPS LED of the router flashes for about 2 minutes during the WPS process.
6. When the WPS LED is on, the client device has successfully connected to the modem router.

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

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Wireless > WPS page. Click Method Two--PIN.



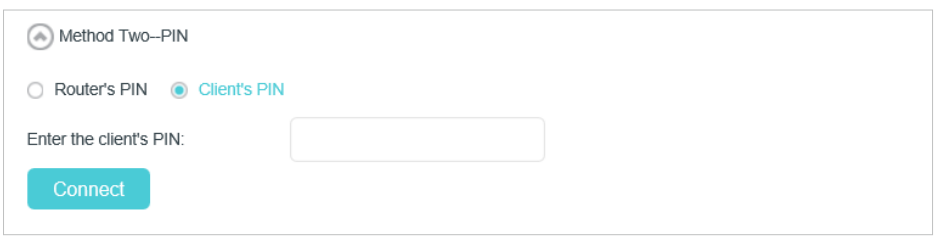
3. Take a note of the Current PIN of the modem router. You can also click the Generate button to get a new PIN.
4. On the client device, enter the modem router's PIN. (The default PIN is also printed on the label of the modem router.)
5. The WPS LED flashes for about two minutes during the WPS process.
6. When the WPS LED is on, the client device has successfully connected to the modem router.

Note:

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

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Wireless > WPS page. Click Method Two--PIN.

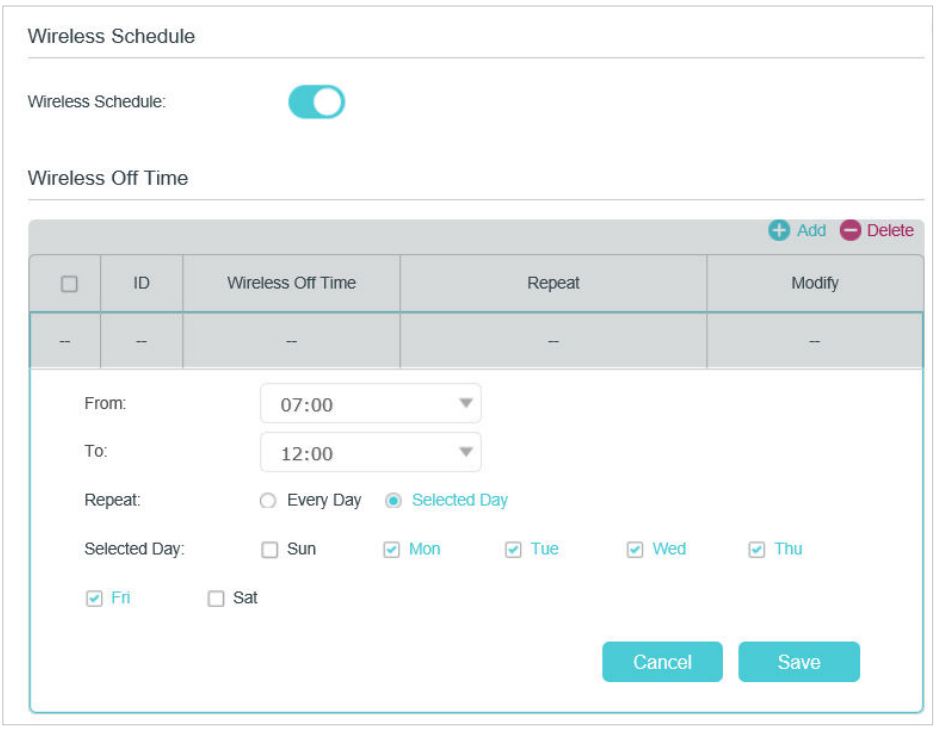


3. Select Client's PIN.
4. Enter the client device's PIN in the field. Then click the Connect button.
5. Connect successfully will appear on the above screen, which means the client device has successfully connected to the modem router.

15. 3. 3. Schedule Your Wireless Function

You can automatically turn off your wireless network (both 2.4GHz and 5GHz) when you do not need the wireless connection.

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Wireless > Wireless Schedule page.
3. Toggle on the button to enable the Wireless Schedule feature.



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

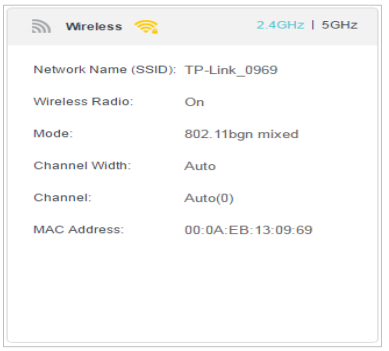
Note:

1. Make sure that the time of the router is correct before using this function. For details, refer to Set System Time.
2. The wireless LED (2.4GHz , 5GHz) will turn off if the corresponding wireless network is disabled.
3. The wireless network will be automatically turned on after the time period you set.

15. 3. 4. View Wireless Information

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Status page. You can see the Wireless box.
3. Select 2.4GHz or 5GHz to view the wireless details.



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

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

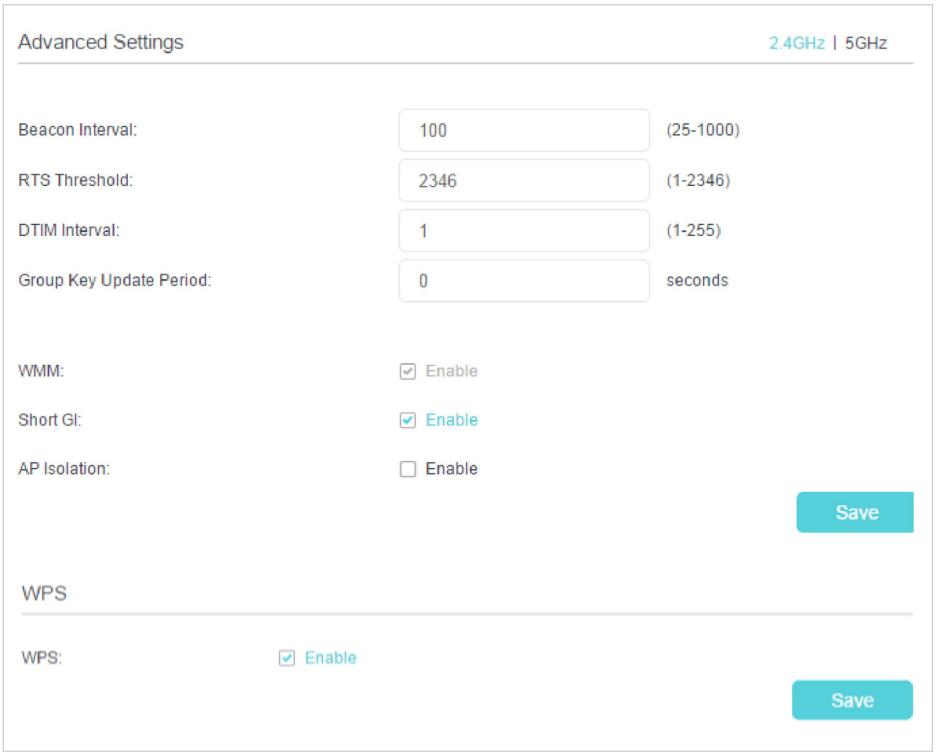
1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Wireless > Statistics page.
3. You can view the detailed information of the wireless clients, including its connected wireless band and security option as well as the packets transmitted.

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

15. 3. 5. Advanced Wireless Settings

Advanced wireless settings are for those who have a network concept. If you are not familiar with the settings on this page, it's strongly recommended that you keep the provided default values; otherwise it may result in lower wireless network performance.

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



- Beacon Interval: Enter a value between 25 and 1000 in milliseconds to determine the duration between which beacon packets are broadcasted by the router to synchronize the wireless network. The default is 100 milliseconds.
- RTS Threshold: Enter a value between 1 and 2346 to determine the packet size of data transmission through the router. By default, the RTS (Request to Send) Threshold size is 2346. If the packet size is greater than the preset threshold, the router sends Request to Send frames to a particular receiving station and negotiates the sending of a data frame, or else the packet will be sent immediately.
- DTIM Interval: Enter a value between 1 and 255 to determine the interval of the Delivery Traffic Indication Message (DTIM). 1 indicates the DTIM Interval is the same as Beacon Interval.
- Group Key Update Period: Enter the number of seconds to control the time interval for the encryption key automatic renewal. The default is 0, indicating no key renewal.
- WMM: This feature guarantees the packets with high-priority messages being transmitted preferentially. WMM is enabled compulsively under 802.11n or 802.11ac mode.
- Short GI: This feature is enabled by default and recommended to increase the data capacity by reducing the Guard Interval (GI) time.
- AP Isolation: Select this check box to enable the AP Isolation feature that allows you to confine and restrict all wireless devices on your network from interacting with each other, but still able to access the internet. AP isolation is disabled by default.

- WPS: Select this check box to enable the WPS feature. WPS (Wi-Fi Protected Setup) provides you with an easier approach to set up a security-protected Wi-Fi connection.

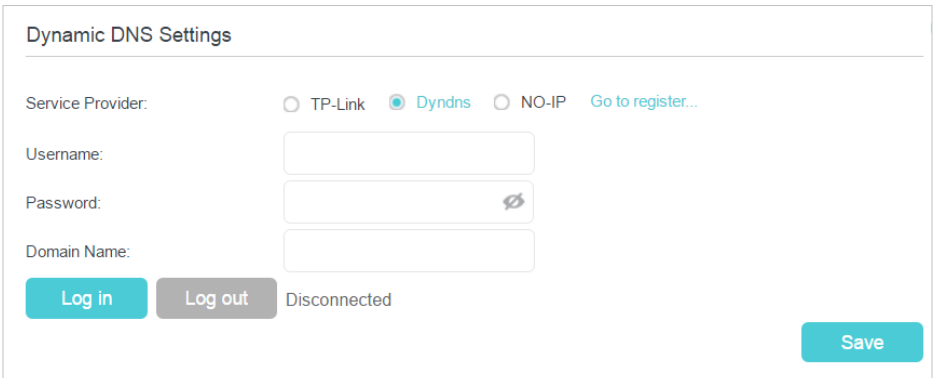
15. 4. Set Up a Dynamic DNS Service Account

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 modem router.

To set up DDNS, please follow the instructions below:

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > Dynamic DNS.
3. Select the DDNS service provider (TP-Link, Dyndns or NO-IP).
4. To use TP-Link DDNS service, you should log in with your TP-Link ID.
5. If you choose other DDNS service, you should also log in with your DDNS account, select a service provider and click Go to register ... Enter the username, password and domain name of the account (such as lisa.ddns.net).



6. Click Log in and Save.

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

15. 5. Create Static Routes

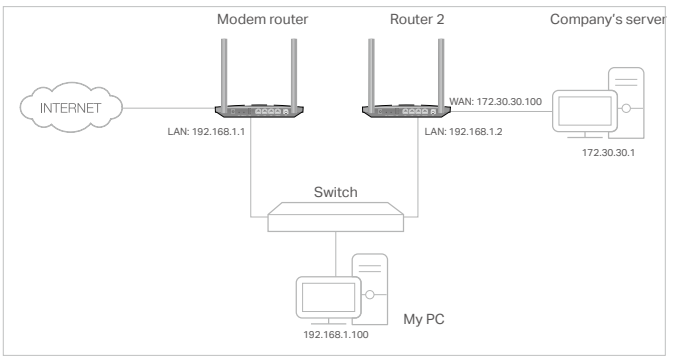
A static route is a pre-determined path that network information must travel to reach a specific host or network. Data from one point to another will always follow the same

path regardless of other considerations. Normal internet usage does not require this setting to be configured.

I want to:

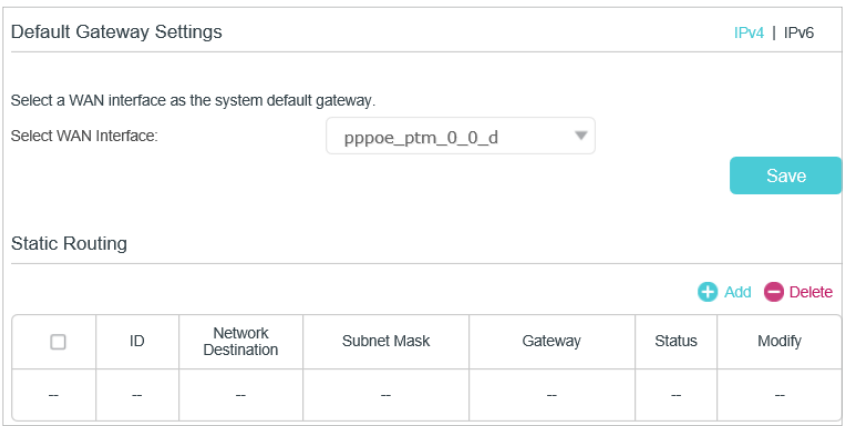
Visit multiple networks and multiple servers at the same time.

For example, in a small office, my PC can surf the internet, but I also want to visit my company's server. 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.

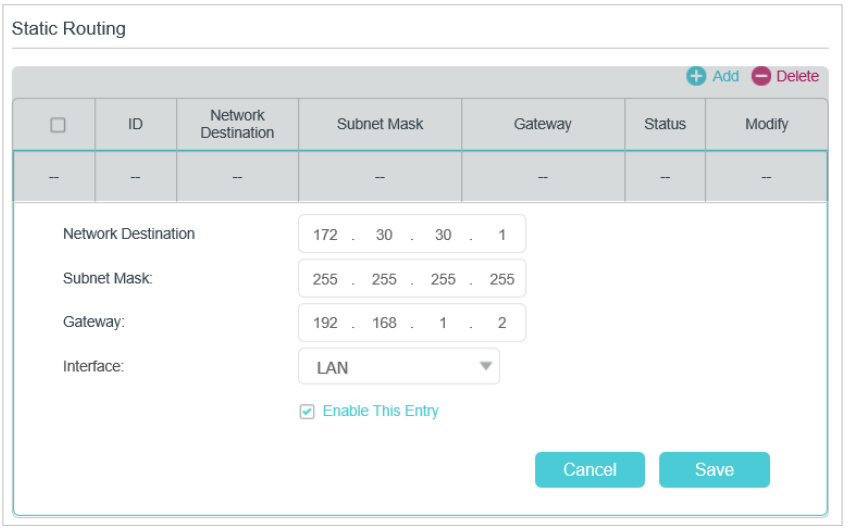


How can I do that?

1. Make sure the routers use different LAN IP addresses on the same subnet. Disable Router 2's DHCP function.
2. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
3. Go to Advanced > Network > Static Routing. Select your current WAN Interface and click Save.



4. Click Add to add a new static routing entry. Finish the settings according to the following explanations:



- Network Destination: The destination IP address that you want to assign to a static route. This IP address cannot be on the same subnet with the WAN IP or LAN IP of the router. 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.
- 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 192.168.1.2.
- 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.

5. Select the check box to enable this entry.
6. Click OK to save the settings.

Done!

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

15. 6. Set Up the IPv6 Tunnel

The IPv6 Tunnel feature helps you obtain IPv6 resources based on an IPv4 WAN connection or vice versa.

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

The modem router provides three tunneling mechanisms: 6to4, 6rd and DS-Lite. The way to set up 6rd and DS-Lite tunnel are similar.

15. 6. 1. Use the Public IPv6 Tunnel Service-6to4

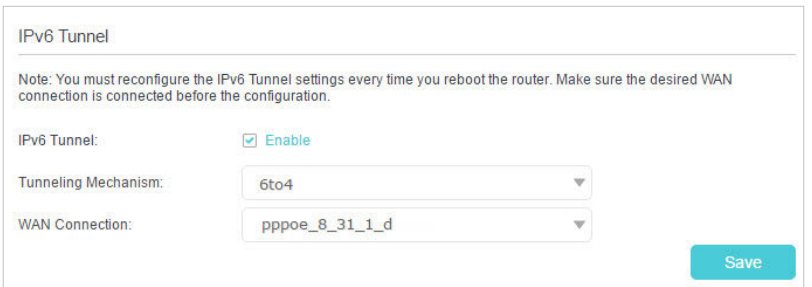
The 6to4 tunnel is a kind of public service. If there are any 6to4 servers on your network, you can use this mechanism to access IPv6 service. If your ISP provides you with an IPv4-only connection but you want to visit IPv6 websites, you can try to set up a 6to4 tunnel.

I want to:

Set up the IPv6 tunnel though my ISP doesn't provide me with the tunnel service.

How can I do that?

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > IPv6 Tunnel.
3. Tick the check box, select 6to4 as the tunneling mechanism and select a WAN connection from the drop-down list, then click Save.



Note:

If there is no available WAN connection to choose, make sure you have connected to the internet and the connection type is not Bridge.

Done!

Now you can visit the IPv6 websites with the 6to4 tunnel.

Note:

Still not being able to access IPv6 resources means that not any 6to4 public server was found in your network. You can contact your ISP to sign up for IPv6 connection service.

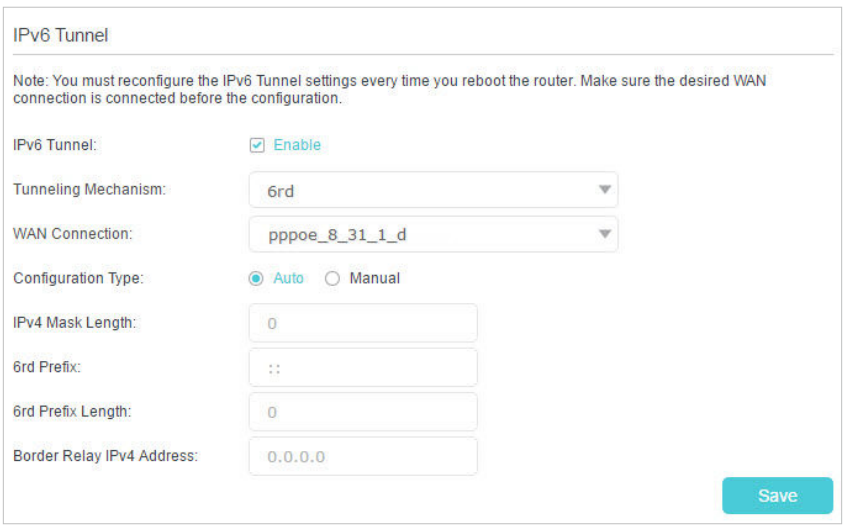
15. 6. 2. Specify the 6rd Tunnel with Parameters Provided by Your ISP

I want to:

Specify the 6rd tunnel with the parameters provided by my 6rd tunnel service provider.

How can I do that?

1. Visit http://tplinkmodem.net, and log in with your TP-Link ID and the password you set for the router.
2. Go to Advanced > Network > IPv6 Tunnel.
3. Tick the check box, select 6rd as the tunneling mechanism and select a WAN connection from the drop-down list.
4. According to the parameters provided by your ISP, choose Auto or Manual. More parameters are needed if you choose Manual.
5. Click Save.



Note:

If there is no available WAN connection to choose, make sure you have connected to the internet and the connection type is not Bridge.

Done!

Now you can visit the IPv6 websites with the 6rd tunnel.

Tips:

The way to set up DS-Lite tunnel is similar to that of 6rd tunnel. If you are provided with an IPv6-only WAN connection and have signed up for DS-Lite tunnel service, specify the DS-Lite tunnel by referring to the steps above.

Chapter 16

Administrate Your Network

This chapter introduces how to change the system settings and administrate your modem router's network.

This chapter contains the following sections:

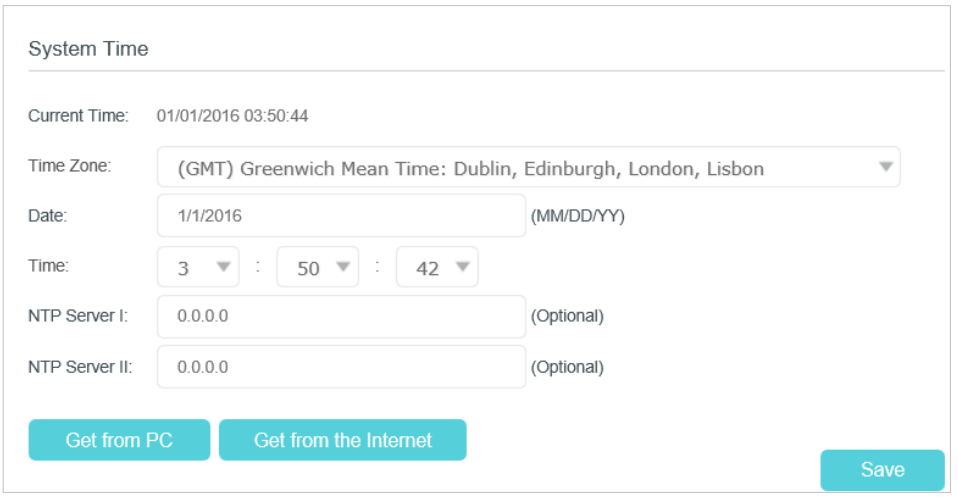
- Set System Time
- Update the Firmware
- Back up and Restore Configuration Settings
- Reboot the Router
- Change the Administrator Account
- Local Management
- Remote Management
- System Log
- Monitor the Internet Traffic Statistics
- CWMP Settings
- SNMP Settings

16. 1. Set System Time

System time is the time displayed while the modem router is running. The system time you configure here will be used for other time-based functions like Parental Controls and Wireless Schedule. You can manually set how to get the system time.

Follow the steps below to set your system time.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > Time Settings page.

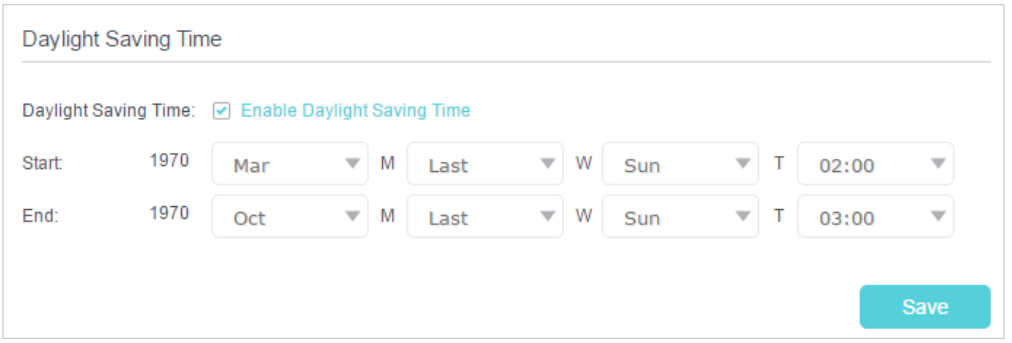


3. Configure the system time using the following methods:

   Manually: Select your time zone and enter your local time.

   Get from PC: Click this button if you want to use the current managing PC's time.

   Get GMT: Click this button if you want to get time from the internet. Make sure your modem router can access the internet before you select this way to get system time.
4. Click Save.
5. After setting the system time, you can set Daylight Saving Time according to your needs. Tick the check box to enable Daylight Saving Time, set the start and end time and then click Save to make the settings effective.



16. 2. Update the Firmware

TP-Link is dedicated to improving product features, giving you a better network experience.

We will inform you through the web management page if there's any update firmware available for your router. The latest firmware can also be downloaded 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 any USB storage device connected to the router before the firmware upgrade to prevent data loss.
3. Back up your router configuration before upgrading the firmware.
4. Do NOT turn off the router during the firmware upgrade.

16. 2. 1. Online Upgrade

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. If there's any firmware update available for your router, the update icon 

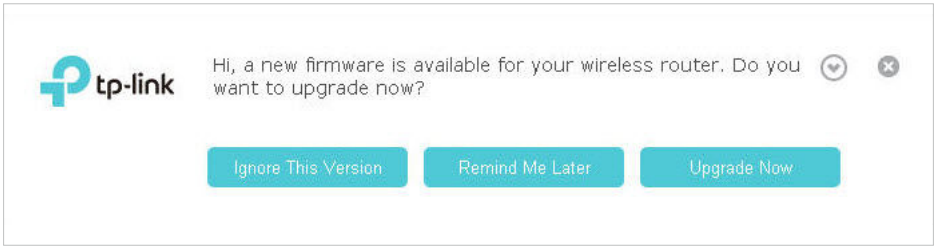
will display on the top-right corner of the page. Click the icon to go to the Firmware Upgrade page.

   Alternatively, you can go to Advanced > System Tools > Firmware Upgrade, and click Check for Upgrades to see if there's any new firmware.



Tips:

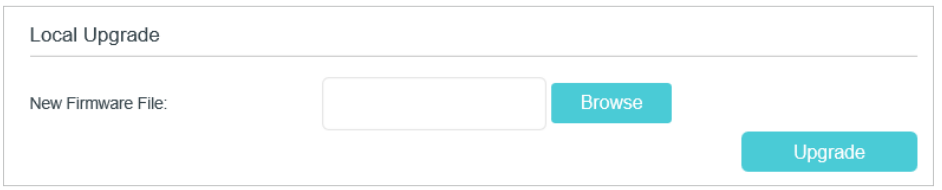
If there's any new important firmware update for your router, you will see the notification (similar as shown below) on your computer when open a new web page. Click Upgrade now, and log into the web management page. You will see the Firmware Upgrade page.



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

16. 2. 2. Local Upgrade

1. Download the latest firmware file for the router from our website www.tp-link.com.
2. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you 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 matches 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.

16. 3. Back up and Restore Configuration Settings

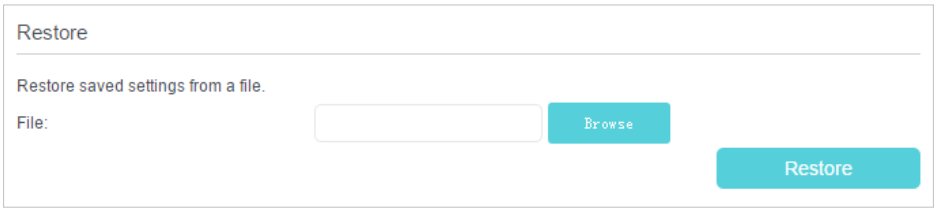
The configuration settings are stored as a configuration file in the router. You can back up the configuration file to your computer for future use and restore the modem router to a previous settings from the backup file when needed. Moreover, if needed you can erase the current settings and reset the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

- **To back up configuration settings**

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Click Advanced > System Tools > Backup & Restore page.
3. Click Backup to save a copy of the current settings to your local computer. A conf. bin file will be stored to your computer.

- **To restore configuration settings**

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Click Advanced > System Tools > Backup & Restore page.



3. Click Browse to locate the previous backup configuration file, and click Restore.
4. Wait for the restoring and then the modem router will automatically reboot.

- **To reset the modem router to factory default settings**

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Click Advanced > System Tools > Backup & Restore page.
3. Click Restore to restore all configuration settings to default values, except your login and TP-Link ID information. Click Factory Restore to reset the modem router.
4. Wait for the reset process to complete, and then the modem router will automatically reboot.

Note:

1. During the resetting process, do not turn off the modem router.
2. We strongly recommend you back up the current configuration settings before resetting the modem router.

16. 4. Reboot the Router

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

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Click Advanced > System Tools > Reboot page.

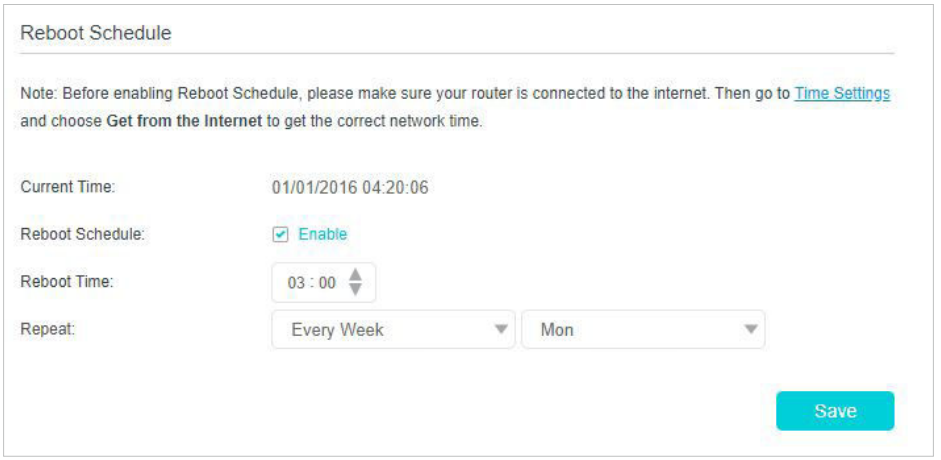
- **To Reboot Manually**

Locate the Manual Reboot section and click Reboot.



- **To Reboot Automatically**

1. Locate the Reboot Schedule section and check the box to enable Reboot Schedule.



2. Specify the Reboot Time when the router reboots and Repeat to decide how often it reboots.

Note:

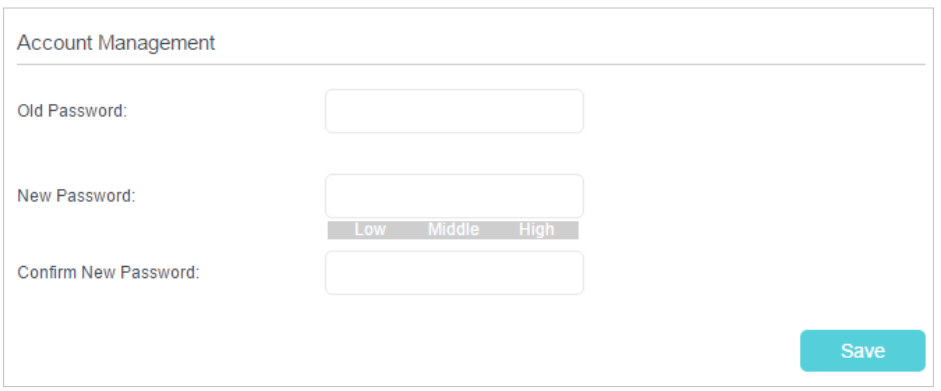
Before enabling Reboot Schedule, please make sure your router is connected to the internet, then go to Advanced > Time Settings and choose Get from the Internet to get the correct network time.

3. Click Save.

16. 5. Change the Administrator Account

Admin account is used to log in to the modem router's web management page. You are required to set the admin account at first login. You can also change it on the web page.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > Administration page. Locate the Account Management section.



3. Enter the old password. Enter the new password and enter again to confirm.

4. Click Save to make the settings effective.

16. 6. Local Management

You can control the local devices' authority to manage the modem router via Local Management feature. By default all local connected devices are allowed to manage the modem router. You can also specify one device to manage the modem router and enable local management over a more secure way, HTTPS.

Follow the steps below to allow only the specific device to manage the router via the local management over HTTPS.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > Administration page. Locate the Local Management section.
3. Keep the Port as the default setting. Enable Management over HTTPS and keep the Port for HTTPS as the default setting. Enter the IP address or MAC address of the local device to manage the modem router.



4. Click Save.

Now, you can manage the modem router over both HTTP (http://tplinkmodem.net) and HTTPS (https://tplinkmodem.net).

Note:

If you want that all local devices can manage the modem router, just leave the IP/MAC Address field blank.

16. 7. Remote Management

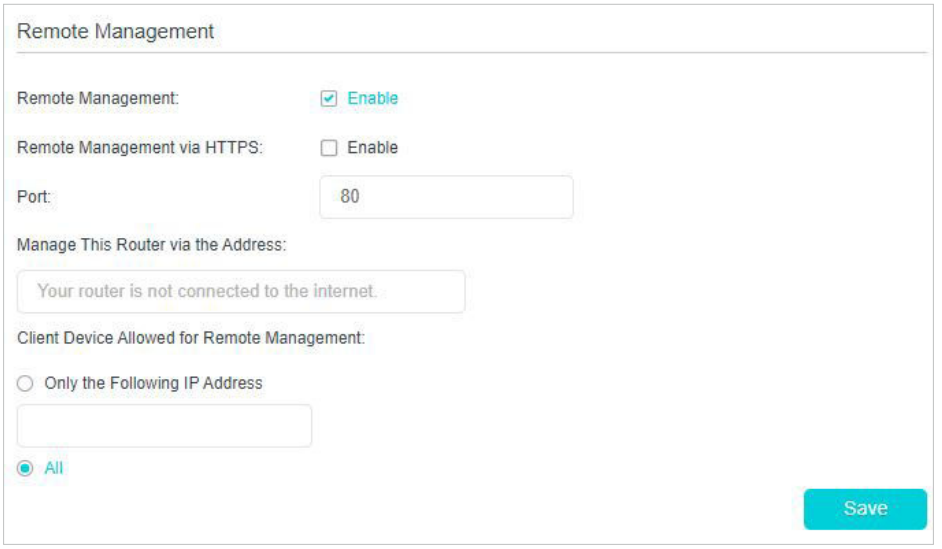
By default, the remote devices are not allowed to manage the modem router from the internet. You can enable remote management over HTTP and/or HTTPS if needed. HTTPS is a more secure way to access the router.

Note:

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

Follow the steps below to allow remote devices to manage the modem router over HTTPS.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > Administration page. Locate the Remote Management section.

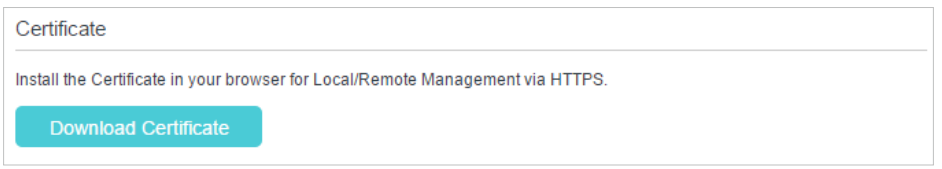


3. Tick the check box to enable Remote Management. Enable Remote Management via HTTPS to allow for HTTPS connection. Keep the Port as the default setting.
4. Set the client device allowed for remote management. Select All to allow all remote devices to manage the modem router. If you just want to allow a specific device to manage the modem router, select Only the Following IP Address and enter the IP address of the remote device.
5. Click Save.

All devices or the specific device on the internet can log in to your router using the address displayed on the Manage This Router via the Address field to manage the modem router.

Tips:

1. If you were warned about the certificate when visiting the web management page remotely, click Trust (or a similar option) to continue. To avoid this warning, you can download and install the certificate on the modem router's web management page at Advanced > System Tools > Administration.

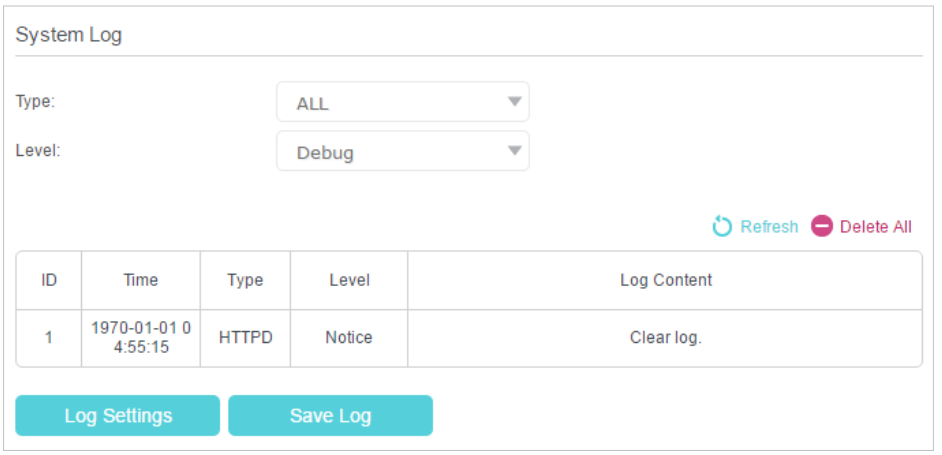


2. The router's WAN IP is usually a dynamic IP. Please refer to Set Up a Dynamic DNS Service Account if you want to log in to the router through a domain name.

16. 8. System Log

System Log can help you know what happened to your modem router, facilitating you to locate the malfunctions. For example when your modem router does not work properly, you will need to save the system log and send it to the technical support for troubleshooting.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Click Advanced > System Tools > System Log page.



- **To view the system logs:**

You can view specific system logs by selecting the log Type and Level.

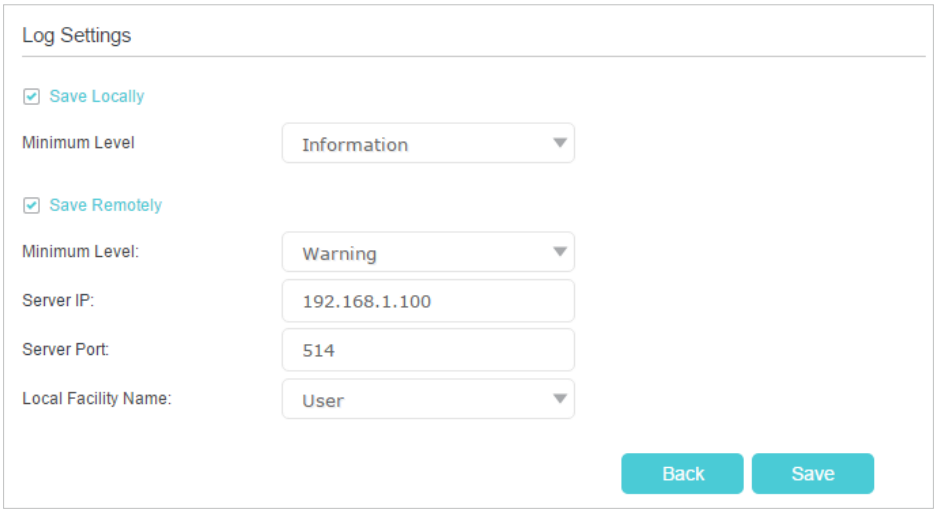
Click Refresh to refresh the log list.

- **To save the system logs:**

You can choose to save the system logs to your local computer or a remote server.

Click Save Log to save the logs in a txt file to your computer.

Click Log Settings to set the storage path of logs.

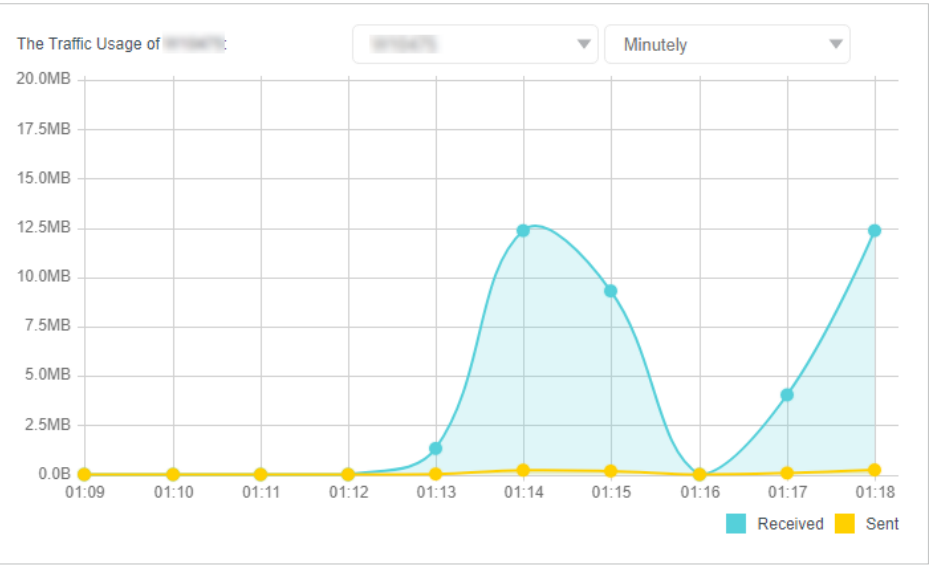


- Save Locally: Select this option to cache the system log to the router's local memory, select the minimum level of system log to be saved from the drop-down list. The logs will be shown in the table in descending order on the System Log page.
- Save Remotely: Select this option to send the system log to a remote server, select the minimum level of system log to be saved from the drop-down list and enter the information of the remote server. If the remote server has a log viewer client or a sniffer tool implemented, you can view and analyze the system log remotely in real-time.

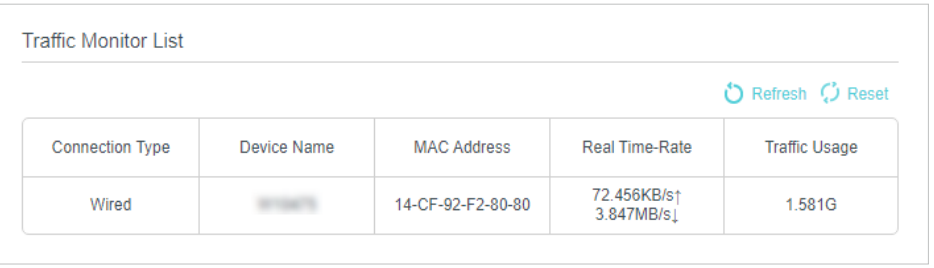
16. 9. Monitor the Internet Traffic Statistics

The Traffic Statistics page displays the network traffic of the interfaces, including the received and sent packets.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > Traffic Monitor page.
3. Toggle on Traffic Monitor, select the client from the dropdown list, and then you can see the packets received and sent by this client in the past ten minutes. This function is disabled by default.



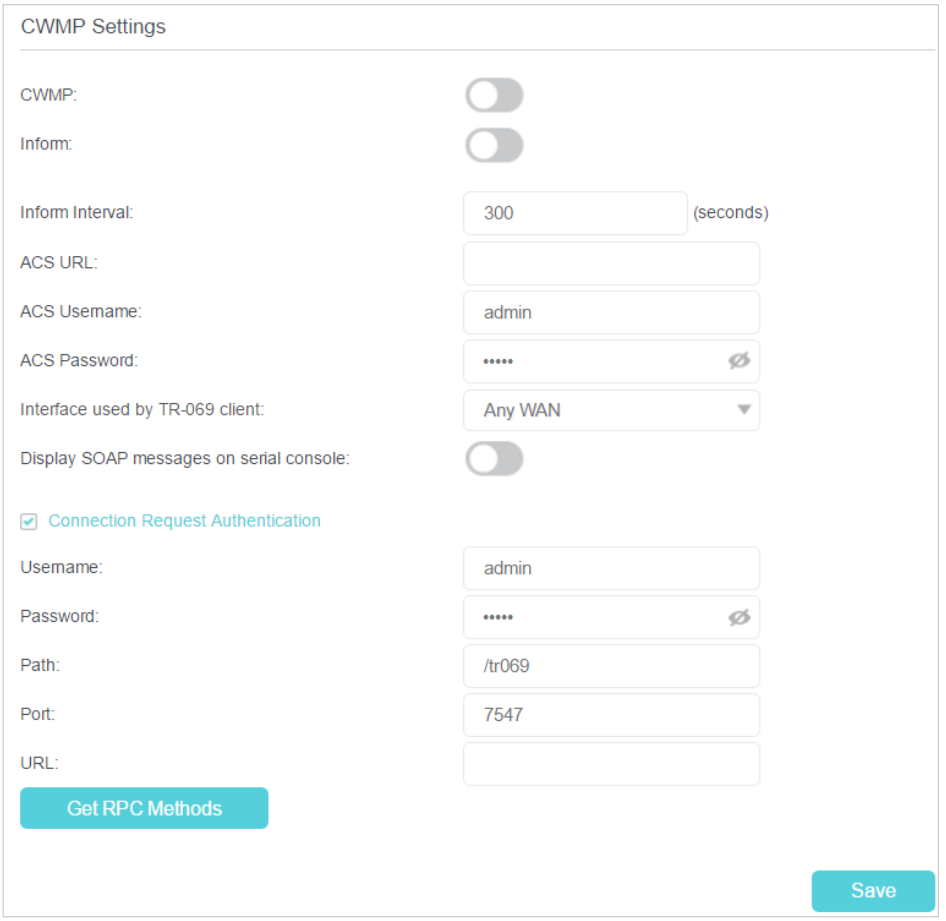
4. You can also go to Traffic Monitor List to view the traffic usage of all clients.



16. 10. CWMP Settings

The modem router supports CWMP (CPE WAN Management Protocol), also called TR-069. This collects information, performs diagnostics and configures the devices automatically via ACS (Auto-Configuration Server).

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > CWMP Settings page.



- CWMP: Toggle On to enable the CWMP (CPE WAN Management Protocol) feature.
- Inform: Enable this feature to send an Inform message to the ACS (Auto Configuration Server) periodically.
- Inform Interval: Enter the time interval in seconds when the Inform message will be sent to the ACS.
- ACS URL: Enter the web address of the ACS which is provided by your ISP.
- ACS Username/Password: Enter the username/password to log in to the ACS server.
- Interface used by TR-069 client: Select which interface to be used by the TR-069 client.
- Display SOAP messages on serial console: Toggle to enable or disable this feature.
- Connection Request Authentication: Select this check box to enable authentication for the connection request.
- Username/Password: Enter the username/password for the ACS server to log in to the router.
- Path: Enter the path for the ACS server to log in to the router.
- Port: Enter the port that connects to the ACS server.
- URL: Enter the URL that connects to the ACS server.

- Get RPC methods: Click to get the methods to support CWMP.

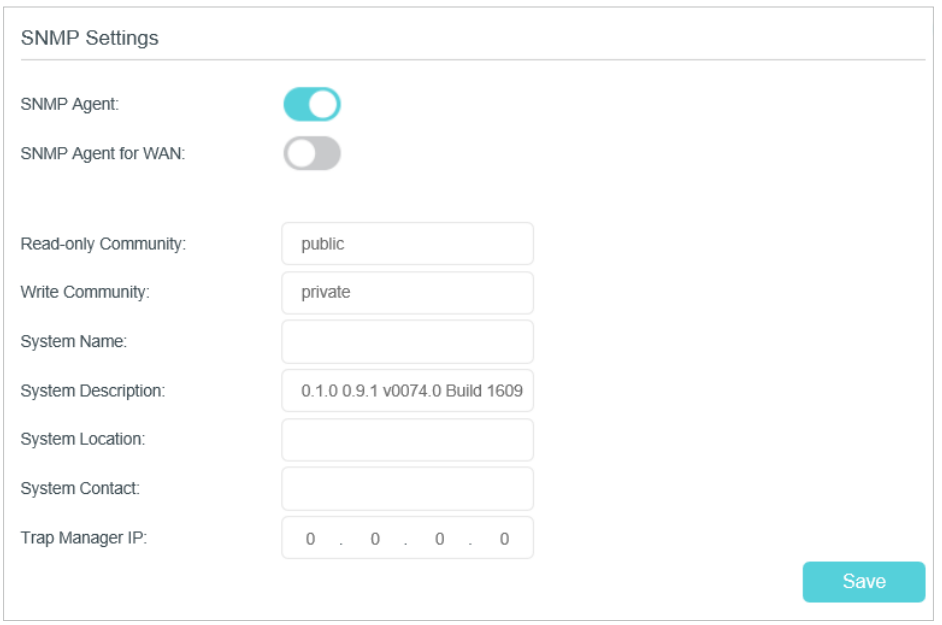
Click Save to make the settings effective.

16. 11. SNMP Settings

SNMP (Simple Network Management Protocol) is widely applied in the computer networks of today, and is used for ensuring the transmission of the management information between two nodes. In this way, network administrators can easily search and modify the information on any node on the network. Meanwhile, they can locate faults promptly and implement the fault diagnosis, capacity planning and report generating.

An SNMP Agent is an application running on the modem router that performs the operational role of receiving and processing SNMP messages, sending responses to the SNMP manager, and sending traps when an event occurs. So a router contains SNMP "agent" software can be monitored and/or controlled by SNMP Manager using SNMP messages.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > System Tools > SNMP Settings page.



- SNMP Agent: Toggle On to enable the built-in SNMP agent that allows the router to operate as the operational role in receiving and processing of SNMP messages, sending responses to the SNMP manager, and triggering SNMP traps when an event occurs.

- Read-only Community: Displays the default public community string that protects the router from unauthorized access.
- Write Community: Displays the default write community string that protects the router from unauthorized changes.
- System Name: Displays the administratively-assigned name for this managed device.
- System Description: Displays the textual description of the managed device. This value should include the full name and version identification of the system's hardware type, software operating-system, and networking software.
- System Location: Displays the physical location of this device (for example, the telephone closet, 3rd floor).
- System Contact: Displays the textual identification of the contact person for this managed device, together with information on how to contact this person.
- Trap Manager IP: Displays the IP address of the host to receive the traps.

You are suggested to keep the default settings. Click Save to make the settings effective.

Appendix: Troubleshooting

T1. How do I restore my modem router's configuration to its factory default settings?

With the modem router powered on, press and hold down the Reset button on the side panel of the modem router until all LEDs turn on momentarily, then release the button.

Note: Once the modem router is reset, the current configuration settings will be lost and you will need to re-configure the modem router.

T2. What should I do if I forgot my password?

Web management page password:

- If you are using a TP-Link ID to log in, click Forgot password? on the login page and then follow the instructions to reset the password.
- Alternatively, refer to T1 to reset the router, and then visit http://tplinkmodem.net to create a new login password.

Wireless network password:

1. The default Wireless Password/PIN is printed on the product label of the modem router.
2. If the default wireless password has been changed, log in to the modem router's web management page and go to Basic > Wireless to retrieve or reset your password.

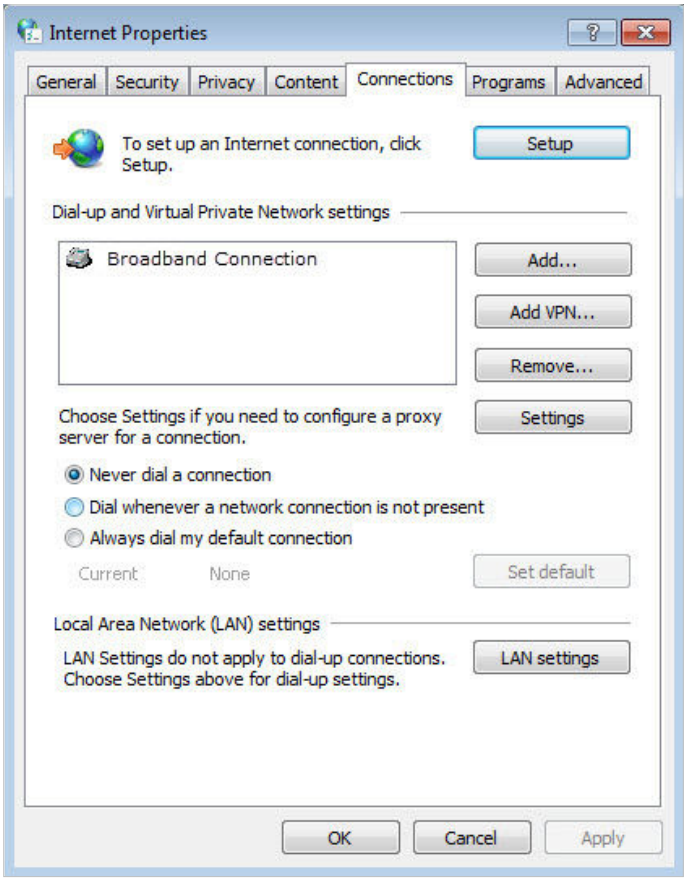
T3. What should I do if I cannot log in to the modem router's web management page?

- Make sure the modem router connects to the computer correctly and the corresponding LED indicator(s) light up.
- Make sure the IP address of your computer is configured to obtain an IP address automatically and obtain the DNS server address automatically.
- Make sure the default access you input is right.
- Check your computer's settings:

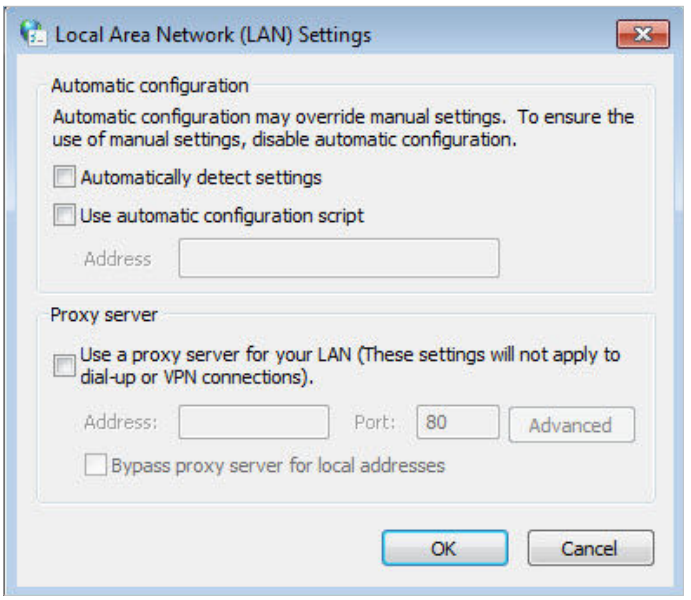
  1) Go to Start > Control Panel > Network and Internet, and click View network status and tasks;

  2) Click Internet Options on the bottom left;

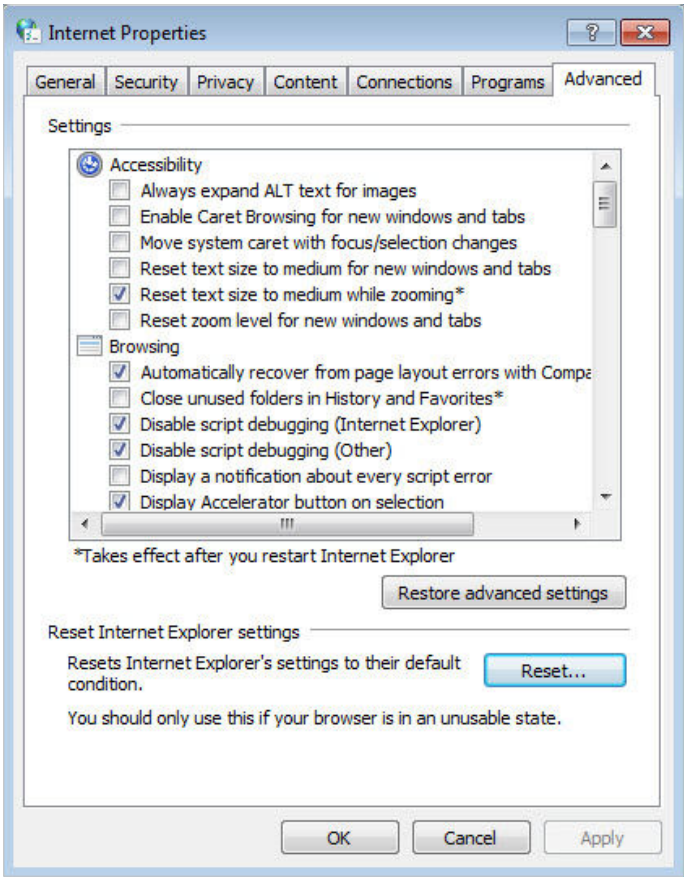
  3) Click Connections, select Never dial a connection;



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



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



- Change a web browser or computer and log in again.
- Reset the modem router to factory default settings. Refer to Back up and Restore Configuration Settings for detailed information. Open a web browser and log in again. If login fails, please contact our Technical Support.

T4. What should I do if I cannot access the internet?

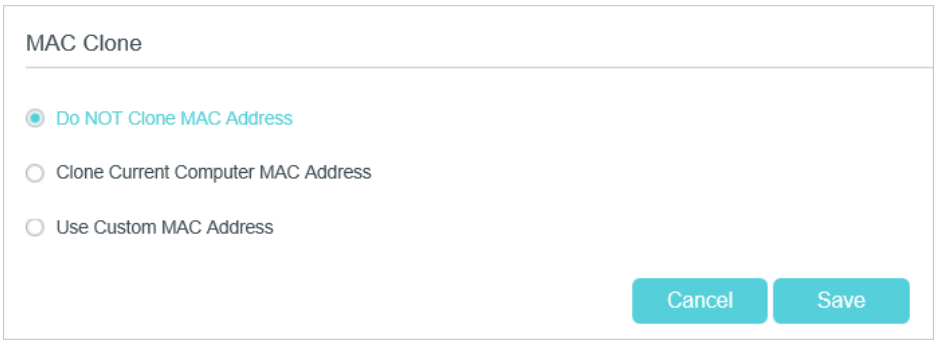
1. Ensure all connections are secure, including telephone lines, Ethernet cables and power adapters.
2. Check to see if you can log in to the web management page of the modem router. If you cannot, please adjust your computer's settings according to T3 and then see if you can access the internet. If the problem persists, please go to the next step.
3. Consult your ISP and make sure the VPI/VCI, Connection Type, account username and password are correct. If there are any mistakes, please correct the settings and try again.
4. Refer to T5 to clone the MAC address.
5. If you still cannot access the internet, please restore your modem router to its factory default settings and reconfigure your modem router by following the instructions in Use Quick Setup Wizard.

6. Please contact our Technical Support if the problem persists.

T5. How do I clone a MAC address?

You can manually change the MAC address of the modem router. It is helpful when your internet access account provided by your ISP is bound to one specific MAC address, in other words, your ISP just permits only one computer with the authenticated MAC address to access the internet. In this case, you can use MAC Clone to allow more computers to access the internet via the same account.

1. Visit http://tplinkmodem.net, and log in with your TP-Link and the password you set for the router.
2. Go to Advanced > Network > Internet page. Click the Add icon, and scroll down to get the MAC Clone section.



- If you are using the computer with the authenticated MAC address to access the modem router, please select Use Current Computer MAC Address.
- If you know the authenticated MAC address, please select Use Custom MAC Address and then enter the address.

3. Click OK to make the settings effective.

T6. How can I change my computer's settings to obtain an IP address automatically?

To change the computer's network settings, follow the steps below.

- For MAC OS X:

1) Click the Apple icon, and select System Preferences from the drop-down list.

2) Click the Network icon.

3) Select Ethernet (for wired connection) or Wi-Fi (for wireless connection) in the left panel, then click Advanced.

4) Click TCP/IP.

5) From the Configure IPv4 drop-down list, select Using DHCP.

6) Click OK.

- For Windows 7/8/8.1/10:

1) Right-click the Network icon on the system tray and select Open Network and Sharing Center > Change adapter settings.

2) Right-click your network connection (wired or wireless) and select Properties.

3) Double-click Internet Protocol Version 4 (TCP/IPv4).

4) Select both Obtain an IP address automatically and Obtain DNS server address automatically, then click OK.

5) Click OK again to save your configuration.

- For Windows XP:

1) Right-click the Network icon on the system tray and select Open Network Connections.

2) Right-click your network connection (wired or wireless) and select Properties.

3) Double-click Internet Protocol (TCP/IP).

4) Select both Obtain an IP address automatically and Obtain DNS server address automatically, then click OK.

5) Click OK again to save your configuration.

T7. What should I do if I cannot find my wireless network or I cannot connect the wireless network?

- **If you fail to find any wireless network, follow the steps below:**

1. Make sure the wireless function 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.
2. Make sure the wireless adapter driver is installed successfully and the wireless adapter is enabled. You can refer to the relevant document or contact the wireless adapter manufacturer.

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

1. Check the Wi-Fi LED indicator on your wireless router/modem;
2. Make sure your computer/device is still in range of your router/modem. Move closer if you are currently too far away.
3. Go to Basic > Wireless page, and check the wireless settings, double-check your Wireless Name (SSID) is not hidden.
4. Connect to wireless network.

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

1. Authentication problem: Network Security Key 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 label of your modem 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 Network Security Key/Wireless Password;



   3) If you continue to be told there is a network security key mismatch, it is suggested to check the wireless password on your modem router.

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



4) Connect to wireless network.

2. Windows was unable to connect to XXXX /Cannot join this network/Taking longer than usual to connect to this network.

1) Check the wireless signal strength of your network, if it is weak (1~3 bars), please move the router closer and try again;

2) Change the wireless Channel of the router to 1,6,or 11 to reduce interference from other networks;

3) Re-install or update the driver for your wireless adapter of the computer;

4) Connect to wireless network.

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CE Mark Warning

CE

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

OPERATING FREQUENCY(the maximum transmitted power)

2412MHz—2472MHz (20dBm)

5150MHz—5250MHz (23dBm)

EU declaration of conformity

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

The original EU declaration of conformity may be found at **https://www.tp-link.com/en/ce**.

RF Exposure Information

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

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

National Restrictions

Attention: This device may only be used indoors in all EU member states and EFTA countries.



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

Canadian Compliance Statement

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

(1) This device may not cause interference.

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

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

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

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

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

Radiation Exposure Statement:

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

Déclaration d'exposition aux radiations:

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

Korea Warning Statements

당해 무선설비는 운용중 전파혼신 가능성이 있음.

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

Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended
- Do not use the device where wireless devices are not allowed.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product.

NCC & BSMI 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信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，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。

4.7.9.1應避免影響附近雷達系統之操作。

4.7.9.2高增益指向性天線只得應用於固定式點對點系統。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 不要私自拆開機殼或自行維修，如產品有故障請與原廠或代理商聯繫。

設備名稱： Equipment name AC1200 Wireless VDSL/ADSL Modem Router						型號（型式）： Type designation (Type) Archer VR400
單元 U nit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr+6)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB	○	○	○	○	○	○
外殼	○	○	○	○	○	○
電源供應板	—	○	○	○	○	○
其他及其配件	—	○	○	○	○	○

備考 1.〝超出 0.1 wt %〞及〝超出 0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值

Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考 2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考 3.〝—〞係指該項限用物質為排除項目。

Note 3：The “—” indicates that the restricted substance corresponds to the exemption.

Explanation of the symbols on the product label

Symbol	Explanation
	DC voltage
	Class II equipment
	AC voltage
	Energy efficiency Marking
	Polarity of output terminals
	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.
	Indoor use only