TP-LINK®

Archer D20

User Guide

AC750 Wireless Dual Band
ADSL2+ Modem Router

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About This Guide

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

Conventions

In this guide the following conventions are used:

Convention	Description
modem router/ router	Stands for AC750 Wireless Dual Band ADSL2+ Modem Router without any explanation.
parameters	Parameters provided in the screenshots are just references for setting up the device, which may differ from the actual situation. You can set the parameters according to your demand.
screenshots	The demonstrated screenshots may look a little different from the actual web page of your device due to the various firmware versions. Please just configure your product based on the actual web page.
Blue Italic	Hyperlinks are in blue italic. You can click to redirect to a website or a specific section.
Blue	Contents to be emphasized and texts on the web page are in blue, including the menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, Advanced > Wireless > MAC Filtering means the MAC Filtering function page is under the Wireless menu that is located in the Advanced tab.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	• click to edit the corresponding entry. • click to delete the corresponding entry. • click to enable or disable the corresponding entry.

Chapter *1*

Get to Know About Your Modem Router

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

This chapter contains the following sections:

- *Product Overview*
- *Main Features*
- *Panel Layout*

1. 1. Product Overview

What This Product Does

TP-LINK's Archer D20 AC750 Wireless Dual Band ADSL2+ Modem Router is a combined wired/wireless network connection device with integrated wireless router and ADSL modem, reducing hassle of configuration and saving space. Featuring a variety of features and rich functionality, Archer D20 is the perfect hub of your home or business network.

802.11ac - The Next Generation of Wi-Fi

TP-LINK's Archer D20 comes with the next generation Wi-Fi standard – 802.11ac, backward compatible with 802.11n and 3 times faster than wireless N speeds. With higher power efficiency and robust security, 802.11ac is the perfect way to accelerate a home multimedia network and solve congestion that multiple devices may cause.

750Mbps Concurrent Dual Band - More Bandwidth, Less Interference

With 433Mbps wireless speeds over the crystal clear 5GHz band and 300Mbps over the 2.4GHz band, Archer D20 offers you the flexibility of two dedicated networks and ensures amazing wireless performance. Simple tasks such as sending e-mails or web browsing can be handled by the 2.4GHz band while bandwidth intensive tasks like online gaming or HD video streaming can be processed by the 5GHz band – all at the same time.

Broad Wi-Fi Coverage

Featuring two fixed external antennas and high power amplifiers, Archer D20 is able to boost Wi-Fi coverage throughout your home.

Multifunctional USB Port – Easy Storage and Sharing

Using the Archer D20's multi-functional USB 2.0 port, you can share a printer with multiple computers and devices on your network and can also share files & media at home or via the FTP server while away from home.

Interchangeable LAN/WAN Port - Versatile Connectivity

The Archer D20 supports ADSL or Ethernet WAN connections (EWAN), which allows users to have the flexibility of different Internet connections among ADSL, cable or fiber modem using its interchangeable LAN/WAN port. This unique feature makes it easier when users need to change to fiber or cable services when necessary.

Guest Network

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

IPv6 Supported

Archer D20 supports IPv6, which is the foundation of the next generation of the Internet and enables a range of new services and improved user experience.

1. 2. Main Features

- Supports 802.11ac - The next generation of Wi-Fi, compatible with 802.11n
- Simultaneous 2.4GHz 300Mbps and 5GHz 450Mbps connections for 750Mbps of total available bandwidth
- 2 dual band fixed external antennas and high power amplifiers provide stable signals and optimal wireless coverage
- Supports USB Storage Sharing, Print Server, FTP Server, Media Server. Share a printer locally and files & media with networked devices or remotely via FTP server
- Ethernet WAN (EWAN) offers another broadband connectivity option for connecting VDSL, cable or fiber modems
- Adopts Advanced DMT modulation and demodulation technology.
- Downstream data rates up to 24Mbps, upstream data rates up to 1Mbps.
- Supports long transfers, the max line length can reach to 6.5Km.
- Supports Multiple PVC (Permanent Virtual Circuit).
- Built-in DHCP server.
- High speed and asymmetrical data transmit mode, provides safe and exclusive bandwidth.
- Compatible with all mainstreams DSLAM (CO).
- Provides integrated access of internet and route function which face to SOHO user.
- Guest Network Access provides secure Wi-Fi access for guests sharing your home or office network
- Parental Controls allow parents or administrators to establish restricted access policies for children or staff
- IP-based Bandwidth Control makes it easier for you to manage the bandwidth of devices connected to the router
- Supports IP/MAC filter and URL filter, Access Control list
- SPI and NAT firewall protects end-user devices from potential attacks from the Internet
- WPA-PSK/WPA2-PSK encryptions provide user networks with active defense against security threats
- Supports remote configuration and management through SNMP and CWMP.
- Easy one-touch WPA wireless security encryption with the WPS button
- Wi-Fi On/Off Button allows users to turn their wireless radio on or off

- Supports firmware upgrade and Web management
- Supports Virtual Server, DMZ host and Port Triggering
- Supports Dynamic DNS, UPnP and Static Routing
- Supports system log and flow Statistics
- Supports IPv6

1. 3. Panel Layout

1. 3. 1. Top View

The modem router's LEDs are located on the top panel (View from top to bottom). You can check the modem router's working status by following the LED Explanation table.

LED Explanation

Name	Status	Indication
Power	On	System initialization complete.
	Flashing	System initializing or firmware upgrading is in process. Do not disconnect or power off the modem router.
	Off	Power is off. Please ensure that the power adapter is connected correctly.
ADSL	On	ADSL line is synchronized and ready to use.
	Flashing	The ADSL negotiation is in progress.
	Off	ADSL synchronization failed. Please refer to Note 1 for troubleshooting.

LED Explanation

Name	Status	Indication
Internet	On	The network is available with a successful Internet connection.
	Off	There is no successful Internet connection or the modem router is operating in Bridge mode. Please refer to Note 2 for troubleshooting.
Wireless 2.4Ghz	On	The wireless 2.4GHz band is working properly.
	Off	The wireless 2.4 GHz band is disabled.
Wireless 5Ghz	On	The wireless 5GHz band is working properly.
	Off	The wireless 5GHz band is disabled.
LAN	On	At least one LAN port is connected.
	Off	No LAN port is connected.
WPS	On	A wireless device has been successfully added to the network by WPS function.
	Flashing	WPS handshaking is in process and will continue for about 2 minutes. Please press the WPS button on other wireless devices that you want to add to the network while the LED is flashing.
	Off	A wireless device has failed to be added to the network by WPS function.
USB	On	The USB device is identified and ready to use.
	Flashing	The USB device is being identified.
	Off	No USB device is plugged into the USB port.

Note:

1. If the ADSL LED is off, please check your Internet connection first. Refer to Connect Your Modem Router for more information about how to make Internet connection correctly. If you have already made a right connection, please contact your ISP to make sure your Internet service is available now.
2. If the Internet LED is off, please check your ADSL LED first. If your ADSL LED is also off, please refer to *Note 1*. If your ADSL LED is ON, please check your Internet configuration. You may need to check this part of information with your ISP and make sure everything have been input correctly.

1. 3. 2. The Back Panel

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

Item	Description
ADSL	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 the Modem Router.
USB	For connecting to a USB storage device or a USB printer.
WiFi ON/OFF	For turning on/off the Wi-Fi function.
WPS/RESET	The switch for the WPS and RESET function. RESET: There are two ways to reset the modem router's factory defaults. Method one: With the modem router powered on, use a pin to press and hold the RESET button for at least 8-10 seconds. And the modem router will reboot to its factory default settings. Method two: Restore the default settings from Backup & Restore of the modem router's Web-based Management.
LAN1, LAN2, LAN3, LAN4/WAN	For connecting the modem router to your PC or other Ethernet network devices. In wireless router mode you will be able to connect to Cable/FTTH/VDSL/ADSL devices.
POWER ON/OFF	The switch for the power. Press it to power on or off the modem router.
POWER	For connecting the modem router to power socket via the provided power adapter.
Antennas	Used for wireless operation and data transmit. Upright them for the best Wi-Fi performance.

Chapter *2*

Connect the Hardware

This chapter contains the following sections:

- *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 actual environment where your modem router is in. Many obstacles may limit the range of the wireless signal, for example, concrete structures, thickness and number of walls.

For your security and best Wi-Fi performance, please:

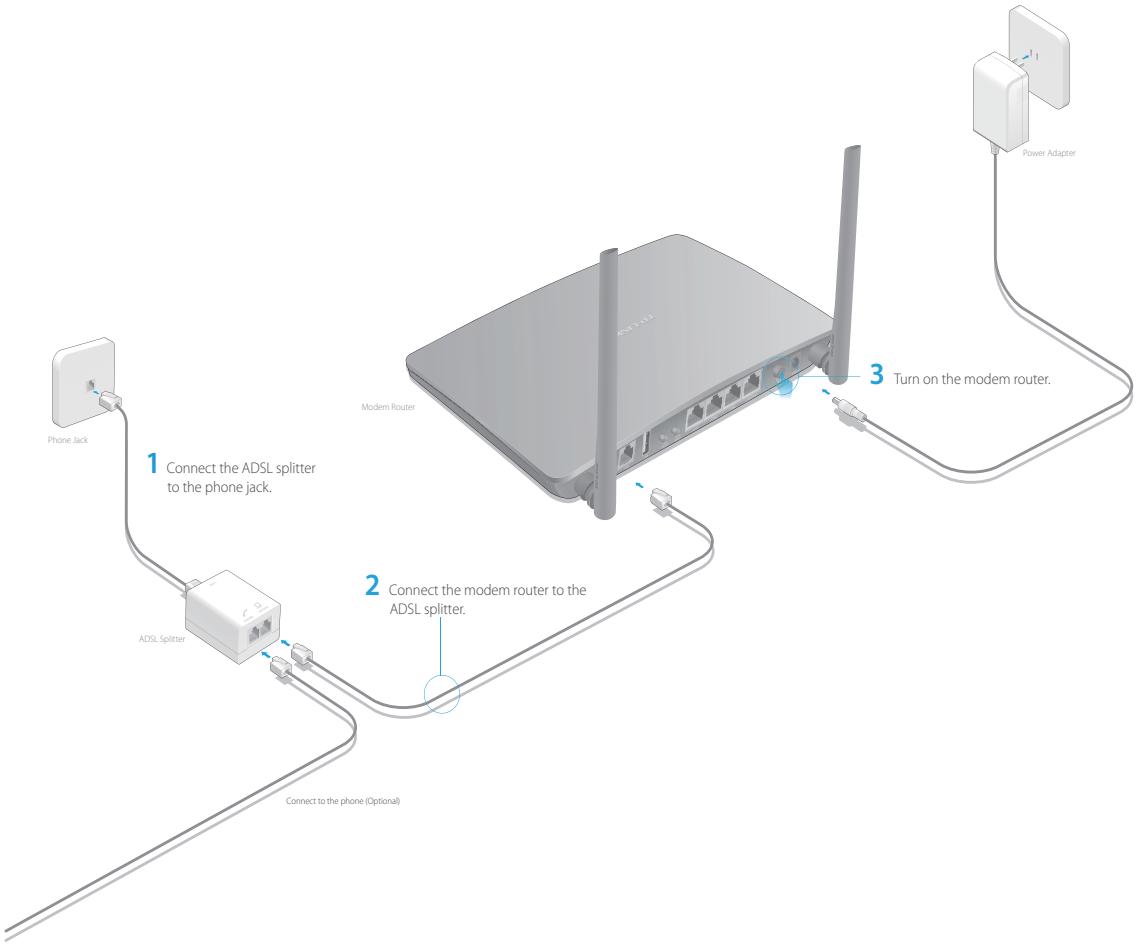
- Do Not locate the modem router in the place where it will be exposed to moisture or excessive heat.
- Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.
- Place the modem router in a location where it can be connected to the various devices as well as to 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.

Tips: The modem router can be placed on a shelf or desktop.

2. 2. Connect Your Modem Router

Follow the steps below to connect your modem router.

1. Connect the ADSL 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 Archer D20 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:

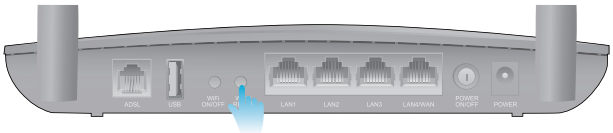
The WPS function cannot be configured if the wireless function of the router is disabled. Also, the WPS function will be disabled if your wireless encryption is WEP. Please make sure the wireless function is enabled and is configured with the appropriate encryption before configuring the WPS.

1) Tab 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 is on, the client device has successfully connected to the modem router.



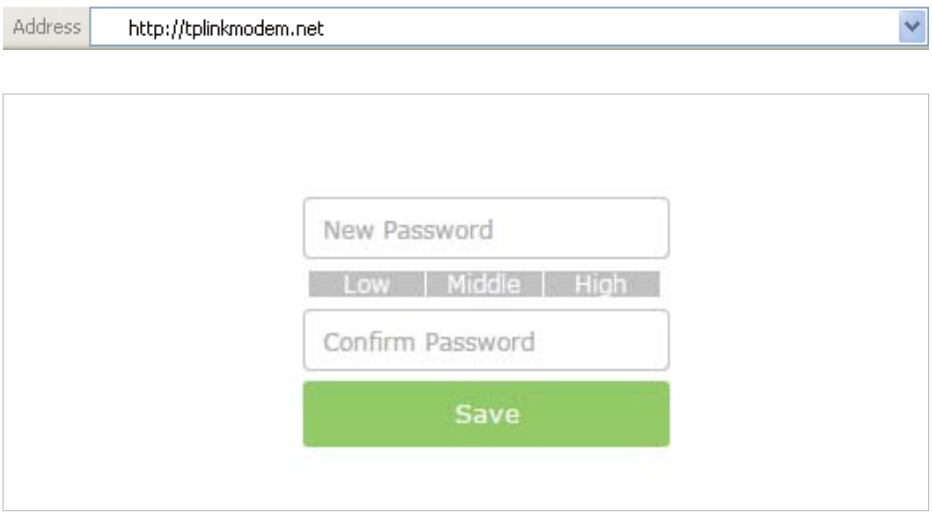
Chapter *3*

Log into Your Modem Router

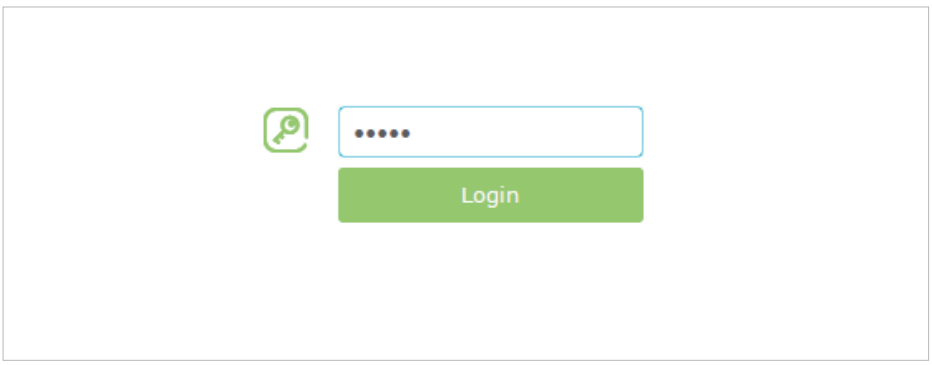
With a Web-based utility, it is easy to configure and manage the Archer D20 AC750 Wireless Dual Band ADSL2+ Modem Router. The Web-based utility can be used on any Windows, Macintosh or UNIX OS with a Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

Follow the steps below to log into your modem router.

1. If the TCP/IP Protocol on your computer is set to the static (fixed) IP address, you need to change it to obtain an IP address automatically. Refer to *Appendix B: Troubleshooting* to configure your computer.
2. Launch a web browser and type in *http://tplinkmodem.net* or *http://192.168.1.1*. Set a strong password using 1-15 characters and click Save.



3. Enter the password you set and click Login.



Note: For subsequent logins, you only need to enter the password that you have set to log in.

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 provided IPv6 service.

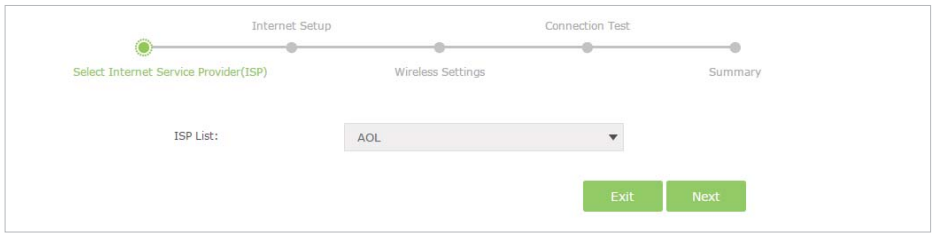
This chapter includes the following sections:

- *Use Quick Setup Wizard*
- *Manually Set up an Internet Connection*
- *Set up an IPv6 Connection*
- *Test Internet Connectivity*

4. 1. Use Quick Setup Wizard

To set up your modem router with several easy steps quickly:

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Click Quick Setup, select your ISP from the dropdown list or select Other if you can't find your ISP, then click Next.



3. Follow the on-screen instructions to complete the setup.

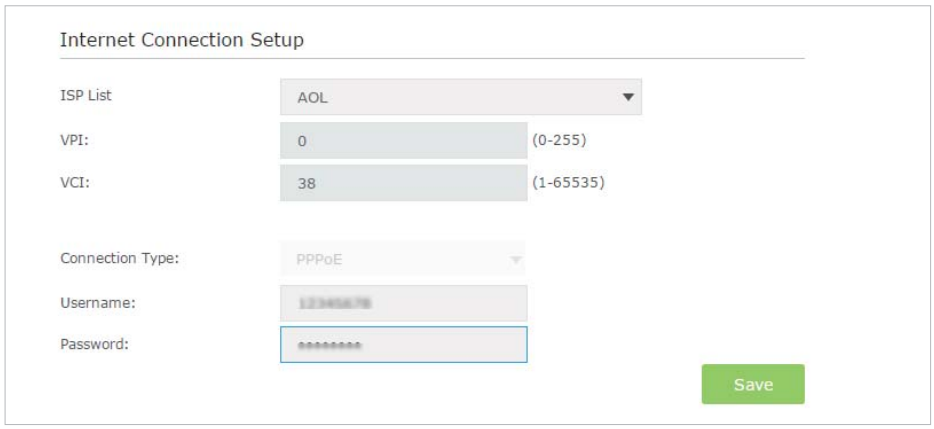
Note:

1. During the quick setup process, you can change the preset wireless network name (SSID) and wireless password. Once done, all your wireless devices must use the new SSID and password to connect to the modem router.
2. The modem router supports two operation modes, DSL Modem Router Mode and Wireless Router mode. If you already have a modem or your Internet comes via an Ethernet cable from the wall, you can set up the modem router as a regular wireless router to share the Internet. Refer to *Appendix B: Troubleshooting* for details.

4. 2. Manually Set up an Internet Connection

To manually add an Internet connection without following the instructions of the Quick Setup wizard:

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Basic > Internet page. Select your ISP, and the VPI and VCI values will be automatically filled in. Enter the information provided by your ISP for the Connection Type. 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 connections on Advanced > Network > Internet page.

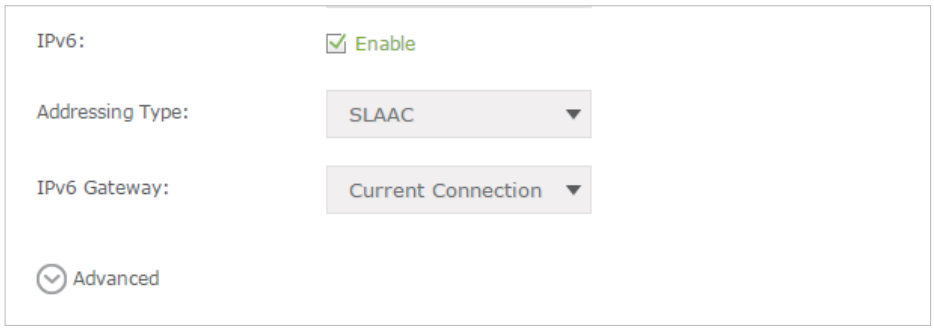
4. 3. Set up an IPv6 Connection

If the DSL line your ISP provided also supports IPv6 connection and your ISP has provided some detailed IPv6 parameters, you can configure the modem router to permit IPv6 connection.

Follow the steps below to set up an IPv6 connection.

1. Configure the WAN settings.
   1) Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
   2) Go to Advanced > Network > Internet page. Select your WAN Interface Name and click the (Edit) icon.

   3) Scroll down to configure the IPv6 parameters.



Select the checkbox to enable IPv6 feature.

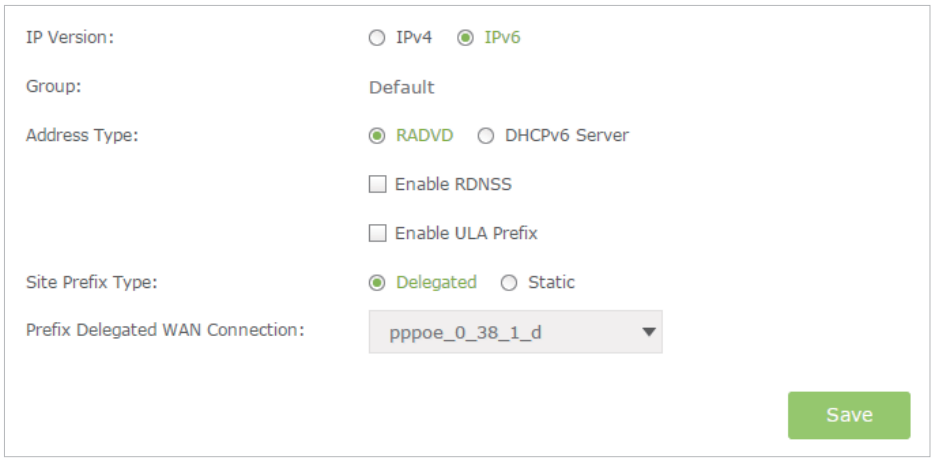
Addressing Type: Consult your ISP for the addressing type, DHCPv6 or SLAAC. SLAAC is the most commonly used addressing type.

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.

4) Click OK to make the settings effective.

2. Configure the IPv6 LAN settings. Go to Advanced > Network > LAN Settings page. Select IPv6 to configure IPv6 LAN parameters.



1) Select the Prefix Delegated WAN Connection, the IPv6 connection you just set up, from the drop-down list.

2) Leave the rest of the settings as default.

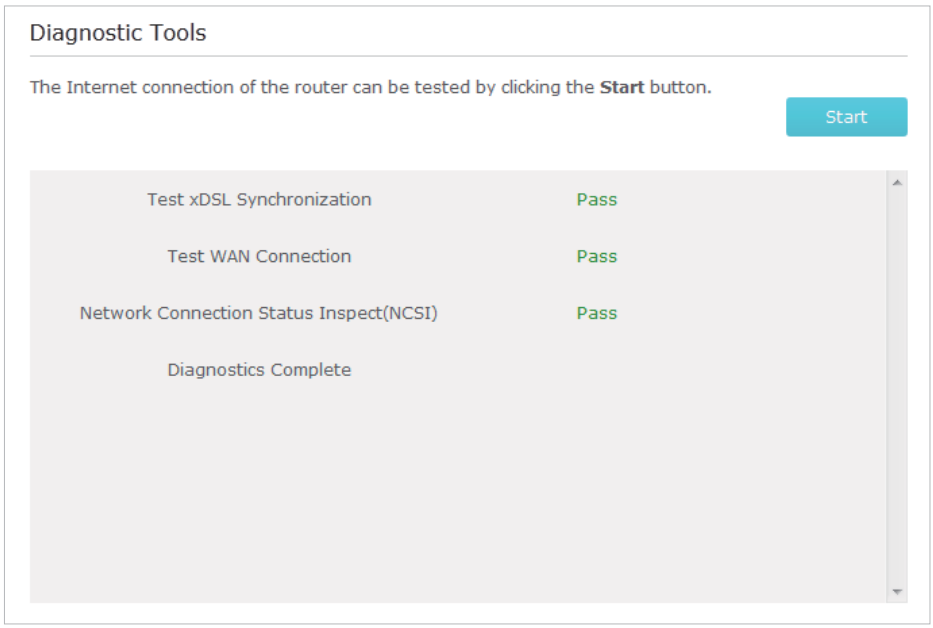
3) Click Save to make the settings effective.

3. Done. IPv6 service is available for your network.

4. 4. Test Internet Connectivity

After manually setting up the Internet connection, you need to know the Internet connectivity. The modem router provides a diagnostic tool to help you locate the malfunction.

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem 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.

Chapter *5*

Bandwidth Control

The Bandwidth Control feature is used to fully utilize your limited bandwidth and optimize the load respectively. With this feature enabled, you can assign a specific minimum or maximum bandwidth for each computer, thus minimizing the impact caused when the connection is under heavy load.

I want to:

Use an independent bandwidth and enjoy a good Internet experience without being affected by other users who are sharing the same router.

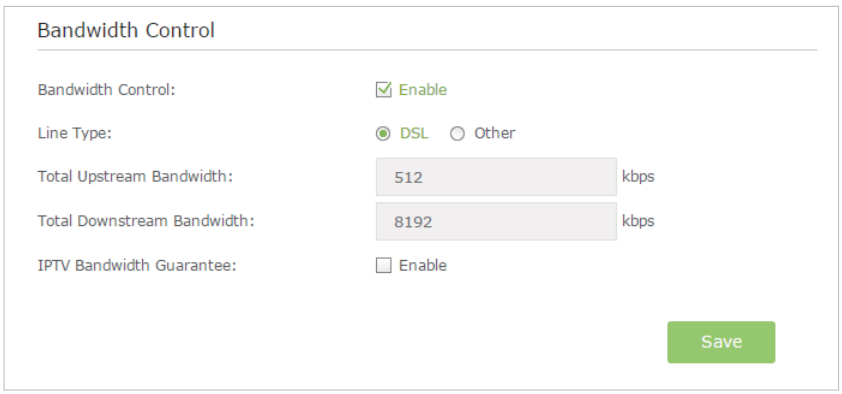
For example, my roommate and I share 512Kbps Upstream Bandwidth and 8Mbps Downstream Bandwidth via this router, she likes to watch live show and play online games, which may take up much bandwidth. I don't want to be affected, so we agree to equally distribute the bandwidth. Our IP addresses are 192.168.1.101 and 192.168.1.110.

Tips:

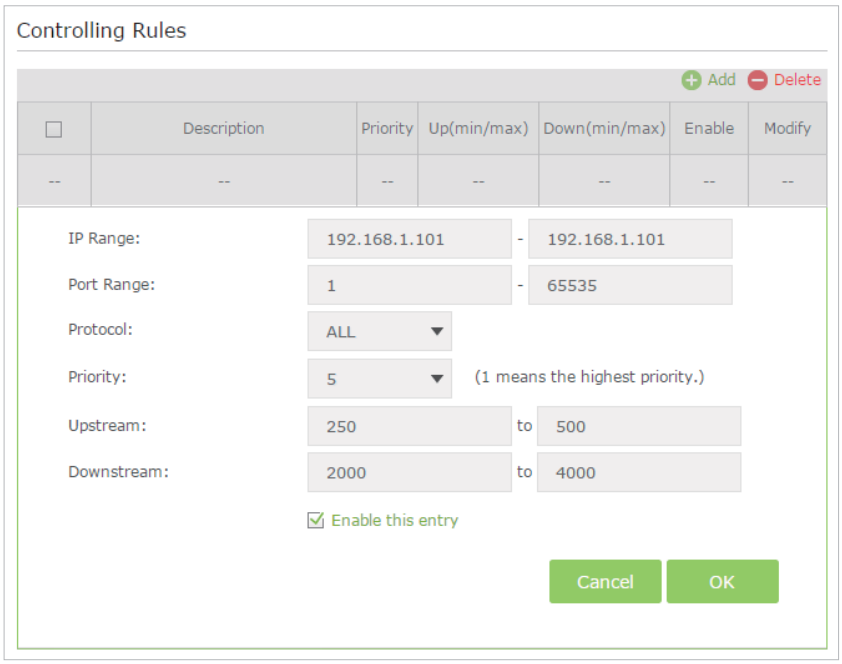
To use the bandwidth control feature, you'd better set static IP Address on each computer to be controlled or configure Address reservation on the modem router in order to manage easily. About how to configure address reservation, please refer to *Reserve LAN IP Addresses*.

How can I do that?

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Bandwidth Control page.



3. Enable Bandwidth Control, choose DSL on the line type. If you don't know how to choose the line type, please contact your ISP which line type you have access.
4. Enter the Total Upstream Bandwidth and the Total Downstream Bandwidth given by your ISP. (1Mbps=1024Kbps). Click Save to save the settings.
5. Click Add to add controlling rules for each computer respectively.



1) IP Range: Enter the IP address. The field can be single IP address or IP address range according to your demands. When you configure the single IP address, the computer with this IP address will get independent given bandwidth. When you configure the IP address range, all computers in the range will share the given bandwidth.

2) Port Range: Keep the default settings. The default port range of TCP protocol or UDP protocol is from 1 to 65535.

3) Protocol: Keep the default setting. Or you can choose the TCP protocol or UDP protocol or both of them.

4) Priority: Keep the default setting. You can change the value if you want to first guarantee the bandwidth for one computer. The smaller value has the higher priority.

5) Upstream/Downstream: Enter the bandwidth according to your division.

6) Check to enable this entry and click OK to save the settings.

6. Follow the steps above to add a rule for the other computer. And then you will get the following table.

Controlling Rules

Add Delete

	Description	Priority	Up(min/max)	Down(min/max)	Enable	Modify
	192.168.1.110	5	250/500 kbps	2000/4000 kbps		
	192.168.1.101	5	250/500 kbps	2000/4000 kbps		

Done!

Now you and your roommate have an independent bandwidth.

Chapter *6*

Network Security

This chapter guides you on how to protect your home network from unauthorized users by implementing these three 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 using IP & MAC Binding.

- *MAC Filtering*
- *Access Control*
- *IP & MAC Binding*

6. 1. MAC Filtering

This function exploits the uniqueness of the MAC (Medium Access Control) address, a unique 12-digit hexadecimal address (for example, D8:5D:4C:B4:46:EA) of every network device, to determine if the device can or cannot access your wireless network.

I want to:

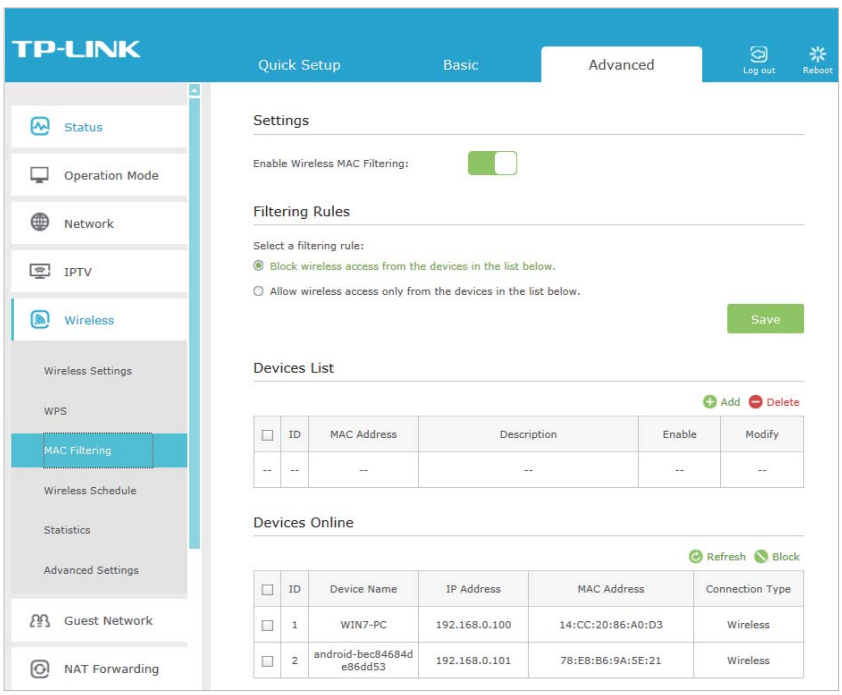
Prevent unauthorized users from accessing my wireless network by utilizing the network device's MAC address and IP address.

For example, I have a computer that is connected to my wireless network. Now, an unknown device (an intruder) is also using my wireless network, which affects my Internet speed. I would like to control my wireless network with the following capabilities:

- My computer is always allowed to access the wireless network.
- The unknown device is not allowed to access the wireless network.
- I don't have to keep changing my wireless password as often.

How can I do that?

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the router.
2. Go to Advanced > Wireless > MAC Filtering and enable Wireless MAC Filtering.



3. Select the filtering rule to either block (recommended) or allow the device(s) in the list.

To block specific device(s)

1) Select Block wireless access from the devices in the list below and click Save.

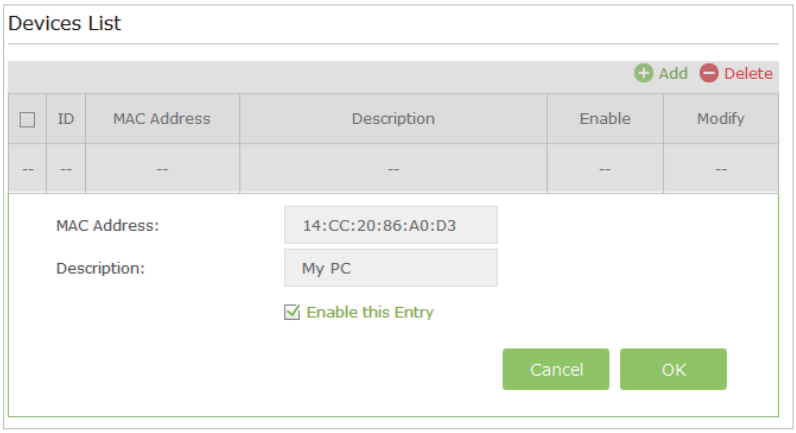
2) Select the device(s) to be blocked in the Devices Online table.

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

To allow specific device(s)

1) Select Allow wireless access only from the devices in the list below and click Save.

2) Click Add.



3) Enter the MAC Address (You can copy and paste the MAC Address from Devices Online list if the device is connected to your wireless network) and enter the Description of the device.

4) Select the checkbox to enable this entry, and click OK.

Done! Now MAC Filtering is implemented to protect your wireless network.

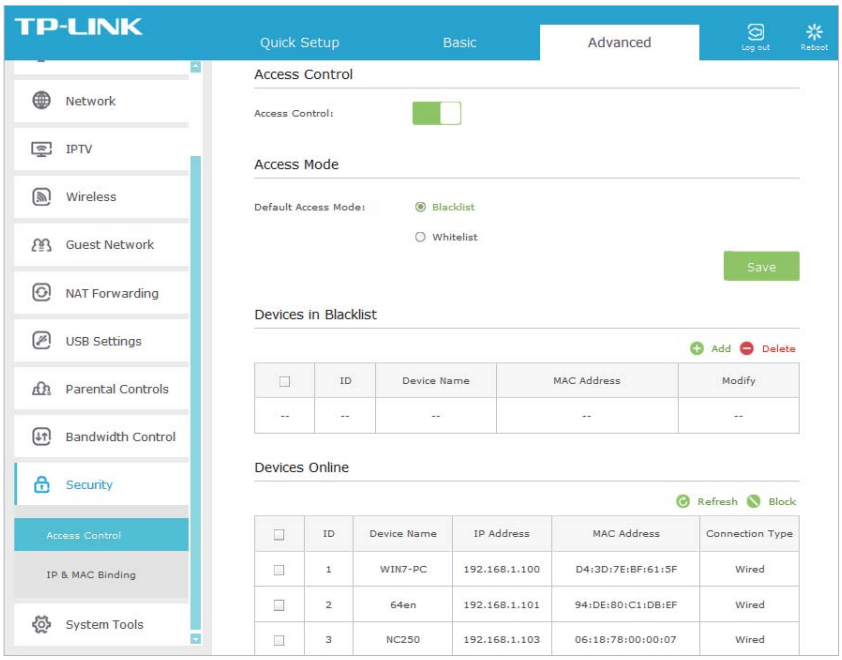
6. 2. Access Control

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

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

How can I do that?

1. Visit *http://tplinkmodem.net*, and log in with 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.

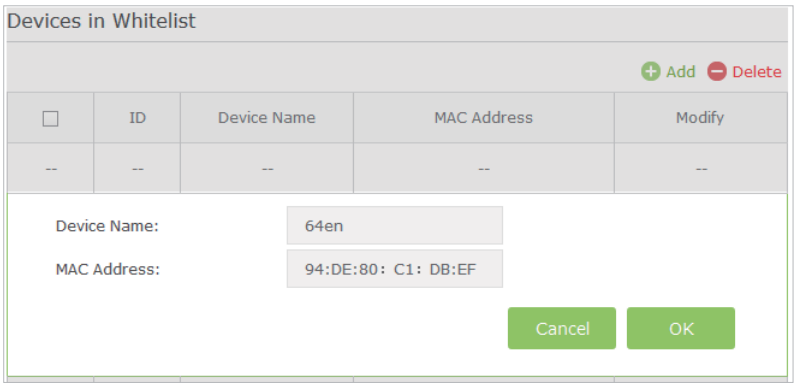
   2) Select the device(s) to be blocked in the Devices Online table.

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

   To allow specific device(s)

   1) Select Whitelist and click Save.

   2) Click Add.



3) Enter the Device Name and MAC Address (You can copy and paste the information from Devices Online table if the device is connected to your network).

4) Click OK.

Done!

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

6. 3. IP & MAC Binding

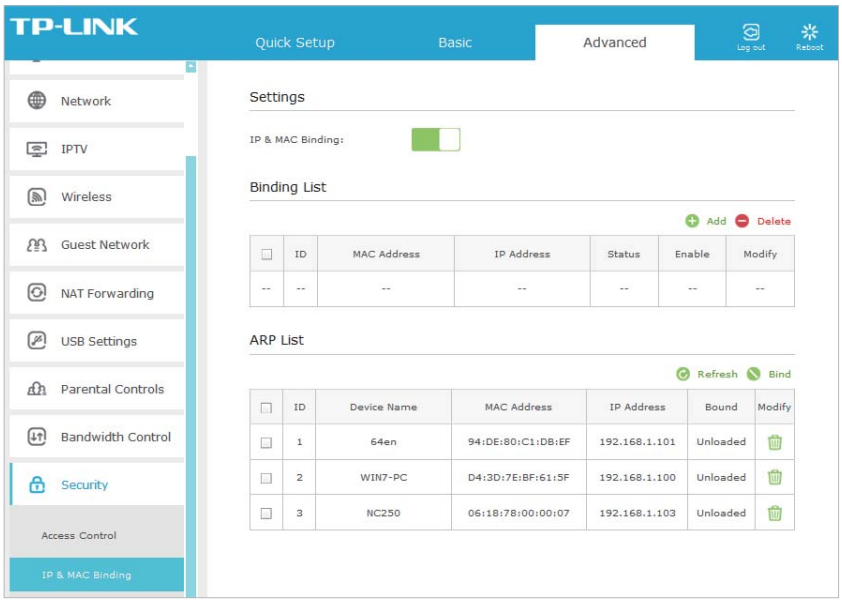
IP & MAC Binding, namely, ARP (Address Resolution Protocol) Binding, is used to bind network device's IP address to its MAC address. This will prevent ARP spoofing and other ARP attacks by denying network access to an device with matching IP address in the Binding list, but unrecognized MAC address.

I want to:

Prevent ARP spoofing and ARP attacks.

How can I do that?

1. Visit *http://tplinkmodem.net*, and log in with 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.

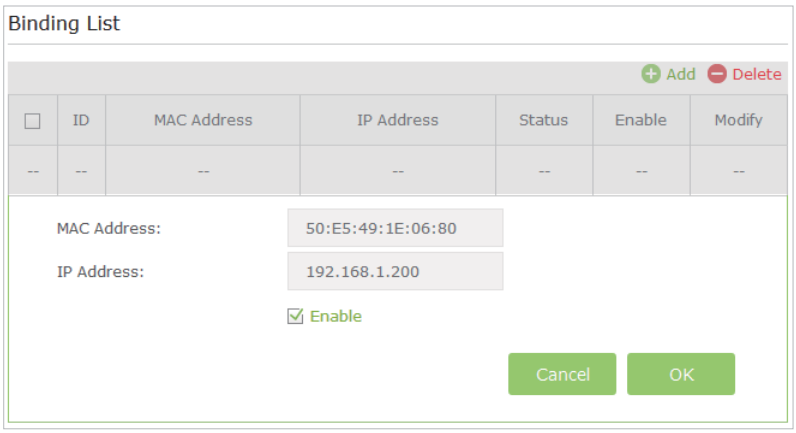
To bind the connected device(s)

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 checkbox to enable the entry and click OK.

Done!

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

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 seperating IPTV from Internet surfing, we guarantee you a high quality of video streaming and a high speed of Internet surfing.

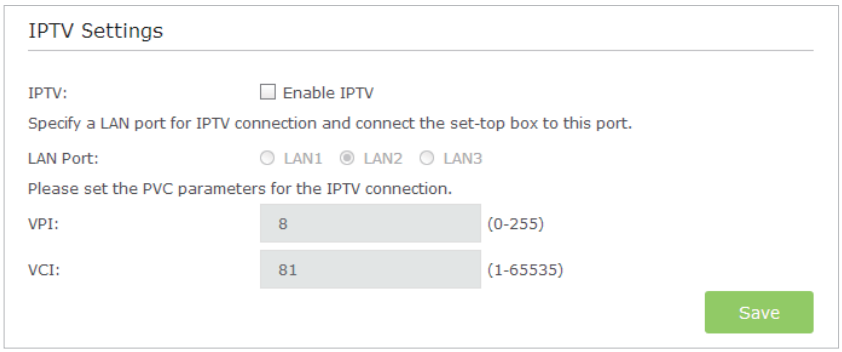
I want to:

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 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. Specify a LAN port for IPTV connection and connect the set-top box to this port.
5. Fill in PVC parameters (VPI and VCI). These parameters are provided by your IPTV service provider.
6. Click Save to make the settings effective.

Done!

Configurations needed on modem router is done now! You may need other configurations on your set-top box before enjoying your TV.

Chapter *8*

USB Application

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

The modem router only supports USB external flash drives, hard drives and USB printers, and does not support USB 3G/4G modems.

This chapter contains the following sections:

- *Local Storage Sharing*
- *Remote Access via FTP Serverr*
- *Media Sharing*
- *Printer Sharing*

8. 1. Local Storage Sharing

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

8. 1. 1. Access the USB disk

1. Connect Your USB Disk

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

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

2. Access Your USB Disk

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

Windows computer	1. Press Start ( )+ R on the keyboard (or select Start > Run) 2. Type the server address \\tplinkmodem.net or ftp://tplinkmodem.net in the dialog box 3. Click OK
Mac	1. Select Go > Connect to Server 2. Type the server address smb://tplinkmodem.net or ftp://tplinkmodem.net 3. Click Connect
pad	Use a third-party app for network files management.

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

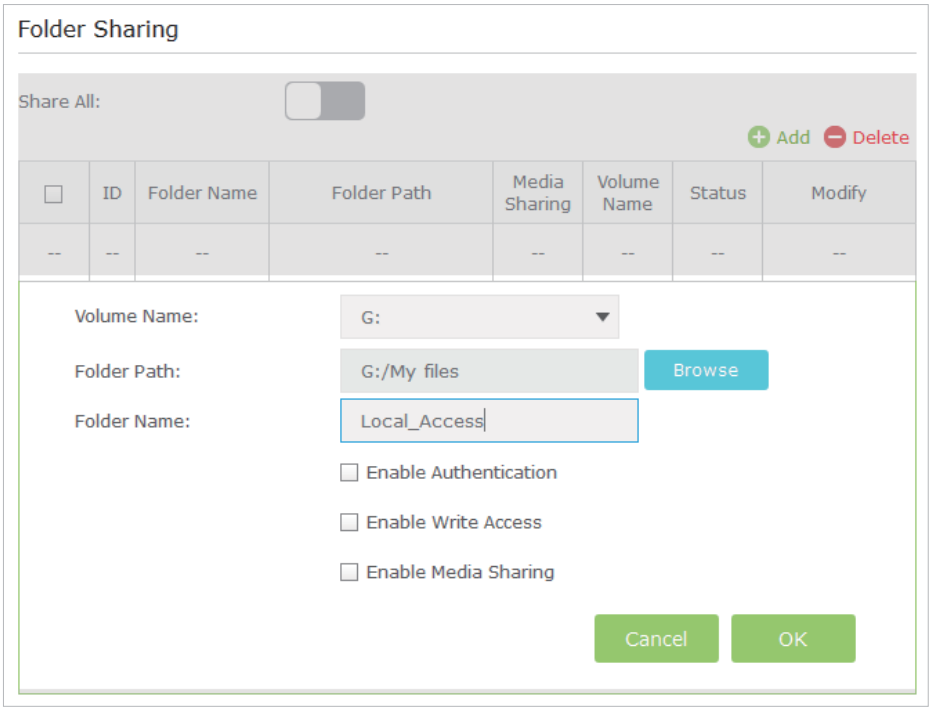
8. 1. 2. Customize Your Settings

➢ To Only Share Specific Content

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

1. Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.

2. Select Basic > USB Settings > Sharing Access. Focus on the Folder Sharing section. Click the button to disable Share All, then click Add to add a new sharing folder.



3. Select the Volume Name and Folder Path, then enter a Folder Name as you like.
4. Decide the way you share the folder:
   - Enable Authentication: Tick to enable authentication for this folder sharing, and you will be required to use a username and password to access the USB disk. Refer to *To Set up Authentication for Data Security* to learn more.
   - Enable Write Access: If you tick this check box, network clients can modify this folder.
   - Enable Media Sharing: Tick to enable media sharing for this folder, and you can view photos, play music and watch movies stored on the USB disk directly from DLNA-supported devices. Click *Media Sharing* to learn more.
5. Click OK.

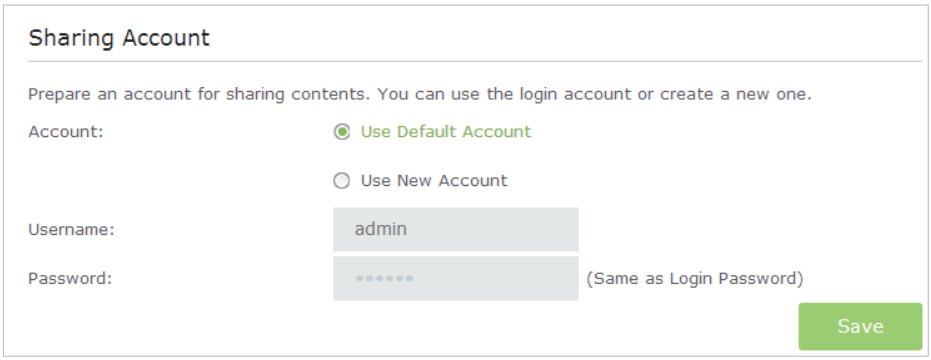
Tips:
The modem router can share eight volumes at most. You can click on the page to detach the corresponding volume you do not need to share.

➢ To Set up Authentication for Data Security

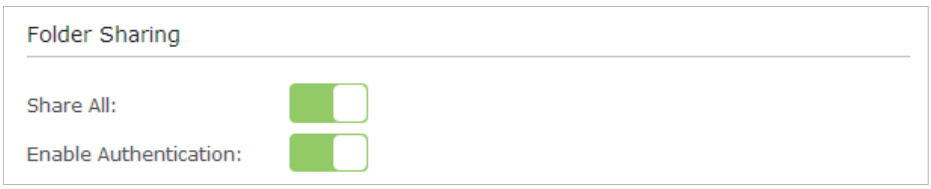
If you enable Authentication, network clients will be required to enter the username and password you set when accessing the USB disk.

1. Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.

2. Select Advanced > USB Settings > Sharing Access.



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

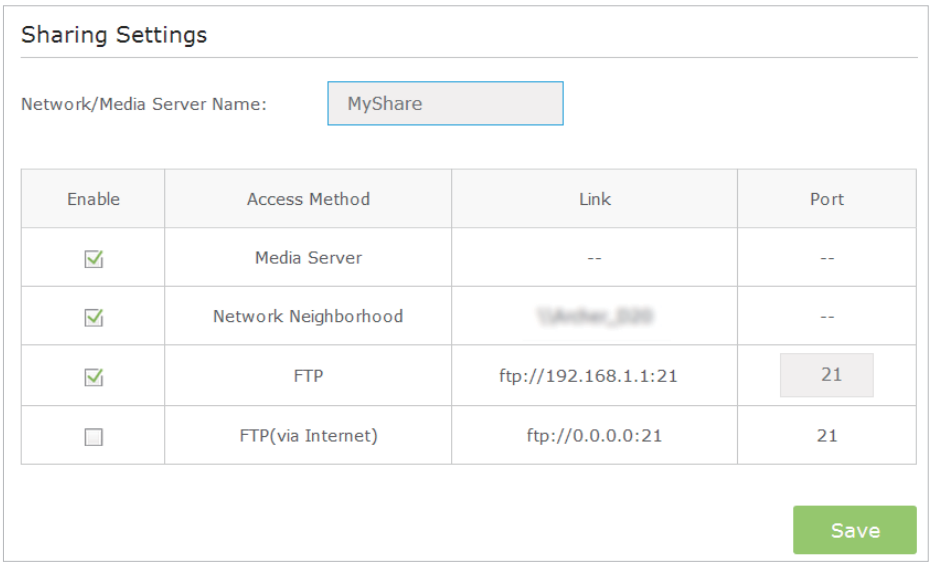


   - If Share All is disabled, enable Authentication for specific folders.

➢ **To Customize the Address of the USB Disk**

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

1. Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.
2. Select Advanced > USB Settings > Sharing Access.
3. Make sure Network Neighborhood is ticked, and enter a Network/Media Server Name as you like, such as MyShare, then click Save.



4. Now you can access the USB disk with \\MyShare (smb://MyShare for Mac).

8. 2. Remote Access via FTP Server

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

For example:

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

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

8. 2. 1. Access the USB disk

1. **Connect Your USB Disk**

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

   Note:
   - If you use USB hubs, make sure no more than 4 devices are connected to the modem router.
   - If the USB storage device requires using bundled external power, make sure the external power has been connected.
   - If you use a USB hard drive, make sure its file system is FAT32 or NTFS.
   - Before you physically disconnect a USB device from the modem router, safely remove it to avoid data damage: Select Advanced > USB Settings > Device Settings and click Safely Remove.

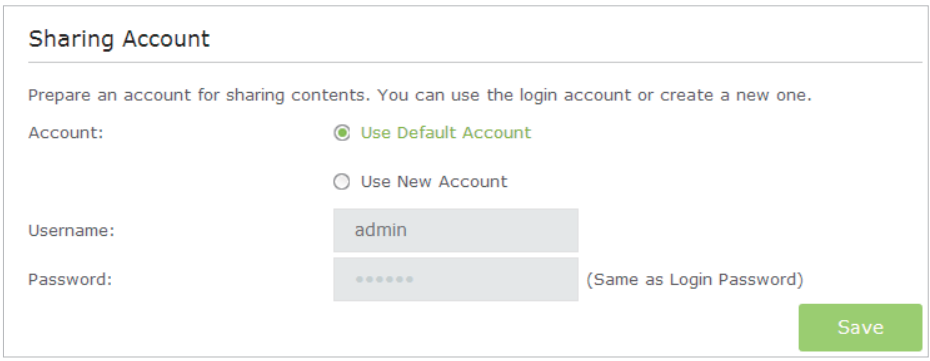
2. **Enable Authentication for Data Security**

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

1) Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.

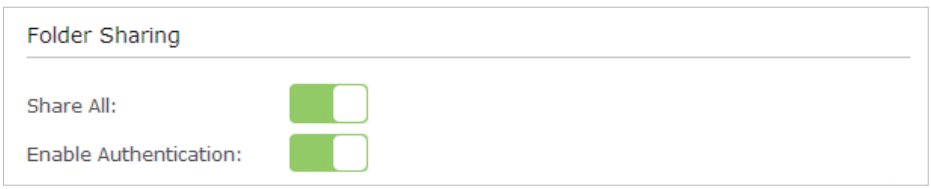
2) Select Advanced > USB Settings > Sharing Access.

3) Choose to use the default Account (admin) or use a new account and click Save.



4) Enable Authentication to apply the sharing account.

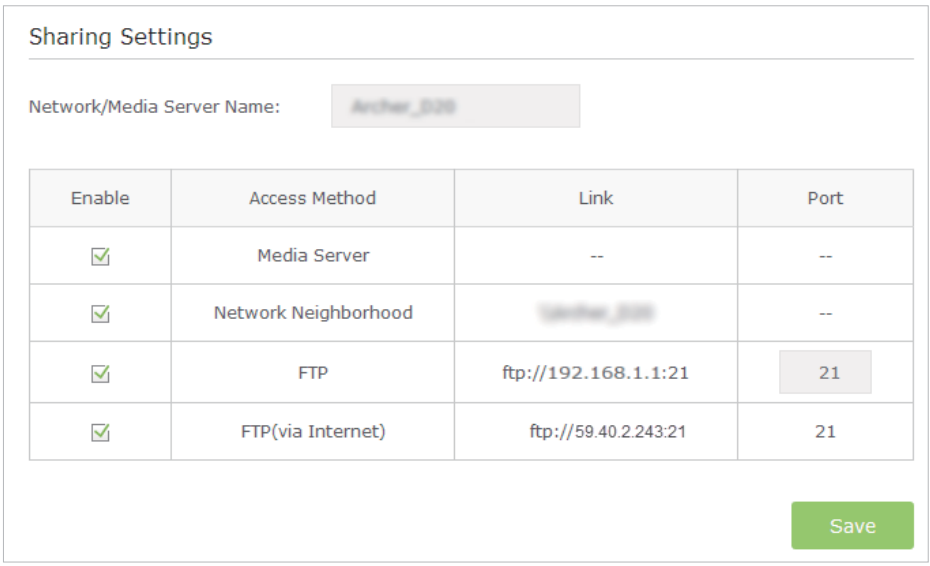
- If you leave Share All enabled, click the button to enable Authentication for all folders.



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

3. Enable the FTP(via Internet)

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



4. Access Your USB Disk via Internet

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

Computer	• To download, open a web browser and type the server address ftp://<WAN IP address of the modem router>:<port number> (such as ftp://59.40.2.243:21) or ftp://<domain name of the modem router>:<port number> (such as ftp://MyDomainName:21) in the address bar, then press Enter on the keyboard. • To upload, use a third-party app for network files management.
Pad	• Use a third-party app for network files management.

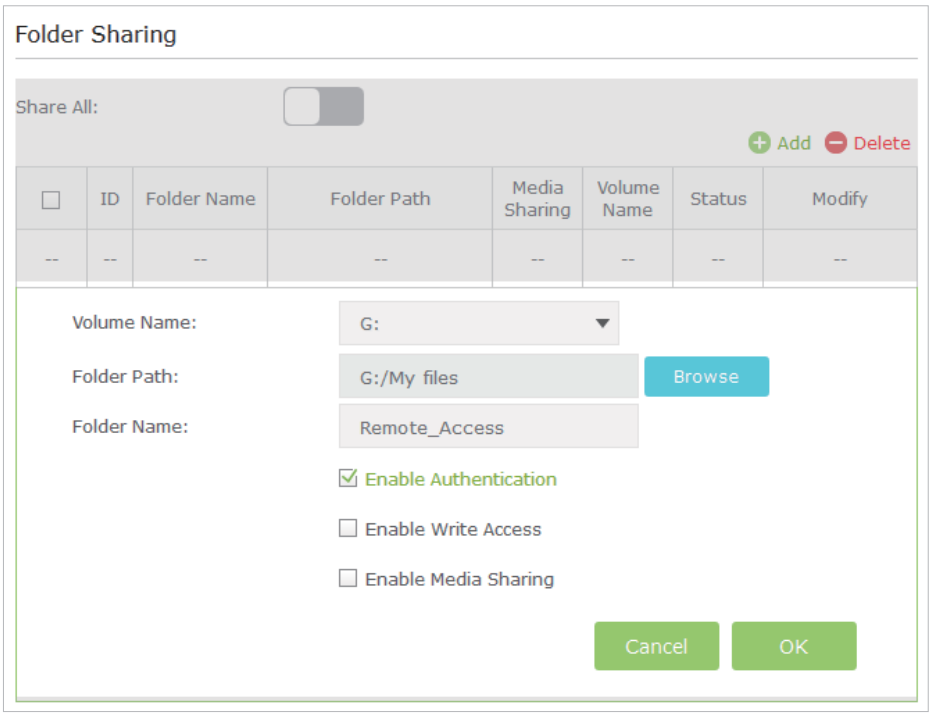
Tips:
Click *Set Up a Dynamic DNS Service Account* to learn how to set up a domain name for you modem router.

8. 2. 2. Customize Your Settings

➢ To Only Share Specific Content

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

1. Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.
2. Select Basic > USB Settings > Sharing Access. Focus on the section of Folder Sharing. Click the button to disable Share All, then click Add to add a new sharing folder.



3. Select the Volume Name and Folder Path, then specify the Folder Name as you like.
4. Tick Enable Authentication. If you allow network clients to modify this folder, tick Enable Write Access.
5. Click OK.

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

8. 3. Media Sharing

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

8. 3. 1. Access the USB disk

1. **Connect Your USB Disk**

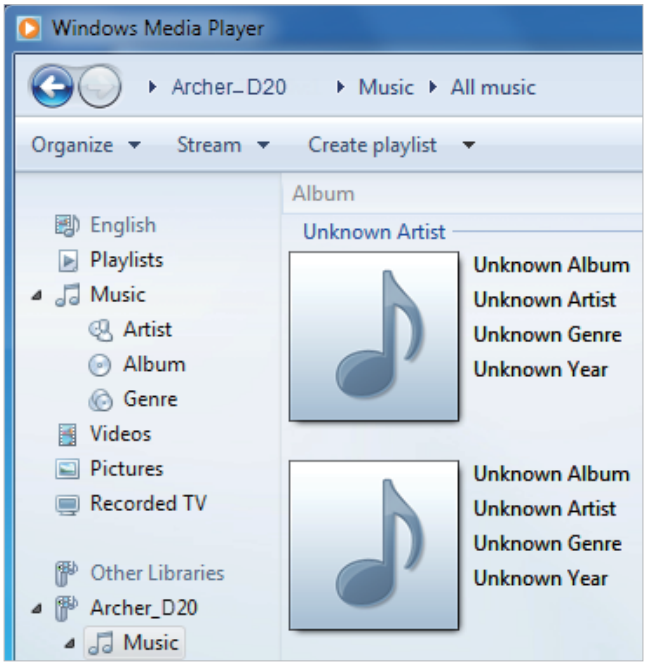
   Insert your USB storage device into the modem router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

   Note:
   - If you use USB hubs, make sure no more than 4 devices are connected to the modem router.
   - If the USB storage device requires using bundled external power, make sure the external power has been connected.
   - If you use a USB hard drive, make sure its file system is FAT32 or NTFS.

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

2. Access the Media Files on Your USB Disk

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

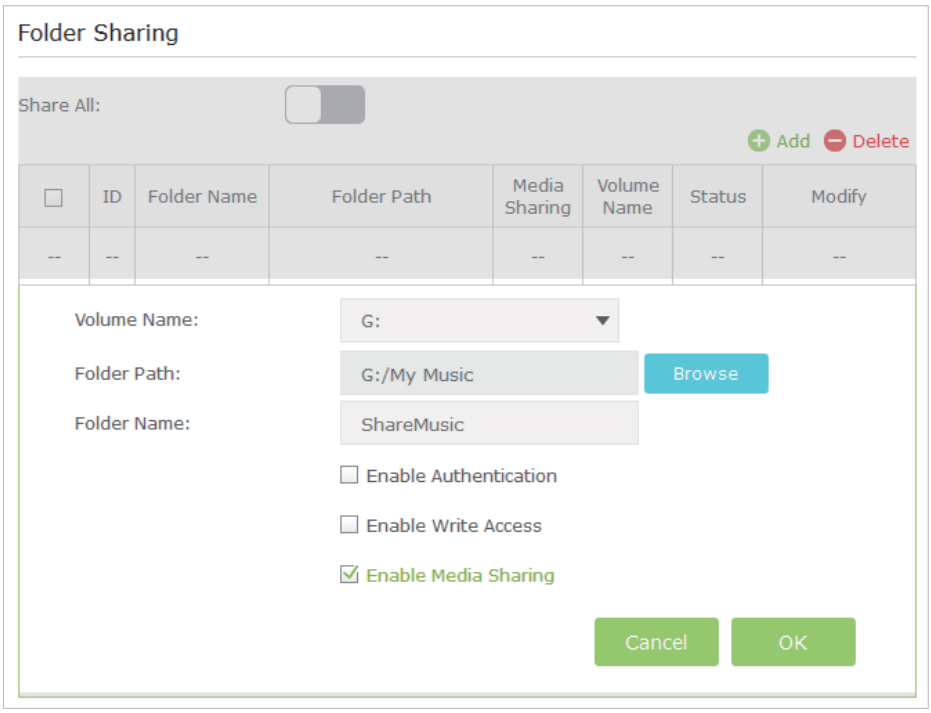
Windows computer	1. Open the Windows Media Player. 2. Click the media server name (Archer_D20 default) under the list of Other Libraries, then you can directly view photos, play music and watch movies that you share on the USB disks. 
Pad	• Use a third-party DLNA-supported player.

8. 3. 2. Customize Your Settings

➢ **To Only Share Specific Content**

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

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



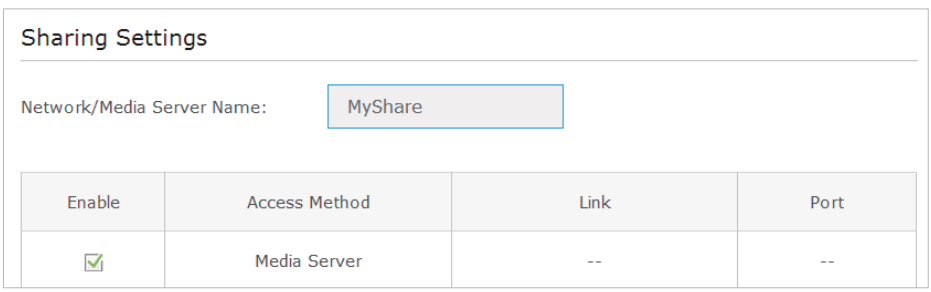
4. Select the Volume Name and Folder Path, then enter a Folder Name as you like.
5. Tick Enable Media Sharing and click OK.

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

➢ To Specify the Media Server

You can also modify the media server name or disable the feature of Media Sharing as needed.

1. Visit *http://tplinkmodem.net*, then log in with the password you set for the modem router.
2. Select Advanced > USB Settings > Sharing Access.
3. Enter a Network/Media Server Name as you like, such as MyShare. You can deselect the check box of Media Server to disable the media server feature.



4. Click Save.

8. 4. Printer Sharing

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

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

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

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

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

2. **Connect the Printer**

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

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

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

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

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

   3) Click TP-LINK USB Printer Controller Setup (for Windows users) or TP-Link UDS Printer Controller Installer (for Mac users) to install the utility.

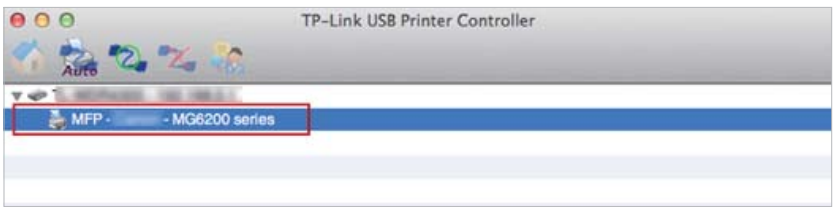
4. **Access the Printer**

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

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

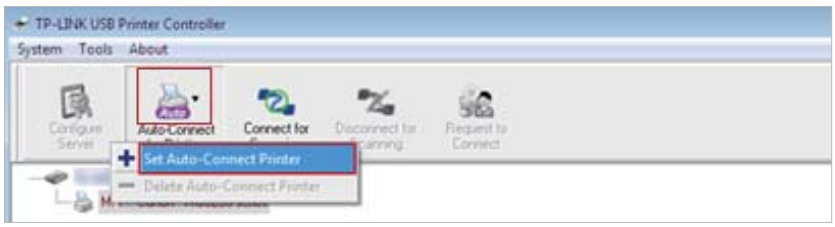
   2) Highlight the printer you share.

Windows

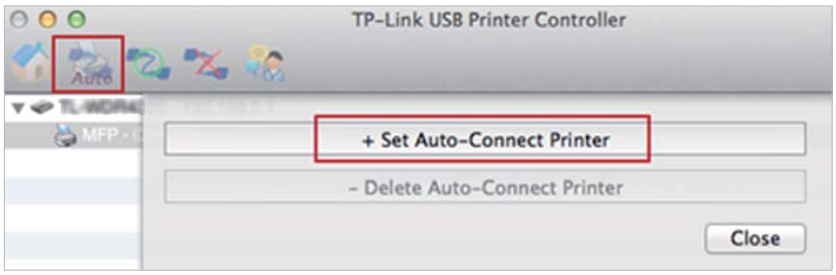


Mac

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

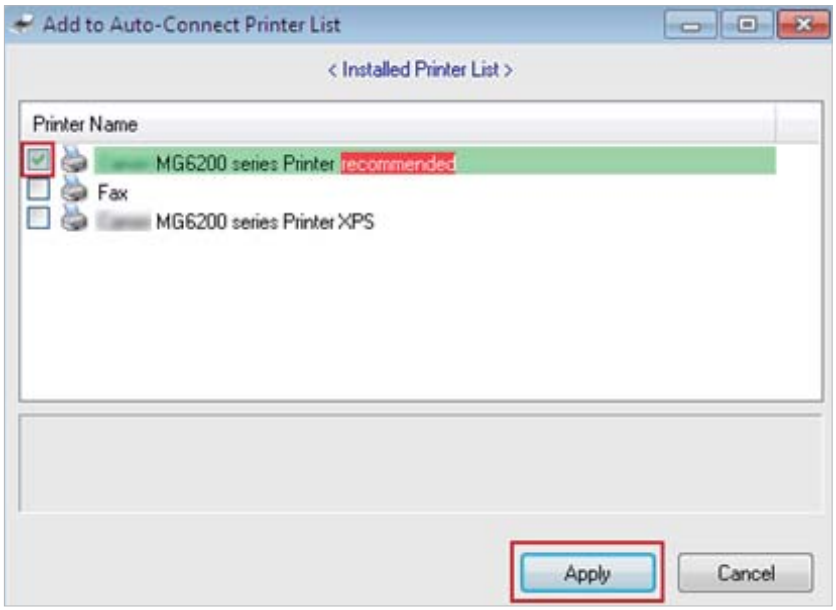


Windows

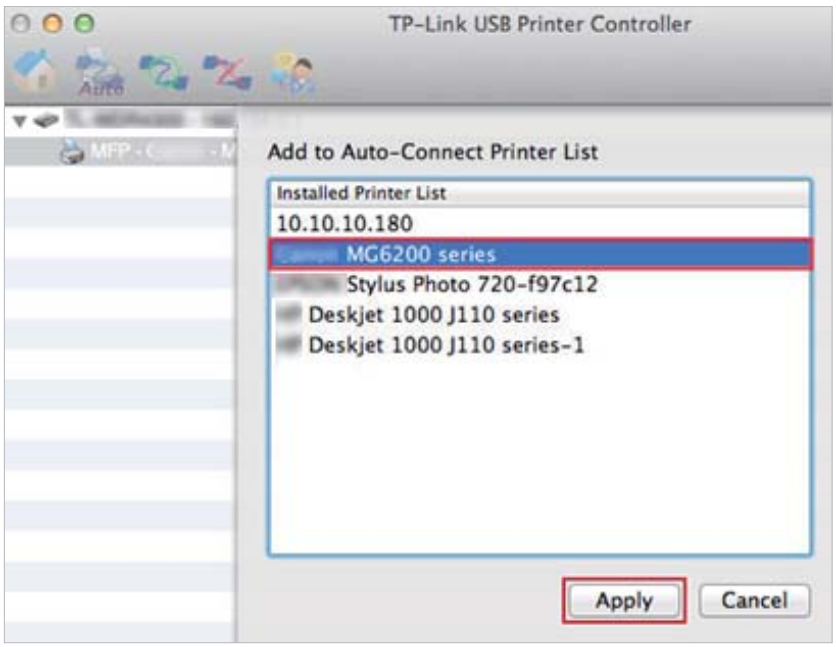


Mac

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

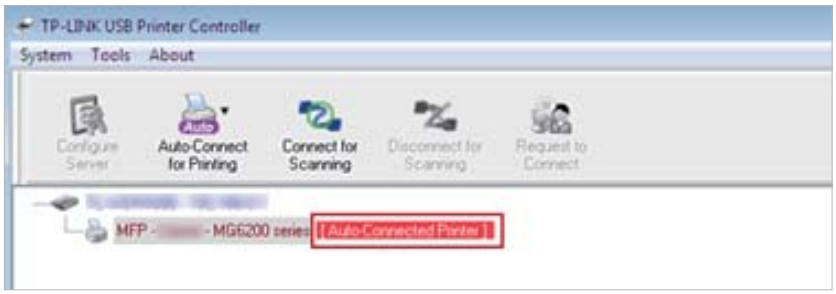


Windows



Mac

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



Windows

Mac

Tips:

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

Chapter *9*

Parental Controls

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

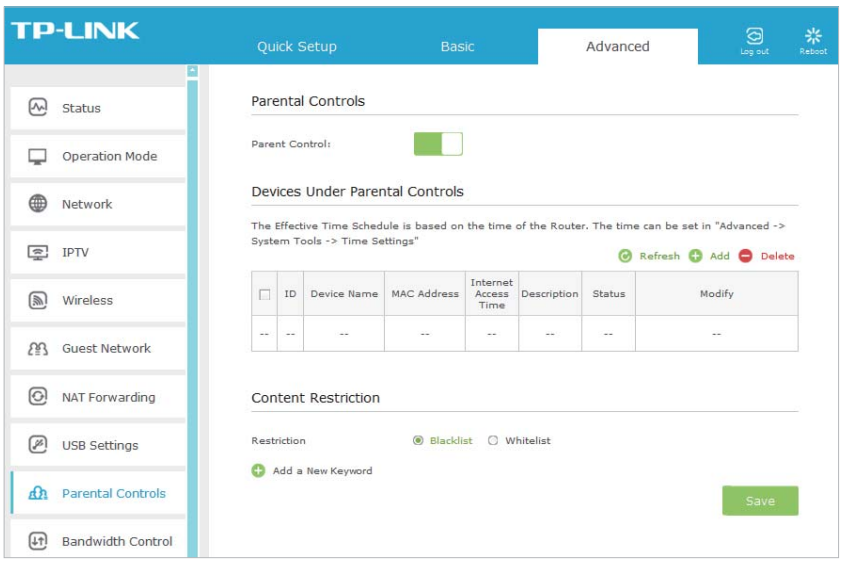
I want to:

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

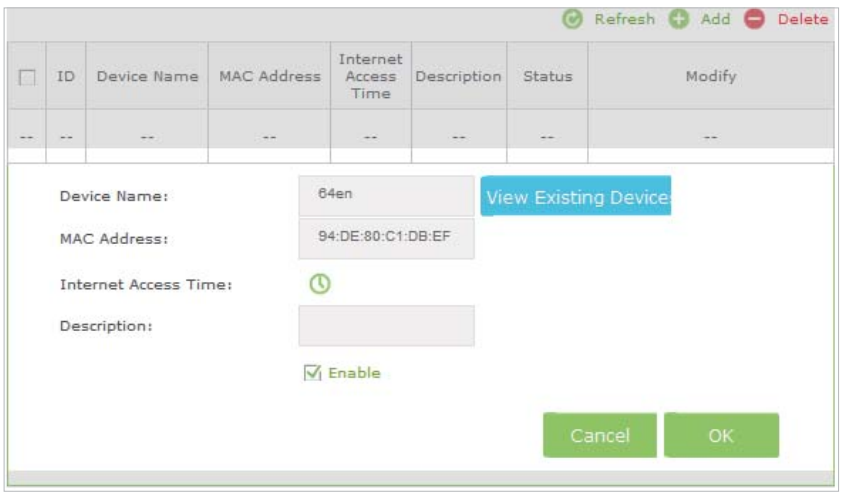
For example, I want to allow my children's devices (e.g. a computer or a tablet) to access only www.tp-link.com and Wikipedia.org from 18:00 (6PM) to 22:00 (10PM) on weekdays and not other time.

How can I do that?

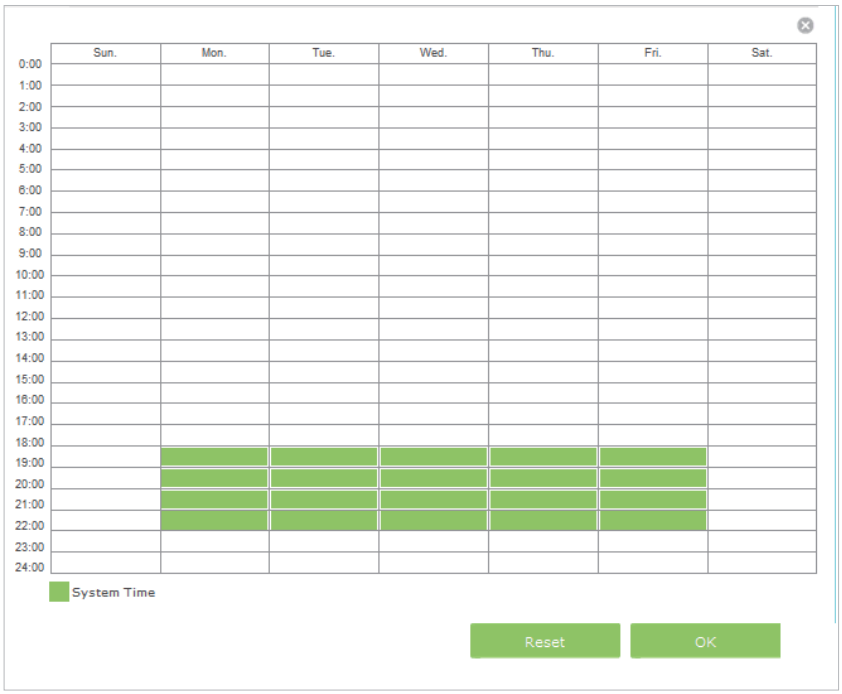
1. Visit *http://tplinkmodem.net*, and log in with the password you set for the router.
2. Go to Basic or Advanced > Parental Controls and enable Parental Control.



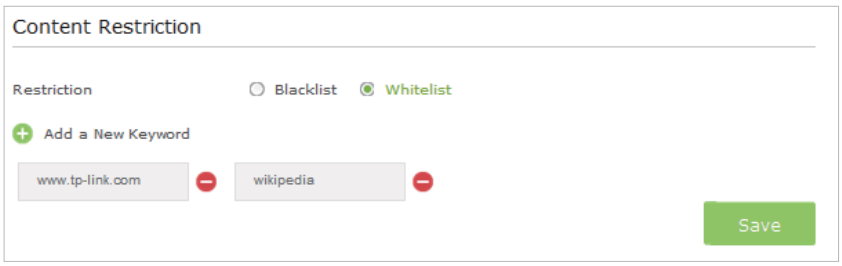
3. Click Add.



4. Click View Existing Devices, and select the device to be controlled. Or, enter the Device Name and MAC Address manually.
5. Click the icon to set the Internet Access Time. Drag the cursor over the appropriate cell(s) and click OK.



6. Enter a Description for the entry.
7. Select the checkbox to enable this entry and click OK.
8. Select the restriction mode.
   1) In Blacklist mode, the controlled devices cannot access any websites containing the specified keywords during the Internet Access Time period.
   2) In Whitelist mode, the controlled devices can only access websites containing the specified keywords during the Internet Access Time period.



9. Click Add a New Keyword. You can add up to 200 keywords for both Blacklist and Whitelist. Below are some sample entries to allow access.
   1) Enter a web address (e.g. www.tp-link.com) or a web address keyword (e.g. wikipedia) to only allow or block access to the websites containing that keyword.
   2) Specify the domain suffix (eg. .edu or .org) to allow access only to the websites with that suffix.
   3) If you wish to block all Internet browsing access, do not add any keyword to the Whitelist.
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 *10*

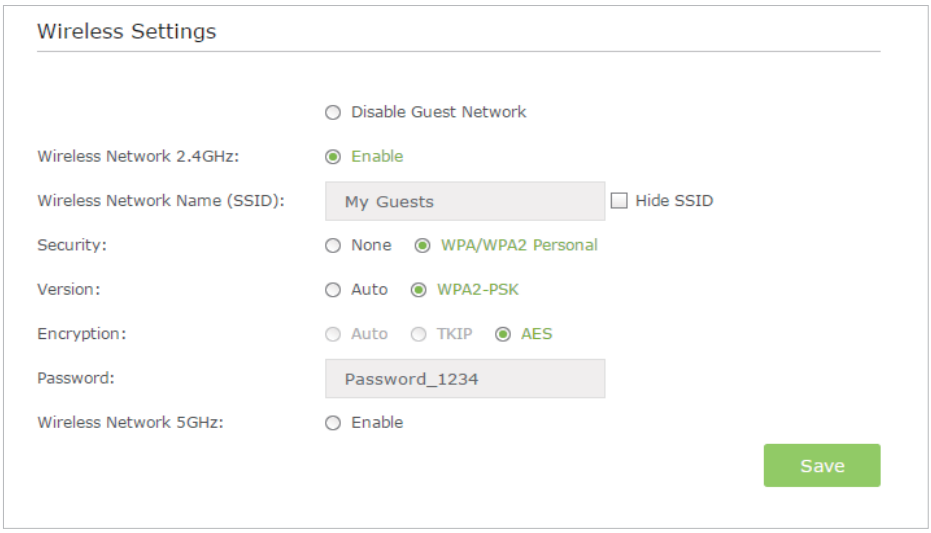
Guest Network

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*

10. 1. Create a Network for Guests

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



1) Enable Wireless Network 2.4GHz or Wireless Network 5GHz.

2) Set an easy-to-identify SSID. Don't select Hide SSID unless you want your guests and other people to manually input this SSID for Wi-Fi access.

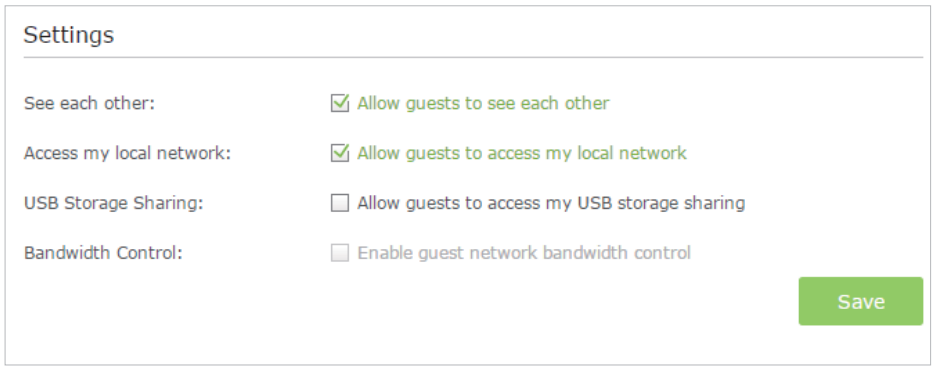
3) Set Security to WPA/WPA2 Personal, keep the default Version and Encryption values, and set an easy-to-remember password.

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

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

10. 2. Customize Guest Network Options

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Guest Network.



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

- Allow guests to see each other

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

- Allow guests to access my local network

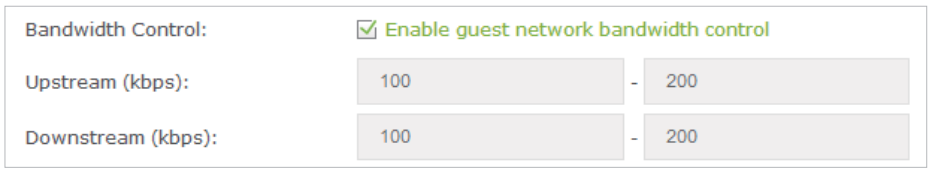
Select this checkbox to allow the clients in your guest network to access your local network, not just Internet access.

- Allow guests to access my USB storage sharing

Select this checkbox to allow the clients in your guest network to access your router's USB storage sharing.

- Enable guest network bandwidth control

Select this checkbox to assign the upstream and downstream bandwidth of the guest network. This option is available only when Bandwidth Control is enabled on the Advanced > Bandwidth Control page.



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

Tips:

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

Chapter *11*

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.

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

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.

This chapter contains the following sections:

- *Share Local Resources in 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*

11. 1. Share Local Resources in the Internet by Virtual Server

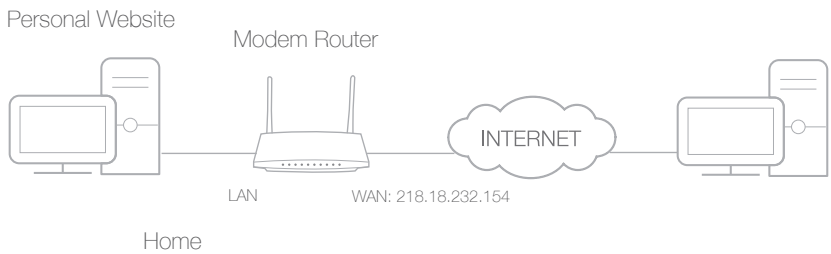
When you build up a server in the local network and want to share it on the Internet, Virtual Server can realize the service and provide it to the Internet users. At the same time virtual server can keep the local network safe as other services are still invisible from the Internet.

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:

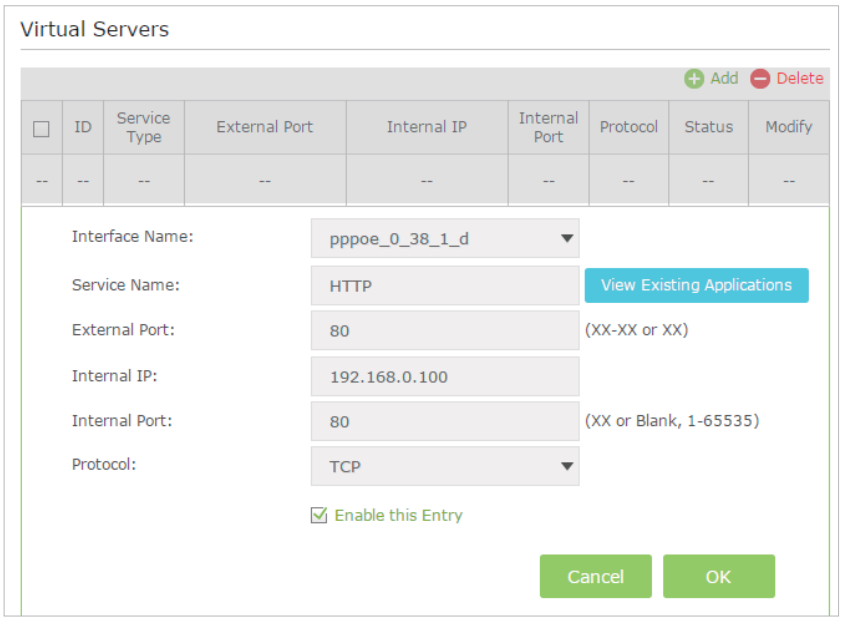
share my personal website I've built in local network with my friends through the Internet.

For example, the personal website has been built in my home PC (192.168.0.100). I hope that my friends in the Internet can visit my website in some way. 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 192.168.0.100.
2. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
3. Go to Advanced > NAT Forwarding > Virtual Servers, click Add.



4. Click View Existing Services, and choose HTTP. The external port, internal port and protocol will be automatically filled with contents. Enter the PC's IP address 192.168.0.100 in the Internal IP field.

5. Click OK 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 in a modem router. Please note that the External Port cannot be overlapped.

Done!

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

Tips:

1. WAN IP should be a public IP address. For the WAN IP is assigned dynamically by ISP, it is recommended to apply and register a domain name for the WAN 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.

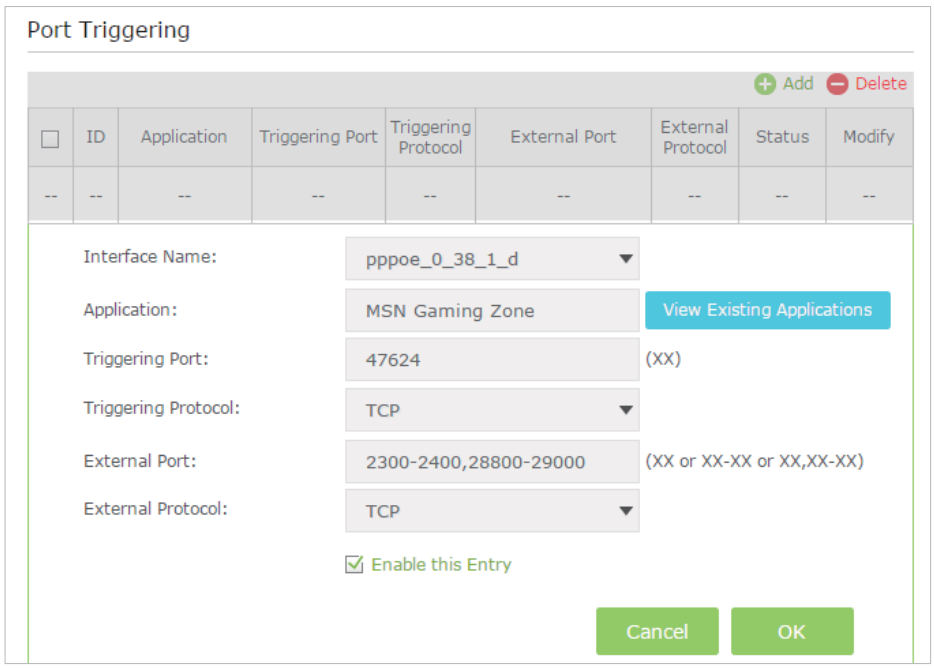
11. 2. Open Ports Dynamically by Port Triggering

Port triggering can specify a triggering port and its corresponding external ports. When a host in the local network initiates a connection to the triggering port, all the external ports will be opened for subsequent connections. The modem router can record the IP address of the host. When the data from the Internet return 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 and Quick Time 4 players, etc.

Follow the steps below to configure the port triggering rules:

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > NAT Forwarding > Port Triggering and click Add.



3. Click View Existing Applications, and select the desired application. The triggering port and protocol, the external port and protocol will be automatically filled with contents. Here we take application MSN Gaming Zone as an example.
4. Click OK 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.

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

When a PC is set to be a DMZ (Demilitarized Zone) host in the local network, it is totally exposed to the Internet, which can realize the unlimited bidirectional communication between internal hosts and external hosts. The DMZ host becomes a virtual server with

all ports opened. When you are not clear about which ports to open in some special applications, like IP camera and database software, you can set the PC to be a DMZ host.

Note:
DMZ is more applicable in the situation that users are not clear about 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 192.168.0.100.
2. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
3. Go to Advanced > NAT Forwarding > DMZ and select the checkbox to enable DMZ.

4. Enter the IP address 192.168.0.100 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.

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

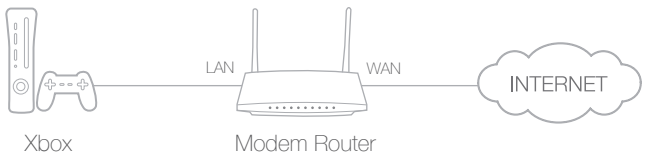
UPnP (Universal Plug and Play) protocol allows the applications or host devices to automatically find the front-end NAT device and send request to it to open the corresponding ports. With UPnP enabled, the applications or host devices in the both sides of NAT device can freely communicate with each other realizing the seamless connection of the network. You may need to enable the UPnP if you want

to use applications for multiplayer gaming, peer-to-peer connections, real-time communication (such as VoIP or telephone conference) or remote assistance, etc.

Tips:

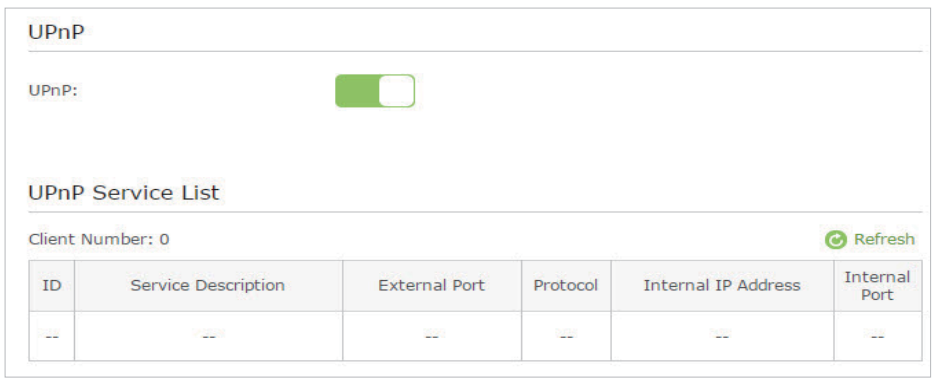
1. UPnP is enabled by default in this modem router.
2. Only the application supporting UPnP protocol can use this feature.
3. UPnP feature needs the support of operating system (e.g. Windows Vista/ Windows 7/ Windows 8, etc. Some of operating system need to install the UPnP components).

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



Chapter *12*

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-based management page.

This chapter contains the following sections:

- *LAN Settings*
- *Wireless Settings*
- *Set Up a Dynamic DNS Service Account*
- *Interface Grouping*
- *Create Static Routes*
- *Set up a VPN Connection*

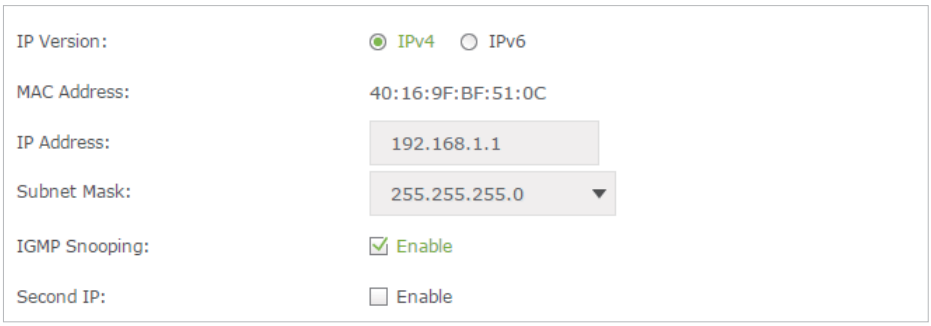
12. 1. LAN Settings

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

Follow the steps below to change your IP address.

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



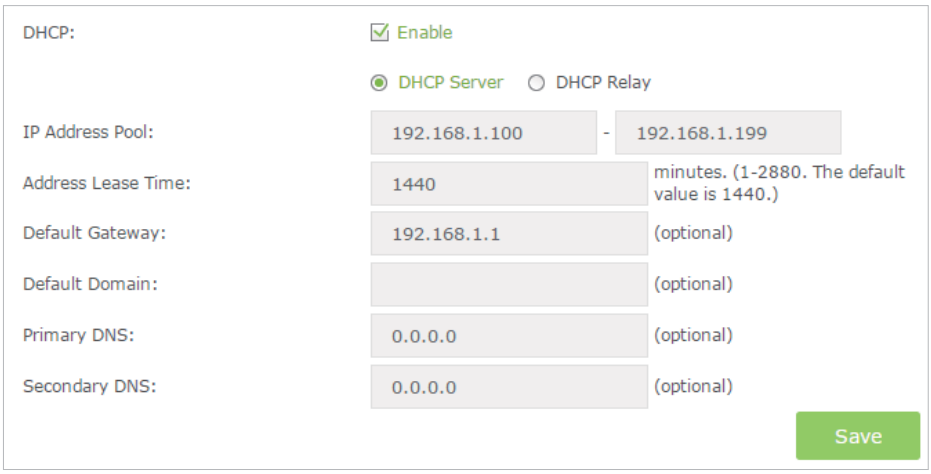
3. Type in a new IP Address appropriate to your needs.
4. Select the Subnet Mask from the drop-down list. The subnet mask together with the IP address identifies the local IP subnet.
5. Keep IGMP Snooping as enabled by default. IGMP snooping is the process of listening to IGMP (Internet Group Management 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.

12. 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 the password you set for the modem 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 to make your settings effective.

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 actual situation on Advanced > Network > LAN Settings page.

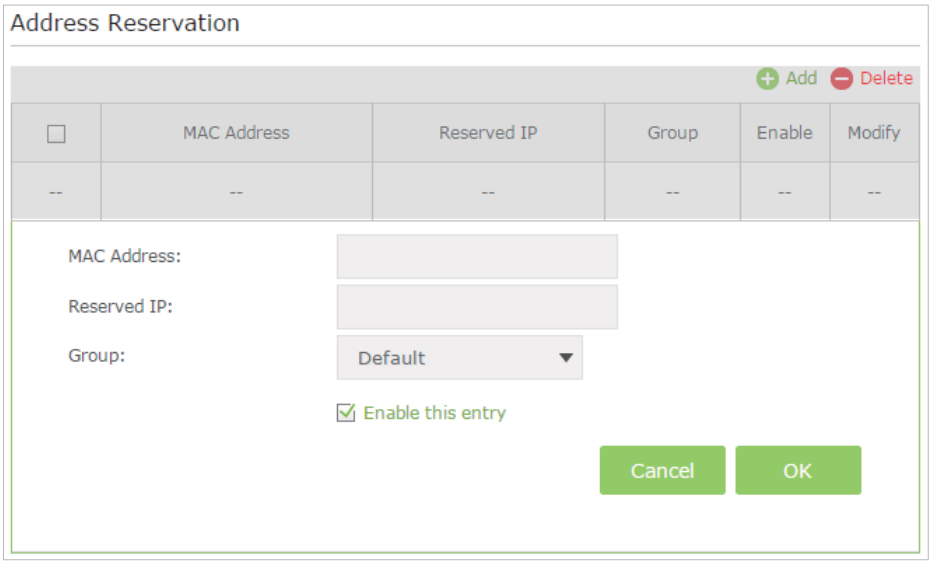
12. 1. 3. Reserve LAN IP Addresses

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 the password you set for the modem 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.



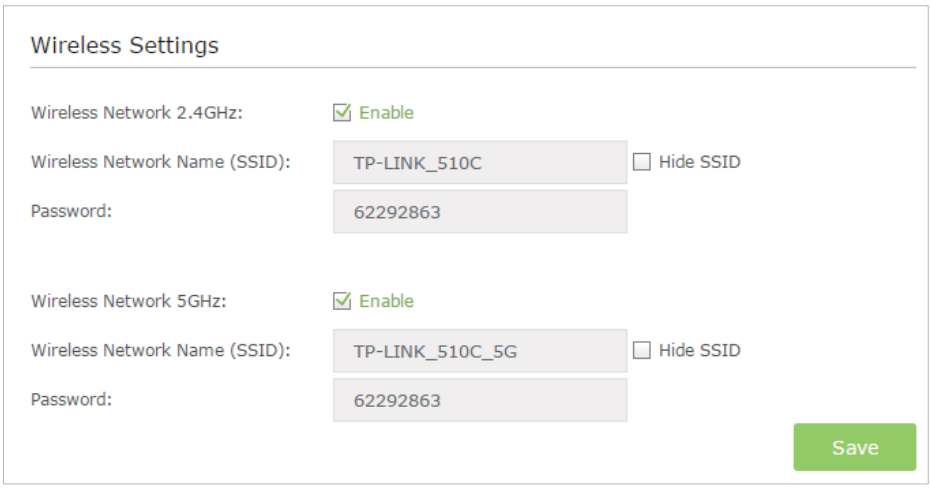
4. Enter the MAC address of the device for which you want to reserve IP address.
5. Specify the IP address which will be reserved by the router.
6. Check to Enable this entry and click OK to make the settings effective.

12. 2. Wireless Settings

12. 2. 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.

Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router. Go to Basic > Wireless page.



➢ To enable or disable the wireless function:

Enable the Wireless Network 2.4GHz or 5GHz. If you don't want to use the wireless function, just uncheck 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 default SSID is TP-LINK_XXXX and the value is case-sensitive.

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

➢ To hide SSID:

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

➢ 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.

➢ **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.

12. 2. 2. Use WPS for Wireless Connection

You can use WPS feature to add a new wireless device to your existing network quickly.

Method 1 Use the Wi-Fi Protected Setup Button

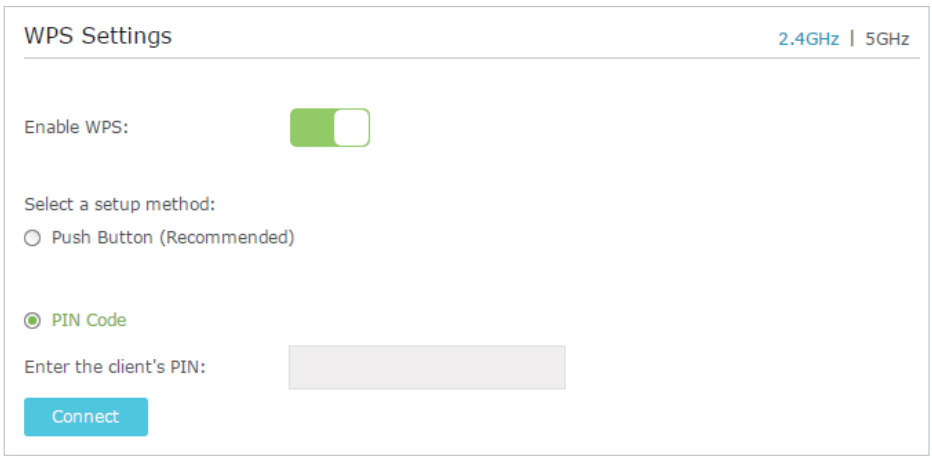
Use this method if your client device has a Wi-Fi Protected Setup button.

1. Press the WPS/RESET button on the back panel of the modem router for 1 second.

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

Method 2 Enter the client device's PIN on the modem router

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Wireless >WPS page. Select the wireless network 2.4GHz or 5GHz according to your wireless client.

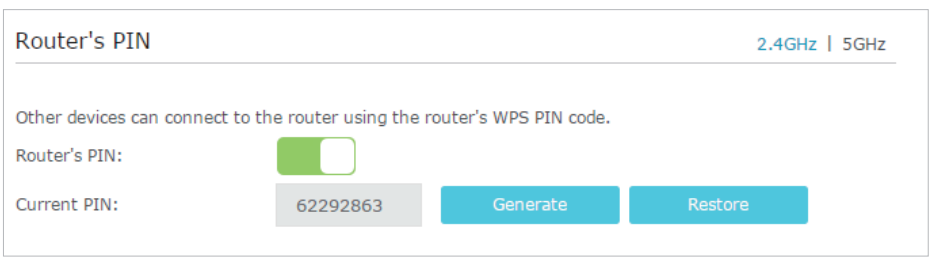


3. Keep the default WPS status as Enabled and select the PIN Code radio button.
4. Enter the client device's PIN in the field on the above WPS screen. Then click the Connect button.
5. "Connect successfully" will appear on the above screen, which means the client device has successfully connected to the modem router.

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 the password you set for the modem router.
2. Go to Advanced > Wireless >WPS page. Select the wireless network 2.4GHz or 5GHz according to your wireless client.



3. Keep the Router's PIN status as enabled. 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 labeled on the bottom 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.

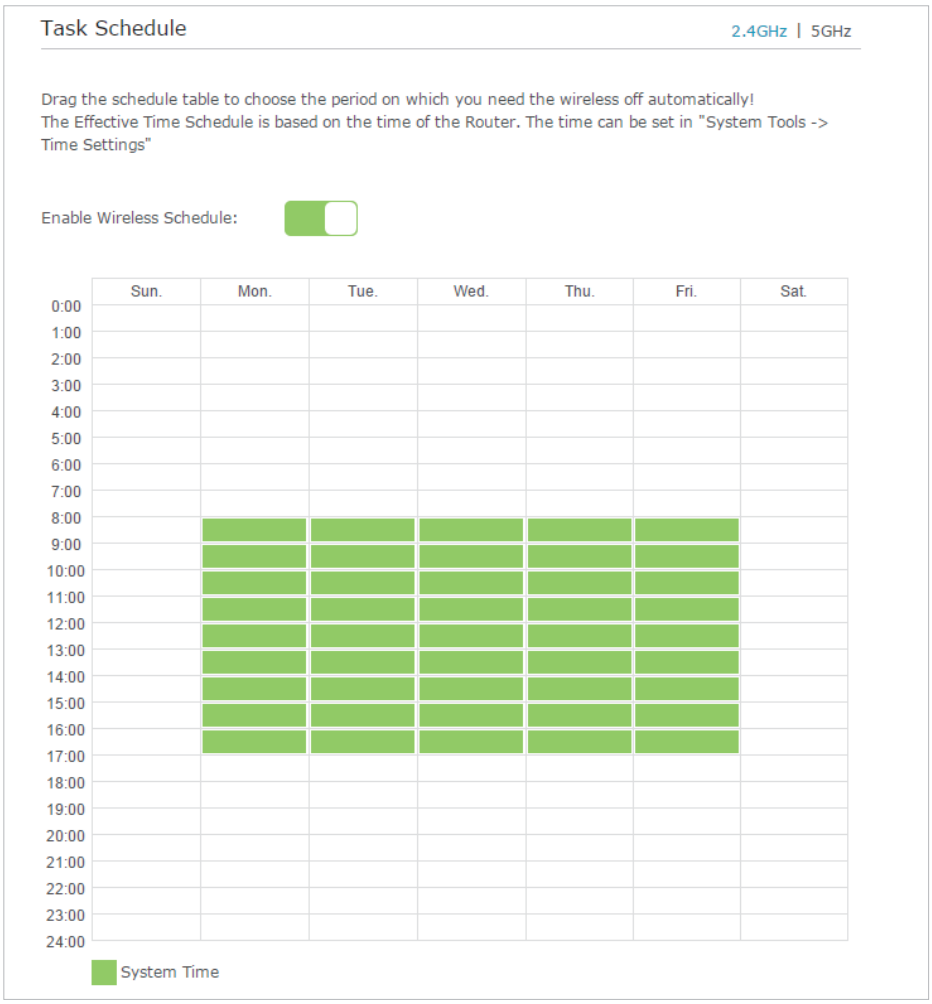
Note:

1. The WPS LED on the modem router will light green 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 the WPS.

12. 2. 3. Schedule Your Wireless Function

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

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Wireless > Wireless Schedule page.
3. Select the 2.4GHz wireless network to configure. Toggle on the button to enable the Wireless Schedule feature.



4. Set the time. Drag the cursor to cover the time area and click Save to make the settings effective. The selected time will be in green.

5. Repeat steps 3 and 4 to set time for 5GHz wireless network.

Note:

1. If you just set time for one wireless band, the other wireless band is still always on, so set time for both of the two bands to schedule your whole wireless network.
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.

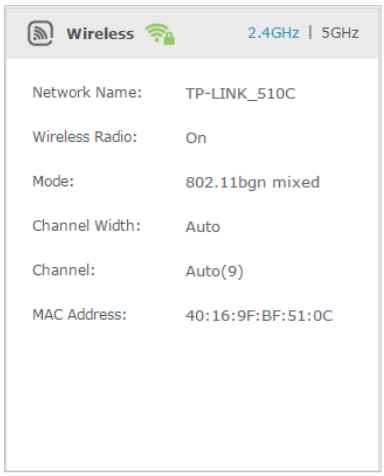
12. 2. 4. View Wireless Information

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

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem 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 wrieless details by clicking the router icon on Basic> Network Map.

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

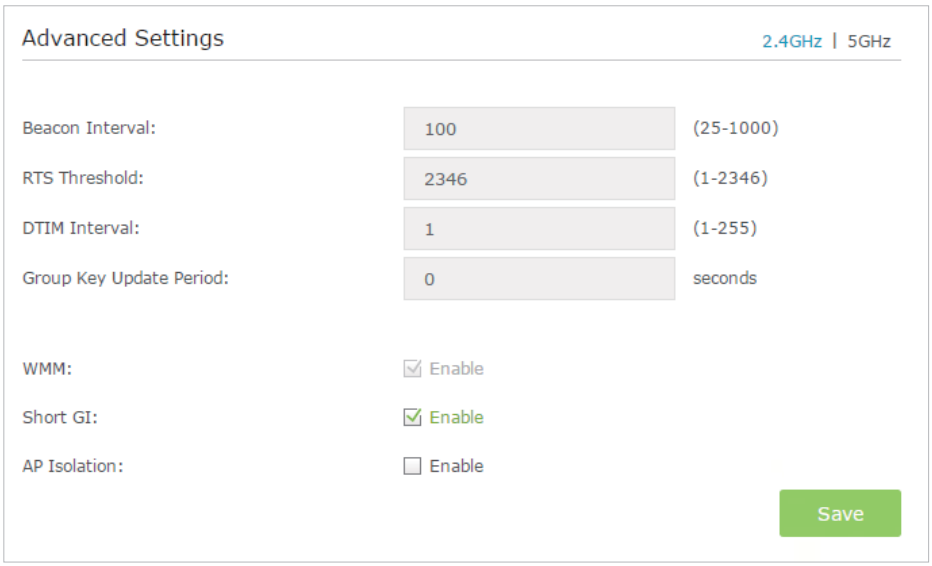
1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Wireless > Statistics page.
3. You can view the detailed information of the wireless clients, including its connected wireless band and security option as well as the packets transmitted.

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

12. 2. 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 the password you set for the modem 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.
- Enable WMM: This feature guarantees the packets with high-priority messages being transmitted preferentially. WMM is enabled compulsively under 802.11n or 802.11ac mode. It is strongly recommended to enable WMM.
- Enable 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 checkbox 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.
- WDS: Select this checkbox to enable the WDS (Wireless Distribution System) Bridging feature to allow the router to bridge with another access point (AP) in a wireless local area network (WLAN). Refer to *Appendix B: Troubleshooting* for detailed instructions.

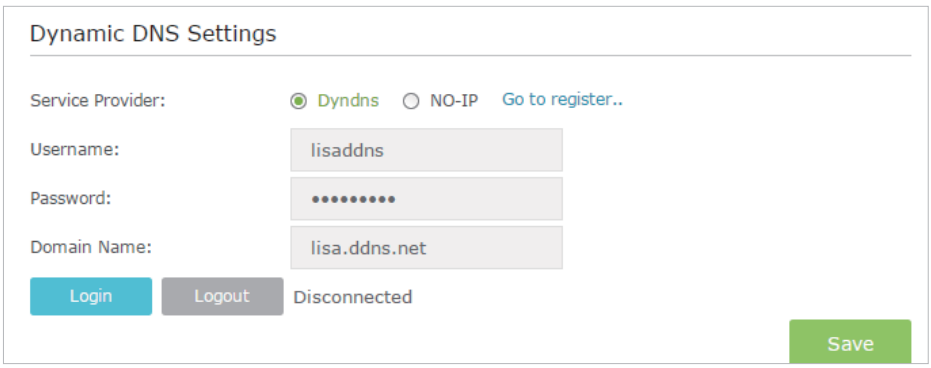
12. 3. Set Up a Dynamic DNS Service Account

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

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

To set up DDNS, please follow the instructions below:

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



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

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

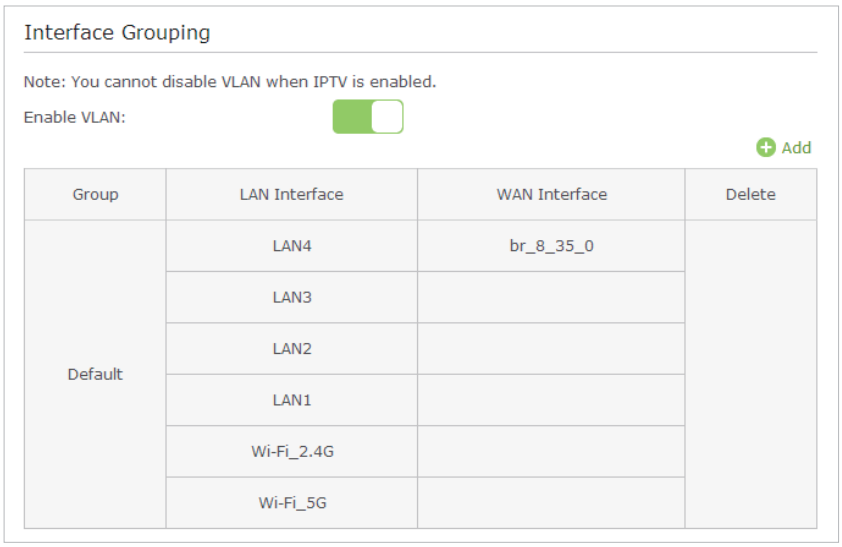
12. 4. Interface Grouping

I want to: Divide my devices connected to the modem router into different groups and disallow devices' cross-group communication.

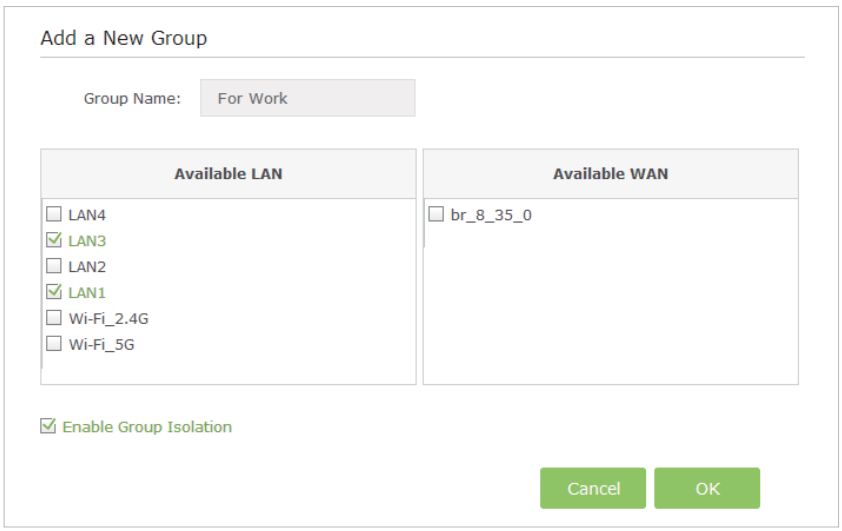
For example, in my house, devices connected to LAN1 and LAN3 are for work, while others for entertainment. I want to isolate working devices from others while keep all devices' access to the Internet.

How can I do that?

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > Network > Interface Grouping to open the configuration page where some interfaces can be grouped together.



3. Click to Add a new group.



4. Name the group.
5. Check the boxes of LAN1 and LAN3 in Available LAN. Here Wi-Fi 2.4G network and Wi-Fi 5G network are viewed as a LAN interface respectively.
6. Click Enable Group Isolation to isolate working devices and disallow other devices from communicating with them.
7. Click OK to save the settings.

Done!

Now your working devices connected to LAN1 and LAN3 are in an isolated group!

Note: VLAN function is enabled by default. You cannot disable it when IPTV is enabled.

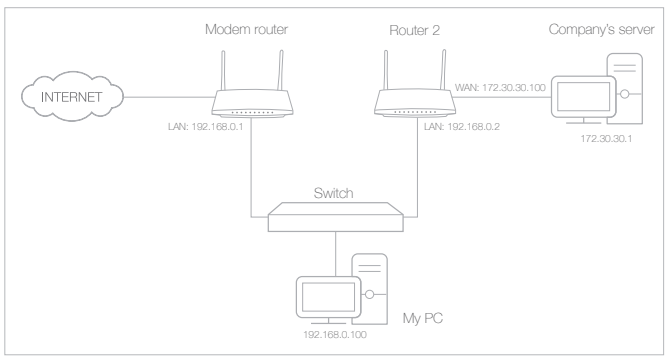
12. 5. Create Static Routes

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:

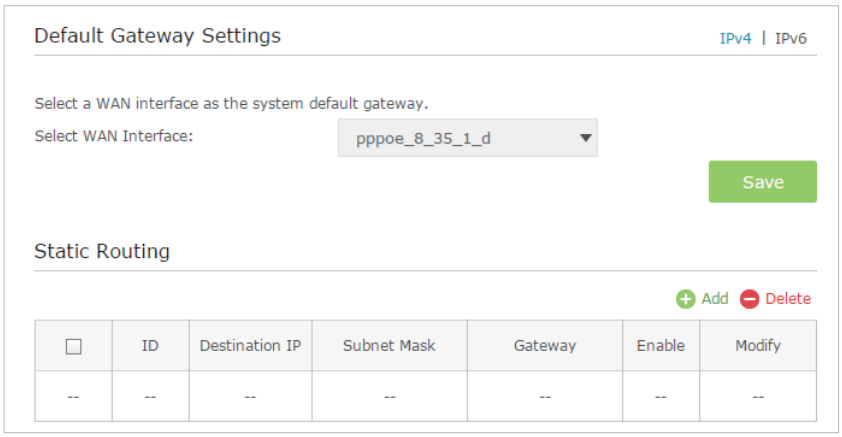
Visit multiple networks and multiple servers at the same time.

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.

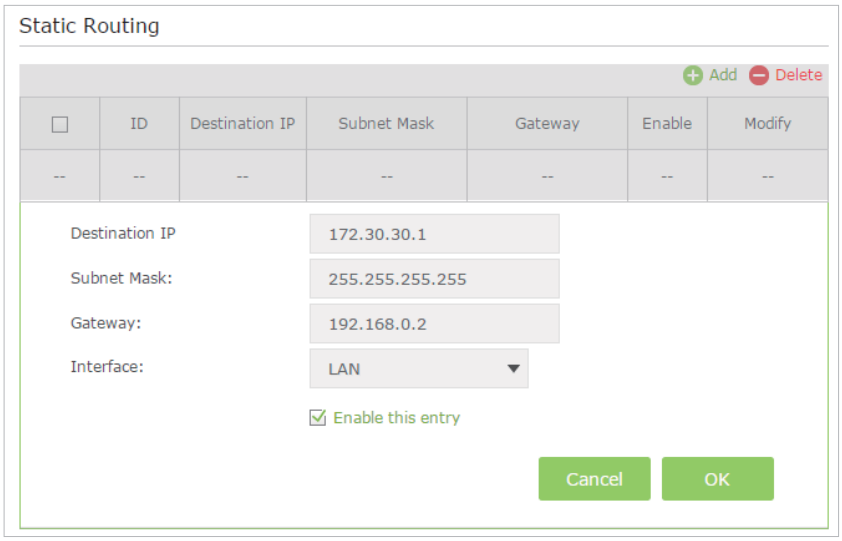


How can I do that?

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 the password you set for the modem router.
3. Go to Advanced > Network > Advanced 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:



- Destination IP: 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 192.168.0.2.

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

5. Check to enable this entry and 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.

12. 6. Set up a VPN Connection

VPN (Virtual Private Network) is a private network established across the public network, generally via the Internet. However, the private network is a logical network without any physical network lines, so it is called Virtual Private Network.

With the wide application of the Internet, more and more data are needed to be shared through the Internet. Connecting the local network to the Internet directly, though can allow the data exchange, will cause the private data to be exposed to all the users on the Internet.

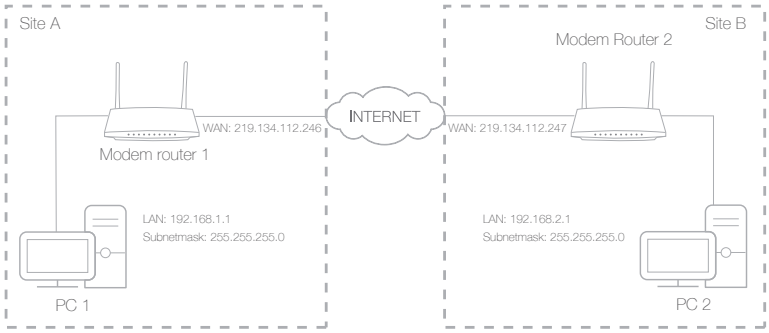
The VPN (Virtual Private Network) technology is developed and used to establish the private network through the public network, which can provides a secure communication to a remote computer or remote network, and guarantee a secured data exchange. IPSec is one of the major implementations of VPNs.

I want to:

Establish an IPSec VPN tunnel to connect two LANs via Internet so that the hosts in different remote LANs are able to communicate with each as if they are in the same LAN.

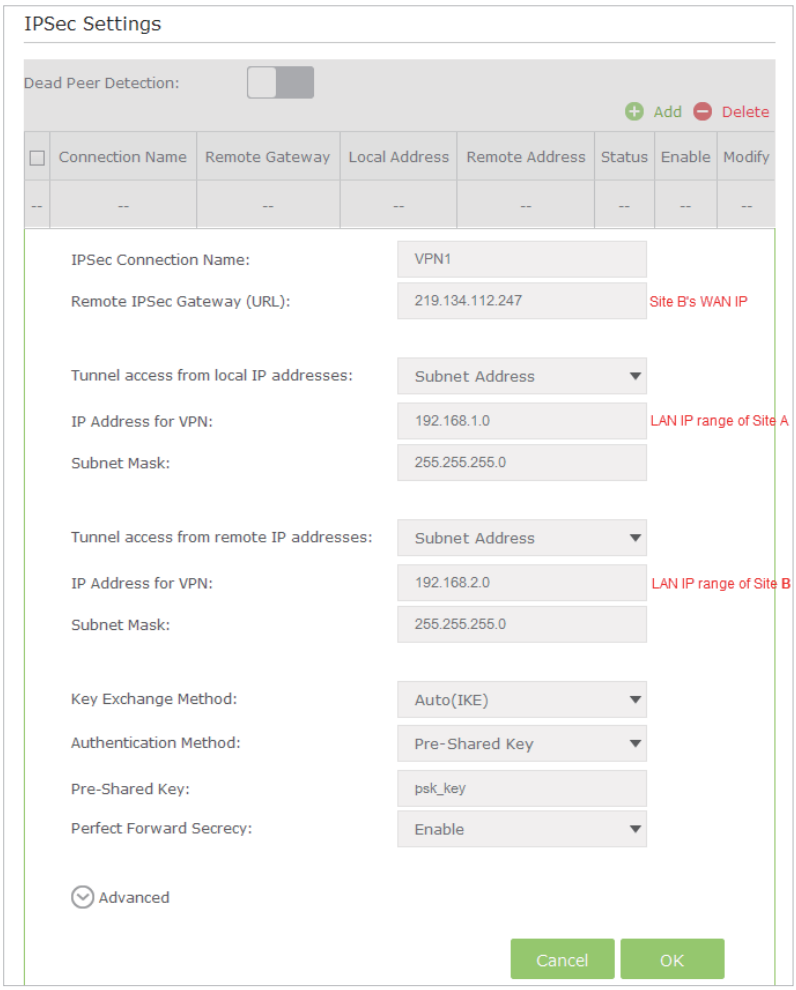
For example, I am the network administrator of a regional office, I need to let my office staff can visit the headquarter's servers and resources, and vice versa. I know that the modem router in my office and the device in headquarter both support IPSec VPN feature, so I decide to set up a VPN connection with the headquarter office.

The following diagram is a typical VPN topology. Here Site A refers to regional office's network (local network). And Site B refers to the headquarter's network (remote network) which I want to connect.



How can I do that?

1. Make sure of the topology you want to build and record site A (local network) and site B (remote network)'s LAN IP and WAN IP.
2. Configuration on site A (local network).
   1) Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
   2) Go to Advanced > Network > IPSec VPN to open the configuration page. Click Add to set up a VPN tunnel.



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) To configure Site A's LAN:

In the Tunnel access from local IP addresses column, here we take Subnet Address as an example. Then input the LAN IP range of Site A in the IP Address for VPN column, and input Subnet Mask of Site A.

6) To configure Site B's LAN:

In the Tunnel access from local IP addresses column, here we take Subnet Address as an example. Then 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:
The key should consist of visible characters without blank space.
Make sure Site A and Site B use the same key.

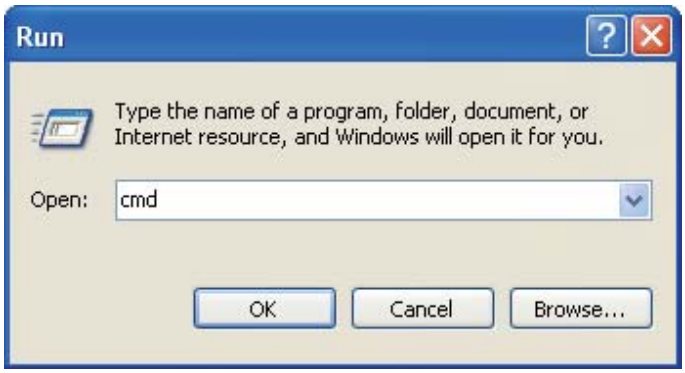
9) Leave the Advanced Settings as default value. Then click OK to save.

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.

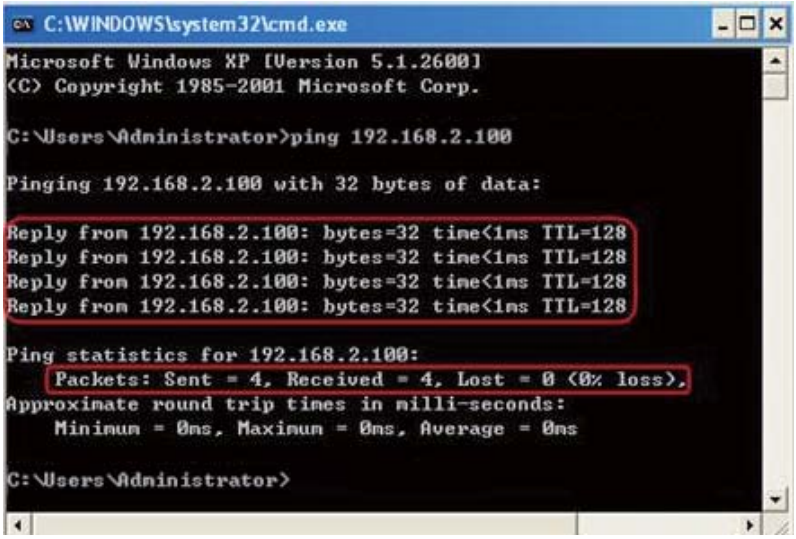
4. The Status column will change to UP if the VPN connection has been set up successfully.

5. 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.
On the host in Site A, press [Windows Logo] + [R] to open Run dialog. Input "cmd" and hit OK.



a . 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].



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

Done!

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 off line 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 *13*

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:

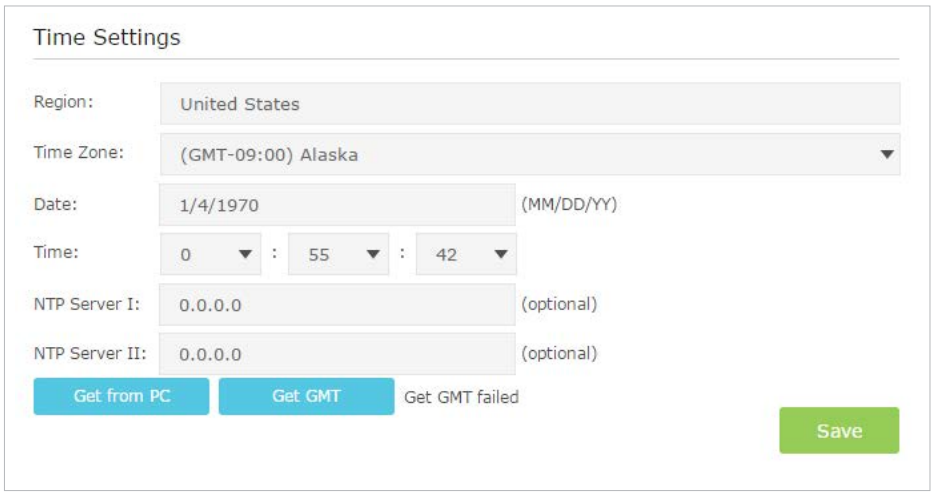
- *Set System Time*
- *Update the Firmware*
- *Back up and Restore Configuration Settings*
- *Change the Administrator Account*
- *Local Management*
- *Remote Management*
- *System Log*
- *Monitor the Internet Traffic Statistics*
- *CWMP Settings*
- *SNMP Settings*

13. 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 the password you set for the modem router.
2. Go to Advanced > System Tools > Time Settings page.

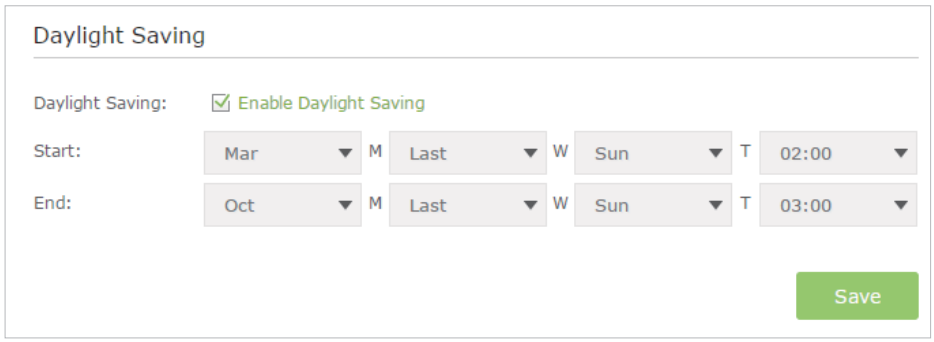


3. Select your Time Zone from the drop-down list.
4. Configure the system time using the following methods :

   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.
5. Click Save to make your settings effective.
6. After setting the system time, you can set Daylight Saving time according to your needs. Tick the checkbox to enable Daylight Saving, set the start and end time and then click Save to make the settings effective.



13. 2. Update the Firmware

TP-LINK is dedicated to improving and enriching the product features, giving you a better network experience. We will release the latest firmware at TP-LINK official website, you can download the latest firmware file from our website: *www.tp-link.com* and upgrade the firmware to the latest version.

Follow the steps below to update your firmware to the latest.

1. Download the latest firmware file from our website: *www.tp-link.com*.
2. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
3. Go to Advanced > System Tools > Firmware Upgrade page.

4. Click Browse to locate the downloaded new firmware file, and click Upgrade.
5. Wait for the upgrading and then the modem router will automatically reboot.

Note:

1. Before upgrading the firmware, it's better to back up your current settings. For more details, refer to*Back up and Restore Configuration Settings*.
2. During the upgrading process, do not turn off or reset the router.
3. The upgraded firmware version must correspond to the hardware.

13. 3. Back up and Restore Configuration Settings

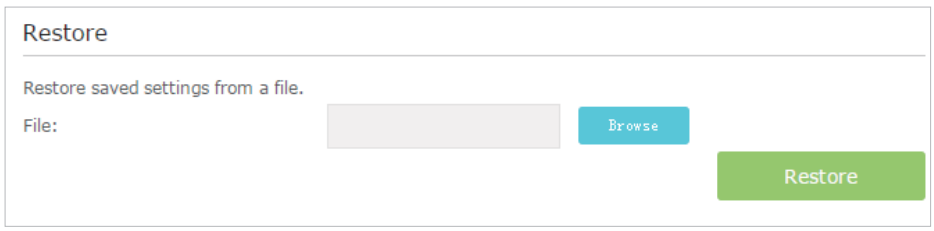
The configuration settings are stored as a configuration file in the router. You can back up the configuration file to your computer for future use and restore the modem router to a previous settings from the backup file when needed. Moreover, if needed you can erase the current settings and reset the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

To back up configuration settings:

1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem 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 the password you set for the modem 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 the password you set for the modem router.
2. Click Advanced > System Tools > Backup & Restore page.
3. Click Factory Restore to reset the modem router.
4. Wait for the resetting and then the modem router will automatically reboot.

Note:

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

13. 4. Change the Administrator Account

Admin account is used to log in to the modem router's web-based 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 the password you set for the modem router.
2. Go to Advanced > System Tools> Administration page. Locate the Account Management section.

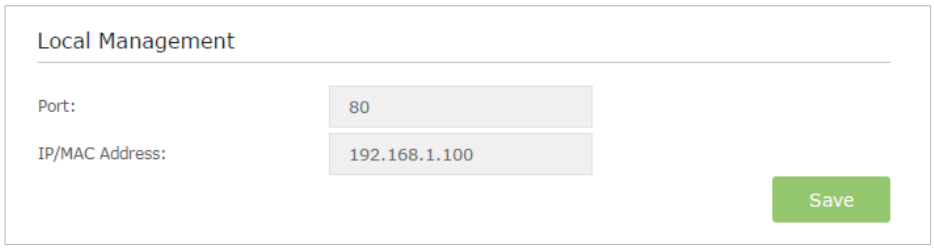
3. Enter the old password. Enter the new password and enter again to confirm.
4. Click Save to make the settings effective.

13. 5. 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 allow only one device to manage the modem router.

Follow the steps below to specify the local management.

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



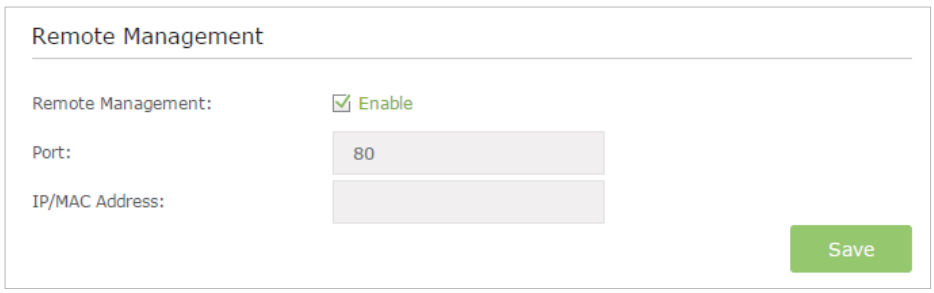
4. Click Save to make the settings effective. Now only the device (192.168.1.100) can manage the modem router. If you want that all local devices can manage the modem router, just leave the IP/MAC Address field blank.

13. 6. Remote Management

By default, the remote devices are not allowed to manage the modem router from the Internet.

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

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



3. Tick the checkbox to enable Remote Management. Keep the Port as the default setting. Leave the IP/MAC Address field blank. If you just want to allow a specific device to manage the modem router, you can enter the IP address of the remote device in the IP/MAC Address field.
4. Click Save to make the settings effective. Now, all devices on the Internet can log in to http://modem router's WAN IP address:port number (such as http://113.116.60.229:80) to manage the modem router.

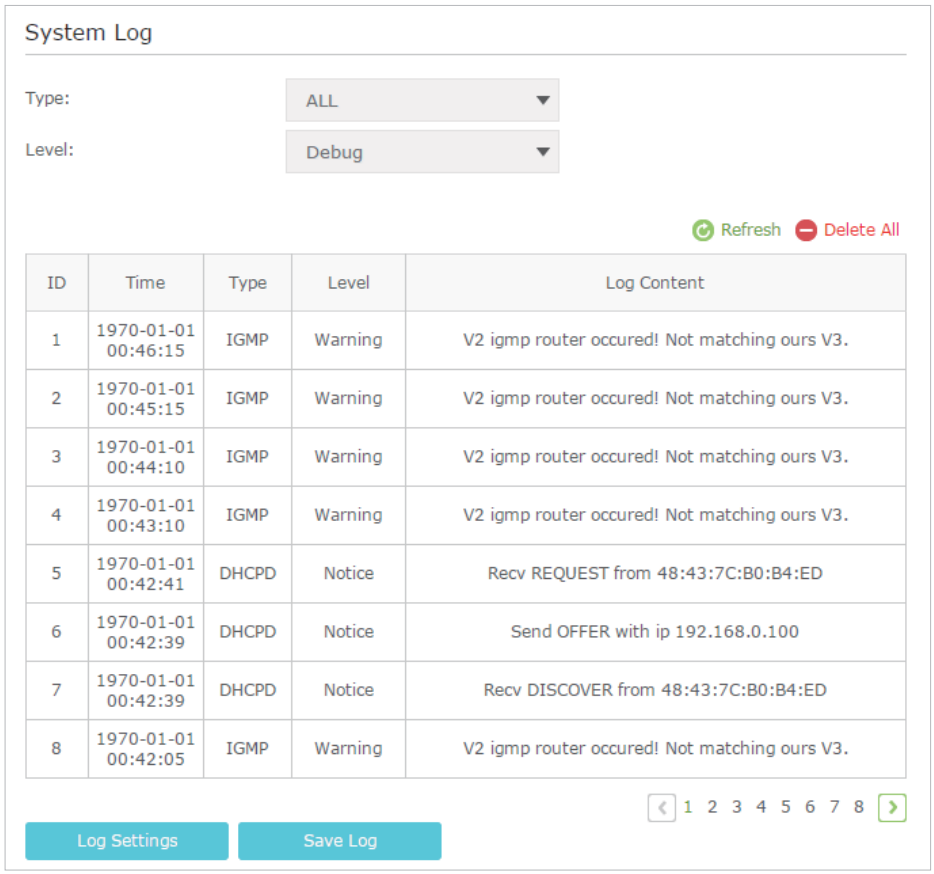
Tips:

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

13. 7. 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 the password you set for the modem router.
2. Click Advanced > System Tools > System Log page.



ID	Time	Type	Level	Log Content
1	1970-01-01 00:46:15	IGMP	Warning	V2 igmp router occured! Not matching ours V3.
2	1970-01-01 00:45:15	IGMP	Warning	V2 igmp router occured! Not matching ours V3.
3	1970-01-01 00:44:10	IGMP	Warning	V2 igmp router occured! Not matching ours V3.
4	1970-01-01 00:43:10	IGMP	Warning	V2 igmp router occured! Not matching ours V3.
5	1970-01-01 00:42:41	DHCPD	Notice	Recv REQUEST from 48:43:7C:B0:B4:ED
6	1970-01-01 00:42:39	DHCPD	Notice	Send OFFER with ip 192.168.0.100
7	1970-01-01 00:42:39	DHCPD	Notice	Recv DISCOVER from 48:43:7C:B0:B4:ED
8	1970-01-01 00:42:05	IGMP	Warning	V2 igmp router occured! Not matching ours V3.

To view the system logs:

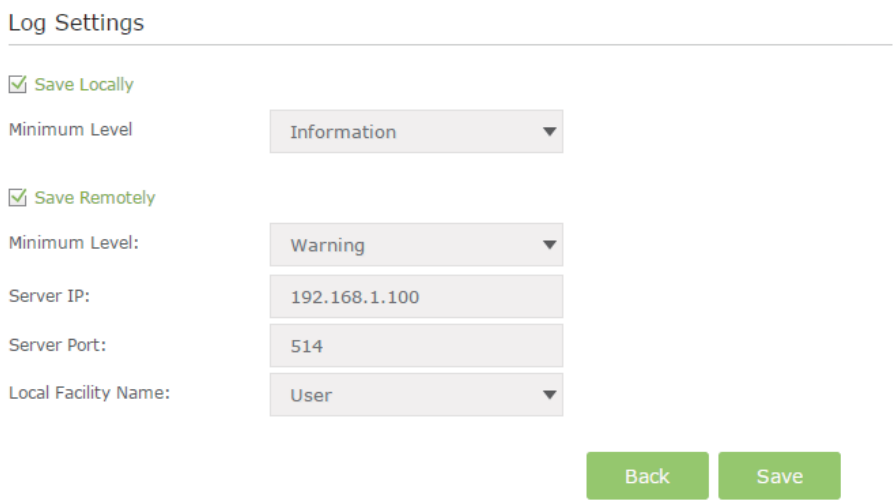
1. Select the log Type. Select ALL to view all kinds of logs, or select DHCPD or IGMP to view the specific logs.
2. Select the log Level and you will see the logs with the specific or higher levels.
3. Click Refresh to refresh the log list.

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 save path of the logs.

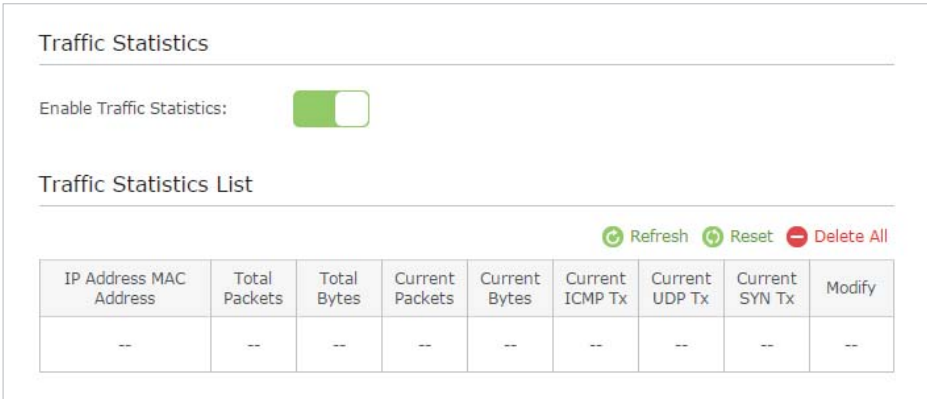


- Save Locally: Select this option to cache the system log to the router's local memory, select the minimum level of system log to be saved from the drop-down list. The logs will be shown in the table in descending order on the System Log page.
- Save Remotely: Select this option to send the system log 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.

13. 8. Monitor the Internet Traffic Statistics

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

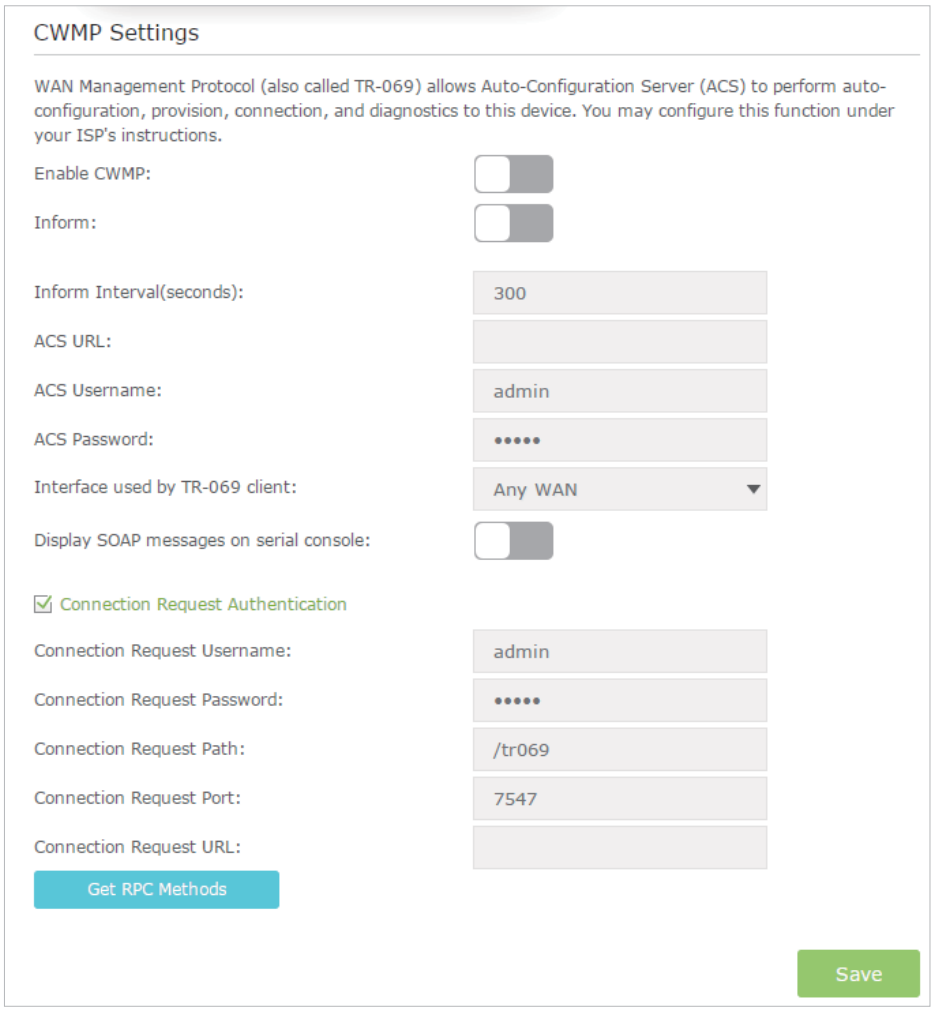
1. Visit *http://tplinkmodem.net*, and log in with the password you set for the modem router.
2. Go to Advanced > System Tools > Statistics.
3. Toggle on Traffic Statistics, and then you can monitor the traffic statistics in Traffic Statistics List section. This function is disabled by default.



13. 9. CWMP Settings

The modem router offers CWMP feature. The function supports TR-069 protocol which collects information, diagnoses the devices and configures the devices automatically via ACS (Auto-Configuration Server).

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



- Enable 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 checkbox to enable authentication for the connection request.
- Connection Request Username/Password: Enter the username/password for the ACS server to log in to the router.
- Connection Request Path: Enter the path for the ACS server to log in to the router.

- Connection Request Port: Enter the port that connects to the ACS server.
- Connection Request URL: Enter the URL that connects to the ACS server.
- Get RPC methods: Click to get the methods to support CWMP.

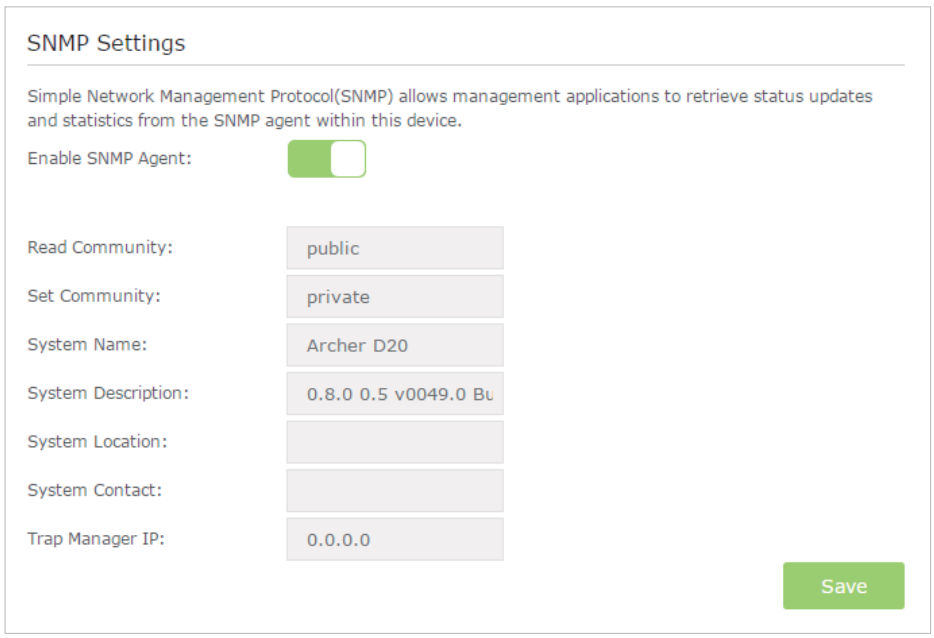
Click Save to make the settings effective.

13. 10. SNMP Settings

SNMP (Simple Network Management Protocol) has been widely applied in the computer networks currently, which 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 the password you set for the modem router.
2. Go to Advanced > System Tools > SNMP Settings page.



- Enable 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.
- Set Community: Displays the default read and 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 (e.g., 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 A: Specifications

	General
Standards and Protocols	ANSI T1.413, ITU G.992.1, ITU G.992.3, ITU G.992.5, IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IEEE 802.3, IEEE 802.3u, TCP/IP, PPPoA, PPPoE, SNTP, HTTP, DHCP, ICMP, NAT
Safety & Emission	FCC, CE
Ports	Four 10/100M Auto-Negotiation RJ45 ports (Auto MDI/MDIX) One RJ11 port One USB 2.0 port
Network Medium	10Base-T: UTP category 3, 4, 5 cable 100Base-TX: UTP category-5, 5e cable 1000Base-TX: UTP category-5, 5e cable Max line length: 6.5Km
Data Rates	Downstream: Up to 24Mbps Upstream: Up to 1Mbps
System Requirement	Windows 8/7/Vista/XP or Mac OS or Linux-based operating system Microsoft Internet Explorer, Firefox, Chrome or Safari browser for web-based configuration
	Physical and Environment
Working Temperature	0℃ ~ 40℃
Working Humidity	10% ~ 90% RH (non-condensing)
Storage Temperature	-40℃ ~ 70℃
Storage Humidity	5% ~ 90% RH (non-condensing)

Appendix B: 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 WPS/RESET button on the rear panel of the modem router for 8 seconds until all LEDs turn back 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 can I do if I forgot my password?

Web Management page password:

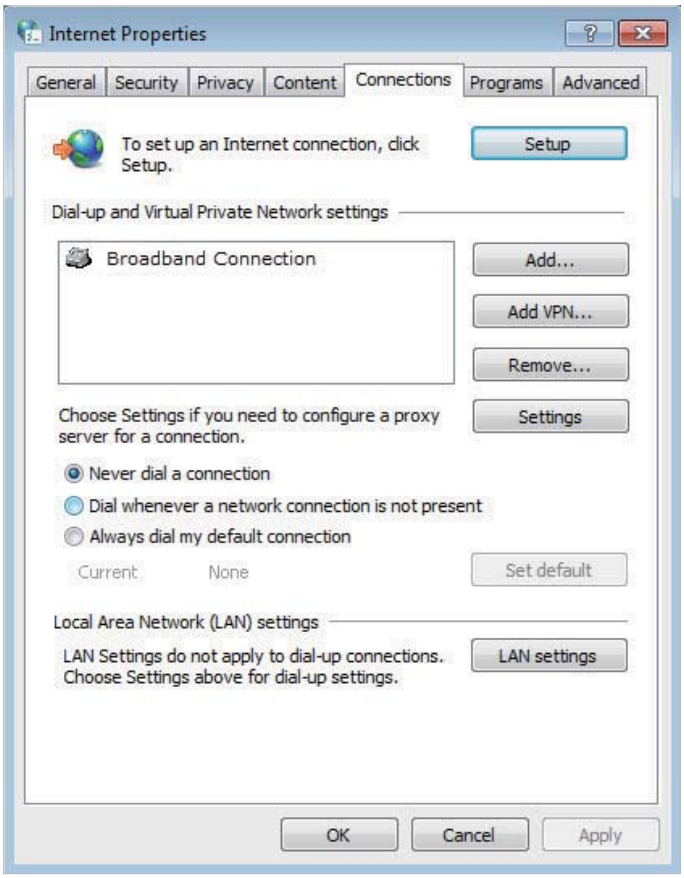
Restore the modem router to its factory default settings and then set a new password using 1-15 characters.

Wireless Network password:

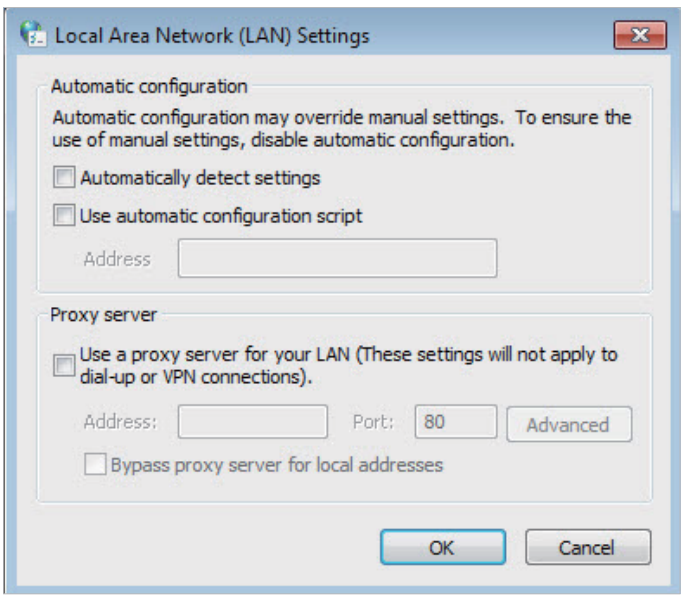
1. The default Wireless Password/PIN is printed on the product label of the modem router.
2. If the default wireless password has been changed, log into the modem router's web management page and go to Basic > Wireless to retrieve or reset your password.

T3. What can I do if I cannot log into the modem router's web management page?

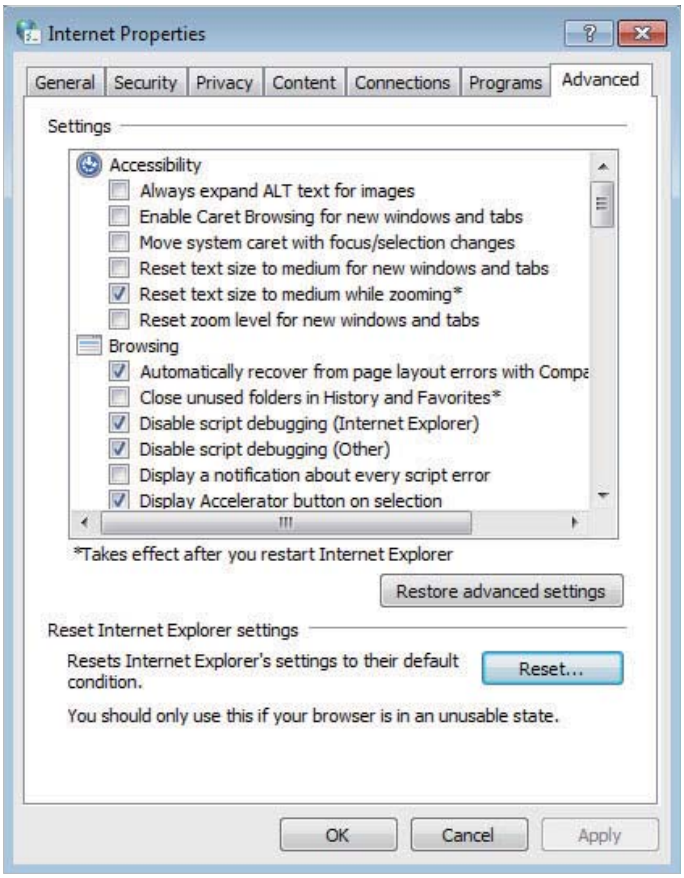
- Make sure the modem router connects to the computer correctly and the corresponding LED indicator(s) light up.
- Make sure the IP address of your computer is configured to obtain an IP address automatically and obtain DNS server address automatically.
- Make sure the default access you input is right.
- 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: With the modem router powered on, press and hold down the WPS/RESET button on the rear panel of the modem router for 8 seconds until all LEDs turn back on momentarily, then release the button.

  Note: You'll need to reconfigure the modem router to surf the Internet once the modem router is reset.

  Open a web browser and log in again. If login fails, please contact the technical support.

T4. What can I do if I cannot access the Internet?

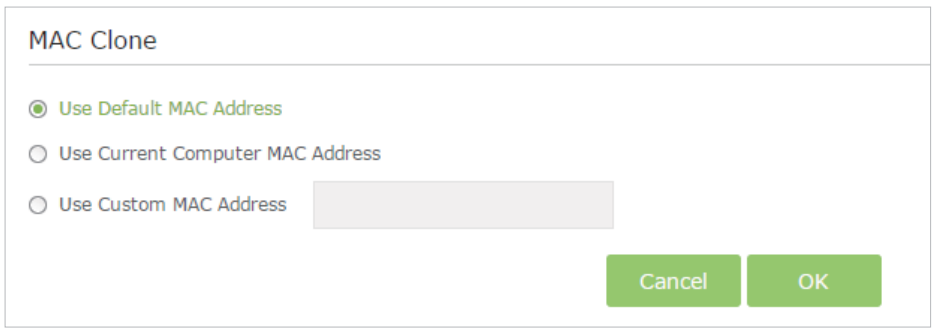
1. Check to see if all the connectors are connected well, including the telephone line, Ethernet cables and power adapter.
2. Check to see if you can log in to the web management page of the modem router. If you can, try the following steps. If you cannot, please set your computer referring to T3 and then try to see if you can access the Internet. If the problem persists, please go to the next step.
3. Consult your ISP and make sure all 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 still exists.

T5. How to configure MAC Clone?

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 password you set for the modem 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.

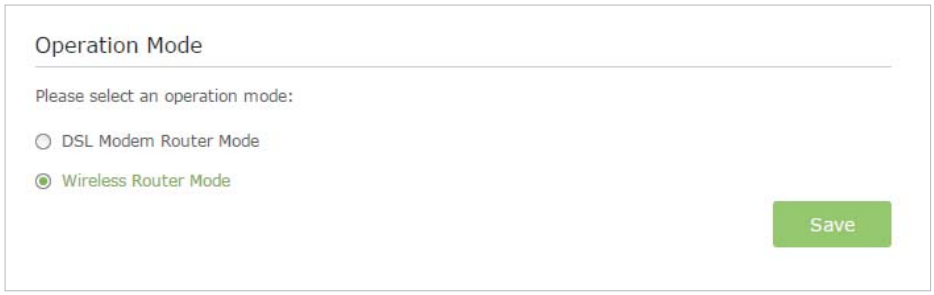
T6. How to use the modem router as a regular wireless router to share my Internet ?

The modem router supports two operation modes, DSL Modem Router Mode and Wireless Router mode. If you already have a modem or your Internet comes via an Ethernet cable from the wall, you can set up the modem router as a regular wireless router to share the Internet.

1. Connect your modem router's LAN4/WAN port to the modem or the network port.

2. Visit *http://tplinkmodem.net*, and log in with password you set for the modem router.

3. Go to Advanced > Operation Mode page.



4. Select the Wireless Router Mode option and click Save to make the settings effective.

Note: IPTV function is not supported in Wireless Router Mode.

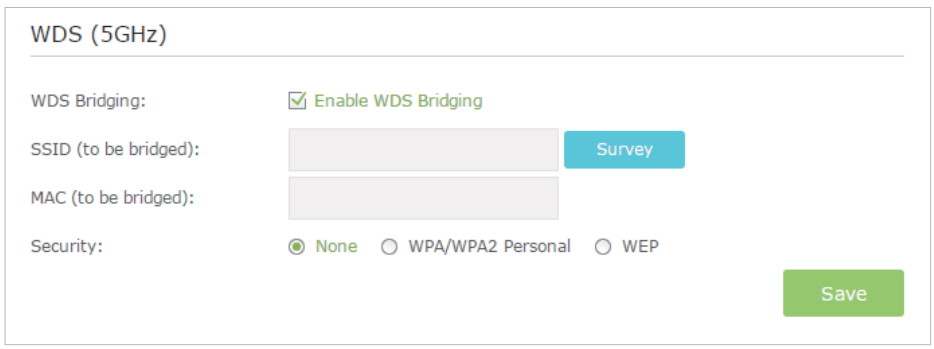
T7. How to use the WDS Bridging function to extend my wireless network?

My house covers a large area. The wireless network coverage of the router I'm using (the root router) is limited. I want to use an extended router to extend the wireless network of the primary router. Follow the steps to configure the modem router.

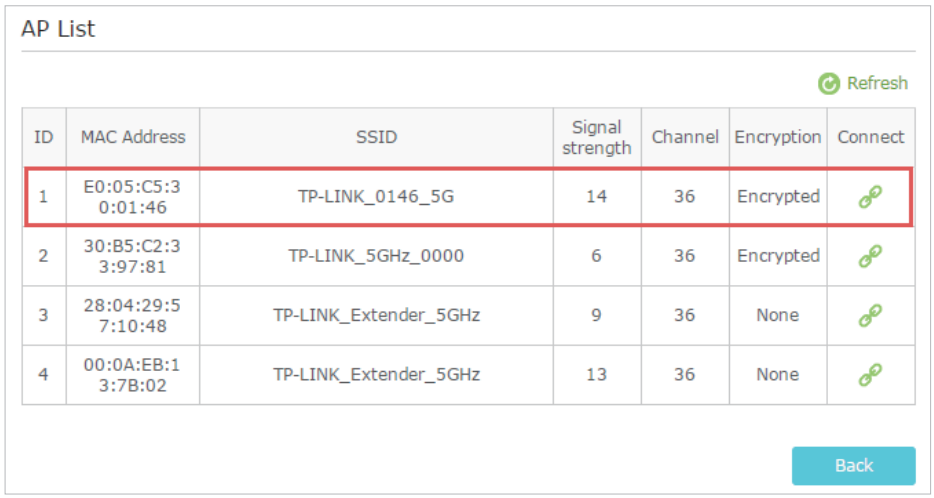
1. Visit *http://tplinkmodem.net*, and log in with password you set for the modem router.

2. Configure the LAN IP address of the modem router in the same subnet as the root router. For example, the IP address of the root router is 192.168.0.1, the IP address of the extended router should be from 192.168.0.2 to 192.168.0.254.).

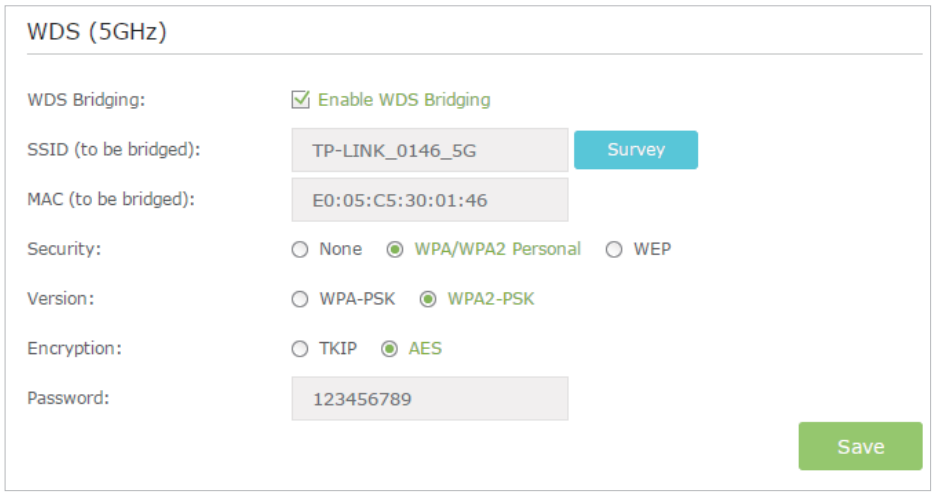
3. Go to Advanced > Wireless >Advanced Settings page and select the wireless network 5GHz. Locate the WDS (5GHz) section and select the checkbox to enable the WDS Bridging function.



4. Click Survey to scan all the AP devices and choose the root AP to be bridged.



5. Click the connect icon and then the SSID and MAC will be automatically filled in. Configure the Security settings as the AP you choose to be bridged.



6. Click Save to make the settings effective.
7. Go to Advanced > Network > LAN Settings page to disable DHCP.

Now, the root's wireless network is extended and you can use the modem router's SSID and password to enjoy the network.

Note: The extended router (modem router) can have different SSID and password from the root router, you can change your modem router's SSID and password on Basic > Wireless page.

T8. What can I do if I cannot find my wireless network or I cannot connect the wireless network?

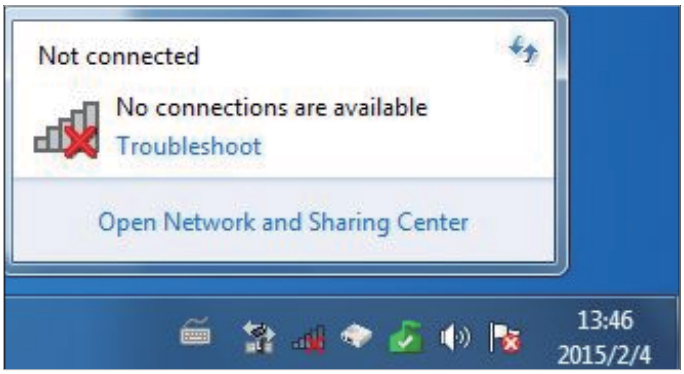
➢ **If you fail to find any wireless network, please follow the steps below:**

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.

On Windows 7

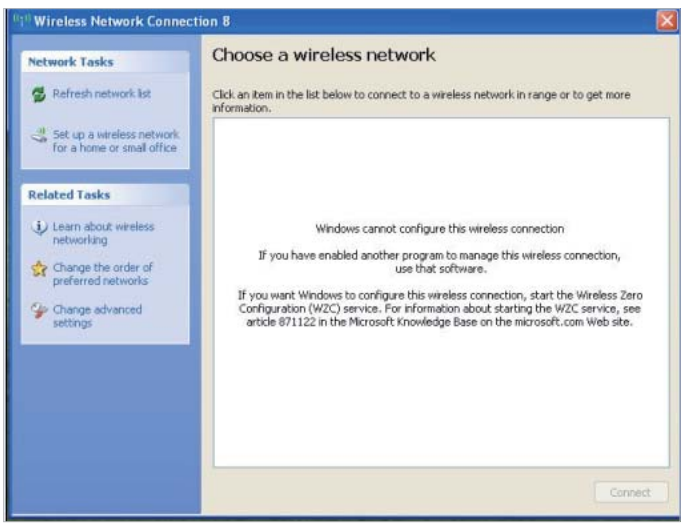
1) If you see the message No connections are available, it is usually because the wireless function is disabled or blocked somehow;



2) Clicking on Troubleshoot and windows might be able to fix the problem by itself.

On Windows XP

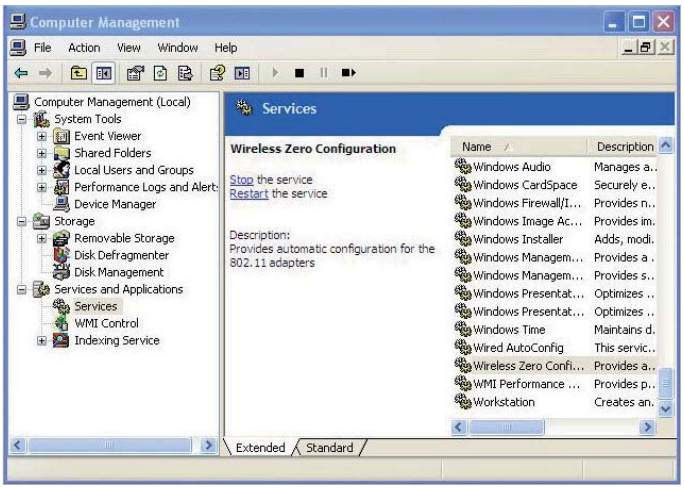
1) If you see the message Windows cannot configure this wireless connection, this is usually because windows configuration utility is disabled or you are running another wireless configuration tool to connect the wireless.



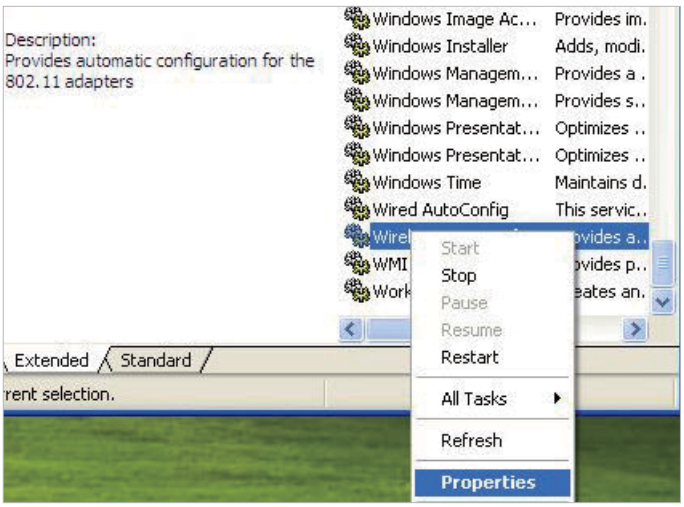
2) Exit the wireless configuration tool(the TP-LINK Utility, for example);

3) Select and right click on My Computer on desktop, select Manage to open Computer Management window;

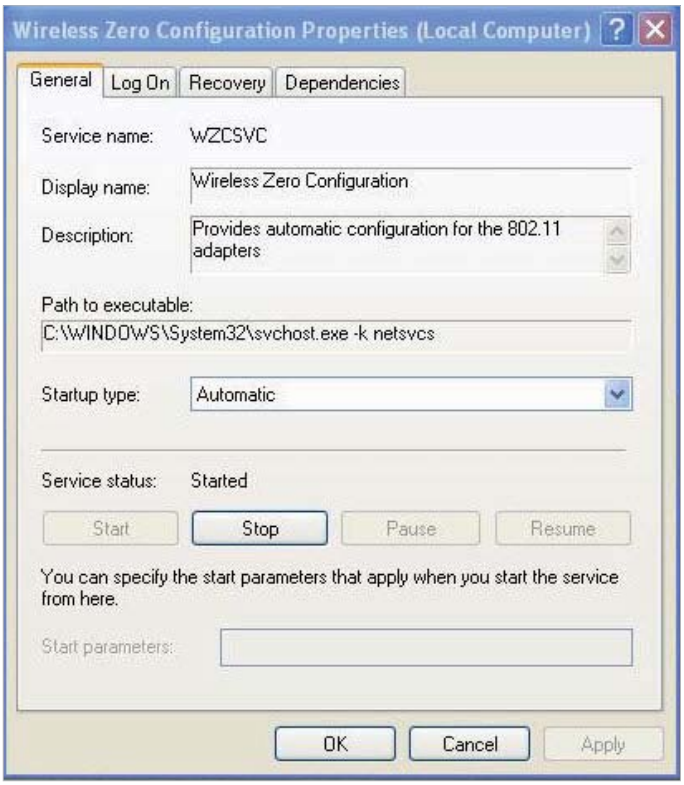
4) Expand Services and Applications > Services, find and locate Wireless Zero Configuration in the Services list on the right side;



5) Select Wireless Zero Configuration, right click, and then select Properties;



6) Change Startup type to Automatic, click on Start button and make sure the Service status is Started. And then click OK.



7) Connect to wireless network.

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

1. Check the WLAN LED indicator on your wireless router/modem;
2. Make sure your computer/device is still in the range of your router/modem, move closer if it is currently too far away;
3. Go to Advanced > Wireless > Advanced Settings page, and check the wireless router settings, double check your Wireless Name and the SSID is not hided;

Note:
Different countries have different laws about wireless channel. For example, USA allows 2.4GHz channel from 1 to 11, while UK allows from 1 to 13.

4. Connect to wireless network.

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

1. Authenticating problem, password mismatch.

   1) Sometimes it will ask you to type in a PIN number when you connect to the wireless network for the first time. This PIN number is different from the Wireless

Password/Network Security Key, usually you can only find it on the back of your wireless router/modem;

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 it continues on saying network security key mismatch, it is suggested to confirm the wireless password on your wireless router/modem;

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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FCC STATEMENT

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

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

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

1) This device may not cause harmful interference.

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

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

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

FCC RF Radiation Exposure Statement

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

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

CE Mark Warning

CE 1588 ⓘ

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.

ATTENTION: Due to EU law, the country settings must be identical to the country where the device is operating (important due to non-harmonised frequencies in the EU). Restricted to indoor use.

National Restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/remark
Bulgaria	None	General authorization required for outdoor use and public service
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications

Note: Please don't use the product outdoors in France.

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux norms CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

1. cet appareil ne doit pas provoquer d'interférences et
2. cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 3 dBi. Antennas not included in this list or having a gain greater than 3 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

Industry Canada Statement

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice & 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行；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

減少電磁波影響，請妥適使用。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。

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

EAC

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

AT	BG	BY	CA	CZ	DE	DK	EE
ES	FI	FR	GB	GR	HU	IE	IT
LT	LV	MT	NL	NO	PL	PT	RO
RU	SE	SK	TR	UA	US		

TP-LINK® TP-LINK TECHNOLOGIES CO., LTD

DECLARATION OF CONFORMITY

For the following equipment:

Product Description: AC750 Wireless Dual Band ADSL2+ Modem Router

Model No.: **Archer D20**

Trademark: **TP-LINK**

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 1999/5/EC, Directives 2004/108/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents

EN 300 328 V1.8.1

EN 301 489-1 V1.9.2 & EN 301 489-17 V2.2.1

EN 55022: 2010 + AC: 2011

EN 55024: 2010

EN 61000-3-2: 2006 + A1: 2009 + A2: 2009

EN 61000-3-3: 2013

EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 +A2:2013

EN 50385: 2002

EN 301 893 V1.7.1

The product carries the CE Mark:

CE1588

Person responsible for making this declaration:

Yang Hongliang
Product Manager of International Business

Date of issue: 2015/07/01

TP-LINK TECHNOLOGIES CO., LTD
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