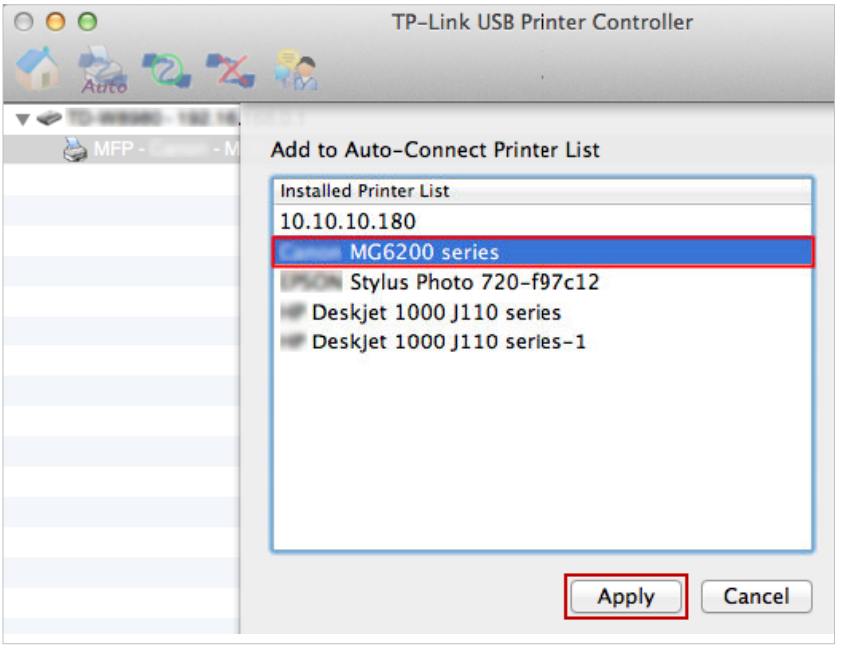
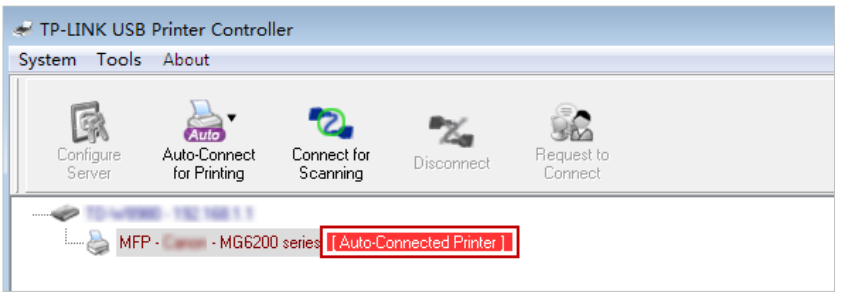


Mac

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 8

HomeCare – Parental Controls, QoS, Antivirus

TP-Link HomeCare™ powered by Trend Micro™ provides a kit of features to help you create a personalized network that caters for the whole family. You can ensure appropriate internet access for everyone with Parental Controls, save bandwidth for the things that matter with QoS and keep your network secure with built-in Antivirus.

It contains the following sections:

8. 1. Parental Controls

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

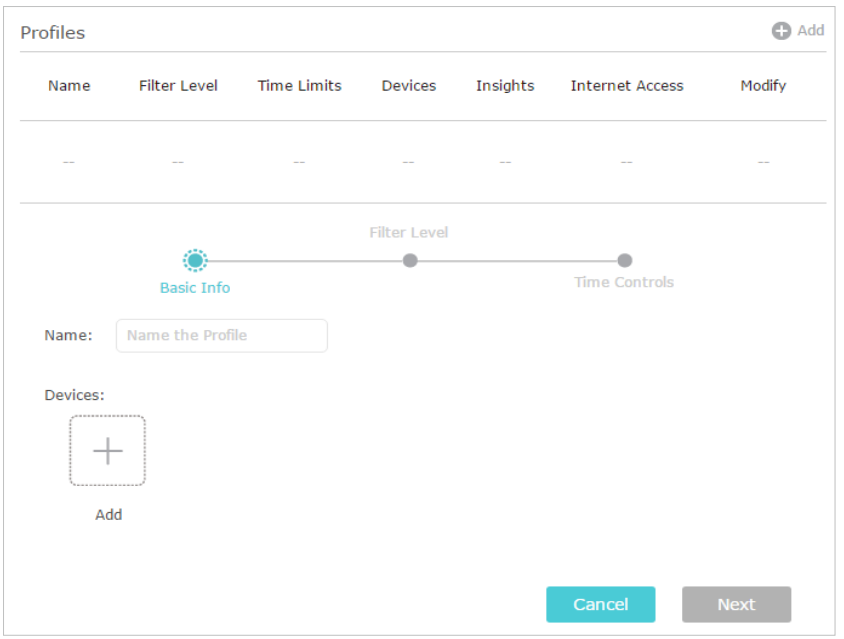
8. 1. 1. Scenario 1: Setting Up Access Restrictions

I want to:

Block access to inappropriate online content for my child's devices, restrict internet access to 2 hours every day and block internet access during bed time (10 PM to 6 AM) on weekdays.

How can I do that?

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > HomeCare > Parental Controls or Advanced > Parental Controls.
3. Click Add to create a profile for a family member.
4. Add basic profile information.



1) Enter a Name for the profile to make it easier to identify.

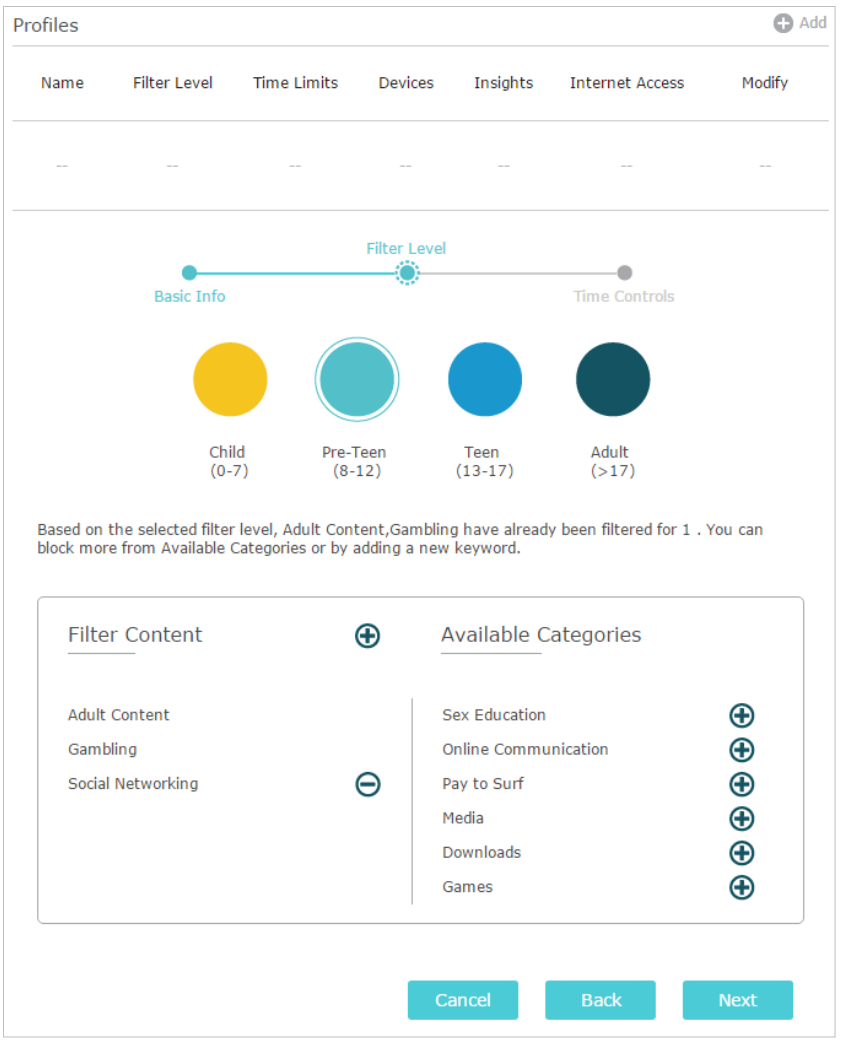
2) Under Devices, click +.

3) Select the devices that belong to this family member. Access restrictions will be applied to these devices. Click Add when finished.

Note: Only devices that have previously been connected to your router's network are listed here. If you are unable to find the device you want to add, connect it to your network and then try again.

4) Click Next.

5. Block content for this profile.



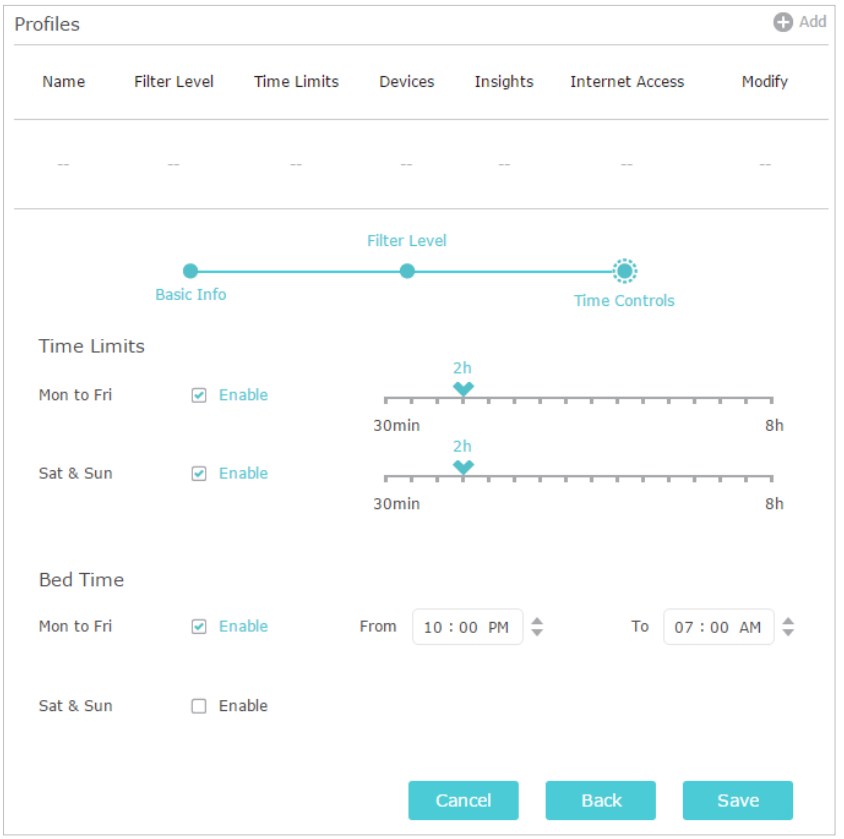
1) Select a filter level based on the age of the family member this profile belongs to. Blocked content will then be displayed in the Filter Content list.

2) If needed, you can edit the blocked content by clicking ⊕ and ⊖ to move categories between the Filter Content and Available Categories lists.

3) You can also block a specific website or application by clicking ⊕ next to Filter Content. Enter a keyword (for example, "Facebook") or a URL (for example, "www.facebook.com"), then click Add.

4) Click Next.

6. Set time restrictions on internet access.



1) Enable Time Limits on Monday to Friday and Saturday & Sunday then set the allowed online time to 2 hours each day.

2) Enable Bed Time on Monday to Friday and use the up/down arrows or enter times in the fields. Devices under this profile will be unable to access the internet during this time period.

3) Click Save.

Done!

The amount of time your child spends online is controlled and inappropriate content is blocked on their devices.

8. 1. 2. Scenario 2: Monitoring Internet Usage

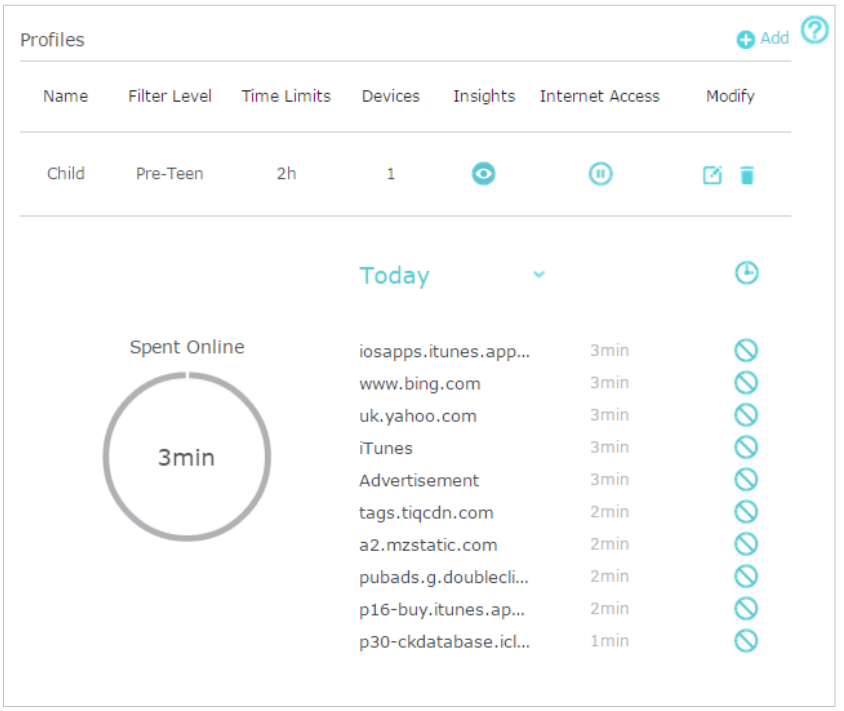
I want to:

Check which websites my child has visited and how much time they have spent online recently.

How can I do that?

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

2. Go to Basic > HomeCare > Parental Controls or Advanced > Parental Controls.



3. Find the correct profile and click in the Insights column.

Note: If you have not set up a profile for your child yet, you should do that first by clicking Add, then follow the steps to create a profile. Refer to Scenario 1: Setting Up Access Restrictions for detailed instructions.

4. Use the drop-down menu to view the websites visited and time spent online for any of the last 7 days. Click to view a complete history.

Tip: Click to block the corresponding content for this profile.

Done!

You can now check up on your child's online activities.

8. 2. QoS

QoS (Quality of Service) allows you to prioritize the internet traffic of specific online activities, such as gaming or streaming. Activities set as high priority will be allocated more bandwidth and so continue to run smoothly even when there is heavy traffic on the network. You can also prioritize the connection of specific devices for a set duration.

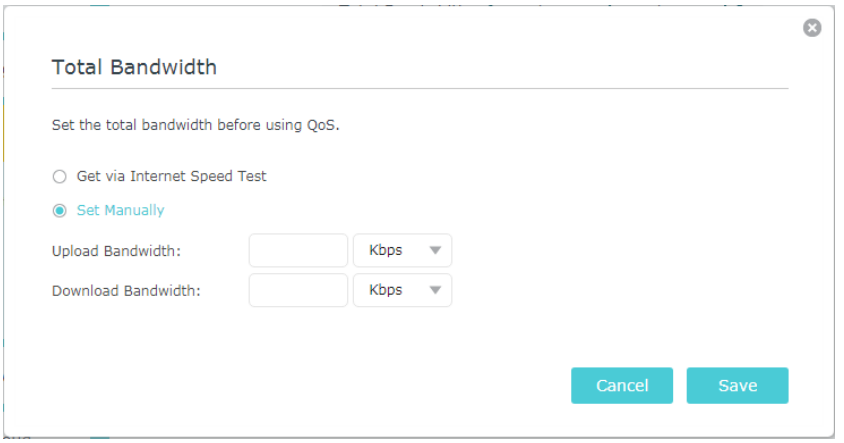
I want to:

Ensure a fast connection while I play online games with friends on my computer for the next 2 hours.

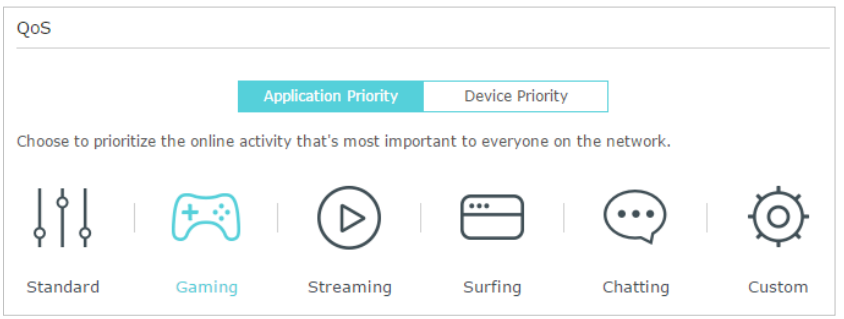
How can I do that?

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

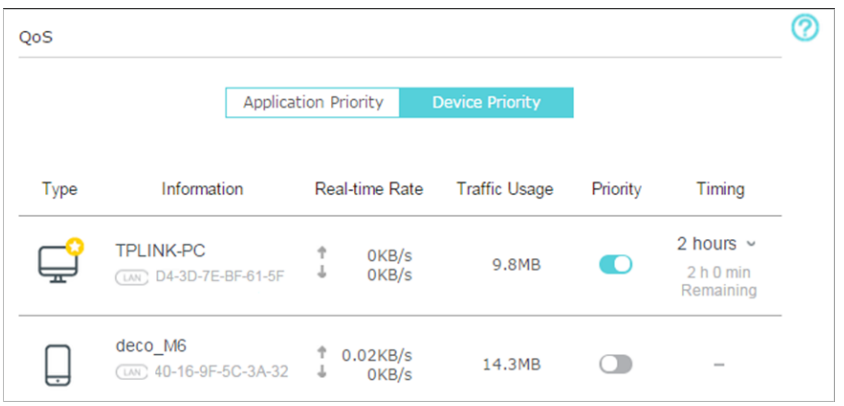
3. If you already run a speed test and get the bandwidth value, just skip to step 4. If not, click the edit button to set the total bandwidth. You can choose to run a speed test to get the value or manually enter the bandwidth provided by your internet service provider.



4. In the Application Priority tab, click Gaming to prioritize this online activity. The default is Standard, with no application prioritized.



5. In the Device Priority tab, find your computer and toggle on Priority. Click the entry in the Timing column and select 2 hours as the duration you want the device to be prioritized for.



Done! You can now enjoy playing games without lag on your computer for the next 2 hours.

8. 3. Antivirus

Your router supports built-in Antivirus powered by Trend Micro™. It provides malicious content filtering and intrusion prevention for your home network, as well as a quarantine for infected devices. An active database protects every connected device from external threats.

Antivirus includes the following protection:

- Malicious Content Filter

Blocks malicious websites listed in Micro Trend's database. The database is automatically updated so new malicious websites are blocked when they go live.

- Intrusion Prevention System

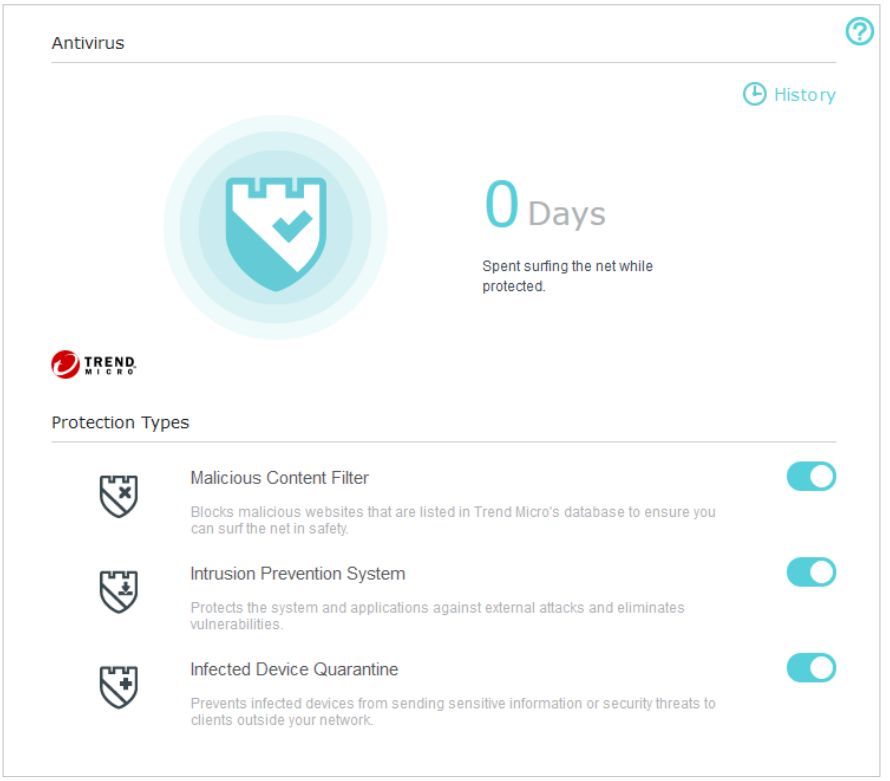
Identifies and blocks potential threats from attackers and fixes vulnerabilities in the network.

- Infected Device Quarantine

Prevents infected devices from sending your sensitive information to clients outside your network or spreading security threats.

➢ **To access your router's Antivirus settings:**

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



3. Choose the protection types you want to enable. It is recommended to keep them all enabled to ensure the best protection for your network.
4. Click History to view threats that have been detected and resolved.

Chapter 9

Network Security

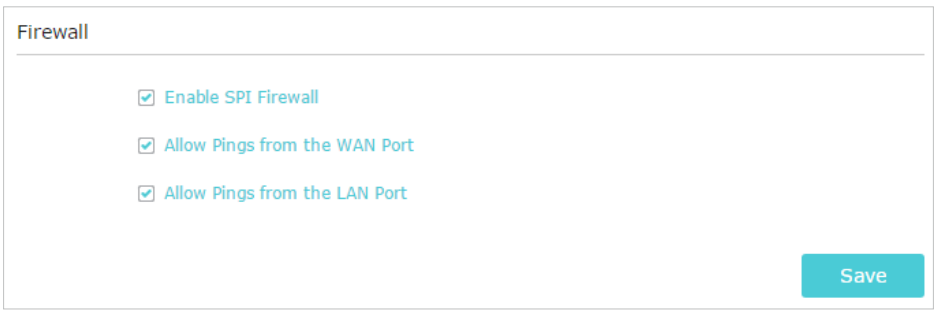
This chapter guides you on how to protect your home network from cyber attacks and unauthorized users by implementing these three network security functions. You can block or allow specific client devices to access your network using Access Control, or you can prevent ARP spoofing and ARP attacks using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

It contains the following sections:

9. 1. Firewall

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

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Security > Firewall.
3. It's recommended to keep the default settings. If necessary, deselect the corresponding checkbox and click Save.



9. 2. Access Control

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

I want to:

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

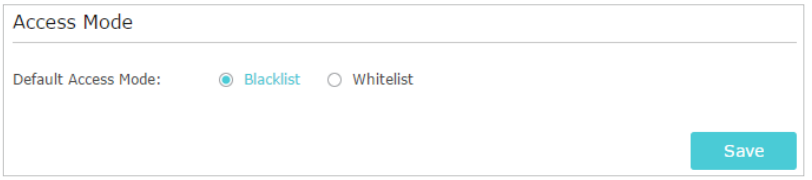
How can I do that?

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

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

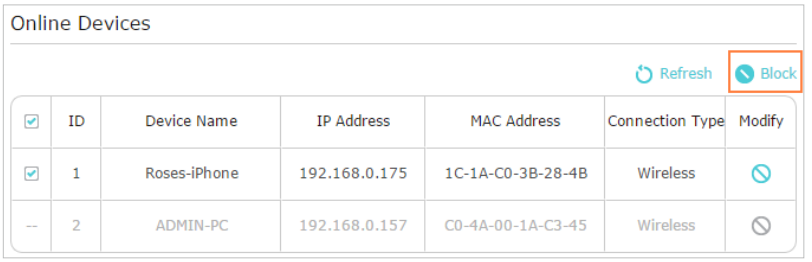
   To block specific device(s):

   1) Select Blacklist and click Save.



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

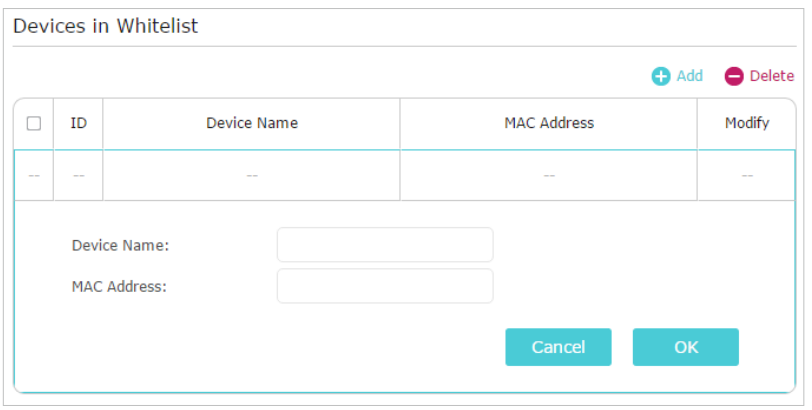
3) Click Block above the Online Devices table. The selected devices will be added to Devices in Blacklist automatically.



To allow specific device(s):

1) Select Whitelist and click Save.

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



3) Click OK.

Done!

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

9. 3. IP & MAC Binding

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

I want to:

Prevent ARP spoofing and ARP attacks.

How can I do that?

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

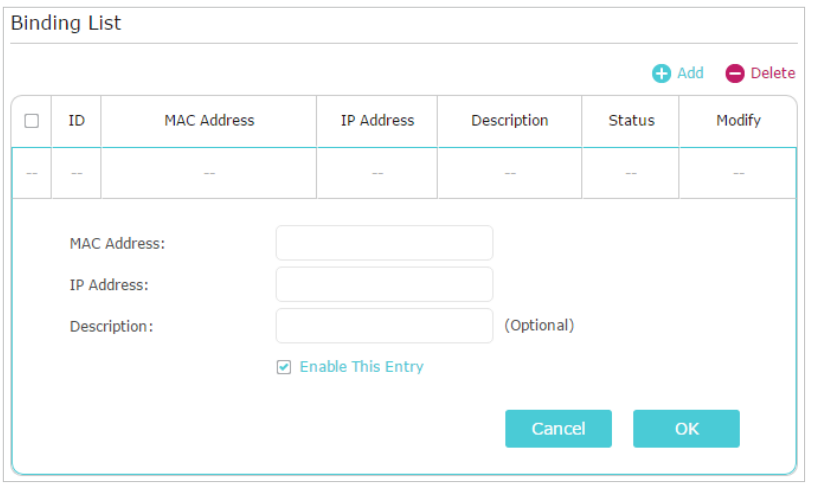
4. Bind your device(s) according to your need.

   To bind the connected device(s):

   Click to add the corresponding device to the Binding List.

   To bind the unconnected device:

   1) Click Add in the Binding List section.



   2) Enter the MAC address and IP address that you want to bind. Enter a Description for this binding entry.

   3) Tick the Enable This Entry checkbox and click OK.

Done!

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

Chapter 10

NAT Forwarding

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

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

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

It contains the following sections:

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

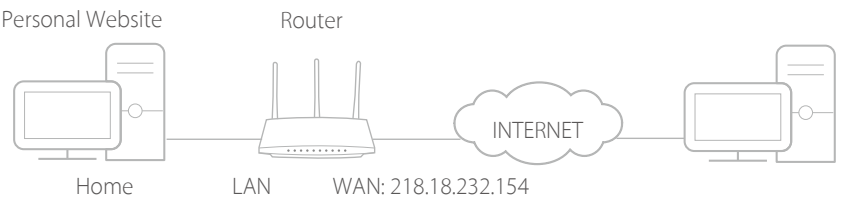
When you build up a server on the local network and want to share it on the internet, Virtual Servers can realize the service and provide it to internet users. At the same time Virtual Servers can keep the local network safe as other services are still invisible from the internet.

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

I want to:

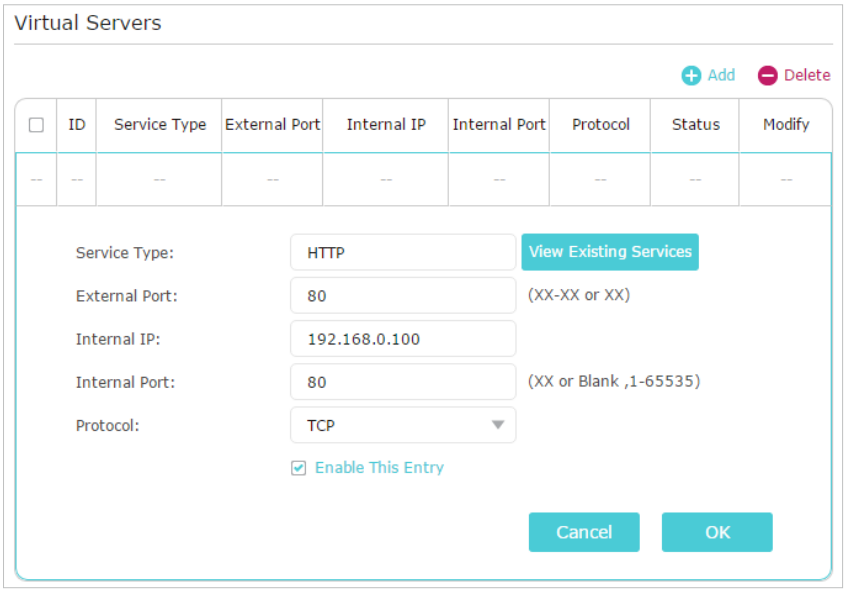
Share my personal website I've built in local network with my friends through the internet.

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



How can I do that?

1. Assign a static IP address to your PC, for example 192.168.0.100.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > NAT Forwarding > Virtual Servers.
4. Click Add. Click View Existing Services and select HTTP. The External Port, Internal Port and Protocol will be automatically filled in. Enter the PC's IP address 192.168.0.100 in the Internal IP field.
5. Click OK.



Tips:

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

Done!

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

Tips:

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

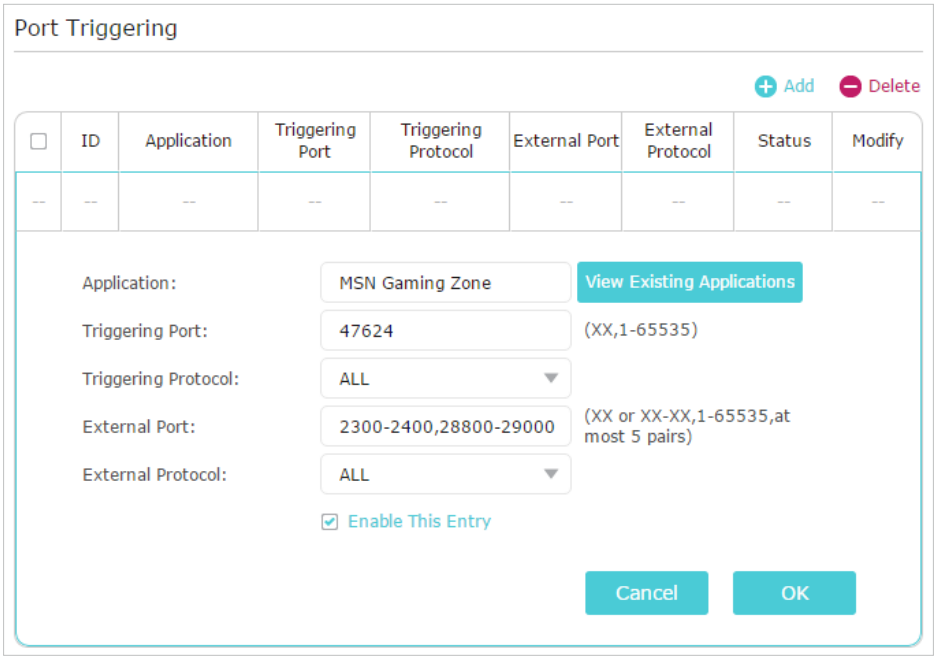
10. 2. Open Ports Dynamically by Port Triggering

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

Follow the steps below to configure the Port Triggering rules:

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

3. Click View Existing Applications, and select the desired application. The Triggering Port, External Port and Protocol will be automatically filled in. The following picture takes application MSN Gaming Zone as an example.
4. Click OK.



Tips:

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

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

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

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

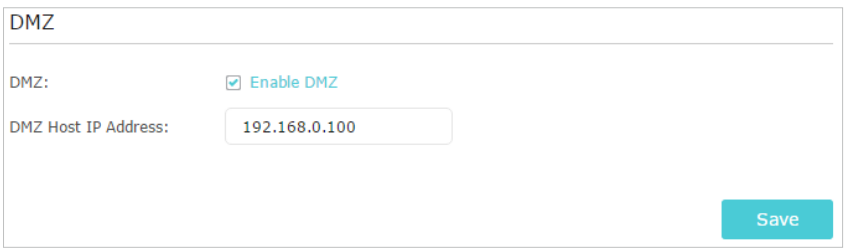
I want to:

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

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

How can I do that?

1. Assign a static IP address to your PC, for example 192.168.0.100.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > NAT Forwarding > DMZ and select Enable DMZ.
4. Enter the IP address 192.168.0.100 in the DMZ Host IP Address filed.



5. Click Save.

Done!

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

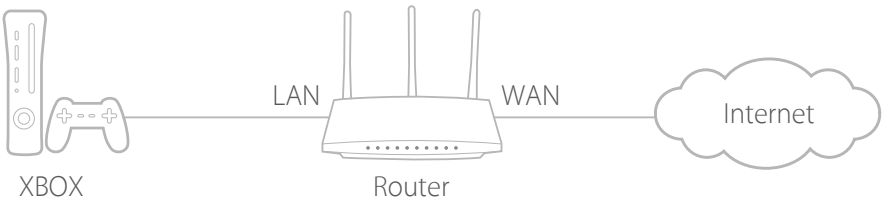
10. 4. Make Xbox Online Games Run Smoothly by UPnP

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

Tips:

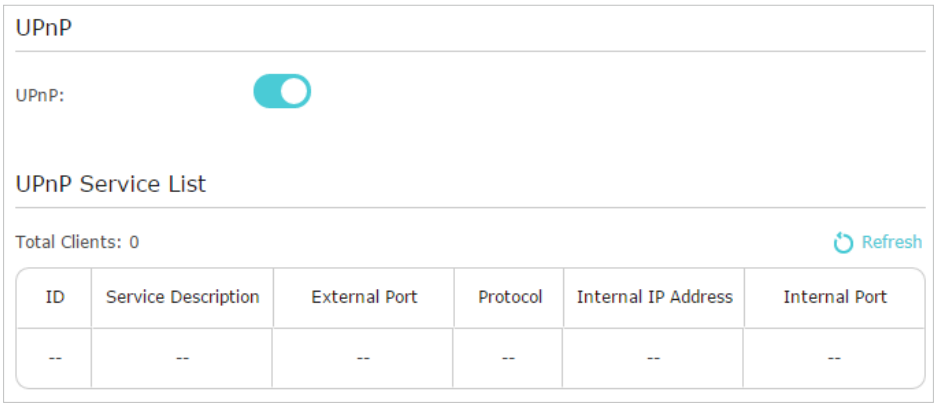
- UPnP is enabled by default in this router.
- Only the application supporting UPnP protocol can use this feature.
- UPnP feature needs the support of operating system (e.g. Windows Vista/ Windows 7/ Windows 8, etc. Some of operating system need to install the UPnP components).

For example, when you connect your Xbox to the router which has connected to the internet to play online games, UPnP will send request to the router to open the corresponding ports allowing the following data penetrating the NAT to transmit. Therefore, you can play Xbox online games without a hitch.



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

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



Chapter 11

VPN Server

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

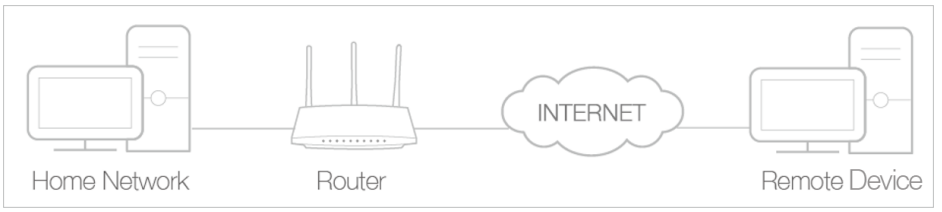
OpenVPN is somewhat complex but with greater security and more stable. It is suitable for restricted environment, such as campus network and company intranet.

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

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

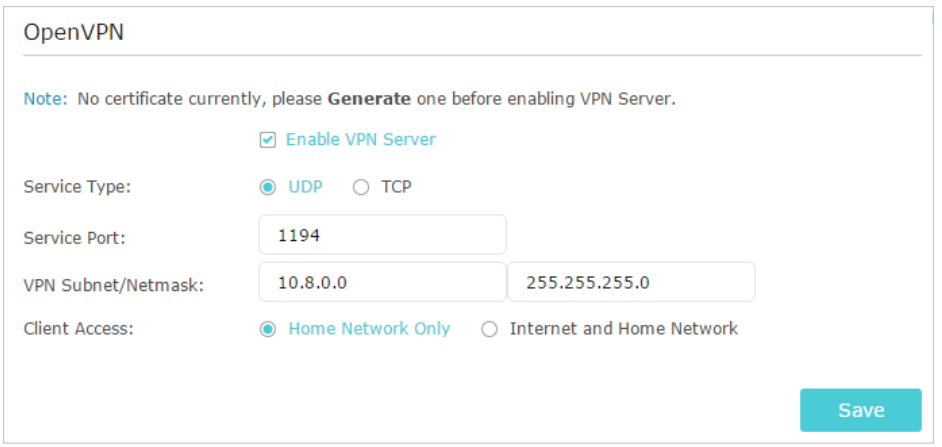
11. 1. Use OpenVPN to Access Your Home Network

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



Step1. Set up OpenVPN Server on Your Router

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



Note:

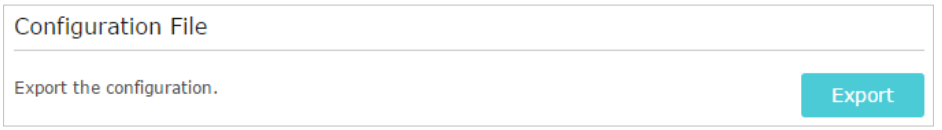
- Before you enable VPN Server, we recommend you configure Dynamic DNS Service (recommended) or assign a static IP address for router's WAN port and synchronize your System Time with internet.
- The first time you configure the OpenVPN Server, you may need to Generate a certificate before you enable the VPN Server.

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

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

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

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



Step 2. Configure OpenVPN Connection on Your Remote Device

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

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

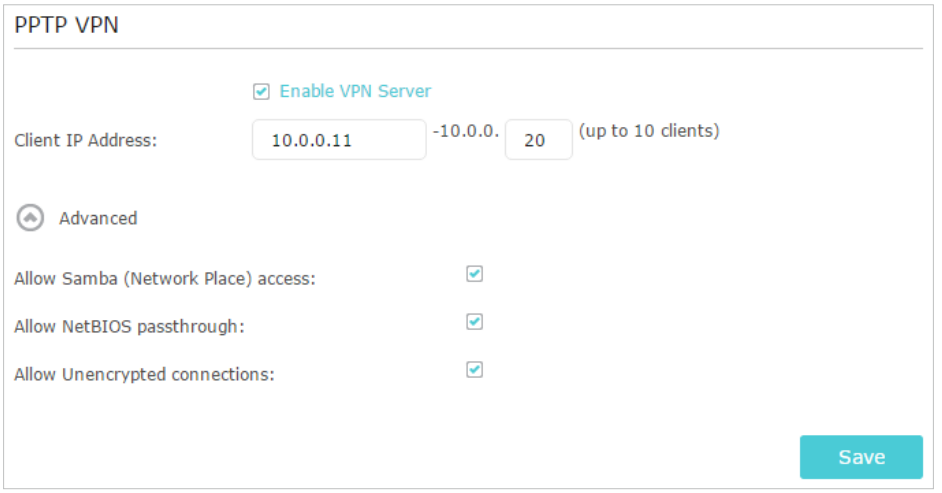
2. After the installation, copy the file exported from your router to the OpenVPN client utility's "config" folder (for example, C:\Program Files\OpenVPN\config on Windows). The path depends on where the OpenVPN client utility is installed.
3. Run the OpenVPN client utility and connect it to OpenVPN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

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

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

Step 1. Set up PPTP VPN Server on Your Router

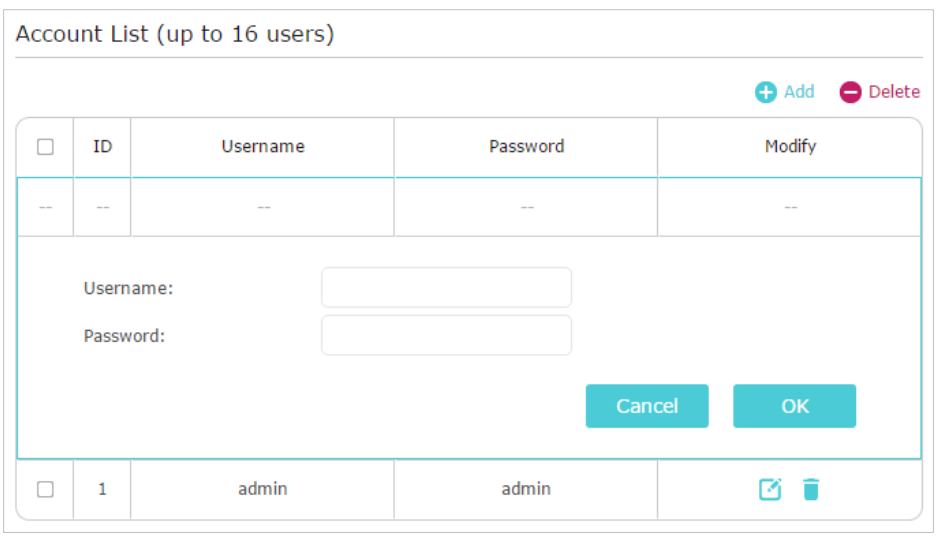
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > VPN Server > PPTP VPN, and select Enable VPN Server.



Note:

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

3. In the Client IP Address filed, enter the range of IP addresses (up to 10) that can be leased to the devices by the PPTP VPN server.
4. Click Advanced to set the PPTP connection permission according to your needs.
   - Select Allow Samba (Network Place) access to allow your VPN device to access your local Samba server.
   - Select Allow NetBIOS passthrough to allow your VPN device to access your Samba server using NetBIOS name.
   - Select Allow Unencrypted connections to allow unencrypted connections to your VPN server.
5. Click Save.
6. Configure the PPTP VPN connection account for the remote device, you can create up to 16 accounts.



1) Click Add.

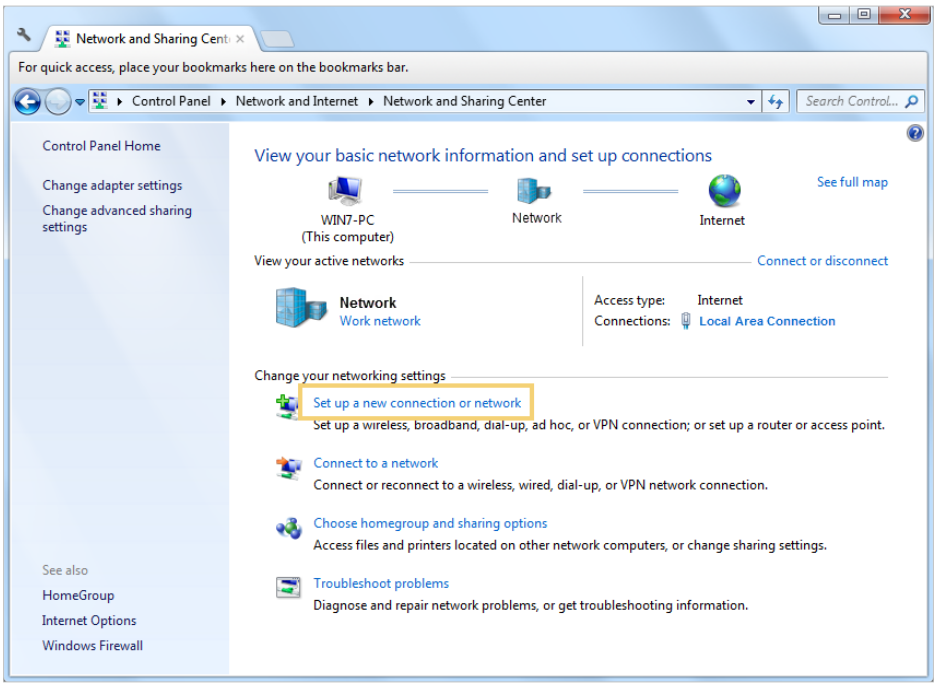
2) Enter the Username and Password to authenticate devices to the PPTP VPN Server.

3) Click OK.

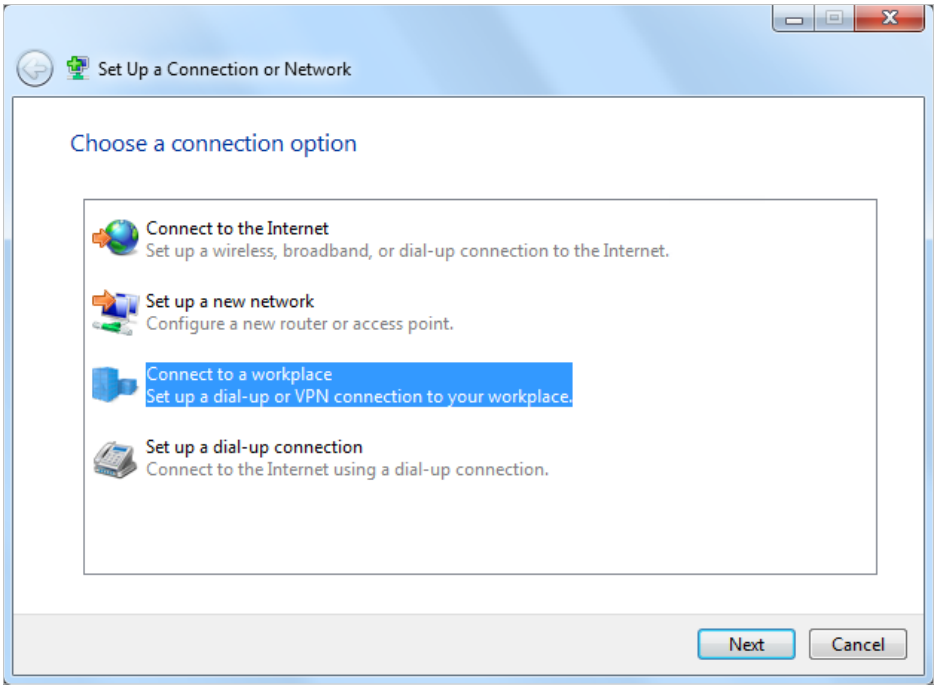
Step 2. Configure PPTP VPN Connection on Your Remote Device

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

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

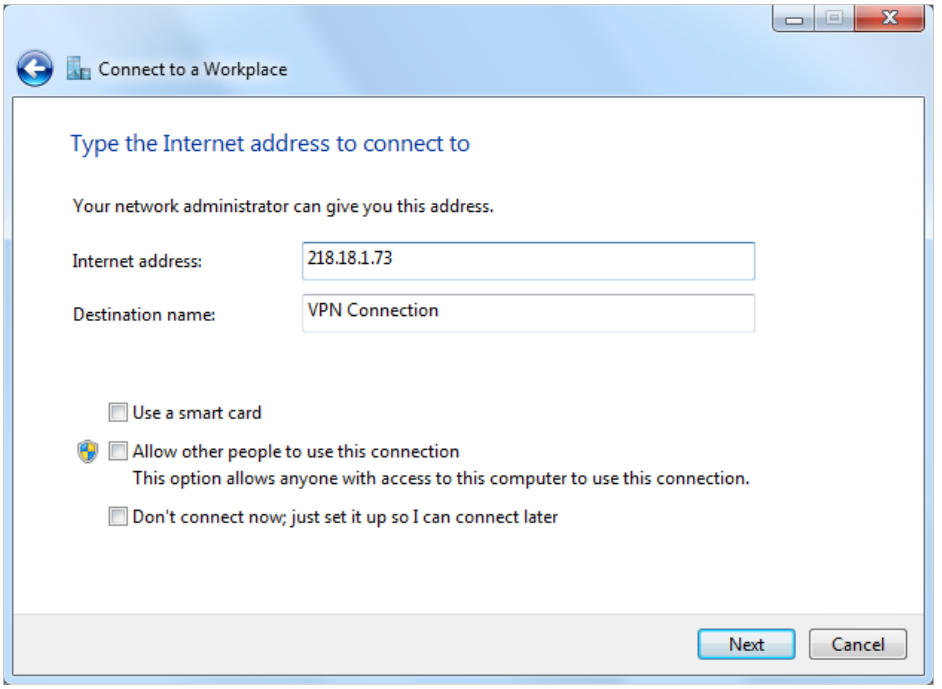


3. Select Connect to a workplace and click Next.

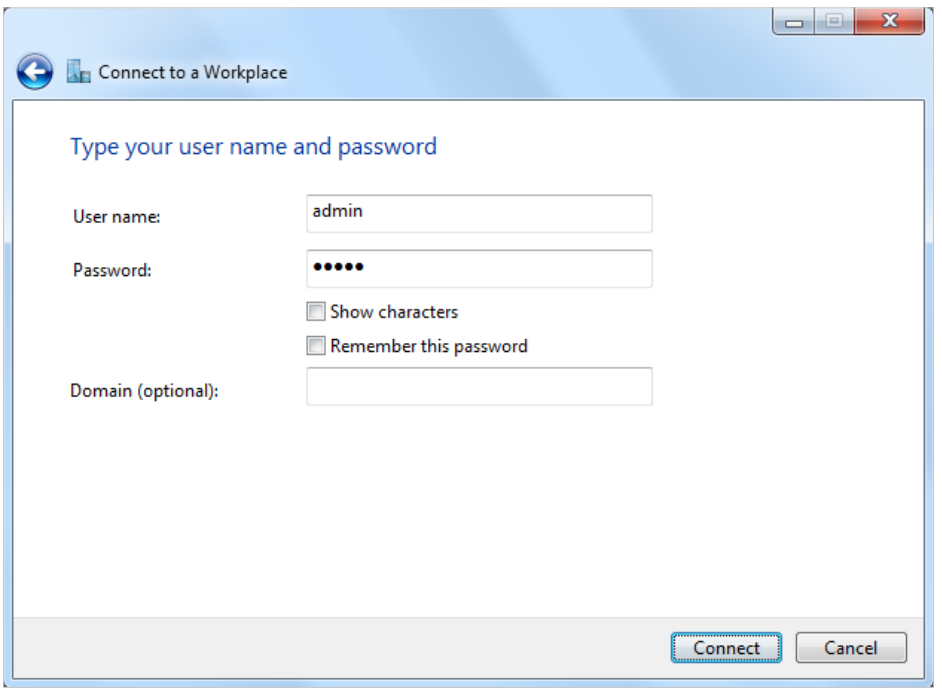


4. Select Use my Internet connection (VPN).

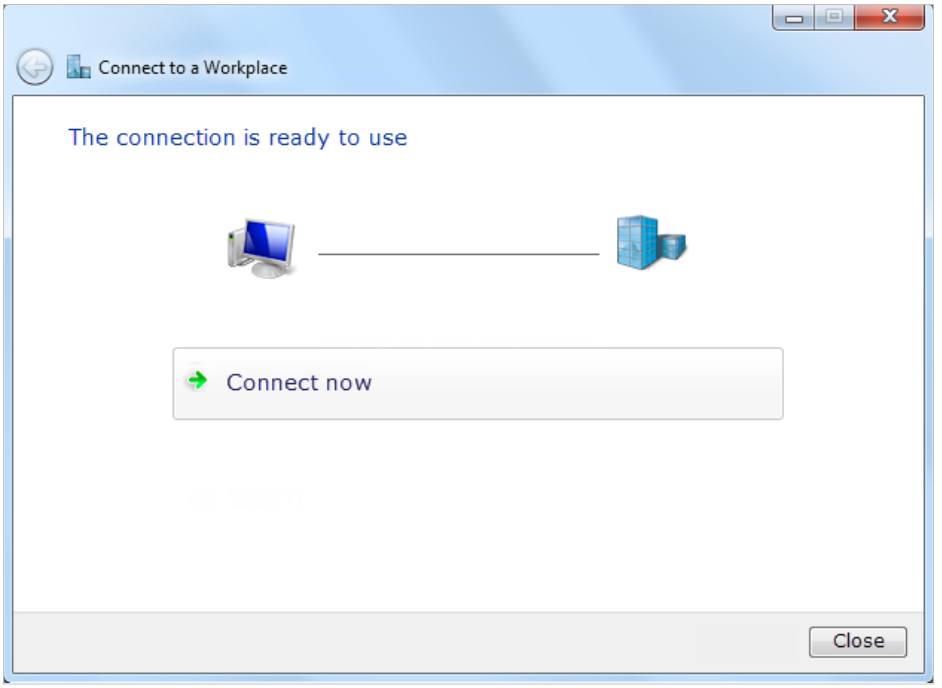
5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field. Click Next.



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



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


Connect to a Workplace
The connection is ready to use
Connect now
Close

Chapter 12

Customize Your Network Settings

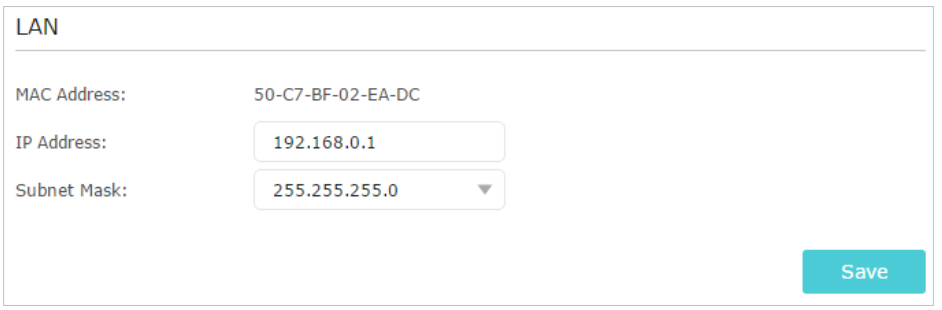
This chapter guides you on how to configure advanced network features.

It contains the following sections:

12. 1. Change the LAN Settings

The router is preset with a default LAN IP 192.168.0.1, which you can use to log in to its web management page. The LAN IP address together with the Subnet Mask also defines the subnet that the connected devices are on. If the IP address conflicts with another device on your local network or your network requires a specific IP subnet, you can change it.

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



4. Click Save.

Note:

If you have set the Virtual Server, DMZ or DHCP address reservation, and the new LAN IP address is not in the same subnet with the old one, then you should reconfigure these features.

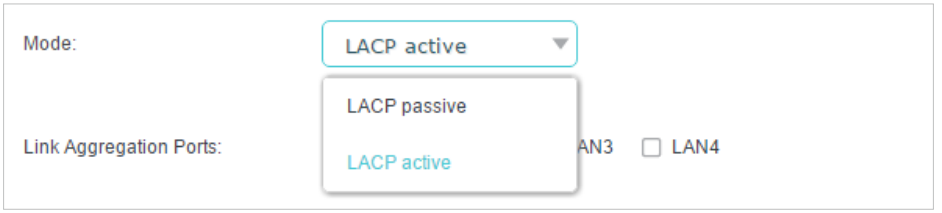
12. 2. Set Up Link Aggregation

The Link Aggregation feature combines two ports together to make a single highbandwidth data path, thus sustaining a higher-speed and more stable wired network.

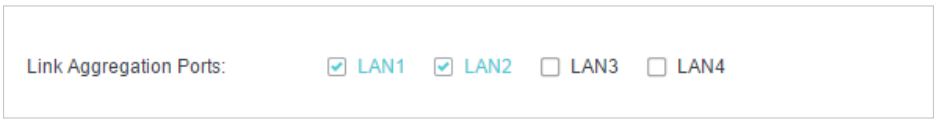
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > LAN.
3. Enable Link Aggregation.

4. Select LACP active or LACP passive for Mode.

- LACP active: enables LACP (Link Aggregation Control Protocol) unconditionally.
- LACP passive: enables LACP only when an LACP device is detected.



5. Specify two ports for link aggregation.



6. Click Save.

12. 3. Configure to Support IPTV Service

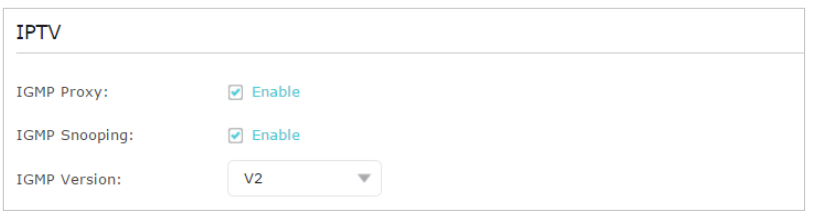
I want to:

Configure IPTV setup to enable Internet/IPTV/Phone service provided by my internet service provider (ISP).

How can I do that?

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > IPTV.
3. **If your ISP provides the networking service based on IGMP technology**, for example, British Telecom(BT) and Talk Talk in UK:

   1) Check the box for IGMP Proxy and select the IGMP Version, either V2 or V3, as required by your ISP.



   2) Click Save.

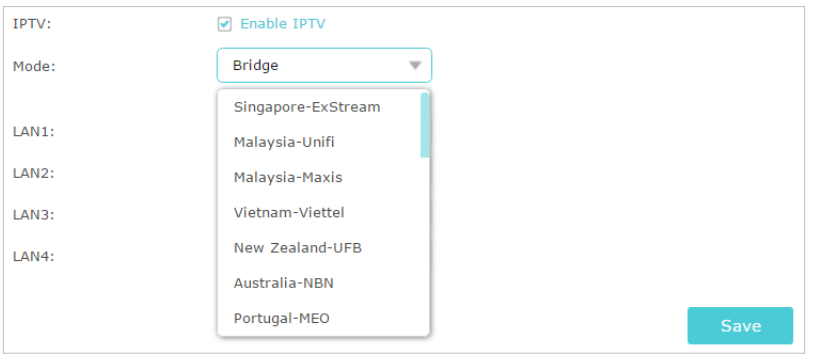
   3) After configuring IGMP proxy, IPTV can work behind your router now. You can connect your set-top box to any of the router's Ethernet port.

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

1) Tick Enable IPTV.

2) Select the appropriate Mode according to your ISP.

- Select Bridge if your ISP is not listed and no other parameters are required.
- Select Custom if your ISP is not listed but provides necessary parameters.



3) After you have selected a mode, the necessary parameters, including the LAN port for IPTV connection, are predetermined. If not, select the LAN type to determine which port is used to support IPTV service.

4) Click Save.

5) Connect the set-top box to the corresponding LAN port which is predetermined or you have specified in Step 3.

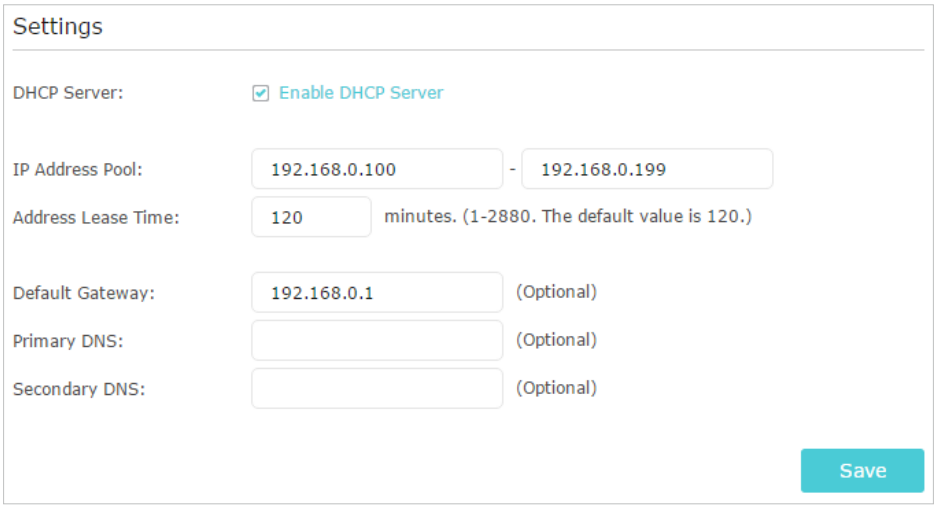
Done! Your IPTV setup is done now! You may need to configure your set-top box before enjoying your TV.

12. 4. Specify DHCP Server Settings

By default, the DHCP (Dynamic Host Configuration Protocol) Server is enabled and the router acts as a DHCP server; it dynamically assigns TCP/IP parameters to client devices from the IP Address Pool. You can change the settings of the DHCP Server if necessary, and you can reserve LAN IP addresses for specified client devices.

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

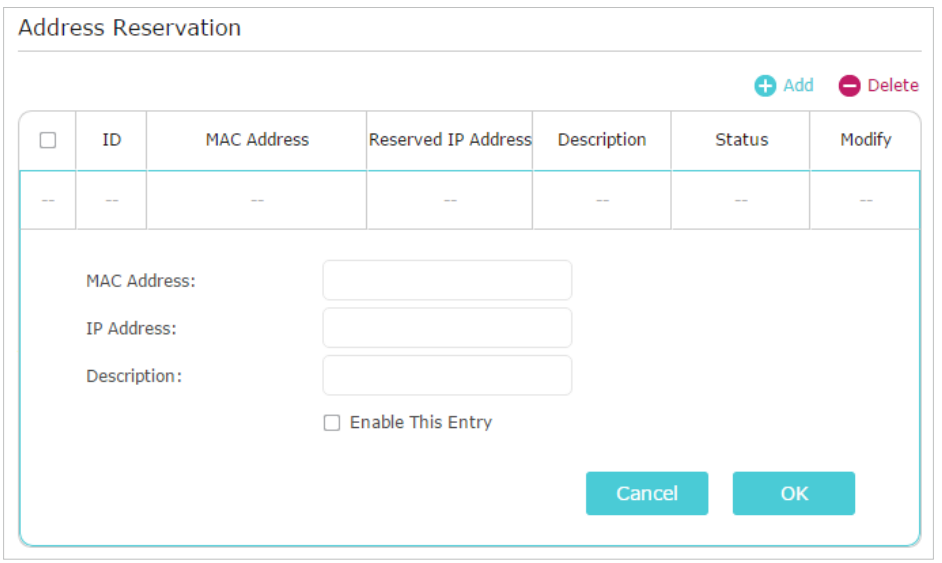
➢ **To specify the IP address that the router assigns:**



1. Tick the Enable DHCP Server checkbox.
2. Enter the starting and ending IP addresses in the IP Address Pool.
3. Enter other parameters if the ISP offers. The Default Gateway is automatically filled in and is the same as the LAN IP address of the router.
4. Click Save.

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

1. Click Add in the Address Reservation section.



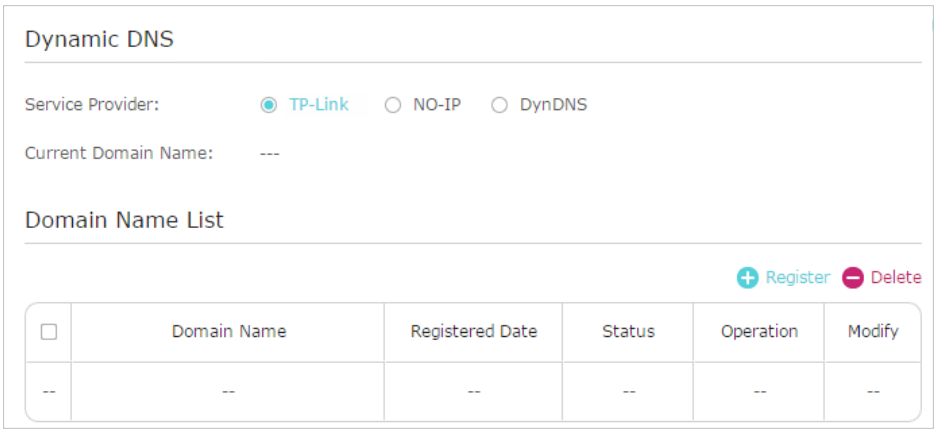
2. Click View Existing Devices or enter the MAC address of the client device.
3. Enter the IP address to reserve for the client device.
4. Enter the Description for this entry.
5. Tick the Enable This Entry checkbox and click OK.

12. 5. Set Up a Dynamic DNS Service Account

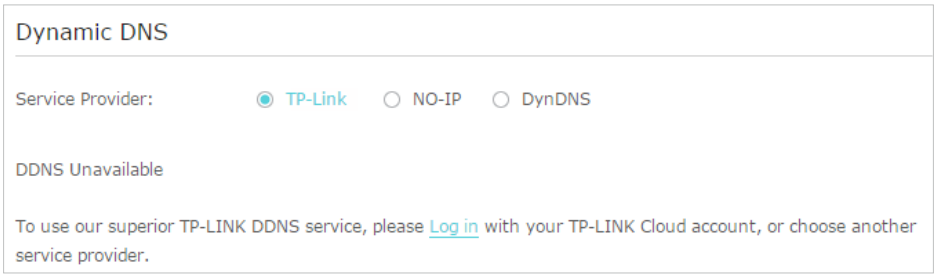
Most ISPs assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change from time to time and you don't know when it changes. In this case, you might apply the DDNS (Dynamic Domain Name Server) feature on the router to allow you and your friends to access your router and local servers (FTP, HTTP, etc.) using a domain name without checking and remembering the IP address.

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

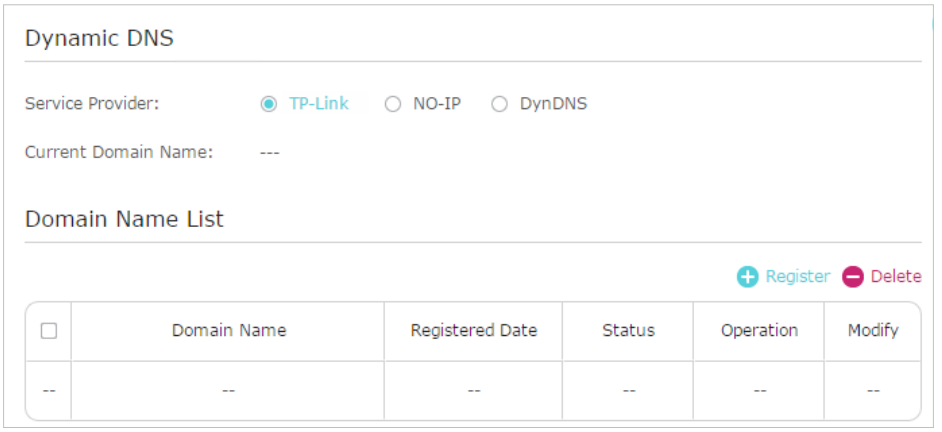
1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Network > Dynamic DNS.
3. Select the DDNS Service Provider (TP-Link, NO-IP or DynDNS). It is recommended to select TP-Link so that you can enjoy TP-Link's superior DDNS service. Otherwise, please select NO-IP or DynDNS. If you don't have a DDNS account, you have to register first by clicking Go to register.



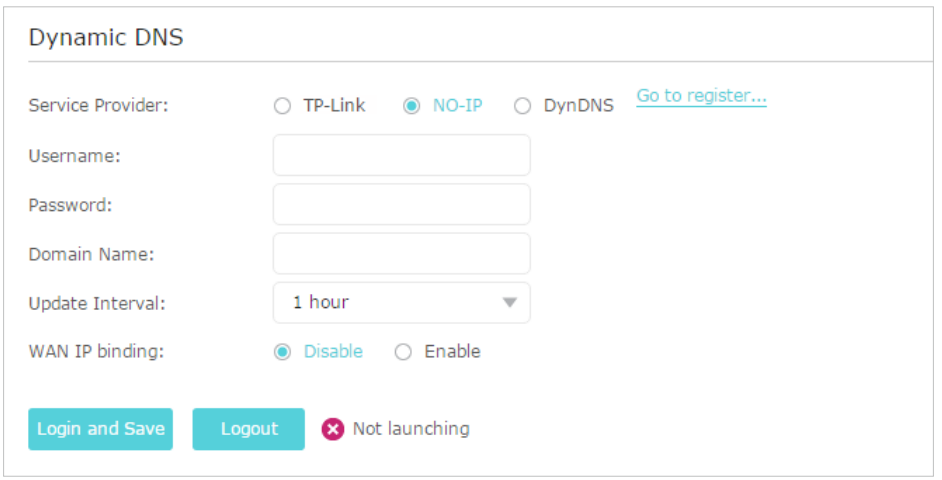
Note:
To enjoy TP-Link's DDNS service, you have to log in with a TP-Link ID. If you have not logged in with one, click Log in.



4. Click Register in the Domain Name List if you have chosen TP-Link, and enter the Domain Name as needed.



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



5. Click Login and Save.

Tips:
If you want to use a new DDNS account, please click Logout first, and then log in with a new account.

12. 6. Create Static Routes

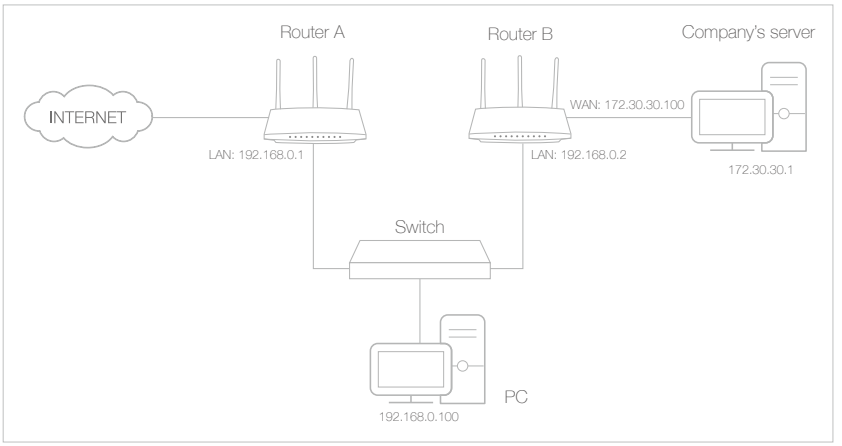
Static routing is a form of routing that is configured manually by a network administrator or a user by adding entries into a routing table. The manually-configured routing information guides the router in forwarding data packets to the specific destination.

I want to:

Visit multiple networks and servers at the same time.

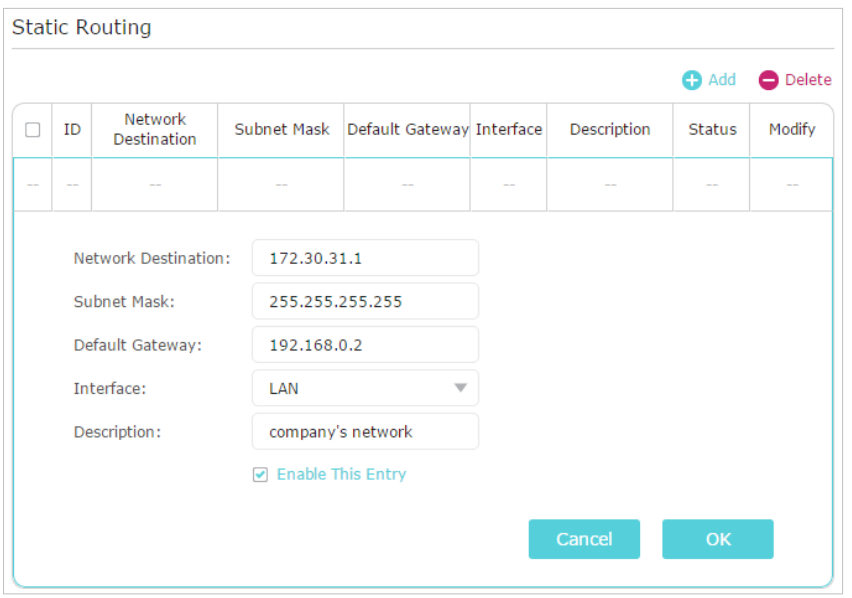
For example, in a small office, my PC can surf the internet through Router A, but I also want to visit my company's network. Now I have a switch and Router B. I connect the devices as shown in the following figure so that the physical connection between my PC and my company's server is established. To surf the internet

and visit my company's network at the same time, I need to configure the static routing.



How can I do that?

1. Change the routers' LAN IP addresses to two different IP addresses on the same subnet. Disable Router B's DHCP function.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for Router A.
3. Go to Network > Advanced Routing.
4. Click Add and finish the settings according to the following explanations:



Network Destination: The destination IP address that you want to assign to a static route. This IP address cannot be on the same subnet with the WAN IP or LAN IP of Router A. In the example, the IP address of the company network is the destination IP

address, so here enter 172.30.30.1.

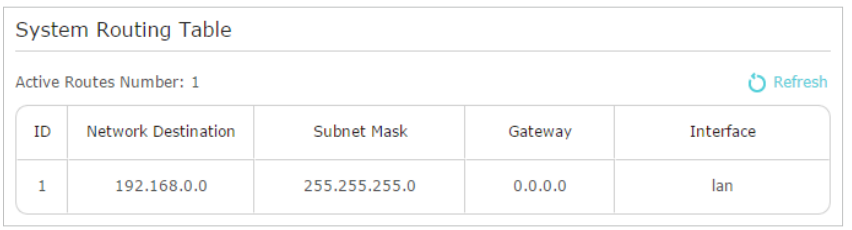
Subnet Mask: Determines the destination network with the destination IP address. If the destination is a single IP address, enter 255.255.255.255; otherwise, enter the subnet mask of the corresponding network IP. In the example, the destination network is a single IP, so here enter 255.255.255.255.

Default Gateway: The IP address of the gateway device to which the data packets will be sent. This IP address must be on the same subnet with the router's IP which sends out data. In the example, the data packets will be sent to the LAN port of Router B and then to the Server, so the default gateway should be 192.168.0.2.

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

Description: Enter a description for this static routing entry.

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



Done!

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

12. 7. Specify Wireless Settings

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

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

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

1. Go to Basic > Wireless.

2. The wireless radio is enabled by default. If you want to disable the wireless function of the router, just untick the Enable Wireless Radio checkbox. In this case, all the wireless settings will be invalid.

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

1. Go to Basic > Wireless.
2. Create a new SSID in Network Name (SSID) and customize the password for the network in Password. The value is case-sensitive.

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

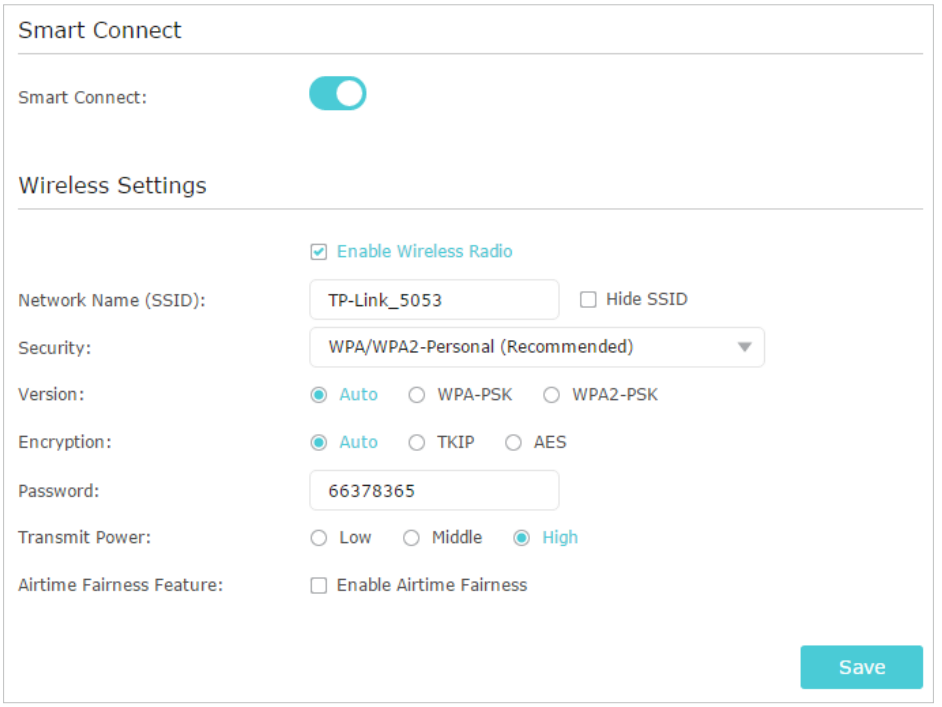
➢ **To hide SSID:**

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

➢ **To use the smart connect function**

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

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



➢ **To change the security option:**

1. Go to Advanced > Wireless > Wireless Settings.
2. Select the wireless network 2.4GHz, 5GHz-1 or 5GHz-2.
3. Select an option from the Security drop-down list. We recommend you don't change the default settings unless necessary. If you select other options, configure the related parameters according to the help page.

In addition

- Mode - Select a transmission mode according to your wireless client devices. It is recommended to just leave it as default.
- Channel Width - Select a channel width (bandwidth) for the wireless network.
- Channel - Select an operating channel for the wireless network. It is recommended to leave the channel to Auto, if you are not experiencing the intermittent wireless connection issue.
- Transmit Power - Select either High, Middle or Low to specify the data transmit power. The default and recommended setting is High.

➢ **To enable the Airtime Fairness feature**

The Airtime Fairness feature can improve the overall network performace by sacrificing a little bit of network time on your slow devices. Enable Airtime Fairness when you wish to sacrifice some of the networking time from the slow devices, so that your faster devices can achieve better quality of service.

For example, you have a gaming computer next to the router in the living room, and a slower family computer upstairs. Enable the airtime fairness feature so that your gaming computer can perform as optimally as possible.

1. Go to Advanced > Wireless > Wireless Settings.
2. Select the wireless network 2.4GHz, 5GHz-1 or 5GHz-2.
3. Check the box for Enable Airtime Fairness.
4. Click Save.

➢ **To enable the Multi-User MIMO feature**

A router with the Multi-User MIMO feature serves 4 devices simultaneously while a traditional router serves only one user at a time. That means Multi-User MIMO can provide a faster, more efficient Wi-Fi network for multiusers.

Note:
Devices supporting 5GHz wireless band can enjoy the Multi-User MIMO service.

1. Go to Advanced > Wireless > Wireless Settings.
2. Select the wireless network 5GHz-1 or 5GHz-2.
3. Check the box for Enable Multi-User MIMO.
4. Click Save.

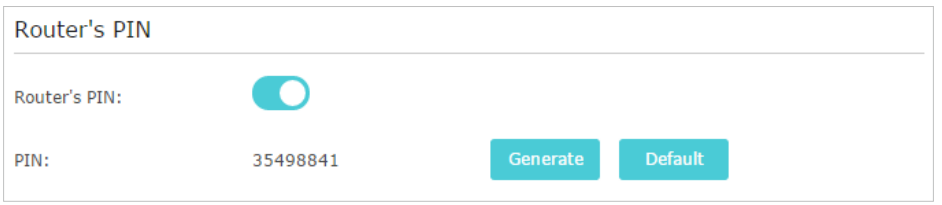
12. 8. Use WPS for Wireless Connection

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

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

12. 8. 1. Set the Router's PIN

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



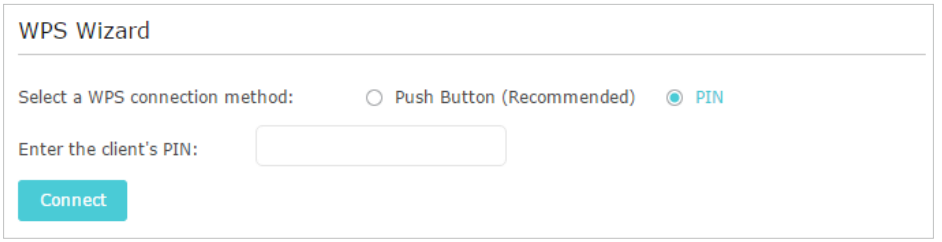
Note:

- If you want to enable/disable the WPS feature, go to System Tools > System Parameters > WPS, tick or untick the Enable WPS checkbox.

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

12. 8. 2. Use the WPS Wizard for Wi-Fi Connections

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

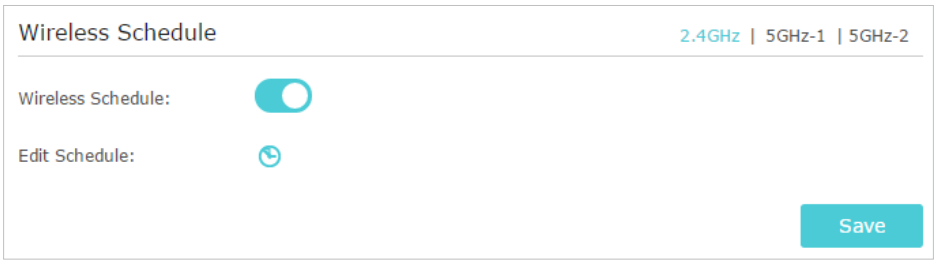


2. Success will appear on the above screen and the WPS LED on the router will keep on for five minutes if the client has been successfully added to the network.

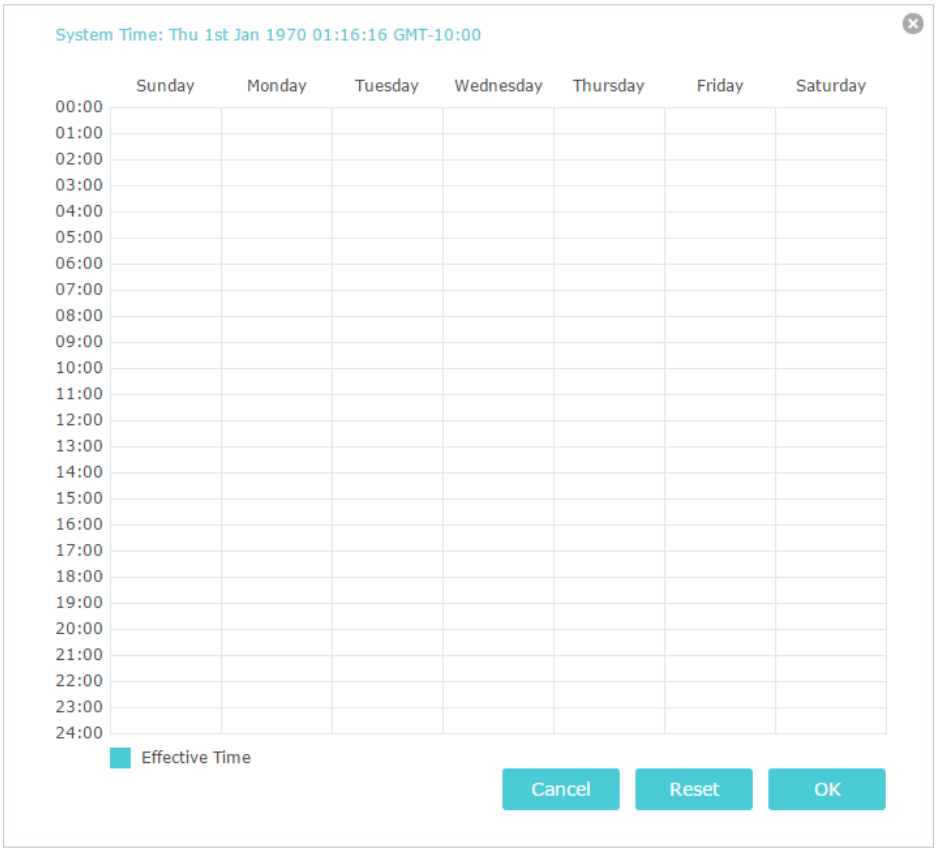
12. 9. Schedule Your Wireless Function

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

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > Wireless > Wireless Schedule.
3. Select 2.4GHz, 5GHz-1 or 5GHz-2 to change the corresponding settings.
4. Enable the Wireless Schedule feature.



5. Click the icon to set the effective time. Drag the cursor over the cells to choosethe period during which you need the wireless off automatically, and click OK.



6. Click Save.

7. If you also want to set wireless off time for other band(s), please repeat the steps above.

Note:

- The Effective Time Schedule is based on the time of the router. You can go to Advanced > System Tools > Time Settings to modify the time.
- The wireless LED will be off if the corresponding wireless network is disabled.
- The wireless network will be automatically turned on after the time period you set.

Chapter 13

Manage the Router

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

It contains the following sections:

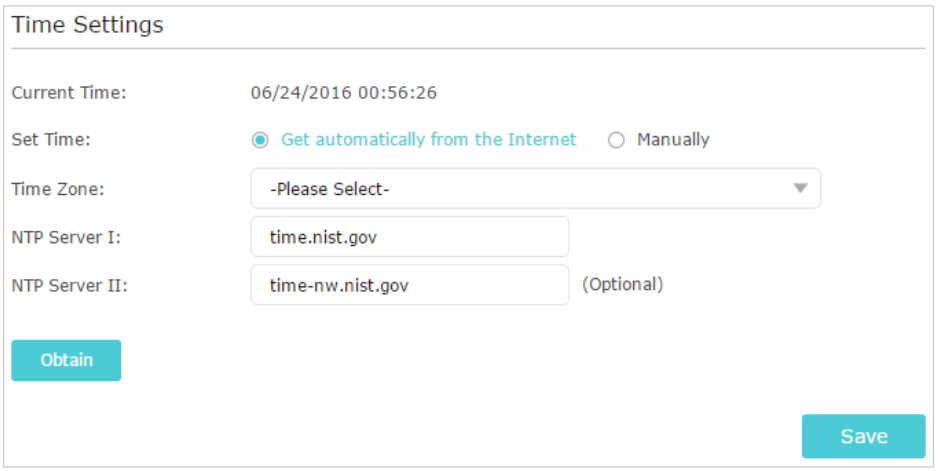
13. 1. Set Up System Time

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

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

➢ **To get time from the internet:**

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



2. Select your local Time Zone from the drop-down list.
3. In the NTP Server I field, enter the IP address or domain name of your desired NTP Server.
4. (Optional) In the NTP Server II field, enter the IP address or domain name of the second NTP Server.
5. Click Obtain to get the current Internet time and click Save.

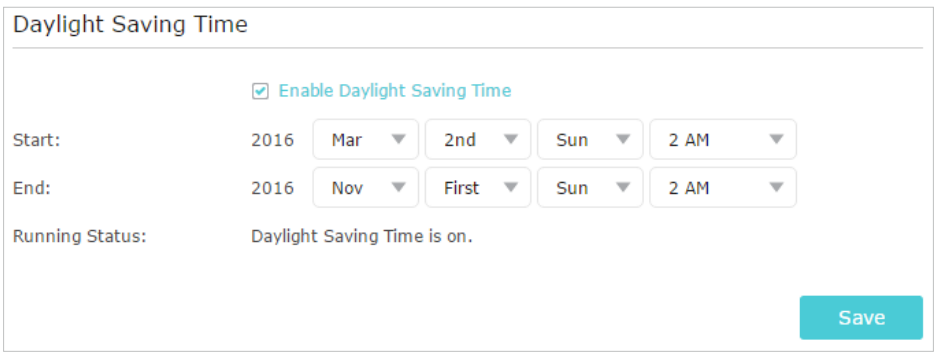
➢ **To manually set the date and time:**

1. In the Set Time field, select Manually.

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

➢ **To set up Daylight Saving Time:**

1. Select Enable Daylight Saving Time.



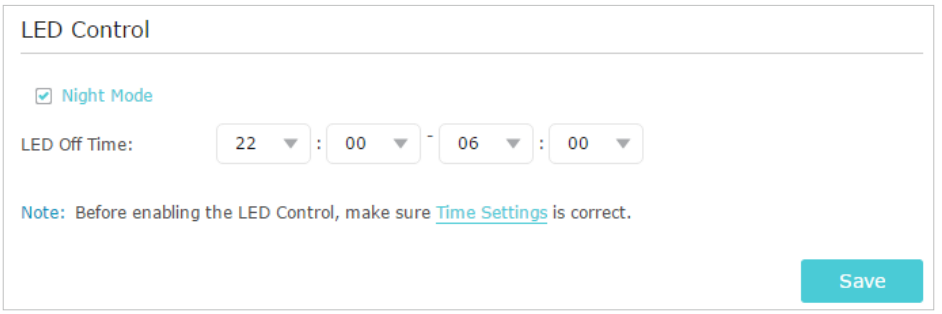
2. Select the correct Start date and time when daylight saving time starts at your local time zone.
3. Select the correct End date and time when daylight saving time ends at your local time zone.
4. Click Save.

13. 2. Control LEDs

The router's LEDs indicate router's activities and status. You can turn on or turn off the LEDs either from the web management page or by pressing the LED button.

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > System Tools > LED Control.
3. Tick the Night Mode checkbox.

4. Specify a time period in the LED Off Time as needed, and the LEDs will be off during this period.

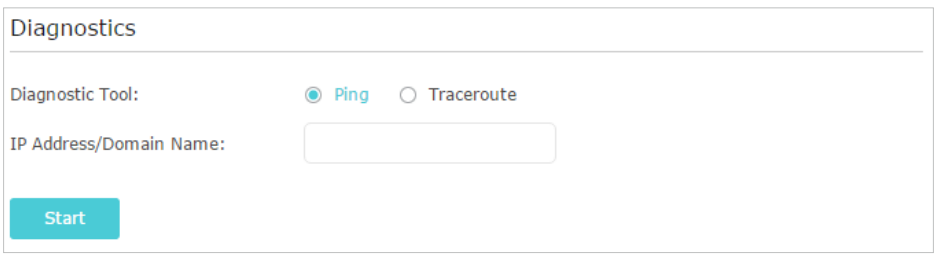


5. Click Save.

13. 3. Test the Network Connectivity

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

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



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

   1) Choose Ping or Traceroute as the diagnostic tool to test the connectivity;

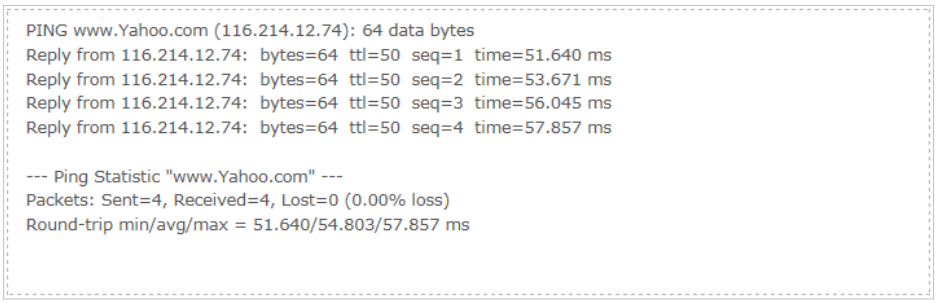
   - Ping is used to test the connectivity between the router and the tested host, and measure the round-trip time.
   - Traceroute is used to display the route (path) your router has passed to reach the tested host, and measure transit delays of packets across an Internet Protocol network.

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

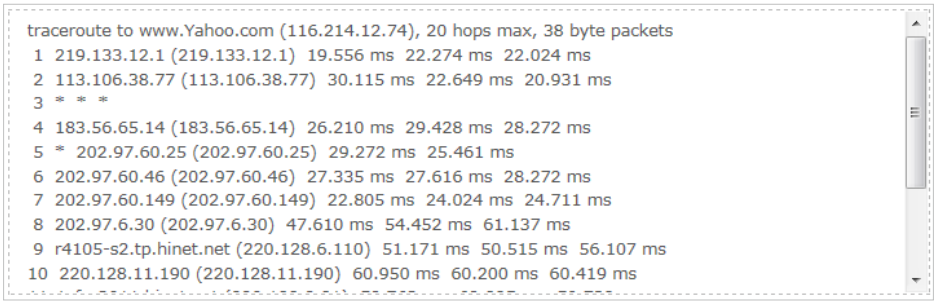
4. Click Start to begin the diagnostics.

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

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



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

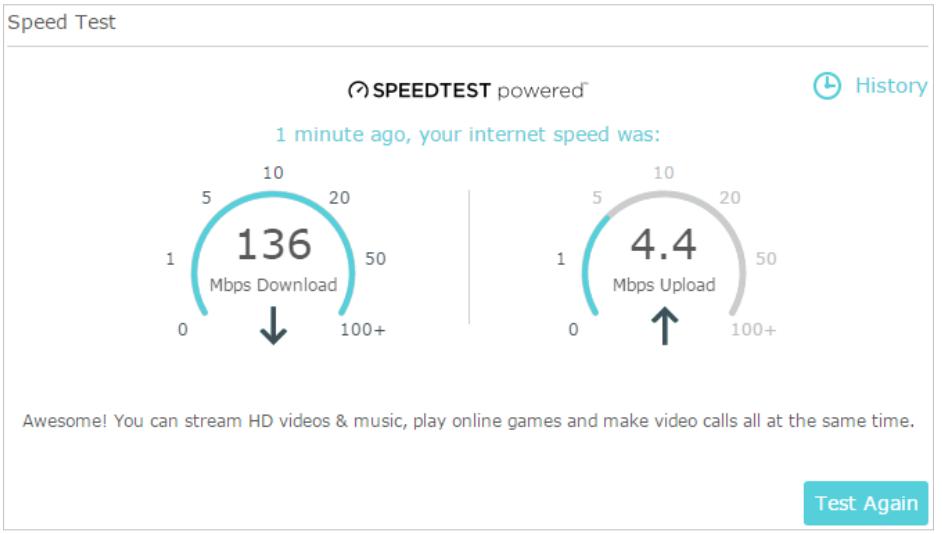


13. 4. Test Your Internet Speed

Speed Test provides an easy way to monitor your network speed. It reveals the current upload and download speeds received from your provider and gives practical advice about the activities you can enjoy.

➢ **To test your internet speed**:

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > Network Map and click Speed Test .
3. If it is the first time you run a test, the router will start the test automatically. Otherwise, click Test Again.

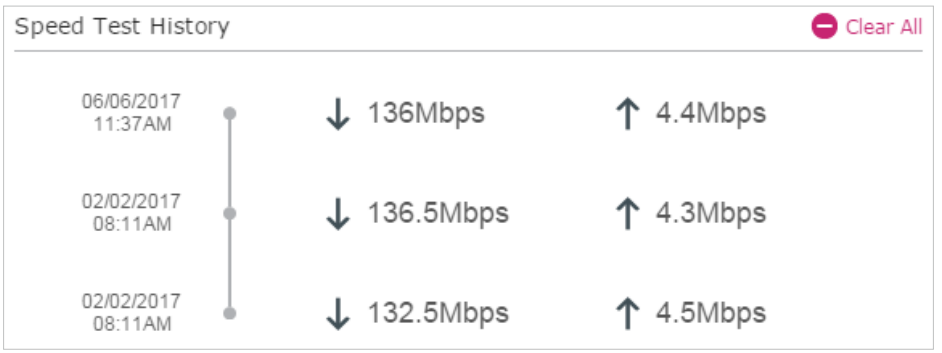


Note:

- To run a speed test, your router must be connected to the internet.
- For a more accurate result, make sure no apps or programs are running on devices on your network.

➢ **To view history of internet speeds:**

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Basic > Network Map and click Speed Test .
3. Click History to view a record of previous speed test results.



13. 5. Upgrade the Firmware

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

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

Note:

- Make sure you remove all attached USB devices from the router before the firmware upgrade to prevent data loss.
- Backup your router configuration before firmware upgrade.
- Do NOT turn off the router during the firmware upgrade.

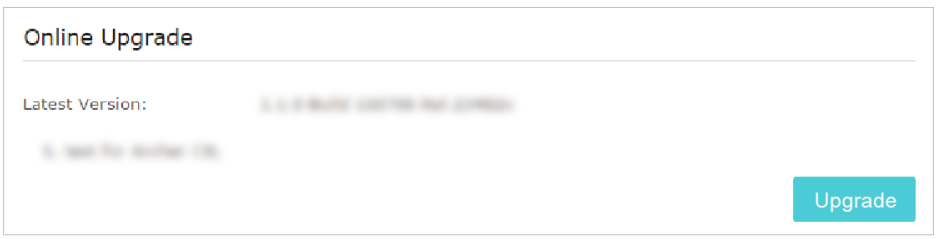
13. 5. 1. Online Upgrade

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. When the latest firmware is available for your router, the update icon 

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

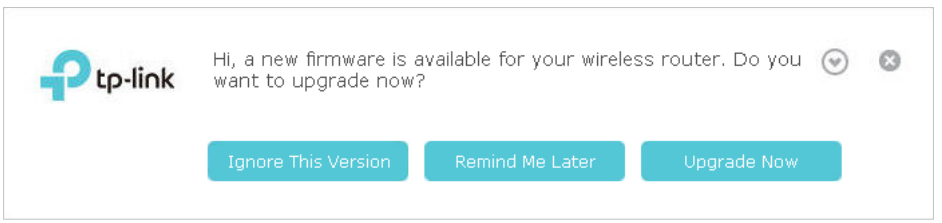
   Alternatively, you can go to Advanced > System Tools > Firmware Upgrade, and click Check for upgrade to see whether the latest firmware is released.

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



4. Wait a few minutes for the upgrade and reboot to complete.

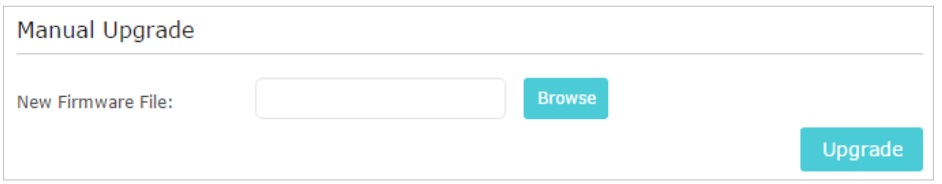
Tips:
If there's a new and important firmware update for your router, you will see the notification (similar as shown below) on your computer as long as a web browser is opened. Click Upgrade now, and log into the web management page with the username and password you set for the router. You will see the Firmware Upgrade page.



13. 5. 2. Manual Upgrade

1. Download the latest firmware file for the router from www.tp-link.com.
2. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
3. Go to Advanced > System Tools > Firmware Upgrade.

4. Focus on the Device Information section. Make sure the downloaded firmware file is matched with the Hardware Version.
5. Focus on the Manual Upgrade section. Click Browse to locate the downloaded new firmware file, and click Upgrade.



6. Wait a few minutes for the upgrade and reboot to complete.

13. 5. 3. Restore Interrupted Upgrade After Power Failure

If your router cannot start up after an upgrade interruption due to power failure, follow the steps below to restore the interrupted upgrade. Otherwise, your router cannot work again.

1. Make sure you have the latest firmware file in your computer. If not, try another way to connect your computer to the Internet and download the latest firmware file from www.tp-link.com.
2. Connect your computer to the router with an Ethernet cable.
3. Visit 192.168.0.1 and you will see the following upgrade page.

4. Click Browse and select the downloaded firmware file.
5. Click Upgrade and wait for a few minutes until the router completes the upgrading and restarts.

13. 6. Backup and Restore Configuration Settings

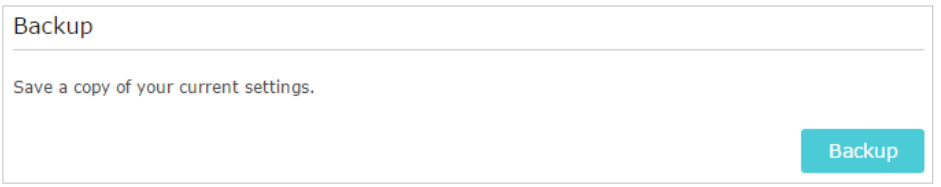
The configuration settings are stored as a configuration file in the router. You can backup the configuration file to your computer for future use and restore the router to a previous settings from the backup file when needed. Moreover, if necessary you can erase the current settings and reset the router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

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

2. Go to Advanced > System Tools > Backup & Restore.

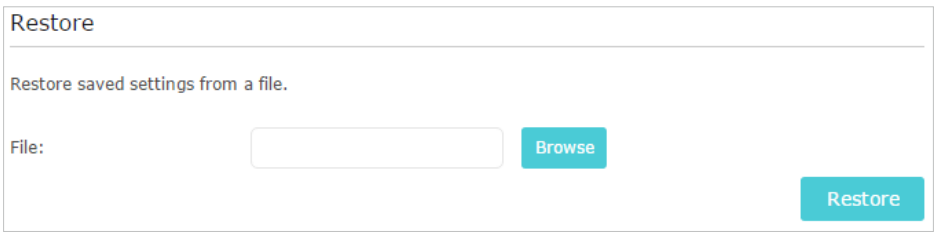
➢ **To backup configuration settings:**

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



➢ **To restore configuration settings:**

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

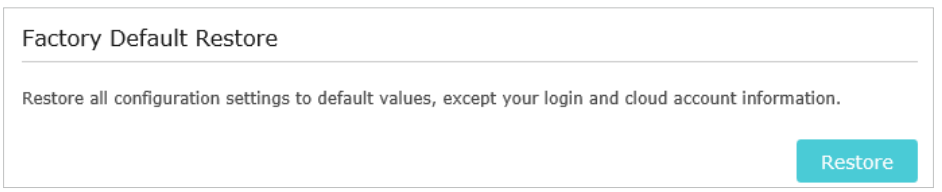


2. Wait a few minutes for the restoring and rebooting.

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

➢ **To reset the router except your login password and bound TP-Link ID:**

1. Click Restore under the Factory Default Restore session.



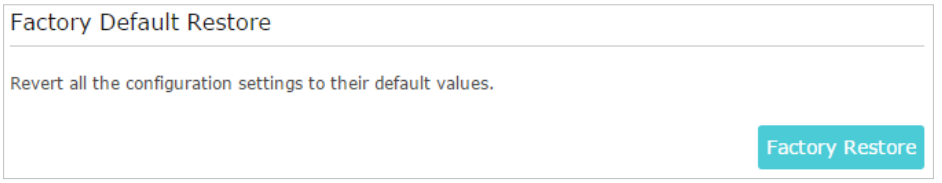
2. Wait a few minutes for the resetting and rebooting.

Note:

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

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

1. Click Factory Restore to reset the router.



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

Note:

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

13. 7. Change the Administrator Account

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

Note:

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

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

3. Enter the old password, then a new password twice (both case-sensitive). Click Save.
4. Use the new password for future logins.

13. 8. Password Recovery

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

Note:

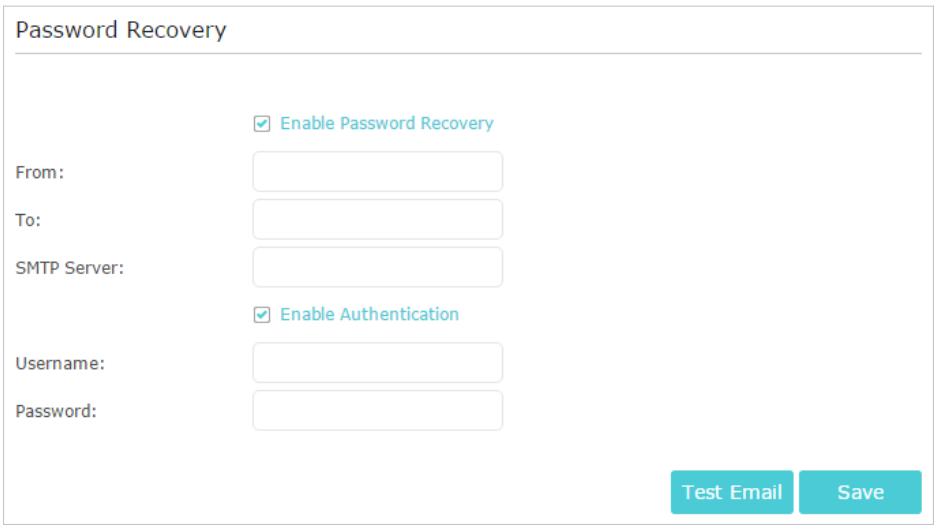
If you are using a TP-Link ID to log in to the web management page, the Password Recovery feature will be disabled. To manage the TP-Link ID, go to Basic > TP-Link Cloud.

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

2. Go to Advanced > System Tools > Administration and focus on the Password Recovery section.
3. Tick the Enable Password Recovery checkbox.
4. Specify a mailbox (From) for sending the recovery letter and enter its SMTP Server address. Specify a mailbox (To) for receiving the recovery letter. If the mailbox (From) to send the recovery letter requires encryption, select Enable Authentication and enter its username and password.

   Tips:

   - SMTP server is available for users in most webmail systems. For example, the SMTP server address of Gmail is smtp.gmail.com. You can refer to their Help page to learn the SMTP server address.
   - Generally, Enable Authentication should be selected if the login of the mailbox requires username and password.



5. Click Save.

You can click Test Email to test whether the configuration is successful.

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

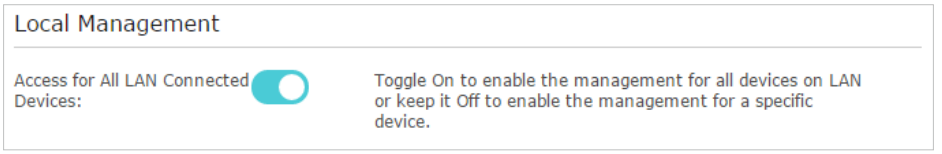
13. 9. Local Management

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

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

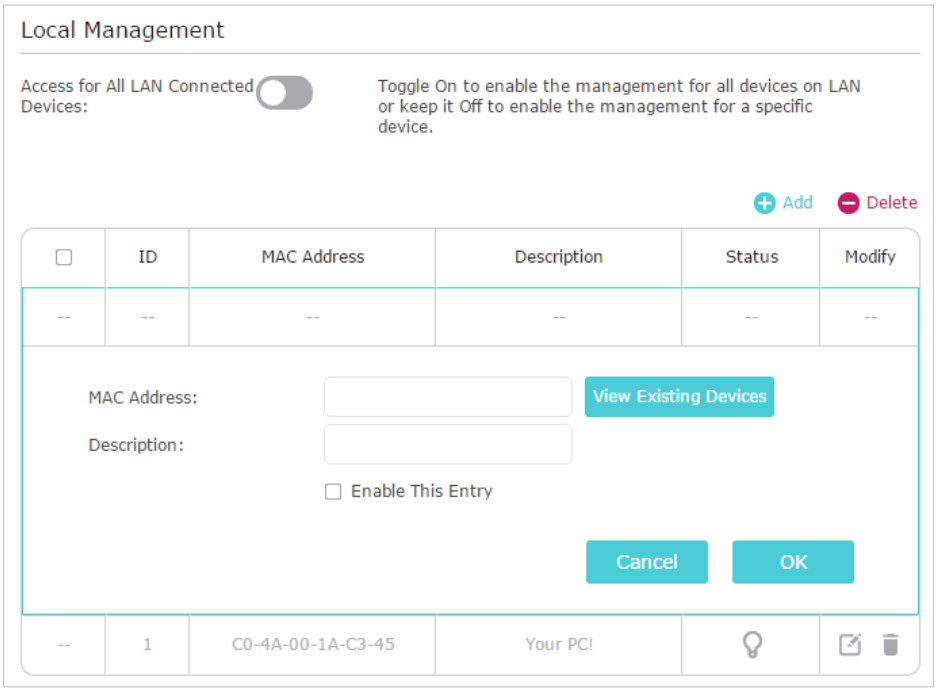
➢ **Allow all LAN connected devices to manage the router:**

Toggle on Access for All LAN Connected Devices.



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

1. Toggle off Access for All LAN Connected Devices.
2. Click Add.

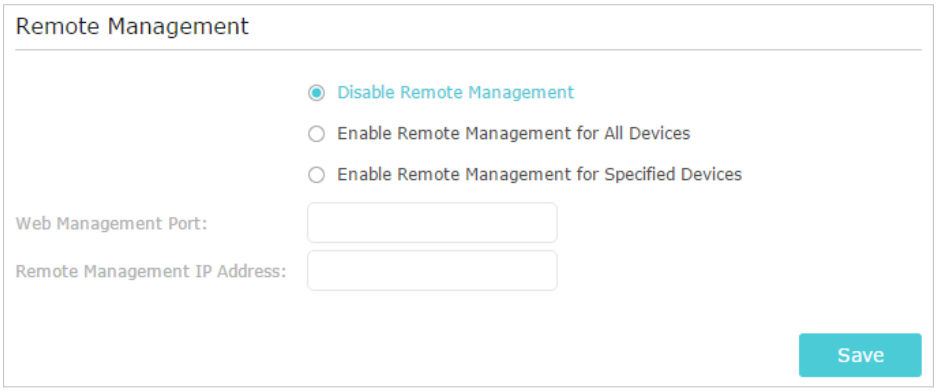


3. Click View Existing Devices and select the device to manage the router from the Existing Devices list, or enter the MAC address of the device manually.
4. Specify a Description for this entry.
5. Tick the Enable This Entry checkbox.
6. Click OK.

13. 10. Remote Management

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

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



➢ **Forbid all devices to manage the router remotely:**

Select Disable Remote Management and click Save.

➢ **Allow all devices to manage the router remotely:**

1. Select Enable Remote Management for All Devices.
2. Enter Web Management Port (1024-65535 or 80).
3. Click Save.

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

Tips:

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

➢ **Allow specific devices to manage the router remotely:**

1. Select Enable Remote Management for Specified Devices.
2. Enter Web Management Port (1024-65535 or 80).
3. In Remote Management IP address, enter the IP address of the remote device to manage the router.
4. Click Save.

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

Tips:

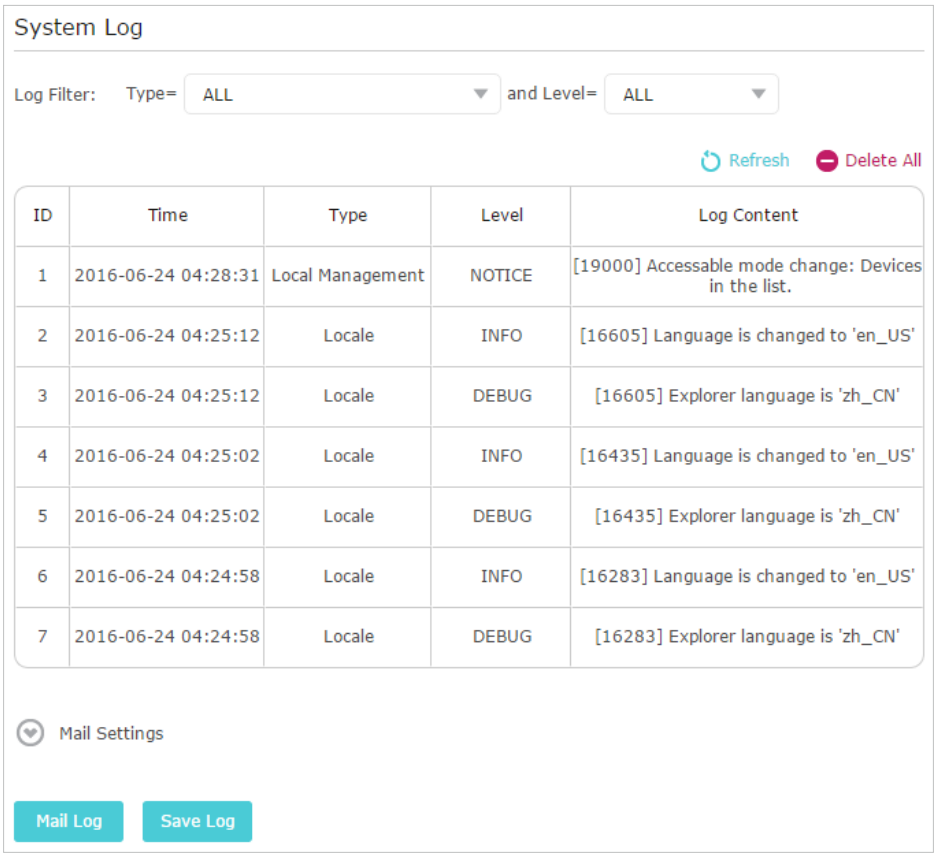
The router's WAN IP is usually a dynamic IP. Please refer to Set Up a Dynamic DNS Service Account if you want to log in to the router through a domain name.

13. 11. System Log

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

➢ **To save the system log locally:**

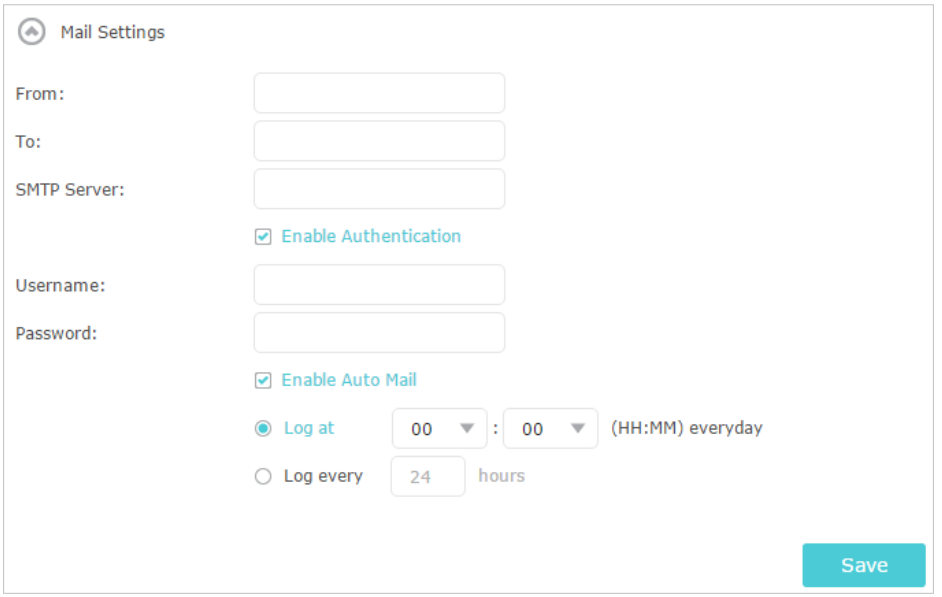
1. Visit http://tplinkwifi.net, and log in your TP-Link ID or the password you set for the router.
2. Go to Advanced > System Tools > System Log.
3. Choose the type and level of the system logs as needed.
4. Click Save Log to save the system logs to a local disk.



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

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

1. Visit http://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > System Tools > System Log.
3. Click Mail Settings.
4. Enter the information required:



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

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

3) SMTP Server: Enter the SMTP server address.

Tips: SMTP server is available for users in most webmail systems. For example, the SMTP server address of Hotmail is smtp-mail.outlook.com. You can refer to their Help page to learn the SMTP server address.

4) Select Enable Authentication.

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

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

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

7) Select Enable Auto Mail.

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

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

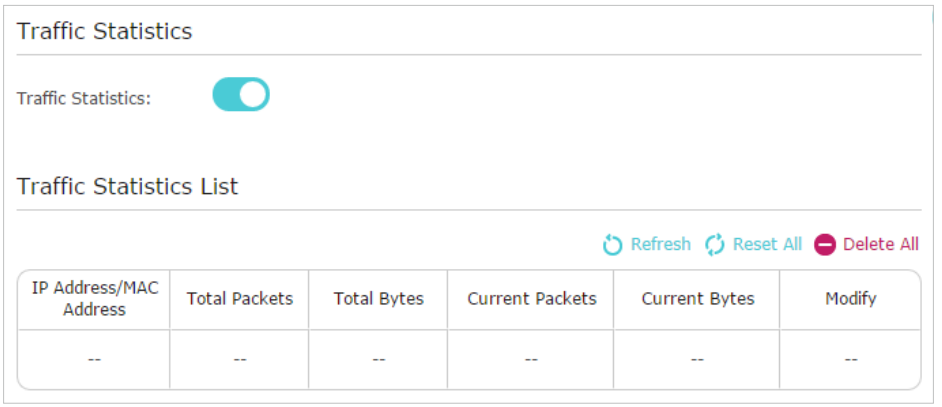
5. Click Save.

13. 12. 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://tplinkwifi.net, and log in with your TP-Link ID or the password you set for the router.
2. Go to Advanced > System Tools > Traffic Statistics.

3. Toggle on Traffic Statistics, and then you can monitor the traffic statistics in Traffic Statistics List section.



Click Refresh to update the statistic information on the page.

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

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

Click to reset the statistic information of the specific device.

Click to delete the specific device item in the list.

FAQ

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

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

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

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

- If you are using a TP-Link ID to log in, or you have enabled the Password Recovery feature of the router, click Forgot password on the login page and then follow the instructions to reset it.
- Alternatively, press and hold the Reset button of the router until the Power LED binks to reset it, and then visit http://tplinkwifi.net to create a new login password.

Note:

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

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

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

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