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

UPnP	
Enable UPoP (Onlemnat Plag and Play) to allow devices on your local retwolk to dynamically op for applications such as multipleyer gaming and real-time communications.	
UPnP:	

### Chapter 13

# **VPN Server&Client**

The router offers several ways to set up VPN connections:

**VPN Server** allows remote devices to access your home network in a secured way through the internet. The router supports three types of VPN Server:

**OpenVPN** is somewhat complex but with higher security and more stability, suitable for restricted environments such as campus network and company intranet.

**PPTP VPN** is easy to use with the built-in VPN software of computers and mobile devices, but it is vulnerable and may be blocked by some ISPs.

**L2TP/IPSec VPN** is more secure but slower than PPTP VPN, and may have trouble getting around firewalls.

**VPN Client** allows devices in your home network to access remote VPN servers, without the need to install VPN software on each device.

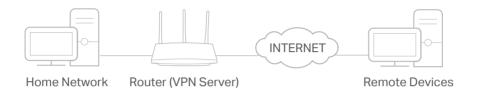
This chapter contains the following sections:

- Use OpenVPN to Access Your Home Network
- Use PPTP VPN to Access Your Home Network
- Use L2TP/IPSec VPN to Access Your Home Network
- Use VPN Client to Access a Remote VPN Server

### 13. 1. Use OpenVPN to Access Your Home Network

OpenVPN Server is used to create an OpenVPN connection for remote devices to access your home network.

To use the VPN feature, you need to enable OpenVPN Server on your router, and install and run VPN client software on remote devices. Please follow the steps below to set up an OpenVPN connection.



### Step1. Set up OpenVPN Server on Your Router

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

OpenVPN	
Set up an OpenVPN for secure, remote	access to your network.
Note: No certificate has been created. O	Senerate one below before enabling OpenVPN.
OpenVPN:	_
opentrik	CHILDRE
Service Type:	UDP
	○ TCP
Service Port:	1194
VPN Subnet:	10.8.0.0
Netmask:	255.255.255.0
Client Access:	Home Network Only $\sim$

Note:

- Before you enable VPN Server, we recommend you configure Dynamic DNS Service (recommended) or assign a static IP address for router's WAN port and synchronize your System Time with internet.
- The first time you configure the OpenVPN Server, you may need to generate a certificate before you enable the VPN Server.
- 3. Select the Service Type (communication protocol) for OpenVPN Server: UDP, TCP.
- 4. Enter a VPN Service Port to which a VPN device connects, and the port number should be between 1024 and 65535.
- 5. In the VPN Subnet/Netmask fields, enter the range of IP addresses that can be leased to the device by the OpenVPN server.

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

Certificate		
Generate the untificate.		
	CANED/S17	

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

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

Configuration File		
Export the configuration file.		
	est ten	

#### Step 2. Configure OpenVPN Connection on Your Remote Device

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

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

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

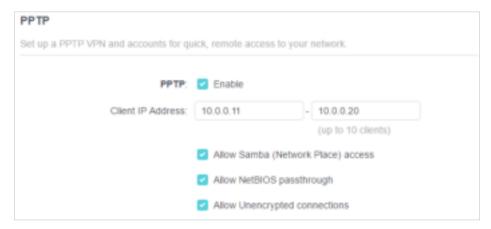
### 13.2. Use PPTP VPN to Access Your Home Network

PPTP VPN Server is used to create a PPTP VPN connection for remote devices to access your home network.

To use the VPN feature, you need to set up PPTP VPN Server on your router, and configure the PPTP connection on remote devices. Please follow the steps below to set up a PPTP VPN connection.

Step 1. Set up PPTP VPN Server on Your Router

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



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

- 3. In the Client IP Address field, enter the range of IP addresses (up to 10) that can be leased to the devices by the PPTP VPN server.
- 4. Set the PPTP connection permission according to your needs.
  - Select Allow Samba (Network Place) access to allow your VPN device to access your local Samba server.
  - Select Allow NetBIOS passthrough to allow your VPN device to access your Samba server using NetBIOS name.
  - Select Allow Unencrypted connections to allow unencrypted connections to your VPN server.

5. Click SAVE.

6. Configure the PPTP VPN connection account for the remote device. You can create up to 16 accounts.

Account List		
tantique accounts (up to M)	that can be assot by immire clients to connec	3.00 the SRN Server
		O Att
Usemame	Password	Modify
admin.	admite	Ci 🛍

- 1) Click Add.
- 2) Enter the Username and Password to authenticate devices to the PPTP VPN Server.

(SANCE)		800	
	(SAWCE)		

3) Click ADD.

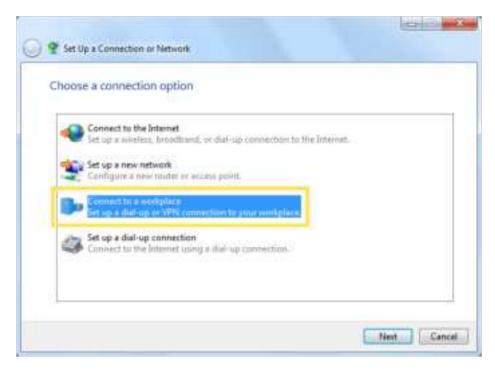
### Step 2. Configure PPTP VPN Connection on Your Remote Device

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

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

Hetwork and Sharing Ce. For spatial access, place your books.	They're Routings ar an ann an ar	
	Network and Different:      Network and Sharing Conter	• [+_] [
Gerikosi Pareat Hanna	View your basic network information and	set up connections
Change adapter settings Outrop advanced sharing settings	WBIT-PC (This computer) View youd ACtive retrievels	Correct or dynamics
	Charge page (set-setting)	Accessifyin: Desmat Connections Q Local Anna Connection
	Set up a new presentant to reduce to	in 1996 connection; or off up a reader of access point.
	Connect or reconnect to a similar, whell do	
- Inn die Hannellung Internet Options Stindung Fremal	Access fået avd prödert located ov offser sat Traditerbert problere Diagness and ispac rationic problere, or pa	

3. Select Connect to a workplace and click Next.



4. Select Use my Internet connection (VPN).

How do you wa	nt to connect?				
	ternet connection		etion thurson	the Internet	
	<b>63</b>	ex (read count		ove writerinen	
-			and the second s		
Dial direct Connect direct	y thy to a pixone number	without acing !	hrough the Int	ernet.	
100	- C. P.				

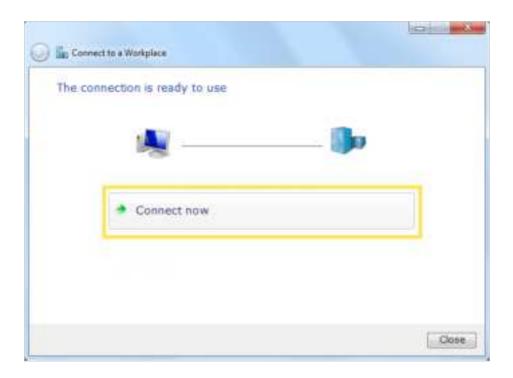
5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field. Click Next.

Type the Internet a	address to connect to
Your network administr	ator can give you this address.
Internet address	218.38.1.73
Destination names	VPN Connection
🖽 Use a smart card	
	ple to use this connection ws anyone with access to this computer to use this connection.
Don't connect n	ovc just set it up so I can connect later

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

User name:	Table 1	
Pasowordt		
1.00	Dow characters	
Domain (optionalit	Remember this password	

7. Click Connect Now when the VPN connection is ready to use.



#### Use L2TP/IPSec VPN to Access Your Home 13.3. **Network**

L2TP/IPSec VPN Server is used to create a L2TP/IPSec VPN connection for remote devices to access your home network.

To use the VPN feature, you need to set up L2TP/IPSec VPN Server on your router, and configure the L2TP/IPSec connection on remote devices. Please follow the steps below to set up the L2TP/IPSec VPN connection.



**Remote Devices** 

### Step 1. Set up L2TP/IPSec 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 > L2TP/IPSec, and enable L2TP/IPSec.

Note:

- Firmware update may be required to support L2TP/IPSec VPN Server.
- · 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.

L2TP/IPSec			
Set up a L2111100 VPN and accounts	the quick, remote a	ricess to your hebiturit.	
L2TPHFSec	Enable		
Client 8 <sup>12</sup> Address		- 10.9.0.20	
		(op to 10 climits)	
PSec Encryption	Encrypted	× .	
IPSec Pre-Shared Key			

- 3. In the Client IP Address field, enter the range of IP addresses (up to 10) that can be leased to the devices by the L2TP/IPSec VPN server.
- 4. Keep IPSec Encryption as Encrypted and create an IPSec Pre-Shared Key.
- 5. Click SAVE.
- 6. Configure the L2TP/IPSec VPN connection account for the remote device. You can create up to 16 accounts.

ccount List		
	that can be assot by seconde clients to corese	ct in the SPN Scruek
		O Att
Usemame	Password	Modity
admin	admin	Ci 🛍

- 4) Click Add.
- 5) Enter the Username and Password to authenticate devices to the L2TP/IPSec VPN Server.

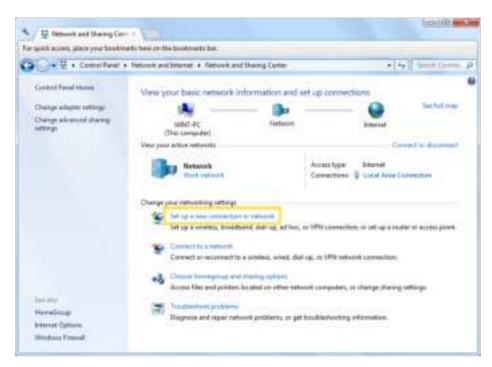
Add Account			×
	Username Password		
		(SANCE)	8400

6) Click ADD.

Step 2. Configure L2TP/IPSec VPN Connection on Your Remote Device

The remote device can use the Windows or Mac OS built-in L2TP/IPSec software or a third-party L2TP/IPSec software to connect to L2TP/IPSec Server. Here we use the Windows built-in L2TP/IPSec 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.

hoos	e a connection option
	Connect to the Internet Set up a wireless, forcedtrand, or dial-up connection to the Internet.
÷	Set up a new network Configure a new moter er access pelet.
80	Connect III a workplace Set up a dialogn or VPN connection to your workplace.
3	Set up a dial-up connection Connect to the Internet using a dial-up connection.
~	Connect to the Internet using a dial- up connection.

4. Select Use my Internet connection (VPN).

How do you w	ant to con	mect?				
Use my la Connect unit	nternet co ng a virtual p			nection thro	ugh the inter	nef.
1	_	۲	-	Do		
Dial direct Connect direct	tly ectly to a pilo	one number i	without gor	g through th	e înternet.	
1		00				
What is a VPN con	nection?					

5. Enter the internet IP address of the router (for example: 218.18.1.73) in the Internet address field, and select the checkbox Don't connect now; just set it up so I can connect later. Click Next.

Type the Internet a	ddress to connect to
Your network administr	ator can give you this address.
Internet address	218.38.1.73
Destination names	YPN Connection
Use a smart card	
	ple to use this connection as anyone with access to this computer to use this connection.
inter excite the second second	over just set it up to I can connect later

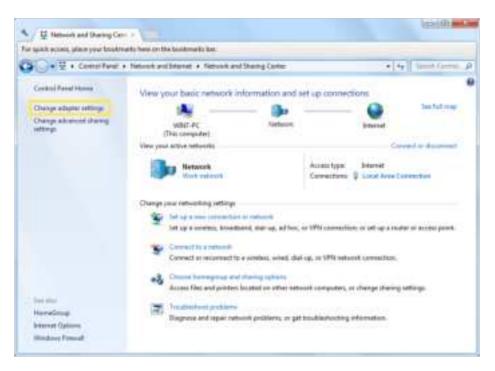
6. Enter the User name and Password you have set for the L2TP/IPSec VPN server on your router, and click Connect.

🔓 Connect to a Workpi	ice	
Type your user nar	ne and password	
User name	MARK.	
Pasowordt	••••	
	Show characters	
Domain (optional):	Remember this password	
Domain (optional):		
		Connect Cancel

7. Click Close when the VPN connection is ready to use

🔵 📠 Conne	t to a Workplace	
The con	nection is ready to use	
	<b>1</b>	
	Connect now	
		Close

8. Go to Network and Sharing Center and click Change adapter settings.



9. Find the VPN connection you created, then double-click it.

Ingenite + Mart this connection	Rename this connection =	- * · (3 )
Local Area Connection sec.anthather.co.jp Intellity PRD/1000 MT Netwo	WPN Connection	
Intelligi PRD/1080 MT Network	e C. gl watt Meigen	

10. Enter the User name and Password you have set for the L2TP/IPSec VPN server on your router, and click Properties.

* Einenst Will Connection
University of Constants
Depre
(2) Specifies and range and parameters for the following same: B Margo System and cases for compare
Corred Canal Agentes 198

11. Switch to the Security tab, select Layer 2 Tunneling Protocol with IPsec (L2TP/ IPSec) and click Advanced settings.

2 UPN Connection Properties	10.0
Gerand Collars Security Makazolar	a Diana
Trave of VPM	
Saver & Turretting Planault with Plana	L10/Pieci *
Date exception	Advanced settings
People incognized (discovered if party	e desilitati 🔹 🔹
Advertication C: Une Disordele Rubertication Pro- # Rev Press gratuce	
Culture region ( parameter ( PAP) Culture of Culture ( Culture ) Manual ( ChiP Venture ) MS Culture ( ChiP Venture ) MS Culture ( Culture ) ( Culture ) ( Culture ) Culture ( Culture ) ( Culture	over bright memory and
1	OI Dece

12. Select Use preshared key for authentication and enter the IPSec Pre-Shared Key you have set for the L2TP/IPSec VPN server on your router. Then click OK.

Alternation Properties	
• on polardies is admit	uter .
Competitions for automation Material for the two wellings	en and the second section of the sectio
	Cond Cond

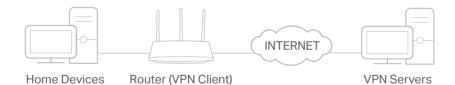
Done! Click Connect to start VPN connection.

* Listerst 1994 Convertion
lannan
If See the use rate and passed to be following and:       If he upp       If he up       If he up

### 13.4. Use VPN Client to Access a Remote VPN Server

VPN Client is used to create VPN connections for devices in your home network to access a remote VPN server.

To use the VPN feature, simply configure a VPN connection and choose your desired devices on your router, then these devices can access the remote VPN server. Please follow the steps below:



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

### 2. Go to Advanced > VPN Client.

Note: Firmware update may be required to support VPN Client.

3. Enable VPN Client, then save the settings.

VPN Client					
Set up profiles 5	ar coloreda, thair seile	ee the S	(14 Junchus		
			ENABLE		

- 4. Add VPN servers, and enable the one you need.
  - 1) In the Server List section, click Add.
  - 2) Specify a description for the VPN, and choose the VPN type.

Add Profile		×
Description:	vpnt	
VPN Type:	OpenV/PN 🗢	
Username:	OpenVPN	(Cyllosal)
Password:	рртр	(Optional)
Configuration File:	L2TPhPSec	
	BRONGE	
	CANGEL	SAVE

- 3) Enter the VPN information provided by your VPN provider.
  - OpenVPN: Enter the VPN username and password if required by your VPN provider, otherwise simply leave them empty. Then import the configuration file provided by your VPN provider.

Add Profile		×
Description:	vpn1	
VPN Type:	OpenVPN V	
Usemame:	1070	(Optional)
Passwort	nin.	(Optional)
Configuration File:	Open/VPN-Config.ovpn	
	BROWSE	
	Uplant wetmahilip	
	CANCER.	2002

• PPTP: Enter the VPN server address (for example: 218.18.1.73) and the VPN username and password provided by your VPN provider.

Add Profile				×
	Description:	vpn2		
	VPN Type:	PPTP	-34	
	VPN Server:	218.18.1.73		
	Username:	10710		
	Password	1000		
	Encryption:	Auto	94 (	
			CANCEL	SAVE

 L2TP/IPSec VPN: Enter the VPN server address (for example: 218.18.1.73), VPN username and password, and IPSec pre-shared key provided by your VPN provider.

Add Profile			×
Description:	vpn3		
VPN Type:	L2TP/IPSec	- 19V	
VPN Server:	218.18.1.73		
Username:	-		
Password:	1001		
IPSec Pre-Shared Key:	10000		
		CANCEL	SAVE

- 4) Save the settings.
- 5) In the server list, enable the one you need.

rver List				
t or edit VPN yers	nr, Up to 6 VPMs surve	re carr by added.		
				0.4
Description	VPN Type	Status	ENABLE	Modify
6nqv	L2TP/IPSec	Disconnected	0	80
vprd2	PPTP	Disconnected	0	0 <b>1</b>
requ	OpenVPN	Disconnected		05 00

5. Add and manage the devices that will use the VPN function.

- 1) In the Device List section, click Add.
- 2) Choose and add the devices that will access the VPN server you have configured.

			×
Select the Online Dev		Laccess VPN server	
	Device Type	Device Name	MAC Address
	***		FC-AA-14-55-FB-5D
•	***		86-D2-DE-89-18-82
offline Dev	vices		
	Device Type	Device Name	MAC Address
No Entries			
			Camori Adr

6. Save the settings.

evice Lis	t			
annge dey	cars that will use the VPW	handlion.		
				Q A00
Туре	Device Name	MAC Address	VPN Access	Modilly
		FC:AA:14:56:FB:5D	•	8
	No.Press	86:02:DE 88:18:62	•	

Done! Now the devices you specified can access the VPN server you enabled.

### Chapter 14

# **Customize Your Network Settings**

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

It contains the following sections:

- <u>Change the LAN Settings</u>
- <u>Configure to Support IPTV Service</u>
- <u>Specify DHCP Server Settings</u>
- <u>Set Up a Dynamic DNS Service Account</u>
- <u>Create Static Routes</u>

### 14.1. 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 <u>http://tplinkwifi.net</u>, 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.

LAN		
View and configure LAN settings.		
MAC Address:	98-DA-C4-B4-01-D8	
IP Address:	192.168.0.1	
Subnet Mask:	255.255.255.0	~

### 4. Click SAVE.

**Note:** If you have set the Port Forwarding, 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.

### 14.2. Configure to Support IPTV Service

### I want to:

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

### How can I do that?

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > Network > IPTV/VLAN.
- **3.** If your ISP provides the networking service based on IGMP technology, e.g., British Telecom(BT) and Talk Talk in UK:
  - 1) Tick the IGMP Proxy and IGMP Snooping checkbox, then select the IGMP Version, either V2 or V3, as required by your ISP.

Multicast		
Check the multicast setting. It is recomm	nended to keep them as default.	
IGMP Praxy:	Enable	
IGMP Snooping:	C Enable	
IGMP Version:	V2 ~	
Wireless Multicast Forwarding:	Enable	

- 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/VLAN.
- 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.

IPTWYLAN	Enable	
Mode	Bridge	÷
LANI	Partugal-Meo	
LANZ	Portugal-Mutatone	
LAND	Australia NEM	
15 LAU	New Zeward-LFB	

- 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.

### 14.3. Specify DHCP Server Settings

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

- 1. Visit <u>http://tplinkwifi.net</u>, 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:

OHCP Server			
synamically angle in addresses to the	devices tomoched to	the soulier	
DHCP Server	🛃 Enable		
IP Address Pool	192 158 0 100	- 192 168 0	249
Address Lease Time	\$20	modes	
Default Geleway			(D)/HOMB
Primary DNS			yopnosag
Secondary DNS			(Oytonal)

- 1. Tick the Enable 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.

Add a Reservation Entry		×
MAC Address.	1.1.1.1.1.1.1	
	MEW COMMENTED DEVICES	
IP Address		
	CANCEL	SWE

- 2. Click VIEW CONNECTED DEVICES and select the you device you want to reserve an IP for. Then the MAC Address will be automatically filled in. Or enter the MAC address of the client device manually.
- 3. Enter the IP address to reserve for the client device.
- 4. Click SAVE.

### 14.4. 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 <u>http://tplinkwifi.net</u>, 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 Register Now.



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 selected TP-Link, and enter the Domain Name as needed.

				ynamic DNS
wer behind the	ur device, website, or sen	emote access to y	ne (domain name) for i	ssign a fixed host nar urfer
	~	Link	Service Provider.	
			t Domain Name.	Curren
				omain Name List
🕒 Rogist				
Delete	Operation	Status	Registered Date	Domain Name
				No Entrica
				No Entries

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

Dynamic DNS		
Areage a fired heat name chomain name reader	e) he result access to your denses, we	name, or survey behind the
Service Provider.	NO-IP U	Regular Now
Usemame:		
Password	0	
Domain Name		
WAN IP binding	Enable	
Status	Not launching	
	LOSIN AND SHIT	
	106001	- S

#### 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.

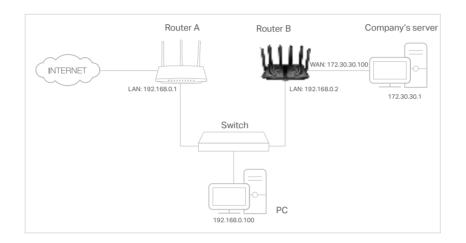
### 14.5. Create Static Routes

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

### I want to:

Visit multiple networks and 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 <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for Router A.
- 3. Go to Advanced > Network > Routing.
- 4. Click Add and finish the settings according to the following explanations:

Network Destination:	172.30.30.1		
Subnet Mask:	255 255 255 255		
Default Gateway:	192.168.0.2		
Interface:	LANWLAN	~	
Description:	Company		

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/WLAN should be selected.

Description: Enter a description for this static routing entry.

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

Routing Table	that are currently in une		
Active Route Number: 1			Q Astroph
Network Destination	Subnet Mask	Gabeway	Interface
192.168.0.0	255 255 259 0	0.0.0.0	LAN

### Done!

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

### Chapter 15

# **Manage the Router**

This chapter will show you the configuration for managing and maintaining your router. It contains the following sections:

- Upgrade the Firmware
- Backup and Restore Configuration Settings
- Change the Login Password
- <u>Password Recovery</u>
- Local Management
- <u>Remote Management</u>
- <u>System Log</u>
- <u>Test the Network Connectivity</u>
- <u>Set Up System Time</u>
- Set the Router to Reboot Regularly
- <u>Control the LED</u>

### 15.1. 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 <u>www.tp-link.com</u>, and you can download it from the <u>Support</u> page for free.

Note:

- Backup your router configuration before firmware upgrade.
- Do NOT turn off the router during the firmware upgrade.

### 15.1.1. Auto Update

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

#### 2. Enable Auto Update.

Auto Update			
abaro jicznolae	actionalizatic whole we	v version is southable.	
	Auto Updaw		
	Current Time:	2020-07-19 7 12:39 PM	Settings
	Update Time	3 BOAM to 5 DOAM	

3. Specify the Update Time and save the settings.

The router will update firmware automatically at the specified time when new version is available.

### 15.1.2. Online Upgrade

- 1. Visit <u>http://tplinkwifi.net</u>, 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 upgrade icon **Creater** 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 > Firmware Upgrade, and click CHECK FOR UPGRADES to see whether the latest firmware is released.

Online Upgrade	
Upgrade Immeans over the internet.	
Firmware Version	- ) - man at series in a statistic to
Hardware Version.	Archer AX
CHECK FOR UPGRADES	

3. Focus on the Online Upgrade section, and click UPGRADE if there is new firmware.

Online Upgrade			
Upgrade Inmales over the minimul.			
Firmware Version.			
Hardware Version.	Archer AX		
Latest Firmware Version			White Serve
	_		-
		STREET, STREET	

#### 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 prompt notification on your computer as long as a web browser is opened. Click UPGRADE, and log in to the web management page with the username and password you set for the router. You will see the Firmware Upgrade page.

### 15.1.3. Local Upgrade

- 1. Download the latest firmware file for the router from <u>www.tp-link.com</u>.
- 2. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 3. Go to Advanced > System > Firmware Upgrade.
- 4. Focus on the Local Upgrade section. Click BROWSE to locate the downloaded new firmware file, and click UPGRADE.

Local Upgrade		
Opprase firmware from a local film		
New Firmware File;		
	INTOWISE.	
	UPGRADE	

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

Note: If you fail to upgrade the firmware for the router, please contact our Technical Support.

### 15.2. 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 <u>http://tplinkwifi.net</u>, 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 BACK UP 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.

Restore			
Restore sellings from a dark	up We		
	Fae		
		provor.	

#### 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 TP-Link ID:

1. In the Factory Default Restore section, click RESTORE.

Restore all settings to default values.		
teatore un acturga to octavat valoca.		
Sectors all configuration collings to default :	waking and party loads and along	d account information
Restore all configuration settings to default v	values, except your login and clou	d account information.
	RESTORE	

#### 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.

### 15.3. Change the Login Password

## 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 Advanced > TP-Link ID.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System > Administration and focus on the Change Password section.

Change Password	
Change the router's local management password.	
Old Password:	23
New Password:	
Confirm New Password:	

3. Enter the old password, then a new password twice (both case-sensitive). Click SAVE.

4. Use the new password for future logins.

### 15.4. 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 Advanced > TP-Link ID.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System > Administration and focus on the Password Recovery section.
- 3. Tick the Enable box of Password Recovery.
- 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, Tick the Enable box of 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.
- Generally, Authentication should be enabled if the login of the mailbox requires username and password.

Password Recovery		
Reset local management password via	preset questions and answers.	
Password Recovery:	Enable	
From:		
To:		
SMTP Server:		
Authentication:	C Enable	
Username:		
Password:	i Ø	

#### 5. Click SAVE.

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

### 15.5. 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 <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Administration and complete the settings In Local Management section as needed.
- Access the router via HTTPS and HTTP:

Tick the Enable box of Local Management via HTTPS to access the router via HTTPS and HTTP, or keep it disabled to access the router only via HTTP.

Local Management		
Access and manage the router from loca	al network devices.	
Local Management via HTTPS:	Enable	

• Allow all LAN connected devices to manage the router:

Select All Devices for Local Managers.

Local Management		
Access and manage the routes from loca	al nelivora devices.	
Local Mahagement via HTTPS:	🙆 Enable	
Local Managers:	All Devices	. v

- Allow specific devices to manage the router:
- 1. Select All Devices for Local Managers and click SAVE.

Local Management			
Access and manage the router from local network devices.			
Local Management via HTTPS:	C Enable		
Local Managers:	Specified Devices		
		Add Device	
Description	MAC Address	Operation	
No Entries			

#### 2. Click Add Device.

Description				
	WEW CO	NINE COL	ED DEVICES	
AC Address	- i-	-	121 2	
			CANCEL	SWE
	and a standard stand.	AC Address	AC Address	

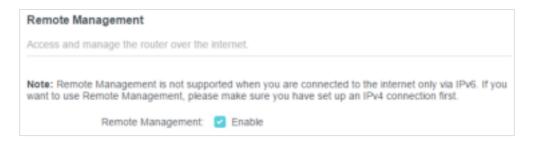
- 3. Click VIEW CONNECTED DEVICES and select the device to manage the router from the Connected Devices list, or enter the MAC address of the device manually.
- 4. Specify a Description for this entry.
- 5. Click SAVE.

### 15.6. Remote Management

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

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

Do not tick the Enable checkbox of Remote Management.



Allow all devices to manage the router remotely:

Remote Management		
Access and manage the router over the	internet.	
Note: Remote Management is not supp want to use Remote Management, plea		
Remote Management:	Enable	
HTTPS Port:	443	
HTTP Port	80	
Web Address for Management:	https://0.0.0.0:443	
Remote Managers:	All Devices $\qquad \lor$	

- 1. Tick the Enable checkbox of Remote Management.
- 2. Keep the HTTPS and HTTP port as default settings (recommended) or enter a value between 1024 and 65535.
- 3. Select All Devices for Remote Managers.
- 4. Click SAVE.

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

- Ø Tips:
- You can find the WAN IP address of the router on Network Map > Internet.
- The router's WAN IP is usually a dynamic IP. Please refer to <u>Set Up a Dynamic DNS Service Account</u> if you want to log in to the router through a domain name.
- Allow a specific device to manage the router remotely:

Remote Management		
Access and manage the router over the	internet.	
Note: Remote Management is not supp want to use Remote Management, plea		
Remote Management:	Enable	
HTTPS Port:	443	
HTTP Port:	80	
Web Address for Management:	https://0.0.0.0:443	
Remote Managers:	Specified Device $\sim$	
Only this IP Address:		

- 1. Tick the Enable checkbox of Remote Management.
- 2. Keep the HTTPS and HTTP port as default settings (recommended) or enter a value between 1024 and 65535.
- 3. Select Specified Device for Remote Managers.
- 4. In the Only this IP Address field, enter the IP address of the remote device to manage the router.
- 5. Click SAVE.

Devices using this WAN IP can manage the router by logging in to <u>http://Router's WAN</u> 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 <u>Set Up a Dynamic DNS Service Account</u> if you want to log in to the router through a domain name.

### 15.7. 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 <u>http://tplinkwifi.net</u>, and log in your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > System Log.
- 3. Choose the type and level of the system logs as needed.

		IL UC SERVICE ACTIVITY			
		Current Time	2020-07-13 7:15:30 PW		
Log Type	A8	14			
Seatt		Q		G Retroit	4 Citar A
2029-0 2029-0 2029-0 2029-0 2029-0 2029-0 2029-0 2029-0 2020-0 2020-0	7-10 1855 7-10 1855 7-10 1855 7-10 1855 7-10 1855 7-10 1855 7-10 1855 7-10 1855	6 54 Access Contro 5 54 Access Contro 5 54 Access Contro 5 20 Access Contro 5 20 Access Contro 6 20 Access Contro 6 10 Access Contro 6 10 Access Contro 6 10 Access Contro 7 35 QoS INFO [34	131 Function enabled	d KK table succeeded	

4. In the Save Log section, click SAVE TO LOCAL to save the system logs to a local disk.

Save Log		
Send system log to a specific e	will address is save locally	
	MALTOG	E.
	MANE TO LIDEAL	1

• 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 <u>http://tplinkwifi.net</u>, 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. In the Save Log section, click MAIL LOG.
- 4. Enter the information required:

Mail Log		×
	Set your mail information below	
Email From	Require Password	
Usename		
Email Password	201	
SMTP Server		
Email 7a		
	Mail Log Automatically	
Frequency	Every Day 🖂	
Mail Time	00 V 00 V	
	CARACEL.	5AL

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

#### 2) Select Require Password.

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

- 3) Username: Enter the email address used for sending the system log.
- 4) Email Password: Enter the password to login the sender's email address.
- 5) 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.

- Email To: Enter the recipient's email address, which can be the same as or different from the sender's email address.
- 7) Select Mail Log Automatically.

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

8) Frequency: This determines how often the recipient will receive the system log.

5. Click SAVE.

### 15.8. Test the Network Connectivity

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

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

Diagnostics			
randomicant industric connectivity proto	itmi.		
Diagnostic Toole	Ping		
IP Address/Comain Name			
Ping Count	4		
Ping Packet Size	64	Weben.	
	_		
		TART	

- 3. Enter the information:
  - 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.
  - 3) Modify the Ping Count number and the Ping Packet Size. It's recommended to keep the default value.
  - 4) If you have chosen Traceroute, you can modify the Traceroute Max TTL. It's recommended to keep the default value.

4. Click START to begin the diagnostics.

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

```
PING 192 168 0 1 (11/2 168 0 1): 64 data bytes

Reply from 192 168 0 1 bytes+64 tb+64 seq=1 time=0 322 ms

Reply from 192 168 0 1 bytes+64 tb+64 seq=2 time=0 306 ms

Reply from 192 168 0 1 bytes=64 tb+64 seq=3 time=0 286 ms

Reply from 192 168 0 1 bytes=64 tb=64 seq=4 time=0 334 ms

— Ping Statistic "192 168 0 1" ---

Packets: Sent=4, Received=4, Lost=0 (0 00% loss)

Round-tup min/avg/max = 0 286/0 312/0 354 ms

ping is stopped
```

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



### 15.9. Set Up System Time

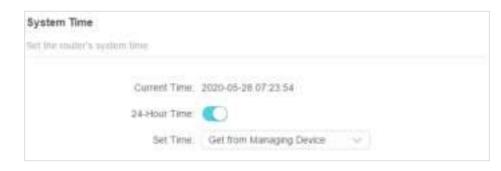
System time is the time displayed while the router is running. The system time you configure here will be used for other time-based functions like Parental Controls. You can choose the way to obtain the system time as needed.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Time & Language.
- To get time from the internet:
- 1. Enable 24-Hour Time if you want the time to display in a 24-hour way.
- 2. In the Set Time field, select Get from Internet.

System Time	
let the router's system time.	
Current Time:	2020-05-28 07:22:42
24-Hour Time:	
Set Time:	Get from Internet
Time Zone:	(UTC-08:00) Pacific Time (US & Canada)
NTP Server I:	time.nist.gov
NTP Server II:	time-nw.nist.gov (Option:

- 3. Select your local Time Zone from the drop-down list.
- 4. In the NTP Server I field, enter the IP address or domain name of your desired NTP Server.

- 5. (Optional) In the NTP Server II field, enter the IP address or domain name of the second NTP Server.
- 6. Click SAVE.
- To get time from your computer:
- 1. In the Set Time field, select Get from Managing Device.



2. The time of your computer will then be displayed and click SAVE.

### • To manually set the date and time:

1. In the Set Time field, select Manually.

System Time				
Set the router's system time.				
Current Time:	2020-05-28 07:24:11			
24-Hour Time:				
Set Time:	Manually	$\sim$		
Date:	05/28/2020			
Time:	07 🗸 : 17	v :	19	~

- 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. Tick the Enable box of Daylight Saving Time.

		ylqtit sav		
Daylight Saving Time	C Enab	iπ		
Start 2020	Mar		2nd	1.10
	Sun	~	10.00	- 44 C
End 2020	Nov		First	1
	Sub	- ¥	09.00	· •

- 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.

### 15. 10. Set the Router to Reboot Regularly

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

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > Reboot.
- 3. Tick the Enable box of Reboot Schedule.

Reboot Schedule		
Set when and how often the router rebo	ots automatically.	
Reboot Schedule:	C Enable	
Note: Make sure Time Settings are corr	ect before using this function.	
Current Time: 2020-05-28 07:25:44		
Reboot Time:	03 💎 : 00	$\sim$
Repeat:	Every Week	~

- 4. Specify the Reboot Time when the router reboots and Repeat to decide how often it reboots.
- 5. Click SAVE.

### 15.11. Control the LED

The LED of the router indicates its activities and status. You can enable the Night Mode feature to specify a time period during which the LED is off.

- 1. Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > System > LED Control.
- 3. Enable Night Mode.
- 4. Specify the LED off time, and the LED will be off during this period every day.
- 5. Click SAVE.

LED Control					
Turn the souther's LEES on or off					
LED Status	0				
Night Mode					
Set a time period when the LEDix will be	off autom	atcally			
	E Fint	le .			
Night Mode					
and the second	and the second	using the	s function		
Note: Make sure Tane Settings are con	and the second	using the	s function		
Night Mode Note: Make sure Thre Sellings are con Current Time: 2020-05-28 07 27 05 LED Off From	ect before	using the	s function	4	

# 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 <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- 3. Go to 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 LED blinks to restore factory default settings, and then visit <u>http://tplinkwifi.net</u> to create a new login password.

### Note:

- Please refer to <u>Password Recovery</u> 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 <a href="http://tplinkwifi.net">http://192.168.0.1</a> 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.

nternet Properties	1-8-1
neral Security Privacy Content Connections	Programs Advance
To set up an Internet connection, click Setup.	Setup
Dial-up and Virtual Private Network settings	
8roadband Connection	Add
	Add VPN
	Remove
Choose Settings if you need to configure a proxy server for a connection.	Settings
Never dial a connection	
O Dial sherever a network connection is not prese	nt
Always dal my default connection	
Curnert. Name	secondarit:
.ocal Area Network (LAH) settings	
LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.	LAN settings

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

		nay override ma isable automatic		ps. To ensure the
Automatica	ally detect s	ettings		
🔲 Use autom	atc configu	ration script		
Address				
Proxy server				
CONTRACTOR .				
			se settings	will not apply to
Use a prox	VPN connec	tions).	se settings	will not apply to
El Use a prox dial-up or V Addressi	VPN connec	tions).	0.0	· · · · · · · · · · · · · · · · · · ·

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