	Connection Name	Figmole Outpoorty	Lucal Ambent	Remote Address	Status	Enstin	Modty
-	+	-	-	4	-		-
iP:	Sel: Contection Name			Name			
Ple	rnche U ^s Siec Galleway (U	0.0.0.0					
Ти	nmili access from local (P	adminer		Subnet Addres		Ŧ	
iP.	Address for VPN	0 0 0					
60	trief Mask:	255 - 255 - 255 - 0					
Tunnal access from remote 8 ⁴ addresses			Subret Address 👻				
IP Address for VPN				0 0 0 0			
Subnet Mark				255 255 255 0			
Ke	s Escharge Method			Auto (IKE)		w.	
Authentication Method				Pre-Shared Key *		*	
Pre-linareit Key				pak_kny			
Peded Faward Secrecy				Enable. v			
C	Atvanced						

5. Configure the advanced settings according to the following explanation. We recommend that you keep the default settings. If you want to change these settings, make sure that both VPN server endpoints use the same Encryption Algorithm, Integrity Algorithm, Diffie-Hellman Group and Key Lifetime in both phase1 and phase2.

Phase 5->		
Wate	Main	
Local Identifier Type	Local Wan IP	
Local Identifier		
Remote identifier Type	Remote Wan IP	*
Remote Identifier		
Encryption Algorithm:	3065	
Integrity Algorithm:	MDS	
Diffle-Hellman Group for Kay Exchange	10.24b/t	
Kiry Life Time(Seconds)	3600	
==Plaze 2==		
Encryphan Algorithm	3DE5	.*
Integrity Algorithm.	ND5	
Diffe-Heiman Graup for Key Exchange	1024bit	
Key Life Time(Seconds)	3000	

6. Click OK.

Note:

• For the comprehensive guide, please refer to the User Guide on the product's support page.

Step 2. Configure IPSec VPN Connection on Your Remote Device

The remote device can use the Windows or Mac OS built-in IPSec software or a thirdparty IPSec software to connect to IPSec Server. Here we use the Windows built-in 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, firoodbamil; or dial-up connection to the Internet.
*	Set up a new network Configure a new router er access peint.
80	Connect to a workplaze Set up a dial-up or VPN connection to pour workplace.
4	Set up a dial-up connection Connect to the Internet using a dial-up connection.

4. Select Use my Internet connection (VPN).

How do you wa	ant to connect?	6			
Use my In Connect unit	ternet connecti g a virtual private o	ion (VPN) etwork (VPN) ci	innection throug	ph the Internet.	
1	- 0) —	- Do		
Dial direct Connect dire	ly thy to a pitrone num	nber without go	ing through the	Diternet.	
A					
What is a VPN core	ection?				

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	21838.1.73
Destination names	VPN Connection
Use a smart card	
S 2 Allow other peop This option allow	ple to use this connection as 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 IPSec VPN server on your router, and click Connect.

Type your user nar	ne and password	
User name:	Mark.	
Paspwordt		
	Show characters	
	Remember this password	
Domain (optional):		

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

😡 🌆 Connect to a Workplace		
The connection is ready to use		
N	D o	
 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.

onection
wrdiad. Frigeat

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

Se Casewet SPM Convertion
Lier same
Degae.
If for the or over and passed to the bloor passes # Na op \$ - Average discussion in the impact
Cored Carol Agents (bit

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

INVICATION Properties	14.0
Genual Comme Security Hadwood	a Deta
Taxe of VPM	
Laser & Turretting Paramit with Press	LTIP/Piert +
Date exception	Advanced settings
People brogging illuminant i street	e desiliere i
() De Daniel Advetzan ha	
Cuberceptind parameter (PAP) Cuberge geodetate Autority Monard QHAP Vessor 2:95 Cubered geodetate. For parameter geodetate.	cation Postcore (DollP) DNIP x2 No https://www.and N
1	OH Carcal

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

Advantation	
• congreduced in the automatics for the	
Competition for a directation In party the hore we lingue difficulty of	faur-etion three
C	Ol Genel

Done! Click Connect to start VPN connection.

Correct Will Correction
Germania de Deserto de la constante de la con
Const.

16.4. VPN Connections

VPN Connections page displays the clients that are currently connected to the OpenVPN servers, PPTP VPN servers and IPSec VPN hosted on the router.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with your TP-Link ID or the password you set for the router.
- 2. Go to Advanced > VPN > VPN connections.

0	Client 14 Children	Mart .
AND COMPLETION		
Ψ.	VIEW CASER I	MOT N
-	-	-
WHAT Compared by a		
Trans Iso Mars	Kanada Jarrel Addance - De	rele Address - Aldres - Ded Jo

Chapter 17

Manage Your Router

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

This chapter contains the following sections:

- Set System Time
- <u>Control the LED</u>
- <u>Test Internet Connectivity</u>
- <u>Update the Firmware</u>
- <u>Back Up and Restore Configuration Settings</u>
- <u>Reboot the Router</u>
- <u>Administration Management</u>
- <u>System Log</u>
- <u>CWMP Settings</u>
- SNMP Settings
- Monitor the Internet Traffic Statistics

17.1. Set 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 and Wireless Schedule. You can manually set how to get the system time.

Follow the steps below to set your system time.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Time Settings page.

Time Zone:	(GMT-08:00) Pacific Time (US & Car	ada); Tijuana	Ŧ
Date:	1/7/2016	(MWDD/YY)	
Time:	23 V : 59 V : 13 V		
NTP:	C Enable		
NTP Server I:	0.0.0.0	(Optional)	
NTP Server II:	0.0.0.0	(Optional)	

3. Configure the system time using the following methods:

Get from PC: Click this button if you want to use the current time of your PC.

Get from the Internet: Click this button if you want to get time from the internet. Make sure your router can access the internet before you select this way to get system time.

- 4. Click Save.
- 5. After setting the system time, you can set Daylight Saving Time according to your needs. Enable Daylight Saving Time, and set the start and end time and then click Save to make the settings effective.

		Enable I	Daylight	Savin	g Time							
Start:	2016	Jan	Ψ	м	Last	Ψ	W	Tue	Ψ	т	00:00	Ŧ
End	2016	Oct	Ŧ	М	Last	Ŧ	w	Sun	Ŧ	т	03:00	v

17.2. 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> or <u>http://192.168.0.1</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.

tt Mode Period:	22 1	0	*	to	6	~	0	-	(HH:MM)

17.3. Test Internet Connectivity

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Diagnostics page.

> To test the internet connection of the router:

Locate the Diagnostic Tools section, and click the Start to test the internet connectivity and you will find the test results in the gray box.

Diagnostic Tools	
Click the Start button to test the Internet connection of the router.	Start

> To run ping and traceroute tools:

1) Locate the Diagnostic Tools section.

Ping & Traceroute & Nslook	kup:		
Choose the test operation:	Ping O Tracer	oute 🔿 Nslookup	
IP address/Domain name:			
 Advanced 			
Interface Name:	Auto	*	
Ping Count:	з	(1-50	0
Ping Packet Size:	32	(4-14	I72 Bytes)

- 2) Select Ping or Traceroute or Nslookup 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.
- Nslookup is used to queries the Domain Name System (DNS) to obtain the mapping between a domain name and IP address, or other DNS records.
- 3) Enter the Target IP Address/Domain Name of the tested host. You can change the default test options if necessary.

4) Click Start to begin the diagnostics, and you will find the test results in the gray box.

17.4. Update the Firmware

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

We will inform you through the web management page if there's any update firmware available for your router. The latest firmware can also be downloaded from the Support page of our website <u>www.tp-link.com</u> for free.

Note:

- 1. Make sure that you have a stable connection between the router and your computer. It is NOT recommended to upgrade the firmware wirelessly.
- 2. Back up your router configuration before upgrading the firmware.
- 3. DO NOT turn off the router during the firmware upgrade.

> Follow the steps below to upgrade the firmware online:

- 1. Click Check for Upgrades.
- 2. If a new firmware is displayed, click Upgrade and click Yes when prompted, then the router will automatically download the latest firmware file and upgrade.

> Follow the steps below to manually update the firmware:

- 1. Download the latest firmware file for the router from our website www.tp-link.com.
- 2. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 3. Go to Advanced > System Tools > Firmware Upgrade.
- 4. Focus on the Device Information section. Make sure the downloaded firmware file matches with the Hardware Version.

Device Information	
Firmware Version:	
Hardware Version:	

5. Focus on the Local Upgrade section. Click Browse to locate the downloaded new firmware file, and click Upgrade.

	Device Name	Model Name	MAC Address	Firm	ware Version
2 1	Iving room	HX220	(8)(10)(8)(8)(10)		
1	living room	HX220	Carl Constant		

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

17.5. Back Up and Restore Configuration Settings

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Backup & Restore.

> To back up configuration settings:

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

Backup	
Save a copy of your current settings.	
	Backup

> To restore configuration settings:

1) Click Browse to locate the previous backup configuration file, and click Restore.

Restore	
Restore previous settings from a saved file.	
File:	Browse
	Restore

- 2) Wait a few seconds for the restoring and rebooting.
- > To reset the router to factory default settings:

1) Locate the Factory Default Restore section, and click Factory Restore to reset the router.



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

Note:

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

17.6. Reboot the Router

The Reboot feature cleans the cache to enhance the running performance of the router. You can reboot the router manually or set it to reboot regularly.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Reboot Schedule, and you can restart your router.

> To reboot the router manually:

Click Reboot, and wait a few minutes for the router to rebooting.

Manual Reboot		
	14 Birth	om.

- > To schedule the router to reboot at a specific time:
 - 1) Enable Auto Reboot.
 - 2) Specify the Time when the router reboots.

Reboot Schedule	
Note: Before enabling Reboot and choose Get from the Inte	Schedule, please make sure your router is connected to the internet. Then go to Time Settings emet to get the correct network time.
Current Time:	01/08/2016 00:10:57
Reboot Schedule:	Enable
Repeat	Every day w
Reboot Time:	3 * : 0 *
	Saue
	Save

3) Click Save to make the settings effective.

Some settings of the router may take effect only after rebooting, including:

- Change the LAN IP Address (system will reboot automatically).
- · Change the Operation Mode (system will reboot automatically).
- Upgrade the firmware of the router (system will reboot automatically).
- Restore the router to its factory defaults (system will reboot automatically).
- Update the configuration with the file (system will reboot automatically).

Note:

The Auto Reboot feature takes effect based on the router's system time. Please make sure you have already set up the time of the router.

17.7. Administration Management

17.7.1. Change the Login Password

A login password is required to log in to the router's web management page. You are asked to set a login password at first login. You can change it with the account management feature.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the Account Management section.

Account Management		
Old Processord	ø	
New Password:	ø	
	Low Middle High	

- 3. Enter the old password and a new password twice (both case-sensitive).
- 4. Click Save to make the settings effective.

17.7.2. Local Management

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

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the Local Management section.
- **3.** Enable Local Management over HTTPS and keep the Port for HTTP and Port for HTTPS as the default settings. Enter the IP address or MAC address of the local device to manage the router.

Local Management	
Port for HTTP:	80
Local Management via HTTPS:	Enable
Port for HTTPS:	443
IP/MAC Address:	

4. Click Save.

Now, you can manage the router over both HTTP (<u>http://tplinkwifi.net</u>) and HTTPS (<u>https://tplinkwifi.net</u>).

Note:

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

17.7.3. Remote Management

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

Note:

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

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the Remote Management section.

Remote Management		
Remote Management:	Enable	
Port for HTTP:	80	
Remote Management via HTTPS:	Enable	
Port for HTTPS:	443	
Manage This Router via the Address:		
Your router is not connected	to the Internet.	
Client Device Allowed for Remote Ma	nagement.	
Only the Following IP Addresses		
Add a new IP		
	/ 32 🔻 🖨	
O All		

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

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

```
Ø Tips:
```

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



2. 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.

17.7.4. HTTP Referer Head Check

HTTP referer header check function can protect your networks against CSRF attacks. This function is enabled by default. You can disable this function if needed.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the HTTP Referer Head Check section.
- 3. Clear the Enable check box and click Save if you want to disable this function.



17.7.5. ICMP Ping

ICMP (Internet Control Message Protocol) Ping is used to diagnose the network by sending ICMP echo request packets to the target remote or local host and waiting for an ICMP response.

You can control the router's replies to ICMP Ping requests.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the ICMP Ping section.

ICMP Ping		
ICMP Ping:	Remote 🕑 Local	
		Save

- **3.** Specify the ICMP Ping reply options.
 - Remote: Select it if you want the computers on a public network to ping the router's WAN IP address.
 - Local: Enabled by default, if enabled, the computers on a private network can ping the router's LAN IP address.
- 4. Click Save to make the settings effective.

17.7.6. Session ID

When Session ID function is enabled, it will be saved into Flash every time the PPP connection is updated. This can prevent some problems of PPPoE/L2TP/PPTP connection being rejected to reconnect to servers when the device is powered off or the network disconnect accidentally.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Administration, and locate the Session ID section.



3. Enable the Update Session ID and Click Save to make the settings effective.

17.8. System Log

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > System Log page.

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Mbe:			ALL.	*	
aver.			Notes	(e)	
					O fadress 🕒 Devela Ad
ίΠ.	Title	Туре	Lavai		Log Coment
1	2016-01-01.0 2:43:34	HTTPD	Notice		Charring

> To view the system logs:

You can view specific system logs by selecting the log type and level.

Click Refresh to refresh the log list.

> To save the system logs:

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

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

Click Log Settings to set the storage path of logs.

Log Settings			
🗷 Save Locally			
Minimum Level	Information	Ŧ	
I∠ Save Remotely			
Minimum Level:	Warning	Ψ.	
Sorver IF:	192,168,1,108		
Server Port	514		
Local Facility Name:	Hour	-	

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

17.9. CWMP Settings

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > CWMP Settings page.

CPE WAN Management Protocol (also called TR- provision, connection, and diagnostics to this devi	069) allows Auto-Configuration Serv ce. You may configure this function u	er (ACS) to perform auto-configuratio under your ISP's instructions.
CWMP:		
nform:		
nform DataModel with TR098:		
nform interval:	300	
ACS URL:	https://tauc-cwmp	-server.tpli
ACS Username:	admin	
ACS Password	•••••	ø
nterface used by TR-069 client:	Any WAN	v
CPE ID:	IN O LAN MAC	O WAN MAC
CPE ID:	SN O LAN MAC	O WAN MAC
CPE ID: Connection Request Authentication Usemame:	● SN ○ LAN MAC	O WAN MAC
CPE IID: Connection Request Authentication Usemame: Password:	SN O LAN MAC admin	○ WAN MAC
CPE ID: Connection Request Authentication Jsemame: Password: Path:	SN O LAN MAC admin Manual O Randor	○ WAN MAC
CPE ID: Connection Request Authentication Jsername: Password: Path:	SN O LAN MAC admin Manual O Rander /tr069	○ WAN MAC
CPE IID: Connection Request Authentication Usemame: Password: Path: Port:	 SN O LAN MAC admin Manual O Randor /tr069 7547 	 ○ WAN MAC Ø
CPE IID: Connection Request Authentication Usemame: Password: Path: Port: URL:	 SN O LAN MAC admin ••••• Menual O Randor /tr069 7547 	○ WAN MAC

- CWMP: Enable or disable the CWMP (CPE WAN Management Protocol) function.
- Inform: Enable or disable the function of sending an inform message to the ACS (Auto Configuration Server) periodically.
- Inform Interval: Set the time interval in seconds when the Inform message will be sent to the ACS.
- ACS URL: Enter the web address of the ACS which is provided by your ISP.

- ACS Username/Password: Enter the username/password to log in to the ACS server.
- Interface used by TR-069 client: Select which interface to be used by the TR-069 client.
- Display SOAP messages on serial console: Enable or disable this function.
- Connection Request Authentication: Select this check box to enable authentication for the connection request.
- Username/Password: Enter the username/password for the ACS server to log in to the router.
- Path: Enter the path for the ACS server to log in to the router.
- Port: Enter the port that connects to the ACS server.
- URL: Enter the URL that connects to the ACS server.
- Simple Traversal of UDP over NATs: Select this check box to enable STUN for the connection request and set the STUN maximum and minimum keep alive period, server address and port.

Click Save to make the settings effective.

17.10. SNMP Settings

SNMP (Simple Network Management Protocol) is widely used in network management for network monitoring. It allows management applications to retrieve status updates and statistics from the SNMP agent within this device. In this way, network administrators can easily search and modify the information on any node on the network. Meanwhile, they can locate faults promptly and implement the fault diagnosis, capacity planning and report generating.

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

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > SNMP Settings page.

SNMP Settings		
Simple Network Management from the SINNP agent within th	Professil (SNMP) allows menagement applica- ts device	ons to relineve stellar updetex end statistics
I nable SNM SAgeof		
SNMP Agent for WAN		
Read-only Community	public	
Write Community	private	
System Name	EX510	
System Description	0.4.0 3.0.0 v6060.0 Bulli	
System Location		
System Contect		
Irap Manager I *	0.0.0.0	
		Save

- SNMP Agent/SNMP Agent for WAN: Turn on to enable the built-in SNMP agent that allows the router to operate as the operational role in receiving and processing of SNMP messages, sending responses to the SNMP manager, and triggering SNMP traps when an event occurs.
- Read-only Community: Displays the default public community string that protects the router from unauthorized access.
- Write Community: Displays the default write community string that protects the router from unauthorized changes.
- System Name: Displays the administratively-assigned name for this managed device.
- System Description: Displays the textual description of the managed device. This value should include the full name and version identification of the system's hardware type, software operating-system, and networking software.
- System Location: Displays the physical location of this device (for example, the telephone closet, 3rd floor).
- System Contact: Displays the textual identification of the contact person for this managed device, together with information on how to contact this person.
- Trap Manager IP: Displays the IP address of the host to receive the traps.

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

17.11. Monitor the Internet Traffic Statistics

The traffic statistics function allows you to monitor the volume of internet traffic statistics. You can view the network traffic of the LAN, WAN and WLAN sent and received packets.

- 1. Visit <u>http://tplinkwifi.net</u> or <u>http://192.168.0.1</u>, and log in with the password you set for the router.
- 2. Go to Advanced > System Tools > Traffic Statistics.
- **3.** Turn on Enable Traffic Statistics to enable traffic statistics function, you can view the total number of packets and bytes received and transmitted by the router within the selected Statistics Interval. This function is disabled by default.

Traffic Statistics		
Enable Traffic Statistics: Traffic Statistics and NAT Be	ost cannot be enabled at the same time.	
Statistics Interval:	10 m seconds	
		Save

4. You can refer to Traffic Statistics List for the detailed information about the traffic usage of all devices.

					O Re	itesh 💭 R	leset All 🗢	Delete Al
IP Address/ MAC Address	Total Packets	Total Bytes	Current Packets	Current Bytes	Current ICMP Tx	Current UDP Tx	Current SYN Tx	Modify
-		-		-	-	-	-	

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 Power LED blinks to restore factory default settings, and then visit <u>http://tplinkwifi.net</u> to create a new login password.

Note:

• You'll need to reconfigure the router to surf the internet once the router is reset, and please mark down your new password for future use.

Q3. 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://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.

nternet Properties	1280
neral Security Privacy Content Connections	Programs Advance
To set up an Internet connection, click Setup.	Setup
Dial-up and Virtual Private Network settings	
Broadband 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 wherever a network connection is not prese	nt
Always dai my default connection	
Curntrit. Name	Sectefisit
Local Area Network (LAN) 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.

Automatic con use of manual	ifiguration (settings, d	nay override isable autor	mark latic o	al setting	s. To ensure the
Automatica	ally detect :	settings			
Use autom	atc config.	ration script			
Address					
Proxy server					
				and the second sec	collecter state (inco
Use a prox dial-up or V	iy server fo IPN connec	r your LAN (tions).	These	settings	we not apply to
El Use a prox dial-up or V	vy server fo IPN connec	r your LAN (tions).	(These	(0.0	Advanced
ES dal-up or V Address	vy server fo VPN connec	r your LAN (tions).	(These orti addre	00 stell	Advanced

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

eceral	Security	Privary	Content (ormetions.	Proceases	Advanced
- 10	Course of	THINGST	00700		rieg are	
Setting	6					
6	Accessibil Alway Enable Move Reset Reset Browsing V Autor Close V Disabl	ty is expand e Caret Br system of text size text size coom lev natically m unused fi le script d	ALT text for owsing for ne aret with facu to medium fo to medium wit el for new wit ecover from p siders in Histo ebugging (Int	mages systection of r new windo sile zooming dows and to oge layout e ry and Pavo emet Explor	and tabs hanges wis and tabs " abs original tabs errors with C rites" er)	A THE STREET
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				Restore	advanced s	ettinge
Reset 1 Rese cond You :	nternet Ex Its Interne Ition. should only	plorer set t Explorer y use this	ttings 's settings to if your brows	their default er is in an ur	. Rea	thus -
				100		Antonio

- Use another web browser or computer to log in again.
- Reset the router to factory default settings and try again. If login still fails, please contact the technical support.

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

Q4. What should I do if I can't access the internet even though the configuration is finished?

- 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 > Status to check internet status:

If IP Address is a valid one, please try the methods below and try again:

- Your computer might not recognize any DNS server addresses. Please manually configure the DNS server.
 - 1) Go to Advanced > Network > DHCP Server.
 - 2) Enter 8.8.8.8 as Primary DNS, click SAVE.
 - Tips: 8.8.8 is a safe and public DNS server operated by Google.

amically assgin IP addresses to the	devices connected to	the rou	iter.	
DHCP Server:	Enable			
IP Address Pool:	192.168.0.100	-	192.168.0	249
Address Lease Time:	120		minutes	
Default Gateway:	192.168.0.1			(Optional)
Primary DNS:	8.8.8			(Optional)
Secondary DNS:				(Optional)

- Restart the modem and the router.
 - 1) Power off your modem and router, and leave them off for 1 minute.
 - 2) Power on your modem first, and wait about 2 minutes until it gets a solid cable or Internet light.
 - 3) Power on the router.
 - 4) Wait another 1 or 2 minutes and check the internet access.
- Reset the router to factory default settings and reconfigure the router.
- Upgrade the firmware of the router.
- Check the TCP/IP settings on the particular device if all other devices can get internet from the router.

As the picture below shows, if the IP Address is 0.0.0.0, please try the methods below and try again:

Status Internet status menvesi is miparyed on	the page
internet	
Statum	WAN port is unplugged
Internet Connection Type:	Dynamic IP
IP Address.	0.0.0.0
Subnet Mask	0.0.0.0
Detaut Gateway	0.0.0.0
Primary DNS.	0.0.0.0
Secondary DNS:	0.0.0.0

- Make sure the physical connection between the router and the modem is proper.
- Clone the MAC address of your computer.

- 1) Visit <u>http://tplinkwifi.net</u>, and log in with your TP-Link ID or the password you set for the router.
- Go to Internet or Advanced > Network > Internet and focus on the MAC Clone section.
- 3) Choose an option as needed (enter the MAC address if Use Custom MAC Address is selected), and click SAVE.

WAC Clon	e		
	Router MAC Address.	Use Detault MAC Address 🔍	
		Lise Detaul MAC Address	
		Clone Current Device MAC	
		Use Custom MAC Address	

Ø Tips:

- Some ISP will register the MAC address of your computer when you access the internet for the first time through their Cable modem, if you add a router into your network to share your internet connection, the ISP will not accept it as the MAC address is changed, so we need to clone your computer's MAC address to the router.
- The MAC addresses of a computer in wired connection and wireless connection are different.

• Modify the LAN IP address of the router.

Note:

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

- 1) Visit <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) Modify the LAN IP address as the follow picture shows. Here we take 192.168.2.1 as an example.
- 4) Click Save.

LAN				
Wew and configure LAN settings.				
MAC Address:	98-DA-C4-B4-01-D8			
IP Address:	192.168.2.1			
Subnet Mask:	255.255.255.0	\sim		

• Restart the modem and the router.

- 1) Power off your modem and router, and leave them off for 1 minute.
- 2) Power on your modem first, and wait about 2 minutes until it get a solid cable or Internet light.
- 3) Power on the router.
- 4) Wait another 1 or 2 minutes and check the internet access.
- Double check the internet connection type.
 - 1) Confirm your internet connection type, which can be learned from the ISP.
 - 2) Visit <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 > Network > Internet.
 - 4) Select your Internet Connection Type and fill in other parameters.
 - 5) Click Save.

Internet		
Set up an internet connection with the s	ervice information provided by your IS	P (internet service provider)
Internet Connection Type:	Dynamic IP	
IP Address:	Static IP	
Subnet Mask:	Dynamic IP	
Default Gateway:	PPPoE	
Primary DNS:	L2TP PPTP	
Secondary DNS:	0.0.0.0	
	RENEW	

- 6) Restart the modem and the router again.
- Please upgrade the firmware of the router.

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

Q5. What should I do if I can't find my wireless network or I cannot connect the wireless network?

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

• Make sure the wireless function of your device is enabled if you're using a laptop with built-in wireless adapter. You can refer to the relevant document or contact the laptop manufacturer.

- Make sure the wireless adapter driver is installed successfully and the wireless adapter is enabled.
 - On Windows 7
 - 1) If you see the message No connections are available, it is usually because the wireless function is disabled or blocked somehow.
 - 2) Click Troubleshoot and windows might be able to fix the problem by itself.
 - On Windows XP
 - If you see the message Windows cannot configure this wireless connection, this is usually because windows configuration utility is disabled or you are running another wireless configuration tool to connect the wireless.
 - 2) Exit the wireless configuration tool (the TP-Link Utility, for example).
 - 3) Select and right click on My Computer on desktop, select Manage to open Computer Management window.
 - 4) Expand Services and Applications > Services, find and locate Wireless Zero Configuration in the Services list on the right side.
 - 5) Right click Wireless Zero Configuration, and then select Properties.
 - 6) Change Startup type to Automatic, click on Start button and make sure the Service status is Started. And then click OK.

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

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

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

- Authenticating problem/password mismatch:
 - Sometimes you will be asked to type in a PIN number when you connect to the wireless network for the first time. This PIN number is different from the Wireless Password/Network Security Key, usually you can only find it on the label of your router.



- 2) If you cannot find the PIN or PIN failed, you may choose Connecting using a security key instead, and then type in the Wireless Password/Network Security Key.
- 3) If it continues to show note of Network Security Key Mismatch, it is suggested to confirm the wireless password of your wireless router.

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

- Windows unable to connect to XXXX / Can not join this network / Taking longer than usual to connect to this network:
 - Check the wireless signal strength of your network. If it is weak (1~3 bars), please move the router closer and try again.
 - Change the wireless Channel of the router to 1, 6 or 11 to reduce interference from other networks.
 - Re-install or update the driver for your wireless adapter of the computer.

FCC compliance information statement

Product Name: AXE11000 Tri-Band 10G Wi-Fi 6E Router Model Number: EX1110

Component Name	Model
I.T.E. Power	T120450-2B4

Responsible party:

TP-Link USA Corporation Address: 10 Mauchly, Irvine, CA 92618 Website: http://www.tp-link.com/us/ Tel: +1 626 333 0234 Fax: +1 909 527 6804 E-mail: sales.usa@tp-link.com

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

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

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

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

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

FCC regulations restrict operation of this device to indoor use only. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.

FCC RF Radiation Exposure Statement

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

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

We, **TP-Link USA Corporatio**n, has determined that the equipment shown as above has been shown to comply with the applicable technical standards, FCC part 15. There is no unauthorized change is made in the equipment and the equipment is properly maintained and operated.

Issue Date: 2022.09.06

FCC compliance information statement

Product Name: I.T.E. Power Supply Model Number: T120450-2B4 Responsible party: TP-Link USA Corporation Address: 10 Mauchly, Irvine, CA 92618 Website: http://www.tp-link.com/us/ Tel: +1 626 333 0234 Fax: +1 909 527 6804 E-mail: sales.usa@tp-link.com This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

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

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

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

We, **TP-Link USA Corporation**, has determined that the equipment shown as above has been shown to comply with the applicable technical standards, FCC part 15. There is no unauthorized change is made in the equipment and the equipment is properly maintained and operated.

Issue Date: 2022.09.06

Canadian Compliance Statement

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

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

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. l'appareil ne doit pas produire de brouillage;
- 2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement

Caution:

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

DFS (Dynamic Frequency Selection) products that operate in the bands 5250-5350 MHz, 5470-5600MHz, and 5650-5725MHz.

Avertissement:

Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

Les produits utilisant la technique d'atténuation DFS (sélection dynamique des fréquences) sur les bandes 5250-5350 MHz, 5470-5600MHz et 5650-5725MHz.

Radiation Exposure Statement:

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

Déclaration d'exposition aux radiations:

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

Industry Canada Statement

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

NCC Notice & BSMI Notice:

注意!

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變 更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象 時,應立即停用,並改善至無干擾時方得繼續使用。

前述合法通信,指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干 擾。

應避免影響附近雷達系統之操作。

高增益指向性天線只得應用於固定式點對點系統。

安全諮詢及注意事項

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

限用物質含有情況標示聲明書

設備名稱: \ Equipment	Wi-Fi Rou [.] name	ters	型號(型式): Type designation (Type)			
			限 Restricted sub	表示的 我用物質及其化學 stances and its c	符號 hemical symbols	
単元 Unit	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB	0	\bigcirc	0	0	0	\bigcirc
外殼	0	\bigcirc	0	0	\bigcirc	\bigcirc
電源供應器	_	0	0	0	0	0

天線	0	0	0	0	\bigcirc	\bigcirc
備考1. 〝超出	出0.1 wt %	が及 〝超出(D.01 wt % 係指	a限用物質之百分b	北含量超出百分比含	量基準值
Note 1: "E the restricte	Exceeding ed substa	; 0.1 wt %" nce exceeds	and "exceedir the reference p	ng 0.01 wt %" in percentage value	dicate that the per of presence condit	centage content of ion.
備考2. `〇´	係指該項	限用物質之	百分比含量未超	出百分比含量基準	值。	
Note 2: " percentage	○" indic of referer	ates that the nce value of	e percentage co presence.	ontent of the rest	ricted substance de	oes not exceed the
備考3.〝–〞	係指該項	限用物質為	排除項目。			
Note 3: The	e"—" i	ndicates tha	at the restricted	substance corre	sponds to the exem	nption.

Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended
- Do not use the device where wireless devices are not allowed.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
- This product uses radios and other components that emit electromagnetic fields. Electromagnetic fields and magnets may interfere with pacemakers and other implanted medical devices. Always keep the product and its power adapter more than 15 cm (6 inches) away from any pacemakers or other implanted medical devices. If you suspect your product is interfering with your pacemaker or any other implanted medical device, turn off your product and consult your physician for information specific to your medical device.
- Operating Temperature: 0°C ~40°C

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

Explanations of the symbols on the product label

Symbol	Explanation
	DC voltage
$c \gamma_{0, \mu}$	AC voltage
	Class II equipment

Symbol	Explanation
♦ · € · ♦	Polarity of output terminals
VI	Energy efficiency Marking
\bigtriangleup	Indoor use only
	Caution
	Operator's manual
R	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/ EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.