



Managing System

CHAPTERS

1. System
2. System Info Configurations
3. User Management Configurations
4. System Tools Configurations
5. EEE Configuration
6. PoE Configurations
7. SDM Template Configuration
8. Time Range Configuration
9. Example for PoE Configurations
10. Appendix: Default Parameters



This guide applies to:

T1500G-10PS v2 or above, T1500G-8T v2 or above, T1500G-10MPS v2 or above, T1500-28PCT v3 or above, T1600G-52TS v3 or above, T1600G-52PS v3 or above, T1600G-28PS v3 or above, T1600G-28TS v3 or above, T1600G-18TS v2 or above, T1700X-16TS v3 or above, T1700G-28TQ v3 or above, T2500G-10TS v2 or above, T2600G-52TS v3 or above, T2600G-28TS v3 or above, T2600G-28MPS v3 or above, T2600G-28SQ v1 or above.

1 System

1.1 Overview

In System module, you can view the system information and configure the system parameters and features of the switch.

1.2 Supported Features

System Info

You can view the switch's port status and system information, and configure the device description, system time, and daylight saving time.

User Management

You can manage the user accounts for login to the switch. There are multiple user types which have different access levels, and you can create different user accounts according to your need.

System Tools

You can configure the boot file of the switch, backup and restore the configurations, update the firmware, reset the switch, and reboot the switch.

EEE

EEE (Energy Efficient Ethernet) is used to save power consumption of the switch during periods of low data activity. You can simply enable this feature on ports to allow power reduction.

PoE



Note:

Only PoE switches support the PoE feature.

Power over Ethernet (PoE) is a remote power supply function. With this function, the switch can supply power to the connected devices over twisted-pair cable.

Some devices such as IP phones, access points (APs) and cameras may be located far away from the AC power source in actual use. PoE can provide power for these devices without requiring to deploy power cables. This allows a single cable to provide both data connection and electric power to devices.

IEEE 802.3af and 802.3at are both PoE standards. The standard process of PoE power supply contains powered-device discovery, power administration, disconnect detection and optional power-device power classification.

- PSE

Power sourcing equipment (PSE) is a device that provides power for PDs on the Ethernet, for example, the PoE switch. PSE can detect the PDs and determine the device power requirements.

- PD

Powered device (PD) is a device receiving power from the PSE, for example, IP phones and access points. According to whether PDs comply with IEEE standard, they can be classified into standard PDs and non-standard PDs. Only standard PDs can be powered via TP-Link PoE switches.

SDM Template

SDM (Switch Database Management) Template is used to prioritize hardware resources for certain features. The switch provides three templates which allocate different hardware resources for different usage, and you can choose one according to your need.

Time Range

With this feature, you can configure a time range and bind it to a PoE port or an ACL rule.

2 System Info Configurations

With system information configurations, you can:

- View the System Summary
- Configure the Device Description
- Configure the System Time
- Configure the Daylight Saving Time
- Configure the System IP (Only for T1500&T1500G Series Switches)
- Configure the System IPv6 (Only for T1500&T1500G Series Switches)

2.1 Using the GUI

2.1.1 Viewing the System Summary

Choose the menu **SYSTEM > System Info > System Summary** to load the System Summary page. You can view the port status and system information of the switch.

Viewing the Port Status

In the **Port Status** section, you can view the status and bandwidth utilization of each port.

Figure 2-1 Viewing the System Summary



The following table introduces the meaning of each port status:

Port Status	Indication
	Indicates that the corresponding 1000Mbps port is not connected to a device.
	Indicates that the corresponding 1000Mbps port is at the speed of 1000Mbps.
	Indicates that the corresponding 1000Mbps port is at the speed of 10Mbps or 100Mbps.
	Indicates that the corresponding SFP port is not connected to a device.



Indicates the SFP port is at the speed of 1000Mbps.



Indicates the SFP port is at the speed of 100Mbps.

You can move your cursor to a port to view the detailed information of the port.

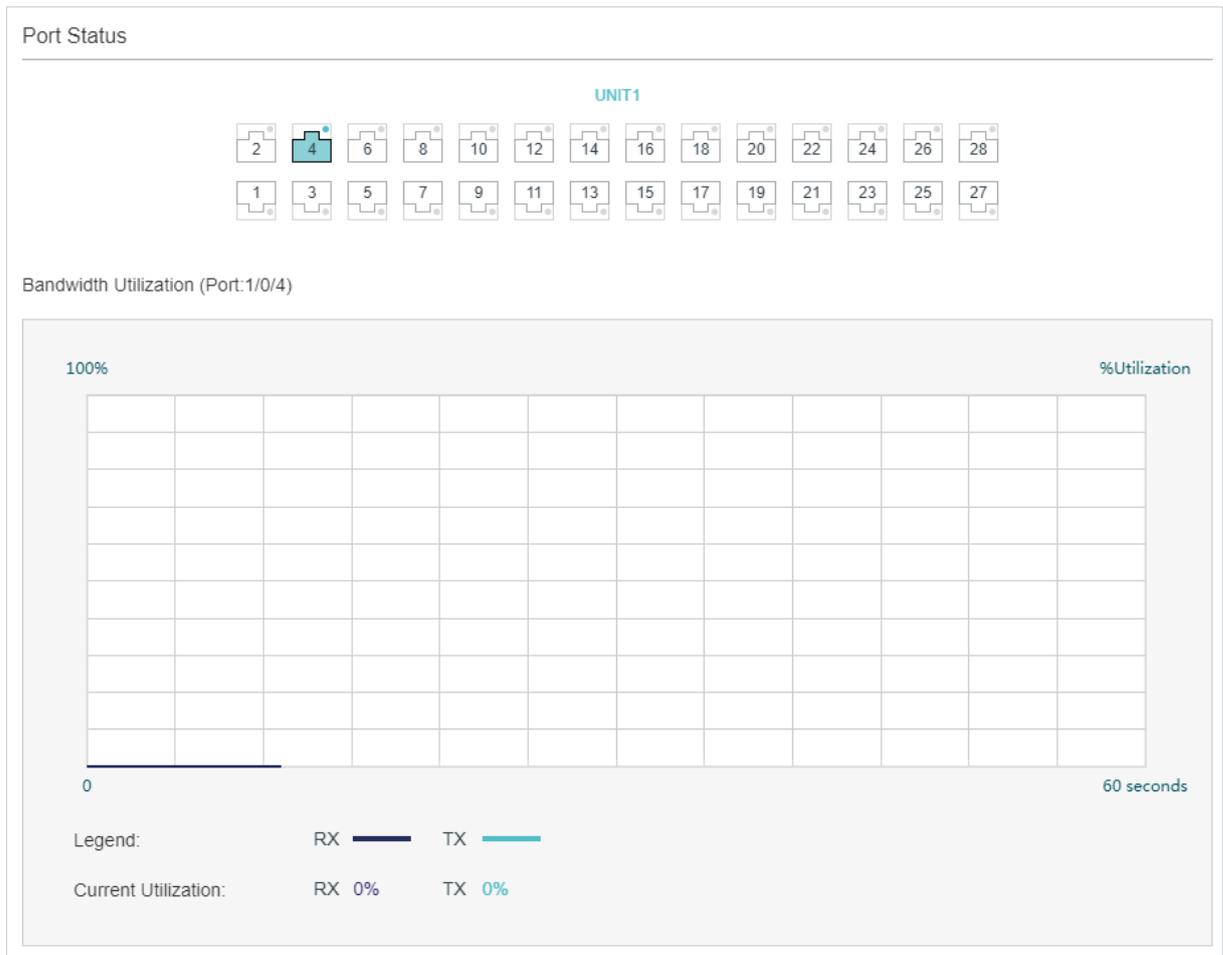
Figure 2-2 Port Information

Port: 1/0/4	
Type:	Auto RJ45
Speed:	1000M, Full Duplex
Status:	Link Up

Port Information	Indication
Port	Displays the port number.
Type	Displays the type of the port.
Speed	Displays the maximum transmission rate and duplex mode of the port.
Status	Displays the connection status of the port.

You can click a port to view the bandwidth utilization on this port.

Figure 2-3 Bnadwidth Utilization



RX Displays the bandwidth utilization of receiving packets on this port.

TX Displays the bandwidth utilization of sending packets on this port.

Viewing the System Information

In the **System Info** section, you can view the system information of the switch.

Figure 2-4 System Information

System Info	
UNIT1	
System Description:	JetStream 24-Port Gigabit L2 Managed Switch with 4 SFP Slots
Device Name:	T2600G-28TS
Device Location:	SHENZHEN
Contact Information:	www.tp-link.com
Hardware Version:	T2600G-28TS 3.0
Firmware Version:	3.0.0 Build 20170820 Rel.65183(s)
Boot Loader Version:	TP-LINK BOOTUTIL(v1.0.0)
MAC Address:	00-0A-EB-13-A2-3D
System Time:	2006-01-03 09:54:17
Running Time:	2 day - 1 hour - 55 min - 10 sec
Serial Number:	211100100001C
Jumbo Frame:	Enabled Settings
SNTP:	Enabled Settings
IGMP Snooping:	Disabled Settings
SNMP:	Disabled Settings
Spanning Tree:	Disabled Settings
DHCP Relay:	Disabled Settings
802.1X:	Disabled Settings
HTTP Server:	Enabled Settings
Telnet:	Enabled Settings
SSH:	Disabled Settings

System Description	Displays the system description of the switch.
Device Name	Displays the name of the switch. You can edit it on the Device Description page.
Device Location	Displays the location of the switch. You can edit it on the Device Description page.
Contact Information	Displays the contact information of the switch. You can edit it on the Device Description page.
Hardware Version	Displays the hardware version of the switch.
Firmware Version	Displays the firmware version of the switch.
Boot Loader Version	Displays the boot loader version of the switch.
MAC Address	Displays the MAC address of the switch.
System Time	Displays the system time of the switch.

Running Time	Displays the running time of the switch.
Serial Number	Displays the serial number of the switch.
Jumbo Frame	Displays whether Jumbo Frame is enabled. You can click Settings to jump to the Jumbo Frame configuration page.
SNTP	Displays whether the switch gets system time from NTP Server. You can click Settings to jump to the System Time configuration page.
IGMP Snooping	Displays whether IGMP Snooping is enabled. You can click Settings to jump to the IGMP Snooping configuration page.
SNMP	Displays whether SNMP is enabled. You can click Settings to jump to the SNMP configuration page.
Spanning Tree	Displays whether Spanning Tree is enabled. You can click Settings to jump to the Spanning Tree configuration page.
DHCP Relay	Displays whether DHCP Relay is enabled. You can click Settings to jump to the DHCP Relay configuration page.
802.1x	Displays whether 802.1x is enabled. You can click Settings to jump to the 802.1x configuration page.
HTTP Server	Displays whether HTTP server is enabled. You can click Settings to jump to the HTTP configuration page.
Telnet	Displays whether Telnet is enabled. You can click Settings to jump to the Telnet configuration page.
SSH	Displays whether SSH is enabled. You can click Settings to jump to the SSH configuration page.

2.1.2 Configuring the Device Description

Choose the menu **SYSTEM > System Info > Device Description** to load the following page.

Figure 2-5 Configuring the Device Description

Device Description

Device Name: (1-32 characters)

Device Location: (1-32 characters)

System Contact: (1-32 characters)

[Apply](#)

1) In the **Device Description** section, configure the following parameters.

Device Name	Specify a name for the switch.
-------------	--------------------------------

Device Location	Enter the location of the switch.
System Contact	Enter the contact information.

2) Click **Apply**.

2.1.3 Configuring the System Time

Choose the menu **SYSTEM > System Info > System Time** to load the following page.

Figure 2-6 Configuring the System Time

Time Info

Current System Time: Monday, January 2, 2006 05:21:47

Current Time Source: Manual

Time Config

Manual
 Get Time from NTP Server
 Synchronize with PC's Clock

Time Zone: (GMT+08:00) Beijing, Urumqi, Hong Kong, Taipei ▼

Primary NTP Server: 133.100.9.2 (Format: 192.168.0.1 or 2001::1)

Secondary NTP Server: 139.78.100.163 (Format: 192.168.0.1 or 2001::1)

Update Rate: 12 hours (1-24)

Apply

In the **Time Info** section, you can view the current time information of the switch.

Current System Time	Displays the current date and time of the switch.
Current Time Source	Displays how the switch gets the current time.

In the **Time Config** section, follow these steps to configure the system time:

1) Choose one method to set the system time and specify the related parameters.

Manual	Set the system time manually.
	Date: Specify the date of the system.
	Time: Specify the time of the system.

Get Time from NTP Server Get the system time from an NTP server. Make sure the NTP server is accessible on your network. If the NTP server is on the internet, connect the switch to the internet first.

Time Zone: Select your local time zone.

Primary Server: Enter the IP Address of the primary NTP server.

Secondary Server: Enter the IP Address of the secondary NTP server. Once the primary NTP server is down, the EAP can get the system time from the secondary NTP server.

Update Rate: Specify the interval the switch fetching time from NTP server, which ranges from 1 to 24 hours.

Synchronize with PC's Clock Synchronize the system time with the clock of your currently logged-in host.

2) Click **Apply**.

2.1.4 Configuring the Daylight Saving Time

Choose the menu **SYSTEM > System Info > Daylight Saving Time** to load the following page.

Figure 2-7 Configuring the Daylight Saving Time

Follow these steps to configure Daylight Saving Time:

- 1) In the **DST Config** section, enable the Daylight Saving Time function.
- 2) Choose one method to set the Daylight Saving Time and specify the related parameters.

Predefined Mode If you select **Predefined Mode**, choose a predefined DST schedule for the switch.

USA: Select the Daylight Saving Time of the USA. It is from 2: 00 a.m. on the Second Sunday in March to 2:00 a.m. on the First Sunday in November.

Australia: Select the Daylight Saving Time of Australia. It is from 2:00 a.m. on the First Sunday in October to 3:00 a.m. on the First Sunday in April.

Europe: Select the Daylight Saving Time of Europe. It is from 1: 00 a.m. on the Last Sunday in March to 1:00 a.m. on the Last Sunday in October.

New Zealand: Select the Daylight Saving Time of New Zealand. It is from 2: 00 a.m. on the Last Sunday in September to 3:00 a.m. on the First Sunday in April.

Recurring Mode If you select **Recurring Mode**, specify a cycle time range for the Daylight Saving Time of the switch. This configuration will be used every year.

Offset: Specify the time to set the clock forward by.

Start Time: Specify the start time of Daylight Saving Time. The interval between start time and end time should be more than 1 day and less than 1 year(365 days).

End Time: Specify the end time of Daylight Saving Time. The interval between start time and end time should be more than 1 day and less than 1 year (365 days).

Date Mode If you select **Date Mode**, specify an absolute time range for the Daylight Saving Time of the switch. This configuration will be used only one time.

Offset: Specify the time to set the clock forward by.

Start Time: Specify the start time of Daylight Saving Time. The interval between start time and end time should be more than 1 day and less than 1 year(365 days).

End Time: Specify the end time of Daylight Saving Time. The interval between start time and end time should be more than 1 day and less than 1 year (365 days).

3) Click **Apply**.

2.1.5 Configuring the System IP

 **Note:**

Only T1500&T1500G Series Switches support configuring the system IP.

Choose the menu **SYSTEM > System Info > System IP** to load the following page.

Figure 2-8 Configuring the Sysrtem IP Parameters

System IP Config

MAC Address: 00-0A-EB-13-A2-11

Management VLAN ID: (1-4094)

IP Address Mode: Static DHCP BOOTP

IP Address: (Format: 192.168.0.1)

Subnet Mask: (Format: 255.255.255.0)

Default Gateway: (Format: 192.168.0.1)

Apply

Follow these steps to configure the System IP:

1) Configure the corresponding parameters for the system IP

Management VLAN ID Specify the management VLAN of the switch. Only the computers in the management VLAN can access the management interface of the switch. By default, VLAN 1 owning all the ports is the management VLAN and you can access the switch via any port.

IP Address Mode	Specify the IP address assignment mode of the interface. Static: Assign an IP address to the management interface. DHCP: Assign an IP address to the management interface through the DHCP server. BOOTP: Assign an IP address to the management interface through the BOOTP server.
DHCP Option 12	If you select the IP Address Mode as DHCP, configure the Option 12 here. DHCP Option 12 is used to specify the client's name.
IP Address	Specify the IP address of the management interface if you select the IP Address Mode as Static.
Subnet Mask	Specify the subnet mask of the management interface if you select the IP Address Mode as Static.
Default Gateway	Specify the default gateway of the management interface if you select the IP Address Mode as Static. The default gateway is the IP address to which the packet should be sent next.

2) Click **Apply**.

2.1.6 Configuring the System IPv6

 **Note:**

Only T1500&T1500G Series Switches support configuring the system IPv6.

Choose the menu **SYSTEM > System Info > System IPv6** to load the following page.

Figure 2-9 Configuring the System IPv6 Parameters

System IPv6 Config

Management VLAN ID: VLAN1

IPv6 Enable: Enable

Link-local Address Mode: Manual Auto

Link-local Address: (Format: fe80::1)

Status: Normal

Enable global address auto configuration via RA message

Enable global address auto configuration via DHCPv6 Server

Apply

Global Address Config

+ Add **-** Delete

<input type="checkbox"/>	Index	Global Address	Prefix Length	Type	Preferred Lifetime	Valid Lifetime	Status
No entries in this table.							
Total: 0							

1) In the **System IPv6 Config** section, enable IPv6 feature for the interface and configure the corresponding parameters . Then click **Apply**.

Management VLAN ID	Displays the Management VLAN ID. Only the computers in the management VLAN can access the management interface of the switch. By default, VLAN 1 owning all the ports is the management VLAN and you can access the switch via any port.
IPv6 Enable	Enable the IPv6 feature of the management interface.
Link-local Address Mode	Select the link-local address configuration mode. Manual: With this option selected, you can assign a link-local address manually. Auto: With this option selected, the switch generates a link-local address automatically.
Link-local Address	Enter a link-local address if you choose "Manual" as the Link-Local Address Mode.

Status	<p>Displays the status of the link-local address. An IPv6 address cannot be used before pass the DAD (Duplicate Address Detection), which is used to detect the address conflicts. In the DAD process, the IPv6 address may in three different status:</p> <p>Normal: Indicates that the link-local address passes the DAD and can be used normally.</p> <p>Try: Indicates that the link-local address is in the progress of DAD and cannot be used right now.</p> <p>Repeat: Indicates that the link-local address is duplicated, this address is already used by another node and cannot be used by the interface.</p>
---------------	---

2) Configure IPv6 global address of the interface via following three ways:

Via RA Message:

<p>Enable global address auto configuration via RA message</p>	<p>With this option enabled, the interface automatically generates a global address and other information according to the address prefix and other configuration parameters from the received RA (Router Advertisement) message.</p>
--	---

Via DHCPv6 Server:

<p>Enable global address auto configuration via DHCPv6 Server</p>	<p>With this option enabled, the switch will try to obtain the global address from the DHCPv6 Server.</p>
---	---

Manually:

In the **Global Address Config** section, click  **Add** to manually assign an IPv6 global address to the interface.

Global Address

Address Format: EUI-64 Not EUI-64

Global Address: (Format:3001::1)

Prefix Length: (1-64)

Address Format	<p>Select the global address format according to your needs.</p> <p>EUI-64: Indicates that you only need to specify an address prefix, then the system will create a global address automatically.</p> <p>Not EUI-64: Indicates that you have to specify an intact global address.</p>
Global Address	<p>When EUI-64 is selected, please input the address prefix here, otherwise, please input an intact IPv6 address here.</p>

Prefix Length	Configure the prefix length of the global address.
---------------	--

3) View the global address entry in the **Global Address Config** section.

Global Address	View or modify the global address.
----------------	------------------------------------

Prefix Length	View or modify the prefix length of the global address.
---------------	---

Type	Displays the configuration mode of the global address. Manual: Indicates that the corresponding address is configured manually. Auto: Indicates that the corresponding address is created automatically using the RA message or obtained from the DHCPv6 Server.
------	--

Preferred Lifetime	Displays the preferred lifetime of the global address. Preferred lifetime is the length of time that a valid IPv6 address is preferred. When the preferred time expires, the address becomes deprecated but still can be used, and you need to switch to another address.
--------------------	--

Valid Lifetime	Displays the valid lifetime of the global address. Valid lifetime is the length of time that an IPv6 address is in the valid state. When the valid lifetime expires, the address become invalid and can be no longer usable.
----------------	---

Status	Displays the status of the link-local address. An IPv6 address cannot be used before pass the DAD (Duplicate Address Detection), which is used to detect the address conflicts. In the DAD process, the IPv6 address may in three different status: Normal: Indicates that the global address passes the DAD and can be normally used. Try: Indicates that the global address is in the progress of DAD and cannot be used right now. Repeat: Indicates that the global address is duplicated, this address is already used by another node. This address cannot be used by the interface.
--------	--

2.2 Using the CLI

2.2.1 Viewing the System Summary

On privileged EXEC mode or any other configuration mode, you can use the following commands to view the system information of the switch:

```
show interface status [ fastEthernet port | gigabitEthernet port | ten-gigabitEthernet port ]
```

View status of the interface.

port: Enter the number of the Ethernet port.

show system-info

View the system information including System Description, Device Name, Device Location, System Contact, Hardware Version, Firmware Version, System Time, Run Time and so on.

The following example shows how to view the interface status and the system information of the switch.

Switch#show interface status

Port	Status	Speed	Duplex	FlowCtrl	Jumbo	Active-Medium
-----	-----	-----	-----	-----	-----	-----
Gi1/0/1	LinkDown	N/A	N/A	N/A	Disable	Copper
Gi1/0/2	LinkDown	N/A	N/A	N/A	Disable	Copper
Gi1/0/3	LinkUp	1000M	Full	Disable	Disable	Copper
...						

Switch#show system-info

System Description - JetStream 24-Port Gigabit L2 Managed Switch with 4 SFP Slots
 System Name - T2600G-28TS
 System Location - SHENZHEN
 Contact Information - www.tp-link.com
 Hardware Version - T2600G-28TS 3.0
 Software Version - 3.0.0 Build 20170820 Rel.65183(s)
 Bootloader Version - TP-LINK BOOTUTIL(v1.0.0)
 Mac Address - 00-0A-EB-13-A2-3D
 Serial Number - 211100100001C
 System Time - 2006-01-03 10:10:37
 Running Time - 2 day - 2 hour - 11 min - 30 sec

2.2.2 Configuring the Device Description

Follow these steps to configure the device description:

-
- Step 1 **configure**
 Enter global configuration mode.
-

Step 2 **hostname [*hostname*]**

Specify the system name of the switch.

hostname: Enter the device name. The length of the name ranges from 1 to 32 characters. By default, it is the model name of the switch.

Step 3 **location [*location*]**

Specify the system location of the switch.

location: Enter the device location. It should consist of no more than 32 characters. By default, it is "SHENZHEN".

Step 4 **contact-info [*contact-info*]**

Specify the system contact Information.

contact-info: Enter the contact information. It should consist of no more than 32 characters. By default, it is "www.tp-link.com".

Step 5 **show system-info**

Verify the system information including system Description, Device Name, Device Location, System Contact, Hardware Version, Firmware Version, System Time, Run Time and so on.

Step 6 **end**

Return to privileged EXEC mode.

Step 7 **copy running-config startup-config**

Save the settings in the configuration file.

The following example shows how to set the device name as Switch_A, set the location as BEIJING and set the contact information as <https://www.tp-link.com>.

Switch#configure

Switch(config)#hostname Switch_A

Switch(config)#location BEIJING

Switch(config)#contact-info <https://www.tp-link.com>

Switch(config)#show system-info

System Description - JetStream 24-Port Gigabit L2 Managed Switch with 4 SFP Slots

System Name - Switch_A

System Location - BEIJING

Contact Information - <https://www.tp-link.com>

...

Switch(config)#end

Switch#copy running-config startup-config

2.2.3 Configuring the System Time

Follow these steps to configure the system time:

 **Note:**

The mode of Synchronize with PC's Clock does not support CLI command.

Step 1 **configure**

Enter global configuration mode.

Step 2 Use the following command to set the system time manually:

system-time manual *time*

Configure the system time manually.

time: Specify the date and time manually in the format of MM/DD/YYYY-HH:MM:SS. The valid value of the year ranges from 2000 to 2037.

Use the following command to set the system time by getting time from the NTP server. Ensure the NTP server is accessible. If the NTP server is on the internet, connect the switch to the internet first.

system-time ntp { *timezone* } { *ntp-server* } { *backup-ntp-server* } { *fetching-rate* }

timezone: Enter your local time-zone, which ranges from UTC-12:00 to UTC+13:00.

The detailed information of each time-zone are displayed as follows:

UTC-12:00 — TimeZone for International Date Line West.

UTC-11:00 — TimeZone for Coordinated Universal Time-11.

UTC-10:00 — TimeZone for Hawaii.

UTC-09:00 — TimeZone for Alaska.

UTC-08:00 — TimeZone for Pacific Time (US Canada).

UTC-07:00 — TimeZone for Mountain Time (US Canada).

UTC-06:00 — TimeZone for Central Time (US Canada).

UTC-05:00 — TimeZone for Eastern Time (US Canada).

UTC-04:30 — TimeZone for Caracas.

UTC-04:00 — TimeZone for Atlantic Time (Canada).

UTC-03:30 — TimeZone for Newfoundland.

UTC-03:00 — TimeZone for Buenos Aires, Salvador, Brasilia.

UTC-02:00 — TimeZone for Mid-Atlantic.

UTC-01:00 — TimeZone for Azores, Cape Verde Is.

UTC — TimeZone for Dublin, Edinburgh, Lisbon, London.

UTC+01:00 — TimeZone for Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna.
 UTC+02:00 — TimeZone for Cairo, Athens, Bucharest, Amman, Beirut, Jerusalem.
 UTC+03:00 — TimeZone for Kuwait, Riyadh, Baghdad.
 UTC+03:30 — TimeZone for Tehran.
 UTC+04:00 — TimeZone for Moscow, St.Petersburg, Volgograd, Tbilisi, Port Louis.
 UTC+04:30 — TimeZone for Kabul.
 UTC+05:00 — TimeZone for Islamabad, Karachi, Tashkent.
 UTC+05:30 — TimeZone for Chennai, Kolkata, Mumbai, New Delhi.
 UTC+05:45 — TimeZone for Kathmandu.
 UTC+06:00 — TimeZone for Dhaka, Astana, Ekaterinburg.
 UTC+06:30 — TimeZone for Yangon (Rangoon).
 UTC+07:00 — TimeZone for Novosibirsk, Bangkok, Hanoi, Jakarta.
 UTC+08:00 — TimeZone for Beijing, Chongqing, Hong Kong, Urumqi, Singapore.
 UTC+09:00 — TimeZone for Seoul, Irkutsk, Osaka, Sapporo, Tokyo.
 UTC+09:30 — TimeZone for Darwin, Adelaide.
 UTC+10:00 — TimeZone for Canberra, Melbourne, Sydney, Brisbane.
 UTC+11:00 — TimeZone for Solomon Is., New Caledonia, Vladivostok.
 UTC+12:00 — TimeZone for Fiji, Magadan, Auckland, Wellington.
 UTC+13:00 — TimeZone for Nuku'alofa, Samoa.

ntp-server: Specify the IP address of the primary NTP server.

backup-ntp-server: Specify the IP address of the backup NTP server.

fetching-rate: Specify the interval fetching time from the NTP server.

Step 3 Use the following command to verify the system time information.

show system-time

Verify the system time information.

Use the following command to verify the NTP mode configuration information.

show system-time ntp

Verify the system time information of NTP mode.

Step 4 **end**
Return to privileged EXEC mode.

Step 5 **copy running-config startup-config**
Save the settings in the configuration file.

The following example shows how to set the system time by Get Time from NTP Server and set the time zone as UTC+08:00, set the NTP server as 133.100.9.2, set the backup NTP server as 139.78.100.163 and set the update rate as 11.

Switch#configure

Switch(config)#system-time ntp UTC+08:00 133.100.9.2 139.78.100.163 11

Switch(config)#show system-time ntp

Time zone : UTC+08:00

Prefered NTP server: 133.100.9.2

Backup NTP server: 139.78.100.163

Last successful NTP server: 133.100.9.2

Update Rate: 11 hour(s)

Switch(config)#end**Switch#copy running-config startup-config**

2.2.4 Configuring the Daylight Saving Time

Follow these steps to configure the Daylight Saving Time:

Step 1 configure

Enter global configuration mode.

Step 2 Use the following command to select a predefined Daylight Saving Time configuration:

system-time dst predefined [USA | Australia | Europe | New-Zealand]

Specify the Daylight Saving Time using a predefined schedule.

USA | Australia | Europe | New-Zealand: Select one mode of Daylight Saving Time.

USA: 02:00 a.m. on the Second Sunday in March ~ 02:00 a.m. on the First Sunday in November.

Australia: 02:00 a.m. on the First Sunday in October ~ 03:00 a.m. on the First Sunday in April.

Europe: 01:00 a.m. on the Last Sunday in March ~ 01:00 a.m. on the Last Sunday in October.

New Zealand: 02:00 a.m. on the Last Sunday in September ~ 03:00 a.m. on the First Sunday in April.

Use the following command to set the Daylight Saving Time in recurring mode:

```
system-time dst recurring { sweek } { sday } { smonth } { stime } { eweek } { eday } { emonth } { etime } [ offset ]
```

Specify the Daylight Saving Time in Recuring mode.

sweek: Enter the start week of Daylight Saving Time. There are 5 values showing as follows: first, second, third, fourth, last.

sday: Enter the start day of Daylight Saving Time. There are 7 values showing as follows: Sun, Mon, Tue, Wed, Thu, Fri, Sat.

smonth: Enter the start month of Daylight Saving Time. There are 12 values showing as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec.

stime: Enter the start time of Daylight Saving Time, in the format of HH:MM.

ewEEK: Enter the end week of Daylight Saving Time. There are 5 values showing as follows: first, second, third, fourth, last.

eday: Enter the end day of Daylight Saving Time. There are 7 values showing as follows: Sun, Mon, Tue, Wed, Thu, Fri, Sat.

emonth: Enter the end month of Daylight Saving Time. There are 12 values showing as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec.

etime: Enter the end time of Daylight Saving Time, in the format of HH:MM.

offset: Enter the offset of Daylight Saving Time. The default value is 60.

Use the following command to set the Daylight Saving Time in date mode:

```
system-time dst date { smonth } { sday } { stime } { syear } { emonth } { eday } { etime } { eyear } [ offset ]
```

Specify the Daylight Saving Time in Date mode.

smonth: Enter the start month of Daylight Saving Time. There are 12 values showing as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec.

sday: Enter the start day of Daylight Saving Time, which ranges from 1 to 31.

stime: Enter the start time of Daylight Saving Time, in the format of HH:MM.

syear: Enter the start year of Daylight Saving Time.

emonth: Enter the end month of Daylight Saving Time. There are 12 values showing as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec.

eday: Enter the end day of Daylight Saving Time, which ranges from 1 to 31.

etime: Enter the end time of Daylight Saving Time, in the format of HH:MM.

eyear: Enter the end year of Daylight Saving Time.

offset: Enter the offset of Daylight Saving Time. The default value is 60.

-
- | | |
|--------|--|
| Step 3 | show system-time dst
Verify the DST information of the switch. |
|--------|--|
-
- | | |
|--------|---|
| Step 4 | end
Return to privileged EXEC mode. |
|--------|---|
-
- | | |
|--------|---|
| Step 5 | copy running-config startup-config
Save the settings in the configuration file. |
|--------|---|
-

The following example shows how to set the Daylight Saving Time by Date Mode. Set the start time as 01:00 August 1st, 2017, set the end time as 01:00 September 1st, 2017 and set the offset as 50.

Switch#configure

```
Switch(config)#system-time dst date Aug 1 01:00 2017 Sep 1 01:00 2017 50
```

Switch(config)#show system-time dst

DST starts at 01:00:00 on Aug 1 2017

DST ends at 01:00:00 on Sep 1 2017

DST offset is 50 minutes

DST configuration is one-off

Switch(config)#end

```
Switch#copy running-config startup-config
```

2.2.5 Configuring the System IP

Note:

Only T1500&T1500G Series Switches support configuring the system IP.

Follow these steps to configure the System IP parameters.

Step 1	configure Enter global configuration mode.
Step 2	ip management-vlan {vlan-id} Configure the management VLAN of the switch. Only the computers in the management VLAN can access the management interface of the switch.
Step 3	interface vlan {vlan-id} Enter the Interface VLAN Mode. <i>vlan-id</i> : The management VLAN ID.

Step 4	<p>Automatically assign an IP Address and default gateway for the management interface via DHCP or BOOTP: ip address-alloc { dhcp bootp }</p> <p>Specify the IP Address assignment mode of the management interface.</p> <p><i>dhcp</i>: Specify the management interface to obtain an IPv4 address from the DHCP Server. <i>bootp</i>: Specify the management interface to obtain an IPv4 address from the BOOTP Server.</p> <p>Manually assign an IP Address and default gateway for the management interface: ip address { ip-addr } { mask } gateway { default-gateway }</p> <p>Configure the IP address and default gateway for the management interface manually. <i>ip-addr</i>: Specify the IP address of the management interface. <i>mask</i>: Specify the subnet mask of the management interface. <i>default gateway</i>: Specify the default gateway of the management interface if you select the IP Address Mode as Static. The default gateway is the IP address to which the packet should be sent next.</p>
Step 5	<p>show interface vlan { vlan-id }</p> <p><i>vlan-id</i>: The management VLAN ID.</p> <p>Verify the summary information of the management interface.</p>
Step 6	<p>end</p> <p>Return to privileged EXEC mode.</p>
Step 7	<p>copy running-config startup-config</p> <p>Save the settings in the configuration file.</p>

The following example shows how to configure the switch's IP address as **192.168.0.10/24** and configure the default gateway as **192.168.0.100**.

Switch#configure

Switch(config)#interface vlan 1

Switch(config-if)#ip address 192.168.0.10 255.255.255.0 gateway 192.168.0.100

The connection will be interrupted and you should telnet to the switch's new IP address **192.168.0.10**.

C:\Users\Administrator>telnet 192.168.0.10

User:admin

Password:admin

Switch>enable

Switch#show interface vlan 1

Switch#copy running-config startup-config

2.2.6 Configuring System IPv6 Parameters

 **Note:**

Only T1500&T1500G Series Switches support configuring the system IPv6.

Follow these steps to configure the system IPv6 parameters.

-
- | | |
|--------|--|
| Step 1 | configure
Enter global configuration mode. |
|--------|--|
-
- | | |
|--------|--|
| Step 2 | ip management-vlan { vlan-id }
Configure the management VLAN of the switch. Only the computers in the management VLAN can access the management interface of the switch. |
|--------|--|
-
- | | |
|--------|---|
| Step 3 | interface vlan { vlan-id }
Enter the Interface VLAN Mode.

<i>vlan-id</i> : The management VLAN ID. |
|--------|---|
-
- | | |
|--------|--|
| Step 4 | ipv6 enable
Enable the IPv6 feature on the management interface. |
|--------|--|
-
- | | |
|--------|---|
| Step 5 | Configure the IPv6 link-local address for the management interface:

Manually configure the ipv6 link-local address for the management interface:
ipv6 address ipv6-addr link-local
<i>ipv6-addr</i> : Specify the link-local address of the interface. It should be a standardized IPv6 address with the prefix fe80::/10, otherwise this command will be invalid.

Automatically configure the ipv6 link-local address for the management interface:
ipv6 address autoconfig |
|--------|---|
-

Step 6	<p>Configure the IPv6 global address for the management interface:</p> <p>Automatically configure the interface's global IPv6 address via RA message: ipv6 address ra Configure the interface's global IPv6 address according to the address prefix and other configuration parameters from its received RA (Router Advertisement) message.</p> <p>Automatically configure the interface's global IPv6 address via DHCPv6 server: ipv6 address dhcp Enable the DHCPv6 Client function. When this function is enabled, the Layer 3 interface will try to obtain the IPv6 address from DHCPv6 server.</p> <p>Manually configure the interface's global IPv6 address: ipv6 address ipv6-addr <i>ipv6-addr</i>: The Global IPv6 address with network prefix, for example 3ffe::1/64. ipv6 address ipv6-addr eui-64 Specify a global IPv6 address with an extended unique identifier (EUI) in the low-order 64 bits of the IPv6 address. Specify only the network prefix; the last 64 bits are automatically computed from the switch MAC address. This enables IPv6 processing on the interface.</p>
Step 7	<p>show ipv6 interface Verify the configured ipv6 information of the interface.</p>
Step 8	<p>end Return to privileged EXEC mode.</p>
Step 9	<p>copy running-config startup-config Save the settings in the configuration file.</p>

The following example shows how to enable the IPv6 function and configure the IPv6 parameters of the management interface:

Switch#configure

Switch(config)#interface vlan 1

Switch(config-if)#ipv6 enable

Switch(config-if)#ipv6 address autoconfig

Switch(config-if)#ipv6 address dhcp

Switch(config-if)#show ipv6 interface

Vlan2 is up, line protocol is up

IPv6 is enable, Link-Local Address: fe80::20a:ebff:fe13:237b[NOR]

Global Address RA: Disable

Global Address DHCPv6: Enable

Global unicast address(es): ff02::1:ff13:237b

Joined group address(es): ff02::1

ICMP error messages limited to one every 1000 milliseconds

ICMP redirects are enable

MTU is 1500 bytes

ND DAD is enable, number of DAD attempts: 1

ND retrans timer is 1000 milliseconds

ND reachable time is 30000 milliseconds

Switch(config-if)#end

Switch#copy running-config startup-config

3 User Management Configurations

With User Management, you can create and manage the user accounts for login to the switch.

3.1 Using the GUI

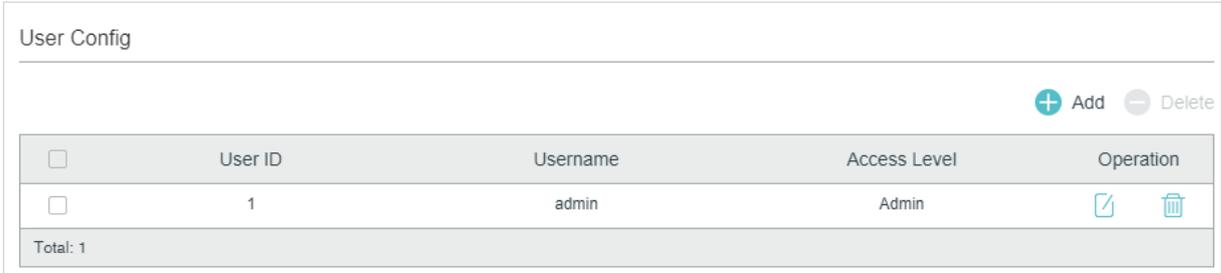
There are four types of user accounts with different access levels: Admin, Operator, Power User and User.

- There is a default Admin account which cannot be deleted. The default username and password of this account are both admin. You can also create more Admin accounts.
- If you create Operator, Power User or User accounts, you need go to the AAA section to create an Enable Password. If needed, these types of users can use the Enable Password to change their access level to Admin.

3.1.1 Creating Accounts

Choose the menu **SYSTEM > User Management > User Config** to load the following page.

Figure 3-1 User Config Page



The screenshot shows the 'User Config' page. At the top right, there are '+ Add' and '- Delete' buttons. Below is a table with the following data:

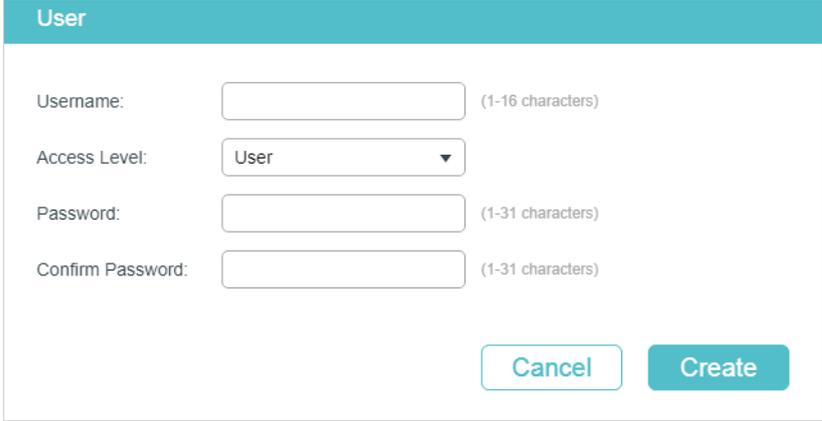
<input type="checkbox"/>	User ID	Username	Access Level	Operation
<input type="checkbox"/>	1	admin	Admin	 

Total: 1

By default, there is a default Admin account in the table. You can click  to edit this Admin account but you cannot delete it.

You can create new user accounts. Click  **Add** and the following window will pop up.

Figure 3-2 Adding Account



Follow these steps to create a new user account.

1) Configure the following parameters:

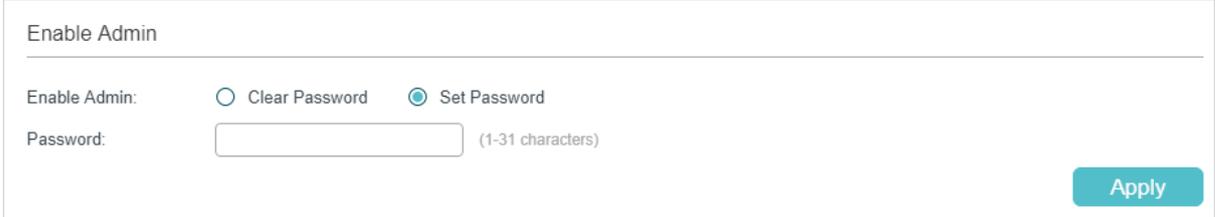
Username	Specify a username for the account. It contains 16 characters at most, composed of digits, English letters and underscore only.
Access Level	Select the access level. There are four options provided: Admin: Admin can edit, modify and view all the settings of different functions. Operator: Operator can edit, modify and view most of the settings of different functions. Power User: Power User can edit, modify and view some of the settings of different functions. User: User can only view the settings without the right to edit or modify.
Password	Specify a password for the account. It contains 1-31 alphanumeric characters or symbols, composed of digits, English letters (case sensitive), underscore and sixteen special characters only.
Confirm Password	Retype the password.

2) Click **Create**.

3.1.2 Configuring Enable Password

Choose the menu **SECURITY > AAA > Global Config** to load the following page.

Figure 3-3 Configure Enable Password



Enable Admin

Enable Admin: Clear Password Set Password

Password: (1-31 characters)

Apply

Follow these steps to configure Enable Password:

- 1) Select **Set Password** and specify the Enable Password in the **Password** field.
- 2) Click **Apply**.

Tips:

The logged-in users can enter the Enable Password on this page to get the administrative privileges.

3.2 Using the CLI

There are four types of user accounts with different access levels: Admin, Operator, Power User and User.

- There is a default Admin account which cannot be deleted. The default username and password of this account are both admin. You can also create more Admin accounts.
- If you create Operator, Power User or User accounts, you need go to the AAA section to create an Enable Password. If needed, these types of users can use the Enable Password to change their access level to Admin.

3.2.1 Creating Accounts

Follow these steps to create an account:

-
- Step 1 **configure**
- Enter global configuration mode.
-

Step 2 Use the following command to create an account unencrypted or symmetric encrypted.

```
user name name { privilege admin | operator | power_user | user } password { [ 0 ] password | 7 encrypted-password }
```

name: Enter a user name for users' login. It contains 16 characters at most, composed of digits, English letters and underscore only.

admin | operator | power_user | user: Specify the access level for the user. Admin can edit, modify and view all the settings of different functions. Operator can edit, modify and view mostly the settings of different functions. Power User can edit, modify and view some the settings of different functions. User only can view the settings without the right to edit and modify.: Select the access level for the user. Admin can edit, modify and view all the settings of different functions.

0: Specify the encryption type. 0 indicates that the password you entered is unencrypted, and the password is saved to the configuration file unencrypted. By default, the encryption type is 0.

password: Enter a password for users' login. It is a string from 1 to 32 alphanumeric characters or symbols. The password is case sensitive, allows digits, English letters (case sensitive), underlines and sixteen special characters.

7: Specify the encryption type. 7 indicates that the password you entered is symmetric encrypted, and the password is saved to the configuration file symmetric encrypted.

encrypted-password: Enter a symmetric encrypted password with fixed length, which you can copy from another switch's configuration file. After the encrypted password is configured, you should use the corresponding unencrypted password to reenter this mode.

Use the following command to create an account MD5 encrypted.

```
user name name { privilege admin | operator | power_user | user } secret { [ 0 ] password | 5 encrypted-password }
```

Create an account whose access level is Admin.

name: Enter a user name for users' login. It contains 16 characters at most, composed of digits, English letters and underscore only.

admin | operator | power_user | user: Specify the access level for the user. Admin can edit, modify and view all the settings of different functions. Operator can edit, modify and view mostly the settings of different functions. Power User can edit, modify and view some the settings of different functions. User only can view the settings without the right to edit and modify.: Select the access level for the user. Admin can edit, modify and view all the settings of different functions.

0: Specify the encryption type. 0 indicates that the password you entered is unencrypted, but the password is saved to the configuration file MD5 encrypted. By default, the encryption type is 0.

password: Enter a password for users' login. It is a string from 1 to 32 alphanumeric characters or symbols. The password is case sensitive, allows digits, English letters (case sensitive), underlines and sixteen special characters.

5: Specify the encryption type. 5 indicates that the password you entered is MD5 encrypted, and the password is saved to the configuration file MD5 encrypted.

encrypted-password: Enter a MD5 encrypted password with fixed length, which you can copy from another switch's configuration file.

Step 3 **show user account-list**

Verify the information of the current users.

Step 4 **end**
Return to privileged EXEC mode.

Step 5 **copy running-config startup-config**
Save the settings in the configuration file.

3.2.2 Configuring Enable Password

Follow these steps to create an account of other type:

Step 1 **configure**
Enter global configuration mode.

Step 2 **aaa enable**
Globally enable the AAA function.

-
- Step 3 Use the following command to create an enable password unencrypted or symmetric encrypted.
- enable admin password** {[0] *password* | 7 *encrypted-password* }
- Create an Enable Password. It can change the users' access level to Admin. By default, it is empty.
- 0: Specify the encryption type. 0 indicates that the password you entered is unencrypted, and the password is saved to the configuration file unencrypted. By default, the encryption type is 0.
- password*: Enter an enable password. It is a string from 1 to 32 alphanumeric characters or symbols. The password is case sensitive, allows digits, English letters (case sensitive), underlines and sixteen special characters.
- 7: Specify the encryption type. 7 indicates that the password you entered is symmetric encrypted, and the password is saved to the configuration file symmetric encrypted.
- encrypted-password*: Enter a symmetric encrypted password with fixed length, which you can copy from another switch's configuration file. After the encrypted password is configured, you should use the corresponding unencrypted password to reenter this mode.
- Use the following command to create an enable password unencrypted or MD5 encrypted.
- enable admin secret** {[0] *password* | 5 *encrypted-password* }
- Create an Enable Password. It can change the users' access level to Admin. By default, it is empty.
- 0: Specify the encryption type. 0 indicates that the password you entered is unencrypted, but the password is saved to the configuration file MD5 encrypted. By default, the encryption type is 0.
- password*: Enter an enable password. It is a string from 1 to 32 alphanumeric characters or symbols. The password is case sensitive, allows digits, English letters (case sensitive), underlines and sixteen special characters.
- 5: Specify the encryption type. 5 indicates that the password you entered is MD5 encrypted, and the password is saved to the configuration file MD5 encrypted.
- encrypted-password*: Enter a MD5 encrypted password with fixed length, which you can copy from another switch's configuration file. After the encrypted password is configured, you should use the corresponding unencrypted password to reenter this mode.
-
- Step 4 **show user account-list**
Verify the information of the current users.
-
- Step 5 **end**
Return to privileged EXEC mode.
-
- Step 6 **copy running-config startup-config**
Save the settings in the configuration file.
-

Tips:

The logged-in users can enter the Enable Password on this page to get the administrative privileges.

The following example shows how to create a user with the access level of Operator, set the username as user1 and password as 123, enable AAA function and set the enable password as abc123.

Switch#configure

Switch(config)#user name user1 privilege operator password 123

Switch(config)#aaa enable

Switch(config)#enable admin password abc123

Switch(config)#show user account-list

Index	User-Name	User-Type
-----	-----	-----
1	user1	Operator
2	admin	Admin

Switch(config)#end

Switch#copy running-config startup-config

4 System Tools Configurations

With System Tools, you can:

- Configure the boot file
- Restore the configuration of the switch
- Back up the configuration file
- Upgrade the firmware
- Configure DHCP Auto Install
- Reboot the switch
- Reset the switch

4.1 Using the GUI

4.1.1 Configuring the Boot File

Choose the menu **SYSTEM > System Tools > Boot Config** to load the following page.

Figure 4-1 Configuring the Boot File

Boot Table

<input checked="" type="checkbox"/>	Unit	Current Startup Image	Next Startup Image	Backup Image	Current Startup Config	Next Startup Config	Backup Config
<input checked="" type="checkbox"/>	1	Image_1.bin	Image_1.bin	Image_2.bin	config1.cfg	Config_1.cfg	Config_2.cfg
Total: 1				1 entry selected.			<input type="button" value="Cancel"/> <input style="background-color: #009682; color: white;" type="button" value="Apply"/>

Image Table

UNIT1

▼ Current Startup Image

Image Name: image1.bin

Software Version: 3.0.0

Flash Version: 1.3.0

▼ Next Startup Image

Image Name: image1.bin

Software Version: 3.0.0

Flash Version: 1.3.0

▼ Backup Image

Image Name: image2.bin

Software Version: 3.0.0

Flash Version: 1.3.0

Follow these steps to configure the boot file:

- 1) In the **Boot Table** section, select one or more units and configure the relevant parameters.

Unit	Displays the number of the unit.
Current Startup Image	Displays the current startup image.
Next Startup Image	Select the next startup image. When the switch is powered on, it will try to start up with the next startup image. The next startup image and backup image should not be the same.
Backup Image	Select the backup image. When the switch fails to start up with the next startup image, it will try to start up with the backup image. The next startup and backup image should not be the same.
Current Startup Config	Displays the current startup configuration.
Next Startup Config	Specify the next startup configuration. When the switch is powered on, it will try to start up with the next startup configuration. The next startup configuration and backup configuration should not be the same.
Backup Config	Specify the backup configuration. When the switch fails to start up with the next startup configuration, it will try to start up with the backup configuration. The next startup and backup configuration should not be the same.

- 2) Click **Apply**.

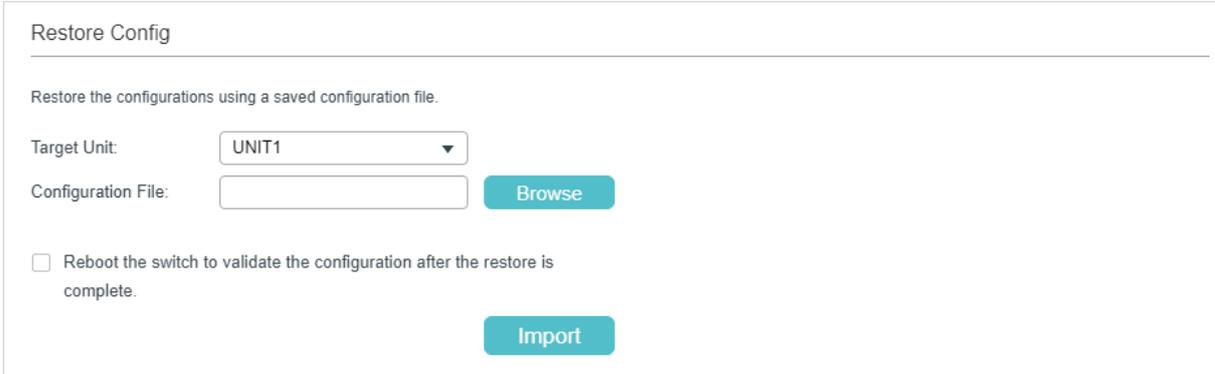
In the **Image Table**, you can view the information of the current startup image, next startup image and backup image. The displayed information is as follows:

Image Name	Displays the name of the image.
Software Version	Displays the software version of the image.
Flash Version	Displays the flash version of the image.

4.1.2 Restoring the Configuration of the Switch

Choose the menu **SYSTEM > System Tools > Restore Config** to load the following page.

Figure 4-2 Restoring the Configuration of the Switch



Restore Config

Restore the configurations using a saved configuration file.

Target Unit:

Configuration File: [Browse](#)

Reboot the switch to validate the configuration after the restore is complete.

[Import](#)

Follow these steps to restore the current configuration of the switch:

- 1) In the **Restore Config** section, select the unit to be restored.
- 2) Click **Browse** and select the desired configuration file to be imported.
- 3) Choose whether to reboot the switch after restoring is completed. Only after the switch is rebooted will the imported image take effect.
- 4) Click **Import** to import the configuration file.

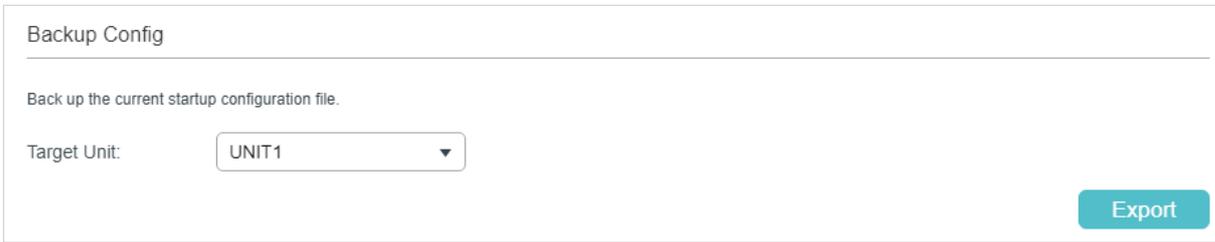
 **Note:**

It will take some time to restore the configuration. Please wait without any operation.

4.1.3 Backing up the Configuration File

Choose the menu **SYSTEM > System Tools > Backup Config** to load the following page.

Figure 4-3 Backing up the Configuration File



Backup Config

Back up the current startup configuration file.

Target Unit:

[Export](#)

In the **Config Backup** section, select one unit and click **Export** to export the configuration file.

 **Note:**

It will take some time to export the configuration. Please wait without any operation.

4.1.4 Upgrading the Firmware

Choose the menu **SYSTEM > System Tools > Firmware Upgrade** to load the following page.

Figure 4-4 Upgrading the Firmware

Firmware Upgrade

You can upgrade the firmware of the switch using the new upgrade file.

Firmware Version: 3.0.0 Build 20170820 Rel.65183(s)

Hardware Version: T2600G-28TS 3.0

Image Name: Backup Image

Firmware File: Browse

Reboot the switch using the backup image after upgrading is completed.

Upgrade

You can view the current firmware information on this page:

Firmware Version	Displays the current firmware version of the system.
Hardware Version	Displays the current hardware version of the system.
Image Name	Displays the image to upgrade. The operation will only affect the image displayed here.

Follow these steps to upgrade the firmware of the switch:

- 1) Click **Browse** and select the proper firmware upgrade file.
- 2) Choose whether to reboot the switch after upgrading is completed. Only after the switch is rebooted will the new firmware take effect.
- 3) Click **Upgrade** to upgrade the system.

Note:

- It will take some time to upgrade the switch. Please wait without any operation.
- It is recommended to backup your configuration before upgrading.

4.1.5 Configuring DHCP Auto Install

This feature is used to download configuration files and images from the TFTP server automatically. It requires a DHCP server supporting option 128 and a TFTP sever on your network. When Auto Install function starts, the switch tries to get configuration file name, image file path and TFTP Server IP address from the DHCP Server, and then downloads

the new image and configuration file from the TFTP Server. Only T2600G series switches support DHCP Auto Install.

Choose the menu **SYSTEM > System Tools > DHCP Auto Install** to load the following page.

Figure 4-5 Configuring DHCP Auto Install

DHCP Auto Install

DHCP Auto Install: Enable

Auto Install Persistent Mode: Enable

Auto Save Mode: Enable

Auto Reboot Mode: Enable

Auto Install Retry Count: (1-3)

Auto Install State: Stopped

Apply

Configure the following parameters and click **Apply**:

DHCP Auto Install	Enable or disable DHCP Auto Install.
Auto Install Persistent Mode	Enable or disable Auto Install Persistent Mode. With this mode enabled, the switch will start Auto Install progress once the switch is rebooted.
Auto Save Mode	Enable or disable Save Mode. With this mode enabled, the downloaded configuration file will be saved as the startup configuration file, which means that the downloaded configuration will take effect after the next reboot.
Auto Reboot Mode	Enable or disable Auto Reboot Mode. With this mode enabled, the switch will reboot automatically once the auto install process is completed.
Auto Install Retry Count	Specify how many times the switch can try to get the configuration file or image file from the TFTP server in one cycle. If the number of tries has reached this limit, the switch will wait for 10 minutes and start to try to get the files again. This process will be repeated until the switch succeeds in getting any of the image file or configuration file, or unless you stop Auto Install manually.
Auto Install State	Displays the status of Auto Install process.

Note:

- The switch will obtain a new IP address from the DHCP server during the process of Auto Install. If you want to access to the switch, you should check the new IP address on the DHCP server.
- If the Auto Install process fails, the switch will restart the process every 10 minutes. You can stop the process manually.

4.1.6 Rebooting the switch

There are two methods to reboot the switch: manually reboot the switch and configure reboot schedule to automatically reboot the switch.

Manually Rebooting the Switch

Choose the menu **SYSTEM > System Tools > System Reboot > System Reboot** to load the following page.

Figure 4-6 Manually Rebooting the Switch

Follow these steps to reboot the switch:

- 1) In the **System Reboot** section, select the desired unit.
- 2) Choose whether to save the current configuration before reboot.
- 3) Click **Reboot**.

Configuring Reboot Schedule

Choose the menu **SYSTEM > System Tools > System Reboot > Reboot Schedule** to load the following page.

Figure 4-7 Configuring the Reboot Schedule

Follow these steps to configure the reboot schedule:

- 1) Enable Reboot Schedule, and select one time schedule for the switch to reboot.

Time Interval

Specify a period of time. The switch will reboot after this period. Valid values are from 1 to 43200 minutes.

To make this schedule recur, you need to click  **Save** to save current configuration or enable the option **Save the current configuration before reboot**.

Special Time	Specify the date and time for the switch to reboot. Month/Day/Year: Specify the date for the switch to reboot. Time (HH:MM): Specify the time for the switch to reboot, in the format of HH:MM.
---------------------	---

- 2) Choose whether to save the current configuration before the reboot.
- 3) Click **Apply**.

4.1.7 Resetting the Switch

Choose the menu **SYSTEM > System Tools > System Reset** to load the following page.

Figure 4-8 Resetting the Switch

In the **System Reset** section, select the desired unit and click **Reset**. After reset, all configurations of the switch will be reset to the factory defaults.

4.2 Using the CLI

4.2.1 Configuring the Boot File

Follow these steps to configure the boot file:

Step 1	configure Enter global configuration mode.
Step 2	boot application filename { image1 image2 } { startup backup } Specify the configuration of the boot file. By default, image1.bin is the startup image and image2.bin is the backup image. image1 image2: Select the image file to be configured. startup backup: Select the property of the image file.
Step 3	boot config filename { config1 config2 } { startup backup } Specify the configuration of the boot file. By default, config1.cfg is the startup configuration file and config2.cfg is the backup configuration file. config1 config2: Select the configuration file to be configured. startup backup: Specify the property of the configuration file.
Step 4	show boot Verify the boot configuration of the system.

Step 5 **end**
Return to privileged EXEC mode.

Step 6 **copy running-config startup-config**
Save the settings in the configuration file.

The following example shows how to set the next startup image as image1, the backup image as image2, the next startup configuration file as config1 and the backup configuration file as config2.

Switch#configure

Switch(config)#boot application filename image1 startup

Switch(config)#boot application filename image2 backup

Switch(config)#boot config filename config1 startup

Switch(config)#boot config filename config2 backup

Switch(config)#show boot

Boot config:

Current Startup Image - image2.bin

Next Startup Image - image1.bin

Backup Image - image2.bin

Current Startup Config - config2.cfg

Next Startup Config - config1.cfg

Backup Config - config2.cfg

Switch(config)#end

Switch#copy running-config startup-config

4.2.2 Restoring the Configuration of the Switch

Follow these steps to restore the configuration of the switch:

Step 1 **enable**
Enter privileged mode.

Step 2 **copy tftp startup-config ip-address *ip-addr* filename *name***
Download the configuration file to the switch from TFTP server.

ip-addr: Specify the IP address of the TFTP server. Both IPv4 and IPv6 addresses are supported.

name: Specify the name of the configuration file to be downloaded.

 **Note:**

It will take some time to restore the configuration. Please wait without any operation.

The following example shows how to restore the configuration file named file1 from the TFTP server with IP address 192.168.0.100.

Switch>enable

Switch#copy tftp startup-config ip-address 192.168.0.100 filename file1

Start to load user config file.....

Operation OK! Now rebooting system.....

4.2.3 Backing up the Configuration File

Follow these steps to back up the current configuration of the switch in a file:

Step 1 **enable**

Enter privileged mode.

Step 2 **copy startup-config tftp ip-address *ip-addr* filename *name***

Back up the configuration file to TFTP server.

ip-addr: Specify the IP address of the TFTP server. Both IPv4 and IPv6 addresses are supported.

name: Specify the name of the configuration file to be saved.

The following example shows how to backup the configuration file named file2 to TFTP server with IP address 192.168.0.100.

Switch>enable

Switch#copy startup-config tftp ip-address 192.168.0.100 filename file2

Start to backup user config file.....

Backup user config file OK.

4.2.4 Upgrading the Firmware

Follow these steps to upgrade the firmware:

Step 1 **enable**

Enter privileged mode.

-
- Step 2 **firmware upgrade ip-address** *ip-addr filename name*
- Upgrade the switch's backup image via TFTP server. To boot up with the new firmware, you need to choose to reboot the switch with the backup image.
- ip-addr*: Specify the IP address of the TFTP server. Both IPv4 and IPv6 addresses are supported.
- name*: Specify the name of the desired firmware file.
-
- Step 3 Enter Y to continue and then enter Y to reboot the switch with the backup image.
-

The following example shows how to upgrade the firmware using the configuration file named file3.bin. The TFTP server is 190.168.0.100.

Switch>enable

```
Switch#firmware upgrade ip-address 192.168.0.100 filename file3.bin
```

```
It will only upgrade the backup image. Continue? (Y/N):Y
```

```
Operation OK!
```

```
Reboot with the backup image? (Y/N): Y
```

4.2.5 Configuring DHCP Auto Install

Follow these steps to configure the DHCP Auto Install.

-
- Step 1 **configure**
- Enter global configuration mode.
-
- Step 2 **boot autoinstall persistent-mode**
- Enable the auto install persistent mode. After saving configuration, the switch will start the Auto Install function automatically during next reboot process.
-
- Step 3 **boot autoinstall auto-save**
- Enable the auto save mode and the switch will save the configuration file downloaded as startup configuration file automatically.
-
- Step 4 **boot autoinstall auto-reboot**
- Enable the auto reboot mode and the switch will reboot automatically after the auto install process is completed successfully.
-
- Step 5 **boot autoinstall retry-count** *count*
- Specify the auto install retry count which ranges from 1 to 3. The default value is 1.
-
- Step 6 **boot autoinstall start**
- Start the Auto Install process and the switch will download the configuration file and the backup image automatically.
-

Step 7 **end**
Return to privileged EXEC mode.

Step 8 **copy running-config startup-config**
Save the settings in the configuration file.

 **Note:**

- The switch will obtain a new IP address from the DHCP server during the process of Auto Install. If you want to access to the switch, you should check the new IP address on the DHCP server.
 - If the Auto Install process fails, the switch will restart the process every 10 minutes. You can stop the process manually.
-

The following example shows how to configure the Auto Install function.

Switch#configure

Switch(config)#boot autoinstall persistent-mode

Switch(config)#boot autoinstall auto-save

Switch(config)#boot autoinstall auto-reboot

Switch(config)#boot autoinstall retry-count 2

Switch(config)#show boot autoinstall

```
Auto Insatll Mode.....Stop
Auto Insatll Persistent Mode.....Enabled
Auto Save Mode.....Enabled
Auto Reboot Mode.....Enabled
Auto Insatll Retry Count.....2
Auto Insatll sate.....Stopped
```

4.2.6 Rebooting the Switch

Manually Rebooting the Switch

Follow these steps to reboot the switch:

Step 1 **enable**
Enter privileged mode.

Step 2 **reboot**
Reboot the switch.

Configuring Reboot Schedule

Follow these steps to configure the reboot schedule:

Step 1 **configure**

Enter global configuration mode.

Step 2 Use the following command to set the interval of reboot:

reboot-schedule in *interval* [**save_before_reboot]**

(Optional) Specify the reboot schedule.

interval: Specify a period of time. The switch will reboot after this period. The valid values are from 1 to 43200 minutes.

save_before_reboot: Save the configuration file before the switch reboots. To make this schedule recur, you can add this part to the command.

Use the following command to set the special time of reboot:

reboot-schedule at *time* [*date*] [**save_before_reboot]**

(Optional) Specify the reboot schedule.

time: Specify the time for the switch to reboot, in the format of HH:MM.

date: Specify the date for the switch to reboot, in the format of DD/MM/YYYY. The date should be within 30 days.

save_before_reboot: Save the configuration file before the switch reboots.

If no date is specified, the switch will reboot according to the time you have set. If the time you set is later than the time that this command is executed, the switch will reboot later the same day; otherwise the switch will reboot the next day.

Step 3 **end**

Return to privileged EXEC mode.

Step 4 **copy running-config startup-config**

Save the settings in the configuration file.

The following example shows how to set the switch to reboot at 12:00 on 15/08/2017.

Switch#configure

Switch(config)#reboot-schedule at 12:00 15/08/2017 save_before_reboot

Reboot system at 15/08/2017 12:00. Continue? (Y/N): Y

Reboot Schedule Settings

Reboot schedule at 2017-08-15 12:00 (in 25582 minutes)

Save before reboot: Yes

Switch(config)#end

Switch#copy running-config startup-config

4.2.7 Resetting the Switch

Follow these steps to reset the switch:

Step 1 **enable**

Enter privileged mode.

Step 2 **reset**

Reset the switch, and all configurations of the switch will be reset to the factory defaults.

5 EEE Configuration

Choose the menu **SYSTEM** > **EEE** to load the following page.

Figure 5-1 Configuring EEE

UNIT1	LAGS	Port	Status
<input checked="" type="checkbox"/>		1/0/1	Disabled
<input type="checkbox"/>		1/0/2	Disabled
<input type="checkbox"/>		1/0/3	Disabled
<input type="checkbox"/>		1/0/4	Disabled
<input type="checkbox"/>		1/0/5	Disabled
<input type="checkbox"/>		1/0/6	Disabled
<input type="checkbox"/>		1/0/7	Disabled
<input type="checkbox"/>		1/0/8	Disabled
<input type="checkbox"/>		1/0/9	Disabled
<input type="checkbox"/>		1/0/10	Disabled

Total: 28 1 entry selected. Cancel Apply

Follow these steps to configure EEE:

- 1) In the **EEE Config** section, select one or more ports to be configured.
- 2) Enable or disable EEE on the selected port(s).
- 3) Click **Apply**.

5.1 Using the CLI

Follow these steps to configure EEE:

Step 1	configure Enter global configuration mode.
Step 2	interface { fastEthernet <i>port</i> range fastEthernet <i>port-list</i> gigabitEthernet <i>port</i> range gigabitEthernet <i>port-list</i> ten-gigabitEthernet <i>port</i> range ten-gigabitEthernet <i>port-list</i> } Enter interface configuration mode.
Step 3	eee Enable EEE on the port.

Step 4 **end**
Return to privileged EXEC mode.

Step 5 **copy running-config startup-config**
Save the settings in the configuration file.

The following example shows how to enable the EEE feature on port 1/0/1.

Switch#config

Switch(config)#interface gigabitEthernet 1/0/1

Switch(config-if)#eee

Switch(config-if)#show interface eee

Port EEE status

Gi1/0/1 Enable

Gi1/0/2 Disable

...

Switch(config-if)#end

Switch#copy running-config startup-config

6 PoE Configurations

 Note:

Only PoE switches support the PoE feature.

With the PoE feature, you can:

- Configure the PoE parameters manually
- Configure the PoE parameters using the profile

You can configure the PoE parameters one by one via configuring the PoE parameters manually. You can also set a profile with the desired parameters and bind the profile to the corresponding ports to quickly configure the PoE parameters.

6.1 Using the GUI

6.1.1 Configuring the PoE Parameters Manually

Choose the menu **SYSTEM > PoE > PoE Config** to load the following page.

Figure 6-1 Configuring PoE Parameters Manually

PoE Config

Unit	System Power Limit (W)	System Power Consumption (W)	System Power Remain (W)	Operation
Unit1	384.0	0.0	384.0	
Total: 1				

Port Config

UNIT1

<input type="checkbox"/>	Port	PoE Status	PoE Priority	Power Limit	Power Limit Value (0.1-30.0 W)	Time Range	PoE Profile	Power (W)	Current
<input checked="" type="checkbox"/>	1	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	2	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	3	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	4	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	5	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	6	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	7	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	8	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	9	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	10	Enabled	Low	Class4	30	No Limit	None	0	

Total: 24
1 entry selected.

Cancel
Apply

Follow these steps to configure the basic PoE parameters:

- 1) In the **PoE Config** section, you can view the current PoE parameters.

System Power Limit (w)	Displays the maximum power the PoE switch can supply.
System Power Consumption (w)	Displays the real-time system power consumption of the PoE switch.
System Power Remain (w)	Displays the real-time system remaining power of the PoE switch.

In addition, you can click  and configure the System Power Limit. Click **Apply**.

Figure 6-2 Configuring System Power Limit



Unit	Displays the unit number.
System Power Limit	Specify the maximum power the PoE switch can supply.

2) In the **Port Config** section, select the port you want to configure and specify the parameters. Click **Apply**.

PoE Status	Enable or disable the PoE function for the corresponding port. The port can supply power to the PD when its status is enable.
PoE Priority	Select the priority level for the corresponding port. When the supply power exceeds the system power limit, the switch will power off PDs on low-priority ports to ensure stable running of other PDs.
Power Limit	Specify the maximum power the corresponding port can supply. The following options are provided: Auto: The switch will allocate a value as the maximum power that the port can supply automatically. Class1: The maximum power that the port can supply is 4W. Class2: The maximum power that the port can supply is 7W. Class3: The maximum power that the port can supply is 15.4W. Class4: The maximum power that the port can supply is 30W. Manual: You can enter a value manually.
Power Limit Value (0.1w-30w)	If you select Manual as Power Limit mode, specify a maximum power supply value in this field. If you select Class1 to Class4 as Power Limit mode, you can view the maximum power supply value in this field.
Time Range	Select a time range, then the port will supply power only during the time range. For how to create a time range, refer to Time Range Configuration .

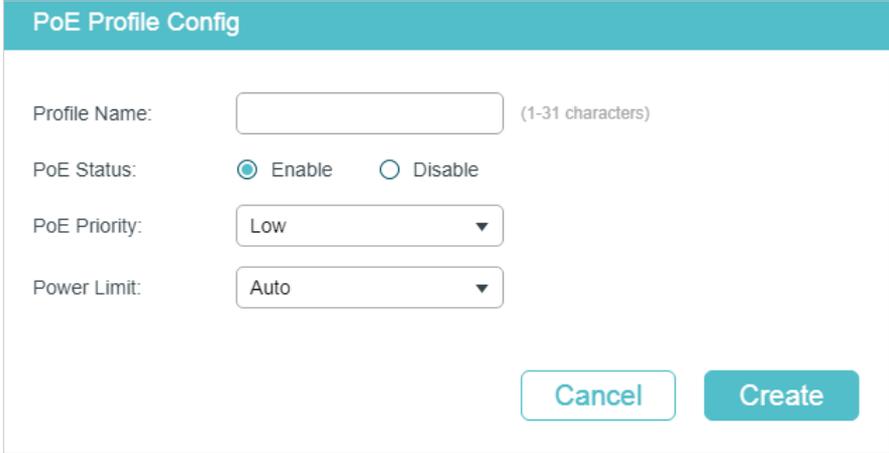
PoE Profile	A quick configuration method for the corresponding ports. If one profile is selected, you will not be able to modify PoE status, PoE priority or power limit manually. For how to create a profile, refer to Configuring the PoE Parameters Using the Profile .
Power (w)	Displays the port's real-time power supply.
Current (mA)	Displays the port's real-time current.
Voltage (v)	Displays the port's real-time voltage.
PD Class	Displays the class the linked PD belongs to.
Power Status	Displays the port's real-time power status.

6.1.2 Configuring the PoE Parameters Using the Profile

Creating a PoE Profile

Choose the menu **SYSTEM > PoE > PoE Profile** and click  **Add** to load the following page.

Figure 6-3 Creating a PoE Profile



Follow these steps to create a PoE profile:

- 1) In the **Create PoE Profile** section, specify the desired configurations of the profile.

Profile Name	Specify a name for the PoE profile.
PoE Status	Specify the PoE status for the PoE profile.
PoE Priority	Specify the priority level for the PoE profile. The following options are provided: High , Middle and Low . When the supply power exceeds the system power limit, the switch will power off PDs on low-priority ports to ensure stable running of other PDs.
Power Limit	Specify the maximum power the port can supply for the PoE profile. The following options are provided: Auto: The switch will allocate a value as the maximum power that the port can supply automatically. Class1 (4w): The maximum power that the port can supply is 4W. Class2 (7w): The maximum power that the port can supply is 7W. Class3 (15.4w): The maximum power that the port can supply is 15.4W. Class4 (30w): The maximum power that the port can supply is 30W. Manual: Enter a value manually.

- 2) Click **Create**.

Binding the Profile to the Corresponding Ports

Choose the menu **SYSTEM > PoE > PoE Config** to load the following page.

Figure 6-4 Binding the Profile to the Corresponding Ports

PoE Config

Unit	System Power Limit (W)	System Power Consumption (W)	System Power Remain (W)	Operation
Unit1	384.0	0.0	384.0	
Total: 1				

Port Config

UNIT1

	Port	PoE Status	PoE Priority	Power Limit	Power Limit Value (0.1-30.0 W)	Time Range	PoE Profile	Power (W)	Current
<input checked="" type="checkbox"/>	1	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	2	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	3	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	4	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	5	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	6	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	7	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	8	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	9	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	10	Enabled	Low	Class4	30	No Limit	None	0	

Total: 24
1 entry selected.
Cancel
Apply

Follow these steps to bind the profile to the corresponding ports:

- 1) In the **PoE Config** section, you can view the current PoE parameters.

System Power Limit (w)	Displays the maximum power the PoE switch can supply.
System Power Consumption (w)	Displays the real-time system power consumption of the PoE switch.
System Power Remain (w)	Displays the real-time system remaining power of the PoE switch.

In addition, you can click  and configure the System Power Limit. Click **Apply**.

Figure 6-5 Configuring System Power Limit

PoE Config

Unit: 1

System Power Limit: W (1-384)

Cancel
Save

Unit	Displays the unit number.
System Power Limit	Specify the maximum power the PoE switch can supply.

- 2) In the **Port Config** section, select one or more ports and configure the following two parameters: Time Range and PoE Profile. Click **Apply** and the PoE parameters of the selected PoE Profile, such as PoE Status and PoE Priority, will be displayed in the table.

PoE Status	Displays the PoE function for the corresponding port. The port can supply power to the PD when its status is enable.
PoE Priority	Displays the priority level for the corresponding port. When the supply power exceeds the system power limit, the switch will power off PDs on low-priority ports to ensure stable running of other PDs.
Power Limit	Displays the maximum power the corresponding port can supply.
Power Limit Value (0.1W-30.0W)	Displays the power limit value.
Time Range	Select a time range, then the port will supply power only during the time range. For how to create a time range, refer to Time Range Configuration .
PoE Profile	Select the PoE profile for the desired port. If one profile is selected, you will not be able to modify PoE status, PoE priority or power limit manually.
Power (W)	Displays the port's real-time power supply.
Current (mA)	Displays the port's real-time current.
Voltage (V)	Displays the port's real-time voltage.
PD Class	Displays the class the linked PD belongs to.
Power Status	Displays the port's real-time power status.

6.2 Using the CLI

6.2.1 Configuring the PoE Parameters Manually

Follow these steps to configure the basic PoE parameters:

Step 1	<p>configure</p> <p>Enter global configuration mode.</p>
Step 2	<p>power inline consumption <i>power-limit</i></p> <p>Specify the maximum power the PoE switch can supply globally.</p> <p><i>power-limit</i>: Specify the maximum power the PoE switch can supply. It ranges from 1.0 to 384.0W, and the default value is 384.0W.</p>
Step 3	<p>interface { fastEthernet <i>port</i> range fastEthernet <i>port-list</i> gigabitEthernet <i>port</i> range gigabitEthernet <i>port-list</i> ten-gigabitEthernet <i>port</i> range ten-gigabitEthernet <i>port-list</i> }</p> <p>Enter Interface Configuration mode.</p> <p><i>port</i>: Specify the Ethernet port number, for example 1/0/1.</p> <p><i>port-list</i>: Specify the list of Ethernet ports, for example 1/0/1-3, 1/0/5.</p>
Step 4	<p>power inline supply { enable disable }</p> <p>Specify the PoE status for the corresponding port.</p> <p><i>enable disable</i>: Enable or disable the PoE function. By default, it is enable.</p>
Step 5	<p>power inline priority { low middle high }</p> <p>Specify the PoE priority for the corresponding port.</p> <p><i>low middle high</i>: Select the priority level for the corresponding port. When the supply power exceeds the system power limit, the switch will power off PDs on low-priority ports to ensure stable running of other PDs. The default setting is low.</p>
Step 6	<p>power inline consumption { <i>power-limit</i> auto class1 class2 class3 class4 }</p> <p>Specify the maximum power the corresponding port can supply.</p> <p><i>power-limit auto class1 class2 class3 class4</i>: Select or enter the maximum power the corresponding port can supply. The following options are provided: Auto represents that the switch will allocate the maximum power that the port can supply automatically. Class1 represents 4W, Class2 represents 7W, Class3 represents 15.4W and Class4 represents 30W, or you can enter a value manually. The value ranges from 1 to 300. It is in the unit of 0.1 watt. For instance, if you want to configure the maximum power as 5W, you should enter 50. By default, it is Class4.</p>
Step 7	<p>time-range <i>name</i></p> <p>Specify a time range for the port. Then the port will supply power only during the time range. For how to create a time range, refer to Time Range Configuration.</p> <p><i>name</i>: Specify the name of the time range.</p>
Step 8	<p>show power inline</p> <p>Verify the global PoE information of the system.</p>

-
- Step 9 **show power inline configuration interface [fastEthernet { port | port-list } | gigabitEthernet { port | port-list } | ten-gigabitEthernet { port | port-list }]**
 Verify the PoE configuration of the corresponding port.
port: Specify the Ethernet port number, for example 1/0/1.
port-list: Specify the list of Ethernet ports, in the format of 1/0/1-3, 1/0/5.
-
- Step 10 **show power inline information interface [fastEthernet { port | port-list } | gigabitEthernet { port | port-list } | ten-gigabitEthernet { port | port-list }]**
 Verify the real-time PoE status of the corresponding port.
port: Specify the Ethernet port number, for example 1/0/1.
port-list: Specify the list of Ethernet ports, in the format of 1/0/1-3, 1/0/5.
-
- Step 11 **end**
 Return to privileged EXEC mode.
-
- Step 12 **copy running-config startup-config**
 Save the settings in the configuration file.
-

The following example shows how to set the system power limit as 160W. Set the priority as middle and set the power limit as class3 for the port 1/0/5.

Switch#configure

Switch(config)#power inline consumption 160

Switch(config)#interface gigabitEthernet 1/0/5

Switch(config-if)#power inline supply enable

Switch(config-if)#power inline priority middle

Switch(config-if)#power inline consumption class3

Switch(config-if)#show power inline

System Power Limit: 160.0w

System Power Consumption: 0.0w

System Power Remain: 160.0w

Switch(config-if)#show power inline configuration interface gigabitEthernet 1/0/5

Interface	PoE-Status	PoE-Prio	Power-Limit(w)	Time-Range	PoE-Profile
-----	-----	-----	-----	-----	-----
Gi1/0/5	Enable	Middle	Class3	No Limit	None

Switch(config-if)#show power inline information interface gigabitEthernet 1/0/5

Interface	Power(w)	Current(mA)	Voltage(v)	PD-Class	Power-Status
Gi1/0/5	1.3	26	53.5	Class 2	ON

```
Switch(config-if)#end
```

```
Switch#copy running-config startup-config
```

6.2.2 Configuring the PoE Parameters Using the Profile

Follow these steps to configure the PoE profile:

Step 1	<p>configure</p> <p>Enter global configuration mode.</p>
Step 2	<p>power inline consumption <i>power-limit</i></p> <p>Specify the maximum power the PoE switch can supply globally.</p> <p><i>power-limit</i>: Specify the maximum power the PoE switch can supply. It ranges from 1.0 to 384.0W, and the default value is 384.0W.</p>
Step 3	<p>power profile <i>name</i> [supply { enable disable } [priority { low middle high } [consumption { <i>power-limit</i> auto class1 class2 class3 class4 }]]]]</p> <p>Create a PoE profile for the switch. In a profile, the PoE status, PoE priority and power limit are configured. You can bind a profile to the corresponding port to quickly configure the PoE function.</p> <p><i>name</i>: Specify a name for the PoE profile. It ranges from 1 to 16 characters. If the name contains spaces, enclose the name in double quotes.</p> <p>enable disable: Specify the PoE status for the profile. By default, it is enable.</p> <p>low middle high: Select the priority level for the profile. When the supply power exceeds the system power limit, the switch will power off PDs on low-priority ports to ensure stable running of other PDs.</p> <p><i>power-limit</i> auto class1 class2 class3 class4: Select or enter the maximum power the corresponding port can supply. The following options are provided: Auto represents that the switch will assign a value of maximum power automatically. Class1 represents 4W, Class2 represents 7W, Class3 represents 15.4W and Class4 represents 30W or you can enter a value manually. The value ranges from 1 to 300. It is in the unit of 0.1 watt. For instance, if you want to configure the maximum power as 5W, you should enter 50.</p>
Step 4	<p>interface { fastEthernet <i>port</i> range fastEthernet <i>port-list</i> gigabitEthernet <i>port</i> range gigabitEthernet <i>port-list</i> ten-gigabitEthernet <i>port</i> range ten-gigabitEthernet <i>port-list</i> }</p> <p>Enter Interface Configuration mode.</p> <p><i>port</i>: Specify the Ethernet port number, for example 1/0/1.</p> <p><i>port-list</i>: Specify the list of Ethernet ports, for example 1/0/1-3, 1/0/5.</p>

Step 5	power inline profile <i>name</i>
	Bind a PoE profile to the desired port. If one profile is selected, you will not be able to modify PoE status, PoE priority or power limit manually. <i>name</i> : Specify the name of the PoE profile. If the name contains spaces, enclose the name in double quotes.
Step 6	time-range <i>name</i>
	Specify a time range for the port. Then the port will supply power only during the time range. For how to create a time range, refer to Time Range Configuration . <i>name</i> : Specify the name of the time range.
Step 7	show power profile
	Verify the defined PoE profile.
Step 8	show power inline configuration interface [fastEthernet { <i>port</i> <i>port-list</i> } gigabitEthernet { <i>port</i> <i>port-list</i> } ten-gigabitEthernet { <i>port</i> <i>port-list</i> }]
	Verify the PoE configuration of the corresponding port. <i>port</i> : Specify the Ethernet port number, for example 1/0/1. <i>port-list</i> : Specify the list of Ethernet ports, in the format of 1/0/1-3, 1/0/5.
Step 9	show power inline information interface [fastEthernet { <i>port</i> <i>port-list</i> } gigabitEthernet { <i>port</i> <i>port-list</i> } ten-gigabitEthernet { <i>port</i> <i>port-list</i> }]
	Verify the real-time PoE status of the corresponding port. <i>port</i> : Specify the Ethernet port number, for example 1/0/1. <i>port-list</i> : Specify the list of Ethernet ports, in the format of 1/0/1-3, 1/0/5.
Step 10	end
	Return to privileged EXEC mode.
Step 11	copy running-config startup-config
	Save the settings in the configuration file.

The following example shows how to create a profile named profile1 and bind the profile to the port 1/0/6.

```
Switch#configure
```

```
Switch(config)#power profile profile1 supply enable priority middle consumption class2
```

```
Switch(config)#show power profile
```

Index	Name	Status	Priority	Power-Limit(w)
-----	-----	-----	-----	-----
1	profile1	Enable	Middle	Class2

```
-----
```

```
1 profile1 Enable Middle Class2
```

```
Switch(config)#interface gigabitEthernet 1/0/6
```

```
Switch(config-if)#power inline profile profile1
```

```
Switch(config-if)#show power inline configuration interface gigabitEthernet 1/0/6
```

Interface	PoE-Status	PoE-Prio	Power-Limit(w)	Time-Range	PoE-Profile
-----	-----	-----	-----	-----	-----
Gi1/0/6	Enable	Middle	Class2	No Limit	profile1

```
Switch(config-if)#end
```

```
Switch#copy running-config startup-config
```

7 SDM Template Configuration

7.1 Using the GUI

Choose the menu **SYSTEM > SDM Template** to load the following page.

Figure 7-1 Configuring SDM Template

SDM Template Config

Current Template: Default

Next Template: Default

Select Next Template: ▼

[Apply](#)

SDM Template Table

SDM Template	IP ACL Rules	MAC ACL Rules	Combined ACL Rules	IPv6 ACL Rules	IPv6 Source Guard Entries	Packet Content ACL Rules
Default	200	100	50	0	0	50
EnterpriseV4	360	230	50	0	0	50
EnterpriseV6	100	100	0	50	120	50
Total: 3						

In **SDM Template Config** section, select one template and click **Apply**. The setting will be effective after the switch is rebooted.

Current Template	Displays the template currently in effect.
Next Template	Displays the template that will be effective after the reboot.
Select Next Template	<p>Select the template that will be effective after the next reboot.</p> <p>Default: Select the template of default. It gives balance to the IP ACL rules, MAC ACL rules and ARP detection entries.</p> <p>EnterpriseV4: Select the template of enterpriseV4. It maximizes system resources for IP ACL rules and MAC ACL rules.</p> <p>EnterpriseV6: Select the template of enterpriseV6. It allocates resources to IPv6 ACL rules.</p>

The Template Table displays the resources allocation of each template. Note that the SDM template table listed here may differ from your product.

SDM Template	Displays the name of the templates.
---------------------	-------------------------------------

IP ACL Rules	Displays the number of IP ACL Rules including Layer 3 ACL Rules and Layer 4 ACL Rules.
MAC ACL Rules	Displays the number of Layer 2 ACL Rules.
Combined ACL Rules	Displays the number of combined ACL rules.
IPv6 ACL Rules	Displays the number of IPv6 ACL rules.
ARP Detection Entries	Displays the number of TCAM entries for ARP defend.
IPv6 Source Guard Entries	Displays the number of IPv6 source guard entries.
Packet Content ACL Rules	Displays the number of packet content ACL rules.

7.2 Using the CLI

Follow these steps to configure the SDM template:

Step 1	<p>configure</p> <p>Enter global configuration mode.</p>
Step 2	<p>show sdm prefer { used default enterpriseV4 enterpriseV6 }</p> <p>View the template table. It will help you determine which template is suitable for your network.</p> <p>used: Displays the resource allocation of the current template.</p> <p>default: Displays the resource allocation of the default template.</p> <p>enterpriseV4: Displays the resource allocation of the enterpriseV4 template.</p> <p>enterpriseV6: Displays the resource allocation of the enterpriseV6 template.</p>
Step 3	<p>sdm prefer { default enterpriseV4 enterpriseV6 }</p> <p>Select the template that will be effective after the switch is rebooted.</p> <p>default: Select the template of default. It gives balance to the IP ACL rules, MAC ACL rules and ARP detection entries.</p> <p>enterpriseV4: Select the template of enterpriseV4. It maximizes system resources for IP ACL rules and MAC ACL rules.</p> <p>enterpriseV6: Select the template of enterpriseV4. It allocates resources to IPv6 ACL rules.</p>
Step 4	<p>end</p> <p>Return to privileged EXEC mode.</p>

Step 5 copy running-config startup-config

Save the settings in the configuration file.

The following example shows how to set the SDM template as enterpriseV4.

Switch#config**Switch(config)#show sdm prefer enterpriseV4**

"enterpriseV4" template:

number of IP ACL Rules : 360

number of MAC ACL Rules : 230

number of Combined ACL Rules : 0

number of IPV6 ACL Rules : 0

number of IPV6 Source Guard Entries : 0

number of ARP Detection Entries : 7

number of Packet Content ACL Rules : 0

Switch(config)#sdm prefer enterpriseV4

Switch to "enterpriseV4" tempale.

Changes to the running SDM preferences have been stored, but cannot take effect until reboot the switch.

Switch(config)#end**Switch#copy running-config startup-config**

8 Time Range Configuration

To complete Time Range configuration, follow these steps:

- 1) Add time range entries.
- 2) Configure Holiday time range.

8.1 Using the GUI

8.1.1 Adding Time Range Entries

Choose the menu **SYSTEM > Time Range > Time Range Config** and click  Add to load the following page.

Figure 8-1 Configuring Time Range

Time-Range Config

Name: (1-16 characters)

Holiday: Exclude Include

Period Time Config

 Add  Delete

<input type="checkbox"/>	Index	Date	Day	Time	Operation
No entries in this table.					
Total: 0					

Discard
Create

Follow these steps to add time range entries:

- 1) In the **Time-Range Config** section, specify a name for the entry and select the Holiday mode.

Name	Specify a name for the entry.
Holiday	Select to include or exclude the holiday in the time range. Exclude: The time range will not take effect on holiday. Include: The time range will not be affected by holiday. To configure Holiday, refer to Configuring Holiday .

- 2) In the **Period Time Config** section, click  Add and the following window will pop up.

Figure 8-2 Adding Period Time

Period Time Config

Date

From Month: Day: Year:

To Month: Day: Year:

Time

From: (Format: HH:MM)

To: (Format: HH:MM)

Day of Week

Mon Tue Wed Thu Fri Sat Sun

Configure the following parameters and click **Create**:

Date	Specify the start date and end date of this time range.
Time	Specify the start time and end time of a day.
Day of Week	Select days of a week as the period of this time range.

- 3) Similarly, you can add more entries of period time according to your needs. The final period time is the sum of all the periods in the table. Click **Create**.

Figure 8-3 View Configuration Result

Time-Range Config

Name: (1-16 characters)

Holiday: Exclude Include

Period Time Config

+ Add - Delete

<input type="checkbox"/>	Index	Date	Day	Time	Operation
<input type="checkbox"/>	1	January 1, 2017 - November 1, 2017	Mon, Tue, Wed, Thu, Fri	08:00 - 20:00	<input type="checkbox"/> <input type="checkbox"/>
Total: 1					

Discard
Create

8.1.2 Configuring Holiday

Choose the menu **SYSTEM > Time Range > Holiday Config** and click + Add to load the following page.

Figure 8-1 Configuring Holiday

Holiday Config

Holiday Name: (1-31 characters)

Start Date

Month: Day:

End Date

Month: Day:

Cancel
Create

Configure the following parameters and click **Create** to add a Holiday entry.

Holiday Name	Specify a name for the entry.
Start Date	Specify the start date of the Holiday time range.
End Date	Specify the end date of the Holiday time range.

Similarly, you can add more Holiday entries. The final Holiday time range is the sum of all the entries.

8.2 Using the CLI

8.2.1 Adding Time Range Entries

Follow these steps to add time range entries:

Step 1	configure Enter global configuration mode.
Step 2	time-range <i>name</i> Create a time-range entry. <i>name</i> : Specify a name for the entry.
Step 3	holiday { <i>exclude</i> <i>include</i> } Include or exclude the holiday in the time range. <i>exclude</i> : The time range will not take effect on holiday. <i>include</i> : The time range will not be affected by holiday. To configure Holiday, refer to Configuring Holiday .
Step 4	absolute from <i>start-date</i> to <i>end-date</i> Specify the start date and end date of this time range. <i>start-date</i> : Specify the start date in the format MM/DD/YYYY. <i>end-date</i> : Specify the end date in the format MM/DD/YYYY.
Step 5	periodic { [<i>start start-time</i>] [<i>end end-time</i>] [<i>day-of-the-week week-day</i>] } Specify days of a week as the period of this time range. <i>start-time</i> : Specify the start end time of a day in the format HH:MM. <i>end-time</i> : Specify the end time and end time of a day in the format HH:MM. <i>week-day</i> : Specify the days of week in the format of 1-3, 7. The numbers 1-7 respectively represent Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday.
Step 6	show time-range View the configuration of Time Range.
Step 7	end Return to privileged EXEC mode.
Step 8	copy running-config startup-config Save the settings in the configuration file.

The following example shows how to create a time range entry and set the name as time1, holiday mode as exclude, absolute time as 10/01/2017 to 10/31/2017 and periodic time as 8:00 to 20:00 on every Monday and Tuesday:

Switch#config

Switch(config)#time-range time1

Switch(config-time-range)#holiday exclude

Switch(config-time-range)#absolute from 10/01/2017 to 10/31/2017

Switch(config-time-range)#periodic start 08:00 end 20:00 **day-of-the-week** 1,2

Switch(config-time-range)#show time-range

Time-range entry: 12 (Inactive)

Time-range entry: time1 (Inactive)

holiday: exclude

number of time slice: 1

01 - 10/01/2017 to 10/31/2017

- 08:00 to 20:00 on 1,2

Switch(config-time-range)#end

Switch#copy running-config startup-config

8.2.2 Configuring Holiday

Follow these steps to configure Holiday time range:

-
- | | |
|--------|---|
| Step 1 | <p>configure</p> <p>Enter global configuration mode.</p> |
|--------|---|
-
- | | |
|--------|---|
| Step 2 | <p>holiday <i>name</i> start-date <i>start-date</i> end-date <i>end-date</i></p> <p>Create a holiday entry.</p> <p><i>name</i>: Specify a name for the entry.</p> <p><i>start-date</i> : Specify the start date in the format MM/DD.</p> <p><i>end-date</i>: Specify the end date in the format MM/DD.</p> |
|--------|---|
-
- | | |
|--------|--|
| Step 3 | <p>show holiday</p> <p>View the configuration of Holiday.</p> |
|--------|--|
-
- | | |
|--------|--|
| Step 4 | <p>end</p> <p>Return to privileged EXEC mode.</p> |
|--------|--|
-

Step 8 **copy running-config startup-config**

Save the settings in the configuration file.

The following example shows how to create a holiday entry and set the entry name as holiday1 and set start date and end date as 07/01 and 09/01:

Switch#config**Switch(config)#holiday** holiday1 **start-date** 07/01 **end-date** 09/01**Switch(config)#show holiday**

Index	Holiday Name	Start-End
-----	-----	-----
1	holiday1	07.01-09.01

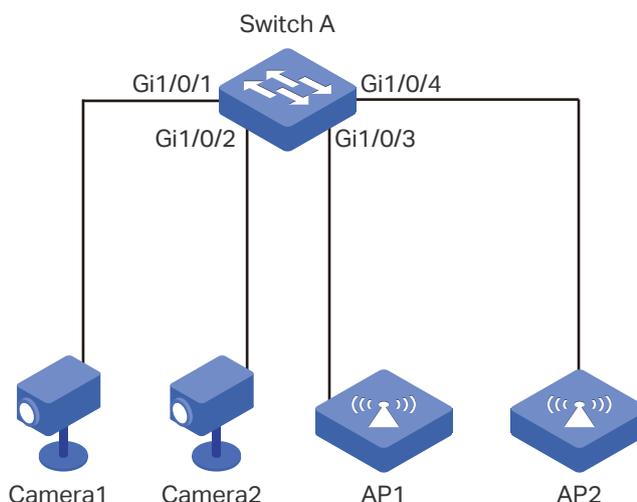
Switch(config)#end**Switch#copy running-config startup-config**

9 Example for PoE Configurations

9.1 Network Requirements

The network topology of a company is shown as below. Camera1 and Camera2 work for the security of the company and cannot be power off all the time. AP1 and AP2 provide the internet service and only work in the office time.

Figure 9-1 Network Topology



9.2 Configuring Scheme

To implement this requirement, you can set a PoE time-range as the office time, for example, from 08:30 to 18:00 on work days. Then apply the settings to port 1/0/3 and 1/0/4. Port 1/0/1 and port 1/0/2 need to supply power all the time, so the time range configurations can be left as the default settings here.

9.3 Using the GUI

The configurations of port 1/0/4 is similar with the configurations of port 1/0/3. Here we take port 1/0/3 for example.

- 1) Choose the menu **SYSTEM > Time Range > Time Range Create** and click  Add to load the following page.

Figure 9-2 Creating Time Range

Time-Range Config

Name: (1-16 characters)

Holiday: Exclude Include

Period Time Config

+ Add - Delete

<input type="checkbox"/>	Index	Date	Day	Time	Operation
No entries in this table.					
Total: 0					

Discard
Create

- 2) Click + Add and the following window will pop up. Set **Date**, **Time** and **Day** of Week as the following figure shows. Click **Create**.

Figure 9-3 Creating a Periodic Time

Period Time Config

Date

From:
 Month: Day: Year:

To:
 Month: Day: Year:

Time

From: 08:30 (Format: HH:MM)

To: 18:00 (Format: HH:MM)

Day of Week

Mon
 Tue
 Wed
 Thu
 Fri
 Sat
 Sun

Cancel
Create

- 3) Specify a name for the time range. Click **Create**.

Figure 9-4 Configuring Time Range

Time-Range Config

Name: (1-16 characters)

Holiday: Exclude Include

Period Time Config

+ Add - Delete

<input type="checkbox"/>	ID	Date	Day	Time	Operation
<input type="checkbox"/>	0	January 1, 2017 - January 1, 2018	Mon,Tue,Wed,Thu,Fri	08:30 - 18:00	
Total: 0					

- 4) Choose the menu **SYSTEM > PoE > PoE Config** to load the following page. Select port 1/0/3 and set the **Time Range** as OfficeTime. Click **Apply**.

Figure 9-5 Configure the Port

PoE Config

Unit	System Power Limit (W)	System Power Consumption (W)	System Power Remain (W)	Operation
Unit1	192.0	0.0	192.0	
Total: 1				

Port Config

UNIT1

<input type="checkbox"/>	Port	PoE Status	PoE Priority	Power Limit	Power Limit Value (0.1-30.0 W)	Time Range	PoE Profile	Power (W)	Current
<input type="checkbox"/>	1	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	2	Enabled	Low	Class4	30	No Limit	None	0	
<input checked="" type="checkbox"/>	3	Enabled	Low	Class4	30	OfficeTime	None	0	
<input type="checkbox"/>	4	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	5	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	6	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	7	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	8	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	9	Enabled	Low	Class4	30	No Limit	None	0	
<input type="checkbox"/>	10	Enabled	Low	Class4	30	No Limit	None	0	

Total: 24 1 entry selected.

- 5) Click Save to save the settings.

9.4 Using the CLI

The configurations of Port1/0/4 is similar with the configuration of port 1/0/3. Here we take port 1/0/3 for example.

- 1) Create a time-range.

```
Switch_A#config
```

```
Switch_A(config)#time-range office-time
```

```
Switch_A(config-time-range)#holiday exclude
```

```
Switch_A(config-time-range)#absolute from 01/01/2017 to 01/01/2018
```

```
Switch_A(config-time-range)#periodic start 08:30 end 18:00 day-of-the-week 1-5
```

```
Switch_A(config-time-range)#exit
```

- 2) Enable the PoE function on the port 1/0/3. Specify the basic parameters for the port 1/0/3 and bind the time-range "office time" to the port.

```
Switch_A(config)#interface gigabitEthernet 1/0/3
```

```
Switch_A(config-if)#power inline supply enable
```

```
Switch_A(config-if)#power inline time-range office-time
```

```
Switch_A(config-if)#end
```

```
Switch_A#copy running-config startup-config
```

Verify the Configuration

- 3) Verify the configuration of the time-range:

```
Switch_A#show time-range
```

```
Time-range entry: office-time (Active)
```

```
holiday: exclude
```

```
number of time slice: 1
```

```
01 - 01/01/2017 to 01/01/2018
```

```
- 08:00 to 18:00 on 1,2,3,4,5
```

- 4) Verify the configuration of the PoE basic parameters:

```
Switch_A#show power inline configuration interface gigabitEthernet 1/0/3
```

Interface	PoE-Status	PoE-Prio	Power-Limit(w)	Time-Range	PoE-Profile
Gi1/0/3	Enable	Low	Class4	office-time	None

10 Appendix: Default Parameters

Default settings of System Info are listed in the following tables.

Table 10-1 Default Settings of Device Description Configuration

Parameter	Default Setting
Device Name	The model name of the switch.
Device Location	SHENZHEN
System Contact	www.tp-link.com

Table 10-2 Default Settings of System Time Configuration

Parameter	Default Setting
Time Source	Manual

Table 10-3 Default Settings of Daylight Saving Time Configuration

Parameter	Default Setting
DST status	Disabled

Default settings of User Management are listed in the following table.

Table 10-4 Default Settings of User Configuration

Parameter	Default Setting
User Name	admin
Password	admin
Access Level	Admin

Default settings of System Tools are listed in the following table.

Table 10-5 Default Settings of Boot Configuration

Parameter	Default Setting
Current Startup Image	image1.bin
Next Startup Image	image1.bin
Backup Image	image2.bin
Current Startup Config	config1.cfg
Next Startup Config	config1.cfg

Parameter	Default Setting
Backup Config	config2.cfg

Default setting of EEE is listed in the following table.

Table 10-6 Default Settings of EEE Configuration

Parameter	Default Setting
Status	Disabled

Default settings of PoE is listed in the following table.

Table 10-7 Default Settings of PoE Configuration

Parameter	Default Setting
PoE Config	
System Power Limit	384.0W
Port Config	
PoE Status	Enable
PoE Priority	Low
Power Limit (0.1w-30.0w)	Class 4
Time Range	No Limit
PoE Profile	None
Profile Config	
Profile Name	None
PoE Status	Enable
PoE Priority	High
Power Limit	Auto

Default settings of SDM Template are listed in the following table.

Table 10-8 Default Settings of SDM Template Configuration

Parameter	Default Setting
Current Template ID	Default
Next Template ID	Default

Default settings of Time Range are listed in the following table.

Table 10-9 Default Settings of Time Range Configuration

Parameter	Default Setting
Holiday	Include