

# Web Configuration

# Table of Contents

Chapter 1 Configuration Preparation .....	4
1.1 Accessing the Switch Through HTTP .....	7
1.1.1 Initially Accessing the Switch.....	7
1.1.2 Upgrading to the Web-Supported Version.....	8
1.2 Accessing a Switch Through Secure Links.....	8
1.3 Introduction of Web Interface .....	8
1.3.1 Top Control Bar.....	9
1.3.2 Navigation Bar .....	10
1.3.3 Configuration Area .....	10
1.3.4 Bottom Control Bar .....	11
1.3.5 Configuration Area .....	11
Chapter 2 Basic Configuration.....	12
2.1 IP Address Configuration .....	12
2.2 Hostname Configuration .....	13
2.3 Time Management .....	13
Chapter 3 Configuration of the Physical Interface.....	15
3.1 Configuring Port Description.....	15
3.2 Configuring the Attributes of the Port.....	16
3.3 Rate control .....	16
3.4 Storm control .....	19
3.4.1 Broadcast Storm Control .....	19
3.4.2 Multicast Storm Control.....	20
3.4.3 Unknown Unicast Storm Control .....	21
3.5 Port security.....	错误！未定义书签。
3.5.1 IP Binding Configuration.....	错误！未定义书签。
3.5.2 MAC Binding Configuration .....	错误！未定义书签。
3.5.3 Setting the Static MAC Filtration Mode .....	错误！未定义书签。
3.5.4 Static MAC Filtration Entries .....	错误！未定义书签。
3.5.5 Setting the Dynamic MAC Filtration Mode .....	错误！未定义书签。
3.6 Port Mirror .....	错误！未定义书签。
3.7 Setting the Serial-Interface Server.....	错误！未定义书签。
3.8 Loopback Detection .....	错误！未定义书签。
3.9 DDM Configuration .....	错误！未定义书签。
Chapter 4 Layer-2 Configuration.....	22
4.1 VLAN Settings .....	23
4.1.1 VLAN List .....	23
4.1.2 VLAN Settings.....	23
4.2 PDP Configuration.....	24
4.2.1 Configuring the Global Attributes of PDP .....	24
4.2.2 Configuring the Attributes of the PDP Port.....	24
4.3 LLDP Configuration .....	24

---

4.3.1 Configuring the Global Attributes of LLDP .....	24
4.3.2 Configuring the Attributes of the LLDP Port.....	25
4.4 Link Aggregation Configuration .....	25
4.5 STP Configuration .....	26
4.5.1 STP Status Information .....	26
4.5.2 Configuring the Attributes of the STP Port.....	27
4.6 IGMP-Snooping Configuration .....	27
4.6.1 IGMP-Snooping Configuration .....	27
4.6.2 IGMP-Snooping VLAN List.....	28
4.6.3 Static Multicast Address.....	28
4.6.4 Multicast List .....	29
4.7 Setting Static ARP .....	29
4.8 Ring Protection Configuration.....	30
4.8.1 EAPS Ring List.....	30
4.8.2 EAPS Ring Configuration .....	31
4.9 EVC Configuration .....	31
4.9.1 Global QinQ Configuration .....	31
4.9.2 Configuring the QinQ Port.....	32
Chapter 5 Layer-3 Configuration.....	33
5.1 Configuring the VLAN Interface .....	33
5.2 Setting the Static Route .....	34
5.3 IGMP Agent.....	35
5.3.1 Enabling the IGMP Agent .....	35
5.3.2 Setting the IGMP Agent .....	35
Chapter 6 Advanced Configuration .....	36
6.1 QoS Configuration.....	36
6.1.1 Configuring QoS Port .....	36
6.1.2 Global QoS Configuration .....	37
6.2 MAC Access Control List.....	37
6.2.1 Setting the Name of the MAC Access Control List.....	37
6.2.2 Setting the Rules of the MAC Access Control List.....	38
6.2.3 Applying the MAC Access Control List .....	38
6.3 IP Access Control List.....	39
6.3.1 Setting the Name of the IP Access Control List.....	39
6.3.2 Setting the Rules of the IP Access Control List .....	39
6.3.3 Applying the IP Access Control List.....	41
Chapter 7 Network Management Configuration.....	42
7.1 SNMP Configuration .....	42
7.1.1 SNMP Community Management.....	42
7.1.2 SNMP Host Management .....	43
7.2 RMON .....	43
7.2.1 RMON Statistic Information Configuration.....	43
7.2.2 RMON History Information Configuration.....	44
7.2.3 RMON Alarm Information Configuration .....	45
7.2.4 RMON Event Configuration.....	45
Chapter 8 Diagnosis Tools.....	47

---

8.1 Ping.....	47
8.1.1 Ping.....	47
Chapter 9 System Management .....	49
9.1 User Management.....	49
9.1.1 User List .....	49
9.1.2 Establishing a New User.....	50
9.2 Log Management .....	50
9.3 Managing the Configuration Files .....	51
9.3.1 Exporting the Configuration Information.....	51
9.3.2 Importing the Configuration Information .....	52
9.4 Software Management .....	52
9.4.1 Backing up the IOS Software.....	52
9.4.2 Upgrading the IOS Software.....	53
9.5 Resuming Initial Configuration .....	53
9.6 Rebooting the Device .....	54

## Chapter 1 HTTP Switch Configuration

### 1.1 HTTP Configuration

Switch configuration can be conducted not only through command lines and SNMP but also through Web browser. The switches support the HTTP configuration, the abnormal packet timeout configuration, and so on.

#### 1.1.1 Choosing the Prompt Language

Up to now, switches support two languages, that is, English and Chinese, and the two languages can be switched over through the following command.

Command	Purpose
ip http language {chinese   english}	Sets the prompt language of Web configuration to <b>Chinese</b> or <b>English</b> .

#### 1.1.2 Setting the HTTP Port

Generally, the HTTP port is port 80 by default, and users can access a switch by entering the IP address directly; however, switches also support users to change the service port and after the service port is changed you have to use the IP address and the changed port to access switches. For example, if you set the IP address and the service port to **192.168.1.3** and **1234** respectively, the HTTP access address should be changed to **http:// 192.168.1.3:1234**. You'd better not use other common protocols' ports so that access collision should not happen. Because the ports used by a lot of protocols are hard to remember, you'd better use port IDs following port 1024.

Command	Purpose
ip http port { portNumber }	Sets the HTTP port.

#### 1.1.3 Enabling the HTTP Service

Switches support to control the HTTP access. Only when the HTTP service is enabled can HTTP exchange happen between switch and PC and, when the HTTP service is closed, HTTP exchange stops.

Command	Purpose
ip http server	Enables the HTTP service.
ip http {timeout}	Configures the timeout time of HTTP abnormal packets.

#### 1.1.4 Setting the HTTP Access Mode

You can access a switch through two access modes: HTTP access and HTTPS access, and you can use the following command to set the access mode to **HTTP**.

Command	Purpose
ip http http-access enable	Sets the HTTP access mode.

### 1.1.5 Setting the Maximum Number of VLAN Entries on Web Page

A switch supports at most 4094 VLANs and in most cases Web only displays parts of VLANs, that is, those VLANs users want to see. You can use the following command to set the maximum number of VLANs. The default maximum number of VLANs is 100.

Command	Purpose
ip http web max-vlan { <i>max-vlan</i> }	Sets the maximum number of VLAN entries displayed in a web page.

### 1.1.6 Setting the Maximum Number of Multicast Entries Displayed on a Web Page

A switch supports at most 100 multicast entries. You can run the following command to set the maximum number of multicast entries and Web then shows these multicast entries. The default maximum number of multicast entries is 15.

Command	Purpose
ip http web igmp-groups { <i>igmp-groups</i> }	Sets the maximum number of multicast entries displayed in a web page.

## 1.2 HTTPS Configuration

In order to improve the security of communications, switches support not only the HTTP protocol but also the HTTPS protocol. HTTPS is a security-purposed HTTP channel and it is added to the SSL layer under HTTP.

### 1.2.1 Setting the HTTP Access Mode

You can run the following command to set the access mode to **HTTPS**.

Command	Purpose
ip http ssl-access enable	Sets the HTTPS access mode.

### 1.2.2 It is used to set the HTTPS port.

As the HTTP port, HTTPS has its default service port, port 443, and you also can run the following command to change its service port. It is recommended to use those ports following port 1024 so as to avoid collision with other protocols' ports.

Parameter	Remarks
ip http secure-port	Sets the HTTPS port.

<i>{portNumber}</i>	
---------------------	--

## Chapter 2 Configuration Preparation

### 2.1 Accessing the Switch Through HTTP

When accessing the switch through Web, please make sure that the applied browser complies with the following requirements:

- HTML of version 4.0
- HTTP of version 1.1
- JavaScript™ of version 1.5

What's more, please ensure that the main program file, running on a switch, supports Web access and your computer has already connected the network in which the switch is located.

#### 2.1.1 Initially Accessing the Switch

When the switch is initially used, you can use the Web access without any extra settings:

1. Modify the IP address of the network adapter and subnet mask of your computer to **192.168.0.1** and **255.255.255.0** respectively.
2. Open the Web browser and enter **192.168.0.1** in the address bar. It is noted that **192.168.0.1** is the default management address of the switch.
3. If the Internet Explorer browser is used, you can see the dialog box in figure 1. Both the original username and the password are "admin", which is capital sensitive.



Figure 1: ID checkup of WEB login

4. After successful authentication, the systematic information about the switch will appear on the IE browser.



## 2.1.2 Upgrading to the Web-Supported Version

If your switch is upgraded to the Web-supported version during its operation and the switch has already stored its configuration files, the Web visit cannot be directly applied on the switch. Perform the following steps one by one to enable the Web visit on the switch:

1. Connect the console port of the switch with the accessory cable, or telnet to the management address of the switch through the computer.
2. Enter the global configuration mode of the switch through the command line, the DOS prompt of which is similar to "Switch\_config#".
3. If the management address of the switch is not configured, please create the VLAN interface and configure the IP address.
4. Enter the **ip http server** command in global configuration mode and start the Web service.
5. Run **username** to set the username and password of the switch. For how to use this command, refer to the "Security Configuration" section in the user manual.

After the above-mentioned steps are performed, you can enter the address of the switch in the Web browser to access the switch.

6. Enter **write** to store the current configuration to the configuration file.

## 2.2 Accessing a Switch Through Secure Links

The data between the WEB browser and the switch will not be encrypted if you access a switch through common HTTP. To encrypt these data, you can use the secure links, which are based on the secure sockets layer, to access the switch.

To do this, you should follow the following steps:

1. Connect the console port of the switch with the accessory cable, or telnet to the management address of the switch through the computer.
2. Enter the global configuration mode of the switch through the command line, the DOS prompt of which is similar to "Switch\_config#".
3. If the management address of the switch is not configured, please create the VLAN interface and configure the IP address.
4. Enter the **ip http server** command in global configuration mode and start the Web service.
5. Run **username** to set the username and password of the switch. For how to use this command, refer to the "Security Configuration" section in the user manual.
6. Run **ip http ssl-access enable** to enable the secure link access of the switch.
7. Run **no ip http http-access enable** to forbid to access the switch through insecure links.
8. Enter **write** to store the current configuration to the configuration file.
9. Open the WEB browser on the PC that the switch connects, enter **https://192.168.0.1** on the address bar (**192.168.0.1** stands for the management IP address of the switch) and then press the **Enter** key. Then the switch can be accessed through the secure links.

## 2.3 Introduction of Web Interface

The Web homepage appears after login, as shown in figure 2:

The screenshot shows the 'Device Info' page in a web configuration interface. At the top right, there is a control bar with links for 'Save All | Logout | Port Pane'. On the left, a navigation menu lists various sections: 'Device Status', 'Device Info', 'Interface State', 'Interface Flow', 'Mac Address Table', 'Log Query', 'Basic Config', 'Port Config', 'L2 Config', 'Advanced Config', 'Network Mgr.', 'Diagnostic Tool', and 'System Mgr.'. The main content area is titled 'System Information' and displays the following data:

Device Type	SWITCH
BIOS Version	0.3.5
Firmware Version	2.1.1B
Serial No.	200-20013040101
MAC Address	FCFA.F749.0F00
IP Address	192.168.1.79
Current Time	1970-1-1 0:1:20
Uptime	0 Day -0 Hour -1 Minute -20 Second
CPU Usage	1%
Memory Usage	4294967230%

Below the table is a 'Refresh' button.

Figure 2: Web homepage

The whole homepage consists of the top control bar, the navigation bar, the configuration area and the bottom control bar.

### 2.3.1 Top Control Bar

[Save All](#) | [Logout](#) | [Port Panel](#) | [About](#)

Figure 3: Top control bar

Save All	Write the current settings to the configuration file of the device. It is equivalent to the execution of the <b>write</b> command. The configuration that is made through Web will not be promptly written to the configuration file after validation. If you click "Save All", the unsaved configuration will be lost after rebooting.
English	The interface will turn into the English version.
Chinese	The interface will turn into the Chinese version.
Logout	Exit from the current login state. After you click "logout", you have to enter the username and the password again if you want to continue the Web function.

After you configure the device, the result of the previous step will appear on the left side of the top control bar. If error occurs, please check your configuration and retry it later.

### 2.3.2 Navigation Bar

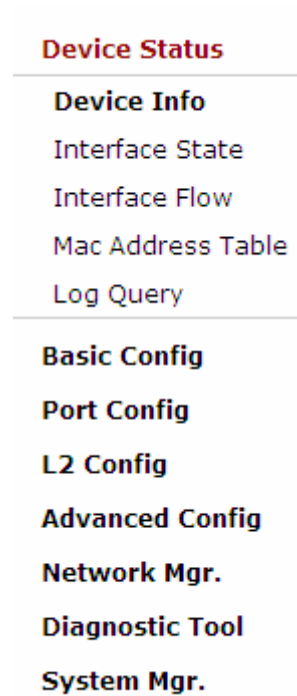


Figure 4 Navigation bar

The contents in the navigation bar are shown in a form of list and are classified according to types. By default, the list is located at "Runtime Info". If a certain item need be configured, please click the group name and then the sub-item. For example, to browse the flux of the current port, you have to click "Interface State" and then "Interface Flow".

**Note:**

The limited user can only browse the state of the device and cannot modify the configuration of the device. If you log on to the Web with limited user's permissions, only "Interface State" will appear.

### 2.3.3 Configuration Area

System Information	
Device Type	SWITCH
BIOS Version	0.3.5
Firmware Version	2.1.1B
Serial No.	200-20013040101
MAC Address	FCFA.F749.0F00
IP Address	192.168.1.79
Current Time	1970-1-1 0:1:20
Uptime	0 Day -0 Hour -1 Minute -20 Second
CPU Usage	1%
Memory Usage	4294967230%

[Refresh](#)

Figure 5 Configuration Area

The configuration display area shows the state and configuration of the device. The contents of this area can be modified by the clicking of the items in the navigation bar.

### 2.3.4 Bottom Control Bar

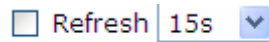


Figure 6: Bottom control bar

If you click the **About** button on the top control bar, the bottom control bar appears. The main function of the bottom control bar is to realize the automatic refreshing of the configuration display area. For example, if you click “Interface Flow” in the navigation bar and then click “Refresh”, the flow of the interface can be continuously monitored.

After you click “Refresh”, the countdown of the next-time refresh will appear on the left side. You can modify the countdown settings by clicking the dropdown list.

---

**Note:**

The smaller the countdown value is set, that is, the higher the frequency is, the higher the CPU usage is.

---

### 2.3.5 Configuration Area

The configuration area is to show the content that is selected in the navigation area. The configuration area always contains one or more buttons, and their functions are listed in the following table:

Refresh	Refresh the content shown in the current configuration area.
Apply	Apply the modified configuration to the device.  The application of the configuration does not mean that the configuration is saved in the configuration file. To save the configuration, you have to click “Save All” on the top control bar.
Reset	Means discarding the modification of the sheet. The content of the sheet will be reset.
New	Creates a list item. For example, you can create a VLAN item or a new user.
Delete	Deletes an item in the list.
Back	Go back to the previous-level configuration page.

## Chapter 3 Basic Configuration

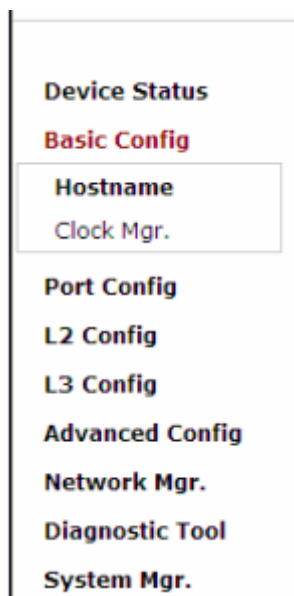


Figure 1 A list of basic configuration

### 3.1 IP Address Configuration

If you click **Basic Config** -> **IP Address Config** in the navigation bar, the **IP Address Configuration** page appears, as shown in figure 2.

#### IP地址配置

配置Vlan1接口的IP地址。

MAC 地址	00:e0:0f:a5:b3:37
IP地址*	<input type="text" value="90.0.0.2"/>
子网掩码*	<input type="text" value="255.255.0.0"/>
默认网关	<input type="text" value="90.0.0.255"/>

#### 在线帮助

◆配置Vlan1接口的IP地址，用来实现对交换机的访问。

Figure 2 IP address configuration

This page is used to set the IP address of Interface Vlan 1, the management interface of the device. In initial conditions, the MAC address of the device, the IP address, mask and gateway of the interface will appear on this page. After the content is modified on this page, click "Apply" to finish the modification of the address; click "Reset" to restore the content of the page to the initial unchanged content.

The items with the asterisk symbol "\*" are ones where you must enter values. "Default gateway" is an optional item, which can be null.

---

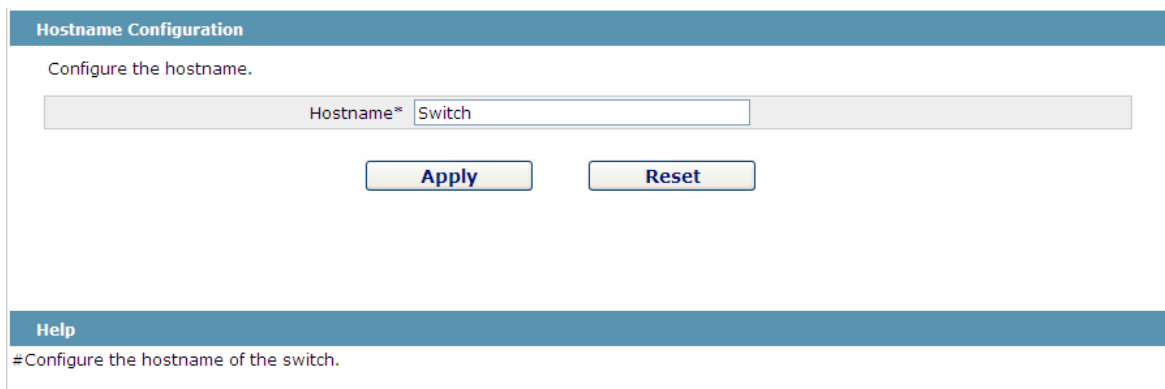
**Note:**

On the Web page, you can only set the IP address of Interface Vlan1; if the L3 switch is used and more Vlan interfaces need be created, please make configuration after a successful login through the console port or Telnet.

---

## 3.2 Hostname Configuration

If you click **Basic Config -> Hostname Config** in the navigation bar, the **Hostname Configuration** page appears, as shown in figure 3.



Hostname Configuration

Configure the hostname.

Hostname\* Switch

Apply Reset

Help

#Configure the hostname of the switch.

Figure 3 Hostname configuration

The hostname will be displayed in the login dialog box.

The default name of the device is "Switch". You can enter the new hostname in the text box shown in figure 3 and then click "Apply".

## 3.3 Time Management

If you click **System Manage -> Time Manage**, the **Time Setting** page appears.

**Time Setting**

System Time

Select Time-Zone	<input type="text" value="(GMT)Greenwich Mean Time,Dublin,London,Lisbon"/>	
<input checked="" type="radio"/> Set Time Manually		
	Set Time	1970 Year 01 Month 01 Day 00 Hour 10 Minute(s) 10 Second
<input type="radio"/> Network Time Synchronization		
SNTP Server One	<input type="text"/>	
SNTP Server Two	<input type="text"/>	
SNTP Server Three	<input type="text"/>	
Synchronization Interval	<input type="text" value="1"/>	Minute(s)

Figure 4 Clock management

To refresh the clock of the displayed device, click "Refresh".

In the "Select Time-Zone" dropdown box select the time zone where the device is located. When you select "Set Time Manually", you can set the time of the device manually. When you select "Network Time Synchronization", you can designate 3 SNTP servers for the device and set the interval of time synchronization.

## Chapter 4 Configuration of the Physical Interface



Figure 1: Physical port configuration list

### 4.1 Configuring Port Description

If you click **Physical port config -> Port description Config** in the navigation bar, the **Port description Configuration** page appears, as shown in figure 2.

Port	Port Description
G0/1	<input type="text"/>
G0/2	<input type="text"/>
G0/3	<input type="text"/>
G0/4	<input type="text"/>

Figure 2: Port description configuration

You can modify the port description on this page and enter up to 120 characters. The description of the VLAN port cannot be set at present.



## 4.2 Configuring the Attributes of the Port

If you click **Physical port config -> Port attribute Config** in the navigation bar, the **Port Attribute Configuration** page appears, as shown in figure 3.

Port	Status	Speed	Duplex	Flow Control	Medium
G0/1	Up	Auto	Auto	Off	Auto
G0/2	Up	Auto	Auto	Off	Auto
G0/3	Up	Auto	Auto	Off	Auto
G0/4	Up	Auto	Auto	Off	Auto
G0/5	Up	Auto	Auto	Off	Auto
G0/6	Up	Auto	Auto	Off	Auto
G0/7	Up	Auto	Auto	Off	Auto
G0/8	Up	Auto	Auto	Off	Auto
G0/9	Up	Auto	Auto	Off	Auto
G0/10	Up	Auto	Auto	Off	Auto

Figure 3 Configuring the port attributes

On this page you can modify the on/off status, rate, duplex mode, flow control status and medium type of a port.

Note:

1. The Web page does not support the speed and duplex mode of the fast-Ethernet port.
2. After the speed or duplex mode of a port is modified, the link state of the port may be switched over and the network communication may be impaired.

## 4.3 Rate control

If you click **Physical port Config -> Port rate-limit Config** in the navigation bar, the **Port rate limit** page appears, as shown in figure 4.

Port	Receive Status	Receive Speed Unit	Receive Speed	Send Status	Send Speed Unit	Send Speed
G0/1	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/2	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/3	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/4	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/5	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/6	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/7	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/8	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/9	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)
G0/10	Disable	64kbps	(1-15625)	Disable	64kbps	(1-15625)

Figure 4: Port's rate limit

On this page you can set the reception speed and transmission speed of a port. By default, all ports have no speed limited.

## 4.4 Port mirroring

If you click **Physical port Config -> Port Mirror** in the navigation bar, the **Port Mirror Config** page appears, as shown in figure 4-5.

Mirror Port		G0/1	
Filters		Port Type: All	Slot Num: All Name(s): <input type="text"/> Help
<b>Mirrored Port</b>		<b>Mirror Mode</b>	
<input type="checkbox"/> G0/1		RX	
<input checked="" type="checkbox"/> G0/2		TX	

Figure 4-5 Port mirror configuration

Click the dropdown list on the right side of "Mirror Port" and select a port to be the destination port of mirror.

Click a checkbox and select a source port of mirror, that is, a mirrored port.

- RX                      The received packets will be mirrored to the destination port.
- TX                      The transmitted packets will be mirrored to a destination port.
- RX & TX                The received and transmitted packets will be mirrored simultaneously.

## 4.5 Loopback Detection

If you click **Physical port Config -> Port loopback detection** in the navigation bar, the **Setting the port loopback detection** page appears, as shown in figure 4-6.

Port	Status	Keepalive Period
G0/1	Enable	3333 (0-32767)Seconds

Figure 4-6: Port loopback detection

You can set the loopback detection cycle on the **Loopback Detection** page.

## 4.6 Port security

### 4.6.1 IP Binding Configuration

If you click **Physical port Config -> Port Security -> IP bind** in the navigation bar, the **Configure the IP-Binding Info** page appears, as shown in figure 4-7.

Interface Name	Detail
G0/1	<a href="#">Detail</a>

Figure 4-7 IP binding configuration

Click "Detail" and then you can conduct the binding of the source IP address for each physical port. In this way, the IP address that is allowed to visit the port will be limited.

	Serial number	Address	Operate
<input type="checkbox"/>	1	192.168.0.2	<a href="#">Edit</a>
<input type="checkbox"/>	2	192.168.0.3	<a href="#">Edit</a>

Figure 4-8 Setting the binding of the source IP address

## 4.6.2 MAC Binding Configuration

If you click **Physical port Config -> Port Security -> MAC bind** in the navigation bar, the **Configure the MAC-Binding Info** page appears, as shown in figure 4-10.

Interface Name	Detail
G0/1	<a href="#">Detail</a>

Figure 4-9 MAC binding configuration

Click “Detail” and then you can conduct the binding of the source MAC address for each physical port. In this way, the MAC address that is allowed to visit the port will be limited.

	Serial number	Address	Operate
<input type="checkbox"/>	1	1234.1234.1234	<a href="#">Edit</a>
<input type="checkbox"/>	2	1234.1234.1235	<a href="#">Edit</a>

Figure 4-10 Setting the binding of the source MAC address

## 4.6.3 Setting the Static MAC Filtration Mode

If you click **Physical port Config -> Port Security -> Static MAC filtration mode** in the navigation bar, the **Configure the static MAC filtration mode** page appears, as shown in figure 4-11.

Interface Name	Port Mode	Static MAC Filtration Mode
G0/1	Access	<a href="#">Disable</a>

Figure 4-11: Setting the static MAC filtration mode

On this page you can set the static MAC filtration mode. By default, the static MAC filter is disabled. Also, the static MAC filter mode cannot be set on ports in trunk mode.

## 4.6.4 Static MAC Filtration Entries

If you click **Physical port Config -> Port security -> Static MAC filtration entries** in the navigation bar, the **Setting the static MAC filtration entries** page appears.

Interface Name	Detail
G0/1	<a href="#">Detail</a>

Figure 4-12: Static MAC filtration entry list

If you click “Detail”, you can conduct the binding of the source MAC address for each physical port. According to the configured static MAC filtration mode, the MAC address of a port can be limited, allowed or forbidden to visit.

	Serial number	Filtration Mode	MAC Address	Operate
<input type="checkbox"/>	1	Disable	0001.0002.0003	<a href="#">Edit</a>

Figure 4-13: Setting static MAC filtration entries

#### 4.6.5 Setting the Dynamic MAC Filtration Mode

If you click **Physical port Config -> Port Security -> Dynamic MAC filtration mode** in the navigation bar, the **Configure the dynamic MAC filtration mode** page appears, as shown in figure 4-14.

Interface Name	Dynamic MAC Filtration Mode	Max MAC Address
G0/1	Disable <input type="button" value="v"/>	1 (1-4095)

Figure 4-14: Setting the dynamic MAC filtration mode

You can set the dynamic MAC filtration mode and the allowable maximum number of addresses on this page. By default, the dynamic MAC filtration mode is disabled and the maximum number of addresses is 1.

### 4.7 Storm control

In the navigation bar, click **Physical port Config -> Storm control**. The system then enters the page, on which the broadcast/multicast/unknown unicast storm control can be set.

#### 4.7.1 Broadcast Storm Control

Port	Status	Threshold
G0/1	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/2	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/3	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/4	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/5	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/6	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS
G0/7	Disable <input type="button" value="v"/>	<input type="text"/> (1-1638400) 100PPS

Figure 5 Broadcast storm control

Through the dropdown boxes in the **Status** column, you can decide whether to enable broadcast storm control on a port. In the **Threshold** column you can enter the threshold of the broadcast packets. The legal threshold range for each port is given behind the threshold.

## 4.7.2 Multicast Storm Control

G0/38	Disable ▾		(1-1638400) 100PPS
G0/39	Disable ▾		(1-1638400) 100PPS
G0/40	Disable ▾		(1-1638400) 100PPS
G0/41	Disable ▾		(1-1638400) 100PPS
G0/42	Disable ▾		(1-1638400) 100PPS
G0/43	Disable ▾		(1-1638400) 100PPS
G0/44	Disable ▾		(1-1638400) 100PPS
G0/45	Disable ▾		(1-1638400) 100PPS
G0/46	Disable ▾		(1-1638400) 100PPS
G0/47	Disable ▾		(1-1638400) 100PPS
G0/48	Disable ▾		(1-1638400) 100PPS
T1/1	Disable ▾		(1-1638400) 100PPS
T1/2	Disable ▾		(1-1638400) 100PPS
T1/3	Disable ▾		(1-1638400) 100PPS
T1/4	Disable ▾		(1-1638400) 100PPS
T1/5	Disable ▾		(1-1638400) 100PPS
T1/6	Disable ▾		(1-1638400) 100PPS
T1/7	Disable ▾		(1-1638400) 100PPS
T1/8	Disable ▾		(1-1638400) 100PPS

Figure 6 Setting the broadcast storm control

Through the dropdown boxes in the **Status** column, you can decide whether to enable multicast storm control on a port. In the **Threshold** column you can enter the threshold of the multicast packets. The legal threshold range for each port is given behind the threshold.

## 4.7.3 Unknown Unicast Storm Control

G0/39	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/40	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/41	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/42	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/43	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/44	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/45	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/46	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/47	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
G0/48	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/1	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/2	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/3	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/4	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/5	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/6	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/7	Disable <input type="button" value="v"/>		(1-1638400) 100PPS
T1/8	Disable <input type="button" value="v"/>		(1-1638400) 100PPS



Figure 7 Unknown unicast storm control

通过“状态”一系列的下拉框控制端口是否启用未知单播风暴控制。 In the **Threshold** column you can enter the threshold of the broadcast packets. The legal threshold range for each port is given behind the threshold.

## Chapter 5 Layer-2 Configuration

<b>Device Status</b>
<b>Basic Config</b>
<b>Port Config</b>
<b>L2 Config</b>
VLAN Config
VLAN Interface
GVRP Config
LLDP Config
STP Config
IGMP Snooping
Static ARP
Static MAC Config
DDM Config
Port Channel
Ring Protection
Multiple Ring Protection
BackupLink Config
DHCP Snooping Config
MTU Config
PDP Config
<b>L3 Config</b>
<b>Advanced Config</b>
<b>Network Mgr.</b>
<b>Diagnostic Tool</b>
<b>System Mgr.</b>

Figure 1: Layer-2 configuration list

## 5.1 VLAN Settings

### 5.1.1 VLAN List

If you click **Layer-2 Config -> VLAN Config** in the navigation bar, the **VLAN Config** page appears, as shown in figure 2.

	VLAN ID	VLAN Name	Operate
<input type="checkbox"/>	1	Default	<a href="#">Edit</a>

Figure 2 VLAN configuration

The VLAN list will display VLAN items that exist in the current device according to the ascending order. In case of lots of items, you can look for the to-be-configured VLAN through the buttons like “Prev”, “Next” and “Search”.

You can click “New” to create a new VLAN.

You can also click “Edit” at the end of a VLAN item to modify the VLAN name and the port’s attributes in the VLAN.

If you select the checkbox before a VLAN and then click “Delete”, the selected VLAN will be deleted.

#### Note:

By default, a VLAN list can display up to 100 VLAN items. If you want to configure more VLANs through Web, please log on to the switch through the Console port or Telnet, enter the global configuration mode and then run the **“ip http web max-vlan”** command to modify the maximum number of VLANs that will be displayed.

### 5.1.2 VLAN Settings

If you click “New” or “Edit” in the VLAN list, the VLAN configuration page appears, on which new VLANs can be created or the attributes of an existent VLAN can be modified.

Revising VLAN Config					
VLAN ID		<input type="text" value="2"/>			
VLAN Name		<input type="text" value="VLAN0002"/>			
Port	Default VLAN	Mode	Untag or not	Allow or not	
G0/1	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/2	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/3	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/4	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/5	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/6	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/7	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/8	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/9	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/10	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/11	<input type="text" value="1"/> <1-4094>	Access	No	Yes	
G0/12	<input type="text" value="1"/> <1-4094>	Access	No	Yes	

Figure 3 Revising VLAN configuration

If you want to create a new VLAN, enter a VLAN ID and a VLAN name; the VLAN name can be null.



Through the port list, you can set for each port the default VLAN , the VLAN mode (Trunk or Access), whether to allow the entrance of current VLAN packets and whether to execute the untagging of the current VLAN when the port works as the egress port.

**Note:**

When a port in Trunk mode serves as an egress port, it will untag the default VLAN by default.

## 5.2 PDP Configuration

### 5.2.1 Configuring the Global Attributes of PDP

If you click **Layer-2 Config -> PDP Config** in the navigation bar, the **Global PDP Config** page appears, as shown in figure 4.

Basic Config of PDP Protocol	
Protocol State	Close the PDP protocol
HoldTime Settings	180 (10-255)s
Setting the packet transmission cycle	60 (5-254)s
Protocol Version	Version2

**Help**

#HoldTime:If the other PDP packets are not received, the switch will save the holdtime before clearing the received packets.Its default value is 180s.  
#Cycle of Sending Packets:Its default value is 60s.

Figure 4 Configuring the global attributes of PDP

You can choose to enable PDP or disable it. When you choose to disable PDP, you cannot configure PDP.

The “HoldTime” parameter means the time to be saved before the router discards the received information if other PDP packets are not received.

The protocol version cannot be read currently through the command line “show run”, so the protocol version is not handled on the Web.

### 5.2.2 Configuring the Attributes of the PDP Port

If you click **Layer-2 Config -> PDP Config-> PDP port Config** in the navigation bar, the **Setting the attributes of the PDP port** page appears, as shown in figure 5.

Port	Status
G0/1	Enable PDP

Figure 5 PDP port configuration

After the PDP port is configured, you can enable or disable PDP on this port.

## 5.3 LLDP Configuration

### 5.3.1 Configuring the Global Attributes of LLDP

If you click **Layer-2 Config -> LLDP Config** in the navigation bar, the **Global LLDP Config** page appears, as shown in figure 6.

Basic Config of LLDP Protocol	
Protocol State	Close the LLDP protocol ▾
HoldTime Settings	120 (0-65535)s
Reinit Settings	2 (2-5)s
Setting the packet transmission cycle	30 (5-65534)s

---

**Help**

◆HoldTime: Means the TTL(Time to live) of sending LLDP packets. Its default value is 120s.  
 ◆Reinit: Means the delay of continuously sending LLDP packets. Its default value is 2s.

Figure 6 Configuring the global attributes of LLDP

You can choose to enable LLDP or disable it. When you choose to disable LLDP, you cannot configure LLDP.

The “HoldTime” parameter means the ttl value of the packet that is transmitted by LLDP, whose default value is 120s.

The “Reinit” parameter means the delay of successive packet transmission of LLDP, whose default value is 2s.

### 5.3.2 Configuring the Attributes of the LLDP Port

If you click **Layer-2 Config -> LLDP Config-> LLDP port Config** in the navigation bar, the **Setting the attributes of the LLDP port** page appears, as shown in figure 7.

Port	Receive LLDP Packet	Send LLDP Packet
G0/1	Disable ▾	Disable ▾
G0/2	Disable ▾	Disable ▾
G0/3	Disable ▾	Disable ▾
G0/4	Disable ▾	Disable ▾

Figure 7 Configuring the LLDP port

After the LLDP port is configured, you can enable or disable LLDP on this port.

## 5.4 Link Aggregation Configuration

If you click **Advanced Config -> Link aggregation Config** in the navigation bar, the **Link aggregation Config** page appears, as shown in figure 8.

Port Aggregation Config							
<input type="button" value="New"/>							
No.1 Page/Total 1 Page First Prev Next Last Go No. <input type="text"/> Page Search: <input type="text"/>				Current 1 Item/Total 1 Item			
	Aggregation Group	Mode	Configure port members	Valid port members	Speed	State	Operate
<input type="checkbox"/>	P1	Static	G0/2,G0/3			down	<a href="#">Edit</a>
<input type="checkbox"/> Select All/Select None							<input type="button" value="Delete"/>

---

**Help**

◆Note: The physical attributes of all the aggregated ports shall be the same, including Speed, Duplex mode and Vlan

Figure 8 Port aggregation configuration

If you click **New**, an aggregation group can be created. Up to 32 aggregation groups can be configured through Web and up to 8 physical ports in each group can be aggregated. If you click **Cancel**, you can delete a selected aggregation group; if you click **Modify**, you can modify the member port and the aggregation mode.

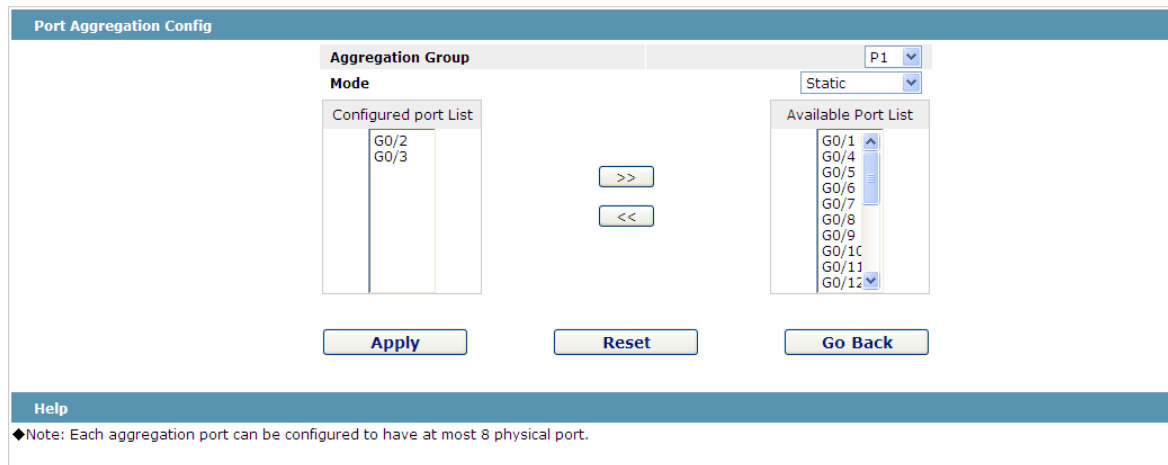


Figure 9: Setting the member port of the aggregation group

An aggregation group is selectable when it is created but is not selectable when it is modified.

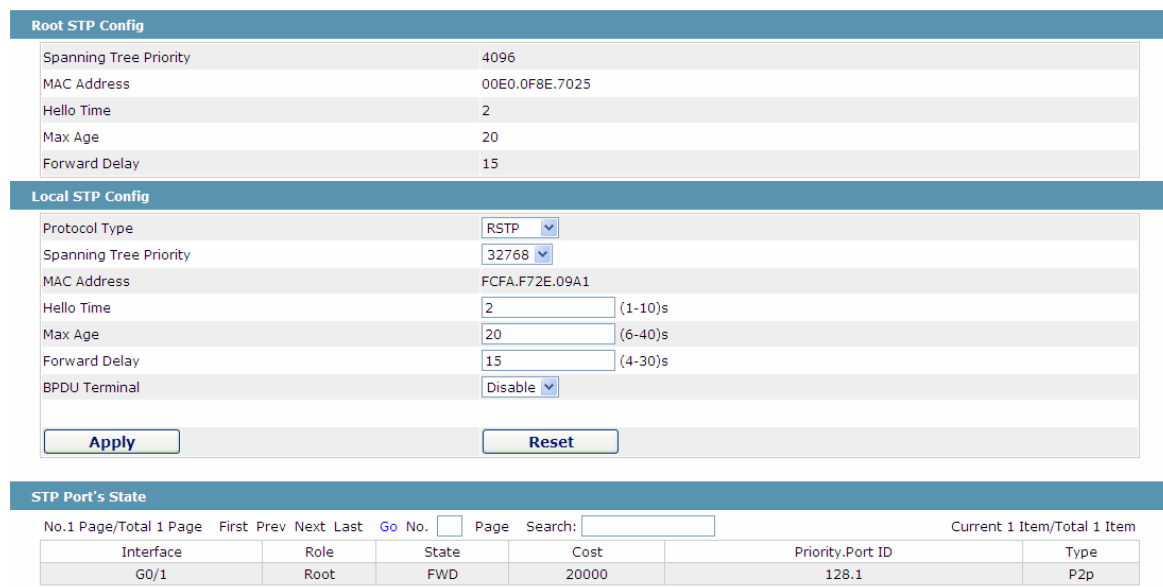
When a member port exists on the aggregation group, you can choose the aggregation mode to be **static**, **LACP active** or **LACP passive**.

You can click “>>” and “<<” to delete and add a member port in the aggregation group.

## 5.5 STP Configuration

### 5.5.1 STP Status Information

If you click **Layer-2 Config -> STP Config** in the navigation bar, the **STP Config** page appears, as shown in figure 10.



Interface	Role	State	Cost	Priority	Port ID	Type
G0/1	Root	FWD	20000		128.1	P2p

Figure 10 Configuring the global attributes of STP

The root STP configuration information and the STP port's status are only-read.

On the local STP configuration page, you can modify the running STP mode by clicking the Protocol type dropdown box. The STP modes include STP, RSTP and disabled STP.

The priority and the time need be configured for different modes.

Note:

The change of the STP mode may lead to the interruption of the network.

## 5.5.2 Configuring the Attributes of the STP Port

If you click the "Configure RSTP Port" option, the "Configure RSTP Port" page appears.

Port	Protocol Status	Priority(0~240)	Path-Cost(0~200000000)	Edge Port Property
G0/1	Enable	128	0	Auto
G0/2	Enable	128	0	Auto
G0/3	Enable	128	0	Auto
G0/4	Enable	128	0	Auto
G0/5	Enable	128	0	Auto
G0/6	Enable	128	0	Auto
G0/7	Enable	128	0	Auto
G0/8	Enable	128	0	Auto

Figure 11 Configuring the attributes of RSTP

The configuration of the attributes of the port is irrelative of the global STP mode. For example, if the protocol status is set to "Disable" and the STP mode is also changed, the port will not run the protocol in the new mode.

The default value of the path cost of the port is 0, meaning the path cost is automatically calculated according to the speed of the port. If you want to change the path cost, please enter another value.

## 5.6 IGMP-Snooping Configuration

### 5.6.1 IGMP-Snooping Configuration

If you click **Layer-2 Config -> IGMP snooping**, the IGMP-Snooping configuration page appears.

**IGMP Snooping Config**

Multicast Filtration Mode	Transfer Unknown
IGMP Snooping	Enable
Enable Auto Query	Enable

Figure 12 IGMP-snooping configuration

On this page you can set whether to make a switch to forward unknown multicasts, whether to enable IGMP snooping, and whether to configure the switch as the querier of IGMP.

### 5.6.2 IGMP-Snooping VLAN List

If you click **Layer-2 Config -> IGMP snooping vlan list**, the **IGMP-Snooping VLAN list** page appears.

VLAN ID	Status of the IGMP Snooping Vlan	Immediate-leave	Multicast Router's Port	Operate
<input type="checkbox"/> 1	Running	Disable	SWITCH(querier);	<a href="#">Edit</a>

Figure 13: IGMP-snooping VLAN list

If you click **New**, IGMP-snooping VLAN configuration can be done. Through Web up to 8 physical ports can be set on each IGMP snooping VLAN. If you click **Cancel**, a selected IGMP-Snooping VLAN can be deleted; if you click **Edit**, you can modify the member port, running status and immediate-leave of IGMP-Snooping VLAN.

The screenshot shows the configuration interface for an IGMP-Snooping VLAN. The 'VLAN ID' is set to 2. The 'Status of the IGMP Snooping Vlan' is set to 'Enable' and 'Immediate-leave' is set to 'Disable'. The 'Configured Mrouter Port List' contains G0/1 and G0/12. The 'Available Port List' contains G0/10 through G0/20. There are '>>' and '<<' buttons between the lists. At the bottom are 'Apply', 'Reset', and 'Go Back' buttons.

Figure 14: Static routing port of IGMP VLAN

When an IGMP-Snooping VLAN is created, its VLAN ID can be modified; but when the IGMP-Snooping VLAN is modified, its VLAN ID cannot be modified.

You can click ">>" and "<<" to delete and add a routing port.

### 5.6.3 Static Multicast Address

If you click **Static multicast address**, the **Setting the static multicast address** page appears.

**Static Multicast Address Config**

VLAN ID	<input type="text"/>
Multicast IP Address	<input type="text"/>
Assignment Port	<input type="text" value="v"/>

**Static Multicast List Info**

No.0 Page/Total 0 Page    First Prev Next Last    Go No.  Page    Search: 
Current 0 Item/Total 0 Item

	VLAN ID	Group	Port
<input type="checkbox"/> Select All/Select None			

**Help**

Figure 15 Multicast List

On this page, the currently existing static multicast groups and port groups in each static multicast group are shown.

Click “Refresh” to refresh the contents in the list.

#### 5.6.4 Multicast List

Click the **Multicast List Info** option on the top of the page and the **Multicast List Info** page appears.

**Multicast List Info**

No.0 Page/Total 0 Page    First Prev Next Last    Go No.  Page    Search: 
Current 0 Item/Total 0 Item

	VLAN ID	Group	Type	Port
<input type="button" value="Refresh"/>				

Figure 16 Multicast List

On this page the multicat groups, which are existent in the current network and are in the statistics of IGMP snooping, as well as port sets which members in each group belong to are displayed.

Click “Refresh” to refresh the contents in the list.

---

**Note:**

By default, a multicast list can display up to 15 VLAN items. You can modify the number of multicast items by running **ip http web igmp-groups** after you log on to the device through the Console port or Telnet.

---

## 5.7 Setting Static ARP

If you click **Layer-2 Config -> Static ARP Config**, the static ARP configuration page appears.

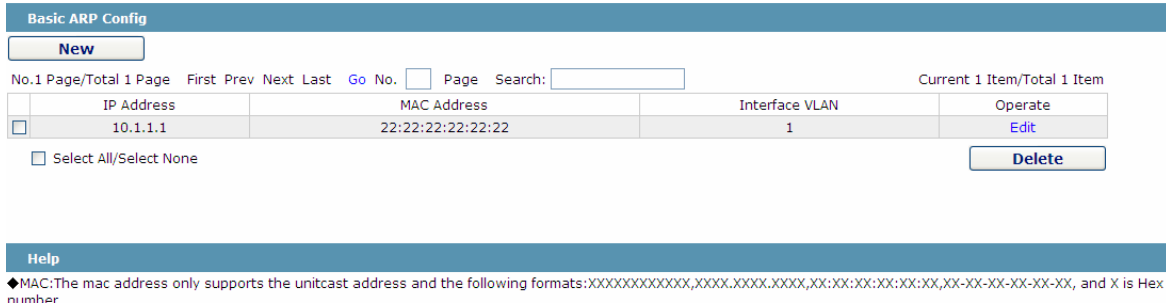


Figure 17 Displaying static ARP

You can click **New** to add an ARP entry. If the **Alias** column is selected, it means to answer the ARP request of the designated IP address.

If you click Edit, you can modify the current ARP entry.

If you click Cancel, you can cancel the chosen ARP entry.

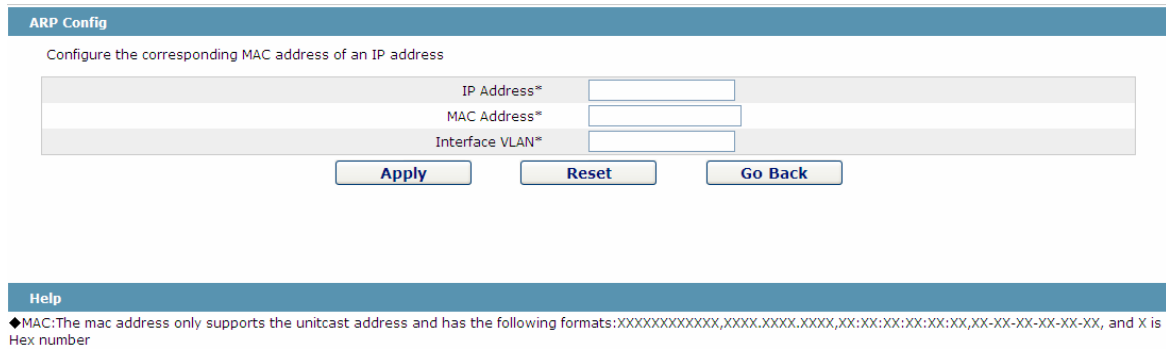


Figure 18 Setting static ARP

## 5.8 Ring Protection Configuration

### 5.8.1 EAPS Ring List

If you click **Layer-2 Config -> Ring protection Config**, the **EAPS ring list** page appears.

Ring ID	Node Type	Ring Description	Control VLAN	Status	Hello	Fail	Preforward	Primary Port/Forwarding/Link Status	Secondary Port/Forwarding/Link Status	
<input type="checkbox"/> Select All/Select None <a href="#">Delete</a> <a href="#">Refresh</a>										

Figure 19 EAPS Ring List

In the list shows the currently configured EAPS ring, including the status of the ring, the forwarding status of the port and the status of the link.

Click “New” to create a new EAPS ring.

Click the “Operate” option to configure the “Time” parameter of the ring.

**Note:**

1. The system can support 8 EAPS rings.

2. After a ring is configured, its port, node type and control VLAN cannot be modified. If the port of the ring, the node type or the control VLAN need be adjusted, please delete the ring and then establish a new one.

## 5.8.2 EAPS Ring Configuration

If you click “New” on the EAPS ring list, or “Operate” on the right side of a ring item, the “Configure EAPS” page appears.

Figure 20 EAPS ring configuration

### Note:

If you want to modify a ring, on this page the node type, the control VLAN, the primary port and the secondary port cannot be modified.

In the dropdown box on the right of “Ring ID”, select an ID as a ring ID. The ring IDs of all devices on the same ring must be the same.

The dropdown box on the right of “Node Type” is used to select the type of the node. Please note that only one master node can be configured on a ring.

Enter a value between 1 and 4094 in the text box on the right of “Control VLAN” as the control VLAN ID. When a ring is established, the control VLAN will be automatically established too. Please note that if the designated control VLAN is 1 and the VLAN of the control device is also 1 the control device cannot access the control VLAN. Additionally, please do not enter a control VLAN ID that is same as that of another ring.

In the text boxes of “Primary Port” and “Secondary Port”, select a port as the ring port respectively. If “Node Type” is selected as “Transit-Node”, the two ports will be automatically set to transit ports.

Click “Apply” to finish EAPS ring configuration, click “Reset” to resume the initial values of the configuration, or click “Return” to go back to the EAPS list page.

## 5.9 EVC Configuration

### 5.9.1 Global QinQ Configuration

If you click **Layer-2 Config -> EVC Config**, the **Global QinQ configuration** page appears.



Figure 21: Global EVC configuration

In global EVC configuration mode, you can enable or disable the global dot1q.

## 5.9.2 Configuring the QinQ Port

If you click **Layer-2 Config -> EVC Config -> QinQ port Config**, the **Configuring the QinQ port** page appears.

端口	端口类型	端口PVID	CVLAN翻译表	允许的SVLAN	操作
G0/1	Access	1		1	修改
G0/2	Access	1		1	修改
G0/3	Access	1		1	修改
G0/4	Access	1		1	修改
G0/5	Access	1		1	修改
G0/6	Access	1		1	修改
G0/7	Access	1		1	修改
G0/8	Access	1		1	修改

Figure 22: Configuring the PTP port

The QinQ related configuration of all ports can be displayed and modified on the **Configuring the QinQ port** page.

## 5.10 DDM Configuration

If you click **L2 Config -> DDM Config** in the navigation bar, the **DDM configuration** page appears, as shown in figure 5-21.

Figure 5-21: DDM configuration

## Chapter 6 Layer-3 Configuration



Figure 1: Layer-3 configuration list

---

Note:  
Only layer-3 switches have the layer-3 configuration.

---

### 6.1 Configuring the VLAN Interface

If you click **Layer-3 Config** -> **VLAN interface Config**, the **Configuring the VLAN interface** page appears.

	Name of the VLAN Interface	IP Attribute	IP Address	□□□□
<input type="checkbox"/>	1	Manual Config	192.168.1.79/24;	□□

Select All/Select None

Figure 2: Configuring the VLAN interface

Click **New** to add a new VLAN interface. Click **Cancel** to delete a VLAN interface. Click **Modify** to modify the settings of a corresponding VLAN interface.

When you click **New**, the name of the corresponding VLAN interface can be modified; but if you click **Modify**, the name of the corresponding VLAN interface cannot be modified.

**VLAN Interface Config**

**IP Attribute**

	VLAN Interface Name*	<input type="text"/>
	IP Attribute*	Manual Config <span style="font-size: small;">▼</span>

**Primary IP Address**

	IP Address*	<input type="text"/>
	MASK address*	<input type="text"/>

**Secondary IP Address 1**

	IP Address*	<input type="text"/>
	MASK address*	<input type="text"/>

**Secondary IP Address 2**

	IP Address*	<input type="text"/>
	MASK address*	<input type="text"/>

**Help**

The primary IP must be configured for the VLAN interface before the secondary IP is configured

Figure 3: VLAN interface configuration

**Note:**  
Before the accessory IP of a VLAN interface is set, you have to set the main IP.

## 6.2 Setting the Static Route

If you click **Layer-3 Config -> Static route Config**, the **Static route configuration** page appears.

**Static Routing Protocol Config**

No.0 Page/Total 0 Page    First Prev Next Last Go No.  Page    Search:     Current 0 Item/Total 0 Item

Default Route	Dest IP Segment	Dest IP Mask	Interface Type	VLAN Interface	Gateway's IP Address	Forwarding Routing Address	Distance metric	Routing Tag	Global	Specify the route description	Operate
<input type="checkbox"/>											<input type="button" value="Delete"/>

Select All/Select None

**Help**

◆Global:The next-hop address is in the global routing table.

Figure 4 Displaying the static route

- Click **Create** to add a static route.
- If you click **Edit**, you can modify the current static route.
- If you click **Cancel**, you can cancel the chosen static route.

Static Route Config		
Configure the static routing protocol		
Default Route	<input type="checkbox"/>	
Dest IP Segment	<input type="text"/>	
Dest IP Mask	<input type="text"/>	
Interface Type	Interface Null0	<input type="button" value="v"/>
Interface Vlan	<input type="text"/>	
Gateway's IP Address	<input type="text"/>	
Forwarding Routing address	<input type="text"/>	
Distance metric	<input type="text"/>	
Routing Tag	<input type="text"/>	
Global	<input type="checkbox"/>	
Specify Route Description	<input type="text"/>	
<input type="button" value="Apply"/> <input type="button" value="Reset"/> <input type="button" value="Go Back"/>		

**Help**  
 ◆Global:The next-hop address is in the global routing table.

Figure 5: Setting the static route

## 6.3 IGMP Agent

### 6.3.1 Enabling the IGMP Agent

If you click **Layer-3 Config -> IGMP agent**, the **IGMP agent** page appears.

Enabling the IGMP Proxy	
IGMP Proxy	Enable <input type="button" value="v"/>
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

**Help**  
 Before enabling or disabling IGMP Proxy, you must enable IGMP Snooping, which is configured if you click 'L2 Config -> IGMP Snooping'

Figure 6: Enabling the IGMP agent

On this page you can enable or disable the IGMP agent. It is noted that the IGMP agent can be enabled or disabled on a switch only after the IP IGMP-snooping function is enabled on the switch.

### 6.3.2 Setting the IGMP Agent

If you click **Layer-3 Config -> IGMP agent -> IGMP agent Config**, the **IGMP agent configuration** page appears. Click **New** to create a new IGMP agent.

NewIGMP Proxy	
Agent VLAN*	<input type="text" value="1"/>
Client VLAN*	<input type="text" value="1"/>
<input type="button" value="Apply"/> <input type="button" value="Reset"/> <input type="button" value="Go Back"/>	

Figure 7: Setting the IGMP agent

## Chapter 7 Advanced Configuration



Figure 1 A list of advanced configuration

### 7.1 QoS Configuration

#### 7.1.1 Configuring QoS Port

If you click **Advanced Config -> QoS -> Configure QoS Port**, the **Port Priority Config** page appears.

Port	COS value
G0/1	0
G0/2	0
G0/3	0
G0/4	0
G0/5	
G0/6	
G0/7	
G0/8	
G0/9	
G0/10	
G0/11	

Figure 2 Configuring the QoS Port

You can set the CoS value by clicking the dropdown box on the right of each port and selecting a value. The default CoS value of a port is 0, meaning the lowest priority. If the CoS value is 7, it means that the priority is the highest.

## 7.1.2 Global QoS Configuration

If you click **Advanced Config -> QoS Config -> Global QoS Config**, the **Port's QoS parameter configuration** page appears.

The screenshot shows the 'QoS Config' page. At the top, there is a 'Schedule Policy' section with a dropdown menu set to 'sp'. Below this is a table for configuring 8 queues. Each queue has a 'Queue' dropdown (all set to '1') and a bandwidth range '(0-15)'. Below the queue table is a 'COS-to-queue map' table with 'COS value' from 0 to 7 and 'Queue' dropdowns (all set to 'Queue 1'). At the bottom are 'Apply' and 'Reset' buttons. A 'Help' section at the very bottom contains two notes: 'If you want to configure the cos value of the interface, please goto QoS Interface Configuration.' and 'if the bandwidth of queue has been set to 0, the queue after this also must be set to 0'.

Figure 3 Configuring global QoS attributes

In WRR schedule mode, you can set the weights of the QoS queues. There are 4 queues, among which queue 1 has the lowest priority and queue 4 has the highest priority.

## 7.2 MAC Access Control List

### 7.2.1 Setting the Name of the MAC Access Control List

If you click **Advanced Config -> MAC access control list -> MAC access control list Config**, the MAC ACL configuration page appears.

The screenshot shows the 'MAC ACL Config' page. It features a 'New' button at the top left. Below it is a navigation bar with 'No.0 Page/Total 0 Page', 'First Prev Next Last', 'Go No. [input] Page', and 'Search: [input]'. On the right, it says 'Current 0 Item/Total 0 Item'. The main area contains a table with one column 'Name of the MAC Access Control List' and one column 'Operate'. Below the table is a checkbox 'Select All/Select None' and a 'Delete' button.

Figure 4: MAC access control list configuration

Click **New** to add a name of the MAC access control list. Click **Cancel** to delete a MAC access control list.

Figure 5: Setting the name of MAC access control list

### 7.2.2 Setting the Rules of the MAC Access Control List

If you click **Modify**, the corresponding MAC access control list appears and you can set the corresponding rules for the MAC access control list.

No.1	Authority	Src MAC Type	Src MAC	Src MAC Mask	Dst MAC Type	Dst MAC	Dst MAC Mask	Operate
1	permit	host	0001.0002.0003		any			Edit

Figure 6: Specific MAC access control list configuration

Click **New** to add a rule of the MAC access control list. Click **Cancel** to delete a rule of the MAC access control list.

◆MAC: the valid mac address can be one of the following formats: XXXXXXXXXXXX, XXXX.XXXX.XXXX, XX:XX:XX:XX:XX:XX, and XX-XX-XX-XX-XX-XX, among which X is a Hex number

Figure 7: Setting the Rules of the MAC Access Control List

### 7.2.3 Applying the MAC Access Control List

If you click **Advanced Config -> MAC access control list -> Applying the MAC access control list**, the **Applying the MAC access control list** page appears.

Port	Egress ACL	Ingress ACL
G0/1	<input type="text"/>	<input type="text"/>
G0/2	<input type="text"/>	<input type="text"/>
G0/3	<input type="text"/>	<input type="text"/>
G0/4	<input type="text"/>	<input type="text"/>
G0/5	<input type="text"/>	<input type="text"/>
G0/6	<input type="text"/>	<input type="text"/>
G0/7	<input type="text"/>	<input type="text"/>

Figure 8: Applying the MAC access control list

## 7.3 IP Access Control List

### 7.3.1 Setting the Name of the IP Access Control List

If you click **Advanced Config -> IP access control list -> IP access control list Config**, the IP ACL configuration page appears.

IP ACL Config		
<input type="button" value="New"/>		
No.1 Page/Total 1 Page	First Prev Next Last	Go No. <input type="text"/> Page Search: <input type="text"/>
		Current 2 Item/Total 2 Item
Name of the IP ACL	Attribute of the IP ACL	Operate
<input type="checkbox"/> acla	extended	<a href="#">Edit</a>
<input type="checkbox"/> myacl	standard	<a href="#">Edit</a>
<input type="checkbox"/> Select All/Select None		<input type="button" value="Delete"/>

Figure 9: IP access control list configuration

Click **New** to add a name of the IP access control list. Click **Cancel** to delete an IP access control list.

**Creating the IP ACL**

Name of the IP ACL\*

Attribute

Figure 10: Creating a name of the IP access control list

If you click **Modify**, the corresponding IP access control list appears and you can set the corresponding rules for the IP access control list.

### 7.3.2 Setting the Rules of the IP Access Control List

- Standard IP access control list



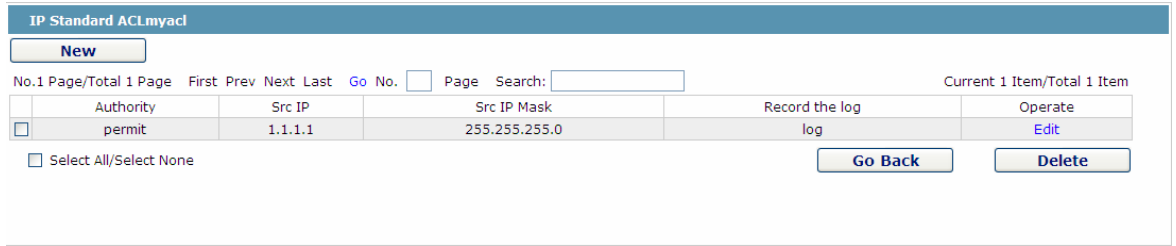


Figure 11: Standard IP access control list

Click **New** to add a rule of the IP access control list. Click **Cancel** to delete a rule of the IP access control list. If you click **Modify**, the corresponding IP access control list appears and you can set the corresponding rules for the IP access control list.

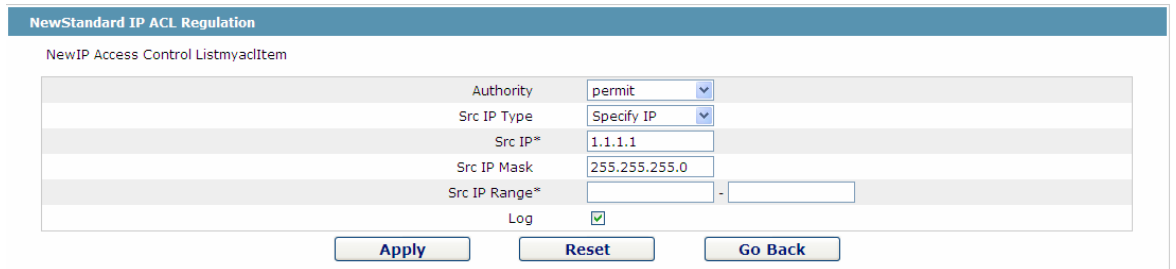


Figure 12: Setting the Rules of the standard IP access control list

➤ Extended IP access control list

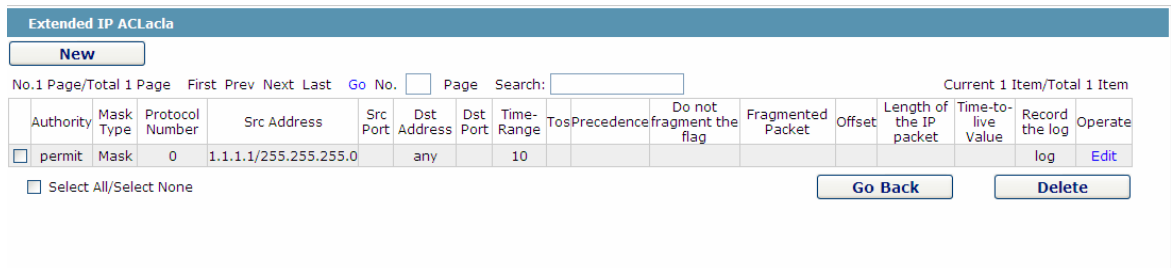


Figure 13: Extended IP access control list

Click **New** to add a rule of the IP access control list. Click **Cancel** to delete a rule of the IP access control list. If you click **Modify**, the corresponding IP access control list appears and you can set the corresponding rules for the IP access control list.

Authority	permit
Mask Type	Mask
Protocol Number*	0
Src IP Type	Specify IP
Src IP*	1.1.1.1
Src IP Mask*	255.255.255.0
Src Interface Vlan*	
Src IP Range*	-
Src Port	
Src Port Range	-
Dst IP Type	any
Dst IP*	
Dst IP Mask*	
Dst Interface Vlan*	
Dst IP Range*	-
Dst Port	
Dst Port Range	-
Time-Range	10
Tos	
Precedence	
Do not fragment	
Fragmented Packet	
Offset	
Length of the IP Packet	
Time-to-live Value	
Log	<input checked="" type="checkbox"/>
Location	1

Figure 14: Setting the Rules of the extended IP access control list

### 7.3.3 Applying the IP Access Control List

If you click **Advanced Config -> IP access control list -> Applying the IP access control list**, the **Applying the IP access control list** page appears.

Port	Egress ACL	Ingress ACL
G0/1	myacl	
G0/2		acla
G0/3		
G0/4		
G0/5		
G0/6		
G0/7		
G0/8		

Figure 15: Applying the IP access control list

## Chapter 8 Network Management Configuration

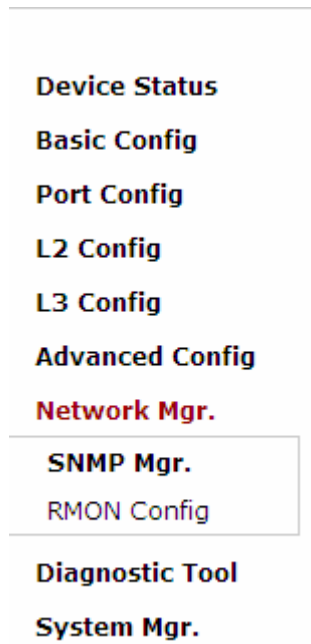


Figure 1: Network management configuration list

### 8.1 SNMP Configuration

If you click **Network management Config -> SNMP management** in the navigation bar, the **SNMP management** page appears, as shown in figure 2.

#### 8.1.1 SNMP Community Management

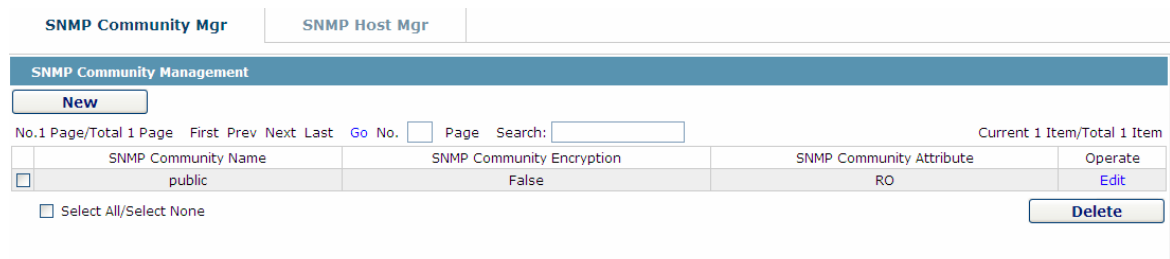
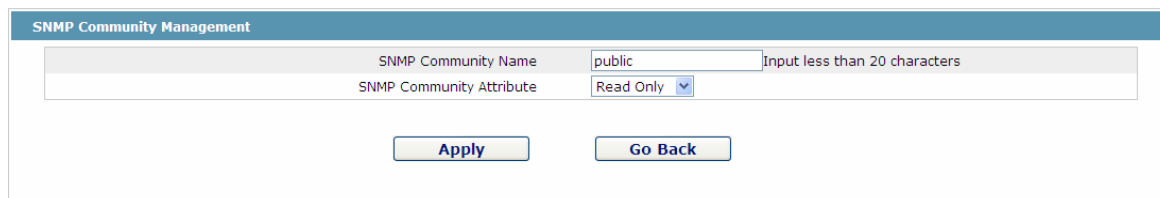


Figure 2 SNMP community management

On the SNMP community management page, you can know the related configuration information about SNMP community.

You can create, modify or cancel the SNMP community information, and if you click **New** or **Edit**, you can switch to the configuration page of SNMP community.

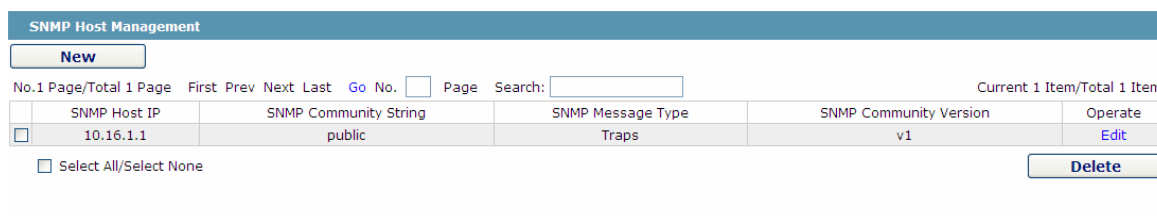


The screenshot shows the 'SNMP Community Management' page. It features a form with two input fields: 'SNMP Community Name' with the value 'public' and a note 'Input less than 20 characters', and 'SNMP Community Attribute' with a dropdown menu set to 'Read Only'. Below the form are two buttons: 'Apply' and 'Go Back'.

Figure 4.2 SNMP community management settings

On the SNMP community management page you can enter the SNMP community name, select the attributes of SNMP community, which include Read only and Read-Write.

## 8.1.2 SNMP Host Management

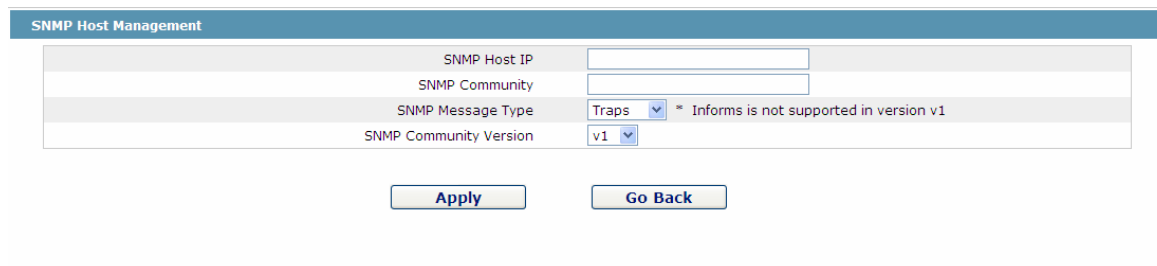


The screenshot shows the 'SNMP Host Management' page. It includes a 'New' button, a table with columns for 'SNMP Host IP', 'SNMP Community String', 'SNMP Message Type', 'SNMP Community Version', and 'Operate'. The table contains one row with the values: 10.16.1.1, public, Traps, v1, and Edit. There are also navigation controls like 'No. 1 Page/Total 1 Page', 'First', 'Prev', 'Next', 'Last', 'Go No.', 'Page', 'Search:', and 'Current 1 Item/Total 1 Item'. A 'Delete' button is located at the bottom right.

Figure 4 SNMP host management

On the SNMP community host page, you can know the related configuration information about SNMP host.

You can create, modify or cancel the SNMP host information, and if you click **New** or **Edit**, you can switch to the configuration page of SNMP host.



The screenshot shows the 'SNMP Host Management' configuration page. It features a form with four input fields: 'SNMP Host IP', 'SNMP Community', 'SNMP Message Type' (dropdown menu set to 'Traps' with a note '\* Informs is not supported in version v1'), and 'SNMP Community Version' (dropdown menu set to 'v1'). Below the form are two buttons: 'Apply' and 'Go Back'.

Figure 5 SNMP host management settings

On the SNMP host configuration page, you can enter **SNMP Host IP**, **SNMP Community**, **SNMP Message Type** and **SNMP Community Version**. **SNMP Message Type** includes **Traps** and **Informs**, and as to version 1, **SNMP Message Type** does not support **Informs**.

## 8.2 RMON

### 8.2.1 RMON Statistic Information Configuration

If you click **Network Management Config -> RMON -> RMON Statistics -> New**, the **RMON Statistics** page appears.

Interface Statistics Config		
Interface	G0/1	
Index	1	(1-65535)
Owner	demon	
<input type="button" value="Apply"/> <input type="button" value="Go Back"/>		
Help		
◆ It must be configured in interface mode, which is used to enable the interface statistics		
*◆ The string you totally entered is less than or equal to 255 characters		

Figure 6 Configuring the RMON statistic information

You need to set a physical port to be the reception terminal of the monitor data.

The index is used to identify a specific interface; if the index is same to that of the previous application interface, it will replace that of the previous application interface.

At present, the monitor statistic information can be obtained through the command line “show rmon statistics”, but the Web does not support this function.

## 8.2.2 RMON History Information Configuration

If you click **Network Management Config -> RMON -> RMON history -> New**, the **RMON history** page appears.

Interface History config		
Interface	G0/1	
Index		(1-65535)
Sampling Number	50	(1-65535)
Sampling Interval	1800	(1-3600)
Owner	config	Enter less than 31 characters*
<input type="button" value="Apply"/> <input type="button" value="Go Back"/>		
Help		
◆ Sampling Number means how many history items must be saved recently		

Figure 7 Configuring the RMON history information

You need to set a physical port to be the reception terminal of the monitor data.

The index is used to identify a specific interface; if the index is same to that of the previous application interface, it will replace that of the previous application interface.

The sampling number means the items that need be reserved, whose default value is 50.

The sampling interval means the time between two data collection, whose default value is 1800s.

At present, the monitor statistic information can be obtained through the command line “show rmon history”, but the Web does not support this function.

### 8.2.3 RMON Alarm Information Configuration

If you click **Network Management Config -> RMON -> RMON Alarm -> New**, the **RMON Alarm** page appears.

RMON Alarm config		
Index	1	(1-65535)
MIB Node	IfnOctets	
OID	1.3.6.1.2.1.2.2.1.10	
Interface	G0/1	
Alarm type	absolute	
Sampling Interval	5	(1-2147483647)
Rising Threshold	5	(-2147483648 - 2147483647)
Rising Event Index	2	(1-65535)
Falling Threshold	6	(-2147483648 - 2147483647)
Falling Event Index	3	(1-65535)
Owner	default	Enter less than 31 characters*

**Help**

- ◆The owner can be empty
- \*◆The string you totally entered is limited in 255 characters

Figure 8 Configuring the RMON alarm information

The index is used to identify a specific alarm information; if the index is same to the previously applied index, it will replace the previous one.

The MIB node corresponds to OID.

If the alarm type is **absolute**, the value of the MIB object will be directly monitored; if the alarm type is **delta**, the change of the value of the MIB object in two sampling will be monitored.

When the monitored MIB object reaches or exceeds the rising threshold, the event corresponding to the index of the rising event will be triggered.

When the monitored MIB object reaches or exceeds the falling threshold, the event corresponding to the index of the falling event will be triggered.

### 8.2.4 RMON Event Configuration

If you click **Network Management Config -> RMON -> RMON Event -> New**, the **RMON event** page appears.

RMON Event Config	
Index	<input type="text"/> (1-65535)
Owner	<input type="text"/>
Description	<input type="text"/>
Enable log	<input type="checkbox"/>
Enable trap	<input type="checkbox"/>
Community	<input type="text"/>

---

**Help**

- ◆ If the log is enabled, the items will be added to the log table at the trigger of the event.
- ◆ If the trap is enabled, the trap will be generated with the event community name.
- \*◆ The string you totally entered is less than 255 characters

Figure 9 RMON event configuration

The index corresponds to the rising event index and the falling event index that have already been configured on the **RMON alarm config** page.

The owner is used to describe the descriptive information of an event.

"Enable log" means to add an item of information in the log table when the event is triggered.

"Enable trap" means a trap will be generated if the event is triggered.

## Chapter 9 Diagnosis Tools

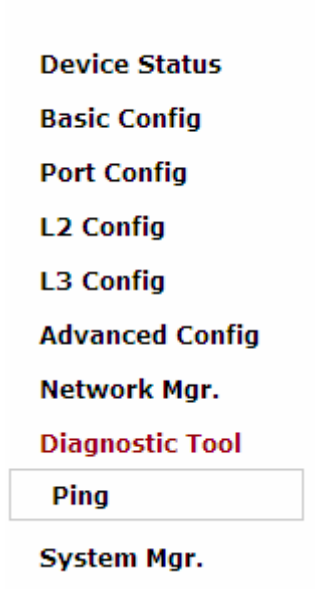


Figure 1: Diagnosis tool list

### 9.1 Ping

#### 9.1.1 Ping

If you click **Diagnosis Tools -> Ping**, the **Ping** page appears.

**Ping**

Ping is a typical network tool, which is used to identify the states of some network functions. The states of network functions are the basis of regular network diagnosis. Ping is used to check whether the peer is reachable. If Ping transmits a packet to the host and receives a response from the peer, the peer is reachable.

PING test-->	
Destination address*	<input style="width: 100%;" type="text"/>
Source IP address	<input style="width: 100%;" type="text"/> (An option which can be null)
Size of the PING packet	<input style="width: 100%;" type="text"/> (36-20000) (An option which can be null)

**Help**

- ◆The ping program can test whether a destination can be reached, or it can test the packet loss to reach a destination.
- ◆Destination address: Enter the to-be-tested destination address.
- ◆Source IP: Source IP.
- ◆Packet's size: Designate the size of a packet when the packet is used to ping a destination. It is optional and cannot be configured.

Figure 2 Ping

Ping is used to test whether the switch connects other devices.



If a Ping test need be conducted, please enter an IP address in the “Destination address” textbox, such as the IP address of your PC, and then click the “PING” button. If the switch connects your entered address, the device can promptly return a test result to you; if not, the device will take a little more time to return the test result.

“Source IP address” is used to set the source IP address which is carried in the Ping packet.

“Size of the PING packet” is used to set the length of the Ping packet which is transmitted by the device.

## Chapter 10 System Management

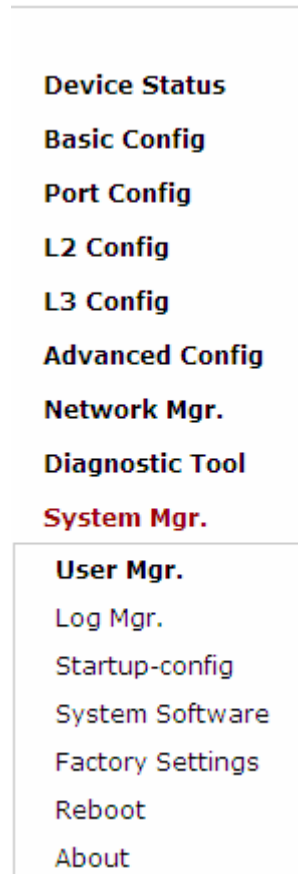


Figure 1 Navigation list of system management

### 10.1 User Management

#### 10.1.1 User List

If you click **System Manage -> User Manage**, the **User Management** page appears.

**User Management**

**New**

No.1 Page/Total 1 Page    First Prev Next Last    Go No.  Page    Search:     Current 1 Item/Total 1 Item

	User name	User permission	Pass-Group	Authen-Group	Author-Group	User Status	Operate
<input type="checkbox"/>	admin	System administrator				Normal	<a href="#">Edit</a>

Select All/Select None    **Delete**

**Help**

- ◆Note: When only one Admin user exists, You cannot delete the current administrator user. Otherwise, you cannot log on to the switch and configure it.
- ◆Users can be divided into the Admin user and the limited user according to the permission. The Admin user can use all functions of the switch, including browsing, configuring and remote login, while the limited user only has the permission to browse the switch's running state through the WEB page.
- ◆Click the 'New' button to create a new user.

Figure 2 User list

You can click “New” to create a new user.

To modify the permission or the login password, click “Edit” on the right of the user list.

Note:

1. Please make sure that at least one system administrator exists in the system, so that you can manage the devices through Web.
2. The limited user can only browse the status of the device.

### 10.1.2 Establishing a New User

If you click “New” on the **User Management** page, the **Creating User** page appears.

**User Management**

User name	<input type="text"/>
Password	<input type="text"/>
Confirming password	<input type="text"/>
Pass-Group	<input type="text"/>
Authen-Group	<input type="text"/>
Author-Group	<input type="text"/>

**Apply**    **Reset**    **Go Back**

Figure 3 Creating new users

In the “User name” text box, enter a name, which contains letters, numbers and symbols except “?”, “\”, “&”, “#” and the "Space" symbol. \ " & #和空格以外的字符。

In the “Password” textbox enter a login password, and in the “Confirming password” textbox enter this login password again.

In the “User permission” dropdown box set the user's permission. The “System administrator” user can browse the status of the device and conduct relevant settings, while the limited user can only browse the status of the device.

## 10.2 Log Management

If you click **System Manage -> Log Manage**, the **Log Management** page appears.

Log Management	
System logs will be sent to the server when it is enabled	
Enable the log server	<input checked="" type="checkbox"/>
Address of the log server	<input type="text" value="192.168.1.77"/>
Level of system logs	<input type="text" value="(7-debugging)"/>
Enable the log buffer	<input type="checkbox"/>
Size of the log buffer	<input type="text" value="4096"/> (Bytes)
Level of cache logs	<input type="text" value="(7-debugging)"/>
<input type="button" value="Apply"/>	

Figure 4 Log management

If “Enabling the log server” is selected, the device will transmit the log information to the designated server. In this case, you need enter the address of the server in the “Address of the system log server” textbox and select the log's grade in the “Grade of the system log information” dropdown box.

If “Enabling the log buffer” is selected, the device will record the log information to the memory. By logging on to the device through the Console port or Telnet, you can run the command “show log” to browse the logs which are saved on the device. The log information which is saved in the memory will be lost after rebooting. Please enter the size of the buffer area in the “Size of the system log buffer” textbox and select the grade of the cached log in the “Grade of the cache log information” dropdown box.

## 10.3 Managing the Configuration Files

If you click **System Manage -> Configuration file**, the **Configuration file** page appears.

### 10.3.1 Exporting the Configuration Information

Export the current startup-config
Export the current startup-config
<input type="button" value="Export"/>

Figure 5 Exporting the configuration file

The current configuration file can be exported, saved in the disk of PC or in the mobile storage device as the backup file.

To export the configuration file, please click the “Export” button and then select the “Save” option in the pop-up download dialog box.

The default name of the configuration file is “startup-config”, but you are suggested to set it to an easily memorable name.

## 10.3.2 Importing the Configuration Information

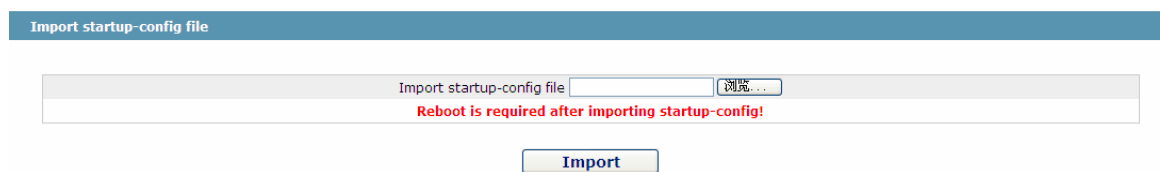


Figure 6 Importing the configuration files

You can import the configuration files from PC to the device and replace the configuration file that is currently being used. For example, by importing the backup configuration files, you can resume the device to its configuration of a previous moment.

**Note:**

1. Please make sure that the imported configuration file has the legal format for the configuration file with illegal format cannot lead to the normal startup of the device.
2. If error occurs during the process of importation, please try it later again, or click the "Save All" button to make the device re-establish the configuration file with the current configuration, avoiding the incomplete file and the abnormality of the device.
3. After the configuration file is imported, if you want to use the imported configuration file immediately, do not click "Save All", but reboot the device directly.

## 10.4 Software Management

If you click **System Manage -> Software Upgrade**, the software management page appears.

### 10.4.1 Backing up the IOS Software

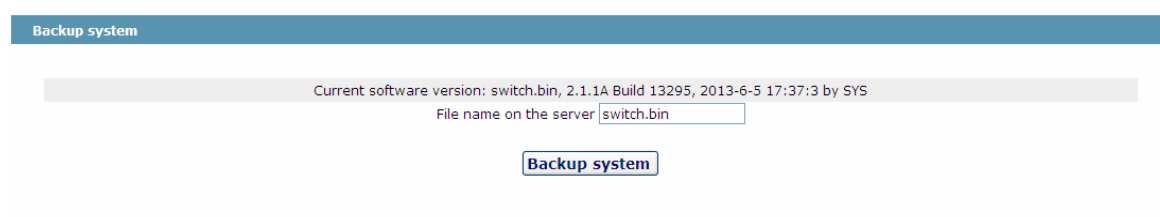


Figure 7 Backing up IOS

On this page the currently running software version is displayed. If you want to backup IOS, please click "Backuping IOS"; then on the browser the file download dialog box appears; click "Save" to store the IOS file to the disk of the PC, mobile storage device or other network location.

**Note:**

IOS 文件的缺省名称为"Switch.bin", 建议在备份时将其修改为易于识别和查找的名称。

## 10.4.2 Upgrading the IOS Software

Note:

1. Please make sure that your upgraded IOS matches the device type, because the matchable IOS will not lead to the normal startup of the device.
2. The upgrade of IOS probably takes one to two minutes; when the “updating” button is clicked, the IOS files will be uploaded to the device.
3. If errors occur during upgrade, please do not restart the device or cut off the power of the device, or the device cannot be started. Please try the upgrade again.
4. After the upgrade please save the configuration and then restart the device to run the new IOS.

Figure 8 Upgrading the IOS software

The upgraded IOS is always used to solve the already known problems or to perfect a specific function. If your device runs normally, do not upgrade your IOS software frequently.

If IOS needs to be upgraded, please first enter the complete path of the new IOS files in the textbox on the right of “Upgrading IOS”, or click the “Browsing” button and select the new IOS files on your computer, and then click “Updating”.

## 10.5 Resuming Initial Configuration

If you click **System Manage** -> **Resume Config**, the **Resuming the original configuration** page appears.

Figure 9 Resuming the original configuration

Note:

1. If you click the “Resume” button, the current configuration will be replaced by the original configuration, which will take effect after rebooting.

2. Before rebooting the device still works under the current configuration, and if you click “Save All” at the moment, the current configuration will replace the original configuration. The original configuration, therefore, cannot take effect after rebooting.
3. After the rebooting is done and the original configuration takes effect, the Web access of the device will be automatically started. The address of Vlan 1 is 192.168.0.1/255.255.255.0, and the username and password are both “admin”.

To resume the original configuration, click “Resume” and then reboot the device.

## 10.6 Rebooting the Device

If you click **System Manage -> Reboot Device**, the **Rebooting** page appears.

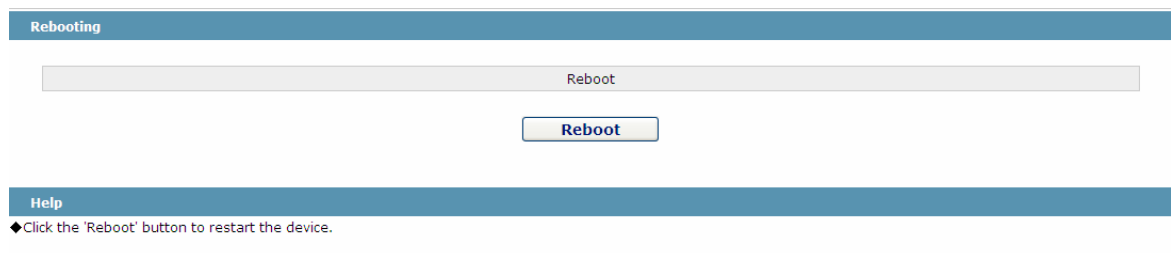


Figure 10 Rebooting the device

If the device need be rebooted, please first make sure that the modified configuration of the device has already been saved, and then click the “Reboot” button.