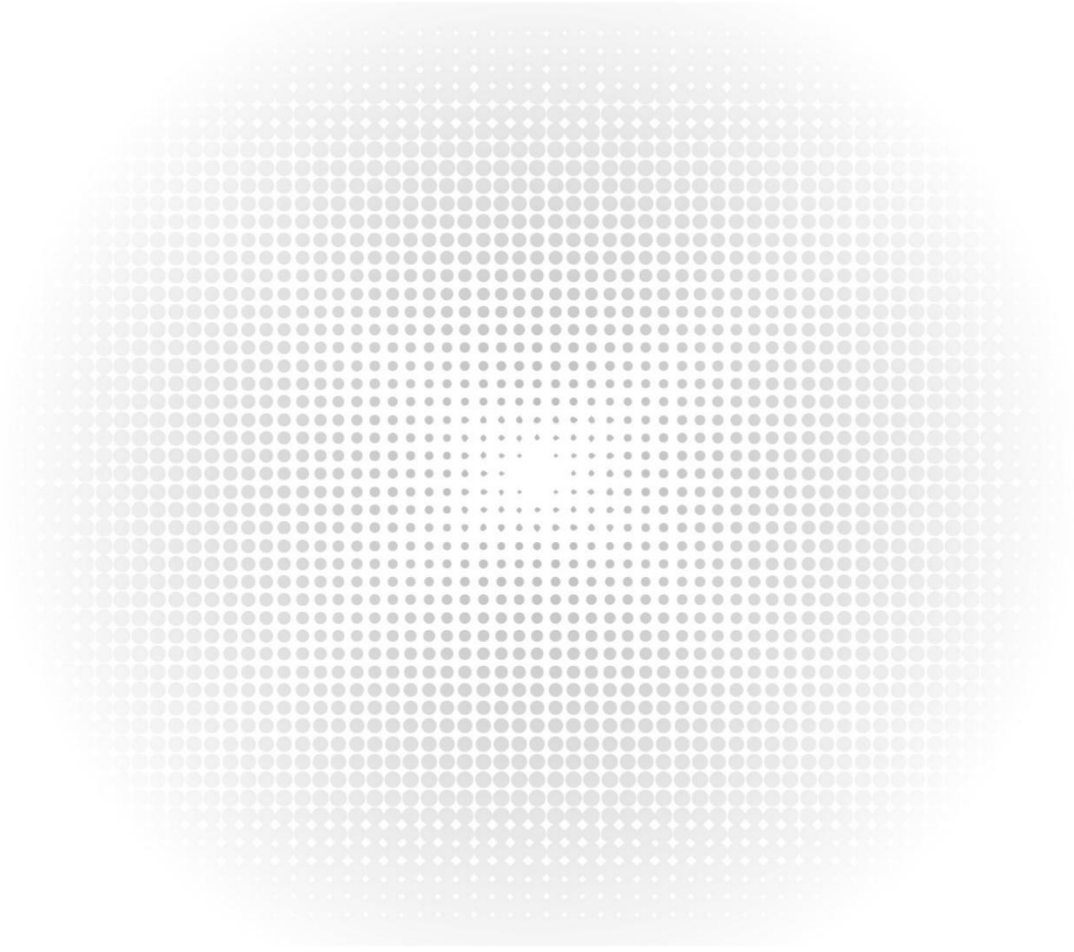
IES3100 Series Switches Configuration Guide

Models: IES3100-8TF; IES3100-8TF-P



Configuration Guide

Contents

1 Basic Configuration

1.1 HTTP protocol configuration

Switches support not only being configured by CLI and SNMP protocol; it also supports being configured by web. HTTP service port configuration and time configuration of abnormal message overtime and etc are also supported.

1.1.1 Language Selection

In currently, there are supporting two languages in the Industrial Switch： you may choice English or Chinese。User can setting the language in the global configuration mode through the command line as shown as below：

Enter the command as shown as below in global configuration mode and then system language changed.

Command	Description
[no] ip http language { english}	Setting the Web language to English。The Web interface will turn into the English version.

1.1.2 HTTP service port configuration

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 **192.168.2.1** and **1234** respectively, the HTTP access address should be changed to **http:// 192.168.2.1:1234**. You'd better not use other common protocols' ports so that access collision should not happen. For example, **ftp-20**， **telnet-23**， **dns-53**， **snmp-161**. 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* }	Configuring HTTP service 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. Configure global mode by the following command:

Command	Purpose
ip http server	Enabling HTTP service

1.1.4 HTTP access mode Configuration

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	Configuring HTTP access mode

1.1.5 Setting the Max-VLAN numbers to display in Web page

Setting a value between 1 and 4094 in the global configuration mode (4094 which is the max value， default max-vlan value is 100)

Command	Description

ip http web max-vlan { *max-vlan* }	Setting the Max-VLAN numbers to display in Web page

1.1.6 Setting the IGMP-Groups number to display in Web page

Setting a value between 1 and 100 in the global configuration mode。(100 which is the max value， default value is 15)

Command	Description
ip http web igmp-groups { *igmp-groups* }	Setting the IGMP-Groups number to display in 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 HTTPS Access Configuration

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

Command	Description
ip http ssl-access enable	Enable the HTTPS access mod

1.2.2 HTTPS Service Port Configuration

As same as the HTTP service port, there is also the 443 port in HTTPS. User can change the port number through command line in global configuration mode. Suggesting the port number is bigger than 1024.

Command	Description
ip http secure-port {*portNumber*}	Setting the HTTPS port number

2 Accessing Switch

2.1 Accessing the Switch Through Web

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
- JavaScriptTM 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.

2.2 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 **192.168.2.2** and **255.255.255.0** respectively.
2. Open the Web browser and enter **192.168.2.1** in the address bar. It is noted that **192.168.2.1** is the default management address of the switch.
3. If the IE browser is used, please enter the username and the password in the ID authentication dialog box. Both the original username and the password are "admin", which is capital sensitive.
4. After successful authentication, the systematic information about the switch will appear on the IE browser.

2.2.1 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 save the current configuration to the configuration file.

Accessing Switch Through Secure Links

2.3 Accessing Switch Through Secure Links

The data between the WEB browser and the switch will not be encrypted if you access 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 at 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, please 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://**192.168.2.1** on the address bar (**192.168.2.1** 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.

2.4 Introduction of Web Interface

The Web homepage appears after login, the whole homepage consists of the **top control bar**, the **navigation bar**, the **configuration display area** and the **bottom control bar**.

2.4.1 Top Control Bar

Save	Write the current settings to the configuration file of the device. It is equivalent to the execution of the **write** command. The configuration that is made through Web will not be promptly written to the configuration file after validation. If you click "Save", 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.

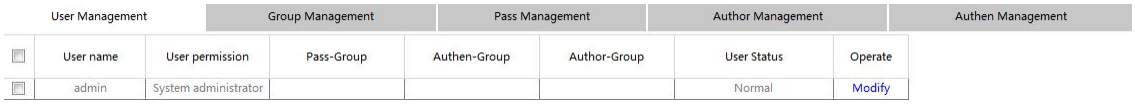
2.4.2 Navigation Bar

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 "system". 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.

2.4.3 Configuration Display Area



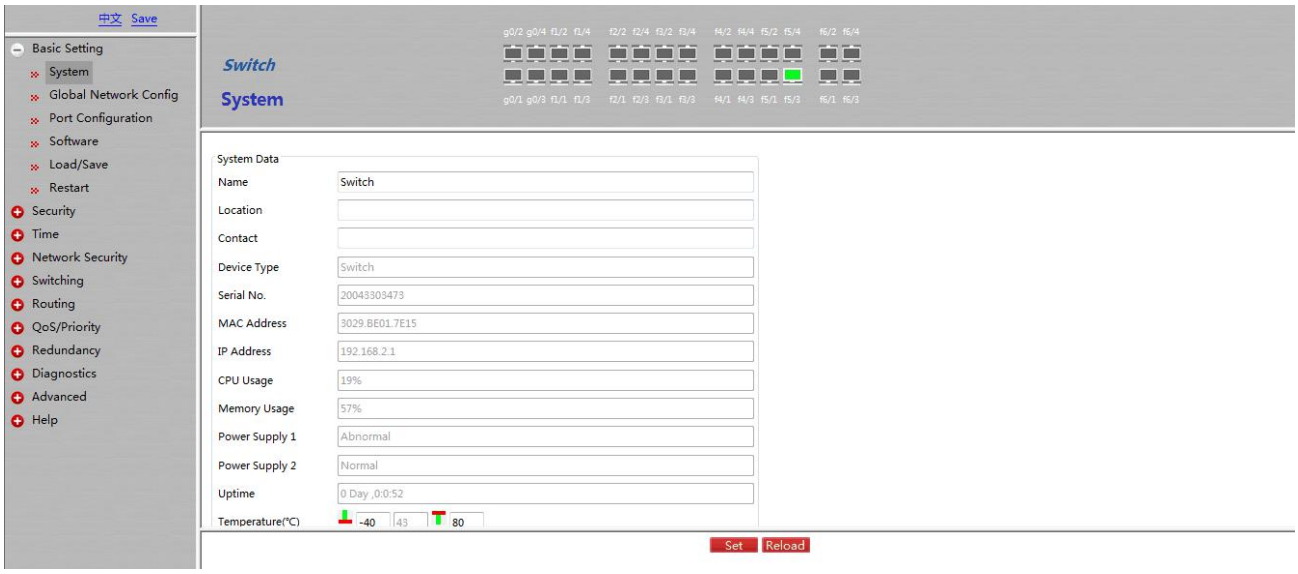
The configuration display area shows the state and configuration of the device. The contents of this area can be modified by the clicking of the items in the navigation bar.

2.4.4 Bottom Control Bar

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	Mean discarding the modification of the sheet. The content of the sheet will be reset.
New	Create a list item. For example, you can create a VLAN item or a new user.
Delete	Delete an item in the list.
Back	Go back to the previous-level configuration page.

3 Basic Configuration



3.1 System Information

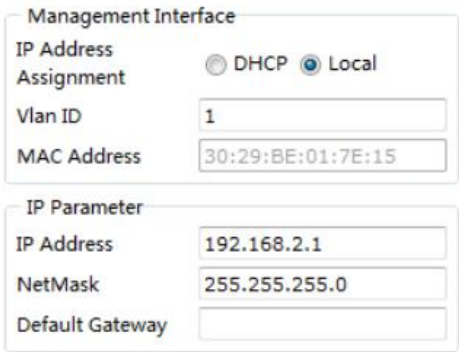
If you click **Basic Config -> System Data** in the navigation bar, the page appears as shown as below：

The system message will be displayed in the dialog box.

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

3.2 Global configuration mode (Management Interface)

If you click **Basic Config -> Management Interface** in the navigation bar, the page appears as shown as below：



- Setting the IP address of Interface VLAN 1 , in order to access the switch
- This page is used to set the IP address of Interface Vlan 1 in 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.

3.3 Port Configuration

If you click **Basic Config -> Port Config** in the navigation bar, the **Port Configuration** page appears, as shown as below figure

You can change the status, speed, duplex mode and flow control of a port on this page.

Note:

Port link switching might happen if modifying port's speed or duplex mode. Network communication might be affected.

3.4 Software

If you click **Basic Config -> Software** in the navigation bar, the Software management page appears, as shown as below figure

Current running version and rom version could be checked at this page. Click **Export** to export current running version to computer. Choose the to-be-updated software version and click **Update** to change system's software version on **Software Update** Column.

Note: The updated system's software would be valid only if the device is restarted.

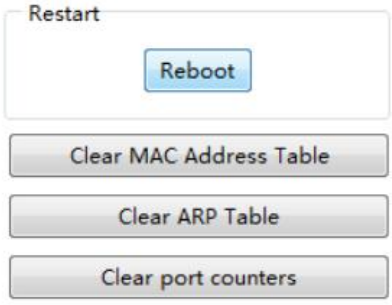
3.5 Save/Load

If you click **Basic Config -> Save/Load** in the navigation bar, the page appears as shown as below figure：

Click the "Export" then the current configuration of system will be exported to computer， if you click the " Import" then related configuration document will be imported to switch.

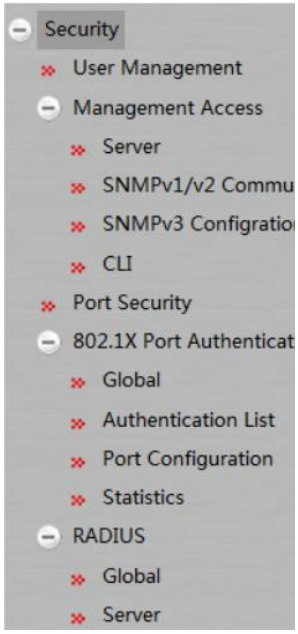
3.6 Restart

If you click **Basic Config -> Restart** in the navigation bar, the page appears as shown as below figure：



You can choice "Reboot" to reboot the switch， or choice "Clear MAC Address Table" 、"Clear ARP Table"、"Clear port counters".

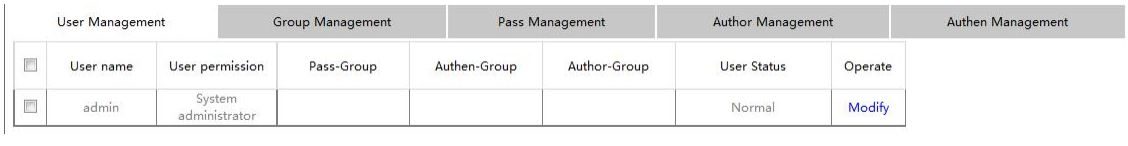
4 Security



4.1 User Management

4.1.1 User Management

If you click **Security -> User Management** in the navigation bar, the page appears as shown as below figure：



Click **Modify** to change user's configuration at this page, and then click **Delete** at the bottom bar after selecting user to delete user.

Click **New** at the bottom bar to enter the following page:

Fill in configuration at every configuration column and click **Setup** at the bottom bar to create new user.

4.1.2 Group Management

Click **Security -> User Management** in order and then click **Group Management** to open configuration page as following:

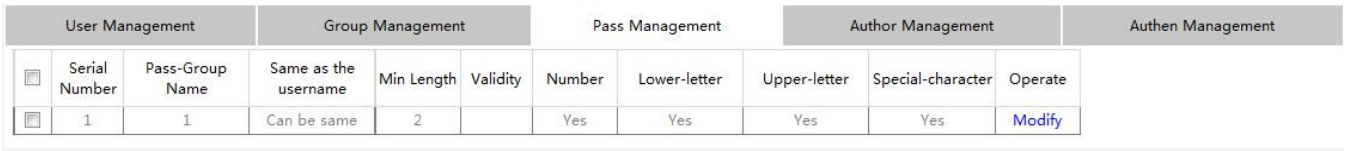
Click **Modify** to change user group's configuration at this page. Select user and click **Delete** at the bottom bar to delete user group. Click **Details** to check and configure members of group as following:

Click **New** at the bottom bar of group management page to enter the following page:

Fill in configuration at every configuration column and click **Setup** at the bottom bar to create new user group.

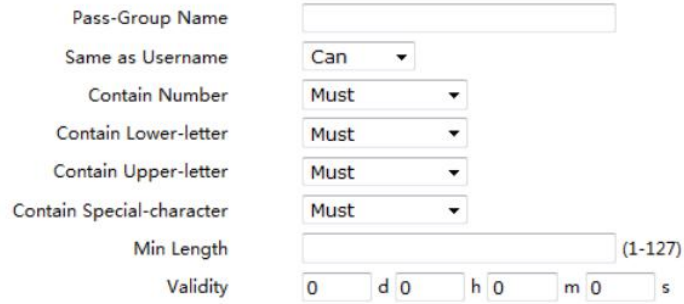
4.1.3 Password Rule Management

Click **Security -> User Management** in order and then click **Pass Management** to open configuration page as following:



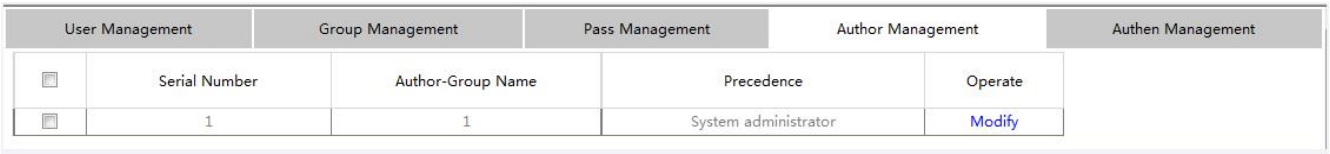
Click **Modify** to change password regulation at this page. Click **Delete** at the bottom bar to delete password regulation.

Click **New** at the bottom bar to enter the following page:



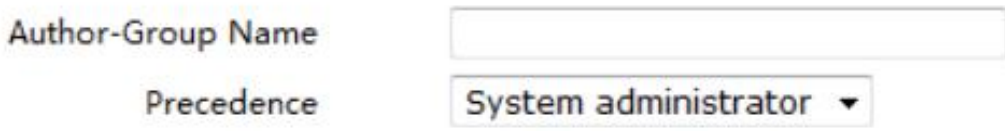
4.1.4 Author Rule Management

Click **Security -> User Management** in order and then click **Author Management** to open configuration page as following:



Click **Modify** to change author rules at this page. Click **Delete** at the bottom bar to delete author rules.

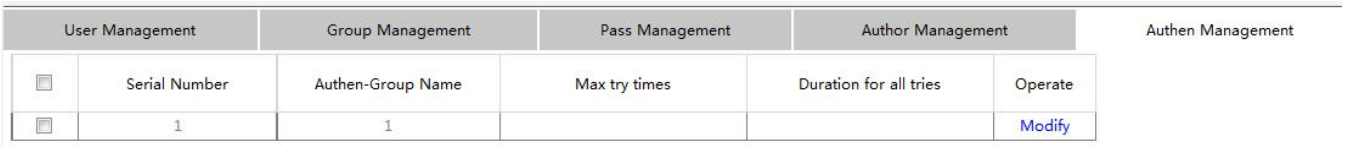
Click **New** at the bottom bar to enter the following page:



Fill in configuration at every configuration column and click **Setup** at the bottom bar to create new author rules.

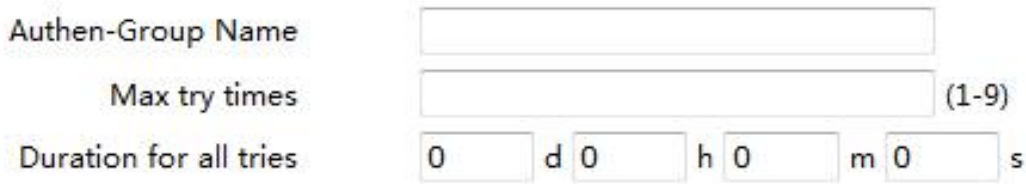
4.1.5 Authentication Rule Management

Click **Security** -> **User Management** in order and then click **Authen Management** to open configuration page as following:



Click **Modify** to change authentication rules at this page. Click **Delete** at the bottom bar to delete authentication rules.

Click **New** at the bottom bar to enter the following page:

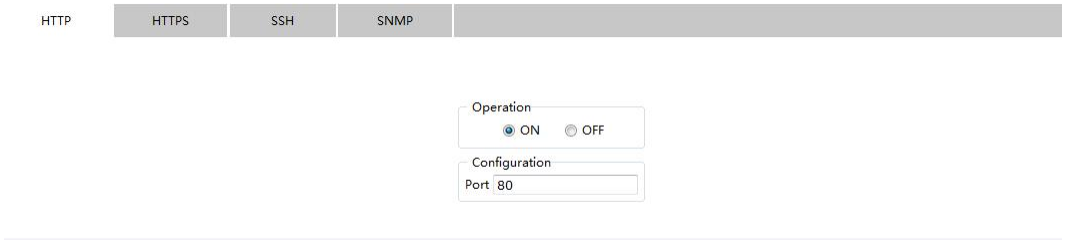


Fill in configuration at every configuration column and click **Setup** at the bottom bar to create new authentication rules.

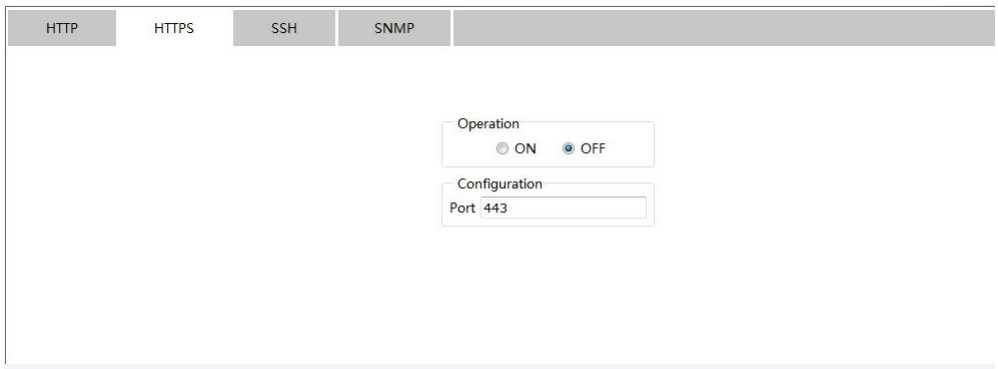
4.2 Access Management

4.2.1 Service

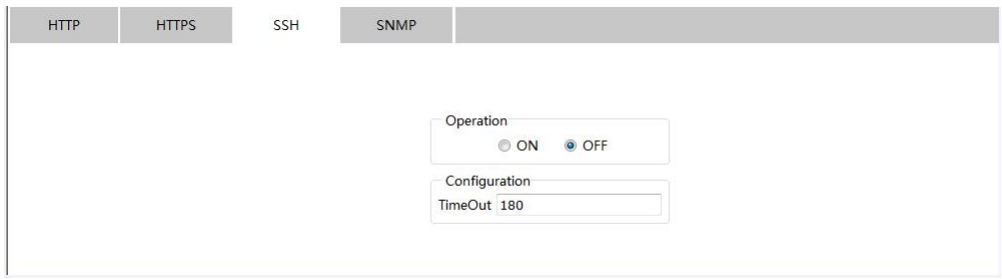
HTTP, HTTPS, SSH and SNMP could be configured at this page. Click **Security -> Access Management -> Service** at navigation bar in order to enter service configuration page. Click **HTTP** at this page to enter HTTP configuration.



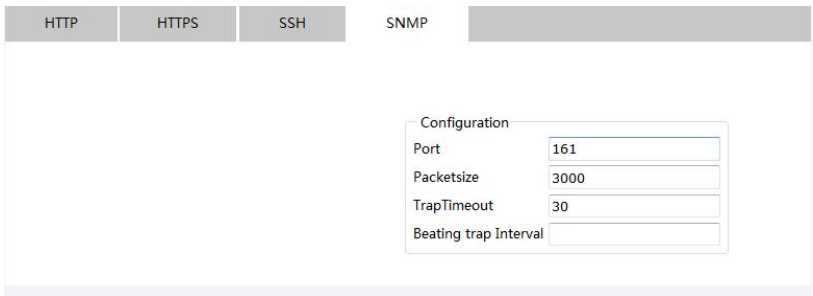
Click **HTTPS** to configure HTTPS related:



Click **SSH** to configure SSH related:

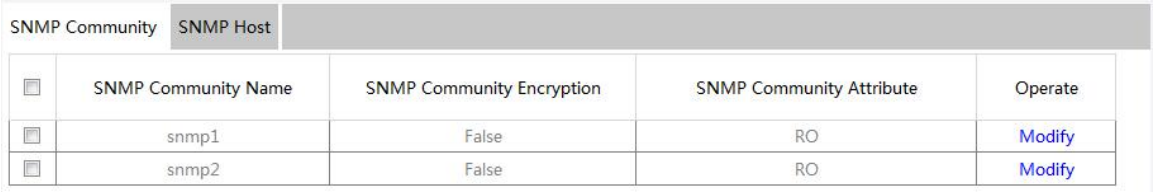


Click **SNMP** to configure SNMP related:



4.2.2 SNMP Community Management (SNMPv1/v2 community)

Click **Security -> Access Management -> SNMPv1/v2 Community** at navigation bar in order to enter configuration page as following:

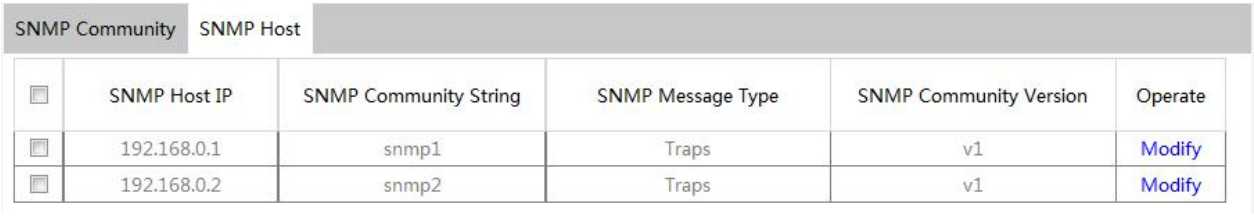


Click **New** to create new SNMP Community:

Click **Modify** to change the feature of SNMP Community;

Click **Delete** to delete the selected SNMP Community;

Click **SNMP** Host to switch to the SNMP Host configuration page:



Click **New** to create new SNMP Host:

Click **Modify** to modify feature of SNMP Host;

Click **Delete** to delete the selected SNMP Host.

4.2.3 CLI (Command Line Interface)

Click **Security -> Access Management -> CLI** at navigation bar in order to enter configuration page as following:

Terminal's overtime time could be configured at this page, and if configured as 0, it means there would be never overtime.

Click **Login Banner** to enter the following page:

Terminal's Login Banner could be configured at this page.

4.3 Interface Security

4.3.1 IP MAC Interface Binding Configuration

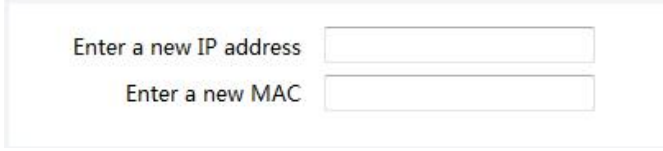
Click **Security -> Interface Security** at navigation bar in order, and then click **IP MAC Interface Binding Configuration** to enter configuration page as following:

Interface Name	Operate
g0/1	Detail
g0/2	Detail
g0/3	Detail
g0/4	Detail

Click Detail to check this interface's IP MAC binding information.

	Serial number	IP Address	MAC Address	Operate
	1	192.168.0.1	1001.1002.1003	Modify
	2	192.168.0.2	0002.0003.0004	Modify

Click **New** to create new IP MAC binding item.



Click **Modify** to modify IP MAC binding item;

Click **Delete** to delete the selected IP MAC binding item.

4.3.2 Static MAC Filtration Mode Configuration

Click **Security -> Interface Security** at navigation bar in order, and then click **Static MAC Filtration Mode Configuration** to enter configuration page as following:

Interface's Static MAC Filtration Mode could be configured at this page.

4.3.3 Static MAC Filtration Configuration

Click **Security -> Interface Security** at navigation bar in order, and then click **Static MAC Filtration Configuration** to enter configuration page as following:

Interface Name	Operate
g0/1	Detail
g0/2	Detail
g0/3	Detail

Click **Detail** to check the interface's static MAC filtration items.

	Serial number	MAC Address	Operate
	1	1001.1002.1003	Modify

Click **New** to create new static MAC filtration items.

Click **Modify** to modify static MAC filtration items;

Click **Delete** to delete the selected static MAC filtration items.

4.3.4 Dynamic MAC Filtration Mode Configuration

Click **Security -> Interface Security** at navigation bar in order, and then click **Dynamic MAC Filtration Mode Configuration** to enter configuration page as following:

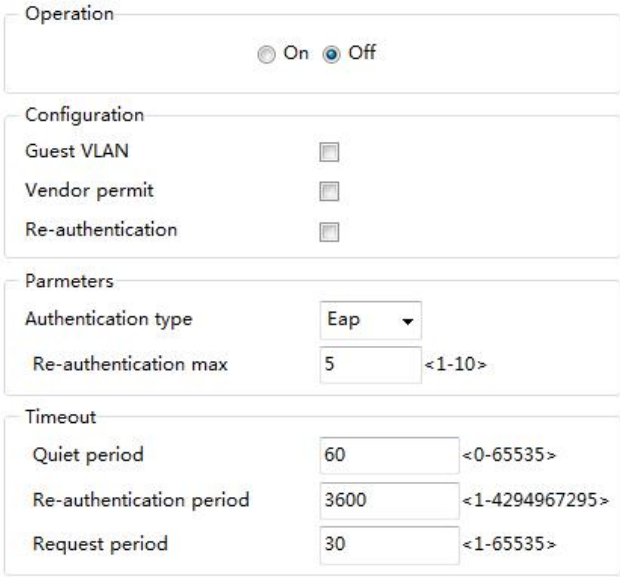
Interface Name	Dynamic MAC Filtration Mode	Max MAC Address
g0/1	Disable	1 (1-4095)
g0/2	Disable	1 (1-4095)
g0/3	Disable	1 (1-4095)
g0/4	Disable	1 (1-4095)

Interface's Dynamic MAC Filtration Mode could be configured at this page.

4.4 802.1X Interface Authentication

4.4.1 Global

Click **Security -> 802.1X Interface Authentication -> Global** at navigation bar in order to enter configuration page as following:



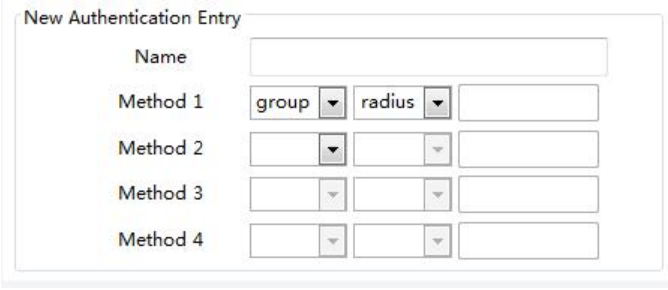
Configure the enabling/disabling operations of 802.1X interface authentication at this page.

4.4.2 Authentication List

Click Security -> 802.1X Interface Authentication -> Authentication List at navigation bar in order to enter configuration page as following:

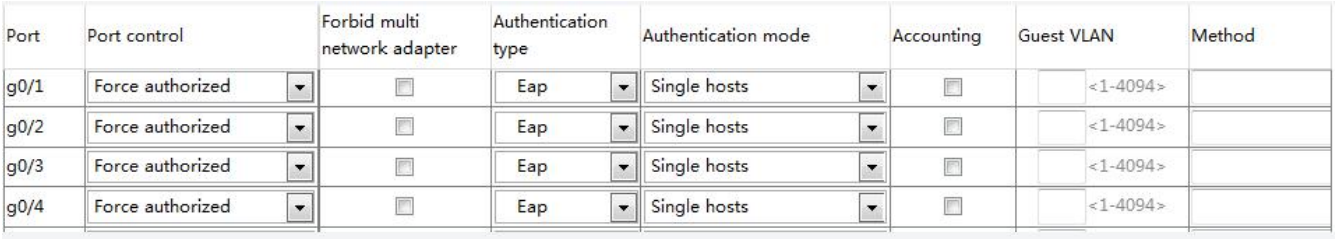
	Name	Method 1	Method 2	Method 3	Method 4
	zx	local			
	scc	group radius	group tacacs+	group 1	

Click **New** to create new authentication entry:



4.4.3 Interface Configuration

Click **Security -> 802.1X Interface Authentication -> Interface Configuration** at navigation bar in order to enter configuration page as following:



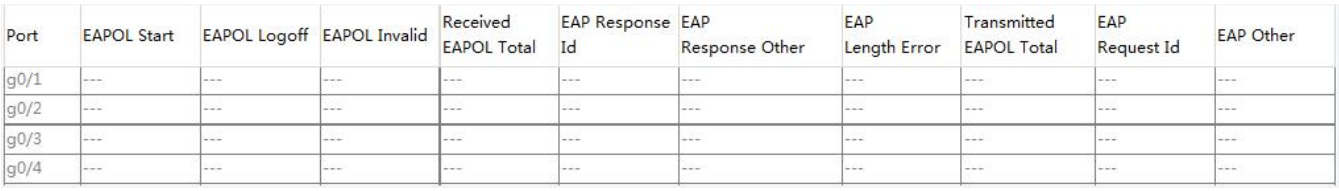
You could configure interface's enabling/disabling 802.1x interface authentication, authentication type, authentication mode, method and etc at this page.

Note:

Some configurations can only be configured when 802.1x interface authentication is enabled.

4.4.4 Statistics

Click **Security -> 802.1X Interface Authentication -> Statistics** at navigation bar in order to enter configuration page as following:



4.5 RADIUS

4.5.1 Global

Click **Security -> RADIUS -> Global** at navigation bar in order to enter configuration page as following:

Max. Number of retransmits of radius, overtime, NAS and Radius-Server Key could be configured at this page.

4.5.2 Service

Click **Security -> RADIUS -> Service** at navigation bar in order to enter configuration page as following:

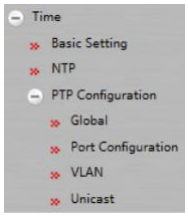
	Address	Authentication port	Accounting port
	1.2.3.5	1812	1813
	1.2.3.6	1812	1813

Radius server's authentication port and accounting port can be configured at this page;

Click **New** to create new radius server items:

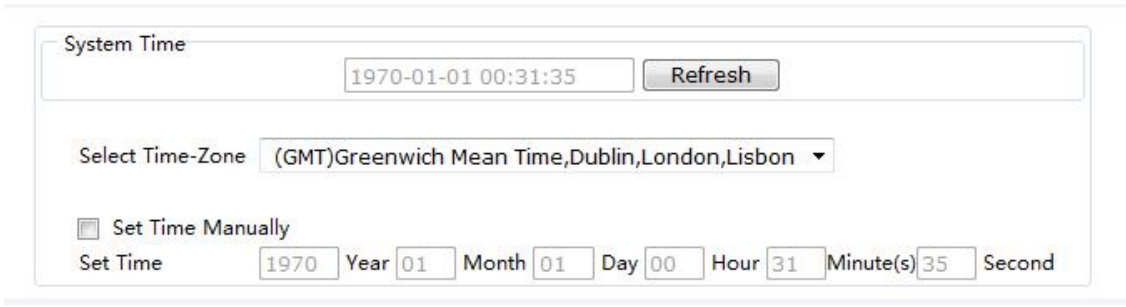
Server Ip Address:

5 Time



5.1 Basic Configuration

Click **Time -> Basic Configuration** at navigation bar in order to enter configuration page as following:

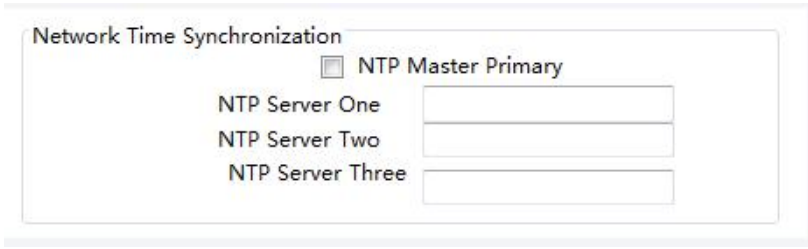


Click **Refresh** to refresh the current displayed system time.

System's time-zone could be configured at this page. Select **Set Time Manually** to set system time manually.

5.2 NTP

Click **Time -> NTP** at navigation bar in order to enter configuration page as following:

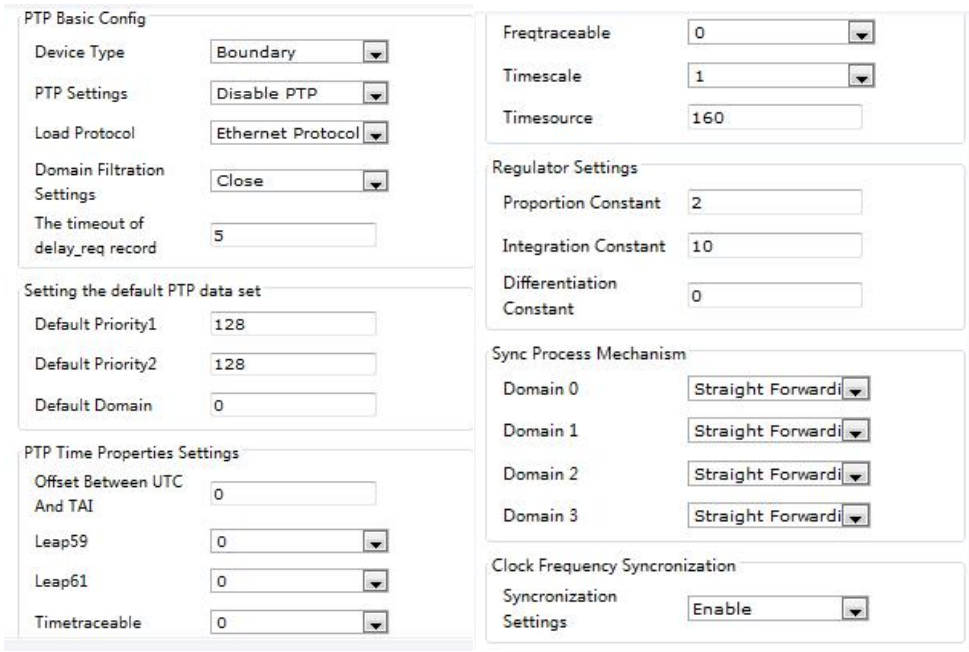


NTP server's IP address of NTP (Network Time Synchronization) could be configured at this page.

5.3 PTP Configuration

5.3.1 Global

Click **Time -> PTP -> Global** at navigation bar in order to enter configuration page as following:



Enabling/disabling PTP and timeout parameter can be configured at this page.

5.3.2 Port Configuration

Click **Time -> PTP -> Port Configuration** at navigation bar in order to enter configuration page as following:

PTP port's creation, IEEE1588 Transport Protocol type, delay measurement mechanism, and etc, all of which are under port, could be

configured at this page.

Note:

This page could only be configured after PTP protocol is enable。

5.3.3 VLAN

Click **Time -> PTP -> VLAN** at navigation bar in order to enter configuration page as following:

VLAN ID	PTP Disable
1	Enable
2	Disable

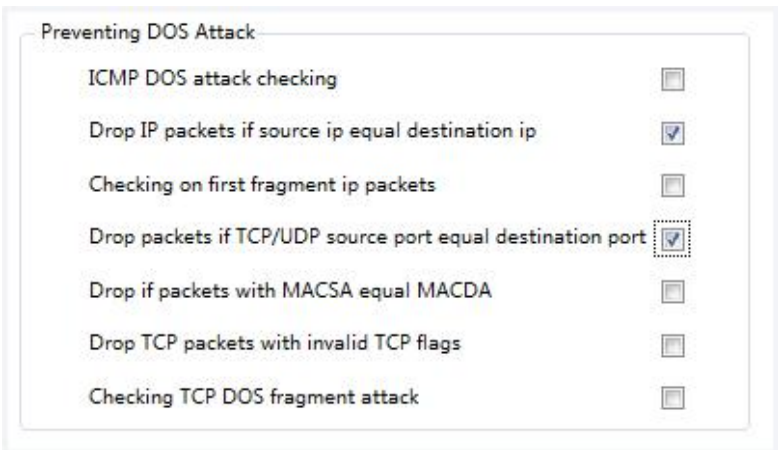
You can enable or disable Interface VLAN's PTP function at this page.

6 Network Security

6.1 DOS Configuration

6.1.1 DOS Global Configuration

Click **Network Security -> DOS-> Global** at navigation bar in order to enter DOS global configuration page as following:



You could set or cancel the related Preventing DOS Attack according to needs. Click Setup to save configuration.

6.2 DHCP Snooping Configuration

6.2.1 DHCP Snooping Global Configuration

Click **Network Security -> DHCP Snooping -> Global** at navigation bar in order to enter DHCP Snooping global configuration page as following:

Enable global DHCP Snooping protocol to detect all DHCP messages. Relative binding relationships forms. If client obtains addresses by the switch before the command is configured previously, switch cannot add relative binding relationships.

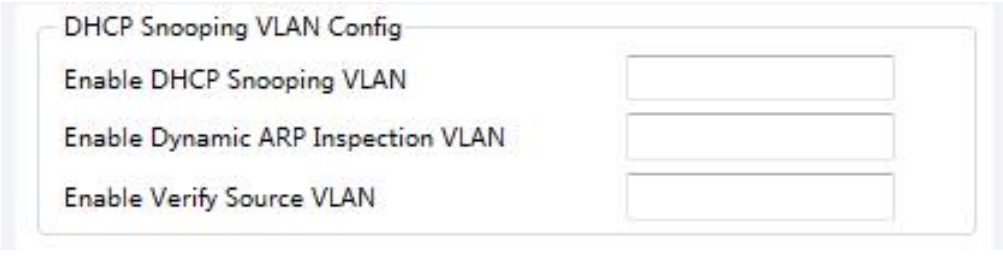
After switch's configuration is saved, restart the switch. All previous configured interface binding relationship would be dropped. At the meantime, the interface has no binding relationship, and switch would denying the forwarding of all IP messages after IP source address monitoring function is enabled. After the interface binding relationship's backup TFTP server is configured, binding relationship would be copied to server by TFTP protocol. After switch restarted, it would download binding list from TFTP server automatically to ensure network's normal operation.

When configuring backup interface binding relationships, save file name on TFTP server. Therefore, different switches can copy their interface binding relationship list to the same TFTP server.

The binding relationship list of interface's MAC address and IP address is dynamic. It is required to check whether the binding is updated. If there is (like binding items are added or deleted), backup should be done again. The default time interval is 30 minutes.

6.2.2 DHCP Snooping VLAN Configuration

Click **Network Security -> DHCP Snooping -> VLAN** Configuration at navigation bar in order to enter DHCP Snooping VLAN configuration page as following:



After the DHCP Snooping function is enabled on the VLAN, the DHCP messages received by all untrusted physical ports on the entire VLAN will be legally inspected. Any responded DHCP messages received by untrusted physical ports within a VLAN will be lost to prevent users from counterfeiting messages or prevent a mistaken DHCP server from assigning addresses. For the DHCP requests from untrusted ports, if the MAC address does not match the hardware address field in the messages, the requests will be considered as attacking messages counterfeited by users for the purpose of DHCP DOS (denial of service) and the switch will be abandoned too.

Monitor the ARP dynamics of all physical ports of a VLAN. If the source MAC and IP addresses of the ARP messages received by the ports

do not match the MAC and IP address binding relations configured for the ports, the messages cannot be processed. The binding relations configured for the ports may be dynamic along with the DHCP or manually configured. If no MAC and IP address binding relations are configured for a physical port, the switch will refuse to forward all the ARP messages.

In a VLAN where IP source addresses are monitored, if the source MAC and IP addresses of the IP messages received by all the physical ports in the VLAN do not match the MAC and IP address binding relations configured for the ports, the messages cannot be processed. The binding relations configured for the ports may be dynamic along with the DHCP or manually configured. If no MAC and IP address binding relations are configured for a physical port, the switch will refuse to forward all the IP messages received by all the ports.

6.2.3 DHCP Snooping Port Configuration

Click **Network Security -> DHCP Snooping -> Port Configuration** at navigation bar in order to enter DHCP Snooping Port configuration page as following:

Port	DHCP Trust Port	ARP Inspection Trust Port	IP Source Trust Port
g0/1	Distrust	Distrust	Distrust
g0/2	Distrust	Distrust	Distrust
g0/3	Distrust	Distrust	Distrust
g0/4	Distrust	Distrust	Distrust
f1/1	Distrust	Distrust	Distrust
f1/2	Distrust	Distrust	Distrust
f1/3	Distrust	Distrust	Distrust
f1/4	Distrust	Distrust	Distrust
f2/1	Distrust	Distrust	Distrust
f2/2	Distrust	Distrust	Distrust
f2/3	Distrust	Distrust	Distrust
f2/4	Distrust	Distrust	Distrust

If a port is configured as the DHCP-trusted port, the DHCP messaged received by this port will not be inspected.

The ARP monitoring function will not be enabled for ARP-trusted ports. Ports are untrusted by default.

The source address inspection function is not enabled for ports trusted by IP source addresses.

6.2.4 DHCP Snooping Binding Configuration

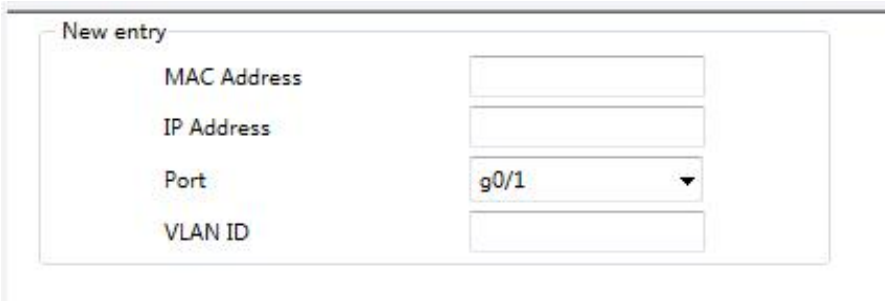
Click **Network Security -> DHCP Snooping -> Binding** at navigation bar in order to enter DHCP Snooping Binding configuration page as following:

MAC Address	IP Address	Interface Name	VLAN

For hosts that do not use DHCP to obtain addresses, users can manually add entries for binding at the switch ports to enable the host to smoothly access the network. The no command can be used to delete the bound entries.

Entries bound manually proceed over those bound through dynamic configuration. If the MAC address of the configured entry is the same as the MAC address of the dynamically configured entry, the latter will be updated based on the former. The MAC address is the only one index for bound entries of a port.

Click "New" to create entries for binding manually configured DHCP Snooping ports.



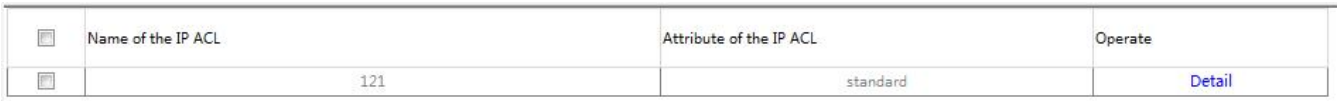
Note:

Binding entries can be created only if enabling DHCP Snooping protocol.

6.3 Access Control List Configuration

6.3.1 IPv4 Rules

Click **Network Security -> Access Control List -> IPv4 Rules** at navigation bar in order to enter IPv4 rules' page as following:



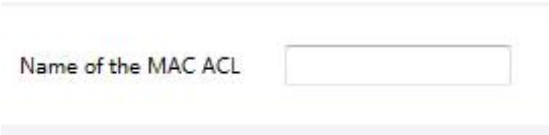
Click **New** to create an IP access control list. Click Delete to delete the access control list.

Click **Modify** to enter relative IP access control list to do rules' setup.

6.3.2 MAC Rules

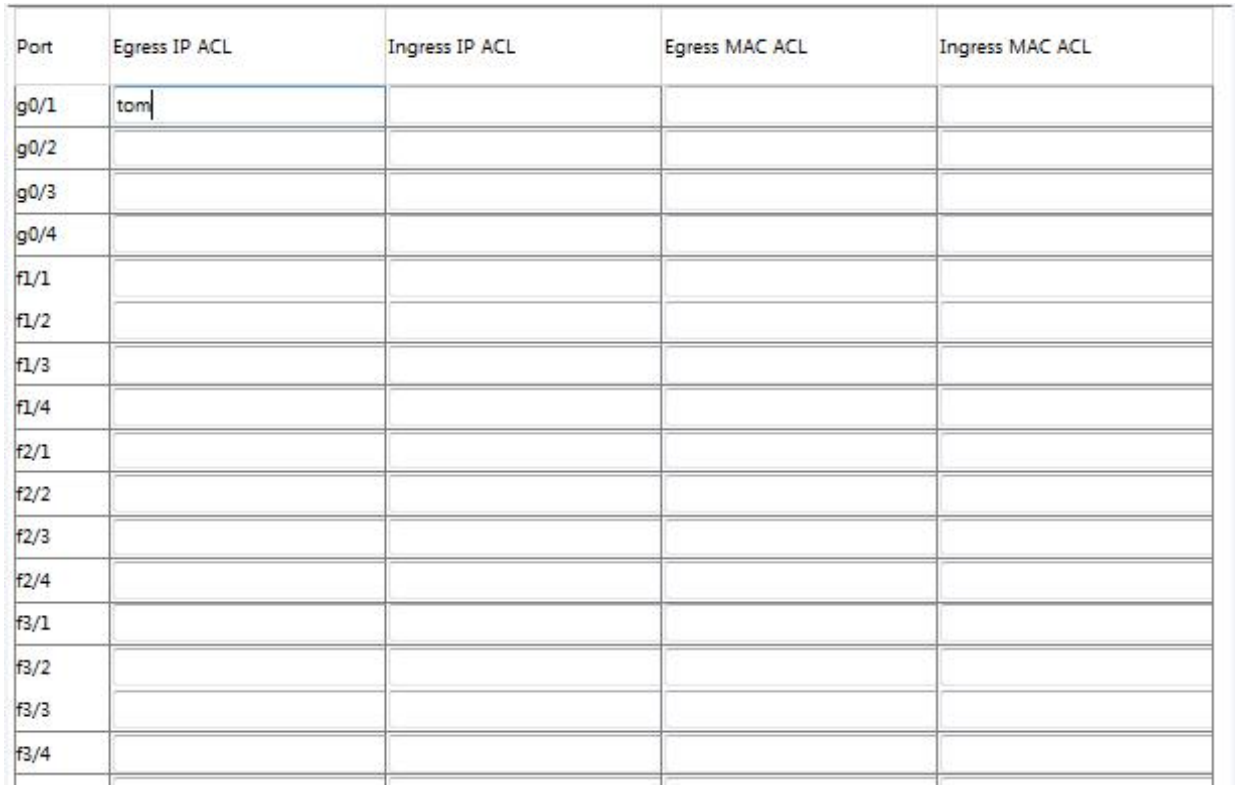
Click **Network Security -> Access Control List -> MAC Rules** at navigation bar in order to enter MAC rules' page as following:

Click **New** to create a MAC access control list. Click **Delete** to delete the access control list.



6.3.3 Distribution

Click Network Security -> Access Control List -> Distribution at navigation bar in order to enter distribution page of access control list as following:

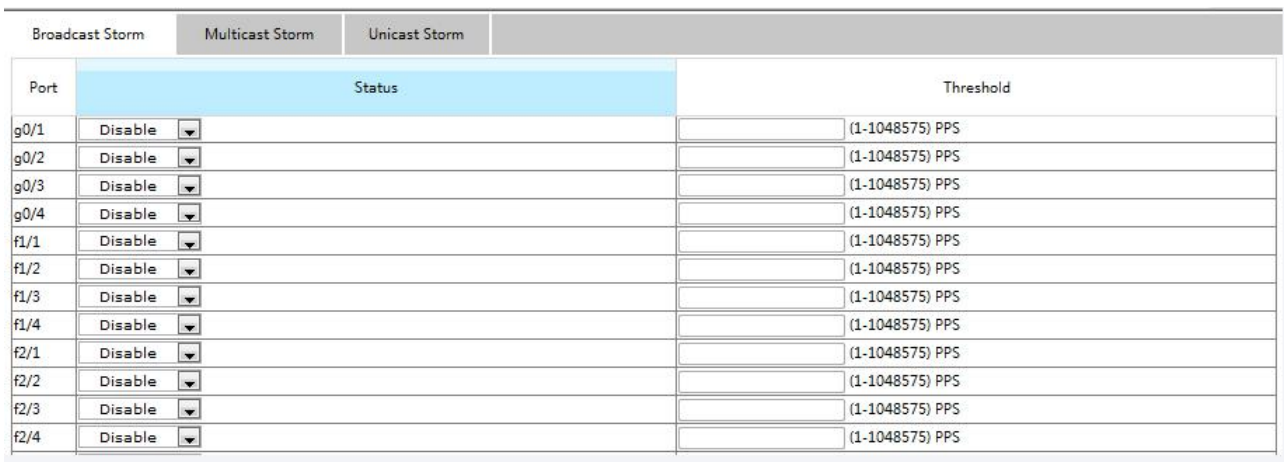


7 Switching

7.1 Storm Control

Click **Physical Port Configuration -> Storm Control** at navigation bar in order to enter broadcast storm control, multicast storm control and unicast storm control as following:

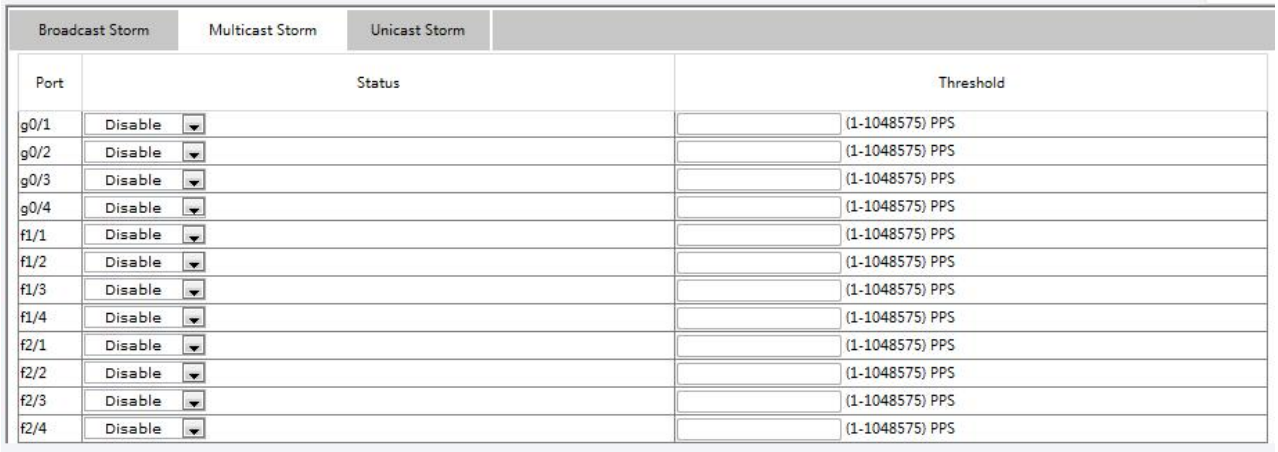
7.1.1 Broadcast Storm Control



Through the dropdown boxes in the **Status** column, you can decide whether to enable broadcast storm control on a port. In the

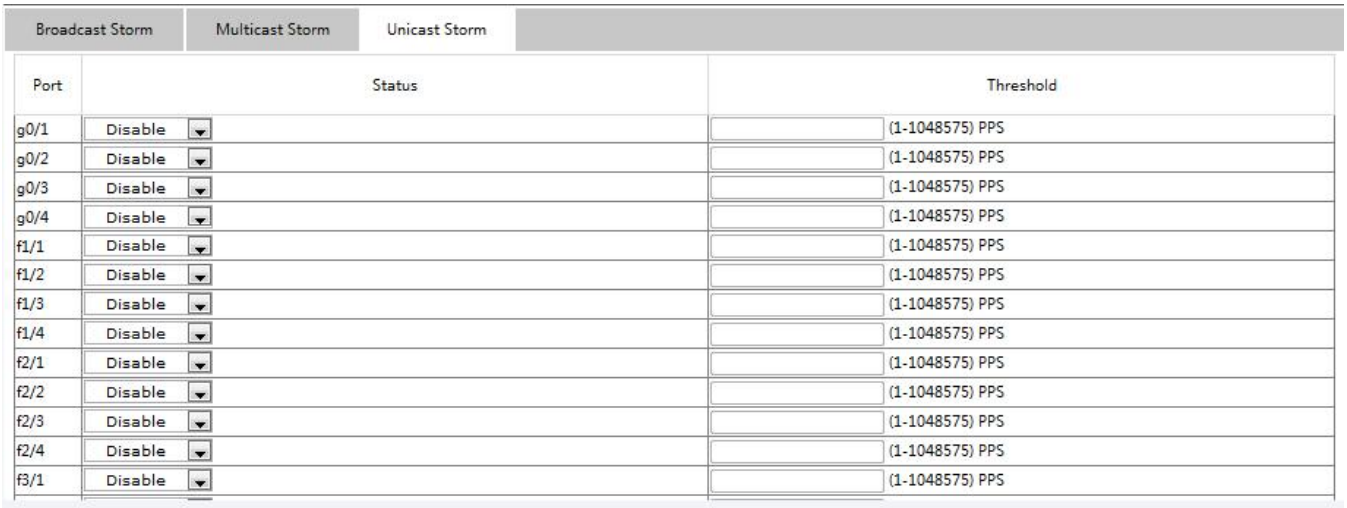
Threshold column you can enter the threshold of the broadcast packets. The legal threshold range for each port is given behind the threshold.

7.1.2 Multicast 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.

7.1.3 Unknown Unicast Storm Control



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

7.2 Port's Speed-limit

Click **Exchange -> Port's Speed-limit** at navigation bar in order to enter port's speed-limit as following:

Port	Receive Status	Receive Speed Unit	Receive Speed	Send Status	Send Speed Unit	Send Speed
g0/1	Disable	64kbps	(1-16384)	Disable	64kbps	(1-16384)
g0/2	Disable	64kbps	(1-16384)	Disable	64kbps	(1-16384)
g0/3	Disable	64kbps	(1-16384)	Disable	64kbps	(1-16384)
g0/4	Disable	64kbps	(1-16384)	Disable	64kbps	(1-16384)
f1/1	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f1/2	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f1/3	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f1/4	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f2/1	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f2/2	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f2/3	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)
f2/4	Disable	64kbps	(1-1600)	Disable	64kbps	(1-1600)

Do speed-limit on ports receive speed and send speed of port at this page. By default all ports' speed is not limited. Receive speed and send speed can be configured according to ratio or switch's defined unit.

7.3 MAC Address Filtration

Click **Exchange -> MAC Address Filtration** at navigation bar in order to enter static MAC address table as following:

Static MAC address table | Aging configuration

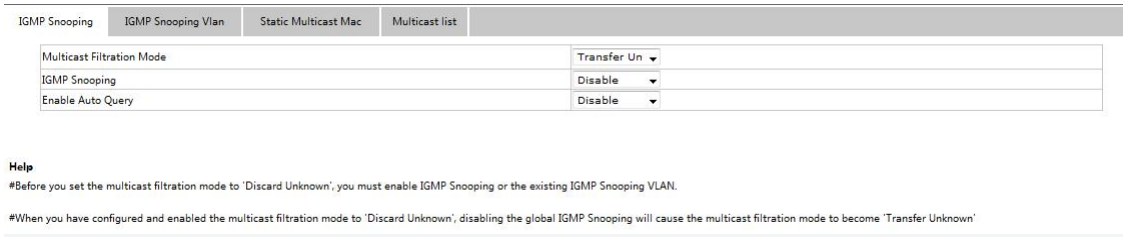
Index	Static MAC Address	VLAN ID	Port	Operate
1	0000.0000.0000	2	G0/4	Modify

Static MAC address, VLAN ID and index are shown on the page. Click **New** or **Modify** to enter static MAC address configuration page and do modifications on configured static MAC address table.

7.4 IGMP Snooping Configuration

7.4.1 IGMP Snooping Configuration

Click **Exchange -> IGMP Snooping**, at navigation bar in order, and select IGMP Snooping tab page to enter IGMP Snooping configuration page as following:

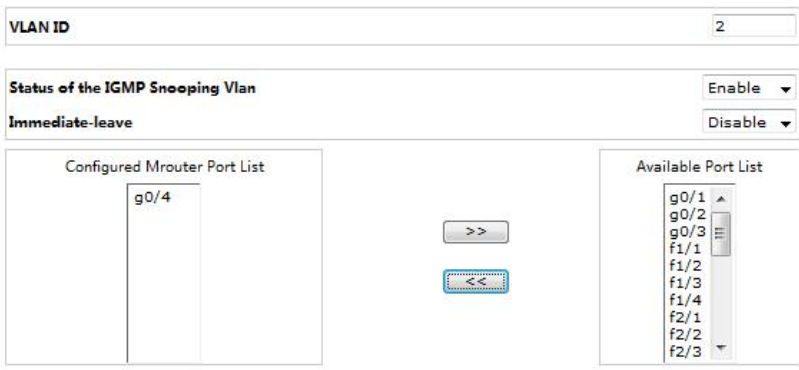


Whether switch forwarding unknown multicast, whether enabling IGMP-Snooping and whether taken as IGMP ' s Querier can be configured at this page.

7.4.2 IGMP-Snooping VLAN List

Click **Exchange -> IGMP Snooping**, at navigation bar in order, and select IGMP Snooping VLAN tab page to enter IGMP Snooping VLAN configuration page as following:

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 **Delete**, a selected IGMP-Snooping VLAN can be deleted; if you click **Modify**, you can modify the member port, running status and immediate-leave of IGMP-Snooping VLAN.

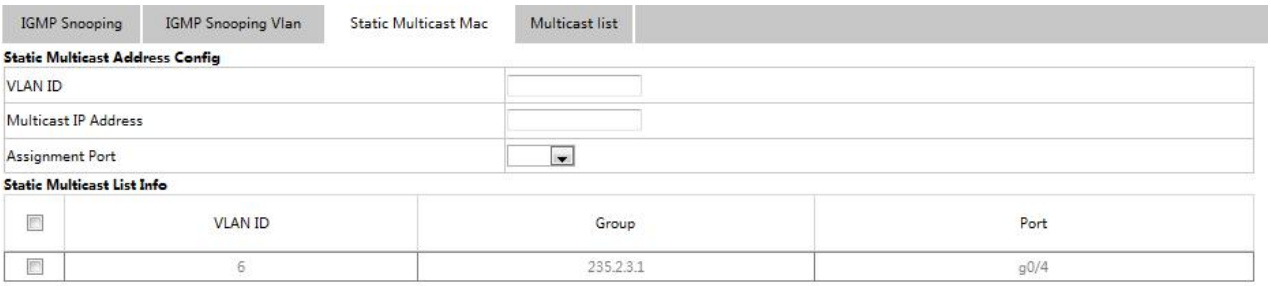


When an IGMP-Snooping VLAN is created, its VLAN ID can be modified; but when the IGMP-Snooping VLAN is modified, its VLAN ID cannot be modified.

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

7.4.3 Static Multicast Mac Address Configuration

Click Exchange -> IGMP Snooping, at navigation bar in order, and select static multicast address tab page to enter static multicast address page as following:



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.

7.4.4 Multicast list

Click **Exchange -> IGMP Snooping**, at navigation bar in order, and select multicast member list tab page to enter multicast member list configuration page as following:

The multicast groups in current network and ports' set where every group member exists counted by IGMP-Snooping, are shown on this page.

Click Refresh to **refresh** the contents in the list.

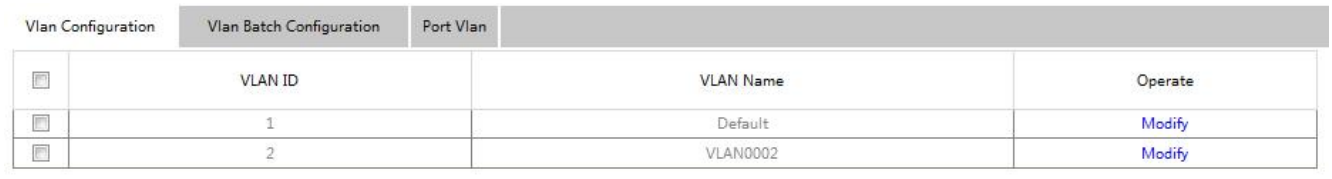
Note:

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.

7.5 VLAN

7.5.1 VLAN configuration

Click Exchange -> VLAN, at navigation bar in order, and select VLAN configuration tab page to enter VLAN configuration page as following:



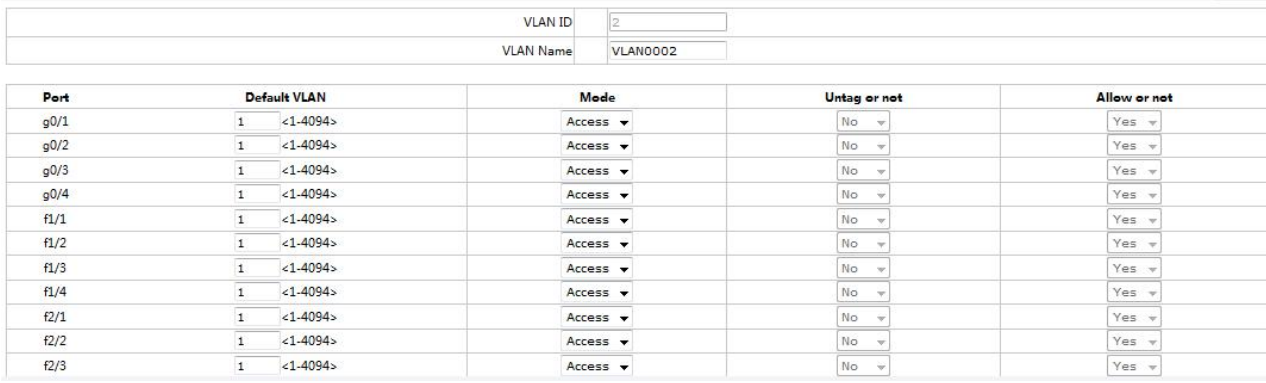
Click **Modify** after VLAN entry to change VLAN name and this VLAN's port feature.

Select the check box before item and click **Delete** to delete the selected VLAN.

Note:

By default, the maximum quantity of shown items of VLAN list is 100. If you want to configure more VLAN through Web, please login switch by Console port or Telnet to enter global configuration mode and use command **ip http web max-vlan** to modify maximum shown VLAN quantity.

Click **New** or **Modify** to enter VLAN configuration page.



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.

7.5.2 VLAN batch configuration

Click **Exchange -> VLAN**, at navigation bar in order, and select VLAN batch configuration tab page to enter VLAN configuration page as following:

Note:

Before VLAN to be deleted, it should be added first.

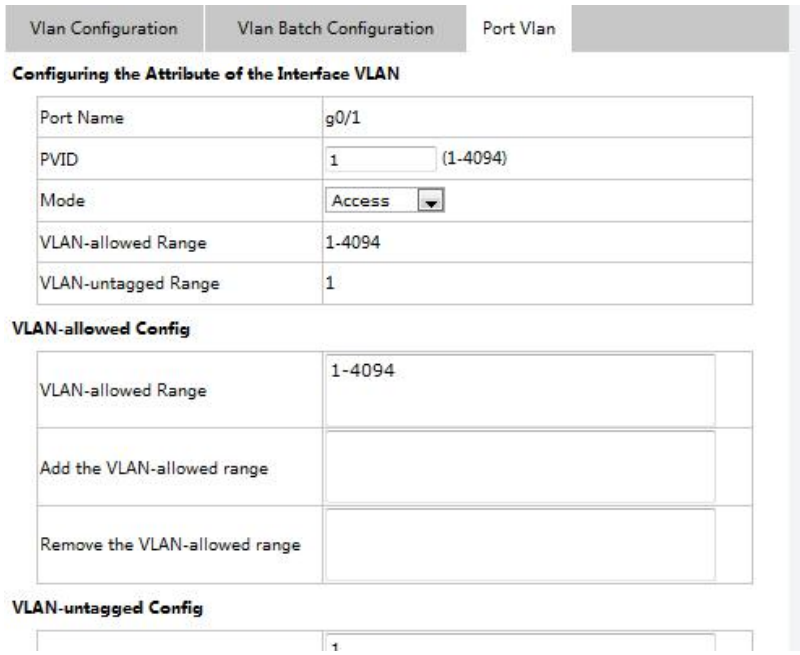
7.5.3 Port VLAN Configuration

Click **Exchange -> VLAN**, at navigation bar in order, and select VLAN tab page to enter port VLAN configuration page as following:

Vlan Configuration | Vlan Batch Configuration | Port Vlan

Port Name	PVID	Mode	VLAN-allowed Range	VLAN-untagged Range	Operate
g0/1	1	Access	1-4094	1	Modify
g0/2	1	Access	1-4094	1	Modify
g0/3	1	Access	1-4094	1	Modify
g0/4	1	Access	1-4094	1	Modify
f1/1	1	Access	1-4094	1	Modify
f1/2	1	Access	1-4094	1	Modify
f1/3	1	Access	1-4094	1	Modify
f1/4	1	Access	1-4094	1	Modify
f2/1	1	Access	1-4094	1	Modify
f2/2	1	Access	1-4094	1	Modify
f2/3	1	Access	1-4094	1	Modify
f2/4	1	Access	1-4094	1	Modify
f3/1	1	Access	1-4094	1	Modify
f3/2	1	Access	1-4094	1	Modify
f3/3	1	Access	1-4094	1	Modify
f3/4	1	Access	1-4094	1	Modify
f4/1	1	Access	1-4094	1	Modify

This page shows all ports'PVIDs, modes, allowed VLAN range and VLAN range without tag. Click **Modify** to change port's VLAN feature configuration, VLAN-allowed configuration and VLAN-untagged configuration.

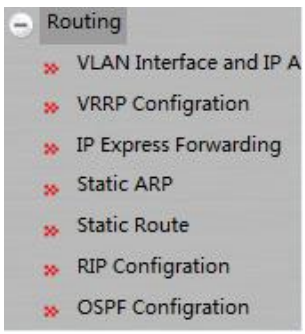


Note:

VLAN-allowed and VLAN-untagged：Please add first before do delete operation.

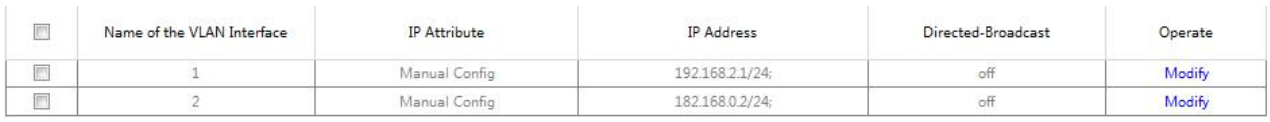
Please do not key enter.

8 Routing



8.1 VLAN Interface and IP Address Configuration

Click **Routing -> VLAN Interface and IP Address** at navigation bar in order, and then enter configuration page as following：

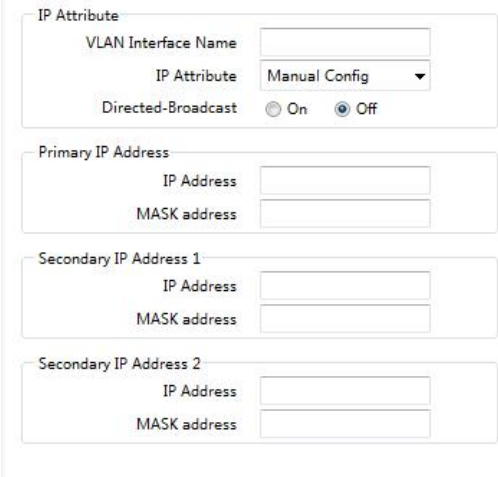


Click **New** to create a new VLAN interface items.

Click **Modify** to enter relative VLAN interface items to do the modification.

Click **Delete** to delete the selected VLAN interface items.

You can change the VLAN name when you click the “New” bottom, it’s cannot change VLAN name when click “Modify” just can do the VLAN related items modification.

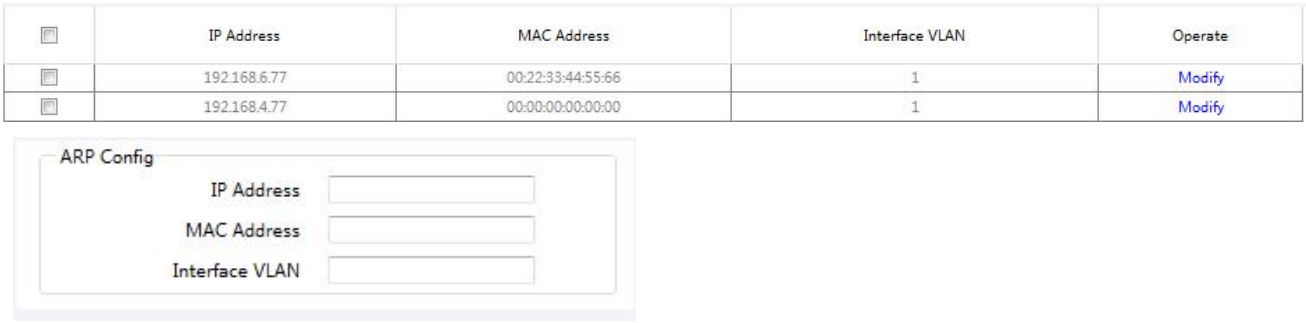


Note:

Before you want setting the VLAN secondary IP address, must need setting the Primary IP Address finished.

8.2 Static ARP Configuration

Click Routing -> Static ARP at navigation bar in order， and then enter configuration page as following：



Click **New** to create a new Static ARP.

Click **Modify** to modify the current Static ARP.

Click **Delete** to delete the selected Static ARP items.

8.3 Static Route Configuration

Click **Routing -> Static Route** at navigation bar in order, and then enter configuration page as following：

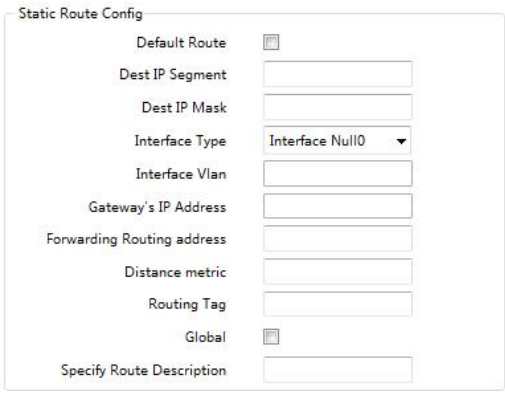
Click **New** to create a new Static ARP.

Click **Modify** to modify the current Static ARP.

Click **Delete** to delete the selected Static ARP items.

Note:

Only the L3 switches have the static route configuration page.



8.4 RIP

8.4.1 RIP process configuration

Click **Routing -> RIP Configuration** at navigation bar in order, and then enter configuration page as following：

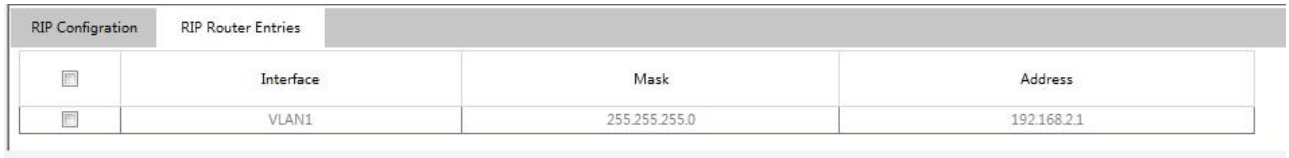
You should have created a RIP process firstly， before do the RIP entry configuration. When **Edit** the RIP process can create the new RIP process or delete it also.

Click **New** to create a new RIP process.

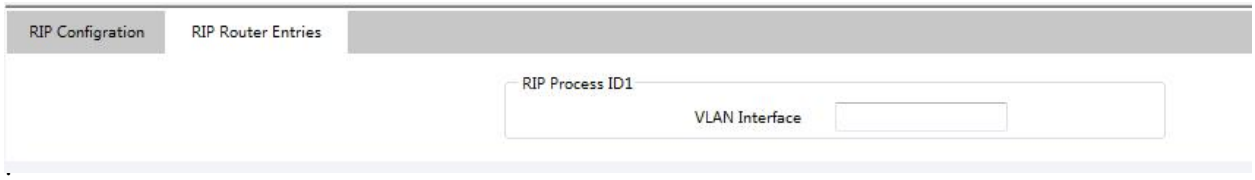
8.4.2 RIP Entries Configuration

Click **Routing -> RIP Configuration** at navigation bar in order, and then click RIP Router Entries to enter **RIP Router Entries** configuration page as following：

Enter the created RIP process ID, Click Apply to entry the selected RIP Router Entries page.



Click New to create a new RIP Router Entries of selected RIP process.



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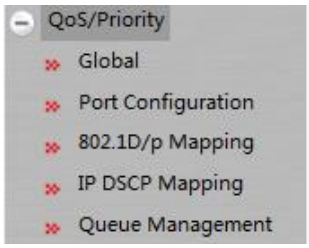
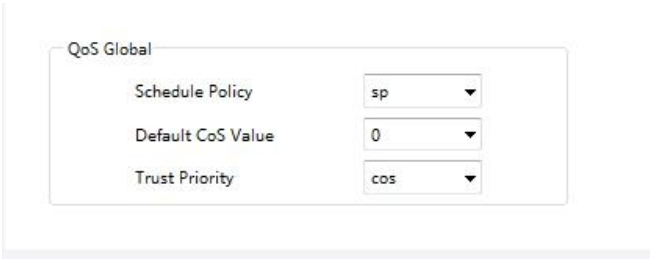
9 QoS/Priority



9.1 QoS Global Configuration

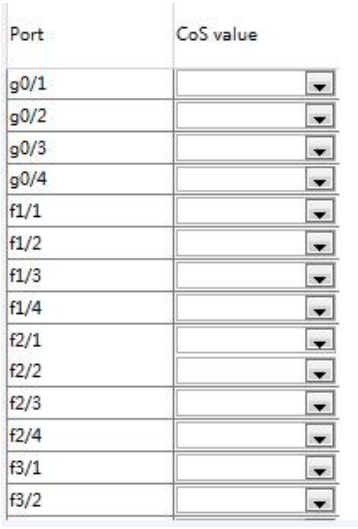
Click **QoS/Priority -> Global** at navigation bar in order, and then enter the configuration page as following：



You can do the setting of Schedule Policy, Default CoS Value and Trust Priority in the QoS Global page.

9.2 Port Configuration

Click **QoS/Priority -> Port Configuration** at navigation bar in order, and then enter the configuration page as following：



You can setting the Port CoS value by port, and then click **Setup** to save the changes.

9.3 802.1D/p mapping Configuration

Click **QoS/Priority -> 802.1D/p mapping** at navigation bar in order, and then enter the configuration page as following：

CoS Value	Queue
0	Queue 1
1	Queue 1
2	Queue 2
3	Queue 4
4	Queue 5
5	Queue 6
6	Queue 7
7	Queue 8

Click **Setup** to save all 802.1D/p mapping configurations.

9.4 IP DSCP Mapping Configuration

Click **QoS/Priority -> IP DSCP Mapping** at navigation bar in order, and then enter the configuration page as following：

DSCP	Mapping DSCP Value	Mapping Priority	Mapping Congestion Bits
0		0	
1		0	
2		0	
3		0	
4		0	
5		0	
6		0	
7		0	
8		0	
9		0	
10		0	
11		0	
12		0	
13		0	
14		0	

There are listed the 64 values of DSCP in the IP DSCP mapping page, you can setting the mapping value per each DSCP. Click Zero and then clean all of the DSCP mapping configuration.

Note：

The number of table parameter may different between different device model.

9.5 Config the Queue Management

Click **QoS/Priority -> Queue Management** at navigation bar in order, and then enter the configuration page as following：

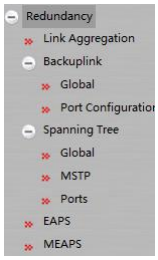
Click **Setup** can save all configuration.

Queue ID	Bandwidth Weight
1	1 (1-15)
2	1 (1-15)
3	1 (0-15)
4	1 (0-15)

Note：

If one Queue ID setting the bandwidth weight to Zero value, then the weight value must only can setting Zero that behind this Queue ID.

10 Redundancy



10.1 MEAPS Multi-ring Network Protection Protocol Configuration

Click **Redundancy -> MEAPS** at navigation bar in order, and then enter the MEAPS list configuration page as following：

	Domain ID	Ring ID	Ring Type	Node Type	Control Vlan	Hello Time	Failed Time	Pre Forward Time	Port	Type	Port	Type	Operate
	1	2	Major Ring	Master Node	2	3	3	4	None	Primary-Port	None	Secondary-Port	Modify

The list displays the currently configured MEAPS ring, including the Domain ID, Ring ID , Ring Type, Control VLAN, Hello Time, Failed Time, Pre Forward Time and the Primary/Secondary Port on the ring.

Click **New** to create MEAPS ring network.

Click **Modify** right of the entry to configure the time parameter and the Primary and Secondary port of the MEAPS ring network.

Note：

1. Supporting max four MEAPS domains(0-3).

2. Supporting max eight Rings in one domain(0-7).

3. Once one MEAPS has configured, its Domain ID, Ring ID, Ring Type, Node Type and Control VLAN cannot be changed. If these parameters need to be configured, please delete this ring and re-create it.

10.1.1 MEAPS Ring Network Configuration

Click **New** or **Modify** on the right of the entry in MEAPS network ring list, and enter MEAPS configuration page.

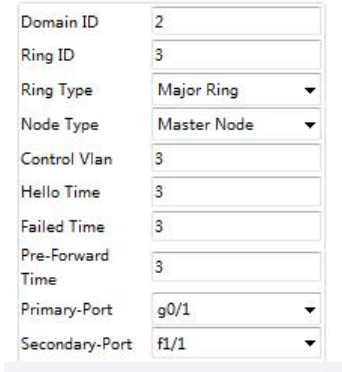


Figure: MEAPS Configuration

The primary ring can only configure the master node and the transit node.

The secondary ring can configure the primary node, the transit node, the edge node.

The primary node and the transit node can only exit in one ring, and the edge node and the assistant edge node can exist in many rings simultaneously.

In the text boxes of "Primary Port" and "Secondary Port", select a port as the ring port respectively or select "None".

Note:

Once one MEAPS has configured, its ID, ring ID, ring type, node type and control Vlan cannot be configured.

10.2 Link Aggregation Configuration

10.2.1 Port Aggregation Configuration

Click **Redundancy -> Link Aggregation** at navigation bar in order, and then enter the link aggregation configuration page as following:

Figure: Port Aggregation Configuration

Click **New** to create a new aggregation group. As much as 32 aggregation groups can be configured through Web. Each group can configure at most 8 physical port aggregations.

Click **Delete** to delete the selected aggregation group.

Click **Modify** to modify the member port and aggregation mode of the aggregation port.

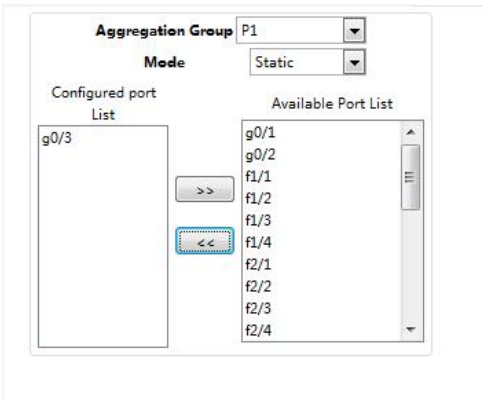


Figure: Aggregation Group Member Port Configuration

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 port, you can choose the aggregation mode to be Static, LACP Active or LACP Passive.

You can add or delete the aggregation group member port by buttons >> or <<

10.2.2 Link Aggregation Load Balancing Configuration

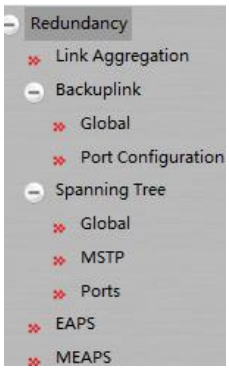
Some models support link aggregation load balancing configuration and others not, but they can be configured in the global configuration mode.

This Layer 3 model can support the aggregation group based load balancing configuration:

Figure: The Aggregation Group Based Load Balancing Configuration

You can use different aggregation groups to set different aggregation modes.

10.3 Link Backup Protocol Configuration



10.3.1 Link Backup Protocol Global Configuration

Click **Redundancy -> Backuplink -> Global** at navigation bar in order, and then enter the link backup protocol global configuration page as following：

The page lists current configured link backup group, including the preemption mode and the preemption delay mode. Click **New** to create a new link backup group.

Click **Modify** on the right of the entry and configure the preemption mode and the preemption delay mode of the link backup group.

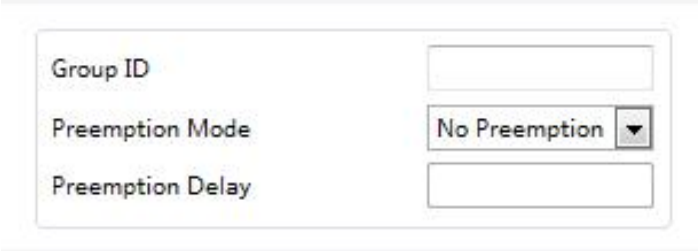


Figure: Link Backup Protocol Group Attribute Configuration

Note：

1. There are supported 8 group numbers of link backup group in this system.
2. The preemption mode of the link backup group decides the policy of the primary port and the backup port selecting forwarding packets.

10.3.2 Link Backup Protocol Port Configuration

Click **Redundancy -> Backuplink -> Port Configuration** at navigation bar in order, and then enter the link backup protocol port configuration page as following：

Interface Name	Group ID	Interface Attribute	MMU Attribute	Shareload VLAN	Operate
f1/4					Modify
f2/1					Modify
f2/2					Modify
f2/3					Modify
f2/4					Modify
f3/1					Modify
f3/2					Modify
f3/3					Modify
f3/4					Modify
f4/1					Modify
f4/2					Modify
f4/3					Modify
f4/4					Modify
f5/1					Modify
f5/2					Modify
f5/3					Modify
f5/4					Modify
f6/1					Modify
f6/2					Modify
f6/3					Modify
f6/4					Modify
p1					Modify

Figure: Link Backup Port List

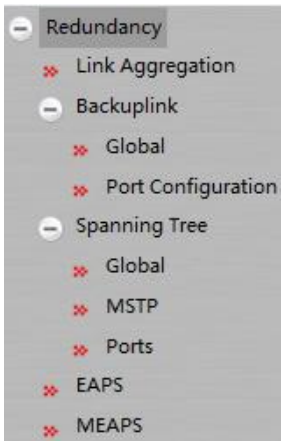
The page lists the member port has joined the backup link group, port attribute of the member port, MMU attribute, load balance vlan. MMU sender can transmit the message to MMU receiver to make the receiver quick update the mac address table.

Click **Modify** on the right of the entry and configure the link backup protocol of the port.

Figure: Link Backup Port Configuration

The link backup group which has been configured the primary port cannot be configured with other port as the primary one. In the same way, the link backup group which has been configured with the backup port cannot be configured with other port as the backup one.

10.4 Spanning-Tree Global Configuration



Click **Redundancy -> Spanning Tree -> Global** at navigation bar in order, and then enter the spanning tree configuration page as following:

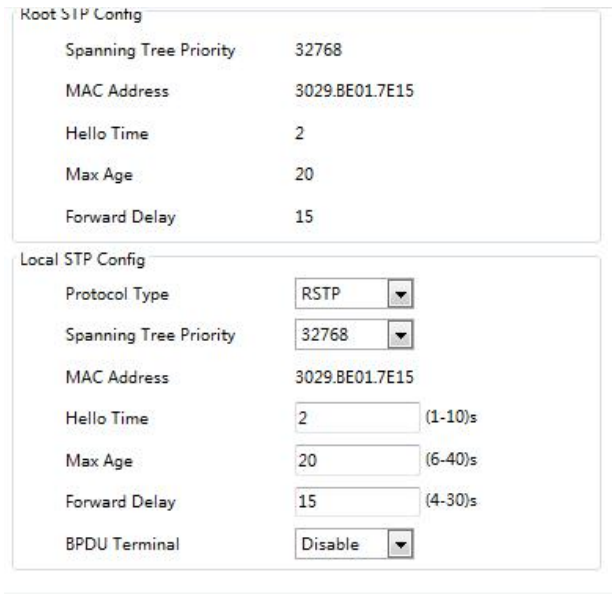


Figure: Spanning Tree Global Configuration

The page can configure the local STP protocol, such as protocol type, spanning tree priority…etc. Click Setup to save configuration.

10.5 MSTP Configuration

10.5.1 MST Global Configuration

Click **Redundancy -> Spanning Tree -> MSTP** at navigation bar in order, and then click the **MST Global** enter the configuration page as following:

You can configure the MST Global Revision Level in this page.

Click Setup to save configuration.

10.5.2 MST Instance Configuration

Click **Redundancy -> Spanning Tree -> MSTP** at navigation bar in order, and then click the **MST Instance** enter the configuration page as following：

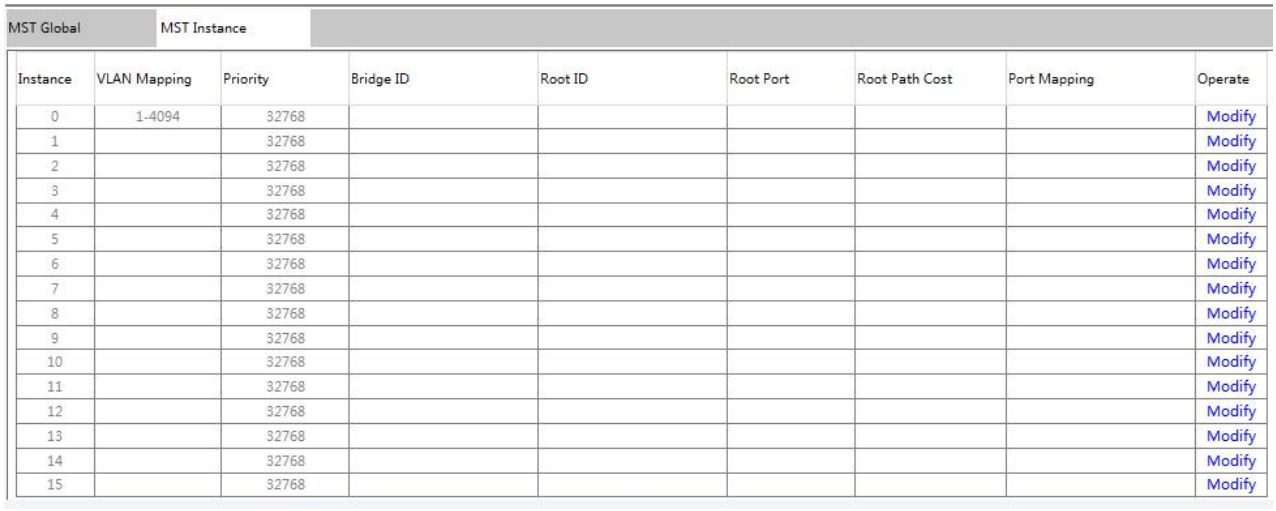
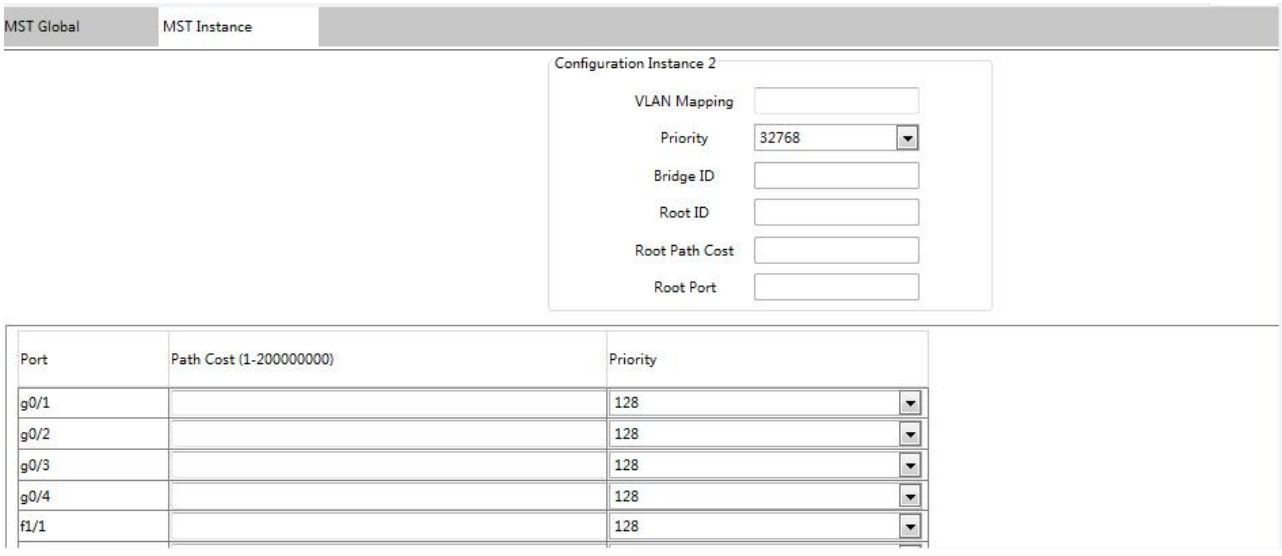


Figure: Spanning Tree MST Instance Configuration

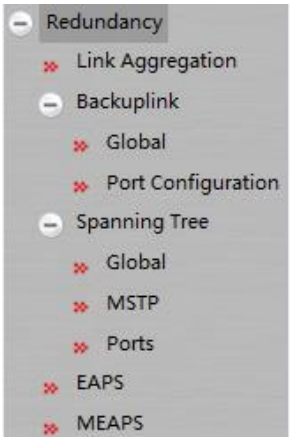
The page lists the instance related parameter，such as VLAN mapping, Priority, Bridge ID, Root ID, Root Port, Root Path Cost, Port Mapping.

Click **Modify** on the right of the entry and configure the MST instance.



Click **Setup** to save configuration.

10.6 Spanning-Tree Port Configuration



10.6.1 Port Configuration

Click **Redundancy -> Spanning Tree -> Ports** at navigation bar in order, and then click the **Port Configuration** enter the configuration page as following：

Port Configuration | Port State

Port	Protocol Status	Priority(0~240)	Path-Cost(0~200000000)	Edge Port	RSTP Ring	Guard	BPDU guard	BPDU filter
g0/1	Enable	128	0	Disable	Disable	none	Disable	Disable
g0/2	Enable	128	0	Disable	Disable	none	Disable	Disable
g0/3	Enable	128	0	Disable	Disable	none	Disable	Disable
f1/1	Enable	128	0	Disable	Disable	none	Disable	Disable
f1/2	Enable	128	0	Disable	Disable	none	Disable	Disable
f1/3	Enable	128	0	Disable	Disable	none	Disable	Disable
f1/4	Enable	128	0	Disable	Disable	none	Disable	Disable
f2/1	Enable	128	0	Disable	Disable	none	Disable	Disable
f2/2	Enable	128	0	Disable	Disable	none	Disable	Disable
f2/3	Enable	128	0	Disable	Disable	none	Disable	Disable
f2/4	Enable	128	0	Disable	Disable	none	Disable	Disable
f3/1	Enable	128	0	Disable	Disable	none	Disable	Disable
f3/2	Enable	128	0	Disable	Disable	none	Disable	Disable
f3/3	Enable	128	0	Disable	Disable	none	Disable	Disable

The page lists the usage status of spanning tree per port, you can configure the parameters。Click Setup then save the configuration.

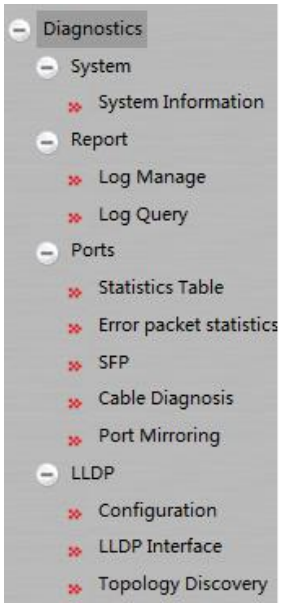
10.6.2 Spanning Tree Ports Status

Click **Redundancy -> Spanning Tree -> Ports** at navigation bar in order, and then click the **Port State** enter the configuration page as following：

Port	Role	State	Cost	Priority.Port ID	Type
f4/1	Desg	FWD	200000	128.17	P2p
f4/4	Back	BLK	200000	128.20	P2p
f5/3	Desg	FWD	200000	128.23	Edge

The page lists the port information and usage status of spanning tree, Click **Reload** can refresh the data.

11 Diagnostics



11.1 System

11.1.1 System Information

Click **Diagnostics -> System -> System Information** at navigation bar in order, and then enter the configuration page as following：

System Information

Name	Switch
Device Type	Switch
Serial No.	20043303473
MAC Address	3029.BE01.7E15
IP Address	192.168.2.1
CPU Usage	19%
Memory Usage	57%
Power Supply 1	Abnormal
Power Supply 2	Normal
Uptime	0 Day ,2:7:29
Current Time	1970-1-1 2:7:28
Temperature(℃)	39

State of Redundancy Protocols

Portocol	State	Information
STP	Running	RSTP

Port Configuration

Port	Enable	State	Speed	Duplex	Flow Control
g0/1	enabled	down	auto	full	Off
g0/2	enabled	down	auto	full	Off
g0/3	enabled	down	auto	full	Off
g0/4	enabled	down	auto	full	Off
f1/1	enabled	down	auto	auto	Off
f1/2	enabled	down	auto	auto	Off
f1/3	enabled	down	auto	auto	Off
f1/4	enabled	down	auto	auto	Off
f2/1	enabled	down	auto	auto	Off
f2/2	enabled	down	auto	auto	Off
f2/3	enabled	down	auto	auto	Off
f2/4	enabled	down	auto	auto	Off
f3/1	enabled	down	auto	auto	Off

f3/3	enabled	down	auto	auto	Off
f3/4	enabled	down	auto	auto	Off
f4/1	enabled	up	auto	auto	Off
f4/2	enabled	down	auto	auto	Off
f4/3	enabled	down	auto	auto	Off
f4/4	enabled	up	auto	auto	Off
f5/1	enabled	down	auto	auto	Off
f5/2	enabled	down	auto	auto	Off
f5/3	enabled	up	auto	auto	Off
f5/4	enabled	down	auto	auto	Off
f6/1	enabled	down	auto	auto	Off
f6/2	enabled	down	auto	auto	Off
f6/3	enabled	down	auto	auto	Off
f6/4	enabled	down	auto	auto	Off

Port Statistics

Port	Send Bytes	Send Packets	Receive Bytes	Receive Packets	Discard	Discard Rate
g0/1	0	0	0	0	0	0%
g0/2	0	0	0	0	0	0%
g0/3	0	0	0	0	0	0%
g0/4	0	0	0	0	0	0%
f1/1	0	0	0	0	0	0%
f1/2	0	0	0	0	0	0%
f1/3	0	0	0	0	0	0%
f1/4	0	0	0	0	0	0%
f2/1	0	0	0	0	0	0%
f2/2	0	0	0	0	0	0%
f2/3	0	0	0	0	0	0%
f2/4	0	0	0	0	0	0%
f3/1	0	0	0	0	0	0%
f3/2	0	0	0	0	0	0%
f3/3	0	0	0	0	0	0%
f3/4	0	0	0	0	0	0%
f4/1	1377194	5597	384	6	0	0%
f4/3	0	0	0	0	0	0%
f4/4	576	9	1377002	5594	3142	56%
f5/1	0	0	0	0	0	0%
f5/2	0	0	0	0	0	0%
f5/3	11052143	18162	3507416	15769	1879	11%
f5/4	0	0	0	0	0	0%
f6/1	0	0	0	0	0	0%
f6/2	0	0	0	0	0	0%
f6/3	0	0	0	0	0	0%
f6/4	0	0	0	0	0	0%

Used Management Ports

Portocol :	SNMP	HTTP	HTTPS
Port:	161	80	443

The page lists the system information, state of redundancy protocol, port configuration, port statistics, user management port; Click Display more can check more information such as CPU utilization, task information...etc.

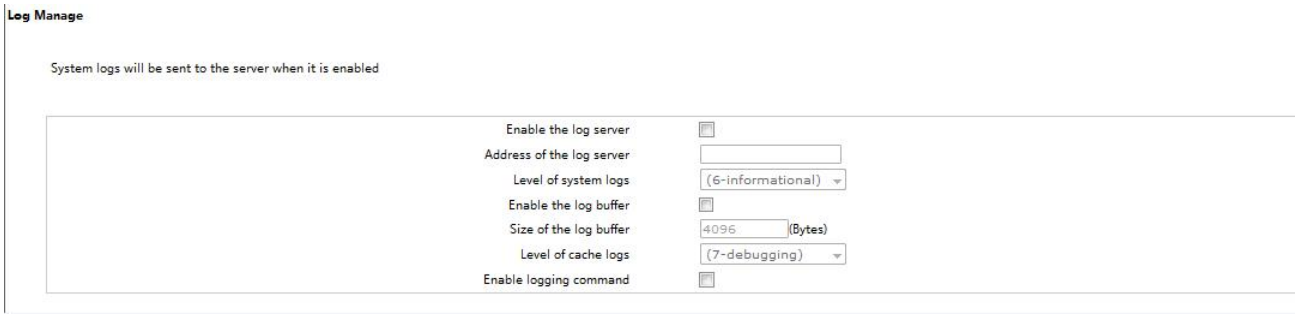
Tasks:

```
CPU utilization for one second: 21; one minute: 20; five minutes: 20
    P - Pending     D - Delay     R - Ready     S - Suspend   E - Estimated
NAME    ENTRY  TID      PRI    PC      Stk Ptr  SP lmt    ERR.NO ST    CPU    invoked
-------------------------------------------------------------------------------
tExc 812065e4 81f38a78 000 8122f0fc 81f4eba0 81f4ccb8 000000 P    0.00          0
tJob 812076a8 8218f310 000 8122f0fc 8218f1a8 8218d3d0 000000 P    0.00          5
IDLE 80708204 821945e0 255 80708218 82194438 821925e0 000000 R   83.65    3966610
```

11.2 Report

11.2.1 Log Management

Click Diagnostics -> Report -> Log Manage at navigation bar in order, and then enter the configuration page as following：

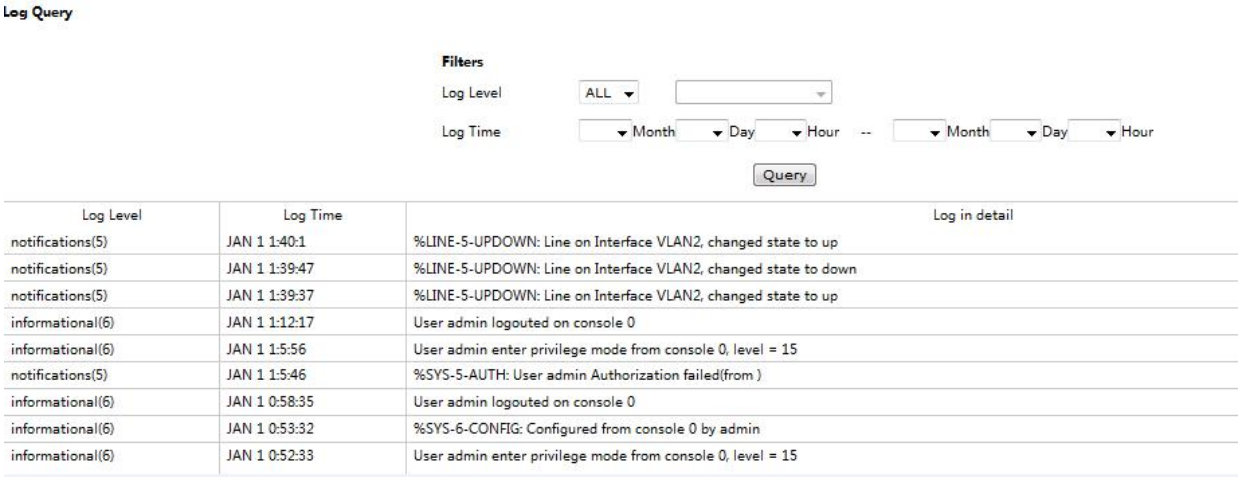


When **Enabling the log server** was selected, the device will transmit the log information to the designated server. In this case, you need enter the address of the server in the Web Configuration "**Address of the system log server**" textbox and select the log's grade in the "Grade of the system log information"dropdown box (grade 7 – debugging is the lowest grade of log).

When **enabling the log buffer** was 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 saved in the memory will lost when restarting the device. 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.

11.2.2 Log Query

Click **Diagnostics -> Report -> Log Query** at navigation bar in order, and then enter the configuration page as following:

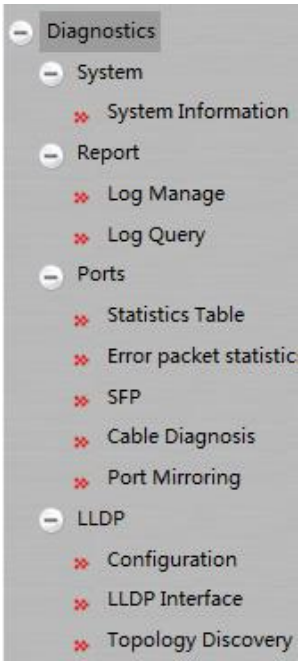


Log Level	Log Time	Log in detail
notifications(5)	JAN 1 1:40:1	%LINE-5-UPDOWN: Line on Interface VLAN2, changed state to up
notifications(5)	JAN 1 1:39:47	%LINE-5-UPDOWN: Line on Interface VLAN2, changed state to down
notifications(5)	JAN 1 1:39:37	%LINE-5-UPDOWN: Line on Interface VLAN2, changed state to up
informational(6)	JAN 1 1:12:17	User admin logouted on console 0
informational(6)	JAN 1 1:5:56	User admin enter privilege mode from console 0, level = 15
notifications(5)	JAN 1 1:5:46	%SYS-5-AUTH: User admin Authorization failed(from)
informational(6)	JAN 1 0:58:35	User admin logouted on console 0
informational(6)	JAN 1 0:53:32	%SYS-6-CONFIG: Configured from console 0 by admin
informational(6)	JAN 1 0:52:33	User admin enter privilege mode from console 0, level = 15

Note:

If you need more information, you can Query it by setting the log level and log time. Do not set the log time means that the query log of all time;Only set the starting time of log queries are expressed by the time for starting time log of all;only set the end time means queries are expressed by the time as the end time of all log.

11.3 Port



11.3.1 Ports Statistics Table

Click **Diagnostics -> Port -> Statistics Table** at navigation bar in order, and then enter the configuration page as following:

Port	Receive Packets	Receive Bytes	Received Unicast Packets	Received Multicast Packets	Received Broadcast Packets	Transmitted Packets	Transmitted Bytes	Transmitted Unicast Packets	Transmitted Multicast Packets	Transmitted Broadcast Packets	Discard	Discard Rate
g0/1	0	0	0	0	0	0	0	0	0	0	0	0%
g0/2	0	0	0	0	0	0	0	0	0	0	0	0%
g0/3	0	0	0	0	0	0	0	0	0	0	0	0%
g0/4	0	0	0	0	0	0	0	0	0	0	0	0%
f1/1	0	0	0	0	0	0	0	0	0	0	0	0%
f1/2	0	0	0	0	0	0	0	0	0	0	0	0%
f1/3	0	0	0	0	0	0	0	0	0	0	0	0%
f1/4	0	0	0	0	0	0	0	0	0	0	0	0%
f2/1	0	0	0	0	0	0	0	0	0	0	0	0%
f2/2	0	0	0	0	0	0	0	0	0	0	0	0%
f2/3	0	0	0	0	0	0	0	0	0	0	0	0%
f2/4	0	0	0	0	0	0	0	0	0	0	0	0%
f3/1	0	0	0	0	0	0	0	0	0	0	0	0%
f3/2	0	0	0	0	0	0	0	0	0	0	0	0%
f3/3	0	0	0	0	0	0	0	0	0	0	0	0%
f3/4	0	0	0	0	0	0	0	0	0	0	0	0%
f4/1	6	384	0	6	0	5862	1432525	0	5818	44	0	0%
f4/2	0	0	0	0	0	0	0	0	0	0	0	0%
f4/3	0	0	0	0	0	0	0	0	0	0	0	0%

The page lists the port information, there are included the Receive Packets, Receive Bytes, Received Unicast Packets, Received Multicast Packets, Received Broadcast Packets...etc.

11.3.2 SFP Information

Click **Diagnostics -> Port -> SFP** at navigation bar in order, and then enter the configuration page as following:

Port	TX Power (dBM)	RX Power (dBM)	Temperature (℃)	Supply Voltage (V)	Bias (mA)

Note: SFP port information can be read when the DDM has been enabled.

11.3.3 Cable Diagnosis

Click **Diagnostics -> Port -> Cable Diagnosis** at navigation bar in order, and then enter the configuration page as following:

Port	Diagnosis Enable	Diagnosis Period	Diagnosis Result
g0/1	Disable		
g0/2	Disable		
g0/3	Disable		
g0/4	Disable		
f1/1	Disable		
f1/2	Disable		
f1/3	Disable		
f1/4	Disable		
f2/1	Disable		
f2/2	Disable		
f2/3	Disable		
f2/4	Disable		
f3/1	Disable		
f3/2	Disable		
f3/3	Disable		

You can configure each port of cable diagnosis is enable or disable, and also can configure the diagnosis period.

Click **Setup** to view the results of the diagnosis.

11.3.4 Port Mirroring

Click **Diagnostics -> Port -> Port Mirroring** at navigation bar in order, and then enter the configuration page as following:

Mirror Port: Disable

Mirrored Port	Enabled	Mirror Mode
g0/1		RX
g0/2		RX
g0/3		RX
g0/4		RX
f1/1		RX
f1/2		RX
f1/3		RX
f1/4		RX
f2/1		RX
f2/2		RX
f2/3		RX
f2/4		RX

Click the dropdown box right of the **Mirror Port** and select a port to be the destination port of mirror.

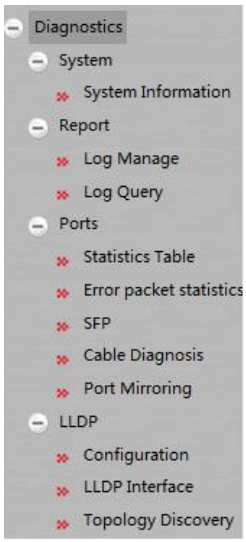
Click the checkbox and select the mirroring source port:

RX The received packets will be mirrored to the destination port.

TX The transmitted packets will be mirrored to a destination port.

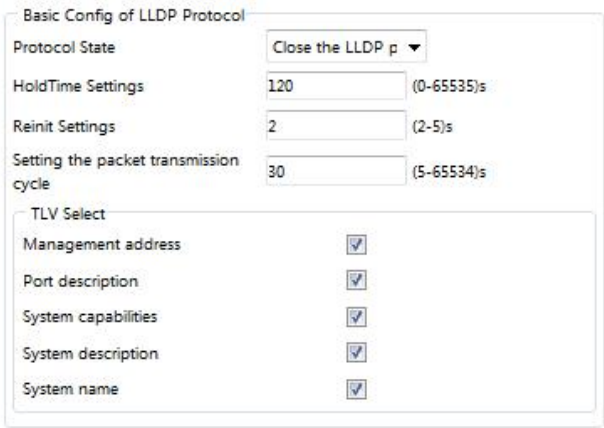
RX & TX The received and transmitted packets will be mirrored simultaneously.

11.4 LLDP Configuration



11.4.1 LLDP Basic Configuration

Click **Diagnostics -> LLDP -> Configuration** at navigation bar in order, and then enter the LLDP configuration page as following:



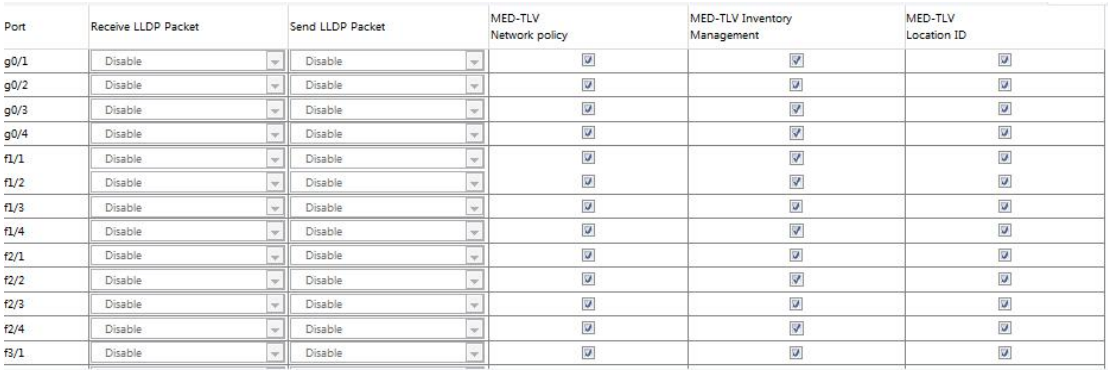
You can enable or disable the LLDP protocol. You cannot configure the LLDP protocol of the port when LLDP is disabled.

HoldTime refers to the ttl value for transmitting the LLDP message. The default value is 120s.

Reinit refers to the transmission delay of LLDP. The default value is 2s.

11.4.2 LLDP Port Configuration

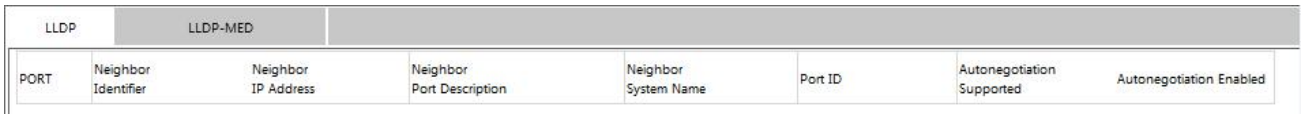
Click **Diagnostics -> LLDP -> LLDP Interface** at navigation bar in order, and then enter the LLDP port configuration page as following:



LLDP port configuration can enable or disable the port transmitting LLDP packets, the default value was disable both of receive and send LLDP packet. The default of MED-TLV is enabled.

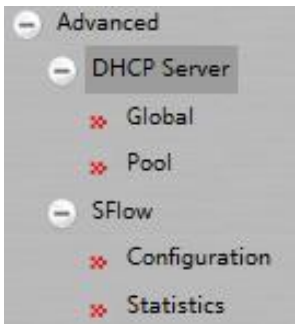
11.4.3 Topology Discovery

Click **Diagnostics -> LLDP -> Topology Discovery** at navigation bar in order, and then enter the LLDP topology discovery and configuration page as following:



The page lists the devices that have been found.

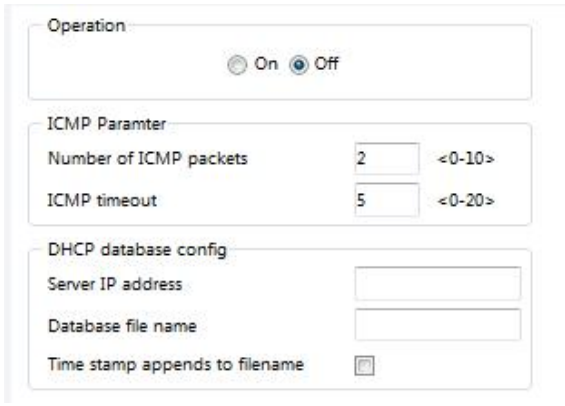
12 Advanced



12.1 DHCP Server

12.1.1 DHCP Server Global Configuration

Click **Advanced -> DHCP Server -> Global** at navigation bar in order, and then enter the DHCP server global configuration page as following:



You can enable or disable the DHCP server feature in this page. The default value is 2 for Number of ICMP packets, ICMP timeout default value is 5 seconds;BTW you also can configure the DHCP database parameters such as server IP address, database file name, time stamp appends to filename.

12.1.2 DHCP Server Pool Configuration

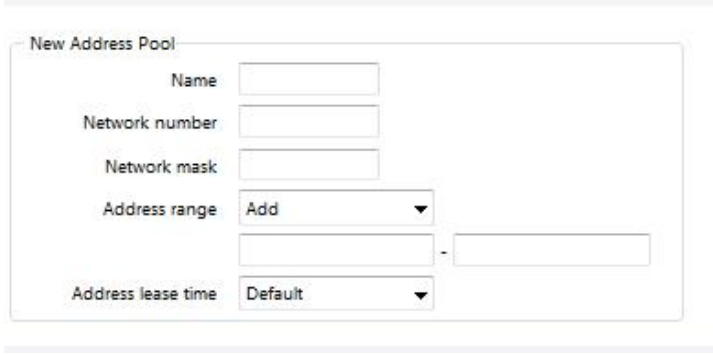
Click **Advanced -> DHCP Server -> Pool** at navigation bar in order, and then enter the DHCP server pool configuration page as

following：

	Name	Network number	Network mask	Address range	Address lease time	Operate
	aaa	192.168.6.0	255.255.255.0		Default	Modify

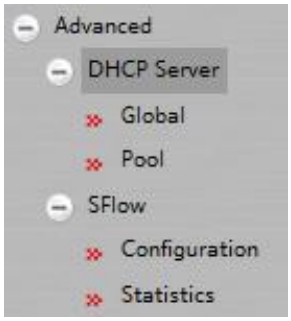
The page lists the DHCP server pool information that have been configured.

Click New to create a new DHCP server pool, page as following:



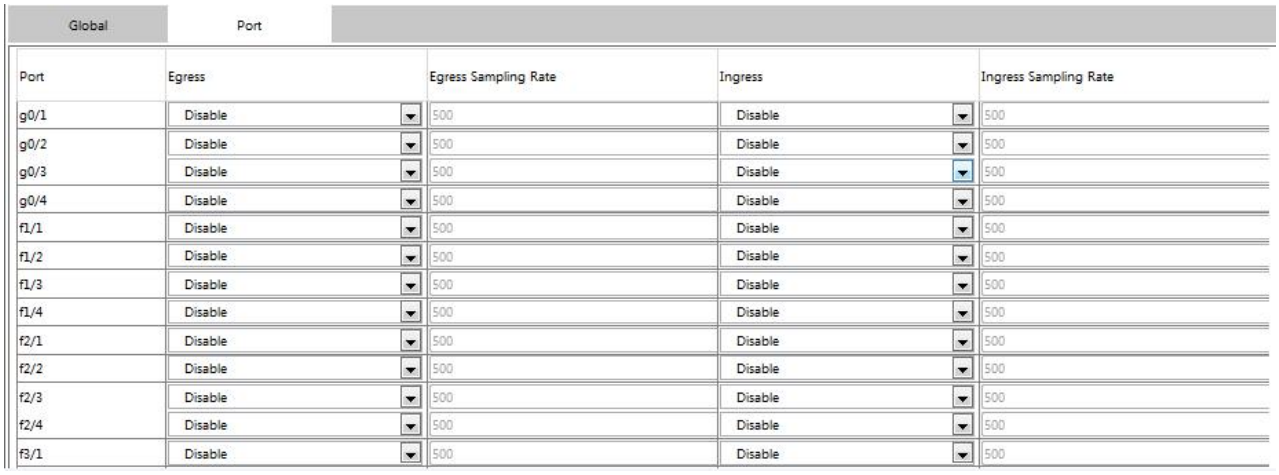
Click **Modify** on the right of the entry and configure the parameter of DHCP server pool.

12.2 SFlow



12.2.1 SFlow Global Configuration

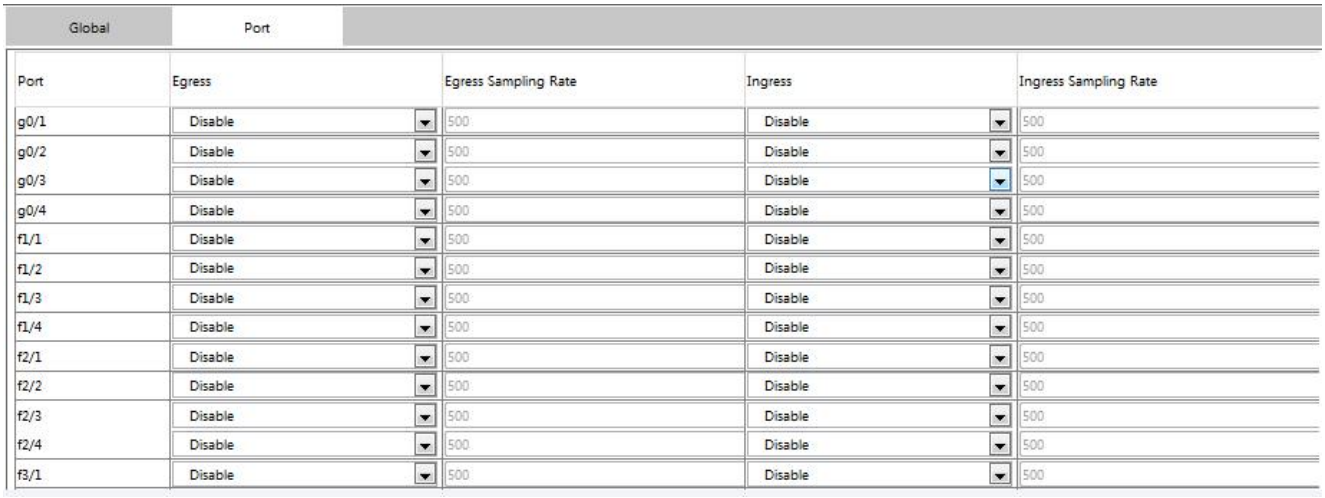
Click **Advanced -> SFlow -> Configuration** at navigation bar in order, and then click the Global tab page enter the SFlow global configuration page as following.



You can configure the Agent IP address on this page, the default value of SFlow Version is 5;default value of **Maximum Header Size** is 20 (maximum number is 128).

12.2.2 SFlow Port Configuration

Click **Advanced -> SFlow -> Configuration** at navigation bar in order, and then click the Port tab page enter the SFlow port configuration page as following：

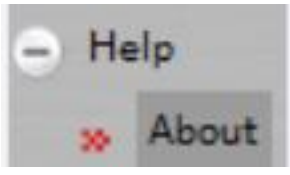


The page lists the port of SFlow enable/disable status, the default value of Egress/Ingress Sampling Rate is 500; you can configure the rate upon your requirement when it is setting to be enabled.

13 Help

13.1 About

Click **Help -> About** at navigation bar in order, and then enter the About page as following：



The information will shown in this page which are included IOS version messages, company website, contact telephone...etc.