

L3 Managed Ethernet

WEB Network Management Operation Guide

Ver 1.01

Declare

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Introduction

This manual mainly describes the WEB of the COMXUS L3 network switch. The user can manage the switch through the WEB page. This manual only gives a brief introduction to the operation of each WEB page. Please refer to the User Manual for the introduction of each function.

The preamble contains the following

- Audience Object
- Product Introduction
- Product Features

Audience Object

- Network Planner
- On-site technical support and maintenance personnel
- Responsible for the Network administrator responsible for network configuration and maintenance

Product Introduction

COMXUS L3 network switch is independently designed and developed by our company, which is specially designed for building high security and high-performance network. The system adopts a new software and hardware platform, which is an ideal convergence layer switch for office network, campus network, small and medium-size enterprises and branch offices.

Highlighted Features

- Support Port Shutdown
- Support auto negotiation, port speed of 10000M, 2500M, 1000M, 100m, half 100m, 10m and half 10m
- Supports full-duplex IEEE 802.3x, half-duplex backpressure flow control
- Supports rate limit for broadcast, multicast, and DLF packets
- Supports detection of broadcast, multicast, or unicast packets on a port and shuts down the port if the rate exceeds a threshold
- Port mirroring is supported
- Support port ingress and egress rate limit
- Support manual link aggregation
- Support LACP dynamic link aggregation
- Supports up to 32 aggregation groups, each group up to 8 ports
- Support source MAC, destination MAC, source destination MAC, source IP, destination IP, source destination IP routing strategy
- Supports port isolation
- Support up to 12KB packet
- Support for redundant port
- DDM with Fiber Port support
- Support Large MAC table capacity
- Support MAC table management
- Support IVL forwarding mode
- Support static MAC address, MAC address binding, and MAC address filtering
- Support Control the MAC learning based on port
- Supports 4K VLANs
- Support for 802.1Q-based VLAN

- Support for MAC-based VLAN
- Supports IP-based, protocol-based VLAN
- Voice VLAN support
- Support 1:1 VLAN mapping
- Q in Q Support basic Q in Q and support flexible Q in Q
- GVRP support
- Supports STP/RSTP/MSTP Spanning Tree Protocol
- Support Port Loop Detection
- Support for EAPS RFC3619
- Support ERPS (ITU-T G.8032/Y.1344)
- Support LLDP & LLDP-MED
- Support Fully compatible with CISCO's UDLD protocol
- Support for VLLP only with VRRP
- Support static and dynamic ARP
- Support static route based on IPv4 and IPv6
- Support 32 VLAN interfaces
- Support RIP v1/v2 & IPv6 RIPng
- Support OSPFv2 & IPv6 OSPFv3
- Support BGP4 & IPv6 BGP4+
- Support Policy Line, VRRP support
- Supports static multicast MAC address
- Support IGMP SNOOPING v1/v2/v3
- Support for IGMP Querier, IGMP Snoop Filter,
- Support MVR, GMRP, PIM-SM
- Support IGMP v1/v2/v3
- Standard and extended IP-based ACLs are supported

- Support for IP-based Extended ACL
- Supports MAC-based ARP, time-based ACL. Support ACL port filtering
- Support port queue number 8
- Port queue scheduling mode supporting WRR, WFQ, SP
- Supports port-based classification, 802.1p-based classification, DSCP based classification, and ACL-based classification
- Support packets mapping to queue
- Support COS or DSCP Remarking
- Support data flow statistics
- Support rate limits of data flow
- Support mirroring of data flow
- Supports DHCP Client, DHCP Snooping, DHCP Relay, DHCP Server, DHCP Option 82
- Support Console, Telnet and SSH
- Supports multiple Telnet links, SSH connections over IPv4 and IPv6
- Supports HTTP, HTTPS over IPv4 and IPv6
- Support SNMP v1, v2, v3, SNMP trap
- Support lots of standard and private MIBs
- Support SNMP and TRAP based on IPv4 and IPv6
- Support multiple user management
- support switch authentication via TACACS+ server remote username and password
- Support password encryption in PAP and CHAP mode
- Support TACACS+ server to authorize the switch's commands
- Support TACACS+ based on IPv4 and IPv6
- Support local log management

- Support SYSLOG
- Support RMON 1, 2, 3 and 9 groups
- Support NDP, NTDP
- Support manual and automatic joining of cluster groups
- Support cluster unified management
- Support uploading and downloading configuration file
- Support TFTP transmission based IPv4 and IPv6
- Support local clock management
- Support SNTP
- Support enabling and disabling TELNET, SSH, HTTP, HTTPS and SNMP services
- Support TELNET, SSH, HTTP
- HTTPS and SNMP services to bind to standard IP ACLs
- Support for limiting the number of TELNET and SSH connections
- Supports authentication, authorization, and accounting through RADIUS server
- 802.1XSupport port-based and MAC-based 802.1x
- Support 802.1x guest VLAN
- Support static configuration of IP, MAC and port binding
- Support dynamic ARP binding to prevent ARP spoofing
- Support dynamic IP, MAC and port binding
- Support fixed port to connect to DHCP server to prevent private connection to DHCP server
- Support manually configuring MAC ARP-based ACL rules to prevent ARP spoofing.
- Support the DHCP SNOOPING function. During the process of obtaining an IP address by DHCP, the switch dynamically binds ARP to the port to prevent ARP spoofing.

- Support IPv4/IPv6 dual protocol stack, IPv6 neighbor discovery, ICMPv6, and IPv6 path MTU discovery
- Support manual address configuration and stateless address auto-configuration
- Support PING, PING 6, Traceroute
- Support TELNET client based IPv4 and IPv6
- Support SSH client based IPv4 and IPv6

[Version Update]

Ver 1.0.1

User experience optimization

Resolves known issues and provides faster response.

Related functions are optimized to make management easier.

Directory

WEB PAGE OVERVIEW	11
1. Characteristics of web access	11
2. System requirements for web browsing	12
3. Login of web browsing session	12
4. Basic composition of web page	13
5. Introduction to page button	14
6. Error message.....	15
7. Entry field.....	15
 Web page introduction	16
1. System configuration	16
1) System information page.....	16
2) IP address configuration page	17
3) User management page	17
4) Serial port information	18
5) SNTP configuration.....	18
6) SNMP community configuration page	18
7) SNMP trap configuration page.....	19
8) Log information.....	20
2. Port configuration	20
1) Port basic configuration page.....	20
2) Port statistics page.....	21
3) Port storm suppression page.....	22
4) Port speed limit page.....	22
5) Protection port.....	23

3, CONFIGURATION.....	26
(1) Port mirroring configuration page	23
(2) Link Aggregation Configuration Part	24
(3) DDM information	26
4, VLAN CONFIGURATION.....	28
(1) Configuration Page	28
(2) Access Port Configuration Page.....	29
(3) Trunk Port Configuration Part	30
(4) Hybrid Port Configuration Page	30
(5) GVRP Configuration	31
5, THREE-TIER CONFIGURATION	32
(1) IP Basic Configuration.....	32
(2) RIP configuration.....	35
(3) OSPF Configuration.....	36
(4) VRRP configuration	37
6, SECURITY CONFIGURATION.....	38
(1) MAC configuration	38
(2) ACL Configuration.....	40
(3) AAA Configuration	45
(4) Native Management Security Configuration	47
7, DHCP CONFIGURATION.....	48
(1) DHCP client.....	48
(2) DHCP Relay.....	49
(3) DHCP server.....	49
(4) DHCP snooping.....	50
8, MULTICAST CONFIGURATION	52
(1) IGMP SNOOPING Configuration.....	52

(2) GMRP Configuration	52
(3) Multicast routing configuration	54
(4) IGMP configuration	54
(5) PIM-SM Configuration	55
9, RING NETWORK CONFIGURATION	57
(1) Spanning Tree Configuration	57
(2) ERPS Configuration	58
(3) EAPS Configuration	60
10, ADVANCED CONFIGURATION	62
(1) QoS Configuration	62
(2) LLDP configuration	63
11, SYSTEM TOOLS	64
(1) Save Configuration	63
(2) Backup configuration films	63
(3) Restore Configuration File	63
(4) Software upgrade	64
(5) Restore Factory Configuration	65
(6) Restart	65

WEB page operation manual

This manual mainly describes the WEB page of the switch. The user can The WEB page manages the switch. This manual only briefly introduces the operation of each WEB page. For the introduction of each function of the switch, see User Operation Manual. This manual mainly includes the following contents:

- 1, WEB Page Overview
- 2, WEB page introduction

WEB Page Overview

1, Characteristics of WEB access

The switch provides Web access to the user. Users can access the switch through a Web browser to manage and configure the switch. The main features of WEB access are:

- Easy access: Users can easily access the switch from anywhere on the network.
- Users can use familiar browsers such as Firefox, Google Chrome, Opera and Microsoft Internet Explorer (8.0 and above) to access the WEB page of the switch. The WEB page is presented to the user in graphical and tabular form.
- The switch provides rich WEB pages, through which the user can configure and manage most of the functions of the switch.
- The classification and integration of WEB page functions are convenient for users to find relevant pages for configuration and management.

2, System requirements for WEB browsing

The system requirements for Web browsing are shown in Table 1.

Table 1:

Hardware and software	System Requirements
CPU	Pentium 586Up
Memory	128MB or more
Resolution	1024 x768-up
color	More than 256 colors
Browser	Internet Explorer 8.0 or above or Firefox or Google Chrome or Opera, etc.
Operating system	Microsoft ® Windows XP ®/Windows Vista ®/Windows 7 ®/Windows 8 ®, MAC, Linux, Unix, etc.

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3, Login of WEB browsing session

Before starting a Web browsing session, the user needs to confirm:

- The switch has been configured for IP, and by default, the interface IP address for VLAN 1 on the switch is 192.168.0.5
- The subnet mask is 255.255.255.0
- A host with a Web browser installed is connected to the network and is able to ping the switch.

After completing the above two tasks, the user enters the address of the switch in the address bar of the browser and presses Enter to enter the Web login page of the switch, as shown in Figure 1. The Web can be accessed only if the correct password is entered. The default user is comxus, and the password is comxus by default.

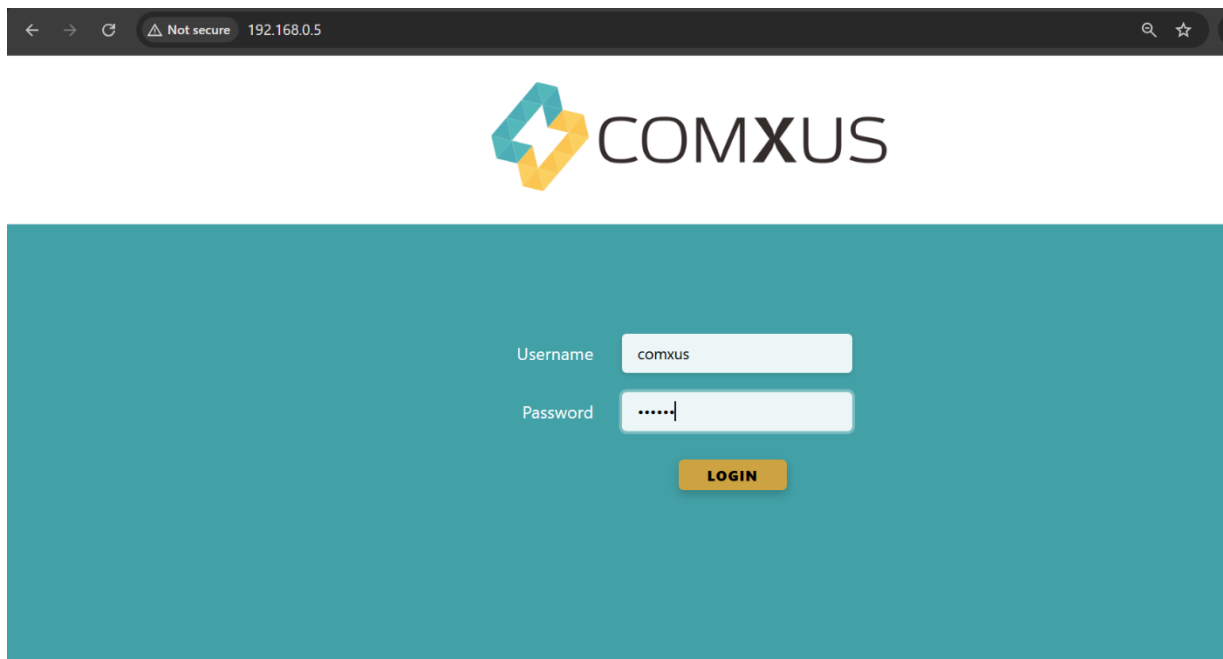


Figure 1 Login page for a WEB browsing session

4, Basic composition of WEB page

As shown in Figure 2, the WEB page is mainly composed of four parts: title page, category navigation page, menu page and main page.

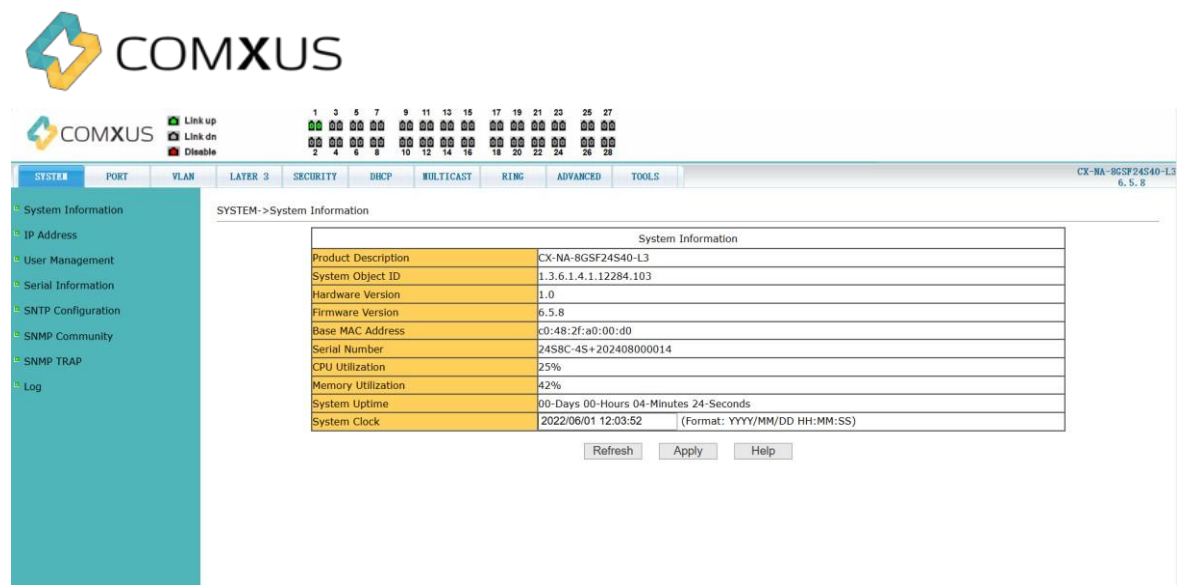


Figure 2 Basic Composition Page of Switch WEB Page

The **banner page** is used to display the logo and the real-time port status, as shown in the following figure:

- A green light indicates that the port is connected;
- A gray light indicates that the port is in an unconnected state;
- A red light indicates that the port is down

The **category navigation page** is the function category entry of WEB. The user can click a button to view the corresponding category menu. The right side of the page is the switch model version and login user name.

The **menu page** displays the category menu selected by the user from the category navigation page. There may be a primary or secondary menu. Click the menu item to open the corresponding page.

The **main page** is used to display the page selected by the user from the menu page.

5, Introduction to Page Button

There are some common buttons on the page. The functions of these buttons are generally the same. Table 2 describes the functions of these buttons.

Table 2:

button	Action
Refresh	Update all domains on the page
application	Place the updated value in memory. Because error checking is done by the Web server, there is no error checking until the user selects the button
delete	Delete the current record
help	Open the help page to view the configuration instructions for each pack

6, Error Message

If an error occurs when the WEB server of the switch processes a user request, a corresponding error message is displayed in a dialog box. For example, Figure 4 shows an error message dialog box.



Figure 3 Error Information Page

7, Entry Field

Some pages have an entry field at the beginning, as shown in Figure 4, through which different entries can be accessed. When you select a value in an entry field, the corresponding information for that row is displayed on the page, and the contents of the row are edited. The row is also called the active row.



Link up

Link dn

Disable

1	3	5	7	9	11	13	15	17	19	21	23	25	27
00	00	00	00	00	00	00	00	00	00	00	00	00	00
2	4	6	8	10	12	14	16	18	20	22	24	26	28
00	00	00	00	00	00	00	00	00	00	00	00	00	00

SYSTEM

PORT

VLAN

LAYER 3

SECURITY

DHCP

MULTICAST

RING

ADVANCED

TOOLS

CX-NA-8CSP24S40-E3
6, 5, 8

System Information

IP Address

User Management

Serial Information

SNTP Configuration

SNMP Community

SNMP TRAP

Log

SYSTEM->User Management

User Management

normal

Attention: User name and password are case sensitive.

Refresh

Apply

Help

Item	User Name	User Level	Operation
1	comxus	privilege	delete

Figure 4 Entry field page

WEB page introduction

The WEB pages of the switch are organized into groups, and each group includes one or more WEB pages. Each page is described below one by one.

1, System configuration

(1) System Information Page

Figure 1-1 is the system information configuration page, through which the user can configure and view the system information of the switch.

Product Model: The product model description of the switch

Firmware Version Information: The firmware version currently used by the switch

Bootrom version information: The version of Bootrom currently used by the switch

Base MAC Address: The base MAC address of the switch

Serial Number: The serial number of the switch

Serial port baud rate: serial port baud rate used by the switch

System startup time: The time since the switch was started

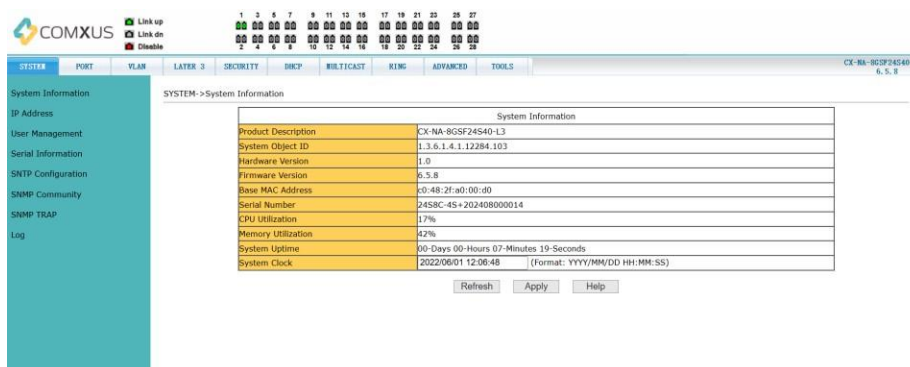


Figure 1-1 Basic Information Page

System clock (modifiable): the current clock of the system; year, month, day, hour, minute and second are required to be input

(2) IP address configuration page

Figure 1-2 is the IP address configuration page. The user can configure the IP address, subnet mask, and gateway address of the switch through this page. The management VLAN is 1 by default and cannot be modified.

SYSTEM->IP Address

IP Address	
Admin VLAN	1
IP Address	192.168.10.1
Subnet Mask	255.255.255.0
Gateway	0.0.0.0
MAC Address	c0:48:2f:a0:00:d0

Attention: Please configure carefully. If WEB connection is interrupted after the configuration, please try establish a new connection with the new IP Address.

Refresh Apply Help

Figure 1-2 IP Address Configuration Page

(3) User management page

Figure 1-3 is the user management page, through which user information can be configured. The default user of the switch is comxus, which cannot be deleted, but the password can be modified.

SYSTEM->User Management

User Management	
User Name	
User Level	normal ▼
Password	
Confirm Password	

Attention: User name and password are case sensitive.

Refresh Apply Help

Item	User Name	User Level	Operation
1	comxus	privilege	delete

Figure 1-3 User Management Page

(4) Serial port information

Figure 1-4 is the serial port information page, through which you can view the serial port information.

SYSTEM->Serial Information

Serial Information	
Baud Rate	38400
Character Size	8
Parity Code	None
Stop Bits	1
Flow Control	None

Refresh Help

Figure 1-4 Serial Port Information Page

(5) SNTP Configuration

Figure 1-5 is the SNTP configuration page, through which the administrator can configure and view the system clock.

SYSTEM->SNTP Configuration

SNTP Configuration		
Server IP Address 1		
Server IP Address 2		
Server IP Address 3		
Time Interval	60	(60-65535 seconds)
Time Zone	+8	
Enable Status	Disable	▼
Last Update Time		
System Date Time	2022/06/01 12:08:42	

Refresh Apply Help

Figure 1-5 SNTP Configuration Page

(6) SNMP Community Configuration Page

Figure 1-6 shows the SNMP Community Configuration page. This page allows the user to configure the name and read and write permissions of the community of the switch. A total of eight entries can be configured.

By default, the switch has a community with a public name that is read-only

When the switch needs to be managed through SNMP, it is necessary to configure a common body with readable and writable permissions.

The configured community cannot be modified and cannot be added with the same name as the existing one. However, you can click the corresponding delete link to delete the community and then reconfigure it.

SYSTEM->SNMP Community

SNMP Community			
Community Name			
Read and Write Purview	read-write ▼		
Refresh Apply Help			
Item	Community Name	Read and Write Purview	Operation
1	public	read-only	---

Figure 1-6 SNMP Community Configuration Page

(7) SNMP TRAP Configuration Page

Figure 1-7 shows the SNMP TRAP configuration page, which allows the user to configure the IP address of the station receiving the TRAP message and some parameters of the TRAP protocol package.

Enter the TRAP name, the IP address of the TRAP server, and select the version number. If the configuration is successful after submission, the SNMP TRAP function will work. Once link up or link down occurs, the switch will automatically send the TRAP packet to the target address.

Configured TRAP targets cannot be modified and added without duplicating an existing name. However, you can click the corresponding delete link to delete the TRAP target and then reconfigure it.

SYSTEM->SNMP TRAP

SNMP TRAP				
TRAP Name				
Server IP Address				
SNMP Version	V3 ▼			
Refresh Apply Help				
Item	TRAP Name	Server IP Address	SNMP Version	Operation

Figure 1-7 SNMP TRAP Configuration Page

(8) Log information

Figure 1-8 is the log information page through which the user can view the log. Select the priority from the drop-down list to view the log of this level. Click Refresh to view the latest log.

SYSTEM->Log

Log Configuration	
Log output	☐ Stdout ☐ File ☐ Syslog
Lowest priority for log output	debugging ▾
Refresh Apply Backup Help	

Log Information	
Priority	All ▾
open log file fail, log file not exist!	
Page 0 / 0	
Previous Next	

Figure 1-8 Log Information Page

2, Port configuration

(1) Port Basic Configuration Page

Figure 2-1 shows the port basic configuration page. From this page, users can enable or disable ports, set port rates and flow control, or view the basic information of all ports.

To modify the port configuration, the user needs to check the left side of the corresponding port or use the "Select All" function. The selected ports will be displayed at the top of the page, and several consecutive ports will be represented by connection numbers. After successful setting, the selected port will be configured with the same parameters. The list on the page shows the configuration information for all ports.

PORT->Basic Configuration

Basic Configuration	
Selected Port(s)	
Enable/Disable	v
Speed/Duplex	v
Description	
Flow Control	v
Jumbo Frame Bytes	1522 (1522-12288)
DAC	v

☐ Select All	Port	Description	Link Status	Speed/Duplex	Enable/Disable	Flow Control	Jumbo Frame Bytes	DAC
☐	1		1G/FULL	AUTO/AUTO	Enable	Disable	1522	---
☐	2		---	AUTO/AUTO	Enable	Disable	1522	---
☐	3		---	AUTO/AUTO	Enable	Disable	1522	---
☐	4		---	AUTO/AUTO	Enable	Disable	1522	---
☐	5		---	AUTO/AUTO	Enable	Disable	1522	---
☐	6		---	AUTO/AUTO	Enable	Disable	1522	---
☐	7		---	AUTO/AUTO	Enable	Disable	1522	---
☐	8		---	AUTO/AUTO	Enable	Disable	1522	---

Figure2-1 Port Configuration and Port Display Page

(2) Port Statistics Page

Figure 2-2 is the Port Statistics page. The page lists the number of packets sent, bytes sent, packets received, bytes received, error packets, and dropped packets for all ports.

PORT->Port Statistics

Port	Received Packets Num	Received Octets Num	Sent Packets Num	Sent Octets Num	Error Packets Num	Discard Packets Num
1	2724	422932	1727	1207922	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0

Figure2-2 Port Statistics Page

(3) Port Storm Suppression Page

Figure 2-3 shows the port storm suppression page. This page is used to configure the suppression of broadcast, multicast, and DLF packets on a port.

Check on the left side of the corresponding port, or use the "Select All" function to select the port to turn on and off the broadcast suppression,

multicast suppression and DLF suppression of the port. The suppression rate type item and the suppression rate item are used to select the suppression rate type and suppression rate value to be configured. The suppression rate range is 1-1024000, and the unit is kbits. The suppression rates of broadcast suppression, multicast suppression and DLF suppression can be configured independently. The list on the page shows the configuration information for all ports.

PORT->Storm Control

Storm Control					
Selected Port(s)					
Broadcast Suppression	▼	Multicast Suppression	▼	DLF Suppression	▼
Ratelimt	(1-1024000 kbps)				

Refresh Apply Help

☐ Select All	Port	Broadcast Suppression	Multicast Suppression	DLF Suppression	Ratelimt(kbps)
☐	1	Disable	Disable	Disable	64
☐	2	Disable	Disable	Disable	64
☐	3	Disable	Disable	Disable	64
☐	4	Disable	Disable	Disable	64
☐	5	Disable	Disable	Disable	64
☐	6	Disable	Disable	Disable	64
☐	7	Disable	Disable	Disable	64
☐	8	Disable	Disable	Disable	64
☐	9	Disable	Disable	Disable	64
☐	10	Disable	Disable	Disable	64

Figure2-3 Broadcast Storm Suppression Page

(4) Port speed limit page

Figure 2-4 shows the port speed limit page. This page is used to configure the port ingress and egress speed limits.

Check on the left side of the corresponding port, or use the "Select All"

function to select the port. The inlet/outlet port speed limit can be enabled independently by checking. The speed limit range is 1-1024000, and the unit is kbits.

If the check is cancelled, the speed is not limited. The list on the page shows the configuration information for all ports.

PORT->Port Rate

Port Rate			
Selected Port(s)			
Receive Packets Rate Control	☒ enable		(1-10240000 kbps)
Send Packets Rate Control	☒ enable		(1-10240000 kbps)

☐ Select All	Port	Receive Packets Rate Control(kbps)	Send Packets Rate Control(kbps)
☐	1	---	---
☐	2	---	---
☐	3	---	---
☐	4	---	---
☐	5	---	---
☐	6	---	---
☐	7	---	---
☐	8	---	---

Figure2-4 Port Speed Limit Page

(5) Protection Port

Figure 2-5 is the protection port setting interface. This page is used to configure/display protection port information.

PORT->Protected Port

☐ Select All	Port	Is Protected Port
☐	1	No
☐	2	No
☐	3	No
☐	4	No
☐	5	No
☐	6	No
☐	7	No
☐	8	No
☐	9	No
☐	10	No

Figure2-5 Protection Port Page

(3) Port configuration page

(1) Port mirroring configuration page

Figure 2-6 shows the port mirroring configuration page, which allows the user to configure port mirroring. Port mirroring is to monitor the data packets output by the mirrored output port and the data packets input by the mirrored

input port through the mirroring port. Only one mirror port can be selected, and multiple mirrored output ports and mirrored input ports can be selected. When configuring, select a mirror port first, and select "Do not mirror" to cancel the mirror configuration. Then select the port and direction to be mirrored from the other ports. When the ingress port in the monitoring direction is selected, it means to monitor the received data packets, and the egress port means to monitor the sent data packets. Ticking both means to monitor all the sent and received data packets.

PORT->Port Mirror

Listen Port		unset	
Port	Listen Direction	Port	Listen Direction
1	☐ receive ☐ transmit	2	☐ receive ☐ transmit
3	☐ receive ☐ transmit	4	☐ receive ☐ transmit
5	☐ receive ☐ transmit	6	☐ receive ☐ transmit
7	☐ receive ☐ transmit	8	☐ receive ☐ transmit
9	☐ receive ☐ transmit	10	☐ receive ☐ transmit
11	☐ receive ☐ transmit	12	☐ receive ☐ transmit
13	☐ receive ☐ transmit	14	☐ receive ☐ transmit
15	☐ receive ☐ transmit	16	☐ receive ☐ transmit
17	☐ receive ☐ transmit	18	☐ receive ☐ transmit
19	☐ receive ☐ transmit	20	☐ receive ☐ transmit
21	☐ receive ☐ transmit	22	☐ receive ☐ transmit
23	☐ receive ☐ transmit	24	☐ receive ☐ transmit
25	☐ receive ☐ transmit	26	☐ receive ☐ transmit
27	☐ receive ☐ transmit	28	☐ receive ☐ transmit

Attention: select the unset option and click the button Apply to delete the configuration.

Refresh Apply Help

Figure2-6 Port Mirror Configuration Page

(2) Link Aggregation Configuration Part

The following figure shows the link aggregation configuration page. The page lists all ports vertically and all aggregation groups horizontally. To add a port to an aggregation group, just click the radio box at the intersection of the row and column. You can also select the aggregation method at the bottom of

each aggregation group. If you want to cancel the aggregation configuration of the specified port, click the leftmost radio box corresponding to the port.

① Create an aggregation group

Figure 2-7-1 shows the link aggregation creation interface. This page is used to configure aggregation groups.

PORT->Port Trunking->Trunk Group

Create Trunk Group	
Trunk Group	trunk1
Trunk Type	Static
Create Status	Uncreated
Trunk Method	src-dst-mac

Refresh Apply Delete Help

Figure 2-7-1 Create Aggregation Group Page

② Configure Aggregation Group

Figure 2-7-2 shows the interface for configuring the aggregation group. This page is used to configure the aggregation group.

PORT->Port Trunking->Trunk Configuration

Trunking Configuration	
Trunk Group created	
Member Port	1

Refresh Apply Delete Help

Member Port

Figure 2-7-2 Configure Aggregation Group Page

③ Aggregate Information

Figure 2-7-3 shows the interface for viewing aggregated information. This page is used to view aggregation information for a link aggregation.

PORT->Port Trunking->Trunk Information

Trunk Information	

Refresh help

Figure 2-7-3 Aggregate Information Page

(3) DDM information

Figure 2-8 shows the DDM information viewing interface. This page is used to view the corresponding information of the optical module.



Figure 2-8 DDM Information Page

4, VLAN Configuration

(1) Configuration Page

Figure 4-1 shows the VLAN configuration page. This page allows the user to create VLANs and displays information for all VLANs.

If you want to create a new VLAN, enter the VID in the active line from 2 to 4094. The switch creates VLAN 1 by default, and VLAN 1 cannot be deleted.

The VLAN list displays all created VLANs and indicates the port membership of each VLAN. A port may not be a member of a VLAN, and may be a tagged or untagged member of a VLAN. The characters before the port on the page have the following meanings:

T Tagged The port is a tagged member of this VLAN

U Untagged The port is an untagged member of this VLAN

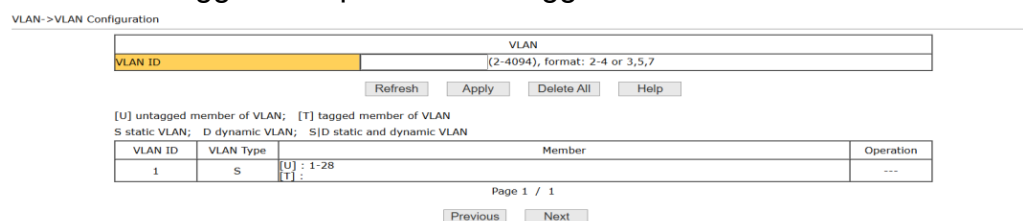


Figure 4-1 VLAN Configuration Page

(2) Access Port Configuration Page

Figure 4-2 shows the Access Port Configuration page, which displays and configures the Port Access Mode and the VLAN to which it belongs. The page is divided into two parts: port list and VLAN list. Hover the mouse on the port to see the VLAN mode of the port. Click a port to display/configure the VLAN of the port. If the port is in Access mode, its VLAN can be displayed when it is selected. If other VLANs are selected and applied, the VLAN of the port is changed. If the port is not in Access mode, the port is changed to Access mode after configuration and the VLAN is set. Note that only one VLAN can be selected in Access mode.

VLAN->Access Port

Port	1 3 5 7 9 11 13 15 17 19 21 23 25 27 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28
VLAN	☒ 1

Figure 4-2 Access Port Configuration Page

(3) Trunk Port Configuration Part

Figure 4-3 shows the Trunk Port Configuration page, which displays and configures the port Trunk mode and the VLAN to which it belongs. This page is divided into two parts: port list and VLAN list. For the operation of port part, please refer to Section 2 (Access Port Configuration Page). If the port is in Trunk mode, its VLAN can be displayed when it is selected. If other VLANs are selected and applied, the VLAN of the port is changed. If the port is not in Trunk mode, after configuration, the port is changed to Trunk mode and the VLAN is set. Multiple VLANs can be selected in Trunk mode. To select a group of consecutive VLANs, select the first one, press and hold the Shift key, and then select the last one.

VLAN->Trunk Port

Port	1 3 5 7 9 11 13 15 17 19 21 23 25 27              
Default VLAN	☐ 1
tagged VLAN (☐ All)	☐ 1

Figure 4-3 Trunk Port Configuration Page

(4) Hybrid Port Configuration Page

Figure 4-4 shows the Hybrid port configuration page, which displays and configures the port in Hybrid mode and the VLAN to which it belongs. This page is divided into two parts: port list and VLAN list. For the operation of port part, please refer to Section 2 (Access Port Configuration Page). If the port is in Hybrid mode, its VLAN can be displayed when it is selected. If other VLANs are selected and applied, the VLAN of the port is changed. If the port is not in Hybrid mode, after configuration, the port is changed to Hybrid mode and the VLAN is set. The default VLAN must be configured and only one can be selected. Any number of tagged VLANs and untagged VLANs can be selected. However, for a VLAN, only one of the three modes can be selected. If a VLAN is configured with a tagged VLAN, The VLAN cannot be designated as a default VLAN or an untagged VLAN, and so on.

VLAN->Hybrid Port

Port	1 3 5 7 9 11 13 15 17 19 21 23 25 27              
Default VLAN	☐ 1
Tagged VLAN (☐ All)	☐ 1
Untagged VLAN (☐ All)	☐ 1

Figure 4-4 Hybrid Port Configuration Page

(5) GVRP Configuration

① GVRP Global Configuration

Figure 4-5-1 shows the GVRP global configuration page, through which the user can enable GVRP.

VLAN->GVRP Configuration->Global Configuration

GVRP Global Configuration	
Global GVRP	Disable

Refresh Apply Help

Figure 4-5-1 GVRP Global Configuration Page

② GVRP Port Configuration

Figure 4-5-2 is the GVRP port configuration page, through which the user can enable port GVRP and view port information.

VLAN->GVRP Configuration->Port Configuration

GVRP Port Configuration						
Selected Port(s)						
GVRP Status		Disable				

Refresh Apply Help

☐ Select All	Port	GVRP Status	Join Timer(centiseconds)	Leave Timer(centiseconds)	LeaveAll Timer(centiseconds)
☐	1	Disable	---	---	---
☐	2	Disable	---	---	---
☐	3	Disable	---	---	---
☐	4	Disable	---	---	---
☐	5	Disable	---	---	---
☐	6	Disable	---	---	---
☐	7	Disable	---	---	---
☐	8	Disable	---	---	---
☐	9	Disable	---	---	---

Figure 4-5-2 GVRP Port Configuration Page

③ GVRP state machine

Figure 4-5-3 is the GVRP state machine page, through which the user can view the state machine information established by GVRP.

VLAN->GVRP Configuration->State Machine

Port Name	VLAN ID	Applicant State	Registrar State
Refresh Help			

Figure 4-5-3 GVRP State Machine Page Diagram

5, Three-tier configuration

(1) IP Basic Configuration

① VLAN interface configuration

Figure 5-1-1 is the VLAN interface configuration page, through which the user can configure the IP address of the interface, delete the IP address of the interface and view the interface information.

LAYER 3->IP Basic->VLAN Interface

VLAN Interface			
VLAN ID			
IP Address / Subnet Prefix	(format: 192.168.0.1/24)		
Attention: Please configure carefully. If WEB connection is interrupted after the configuration, please try establish a new connection with the new IP Address.			
Refresh Apply Help			
VLAN ID	IP Address / Subnet Prefix	MAC Address	Operation
1	192.168.10.1/24	c048.2fa0.00d0	Delete

Figure 5-1-1 VLAN Interface Configuration Page

The switch has a VLAN 1 interface by default, which cannot be deleted. Only one VLAN interface can be configured for each VLAN.

② ARP interface configuration

Figure 5-1-2 is the ARP configuration page. This page can display all the information of the ARP table of the switch. At the same time, the user can configure the static ARP entry, delete the ARP entry, and modify the dynamic ARP entry to the static ARP entry through this page.

When configuring a static ARP entry, the user needs to enter the IP address and MAC address. The MAC address must be a unicast MAC address, and then click the Apply button.

When the user deletes an ARP entry, click the corresponding delete link in the list.

LAYER 3->IP Basic->ARP Configuration

ARP Configuration				
IP Address				
MAC Address	(format: HHHH.HHHH.HHHH)			
Refresh Apply Help				
Item	IP Address	Mac Address	Type	Operation
1	192.168.10.101	28:00:af:a6:37:16	Dynamic	Delete

Figure 5-1-2 ARP Interface Configuration Page

③ Static route configuration

Figure 5-1-3 is the static route configuration page, through which the user can add or delete the static route of the switch. By default, the switch is not configured with a static route. The user can also use this page to configure a default route, that is, a route with a destination address/subnet prefix of 0.0.0.0/0.

LAYER 3->IP Basic->Static Routes

Static Routes Configuration	
Target Address/Subnet prefix	(format: 10.1.1.0/24)
Next Hop	
Attention: please use 0.0.0.0/0 to set default router.	
Refresh Apply Help	

Item	Target Address/Subnet prefix	Next Hop	State	Operation
------	------------------------------	----------	-------	-----------

Figure 5-1-3 Static Route Configuration Page

④ Routing table information

Figure 5-1-4 shows the Routing Table Information page, which displays the routing table entries of the switch. Users can filter the displayed routes by route state and route type to view the required routing information.

LAYER 3->IP Basic->Routing Table

Route Display Conditions	
Route State	All (All includes Active and Inactive)
Route Type	All (All includes Connected, Static, RIP and OSPF etc.)
Display Help	

Routing Table Information	
Codes: K - kernel, C - connected, S - static, R - RIP, B - BGP O - OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF external type 2 i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area > - selected route, * - FIB route, p - stale info C *> 127.0.0.0/8 is directly connected, lo K * 127.0.0.0/24 is directly connected, lo C *> 192.168.10.0/24 is directly connected, vlan1	

Figure 5-1-4 Routing Table Information Page

(2) RIP configuration

① RIP configuration

Figure 5-2-1 shows the RIP configuration page, through which the user

can turn on/off the RIP state and declare the corresponding network segment.

LAYER 3->RIP Configuration->RIP Configuration

RIP Configuration	
RIP State	Disable ▾
Network	(Format: A.B.C.D/M, as 2.0.0.0/24)
Refresh Apply Help	
Network	Operation

Figure 5-2-1 RIP Configuration Page

② RIP Interface Information

Figure 5-2-2 is the RIP interface information interface, and the user can view the RIP interface information.

LAYER 3->RIP Configuration->RIP Interface

RIP Interface Information
Refresh Help

Figure 5-2-2 RIP Interface Information Page

③ RIP routing information

Figure 5-2-3 shows the RIP routing information interface. The user can view the RIP routing information configured by RIP.

LAYER 3->RIP Configuration->RIP Route

RIP Route Information
Refresh Help

Figure 5-2-3 RIP Routing Information Page

(3) OSPF Configuration

① OSPF Configuration

Figure 5-3-1 shows the OSPF configuration. This page is used to configure the OSPF configuration.

LAYER 3->OSPF Configuration->OSPF Configuration

OSPF Configuration	
OSPF ID	0 (0-65535)
OSPF State	Disable ▾
Network	(Format: A.B.C.D/M, as 2.0.0.0/24)
Area ID	(0-4294967295 or IP address)

OSPF ID	Network	Area ID	Operation
---------	---------	---------	-----------

② OSPF interface information

Figure 5-3-2 shows the interface for viewing OSPF interface information. This page is used to view interface information for OSPF.

LAYER 3->OSPF Configuration->OSPF Interface

OSPF Interface Information

Figure 5-3-2 OSPF Interface Information Page

③ OSPF Neighbor Information

Figure 5-3-3 shows the OSPF neighbor information viewing interface. This page is used to view neighbor information for OSPF.

LAYER 3->OSPF Configuration->OSPF Neighbor

OSPF Neighbor Information

Figure 5-3-3 OSPF Neighbor Information Page

④ OSPF link-state information

Figure 5-3-4 is the OSPF link status information viewing interface. This page is used to view the link state information for the OSPF configuration.

LAYER 3->OSPF Configuration->OSPF LSA

OSPF LSA Information	
Refresh	Help

Figure 5-3-4 OSPF Link State Information Page

⑤ OSPF routing information

Figure 5-3-5 shows the OSPF routing information viewing interface. This page is used to view routing information for an OSPF configuration.

LAYER 3->OSPF Configuration->OSPF Route

OSPF Route Information	
Refresh	Help

Figure 5-3-5 OSPF Routing Information Page

(4) VRRP configuration

① VRRP configuration

Figure 5-4-1 shows the VRRP configuration. This page is used to configure the VRRP configuration.

LAYER 3->VRRP Configuration->VRRP Configuration

VRRP Configuration	
Virtual Router ID	1
Virtual Interface	none
Virtual IP Address	☐ Owner
Priority	100 (1-255)
Advertisement Interval	1 (1-10s)
Preempt Mode	Enable
Authentication	none
Simple Password	
Virtual Router State	Disable
Attention: Please configure carefully. If WEB connection is interrupted after the configuration, please wait a while then refresh or try establish a new connection with the new IP Address.	
Refresh	Apply Delete Help

Figure5-4-1 VRRP configuration page

② VRRP Information

Figure 5-4-2 shows the VRRP information viewing interface. This page is used to view the VRRP information of the VRRP configuration.

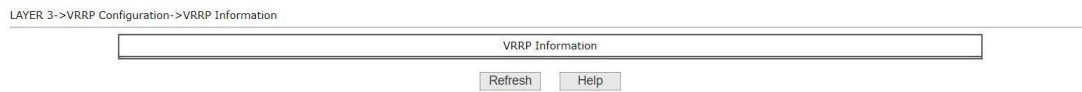


Figure 5-4-2 VRRP information page

6, Security Configuration

(1) MAC configuration

① MAC address manual binding

Figure 6-1-1 is the MAC binding configuration page. This page is used to implement the binding of port and MAC address.

The MAC entry on the page is used to enter the bound MAC address, and the VLAN ID entry is used to enter the VLAN to which the MAC address belongs.

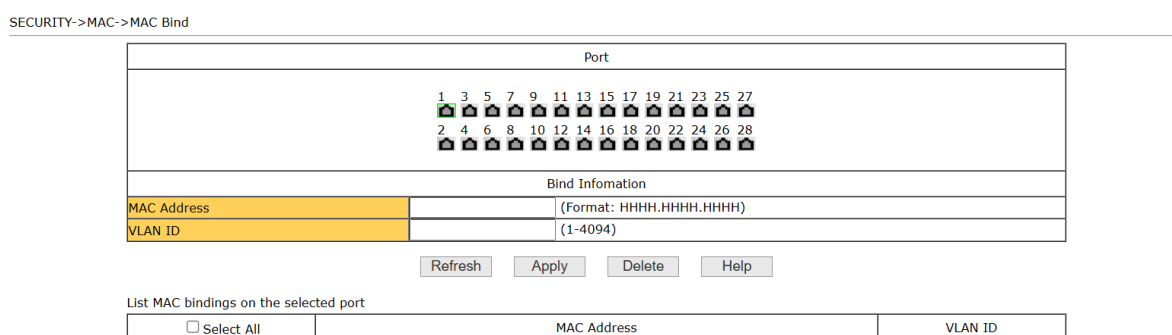


Figure 6-1-1 MAC address manual binding page

② Automatic MAC address binding

Figure 6-1-2 shows the MAC address automatic binding page. This page is used to automatically bind the MAC address to the port.

Displays the existing dynamic MAC address of the port in the Layer 2 hardware forwarding table and the VLAN to which the port belongs. You can select one of the entries and convert it to a static binding.

SECURITY->MAC->MAC Auto Bind

Port

1	3	5	7	9	11	13	15	17	19	21	23	25	27
2	4	6	8	10	12	14	16	18	20	22	24	26	28

List MAC table learned from the selected port

☐ Select All	MAC Address	VLAN ID
☐	0028.2412.2de3	1
☐	00cf.e049.2f28	1
☐	00cf.e049.30a7	1

Figure 6-1-2 MAC address automatic binding page

③ MAC address filtering configuration

Figure 6-1-3 shows the MAC address filtering configuration page. This page is used to configure port MAC address filtering.

The MAC entry on the page is used to enter the MAC address for filtering, and the VLAN number entry is used to enter the VLAN to which the MAC address belongs.

SECURITY->MAC->MAC Filter

Port

1	3	5	7	9	11	13	15	17	19	21	23	25	27
2	4	6	8	10	12	14	16	18	20	22	24	26	28

Filter Information

MAC Address	(Format: HHHH.HHHH.HHHH)
VLAN ID	(1-4094)

List MAC filtered on the selected port

☐ Select All	MAC Address	VLAN ID
-------------------------------------	-------------	---------

Figure 6-1-3 MAC Address Filtering Configuration

④ MAC address table

Figure 6-1-4 is the MAC address table. This page is used to configure the

MAC display condition of the port.

SECURITY->MAC->MAC Table

MAC Display Conditions	
Port	All
VLAN ID	All

Display Help

MAC Table Information					
bridge	VLAN	port	mac	fw	static
1	1	ge1/1	2800.afa6.3716	1	0
Total of Entry 1					
Maximum number of MAC addresses 16K					

Figure 6-1-4 MAC Address Table

(2) ACL Configuration

① Standard IP group ACL

Figure 6-2-1 is the standard IP group ACL page, through which the user can establish the rule base of ACL standard IP. Users can select an ACL group number (in the range of 1-99, or 1300-1999) to create one or more rules in that group. The only field that can be matched in a rule is the source IP address (with a mask).

SECURITY->ACL->ACL Based Source IP

ACL Based Source IP			
ACL Group ID	1	Filter	deny
Source IP Address		Source Wildcard	

Attention: Wildcard should be the format such as 0.0.0.255.

Refresh Apply Delete Help

Select All	ACL Group ID	Filter	Source IP Address	Source Wildcard
☐				

Figure 6-2-1 Standard IP Group ACL Page

When the user configures the rule, the source IP address needs to be masked, and the rule can match the set of IP addresses. The mask of the address is represented by the complement. If the rule is to match the IP address range 192.168.0.0 to 192.168.0.255, the IP address can be 192.168.0.1 and its mask is 255.0.0.0

When the user configures rules, each rule must have a filter mode: Allow or Deny.

When a user creates a rule in a rule group, the system will automatically

assign a rule number to the rule. When a rule in a rule group is deleted, other rules remain unchanged, and the system will automatically sort the rules in a rule group. If the user wants to delete the whole rule group, he can select all first, and then click the delete button.

② Extended IP Group ACL

Figure 6-2-2 is the ACL page of the extended IP group, through which the user can establish the rule base of the ACL extended IP. Users can select an ACL group number (in the range of 100-199, or 2000-2699) to create one or more rules in that group. Fields that can be matched in a rule are source IP address (with mask), destination IP address (with mask), protocol type (such as ICMP, TCP, UDP, etc.), source port and destination port (valid only for TCP and UDP protocols), and TCP control flags.

SECURITY->ACL->ACL Based Extended IP

ACL Based Extended IP									
ACL Group ID	100			Filter	deny				
Source IP				Source Wildcard					
Destination IP				Destination Wildcard					
Protocol Type				Source Port					
Destination Port				TCP Flag	☐ fin ☐ syn ☐ rst ☐ psh ☐ ack ☐ urg				

Attention: Wildcard should be the format such as 0.0.0.255.

☐ All	Group ID	Filter	Source IP	Source Wildcard	Destination IP	Destination Wildcard	Protocol Type	Source Port	Destination Port	TCP Flag
------------------------------	----------	--------	-----------	-----------------	----------------	----------------------	---------------	-------------	------------------	----------

Figure 6-2-2 Extended IP Group ACL Page

When the user configures the rule, the source IP address needs to be masked, and the rule can match the set of IP addresses. The mask of the address is represented by the complement. If the rule is to match the IP address range 192.168.0.0 to 192.168.0.255, the IP address can be 192.168.0.1 and its mask is 0.0. 0.255.

When the user configures rules, each rule must have a filter mode: Allow or Deny. When a user creates a rule in a rule group, the system will automatically assign a rule number to the rule. When a rule in a rule group is deleted, other rules remain unchanged, and the system will automatically sort the rules in

a rule group. If the user wants to delete the whole rule group, he can select all first, and then click the delete button.

③ MAC IP Group ACL Part

Figure 6-2-3 is the MAC IP group ACL page, through which the user can establish the rule base of ACL MAC IP. Users can select an ACL group number (in the range of 700-799) to create one or more rules in that group. The fields that can be matched in a rule are source MAC address (with address match bits), source IP address (with address match bits), and destination IP address (with address match bits).

SECURITY->ACL->ACL Based MAC IP

ACL Based MAC IP											
ACL Group ID	700 ▾				Filter	deny ▾					
Source MAC					Source MAC Wildcard						
Destination MAC					Destination MAC Wildcard						
Source IP					Source IP Wildcard						
Destination IP					Destination IP Wildcard						
Attention: IP Wildcard should be the format such as 0.0.0.255. MAC Wildcard format should be HHHH.HHHH.HHHH											
Refresh Apply Delete Help											
☐ All	☐ Group ID	☐ Filter	☐ Source MAC	☐ Source MAC Wildcard	☐ Destination MAC	☐ Destination MAC Wildcard	☐ Source IP	☐ Source IP Wildcard	☐ Destination IP	☐ Destination IP Wildcard	

Figure 6-2-3 MAC IP Group ACL Page

When the user configures the rule, the source IP address needs to be masked, and the rule can match the set of IP addresses. The mask of the address is represented by the complement. If the rule is to match the IP address range 192.168.0.0 to 192.168.0.255, the IP address can be 192.168.0.1 and its mask is 0.0.0.255.

When the user configures rules, each rule must have a filter mode: Allow or Deny. When a user creates a rule in a rule group, the system will automatically assign a rule number to the rule. When a rule in a rule group is deleted, other rules remain unchanged, and the system will automatically sort the rules in a rule group. If the user wants to delete the whole rule group, he can select all first, and then click the delete button.

④ MAC ARP Group ACL Part

Figure 6-2-4 is the MAC ARP group ACL page, through which the user can establish the rule base of ACL MAC ARP. Users can select an ACL group number (in the range of 1100-1199) to create one or more rules in that group. The fields that can be matched in a rule are the ARP operation type, the sending MAC address (with address match bits), and the sending IP address (with address match bits).

SECURITY->ACL->ACL Based MAC ARP

ACL Based MAC ARP			
ACL Group ID	1100 ▾	Filter	deny ▾
Sender MAC		Sender MAC Wildcard	
Sender IP		Sender IP Wildcard	

Attention: IP Wildcard should be 0.0.0.255 and such, and MAC Wildcard format should be HHHH.HHHH.HHHH

☐ All	Group ID	Filter	Sender MAC	Sender MAC Wildcard	Sender IP	Sender IP Wildcard
------------------------------	----------	--------	------------	---------------------	-----------	--------------------

Figure 6-2-4 MAC ARR Group ACL Page

When the user configures the rule, the source IP address needs to be masked, and the rule can match the set of IP addresses. The mask of the address is represented by the complement. If the rule is to match the IP address range 192.168.0.0 to 192.168.0.255, the IP address can be 192.168.0.1 and its mask is 0.0.0.255.

When the user configures rules, each rule must have a filter mode: Allow or Deny.

When a user creates a rule in a rule group, the system will automatically assign a rule number to the rule. When a rule in a rule group is deleted, other rules remain unchanged, and the system will automatically sort the rules in a rule group. If the user wants to delete the whole rule group, he can select all first, and then click the delete button.

⑤ Port Apply ACLs pack

Figure 6-2-5 is the port application ACL page, through which the user can select an ACL group for a port, write the rules in this ACL group into the port hardware logic, and make the port perform ACL filtering on the received packets according to these rules.

When selecting an ACL group on a port, you can select IP Standard, IP Extended, MAC IP, and MAC ARP ACL groups. The selected ACL group must exist. Select from the ACL Rule Group list and press the Add key. To delete an ACL group, select an ACL group from the list of referenced rule groups and press the Delete key.

SECURITY->ACL->ACL Group

Port	ACL Group configured	Operation	ACL Group applied
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24		Apply => <= Delete Refresh Help	

Figure 6-2-5 Port Application ACL Page

⑥ ACL Configuration Information Part

Figure 6-2-6 shows the ACL configuration information page, which displays all the rules and reference information configured in the current ACL.

SECURITY->ACL->ACL Resource

ACL Resource

Figure 6-2-6 ACL Configuration Information Page

(3) AAA Configuration

① AAA Global Configuration Page

Figure 6-3-1 is the AAA global configuration page. The user can configure the

information related to AAA. The information that can be set includes:

- Whether to start the 802.1x protocol, the 802.1x protocol must be started during authentication and accounting.
- Whether to enable the re-authentication function is not enabled by default, and it is determined according to the actual situation when performing authentication billing. Turning on the recertification function will make users more reliable when using authentication billing, but it will slightly increase the traffic of the network.
- Set the time interval for re-authentication, which is valid only when the re-authentication function is enabled. The default value is 3600 seconds. Set the value according to the actual situation when performing authentication billing, but the value should not be too small.
- The IP address of the RADIUS server. This field must be set during authentication and accounting.
- Backup RADIUS server IP address. This field can be set if there is a backup RADIUS server.
- The shared key is used to set the encrypted shared password between the switch and the Radius server. This field must be set during authentication and billing, and must be the same as the setting on the Radius server.
- Whether to start charging, it is started by default. Charging is generally started during authentication and charging.

SECURITY>AAA->802.1x/RADIUS Global Configuration

802.1x/RADIUS Global Configuration	
802.1x	disable
Reauthentication	disable
Reauthentication Period	3600 (s)
RADIUS Server IP	0.0.0.0
Alternative RADIUS Server IP	0.0.0.0
Share Key	
Accounting Status	enable

Figure 6-3-1 AAA Global Configuration Page

② AAA Port Configuration Part

Figure 6-3-2 is the AAA port configuration page, through which the user can configure the authentication port mode and the maximum number of hosts

supported, and view the configuration of each port. To modify the port AAA configuration, the user needs to check the left side of the corresponding port, or use the "Select All" function. The selected ports will be displayed at the top of the page, and several consecutive ports are represented by connection numbers. After successful setting, the selected port will be configured with the same parameters. There are four types of AAA port modes: N/A state, Auto state, Force-authorized state, and Force-unauthorized state. When 802.1 authentication is required for a port, the port must be set to the Auto state. If the port is not authenticated, it can access the network. The port must be set to the N/A state. The other two States are rarely used in practical applications.

SECURITY->AAA->802.1x Port Configuration

802.1x Port Configuration			
Selected Port(s)			
Port Mode	Force-UnAuthorized ▾		
Support Host Num	256 (1-256)		
Refresh Apply Help			

☐ Select All	Port	Port Mode	Support Host Num
☐	1	N/A	256
☐	2	N/A	256
☐	3	N/A	256
☐	4	N/A	256
☐	5	N/A	256
☐	6	N/A	256
☐	7	N/A	256
☐	8	N/A	256
☐	9	N/A	256
☐	10	N/A	256

Figure 6-3-2 AAA Port Configuration Page

During 802.1x authentication, the maximum number of hosts accessed by the port is 256 by default. The user can modify this field to support 256 hosts at most.

③)AAA User Information Page

Figure 6-3-3 is the AAA user information page, through which the user can view the status information of all users connected to a port.

SECURITY->AAA->AAA User Information

AAA User Information				
User name	MAC Address	Authentication state	Authenticator state	Back-End state
Refresh Help				

Figure 6-3-3 AAA User Information Page

(4) Native Management Security Configuration

① Management permission configuration page

Figure 6-4-1 is the management authority configuration page.

Through the configuration of this page, the administrator can control the network management services TELNET, WEB and SNMP, enable or disable these services, and attach these services to the ACL group of IP standard to implement source IP address control. Controls host access to these services.

By default, the TELNET, WEB, and SNMP services of the switch are turned on without ACL filtering, that is, all hosts can access these three services of the switch. If the administrator does not want to provide one or more of these services to other users for the sake of security, one or more of these services can be turned off. If the administrator only wants specific hosts to access one or more of these services, one or more of these services can be filtered by ACL. When a service needs ACL filtering, the service needs to be opened and an ACL group (1-99) of IP standard needs to be selected. At this time, the ACL group must exist.

It should be noted that if the administrator controls the WEB service on this page (such as closing the WEB service), the user may no longer be able to use the WEB page. At this time, the user can log in to the switch in other ways and control the WEB service so that the user can use the WEB page (such as opening the WEB service).

SECURITY->Safe Management->Safe Management

Safe Management			
Service Type			
Management State	Enable		
ACL Group	0 (0-99, 0 means no ACL group is associated.)		
Refresh Apply Help			

Service Type	Management State	ACL Group	Number
HTTP	Enable	0	---
HTTPS	Enable	0	---
SNMP	Enable	0	---
TELNET	Enable	0	5
SSH	Disable	0	5

Figure 6-4-1 Management Authority New Configuration Page

7, DHCP Configuration

(1) DHCP client

Figure 7-1 shows the DHCP client configuration. This page is used to configure the DHCP client configuration.

DHCP->DHCP Client

DHCP Client Configuration	
Interface	vlan1
Enable/Disable	Disable

Refresh Apply Renew Release Help

DHCP Client Information	

Figure 7-1 DHCP Client Page

(2) DHCP Relay

Figure 7-2 shows the DHCP relay configuration. This page is used to configure the DHCP relay configuration.

DHCP->DHCP Relay

DHCP Relay Configuration	
Interface	vlan1
Enable/Disable	Disable
Master DHCP Server IP	
Backup DHCP Server IP	

Refresh Apply Help

DHCP Relay Information	

Figure 7-2 DHCP Relay Page

(3) DHCP server

① Global and interface configuration

Figure 7-3-1 shows the DHCP server interface configuration. This page is used to configure the DHCP server interface configuration.

DHCP->DHCP Server->Global & Interface

DHCP Server Global Configuration	
Global DHCP Server	Disable ▾

DHCP Server Interface Configuration	
Interface	vlan1 ▾
DHCP Listen	Disable ▾

DHCP Server Information	
DHCP server: Disable	
DHCP server listen interface:	

Figure 7-3-1 Global and Interface Configuration Page

② Address Pool Configuration

Figure 7-3-2 shows the DHCP server address pool configuration. This page is used to configure the DHCP server address pool configuration.

DHCP->DHCP Server->Address Pool

Create Address Pool	
Address Pool Name	Create

Address Pool Configuration	
Address Pool Name	▾
Address Range	Start: End:
Subnet Mask	
Default Router	
DNS Server	Master: Backup:
Lease Time	0 days 0 Hours 0 Minutes
Exclude Address	Start: Add Exclude End: Del Exclude
Option 82 Circuit ID	

Address Pool Information	
--------------------------	--

Figure 7-3-2 Address Pool Configuration Page

③ Address Information

Figure 7-3-3 is the DHCP server address information viewing interface. This page is used to view the address information of the DHCP server.

DHCP->DHCP Server->Address Information

DHCP Server Address Information				
IP	MAC	State	Pool Name	Lease
Refresh Help				

Figure 7-3-3 Address information page

(4) DHCP snooping

① Global Configuration

Figure 7-4-1 is the global DHCP snooping configuration interface, which is used to configure the global DHCP snooping configuration.

DHCP->DHCP Snooping->Global Configuration

DHCP Snooping Global Configuration	
Global DHCP Snooping	Disable ▾
DHCP Server Port 1	▾
DHCP Server Port 2	▾
DHCP Server Port 3	▾
DHCP Server Port 4	▾

Figure 7-4-1 Global Configuration Page

② Interface configuration

Figure 7-4-2 is the DHCP listening port configuration interface, which is used to configure the DHCP listening interface configuration.

DHCP->DHCP Snooping->Interface Configuration

DHCP Snooping Interface Configuration				
Selected Port(s)				
DHCP Snooping	Disable ▾			
Option 82	Disable ▾			
Option 82 Circuit ID				

☐ Select All	Port	DHCP Snooping	Option 82	Option 82 Circuit ID
☐	1	Disable	Disable	
☐	2	Disable	Disable	
☐	3	Disable	Disable	
☐	4	Disable	Disable	
☐	5	Disable	Disable	
☐	6	Disable	Disable	
☐	7	Disable	Disable	

Figure 7-4-2 Interface configuration page

③ Binding Table Information

Figure 7-4-3 is the interface for viewing the address information of the DHCP server. This page is used to view the address information of the DHCP server.

DHCP->DHCP Snooping->Binding Table

DHCP Snooping Binding Table Information
DHCP Snooping is globally disabled

Figure 7-4-3 Binding Table Information Page

8, Multicast configuration

(1) IGMP SNOOPING Configuration

① IGMP SNOOPING Configuration Page

Figure 8-1-1 is the IGMP SNOOPING configuration page. Users can enable IGMP Snooping from this page.

MULTICAST->IGMP SNOOPING->Configuration

IGMP SNOOPING Global Configuration		
Global IGMP SNOOPING	Disable	
Unregistered Multicast Packets	Forward	
Send Query Source IP	192.168.0.1	
Send Query Version	V3	

IGMP SNOOPING VLAN Configuration		
VLAN ID	VLAN 1	
VLAN IGMP SNOOPING	Disable	
Fast Leave	Disable	
Fast Leave Timeout	300000	(>=0ms)
Query Membership Timeout	300000	(60000-300000ms)
Group Membership Timeout	400000	(>=0ms)
Querier	Disable	
Query Interval	60000	(60000-125000ms)
Static Router Ports		(e.g : ge1/1,ge1/2)

Figure 8-1-1 IGMP SNOOPING Configuration Page

② Multicast group information page

Figure 8-1-2 is the multicast group information page, through which the user can view the IGMP SNOOPING multicast information.

MULTICAST->IGMP SNOOPING->Group Information

VLAN ID	Address	Port

Figure 8-1-2 Multicast Group Information Page

(2) GMRP

① GMRP Global Configuration

Figure 8-2-1 is the GMRP omniscient configuration interface, which is used to configure the global GMRP.

MULTICAST->GMRP Configuration->Global Configuration

GMRP Global Configuration	
Global GMRP	Disable

Figure 8-2-1 GMRP Global Configuration Page

② GMRP Port Configuration

Figure 8-2-2 shows the GMRP port configuration interface, which is used to configure the GMRP port status.

MULTICAST->GMRP Configuration->Port Configuration

GMRP Port Configuration					
Selected Port(s)					
GMRP Status		Disable ▼			
Refresh Apply Help					
☐ Select All	Port	GMRP Status	Join Timer(centiseconds)	Leave Timer(centiseconds)	LeaveAll Timer(centiseconds)
☐	1	Disable	---	---	---
☐	2	Disable	---	---	---
☐	3	Disable	---	---	---
☐	4	Disable	---	---	---
☐	5	Disable	---	---	---
☐	6	Disable	---	---	---
☐	7	Disable	---	---	---
☐	8	Disable	---	---	---
☐	9	Disable	---	---	---
☐	10	Disable	---	---	---
☐	11	Disable	---	---	---
☐	12	Disable	---	---	---
☐	13	Disable	---	---	---

Figure 8-2-2 GMRP Port Configuration

③ GMRP state machine

Figure 8-2-3 is the GMRP state machine viewing interface. This page is used to view the status of the GMRP state machine for the GMRP configuration

MULTICAST->GMRP Configuration->State Machine

Port Name	VLAN ID	Multicast MAC Address	Applicant State	Registrar State

Figure 8-2-3 GMRP State Machine

(3) Multicast routing configuration

Figure 8-3-1 shows the multicast routing configuration. This page is used to configure the multicast routing switch.

MULTICAST->Multicast Routing->Multicast Routing

Multicast Routing Configuration	
Multicast Routing	Disable ▾
Refresh Apply Help	

Figure 8-3-1 Multicast Routing Configuration Page

② Multicast routing table

Figure 8-3-2 is the multicast routing table viewing interface. This page is used to view the multicast routing table of the multicast routing

MULTICAST->Multicast Routing->Multicast Routing Table

Multicast Routing Table
IP Multicast Routing Table Flags: I - Immediate Stat, T - Timed Stat, F - Forwarder installed Times: Uptime/Stat Expiry Interface State: Interface (TTL)
Refresh Help

configuration.

Figure 8-3-2 Multicast Routing Table Page

(4) IGMP configuration

① IGMP configuration

Figure 8-4-1 is the IGMP port configuration interface, which is used to configure the IGMP switch parameters.

MULTICAST->IGMP Configuration->IGMP Configuration

IGMP Configuration		
Interface	vlan1 ▾	
IGMP Enable	Disable ▾	
IGMP Status		
Query Interval	125	(1-18000s)
Query Max Response Time	10	(1-240s)
Robustness Variable	2	(2-7)
Last Member Query Interval	1	(1-25s)
Last Member Query Count	2	(2-7)
Igmp Version	V3 ▾	
Refresh Apply Help		

Figure 8-4-1 IGMP Configuration Page

① IGMP Interface Information

Figure 8-4-2 is the IGMP interface information viewing interface. This page is used to view the IGMP interface information for the IGMP configuration.

MULTICAST->IGMP Configuration->IGMP Interface

IGMP Interface Information	
% IP multicast-routing not enable	

Refresh Help

Figure 8-4-2 IGMP Interface Information Page

② Figure 8-4-3 is the IGMP group information viewing interface. This page is used to view IGMP group information for the IGMP configuration.

MULTICAST->IGMP Configuration->IGMP Group

IGMP Group Information	
% IP multicast-routing not enable	

Refresh Help

Figure 8-4-3 IGMP Group Information Page

(5) PIM-SM Configuration

① Global Configuration

Figure 8-5-1 shows the PIM-SM global configuration interface, which is used to configure the global PIM-SM parameters.

MULTICAST->PIM-SM Configuration->Global Configuration

PIM-SM Global Configuration		
RP Address		
Candidate RP	none	
Candidate BSR	none	
JP Interval	60	(1-65535s)
SPT Switch	Disable	

Refresh Apply Help

Figure 8-5-1 Global Configuration Page

② Interface configuration

Figure 8-5-2 is the PIM-SM interface configuration interface, which is used to configure PIM-SM interface parameters.

MULTICAST->PIM-SM Configuration->Interface Configuration

PIM-SM Interface Configuration		
Interface	vlan1 ▾	
PIM-SM Enable	Disable ▾	
Hello Interval	30	(1-65535s)
Hello Holdtime	105	(1-65535s)
DR Priority	1	(0-2147483647)

Figure 8-5-2 Interface Configuration Page

③ Multicast routing information

Figure 8-5-3 is the multicast routing information viewing interface. This page is used to view the multicast routing information configured by PIM-SM.

MULTICAST->PIM-SM Configuration->Mroute Information

PIM-SM Mroute Information

Figure 8-5-3 Multicast routing information

④ Interface information

Figure 8-5-4 is the interface for viewing interface information. This page is used to view the interface information configured by PIM-SM.

MULTICAST->PIM-SM Configuration->Interface Information

PIM-SM Interface Information

Figure 8-5-4 Interface information page

⑤ Neighbor information

Figure 8-5-5 is the neighbor information viewing interface. This page is used to view the neighbor information configured by PIM-SM.

MULTICAST->PIM-SM Configuration->Neighbor Information

PIM-SM Neighbor Information

Figure 8-5-5 Neighbor Information Page

⑥ RP information

Figure 8-5-6 shows the RP information viewing interface. This page is used to view the RP information for the PIM-SM configuration.

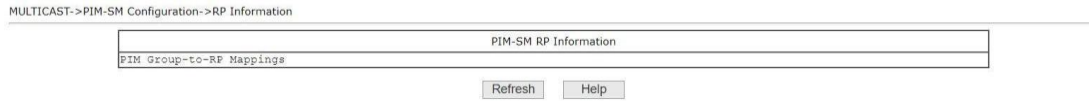


Figure 8-5-6 RP information page

⑦ BSR information

Figure 8-5-7 is the BSR information viewing interface. This page is used to view the BSR information for the PIM-SM configuration.

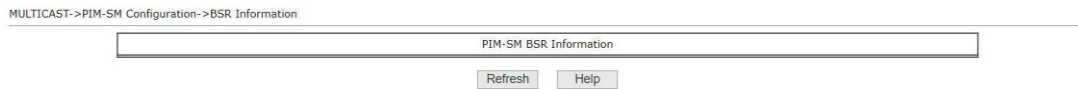


Figure 8-5-7 BSR Information Page

9, Ring Network Configuration

(1) Spanning Tree Configuration

① Spanning Tree Global Configuration

Figure 9-1-1 shows the global configuration page of spanning tree, through which the user can configure global spanning tree parameters.

Global Configuration		
MSTP	disable ▾	
Priority	32768	(0-61440, must be an interger multiple of 4096)
Forward-Time	15	(4-30, meet $2 * (\text{Forward-Time} - 1) \geq \text{Max-Age}$)
Hello-Time	2	(1-10, meet $2 * (\text{Hello-Time} + 1) \leq \text{Max-Age}$)
Max-Age	20	(6-40)
Max-Hops	20	(1-40)

Figure 9-1-1 Spanning Tree Global Configuration Page

② Spanning Tree Port Configuration

Figure 9-1-2 is the Spanning Tree Port Configuration page, through which the user can view the specific status of the port MSTP.

Port Configuration							
Selected Port(s)							
Port Priority							
Path-Cost							
Force-Version	STP ▾						
Portfast	disable ▾						

☐ All	Item	Port	Priority	Path-Cost	Force-Version	Portfast	STP State
☐	1	1	128	20000	MSTP	disable	Forwarding
☐	2	2	128	20000000	MSTP	disable	Blocked
☐	3	3	128	20000000	MSTP	disable	Blocked
☐	4	4	128	20000000	MSTP	disable	Blocked
☐	5	5	128	20000000	MSTP	disable	Blocked
☐	6	6	128	20000000	MSTP	disable	Blocked

Figure 9-1-2 Spanning Tree Port Configuration Page

(2) ERPS Configuration

① ERPS Predefined Configuration

Figure 9-2-1 is the ERPS Predefined Configuration page, which enables

the ERPS Predefined Configuration. When you enable the ERPS predefined configuration, you can specify the node type: Primary or Transport. Specific predefined configuration: ERPS instance number is 1, ERPS change number is 1, ring mode is main ring mode, protocol VLAN is VLAN3001, data VLAN is VLAN1, RPL port is 51, RL port is 52, recovery

behavior is recoverable, hold-off time is 0, guard time is 500 ms, The WTR time is 5 minutes, the WTB time is 5 seconds, and the protocol message sending time is 5 seconds.

RING->ERPS->ERPS Predefined Configuration

Erps Predefined Configuration	
Status	disable ▾
Node Type	rpl-owner-node ▾

Figure 9-2-1 ERPS Predefined Configuration Page

② ERPS Instance Configuration

Figure 9-2-2 shows the ERPS instance configuration page, through which the ERPS instance can be configured. When an instance is not created, click Apply to create and assign a role. When an instance is created but not associated with a ring, you can modify the role. If an instance is created and associated with a ring, you cannot modify the instance. Click Delete to delete the selected instance. You can configure up to 8 instances.

RING->ERPS->ERPS Domain

ERPS Domain Configuration	
ERPS Domain	1 ▾
Domain Status	Not Created
Node Role	none-interconnection ▾

Figure 9-2-2 ERPS Instance Configuration Page

③ ERPS Ring Configuration

Figure 9-2-3 is the ERPS Ring Configuration page, which allows you to create and configure an ERPS ring. Select a ring. Click the Apply button to create the ring and set the configuration information when the ring is not created. If the ring is created, the configuration information

can be modified. Click the Delete button to delete the selected ring. A ring must and can only be associated to one instance. A maximum of 32 rings can be configured. When a ring fault is detected, click the Manual Recovery button to recover.

RING->ERPS->ERPS Ring

ERPS Ring Configuration	
ERPS Ring	1
Ring Status	Not Created
Domain	
Ring Mode	
Node Mode	
Raps VLAN	0
Traffic VLAN	format: 2,4,6
RPL Port	
RL Port	
Revertive Behaviour	revertive
Hold-off Time	0 (<0-10000>, step 100, ms)
Guard Time	500 (<10-2000>, step 10, ms)
WTR Time	5 (<1-12>, min)
WTB Time	5 (<1-10>, sec)
Raps-send Time	5 (<1-10>, sec)
ERPS Ring Enable	disable
Forced Switch RPL Port	
Forced Switch RL Port	
Manual Switch Port	

Figure 9-2-3 ERPS Ring Configuration Page

④ ERPS Information

Figure 9-2-4 is the ERPS information page. Select the ring number to display the configuration and status information of the relevant ERPS ring.

RING->ERPS->ERPS Information

ERPS Ring Select	
ERPS Ring	1

ERPS Ring Information	

Figure 9-2-4 ERPS Information Page

(3) EAPS Configuration

① EAPS Ring Configuration

Figure 9-3-1 This page is used to create and configure EAPS information, and also to delete and display EAPS information.

EAPS ring number: specific ring number, value range 1-16, can be

selected according to the drop-down box

Creation status: Not Created and Created. In case of no creation, it is necessary to create first

Modes: Master and Transit, which can be configured according to specific needs.

Main port: EAPS main port, such as fe1/1, ge1/1

Alternate port: EAPS 2nd port

Control VLAN: control VLAN of EAPS ring, value 2-4094

Protected VLAN: EAPS ring protected VLAN

Hello Interval The interval at which Hello messages are sent. The default is 1s

Fail time: the time to detect the fault, which is 3s by default

In the case of data trans-ring forwarding and multi-ring forwarding, this

Function shall be enabled when the data needs to be trans-ring forwarded.

Not turned on by default Extreme Interoperability Compatibility with other network devices, on by default

Enable status, last EAPS ring enable condition

RING->EAPS->EAPS Ring

EAPS Ring Configuration	
EAPS Ring ID	1
Create Status	Not Created
Mode	None
Primary Port	
Secondary Port	
Control VLAN	0
Protected VLANs	Format: 2,4,6
Hello Time Interval	1 s
Fail Time	3 s
Data Span	Disable
Extreme Interoperability	Enable
Enable Status	Disable

Refresh Apply Delete Help

Figure 9-3-1 EAPS Ring Configuration Page

② EAPS Information

Figure 9-3-2 is the EAPS information page, through which the user can view the EAPS configuration information.

EAPS Ring Information	
Refresh	Help

Figure 9-3-2 EAPS Information Page

10, Advanced Configuration

(1) QoS Configuration

① QoS application configuration

Figure 10-1-1 is the QoS application page, through which the user can configure the QoS type of the port and modify the default user priority. The list shows the port's QoS type and user default priority in real time.

QoS Apply Configuration				
Selected Port(s)				
QoS Type	COS-based ▾			
Policy ID	0 (1-256)			
User Priority	0 ▾			
Refresh Apply Help				
☐ Select All	Port	QoS Type	Policy ID	User Priority
☐	1	COS-based	---	0
☐	2	COS-based	---	0
☐	3	COS-based	---	0
☐	4	COS-based	---	0
☐	5	COS-based	---	0
☐	6	COS-based	---	0
☐	7	COS-based	---	0
☐	8	COS-based	---	0

Figure 10-1-1 QoS Application Configuration Page

QoS scheduling configuration

Figure 10-1-2 is the QoS scheduling page, through which the user can configure the QoS scheduling mode of the port and modify the priority of the queue. The list displays the scheduling mode of the port and the weight value of each queue in real time.

QoS Schedule Configuration									
Selected Port(s)									
QoS Schedule Mode		WRR v							
Weight of queue 0		1	(0-127)	Weight of queue 1		2	(0-127)		
Weight of queue 2		4	(0-127)	Weight of queue 3		8	(0-127)		
Weight of queue 4		16	(0-127)	Weight of queue 5		32	(0-127)		
Weight of queue 6		64	(0-127)	Weight of queue 7		127	(0-127)		

☐ Select All	Port	QoS Schedule Mode	Weight of queue 0	Weight of queue 1	Weight of queue 2	Weight of queue 3	Weight of queue 4	Weight of queue 5	Weight of queue 6	Weight of queue 7
☐	1	WRR	1	2	4	8	16	32	64	127
☐	2	WRR	1	2	4	8	16	32	64	127
☐	3	WRR	1	2	4	8	16	32	64	127
☐	4	WRR	1	2	4	8	16	32	64	127
☐	5	WRR	1	2	4	8	16	32	64	127
☐	6	WRR	1	2	4	8	16	32	64	127
☐	7	WRR	1	2	4	8	16	32	64	127

Figure 10-1-2 QoS Scheduling Configuration Page

(2) LLDP configuration

① LLDP Global Configuration

Figure 10-2-1 shows the LLDP global configuration interface, which is used to display and configure global LLDP parameters.

LLDP Global Configuration	
LLDP Global	Disable v
Hold-multiplier	4 (2-10)
Reinit-delay	2 (1-10s)
Tx-delay	2 (1-10s)
Tx-interval	30 (5-300s)

Figure 10-2-1 LLDP Global Configuration

② LLDP Port Configuration

Figure 10-2-2 shows the LLDP port configuration interface, which is used to display and configure LLDP port parameters.

LLDP Port Configuration								
Selected Port(s)								
LLDP Status		Enable v						
Admin Status		TxRx v						
Manage IP								
Check Change Interval		0	(0-30s)					
DOT1-TLV		Enable v						
DOT3-TLV		Enable v						
MED-TLV		Enable v						

☐ Select All	Port	LLDP Status	Admin Status	Manage IP	Check Change Interval	DOT1-TLV	DOT3-TLV	MED-TLV
☐	1	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	2	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	3	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	4	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	5	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	6	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable
☐	7	Enable	TxRx	0.0.0.0	0	Enable	Enable	Enable

Figure 10-2-2 LDP Port Configuration

③ LLDP Neighbor Table

Figure 10-2-3 shows the LLDP neighbor table viewing interface. This page is used to view the LLDP neighbor table information for the LLDP configuration.

ADVANCED->LLDP Configuration->Neighbor Table

Index	Local Port	Device ID	Chassis ID	Port ID	Manage IP	VLAN	TTL (s)	Capability
Refresh Help								

Figure 10-2-3 LLDP Neighbor Table

11, System Tools

(1) Save Configuration

Figure 11-1 is the Save Configuration page. This page allows the user to view the current configuration of the switch. The Save button is used to save the current configuration of the system to the configuration file. Because the storage operation needs to erase the FLASH chip, which takes a certain amount of time. When the user has made the configuration on the page and

wants to restart the switch without losing the configuration, he must click the Save button on the current configuration page before exiting the page.

TOOLS->Save Configuration

Click the Save button to save the system current configurations into configuration file.

The system current configurations:

```

!
username comxus enc-password ***** privilege
!
hostname Comxus - Industrial Switch
!
spanning-tree mst configuration
!
interface vlan1
 ip address 192.168.10.1/24
!
interface ge1/1
!
interface ge1/2
!
interface ge1/3
!
interface ge1/4
!
interface ge1/5
!
interface ge1/6
!
interface ge1/7
!
interface ge1/8
!

```

Figure 11-1 Save Configuration
Page

(2) Backup configuration films

Figure 11-2 is the Backup Profile page. This page allows the user to view the initial configuration of the system. The initial configuration is actually the configuration file in FLASH. When there is no configuration file in FLASH, the default configuration is used when the system is started. Click the Backup button, a dialog box will pop up, and the user can select the directory path and save the configuration file. The filename of the downloaded configuration file defaults to the switch. CFG.



Figure 11-2 Backup Profile
Page

(3) Restore Configuration File

Figure 11-3 shows the Restore Configuration File page, which allows the user to upload a configuration file to the switch. Click the Browse button to select the directory path of the uploaded configuration file on the PC. Click the Upload button to upload the configuration file. The suffix of the configuration file must be *.cfg. Please do not click other pages or restart the switch before

returning to the transfer result page; otherwise, the file transfer will fail and the system will crash.

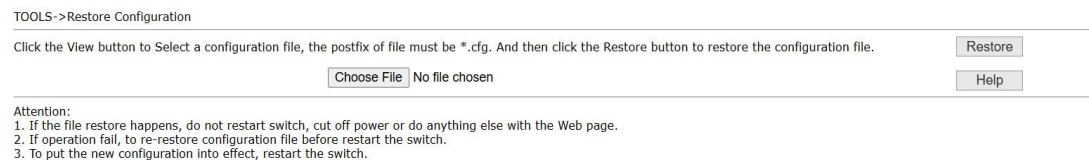


Figure 11-3 Restore Profile Page

(4) Software upgrade

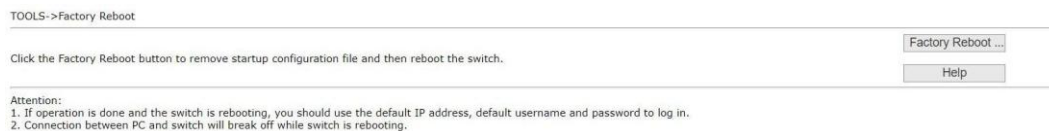
Figure 11-4 shows the Software Upgrade page, which allows users to upload image files to the switch. Click the Browse button to select the directory path of the uploaded image file on the PC. Click the Upload button to upload the image file, which must be provided by the manufacturer and the file name suffix must be *.img. Please do not click other pages or restart the switch before returning to the transfer result page; otherwise, the file transfer will fail and the system will crash.



Figure 11-4 Software Upgrade Page

(5) Restore Factory Configuration

Figure 11-5 shows the Restore Factory Configuration page. This page allows the user to delete the configuration file in FLASH to return to the factory configuration. Click the Restore Factory Configuration button, and a dialog box will pop up to prompt the user whether to confirm. After the factory configuration



is restored, the switch will automatically restart to make the factory configuration take effect. Please use the factory default IP address and password when logging in next time.

Figure 11-5 Restore Factory Configuration Page

(6) Restart

Figure 11-6 shows the restart page through which the user restarts the switch.

When the Restart button is clicked, a dialog box will pop up to prompt the user whether to restart the switch. If yes, press the OK button, otherwise press the Cancel button.

Web pages will no longer open when you restart.



Figure 11-6 Restart
Page