

User Manual

Managed Switch Web Configuration

USER GUIDE

DS408H

Rev. 1.0



### USING THIS DOCUMENT

This document is intended for the software engineer's general information on the usage of switch source files for the chip development of the switch team.

Though every effort has been made to ensure that this document is current and accurate, more information may have become available subsequent to the production of this guide.

### REVISION HISTORY

Revision	Release Date	Summary
1.0	-	First release. Based on firmware v4.0.3.4

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### 1. Introduction

managed switch software provides rich functionality for switches in your networks. This guide describes how to use Web-based management interface (Web UI) to configure managed switch software features.

The Web UI supports all frequently used web browsers listed below:

- Internet Explorer 8 and above
- Firefox 20.0 and above
- Chrome 23.0 and above
- Safari 5.1.7 and above

In the Web UI, the left column shows the configuration menu. The top row shows the switch’s current link status. Green squares indicate the port link is up, while black squares indicate the port link is down. Below the switch panel, you can find a common toolbar to provide useful functions for users. The rest of the screen area displays the configuration settings.

The screenshot displays the WoMaster Web UI interface. On the left is a navigation menu with categories like System Information, Network, Port, VLAN, Spanning Tree, ERPS, Discovery, DHCP, Multicast, Routing, Security, QoS, and Diagnostics. The main area is divided into several sections:

- Port Status:** A row of eight port indicators. Ports 1, 2, 3, and 4 are shown with green squares (up), while ports 5, 6, 7, and 8 are shown with black squares (down).
- System Information Table:**

System Information		Edit
Model	DS408H	
System Name	switch	
System Location	default	
System Contact	default	
Serial Number	WR2311000675	
MAC Address	94:66:E7:01:23:69	
IPv4 Address	192.168.10.1	
System Uptime	0 day, 0 hr, 7 min and 17 sec	
Current Time	2025-01-01 08:07:03 UTC+8	
Loader Version	2020.1	
Loader Date	Sep 09 2025 - 01:14:03	
Firmware Version	4.0.3.4	
Firmware Date	Sep 29 2025 - 02:52:45	
Telnet	Disabled	
SSH	Enabled	
HTTP	Enabled	
HTTPS	Enabled	
- CPU Utilization Graph:** A line graph showing CPU usage over time from 08:03:00 to 08:07:00. The y-axis ranges from 0% to 100%. The CPU usage remains very low, near 0%.
- Memory Utilization Graph:** A line graph showing memory usage over time from 08:03:00 to 08:07:00. The y-axis ranges from 0% to 100%. The memory usage is also very low, near 0%.

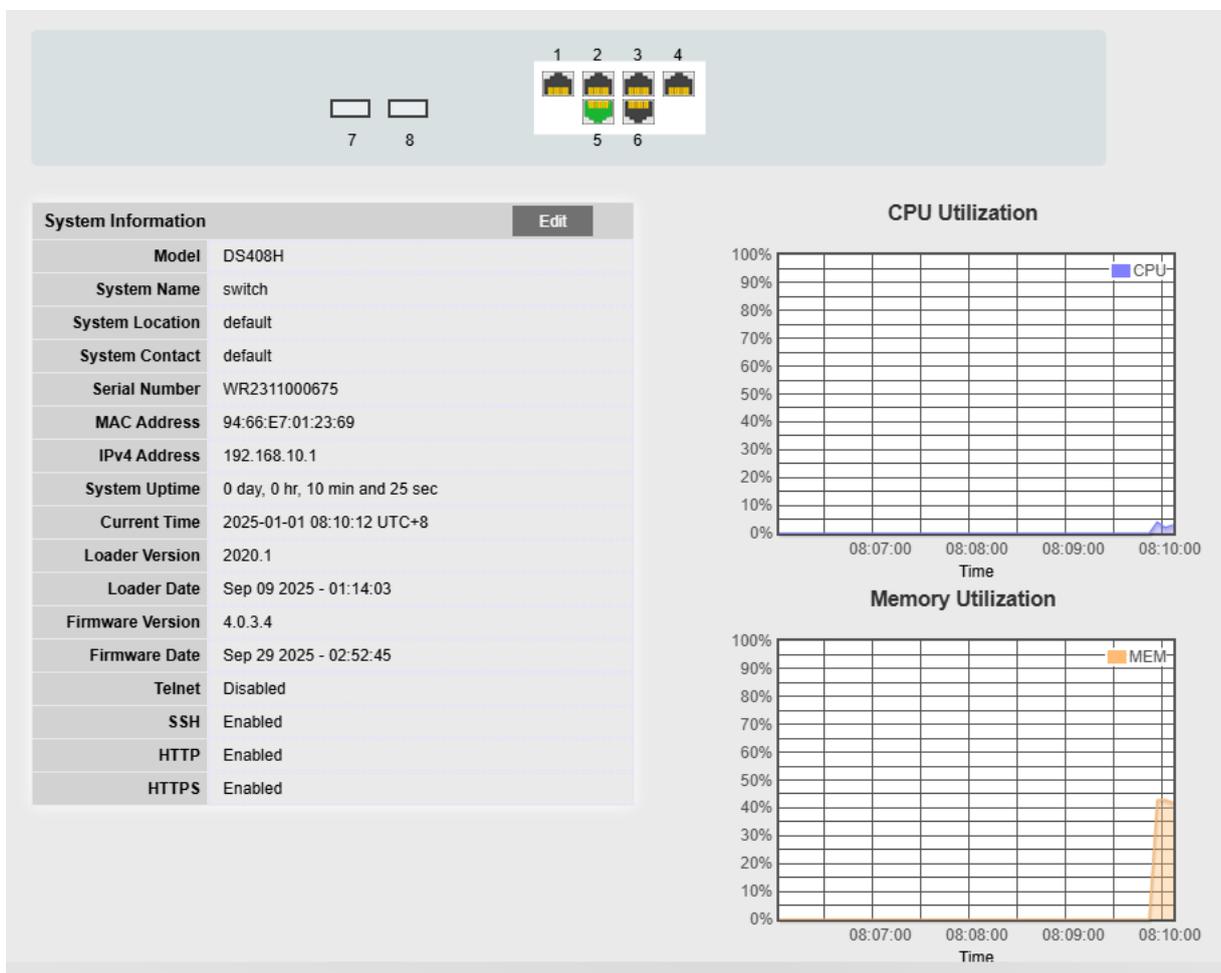
## 2. Status

Use the Status pages to view system information and status.

### 2.1. System Information

To display System Information web page, click **Status > System Information**

This page shows switch panel, CPU utilization, Memory utilization and other system current information. It also allows user to edit some system information.



Field	Description
<b>Model</b>	Model name of the switch
<b>System Name</b>	System name of the switch. This name will also use as CLI prefix of each line. ("Switch>" or "Switch#")
<b>System Location</b>	Location information of the switch
<b>System Contact</b>	Contact information of the switch
<b>MAC Address</b>	Base MAC address of the switch
<b>IPv4 Address</b>	Current system IPv4 address
<b>IPv6 Address</b>	Current system IPv6 address
<b>System OID</b>	SNMP system object ID
<b>System Uptime</b>	Total elapsed time from booting
<b>Current Time</b>	Current system time
<b>Loader Version</b>	Boot loader image version
<b>Loader Date</b>	Boot loader image build date
<b>Firmware Version</b>	Current running firmware image version
<b>Firmware Date</b>	Current running firmware image build date
<b>Telnet</b>	Current Telnet service enable/disable state
<b>SSH</b>	Current SSH service enable/disable state
<b>HTTP</b>	Current HTTP service enable/disable state
<b>HTTPS</b>	Current HTTPS service enable/disable state
<b>SNMP</b>	Current SNMP service enable/disable state

Click "Edit" button on the table title to edit following system information.

### Status >> System Information

#### Edit System Information

System Name	<input type="text" value="Switch"/>
System Location	<input type="text" value="Default"/>
System Contact	<input type="text" value="Default"/>

Field	Description
<a href="#">System Name</a>	System name of the switch. This name will also use as CLI prefix of each line. ("Switch>" or "Switch#")
<a href="#">System Location</a>	Location information of the switch
<a href="#">System Contact</a>	Contact information of the switch

## 2.2. Logging Message

To view the logging messages stored on the RAM and Flash, click **Status > Logging Message**.

Logging Message Table				
Viewing <input type="text" value="RAM"/>				
Showing <input type="text" value="All"/> entries <span style="float: right;">Showing 1 to 23 of 23 entries</span>				
Log ID	Time	Severity	Description	
1	Jan 1 2025 00:05:28	notice	AAA-CONNECT: New http connection for user admin, source 192.168.10.88 ACCEPTED	
2	Jan 1 2025 00:05:24	warning	AAA-USER_REJECT: New http connection for user admin, source 192.168.10.88 REJECTED	
3	Jan 1 2025 00:05:24	error	STARTUP-ERROR: decrypt password failed	
4	Jan 1 2025 00:05:23	warning	AAA-USER_REJECT: New http connection for user admin, source 192.168.10.88 REJECTED	
5	Jan 1 2025 00:05:13	warning	AAA-USER_REJECT: New http connection for user admin, source 192.168.10.88 REJECTED	
6	Jan 1 2025 00:00:08	notice	BOARD-NOTICE: GigabitEthernet8 SFP_FSM_ST_CONFIG_SPEED-->>SFP_FSM_ST_DETECTED	
7	Jan 1 2025 00:00:08	notice	BOARD-NOTICE: GigabitEthernet8 speed configured to 1Gbps	
8	Jan 1 2025 00:00:08	notice	BOARD-NOTICE: GigabitEthernet7 SFP_FSM_ST_CONFIG_SPEED-->>SFP_FSM_ST_DETECTED	
9	Jan 1 2025 00:00:08	notice	BOARD-NOTICE: GigabitEthernet7 speed configured to 1Gbps	
10	Jan 1 2025 00:00:07	notice	PORT-LINK_UP: Interface VLAN1 link up	
11	Jan 1 2025 00:00:07	notice	PORT-LINK_UP: Interface GigabitEthernet5 link up	

Field	Description
Log ID	The log identifier.
Time	The time stamp for the logging message.
Severity	The severity for the logging message.
Description	The description of logging message.

Field	Description
Viewing	The logging view including: <ul style="list-style-type: none"> <li>• <b>RAM:</b> Show the logging messages stored on the RAM.</li> <li>• <b>Flash:</b> Show the logging messages stored on the Flash.</li> </ul>
Clear	Clear the logging messages.
Refresh	Refresh the logging messages.

## 2.3. Port

The Port configuration page displays port summary and status information.

### 2.3.1. Statistics

To display Port Counters web page, click **Status > Port > Statistics**

This page displays standard counters on network traffic from the Interfaces, Ethernet-like and RMON MIB. Interfaces and Ethernet-like counters display errors on the traffic passing through each port. RMON counters provide a total count of different frame types and sizes passing through each port. The “Clear” button will clear MIB counter of current selected port.

Port GE1

MIB Counter

All  
 Interface  
 Etherlike  
 RMON

Refresh Rate

None  
 5 sec  
 10 sec  
 30 sec

Clear

**Interface**

ifInOctets	0
ifInUcastPkts	0
ifInNUcastPkts	0
ifInDiscards	0
ifOutOctets	0
ifOutUcastPkts	0
ifOutNUcastPkts	0
ifOutDiscards	0
ifInMulticastPkts	0
ifInBroadcastPkts	0
ifOutMulticastPkts	0
ifOutBroadcastPkts	0

**Etherlike**

dot3StatsAlignmentErrors	0
dot3StatsFCSErrors	0
dot3StatsSingleCollisionFrames	0
dot3StatsMultipleCollisionFrames	0
dot3StatsDeferredTransmissions	0
dot3StatsLateCollisions	0
dot3StatsExcessiveCollisions	0
dot3StatsFrameTooLongs	0
dot3StatsSymbolErrors	0
dot3ControlInUnknownOpCodes	0
dot3InPauseFrames	0
dot3OutPauseFrames	0

Field	Description
Port	Select one port to show counter statistics.
MIB Counter	Select the MIB counter to show different counter type <ul style="list-style-type: none"> <li>• <b>All:</b> All counters.</li> <li>• <b>Interface:</b> Interface related MIB counters</li> <li>• <b>Etherlike:</b> Ethernet-like related MIB counters</li> <li>• <b>RMON:</b> RMON related MIB counters</li> </ul>
Refresh Rate	Refresh the web page every period of seconds to get new counter of specified port

### 2.3.2. Error Disabled

To display the status of port error disabled, click **Status > Port > Error Disabled**.

<input type="checkbox"/>	Port	Reason	Time Left (sec)
<input type="checkbox"/>	GE1	---	---
<input type="checkbox"/>	GE2	---	---
<input type="checkbox"/>	GE3	---	---
<input type="checkbox"/>	GE4	---	---
<input type="checkbox"/>	GE5	---	---
<input type="checkbox"/>	GE6	---	---
<input type="checkbox"/>	GE7	---	---
<input type="checkbox"/>	GE8	---	---
<input type="checkbox"/>	LAG1	---	---
<input type="checkbox"/>	LAG2	---	---
<input type="checkbox"/>	LAG3	---	---
<input type="checkbox"/>	LAG4	---	---
<input type="checkbox"/>	LAG5	---	---
<input type="checkbox"/>	LAG6	---	---
<input type="checkbox"/>	LAG7	---	---
<input type="checkbox"/>	LAG8	---	---

Refresh Recover

Field	Description
Port	Interface or port number.
Reason	Port will be disabled by one of the following error reason: <ul style="list-style-type: none"> <li>• <b>BPDU Guard</b></li> </ul>

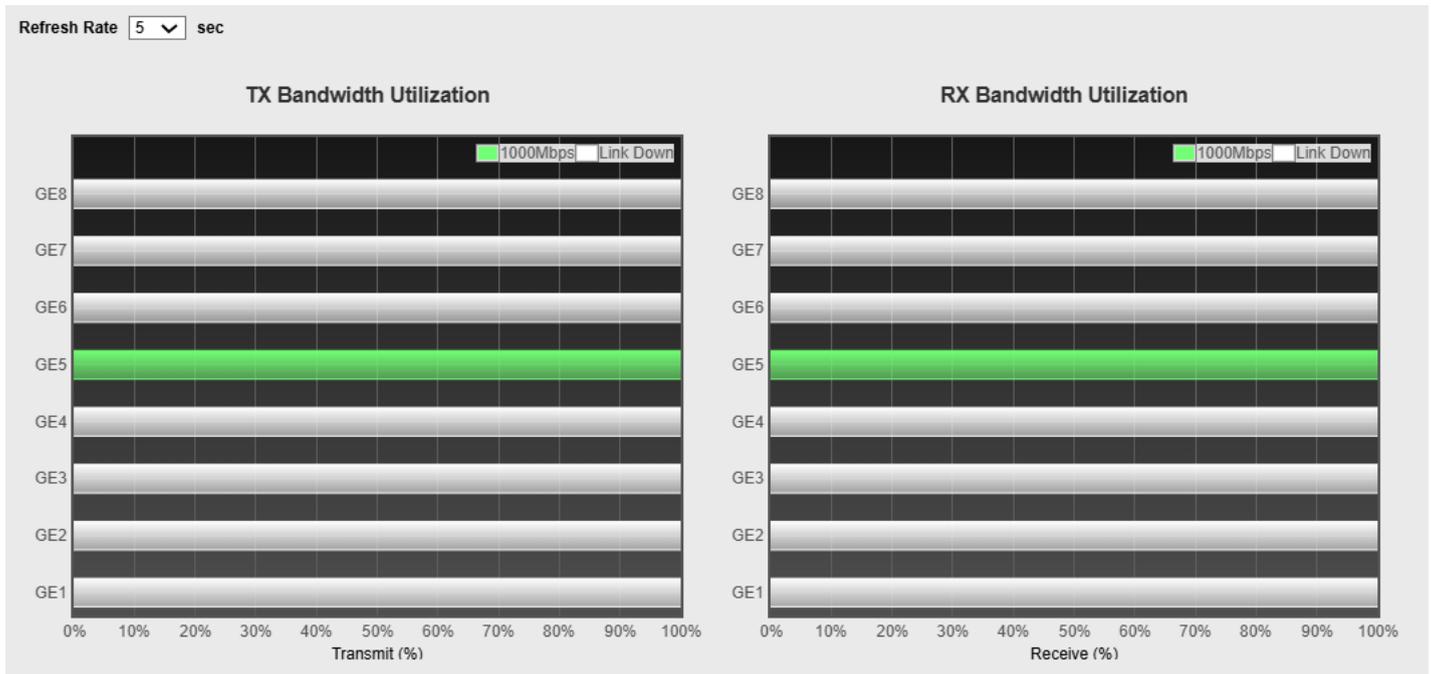
- UDLD
- Self Loop
- Broadcast Flood
- Unknown Multicast Flood
- Unicast Flood
- ACL
- Port Security Violation
- DHCP rate limit
- ARP rate limit

**Time Left (sec)** The time left in second for the error recovery.

### 2.3.3. Bandwidth Utilization

To display Bandwidth Utilization web page, click **Status > Port > Bandwidth Utilization**

This page allow user to browse ports' bandwidth utilization in real time. This page will refresh automatically in every refresh period



Field	Description
<a href="#">Refresh Rate</a>	Refresh the web page every period of seconds to get new bandwidth utilization data

## 2.4. Link Aggregation

To display Link Aggregation status web page, click **Status > Link Aggregation**

LAG	Name	Type	Link Status	Active Member	Inactive Member
LAG 1		---	---		
LAG 2		---	---		
LAG 3		---	---		
LAG 4		---	---		
LAG 5		---	---		
LAG 6		---	---		
LAG 7		---	---		
LAG 8		---	---		

Field	Description
<b>LAG</b>	LAG Name
<b>Name</b>	LAG port description
<b>Type</b>	<p>The type of the LAG</p> <ul style="list-style-type: none"> <li>• <b>Static:</b> The group of ports assigned to a static LAG are always active members.</li> <li>• <b>LACP:</b> The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>
<b>Link Status</b>	LAG port link status
<b>Active Member</b>	Active member ports of the LAG
<b>Inactive Member</b>	Inactive member ports of the LAG

## 2.5. MAC Address Table

To display MAC Address Table status web page, click **Status > MAC Address Table**.

The MAC address table page displays all MAC address entries on the switch including static MAC address created by administrator or auto learned from hardware. The “Clear” button will clear all dynamic entries and “Refresh” button will retrieve latest MAC address entries and show them on page.

VLAN	MAC Address	Type	Port
1	94:66:E7:01:23:69	Management	CPU
1	A8:1E:84:A9:76:ED	Dynamic	GE5

Field	Description
<b>VLAN</b>	VLAN ID of the mac address
<b>MAC Address</b>	MAC address
<b>Type</b>	<p>The type of MAC address</p> <ul style="list-style-type: none"> <li>• <b>Management:</b> DUT’s base mac address for management purpose</li> <li>• <b>Static:</b> Manually configured by administrator</li> <li>• <b>Dynamic:</b> Auto learned by hardware</li> </ul>
<b>Port</b>	<p>The type of Port</p> <ul style="list-style-type: none"> <li>• <b>CPU:</b> DUT’s CPU port for management purpose</li> <li>• <b>Other:</b> Normal switch port</li> </ul>

## 3. Network

Use the Network pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

### 3.1. System Time

To display System Time page, click **Network > System Time**

This page allow user to set time source, static time, time zone and daylight saving settings. Time zone and daylight saving takes effect both static time or time from SNTP server.

Source	<input type="radio"/> SNTP <input type="radio"/> From Computer <input checked="" type="radio"/> Manual Time							
Time Zone	UTC +8:00 ▼							
<b>SNTP</b>								
Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4							
Server Address	<input type="text"/>							
Server Port	<input type="text" value="123"/>	(1 - 65535, default 123)						
<b>Manual Time</b>								
Date	<input type="text" value="2025-01-01"/>	YYYY-MM-DD						
Time	<input type="text" value="08:26:26"/>	HH:MM:SS						
<b>Daylight Saving Time</b>								
Type	<input checked="" type="radio"/> None <input type="radio"/> Recurring <input type="radio"/> Non-recurring <input type="radio"/> USA <input type="radio"/> European							
Offset	<input type="text" value="60"/>	Min (1 - 1440, default 60)						
Recurring	From: Day	<input type="text" value="Sun"/>	Week	<input type="text" value="First"/>	Month	<input type="text" value="Jan"/>	Time	<input type="text"/>
	To: Day	<input type="text" value="Sun"/>	Week	<input type="text" value="First"/>	Month	<input type="text" value="Jan"/>	Time	<input type="text"/>
Non-recurring	From:	<input type="text"/>	YYYY-MM-DD	<input type="text"/>	HH:MM			
	To:	<input type="text"/>	YYYY-MM-DD	<input type="text"/>	HH:MM			
<b>Operational Status</b>								
Current Time	2025-01-01 08:26:26 UTC+8							
<input type="button" value="Apply"/>								

Field	Description
-------	-------------

<b>Source</b>	Select the time source. <ul style="list-style-type: none"> <li>• <b>SNTP:</b> Time sync from NTP server.</li> <li>• <b>From Computer:</b> Time set from browser host.</li> <li>• <b>Manual Time:</b> Time set by manually configure.</li> </ul>
<b>Time Zone</b>	Select a time zone difference from listing district.
<b>SNTP</b>	<b>Description</b>
<b>Address Type</b>	Select the address type of NTP server. This is enabled when time source is SNTP.
<b>Server Address</b>	Input IPv4 address or hostname for NTP server. This is enabled when time source is SNTP.
<b>Server Port</b>	Input NTP port for NTP server. Default is 123. This is enabled when time source is SNTP.
<b>Manual Time</b>	<b>Description</b>
<b>Date</b>	Input manual date. This is enabled when time source is manual.
<b>Time</b>	Input manual time. This is enabled when time source is manual.
<b>Daylight Saving Time</b>	<b>Description</b>
<b>Type</b>	Select the mode of daylight saving time. <ul style="list-style-type: none"> <li>• <b>Disable:</b> Disable daylight saving time.</li> <li>• <b>Recurring:</b> Using recurring mode of daylight saving time.</li> <li>• <b>Non-Recurring:</b> Using non-recurring mode of daylight saving time.</li> <li>• <b>USA:</b> Using daylight saving time in the United States that starts on the second Sunday of March and ends on the first Sunday of November</li> <li>• <b>European:</b> Using daylight saving time in the Europe that starts on the last Sunday in March and ending on the last Sunday in October</li> </ul>
<b>Offset</b>	Specify the adjust offset of daylight saving time.
<b>Recurring From</b>	Specify the starting time of recurring daylight saving time. This field available when selecting "Recurring" mode.
<b>Recurring To</b>	Specify the ending time of recurring daylight saving time. This field available when selecting "Recurring" mode.
<b>Non-recurring From</b>	Specify the starting time of non-recurring daylight saving time. This field available when selecting "Non-Recurring" mode.
<b>Non recurring To</b>	Specify the ending time of recurring daylight saving time. This field available when selecting "Non-Recurring" mode.
<b>Operational Status</b>	show the current time

## 4.Port

Use the Port pages to configure settings for switch port related features.

### 4.1. Port Setting

To display Port Setting web page, click **Port > Port Setting**

This page shows port current status and allow user to edit port configurations. Select port entry and click “Edit” button to edit port configurations.

Port Setting Table										
<input type="checkbox"/>	Entry	Port	Type	Description	State	Link Status	Speed	Duplex	Flow Control	FEC
<input type="checkbox"/>	1	GE1	1000M Copper		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	2	GE2	1000M Copper		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	3	GE3	1000M Copper		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	4	GE4	1000M Copper		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	5	GE5	1000M Copper		Enabled	Up	Auto (1000M)	Auto (Full)	Disabled (Off)	N/A
<input type="checkbox"/>	6	GE6	1000M Copper		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	7	GE7	1000M Fiber		Enabled	Down	Auto	Auto	Disabled	N/A
<input type="checkbox"/>	8	GE8	1000M Fiber		Enabled	Down	Auto	Auto	Disabled	N/A

Field	Description
<b>Port</b>	Port Name
<b>Type</b>	Port media type
<b>Description</b>	Port description
<b>State</b>	Port admin state. <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Enable the port.</li> <li>• <b>Disabled:</b> Disable the port.</li> </ul>

<b>Link Status</b>	Current port link status <ul style="list-style-type: none"> <li>• <b>Up:</b> Port is link up</li> <li>• <b>Down:</b> Port is link down</li> </ul>
<b>Speed</b>	Current port speed configuration and link speed status
<b>Duplex</b>	Current port duplex configuration and link duplex status
<b>Flow Control</b>	Current port flow control configuration and link flow control status

Field

Description

**Port**

Selected port list

**Description**

Port description

**State**

Port admin state.

- **Enabled:** Enable the port.
- **Disabled:** Disable the port.

<b>Speed</b>	<p>Port speed capabilities.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto speed with all capabilities</li> <li>• <b>Auto-10M:</b> Auto speed with 10M ability only</li> <li>• <b>Auto-100M:</b> Auto speed with 100M ability only</li> <li>• <b>Auto-1000M:</b> Auto speed with 1000M ability only</li> </ul>
<b>Duplex</b>	<p>Port duplex capabilities.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto duplex with all capabilities</li> <li>• <b>Half:</b> Auto speed with 10M and 100M ability only</li> <li>• <b>Full:</b> Auto speed with 10M/100M/1000M ability only</li> </ul>
<b>Flow Control</b>	<p>Port flow control.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto flow control by negotiation.</li> <li>• <b>Enabled:</b> Enable flow control ability.</li> <li>• <b>Disabled:</b> Disable flow control ability.</li> </ul>

## 4.2. Error Disabled

To display Error Disabled web page, click **Port > Error Disabled**

<b>Recovery Interval</b>	<input type="text" value="300"/>	Sec (30 - 86400)
<b>BPD Guard</b>	<input type="checkbox"/>	Enable
<b>Broadcast Flood</b>	<input type="checkbox"/>	Enable
<b>Unknown Multicast Flood</b>	<input type="checkbox"/>	Enable
<b>Unicast Flood</b>	<input type="checkbox"/>	Enable
<b>ACL</b>	<input type="checkbox"/>	Enable
<b>Port Security</b>	<input type="checkbox"/>	Enable
<b>DHCP Rate Limit</b>	<input type="checkbox"/>	Enable
<b>ARP Rate Limit</b>	<input type="checkbox"/>	Enable

**Apply**

Field	Description
<b>Recover Interval</b>	Auto recovery after this interval for error disabled port.
<b>BPDU Guard</b>	Enabled to auto shutdown port when BPDU Guard reason occur. <u>This reason caused by STP BPDU Guard mechanism.</u>
<b>Broadcast Flood</b>	Enabled to auto shutdown port when Broadcast Flood reason occur. This reason caused by broadcast rate exceed broadcast storm control rate.
<b>Unknown Multicast Flood</b>	Enabled to auto shutdown port when Unknown Multicast Flood reason occur. This reason caused by unknown multicast rate exceed unknown multicast storm control rate.
<b>Unicast Flood</b>	Enabled to auto shutdown port when Unicast Flood reason occur. This reason caused by unicast rate exceed unicast storm control rate.
<b>ACL</b>	Enabled to auto shutdown port when ACL shutdown port reason occur. This reason caused packet match the ACL shutdown port action.
<b>Port Security</b>	Enabled to auto shutdown port when Port Security Violation reason occur. <u>This reason caused by violation port security rules.</u>
<b>DHCP rate limit</b>	Enabled to auto shutdown port when DHCP rate limit reason occur. This reason caused by DHCP packet rate exceed DHCP rate limit.
<b>ARP rate limit</b>	Enabled to auto shutdown port when ARP rate limit reason occur. This reason caused by DHCP packet rate exceed ARP rate limit.

## 4.3. Link Aggregation

### 4.3.1 Group

To display LAG Setting web page, click **Port > Link Aggregation > Group**.

This page allow user to configure link aggregation group load balance algorithm and group member.

Field	Description
<b>Load Balance Algorithm</b>	<p>LAG load balance distribution algorithm</p> <ul style="list-style-type: none"> <li>• <b>MAC Address:</b> Based on MAC address</li> <li>• <b>IP-MAC Address:</b> Based on IP and MAC address</li> <li>• <b>Dst-MAC Address:</b> Based on destination MAC address</li> <li>• <b>Src-MAC Address:</b> Based on source MAC address</li> <li>• <b>Dst-IP Address:</b> Based on destination IP address</li> <li>• <b>Src-IP Address:</b> Based on source IP address</li> </ul>

Link Aggregation Table							
	LAG	Name	Type	Link Status	Active Member	Inactive Member	
<input type="radio"/>	LAG 1		---	---			
<input type="radio"/>	LAG 2		---	---			
<input type="radio"/>	LAG 3		---	---			
<input type="radio"/>	LAG 4		---	---			
<input type="radio"/>	LAG 5		---	---			
<input type="radio"/>	LAG 6		---	---			
<input type="radio"/>	LAG 7		---	---			
<input type="radio"/>	LAG 8		---	---			

Field	Description
<b>LAG</b>	LAG Name
<b>Name</b>	LAG port description
<b>Type</b>	<p>The type of the LAG</p> <ul style="list-style-type: none"> <li>• <b>Static:</b> The group of ports assigned to a static LAG are always active members.</li> <li>• <b>LACP:</b> The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>
<b>Link Status</b>	LAG port link status
<b>Active Member</b>	Active member ports of the LAG
<b>Inactive Member</b>	Inactive member ports of the LAG

Field	Description
<b>LAG</b>	Selected LAG group ID
<b>Name</b>	LAG port description
<b>Type</b>	<p>The type of the LAG</p> <ul style="list-style-type: none"> <li>• <b>Static:</b> The group of ports assigned to a static LAG are always active members.</li> <li>• <b>LACP:</b> The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>
<b>Member</b>	Select available port to be LAG group member port

### 4.3.2. Port Setting

To display LAG Port Setting web page, click **Port > Link Aggregation > Port Setting**.

This page shows LAG port current status and allow user to edit LAG port configurations. Select LAG entry and click “Edit” button to edit LAG port configurations.

Port Setting Table									
<input type="checkbox"/>	LAG	Type	Description	State	Link Status	Speed	Duplex	Flow Control	
<input type="checkbox"/>	LAG 1			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 2			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 3			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 4			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 5			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 6			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 7			Enabled	Down	Auto	Auto	Disabled	
<input type="checkbox"/>	LAG 8			Enabled	Down	Auto	Auto	Disabled	

Field	Description
<b>LAG</b>	LAG Port Name
<b>Type</b>	LAG Port media type
<b>Description</b>	LAG Port description
<b>State</b>	LAG Port admin state. <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Enable the port.</li> <li>• <b>Disabled:</b> Disable the port.</li> </ul>
<b>Link Status</b>	Current LAG port link status <ul style="list-style-type: none"> <li>• <b>Up:</b> Port is link up</li> <li>• <b>Down:</b> Port is link down</li> </ul>
<b>Speed</b>	Current LAG port speed configuration and link speed status
<b>Duplex</b>	Current LAG port duplex configuration and link duplex status
<b>Flow Control</b>	Current LAG port flow control configuration and link flow control status

Field	Description
<b>Port</b>	Selected port list
<b>Description</b>	Port description
<b>State</b>	<p>Port admin state.</p> <ul style="list-style-type: none"> <li>• <b>Enable:</b> Enable the port.</li> <li>• <b>Disable:</b> Disable the port.</li> </ul>
<b>Speed</b>	<p>Port speed capabilities.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto speed with all capabilities</li> <li>• <b>Auto-10M:</b> Auto speed with 10M ability only</li> <li>• <b>Auto-100M:</b> Auto speed with 100M ability only</li> <li>• <b>Auto-1000M:</b> Auto speed with 1000M ability only</li> <li>• <b>Auto-10M/100M:</b> Auto speed with 10M/100M abilities</li> <li>• <b>10M:</b> Force speed with 10M ability</li> <li>• <b>100M:</b> Force speed with 100M ability</li> <li>• <b>1000M:</b> Force speed with 1000M ability</li> </ul>
<b>Flow Control</b>	<p>Port flow control.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto flow control by negotiation.</li> <li>• <b>Enabled:</b> Enable flow control ability.</li> <li>• <b>Disabled:</b> Disable flow control ability.</li> </ul>

### 4.3.3. LACP

To display LACP Setting web page, click **Port > Link Aggregation > LACP**.

This page allow user to configure LACP global and port configurations. Select ports and click “Edit” button to edit port configuration.

Field	Description
<a href="#">System Priority</a>	Configure the system priority of LACP. This decides the system priority field in LACP PDU.

**LACP Port Setting Table**

<input type="checkbox"/>	Entry	Port	Port Priority	Timeout
<input type="checkbox"/>	1	GE1	1	Long
<input type="checkbox"/>	2	GE2	1	Long
<input type="checkbox"/>	3	GE3	1	Long
<input type="checkbox"/>	4	GE4	1	Long
<input type="checkbox"/>	5	GE5	1	Long
<input type="checkbox"/>	6	GE6	1	Long
<input type="checkbox"/>	7	GE7	1	Long
<input type="checkbox"/>	8	GE8	1	Long

**Edit**

Field	Description
<b>Port</b>	Port Name
<b>Port Priority</b>	LACP priority value of the port
<b>Timeout</b>	<p>The periodic transmissions type of LACP PDUs.</p> <ul style="list-style-type: none"> <li>• <b>Long:</b> Transmit LACP PDU with slow periodic (30s).</li> <li>• <b>Short:</b> Transmit LACPP DU with fast periodic (1s).</li> </ul>

Edit LACP Port Setting

Port GE1

Port Priority 1 (1 - 65535, default 1)

Timeout  Long  Short

Apply Close

Field	Description
<b>Port</b>	Selected port list
<b>Port Priority</b>	Enter the LACP priority value of the port
<b>Timeout</b>	<p>The periodic transmissions type of LACP PDUs.</p> <ul style="list-style-type: none"> <li>• <b>Long:</b> Transmit LACP PDU with slow periodic (30s).</li> <li>• <b>Short:</b> Transmit LACPP DU with fast periodic (1s).</li> </ul>

## 4.4. Jumbo Frame

To display Jumbo Frame web page, click **Port > Jumbo Frame**.

This page allow user to configure switch jumbo frame size.

Field	Description
<a href="#">Jumbo Frame</a>	Enable or disable jumbo frame. When jumbo frame is enabled, switch max frame size is allowed to configure. When jumbo frame is disabled, default frame size 1522 will be used.

## 4.5. Protected Port

To display Protected Port web page, click **Port > Protected Port**

This page allow user to configure protected port setting to prevent the selected ports from communication with each other. Protected port is only allowed to communicate with unprotected port. In other words, protected port is not allowed to communicate with another protected port.

<input type="checkbox"/>	Entry	Port	State
<input type="checkbox"/>	1	GE1	Unprotected
<input type="checkbox"/>	2	GE2	Unprotected
<input type="checkbox"/>	3	GE3	Unprotected
<input type="checkbox"/>	4	GE4	Unprotected
<input type="checkbox"/>	5	GE5	Unprotected
<input type="checkbox"/>	6	GE6	Unprotected
<input type="checkbox"/>	7	GE7	Unprotected
<input type="checkbox"/>	8	GE8	Unprotected
<input type="checkbox"/>	9	LAG1	Unprotected
<input type="checkbox"/>	10	LAG2	Unprotected
<input type="checkbox"/>	11	LAG3	Unprotected
<input type="checkbox"/>	12	LAG4	Unprotected
<input type="checkbox"/>	13	LAG5	Unprotected
<input type="checkbox"/>	14	LAG6	Unprotected
<input type="checkbox"/>	15	LAG7	Unprotected
<input type="checkbox"/>	16	LAG8	Unprotected

Field	Description
<b>Port</b>	Port Name
<b>State</b>	Port protected admin state. <ul style="list-style-type: none"> <li>• <b>Protected:</b> Port is protected.</li> <li>• <b>Unprotected:</b> Port is unprotected</li> </ul>

Field	Description
<b>Port</b>	Selected port list
<b>State</b>	Port protected admin state. <ul style="list-style-type: none"> <li>• <b>Protected:</b> Enable protecting function.</li> <li>• <b>Unprotected:</b> Disable protecting function.</li> </ul>

## 4.6.Storm Control

To display Storm Control global setting web page, click **Port > Storm Control**

**Mode**  Packet / Sec  
 Kbits / Sec

**IFG**  Exclude  
 Include

**Apply**

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	State	Broadcast		Unknown Multicast		Unknown Unicast		Action
				State	Rate (Kbps)	State	Rate (Kbps)	State	Rate (Kbps)	
<input type="checkbox"/>	1	GE1	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	2	GE2	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	3	GE3	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	4	GE4	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	5	GE5	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	6	GE6	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	7	GE7	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	8	GE8	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop

**Edit**

Field	Description
<b>Unit</b>	Select the unit of storm control <ul style="list-style-type: none"> <li><b>Packet / Sec:</b> storm control rate calculates by packet-based</li> <li><b>Kbits / Sec:</b> storm control rate calculates by octet-based</li> </ul>
<b>IFG</b>	Select the rate calculates w/o preamble & IFG (20 bytes) <ul style="list-style-type: none"> <li><b>Excluded:</b> exclude preamble &amp; IFG (20 bytes) when count</li> </ul>

- ingress storm control rate.
- **Included:** include preamble & IFG (20 bytes) when count ingress storm control rate.

To Edit Storm Control port setting web page, select the port which to set, click button **Edit**

The screenshot shows the 'Edit Port Setting' interface. The port is set to GE1. The State is currently disabled. The Broadcast, Unknown Multicast, and Unknown Unicast settings are also disabled, with a rate of 10000 Kbps. The Action is set to Drop. There are 'Apply' and 'Close' buttons at the bottom.

Field	Description
<b>Port</b>	Select the setting ports
<b>State</b>	Select the state of setting <ul style="list-style-type: none"> <li>• <b>Enable:</b> Enable the storm control function.</li> </ul>
<b>Broadcast</b>	<b>Enable:</b> Enable the storm control function of Broadcast packet. Value of storm control rate, Unit: pps (packet per-second, range 1 - 262143) or Kbps (Kbits per-second, range16 - 1000000) depends on global mode setting.
<b>Unknown Multicast</b>	<b>Enable:</b> Enable the storm control function of Unknown multicast packet. Value of storm control rate, Unit: pps (packet per-second, range 1 - 262143) or Kbps (Kbits per-second, range16 - 1000000) depends

	on global mode setting.
<b>Unknown Unicast</b>	<p><b>Enable:</b> Enable the storm control function of Unknown unicast packet.</p> <p>Value of storm control rate, Unit: pps (packet per-second, range 1 - 262143) or Kbps (Kbits per-second, range 16 - 1000000) depends on global mode setting.</p>
<b>Action</b>	<p>Select the state of setting</p> <ul style="list-style-type: none"> <li>• <b>Drop:</b> Packets exceed storm control rate will be dropped.</li> <li>• <b>Shutdown:</b> Port will be shutdown when packets exceed storm control rate.</li> </ul>

## 5. VLAN

A virtual local area network, virtual LAN or VLAN, is a group of hosts with a common set of requirements that communicate as if they were attached to the same broadcast domain, regardless of their physical location. A VLAN has the same attributes as a physical local area network (LAN), but it allows for end stations to be grouped together even if they are not located on the same network switch. VLAN membership can be configured through software instead of physically relocating devices or connections.

### 5.1.1. Create VLAN

To display Create VLAN page, click **VLAN > VLAN > Create VLAN**

This page allows user to add or delete VLAN ID entries and browser all VLAN entries that add statically or dynamic learned by GVRP. Each VLAN entry has a unique name, user can edit VLAN name in edit page.

The screenshot shows a web interface for VLAN management. At the top, there are two lists: 'Available VLAN' containing VLAN 2 through 9, and 'Created VLAN' containing VLAN 1. Between these lists are right and left arrow buttons. Below the lists is an 'Apply' button. Underneath is a 'VLAN Table' section with a dropdown menu set to 'All' and the text 'Showing 1 to 1 of 1 entries'. The table has columns for 'VLAN', 'Name', 'Type', and 'VLAN Interface State'. A single row is visible with values: '1', 'default', 'Default', and 'Enabled'. At the bottom of the table are 'Edit' and 'Delete' buttons.

Field	Description
<b>Available VLAN</b>	VLAN has not created yet. Select available VLANs from left box then move to right box to add.
<b>Created VLAN</b>	VLAN had been created.

Select created VLANs from right box then move to left box to delete.

Edit VLAN Name

Name

Field	Description
Name	Input VLAN name.

### 5.1.2. VLAN Configuration

To display VLAN Configuration page, click **VLAN > VLAN > VLAN Configuration**

This page allow user to configure the membership for each port of selected VLAN.

VLAN Configuration Table

VLAN

Entry	Port	Mode	Membership			PVID	Forbidden
1	GE1	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	GE2	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	GE3	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	GE4	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	GE5	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	GE6	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	GE7	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	GE8	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	LAG1	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	LAG2	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	LAG3	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	LAG4	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	LAG5	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	LAG6	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	LAG7	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	LAG8	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Field	Description
VLAN	Select specified VLAN ID to configure VLAN configuration.
Port	Display the interface of port entry.
Mode	Display the interface VLAN mode of port.
Membership	Select the membership for this port of the specified VLAN ID. <ul style="list-style-type: none"> <li>• <b>Forbidden:</b> Specify the port is forbidden in the VLAN.</li> <li>• <b>Excluded:</b> Specify the port is excluded in the VLAN.</li> <li>• <b>Tagged:</b> Specify the port is tagged member in the VLAN.</li> <li>• <b>Untagged:</b> Specify the port is untagged member in the VLAN.</li> </ul>
PVID	Display if it is PVID of interface.

### 5.1.3. Membership

To display Membership page, click **VLAN > VLAN > Membership**

This page allow user to view membership information for each port and edit membership for specified interface

The screenshot shows a web interface titled "Membership Table". It contains a table with the following columns: Entry, Port, Mode, Administrative VLAN, and Operational VLAN. There are 16 rows of data, each with a radio button in the "Entry" column. Below the table is an "Edit" button.

Entry	Port	Mode	Administrative VLAN	Operational VLAN
<input type="radio"/>	1	GE1	Trunk	1UP
<input type="radio"/>	2	GE2	Trunk	1UP
<input type="radio"/>	3	GE3	Trunk	1UP
<input type="radio"/>	4	GE4	Trunk	1UP
<input type="radio"/>	5	GE5	Trunk	1UP
<input type="radio"/>	6	GE6	Trunk	1UP
<input type="radio"/>	7	GE7	Trunk	1UP
<input type="radio"/>	8	GE8	Trunk	1UP
<input type="radio"/>	9	LAG1	Trunk	1UP
<input type="radio"/>	10	LAG2	Trunk	1UP
<input type="radio"/>	11	LAG3	Trunk	1UP
<input type="radio"/>	12	LAG4	Trunk	1UP
<input type="radio"/>	13	LAG5	Trunk	1UP
<input type="radio"/>	14	LAG6	Trunk	1UP
<input type="radio"/>	15	LAG7	Trunk	1UP
<input type="radio"/>	16	LAG8	Trunk	1UP

Field	Description
-------	-------------

<b>Port</b>	Display the interface of port entry.
<b>Mode</b>	Display the interface VLAN mode of port.
<b>Administrative VLAN</b>	Display the administrative VLAN list of this port.
<b>Operational VLAN</b>	Display the operational VLAN list of this port. Operational VLAN means the VLAN status that really runs in device. It may different to administrative VLAN.



Field	Description
<b>Port</b>	Display the interface.
<b>Mode</b>	Display the VLAN mode of interface.
<b>Membership</b>	<p>Select VLANs of left box and select one of following membership then move to right box to add membership. Select VLANs of right box then move to left box to remove membership. Tagging membership may not choose in differ VLAN port mode.</p> <p>Select the time source.</p> <ul style="list-style-type: none"> <li>• <b>Forbidden:</b> Set VLAN as forbidden VLAN.</li> <li>• <b>Excluded:</b> This option is always disabled.</li> <li>• <b>Tagged:</b> Set VLAN as tagged VLAN.</li> </ul>

- **Untagged:** Set VLAN as untagged VLAN.
- **PVID:** Check this checkbox to select the VLAN ID to be the port-based VLAN ID for this port. PVID may auto select or can't select in differ settings.

### 5.1.4. Port Setting

To display Port Setting page, click **VLAN > VLAN > Port Setting**

This page allow user to configure ports VLAN settings such as VLAN port mode, PVID etc...The attributes depend on different VLAN port mode.

Port Setting Table									
<input type="checkbox"/>	Entry	Port	Mode	PVID	Accept Frame Type	Ingress Filtering	Uplink	TPID	
<input type="checkbox"/>	1	GE1	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	2	GE2	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	3	GE3	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	4	GE4	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	5	GE5	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	6	GE6	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	7	GE7	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	8	GE8	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	9	LAG1	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	10	LAG2	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	11	LAG3	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	12	LAG4	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	13	LAG5	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	14	LAG6	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	15	LAG7	Trunk	1	All	Enabled	Disabled	0x8100	
<input type="checkbox"/>	16	LAG8	Trunk	1	All	Enabled	Disabled	0x8100	

Field	Description
<b>Port</b>	Display the interface.
<b>Mode</b>	Display the VLAN mode of port.
<b>PVID</b>	Display the Port-based VLAN ID of port.
<b>Accept Frame Type</b>	Display accept frame type of port
<b>Ingress Filtering</b>	Display ingress filter status of port
<b>Uplink</b>	Display uplink status.
<b>TPID</b>	Display TPID used of interface.

Field	Description
<b>Port</b>	Display selected port to be edited.
<b>Mode</b>	<p>Select the VLAN mode of the interface.</p> <ul style="list-style-type: none"> <li>• <b>Hybrid:</b> Support all functions as defined in IEEE 802.1Q specification.</li> <li>• <b>Access:</b> Accepts only untagged frames and join an untagged VLAN.</li> <li>• <b>Trunk:</b> An untagged member of one VLAN at most, and is a tagged member of zero or more VLANs.</li> </ul>

<b>PVID</b>	Specify the port-based VLAN ID (1-4094). It's only available with Hybrid and Trunk mode.
<b>Accepted Type</b>	Specify the acceptable-frame-type of the specified interfaces. It's only available with Hybrid mode.
<b>Ingress Filtering</b>	Set checkbox to enable/disable ingress filtering. It's only available with Hybrid mode.
<b>Uplink</b>	Set checkbox to enable/disable uplink mode. It's only available with trunk mode.
<b>TPID</b>	Select TPID used of interface. It's only available with trunk mode.



## 6. MAC Address Table

Use the MAC Address Table pages to show dynamic MAC table and configure settings for static MAC entries.

### 6.1. Dynamic Address

To configure the aging time of the dynamic address, click **MAC Address Table > Dynamic Address**.

The screenshot shows the configuration interface for the Dynamic Address Table. At the top, there is an 'Aging Time' field with a value of 300 and a unit of 'Sec (10 - 630, default 300)'. Below this is an 'Apply' button. The main section is titled 'Dynamic Address Table' and includes a 'Showing All entries' dropdown and a 'Showing 1 to 1 of 1 entries' indicator. A table with the following columns is displayed: 'VLAN', 'MAC Address', and 'Port'. The table contains one entry: VLAN 1, MAC Address A8:1E:84:A9:76:ED, and Port GE5. At the bottom of the table, there are 'Refresh' and 'Add Static Address' buttons.

Field	Description
<b>Aging Time</b>	The time in seconds that an entry remains in the MAC address table. Its valid range is from 10 to 630 seconds, and the default value is 300 seconds..

## 6.2. Static Address

To display the static MAC address, click **MAC Address Table > Static Address**.

Field	Description
<a href="#">MAC Address</a>	The MAC address to which packets will be statically forwarded.
<a href="#">VLAN</a>	Specify the VLAN to show or clear MAC entries.
<a href="#">Port</a>	Interface or port number.

## 6.3. Filtering Address

To configure and display the MAC filtering settings, click **MAC Address Table > Filtering Address**.

Field	Description
<a href="#">MAC Address</a>	Specify unicast MAC address in the packets to be dropped.
<a href="#">VLAN</a>	Specify the VLAN ID for the specific MAC address.

## 7.Spanning Tree

The Spanning Tree Protocol (STP) is a network protocol that ensures a loop-free topology for any bridged Ethernet local area network.

### 7.1 Property

To configure and display STP property configuration, click **Spanning Tree > Property**.

<b>State</b>	<input type="checkbox"/> Enable
<b>Operation Mode</b>	<input type="radio"/> STP <input checked="" type="radio"/> RSTP <input type="radio"/> MSTP
<b>Path Cost</b>	<input checked="" type="radio"/> Long <input type="radio"/> Short
<b>BPDU Handling</b>	<input type="radio"/> Filtering <input checked="" type="radio"/> Flooding
<b>Priority</b>	<input type="text" value="32768"/> (0 - 61440, default 32768)
<b>Hello Time</b>	<input type="text" value="2"/> Sec (1 - 10, default 2)
<b>Max Age</b>	<input type="text" value="20"/> Sec (6 - 40, default 20)
<b>Forward Delay</b>	<input type="text" value="15"/> Sec (4 - 30, default 15)
<b>Tx Hold Count</b>	<input type="text" value="6"/> (1 - 10, default 6)
<b>Region Name</b>	<input type="text"/>
<b>Revision</b>	<input type="text"/> (undefined - undefined, default undefined)
<b>Max Hop</b>	<input type="text"/> (undefined - undefined, default undefined)
<b>Operational Status</b>	
<b>Bridge Identifier</b>	32768-94:66:E7:01:23:69
<b>Designated Root Bridge</b>	32768-94:66:E7:01:23:69
<b>Root Port</b>	N/A
<b>Root Path Cost</b>	0
<b>Topology Change Count</b>	0
<b>Last Topology Change</b>	0D/1H/9M/43S
<input type="button" value="Apply"/>	

Field	Description
State	Enable/Disable the Spanning Tree on the switch.
Operation Mode	Specify the Spanning Tree operation mode. <ul style="list-style-type: none"> <li>• <b>STP</b>: Enable the Spanning Tree (STP) operation.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>RSTP</b>: Enable the Rapid Spanning Tree (RSTP) operation.</li> <li>• <b>MSTP</b>: Enable the Multiple Spanning Tree (MSTP) operation.</li> </ul>
Path Cost	Specify the path cost method. <ul style="list-style-type: none"> <li>• <b>Long</b>: Specifies that the default port path costs are within the range: 1-200,000,000..</li> <li>• <b>Short</b>: Specifies that the default port path costs are within the range: 1-65,535.</li> </ul>
BPDU Handling	Specify the BPDU forward method when the STP is disabled. <ul style="list-style-type: none"> <li>• <b>Filtering</b>: Filter the BPDU when STP is disabled.</li> <li>• <b>Flooding</b>: Flood the BPDU when STP is disabled.</li> </ul>
Priority	Specify the bridge priority. The valid range is from 0 to 61440, and the value should be the multiple of 4096. It ensures the probability that the switch is selected as the root bridge, and the lower value has the higher priority for the switch to be selected as the root bridge of the topology.
Hello Time	Specify the STP hello time in second to broadcast its hello message to other bridges by Designated Ports. Its valid range is from 1 to 10 seconds.
Max Age	Specify the time interval in seconds for a switch to wait the configuration messages, without attempting to redefine its own configuration.
Forward Delay	Specify the STP forward delay time, which is the amount of time that a port remains in the Listening and Learning states before it enters the Forwarding state. Its valid range is from 4 to 10 seconds.
TX Hold Count	Specify the tx-hold-count used to limit the maximum numbers of packets transmission per second. The valid range is from 1 to 10.
Region Name	The MSTP instance name. Its maximum length is 32 characters. The default value is the MAC address of the switch.
Revision	The MSTP revision number. Its valid range is from 0 to 65535.
Max Hops	Specify the number of hops in an MSTP region before the BPDU is discarded. The valid range is 1 to 40.

Field	Description
<b>Bridge Identifier</b>	Bridge identifier of the switch.
<b>Designated Root Identifier</b>	Bridge identifier of the designated root bridge.
<b>Root Port</b>	Operational root port of the switch.
<b>Root Path Cost</b>	Operational root path cost.
<b>Topology Change</b>	Numbers of the topology changes.
<b>Count</b>	
<b>Last Topology Change</b>	The last time for the topology change.

## 7.2 Port Setting

To configure and display the STP port settings, click **Spanning Tree > Port Setting**.

Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Path Cost	Priority	BPDU Filter	BPDU Guard	Operational Edge	Operational Point-to-Point	Port Role	Port State	Designated Bridge	Designated Port ID	Designated Cost
<input type="checkbox"/>	1	GE1	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-1	20000
<input type="checkbox"/>	2	GE2	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-2	20000
<input type="checkbox"/>	3	GE3	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-3	20000
<input type="checkbox"/>	4	GE4	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-4	20000
<input type="checkbox"/>	5	GE5	Disabled	20000	128	Disabled	Disabled	Disabled	Enabled	Designated	Forwarding	32768-94.66.E7:01:23:69	128-5	20000
<input type="checkbox"/>	6	GE6	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-6	20000
<input type="checkbox"/>	7	GE7	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-7	20000
<input type="checkbox"/>	8	GE8	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-8	20000
<input type="checkbox"/>	9	LAG1	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-9	20000
<input type="checkbox"/>	10	LAG2	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-10	20000
<input type="checkbox"/>	11	LAG3	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-11	20000
<input type="checkbox"/>	12	LAG4	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-12	20000
<input type="checkbox"/>	13	LAG5	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-13	20000
<input type="checkbox"/>	14	LAG6	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-14	20000
<input type="checkbox"/>	15	LAG7	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-15	20000
<input type="checkbox"/>	16	LAG8	Disabled	20000	128	Disabled	Disabled	Disabled	Disabled	Designated	Disabled	32768-94.66.E7:01:23:69	128-16	20000

[Edit](#) [Protocol Migration Check](#)

Field	Description
<b>Port</b>	Specify the interface ID or the list of interface IDs.
<b>State</b>	The operational state on the specified port.
<b>Path Cost</b>	STP path cost on the specified port.
<b>Priority</b>	STP priority on the specified port.
<b>BPDU Filter</b>	The states of BPDU filter on the specified port.
<b>BPDU Guard</b>	The states of BPDU guard on the specified port.
<b>Operational Edge</b>	The operational edge port status on the specified port.
<b>Operational Point-to-Point</b>	The operational point-to-point status on the specified port.
<b>Port Role</b>	The current port role on the specified port. The possible values are: <u>“Disabled”, “Master”, “Root”, “Designated”, “Alternative”, and “Backup”.</u>
<b>Port State</b>	The current port state on the specified port. The possible values are: <u>“Disabled”, “Discarding”, “Learning”, and “Forwarding”.</u>
<b>Designated Bridge</b>	The bridge ID of the designated bridge.
<b>Designated Port ID</b>	The designated port ID on the switch.
<b>Designated Cost</b>	The path cost of the designated port on the switch

Field	Description
<b>Protocol Migration Check</b>	Restart the Spanning Tree Protocol (STP) migration process (re-negotiate with its neighborhood) on the specific interface.

Field	Description
<b>State</b>	Enable/Disable the STP on the specified port.
<b>Path Cost</b>	Specify the STP path cost on the specified port.
<b>Priority</b>	Specify the STP path cost on the specified port.
<b>Edge Port</b>	<p>Specify the edge mode.</p> <ul style="list-style-type: none"> <li>• <b>Enable</b>: Force to true state (as link to a host).</li> <li>• <b>Disable</b>: Force to false state (as link to a bridge).</li> </ul> <p>In the edge mode, the interface would be put into the Forwarding state immediately upon link up. If the edge mode is enabled for the interface and there are BPDUs received on the interface, the loop might be occurred in the short time before the STP state change.</p>

---

<b>BPDU Filter</b>	<p>The BPDU Filter configuration avoids receiving/transmitting BPDU from the specified ports.</p> <ul style="list-style-type: none"> <li>• <b>Enable:</b> Enable BPDU filter function.</li> <li>• <b>Disable:</b> Disable BPDU filter function.</li> </ul>
<b>BPDU Guard</b>	<p>The BPDU Guard configuration to drop the received BPDU directly.</p> <ul style="list-style-type: none"> <li>• <b>Enable:</b> Enable BPDU guard function.</li> <li>• <b>Disable:</b> Disable BPDU guard function.</li> </ul>
<b>Point-to-Point</b>	<p>Specify the Point-to-Point port configuration:</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> The state is depended on the duplex setting of the port</li> <li>• <b>Enable:</b> Force to true state.</li> <li>• <b>Disable:</b> Force to false state.</li> </ul>

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## 8.ERPS

ERPS (Ethernet Ring Protection Switching) is the G.8032 Ethernet ring protection protocol published by ITU-T, designed to meet telecom-grade reliability with fast convergence. If all devices in the ring support this protocol, interoperability can be achieved.

The concept of ERPS protocol mainly includes ERPS ring, nodes, port roles, and port states.

### 1.ERPS Instance

Unlike spanning tree instances, it is similar to the concept of an ERRP domain. A group of interconnected switches configured with the same instance ID and control VLAN forms an ERPS instance.

### 2.Control VLAN

The control VLAN is the VLAN used for transmitting ERPS protocol messages, similar to the role of the control VLAN in ERRP. The protocol messages will carry the corresponding control VLAN tag.

### 3.RPL

Ring Protection Link (RPL) is a link designated by a mechanism that is blocked during the idle state to prevent loops in the bridged ring.

### 4.ERPS Ring

An ERPS ring consists of a group of Layer 2 switches that are configured with the same control VLAN and interconnected. This is the basic unit of the ERPS protocol.

## 5. Node

A Layer 2 switch that joins an ERPS ring is referred to as a node. No node can have more than two ports in the same ERPS ring. Nodes are classified into four categories: RPL Owner, Neighbour, Next Neighbour, and Common.

## 6. Port Roles

The ERPS protocol defines four main port roles: RPL Owner, Neighbour, Next Neighbour, and Common.

### (1) RPL Owner:

Each ERPS ring has only one RPL Owner port, which is determined by the user. The RPL Owner port is blocked to prevent loops in the ERPS ring. The node with the RPL Owner port is called the RPL Owner node.

(2) RPL Neighbour: Each ERPS ring has only one RPL Neighbour port, configured by the user. It must be the port connected to the RPL Owner port. During normal operation, this port will be blocked along with the RPL Owner port to prevent loops in the ERPS ring. The node with the RPL Neighbour port is called the RPL Neighbour node.

(3) RPL Next Neighbour: An ERPS ring can have up to two RPL Next Neighbour ports, configured by the user. These ports must connect to the RPL Owner or RPL Neighbour ports. The node with an RPL Next Neighbour port is called the RPL Next Neighbour node.

Note: RPL Next Neighbour nodes are similar to common nodes and can be replaced by Common nodes during configuration.

(4) Common: Common ports are all ports other than RPL Owner, Neighbour, and Next Neighbour ports. If a node only has Common ports, it is called a Common node.

## 7. Port States

In an ERPS ring, there are three port states when the ERPS protocol is enabled:

(1) Forwarding: In this state, the port forwards user traffic and receives/sends R-APS messages. It can also forward R-APS messages from other nodes.

(2) Discarding: In this state, the port can only receive/send R-APS messages, but cannot forward R-APS messages from other nodes.

(3) Disable: This state occurs when the port is in a Linkdown state.

## 8. Work Mode: ERPS Working Mode

There are two modes: revertive (reversible) and non-revertive (non-reversible).

(1) Revertive Mode: When a link failure occurs, the RPL link is unblocked for protection. When the failed link recovers, the RPL link is re-protected to prevent loops.

(2) Non-Revertive Mode: After a failure recovery, the failed node remains in the failed state (does not enter Forwarding), and the RPL link remains unprotected.

## 8.1. Property

To display ERPS Property Setting web page, click **ERPS > Property**.

## 8.2 ERPS Instance

1. Click on "Add". You can create an ERPS instance, view the configuration information for each instance, and delete instances if needed.

2. Select the instance ( instance must be created first), then click the " **Edit** " button to enter the instance configuration page.

### Erps Global Config

**Erps Status**  Disable  Enable

**Apply**

### Instance Selection

**Instance 0**

#### Instance 0 Info

Instance Id	0
MEL	0
Work-mode	revertive
WTR Time	5 min
Guard Timer	500 ms
Holdoff Timer	0 s

#### Ring Info

Control Vlan	1
Status	Enable
Protected-instance	0
Node Role	Owner
Level	0
STM	Protection

### Ring Ports Information

	Port	Role	State	Nodeld	BPR
port0	gi5	Common	Forwarding	00:00:00:00:00:00	
port1	gi7	Owner	Disabled	00:00:00:00:00:00	

### Instance Management

**Add** **Edit** **Delete**

## 9.Discovery

### 9.1 LLDP

LLDP is a one-way protocol; there are no request/response sequences. Information is advertised by stations implementing the transmit function, and is received and processed by stations implementing the receive function. The LLDP category contains LLDP and LLDP-MED pages.

#### 9.1.1 Property

To display LLDP Property Setting web page, click **Discovery > LLDP > Property**.

The screenshot shows the LLDP Property Setting web page. It is organized into two main sections: LLDP and LLDP-MED. The LLDP section contains a 'State' checkbox (unchecked), 'LLDP Handling' radio buttons (Filtering, Bridging, Flooding), and four input fields: 'TLV Advertise Interval' (30), 'Hold Multiplier' (4), 'Reinitializing Delay' (2), and 'Transmit Delay' (2). The LLDP-MED section contains a 'Fast Start Repeat Count' input field (3). An 'Apply' button is located at the bottom left of the form.

Field	Description
<b>State</b>	Enable/ Disable LLDP protocol on this switch.
<b>LLDP Handling</b>	Select LLDP PDU handling action to be filtered, bridging or flooded when LLDP is globally disabled. <ul style="list-style-type: none"> <li>• <b>Filtering:</b> Deletes the packet.</li> <li>• <b>Bridging:</b> (VLAN-aware flooding) Forwards the packet to all VLAN members.</li> <li>• <b>Flooding:</b> Forwards the packet to all ports</li> </ul>
<b>TLV Advertise Interval</b>	Select the interval at which frames are transmitted. The default is 30 seconds, and the valid range is 5–32767 seconds.
<b>Holdtime Multiplier</b>	Select the multiplier on the transmit interval to assign to TTL (range 2–10, default = 4).

<b>Reinitialization Delay</b>	Select the delay before a re-initialization (range 1–10 seconds, default = 2).
<b>Transmit Delay</b>	Select the delay after an LLDP frame is sent (range 1–8191 seconds, default = 3).
<b>Fast Start Repeat Count</b>	Select fast start repeat count when port link up (range 1–10, default = 3).

## 9.1.2 Port Setting

To display LLDP Port Setting, click **Discovery > LLDP > Port Setting**.

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	Mode	Selected TLV
<input type="checkbox"/>	1	GE1	Normal	802.1 PVID
<input type="checkbox"/>	2	GE2	Normal	802.1 PVID
<input type="checkbox"/>	3	GE3	Normal	802.1 PVID
<input type="checkbox"/>	4	GE4	Normal	802.1 PVID
<input type="checkbox"/>	5	GE5	Normal	802.1 PVID
<input type="checkbox"/>	6	GE6	Normal	802.1 PVID
<input type="checkbox"/>	7	GE7	Normal	802.1 PVID
<input type="checkbox"/>	8	GE8	Normal	802.1 PVID

To Edit LLDP port setting web page, select the port which to set, click button **Edit**

Field	Description
<b>Port</b>	Select specified port or all ports to configure LLDP state.
<b>Mode</b>	Select the transmission state of LLDP port interface. <ul style="list-style-type: none"> <li>• <b>Disable:</b> Disable the transmission of LLDP PDUs.</li> <li>• <b>RX Only:</b> Receive LLDP PDUs only.</li> <li>• <b>TX Only:</b> Transmit LLDP PDUs only.</li> <li>• <b>TX And RX:</b> Transmit and receive LLDP PDUs both.</li> </ul>
<b>Optional TLV</b>	Select the LLDP optional TLVs to be carried (multiple selection is allowed). <ul style="list-style-type: none"> <li>• <b>System Name</b></li> <li>• <b>Port Description</b></li> <li>• <b>System Description</b></li> <li>• <b>System Capability</b></li> <li>• <b>802.3 MAC-PHY</b></li> <li>• <b>802.3 Link Aggregation</b></li> <li>• <b>802.3 Maximum Frame Size</b></li> <li>• <b>Management Address</b></li> <li>• <b>802.1 PVID</b></li> </ul>

**802.1 VLAN Name**

Select the VLAN Name ID to be carried (multiple selection is allowed).

### 9.1.3 MED Network Policy

To display LLDP MED Network Policy Setting, click **Discovery > LLDP > MED Network Policy**.



To Add LLDP MED Network Policy entry, Click button **Add**

To Edit LLDP MED Network Policy entry, select the entry which to edit, Click button **Edit**

The screenshot shows the 'Add MED Network Policy' form. It contains the following fields and options:

- Policy ID:** A dropdown menu with the value '1' selected.
- Application:** A dropdown menu with the value 'Voice' selected.
- VLAN:** A text input field with a placeholder 'Range (0 - 4095)'.
- VLAN Tag:** Two radio buttons: 'Tagged' (selected) and 'Untagged'.
- Priority:** A dropdown menu with the value '0' selected.
- DSCP:** A dropdown menu with the value '0' selected.

At the bottom of the form, there are two buttons: 'Apply' and 'Close'.

Field	Description
<b>Policy ID</b>	Select specified network policy ID to configure.
<b>Application</b>	Select the network policy application type. <ul style="list-style-type: none"> <li>• <b>Voice</b></li> <li>• <b>Voice Signaling</b></li> <li>• <b>Guest Voice</b></li> <li>• <b>Guest Voice Signaling</b></li> <li>• <b>Softphone Voice</b></li> <li>• <b>Video Conferencing</b></li> <li>• <b>App Streaming Video</b></li> <li>• <b>VideoSignaling</b></li> </ul>
<b>VLAN</b>	Set the VLAN ID, range from 1 to 4094.
<b>VLAN Tag</b>	Set the VLAN tag status. <ul style="list-style-type: none"> <li>• <b>Tagged:</b> Traffic is tagged.</li> <li>• <b>Untagged:</b> Traffic is untagged.</li> </ul>
<b>Priority</b>	Set the L2 priority, range from 0 to 7.
<b>DSCP</b>	Set the DSCP value, range from 0 to 63

### 9.1.4 MED Port Setting

To display LLDP MED Port Setting, click **Discovery > LLDP > MED Port Setting**.

MED Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Network Policy		Location	Inventory
				Active	Application		
<input type="checkbox"/>	1	GE1	Enabled	Yes		No	No
<input type="checkbox"/>	2	GE2	Enabled	Yes		No	No
<input type="checkbox"/>	3	GE3	Enabled	Yes		No	No
<input type="checkbox"/>	4	GE4	Enabled	Yes		No	No
<input type="checkbox"/>	5	GE5	Enabled	Yes		No	No
<input type="checkbox"/>	6	GE6	Enabled	Yes		No	No
<input type="checkbox"/>	7	GE7	Enabled	Yes		No	No
<input type="checkbox"/>	8	GE8	Enabled	Yes		No	No

To Edit LLDP MED port setting web page, select the port which to set, click button **Edit**

Field	Description
<b>Port</b>	Select specified port or all ports to configure LLDP MED.
<b>State</b>	Select LLDP MED enable status
<b>Optional TLV</b>	Select LLDP MED optional TLVs (multiple selection is allowed) <ul style="list-style-type: none"> <li>• <b>Network Policy</b></li> <li>• <b>Location</b></li> <li>• <b>Inventory</b></li> </ul>
<b>Network Policy</b>	Select the network policy IDs to be bound to ports. <u>The network policy should be created in MED Network Policy page at first.</u>

Field	Description
<a href="#">Coordinate</a>	Set Coordinate
<a href="#">Civic</a>	Set Civic
<a href="#">ECS ELIN</a>	Set ECS ELIN

### 9.1.5 Packet View

To display LLDP Overloading, click **Discovery > LLDP > Packet View**.

**Packet View Table**

	Entry	Port	In-Use (Bytes)	Available (Bytes)	Operational Status
<input type="radio"/>	1	GE1	38	1450	Not Overloading
<input type="radio"/>	2	GE2	38	1450	Not Overloading
<input type="radio"/>	3	GE3	38	1450	Not Overloading
<input type="radio"/>	4	GE4	38	1450	Not Overloading
<input type="radio"/>	5	GE5	38	1450	Not Overloading
<input type="radio"/>	6	GE6	38	1450	Not Overloading
<input type="radio"/>	7	GE7	38	1450	Not Overloading
<input type="radio"/>	8	GE8	38	1450	Not Overloading

[Detail](#)

Field	Description
<a href="#">Port</a>	Port Name
<a href="#">In-Use (Bytes)</a>	Total number of bytes of LLDP information in each packet.
<a href="#">Available (Bytes)</a>	Total number of available bytes left for additional LLDP information in each packet.

**Operational Status**    Overloading or not

If need detail information, select the port, then click **detail**

Packet View Detail

<b>Port</b>	GE3
<b>Mandatory TLVs</b>	
Size (Bytes)	21
Operational Status	Transmitted
<b>MED Capabilities</b>	
Size (Bytes)	9
Operational Status	Transmitted
<b>MED Location</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>MED Network Policy</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>MED Inventory</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>MED Extended Power via MDI</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>802.3 TLVs</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>Optional TLVs</b>	
Size (Bytes)	0
Operational Status	Transmitted
<b>802.1 TLVs</b>	
Size (Bytes)	8
Operational Status	Transmitted
<b>Total</b>	
In-Use (Bytes)	38
Available (Bytes)	1450

Close

<b>Field</b>	<b>Description</b>
<b>Port</b>	Port Name
<b>Mandatory TLVs</b>	Total mandatory TLV byte size. Status is sent or overloading.
<b>MED Capabilities</b>	Total MED Capabilities TLV byte size. Status is sent or overloading.
<b>MED Location</b>	Total MED Location byte size. Status is sent or overloading.
<b>MED Network Policy</b>	Total MED Network Policy byte size. Status is sent or overloading.
<b>MED Inventory</b>	Total MED Inventory byte size. Status is sent or overloading.
<b>MED Extended Power via MDI</b>	Total MED Extended Power via MDI byte size. Status is sent or overloading.
<b>802.3 TLVs</b>	Total 802.3 TLVs byte size. Status is sent or overloading.
<b>Optional TLVs</b>	Total Optional TLV byte size. Status is sent or overloading.
<b>802.1 TLVs</b>	Total 802.1 TLVs byte size. Status is sent or overloading
<b>Total</b>	Total number of bytes of LLDP information in each packet.

## 9.1.6 Local Information

To display LLDP Local Device, click **Discovery > LLDP > Local Information**.

### Device Summary

<b>Chassis ID Subtype</b>	MAC address
<b>Chassis ID</b>	94:66:E7:01:23:69
<b>System Name</b>	switch
<b>System Description</b>	
<b>Supported Capabilities</b>	Bridge, Router
<b>Enabled Capabilities</b>	Bridge, Router
<b>Port ID Subtype</b>	Local

### Port Status Table

	Entry	Port	LLDP State	LLDP-MED State
<input type="radio"/>	1	GE1	Normal	Enabled
<input type="radio"/>	2	GE2	Normal	Enabled
<input type="radio"/>	3	GE3	Normal	Enabled
<input type="radio"/>	4	GE4	Normal	Enabled
<input type="radio"/>	5	GE5	Normal	Enabled
<input type="radio"/>	6	GE6	Normal	Enabled
<input type="radio"/>	7	GE7	Normal	Enabled
<input type="radio"/>	8	GE8	Normal	Enabled

[Detail](#)

Use the LLDP Local Information to view LLDP local device information.

Field	Description
<a href="#">Chassis ID Subtype</a>	Type of chassis ID, such as the MAC address.
<a href="#">Chassis ID</a>	Identifier of chassis. Where the chassis ID subtype is a MAC address, the MAC address of the switch is displayed.
<a href="#">System Name</a>	Name of switch.

<b>System Description</b>	Description of the switch.
<b>Capabilities Supported</b>	Primary functions of the device, such as Bridge, WLAN AP, or Router.
<b>Capabilities Enabled</b>	Primary enabled functions of the device.
<b>Port ID Subtype</b>	Type of the port identifier that is shown.
<b>LLDP Status</b>	LLDP Tx and Rx abilities.
<b>LLDP Med Status</b>	LLDP MED enable state.

Click “detail” button on the page to view detail information of the selected port.

Local Information Detail			
Chassis ID Subtype	MAC address		
Chassis ID	94:66:E7:01:23:69		
System Name	switch		
System Description			
Supported Capabilities	Bridge, Router		
Enabled Capabilities	Bridge, Router		
Port ID	GE3		
Port ID Subtype	Local		
Port Description			
Management Address Table			
Address Subtype	Address	Interface Subtype	Interface Number
0 results found.			
MAC/PHY Detail			
Auto-Negotiation Supported	N/A		
Auto-Negotiation Enabled	N/A		
Auto-Negotiation Advertised Capabilities	N/A		
Operational MAU Type	N/A		
802.3 Detail			
802.3 Maximum Frame Size	N/A		
802.3 Link Aggregation			
Aggregation Capability	N/A		
Aggregation Status	N/A		
Aggregation Port ID	N/A		

MED Detail				
Capabilities Supported	Capabilities , Network policy			
Current Capabilities	Capabilities , Network policy			
Device Class	Network Connectivity			
PoE Device Type	N/A			
PoE Power Source	N/A			
PoE Power Priority	N/A			
PoE Power Value	N/A			
Hardware Revision	N/A			
Firmware Revision	N/A			
Software Revision	N/A			
Serial Number	N/A			
Manufacturer Name	N/A			
Model Name	N/A			
Asset ID	N/A			
Location Information				
Civic	N/A			
Coordinate	N/A			
ECS ELIN	N/A			
Network Policy Table				
Application Type	VLAN	VLAN Type	Priority	DSCP
0 results found.				
Close				

### 9.1.7 Neighbor

To display LLDP Remote Device, click **Discovery > LLDP > Neighbor**.

Use the LLDP Neighbor page to view LLDP neighbors information.



Field	Description
<b>Local Port</b>	Number of the local port to which the neighbor is connected.
<b>Chassis ID Subtype</b>	Type of chassis ID (for example, MAC address).
<b>Chassis ID</b>	Identifier of the 802 LAN neighboring device's chassis.
<b>Port ID Subtype</b>	Type of the port identifier that is shown.
<b>Port ID</b>	Identifier of port.
<b>System Name</b>	Published name of the switch.
<b>Time to Live</b>	Time interval in seconds after which the information for this neighbor is deleted.

Click “detail” to view selected neighbor detail information.

## 9.1.8 Statistics

To display LLDP Statistics status, click **Discovery > LLDP > Statistics**.

The Link Layer Discovery Protocol (LLDP) Statistics page displays summary and per-port information for LLDP frames transmitted and received on the switch.

**Global Statistics**

Insertions	0
Deletions	0
Drops	0
AgeOuts	0

**Statistics Table**

<input type="checkbox"/>	Entry	Port	Transmit Frame	Receive Frame			Receive TLV		Neighbor Timeout
			Total	Total	Discard	Error	Discard	Unrecognized	
<input type="checkbox"/>	1	GE1	0	0	0	0	0	0	0
<input type="checkbox"/>	2	GE2	0	0	0	0	0	0	0
<input type="checkbox"/>	3	GE3	0	0	0	0	0	0	0
<input type="checkbox"/>	4	GE4	0	0	0	0	0	0	0
<input type="checkbox"/>	5	GE5	0	0	0	0	0	0	0
<input type="checkbox"/>	6	GE6	0	0	0	0	0	0	0
<input type="checkbox"/>	7	GE7	0	0	0	0	0	0	0
<input type="checkbox"/>	8	GE8	0	0	0	0	0	0	0

Field	Description
<b>Insertions</b>	The number of times the complete set of information advertised by a particular MAC Service Access Point (MSAP) has been inserted into tables associated with the remote systems.
<b>Deletions</b>	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote

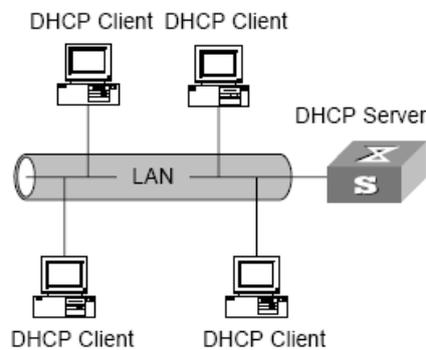
	systems.
<b>Drops</b>	The number of times the complete set of information advertised by MSAP could not be entered into tables associated with the remote systems because of insufficient resources.
<b>Age Outs</b>	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote systems because the information timeliness interval has expired.
<b>Port</b>	Interface or port number.
<b>Transmit Frame Total</b>	Number of LLDP frames transmitted on the corresponding port.
<b>Receive Frame Total</b>	Number of LLDP frames received by this LLDP agent on the corresponding port, while the LLDP agent is enabled.
<b>Receive Frame Discard</b>	Number of LLDP frames discarded for any reason by the LLDP agent on the corresponding port.
<b>Receive Frame Error</b>	Number of invalid LLDP frames received by the LLDP agent on the corresponding port, while the LLDP agent is enabled.
<b>Receive TLV Discard</b>	Number of TLVs of LLDP frames discarded for any reason by the LLDP agent on the corresponding port.
<b>Receive TLV Unrecognized</b>	Number of TLVs of LLDP frames that are unrecognized while the LLDP agent is enabled
<b>Neighbor Timeout</b>	Number of age out LLDP frames.

## 10.DHCP

With the expansion of network scale and the increasing complexity of networks, network configuration has become more complicated. It is common to encounter situations such as changes in computer locations (e.g., portable devices or wireless networks) and the number of computers exceeding the available IP addresses. The Dynamic Host Configuration Protocol (DHCP) was developed to meet these needs.

DHCP operates in a client-server (Client/Server) model, where the DHCP Client dynamically requests configuration information from the DHCP Server, and the DHCP Server returns the appropriate configuration based on its policy.

In a typical DHCP application, there is usually one DHCP server and multiple clients (such as PCs and portable devices).



### 10.1 Property

1.To display DHCP Property web page, click DHCP > Property.Enable “State” and “Static Binding First”.

**State**  Enable

**Static Binding First**  Enable

**Apply**

**DHCP Port Setting Table**

<input type="checkbox"/>	Entry	Port	State
<input type="checkbox"/>	1	GE1	Disabled
<input type="checkbox"/>	2	GE2	Disabled
<input type="checkbox"/>	3	GE3	Disabled
<input type="checkbox"/>	4	GE4	Disabled
<input type="checkbox"/>	5	GE5	Disabled
<input type="checkbox"/>	6	GE6	Disabled
<input type="checkbox"/>	7	GE7	Disabled
<input type="checkbox"/>	8	GE8	Disabled
<input type="checkbox"/>	9	LAG1	Disabled
<input type="checkbox"/>	10	LAG2	Disabled
<input type="checkbox"/>	11	LAG3	Disabled
<input type="checkbox"/>	12	LAG4	Disabled
<input type="checkbox"/>	13	LAG5	Disabled
<input type="checkbox"/>	14	LAG6	Disabled
<input type="checkbox"/>	15	LAG7	Disabled
<input type="checkbox"/>	16	LAG8	Disabled

**Edit**

- Click "Edit" to enter the port configuration page, where you can enable or disable the DHCP server function for the port

**Edit Port Setting**

Port: GE6

State:  Enable

Apply Close

## 10.2 IP Pool Setting

- Click "IP Pool setting" ,enter the interface, you can view and configure the address pool for the DHCP server.

**IP Pool Table**

Showing All entries Showing 0 to 0 of 0 entries

Pool	Section		Gateway	Mask	DNS Primary Server	DNS Second Server	option 43		Lease time
	Section	Start Address					End Address	Address	
0 results found.									

Add Edit Delete First Previous 1 Next Last

- Click the "Add" or "Edit" to add the address pool .

**IP Pool Table**

Pool:  (1 to 32 alphanumeric characters)

Gateway:

Mask:

IP Address Section: Section: 1, Start Address: , End Address:

DNS Primary Server:  Enable

DNS Second Server:  Enable

option 43:  ascii  hex

Lease time: Day: 1, Hour: 00, Minute: 00

Apply Close

## 10.3 VLAN IP Address Group Setting

1. To display VLAN IP Address Group Setting web page, click DHCP > Property, where you can configure and view the VLAN interface address groups and the DHCP server group table.

The screenshot shows two configuration sections. The top section, titled "Vlan Interface Address Pool Table", contains two dropdown menus: "Interface" set to "VLAN 1" and "DHCP Server Group" set to an empty dropdown. Below these is an "Apply" button. The bottom section, titled "DHCP Server Group Table", features a table with three columns: "Group ID", "Group IP Address", and "Bind VLAN Interface". Below the table are three buttons: "Add", "Edit", and "Delete".

2. Click the "Add" or "Edit" to add the DHCP Server Group

The screenshot shows the "DHCP Server Group Table" configuration form. It includes two input fields: "DHCP Server Group" with a dropdown menu showing "1" and "Group IP Address" with an empty text box. Below the fields are "Apply" and "Close" buttons.

## 10.4 Client List

Click DHCP > Client List you can view the DHCP client list information

The screenshot shows the "DHCP Client List" page. At the top, it says "Showing All entries" and "Showing 0 to 0 of 0 entries". There is a search bar on the right. Below, there are tabs for "MAC Address Table", "IPv4 Address", "VLAN", and "Hostname". The "MAC Address Table" tab is selected. The main area displays "0 results found." At the bottom, there is a "Refresh" button and pagination controls: "First", "Previous", "1", "Next", and "Last".

## 10.5 Client Static Binding Table

1. To display Client Static Binding Table web page, click DHCP > Client Static Binding Table, you can view and configure static bindings for clients.

3. Click the "Add" to to configure the client static binding table.

## 11. Multicast

### 11.1 General

Use the General pages to configure settings of IGMP and MLD common function.

#### 11.1.1 Property

To display multicast general property Setting web page, click **Multicast > General > Property**

This page allow user to set multicast forwarding method and unknown multicast action.

The screenshot shows a configuration panel with two main sections. The first section, 'Unknown Multicast Action', has three radio button options: 'Flood' (selected), 'Drop', and 'Forward to Router Port'. The second section, 'Multicast Forward Method', is divided into two sub-sections: 'IPv4' and 'IPv6'. Each sub-section has two radio button options: 'DMAC-VID' (selected for both) and 'DIP-VID'. An 'Apply' button is located at the bottom left of the panel.

Field	Description
<b>Unknown Multicast Action</b>	<p>Set the unknown multicast action</p> <ul style="list-style-type: none"> <li>• <b>Drop:</b> drop the unknown multicast data.</li> <li>• <b>Flood:</b> flood the unknown multicast data.</li> <li>• <b>Router port:</b> forward the unknown multicast data to router port.</li> </ul>
<b>IPv4</b>	<p>Set the ipv4 multicast forward method.</p> <ul style="list-style-type: none"> <li>• <b>MAC-VID:</b> forward method dmac+vid.</li> <li>• <b>DIP-VID:</b> forward method dip+vid.</li> </ul>
<b>IPv6</b>	<p>Set the ipv6 multicast forward method.</p> <ul style="list-style-type: none"> <li>• <b>MAC-VID:</b> forward method dmac+vid.</li> <li>• <b>DIP-VID:</b> forward method dip+vid(dip is ipv6 low 32 bit).</li> </ul>

### 11.1.2 Group Address

To display Multicast General Group web page, click **Multicast> General> Group Address**

This page allow user to browse all multicast groups that dynamic learned or statically added.

**Group Address Table**

IP Version

Showing  entries Showing 0 to 0 of 0 entries

**VLAN** | **Group Address** | **Member** | **Type** | **Life (Sec)**

0 results found.

Field	Description
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast group</li> <li>• <b>IPv6:</b> ipv6 multicast group</li> </ul>
<b>VLAN</b>	The VLAN ID of group.
<b>Group Address</b>	The group IP address.
<b>Member</b>	The member ports of group.
<b>Type</b>	The type of group. Static or Dynamic.
<b>Life(Sec)</b>	The life time of this dynamic group.

The screenshot shows a web form titled "Add Group Address". It contains the following elements:

- VLAN:** A dropdown menu with "1" selected.
- IP Version:** A dropdown menu.
- Group Address:** A text input field.
- Member:** A section with two columns:
  - Available Port:** A list of ports from GE1 to GE8 with a vertical scrollbar and up/down arrows.
  - Selected Port:** An empty list with up/down arrows.
  - Navigation arrows (right and left) between the two columns.
- Buttons:** "Apply" and "Close" buttons at the bottom.

Field	Description
<b>VLAN</b>	The VLAN ID of group.
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast group</li> <li>• <b>IPv6:</b> ipv6 multicast group</li> </ul>
<b>Group Address</b>	The group IP address.
<b>Member</b>	The member ports of group. <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional port member</li> <li>• <b>Selected Port:</b> Selected port member</li> </ul>

Edit Group Address

Field	Description
<b>VLAN</b>	The VLAN ID of edited group.
<b>Group Address</b>	The group IP address.
<b>Member</b>	The member ports of group. <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional port member</li> <li>• <b>Selected Port:</b> Selected port member</li> </ul>

### 11.1.3 Router Port

To display multicast router port table web page, click **Multicast> General> Router Port**

This page allow user to browse all router port information. The static and forbidden router port can set by user.

**Router Port Table**

IP Version

Showing  entries Showing 0 to 0 of 0 entries

**VLAN**  **Member**  **Static Port**  **Forbidden Port**  **Life (Sec)**

0 results found.

Field	Description
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast router</li> <li>• <b>IPv6:</b> ipv6 multicast router</li> </ul>
<b>VLAN</b>	The VLAN ID router entry
<b>Member</b>	Router Port member (include static and learned port member).
<b>Static Port</b>	Static router port member
<b>Forbidden Port</b>	Forbidden router port member
<b>Life (Sec)</b>	The expiry time of the router entry.

Add Router Port

Field	Description
<b>VLAN</b>	<p>The VLAN ID for router entry</p> <ul style="list-style-type: none"> <li>• <b>Available VLAN:</b> Optional VLAN member</li> <li>• <b>Selected VLAN:</b> Selected VLAN member</li> </ul>
<b>IP Version</b>	<p>IP Version</p> <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast router</li> <li>• <b>IPv6:</b> ipv6 multicast router</li> </ul>
<b>Type</b>	<p>The router port type</p> <ul style="list-style-type: none"> <li>• <b>Static:</b> static router port</li> <li>• <b>Forbidden:</b> forbidden router port, can't learn dynamic router port member</li> </ul>

- Port** The member ports of router entry.
- **Available Port:** Optional router port member
  - **Selected Port:** Selected router port member

Edit Router Port

Field	Description
<b>VLAN</b>	VLAN ID of Selected router entry
<b>IP Version</b>	Selected IP version
<b>Type</b>	The router port type <ul style="list-style-type: none"> <li>• <b>Static:</b> static router port</li> <li>• <b>Forbidden:</b> forbidden router port, can't learn dynamic router port member</li> </ul>
<b>Port</b>	The member ports of router entry for selected port type. <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional router port member</li> <li>• <b>Selected Port:</b> Selected router port member</li> </ul>

## 11.1.4 Forward All

To display multicast Forward All web page, click **Multicast**> **General**> **Forward All**

This page allow user to add and edit forward all entry.

Forward All Table

IP Version

Showing  entries Showing 0 to 0 of 0 entries

VLAN  Static Port  Forbidden Port

0 results found.

Add Edit Delete

Field	Description
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast forward all</li> <li>• <b>IPv6:</b> ipv6 multicast forward all</li> </ul>
<b>VLAN</b>	VLAN ID of forward all entry
<b>Static Port</b>	Known multicast group always forward port member
<b>Forbidden Port</b>	Known multicast group always not forward port member

Add Forward All

The screenshot shows a configuration window titled "Add Forward All". It is organized into four main sections:

- VLAN:** Contains two lists: "Available VLAN" (with the number 1) and "Selected VLAN" (empty). Arrows between them allow moving items.
- IP Version:** A dropdown menu currently set to "IPv4".
- Type:** Two radio buttons: "Static" (which is selected) and "Forbidden".
- Port:** Contains two lists: "Available Port" (listing GE1 through GE8) and "Selected Port" (empty). Arrows between them allow moving items.

At the bottom of the window are two buttons: "Apply" and "Close".

Field	Description
<b>VLAN</b>	<p>The VLAN ID for forward all entry</p> <ul style="list-style-type: none"> <li>• <b>Available VLAN:</b> Optional VLAN member</li> <li>• <b>Selected VLAN:</b> Selected VLAN member</li> </ul>
<b>IP Version</b>	<p>IP Version</p> <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 multicast forward all</li> <li>• <b>IPv6:</b> ipv6 multicast forward all</li> </ul>
<b>Type</b>	<p>The forward all port type</p> <ul style="list-style-type: none"> <li>• <b>Static:</b> static forward all port</li> <li>• <b>Forbidden:</b> forbidden forward all port</li> </ul>
<b>Port</b>	<p>The member ports of router entry.</p> <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional router port member</li> <li>• <b>Selected Port:</b> Selected router port member</li> </ul>

Edit Forward All

Field	Description
<b>VLAN</b>	VLAN ID of Selected forward all entry
<b>IP Version</b>	Selected IP version
<b>Type</b>	The forward all port type <ul style="list-style-type: none"> <li>• <b>Static:</b> static forward all port</li> <li>• <b>Forbidden:</b> forbidden forward all port</li> </ul>
<b>Port</b>	The member ports of forward all entry for selected port type. <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional router port member</li> <li>• <b>Selected Port:</b> Selected router port member</li> </ul>

### 11.1.5 Throttling

To display multicast max-group number and action setting web page, click **Multicast> General> Throttling**

**Throttling Table**

IP Version IPv4

	Entry	Port	Max Group	Exceed Action
<input type="checkbox"/>	1	GE1	256	Deny
<input type="checkbox"/>	2	GE2	256	Deny
<input type="checkbox"/>	3	GE3	256	Deny
<input type="checkbox"/>	4	GE4	256	Deny
<input type="checkbox"/>	5	GE5	256	Deny
<input type="checkbox"/>	6	GE6	256	Deny
<input type="checkbox"/>	7	GE7	256	Deny
<input type="checkbox"/>	8	GE8	256	Deny
<input type="checkbox"/>	9	LAG1	256	Deny
<input type="checkbox"/>	10	LAG2	256	Deny
<input type="checkbox"/>	11	LAG3	256	Deny
<input type="checkbox"/>	12	LAG4	256	Deny
<input type="checkbox"/>	13	LAG5	256	Deny
<input type="checkbox"/>	14	LAG6	256	Deny
<input type="checkbox"/>	15	LAG7	256	Deny
<input type="checkbox"/>	16	LAG8	256	Deny

Edit

This page allow user to configure port can learned max group number and if port group number arrived max group number action

Field	Description
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li><b>IPv4:</b> ipv4 for igmp snooping throttling</li> <li><b>IPv6:</b> ipv6 for mld snooping throttling</li> </ul>
<b>Entry</b>	Entry of number
<b>Port</b>	Port Name
<b>Max Group</b>	Max number of group for port

**Exceed Action**

Display the port exceed max number group learning group action

The screenshot shows a configuration window titled "Edit Throttling". It contains the following fields and options:

- Port:** GE4
- IP Version:** IPv4
- Max Group:** 256 (with a range of 0 - 256)
- Exceed Action:** Deny (selected with a radio button), Replace (unselected)

At the bottom of the window are "Apply" and "Close" buttons.

Field	Description
<b>Port</b>	Display the selected port list
<b>IP Version</b>	Display the selected IP version
<b>Max Group</b>	Max number of group for port
<b>Exceed Action</b>	Excess Max number of port learning group action <ul style="list-style-type: none"> <li>• <b>Deny:</b> do not learning group.</li> <li>• <b>Replace:</b> random replace one exist group</li> </ul>

### 11.1.6 Filtering Profile

To display Multicast Profile Setting web page, click **Multicast> General> Filtering Profile**

This page allow user to add, edit or delete profile for IGMP or MLD snooping.

**Filtering Profile Table**

IP Version

Showing  entries Showing 0 to 0 of 0 entries

**Profile ID** **Start Address** **End Address** **Action**

0 results found.

Field	Description
<b>IP Version</b>	IP version: <ul style="list-style-type: none"> <li>• <b>IPv4</b>: IGMP snooping profile</li> <li>• <b>IPv6</b>: MLD snooping profile</li> </ul>
<b>Profile ID</b>	Display profile ID
<b>Start Address</b>	The start group address of profile
<b>End Address</b>	The end group address of profile
<b>Action</b>	Display profile action

**Add Profile**

<b>Profile ID</b>	<input type="text"/> (1 - 128)
<b>IP Version</b>	<input type="text" value="IPv4"/>
<b>Start Address</b>	<input type="text"/>
<b>End Address</b>	<input type="text"/>
<b>Action</b>	<input checked="" type="radio"/> Allow <input type="radio"/> Deny

Field	Description
<b>Profile ID</b>	Profile ID
<b>IP Version</b>	IP version: <ul style="list-style-type: none"> <li>• <b>IPv4</b>: IGMP snooping profile</li> <li>• <b>IPv6</b>: MLD snooping profile</li> </ul>
<b>Start Address</b>	The start group address of profile
<b>End Address</b>	The end group address of profile
<b>Action</b>	The action of profile: <ul style="list-style-type: none"> <li>• <b>Allow</b>: permit all packets that match the profile.</li> <li>• <b>Deny</b>: deny all packets that match the profile.</li> </ul>

Edit Profile

Profile ID	1
IP Version	IPv4
Start Address	<input type="text" value="224.1.1.1"/>
End Address	<input type="text" value="224.1.2.3"/>
Action	<input checked="" type="radio"/> Allow <input type="radio"/> Deny

Field	Description
<b>Profile ID</b>	Edit Profile ID
<b>IP Version</b>	Display the edit profile ip version
<b>Start Address</b>	The start group address of profile

<b>End Address</b>	The end group address of profile
<b>Action</b>	<p>The action of profile:</p> <ul style="list-style-type: none"> <li>• <b>Allow:</b> permit the group can learned that match the profile.</li> <li>• <b>Deny:</b> deny the group to learn the group that match the profile.</li> </ul>

### 11.1.7 Filtering Binding

To display Multicast port filter binding profile web page, click **Multicast > General > Filtering Binding**

This page allow user to bind/remove profile for each port

**Filtering Binding Table**

IP Version IPv4

<input type="checkbox"/>	Entry	Port	Profile ID
<input type="checkbox"/>	1	GE1	
<input type="checkbox"/>	2	GE2	
<input type="checkbox"/>	3	GE3	
<input type="checkbox"/>	4	GE4	
<input type="checkbox"/>	5	GE5	
<input type="checkbox"/>	6	GE6	
<input type="checkbox"/>	7	GE7	
<input type="checkbox"/>	8	GE8	
<input type="checkbox"/>	9	LAG1	
<input type="checkbox"/>	10	LAG2	
<input type="checkbox"/>	11	LAG3	
<input type="checkbox"/>	12	LAG4	
<input type="checkbox"/>	13	LAG5	
<input type="checkbox"/>	14	LAG6	
<input type="checkbox"/>	15	LAG7	
<input type="checkbox"/>	16	LAG8	

Edit

Field	Description
<b>IP Version</b>	IP Version <ul style="list-style-type: none"> <li>• <b>IPv4:</b> ipv4 for igmp snooping throttling</li> <li>• <b>IPv6:</b> ipv6 for mld snooping throttling</li> </ul>
<b>Entry</b>	Entry of number

<b>Port</b>	Port Name
<b>Profile ID</b>	Port binding Profile ID

Edit Filtering Binding

Port	GE1-GE2
IP Version	IPv4
Profile ID	<input checked="" type="checkbox"/> Enable <input type="text" value="1"/>

Field	Description
<b>Port</b>	Selected Port List
<b>IP Version</b>	Display Selected Port filtering IP version
<b>Profile ID</b>	If check Enable, can select or change profile ID, Else it will delete port filter profile binding

## 11.2 IGMP Snooping

Use the IGMP Snooping pages to configure settings of IGMP snooping function.

### 11.2.1 Property

To display IGMP Snooping global setting and VLAN Setting web page, click **Multicast> IGMP Snooping> Property**

This page allow user to configure global settings of IGMP snooping and configure specific VLAN settings of IGMP Snooping.

<b>State</b>	<input type="checkbox"/> Enable
<b>Version</b>	<input checked="" type="radio"/> IGMPv2 <input type="radio"/> IGMPv3
<b>Report Suppression</b>	<input checked="" type="checkbox"/> Enable

**VLAN Setting Table**

	VLAN	Operational Status	Router Port Auto Learn	Query Robustness	Query Interval	Query Max Response Interval	Last Member Query Counter	Last Member Query Interval	Immediate Leave
<input type="checkbox"/>	1	Disabled	Enabled	2	125	10	2	1	Disabled

Field	Description
<b>State</b>	Set the enabling status of IGMP Snooping functionality <ul style="list-style-type: none"> <li><b>Enable:</b> If Checked Enable IGMP Snooping, else is Disabled IGMP Snooping.</li> </ul>
<b>Version</b>	Set the igmp snooping version <ul style="list-style-type: none"> <li><b>IGMPv2:</b> Only support process igmp v2 packet.</li> <li><b>IGMPv3:</b> Support v3 basic and v2.</li> </ul>
<b>Report Suppression</b>	Set the enabling status of IGMP v2 report suppression <ul style="list-style-type: none"> <li><b>Enable:</b> If Checked Enable IGMP Snooping v2 report suppression, else Disable the report suppression function</li> </ul>
<b>VLAN</b>	The IGMP entry VLAN ID
<b>Operation Status</b>	The enable status of IGMP snooping VLAN functionality
<b>Router Port Auto Learn</b>	The enabling status of IGMP snooping router port auto learning
<b>Query Robustness</b>	The Query Robustness allows tuning for the expected packet loss on a subnet.
<b>Query Interval</b>	The interval of querier to send general query

**Query Max Response Interval**

In Membership Query Messages, it specifies the maximum allowed time before sending a responding report in units of 1/10 second.

**Last Member Query count**

The count that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.

**Last Member Query Interval**

The interval that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.

**Immediate leave**

The immediate leave status of the group will immediate leave when receive IGMP Leave message.

Edit VLAN Setting

VLAN	1
State	<input type="checkbox"/> Enable
Router Port Auto Learn	<input checked="" type="checkbox"/> Enable
Immediate leave	<input type="checkbox"/> Enable
Query Robustness	<input type="text" value="2"/> (1 - 7, default 2)
Query Interval	<input type="text" value="125"/> Sec (30 - 18000, default 125)
Query Max Response Interval	<input type="text" value="10"/> Sec (5 - 20, default 10)
Last Member Query Counter	<input type="text" value="2"/> (1 - 7, default 2)
Last Member Query Interval	<input type="text" value="1"/> Sec (1 - 25, default 1)
<b>Operational Status</b>	
Status	Disabled
Query Robustness	2
Query Interval	125 (Sec)
Query Max Response Interval	10 (Sec)
Last Member Query Counter	2
Last Member Query Interval	1 (Sec)

Apply Close

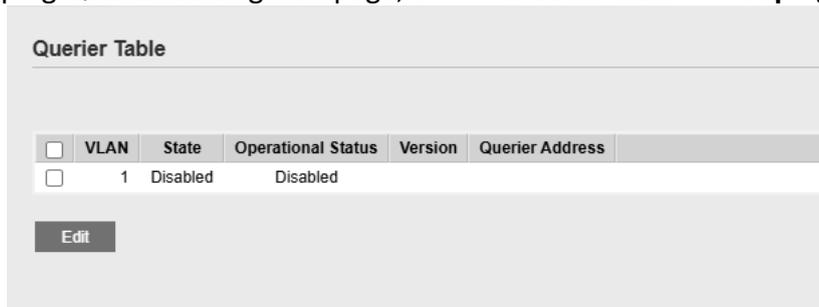
Field	Description
VLAN	The selected VLAN List
State	Set the enabling status of IGMP Snooping VLAN functionality <ul style="list-style-type: none"> <li>• <b>Enable:</b> If Checked Enable IGMP Snooping VLAN, else is Disabled IGMP Snooping VLAN.</li> </ul>
Router Port Auto Learn	Set the enabling status of IGMP Snooping router port learning <ul style="list-style-type: none"> <li>• <b>Enable:</b> If checked Enable learning router port by query and PIM, DVRMP, else Disable the learning router port</li> </ul>
Immediate leave	Immediate Leave the group when receive IGMP Leave message. <ul style="list-style-type: none"> <li>• <b>Enable:</b> If checked Enable immediate leave, else disable immediate leave</li> </ul>
Query Robustness	The Admin Query Robustness allows tuning for the expected packet loss on a subnet.
Query Interval	The Admin interval of querier to send general query
Query Max Response Interval	The Admin query max response interval, In Membership Query Messages, it specifies the maximum allowed time before sending a responding report in units of 1/10 second.
Last Member Query Counter	The Admin last member query count that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Last Member Query Interval	The Admin last member query interval that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Operational Status	
Status	Operational IGMP snooping status, must both IGMP snooping global and IGMP snooping enable the status will be enable.
Query Robustness	Operational Query Robustness
Query Interval	Operational Query Interval
Query Max Response Interval	Operational Query Max Response Interval
Last Member Query Counter	Operational Last Member Query Count

Last Member Query  
Interval

Operational Last Member Query Interval

## 11.2.2 Querier

To display IGMP Snooping Querier Setting web page, click **Multicast> IGMP Snooping> Querier**



This page allow user to configure querier settings on specific VLAN of IGMP Snooping.

Field	Description
<b>VLAN</b>	IGMP Snooping querier entry VLAN ID
<b>State</b>	The IGMP Snooping querier Admin State.
<b>Operational Status</b>	The IGMP Snooping querier operational status
<b>Querier Version</b>	The IGMP Snooping querier operational version.
<b>Querier IP</b>	The operational Querier IP address on the VLAN

Edit Querier

VLAN	State
1	<input checked="" type="checkbox"/> Enable

Version

IGMPv2  
 IGMPv3

Apply Close

Field	Description
<b>VLAN</b>	The Selected Edit IGMP Snooping querier VLAN List
<b>State</b>	Set the enabling status of IGMP Querier Election on the chose VLANs <ul style="list-style-type: none"> <li>• <b>Enabled:</b> if checked Enable IGMP Querier else Disable IGMP Querier</li> </ul>
<b>Version</b>	Set the query version of IGMP Querier Election on the chose VLANs <ul style="list-style-type: none"> <li>• <b>IGMPv2:</b> Querier version 2.</li> <li>• <b>IGMPv3:</b> Querier version 3. (IGMP Snooping version should be IGMPv3)</li> </ul>

### 11.2.3 Statistics

To display IGMP Snooping Statistics, click **Multicast> IGMP Snooping> Statistics**

This page allow user to clear igmp snooping statics.

Receive Packet	
Total	0
Valid	0
InValid	0
Other	0
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0
Transmit Packet	
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0

Clear Refresh

#### Field

#### Description

#### Receive Packet

<b>Total</b>	Total RX igmp packet, include ipv4 multicast data to CPU.
<b>Valid</b>	The valid igmp snooping process packet.
<b>InValid</b>	The invalid igmp snooping process packet.
<b>Other</b>	The ICMP protocol is not 2, and is not ipv4 multicast data packet.
<b>Leave</b>	IGMP leave packet.
<b>Report</b>	IGMP join and report packet

<b>General Query</b>	IGMP General Query packet
<b>Special Group Query</b>	IGMP Special Group General Query packet
<b>Source-specific Group Query</b>	IGMP Special Source and Group General Query packet
<b>Transmit Packet</b>	
<b>Leave</b>	IGMP leave packet
<b>Report</b>	IGMP join and report packet
<b>General Query</b>	IGMP general query packet include querier transmit general query packet
<b>Special Group Query</b>	IGMP special group query packet include querier transmit special group query packet
<b>Source-specific Group Query</b>	IGMP Special Source and Group General Query packet

## **11.3 MVR**

Use the MVR pages to configure settings of MVR function.

### **11.3.1 Property**

To display multicast MVR property Setting web page, click **Multicast> MVR> Property**

This page allow user to set MVR property.

State	<input checked="" type="checkbox"/> Enable
VLAN	1
Mode	<input checked="" type="radio"/> Compatible <input type="radio"/> Dynamic
Group Start	0.0.0.0
Group Count	1 (1 - 128)
Query Time	1 Sec (1 - 10)
<b>Operational Group</b>	
Maximum	128
Current	0
<input type="button" value="Apply"/>	

Field	Description
<b>State</b>	<ul style="list-style-type: none"> <li><b>Enable:</b> if checked enable the MVR state, else disable the MVR state</li> </ul>
<b>VLAN</b>	The MVR VLAN ID
<b>Mode</b>	Set the MVR mode. <ul style="list-style-type: none"> <li><b>Compatible:</b> compatible mode</li> <li><b>Dynamic:</b> dynamic mode, will learn group member on source port</li> </ul>
<b>Group Start</b>	MVR group range start
<b>Group Count</b>	MVR group continue count
<b>Query Time</b>	MVR query time when receive MVR leave MVR group packet
<b>Maximum</b>	The max number of MVR group database
<b>Current</b>	The learned MVR group current time

### 11.3.2 Port Setting

To display MVR port role and immediate leave state setting web page, click **Multicast> MVR> Port Setting**

This page allow user to configure port role and port immediate leave

Port Setting Table				
<input type="checkbox"/>	Entry	Port	Role	Immediate Leave
<input type="checkbox"/>	1	GE1	None	Disabled
<input type="checkbox"/>	2	GE2	None	Disabled
<input type="checkbox"/>	3	GE3	None	Disabled
<input type="checkbox"/>	4	GE4	None	Disabled
<input type="checkbox"/>	5	GE5	None	Disabled
<input type="checkbox"/>	6	GE6	None	Disabled
<input type="checkbox"/>	7	GE7	None	Disabled
<input type="checkbox"/>	8	GE8	None	Disabled
<input type="checkbox"/>	9	LAG1	None	Disabled
<input type="checkbox"/>	10	LAG2	None	Disabled
<input type="checkbox"/>	11	LAG3	None	Disabled
<input type="checkbox"/>	12	LAG4	None	Disabled
<input type="checkbox"/>	13	LAG5	None	Disabled
<input type="checkbox"/>	14	LAG6	None	Disabled
<input type="checkbox"/>	15	LAG7	None	Disabled
<input type="checkbox"/>	16	LAG8	None	Disabled

Field	Description
<b>Entry</b>	Entry of number
<b>Port</b>	Port Name
<b>Role</b>	Port Role for MVR, the type is None/Receiver/Source
<b>Immediate Leave</b>	Status of immediate leave

The screenshot shows a web form titled "Edit Port Setting". It contains three main sections: "Port" with a text input field containing "GE6"; "Role" with three radio button options: "None" (which is selected), "Receiver", and "Source"; and "Immediate Leave" with a checkbox labeled "Enable". At the bottom of the form are two buttons: "Apply" and "Close".

Field	Description
<b>Port</b>	Display the selected port list
<b>Role</b>	<p>MVR port role</p> <ul style="list-style-type: none"> <li>• <b>None:</b> port role is none</li> <li>• <b>Receiver:</b> port role is receiver</li> <li>• <b>Source:</b> port role is source</li> </ul>
<b>Immediate Leave</b>	<p>MVR Port immediate leave</p> <ul style="list-style-type: none"> <li>• <b>Enable:</b> if checked is enable immediate leave, else disable immediate leave.</li> </ul>

### 11.3.3 Group Address

To display Multicast MVR Group web page, click **Multicast> MVR> Group Address**

This page allow user to browse all multicast MVR groups that dynamic learned or statically added.

Group Address Table

Showing All entries Showing 0 to 0 of 0 entries

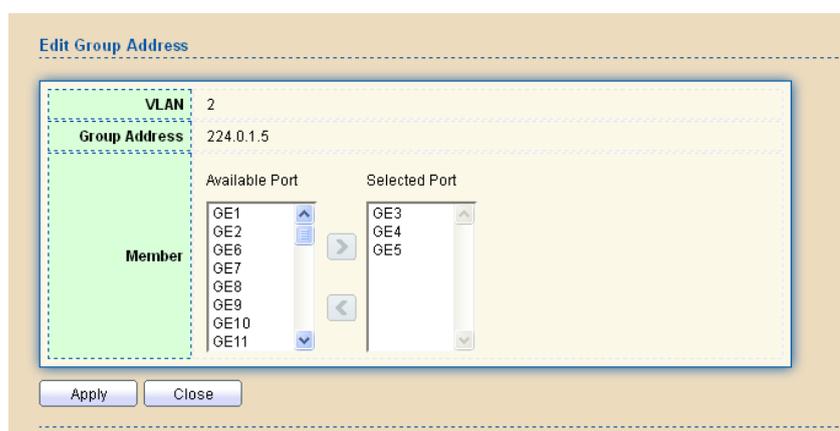
<input type="checkbox"/>	VLAN	Group Address	Member	Type	Life (Sec)
0 results found.					

Field	Description
<b>VLAN</b>	The VLAN ID of MVR group.
<b>Group Address</b>	The MVR group IP address.
<b>Member</b>	The member ports of MVR group.
<b>Type</b>	The type of MVR group. Static or Dynamic.
<b>Life(Sec)</b>	The life time of this dynamic MVR group.

Add Group Address

<b>VLAN</b>	1
<b>Group Address</b>	<input type="text"/> (0.0.0.0 - 0.0.0.0)
<b>Member</b>	Available Port
	Selected Port
	<input type="button" value="&gt;"/> <input type="button" value="&lt;"/>
<input type="button" value="Apply"/> <input type="button" value="Close"/>	

Field	Description
<b>VLAN</b>	The VLAN ID of MVR group.
<b>Group Address</b>	MVR group IP address.
<b>Member</b>	<p>The member ports of MVR group.</p> <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional port member, it is only receiver port when MVR mode is compatible, it include source port when mode is dynamic</li> <li>• <b>Selected Port:</b> Selected port member</li> </ul>



Field	Description
<b>VLAN</b>	The VLAN ID of edited MVR group.
<b>Group Address</b>	The edited MVR group IP address.
<b>Member</b>	<p>The member ports of MVR group.</p> <ul style="list-style-type: none"> <li>• <b>Available Port:</b> Optional port member, it is only receiver port when MVR mode is compatible, it include source port when mode is dynamic</li> <li>• <b>Selected Port:</b> Selected port member</li> </ul>

## 12. Routing

The switch provides three layers of VLAN interface, which is used to communicate with network layer devices. VLANIF interface is a network layer interface, which can be configured with IP address. Before creating VLANIF interface, the corresponding VLAN should be created first. With the help of VLANIF interface, switches can communicate with other network layer devices.

### 12.1 IPv4 Management and Routing

Use this page to configure settings of IPv4 Interface 、 Routes and ARP common function.

#### 12.1.1 IPv4 Interface

To display IPv4 Interface web page, click **IPv4 Management and interfaces > IPv4 Interface**

**IPv4 Interface Table**

<input type="checkbox"/>	Interface	IP Address Type	IP Address	Mask	Status	Roles
<input type="checkbox"/>	VLAN 1	Static	192.168.10.1	255.255.255.0	Valid	primary

**Add IPv4 Interface**

<b>Interface</b>	<input checked="" type="radio"/> VLAN <input type="text" value="1"/> <input type="radio"/> Loopback
<b>Address Type</b>	<input checked="" type="radio"/> Dynamic <input type="radio"/> Static
<b>IP Address</b>	<input type="text"/>
<b>Mask</b>	<input checked="" type="radio"/> Network Mask <input type="text"/> <input type="radio"/> Prefix Length <input type="text"/> (8 - 30)
<b>Roles</b>	<input checked="" type="radio"/> primary <input type="radio"/> sub

Configuration Items	Description
VLAN	VLAN ID to be configured
Address Type	Dynamic: The IP address of the interface is obtained by DHCP Static: The IP address of the interface is configured manually
IP Address	The IP address of the interface
Mask	The IP address mask of the interface

## 12.1.2 IPv4 Routes

To display IPv4 Routes web page, click **IPv4 Management and Interfaces > Routes**

**IPv4 Routing Table**

<input type="checkbox"/>	Destination IP Prefix	Prefix Length	Route Type	Next Hop Router IP Address	Metric	Administrative Distance	Outgoing Interface
<input type="checkbox"/>	192.168.10.0	24	Directly Connected				VLAN 1*

**Add IPv4 Static Route**

<b>IP Address</b>	<input type="text"/>
<b>Mask</b>	<input checked="" type="radio"/> Network Mask <input type="text"/>
	<input type="radio"/> Prefix Length <input type="text"/> (0 - 32)
<b>Next Hop Router IP Address</b>	<input type="text"/>
<b>Metric</b>	<input type="text" value="1"/> (1 - 255, default 1)

Configuration Items	Description
IP Address	Destination IP address segment
Mask	Destination IP address mask
Next Hop Router IP Address	The next hop IP address needs to be in the same network segment as the interface gateway
Metric	Network hops

### 12.1.3 ARP

To display ARP web page, click **IPv4 Management and Interfaces > ARP**

ARP Entry Age Out:  Sec (15 - 21600, default 1200)

Clear ARP Table Entries:

- All
- Dynamic
- Static
- Normal Age Out

Apply Cancel

**ARP Table**

<input type="checkbox"/>	Interface	IP Address	MAC Address	Status
<input type="checkbox"/>	VLAN 1	192.168.10.88	a8:1e:84:a9:76:ed	Dynamic

Add Edit Delete

Add ARP

Interface: VLAN

Note: Only interfaces with a valid IPv4 address are available for selection

IP Address:

MAC Address:

Apply Close

Configuration Items	Description
Interface	VLANIF interface
IP Address	IP address of the same network segment as the interface gateway
MAC Address	MAC address corresponding to IP address

## 13. Security

Use the Security pages to configure settings for the switch security features.

### 13.1 Management Access

Use the Management Access pages to configure settings of management access.

#### 13.1.1 Management Service

To display Management Service click **Security > Management Access > Management Service**

This page allow user to change management services related configurations.

**Management Service**

Telnet  Enable

SSH  Enable

HTTP  Enable

HTTPS  Enable

**Session Timeout**

Console  Min (0 - 65535, default 10)

Telnet  Min (0 - 65535, default 10)

SSH  Min (0 - 65535, default 10)

HTTP  Min (0 - 65535, default 10)

HTTPS  Min (0 - 65535, default 10)

**Password Retry Count**

Console  (0 - 120, default 3)

Telnet  (0 - 120, default 3)

SSH  (0 - 120, default 3)

**Silent Time**

Console  Sec (0 - 65535, default 0)

Telnet  Sec (0 - 65535, default 0)

SSH  Sec (0 - 65535, default 0)

Apply

Field	Description
<b>Management Service</b>	<p>Management service admin state.</p> <ul style="list-style-type: none"> <li>• <b>Telnet:</b> Connect CLI through telnet</li> <li>• <b>SSH:</b> Connect CLI through SSH</li> <li>• <b>HTTP:</b> Connect WEBUI through HTTP</li> <li>• <b>HTTPS:</b> Connect WEBUI through HTTPS</li> </ul>
<b>Session Timeout</b>	<p>Set session timeout minutes for user access to user interface. 0 minutes means never timeout.</p>
<b>Password Retry Count</b>	<p>Retry count is the number which CLI password input error tolerance count. After input error password exceeds this count, the CLI will freeze after silent time.</p>
<b>Silent Time</b>	<p>After input error password exceeds password retry count, the CLI will freeze after silent time.</p>

## 13.2 DHCP Snooping

Use the DHCP Snooping pages to configure settings of DHCP Snooping

### 13.2.1 Property

To display property page, click **Security > DHCP Snooping > Property**

This page allow user to configure global and per interface settings of DHCP Snooping.

Field	Description
<b>State</b>	Set checkbox to enable/disable DHCP Snooping function.
<b>VLAN</b>	Select VLANs in left box then move to right to enable DHCP Snooping. Or select VLANs in right box then move to left to disable DHCP Snooping.

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	Trust	Verify Chaddr	Rate Limit
<input type="checkbox"/>	1	GE1	Disabled	Disabled	Unlimited
<input type="checkbox"/>	2	GE2	Disabled	Disabled	Unlimited
<input type="checkbox"/>	3	GE3	Disabled	Disabled	Unlimited
<input type="checkbox"/>	4	GE4	Disabled	Disabled	Unlimited
<input type="checkbox"/>	5	GE5	Disabled	Disabled	Unlimited
<input type="checkbox"/>	6	GE6	Disabled	Disabled	Unlimited
<input type="checkbox"/>	7	GE7	Disabled	Disabled	Unlimited
<input type="checkbox"/>	8	GE8	Disabled	Disabled	Unlimited
<input type="checkbox"/>	9	LAG1	Disabled	Disabled	Unlimited
<input type="checkbox"/>	10	LAG2	Disabled	Disabled	Unlimited
<input type="checkbox"/>	11	LAG3	Disabled	Disabled	Unlimited
<input type="checkbox"/>	12	LAG4	Disabled	Disabled	Unlimited
<input type="checkbox"/>	13	LAG5	Disabled	Disabled	Unlimited
<input type="checkbox"/>	14	LAG6	Disabled	Disabled	Unlimited
<input type="checkbox"/>	15	LAG7	Disabled	Disabled	Unlimited
<input type="checkbox"/>	16	LAG8	Disabled	Disabled	Unlimited

Field	Description
<b>Port</b>	Display port ID.
<b>Trust</b>	Display enable/disabled trust attribute of interface
<b>Verify Chaddr</b>	Display enable/disabled chaddr validation attribute of interface
<b>Rate Limit</b>	Display rate limitation value of interface.

The screenshot shows a web form titled "Edit Port Setting". It contains the following fields and controls:

- Port:** GE5
- Trust:**  Enable
- Verify Chaddr:**  Enable
- Rate Limit:**  pps (1 - 300, default 0), 0 is Unlimited

At the bottom of the form are two buttons: "Apply" and "Close".

Field	Description
<b>Port</b>	Display selected port to be edited.
<b>Trust</b>	Set checkbox to enable/disabled trust of interface. All DHCP packet will be forward directly if enable trust. Default is disabled.
<b>Verify Chaddr</b>	Set checkbox to enable or disable chaddr validation of interface. All DHCP packets will be checked whether client hardware mac address is same as source mac in Ethernet header if enable chaddr validation.
<b>Rate Limit</b>	Default is disabled. Input rate limitation of DHCP packets. The unit is pps. 0 means unlimited. Default is unlimited.

## 13.2.2 Statistics

To display Statistics page, click **Security > DHCP Snooping > Statistic**

This page allow user to browse all statistics that recorded by DHCP snooping function.

<input type="checkbox"/>	Entry	Port	Forward	Chaddr Check Drop	Untrust Port Drop	Untrust Port with Option82 Drop	Invalid Drop
<input type="checkbox"/>	1	GE1	0	0	0	0	0
<input type="checkbox"/>	2	GE2	0	0	0	0	0
<input type="checkbox"/>	3	GE3	0	0	0	0	0
<input type="checkbox"/>	4	GE4	0	0	0	0	0
<input type="checkbox"/>	5	GE5	0	0	0	0	0
<input type="checkbox"/>	6	GE6	0	0	0	0	0
<input type="checkbox"/>	7	GE7	0	0	0	0	0
<input type="checkbox"/>	8	GE8	0	0	0	0	0
<input type="checkbox"/>	9	LAG1	0	0	0	0	0
<input type="checkbox"/>	10	LAG2	0	0	0	0	0
<input type="checkbox"/>	11	LAG3	0	0	0	0	0
<input type="checkbox"/>	12	LAG4	0	0	0	0	0
<input type="checkbox"/>	13	LAG5	0	0	0	0	0
<input type="checkbox"/>	14	LAG6	0	0	0	0	0
<input type="checkbox"/>	15	LAG7	0	0	0	0	0
<input type="checkbox"/>	16	LAG8	0	0	0	0	0

Clear Refresh

Field	Description
<b>Port</b>	Display port ID
<b>Forwarded</b>	Display how packets forwarded normally.
<b>Chaddr Check Drop</b>	Display how many packets dropped by chaddr validation.
<b>Untrusted Port Drop</b>	Display how many DHCP server packets that are received by untrusted port dropped.
<b>Untrusted Port with Option82 Drop</b>	Display how many packets dropped by untrusted port with option82 checking.
<b>Invalid Drop</b>	Display how many packets dropped by invalid checking.

### 13.2.3 Option82 Property

To display Option82 Property page, click **Security > DHCP Snooping > Option82 Property**

This page allow user to set string of DHCP option82 remote ID filed. The string will attach in option82 if option inserted.

Field	Description
User Defined	Set checkbox to enable user-defined remote-ID. By default, remote ID is switch mac in byte order.
Remote ID	Input user-defined remote ID. Only available when enable user-define remote ID

Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Allow Untrust
<input type="checkbox"/>	1	GE1	Disabled	Drop
<input type="checkbox"/>	2	GE2	Disabled	Drop
<input type="checkbox"/>	3	GE3	Disabled	Drop
<input type="checkbox"/>	4	GE4	Disabled	Drop
<input type="checkbox"/>	5	GE5	Disabled	Drop
<input type="checkbox"/>	6	GE6	Disabled	Drop
<input type="checkbox"/>	7	GE7	Disabled	Drop
<input type="checkbox"/>	8	GE8	Disabled	Drop
<input type="checkbox"/>	9	LAG1	Disabled	Drop
<input type="checkbox"/>	10	LAG2	Disabled	Drop
<input type="checkbox"/>	11	LAG3	Disabled	Drop
<input type="checkbox"/>	12	LAG4	Disabled	Drop
<input type="checkbox"/>	13	LAG5	Disabled	Drop
<input type="checkbox"/>	14	LAG6	Disabled	Drop
<input type="checkbox"/>	15	LAG7	Disabled	Drop
<input type="checkbox"/>	16	LAG8	Disabled	Drop

Edit

Field	Description
<b>Port</b>	Display port ID
<b>Enable</b>	Display option82 enable/disable status of interface
<b>Allow untrusted</b>	Display allow untrusted action of interface

The screenshot shows a dialog box titled "Edit Port Setting". It contains the following fields and options:

- Port:** GE6
- State:**  Enable
- Allow Untrust:**
  - Keep
  - Drop
  - Replace

At the bottom of the dialog are two buttons: "Apply" and "Close".

Field	Description
<b>Port</b>	Display selected port to be edited
<b>State</b>	Set checkbox to enable/disable option82 function of interface
<b>Allow untrusted</b>	<p>Select the action perform when untrusted port receive DHCP packet has option82 filed. Default is drop.</p> <ul style="list-style-type: none"> <li>• <b>Keep:</b> Keep original option82 content.</li> <li>• <b>Replace:</b> Replace option82 content by switch setting</li> <li>• <b>Drop:</b> Drop packets with option82.</li> </ul>

### 13.2.4 Option82 Circuit ID

To display Option82 Circuit ID page, click **Security > DHCP Snooping > Option82 Circuit ID**

This page allow user to set string of DHCP option82 circuit ID filed. The string will attach in option82 if option inserted.

Option82 Circuit ID Table

Showing All entries Showing 0 to 0 of 0 entries

Port VLAN Circuit ID

0 results found.

Add Edit Delete

First Previous 1 Next Last

Field	Description
<b>Port</b>	Display port ID of entry
<b>VLAN</b>	Display associate VLAN of entry
<b>Circuit ID</b>	Display circuit ID string of entry

Add Option82 Circuit ID

Port GE1

VLAN (1 - 4094) (Keep empty to set without VLAN)

Circuit ID

Apply Close

Field	Description
<b>Port</b>	Select port from list to associate to CID entry. Only available on Add dialog.
<b>VLAN</b>	Input VLAN ID to associate to circuit ID entry. VLAN ID is not mandatory. Only available on Add dialog.
<b>Circuit ID</b>	Input String as circuit ID. Packets match port and VLAN will be inserted circuit ID.

## 14. QoS

Use the QoS pages to configure settings for the switch QoS interface.

### 14.1 General

Use the QoS general pages to configure settings for general purpose.

#### 14.1.1 Property

To display Property web page, click **QoS > General > Property**

Field	Description
<b>State</b>	Set checkbox to enable/disable QoS.
<b>Trust Mode</b>	<p>Select QoS trust mode</p> <ul style="list-style-type: none"> <li>• <b>CoS:</b> Traffic is mapped to queues based on the CoS field in the VLAN tag, or based on the per-port default CoS value (if there is no VLAN tag on the incoming packet), the actual mapping of the CoS to queue can be configured on port setting dialog.</li> <li>• <b>DSCP:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. The actual mapping of the DSCP to queue can be configured on the DSCP mapping page. If traffic is not IP traffic, it is mapped to the best effort queue.</li> <li>• <b>CoS-DSCP:</b> <u>Uses the trust CoS mode for non-IP traffic and</u></li> </ul>

trust DSCP mode for IP traffic.

- **IP Precedence:** Traffic is mapped to queues based on the IP precedence. The actual mapping of the IP precedence to queue can be configured on the IP Precedence mapping page.

<input type="checkbox"/>	Entry	Port	CoS	Trust	Remarking		
					CoS	DSCP	IP Precedence
<input type="checkbox"/>	1	GE1	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	2	GE2	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	3	GE3	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	4	GE4	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	5	GE5	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	6	GE6	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	7	GE7	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	8	GE8	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	9	LAG1	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	10	LAG2	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	11	LAG3	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	12	LAG4	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	13	LAG5	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	14	LAG6	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	15	LAG7	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	16	LAG8	0	Enabled	Disabled	Disabled	Disabled

Field	Description
<b>Port</b>	Port name
<b>CoS</b>	Port default CoS priority value for the selected ports
<b>Trust</b>	Port trust state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Traffic will follow trust mode in global setting</li> <li>• <b>Disabled:</b> Traffic will always use best efforts</li> </ul>
<b>Remarking (CoS)</b>	Port CoS remarking admin state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> CoS remarking is enabled</li> <li>• <b>Disabled:</b> CoS remarking is disabled</li> </ul>
<b>Remarking (DSCP)</b>	Port DSCP remarking admin state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> DSCP remarking is enabled</li> <li>• <b>Disabled:</b> DSCP remarking is disabled</li> </ul>

**Remarking (IP  
Precedence)**

Port IP Precedence remarking admin state

- **Enabled:** IP Precedence remarking is enabled
- **Disabled:** IP Precedence remarking is disabled

The screenshot shows a web form titled "Edit Port Setting". It contains several input fields and checkboxes. The "Port" field is set to "GE6". The "CoS" field is a text input with "0" and "(0 - 7)" next to it. The "Trust" field has a checked checkbox labeled "Enable". Below this is a section titled "Remarking" which contains three checkboxes: "CoS" (unchecked), "DSCP" (unchecked), and "IP Precedence" (unchecked). At the bottom of the form are two buttons: "Apply" and "Close".

Field	Description
<b>Port</b>	Select port list
<b>CoS</b>	Set default CoS/802.1p priority value for the selected ports
<b>Trust</b>	Set checkbox to enable/disable port trust state
<b>Remarking (CoS)</b>	Set checkbox to enable/disable port CoS remarking
<b>Remarking (DSCP)</b>	Set checkbox to enable/disable port DSCP remarking
<b>Remarking (IP Precedence)</b>	Set checkbox to enable/disable port IP Precedence remarking

## 14.1.2 Queue Scheduling

To display Queue Scheduling web page, click **QoS > General > Queue Scheduling**.

The switch supports eight queues for each interface. Queue number 8 is the highest priority queue. Queue number 1 is the lowest priority queue. There are two ways of determining how traffic in queues is handled, Strict Priority (SP) and Weighted Round Robin (WRR).

- Strict Priority (SP)—Egress traffic from the highest priority queue is transmitted first. Traffic from the lower queues is processed only after the highest queue has been transmitted, which provide the highest level of priority of traffic to the highest numbered queue.
- Weighted Round Robin (WRR)—In WRR mode the number of packets sent from the queue is proportional to the weight of the queue (the higher the weight, the more frames are sent).

The queuing modes can be selected on the Queue page. When the queuing mode is by Strict Priority, the priority sets the order in which queues are serviced, starting with queue\_8 (the highest priority queue) and going to the next lower queue when each queue is completed.

When the queuing mode is Weighted Round Robin, queues are serviced until their quota has been used up and then another queue is serviced. It is also possible to assign some of the lower queues to WRR, while keeping some of the higher queues in Strict Priority. In this case traffic for the SP queues is always sent before traffic from the WRR queues. After the SP queues have been emptied, traffic from the WRR queues is forwarded. (The relative portion from each WRR queue depends on its weight).

Queue Scheduling Table				
Queue	Method			
	Strict Priority	WRR	Weight	WRR Bandwidth (%)
1	<input checked="" type="radio"/>	<input type="radio"/>	1	
2	<input checked="" type="radio"/>	<input type="radio"/>	2	
3	<input checked="" type="radio"/>	<input type="radio"/>	3	
4	<input checked="" type="radio"/>	<input type="radio"/>	4	
5	<input checked="" type="radio"/>	<input type="radio"/>	5	
6	<input checked="" type="radio"/>	<input type="radio"/>	9	
7	<input checked="" type="radio"/>	<input type="radio"/>	13	
8	<input checked="" type="radio"/>	<input type="radio"/>	15	

Apply

Field	Description
<b>Queue</b>	Queue ID to configure
<b>Strict Priority</b>	Set queue to strict priority type
<b>WRR</b>	Set queue to Weight round robin type
<b>Weight</b>	If the queue type is WRR, set the queue weight for the queue.
<b>WRR Bandwidth</b>	Percentage of WRR queue bandwidth

### 16.1.3 CoS Mapping

To display CoS Mapping web page, click **QoS > General > CoS Mapping**

The CoS to Queue table determines the egress queues of the incoming packets based on the 802.1p priority in their VLAN tags. For incoming untagged packets, the 802.1p priority will be the default CoS/802.1p priority assigned to the ingress ports.

Use the Queues to CoS table to remark the CoS/802.1p priority for egress traffic from each queue.

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

Apply

Field	Description
CoS	CoS value
Queue	Select queue id for the CoS value

**Queue to CoS Mapping**

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

Field	Description
Queue	Queue ID
Cos	Select CoS value for the queue id

#### 14.1.4 DSCP Mapping

To display DSCP Mapping web page, click **QoS > General > DSCP Mapping**

The DSCP to Queue table determines the egress queues of the incoming IP packets based on their DSCP values. The original VLAN Priority Tag (VPT) of the packet is unchanged.

Use the Queues to DSCP page to remark DSCP value for egress traffic from each queue.

**DSCP to Queue Mapping**

DSCP	Queue	DSCP	Queue	DSCP	Queue	DSCP	Queue
0 [CS0]	1 ▾	16 [CS2]	3 ▾	32 [CS4]	5 ▾	48 [CS6]	7 ▾
1	1 ▾	17	3 ▾	33	5 ▾	49	7 ▾
2	1 ▾	18 [AF21]	3 ▾	34 [AF41]	5 ▾	50	7 ▾
3	1 ▾	19	3 ▾	35	5 ▾	51	7 ▾
4	1 ▾	20 [AF22]	3 ▾	36 [AF42]	5 ▾	52	7 ▾
5	1 ▾	21	3 ▾	37	5 ▾	53	7 ▾
6	1 ▾	22 [AF23]	3 ▾	38 [AF43]	5 ▾	54	7 ▾
7	1 ▾	23	3 ▾	39	5 ▾	55	7 ▾
8 [CS1]	2 ▾	24 [CS3]	4 ▾	40 [CS5]	6 ▾	56 [CS7]	8 ▾
9	2 ▾	25	4 ▾	41	6 ▾	57	8 ▾
10 [AF11]	2 ▾	26 [AF31]	4 ▾	42	6 ▾	58	8 ▾
11	2 ▾	27	4 ▾	43	6 ▾	59	8 ▾
12 [AF12]	2 ▾	28 [AF32]	4 ▾	44	6 ▾	60	8 ▾
13	2 ▾	29	4 ▾	45	6 ▾	61	8 ▾
14 [AF13]	2 ▾	30 [AF33]	4 ▾	46 [EF]	6 ▾	62	8 ▾
15	2 ▾	31	4 ▾	47	6 ▾	63	8 ▾

Field	Description
<b>DSCP</b>	DSCP value
<b>Queue</b>	Select queue id for DSCP value

**Queue to DSCP Mapping**

Queue	DSCP
1	0 [CS0] ▼
2	8 [CS1] ▼
3	16 [CS2] ▼
4	24 [CS3] ▼
5	32 [CS4] ▼
6	40 [CS5] ▼
7	48 [CS6] ▼
8	56 [CS7] ▼

Field	Description
Queue	Queue ID
DSCP	Select DSCP value for queue id

### 14.1.5 IP Precedence Mapping

To display IP Precedence Mapping web page, click **QoS > General > IP Precedence Mapping**

This page allow user to configure IP Precedence to Queue mapping and Queue to IP Precedence mapping.

**IP Precedence to Queue Mapping**

IP Precedence	Queue
0	1 ▾
1	2 ▾
2	3 ▾
3	4 ▾
4	5 ▾
5	6 ▾
6	7 ▾
7	8 ▾

Apply

Field	Description
<b>IP Precedence</b>	IP Precedence value
<b>Queue</b>	Queue value which IP Precedence is mapped

**Queue to IP Precedence Mapping**

Queue	IP Precedence
1	0 ▾
2	1 ▾
3	2 ▾
4	3 ▾
5	4 ▾
6	5 ▾
7	6 ▾
8	7 ▾

Apply

Field	Description
<b>Queue</b>	Queue ID
<b>IP Precedence</b>	IP Precedence value which queue is mapped

## 14.2 Rate Limit

Use the Rate Limit pages to define values that determine how much traffic the switch can receive and send on specific port or queue.

### 14.2.1 Ingress / Egress Port

To display Ingress / Egress Port web page, click **QoS > Rate Limit > Ingress / Egress Port**

This page allow user to configure ingress port rate limit and egress port rate limit. The ingress rate limit is the number of bits per second that can be received from the ingress interface. Excess bandwidth above this limit is discarded.

Ingress / Egress Port Table						
Entry	Port	Ingress		Egress		
		State	Rate (Kbps)	State	Rate (Kbps)	
<input type="checkbox"/>	1	GE1	Disabled		Disabled	
<input type="checkbox"/>	2	GE2	Disabled		Disabled	
<input type="checkbox"/>	3	GE3	Disabled		Disabled	
<input type="checkbox"/>	4	GE4	Disabled		Disabled	
<input type="checkbox"/>	5	GE5	Disabled		Disabled	
<input type="checkbox"/>	6	GE6	Disabled		Disabled	
<input type="checkbox"/>	7	GE7	Disabled		Disabled	
<input type="checkbox"/>	8	GE8	Disabled		Disabled	

Field	Description
<b>Port</b>	Port name
<b>Ingress (State)</b>	Port ingress rate limit state <ul style="list-style-type: none"> <li><b>Enabled:</b> Ingress rate limit is enabled</li> <li><b>Disabled:</b> Ingress rate limit is disabled</li> </ul>
<b>Ingress (Rate)</b>	Port ingress rate limit value if ingress rate state is enabled
<b>Egress (State)</b>	Port egress rate limit state <ul style="list-style-type: none"> <li><b>Enabled:</b> Egress rate limit is enabled</li> <li><b>Disabled:</b> Egress rate limit is disabled</li> </ul>
<b>Egress (Rate)</b>	Port egress rate limit value if egress rate state is enabled

Field	Description
Port	Select port list
Ingress	Set checkbox to enable/disable ingress rate limit. If ingress rate limit is enabled, rate limit value need to be assigned.
Egress	Set checkbox to enable/disable egress rate limit. If egress rate limit is enabled, rate limit value need to be assigned.

## 14.2.2 Egress Queue

To display Egress Queue web page, click **QoS > Rate Limit > Egress Queue**.

Egress rate limiting is performed by shaping the output load.

Egress Queue Table

Entry	Port	Queue 1		Queue 2		Queue 3		Queue 4		Queue 5		Queue 6		Queue 7		Queue 8	
		State	CIR (Kbps)														
<input type="checkbox"/>	1	GE1	Disabled		Disabled												
<input type="checkbox"/>	2	GE2	Disabled		Disabled												
<input type="checkbox"/>	3	GE3	Disabled		Disabled												
<input type="checkbox"/>	4	GE4	Disabled		Disabled												
<input type="checkbox"/>	5	GE5	Disabled		Disabled												
<input type="checkbox"/>	6	GE6	Disabled		Disabled												
<input type="checkbox"/>	7	GE7	Disabled		Disabled												
<input type="checkbox"/>	8	GE8	Disabled		Disabled												

Edit

Field	Description
Port	Port name
Queue 1 (State)	Port egress queue 1 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 1 (CIR)	Queue 1 egress committed information rate
Queue 2 (State)	Port egress queue 2 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 2 (CIR)	Queue 2 egress committed information rate
Queue 3 (State)	Port egress queue 3 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 3 (CIR)	Queue 3 egress committed information rate
Queue 4 (State)	Port egress queue 4 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 4 (CIR)	Queue 4 egress committed information rate
Queue 5 (State)	Port egress queue 5 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 5 (CIR)	Queue 5 egress committed information rate
Queue 6 (State)	Port egress queue 6 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>
Queue 6 (CIR)	Queue 6 egress committed information rate
Queue 7 (State)	Port egress queue 7 rate limit state <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Egress queue rate limit is enabled</li> <li>• <b>Disabled:</b> Egress queue rate limit is disabled</li> </ul>

Queue 7  
(CIR)

Queue 7 egress committed information rate

Queue 8  
(State)

Port egress queue 8 rate limit state

- **Enabled:** Egress queue rate limit is enabled
- **Disabled:** Egress queue rate limit is disabled

Queue 8  
(CIR)

Queue 8 egress committed information rate

Queue	Port	Enable	Rate Limit	Unit
Queue 1	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 2	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 3	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 4	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 5	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 6	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 7	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)
Queue 8	GE3	<input type="checkbox"/>	10000000	Kbps (16 - 10000000)

Apply Close

Field	Description
-------	-------------

Port

Select port list

---

Queue 1	Set checkbox to enable/disable egress queue 1 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 2	Set checkbox to enable/disable egress queue 2 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 3	Set checkbox to enable/disable egress queue 3 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 4	Set checkbox to enable/disable egress queue 4 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 5	Set checkbox to enable/disable egress queue 5 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 6	Set checkbox to enable/disable egress queue 6 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 7	Set checkbox to enable/disable egress queue 7 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.
Queue 8	Set checkbox to enable/disable egress queue 8 rate limit. If egress rate limit is enabled, rate limit value need to be assigned.

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## 15. Diagnostics

Use the Diagnostics pages to configure settings for the switch diagnostics feature or operating diagnostic utilities.

### 15.1. Logging

---

#### 15.1.1. Property

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To enable/disable the logging service, click **Diagnostic > Logging > Property**.

The screenshot shows a configuration page with the following sections:

- Global Logging:** State is checked (Enable).
- Console Logging:** State is checked (Enable). Minimum Severity is set to Notice. Note: Emergency, Alert, Critical, Error, Warning, Notice.
- RAM Logging:** State is checked (Enable). Minimum Severity is set to Notice. Note: Emergency, Alert, Critical, Error, Warning, Notice.
- Flash Logging:** State is unchecked (Disable). Minimum Severity is set to Notice. Note: Emergency, Alert, Critical, Error, Warning, Notice.

An **Apply** button is located at the bottom of the configuration area.

Field	Description
<b>State</b>	Enable/Disable the global logging services. When the logging service is enabled, logging configuration of each destination rule can be individually configured. If the logging service is disabled, no messages will be sent to these destinations.

Field	Description
<b>State</b>	Enable/Disable the console logging service.
<b>Minimum Severity</b>	The minimum severity for the console logging.

---

---

Field	Description
<b>State</b>	Enable/Disable the RAM logging service.
<b>Minimum Severity</b>	The minimum severity for the RAM logging.

---

Field	Description
<b>State</b>	Enable/Disable the flash logging service.
<b>Minimum Severity</b>	The minimum severity for the flash logging.

---

## 15.2. Mirroring

To display Port Mirroring web page, click **Diagnostics > Mirroring**

Mirroring Table					
	Session ID	State	Monitor Port	Ingress Port	Egress Port
<input type="radio"/>	1	Disabled	---	---	---
<input type="radio"/>	2	Disabled	---	---	---
<input type="radio"/>	3	Disabled	---	---	---
<input type="radio"/>	4	Disabled	---	---	---

**Edit**

\*\*:\* Allow the monitor port to send or receive normal packets

Field	Description
<b>Session ID</b>	Select mirror session ID
<b>State</b>	Select mirror session state : port-base mirror or disable <ul style="list-style-type: none"> <li>• <b>Enabled:</b> Enable port based mirror</li> <li>• <b>Disabled:</b> Disable mirror.</li> </ul>
<b>Monitor Port</b>	Select mirror session monitor port, and select whether normal packet could be sent or received by monitor port.
<b>Ingress port</b>	Select mirror session source rx ports
<b>Egress ports</b>	Select mirror session source tx ports

## 15.3. Fiber Module

The Optical Module Status page displays the operational information reported by the Small Form-factor Pluggable (SFP) transceiver. Some information may not be available for SFPs without the supports of digital diagnostic monitoring standard SFF-8472.

To display the Optical Module Diagnostic page, click **Diagnostic > Fiber Module**.

**Fiber Module Table**

	Port	Temperature (C)	Voltage (V)	Current (mA)	Output Power (dBm)	Input Power (dBm)	OE Present	Loss of Signal
<input type="radio"/>	GE7	53.01	3.26	6.76	-5.36	-99.99	Insert	N/A
<input type="radio"/>	GE8	N/S	N/S	N/S	N/S	N/S	Insert	N/A

Refresh    Detail

Field	Description
<b>Port</b>	Interface or port number.
<b>Temperature</b>	Internally measured transceiver temperature.
<b>Voltage</b>	Internally measured supply voltage.
<b>Current</b>	Measured TX bias current.
<b>Output Power</b>	Measured TX output power in milliwatts.
<b>Input Power</b>	Measured RX received power in milliwatts.
<b>Transmitter Fault</b>	State of TX fault.
<b>OE Present</b>	Indicate transceiver has achieved power up and data is ready.
<b>Loss of Signal</b>	Loss of signal.
<b>Refresh</b>	Refresh the page.

Detail

The detail information on the specified port.

Fiber Module Status

Port	GE7
OE Present	Insert
Loss of Signal	N/A
Transceiver Type	SFP/SFP+
Connector Type	LC
Ethernet Compliance Code	1000BASE-SX
Transmission Media	Multi Mode (50um)
Wavelength	850 (nm)
Bitrate	1300 Mbps
Vendor OUI	94-66-e7
Vendor Name	WoMaster
Vendor PN	SFPGEM05D
Vendor Revision	A1
Vendor SN	FC23032801525
Date Code	2023-05-23
Temperature (C)	52.56
Voltage (V)	3.26
Current (mA)	6.98
Output Power (dBm)	-5.27
Input Power (dBm)	-99.99

Refresh Close

## 16. Management

Use the Management pages to configure settings for the switch management features.

### 16.1. User Account

To display User Account web page, click **Management > User Account**

The default username/password is **admin/admin**. And default account is not able to be deleted.

Use this page to add additional users that are permitted to manage the switch or to change the passwords of existing users.

**User Account**

Showing All entries Showing 1 to 1 of 1 entries

<input type="checkbox"/>	Username	Privilege
<input type="checkbox"/>	admin	Admin

Field	Description
<b>Username</b>	User name of the account
<b>Privilege</b>	<p>Select privilege level for new account.</p> <ul style="list-style-type: none"> <li><b>Admin:</b> Allow to change switch settings. Privilege value equals to 15.</li> <li><b>User:</b> See switch settings only. Not allow to change it. Privilege level equals to 1.</li> </ul>

**Add User Account**

Username

Password

Confirm Password

Privilege  Admin  User

Field	Description
<b>Username</b>	User name of the account
<b>Password</b>	Set password of the account
<b>Confirm Password</b>	Set the same password of the account as in “Password” field
<b>Privilege</b>	<p>Select privilege level for new account.</p> <ul style="list-style-type: none"> <li>• <b>Admin:</b> Allow to change switch settings. Privilege value equals to 15.</li> <li>• <b>User:</b> See switch settings only. Not allow to change it. Privilege level equals to 1.</li> </ul>

## 16.2. Firmware

### 16.2.1. Upgrade / Backup

To display firmware upgrade or backup web page, click **Management > Firmware > Upgrade/Backup**

This page allow user to upgrade or backup firmware image through HTTP or TFTP server.

The screenshot shows a configuration panel with three sections: 'Action', 'Method', and 'Filename'. In the 'Action' section, the 'Upgrade' radio button is selected. In the 'Method' section, the 'HTTP' radio button is selected. The 'Filename' section contains a '选择文件' (Select File) button and a text input field with the text '未选择任何文件' (No file selected). An 'Apply' button is located below these sections.

Field	Description
<b>Action</b>	<p>Firmware operations</p> <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	<p>Firmware upgrade / backup method</p> <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Filename</b>	<p>Use browser to upgrade firmware, you should select firmware image file on your host PC.</p>

The screenshot shows a configuration panel with the following fields and options:

- Action:** Radio buttons for Upgrade (selected) and Backup.
- Method:** Radio buttons for TFTP (selected) and HTTP.
- Address Type:** Radio buttons for Hostname (selected), IPv4, and IPv6.
- Server Address:** An empty text input field.
- Filename:** An empty text input field.
- Apply:** A button to save the configuration.

Field	Description
<b>Action</b>	<p>Firmware operations</p> <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	<p>Firmware upgrade / backup method</p> <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Address Type</b>	<p>Specify TFTP server address type</p> <ul style="list-style-type: none"> <li>• <b>Hostname:</b> Use domain name as server address</li> <li>• <b>IPv4:</b> Use IPv4 as server address</li> <li>• <b>IPv6:</b> Use IPv6 as server address</li> </ul>
<b>Server Address</b>	Specify TFTP server address.
<b>Filename</b>	Firmware image file name on remote TFTP server

The screenshot shows a configuration panel with three sections: 'Action', 'Method', and 'Firmware'. Each section contains two radio button options. In the 'Action' section, 'Backup' is selected. In the 'Method' section, 'HTTP' is selected. In the 'Firmware' section, 'Image0' is selected. An 'Apply' button is positioned at the bottom left of the panel.

Field	Description
<b>Action</b>	<p>Firmware operations</p> <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	<p>Firmware upgrade / backup method</p> <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Firmware</b>	<p>Firmware partition need to backup</p> <ul style="list-style-type: none"> <li>• <b>Image0:</b> Firmware image in flash partition 0</li> <li>• <b>Image1:</b> Firmware image in flash partition 1</li> </ul>

The screenshot shows a configuration panel with the following fields and options:

- Action:** Radio buttons for Upgrade and Backup (selected).
- Method:** Radio buttons for TFTP (selected) and HTTP.
- Firmware:** Radio buttons for Image0 (selected) and Image1.
- Address Type:** Radio buttons for Hostname (selected), IPv4, and IPv6.
- Server Address:** A text input field.
- Filename:** A text input field.
- Apply:** A button at the bottom left.

Field	Description
<b>Action</b>	Firmware operations <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	Firmware upgrade / backup method <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Firmware</b>	Firmware partition need to backup <ul style="list-style-type: none"> <li>• <b>Image0:</b> Firmware image in flash partition 0</li> <li>• <b>Image1:</b> Firmware image in flash partition 1</li> </ul>
<b>Address Type</b>	Specify TFTP server address type <ul style="list-style-type: none"> <li>• <b>Hostname:</b> Use domain name as server address</li> <li>• <b>IPv4:</b> Use IPv4 as server address</li> <li>• <b>IPv6:</b> Use IPv6 as server address</li> </ul>
<b>Server Address</b>	Specify TFTP server address.
<b>Filename</b>	File name saved on remote TFTP server

## 16.3. Configuration

### 16.3.1. Upgrade / Backup

To display firmware upgrade or backup web page, click **Management > Configuration > Upgrade/Backup**

This page allow user to upgrade or backup configuration file through HTTP or TFTP server.

Field	Description
<b>Action</b>	Configuration operations <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	Configuration upgrade / backup method <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Configuration</b>	Configuration types <ul style="list-style-type: none"> <li>• <b>Running Configuration:</b> Merge to current running configuration file</li> <li>• <b>Startup Configuration:</b> Replace startup configuration file</li> </ul>

- **Backup Configuration:** Replace backup configuration file

**Filename**

Use browser to upgrade configuration, you should select configuration file on your host PC.

The screenshot shows a configuration panel with the following fields and options:

- Action:**  Upgrade,  Backup
- Method:**  TFTP,  HTTP
- Configuration:**  Running Configuration,  Startup Configuration,  Backup Configuration,  RAM Log,  Flash Log
- Address Type:**  Hostname,  IPv4,  IPv6
- Server Address:** [Text input field]
- Filename:** [Text input field]
- Apply:** [Button]

Field	Description
<b>Action</b>	<p>Configuration operations</p> <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	<p>Configuration upgrade / backup method</p> <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Configuration</b>	<p>Configuration types</p> <ul style="list-style-type: none"> <li>• <b>Running Configuration:</b> Merge to current running configuration file</li> <li>• <b>Startup Configuration:</b> Replace startup configuration file</li> <li>• <b>Backup Configuration:</b> Replace backup configuration file</li> </ul>
<b>Address Type</b>	<p>Specify TFTP server address type</p> <ul style="list-style-type: none"> <li>• <b>Hostname:</b> Use domain name as server address</li> <li>• <b>IPv4:</b> Use IPv4 as server address</li> </ul>

- **IPv6:** Use IPv6 as server address

**Server Address** Specify TFTP server address.

**Filename** Configuration file name on remote TFTP server

The screenshot shows a configuration panel with three sections: Action, Method, and Configuration. Each section has a set of radio buttons. The 'Action' section has 'Upgrade' and 'Backup' options, with 'Backup' selected. The 'Method' section has 'TFTP' and 'HTTP' options, with 'HTTP' selected. The 'Configuration' section has 'Running Configuration', 'Startup Configuration', 'Backup Configuration', 'RAM Log', and 'Flash Log' options, with 'Running Configuration' selected. An 'Apply' button is located at the bottom left of the panel.

Field	Description
<b>Action</b>	<p>Configuration operations</p> <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade configuration from remote host to DUT</li> <li>• <b>Backup:</b> Backup configuration from DUT to remote host</li> </ul>
<b>Method</b>	<p>Configuration upgrade / backup method</p> <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup configuration</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup configuration</li> </ul>
<b>Configuration</b>	<p>Configuration types</p> <ul style="list-style-type: none"> <li>• <b>Running Configuration:</b> Backup running configuration file</li> <li>• <b>Startup Configuration:</b> Backup start configuration file</li> <li>• <b>Backup Configuration:</b> Backup backup configuration file</li> <li>• <b>RAM Log:</b> Backup log file stored in RAM</li> <li>• <b>Flash Log:</b> Backup log files store in Flash</li> </ul>

Action	<input type="radio"/> Upgrade <input checked="" type="radio"/> Backup
Method	<input checked="" type="radio"/> TFTP <input type="radio"/> HTTP
Configuration	<input checked="" type="radio"/> Running Configuration <input type="radio"/> Startup Configuration <input type="radio"/> Backup Configuration <input type="radio"/> RAM Log <input type="radio"/> Flash Log
Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4 <input type="radio"/> IPv6
Server Address	<input type="text"/>
Filename	<input type="text"/>
<input type="button" value="Apply"/>	

Field	Description
<b>Action</b>	Firmware operations <ul style="list-style-type: none"> <li>• <b>Upgrade:</b> Upgrade firmware from remote host to DUT</li> <li>• <b>Backup:</b> Backup firmware image from DUT to remote host</li> </ul>
<b>Method</b>	Firmware upgrade / backup method <ul style="list-style-type: none"> <li>• <b>TFTP:</b> Using TFTP to upgrade/backup firmware</li> <li>• <b>HTTP:</b> Using WEB browser to upgrade/backup firmware</li> </ul>
<b>Configuration</b>	Configuration types <ul style="list-style-type: none"> <li>• <b>Running Configuration:</b> Backup running configuration file</li> <li>• <b>Startup Configuration:</b> Backup start configuration file</li> <li>• <b>Backup Configuration:</b> Backup backup configuration file</li> <li>• <b>RAM Log:</b> Backup log file stored in RAM</li> <li>• <b>Flash Log:</b> Backup log files store in Flash</li> </ul>
<b>Address Type</b>	Specify TFTP server address type <ul style="list-style-type: none"> <li>• <b>Hostname:</b> Use domain name as server address</li> <li>• <b>IPv4:</b> Use IPv4 as server address</li> <li>• <b>IPv6:</b> Use IPv6 as server address</li> </ul>
<b>Server Address</b>	Specify TFTP server address.
<b>Filename</b>	File name saved on remote TFTP server

### 16.3.2. Save Configuration

To display the Save Configuration web page, click **Management > Configuration > Save Configuration**.

This page allow user to manage configuration file saved on DUT and click “Restore Factory Default” button to restore factory defaults.

Field	Description
<b>Source File</b>	Source file types <ul style="list-style-type: none"> <li>• <b>Running Configuration:</b> Copy running configuration file to destination</li> <li>• <b>Startup Configuration:</b> Copy startup configuration file to destination</li> <li>• <b>Backup Configuration:</b> Copy backup configuration file to destination</li> </ul>
<b>Destination File</b>	Destination file <ul style="list-style-type: none"> <li>• <b>Startup Configuration:</b> Save file as startup configuration</li> <li>• <b>Backup Configuration:</b> Save file as backup configuration</li> </ul>