

Command Guide



Gigabit Ethernet L2 Web Smart Switch with 10GbE Uplink

▶ GS-2240-24T4X/GS-2240-48T4X



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Chapter 1 COMMAND LINE INTERFACE

1.1 Accessing the CLI

When accessing the management interface for the switch over a direct connection to the server's console port, or via a Telnet connection, the switch can be managed by entering command keywords and parameters at the prompt. Using the switch's command-line interface (CLI) is very similar to entering commands on a UNIX system.

This chapter describes how to use the Command Line Interface (CLI).

1.2 Command Line Modes

The CLI groups all the commands in appropriate modes according to the nature of the command. A sample of the CLI command modes is described below. Each of the command modes supports specific software commands.

Mode-based Command Hierarchy

The **Command Line Interface (CLI)** groups all the commands in appropriate modes by the nature of the commands. Examples of the CLI command modes are described below. Each of the command modes supports specific switch's commands. The CLI Command Modes table captures the command modes, the prompts visible in that mode and the exit method from that mode.

Command Mode	Access Method	Prompt	Exit or Access Previous Mode
User Mode	This is the first level of access. Perform basic tasks and list system information.	COMMAND>	Enter Logout command
Privileged Mode	From the User Mode, enter the enable command.	Switch#	To exit to the User Mode, enter exit or logout.
Global Config Mode	From the Privileged Mode, enter the configuration command.	Switch (Config)#	To exit to the Privileged Mode, enter the exit command.
Interface Config Mode	From the Global Config mode, enter the interface <port#> command.	Switch (Interface <port#>)#	To exit to the Global Config mode, enter exit.

Table 1-1 CLI Command Modes

The CLI is divided into various modes. The commands in one mode are not available until the operator switches to that particular mode. The commands available to the operator at any point in time depend upon the mode. Entering a question mark (?) at the CLI prompt will display a list of the available commands and descriptions of the commands.

The CLI provides the following modes:

■ User Mode

When the operator logs into the CLI, the User Mode is the initial mode. The User Mode contains a limited set of commands. The command prompt shown at this level is:

Command Prompt: switch>

■ Privileged Mode

To have access to the full suite of commands, the operator must enter the Privileged Mode. The Privileged Mode requires password authentication. From Privileged Mode, the operator can issue any Exec command to enter the Global Configuration mode. The command prompt shown at this level is:

Command Prompt: switch#

■ Global Config Mode

This mode permits the operator to make modifications to the running configuration. General setup commands are grouped in this mode. From the Global Configuration mode, the operator can enter the Interface Configuration mode. The command prompt at this level is:

Command Prompt: switch(Config)#

From the Global Config mode, the operator may enter the following configuration modes:

■ Interface Config Mode

Many features are enabled for a particular interface. The Interface commands enable or modify the operation of an interface. In this mode, a physical port is set up for a specific logical connection operation. The command prompt at this level is:

Command Prompt: Switch(Interface <port#>)#

1.3 Requirements

- **Workstations** running Windows XP/Vista/7/8/10, Windows 2003/2008, MAC OS X or later, Linux, UNIX, or other platforms are compatible with TCP/IP protocols.
- Workstations are installed with Ethernet NIC (Network Interface Card)
- **Serial Port** Connection (Terminal)
 - The above Workstations come with **COM Port** (DB9) or **USB-to-RS232** converter.
 - The above Workstations have been installed with **terminal emulator**, such as Hyper Terminal, PuTTY.
 - **Serial cable** -- one end is attached to the RS232 serial port, while the other end to the console port of the Industrial Managed Switch.
- **Ethernet Port** Connection
 - Network cables -- Use standard network (UTP) cables with RJ45 connectors.
 - The above PC is installed with Web browser and JAVA runtime environment plug-in.

Chapter 2 CONSOLE CLI MANAGEMENT

2.1 Terminal Setup

To configure the system, connect a serial cable to a **COM port** on a PC or notebook computer and to RJ45 type of serial (console) port of the Industrial Managed Switch.

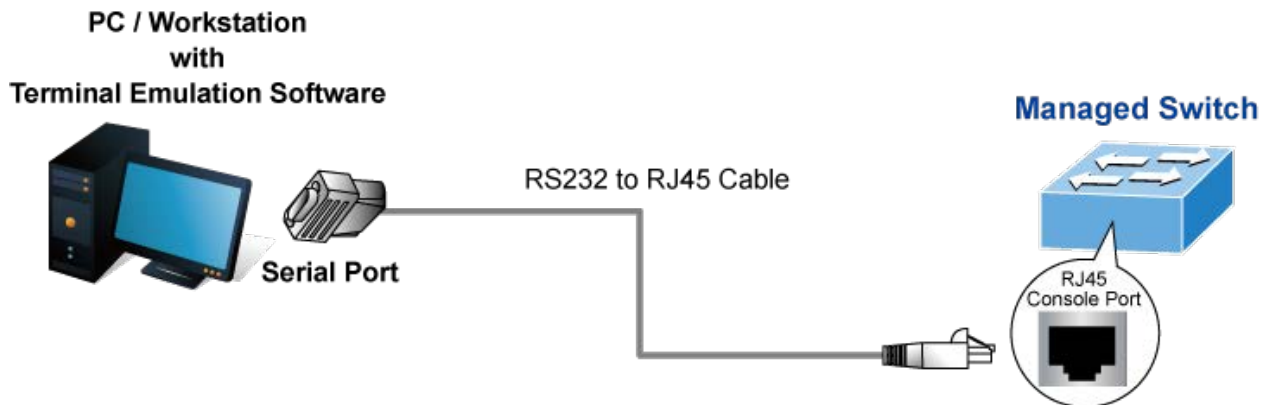


Figure 2-1 Industrial Managed Switch Console Connectivity

The console port of the Industrial Managed Switch is an RJ45 type, RS232 serial port connector. It is an interface for connecting a terminal directly. Through the console port, it provides rich diagnostic information including IP address setting, factory reset, port management, link status and system setting. Users can use the attached RS232 cable in the package and connect to the console port on the device. After the connection, users can run any terminal emulation program (Hyper Terminal, ProComm Plus, Telix, Winterm and so on) to enter the startup screen of the device.

1. When the following screen appears, make sure that the COM port should be configured as:

◆ Baud	: 115200
◆ Data bits	: 8
◆ Parity	: None
◆ Stop bits	: 1
◆ Flow control	: None

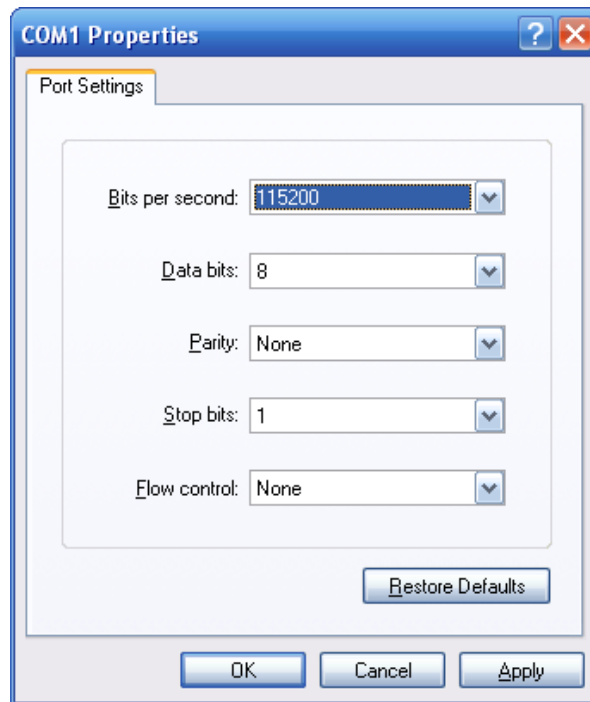


Figure 2-3 Terminal emulator COM Port Configuration

You can change these settings, if desired, after you log on. This management method is often preferred because you can remain connected and monitor the system during system reboots. Also, certain error messages are sent to the serial port, regardless of the interface through which the associated action was initiated. A Macintosh or PC attachment can use any terminal-emulation program for connecting to the terminal serial port. A workstation attachment under UNIX can use an emulator such as TIP.

2.2 Logon to the Console

Once the terminal is connected to the device, power on the Industrial Managed Switch, and the terminal will display “running testing procedures”. Then, the following message asks to log-in user name and password. The factory default user name and password are shown as follows and the login screen in [Figure 3-1](#) appears.

```
Username: admin
Password: admin
```

```
Username: admin
Password:
GS-2240-24T4X#
```

Figure 3-1: Switch Console Login Screen

The user can now enter commands to manage the Industrial Managed Switch. For a detailed description of the commands, please refer to the following chapters.



1. For security reason, please change and memorize the new password after this first setup.
2. Only accept command in lowercase letter under console interface.

2.3 Configuring IP Address

The Industrial Managed Switch is shipped with default IP address shown below.

```
IP Address: 192.168.0.100
Subnet Mask: 255.255.255.0
```

To check the current IP address or modify a new IP address for the Switch, please use the procedures as follows:

■ Show the current IP Address

1. At the “#” prompt, enter “**show ip interface vlan1 brief**”.
2. The screen displays the current IP address and Subnet Mask as shown in [Figure 3-2](#).

```
Username: admin
Password:
GS-2240-24T4X#show ip interface vlan1 brief
Interface  IP-Address      Status  Protocol
vlan1     192.168.0.100  up      up
```

Figure 3-2: IP Information Screen

■ Configuring IP Address

- At the “#” prompt, enter the following command and press <Enter>.as shown in Figure 3-3.

```
# configure terminal
(config)# ip route 0.0.0.0/0 192.168.1.254
(config)# interface vlan 1
(config-vlan1)# ip address 192.168.1.100/24
```

The previous command would apply the following settings for the Industrial Managed Switch.

IP Address: **192.168.1.100**

Subnet Mask: **255.255.255.0**

Gateway: **192.168.1.254**

```
Username:admin
Password:
GS-2240-24T4X#configure terminal
GS-2240-24T4X(config)#ip route 0.0.0.0/0 192.168.1.254
GS-2240-24T4X(config)#interface vlan1
GS-2240-24T4X(config-vlan1)#ip address 192.168.1.100/24
```

Figure 3-3: Configuring IP Address Screen

- Repeat step 1 to check if the IP address is changed.

■ Store current switch configuration

- At the “#” prompt, enter the following command and press <Enter>.

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

```
Username:admin
Password:
GS-2240-24T4X#copy running-config startup-config
Building configuration...
[OK!]
```

Figure 3-4: Saving Current Configuration Command Screen

If the IP is successfully configured, the Industrial Managed Switch will apply the new IP address setting immediately. You can access the Web interface of the Industrial Managed Switch through the new IP address.



Note

If you are not familiar with the console command or the related parameter, enter “?” anytime in console to get the help description.

Chapter 3 TELNET CLI MANAGEMENT

3.1 Telnet Login

The Industrial Managed Switch also supports telnet for remote management. The switch asks for user name and password for remote login when using telnet, please use “**admin**” for both username and password.

Default IP address: **192.168.0.100**

Username: **admin**

Password: **admin**

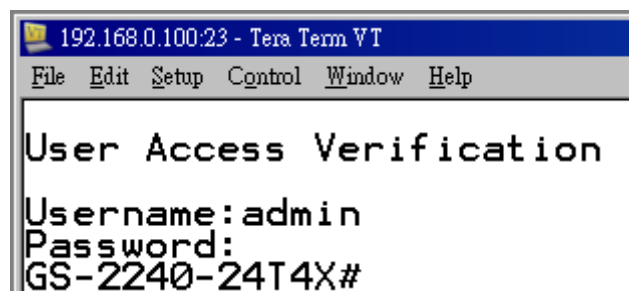


Figure 3-1 Industrial Managed Switch Telnet Login Screen

Chapter 4 Commands for CLI Configuration

4.1 build

4.1.1 build running-state file

Command:

```
build running-state file
```

Default:

N/A

Usage Guide:

To build the **running-state file**.

Example:

To build the **running-state file**.

```
Switch# build running-state file
```

4.2 clear

4.2.1 clear arp-cache

Command:

```
clear arp-cache
```

Default:

N/A

Usage Guide:

To clear the **arp-cache**.

Example:

To clear the Switch's **arp-cache**.

```
Switch# clear arp-cache
```

4.2.2 clear ip dhcp snooping binding

Command:

```
clear ip dhcp snooping binding <A.B.C.D> | dynamic
```

<A.B.C.D> IP address.

dynamic Dynamic IP address.

Default:

N/A

Usage Guide:

To clear the **dhcp snooping binding statistics**.

Example:

To clear the Switch's **dhcp snooping binding statistics for dynamic IP**.

```
Switch# clear ip dhcp snooping binding dynamic
```

4.2.3 clear clear ip igmp snooping group

Command:

```
clear clear ip igmp snooping {<A.B.C.D>} | {interface <Port list>} | {vlan <VLAN ID>}
```

<A.B.C.D> IP address.

<Port list> Port list.

<VLAN ID> VLAN ID.

Default:

N/A

Usage Guide:

To clear the **IGMP snooping statistics**.

Example:

To clear the Switch's **IGMP snooping statistics**.

```
Switch# clear clear ip igmp snooping
```


4.2.4 clear ip prefix-list

Command:

```
clear ip prefix-list <WORD>
```

<WORD> Name of a prefix list.

Default:

N/A

Usage Guide:

To clear the IP .

Example:

To clear the Switch's **ERPS group 1 statistics**.

```
Switch# # clear ip prefix-list
```

4.2.5 clear lacp

Command:

```
clear lacp {counters} | {<1-32> counters}
```

<1-32> channel-group number.

counters clear lacp counters.

Default:

N/A

Usage Guide:

To clear the **LACP statistics**.

Example:

To clear the Switch's **LACP statistics**.

```
Switch# # clear lacp counters
```

4.2.6 clear logging

Command:

```
clear logging
```

Default:

N/A

Usage Guide:

To clear the **system log**.

Example:

To clear the Switch's **system log**.

```
Switch# clear logging
```

4.2.7 clear mac address-table dynamic

Command:

```
clear mac address-table dynamic {address <HHHH.HHHH.HHHH>} | {interface <Port list>} | {vlan <VLAN ID>}
```

<HHHH.HHHH.HHHH> MAC address.

<Port list> Port list.

<VLAN ID> VLAN ID.

Default:

N/A

Usage Guide:

To clear the **MAC address table**.

Example:

To clear the Switch's **VLAN 1 MAC address table**.

```
Switch# clear mac address-table dynamic vlan 1
```

4.2.8 clear spanning-tree detected protocols

Command:

```
clear spanning-tree detected protocols{ bridge | <1-32> } | { interface <Port list> }
```

Default:

N/A

Usage Guide:

To clear the **STP statistics**.

Example:

To clear the Switch's **bridge 1 STP statistics**.

```
Switch# clear spanning-tree detected protocols bridge 1
```

4.3 configure terminal

4.3.1 aaa authentication login console local

Command:

```
arp <ip> <HHHH.HHHH.HHHH>
```

<ip> IP address.

<HHHH.HHHH.HHHH> MAC address.

Default:

N/A

Usage Guide:

To configure static ARP table in the VLAN1.

Example:

To configure static ARP table(IP address: 192.168.0.79, MAC address: 00:30:20:00:30:00) in the VLAN1.

```
Switch# configure terminal
Switch (config)# arp 192.168.0.79 0030.2000.3000
```

4.3.2 exit

Command:

```
exit
```

Default:

N/A

Usage Guide:

To exit **configure terminal** mode.

Example:

To exit **configure terminal** mode.

```
Switch# configure terminal
Switch (config)# exit
#
```

4.3.3 help

Command:

```
help
```

Default:

N/A

Usage Guide:

To explain how to use commands.

Example:

To explain how to use commands.

```
Switch# configure terminal
Switch (config)# help
FOS CLI provides advanced help feature.  When you need help,
anytime at the command line please press '?'.

If nothing matches, the help list will be empty and you must backup
until entering a '?' shows the available options.
```

Two styles of help are provided:

1. Full help is available when you are ready to enter a command argument (e.g. 'show ?') and describes each possible argument.
2. Partial help is provided when an abbreviated argument is entered and you want to know what arguments match the input (e.g. 'show ve?').

4.3.4 hostname

Command:

```
hostname < WORD >
```

< WORD > This system's network name

Default:

N/A

Usage Guide:

To configure switch's **hostname**.

Example:

To configure switch's **hostname** with "planetbestswitch"

```
Switch# configure terminal
Switch (config)# hostname planetbestswitch
planetbestswitch(config)#
```

4.3.5 interface xe | ge | range

Command:

```
interface range <port_type_list> | xe <port_type_list> | ge <port_type_list>
```

range Interface range
ge 1 Gigabit Ethernet Port
xe 10 Gigabit Ethernet Port

Default:

N/A

Usage Guide:

To enter the **interface mode**.

Example:

To enter the **interface ge1 and ge2**

```
Switch# configure terminal
Switch (config)# interface range ge1 - 2
Switch(config-if-range)#
```

4.3.5.1 bandwidth

Command:

```
access-list action deny
```

action Access list action

Default:

Deny

Usage Guide:

To configure **Deny** for the **ACL action**.

Example:

To configure **Deny ACL action** for the **ge4**.

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # access-list action deny
```

4.3.5.2 channel-group

Command:

```
channel-group <1-32> mode [active | passive]
```

<1-32> Channel group number
mode Channel mode commands
active Enable initiation of LACP negotiation on a port
passive Disable initiation of LACP negotiation on a port

Default:

Disable

Usage Guide:

To enable active or passive mode for the **LACP**.

Example:

To enable active mode for the **LACP profile 1** in the ge4.

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # channel-group 1 mode active
```

4.3.5.3 description

Command:

```
description <description>
```

<description> Interface specific description

Default:

Disabled

Usage Guide:

To configure specific description for the interface **description**.

Example:

To configure specific description(**internet**) for the interface ge4 **description**.

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # description internet
```

4.3.5.4 exit

Command:

```
exit
```

exit Exit from current mode

Default:

None

Usage Guide:

To exit current mode

Example:

To exit current mode.

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # exit
Switch (config)#
```

4.3.5.5 flowcontrol

Command:

```
flowcontrol {receive | send} {off | on}
```

flowcontrol Traffic flow control.

receive Flow control on receive.

send Flow control on send.

off Disable flow control.

on Enable flow control.

Default:

Disable

Usage Guide:

To enable **Flow-control** for specific interface

Example:

To enable **Flow-control(RX)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # flowcontrol receive on
```

4.3.5.6 instance

Command:

```
instance <1-15> { path-cost <1-200000000> | priority <0-240> }
```

<1-15> Green ethernet (Power reduction)

path-cost Enable power saving for ports with no link partner.

<1-200000000> Enable power saving for ports with no link partner.

priority Enable power saving for ports with no link partner.

<0-240> Enable power saving for ports with no link partner.

Default:

N/A

Usage Guide:To configure MSTP instance **path-cost** or **priority** for ports.**Example:**To configure MSTP **instance (1)** or **priority(16)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # instance 1 priority 16
```

4.3.5.7 ip dhcp snooping

Command:

```
ip dhcp snooping { limit rate <1-2048> | trust }
```

limit rate	DHCP-snooping limit rate
<1-2048>	DHCP packets numbers per sec
trust	DHCP-snooping trust

Default:

Unlimited

Usage Guide:To configure DHCP snooping **trust-port** or **limit rate** for ports.**Example:**To configure DHCP snooping **trust-port** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # ip dhcp snooping trust
```

4.3.5.8 jumbo-frame

Command:

```
jumbo-frame < 1500-13312 >
```

< 1500-13312 >	jumbo-frame in bytes
-----------------------------	----------------------

Default:

13312 bytes

Usage Guide:To configure jumbo frame **size** for ports.**Example:**To configure jumbo frame **size (2000 bytes)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # jumbo-frame 2000
```

4.3.5.9 ip arp inspection check-vlan

Command:

```
ip arp inspection check-vlan
```

arp Address Resolution Protocol
inspection ARP inspection
check-vlan ARP inspection VLAN mode config

Default:

Disable

Usage Guide:To configure **Check-VLAN mode** into **ARP inspection** for specific interface**Example:**To configure **Check-VLAN mode (Enabled)** into **ARP inspection** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # ip arp inspection check-vlan
```

4.3.5.10 ip arp inspection logging

Command:

```
ip arp inspection logging all | deny | permit
```

arp Address Resolution Protocol
inspection ARP inspection

logging	ARP inspection logging mode config
all	log all entries
deny	log denied entries
permit	log permitted entries

Default:

None

Usage Guide:To configure **Logging type** into **ARP inspection** for specific interface**Example:**To configure **Logging type (All)** into **ARP inspection** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # ip arp inspection logging all
```

4.3.5.11 ip arp inspection trust

Command:

```
ip arp inspection trust
```

arp	Address Resolution Protocol
inspection	ARP inspection
trust	ARP inspection trust config

Default:

Trusted

Usage Guide:To configure Trusted into **ARP inspection** for specific interface**Example:**To configure Trusted into **ARP inspection** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # ip arp inspection trust
```

4.3.5.12 ip dhcp snooping trust

Command:

```
ip dhcp snooping trust
```

Default:

Trusted

Usage Guide:

To configure Trusted into **DHCP Snooping** for specific interface

Example:

To configure Trusted into **DHCP Snooping** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # ip dhcp snooping trust
```

4.3.5.13 lacp port-priority

Command:

```
lacp port-priority <1-65535>
```

lacp Enable LACP on this interface
port-priority LACP priority of the port
<1-65535> Priority value, lower means higher priority

Default:

32768

Usage Guide:

To configure **LACP port-priority** for specific interface

Example:

To configure **LACP port-priority (555)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # lacp port-priority 555
```

4.3.5.14 lacp timeout

Command:

```
lacp timeout short | long
```

- lacp** Enable LACP on this interface
- timeout** The period between BPDU transmissions
- short** Transmit BPDU each second (fast timeout)
- long** Transmit BPDU each 30th second (slow timeout)

Default:

Short

Usage Guide:

To configure **LACP timeout** type for specific interface

Example:

To enable **LACP timeout** type (long) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # lacp timeout long
```

4.3.5.15 line-rate

Command:

```
line-rate { egress <line rate> [burst <burstsize>] | ingress <line rate> [burst
<burstsize> ] }
```

- egress** Egress rate
- ingress** Ingress rate
- <line rate>** Limit rate <64-10485760 kbps> (usable units : k, m, g, must be a multiple of 64k)
- <burstsize>** Burst size <32 kbit - 128 Mbit> (usable units : k, m, must be a multiple of 32k)

Default:

Disable

Usage Guide:

To configure **line rate** for specific interface

Example:

To configure **line rate (Egress rate: 120Mbps)** for for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # line-rate egress 120m
```

4.3.5.16 lldp admin-status

Command:

```
lldp admin-status { disable | rx | tx | txrx }
```

- disable** The port can neither transmit nor receive LLDP frames
- rx** The port can only receive LLDP frames
- tx** The port can only transmit LLDP frames
- txrx** The port can both transmit and receive LLDP frames

Default:

Disable

Usage Guide:

To configure **LLDP Rx only mode** for specific interface

Example:

To configure **LLDP Rx only mode** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # lldp admin-status rx
```

4.3.5.17 lldp frame-format

Command:

```
lldp frame-format {direct | snap}
```

- direct** Direct-encoded LLDP frame format
- snap** SNAP-encoded LLDP frame format.

Default:

Enabled

Usage Guide:

To configure **frame-format** of **LLDP TLV** for specific interface

Example:

To configure **frame-format(SNAP mode)** of **LLDP TLV** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # lldp frame-format snap
```

4.3.5.18 lldp management-address

Command:

```
lldp management-address <ip>
```

<ip> IP address (e.g. 10.0.0.1)

Default:

Disabled

Usage Guide:

To configure **management address** of **LLDP TLV** for specific interface

Example:

To configure **management address (192.168.0.100)** of **LLDP TLV** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # lldp management-address 192.168.0.100
```

4.3.5.19 mac-address-learning enable

Command:

```
mac-address-learning enable
```

Default:

Enabled (Auto)

Usage Guide:

To enable **learning** of **MAC address table** for specific interface

Example:

To enable **learning** of **MAC address table** for **ge4**

```
Switch# configure terminal
```

```
Switch (config)# interface ge4
Switch (config-ge4) # mac-address-learning enable
```

4.3.5.20 mirror interface

Command:

```
mirror interface <port> { both | receive | transmit}
```

<port> Mirrored Port

both Mirror traffic in both directions

receive Mirror received traffic

transmit Mirror transmit traffic

Default:

Disabled

Usage Guide:

To configure **Mirrored Port**

Example:

To set **Mirrored Port (ge11, Tx + Rx)**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # mirror interface ge11 direction both
```

4.3.5.21 no

Command:

```
no
```

no Negate a command or set its defaults

Default:

N/A

Usage Guide:

To default the function for specific interface

Example:

To enable the function (**mirror interface ge11 direction both**) for **ge4**.


```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # no mirror interface ge11 direction both
```

4.3.5.22 path-cost

Command:

```
path-cost <1-200000000>
```

<1-200000000> Enable power saving for ports with no link partner.

Default:

N/A

Usage Guide:

To configure CIST **path-cost** for ports.

Example:

To configure CIST **path-cost (200)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # path-cost 200
```

4.3.5.23 priority

Command:

```
priority <0-240>
```

<0-240> Enable power saving for ports with no link partner.

Default:

N/A

Usage Guide:

To configure CIST **priority** for ports.

Example:

To configure CIST **priority(16)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # priority 16
```

4.3.5.24 shutdown

Command:

```
shutdown
```

Default:

No shutdown

Usage Guide:

To shut down specific interface

Example:

To shut down **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # shutdown
```

4.3.5.25 spanning-tree auto-edge

Command:

```
spanning-tree auto-edge
```

Default:

Enabled

Usage Guide:

To enable **Auto Edge** of **CIST Normal Port Configuration** for specific interface

Example:

To enable **Auto Edge** of **CIST Normal Port Configuration** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # spanning-tree auto-edge
```

4.3.5.26 spanning-tree edgeport

Command:

```
spanning-tree edgeport
```

Default:

Non-Edge

Usage Guide:

To enable **edge port** of **CIST Normal Port Configuration** for specific interface

Example:

To enable **edge port** of **CIST Normal Port Configuration** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # spanning-tree edgeport
```

4.3.5.27 spanning-tree force-version

Command:

```
spanning-tree force-version <0-3>
```

<0-3> Version identifier - 0- STP ,1- Not supported ,2 -RSTP, 3- MSTP

Default:

MSTP

Usage Guide:

To configure **STP version** for specific interface

Example:

To configure **STP version(MSTP)** for for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # spanning-tree force-version 3
```

4.3.5.28 spanning-tree guard root

Command:

```
spanning-tree guard root
```

Default:

Disabled

Usage Guide:

To enable **BPDU Guard** of **CIST Normal Port Configuration** for specific interface

Example:

To enable **BPDU Guard(root mode)** of **CIST Normal Port Configuration** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # spanning-tree guard root
```

4.3.5.29 spanning-tree link-type

Command:

```
spanning-tree {point-to-point | shared}
```

point-to-point Forced to point-to-point

shared Forced to Shared

Default:

N/A

Usage Guide:

To configure **point to point mode** of **CIST Normal Port Configuration** for specific interface

Example:

To enable **point to point mode (shared)** of **CIST Normal Port Configuration** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # spanning-tree link-type shared
```

4.3.5.30 spanning-tree portfast

Command:

```
spanning-tree portfast { bpdu-filter [default | disable | enable] | bpdu-guard [default |
disable | enable]}
```

bpdu-filter Set the portfast bpdu-filter for the port

bpdu-guard Guard the port against reception of BPDUs

default Default

disable Disable

enable Enable

Default:

Disabled

Usage Guide:

To enable **prot-fast mode** of **CIST Normal Port Configuration** for specific interface

Example:

To enable **prot-fast mode (bpdu-filter)** of **CIST Normal Port Configuration** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # spanning-tree portfast bpdu-filter enable
```

4.3.5.31 speed

Command:

```
speed [100-full | 100-half | 1000-full | 10000-full | auto]
```

100-full 100Mbps-full

100-half 100Mbps-half

1000-full 1Gbps

10000-full 10Gbps

Auto Auto

Default:

Auto

Usage Guide:

To configure line speed for specific interface

Example:

To configure line speed (100Mbps-full) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # speed 100-full
```

4.3.5.32 storm-control

Command:

```
storm-control [broadcast | dlf | multicast] {disable | level pps <0-100000>}
```

broadcast 100Mbps-full
dlf 100Mbps-half
multicast 1Gbps
disable 10Gbps
level pps Threshold Level
<0-100000> Threshold pps

Default:

Auto

Usage Guide:

To configure storm-control for specific interface

Example:

To configure storm-control (1000 PPS) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # storm-control broadcast level pps 1000
```

4.3.5.33 switchport access vlan

Command:

```
switchport access vlan <vlan_id>
```

<vlan_id> VLAN ID of the VLAN when this port is in access mode

Default:

1

Usage Guide:

To configure **access VLAN ID** for specific interface

Example:

To configure **access VLAN ID (5)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport access vlan 5
```

4.3.5.34 switchport hybrid vlan

Command:

```
switchport hybrid vlan <vlan_list>
```

<vlan_list> <2-4094> The default VID for the interface

Default:

PVID=1

Usage Guide:

To configure **PVID** of **Hybrid VLAN** for specific interface

Example:

To configure **PVID 2** of **Hybrid VLAN** of **Hybrid VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport hybrid vlan 2
```

4.3.5.35 switchport hybrid allowed vlan

Command:

```
switchport hybrid allowed vlan [all | none | add <vlan_list> | remove <vlan_list> |  
except <vlan_list>]
```

switchport	Switching mode characteristics
hybrid	Change PVID for hybrid port
allowed	Set allowed VLAN characteristics when interface is in hybrid mode
<vlan_list>	VLAN IDs of the allowed VLANs when this port is in hybrid mode
add	Add VLANs to the current list

all	All VLANs
except	All VLANs except the following
none	No VLANs
remove	Remove VLANs from the current list

Default:

All

Usage Guide:To configure **VLAN list** of **Hybrid VLAN** for specific interface**Example:**To configure **VLAN list** (None) of **Hybrid VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport hybrid allowed vlan none
```

4.3.5.36 switchport mode

Command:

```
switchport mode { access | hybrid | private-vlan | trunk }
```

switchport Switching mode characteristics**forbidden** Adds or removes forbidden VLANs from the current list of forbidden VLANs**vlan** Add or modify VLAN entry in forbidden table.**remove** Remove from existing list.**<vlan_list>** VLAN IDs**Default:**

1

Usage Guide:To remove **forbidden VLAN ID** for specific interface**Example:**To remove **forbidden VLAN ID** (5) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport forbidden vlan remove 5
```


4.3.5.37 switchport mode hybrid acceptable-frame-type

Command:

```
switchport mode hybrid acceptable-frame-type [ all | vlan-tagged | vlan-untagged ]
```

all Allow all frames
vlan-tagged Allow only tagged frames
vlan-untagged Allow only untagged frames

Default:

All

Usage Guide:

To configure **acceptable-frame-type** of **hybrid VLAN** for specific interface

Example:

To configure **acceptable-frame-type** (all) of **hybrid VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode hybrid acceptable-frame-type all
```

4.3.5.38 switchport mode trunk acceptable-frame-type

Command:

```
switchport mode trunk acceptable-frame-type [ all | vlan-tagged ]
```

all Allow all frames
vlan-tagged Allow only tagged frames

Default:

All

Usage Guide:

To configure **acceptable-frame-type** of **trunk VLAN** for specific interface

Example:

To configure **acceptable-frame-type** (all) of **trunk VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode trunk acceptable-frame-type all
```

4.3.5.39 switchport mode access acceptable-frame-type

Command:

```
switchport mode access acceptable-frame-type [ all | vlan-untagged ]
```

all Allow all frames

vlan-untagged Allow only untagged frames

Default:

All

Usage Guide:

To configure **acceptable-frame-type** of **access VLAN** for specific interface

Example:

To configure **acceptable-frame-type** (all) of **access VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode access acceptable-frame-type all
```

4.3.5.40 switchport mode hybrid ingress-filter

Command:

```
switchport mode hybrid ingress-filter [disable | enable ]
```

disable Disable ingress filtering

enable Enable ingress filtering

Default:

Disabled

Usage Guide:

To configure **ingress filter** of **hybrid VLAN** for specific interface

Example:

To configure **ingress filter** (enabled) of **hybrid VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode hybrid ingress-filter enable
```

4.3.5.41 switchport mode trunk ingress-filter

Command:

```
switchport mode trunk ingress-filter [disable | enable ]
```

disable Disable ingress filtering

enable Enable ingress filtering

Default:

Disabled

Usage Guide:

To configure **ingress filter** of **trunk VLAN** for specific interface

Example:

To configure **ingress filter** (enabled) of **trunk VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode trunk ingress-filter enable
```

4.3.5.42 switchport mode access ingress-filter

Command:

```
switchport mode access ingress-filter [disable | enable ]
```

disable Disable ingress filtering

enable Enable ingress filtering

Default:

Disabled

Usage Guide:

To configure **ingress filter** of **access VLAN** for specific interface

Example:

To configure **ingress filter** (enabled) of **access VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-if) # switchport mode access ingress-filter enable
```

4.3.5.43 switchport port-security

Command:

```
switchport port-security {mac-address <mac> vlan <vlan id> | maximum <1-1024>}
```

mac-address Secure MAC address

<mac> MAC address in HHHH.HHHH.HHHH format

vlan VLAN.

<vlan id> VLAN ID

maximum Max secure addresses

<1-1024> Maximum addresses

Default:

N/A

Usage Guide:

To configure **switchport port-security mode** for **specific interface**

Example:

To configure **switchport port-security mode** (2 entries) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport port-security maximum 2
```

4.3.5.44 switchport private-vlan

Command:

```
switchport private-vlan [host-association | mapping] <vlan_list> add <vlan_list>
```

host-association Host-association

mapping Mapping

add Switching mode characteristics

<vlan_list> VLAN IDs

Default:

N/A

Usage Guide:

To configure **private VLAN host-association** for specific interface

Example:

To configure **private VLAN host-association** (Primary VLAN: 4, Secondary VLAN: 5, host mode) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport private-vlan host-association 4 add 5
```

4.3.5.45 switchport private-vlan host-associationGG

Command:

```
switchport private-vlan [host-association | mapping] <vlan_list> add <vlan_list>
```

host-association Host-association
mapping Mapping
add Switching mode characteristics
<vlan_list> VLAN IDs

Default:

N/A

Usage Guide:

To configure **private VLAN host-association** for specific interface

Example:

To configure **private VLAN host-association** (Primary VLAN: 4, Secondary VLAN: 5) for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport private-vlan host-association 4 add 5
```

4.3.5.46 switchport trunk allowed vlan

Command:

```
switchport trunk allowed vlan [none | add <vlan_list> | remove <vlan_list> | except <vlan_list>]
```

<vlan_list> VLAN IDs of the allowed VLANs when this port is in hybrid mode
add Add VLANs to the current list
except All VLANs except the following
none No VLANs
remove Remove VLANs from the current list

Default:

All

Usage Guide:To configure **VLAN list** of **trunk VLAN** for specific interface**Example:**To configure **VLAN list** (Add VLAN ID6) of **trunk VLAN** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # switchport trunk allowed vlan add 6
```

4.3.5.47 vlan classifier activate

Command:

```
vlan classifier activate [ip-subnet-vlan | mac-vlan | protocol-vlan]
```

ip-subnet-vlan IP-subnet VLAN
mac-vlan MAC based VLAN
protocol-vlan Protocol based VLAN

Default:

N/A

Usage Guide:To configure **VLAN type mode** for specific interface**Example:**To configure **VLAN type mode (MAC-based VLAN)** for **ge4**

```
Switch# configure terminal
Switch (config)# interface ge4
Switch (config-ge4) # vlan classifier activate mac-vlan
```

4.3.6 interface sa | po

Command:

```
interface sa | po
```

sa static aggregation group
po LACP group

Default:

N/A

Usage Guide:

To enter the aggregation group.

Example:

To enter the aggregation group(po1)

```
Switch# configure terminal
Switch (config)# interface po1
Switch (config-po1)#
```

4.3.6.1 port-channel load-balance

Command:

```
port-channel load-balance { dst-ip | dst-mac | src-dst-ip | src-dst-mac | src-ip |
src-mac }
```

dst-ip Destination IP address based load balancing**dst-mac** Destination Mac address based load balancing**src-dst-ip** Source and Destination IP address based load balancing**src-dst-mac** Source and Destination Mac address based load balancing**src-ip** Source IP address based load balancing**src-mac** Source Mac address based load balancing**Default:**

N/A

Usage Guide:To configure **load-balance rule** for groups.**Example:**To configure **load-balance rule(dst-ip)** for groups **sa1**

```
Switch# configure terminal
Switch (config)# interface sa1
Switch (config-sa1) # port-channel load-balance dst-ip
```

4.3.6.2 static-channel-group member

Command:

```
static-channel-group member { add | remove }
```

- add** Add aggregator member
- remove** Remove aggregator member

Default:

N/A

Usage Guide:

To configure **static-channel-group member** for groups.

Example:

To add **static-channel-group member (ge10)** for groups **sa1**

```
Switch# configure terminal
Switch (config)# interface sa1
Switch (config-sa1) # static-channel-group member add interface ge10
```

4.3.7 interface vlan1

Command:

```
interface vlan1
```

Vlan1 VLAN 1 interface configurations

Default:

N/A

Usage Guide:

To enter the **VLAN 1 interface mode**.

Example:

To enter the **VLAN 1 interface mode**

```
Switch# configure terminal
Switch (config)# interface vlan1
Switch (config-vlan1)#
```

4.3.7.1 arp-ageing-timeout

Command:

```
arp-ageing-timeout <100-3000>
```

<100-3000> ARP Ageing timeout in sec

Default:

300seconds

Usage Guide:To configure **ARP age time** for the **vlan1**.**Example:**To configure **ARP age time(200seconds)** for the **vlan1**.

```
Switch# configure terminal
Switch (config)# interface vlan1
Switch (config-vlan1) # arp-ageing-timeout 200
```

4.3.7.2 end

Command:

```
end
```

end Go back to EXEC mode

Default:

Auto

Usage Guide:To back to **EXEC mode****Example:**To back to **EXEC mode**

```
Switch# configure terminal
Switch (config)# interface vlan X
Switch (config-vlan1)# end
Switch#
```

4.3.7.3 exit

Command:

```
exit
```

exit Exit from current mode

Default:

None

Usage Guide:

To exit current mode

Example:

To exit current mode.

```
Switch# configure terminal
Switch (config)# interface vlan X
Switch (config-vlan1)# exit
Switch (config)#
```

4.3.7.4 ip address

Command:

```
ip address <ip >
```

<ip > IP address (e.g. 10.0.0.1/8)

Default:

192.168.0.100/24

Usage Guide:

To configure **IP address** for vlan1.

Example:

To configure **IP address (192.168.0.100/24)** for vlan1

```
Switch# configure terminal
Switch (config)# interface vlan1
Switch (config- vlan1) # ip address 192.168.0.100/24
```

4.3.8 ip dhcp snooping

Command:

```
ip dhcp snooping { [binding vlan <VLAN ID> interface <Port> <IP address> <MAC address>] | database write-delay <15-86400> | errdisable recovery cause dhcp-rate-limit | errdisable recovery interval <1-3600> | verify mac-address | vlan <VLAN ID> }
```

binding vlan DHCP-snooping binding entry

<VLAN ID> VLAN ID

<Port>	Port
<IP address>	IP address
<MAC address>	MAC address
database write-delay	DHCP-snooping write-delay
<15-86400>	Delay time to write(default: 30s)
errdisable recovery cause dhcp-rate-limit	DHCP-snooping -rate-limit
errdisable recovery interval	DHCP-snooping interval
<1-3600>	DHCP-snooping interval(default: 30)
verify mac-address	DHCP-snooping verify
vlan	VLAN

Default:

N/A

Usage Guide:

To enable DHCP-snooping for VLAN

Example:

To enable DHCP-snooping for VLAN ID 1

```
Switch# configure terminal
Switch (config)# ip dhcp snooping vlan 1
```

4.3.9 ip igmp snooping

Command:

```
ip igmp snooping { delay-time <0-260> vlan <VLAN ID> | fast-leave vlan <VLAN ID> |
last-member-query-count <2-7> vlan <VLAN ID> | last-member-query-interval
<1000-25500> vlan <VLAN ID> | mrouter interface <Port> vlan <VLAN ID> |
multicast-vlan interface vlan <VLAN ID> | querier vlan <VLAN ID> |
querier-timeout <60-300> vlan <VLAN ID> | query-interval <1-18000> vlan <VLAN ID>
| query-max-response-time <1-25> vlan <VLAN ID> | report-suppression vlan <VLAN
ID> | robustness-variable <2-7> vlan <VLAN ID> | source-ip <IP> vlan <VLAN ID> |
static-group <IP> vlan <VLAN ID> | version <1-3> vlan <VLAN ID> | vlan <VLAN ID> }
```

delay-time	Delay time for dynamic leave group record
fast-leave	Fast Leave Processing
last-member-query-count	Last Member Query Count
last-member-query-interval	Last Member Query Interval
limit	IGMP Limit
mrouter	Multicast Router

multicast-vlan	IGMP Snooping Multicast vlan
querier	Querier
querier-timeout	IGMP previous querier timeout
query-interval	Query Interval
query-max-response-time	IGMP Max Query Response Time
report-suppression	IGMPv1/V2 Report Suppression
robustness-variable	Robustness Variable
source-ip	Source IP for Querier
static-group	Static Group to be Joined
version	IGMP Version
vlan	Identify the VLAN to use

<0-260> Delay time(default:12s)

<VLAN ID> VLAN ID

<2-7> Last Member Query Count value (Default: 2)

<1000-25500> Last Member Query Interval value (Default: 1000 ms)

<Port> Port

<60-300> IGMP previous querier timeout value

<1-18000> Query Interval value (Default: 125 s)

<1-25> Query Reponse Time (Default: 10 s)

<IP> Multicast IP

<1-3> Version Number (Default: 3)

Default:

N/A

Usage Guide:

To configure **IGMP snooping settings**.

Example:

To configure **Router port for ge2 and VLAN 1**.

```
Switch# configure terminal
Switch (config)# ip igmp snooping mrouter interface ge2 vlan 1
```

4.3.10 ip interface vlan

Command:

```
ip interface vlan <VLAN ID>
```

<VLAN ID> VLAN ID

Default:

N/A

Usage Guide:

To enable IP VLAN interface.

Example:

To enable IP VLAN interface(VLAN 2).

```
Switch# configure terminal
Switch (config)# ip interface vlan 2
```

4.3.11 ip route

Command:

```
ip route <IP Network> <Next Hop>
```

<IP Network> IP Network

<Next Hop> Next Hop

Default:

N/A

Usage Guide:

To configure static route.

Example:

To configure static route(Network: 192.168.1.0/24, Next Hop: 192.168.0.10).

```
Switch# configure terminal
Switch (config)# ip route 192.168.1.0/24 192.168.0.10
```

4.3.12 lacp system-priority

Command:

```
lacp system-priority <1-65535>
```

<1-65535> LACP system priority <1-65535> default 32768

Default:

32768

Usage Guide:

To configure system priority of LACP.

Example:

To configure system priority (32768) of LACP.

```
Switch# configure terminal
Switch (config)# lACP system-priority 32768
```

4.3.13 line vty

Command:

```
line vty
```

Default:

N/A

Usage Guide:

To enter **line mode**

Example:

To enter **line mode (vty)**

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)#
```

4.3.13.1 login local

Command:

```
login local
```

Default:

Enable

Usage Guide:

To enable password checking for **VTY**

Example:

To enable password checking for **VTY**

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)# login local
```

4.3.13.2 connected count

Command:

```
connected count <0-15>
```

exec-banner Input the number between 0 to 15

Default:

Enabled

Usage Guide:

To enable the **connected count** of the **VTY**

Example:

To enable the **connected count(15)** of the **VTY**

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)# connected count 15
```

4.3.13.3 exec-timeout

Command:

```
exec-timeout < 0-35791 >
```

< 0-35791 > Timeout in minutes

Default:

N/A

Usage Guide:

To configure **EXEC timeout**

Example:

To configure **EXEC timeout** (10 minutes)

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)# exec-timeout 10
```

4.3.13.4 executed number

Command:

```
executed number <1-2000>
```

<1-2000> Timeout in minutes

Default:

N/A

Usage Guide:

To configure **EXEC number**

Example:

To configure **EXEC number** (2000)

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)# executed number 2000
```

4.3.13.5 exit

Command:

```
exit
```

exit Exit from current mode

Default:

None

Usage Guide:

To exit current mode

Example:

To exit current mode.

```
Switch# configure terminal
Switch (config)# line vty
Switch (config-line)# exit
Switch (config)#
```

4.3.14 lldp

Command:

```
lldp { enable | timer <5-300> }
```

enable Enable LLDP

timer Set the interval at which packets are sent
<5-300> Rate at which LLDP packets are sent (in sec)

Default:

N/A

Usage Guide:To configure the **LLDP**.**Example:**To enable the **LLDP**.

```
Switch# configure terminal
Switch (config)# lldp enable
```

4.3.15 logging host

Command:

```
logging host <hostname> | <ipv4_ucast>
```

logging Syslog**host** host**<hostname>** Domain name of the log server**<ipv4_ucast>** IP address of the log server**Default:**

0

Usage Guide:To configure address of **log server****Example:**To configure address of **log server**

```
Switch# configure terminal
Switch (config)# logging host 192.168.5.5
```

4.3.16 logging record-priority

Command:

```
logging record-priority
```

Default:

Disabled

Usage Guide:

To enable **logging record-priority**

Example:

To enable **logging record-priority**

```
Switch# configure terminal
Switch (config)# logging record-priority
```

4.3.17 mac-address-table ageing-time

Command:

```
mac-address-table ageing-time <0,10-1000000>
```

<0,10-1000000> Aging time in seconds, 0 disables aging

Default:

300

Usage Guide:

To configure **Aging Time of MAC Address Table**

Example:

To configure **Aging Time (888) of MAC Address Table**

```
Switch# configure terminal
Switch (config)# mac-address-table ageing-time 888
```

4.3.18 mac address-table static

Command:

```
mac address-table static <mac_addr> vlan <vlan_id> [interface <port_type_list> |
drop]
```

<mac_addr> MAC address
vlan VLAN keyword
<vlan_id> VLAN IDs 1-4095
interface Select an interface to configure
<port_type_list> Port list
drop drop frames

Default:

N/A

Usage Guide:To configure **Static MAC Address Table****Example:**To configure **Static MAC Address Table(Drop MAC address: 0033.4455.5555, VLAN 1)**.

```

Switch# configure terminal
Switch (config)# mac-address-table static 0033.4455.5555 vlan 1 drop
  
```

4.3.19 multiple-spanning-tree enable

Command:

```
multiple-spanning-tree enable
```

Default:

Disabled

Usage Guide:To enable **MSTP****Example:**To enable **MSTP**

```

Switch# configure terminal
Switch (config)# multiple-spanning-tree enable
  
```

4.3.20 no

Command:

```
no
```

no Negate a command or set its defaults

Default:

N/A

Usage Guide:

To default the function

Example:

To disable the function (**mac-address-table static 0033.4455.5555 vlan 1 drop**)

```
Switch# configure terminal
Switch (config)# no mac-address-table static 0033.4455.5555 vlan 1 drop
```

4.3.21 service advanced-vty

Command:

```
service advanced-vty
```

Default:

Disabled

Usage Guide:

To enable the advanced mode vty interface

Example:

To enable the advanced mode vty interface

```
Switch# configure terminal
Switch (config)# service advanced-vty
```

4.3.22 service terminal length

Command:

```
service terminal length <lines>
```

<lines: 0 or 3-512> Number of lines of VTY (0 means no line control)

Default:

N/A

Usage Guide:

To configure length of command display for current terminal session.

Example:

To configure length of command display with 5 lines for current terminal session.

```
Switch # service terminal length 5
```

4.3.23 snmp-server community

Command:

```
snmp-server community <comm> [ ro | rw ]
```

<comm> Community word

ro Read only

rw Read write

Default:

None

Usage Guide:

To configure the **Read / Write / Source network Community** of **SNMP**

Example:

To configure the **Read / Write / Source network Community** (Read only, Community: 22) of **SNMP**

```
Switch# configure terminal
Switch (config)# snmp-server community 22 ro
```

4.3.24 snmp-server contact

Command:

```
snmp-server contact <line>
```

<line> contact string

Default:

None

Usage Guide:

To configure the **sysContact string** of **SNMP**

Example:

To configure the **sysContact string** (Server123) of **SNMP**

```
Switch# configure terminal
Switch (config)# snmp-server contact Server123
```

4.3.25 snmp-server enable traps

Command:

```
snmp-server enable traps
```

Default:

Disabled

Usage Guide:

To enable the SNMP trap Service

Example:

To enable the SNMP trap Service

```
Switch# configure terminal
Switch (config)# snmp-server enable traps
```

4.3.26 snmp-server group

Command:

```
snmp-server group <group_name> v3 { auth | noauth | priv }
```

<GroupName> group name

v3 v3 security model

auth authNoPriv Security Level

noauth noAuthNoPriv Security Level

priv authPriv Security Level

Default:

None

Usage Guide:

To configure the **Group** of **SNMP**

Example:

To configure the **Group** (Level: Auth, Group: qq) of **SNMP**

```
Switch# configure terminal
Switch (config)# snmp-server group qq v3 auth
```

4.3.27 snmp-server host

Command:

```
snmp-server host <IP> <conf_name>
```

<IP> SNMP host's IP address

<conf_name> Name of the host configuration

Default:

None

Usage Guide:

To configure the **SNMP Trap Configuration**

Example:

To configure the **SNMP Trap Configuration (below table)**

Traps Host	Group Name
192.168.0.4	www

```
Switch# configure terminal
Switch (config)# snmp-server host 192.168.0.4 traps www
```

4.3.28 snmp-server location

Command:

```
snmp-server location <line>
```

<line> contact string

Default:

None

Usage Guide:

To configure the **sysLocation** string of **SNMP**

Example:

To configure the **sysLocation** string (**Server123**) of **SNMP**

```
Switch# configure terminal
Switch (config)# snmp-server location Server123
```

4.3.29 static-channel-group

Command:

```
static-channel-group <1-32>
```

<1-32> Channel group number

Default:

Disabled

Usage Guide:

To enable the **static-channel-group ID**

Example:

To enable the **static-channel-group ID 1**

```
Switch# configure terminal
Switch (config)# static-channel-group 1
```

4.3.30 system-monitor debug

Command:

```
system-monitor debug
```

Default:

Disable

Usage Guide:

To enable the **system-monitor** of **debug mode**

Example:

To enable the **system-monitor** of **debug mode**

```
Switch# configure terminal
Switch (config)# system-monitor debug
```


4.3.31 username

Command:

```
username <username> password <password>
```

username Establish User Name Authentication

<username > Define username

password Specify the password for the user

<Password> Define password

Default:

Username: admin

Password: admin

Usage Guide:

To configure the **Profiles of Username**

Example:

To configure the **Profiles of Username (Username: aa, Password: bb)**

```
Switch# configure terminal
Switch (config)# username aa password bb

Username: aa
Password: bb
#
```

4.3.32 vlan classifier rule

Command:

```
vlan classifier rule {<1-999> mac <mac> vlan <vlan>} | {<1000-1999> ipv4 <ipv4
subnet> vlan <vlan>} | {<2000-2099> proto [<0-65535> | arp | atalkarp | atalkddp |
atmmulti | atmtransport | dec |deccustom | decdiagnostics | decdnadumpload
decnareMOTEconsole | decdnarouting | declat | decsyscomm | g8bpqx25 |
ieeeaddrtrans | ieeeppup | ip | ipv6 | ipx | pppdiscovery | pppsession | rarp | x25
| xeroxaddrtrans | xeroxpup ] encap [ethv2 | nosnapllc | snapllc] vlan <vlan>}
```

<1-999> MAC-based VLAN rule ID

mac MAC address

<mac> MAC address in HHHH.HHHH.HHHH format

vlan VLAN ID

<vlan>	VLAN ID
<1000-1999>	IP Subnet-based VLAN rule ID
ipv4	IP address
<ipv4 subnet>	IP address in A.B.C.D/M format
<2000-2099>	Protocol-based VLAN rule ID
proto	proto - specify an ethernet protocol classification
<2000-2099>	Protocol-based VLAN rule ID
<0-65535>	ethernet decimal
arp	protocol - Address Resolution
atalkarp	protocol - Appletalk AARP
atalkddp	protocol - Appletalk DDP
atmmulti	protocol - MultiProtocol Over ATM
atmtransport	protocol - Frame-based ATM Transport
dec	protocol - DEC Assigned
deccustom	protocol - DEC Customer use
decdiagnostics	protocol - DEC Diagnostics
decdnadumpload	protocol - DEC DNA Dump/Load
decdnareMOTEconsole	protocol - DEC DNA Remote Console
decdnarouting	protocol - DEC DNA Routing
declat	protocol - DEC LAT
decsyscomm	protocol - DEC Systems Comms Arch
g8bpqx25	protocol - G8BPQ AX.25
ieeeaddrtrans	protocol - Xerox IEEE802.3 PUP Address Translation
ieeepup	protocol - Xerox IEEE802.3 PUP
ip	protocol - IP
ipv6	protocol - IPv6
ipx	protocol - IPX
pppdiscovery	protocol - PPPoE discovery
pppsession	protocol - PPPoE session
rarp	protocol - Reverse Address Resolution
x25	protocol - CCITT X.25
xeroxaddrtrans	protocol - Xerox PUP Address Translation
xeroxpup	protocol - Xerox PUP
encap	encap - specify packet encapsulation
ethv2	ethernet v2
nosnapllc	IEEE802.2LLC
snapllc	IEEE802.2LLC + SNAP

Default:

None

Usage Guide:

To define specific rules for classifying frames to selected VLANs based on IP, protocol and MAC addresses

Example:

To configure the **MAC address (00:30:44:44:55:55)** for **MAC-based VLAN 2**

```
Switch# configure terminal
Switch (config)# vlan classifier rule 1 mac 0030.4444.5555 vlan 2
```

4.3.33 vlan database

Command:

```
Switch(config)#vlan database
Switch(config-vlan)# {vlan <2-4094> | private-vlan <2-4094> [association | community |
isolated | primary]}
```

vlan database Configure VLAN database

vlan VLAN ID

<2-4094> Create VLAN ID

private-vlan VLAN ID

association Set vlan type to secondary VLAN

community Set vlan type to community VLAN

isolated Set vlan type to isolated VLAN

primary Set vlan type to primary VLAN

Default:

N/A

Usage Guide:

To create the **VLAN ID** of **VLAN**

Example:

To create the **VLAN ID (2, 3, 4, 5)** of **VLAN**

```
Switch# configure terminal
Switch (config)# vlan database
Switch(config-vlan)# vlan 2-5
```

4.3.34 web

Command:

```
web {disable | enable | max-connect <1-8> | refresh-interval <100-10000> }
```

disable disable web function
enable enable web function
max-connect max-connect
<1-8> max num of connect
refresh-interval refresh-interval
<100-10000> time of refresh interval (default 1000 ms)

Default:

N/A

Usage Guide:To configure the **web service****Example:**To disable the **web service**

```
Switch# configure terminal
Switch (config)# web disable
```

4.4 copy

4.4.1 copy

Command:

```
copy { flash| tftp |startup-config | running-config | <source_path> } { startup-config |
running-config | <destination_path> | flash| tftp } [ syntax-check ]
```

copy Copy from source to destination
flash:filename | tftp://server/path-and-filename File in FLASH or on TFTP server
running-config Currently running configuration
startup-config Startup configuration Output modifiers
syntax-check Perform syntax check on source configuration

Default:

None

Usage Guide:

To copy configuration from source to destination

Example:To copy configuration from source (**running-config**) to destination (**startup-config**)

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

4.5 debug

4.5.1 debug arp

Command:

```
debug arp
```

arp IP ARP and switch transactions

Default:

None

Usage Guide:

To enable debug mode of **ARP**

Example:

To enable debug mode of **ARP**

```
Switch # debug arp
```

4.5.2 debug igmp snooping

Command:

```
debug igmp snooping all | decode | encode | event | fsm | recv | send | tib
```

all Enable all debugging

decode IGMP Snooping packet decode

encode IGMP Snooping packet encode

event IGMP Snooping event

fsm IGMP Snooping FSM

recv IGMP Snooping packet receive

send IGMP Snooping packet send

tib IGMP Snooping Tree-Info-Base (TIB)

Default:

None

Usage Guide:

To enable debug mode of **IGMP snooping**

Example:

To enable debug mode of **IGMP snooping**

```
Switch # debug igmp snooping
```

4.5.3 debug ip

Command:

```
debug ip dhcp | icmp | packet | tcp | udp
```

dhcp DHCP based transactions

icmp ICMP transactions

packet IP packets

tcp TCP information

udp UDP based transactions

Default:

None

Usage Guide:

To enable debug mode of **IP**

Example:

To enable debug mode of **ICMP**

```
Switch # debug ip icmp
```

4.5.4 debug lacp

Command:

```
debug lacp all | cli | event | message | packet | snmp | sync | timer
```

all all - turn on all debugging

cli cli - echo commands to console

event event - echo events to console

message message - echo lacp message to console

packet packet - echo packet contents to console

snmp snmp debugging

sync sync - echo synchronization to console

timer timer - echo timer to console

Default:

None

Usage Guide:To enable debug mode of **LACP****Example:**To enable debug mode of **LACP**

```
Switch # debug lacp all
```

4.5.5 debug lldp

Command:

```
debug lldp all | events | packet | protocol
```

all Turn on all LLDP debugging**events** LLDP events**packet** LLDP packets**protocol** LLDP protocol**Default:**

None

Usage Guide:To enable debug mode of **LLDP****Example:**To enable debug mode of **LLDP**

```
Switch # debug lldp
```

4.5.6 debug mstp

Command:

```
debug mstp all | cli | message | packet | protocol | roles | snmp | state | timer
```

all all**cli** CLI Commands**message** message

packet	MSTP Packets
protocol	Protocol
roles	MSTP Role
snmp	snmp debugging
state	MSTP State
timer	MSTP Timers

Default:

None

Usage Guide:To enable debug mode of **MSTP****Example:**To enable debug mode of **MSTP**

```
Switch # debug mstp all
```

4.5.7 debug pkt filter

Command:

```
debug pkt filter
```

Default:

None

Usage Guide:To enable debug mode of **packet filter****Example:**To enable debug mode of **packet filter**

```
Switch # debug pkt filter
```

4.5.8 debug snmp

Command:

```
debug snmp all | detail | error-string | cess | receive | send | xdump
```

all all debugging (included hexa-dump and error-string)

detail	Detail debugging
error-string	Error string display
cess	Packet process
receive	Packet receive
send	Packet send
xdump	Packet hexa dump

Default:

None

Usage Guide:To enable debug mode of **SNMP****Example:**To enable debug mode of **SNMP**

```
Switch # debug snmp all
```

4.6 disable

4.6.1 disable

Command:

```
disable
```

Default:

None

Usage Guide:To exit **enable mode****Example:**To exit **enable mode**

```
Switch # disable  
Switch >
```

4.7 dump

4.7.1 dump running-state

Command:

```
dump running-state
```

Default:

None

Usage Guide:

To dump the **running status**

Example:

To dump the **running status**

```
Switch # dump running-state
```

4.8 enable

4.8.1 enable

Command:

```
enable
```

enable Turn on privileged commands

Default:

None

Usage Guide:

To enter **enable mode**

Example:

To enter **enable mode**

```
Switch > enable
```

```
Switch #
```

4.9 erase

4.9.1 erase

Command:

```
erase {file | private-config | startup-config}
```

file The file on flash

private-config Erase configuration in NV memory

startup-config Erase configuration in NV memory

Default:

None

Usage Guide:

To erase data of **Flash**

Example:

To erase startup-config to **default factory configuration(Factory Reset)**

```
Switch # erase startup-config
erase startup-config? (y/n): y
```

4.10 exit

4.10.1 exit

Command:

```
exit
```

exit Exit from EXEC mode

Default:

None

Usage Guide:

To exit EXEC mode

Example:

To exit EXEC mode

```
Switch # disable
```

```
Switch > exit
```

```
Press ENTER to get started
```

4.11 no

4.11.1 no

Command:

```
no
```

no Negate a command or set its defaults

Default:

N/A

Usage Guide:

To default the function

Example:

To disable the function (**lACP system-priority 1**)

```
Switch# no lACP system-priority 1
```

4.12 ping

4.12.1 ping

Command:

```
ping <ip_addr>
```

<ip_addr> ICMP destination address

Default:

N/A

Usage Guide:

To run the **IPv4 Ping** function

Example:

To run the **IPv4 Ping** (192.168.0.5) function

```

Switch# ping 192.168.0.5
PING 192.168.0.5 (192.168.0.5): 100 data bytes
100 bytes from 192.168.0.5: icmp_seq=0 time=1.763 ms
100 bytes from 192.168.0.5: icmp_seq=1 time=0.957 ms
100 bytes from 192.168.0.5: icmp_seq=2 time=1.313 ms
100 bytes from 192.168.0.5: icmp_seq=3 time=0.931 ms
100 bytes from 192.168.0.5: icmp_seq=4 time=1.280 ms
----192.168.0.5 PING Statistics----
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.931/1.248/1.763 ms

```

4.13 reboot

4.13.1 reboot

Command:

```
reboot {unconditionally}
```

unconditionally no interactivity

Default:

None

Usage Guide:

To **reboot** the switch

Example:

To **reboot** the switch

```

Switch # reboot
System configuration has been modified. Save? [y/n]: y
Building configuration...
[OK!]
Proceed with reboot? [y/n]y

```

4.14 show

4.14.1 show cpuusage

Command:

```
show cpuusage
```

Default:

N/A

Usage Guide:

To display the **CPU usage**.

Example:

To display the **CPU usage**.

```
Switch # show cpuusage  
cpu0: 32%
```

4.14.2 show debugging

Command:

```
show debugging
```

Default:

N/A

Usage Guide:

To display **debugging functions**.

Example:

To display **debugging functions**.

```
Switch # show debugging  
NSM debugging status:  
  Snmp debugging is off  
  
LLDP debugging status:  
  
IGMP Snooping Debugging status:  
  
LACP debugging status:
```

```
Snmp debugging is off
```

```
MSTP debugging status:
```

```
Snmp debugging is off
```

```
DHCP snooping debugging status:
```

4.14.3 show flowcontrol

Command:

```
show flowcontrol
```

Default:

N/A

Usage Guide:

To display **IEEE 802.3x Flow Control Statistics**.

Example:

To display **IEEE 802.3x Flow Control Statistics**.

```
Switch # show flowcontrol
```

Port	Send FlowControl	Receive FlowControl	RxPause	TxPause
	admin oper	admin oper		
----	-----	-----	-----	-----

4.14.4 show history

Command:

```
show history
```

Default:

N/A

Usage Guide:

To display the **command** history.

Example:

To display the **command** history.

```

Switch # show history

service terminal-length 1

do sh ru

service terminal-length

snmp-server community 22 ro

snmp-server contact snmp-server contact Server123

snmp-server contact Server123

snmp-server enable traps

snmp-server group qq

snmp-server group qq v3 auth

snmp-server host 192.168.0.4

snmp-server host 192.168.0.4 traps www

snmp-server location 123

snmp-server location Server123

show cpuusage

show debugging

show flash

show flow

show flowcontrol

show history

```

4.14.5 show interface

Command:

```
show interface [<port_type_list> | switchport]
```

<port_type_list> port_type_list

switchport Show interface switchport information

Default:

N/A

Usage Guide:

To display the **interface** information.

Example:

To display the **interface** information for **interface ge1**.

```
Switch # show interface ge1
```

```
Interface ge1
```



```

Hardware is Ethernet, address is 005e.be00.05b4 (bia 005e.be00.05b4)
index 5001 metric 1 jumbo-frame 13312 duplex-half
<UP,BROADCAST,MULTICAST>
VRF Binding: Not bound
DHCP client: no started
input packets 00, bytes 00, dropped 00, multicast packets 00
output packets 00, bytes 00, multicast packets 00 broadcast packets 00

```

4.14.6 show ip arp

Command:

```
show ip arp
```

Default:

N/A

Usage Guide:

To display the **ARP table**.

Example:

To display the **ARP table** for all.

```

Switch # show ip arp
192.168.0.45 via VLAN1:d4-3d-7e-fd-e3-ac
192.168.0.78 via VLAN1:00-30-4f-97-72-2d

```

4.14.7 show ip dhcp snooping

Command:

```
show ip dhcp snooping
```

Default:

N/A

Usage Guide:

To display the **DHCP Snooping** configuration.

Example:

To display the **DHCP Snooping** configuration.

```
Switch # show ip dhcp snooping
switch DHCP snooping is enabled
DHCP snooping is configured on following VLANs:
1
Verification of hwaddr field is enabled
```

4.14.8 show ip igmp snooping

Command:

```
show ip igmp snooping [ vlan <vlan_list> ] [ group ( vlan <vlan_list> ) ] [ mrouter
( vlan <vlan_list> ) ] [ querier ( vlan <vlan_list> ) ]
```

group IGMP Snooping group information
mrouter IGMP Snooping Mrouter information
querier IGMP Snooping Querier information
vlan Identify the VLAN to use

Default:

N/A

Usage Guide:

To display the **IGMP Snooping** information.

Example:

To display the **IGMP Snooping** information (Querier mode, VLAN 1).

```
Switch # show ip igmp snooping querier vlan 1
Global IGMP Snooping Querier Configuration
-----

vlan :1
-----

Admin State                :Disable
Querier IP Address         :0.0.0.0
Last-Member-Query-Count   :2
Last-Member-Query-Interval :1000(ms)
Query Interval             :125(s)
Other Querier Interval     :255(s)
Query Response Time        :10(s)
```

4.14.9 show ip interface brief

Command:

```
show ip interface brief
```

brief Brief IP interface status

Default:

N/A

Usage Guide:

To display the **IP interface status**.

Example:

To display the **IP interface status**.

```
Switch # show ip interface brief
Interface          IP-Address      Status          Protocol
ge1                 unassigned     up              down
ge2                 unassigned     up              down
```

4.14.10 show ip route

Command:

```
show ip route
```

Default:

N/A

Usage Guide:

To display the **IP Routing table**.

Example:

To display the **IP Routing table**.

```
Switch # show ip route
Codes: C - connected, S - static, R - RIP, B - BGP
       O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default

Gateway of last resort is 192.168.0.254 to network 0.0.0.0
```

```

S*    0.0.0.0/0 [1/0] via 192.168.0.254, vlan1
C     127.0.0.0/8 is directly connected, lo
C     192.168.0.0/24 is directly connected, vlan1
S     192.168.1.0/24 [1/0] via 192.168.0.10, vlan1

```

4.14.11 show lacp

Command:

```
show lacp { counter | etherchannel | port | sys-id }
```

counter LACP counters

etherchannel LACP channel commands

port port commands

sys-id sys-id - LACP system id and priority

Default:

N/A

Usage Guide:

To display the **LACP counter** information.

Example:

To display the **LACP counter** information.

```

Switch # show lacp counter
% Traffic statistics
Port      LACPDUs      Marker      Pckt err
          Sent  Recv   Sent  Recv   Sent  Recv

```

4.14.12 show lldp

Command:

```
show lldp { local-information | neighbor | running-info | traffic }
```

local-information port commands

neighbor LLDP neighbor information

running-info port commands

traffic LLDP traffic

Default:

N/A

Usage Guide:To display the **LLDP neighbor** information.**Example:**To display the **LLDP neighbor** information.

```
Switch # show lldp neighbor
LLDP Neighbors Number: 0
```

4.14.13 show logging

Command:

```
show logging
```

Default:

N/A

Usage Guide:To display the **Syslog** information.**Example:**To display the **Syslog** information

```
Switch # show logging
logging record_priority: enable
Log Buffer (1048576 bytes):
%Jan 01 02:31:19 GS-2240-24T4X: web client login from 192.168.0.5

%Jan 01 02:57:35 GS-2240-24T4X: vty login from 192.168.0.5
```

4.14.14 show mac address-table

Command:

```
show mac address-table { ageing-time | count }
```

ageing-time Aging time

count Total number of MAC addresses

Default:

N/A

Usage Guide:

To display the **MAC address table**.

Example:

To display the **MAC address table counter**.

```
Switch # show mac-address-table count
Mac-address-table count:
Static:    1
Dynamic:  1
```

4.14.15 show memory-utilization

Command:

```
show memory-utilization
```

Default:

N/A

Usage Guide:

To display the **System Memory** information.

Example:

To display the **System Memory** information.

```
Switch # show memory-utilization

MemTotal:      222672 kB
MemFree:       173656 kB
Buffers:       0 kB
Cached:        21552 kB
SwapCached:    0 kB
```

4.14.16 show mirror

Command:

```
show mirror
```

Default:

N/A

Usage Guide:

To display the **Port Mirroring** information.

Example:

To display the **Port Mirroring** information.

```
Switch # show mirror
```

4.14.17 show port-security

Command:

```
show port-security [address]
```

address Show secure address

Default:

N/A

Usage Guide:

To display the **MAC Addresses of Port Security**.

Example:

To display the **MAC Addresses of Port Security**.

```
Switch # show port-security address
Secure Port  MAC-ADDRESS      VLAN
-----  -

```

4.14.18 show privilege

Command:

```
show privilege
```

Default:

N/A

Usage Guide:

To display the **Privilege** information.

Example:

To display the **Privilege** information.

```
Switch # show privilege
```

4.14.19 show process

Command:

```
show process
```

Default:

N/A

Usage Guide:

To display the **System Process ID**.

Example:

To display the **System Process ID**.

```
Switch # show process
PID NAME          TIME FD
  1 nsm            00:08:59 9
 15 lacpd          00:08:55 11
 18 mstpd          00:08:56 10
 28 Dhcp-snooping 00:08:55 12
```

4.14.20 show running-config

Command:

```
show running-config [interface <list>] [switch{ bridge | lacp | mstp | vlan }
```

interface <list> Show specific interface(s)

bridge Bridge group commands

lacp Link Aggregation Control Protocol (LACP)

mstp Multiple Spanning Tree Protocol (MSTP)

vlan Add, delete, or modify values associated with a single VLAN

Default:

N/A

Usage Guide:

To display the **running-config**.

Example:

To display the **running-config**.


```

Switch # show running-config
!
!
spanning-tree mst config
!
no multiple-spanning-tree enable
!
interface lo
  mtu 32768
!
interface vlan1
  ip address 192.168.0.100/24
!
interface ge1
  jumbo-frame 13312

```

4.14.21 show snmp

Command:

```

show snmp {community | contact | engine-id | group | host | location | sub-agent |
user | view}

```

community show community information

contact contact

engine-id engineID of the local agent

group show SNMPv3 groups

host notify target information

location location

sub-agent sub agent

user show SNMPv3 users

view show SNMPv3 views

Default:

N/A

Usage Guide:

To display the **SNMP** information.

Example:

To display the **SNMP** information

```
Switch # show snmp
% SNMP agent not enabled
```

4.14.22 show spanning-tree mst

Command:

```
show spanning-tree mst [ brief | config | detailed [ interface <port_type> ] | instance
<1-15> | interface <port_type>
```

brief Display Brief information

config Display Configuration information

detail Display detailed information

instance Display instance information

interface Interface information

<1-15> instance_id

<port_type> Port Type

Default:

N/A

Usage Guide:

To display the **STP** information.

Example:

To display the **STP** information.

```
Switch # show spanning-tree mst brief
Multiple spanning tree protocol Disabled
%% MST 0      VLAN : 1
Root ID       32768-0011.2233.4457
Bridge ID     32768-0011.2233.4457
Reg Root ID   32768-0011.2233.4457
```

4.14.23 show startup-config

Command:

```
show startup-config
```

Default:

N/A

Usage Guide:

To display the **startup-config**.

Example:

To display the **startup-config**.

```
Switch # show startup-config
!
!
spanning-tree mst config
!
no multiple-spanning-tree enable
!
interface lo
  mtu 32768
!
interface vlan1
  ip address 192.168.0.100/24
!
interface ge1
  jumbo-frame 13312
```

4.14.24 show static-channel-group

Command:

```
show static-channel-group
```

Default:

N/A

Usage Guide:

To display the **Static channel**.

Example:

To display the **Static channel**.

```
Switch # show static-channel-group
```

4.14.25 show storm-control

Command:

```
show storm-control <port_type>
```

<port_type> Port Type

Default:

N/A

Usage Guide:

To display the **storm-control** configuration.

Example:

To display the **storm-control** configuration with **ge1**.

```
Switch # show storm-control ge1
Port      BcastLevel McastLevel DflLevel
ge1       disable   disable   disable
```

4.14.26 show system-runtime

Command:

```
show system-runtime
```

Default:

N/A

Usage Guide:

To display the **system-runtime** information.

Example:

To display the **system-runtime** information.

```
Switch # show system-runtime
The system running time:DAY:0 HOUR:0 MIN:39 SEC:26
```

4.14.27 show system

Command:

```
show system
```

Default:

N/A

Usage Guide:To display the **system time** information.**Example:**To display the **system time** information.

```
Switch # show systime
The current time:2000-01-01 00:40:05
```

4.14.28 show user

Command:

```
show user
```

Default:

N/A

Usage Guide:

To display the user status.

Example:

To display the user status for all.

```
Switch # show user
username admin      password *****
```

4.14.29 show version

Command:

```
show version
```

Default:

N/A

Usage Guide:To display the **software and system** information.**Example:**

To display the **software and system** information.

```
Switch # show verison

Version      : 1.0b151208
Created      : 2015-12-08 17:02:08
Product Name: GS-2240-48T4X
MAC Address  : 0011.2233.4455
DRAM SIZE   : 262144K bytes
FLASH SIZE  : 32768K bytes
Running Time: DAY:0 HOUR:0 MIN:41 SEC:58
```

4.14.30 show vlan

Command:

```
show vlan [ <vlan_list> | {classifier [interface <port_type> | rule <1-2999>] } |
private-vlan ]
```

- <vlan_list>** VLAN status by VLAN id
- <port_type>** Port Type
- classifier** VLAN classification commands
- interface** Interface vlan classifier activated on
- rule** VLAN classifier rule id
- <1-999>** VLAN classifier mac rule id
- <1000-1999>** VLAN classifier ipv4 rule id
- <2000-2999>** VLAN classifier protocol rule id
- private-vlan** Private VLAN information

Default:

N/A

Usage Guide:

To display the **VLAN** information.

Example:

To display the **Private VLAN** information.

```
Switch # show vlan private-vlan

PRIMARY      SECONDARY      TYPE(VLAN/IFP)  INTERFACES
-----      -
-----      -
-----      -
-----      -
```

4.15 systemtime

4.15.1 systemtime

Command:

```
systemtime <data> <time>
```

<data> Date format:2010-01-01

<time> Time format:23:59:59

Default:

None

Usage Guide:

To configure the **systemtime**

Example:

To configure the **systemtime**

```
Switch # systemtime 2015-02-02 22:45:45
```

4.16 telnet

4.16.1 telnet

Command:

```
telnet <ip> <1-65535>
```

<ip> host IP address (e.g. 10.0.0.1)

<1-65535> port

Default:

None

Usage Guide:

To run the **telnet client**

Example:

To run the **telnet client** to access 192.168.0.5

```
Switch # telnet 192.168.0.5 23
```

4.17 terminal

4.17.1 terminal length

Command:

```
terminal length <0-512>
```

<0-512> Number of lines on screen (0 for no pausing)

Default:

The default length is 24.

Usage Guide:

To use this command to set the number of lines to display on the screen.

Example:

To set the number of lines to display on the screen to **30**.

```
Switch # terminal length 30
```

4.17.2 terminal monitor

Command:

```
terminal (no) monitor
```

Default:

N/A

Usage Guide:

To use this command to enable or disable the display of the log and debug outputs on a terminal.

Example:

To enable the display of the log and the debug outputs on a terminal.

```
Switch # terminal monitor
```


4.18 trace-route

4.18.1 trace-route

Command:

```
trace-route <ip>
```

<ip> host IP address (e.g. 10.0.0.1)

Default:

None

Usage Guide:

To trace routing the **IP address**

Example:

To trace routing the **192.168.0.5**

```
Switch # trace-route 192.168.0.5
```

4.19 undebug

4.19.1 undebug all

Command:

```
undebug all
```

all Turn off all debugging

Default:

None

Usage Guide:

To disable debug mode.

Example:

To disable debug mode.

```
Switch # undebug all
```

4.19.2 undebg arp

Command:

```
undebg arp
```

arp IP ARP and switch transactions

Default:

None

Usage Guide:

To disable debug mode of **ARP**

Example:

To disable debug mode of **ARP**

```
Switch # undebg arp
```

4.19.3 undebg ip

Command:

```
undebg ip dhcp | icmp | packet | tcp | udp
```

dhcp DHCP based transactions

icmp ICMP transactions

packet IP packets

tcp TCP information

udp UDP based transactions

Default:

None

Usage Guide:

To disable debug mode of **IP**

Example:

To disable debug mode of **ICMP**

```
Switch # undebg ip icmp
```

4.20 vty

4.20.1 vty unlock

Command:

```
vtty unlock
```

Default:

None

Usage Guide:

To unlock the **vtty**

Example:

To unlock the **vtty**

```
Switch # vtty unlock
```

4.21 who

4.21.1 who

Command:

```
who
```

Default:

None

Usage Guide:

To dump the **vtty user status**

Example:

To dump the **vtty user status**

```
Switch # who  
vtty[0] connected from console  
vtty[14] connected from console
```

4.22 write

4.22.1 write

Command:

```
write { <file> | memory | terminal }
```

<file> Write to file

memory Write to NV memory

terminal Write to terminal

Default:

None

Usage Guide:

To write running configuration to memory or terminal.

Example:

To write running configuration to **memory**.

```
Switch # write memory
Building configuration...
[OK!]
```