EtherWAN

EX26484 PoE Managed Switch

User's Guide – Command Line Interface (CLI)

AUDIENCE

The guide is intended for use by network administrators who are responsible for operating and maintaining network equipment; consequently, it assumes a basic working knowledge of general switch functions, the Internet Protocol (IP), and Simple Network Management Protocol (SNMP).

CONVENTIONS

The following conventions are used throughout this guide to show information:

NOTE: Emphasizes important information or calls your attention to related features or instructions.

WARNING: Alerts you to a potential hazard that could cause personal injury.

CAUTION: Alerts you to a potential hazard that could cause loss of data, or damage the system or equipment.

Revision History

Release	Date	Revision
Initial Release	**2019/06/27**	**A1**

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1 CLI Management

Initial Configuration

Connect to the switch console by connecting the RJ45 to DB9 console cable to the RJ45 console port of the switch and to the serial port of the computer running a terminal emulation application (such as HyperTerminal or Putty).

Configuration settings of the terminal-emulation program:
Baud rate: 115,200bps, Data bits: 8, Parity: none, Stop bit: 1, Flow control: none.

The default login name is “root,” no password.

Baud rate	115200
Stop bits	1
Data bits	8
Parity	N
Flow control	none

You can also use Telnet to connect to the management VLAN of the switch: 192.168.1.10. Login is the same: “root,” no password.

Command Modes

The CLI is divided into several modes. If a user has privilege to run a particular command, the command must be run in the correct mode. To see the commands of the mode, enter a “?” at the system prompt. All commands will be listed in the screen. The command modes are listed below:

MODE	PROMPT	FUNCTIONS
exec	EX26484#	Display current configuration, diagnostics, maintenance
config	EX26484 (config)#	Configuration commands
Config-if	EX26484 (config-interface)#	Configure ports
Config-if-vlan	EX26484 (config-if-vlan)#	Configure static vlan
Config-line	EX26484 (config-line)#	Line Configuration
Config-impc-profile	EX26484 (config-impc-profile)#	IPMC Profile
Config-snmp-host	EX26484 (config-snmp-host)#	SNMP Server Host
Config-stp-aggr	EX26484 (config-stp-aggr)#	STP Aggregation
Config-dhcp-pool	EX26484 (config-dhcp-pool)#	DHCP Pool Configuration
Config-rfc2544-profile	EX26484 (config-rfc2544-profile)#	RFC2544 Profile

Global CLI Commands

```
EX26484# ?
   CableDiag    Cable Diagnostic keyword
   clear       Reset functions
   configure    Enter configuration mode
   copy        Copy from source to destination
   delete      Delete one file in flash: file system
   dir         Directory of all files in flash: file system
   disable     Turn off privileged commands
   do          To run exec commands in config mode
   dot1x       IEEE Standard for port-based Network Access
               Control
   enable      Turn on privileged commands
   erps        Ethernet Ring Protection Switching
   exit        Exit from EXEC mode
   firmware    Firmware upgrade/swap
   help        Description of the interactive help system
   ip          IPv4 commands
   iperf       network bandwidth measurement tool
   iperf3       network bandwidth measurement tool
   ipv6        IPv6 configuration commands
   link-oam     Link OAM configuration
   logout      Exit from EXEC mode
   more        Display file
   no          Delete trace hunt string
   ping         Send ICMP echo messages
   platform     Platform configuration
   ptp         Misc non persistent 1588 settings.
   reload       Reload system.
   rfc2544      RFC2544 performance tests
   send        Send a message to other tty lines
   show        Display statistics counters.
   terminal     Set terminal line parameters
   traceroute   Send IP Traceroute messages
   y1564       Y.1564 service activation tests
```

Exit

Exit from current mode.

Syntax:

exit

Parameters:

None.

Example:

```
EX26484(config)# exit
EX26484#
```

Help

Description of the interactive help system.

Syntax:

help

Parameters:

None.

Example:

```
EX26484# help
Help may be requested at any point in a command by entering
a question mark '?'.  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 pr?'.)
EX26484#
```

logout

Exit from EXEC mode.

Syntax:

logout

Parameters:

none

Example:

```
EX26484# logout
Username:
```

2 CableDiag Commands

Cable Diagnostic keyword

Syntax:

CableDiag interface GigabitEthernet <port_type_id>

Parameters:

Interface	Interface keyword
GigabitEthernet	1 Gigabit Ethernet Port
<port_type_id>	Port ID in 1/1-48

Example:

```
EX26484# CableDiag interface GigabitEthernet 1/23
Starting Cable Diagnostic - Please wait
Interface             Link Status    Test Result    Length
----------------------  -------------  -------------  -------------
GigabitEthernet 1/23    Link Down      detect error or check cable
length is between 7-120 meters
EX26484#
```

3 CLEAR Commands

Table: CLEAR Commands

Command	Function
access	Access management
access-list	Access list
dot1x	IEEE Standard for port-based Network Access Control
eps	Ethernet Protection Switching
erps	Ethernet Ring Protection Switching
ip	Interface Internet Protocol config commands
ipv6	IPv6 configuration commands
lacp	Clear LACP statistics
link-oam	Clear Link OAM statistics
lldp	Clears LLDP statistics
logging	Syslog
mac	MAC Address Table
mep	Maintenance Entity Point
mvr	Multicast VLAN Registration configuration
port-security	Port Security
ptp	
sflow	Statistics flow
spanning-tree	STP Bridge
statistics	Clear statistics for one or more given interfaces
system	system

3-1 access

Access management

Syntax:

clear access management statistics

Parameters:

management Access management configuration.
statistics Statistics data.

Example:

```
EX26484# clear access management statistics
EX26484#
```

3-2 access-list

Access list.

Syntax:

Clear access-list ace statistics

Parameters:

ace	Access list entry
statistics	Traffic statistics

Example:

```
EX26484# clear access-list ace statistics
EX26484#
```

3-3 dot1x

IEEE Standard for port-based Network Access Control.

Syntax

Clear dot1x statistics
Clear dot1x statistics interface { [*] | GigabitEthernet | 10 GigabitEthernet } < PORT_TYPE_LIST>

Parameters:

statistics	Clears the statistics counters
interface	Interface
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear dot1x statistics interface GigabitEthernet 1/1-48
EX26484#
```

3-4 eps

Ethernet Protection Switching.

Syntax

Clear eps <uint> wtr

Parameters:

<uint>	The EPS instance number.
wtr	Clear active WTR.

EXAMPLE

```
EX26484# clear eps 2 wtr
EX26484#
```

3-5 erps

Ethernet Ring Protection Switching

Syntax

Clear erps 1~64 statistics
Clear erps statistics

Parameters:

1~64	Zero or more ERPS group numbers
statistics	Clear ERPS statistics

EXAMPLE

```
EX26484# clear erps statistics
EX26484#
```

3-6 ip

IP protocol.

Syntax

clear ip acd [| (begin | exclude | include) <line>]
clear ip arp
clear ip dhcp detailed statistics { server | client | snooping | relay | helper | all }
[interface { [*] | GigabitEthernet | 10 GigabitEthernet } < PORT_TYPE_LIST>]
clear ip dhcp relay statistics
clear ip dhcp server binding <ipv4_ucast>
clear ip dhcp server binding type [automatic | manual | expired]
clear ip dhcp server statistics
clear ip dhcp snooping statistics [interface { [*] | GigabitEthernet | 10

GigabitEthernet } < PORT_TYPE_LIST>]
clear ip igmp snooping statistics
clear ip igmp snooping vlan <vlan_list> statistics
clear ip statistics

Parameters:

acd	Address Conflict Detection
arp	Clear ARP cache
dhcp	Dynamic Host Configuration Protocol
igmp	Internet Group Management Protocol
statistics	Traffic statistics
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
detailed	Detailed statistics
relay	DHCP relay agent configuration
server	Miscellaneous DHCP server information
snooping	DHCP snooping
all	Clear all DHCP related statistics
client	DHCP client
helper	DHCP normal L2 or L3 forward
relay	DHCP relay
server	DHCP server
interface	Select an interface to configure
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
binding	Clear DHCP binding
statistics	DHCP server statistics
<ipv4_ucast>	IP address of the binding
type	Type of bindings to clear
automatic	Clear (expire) automatic bindings
expired	Clear (remove) expired bindings
manual	Clear (expire) manual bindings
snooping	Snooping IGMP
statistics	Running IGMP snooping counters
vlan	Search by VLAN
<vlan_list>	VLAN identifier (VID)

EXAMPLE

```
EX26484# clear ip arp

EX26484#
```

3-7 ipv6

IPv6 configuration commands.

Syntax

clear ipv6 mld snooping [vlan <v_vlan_list>] statistics
clear ipv6 neighbors
clear ipv6 statistics

Parameters:

mld	Multicasat Listener Discovery
neighbors	Ipv6 neighbors
statistics	Traffic statistics
snooping	Snooping MLD
statistics	Running MLD snooping counters
vlan	Ipv6 interface traffic
<vlan_list>	VLAN identifier(s): VID

EXAMPLE

```
EX26484# clear ipv6 mld snooping vlan 3 statistics
EX26484# clear ipv6 neighbors
EX26484# Clear ipv6 statistics
```

3-8 lacp

Clear LACP statistics

Syntax

Clear lacp statistics

Parameters:

statistics	Clear all LACP statistics

EXAMPLE

```
EX26484# clear lacp statistics
EX26484#
```

3-9 Link-oam

Clear Link OAM statistics

Syntax

Clear link-oam statistics
Clear link-oam statistics interface *
Clear link-oam statistics interface (* | GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

statistics	Clear Rx/Tx counters
interface	Clear Link OAM statistic on a specific interface or all interfaces.
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear link-oam statistics interface 10GigabitEthernet 1/1-3
EX26484#
```

3-10 lldp

Clear LLDP statistics.

Syntax

Clear lldp statistic
Clear lldp statistic | [begin | exclude | include] <line>
Clear lldp statistics global
Clear lldp statistics global | [begin | exclude | include] <line>
Clear lldp statistics interface *
Clear lldp statistics interface * | [begin | exclude | include] <line>
Clear lldp statistics interface * <port_type_list>
Clear lldp statistics interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

statistics	Clear LLDP statistics
|	Output modifiers
global	Clear global counters
interface	Interface keyword
begin	Begin with the line that matches
exclude	Exclude lines that match

include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear lldp statistics interface *
EX26484#
```

3-11 logging

System logging message.

Syntax

clear logging
clear logging [error] [informational] [notice] [warning]

Parameters:

error	Severity 3: Error conditions
informational	Severity 6: Informational messages
notice	Severity 5: Normal but significant condition
warning	Severity 4: Warning conditions

EXAMPLE

```
EX26484# clear logging informational error warning
EX26484#
```

3-12 mac

MAC Address Table.

Syntax

Clear mac address-table

Parameters:

address-table	Flush MAC Address table.

EXAMPLE

```
EX26484# clear mac address-table
EX26484#
```

3-13 mep

Maintenance Entity Point

Syntax

Clear mep <uint> (dm | lb | tst)
Clear mep <uint> lm
Clear mep <uint> lm (both | rx | tx)

Parameters:

<uint>	The MEP instance.
dm	Clear DM measuring information.
lb	Clear LB measuring information.
lm	Clear LM measuring information.
tst	Clear TST measuring information.

EXAMPLE

```
EX26484# clear mep <uint> lm
EX26484#
```

3-14 mvr

Multicast VLAN Registration configuration.

Syntax

clear mvr name <word16> statistics
clear mvr statistics
clear mvr vlan <vlan_list> statistics

Parameters:

name	MVR multicast name
statistics	Running MVR protocol counters
vlan	MVR multicast vlan
< word16>	MVR multicast VLAN name
<vlan_list>	MVR multicast VLAN list

EXAMPLE

```
EX26484# clear  mvr vlan 25 statistics
EX26484#
```

3-15 port-security

Port security

Syntax

Clear port-security dynamic
Clear port-security dynamic address <mac_addr>
Clear port-security dynamic address <mac_addr> vlan <vlan_id>
Clear port-security dynamic interface *
Clear port-security dynamic interface * [<port_type_list> | vlan <vlan_id>]
Clear port-security dynamic interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>
Clear port-security dynamic vlan <vlan_id>

Parameters:

dynamic	Dynamic entries
address	Clear a specific (VLAN, MAC) tuple
interface	Port interface
vlan	Delete all MAC addresses on a given VLAN
<mac_addr>	MAC address to clear
vlan	VLAN keyword
<vlan_id>	VLAN on which to clear all MAC addresses
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<vlan_id>	VLANs on interface to clear all MAC addresses for
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear port-security dynamic vlan 1

EX26484#
```

3-16 ptp

Syntax

clear ptp <0-3> servo

Parameters:

<0-3>
servo

EXAMPLE

```
EX26484# clear ptp 1 servo
EX26484#
```

3-17 sflow

Statistics flow.

Syntax

clear sflow statistics receiver
clear sflow statistics samplers
clear sflow statistics samplers interface *
clear sflow statistics samplers interface * <port_type_list>
clear sflow statistics samplers interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

statistics	sFlow statistics
receiver	Clear statistics for receiver.
samplers	Clear statistics for samplers
interface	Clear statistics for a specific interface or interfaces
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear sflow statistics interface
GigabitEthernet 1/1-48
```

3-18 spanning-tree

STP Bridge.

Syntax

clear spanning-tree detected-protocols
clear spanning-tree detected-protocols interface *
clear spanning-tree detected-protocols interface * <port_type_list>
clear spanning-tree detected-protocols interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>
clear spanning-tree statistics

clear spanning-tree statistics interface *
clear spanning-tree statistics interface * <port_type_list>
clear spanning-tree statistics interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

detected-protocols	Set the STP migration check
statistics	STP statistic
interface	Choose port
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear spanning-tree detected-protocols interface *
EX26484#
```

3-19 statistics

Clear statistics for one or more given interfaces.

Syntax

clear statistics *
clear statistics * <port_type_list>
clear statistics (GigabitEthernet | 10GigabitEthernet) <port_type_list>
clear statistics interface *
clear statistics interface * <port_type_list>
clear statistics interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

interface	Interface
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# clear statistics GigabitEthernet 1/1-48
EX26484#
```

3-20 system

system

Syntax

clear system led status (all | fatal | software)
clear system led status (all | fatal | software) (| (begin | exclude | include) <line>)

Parameters:

led	led
status	status
all	Clear all error status of the system LED and back to normal indication
fatal	Clear fatal error status of the system LED
software	Clear generic software error status of the system LED
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# clear system led status software
EX26484#
```

4 CONFIGURE Commands

Table: CONFIGURE Commands

Command	Function
Terminal	Configure from the terminal
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a banner
clock	Configure time-of-day clock
default	Set a command to its defaults
dms	Enable DMS Maste
do	To run exec commands in the configuration mode
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
end	Go back to EXEC mode
eps	Ethernet Protection Switching.
erps	Ethernet Ring Protection Switching
event	Trap event severity level
exit	Exit from Configuration mode
green-ethernet	Green ethernet (Power reduction)
gvrp	Enable GVRP feature
help	Description of the interactive help system
hostname	Set system's network name
interface	Select an interface to configure
ip	Interface Internet Protocol configuration commands
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
json	JavaScript Object Notation RPC
lacp	LACP settings
line	Configure a terminal line
lldp	Link Layer Discover Protocol
logging	System logging message
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
mep	Maintenance Entity Point
monitor	Monitoring different system events
mvr	Multicast VLAN Registration configuration
mvrp	Enable MVRP feature globally
no	no
ntp	Configure NTP
poe	power over Ethernet
port-security	This command is obsolete
Privilege	Command privilege parameters
prompt	Set prompt
ptp	Precision time Protocol (1588)
qos	Quality of Service
radius-server	Configure RADIUS
rmon	Remote Monitoring
router	Routing process
sflow	Statistics flow
smtp	Set email information
snmp-server	Set SNMP server's configurations
spanning-tree	Spanning Tree protocol
svl	Shared VLAN Learning

switchport	Set VLAN switching mode characteristics
system	Set the SNMP server's configurations
tacacs-server	Configure TACACS+
udld	Enable UDLD in the aggressive or normal mode and to set the configurable message timer on all fiber-optic ports
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	VLAN commands
voice	Voice appliance attributes
web	Web

4-1 terminal

Configure from the terminal.

Syntax

configure terminal

Parameters:

terminal Configure from the terminal

EXAMPLE

```
EX26484# configure terminal
EX26484(config)#
```

4-1.1 aaa

Authentication, Authorization and Accounting.

SYNTAX

aaa authentication login [ssh | telnet | http | console] [local | radius | tacacs]

aaa authorization (console | ssh | telnet) tacacs commands <0-15>

aaa authorization (console | ssh | telnet) tacacs commands <0-15> config-commands

aaa accounting (Console | ssh | telnet) tacacs exec

aaa accounting (Console | ssh | telnet) tacacs commands <0-15>

Parameters:

authentication	Authentication
authorization	Authorization
accounting	Accounting
login	Login
http	Configure HTTP authentication
ssh	Configure SSH authentication
telnet	Configure Telnet authentication
console	Configure Console authentication
local	Use local database for authentication
radius	Use RADIUS for authentication
tacacs	Use TACACS+ for authentication
console	Configure Console command authorization
ssh	Configure SSH command authorization
telnet	Configure Telnet command authorization
tacacs	Use TACACS+ for authorization
commands	Enable command authorization
<0-15>	Command privilege level. Commands equal and above this level are authorized
config-commands	Include configuration commands
console	Configure Console command accounting
ssh	Configure SSH command accounting
telnet	Configure Telnet command accounting
tacacs	Use TACACS+ for accounting
commands	Enable command accounting
exec	Enable EXEC accounting
<0-15>	Command privilege level. Commands equal and above this level are accounted

EXAMPLE

```
EX26484(config)# aaa authentication login http radius
EX26484(config)#
```

4-1.2 access

Access management.

SYNTAX

access management <1..16>

access management <1..16> <1..4095> [<ipv4_ucast> | <ipv6_ucast>] { [web] [snmp] [telnet] | all }

access management <1..16> <1..4095> [<ipv4_ucast> | <ipv6_ucast>] { [web] | [snmp] | [telnet] | [all] }

access management <1..16> <1..4095> [<ipv4_ucast> | <ipv6_ucast>] to <ipv4_ucast>

Parameters:

management	Access management configuration
< 1-16>	ID of access management entry
<1..4095>	The VLAN ID for the access management entry
<ipv4_ucast>	Start IPv4 unicast address
<ipv6_ucast>	Start IPv6 unicast address
all	All services
snmp	SNMP service
telnet	TELNET/SSH service
to	End address of the range
web	Web service
<ipv4_ucast>	End IPv4 unicast address

EXAMPLE

```
EX26484(config)# access management 10 3 192.168.1.1 all
EX26484(config)#
```

4-1.3 access-list

Access list.

Table: configure – access-list Commands

Command	Function
ace	Access list entry

4-1.3.1 ace

Access list entry.

SYNTAX

access-list ace <1-512> action [deny | permit]

access-list ace <1-384> action { (deny | permit) [dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid] }

access-list ace <1-512> action filter interface (* | GigabitEthernet | 10GigabitEthernet) [<port_type_list> | dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) dmac-type (any | broadcast | multicast | unicast) [frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) frame-type { (any [dmac-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (arp [arp-flag | arp-opcode | dip | dmac-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | smac | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (etype [dmac | dmac-type | etype-value | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | smac | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv4 [dip | dmac-type | ingress | ip-flag | ip-protocol | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv4-icmp [dip | dmac-type | icmp-code | icmp-type | ingress | ip-flag | ip-protocol | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv4-tcp | ipv4-udp) [dip | dmac-type | dport | ingress | ip-flag | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | sport | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv6 | ipv6-udp) [dmac-type | hop-limit | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv6-icmp [dip |

dmac-type | icmp-code | icmp-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | tag | tag-priority | vid]) }

access-list ace <1-512> action (deny | permit) frame-type { (ipv6-tcp [dmac-type | dport | hop-limit | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | sip | sport | tag | tag-priority | tcp-flag | vid]) }

access-list ace <1-512> action (deny | permit) ingress{ (any [dmac-type | frame-type | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]) | { interface (* | GigabitEthernet | 10GigabitEthernet) [<port_type_list> | dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid] }

access-list ace <1-512> action (deny | permit) logging [disable | dmac-type | frame-type | ingress | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) mirror [disable | dmac-type | frame-type | ingress | logging | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) next (<1-512> | last) [dmac-type | frame-type | ingress | logging | mirror | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) policy <0-127> [dmac-type | frame-type | ingress | logging | mirror | next | policy-bitmask | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) rate-limiter (<1-16> | disable) [dmac-type | frame-type | ingress | logging | mirror | next | policy | redirect | shutdown | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) redirect { (disable [dmac-type | frame-type | ingress | logging | mirror | next | policy | rate=limiter| shutdown | tag | tag-priority | vid]) } | { interface (* | GigabitEthernet | 10GigabitEthernet) [<port_type_list> | dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | shutdown | tag | tag-priority | vid] }

access-list ace <1-512> action (deny | permit) shutdown [disable | dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | tag | tag-priority | vid]

access-list ace <1-512> action (deny | permit) tag (any | tagged | untagged) [dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag-priority | vid]

access-list ace <1-512> action (deny | permit) tag-priority (0-1 | 0-3 | 2-3 | 4-5 | 4-7 | 6-7 | <0-7> | any) [dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | vid]

access-list ace <1-512> action (deny | permit) vid (<1-4095> | any) [dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority]

access-list ace update <1-512> [action | dmac-type | frame-type | ingress | logging | mirror | next | policy | rate-limiter | redirect | shutdown | tag | tag-priority | vid]

Parameters:

<1-512>	ACE ID
update	Update an existing ACE
action	Access list action
dmac-type	The type of destination MAC address
frame-type	Frame type
ingress	Ingress
logging	Logging frame information. Note: The logging feature only works when the packet length is less than 1518 (without VLAN tags) and the System Log memory size and logging rate is limited.
mirror	Mirror frame to destination mirror port
next	insert the current ACE before the next ACE ID
policy	Policy
rate-limiter	Rate limiter
redirect	Redirect frame to specific port
shutdown	Shutdown incoming port. The shutdown feature only works when the packet length is less than 1518 (without VLAN tags).
tag	Tag
tag-priority	Tag priority
vid	VID field
deny	Deny
filter	Filter
permit	Permit
interface	Select an interface to configure
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

any	Don't-care the type of destination MAC address
broadcast	Broadcast destination MAC address
multicast	Multicast destination MAC address
unicast	Unicast destination MAC address
any	Don't-care the frame type
arp	Frame type of ARP
etype	Frame type of EtherType
ipv4	Frame type of IPv4
ipv4-icmp	Frame type of IPv4 ICMP
ipv4-tcp	Frame type of IPv4 TCP
ipv4-udp	Frame type of IPv4 TCP
ipv6	Frame type of IPv6
ipv6-icmp	Frame type of IPv6 ICMP
ipv6-tcp	Frame type of IPv6 TCP
ipv6-udp	Frame type of IPv6 UDP
arp-flag	ARP flag
arp-opcode	ARP/RARP opcode field
dip	Destination IP address field
sip	Source IP address field
smac	Source MAC address field
dmac	Destination MAC address field
dmac-type	The type of destination MAC address
etype-value	Ether type value
ip-flag	IP flag
ip-protocol	IPv4 protocol field
icmp-code	ICMP code field
icmp-type	ICMP type field
dport	TCP/UDP destination port field
sport	TCP/UDP source port field
tcp-flag	TCP flag
hop-limit	IPv6 hop limiter field

disable	Disable logging
<1-512>	The next ID
last	Place the current ACE to the end of access list
<0-127>	Policy ID
policy-bitmask	The bitmask for policy ID
<1-16>	Rate limiter ID
disable	Disable rate-limiter
disable	Disable
any	Don't-care tagged or untagged
tagged	Tagged
untagged	Untagged
0-1	The range of tag priority
0-3	The range of tag priority
2-3	The range of tag priority
4-5	The range of tag priority
4-7	The range of tag priority
6-7	The range of tag priority
<0-7>	The value of tag priority
any	Any value of tag priority field
<1-4095>	The value of VID field
any	Any the value of VID field
<0-7>	The value of tag priority

EXAMPLE

```
EX26484(config)# access-list ace 10 action deny
EX26484(config)#
```

4-1.3.2 rate-limiter

Rate limiter

SYNTAX

access-list rate-limiter (10pps <0-500000>) | (25kbps <0-400000>) | <1~16> (10pps <0-500000> | 25kbps <0-400000>)

Parameters

10pps	10 packets per second
25kbps	25k bits per second
<1~16>	Rate limiter ID
<0-500000>	Rate value
<0-400000>	Rate value
<0-7>	The value of tag priority

EXAMPLE

```
EX26484(config)# aaccess-list rate-limiter 25kbps 0
EX26484(config)#
```

4-1.4 aggregation

Aggregation mode.

SYNTAX

aggregation mode [dmac | ip | port | smac]

Parameters:

mode	Traffic distribution mode
dmac	Destination MAC affects the distribution
ip	IP address affects the distribution
port	IP port affects the distribution
smac	Source MAC affects the distribution

EXAMPLE

```
EX26484(config)# aggregation mode dmac
EX26484(config)#
```

4-1.5 banner

Define a banner

SYNTAX

banner [<LINE>]

banner (exec | login | motd) <LINE>

Parameters:

<LINE>	c banner-text c, where 'c' is a delimiting character
exec	Set EXEC process creation banner
login	Set login banner
motd	Set Message of the Day banner

EXAMPLE

```
EX26484(config)# banner exec LINE
Enter TEXT message.  End with the character 'L'.
L
EX26484(config)#
```

4-1.6 clock

Configure time-of-day clock.

SYNTAX

clock summer-time <word16> date ([<1-12>]) | (<1-12> <1-31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [<1-1439>])

clock summer-time <word16> recurring ([<1-5>]) | (<1-5> <1-7> <1-12> <hhmm> <1-5> <1-7> <1-12> <hhmm> [<1-1439>])

clock timezone <word16> <-23-23> [<0-59> <0-9>]

Parameters:

summer-time	Configure summer (daylight savings) time
timezone	Configure time zone
<word16>	name of time zone in summer (the string '' is a special syntax

that is reserved for null input)

date	Configure absolute summer time
recurring	Configure recurring summer time
<1-12>	Month to start
<1-31>	Date to start
<2000-2097>	Year to start
<hhmm>	Time to start (hh:mm)
<1-12>	Month to end
<1-31>	Date to end
<2000-2097>	Year to end
<hhmm>	Time to end (hh:mm)
<1-1439>	Offset to add in minutes
<1-5>	Week number to start
<1-7>	Weekday to start
<-23-23>	Hours offset from UTC
<0-59>	Minutes offset from UTC
<0-9>	Sub type of time zone

EXAMPLE

```
EX26484(config)# clock clock timezone taipei 8
EX26484(config)#
```

4-1.7 default

Set a command to its defaults.

SYNTAX

default access-list rate-limiter [<1-16>]

Parameters:

access-list	Access list

rate-limiter	Rate limiter
<1-16>	Rate limiter ID

EXAMPLE

```
EX26484(config)# default access-list rate-limiter 3
EX26484(config)#
```

4-1.8 dms

Enable DMS Master.

SYNTAX

dms

dms mode [disabled | enabled | high-priority]

Parameters:

mode	DMS mode
disabled	DMS mode is disabled
enabled	DMS mode is enabled
high-priority	DMS mode is high priority

EXAMPLE

```
EX26484(config)# dms mode high-priority
EX26484(config)#
```

4-1.9 do

To run exec commands in the configuration mode.

SYNTAX

do < LINE > [< LINE >]

Parameters:

<line>	Exec Command

EXAMPLE

```
EX26484(config)# do clear statistics interface GigabitEthernet 1/1-1
EX26484(config)#
```

4-1.10 dot1x

IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x authentication timer re-authenticate <1-3600>

dot1x authentication timer inactivity <10-1000000>

dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }

dot1x guest-vlan [<1-4095> | supplicant]

dot1x max-reauth-req <1-255>

dot1x re-authentication

dot1x system-auth-control

dot1x timeout (tx-period <1-65535>) | (quiet-period <10-1000000>)

Parameters:

authentication	Authentication
feature	Globally enables/disables a dot1x feature functionality
guest-vlan	Guest VLAN
max-reauth-req	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN
re-authentication	Set Re-authentication state
system-auth-control	Set the global NAS state
timeout	timeout
timer	timer
inactivity	Time in seconds between check for activity on successfully authenticated MAC addresses.
re-authenticate	The period between re-authentication attempts in seconds
<10-1000000>	seconds

<1-3600>	seconds
guest-vlan	Globally enables/disables state of guest-vlan
radius-qos	Globally enables/disables state of RADIUS-assigned QoS.
radius-vlan	Globally enables/disables state of RADIUS-assigned VLAN.
<1-4095>	Guest VLAN ID used when entering the Guest VLAN
supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest VLAN, it will first check if this option is enabled or disabled. If disabled (unchecked, default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port for the life-time of the port. If enabled (checked), the switch will consider entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.
<1-255>	number of times
quiet-period	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.
tx-period	the time between EAPOL retransmissions.
<1-65535>	seconds

EXAMPLE

```
EX26484(config)# dot1x authentication timer re-authenticate 1000
EX26484(config)#
```

4-1.11 enable

Modify enable password parameters.

SYNTAX

enable password (level <1-15> <word32>) | (<word32>)

enable secret (0 | 5) (level <1-15> <word32>) | (<word32>)

Parameters:

password	Assign the privileged level clear password
secret	Assign the privileged level secret
<word32>	The UNENCRYPTED (clear-text) password

level Set exec level password

<1-15> Level number

0 Specifies an UNENCRYPTED password will follow

5 Specifies an ENCRYPTED secret will follow

EXAMPLE

```
EX26484(config)# enable password level 10 999
EX26484(config)#
```

4-1.12 end

Go back to EXEC mode.

Syntax:

end

Example:

```
EX26484 (config)# end
EX26484#
```

4-1.13 eps

Ethernet Protection Switching.

SYNTAX

eps <1-100> 1plus1 ([bidirectional]) | ([unidirectional] aps)

eps <1-100> command [exercise | forced | freeze | lockout | lockoutlocal | manualp | manual]

eps <1-100> domain (port | pw) architecture (1for1 | 1plus1) work-flow { (GigabitEthernet | 10GigabitEthernet) <port_type_id> } | (<unit> protect-flow) [GigabitEthernet | 10GigabitEthernet | <uint>]

eps <1-100> holdoff <uint>

eps <1-100> mep-work <uint> mep-protect <uint> mep-aps <uint>

eps <1-100> revertive ([10m | 10s | 11m | 12m | 30s | 5m | 6m | 7m | 8m | 9m]) | wtr-value <uint>

Parameters:

<1-100>	The EPS instance number.
1plus1	EPS 1+1 architecture.
command	EPS command.
domain	The domain of the EPS.
holdoff	Hold off timer.
mep-work	Working MEP instance.
revertive	Revertive EPS.
bidirectional	EPS 1+1 bidirectional protection type.
unidirectional	EPS 1+1 unidirectional protection type
aps	EPS 1+1 unidirectional with APS protection type.
exercise	Exercise of the protocol - not traffic effecting. This is only allowed in case of 'Bidirectional' protection type
forced	Force switch normal traffic to protection.
freeze	Local Freeze of EPS.
lockout	Lockout of protection.
lockoutlocal	Local lockout of EPS.
manualp	Manual switch normal traffic to protection.
manualw	Manual switch normal traffic to working. This is only allowed in case of 'non-revertive' mode.
port	This EPS is protecting in the Port domain.
pw	This EPS is protecting in the MPLS-TP Pseudo-Wire domain.
tunnel-tp	This EPS is protecting in the MPLS-TP tunnel domain.
architecture	The EPS architecture.
1for1	The architecture is 1 for 1.
1plus1	The architecture is 1 plus 1.
work-flow	The working flow instance that the EPS is related to.
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<uint>	The working flow instance number when not in the port domain.

<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
protect-flow	The protecting flow instance that the EPS is related to.
<uint>	The hold off timer value in 100 ms. Max 10 sec.
<uint>	Working MEP instance number.
mep-protect	Protecting MEP instance.
<uint>	Protecting MEP instance number.
mep-aps	APS MEP instance.
<uint>	APS MEP instance number
10m	WTR is 10 min.
10s	WTR is 10 sec.
11m	WTR is 11 min.
12m	WTR is 12 min.
30s	WTR is 30 sec.
5m	WTR is 5 min.
6m	WTR is 6 min.
7m	WTR is 7 min.
8m	WTR is 8 min.
9m	WTR is 9 min.
wtr-value	WTR as value.
<uint>	The WTR value in seconds. Range is 1 to 720 seconds.

EXAMPLE

```
EX26484(config)# eps 1 revertive wtr-value 1
EX26484(config)#
```

4-1.14 erps

Ethernet Ring Protection Switching.

SYNTAX

erps 1-64 guard 10-2000

erps 1-64 holdoff 0-10000

erps 1-64 major port0 interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> port1 interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> [interconnect]

erps 1-64 mep port0 sf <1-3124> aps <1-3124> port1 sf <1-3124> aps <1-3124>

erps 1-64 revertive 1-12

erps 1-64 rpl (neighbor | owner) [port0 | port1]

erps 1-64 sub port0 interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> (interconnect 1-64 [virtual-channel]) | port1 interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> [virtual-channel]

erps 1-64 topology-change propagate

erps 1-64 version [1 | 2]

erps 1-64 vlan { (add | remove) <vlan_list> } | { [<vlan_list> | none] }

Parameters:

1-64	ERPS group number
guard	Guard
holdoff	Hold-off time
major	Major ring
mep	MEP
revertive	Revertive
rpl	Ring Protection Link
sub	Sub-ring
topology-change	Topology Change
version	Version
vlan	VLAN
10-2000	Guard time in ms
0-10000	Hold-off time in ms
port0	ERPS Port 0 interface
interface	Select an interface to configure
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

port1	ERPS Port 1 interface
interconnect	Major ring is interconnected
sf	Signal Fail
<1-3124>	Index of Port 0 SignalFail MEP
aps	Automatic Protection Switching
<1-3124>	Index of Port 0 APS MEP
port1	ERPS Port 1 interface
<1-3124>	Index of Port 1 SignalFail MEP
<1-3124>	Index of Port 1 APS MEP
1-12	Wait-to-restore time in minutes
neighbor	Neighbor role
owner	Owner role
1-64	Major ring group number
virtual-channel	Enable virtual channel for sub-ring
propagate	Propagate
1	ERPS version 1
2	ERPS version 2
<vlan_list>	List of VLANs
add	Add to set of included VLANs
none	Do not include any VLANs
remove	Remove from set of included VLANs

EXAMPLE

```
EX26484(config)# erps 1 rpl neighbor port0
EX26484(config)#
```

4-1.15 event

Trap event severity level.

SYNTAX

event group [aclaccess-mgmt | arp-inspection | auth-failed | bsc-protection | cold-start | dhcp | dhcp-snooping | ip-source-guard | lacp | link-updown | login | logout | loop-protection | mac-table | maintenance | mgmt-ip-change | nas | port | port-security | rmon | sfp | spanning-tree | system | user | warm-start **]** { [level < 0-7 >] | { syslog [enable | disable] } | { trap [enable | disable] } | { smtp [enable | disable] }}

event group [acl | aclaccess-mgmt | arp-inspection | auth-failed | bsc-protection | cold-start | dhcp | dhcp-snooping | ip-source-guard | lacp | link-updown | login | logout | loop-protection | mac-table | maintenance | mgmt-ip-change | nas | port | port-security | rmon | sfp | spanning-tree | system | user | warm-start **]** [level | syslog | trap | smtp]

event group [acl | aclaccess-mgmt | arp-inspection | auth-failed | bsc-protection | cold-start | dhcp | dhcp-snooping | ip-source-guard | lacp | link-updown | login | logout | loop-protection | mac-table | maintenance | mgmt-ip-change | nas | port | port-security | rmon | sfp | spanning-tree | system | user | warm-start **]** [level | syslog | trap] < 0-7 > { syslog [enable | disable] [trap] } | { trap [enable | disable] [syslog] }

Parameters:

group	Trap Event group name
acl	Group ID ACL
access-mgmt	Group ID ACCESS-MGMT
arp-inspection	Group ID ARP-INSPECTION
auth-failed	Group ID AUTH-FAILED
bsc-protection	Group ID BCS-PROTECTION
cold-start	Group ID COLD-START
dhcp	Group ID DHCP
dhcp-snooping	Group ID DHCP-SNOOPING
ip-source-guard	Group ID IP-SOURCE-GUARD
lacp	Group ID LACP
link-updown	Group ID LINK-UPDOWN
login	Group ID LOGIN
logout	Group ID LOGOUT
loop-protection	Group ID LOOP-PROTECTION
mac-table	Group ID MAC-TABLE
maintenance	Group ID MAINTENANCE
mgmt-ip-change	Group ID MGMT-IP-CHANGE

nas	Group ID NAS
port	Group ID PORT
port-security	Group ID PORT-SECURITY
rmon	Group ID RMON
sfp	Group ID SFP
spanning-tree	Group ID SPANNING-TREE
system	Group ID SYSTEM
user	Group ID USER
warm-start	Group ID WARM-START
level	event group level
smtp	smtp mode
syslog	syslog mode
trap	trap mode
<0-7>	<0> Emergency ,<1> Alert ,<2> Critical ,<3> Error ,<4> Warning ,<5> Notice ,<6> Information ,<7> Debug (0..7)
enable	syslog mode enable
disable	syslog mode disable
enable	trap mode enable
disable	trap mode disable
disable	smtp mode disable
enable	smtp mode enable

EXAMPLE

```
EX26484(config)# event group lacp trap enable
EX26484(config)#
```

4-1.16 green-ethernet

Green ethernet (Power reduction).

SYNTAX

green-ethernet eee optimize-for-power

Parameters:

eee Powering down of PHYs when there is no traffic.

optimize-for-power Set if EEE shall be optimized for least power consumption (else optimized for least traffic latency).

EXAMPLE

```
EX26484(config)# green-ethernet eee optimize-for-power
EX26484(config)#
```

4-1.17 gvrp

Enable GVRP feature.

SYNTAX

gvrp

gvrp max-vlans <1-4094>

gvrp time [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>]

Parameters:

max-vlans Number of simultaneously VLANs that GVRP can control

time Configure GARP protocol timer parameters. IEEE 802.1D-2004, clause 12.11.

<1-4094>

join-time Set GARP protocol parameter JoinTime.

leave-all-time Set GARP protocol parameter LeaveAllTime.

leave-time Set GARP protocol parameter LeaveTime.

<1-20> join-time in units of centiseconds. Range is 1-20. Default is 20.

<1000-5000> leave-all-time in units of centiseconds Range is 1000-5000. Default is 1000.

<60-300> leave-time in units of centiseconds. Range is 60-300. Default is 60.

EXAMPLE

```
EX26484(config)# gvrp max-vlans 333
EX26484(config)# gvrp time join-time 13 leave-all-time 3000 leave-time 200
EX26484(config)#
```

4-1.18 help

Description of the interactive help system.

SYNTAX

help

Parameters:

none

EXAMPLE

```
EX26484(config)# help
Help may be requested at any point in a command by entering
a question mark '?'.  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 pr?'.)

EX26484(config)#
```

4-1.19 hostname

Set system's network name.

SYNTAX

hostname <hostname>

Parameters:

<host_name> This system's network name.

EXAMPLE

```
EX26484(config)# hostname abc
abc(config)#
```

4-1.20 interface

Select an interface to configure.

SYNTAX

interface { ***** [<port_type_list>] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> { [* | GigabitEthernet | 10GigabitEthernet] } [<port_type_list>] }

interface llag 1-26

interface vlan <vlan_list>

Parameters:

*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
llag	Local link aggregation interface configuration
vlan	VLAN interface configurations
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
1-26	ID of LLAG interface
<vlan_list>	List of VLAN interface numbers

EXAMPLE

```
EX26484(config)# interface GigabitEthernet 1/1-48
EX26484(config-if)#
EX26484(config-if)#  interface vlan 3
EX26484(config-if-vlan)#
```

4-1.21 ip

Interface Internet Protocol configuration commands.

SYNTAX

ip arp inspection

ip arp inspection entry interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>

ip arp inspection translate [interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>]

ip arp inspection vlan <vlan_list> [logging (all | deny | permit)]

ip dhcp excluded-address <ipv4_addr> [<ipv4_addr>]

ip dhcp pool <word32>

ip dhcp relay information [option]

ip dhcp relay information policy (drop | keep | replace)

ip dhcp server

ip dhcp snooping

ip dns proxy

ip domain name <domain_name> | dhcp [ipv4 | ipv6] [interface vlan <vlan_id>]

ip helper-address <ipv4_ucast>

ip http (secure-certificate [delete | generate | upload <url_file>]) | [secure-redirect | secure-server]

ip igmp host-proxy [leave-proxy]

ip igmp snooping [vlan <vlan_list>]

ip igmp ssm-range <ipv4_mcast>

ip igmp unknown-flooding

ip name-server <0-3> [<ipv4_ucast> | <ipv6_ucast> | dhcp (interface | ipv4 | ipv6)

vlan <vlan_id> [ipv4 | ipv6]]

ip route <ipv4_addr> <ipv4_netmask> <ipv4_ucast> [<1-255>]

ip source binding interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> <vlan_id> <ipv4_ucast> <mac_ucast>

ip ssh

ip verify source [translate]

Parameters:

arp	Address Resolution Protocol
dhcp	Configure DHCP server parameters
dns	Domain Name System
domain	IP DNS Resolver
helper-address	DHCP helper server address
http	Hypertext Transfer Protocol
igmp	Internet Group Management Protocol
name-server	Domain Name System
route	Add IP route
routing	Enable routing for IPv4 and IPv6
source	source command
ssh	Secure Shell
verify	verify command
inspection	ARP inspection
entry	ARP inspection entry
translate	ARP inspection translate all entries
vlan	ARP inspection vlan setting
interface	Select an interface to configure
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<vlan_id>	Select a VLAN id to configure
<mac_ucast>	Select a MAC address to configure
<ipv4_ucast>	Select an IP Address to configure

<vlan_list>	arp inspection vlan list
logging	ARP inspection vlan logging mode configuration
all	log all entries
deny	log denied entries
permit	log permitted entries
excluded-address	Prevent DHCP from assigning certain addresses
pool	Configure DHCP address pools
relay	DHCP relay agent configuration
server	Enable DHCP server
snooping	DHCP snooping
<ipv4_addr>	Low IP address
<ipv4_addr>	High IP address
<word32>	Pool name in 32 characters
Information	DHCP information option (Option 82)
option	DHCP option
policy	Policy for handling the receiving DHCP packet already include the information option
drop	Drop the package when receive a DHCP message that already contains relay information
keep	Keep the original relay information when receive a DHCP message that already contains it
replace	Replace the original relay information when receive a DHCP
proxy	DNS proxy service
name	Define the default domain name
<domain_name>	Default domain name
dhcp	Dynamic Host Configuration Protocol
Interface	Select an interface to configure
ipv4	DNS setting is derived from DHCPv4
ipv6	DNS setting is derived from DHCPv6; Default selection
<ipv4_ucast>	IP address of the DHCP relay server
secure-certificate	HTTPS certificate

secure-redirect	Secure HTTP web redirection
secure-server	Secure HTTP web server
delete	Delete the current certificate
generate	Generate a new self-signed RSA certificate
upload	Upload a certificate PEM file
<url_file>	Uniform Resource Locator. It is a specific character string that constitutes a reference to a resource. Syntax <protocol> ://[<username>[:<password>]@]<host>[:<port>][/<path>]/<file_name> If the following special characters: space !"#$%&'()*+,/:;<=>?@[\]^`{|}~ need to be contained in the input URL string, They should be percent-encoded. A valid file name is a text string drawn from alphabet (A-Za-z), digits (0-9), dot (.), hyphen (-), under score (_). The maximum length is 63 and hyphen must not be first character. File name content that only contains '.' is not allowed.
host-proxy	IGMP proxy configuration
snooping	Snooping IGMP
ssm-range	IPv4 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv4 multicast traffic
leave-proxy	IGMP proxy for leave configuration
vlan	IGMP VLAN
<vlan_list>	VLAN identifier (VID)
<ipv4_mcast>	Valid IPv4 multicast address
<0-3>	Preference of DNS server. Default selection is 0
<ipv4_ucast>	A valid IPv4 unicast address
<ipv6_ucast>	A valid IPv6 unicast address
dhcp	Dynamic Host Configuration Protocol
<ipv4_addr>	Network
<ipv4_netmask>	Netmask
<ipv4_ucast>	Gateway
<1-255>	Distance value for this route
<mac_ucast>	Select a MAC address to configure
source	verify source
translate	IP verify source translate all entries

EXAMPLE

```
EX26484(config)# ip arp inspection
EX26484(config)#
```

4-1.22 ipmc

IPv4/IPv6 multicast configuration.

SYNTAX

ipmc profile <word16>

ipmc range <word16> [<ipv4_mcast> | <ipv6_mcast>]

Parameters:

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
<word16>	Profile name in 16 characters
<word16>	Range entry name in 16 characters
<ipv4_mcast>	Valid IPv4 multicast address
<ipv6_mcast>	Valid IPv6 multicast address

EXAMPLE

```
EX26484(config)# ipmc profile test
EX26484(config-ipmc-profile)#
```

4-1.23 ipv6

IPv6 configuration commands.

SYNTAX

ipv6 mld host-proxy [leave-proxy]

ipv6 mld snooping [vlan <vlan_list>]

ipv6 mld ssm-range <ipv6_mcast>

ipv6 mld unknown-flooding

Parameters:

mld	Multicasat Listener Discovery
route	Configure static routes
host-proxy	MLD proxy configuration
snooping	Snooping MLD
ssm-range	IPv6 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv6 multicast traffic
leave-proxy	MLD proxy for leave configuration
vlan	MLD VLAN
<vlan_list>	VLAN identifier (VID)
<ipv6_subnet>	IPv6 prefix x:x::y/z
<ipv6_mcast>	Valid IPv6 multicast address

EXAMPLE

```
EX26484(config)# ipv6 mld host-proxy
EX26484(config)# ipv6 mld snooping
EX26484(config)#
```

4-1.24 json

JavaScript Object Notation RPC

SYNTAX

json notification host <word32>

json notification listen <cword>

Parameters:

notification	Notification request object
host	Notification host
listen	JSON-RPC notification event subscription
<word32>	Name of Notification host
<cword>	Valid words are 'acl.status.ace.crossedThreshold.update'

'aggregation.status.notification.update' 'alarm.status.update'
'arpInspection.status.crossedThreshold.update'
'ddmi.status.interface.crossedThreshold.update'
'ethernetLinkOam.statistics.interface.criticalLinkEvent.update'
'ip.status.acd.ipv4.update'
'ip.status.interface.dhcpClient.update'
'ip.status.interface.ipv4.update'
'ip.status.interface.ipv6.update'
'ip.status.interface.link.update' 'ip.status.route.ipv4.update'
'ip.status.route.ipv6.update' 'mep.status.instance.update'
'mep.status.instancePeer.update' 'mep.status.lmHli.update'
'mep.status.lmNotif.update' 'port.status.update'
'portSecurity.status.global.notification.update'
'portSecurity.status.interface.notification.update'
'qos.status.global.update'

EXAMPLE

```
EX26484(config)# json notification host test
EX26484(config-json-noti-host)#
```

4-1.25 lacp

LACP settings.

SYNTAX

lacp system-priority <1-65535>

Parameters:

system-priority	System priority
<1-65535>	Priority value, lower means higher priority

EXAMPLE

```
EX26484(config)# lacp system-priority 333
EX26484(config)#
```

4-1.26 line

Configure a terminal line

SYNTAX

line { <0~16> | console 0 | vty <0~15> }

Parameters:

<0~16>	List of line numbers
console	Console terminal line
vty	Virtual terminal
0	Console Line number
<0~15>	List of vty numbers

EXAMPLE

```
EX26484(config)# line  console 0
EX26484(config-line)#
```

4-1.27 lldp

Link Layer Discover Protocol.

SYNTAX

lldp holdtime <2-10>

lldp med datum [wgs84 | nad83_navd88 | nad83_mllw]

lldp med fast <1-10>

lldp med location-tlv altitude [meters | floors] <word11>

lldp med location-tlv civic-addr (additional-code | additional-info | apartment | block | building | city | country | county | district | floor | house-no | house-no-suffix | landmark | leading-street-direction | name | p-o-box | plase-type | postal-community-

name | room-number | state | street | street-suffix | trailing-street-suffix | zip-code) <line250> [<line250>]

lldp med location-tlv elin-addr <dword25>

lldp med location-tlv latitude (north | south) <word8>

lldp med location-tlv longitude (west | east) <word9>

lldp med media-vlan-policy <0-31> (guest-voice | guest-voice-signaling | softphone-voice | streaming-video | video-conferencing | video-signaling | voice | voice-signaling) tagged <vlan_id> [dscp <0-63>] | [l2-priority <0-7>] dscp <0-63>

lldp med media-vlan-policy <0-31> (guest-voice | guest-voice-signaling | softphone-voice | streaming-video | video-conferencing | video-signaling | voice | voice-signaling) ubtagged [dscp <0-63>]

lldp reinit <1-10>

lldp timer <5-32768>

lldp transmission-delay <1-8192>

Parameters:

Holdtime Sets LLDP hold time (The neighbor switch will discarded the LLDP information after 'hold time' multiplied with 'timer' seconds).

Med Media Endpoint Discovery.

Reinit LLDP tx reinitialization delay in seconds.

timer Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).

transmission-delay Sets LLDP transmission-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)

<2-10>	2-10 seconds.
datum	Datum (geodetic system) type.
fast	Number of times to repeat LLDP frame transmission at fast start.
location-tlv	LLDP-MED Location Type Length Value parameter
media-vlan-policy	Create a policy, which can be assigned to an interface.
nad83_mllw	Mean lower low water datum 1983
nad83_navd88	North American vertical datum 1983
wgs84	World Geodetic System 1984

<1-10>

altitude Altitude parameter.

civic-addr Civic address information and postal information. The total number of characters for the combined civic address information must not exceed 250 characters. Note: 1) A non empty civic address location will use 2 extra characters in addition to the civic address location text. 2) The 2 letter country code is not part of the 250 characters limitation.

elin-addr Emergency Call Service ELIN identifier data format is defined to carry the ELIN identifier as used during emergency call setup to a traditional CAMA or ISDN trunk-based PSAP. This format consists of a numerical digit string, corresponding to the ELIN to be used for emergency calling. Emergency Location Identification Number, (e.g. E911 and others), such as defined by TIA or NENA.

latitude Latitude parameter.

longitude Longitude parameter.

floors Specify the altitude in floor

meter Specify the altitude in meters

<word11> Altitude value. Valid range -2097151.9 to 2097151.9

additional-code Additional code - Example: 1320300003.

additional-info Additional location info - Example: South Wing.

apartment Unit (Apartment, suite) - Example: Apt 42.

block Neighborhood, block.

building Building (structure) - Example: Low Library.

city City, township, shi (Japan) - Example: Copenhagen.

country The two-letter ISO 3166 country code in capital ASCII letters - Example: DK, DE or US.

county County, parish, gun (Japan), district.

district City division, borough, city district, ward, chou (Japan).

floor Floor - Example: 4.

house-no House number - Example: 21.

house-no-suffix House number suffix - Example: A, 1/2.

landmark Landmark or vanity address - Example: Columbia University.

leading-street-direction Leading street direction - Example: N.

name	Name (residence and office occupant) - Example: John Doe.
p-o-box	Post office box (P.O. BOX) - Example: 12345.
place-type	Place type - Example: Office.
postal-community-name	Postal community name - Example: Leonia.
room-number	Room number - Example: 450F.
state	National subdivisions (state, canton, region, province, prefecture).
street	Street - Example: Oxford Street.
street-suffix	Street suffix - Example: Ave, Platz.
trailing-street-suffix	Trailing street suffix - Example: SW.
zip-code	Postal/zip code - Example: 2791.
<line250>	Value for the corresponding selected civic address.
<dword25>	ELIN value
north	Setting latitude direction to north.
south	Setting latitude direction to south.
<word8>	Latitude degrees (0.0000-90.0000).
east	Setting longitude direction to east.
west	Setting longitude direction to west.
<word9>	Longitude degrees (0.0000-180.0000).
<0-31>	Policy id for the policy which is created.
guest-voice	Create a guest voice policy.
guest-voice-signaling	Create a guest voice signaling policy.
softphone-voice	Create a softphone voice policy.
streaming-video	Create a streaming video policy.
video-conferencing	Create a video conferencing policy.
video-signaling	Create a video signaling policy.
voice	Create a voice policy.
voice-signaling	Create a voice signaling policy.
tagged	The policy uses tagged frames.
untagged	The policy uses untagged frames.

<vlan_id>	The VLAN the policy uses tagged frames.
dscp	Differentiated Services Code Point. If not given then DSCP value is set to 0.
l2-priority	Layer 2 priority. If not given then L2 priority value is set to 0.
<0-63>	DSCP value 0-63.
<0-7>	Priority 0-7.
<1-10>	1-10 seconds.
<5-32768>	5-32768 seconds.
<1-8192>	1-8192 seconds.

EXAMPLE

```
EX26484(config)# lldp holdtime 5
EX26484(config)# lldp med fast 5
EX26484(config)# lldp reinit 3
EX26484(config)# lldp timer 555
EX26484(config)# lldp transmission-delay 333
Note: According to IEEE 802.1AB-clause 10.5.4.2 the transmission-delay must
not be larger than LLDP timer * 0.25. LLDP timer changed to 13332
```

4-1.28 logging

System logging message.

SYNTAX

logging host [<hostname> | <ipv4_ucast>]

logging level [error | informational | notice | warning]

logging notification listen <kword127> level (error | informational | notice | warning) <line255>

logging on

Parameters:

host	host
level	Severity level

notification	notification
on	Enable Switch logging host mode
<domain_name>	A valid name consist of a sequence of domain labels separated by '.', each domain label starting and ending with an alphanumeric character and possibly also containing '-' characters. The length of a domain label must be 63 characters or less.
<ipv4_ucast>	The IPv4 address of the log server
error	Severity 3: Error conditions
informational	Severity 6: Informational messages
notice	Severity 5: Normal but significant condition
warning	Severity 4: Warning conditions
listen	listen
<kword127>	A name identifying the listen command
level	Severity level
<line255>	Identification of the notification source

EXAMPLE

```
EX26484(config)# logging host 3 192.155.3.2
EX26484(config)#
EX26484(config)# logging on
EX26484(config)#
```

4-1.29 loop-protect

Loop protection configuration.

SYNTAX

loop-protect [(shutdown-time <0-604800>) | (transmit-time <1-10>)]

Parameters:

shutdown-time	Loop protection shutdown time interval
transmit-time	Loop protection transmit time interval
<0-604800>	Shutdown time in second
<1-10>	Transmit time in second

EXAMPLE

```
EX26484(config)# loop-protect
EX26484(config)# loop-protect shutdown-time 333
EX26484(config)# loop-protect transmit-time 3
EX26484(config)#
```

4-1.30 mac

MAC table entries/configuration.

SYNTAX

mac address-table aging-time <0,10-1000000>

mac address-table learning vlan <vlan_list>

mac address-table static <mac_addr> vlan <vlan_id> [interface { ***** [<port_type_list>] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> { [* | GigabitEthernet | 10GigabitEthernet] } [<port_type_list>] }

Parameters:

address-table	MAC table entries/configuration
aging-time	Mac address aging time
learning	Mac Learning
static	Static MAC address
<0,10-1000000>	Aging time in seconds, 0 disables aging
vlan	VLAN
<vlan_list>	
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN keyword
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types

<port_type_list> Port list in 1/1-48

<port_type_list> Port list in 1/1-4

EXAMPLE

```
EX26484(config)# mac address-table aging-time 3333
EX26484(config)#
```

4-1.31 mep

Maintenance Entity Point

SYNTAX

mep <1-3124> ais [fr1m | fr1s] | [protect]

mep <1-3124> aps <0-7> { [laps] | (multi | uni) (laps | raps) | raps [octet] }

mep <1-3124> cc <0-7> [fr100s | fr10s | fr1m | fr1s | fr300s | fr6h | fr6m] [rx-only]

mep <1-3124> ccm-tlv

mep <1-3124> client domain (evc | vlan) flow <uint> [ais-prio] [<0-7> | ais-highest | lck-prio | level]

mep <1-3124> client domain (evc | vlan) flow <uint> [lck-prio] [<0-7> | ais-prio | lck-highest | level]

mep <1-3124> client domain (evc | vlan) flow <uint> [level <0-7>] [ais-prio | lck-prio]

mep <1-3124> dm <0-7> dual flow interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual flow multi interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual flow uni mep-id

mep <1-3124> dm <0-7> dual interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual multi (flow | rdtrp) interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual multi interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual rdtrp interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual rdtrp multi interval <uint> last-n <uint>

mep <1-3124> dm <0-7> dual rdtrp uni mep-id

mep <1-3124> dm <0-7> dual uni mep-id

mep <1-3124> dm bin { (fd | ifdv) <2-10> } | (threshold <1-50000>)

mep <1-3124> dm (ns | overflow-reset | proprietary | synchronized)

mep <1-3124> (down | up) domain (evc | port | vlan) [flow <uint>] level <0-7> [interface (GigabitEthernet |

10GigabitEthernet) <port_type_id>] | vid <vlan_id>

mep <1-3124> lb <0-7> { [count <uint>] | dei | multi | [uni (mac | mep-id)] }

mep <1-3124> lck [fr1m | fr1s]

mep <1-3124> level <0-7>

mep <1-3124> link-state-tracking

mep <1-3124> lm <0-7> [dual | flr | fr100s | fr10s | fr1s | fr6m | meas | multi | single | size |

slm-testid | synthetic | threshold | uni] <uint>

mep <1-3124> lm flow-counting

mep <1-3124> lm oam-counting [all | y1731]

mep <1-3124> lm rx [synthetic] [flr <uint>] | [prio | <0-7>] | [threshold <1-100>]

mep <1-3124> lm-avail (interval <1-1000> flr-threshold <0-1000>) | maintenance

mep <1-3124> lm-hli flr-threshold <0-1000> interval <uint>

mep <1-3124> lm-notif los-int-cnt-holddown <uint> los-th-cnt-holddown <uint> hli-cnt-holddown <uint>

mep <1-3124> lm-sdeg tx-min <uint> flr-threshold <0-1000> bad-threshold <uint> good-threshold <uint>

mep <1-3124> lt <0-7> [mac <mac_addr>] | [mep-id <uint> ttl <0-255>]

mep <1-3124> meg-id <word> (ieee [name <word>]) | [itu] | [itu-cc]

mep <1-3124> mep-id <uint>

mep <1-3124> mip (down | up) domain (evc | port | vlan) [flow <uint>] level <0-7>

[interface (GigabitEthernet | 10GigabitEthernet) <port_type_id>] | vid <vlan_id>

mep <1-3124> peer-mep-id <uint> [mac <mac_addr>]

mep <1-3124> performance-monitoring

mep <1-3124> syslog

mep <1-3124> tst <0-7> { (dei mep-id) | mep-id } <uint> { (all-one | all-zero | one-zero) | sequence }

rate <uint> size <uint>

mep <1-3124> tst (rx | tx)

mep <1-3124> vid <vlan_id>

mep os-tlv oui <0-0xFFFFFF> sub-type <0-0xFF> value <0-0xFF>

Parameters:

<1-3124>	The MEP instance number.
os-tlv	Organization-Specific TLV
ais	Alarm Indication Signal
aps	Automatic Protection Switching protocol.
cc	Continuity Check.
ccm-tlv	The CCM TLV enable/disable
client	
dm	Delay Measurement.
down	This MEP is a Down-MEP.
lb	Loop Back.
lck	Locked Signal.
level	The MEG level of the MEP.
link-state-tracking	Link State Tracking. When LST is enabled in an instance, Local SF or received 'isDown' in CCM Interface Status TLV, will bring down the residence port. Only valid in Up-MEP. The CCM rate must be 1 f/s or faster.
lm	Loss Measurement. Either Service frame or Synthetic Frame LM.
lm-avail	Availability for Loss Measurement
lm-hli	High Loss Interval for Loss Measurement
lm-notif	Loss Measurement JSON notifications
lm-sdeg	Signal Degrade for Loss Measurement
lt	Link Trace.
meg-id	The ITU/IEEE MEG-ID.
mep-id	The MEP ID.
mip	This MEP instance is a half-MIP.
peer-mep-id	The peer MEP ID.
performance-monitoring	Performance monitoring Data Set collection (MEF35).
syslog	Enable syslog.
tst	Test Signal

up This MEP is a Up-MEP.

vid The MEP VID.

fr1m Frame rate is 1 f/min.

fr1s Frame rate is 1 f/s.

protect The AIS can be used for protection. At the point of state change three AIS PDU is transmitted as fast as possible.

<0-7> Priority in case of tagged OAM. In the MPLS and EVC domain this is the COS-ID.

laps Linear Automatic Protection Switching protocol.

multi OAM PDU is transmitted with multicast MAC. Must me 'multi' in case of RAPS.

raps Ring Automatic Protection Switching protocol.

uni OAM PDU is transmitted with unicast MAC. The MAC is taken from peer MEP MAC database. Only possible in case of LAPS.

octet The last OCTET in the multicast MAC. Only possible in case of RAPS.

fr100s Frame rate is 100 f/s.

fr10s Frame rate is 10 f/s.

fr300s Frame rate is 300 f/s.

fr6h Frame rate is 6 f/hour.

fr6m Frame rate is 6 f/min.

rx-only CCM transmission and LOC detection is not enabled. Only RX parameters (priority and frame rate) are configured.

domain Client flow domain.

evc EVC client flow.

flow Client flow instance.

vlan VLAN client flow.

<uint> Client flow instance number value.

ais-prio AIS injection priority.

lck-prio LCK injection priority.

level The MEG level on the client layer

<0-7> AIS injection priority value.

ais-highest Request the highest possible AIS priority.

<0-7> LCK injection priority value.

lck-highest Request the highest possible LCK priority.

bin Delay Measurement Binning.

ns Nanoseconds

overflow-reset Reset all Delay Measurement results on total delay counter overflow.

proprietary Proprietary Delay Measurement.

synchronized Near-end and far-end is real time synchronized.

dual Delay Measurement based on 1DM PDU transmission.

flow The two way delay is calculated as round trip symmetrical flow delay. The far end residence time is subtracted.

interval Interval between PDU transmission in 10ms. Min value is 10.

multi OAM PDU is transmitted with multicast MAC.

rdtrp The two way delay is calculated as round trip delay. The far end residence time is not subtracted.

single Delay Measurement based on DMM/DMR PDU.

uni OAM PDU is transmitted with unicast MAC. The MAC is taken from peer MEP MAC database.

<uint> Interval value.

<uint> The last N value.

mep-id Peer MEP ID for unicast DM. The MAC is taken from peer MEP MAC database.

last-n The last N delays measurements used for average last N calculation. Min value is 10. Max value is 100

fd the number of FD Measurement Bins.

ifdv the number of IFDV Measurement Bins.

threshold the threshold for each Delay Measurement Binning.

<2-10> the number of FD Measurement Bins.

<1-50000> the threshold for each Delay Measurement Binning.

domain The domain of the MEP.

evc This MEP is a EVC domain MEP.

port This MEP is a Port domain MEP.

vlan This MEP is a VLAN domain MEP.

flow In case the MEP is a VLAN, EVC, MPLS-TP link, tunnel, LSP or Pseudo-Wire domain MEP, the flow instance that the MEP is related to must be given.

level The MEG level of the MEP.

vid In case the MEP is a Port domain Up-MEP or a EVC domain customer MIP (on the UNI), the VID must be given.

<uint> The VLAN, EVC, MPLS-TP link, MPLS-TP tunnel, MPLS-TP LSP or MPLS-TP Pseudo-Wire flow instance number.

<0-7> The MEG level value.

interface Select an interface to configure

GigabitEthernet Gigabit Ethernet Ports

10GigabitEthernet 10Gigabit Ethernet Ports

<port_type_list> Port list in 1/1-48

<port_type_list> Port list in 1/1-4

<vlan_id> The port Domain MEP or EVC domain customer MIB VID.

<0-7> Priority in case of tagged OAM. In the MPLS and EVC domain this is the COS-ID.

count The number of LBM PDUs to send in one loop test. The value 0 indicates infinite transmission (test behavior). This is hardware based LBM/LBR and Requires VOE.

dei Drop Eligible Indicator in case of tagged OAM.

multi OAM PDU is transmitted with multicast MAC. Not used for MPLS-TP.

uni OAM PDU is transmitted with unicast MAC. The MAC is taken from peer MEP MAC database. Not used for MPLS-TP.

<uint> Number of LBM PDUs to send value.

mac Loop Back unicast MAC to be used in case of LB against MIP.

mep-id Peer MEP ID for unicast LB. The MAC is taken from peer MEP MAC database. Not used for MPLS-TP.

flow-counting Loss Measurement is counting service frames per flow – all priority in one.

oam-counting Loss Measurement is counting OAM frames either as Y1731 or all

rx Receive and respond to LM PDUs from LM initiator.

dual Dual ended LM is based on CCM PDU or 1SL PDU in case of 'synthetic'.

flr The Frame Loss Ratio interval.

fr100s Frame rate is 100 f/s. Is only allowed for 'synthetic' LM.

fr10s Frame rate is 10 f/s.

fr1s Frame rate is 1 f/s.

fr6m Frame rate is 6 f/min. Is not allowed for dual ended 'service frame' LM (CCM PDU based).

multi OAM PDU is transmitted with multicast MAC.

single Single ended LM is based on LMM/LMR PDU or SLM/SLR PDU in case of 'synthetic'.

slm-testid SLM Test ID

synthetic Do synthetic LM using SLM/1SL OAM PDUs. Synthetic LM allows multiple peer MEP configured. Service frame LM allows only one peer MEP.

threshold Frame Loss threshold

uni OAM PDU is transmitted with unicast MAC. The MAC is taken from peer MEP MAC database. In case of LM there is only one peer MEP.

interval Availability interval

maintenance Availability Maintenance indicator.

<1-1000> Availability interval - number of measurements with same availability in order to change Availability state.

flr-threshold Availability FLR Threshold

<0-1000> Availability FLR Threshold in permille.

flr-threshold High Loss Interval FLR Threshold

<0-1000> High Loss Interval FLR Threshold in permille

interval High Loss Interval consecutive interval (number of measurements)

<uint> High Loss Interval consecutive interval (number of measurements)

los-int-cnt-holddown Hold down timer for JSON notification updates for near and far end frame loss interval count

<uint> Timer value in seconds.

hli-cnt-holddown Hold down timer for JSON notification updates for near

and far end High Loss Interval count

tx-min Minimum number of frames that must be transmitted in a measurement before FLR is tested against the SDEG FLR threshold.

<uint> Minimum number of frames that must be transmitted in a measurement before FLR is tested against the SDEG FLR threshold.

flr-threshold Signal Degrade FLR threshold

<0-1000> Signal Degrade FLR threshold in permille

bad-threshold Number of consecutive bad interval measurements required to set degrade state.

<uint> Number of consecutive bad interval measurements required to set degrade state.

good-threshold Number of consecutive good interval measurements required to clear degrade state.

<uint> Number of consecutive good interval measurements required to clear degrade state.

mac Link Trace target unicast MAC to be used in case of LT against MIP.

mep-id Peer MEP ID for Link Trace target unicast MAC. The MAC is taken from peer MEP MAC database.

<uint> Peer MEP ID value.

ttl Time To Live.

<0-255> Time To Live value.

<word> The MEG-ID string. This is either the ITU MEG-ID or the IEEE Short MA, depending on the selected MEG-ID format. The ITU max. is 13 characters. The ITU-CC max. is 15 characters. The IEEE max. is 16 characters.

ieee The MEG-ID (Short MA Name) has IEEE Character String format. The MEG-ID max. is 16 characters.

itu The MEG-ID has ITU format (ICC - UMC). The MEG-ID max. is 13 characters.

itu-cc The MEG-ID has ITU Country Code format (CC - ICC - UMC). The MEG-ID max. is 15 characters

<uint> The MEP ID value.

rx Receive Test Signal.

tx Transmit Test Signal.

all-one Test pattern is set to all one.

all-zero Test pattern is set to all zero.

one-zero Test pattern is set to 10101010.

sequence Enable sequence number in TST PDU

rate The TST frame transmission bit rate - in Mega bits pr. second. Limit is 400 Mbps. This is the bit rate of a standard frame without any encapsulation. If 1 Mbps rate is selected in a EVC MEP, the added tag will give a higher bitrate on the wire.

size The TST frame size. This is entered as the wanted size (in bytes) of a un-tagged frame containing TST OAM PDU - including CRC (four bytes). Example when 'Size' = 64 => Un-tagged frame size = DMAC(6) + SMAC(6) + TYPE(2) + TST PDU LENGTH(46) + CRC(4) = 64 bytes. The transmitted frame will be four bytes longer for each tag added - 8 bytes in case of a tunnel EVC. There are two frame MAX sizes to consider. Switch RX frame MAX size: The MAX frame size (all inclusive) accepted on the switch port of 10240 Bytes. CPU RX frame MAX size: The MAX frame size (all inclusive) possible to copy to CPU of 10240 Bytes. Consider that the Peer MEP must be able to handle the selected frame size Consider that in order to calculate the 'RX rate' a received TST PDU must be copied to CPU. Warning will be given if selected frame size exceeds the CPU RX frame MAX size. Frame MIN Size is 64 Bytes.

oui Organizationally Unique Identified.

<0-0xFFFFFF>

sub-type Sub-Type

<0-0xFF> Sub-Type value - one octet.

Value value

EXAMPLE

```
EX26484(config)# mep 1 syslog
EX26484(config)#
```

4-1.32 monitor

Monitoring different system events.

SYNTAX

monitor session <1-5>

monitor session <1-5> destination [interface { ***** [<port_type_list>] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> { [* | GigabitEthernet | 10GigabitEthernet] } [<port_type_list>] }

monitor session <1-5> destination remote vlan <vlan_id> reflector-port **(** GigabitEthernet | 10GigabitEthernet) <port_type_list>

monitor session <1-5> source cpu [both | rx | tx]

monitor session <1-5> source interface * ([<port_type_list>] | [both] | [rx] | [tx])

monitor session <1-5> source interface [**(** GigabitEthernet | 10GigabitEthernet) <port_type_list>]

monitor session <1-5> source remote vlan <vlan_id>

monitor session <1-5> source vlan <vlan_id>

Parameters:

session	Configure a MIRROR session
<1-5>	MIRROR session number
destination	MIRROR destination interface or VLAN
source	MIRROR source interface, VLAN
interface	MIRROR destination interface
remote	MIRROR destination Remote
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
vlan	MIRROR destination Remote number
<vlan_id>	Remote MIRROR destination RMIRROR VLAN number
reflector-port	Remote MIRROR reflector interface
cpu	MIRROR source CPU
interface	MIRROR source interface
remote	MIRROR source Remote
vlan	MIRROR source VLAN
both	MIRROR source CPU receive both

rx	MIRROR source CPU receive Rx
tx	MIRROR source CPU receive Tx

EXAMPLE

```
EX26484(config)# monitor session 1 source vlan 1
EX26484(config)#
```

4-1.33 mvr

Multicast VLAN Registration configuration.

SYNTAX

mvr

mvr (name | vlan <vlan_list>) <word16> channel <word16>

mvr (name | vlan <vlan_list>) <word16> election

mvr (name | vlan <vlan_list>) <word16> frame [priority <0-7>] | [tagged]

mvr (name | vlan <vlan_list>) <word16> igmp-address <ipv4_ucast>

mvr (name | vlan <vlan_list>) <word16> last-member-query-interval <0-31744>

mvr (name | vlan <vlan_list>) <word16> mode [compatible | dynamic]

Parameters:

name	MVR multicast name
vlan	MVR multicast VLAN
<word16>	MVR multicast VLAN name
channel	MVR channel configuration
election	Act as an IGMP Querier to join Querier-Election
frame	MVR control frame in TX
igmp-address	MVR address configuration used in IGMP
last-member-query-interval	Last Member Query Interval in tenths of seconds
mode	MVR mode of operation
<word16>	Profile name in 16 characters
priority	Interface CoS priority

tagged	Tagged IGMP/MLD frames will be sent
<0-7>	CoS priority ranges from 0 to 7
<ipv4_ucast>	A valid IPv4 unicast address
<0-31744>	0 - 31744 tenths of seconds
compatible	Compatible MVR operation mode
dynamic	Dynamic MVR operation mode

EXAMPLE

```
EX26484(config)# mvr vlan 10 mode dynamic
EX26484(config)#
```

4-1.34 mvrp

Enable MVRP feature globally

SYNTAX

mvrp

mvrp managed vlan <vlan_list>

mvrp managed vlan (add | except | remove) <vlan_list>

mvrp managed vlan (all | none)

Parameters:

managed	Set list of MVRP-managed VLANs
vlan	Set managed VLANs of MVRP
<vlan_list>	VLAN IDs of the managed VLANs of MVRP
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

EXAMPLE

```
EX26484(config)# mvrp managed vlan all
EX26484(config)#
```

4-1.35 no

no.

Table: configure – no Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a banner
clock	Configure time-of-day clock
debug	Debugging functions
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
eps	Ethernet Protection Switching.
erps	Ethernet Ring Protection Switching
green-ethernet	Green ethernet (Power reduction)
gvrp	Enable GVRP feature
hostname	Set system's network name
interface	Select an interface to configure
ip	Interface Internet Protocol configuration commands
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
json	JSON-RPC related configuration
lacp	LACP settings
lldp	Link Layer Discover Protocol.
logging	System logging message
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
mep	Maintenance Entity Point
monitor	Monitoring different system events
mvr	Multicast VLAN Registration configuration
mvrp	

ntp	Configure NTP
poe	Power Over Ethernet
port-security	Port Security
Privilege	Command privilege parameters
Prompt	Default the prompt to hostname
ptp	Precision time Protocol (1588)
qos	Quality of Service
radius-server	Configure RADIUS
rmon	Remote Monitoring
router	Routing process
sflow	Statistics flow.
snmp-server	Set SNMP server's configurations
spanning-tree	STP Bridge
svl	Unmap Shared VLAN Learning for a range or all FIDs
switchport	VLAN
system	Set the SNMP server's configurations
tacacs-server	Configure TACACS+
udld	Disable UDLD configurations on all fiber-optic ports.
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	Vlan commands
voice	Voice appliance attributes
web	web

4-1.35.1 aaa

Authentication, Authorization and Accounting.

SYNTAX

no aaa accounting (console | ssh | telnet)

no aaa authentication login (console | http | ssh | telnet)

no aaa authorization (console | ssh | telnet)

Parameters:

authentication Authentication

authorization	Authorization
accounting	
console	
ssh	
telnet	
login	Login
console	Disable Console authentication
http	Disable HTTP authentication
ssh	Disable SSH authentication
telnet	Disable Telnet authentication
console	Disable Console authorization
ssh	Disable SSH authorization
telnet	Disable Telnet authorization

EXAMPLE

```
EX26484(config)# no aaa authentication  login ssh
EX26484(config)#
```

4-1.35.2 access

Access management.

SYNTAX

no access management [<1~16>]

Parameters:

management	Access management configuration
<1~16>	ID of access management entry

EXAMPLE

```
EX26484(config)# no access management
EX26484(config)#
```

4-1.35.3 access-list

Access list.

SYNTAX

no access-list (ace <1~512>) | (rate-limiter [<1~16>])

Parameters:

ace	Access list entry
rate-limiter	Rate limiter
<1~512>	ACE ID
<1~16>	Rate limiter ID

EXAMPLE

```
EX26484(config)# no access-list ace 1
EX26484(config)#
```

4-1.35.4 aggregation

Aggregation mode.

SYNTAX

no aggregation mode

Parameters:

mode	Traffic distribution mode

EXAMPLE

```
EX26484(config)# no aggregation mode
EX26484(config)#
```

4-1.35.5 banner

Define a banner

SYNTAX

no banner [exec | login | motd]

Parameters:

exec	Set EXEC process creation banner
login	Set login banner
motd	Set Message of the Day banner

EXAMPLE

```
EX26484(config)# no banner login
EX26484(config)#
```

4-1.35.6 clock

Configure time-of-day clock.

SYNTAX

no clock [summer-time | timezone]

Parameters:

summer-time	Configure summer (daylight savings) time
timezone	Configure time zone

EXAMPLE

```
EX26484(config)# no clock summer-time
EX26484(config)#
```

4-1.35.7 debug

Debugging functions

SYNTAX

no debug mep <uint> dm tx (dual | single) <0-7> [interval <uint>] [synchronized]

no debug mep <uint> raps forward

no debug mep <uint> test tx (lb | tst) (<0-7> | all) [all-one | all-zero | one-zero]

[dei | rate | size]

no debug mep <uint> test tx (lb | tst) (<0-7> | all) [dei] [all-one | all-zero | one-zero | rate | size]

no debug mep <uint> test tx (lb | tst) (<0-7> | all) rate <uint> [all-one | all-zero | dei | one-zero | size]

no debug mep <uint> test tx (lb | tst) (<0-7> | all) size <uint> [all-one | all-zero | dei | one-zero | rate]

no debug mep <uint> volatile

no debug mep inject (afi | single) (down | up) pdu <uint> prio <uint> [isdx <uint>] | [pipeline-point <uint>] | [tagged]

Parameters:

mep	Maintenance Entity Point.
<uint>	The MEP instance number.
inject	
dm	Delay Measurement.
raps	The MEP instance get RAPS forwarding enabled.
test	Test Generation.
volatile	The MEP instance is change to volatile.
tx	Transmit DM/1DM.
dual	Dual ended - 1DM based.
single	Single ended - DMM/DMR based.
<0-7>	Priority in case of tagged OAM. In the MPLS and EVC domain this is the COS-ID.
interval	Interval between PDU transmission in 10ms. Min value is 10.
synchronized	Near-end and far-end is real time synchronized.
<uint>	Interval value.
tx	Transmit Test.
lb	Loop Back test
tst	Test Signal test
all	all priorities.
all-one	Data pattern is set to all one.
all-zero	Test pattern is set to all zero.

dei Drop Eligible Indicator in case of tagged OAM.

one-zero Data pattern is set to 10101010.

rate The TEST frame transmission bit rate - in Kbps. This is the bit rate of a standard frame without any encapsulation. If 1 Mbps rate is selected in a EVC MEP, the added tag will give a higher bitrate on the wire.

size The TEST frame size. This is entered as the wanted size (in bytes) of an untagged frame containing TST OAM PDU – including CRC (four bytes). Example when 'Size' = 64 : Untagged frame size = DMAC(6) + SMAC(6) + TYPE(2) + TST PDU LENGTH(46) + CRC(4) = 64 bytes. The transmitted frame will be four bytes longer for each tag added - 8 bytes in case of a tunnel EVC. Minimum Size is 64 Bytes. Maximum Size is 9600 Bytes (1526 for MPLS).

afi AFI frame injection.

single Single frame injected

down DOWN injection.

up UP injection.

pdu PDU type.

<uint> The PDU type opcode.

prio Priority.

<uint> The priority in TAG.

isdx ISDX.

pipeline-point pipeline_point.

tagged tagged.

<uint> The pipeline point.

EXAMPLE

```
EX26484(config)# no debug mep 1 dm tx single 1
EX26484(config)#
```

4-1.35.8 dot1x

IEEE Standard for port-based Network Access Control.

SYNTAX

no dot1x authentication timer (inactivity | re-authenticate)

no dot1x feature [guest-vlan] | [radius-qos] | [radius-vlan]

no dot1x guest-vlan [supplicant]

no dot1x (max-reauth-req **|** re-authentication | system-auth-control)

no dot1x timeout (quiet-period | tx-period)

Parameters:

authentication	Authentication
feature	Globally enables/disables a dot1x feature functionality
guest-vlan	Guest VLAN
max-reauth-req	The number of time a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN
re-authentication	Set Re-authentication state
system-auth-control	Set the global NAS state
timeout	timeout
timer	timer
re-authenticate	The period between re-authentication attempts in seconds
guest-vlan	Globally enables/disables state of guest-vlan
radius-qos	Globally enables/disables state of RADIUS-assigned QoS.
radius-vlan	Globally enables/disables state of RADIUS-assigned VLAN.
supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest VLAN, it will first check if this option is enabled or disabled. If disabled (unchecked, default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port for the life-time of the port. If enabled (checked), the switch will consider entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.
quiet-period	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.
tx-period	The time between EAPOL retransmissions

EXAMPLE

```
EX26484(config)# no dot1x authentication timer re-authenticate
EX26484(config)# no dot1x guest-vlan supplicant
EX26484(config)# no dot1x max-reauth-req
EX26484(config)# no dot1x re-authentication
EX26484(config)# no dot1x system-auth-control
EX26484(config)# no dot1x timeout tx-period
EX26484(config)#
```

4-1.35.9 enable

Modify enable password parameters

SYNTAX

no enable password [level <1-15>]

no enable secret [0 | 5 { level <1-15> }]

Parameters:

password	Assign the privileged level clear password
secret	Assign the privileged level secret
0	Specifies an UNENCRYPTED password will follow
5	Specifies an ENCRYPTED password will follow
level	Set exec level password
<1-15>	Level number

EXAMPLE

```
EX26484(config)# no enable secret level 15
EX26484(config)# no enable password level 15
EX26484(config)#
```

4-1.35.10 eps

Ethernet Protection Switching.

SYNTAX

no eps <uint> [command | holdoff | revertive]

Parameters:

<uint>	The EPS instance number.
command	Clear command on EPS.
holdoff	
revertive	Revertive EPS.

EXAMPLE

```
EX26484(config)# no eps 1 command
EX26484(config)#
```

4-1.35.11 erps

Ethernet Ring Protection Switching

SYNTAX

no erps 1-64 (guard | holdoff | mep | revertive | rpl | version | vlan)

no erps 1-64 topology-change propagate

Parameters:

1-64	ERPS group number
guard	Guard
holdoff	Hold-off time
mep	MEP
revertive	Revertive
rpl	Ring Protection Link
sub	Sub-ring
topology-change	Topology Change
version	Version
vlan	VLAN
propagate	Propagate

EXAMPLE

```
EX26484(config)# no erps version
EX26484(config)#
```

4-1.35.12 green-ethernet

Green ethernet (Power reduction)

SYNTAX

no green-ethernet eee optimize-for-power

Parameters:

eee Powering down of PHYs when there is no traffic.

optimize-for-power Set if EEE shall be optimized for least power consumption (else optimized for least traffic latency).

EXAMPLE

```
EX26484(config)# no green-ethernet eee optimize-for-power
EX26484(config)#
```

4-1.35.13 gvrp

Enable GVRP feature

SYNTAX

no gvrp

no gvrp max-vlans <1-4094>

no gvrp time [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>]

Parameters:

max-vlans Number of simultaniously VLANs that GVRP can control

time Config GARP protocol timer parameters. IEEE 802.1D-2004, clause 12.11.

join-time Set GARP protocol parameter JoinTime. See IEEE

802.1D-2004, clause 12.11

leave-all-time Set GARP protocol parameter LeaveAllTime. See IEEE 802.1D-2004, clause 12.11

leave-time Set GARP protocol parameter LeaveTime. See IEEE 802.1D-2004, clause 12.11

<1-20> join-time in units of centiseconds. Range is 1-20. Default is 20.

<1000-5000> leave-all-time in units of centiseconds Range is 1000-5000. Default is 1000.

<60-300> leave-time in units of centiseconds. Range is 60-300. Default is 60.

EXAMPLE

```
EX26484(config)#no gvrp max-vlans 1
EX26484(config)#
```

4-1.35.14 hostname

Set system's network name

SYNTAX

no hostname

Parameters:

none

EXAMPLE

```
EX26484(config)# no hostname
EX26484(config)#
```

4-1.35.15 interface

Select an interface to configure.

SYNTAX

no interface (llag 1-26) | (vlan <vlan_list>)

Parameters:

llag	Local link aggregation interface configuration
vlan	VLAN interface configurations
1-26	ID of LLAG interface
<vlan_list>	List of VLAN interface numbers

EXAMPLE

```
EX26484(config)# no interface vlan 10
EX26484(config)#
```

4-1.35.16 ip

Interface Internet Protocol configuration commands

SYNTAX

no ip arp inspection

no ip arp inspection entry interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>

no ip arp inspection vlan <vlan_list> [logging]

no ip dhcp excluded-address <ipv4_addr> [<ipv4_addr>]

no ip dhcp pool <word32>

no ip dhcp relay information [option | policy]

no ip dhcp [server | snooping]

no ip dns proxy

no ip domain name

no ip helper-address

no ip http (secure-redirect | secure-server)

no ip igmp host-proxy [leave-proxy]

no ip igmp snooping [vlan <vlan_list>]

no ip igmp (ssm-range **|** unknown-flooding)

no ip name-server [<0-3>]

no ip route <ipv4_addr> <ipv4_netmask> <ipv4_ucast>

no ip routing

no ip source binding interface (GigabitEthernet | 10GigabitEthernet) <port_type_id> <vlan_id> <ipv4_ucast> <mac_ucast>

no ip ssh

no ip verify source

Parameters:

arp	Address Resolution Protocol
dhcp	Configure DHCP server parameters
dns	Domain Name System
domain	IP DNS Resolver
helper-address	
http	Hypertext Transfer Protocol
igmp	Internet Group Management Protocol
name-server	Domain Name System
route	
routing	Disable routing for IPv4 and IPv6
source	source command
ssh	Secure Shell
verify	verify command
inspection	ARP inspection
entry	ARP inspection entry
vlan	ARP inspection vlan setting
interface	Select an interface to configure
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<vlan_id>	Select a VLAN id to configure
<mac_ucast>	Select a MAC address to configure
<ipv4_ucast>	Select an IP Address to configure
<vlan_list>	arp inspection vlan list
logging	ARP inspection vlan logging mode configuration

excluded-address	Prevent DHCP from assigning certain addresses
pool	Configure DHCP address pools
relay	DHCP relay agent configuration
server	Enable DHCP server
snooping	DHCP snooping
<ipv4_addr>	Low IP address
<ipv4_addr>	High IP address
<word32>	Pool name in 32 characters
Information	DHCP information option (Option 82)
option	DHCP option
policy	Policy for handling the receiving DHCP packet already include the information option
proxy	DNS proxy service
name	Define the default domain name
secure-redirect	Secure HTTP web redirection
secure-server	Secure HTTP web server
host-proxy	IGMP proxy configuration
snooping	Snooping IGMP
ssm-range	IPv4 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv4 multicast traffic
leave-proxy	IGMP proxy for leave configuration
vlan	IGMP VLAN
<vlan_list>	VLAN identifier (VID)
<0-3>	Preference of DNS server. Default selection is 0
<ipv4_addr>	Network
<ipv4_netmask>	Netmask
<ipv4_ucast>	Gateway
binding	IP source binding
<mac_ucast>	Select a MAC address to configure
source	verify source

EXAMPLE

```
EX26484(config)# no ip ssh
EX26484(config)#
```

4-1.35.17 ipmc

IPv4/IPv6 multicast configuration.

SYNTAX

no ipmc (profile | range) [<word16>]

Parameters:

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
<word16>	Profile name in 16 characters
<word16>	Range entry name in 16 characters

EXAMPLE

```
EX26484(config)# no ipmc profile aa
EX26484(config)#
```

4-1.35.18 ipv6

IPv6 configuration commands.

SYNTAX

no ipv6 mld host-proxy [leave-proxy]

no ipv6 mld snooping [vlan <vlan_list>]

no ipv6 mld ssm-range

no ipv6 mld unknown-flooding

no ipv6 mld route <ipv6_subnet>

Parameters:

mld	Multicasat Listener Discovery
route	Configure static routes
host-proxy	MLD proxy configuration

snooping	Snooping MLD
ssm-range	IPv6 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv6 multicast traffic
leave-proxy	MLD proxy for leave configuration
vlan	MLD VLAN
<vlan_list>	VLAN identifier (VID)
<ipv6_subnet>	IPv6 prefix x:x::y/z

EXAMPLE

```
EX26484(config)# no ipv6 mld snooping
EX26484(config)#
```

4-1.35.19 json

JSON-RPC related configuration

SYNTAX

no json notification host <word32> [| (begin | exclude | include) <line> [<line>]]

no json notification listen [| (begin | exclude | include) <line> [<line>]] [<word256>]

Parameters:

notification	JSON-RPC notification configuration
host	JSON-RPC notification destination host
listen	JSON-RPC notification event subscription
<word32>	Name of JSON-RPC notification destination host
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
<word256>	Name of JSON-RPC notification to subscript to

EXAMPLE

```
EX26484(config)# no json notification listen
EX26484(config)#
```

4-1.35.20 lacp

LACP settings

SYNTAX

no lacp system-priority <1-65535>

Parameters:

system-priority	System priority
<1-65535>	Priority value, lower means higher priority

EXAMPLE

```
EX26484(config)# no lacp system-priority 1
EX26484(config)#
```

4-1.35.21 lldp

Link Layer Discover Protocol.

SYNTAX

no lldp holdtime

no lldp med datum

no lldp med fast

no lldp med location-tlv altitude

no lldp med location-tlv civic-addr [additional-code | additional-info | apartment | block | building | city | country | county | district | floor | house-no | house-no-suffix | landmark | leading-street-direction | name | p-o-box | plase-type | postal-community-name | room-number | state | street | street-suffix | trailing-street-suffix | zip-code]

no lldp med location-tlv elin-addr

no lldp med location-tlv latitude

no lldp med location-tlv longitude

no lldp med media-vlan-policy <0~31>

no lldp reinit

no lldp timer

no lldp transmission-delay

Parameters:

Holdtime Sets LLDP hold time (The neighbor switch will discard the LLDP information after 'hold time' multiplied with 'timer' seconds).

Med Media Endpoint Discovery.

Reinit Sets LLDP reinitialization delay.

timer Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).

transmission-delay Sets LLDP transmission-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)

datum Set datum to default value.

fast Set fast repeat count to default value.

location-tlv LLDP-MED Location Type Length Value parameter

media-vlan-policy Delete a policy.

altitude Setting altitude to default.

civic-addr Civic address information and postal information.

elin-addr Set ELIN address to default value.

latitude Setting Latitude parameter to default.

longitude Setting longitude to default.

<0~31> Policy to delete.

additional-code Additional code - Example: 1320300003.

additional-info Additional location info - Example: South Wing.

apartment Unit (Apartment, suite) - Example: Apt 42.

block Neighborhood, block.

building Building (structure) - Example: Low Library.

city City, township, shi (Japan) - Example: Copenhagen.

country The two-letter ISO 3166 country code in capital ASCII letters - Example: DK, DE or US.

county County, parish, gun (Japan), district.

district City division, borough, city district, ward, chou (Japan).

floor Floor - Example: 4.

house-no House number - Example: 21.

house-no-suffix House number suffix - Example: A, 1/2.

landmark Landmark or vanity address - Example: Columbia University.

leading-street-direction Leading street direction - Example: N.

name Name (residence and office occupant) - Example: John Doe.

p-o-box Post office box (P.O. BOX) - Example: 12345.

place-type Place type - Example: Office.

postal-community-name Postal community name - Example: Leonia.

room-number Room number - Example: 450F.

state National subdivisions (state, canton, region, province, prefecture).

street Street - Example: Oxford Street.

street-suffix Street suffix - Example: Ave, Platz.

trailing-street-suffix Trailing street suffix - Example: SW.

zip-code Postal/zip code - Example: 2791.

EXAMPLE

```
EX26484(config)# no lldp holdtime
EX26484(config)# no lldp med location-tlv civic-addr floor
EX26484(config)# no lldp reinit
EX26484(config)# no lldp timer
EX26484(config)# no lldp transmission-delay
EX26484(config)#
```

4-1.35.22 logging

System logging message

SYNTAX

no logging host

no logging notification listen [<kword127>]

no logging on

Parameters:

host	host
notification	notification
on	Enable Switch logging host mode
listen	listen
<kword127>	A name identifying the listen command

EXAMPLE

```
EX26484(config)# no logging host 3
EX26484(config)# no logging on
EX26484(config)#
```

4-1.35.23 loop-protect

Loop protection configuration.

SYNTAX

no loop-protect [shutdown-time | transmit-time]

Parameters:

shutdown-time	Loop protection shutdown time interval
transmit-time	Loop protection transmit time interval

EXAMPLE

```
EX26484(config)# no loop-protect shutdown-time
EX26484(config)# no loop-protect transmit-time
EX26484(config)#
```

4-1.35.24 mac

MAC table entries/configuration.

SYNTAX

no mac address-table aging-time [<0,10-1000000>]

no mac address-table learning vlan <vlan_list>

no mac address-table static <mac_addr> vlan <vlan_id> [interface { ***** [<port_type_list>] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> { [* | GigabitEthernet | 10GigabitEthernet] } [<port_type_list>] }

Parameters:

address-table	Mac table entries/configuration
aging-time	Mac address aging time
learning	Mac Learning
static	Static MAC address
<0,10-1000000>	Aging time in seconds, 0 disables aging
vlan	VLAN
<vlan_list>	
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN keyword
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484(config)# no mac address-table aging-time
EX26484(config)#
```

4-1.35.25 mep

Maintenance Entity Point

SYNTAX

no mep <uint> [ais | aps | cc | ccm-tlv]

no mep <uint> [client domain (evc | lsp | vlan) flow (<uint> | all)]

no mep <uint> dm [bin] (fd <2-10>) | (ifdv <2-10>) | (threshold <1-50000>)

no mep <uint> [ns | overflow-reset | proprietary | synchronized | lb | lck | link-state-tracking | lm-hli | lm-notif | lm-sdeg | lt | performance-monitoring | syslog | vid]

no mep <uint> lm [both | flow-counting | oam-counting | rx | tx]

no mep <uint> lm [oam-counting] [all | y1731]

no mep <uint> lm-avail [maintenance]

no mep <uint> peer-mep- id (<uint> | all)

no mep <uint> tst (rx | tx)

Parameters:

<uint> The MEP instance number.

ais Alarm Indication Signal.

aps Automatic Protection Switching protocol.

cc Continuity Check.

ccm-tlv The CCM TLV enable/disable

client Client flow instance number.

dm Delay Measurement.

lb Loop Back.

lck Locked Signal

link-state-tracking Link State Tracking. When LST is enabled in an instance, Local SF or received 'isDown' in CCM Interface Status TLV, will bring down the residence port. Only valid in Up-MEP. The CCM rate must be 1 f/s or faster.

lm Loss Measurement.

lm-avail Availability for Loss Measurement.

lm-hli High Loss Interval for Loss Measurement.

lm-notif Loss Measurement JSON notifications

lm-sdeg Signal Degrade for Loss Measurement.

lt Link Trace.

peer-mep-id The peer MEP ID.

performance-monitoring Performance monitoring Data Set collection

(MEF35).

syslog Enable syslog.

tst Test Signal.

Vid

domain Client flow domain.

evc EVC client flow.

lsp MPLS-TP LSP client flow.

vlan VLAN client flow.

flow Client flow instance.

<uint> Client flow instance number value.

all Delete all client flow instances.

bin Delay Measurement Binning.

ns Nanoseconds

overflow-reset Reset all Delay Measurement results on total delay counter overflow.

proprietary Proprietary Delay Measurement.

synchronized Near-end and far-end is real time synchronized.

fd the number of FD Measurement Bins.

ifdv the number of IFDV Measurement Bins.

threshold the threshold for each Delay Measurement Binning.

<2-10> the number of FD Measurement Bins.

<2-10> the number of IFDV Measurement Bins.

<1-50000> the threshold for each Delay Measurement Binning.

both Disable both LM PDU transmission and loss calculation when receiving LM PDUs.

flow-counting Loss Measurement is counting service frames per flow – all priority in one.

oam-counting Loss Measurement is counting OAM frames either as Y1731 or all

rx Disable loss calculation when receiving LM PDUs.

tx Disable LM PDU transmission (default).

all Loss Measurement is counting all OAM frames as service

frames.

y1731 Loss Measurement is counting OAM frames as service frames as described in Y1731.

maintenance Availability Maintenance indicator.

<uint> The peer MEP ID value.

all All peer MEP IDs will be deleted.

rx Receive Test Signal.

tx Transmit Test Signal.

EXAMPLE

```
EX26484(config)# no mep 1 lm rx
EX26484(config)#
```

4-1.35.26 monitor

Monitoring different system events.

SYNTAX

no monitor session <1-5>

no monitor session <1-5> destination [interface { ***** [<port_type_list>] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> { [* | GigabitEthernet | 10GigabitEthernet] } [<port_type_list>] }

no monitor session <1-5> destination remote

no monitor session <1-5> source cpu [both | rx | tx]

no monitor session <1-5> source interface * ([<port_type_list>] | [both] | [rx] | [tx])

no monitor session <1-5> source interface [**(** GigabitEthernet | 10GigabitEthernet) <port_type_list>]

no monitor session <1-5> source remote

no monitor session <1-5> source vlan <vlan_list>

Parameters:

session Configure a MIRROR session

<1-5> MIRROR session number

destination MIRROR destination interface, or VLAN

source	MIRROR source interface, VLAN
interface	MIRROR destination interface
remote	MIRROR destination Remote
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
cpu	MIRROR source CPU
interface	MIRROR source interface
remote	MIRROR source Remote
vlan	MIRROR source VLAN
both	MIRROR source CPU receive both
rx	MIRROR source CPU receive Rx
tx	MIRROR source CPU receive Tx
both	MIRROR source receive both
rx	MIRROR source receive Rx
tx	MIRROR source receive Tx
<vlan_list>	MIRROR source VLAN list

EXAMPLE

```
EX26484(config)# no monitor session 1 destination
EX26484(config)#
```

4-1.35.27 mvr

Multicast VLAN Registration configuration.

SYNTAX

no mvr [(name <word16>) | (vlan <vlan_list>)] [channel | election | (frame (priority | tagged)) | igmp-address | last-member-query-interval | mode]

Parameters:

name	MVR multicast name
vlan	MVR multicast VLAN
<word16>	MVR multicast VLAN name
channel	MVR channel configuration
election	Act as an IGMP Querier to join Querier-Election
frame	MVR control frame in TX
igmp-address	MVR address configuration used in IGMP
last-member-query-interval	Last Member Query Interval in tenths of seconds
mode	MVR mode of operation
priority	Interface CoS priority
tagged	Tagged IGMP/MLD frames will be sent

EXAMPLE

```
EX26484(config)# no mvr
EX26484(config)#
```

4-1.35.28 mvrp

none

SYNTAX

no mvrp

EXAMPLE

```
EX26484(config)# no mvrp
EX26484(config)#
```

4-1.35.29 ntp

Configure NTP.

SYNTAX

no ntp

no ntp server <1-5>

Parameters:

server	Configure NTP server
<1-5>	index number

EXAMPLE

```
EX26484(config)# no ntp server 2
EX26484(config)#
```

4-1.35.30 poe

Power Over Ethernet.

SYNTAX

no poe [capacitor-detect | management mode | ping-check | profile id <1-16>]

Parameters:

capacitor-detect	Disable capacitor detection
management	Use management mode to configure PoE power management method.
ping-check	Enable POE Ping Check.
profile	erase poe scheduling profile
supply	Specify the maximum power the power supply can deliver. Max power supply for a single PoE controller board is 180W and for a dual PoE controller board is 90W.
mode	mode
ping-check	Enable POE Ping Check.
profile	erase poe scheduling profile
id	erase poe scheduling profile id
<1-16>	profile id from 1 to 16

EXAMPLE

```
EX26484(config)# no ntp server 2
EX26484(config)#
```

4-1.35.31 port-security

Port Security

SYNTAX

no port-security (aging | hold) [time]

Parameters:

aging	Enable/disable port security aging.
hold	Configure hold options
time	Time in seconds between check for activity on learned MAC addresses.
time seconds	Violating MAC addresses are held non-forwarding for 300

EXAMPLE

```
EX26484(config)# no port-security hold
EX26484(config)#
```

4-1.35.32 Privilege

Command privilege parameters

SYNTAX

no privilege <cword> level <0-15> <line128> [<line128>]

Parameters:

<cword>	Valid words are 'config-vlan' 'configure' 'dhcp-pool' 'exec' 'if-vlan' 'interface' 'ipmc-profile' 'json-noti-host' 'line' 'llag' 'qos-map-egress' 'qos-map-ingress' 'router-if' 'snmps-host' 'stp-aggr'
level	Set privilege level of command

<0-15>	Privilege level
<line128>	Initial valid words and literals of the command to modify, in 128 characters

EXAMPLE

```
EX26484(config)# no privilege config-vlan level 1
EX26484(config)#
```

4-1.35.33 prompt

Default the prompt to hostname

SYNTAX

no prompt

Parameters:

none

EXAMPLE

```
EX26484(config)# no prompt
EX26484(config)#
```

4-1.35.34 ptp

Precision time Protocol (1588)

SYNTAX

no ptp

no ptp <0-3> [afi–announce | afi-sync | clk | domain | localpriority | log | path-trace-enable | priority1 | priority2 | servo displaystates | uni <0-4>]

no ptp <0-3> mode [bcfrontend | boundary | e2etransparent | master | p2ptransparent | slave]

no ptp <0-3> virtual-port [accuracy | class | local-priority | priority1 | priority2 | variance]

no ptp <0-3> virtual-port io-pin [| (begin | exclude | include) <line>] <line>

no ptp [ext | ho-spec | system-time]

no ptp io-pin <0-3>

Parameters:

<0-3>	Instance number: 0-3
ext	Set the 1PPS and External clock output configuration and VCXO frequency rate adjustment option to default values
ho-spec	Clear the Holdover specification for G8275 PTP clocks
io-pin	Clear input/output pin configuration (i.e disable the pin)
system-time	Disable synchronization between PTP and System time
afi-announce	Disable PTP Announce automatic frame injection
afi-sync	Disable PTP Sync automatic frame injection
clk	Set PTP slave clock options to free running
domain	Default Clock domain
localpriority	Default Clock local priority
log	Disable the PTP debug logging
mode	Delete PTP clock instance
path-trace-enable	Disable path trace option (i.e. no Path Trace added to Announce messages)
priority1	Default Clock priority 1
priority2	Default Clock priority 2
servo	Set Servo parameters
uni	Clear a Unicast Slave configuration entry
virtual-port	
bcfrontend	Delete if Boundary clock front end
boundary	Delete if boundary clock
e2etransparent	Delete if e2e TC
master	Delete if master only
p2ptransparent	Delete if p2p TC
slave	Delete if slave only
displaystates	Enable logging of servo parameters on the console

<0-4>	[0..4] Index in the slave table
accuracy	
class	
io-pin	
local-priority	
priority1	
priority2	
variance	
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
<0-3>	Pin number

EXAMPLE

```
EX26484(config)# no ptp system-time
EX26484(config)#
```

4-1.35.35 qos

Quality of Service.

SYNTAX

no qos fmi <0-4294967295> [mark-red | mark-red-enable]

no qos map cos-dscp <0~7> dpl <0~3>

no qos map (dscp-classify | dscp-cos | dscp-egress-translation | dscp-ingress-translation) [<0~63> | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | be | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va]

no qos map egress <0~511>

no qos map ingress <0~255>

no qos qce <1~256>

no qos sfi <0-4294967295> [block-oversize | block-oversize-enable]

no qos sgi <0-4294967295> [close-invalid-rx | close-invalid-rx-enable | gate-enabled]

no qos storm [broadcast | multicast | unicast]

no qos wred group <1~3> queue <0~7> dpl <1~3>

Parameters:

fmi	SFP Flow Meter Instance
map	Global QoS Map/Table
qce	QoS Control Entry
sfi	PSFP Stream Filter Instance
sgi	PSFP Stream Gate Instance
storm	Storm policer
wred	Weighted Random Early Discard
<0-4294967295>	Flow Meter Instance ID
mark-red	Configure Flow Meter Mark All Frames Red
mark-red-enable	Configure Flow Meter Mark All Frames Red Enable
cos-dscp	Map for COS to DSCP
dscp-classify	Map for DSCP classify enable
dscp-cos	Map for DSCP to COS
dscp-egress-translation	Map for DSCP egress translation
dscp-ingress-translation	Map for DSCP ingress translation
egress	Map for egress configuration
ingress	Map for ingress configuration
<0~7>	Specific class of service or range
dpl	Specify drop precedence level
<0~3>	Specific drop precedence level or range
<0~63>	Specific DSCP or range
af11	Assured Forwarding PHB AF11(DSCP 10)
af12	Assured Forwarding PHB AF12(DSCP 12)
af13	Assured Forwarding PHB AF13(DSCP 14)
af21	Assured Forwarding PHB AF21(DSCP 18)
af22	Assured Forwarding PHB AF22(DSCP 20)

af23	Assured Forwarding PHB AF23(DSCP 22)
af31	Assured Forwarding PHB AF31(DSCP 26)
af32	Assured Forwarding PHB AF32(DSCP 28)
af33	Assured Forwarding PHB AF33(DSCP 30)
af41	Assured Forwarding PHB AF41(DSCP 34)
af42	Assured Forwarding PHB AF42(DSCP 36)
af43	Assured Forwarding PHB AF43(DSCP 38)
be	Default PHB(DSCP 0) for best effort traffic
cs1	Class Selector PHB CS1 precedence 1(DSCP 8)
cs2	Class Selector PHB CS2 precedence 2(DSCP 16)
cs3	Class Selector PHB CS3 precedence 3(DSCP 24)
cs4	Class Selector PHB CS4 precedence 4(DSCP 32)
cs5	Class Selector PHB CS5 precedence 5(DSCP 40)
cs6	Class Selector PHB CS6 precedence 6(DSCP 48)
cs7	Class Selector PHB CS7 precedence 7(DSCP 56)
ef	Expedited Forwarding PHB(DSCP 46)
va	Voice Admit PHB(DSCP 44)
<0~511>	Map ID
<0~255>	Map ID
<1~256>	QCE ID
<0-4294967295>	Stream Filter Instance ID
block-oversize	Configure Stream Blocked Due To Oversize Frame
block-oversize-enable	Configure Stream Blocked Due To Oversize Frame
<0-4294967295>	Stream Gate Instance ID
close-invalid-rx	Configure Gate Closed Due To Invalid Rx
close-invalid-rx-enable	Configure Gate Closed Due To Invalid Rx Enable
gate-enabled	Configure Stream Gate Instance
broadcast	Police broadcast frames
multicast	Police multicast frames
unicast	Police unicast frames
group	Specify group

<1~3>	Specific group or range
queue	Specify queue
<0~7>	Specific queue or range
dpl	Specify DPL
<1~3>	Specific DPL or range

EXAMPLE

```
EX26484(config)# no qos map cos-queue 3
EX26484(config)#
```

4-1.35.36 radius-server

Configure RADIUS.

SYNTAX

no radius-server attribute [32 | 4 | 95]

no radius-server deadtime

no radius-server host <word1-255> **|** [acct-port <0-65535>] [auth-port <0-65535>]

no radius-server [key | retransmit **|** timeout]

Parameters:

attribute	
deadtime	Time to stop using a RADIUS server that doesn't respond
host	Specify a RADIUS server
key	Set RADIUS encryption key
retransmit	Specify the number of retries to active server
timeout	Time to wait for a RADIUS server to reply
32	
4	
95	
<word1-255>	Hostname or IPv4/IPv6 address
acct-port	UDP port for RADIUS accounting server
auth-port	UDP port for RADIUS authentication server

<0-65535> UDP port number

EXAMPLE

```
EX26484(config)# no radius-server attribute 4
EX26484(config)# no radius-server deadtime
EX26484(config)# no radius-server key
EX26484(config)# no radius-server retransmit
EX26484(config)#
```

4-1.35.37 rmon

Remote Monitoring.

SYNTAX

no rmon (alarm | event) <1-65535>

Parameters:

alarm	Configure an RMON alarm
event	Configure an RMON event
<1-65535>	Alarm entry ID
<1-65535>	Event entry ID

EXAMPLE

```
EX26484(config)# no rmon alarm 1000
EX26484(config)#
```

4-1.35.38 sflow

Statistics flow.

SYNTAX

no sflow agent-ip

no sflow collector-address

no sflow collector-port

no sflow max-datagram-size

no sflow timeout

Parameters:

agent-ip	Sets the agent IP address used as agent-address in UDP datagrams to 127.0.0.1.
collector-address	Collector address
collector-port	Collector UDP port
max-datagram-size	Maximum datagram size.
timeout	Receiver timeout measured in seconds. The switch decrements the timeout once per second, and as long as it is non-zero, the receiver receives samples. Once the timeout reaches 0, the receiver and all its configuration is reset to defaults.

EXAMPLE

```
EX26484(config)# no sflow agent-ip
EX26484(config)# no sflow collector-address
EX26484(config)# no sflow collector-port
EX26484(config)# no sflow max-datagram-size
EX26484(config)# no sflow timeout
EX26484(config)#
```

4-1.35.39 snmp-server

Set SNMP server's configurations.

SYNTAX

no snmp-server access <word32> model [v1 | v2c | v3 | any] level [auth | noauth | priv]

no snmp-server community <word32> [(ip-range <ipv4_addr> <ipv4_netmask>) | (ipv6-range <ipv6_subnet>)]

no snmp-server [contact | location]

no snmp-server engine-id local

no snmp-server host <word32>

no snmp-server security-to-group model { v1 | v2c | v3 } name < word32>

no snmp-server trap <cword> [<word255> (exclude | include)] | [id <0-127>]

no snmp-server user <word32> engine-id <word10-64>

no snmp-server view <word32> <word255>

Parameters:

access	access configuration
community	Delete a SNMP community
contact	Clear the SNMP server's contact string
engine-id	Set SNMP engine ID
host	Set SNMP host's configurations
location	Clear the SNMP server's location string
security-to-group	security-to-group configuration
trap	Trap source configuration
user	user who can access SNMP server
view	MIB view configuration
<word32>	group name
model	security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
any	any security model
level	security level
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
<word32>	Security name
ip-range	Use IPv4 range
ipv6-range	Use IPv6 range
<ipv4_addr>	IPv4 address
<ipv4_netmask>	IPv4 netmask
<ipv6_subnet>	IPv6 subnet
local	Set SNMP local engine ID
model	security model

v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<word32>	security user name
<cword>	Valid words are 'authenticationFailure' 'coldStart' 'entConfigChange' 'fallingAlarm' 'linkDown' 'linkUp' 'lldpRemTablesChange' 'newRoot' 'risingAlarm' 'topologyChange' 'warmStart'
<word255>	OID to use as index filter
id	Use specific filter ID
exclude	Exclude filter type
include	Include filter type
<0-127>	Trap source filter ID
<word32>	name of user
engine-id	engine ID
<word10-64>	engine ID octet string
<word32>	MIB view name
<word255>	MIB view OID

EXAMPLE

```
EX26484(config)# no snmp-server engine-id local

EX26484(config)#
```

4-1.35.40 spanning-tree

STP Bridge

SYNTAX

no spanning-tree edge (bpdu-filter | bpdu-guard)

no spanning-tree mode

no spanning-tree mst <0-7> [priority | vlan]

no spanning-tree mst forward-time

no spanning-tree mst hello-time

no spanning-tree mst max-age

no spanning-tree mst max-hops

no spanning-tree mst name

no spanning-tree recovery interval

no spanning-tree transmit hold-count

Parameters:

edge	Edge ports
mode	STP protocol mode
mst	STP bridge instance
recovery	The error recovery timeout
transmit	
bpdu-filter	Enable BPDU filter (stop BPDU tx/rx)
bpdu-guard	Enable BPDU guard
<0-7>	instance (CIST=0, MSTI1=1...)
forward-time	Delay between port states
hello-time	MSTP bridge hello time
max-age	Max bridge age before timeout
max-hops	MSTP bridge max hop count
name	Bridge name keyword
priority	Priority of the instance
vlan	VLAN keyword
interval	Interval
hold-count	

EXAMPLE

```
EX26484(config)# no spanning-tree mode
EX26484(config)# no spanning-tree mst max-age
EX26484(config)#
```

4-1.35.41 svl

Unmap Shared VLAN Learning for a range or all FIDs

SYNTAX

no svl fid [<1~4095> | all]

Parameters:

fid	Filter ID keyword
<1~4095>	List of filter IDs to default
all	Default all Filter IDs

EXAMPLE

```
EX26484(config)# no svl fid all
EX26484(config)#
```

4-1.35.42 switchport

VLAN

SYNTAX

no switchport vlan mapping <1-53> [<vlan_list>] | (both | egress | ingress) <vlan_id>

Parameters:

vlan	VLAN translation entry configuration.
mapping	Group id
<1-53>	VLAN ID List (deprecated)
<vlan_list>	
both	Bi-directional Translation
egress	Egress-only Translation
ingress	Ingress-only Translation
<vlan_id>	VLAN ID

EXAMPLE

```
EX26484(config)# no switchport mapping 1 both 1
EX26484(config)#
```

4-1.35.43 system

Set the SNMP server's configurations.

SYNTAX

no system **[** contact | description | location | name | reboot]

Parameters:

contact	Clear the SNMP server's contact string
description	Clear the system description string
location	Clear the SNMP server's location string
name	Clear the SNMP server's system model name string
reboot	erase all Switch Reboot scheduling

EXAMPLE

```
EX26484(config)# no system reboot
EX26484(config)#
```

4-1.35.44 tacacs-server

Configure TACACS+.

SYNTAX

no tacacs-server deadtime

no tacacs-server host <word1-255> [port <0-65535>]

no tacacs-server key

no tacacs-server timeout

Parameters:

deadtime	Time to stop using a TACACS+ server that doesn't respond
host	Specify a TACACS+ server
key	Set TACACS+ encryption key
timeout	Time to wait for a TACACS+ server to reply
<word1-255>	Hostname or IPv4/IPv6 address

port	TCP port for TACACS+ server
<0-65535>	TCP port number

EXAMPLE

```
EX26484(config)# no tacacs-server deadtime
EX26484(config)# no tacacs-server key
EX26484(config)# no tacacs-server timeout
EX26484(config)#
```

4-1.35.45 udld

Disable UDLD configurations on all fiber-optic ports..

SYNTAX

no udld (aggressive | enable)

Parameters:

aggressive	Disable UDLD aggressive mode on all fiber-optic interfaces.
enable	Disable UDLD on all fiber-optic interfaces.

EXAMPLE

```
EX26484(config)# no udld enable
% Only fiber ports are allowed, port_no: 1
% Only fiber ports are allowed, port_no: 2
% Only fiber ports are allowed, port_no: 3
% Only fiber ports are allowed, port_no: 4
,
,
,
% Only fiber ports are allowed, port_no: x
```

4-1.35.46 upnp

Set UPnP's configurations.

SYNTAX

no upnp

no upnp advertising-duration

no upnp interface-vlan

no upnp static interface vlan

Parameters:

advertising-duration	Set advertising duration
ip-addressing-mode	Set IP addressing mode
static	Set static VLAN interface ID
interface	Select an interface to configure
vlan	VLAN Interface

EXAMPLE

```
EX26484(config)# no upnp advertising-duration
EX26484(config)#
```

4-1.35.47 username

Establish User Name Authentication.

SYNTAX

no username word31

Parameters:

word31	User name allows letters, numbers and underscores

EXAMPLE

```
EX26484(config)# username aaa
EX26484(config)#
```

4-1.35.48 vlan

Vlan commands.

SYNTAX

no vlan <vlan_list>

no vlan ethertype s-custom-port

no vlan protocol eth2 <0x600-0xffff> [group <word16>]

no vlan protocol eth2 arp [group <word16>]

no vlan protocol eth2 (at | ip | ipx) [group]

no vlan protocol llc <0x0-0xff> <0x0-0xff> [group <word16>]

no vlan protocol snap <0x0-0xffffff> <0x0-0xffff> [group <word16>]

no vlan protocol snap (rfc-1042 | snap-8021h) <0x0-0xff> [group <word16>]

Parameters:

<vlan_list>

ethertype

protocol Protocol-based VLAN commands

s-custom-port

eth2 Ethernet protocol based VLAN status

llc LLC-based VLAN group

snap SNAP-based VLAN group

eth2 Ethernet-based VLAN commands

llc LLC-based VLAN group

snap SNAP-based VLAN group

<0x600-0xffff> Ether Type (Range: 0x600 - 0xFFFF)

arp Ether Type is ARP

at Ether Type is AppleTalk

ip Ether Type is IP

ipx Ether Type is IPX

<0x0-0xff> DSAP (Range: 0x00 - 0xFF)

<0x0-0xffffff> SNAP OUI (Range 0x000000 - 0XFFFFFF)

rfc-1042 SNAP OUI is rfc-1042

snap-8021h SNAP OUI is 8021h

group Protocol-based VLAN group commands (deprecated since mapping is unique)

<word16> Group Name (Range: 1 - 16 characters) (deprecated since mapping is unique)

<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
<0x0-0xffff>	PID (Range: 0x0 - 0xFFFF)

EXAMPLE

```
EX26484(config)# no vlan 3
EX26484(config)#
```

4-1.35.49 voice

Voice appliance attributes

SYNTAX

no voice vlan

no voice vlan aging-time

no voice vlan class

no voice vlan oui <oui>

no voice vlan vid

Parameters:

vlan	VLAN for voice traffic
aging-time	Set secure learning aging time
class	Set traffic class
oui	OUI configuration
vid	Set VLAN ID
<oui>	Traffic class value

EXAMPLE

```
EX26484(config)# no voice vlan vid 3
EX26484(config)#
```

4-1.35.50 web

web

SYNTAX

no web privilege group <cword> level

Parameters:

privilege	Web privilege
group	Web privilege group
<CWORD>	Valid words are 'Aggregation' 'Alarm' 'DDMI' 'DHCP' 'DHCPv6_Client' 'Debug' 'Diagnostics' 'EPS' 'ERPS' 'ETH_LINK_OAM' 'FRR' 'Firmware' 'Green_Ethernet' 'IP' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MEP' 'MRP' 'MVR' 'Miscellaneous' 'NTP' 'POE' 'PTP' 'Ports' 'Private_VLANs' 'QoS' 'RMirror' 'Security(access)' 'Security(network)' 'Spanning_Tree' 'System' 'UDLD' 'UPnP' 'VCL' 'VLAN_Translation' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow' 'uFDMA_AIL' 'uFDMA_CIL'
level	Web privilege group level

EXAMPLE

```
EX26484(config)# no web privilege group LACP level
EX26484(config)#
```

4-1.36 ntp

Configure NTP.

SYNTAX

ntp

ntp server <1-5> ip-address [<domain_name> | <ipv4_ucast> | <ipv6_ucast>]

Parameters:

server	Configure NTP server
<1-5>	index number
ip-address	ip address

<domain_name> Domain name

<ipv4_ucast> IPv4 address

<ipv6_ucast> IPv6 address

EXAMPLE

```
EX26484(config)# ntp server 3 ip-address 192.168.1.1
EX26484(config)#
```

4-1.37 poe

Power Over Ethernete.

SYNTAX

poe capacitor-detect

poe management mode [allocation-consumption **|** allocation-reserved-power | class-consumption | class-reserved-power | lldp-consumption | lldp-reserved-power]

poe ping-check (disable | enable)

poe profile id <1-16> (Fri | Mon | Sat | Sun | Thr | Tue | Wed) <0-23> <0-55> <0-23> <0-55>

poe profile id <1-16> name <line32>

poe supply 1-740

Parameters:

capacitor-detect Enable or disable capacitor detection

management Use management mode to configure PoE power management method.

ping-check Enable/Disable POE Ping Check.

profile poe scheduling profile

supply Specify the maximum power the power supply can deliver. Max power supply for a single PoE controller board is 180W and for a dual PoE controller board is 90W.

mode mode

allocation-consumption Max. port power determined by allocated, and power is managed according to power consumption.

allocation-reserved-power Max. port power determined by allocated, and power is managed according to reserved power.

class-consumption Max. port power determined by class, and power is managed according to power consumption.

class-reserved-power Max. port power determined by class, and power is managed according to reserved power.

lldp-consumption Max. port power determined by LLDP Media protocol, and power is managed according to power consumption.

lldp-reserved-power Max. port power determined by LLDP Media protocol, and power is managed according to reserved power.

disable Disable POE Ping Check.

enable Enable POE Ping Check

id poe scheduling profile id

<1-16> poe scheduling profile id, from 1 to 16

Fri Configure PoE Power scheduling on Friday

Mon Configure PoE Power scheduling on Monday

Sat Configure PoE Power scheduling on Saturday

Sun Configure PoE Power scheduling on Sunday

Thr Configure PoE Power scheduling on Thursday

Tue Configure PoE Power scheduling on Tuesday

Wed Configure PoE Power scheduling on Wednesday

name poe scheduling profile name, the name length is 32

<0-23> start hour

<0-55> start miniute, value must be multiples of 5

<0-23> end hour

<0-55> end miniute, value must be multiples of 5

<line32> the length of name is less than 32

1-740 Maximum power the power supply can deliver. Max power supply for a single PoE controller board is 180W and for a dual PoE controller board is 90W. The entered max value is for the entire switch and will be divided in two for a dual PoE board.

EXAMPLE

```
EX26484(config)# poe profile id 4 Mon 0 0 0 0
EX26484(config)#
```

4-1.38 port-security

This command is obsolete.

SYNTAX

port-security

port-security [aging] [time] <10-10000000>

port-security [hold] [time <10-10000000>]

Parameters:

aging	Enable/disable port security aging.
hold	Configure hold options
time	Time in seconds between check for activity on learned MAC addresses.
<10-10000000>	Hold time in seconds
time	Violating MAC addresses are held non-forwarding for this amount of seconds

EXAMPLE

```
EX26484(config)# port-security
EX26484(config)#
```

4-1.39 privilege

Command privilege parameters.

SYNTAX

privilege <cword> level <0-15> <line128>

Parameters:

<cword>	Valid words are 'config-vlan' 'configure' 'dhcp-pool' 'exec' 'if-vlan' 'interface' 'ipmc-profile' 'json-noti-host' 'line'

	'llag' 'qos-map-egress' 'qos-map-ingress' 'router-if' 'snmps-host' 'stp-aggr'
level	Set privilege level of command
<0-15>	Privilege level
<line128>	Initial valid words and literals of the command to modify, in 128 characters

EXAMPLE

```
EX26484(config)# privilege configure level 1 test
EX26484(config)#
```

4-1.40 prompt

Set prompt.

SYNTAX

prompt <word32>

Parameters:

<word32> Up to 32 chars of prompt. Precede prompt variables with a percent sign (%). Prompt variables: %h = hostname, %% = percent sign, %s = space, %t = tab, %D = date, %T = time, %Z = date and time (like '%DT%T' but ensures atomicity in case of %T rollover)

EXAMPLE

```
EX26484(config)# prompt %h
EX26484(config)#
```

4-1.41 ptp

Precision time Protocol (1588).

SYNTAX

ptp

ptp <0-3> [afi-announce | afi-sync]

ptp <0-3> clk sync <1-1000> ap <1-40>

ptp <0-3> domain <0-127>

ptp <0-3> filter-type [aci-basic-phase| aci-basic-phase-low | aci-basic-phase-low-synce | aci-basic-phase-synce | aci-bc-full-on-path-freq]

ptp ext [auto] [ext <1-25000000>] [input] [ltc] [out-in] [output]

ptp ho-spec [cat1 <0-999999999>] [cat2 <0-999999999>] [cat3 <0-999999999>]

ptp io-pin <0-3> [domain <0-2>] [freq <1-25000000>] [interface (GigabitEthernet | 10GigabitEthernet) <port_type_id>] [load] [pps-output] [save] [waveform-output]

ptp system-time [get | set]

ptp tc-internal [mode] [<0-3>]

Parameters:

<0-3>	Clock instance [0-3]
ext and	Update the 1PPS and External clock output configuration
ho-spec	Set the Holdover specification for G8275 PTP clocks
io-pin	Set or show input/output configuration
system-time time	Enable synchronization between PTP time and system
tc-internal = MODE_48BIT	0 = MODE_30BIT, 1 = MODE_32BIT, 2 = MODE_44BIT, 3
afi-announce	Enable PTP Announce automatic frame injection
afi-sync	Enable PTP Sync automatic frame injection
clk	Set PTP slave clock options
domain	Clock domain for PTP
filter-type	Set the filter-type used by PTP
localpriority priority)	Local priority for G8275.1 BMC algorithm (1 is highest
log	Set the PTP debug mode
mode	Enable a PTP instance
path-trace-enable messages)	Enable path trace option (i.e. Add Path Trace to Announce
priority1 priority)	Clock priority 1 for PTP BMC algorithm (0 is highest

priority2 Clock priority 2 for PTP BMC algorithm (0 is highest priority)

servo Set Servo parameters

slave-cfg Set PTP clock Slave Configuration

time-property Set time properties

uni Set a Unicast Slave configuration entry

virtual-port

sync Set PTP slave clock options to 'clock is SyncE locked'

<1-1000> [1..1000] Threshold in ns for offset from master defines when the offset increment/decrement mode is entered

ap Set the adjustment factor

<1-40> [1..40] The offset increment/decrement adjustment factor

<0-127> PTP domain: range = 0-127

aci-basic-phase

aci-basic-phase-low

aci-basic-phase-low-synce

aci-basic-phase-synce

aci-bc-full-on-path-freq

auto AUTO Select clock control, based on PTP profile and available hardware resources

ext Enable external clock frequency output

input Enable 1PPS input

ltc Select Local Time Counter (LTC) frequency control

out-in Enable 1PPS output and input (Jaguar1 only)

output Enable 1PPS output

<1-25000000> [1..25.000.000] External Clock output frequency in Hz

cat1 Define cat1 time

cat2 Define cat2 time

cat3 Define cat3 time

<0-999999999> cat1 time in sec

<0-3> Pin number

domain Set domain assigned to this pin.

freq	Set clock frequency in the waveform case
interface	Set PTP slave interface
load	Set input/output configuration to load. Done on next 1pps input.
pps-output	Set input/output configuration to 1-pps output
save	Set input/output pin configuration to save. Done on next 1pps input.
waveform-output	Set input/output configuration to waveform (clock) output
<0-2>	Domain number 0..2
<1-25000000>	Clock frequency in Hz
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
get	Get (update) the PTP time from the system time
set	Set (update) the system time from the PTP time
mode	Set mode
<0-3>	0 = MODE_30BIT, 1 = MODE_32BIT, 2 = MODE_44BIT, 3 = MODE_48BIT

EXAMPLE

```
EX26484(config)# ptp system-time  get
EX26484(config)#
```

4-1.42 qos

Quality of Service.

SYNTAX

qos map cos-dscp <0-7> dpl <0-3> dscp [<0-63> | af11 | af12 | af13 | af21 |af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | be | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va]

qos map (dscp-classify | dscp-cos | dscp-egress-translation | dscp-ingress-translation) [<0-63> | af11 | af12 | af13 | af21 |af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | be | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va]

qos map egress <0-511>

qos map ingress <0-255>

qos qce <1-256> [action] cos (<0-7> | default) [dmac | dpl | dscp | frame-type | ingress-mep | inner-tag | interface | last | next | pcp-dei | policy | smac | tag]

qos qce <1-256> [action] dpl (<0-3> | default) [cos | dmac | dscp | frame-type | ingress-mep | inner-tag | interface | last | next | pcp-dei | policy | smac | tag]

qos qce <1-256> [action] dscp [<0-63> | af11 | af12 | af13 | af21 |af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | be | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va]

qos qce <1-256> [action] ingress-map (<0-255> | default) [cos | dmac | dpl | dscp | frame-type | inner-tag | interface | last | next | pcp-dei | policy | smac | tag]

qos qce <1-256> [action] pcp-dei ((<0-7> <0-1>) | default) [cos | dmac | dscp | frame-type | ingress-mep | inner-tag | interface | last | next | policy | smac | tag]

qos qce <1-256> [action] policy (<0-127> | default) [cos | dmac | dpl | dscp | frame-type | ingress-mep | inner-tag | interface | last | next | pcp-dei | smac | tag]

qos qce <1-256> dmac (<mac_addr> | any | broadcast | multicast | unicast) [action | frame-type | inner-tag | interface | last | next | smac | tag]

qos qce <1-256> frame-type (any | etype | ipv4 | ipv6 | llc | snap) [action | dmac | frame-type | inner-tag | interface | last | next | smac | tag | vid]

qos qce <1-256> inner-tag (dei (<0-1> | any) | pcp (<pcp> | any) | type (any | c-tagged | s-tagged | tagged | untagged) | vid (<vcap_vr> | any)) [action | dmac | frame-type | inner-tag | interface | last | next | pcp | smac | tag | vid]

qos qce <1-256> interface { ***** [<port_type_list> | action | dmac | frame-type | inner-tag | last | next | smac | tag] } **|** { **(** GigabitEthernet | 10GigabitEthernet) <port_type_list> [* | GigabitEthernet | 10GigabitEthernet action | dmac | frame-type | inner-tag | last | next | smac | tag]

qos qce <1-256> next <1-256> [action | dmac | frame-type | inner-tag | interface | smac | tag | vid]

qos qce <1-256> smac (<mac_addr> | any)) [action | dmac | frame-type | inner-tag | interface | last | next | tag]

qos qce <1-256> tag (dei (<0-1> | any) | pcp (<pcp> | any) | type (any | c-tagged | s-tagged | tagged | untagged) | vid (<vcap_vr> | any)) [action | dmac | frame-type | inner-tag | interface | last | next | pcp | smac | tag | vid]

qos qce refresh

qos qce update <1-256> [action | dmac | frame-type | inner-tag | interface | last | next | smac | tag]

qos storm (broadcast | multicast | unicast) <-13128147> [fps | kbps | kfps | mbps]

qos wred group <1-3> queue <0-7> dpl <1-3> min-fl <0-100> [fill-level]

Parameters:

map	Global QoS Map/Table
qce	QoS Control Entry
storm	Storm policer
wred	Weighted Random Early Discard
cos-dscp	Map for COS to DSCP
dscp-classify	Map for DSCP classify enable
dscp-cos	Map for DSCP to COS
dscp-egress-translation	Map for DSCP egress translation
dscp-ingress-translation	Map for DSCP ingress translation
egress	Map for egress configuration
ingress	Map for ingress configuration
<0~7>	Specific class of service or range
dpl	Specify drop precedence level
<0~3>	Specific drop precedence level or range
dscp	Specify DSCP
<0-63>	Specific DSCP
af11	Assured Forwarding PHB AF11(DSCP 10)
af12	Assured Forwarding PHB AF12(DSCP 12)
af13	Assured Forwarding PHB AF13(DSCP 14)
af21	Assured Forwarding PHB AF21(DSCP 18)
af22	Assured Forwarding PHB AF22(DSCP 20)
af23	Assured Forwarding PHB AF23(DSCP 22)
af31	Assured Forwarding PHB AF31(DSCP 26)
af32	Assured Forwarding PHB AF32(DSCP 28)
af33	Assured Forwarding PHB AF33(DSCP 30)
af41	Assured Forwarding PHB AF41(DSCP 34)
af42	Assured Forwarding PHB AF42(DSCP 36)

af43	Assured Forwarding PHB AF43(DSCP 38)
be	Default PHB(DSCP 0) for best effort traffic
cs1	Class Selector PHB CS1 precedence 1(DSCP 8)
cs2	Class Selector PHB CS2 precedence 2(DSCP 16)
cs3	Class Selector PHB CS3 precedence 3(DSCP 24)
cs4	Class Selector PHB CS4 precedence 4(DSCP 32)
cs5	Class Selector PHB CS5 precedence 5(DSCP 40)
cs6	Class Selector PHB CS6 precedence 6(DSCP 48)
cs7	Class Selector PHB CS7 precedence 7(DSCP 56)
ef	Expedited Forwarding PHB(DSCP 46)
va	Voice Admit PHB(DSCP 44)
<0-511>	Map ID
<0-255>	Map ID
<1-256>	QCE ID
refresh	Refresh QCE tables in hardware
update	Update an existing QCE
action	Setup action
dmac	Setup matched DMAC
frame-type	Setup matched frame type
inner-tag	Setup inner tag options
interface	Interfaces
last	Place QCE at the end
next	Place QCE before the next QCE ID
smac	Setup matched SMAC
tag	Setup tag options
cos	Setup class of service action
dpl	Setup drop precedence level action
dscp	Setup DSCP action
ingress-map	Setup ingress map action
pcp-dei	Setup PCP and DEI action
policy	Setup ACL policy action

<mac_addr>	Matched DMAC (XX-XX-XX-XX-XX-XX)
any	Match any DMAC
broadcast	Match broadcast DMAC
multicast	Match multicast DMAC
unicast	Match unicast DMAC
<0-7>	Assign class of service
default	Keep existing class of service
<0-3>	Assign drop precedence level
default	Keep existing drop precedence level
<0-255>	Assign ingress map id
default	Keep existing ingress map
<0-7>	Assign PCP
default	Keep existing PCP and DEI
<0-1>	Assign DEI
<0-127>	Assign ACL policy
default	Keep existing ACL policy
<mac_addr>	Matched DMAC (XX-XX-XX-XX-XX-XX)
any	Match any DMAC
broadcast	Match broadcast DMAC
multicast	Match multicast DMAC
unicast	Match unicast DMAC
any	Match any frame type
etype	Match EtherType frames
ipv4	Match IPv4 frames
ipv6	Match IPv6 frames
llc	Match LLC frames
snap	Match SNAP frames
dei	Setup matched DEI
pcp	Setup matched PCP
type	Setup matched tag type
vid	Setup matched VLAN ID

<0-1>	Matched DEI
any	Match any DEI
<pcp>	Matched PCP value/range
any	Match any PCP
any	Match tagged and untagged frames
c-tagged	Match C-tagged frames
s-tagged	Match S-tagged frames
untagged	Match untagged frames
<vcap_vr>	Matched VLAN ID value/range
any	Match any VLAN ID
*****	All switches or All ports
GigabitEthernet	Gigabit Ethernet Ports
10GigabitEthernet	10Gigabit Ethernet Ports
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
broadcast	Police broadcast frames
multicast	Police multicast frames
unicast	Police unicast frames
<1-13128147>	Policer rate (default fps). Internally rounded up to the nearest value supported by the storm policer. Supported rates are divisible by 10 fps or 25 kbps.
fps	Unit is frames per second (default)
kbps	Unit is kilobits per second
kfps	Unit is kiloframes per second
mbps	Unit is Megabits per second
group	Specify group
<1~3>	Specific group or range
queue	Specify queue
<0~7>	Specific queue or range
dpl	Specify DPL

<1~3>	Specific DPL or range
min-fl	Specify minimum fill level
<0-100>	Specific minimum fill level in percent
max	Specify maximum drop probability or fill level
<1-100>	Specific maximum drop probability or fill level in percent (default is drop probability)
fill-level	Specify fill level

EXAMPLE

```
EX26484(config)# qos wred group 1 queue 0 dpl 1 min-fl 0 max 1 fill-level
EX26484(config)#
```

4-1.43 radius-server

Configure RADIUS.

SYNTAX

radius-server attribute 32 <line1-253>

radius-server attribute 4 <ipv4_ucast>

radius-server attribute 95 <ipv6_ucast>

radius-server deadtime <1-1440>

radius-server host <word1-255> [auth-port <0-65535>] [acct-port <0-65535>] [timeout <1-1000>] [retransmit <Retries :1-1000>]

radius-server host <word1-255> key [<line1-63> | (encrypted <word96-224>) | unencrypted]

radius-server key [<line1-63> | (encrypted <word96-224>) | unencrypted]

radius-server retransmit <1-1000>

radius-server timeout <1-1000>

Parameters:

attribute	NAS attributes
deadtime	Time to stop using a RADIUS server that doesn't respond

host	Specify a RADIUS server
key	Set RADIUS encryption key
retransmit	Specify the number of retries to active server
timeout	Time to wait for a RADIUS server to reply
32	attribute number 32 = NAS-Identifier
4	attribute number 4 = NAS-IP-Address
95	attribute number 95 = NAS-IPv6-Address
<line1-253>	NAS-Identifier
<ipv4_ucast>	NAS-IP-Address
<ipv6_ucast>	<NAS-IPv6-Address>
<1-1440>	Time in minutes
<word1-255>	Hostname or IPv4/IPv6 address
acct-port	UDP port for RADIUS accounting server
auth-port	UDP port for RADIUS authentication server
key	Server specific key (overrides default)
retransmit	Specify the number of retries to active server (overrides default)
timeout	Time to wait for this RADIUS server to reply (overrides default)
<0-65535>	UDP port number or 0 to disable authentication
<1-1000>	Number of retries for a transaction
<1-1000>	Wait time in seconds
<line1-63>	The UNENCRYPTED (Plain Text) secret key. Notice that you have no chance to get the Plain Text secret key after this command. The system will always display the ENCRYPTED password.
encrypted	Specifies an ENCRYPTED secret key will follow
unencrypted	Specifies an UNENCRYPTED secret key will follow
<word96-224>	The ENCRYPTED (hidden) secret key. Notice the ENCRYPTED secret key will be decoded by system internally. You cannot directly use it as same as the Plain Text and it is not human-readable text normally

EXAMPLE

```
EX26484(config)# radius-server host device key 12
EX26484(config)#
```

4-1.44 rmon

Remote Monitoring.

SYNTAX

rmon alarm <1-65535> [ifInOctets | ifInUcastPkts | ifInNUcastPkts | ifInDiscards | ifInErrors | ifInUnknownProtos | ifOutOctets | ifOutUcastPkts | ifOutNUcastPkts | ifOutDiscards | ifOutErrors] <uint> <1-2147483647> [absolute | delta] rising-threshold <-2147483648-2147483647> [<0-65535> | falling-threshold] <-2147483648-2147483647> [<0-65535>] { [rising | falling | both] }

rmon event <1-65535> [log] | [trap <word127>] | [description <line127>]

Parameters:

alarm Configure an RMON alarm

event Configure an RMON event

<1-65535> Alarm entry ID

ifInDiscards The number of inbound packets that are discarded even the packets are normal

ifInErrors The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol

ifInNUcastPkts The number of broadcast and multicast packets delivered to a higher-layer protocol

ifInOctets The total number of octets received on the interface, including framing characters

ifInUcastPkts The number of unicast packets delivered to a higher-layer protocol

ifInUnknownProtos The number of the inbound packets that were discarded because of the unknown or unsupported protocol

ifOutDiscards The number of outbound packets that are discarded event the packets is normal

ifOutErrors The The number of outbound packets that could not be transmitted because of errors

ifOutNUcastPkts The number of broadcast and multicast packets that request to transmit

ifOutOctets The number of octets transmitted out of the interface, including framing characters

ifOutUcastPkts	The number of unicast packets that request to transmit
<uint>	Interface index
<1-2147483647>	Sample interval
absolute	Test each sample directly
delta	Test delta between samples
rising-threshold	Configure the rising threshold
<-2147483648-2147483647>	rising threshold value
<0-65535>	Event to fire on rising threshold crossing
falling-threshold	Configure the falling threshold
<-2147483648-2147483647>	falling threshold value
<0-65535>	Event to fire on falling threshold crossing
both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
falling	Trigger alarm when the first value is less than the falling threshold
rising	Trigger alarm when the first value is larger than the rising threshold
<1-65535>	Event entry ID
description	Specify a description of the event
log	Generate RMON log when the event fires
trap	Generate SNMP trap when the event fires
<line127>	Event description
<word127>	OBSOLETE: SNMP community string

EXAMPLE

```
EX26484(config)# rmon alarm 10000 ifInErrors 6 9999 absolute rising-threshold
0 falling-threshold 0 both
EX26484(config)#
```

4-1.45 sflow

Statistics flow.

SYNTAX

sflow agent-ip { ipv4 <ipv4_addr> | ipv6 <ipv6_addr> }

sflow collector-address

sflow collector-address{ <domain_name> | <ipv4_addr> | <ipv6_addr> }

sflow collector-port <1-65535>

sflow max-datagram-size <200-1468>

sflow timeout <0-2147483647>

Parameters:

agent-ip The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address

collector-address Collector address

collector-port Collector UDP port

max-datagram-size Maximum datagram size

timeout Receiver timeout measured in seconds. The switch decrements the timeout once per second, and as long as it is non-zero, the receiver receives samples. Once the timeout reaches 0, the receiver and all its configuration is reset to defaults

Ipv4

Ipv6

<ipv4_addr>

<ipv6_addr>

<domain_name> Domain name identifying the collector receiver

<ipv4_addr> IPv4 address identifying the collector receiver

<ipv6_ucast> IPv6 address identifying the collector receiver

<1-65535> Port Number

<200-1468> Bytes

<0-2147483647> Number of seconds

EXAMPLE

```
EX26484(config)# sflow agent-ip ipv4 192.168.1.2
EX26484(config)# sflow collector-port 3
EX26484(config)# sflow max-datagram-size 333
EX26484(config)# sflow timeout 3333
EX26484(config)#
```

4-1.46 smtp

Set email information.

SYNTAX

smtp delete

smtp mailaddress <1-6> <word47>

smtp [returnpath | sender | server] <word47>

smtp username <word31> <word31>

Parameters:

delete	Delete command
mailaddress	Configure email address
returnpath	Configure email returnpath
sender	Configure email sender
server	Configure email server
username	Configure email user name
<1-6>	Email address index
<word47>	Up to 47 characters describing mail address
<word47>	Up to 47 characters describing returnpath
<word47>	Up to 47 characters describing sender
<word47>	Up to 47 characters describing email server
<word31>	Up to 47 characters describing user name
<word31>	Configure email password

EXAMPLE

```
EX26484 (config)# smtp username aa aa
EX26484 (config)#
```

4-1.47 snmp-server

Set SNMP server's configurations.

SYNTAX

snmp-server

Table: configure –snmp-server Commands

Command	Function
access	access configuration
community	Set the SNMP community
contact	Set the SNMP server's contact string
engine-id	Set SNMP engine ID
host	Set SNMP host's configurations
location	Set the SNMP server's location string
security-to-group	security-to-group configuration
trap	Trap source configuration
user	Set the SNMPv3 user's configurations
view	MIB view configuration

4-1.47.1 access

access configuration.

SYNTAX

snmp-server access <word32> model [v1 | v2c | v3 | any] level [auth | noauth | priv]

snmp-server access <word32> model [v1 | v2c | v3 | any] level [auth | noauth | priv] [read | write] <word32>

Parameters:

<word32> group name

model security model

any	any security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
level	security level
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
read	specify a read view for the group
write	specify a write view for the group
<word32>	read view name
<word32>	write view name

EXAMPLE

```
EX26484(config)# snmp-server access text model v2c level noauth
write text
EX26484(config)#
```

4-1.47.2 community

Set the SNMP community.

SYNTAX

snmp-server community <word32> <word32>

snmp-server community <word32> encrypted <word96-160>

snmp-server community <word32> ip-range <ipv4_addr> <ipv4_netmask>

snmp-server community <word32> ipv6-range <ipv6_subnet>

Parameters:

<word32>	Security name
encrypted	Use encrypted community secret
ip-range	Use IPv4 range
ipv6-range	Use IPv6 range
<word96-160>	Encrypted community secret

<ipv4_addr> IPv4 address

<ipv4_netmask> IPv4 netmask

<ipv6_subnet> IPv6 subnet

EXAMPLE

```
EX26484(config)# snmp-server community a a
EX26484(config)#
```

4-1.47.3 contact

Set the SNMP server's contact string.

SYNTAX

snmp-server contact <line255>

Parameters:

<line255> contact string

EXAMPLE

```
EX26484(config)# snmp-server contact aa
EX26484(config)#
```

4-1.47.4 engine-id

Set SNMP engine ID.

SYNTAX

snmp-server engine-id local <word10-64>

Parameters:

local Set SNMP local engine ID

<word10-64> local engine ID

EXAMPLE

```
EX26484(config)# snmp-server engine-id local 1234567890
EX26484(config)#
```

4-1.47.5 host

Set SNMP host's configurations.

SYNTAX

snmp-server host <word32>

Parameters:

<word32> Name of the host configuration

EXAMPLE

```
EX26484(config)# snmp-server host aa
EX26484(config-snmps-host)#
```

4-1.47.6 location

Set the SNMP server's location string.

SYNTAX

snmp-server location <line255>

Parameters:

<line255> location string

EXAMPLE

```
EX26484(config)# snmp-server location aa
EX26484(config)#
```

4-1.47.7 security-to-group

security-to-group configuration.

SYNTAX

snmp-server security-to-group model [v1 | v2c | v3] name <word32> group <word32>

Parameters:

model security model

v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<word32>	security user name
group	security group
<word32>	security group name

EXAMPLE

```
EX26484(config)# snmp-server security-to-group model v2c name text
group text
EX26484(config)#
```

4-1.47.8 user

Set the SNMPv3 user's configurations.

SYNTAX

snmp-server user <word32> engine-id <word10-64>

snmp-server user <word32> engine-id <word10-64> md5 <word8-32>

snmp-server user <word32> engine-id <word10-64> md5 <word8-32> priv [aes | des]

snmp-server user <word32> engine-id <word10-64> md5 encrypted <word16-64>

snmp-server user <word32> engine-id <word10-64> md5 encrypted <word16-64> priv [aes | des]

Parameters:

<word32>	Security user name (word32)
engine-id	engine ID
<word10-64>	Engine ID octet string
md5	Set MD5 protocol
sha	Set SHA protocol
<word8-32>	MD5 unencrypted password
encrypted	Specifies an ENCRYPTED password will follow

aes	Set AES protocol
des	Set DES protocol
<word16-64>	MD5 encrypted password

EXAMPLE

```
EX26484(config)# snmp-server user A engine-id 123456789876 md5
encrypted 12222222222213123213123 priv aes
EX26484(config)#
```

4-1.47.9 view

MIB view configuration.

SYNTAX

snmp-server view <word32> < word255> [include | exclude]

Parameters:

<word32>	MIB view name
<word255>	MIB view OID
include	Included type from the view
exclude	Excluded type from the view

EXAMPLE

```
EX26484(config)# snmp-server view text .1 include
EX26484(config)#
```

4-1.48 spanning-tree

Spanning Tree protocol.

Table: configure –spanning-tree Commands

Command	Function
aggregation	Aggregation mode
edge	Edge ports
mode	STP protocol mode
mst	STP bridge instance

recovery	The error recovery timeout
transmit	BPDUs to transmit

4-1.48.1 aggregation

Aggregation mode.

SYNTAX

spanning-tree aggregation

EXAMPLE

```
EX26484(config)# spanning-tree aggregation
EX26484 (config-stp-aggr) #
```

4-1.48.2 edge

Edge ports.

SYNTAX

spanning-tree edge [bpdu-filter | bpdu-guard]

Parameters:

bpdu-filter	Enable BPDU filter (stop BPDU tx/rx)
bpdu-guard	Enable BPDU guard

EXAMPLE

```
EX26484(config)# spanning-tree edge bpdu-guard
EX26484(config)#
```

4-1.48.3 mode

STP protocol mod.

SYNTAX

spanning-tree mode [stp | rstp | mstp]

Parameters:

mstp	Multiple Spanning Tree (802.1s)
rstp	Rabid Spanning Tree (802.1w)
stp	802.1D Spanning Tree

EXAMPLE

```
EX26484(config)# spanning-tree mode stp
EX26484(config)#
```

4-1.48.4 mst

STP bridge instance.

SYNTAX

spanning-tree mst <0-7> priority <0-61440>

spanning-tree mst <0-7> vlan <vlan_list>

spanning-tree mst forward-time <4-30>

spanning-tree mst hello-time <1-10>

spanning-tree mst max-age <6-40>

spanning-tree mst max-age <6-40> forward-time

spanning-tree mst max-hops <6-40>

spanning-tree mst name <word32> revision <0-65535>

Parameters:

<0-7>	instance (CIST=0, MSTI1=1...)
forward-time	Delay between port states
hello-time	MSTP bridge hello time
max-age	Max bridge age before timeout
max-hops	MSTP bridge max hop count
name	Name keyword
priority	Priority of the instance
vlan	VLAN keyword
<0-61440>	Represents the STP bridge priority. Supported values are 0/4096/8192/12288/16384/20480/24576/28672/32768/36864/40960/45056/49152/53248/57344/61440 i.e divisible by 4096. Default

value is 32768

<vlan_list>	Range of VLANs
<4-30>	Range in seconds
<1-10>	Hello BPDU timer value
<6-40>	Range in seconds
forward-time	
<4-30>	
<6-40>	Hop count range
<word32>	Name of the bridge
revision	Revision keyword
<0-65535>	Revision number

EXAMPLE

```
EX26484(config)# spanning-tree mst name a revision 4
EX26484(config)#
```

4-1.48.5 recovery

The error recovery timeout.

SYNTAX

spanning-tree recovery interval <30-86400>

Parameters:

interval	The interval
<30-86400>	Range in seconds

EXAMPLE

```
EX26484(config)# spanning-tree recovery interval 33
EX26484(config)#
```

4-1.48.6 transmit

BPDUs to transmit.

SYNTAX

spanning-tree hold-count <1-10>

Parameters:

hold-count	Max number of transmit BPDUs per sec
<1-10>	1-10 per sec, 6 is default

EXAMPLE

```
EX26484(config)# spanning-tree transmit hold-count 3
EX26484(config)#
```

4-1.49 svl

Shared VLAN Learning.

SYNTAX

svl fid <1-4095> vlan <vlan_list>

Parameters:

fid	Filter ID keyword
<1-4095>	Filter ID
vlan	VLAN keyword
<vlan_list>	VLAN List

EXAMPLE

```
EX26484(config)# svl fid 1 vlan 3
EX26484(config)#
```

4-1.50 switchport

Set VLAN switching mode characteristics.

SYNTAX

Switchport vlan mapping <1-53> <vlan_list> <vlan_id>

Switchport vlan mapping <1-53> [both | egress | ingress] <vlan_id> <vlan_id>

Parameters:

vlan	VLAN
mapping	VLAN translation entry configuration
<1-53>	Group id
<vlan_list>	VLAN ID List (deprecated)
both	Bi-directional Translation
egress	Egress-only Translation
ingress	Ingress-only Translation
<vlan_id>	Translated VLAN ID
<vlan_id>	VLAN ID

EXAMPLE

```
EX26484(config)# switchport vlan mapping 3 3 3
%% Failed to add VLAN Translation mapping.
% (VLAN Translation Error - The provided Translation VLAN ID is
the same as the VLAN ID - makes no sense to translate a VLAN to
itself)
EX26484(config)#
```

4-1.51 system

Set the SNMP server's configurations.

SYNTAX

system [contact | description | location | name] <line128>

system di [high | low]

system do [close | open]

system do relay [close | open]

system [Fri | Mon | Sat | Sun | Thr | Tue | Wed] <0-23> <0-55>

system mode [disable | enable]

Parameters:

contact	Set the SNMP server's contact string
description	Configure System Description
di	Set the Switch DI input configurations
do	Set the Switch DO output configurations
location	Set the SNMP server's location string
name	Set the SNMP server's system model name string
reboot	Set the Switch Reboot configurations
<line128>	contact string
<line128>	System Description string
high	Set High is Normal mode
low	Set low is Normal mode
close	Set close is Normal mode
open	Set open is Normal mode
relay	Set the Switch DO relay configurations
close	Set off for DO to close state
open	Set on for DO to open state
<line128>	location string
<line128>	name string
Fri	Configure Switch Reboot scheduling on Friday
Mon	Configure Switch Reboot scheduling on Monday
Sat	Configure Switch Reboot scheduling on Saturday
Sun	Configure Switch Reboot scheduling on Sunday
Thr	Configure Switch Reboot scheduling on Thursday
Tue	Configure Switch Reboot scheduling on Tuesday
Wed	Configure Switch Reboot scheduling on Wednesday
mode	Switch reboot mode
<0-23>	start hour
<0-55>	start miniute, value must be multiples of 5
disable	Disable Switch Reboot
enable	Enable Switch Reboot

EXAMPLE

```
EX26484(config)# system contact 222
EX26484(config)# system location 333
EX26484(config)# system name GE
EX26484(config)#
```

4-1.52 tacacs-server

Configure TACACS+.

SYNTAX

tacacs-server deadtime <1-1440>

tacacs-server host <word1-255>

tacacs-server host <word1-255> key <line1-63>

tacacs-server host <word1-255> key encrypted <word96-224>

tacacs-server host <word1-255> key unencrypted <line1-63>

tacacs-server host <word1-255> port <0-65535>

tacacs-server host <word1-255> timeout <1-1000>

tacacs-server key <line1-63>

tacacs-server key encrypted <word96-224>

tacacs-server key unencrypted <line1-63>

acacs-server timeout <1-1000>

Parameters:

deadtime respond	Time to stop using a TACACS+ server that doesn't
host	Specify a TACACS+ server
key	Set TACACS+ encryption key
timeout	Time to wait for a TACACS+ server to reply
<1-1440>	Time in minutes
<word1-255>	Hostname or IPv4/IPv6 address
key	Server specific key (overrides default)

port TCP port for TACACS+ server

timeout Time to wait for this TACACS+ server to reply (overrides default)

<line1-63> The UNENCRYPTED (Plain Text) secret key. Notice that you have no chance to get the Plain Text secret key after this command. The system will always display the ENCRYPTED password.

encrypted Specifies an ENCRYPTED secret key will follow

unencrypted Specifies an UNENCRYPTED secret key will follow

<word96-224> The ENCRYPTED (hidden) secret key. Notice the ENCRYPTED secret key will be decoded by system internally. You cannot directly use it as same as the Plain Text and it is not human-readable text normally

<0-65535> TCP port number

<1-1000> Wait time in seconds

EXAMPLE

```
EX26484(config)# tacacs-server deadtime 300
EX26484(config)# tacacs-server key 33
EX26484(config)# tacacs-server timeout 300
EX26484(config)#
```

4-1.53 udld

Enable UDLD in the aggressive or normal mode and to set the configurable message timer on all fiber-optic ports.

SYNTAX

udld [aggressive | enable]

udld message time-interval <7-90>

Parameters:

aggressive Enables UDLD in aggressive mode on all fiber-optic ports.

enable Enables UDLD in normal mode on all fiber-optic ports.

message Configures the period of time between UDLD probe messages on ports that are in the advertisement phase and are determined to be bidirectional. The range is from 7 to 90 seconds (Currently default message time interval 7 sec is supported)

time-interval Configures the period of time between UDLD probe messages on ports that are in the advertisement phase and are determined to be bidirectional. The range is from 7 to 90 seconds (Currently default message time interval 7 sec is supported)

<7-90> Configures the period of time between UDLD probe messages on ports that are in the advertisement phase and are determined to be bidirectional. The range is from 7 to 90 seconds (Currently default message time interval 7 sec is supported).

EXAMPLE

```
EX26484(config)# udld aggressive
% Only fiber ports are allowed, port_no: 1
% Only fiber ports are allowed, port_no: 2
% Only fiber ports are allowed, port_no: 3
% Only fiber ports are allowed, port_no: 4
.
.
.
% Only fiber ports are allowed, port_no: 45
% Only fiber ports are allowed, port_no: 46
% Only fiber ports are allowed, port_no: 47
% Only fiber ports are allowed, port_no: 48
EX26484(config)#
```

4-1.54 upnp

Set UPnP's configurations.

SYNTAX

upnp

upnp advertising-duration <100-86400>

upnp ip-addressing-mode [dynamic | static]

upnp static interface-vlan <vlan_id>

Parameters:

advertising-duration Set advertising duration

ip-addressing-mode Set IP addressing mode

static	Set static VLAN interface ID
<100-86400>	advertising duration
dynamic	Dynamic IP addressing mode
static	Static IP addressing mode
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier (VID)

EXAMPLE

```
EX26484(config)# upnp advertising-duration 188
EX26484(config)# upnp static interface vlan 33
EX26484(config)#
```

4-1.55 username

Establish User Name Authentication.

SYNTAX

username <word31> privilege <0-15> password [encrypted <word128> | none | unencrypted <line31>]

Parameters:

<word31>	User name allows letters, numbers and underscores
privilege	Set user privilege level
<0-15>	User privilege level
password	Specify the password for the user
encrypted	Specifies an ENCRYPTED password will follow
none	NULL password
unencrypted	Specifies an UNENCRYPTED password will follow
<word128>	The ENCRYPTED (hidden) user password. Notice the ENCRYPTED password will be decoded by system internally. You cannot directly use it as same as the Plain Text and it is not human-readable text normally.
<line31>	The UNENCRYPTED (Plain Text) user password. Any printable characters including space is accepted. Notice that you have no chance to

get the Plain Text password after this command. The system will always display the ENCRYPTED password

EXAMPLE

```
EX26484(config)# username alan privilege 15 password
none
EX26484(config)# (config)#
```

4-1.56 vlan

VLAN commands.

SYNTAX

vlan <vlan_list>

vlan ethertype s-custom-port <0x0600-0xffff>

vlan protocol eth2 [<0x600-0xffff> | arp | at | ip | ipx] group <word16>

vlan protocol llc <0x0-0xff> <0x0-0xff> group <word16>

vlan protocol snap [<0x0-0xffffff> | rfc-1042 | snap-8021h] <0x0-0xffff> group <word16>

Parameters:

<vlan_list>	ISL VLAN IDs
ethertype	Ethertype for Custom S-ports
protocol	Protocol-based VLAN commands
s-custom-port	Custom S-ports configuration
<0x0600-0xffff>	EtherType (Range: 0x0600-0xffff)
eth2	Ethernet-based VLAN commands
llc	LLC-based VLAN group
snap	SNAP-based VLAN group
<0x600-0xffff>	Ether Type (Range: 0x600 - 0xFFFF)
arp	Ether Type is ARP
at	Ether Type is AppleTalk
ip	Ether Type is IP

ipx	Ether Type is IPX
group	Protocol-based VLAN group commands
<word16>	Group Name (Range: 1 - 16 characters)
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
<0x0-0xffffff>	SNAP OUI (Range 0x000000 - 0XFFFFFF)
rfc-1042	SNAP OUI is rfc-1042
snap-8021h	SNAP OUI is 8021h
<0x0-0xffff>	PID (Range: 0x0 - 0xFFFF)

EXAMPLE

```
EX26484(config)# vlan ethertype s-custom-port 0x1111
EX26484(config)# vlan protocol eth2 0x6000 group aa
EX26484(config)#
```

4-1.57 voice

Voice appliance attributes.

SYNTAX

voice vlan

voice vlan aging-time < 10-10000000>

voice vlan vid class <0-7>

voice vlan oui <oui>

voice vlan oui <oui> description <line32>

voice vlan vid <vlan_id>

Parameters:

vlan	VLAN for voice traffic
aging-time	Set secure learning aging time
class	Set traffic class
oui	OUI configuration
vid	Set VLAN ID

<10-10000000>	Aging time, 10-10000000 seconds
<0-7>	Traffic class value
<oui>	OUI value
description	Set description for the OUI
<line32>	Description line
<vlan_id>	VLAN ID, 1-4095

EXAMPLE

```
EX26484(config)# voice vlan aging-time 3333
EX26484(config)# voice vlan class 7
EX26484(config)# voice vlan vid 3333
EX26484(config)#
```

4-1.58 web

Web.

SYNTAX

web privilege group <cword> level [configRoPriv | configRwPriv | statusRoPriv | statusRwPriv] <0-15>

Parameters:

privilege	Web privilege
group	Web privilege group
<cword>	Valid words are 'Aggregation' 'Alarm' 'DDMI' 'DHCP' 'DHCPv6_Client' 'Debug' 'Diagnostics' 'EPS' 'ERPS' 'ETH_LINK_OAM' 'FRR' 'Firmware' 'Green_Ethernet' 'IP' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MEP' 'MRP' 'MVR' 'Miscellaneous' 'NTP' 'POE' 'PTP' 'Ports' 'Private_VLANs' 'QoS' 'RMirror' 'Security(access)' 'Security(network)' 'Spanning_Tree' 'System' 'UDLD' 'UPnP' 'VCL'

	'VLAN_Translation' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow' 'uFDMA_AIL' 'uFDMA_CIL'
level	Web privilege group level
configRoPriv	Configuration Read-only level
configRwPriv	Configuration Read-write level
statusRoPriv	Status/Statistics Read-only level
statusRwPriv	Status/Statistics Read-write level
<0-15>	

EXAMPLE

```
EX26484(config)# web privilege group DDMI level configRoPriv 3
EX26484(config)#
```

5 COPY Commands

Copy from source to destination.

SYNTAX

copy running-config [startup-config | <url_file>]

copy startup-config [running-config | <url_file>]

copy <url_file> [startup-config | running-config]

copy running-config [startup-config | <url_file>] syntax-check

copy startup-config [running-config | <url_file>] syntax-check

copy <url_file> [startup-config | running-config] syntax-check

copy running-config [startup-config | <url_file>] syntax-check | { [begin | exclude | include] <line> }

copy startup-config [running-config | <url_file>] syntax-check | { [begin | exclude | include] <line> }

copy <url_file> [startup-config | running-config] syntax-check | { [begin | exclude | include] <line> }

copy running-config [startup-config | <url_file>] | { [begin | exclude | include] <line> }

copy startup-config [running-config | <url_file>] | { [begin | exclude | include] <line> }

copy <url_file> [startup-config | running-config] | { [begin | exclude | include] <line> }

Parameters:

running-config	Current running configuration
startup-config	Startup configuration
<url_file>	File in FLASH or on TFTP server. Syntax: <flash:filename | tftp://server/path-and-filename>. A valid file name is a text string drawn from alphabet (A-Za-z), digits (0-9), dot (.), hyphen (-), under score (_). The maximum length is 63 and hyphen must not be first character. The file name content that only contains '.' is not allowed.
|	Output modifiers
syntax-check	Perform syntax check on source configuration

begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# copy startup-config  running-config
EX26484#
```

6 DELETE Commands

Delete one file in flash: file system.

SYNTAX

delete <url_file>

Parameters:

<url_file> File in FLASH. Syntax: <flash:filename>. A valid file name is a text string drawn from alphabet (A-Za-z), digits (0-9), dot (.), hyphen (-), under score (_). The maximum length is 63 and hyphen must not be first character. File name content that only contains '.' is not allowed.

EXAMPLE

```
EX26484# delete text
EX26484#
```

7 DIR Commands

Directory of all files in flash: file system.

SYNTAX

dir

dir | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# dir
Directory of flash:
   r- 2018-07-13 09:27:54     650 default-config
   rw 1970-01-01 00:30:38   10466 startup-config
2 files, 11116 bytes total.

Flash size: 3284992 bytes (3.1 MiB)
Flash free: 3239936 bytes (3.1 MiB)
#
```

8 DISABLE Commands

Turn off privileged commands.

SYNTAX

disable

disable <0-15>

Parameters:

<0-15>	Privilege level

EXAMPLE

```
EX26484# disable 1
EX26484#
```

9 DO Commands

To run exec commands in the configuration mode.

SYNTAX

Do <LINE>{[LINE]}

Parameters:

LINE Exec Command

EXAMPLE

```
EX26484# do show clock
System Time    : 2011-01-01T00:03:44+00:00
EX26484#
```

10 DOT1X Commands

IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x initialize

dot1x initialize interface *

dot1x initialize interface * <port_type_list>

dot1x initialize interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

initialize	Force re-authentication immediately
interface	Interface
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# dot1x initialize interface GigabitEthernet 1/1-46
EX26484#
```

11 ENABLE Commands

Turn on privileged commands.

Syntax

Enable

Enable <1-15>

Parameters:

<0-15> Choose privileged level

EXAMPLE

```
EX26484# enable 10
EX26484#
```

12 ERPS Commands

Ethernet Ring Protection Switching.

Syntax

Erps 1-64 commnd [clear | force | manual] [port0 | port1]

Parameters:

1-64 ERPS group number

command Administrative Command

clear Clear command

force Force command

manual Manual command

port0 ERPS Port 0 interface

port1 ERPS Port 1 interface

EXAMPLE

```
EX26484# erps 4 command clear port1
EX26484#
```

13 FIRMWARE

Firmware upgrade/swap.

Syntax

firmware swap

firmware upgrade <url_file>

Parameters:

swap Swap between Active and Alternate firmware image

upgrade upgrade

<url_file> Uniform Resource Locator. It is a specific character string that constitutes a reference to a resource. Syntax:
<protocol>://[<username>[:<password>]@]<host>[:<port>][/<path>]/<file_name>

If the following special characters: space !"#$%&'()*+,/:;<=>?@[\]^`{|}~ need to be contained in the input URL string, they should be percent-encoded. A valid file name is a text string drawn from alphabet (A-Za-z), digits (0-9), dot (.), hyphen (-), under score (_). The maximum length is 63 and hyphen must not be first character.

The file name content that only contains '.' is not allowed.

EXAMPLE

```
EX26484# firmware upgrade tftp://192.168.1.1/running-config
Programming image...
EX26484#
```

14 IP Commands

IPv4 commands.

Syntax

ip dhcp retry interface vlan <vlan_id>

Parameters:

dhcp	DHCP commands
retry	Restart the DHCP query process
interface	Interface
vlan	Vlan interface
<vlan_id>	Vlan ID

EXAMPLE

```
EX26484# ip dhcp retry interface vlan 1
EX26484#
```

15 iperf Commands

Network bandwidth measurement tool

SYNTAX

iperf host <word1-255> [interval <1-60>] | [port <1-65535>] | [time <1-60>] | [ttl <1-255>]

Parameters:

host	host address
<word1-255>	host address
interval	seconds between periodic bandwidth reports
port	server port
time	time in seconds to transmit for
ttl	time-to-live, for multicast
<1-60>	seconds between periodic bandwidth reports
<1-65535>	server port (default 5001)
<1-60>	time in seconds to transmit for (default 10 secs)
<1-255>	time-to-live, for multicast (default 1)

EXAMPLE

```
EX26484# iperf host xxx.xxx.xxx.xxx
EX26484#
```

16 iperf3 Commands

Network bandwidth measurement tool

SYNTAX

iperf host <word1-255> [interval <1-60>] | [port <1-65535>] | [time <1-60>]

Parameters:

host	host address
<word1-255>	host address
interval	seconds between periodic bandwidth reports
port	server port
time	time in seconds to transmit for
<1-60>	seconds between periodic bandwidth reports
<1-65535>	server port (default 5001)
<1-60>	time in seconds to transmit for (default 10 secs)

EXAMPLE

```
EX26484# iperf host xxx.xxx.xxx.xxx
EX26484#
```

17 IPV6 Commands

IPv6 configuration commands.

SYNTAX

ipv6 dhcp-client restart

ipv6 dhcp-client restart interface vlan <vlan_list>

Parameters:

dhcp-client	Manage DHCPv6 client service
restart	Retart DHCPv6 client service
interface	Select an interface to configure
vlan	VLAN of IPv6 interface
<vlan_list>	IPv6 interface VLAN list

EXAMPLE

```
EX26484# ipv6 dhcp-client restart interface vlan 3
EX26484#
```

18 Link-oam

Link OAM configuration.

SYNTAX

link-oam remote-loopback [Start | stop] interface *

link-oam remote-loopback [Start | stop] interface * <port_type_list>

link-oam remote-loopback [Start | stop] interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

remote-loopback	Configure remote loopback on interface
start	Start remote loopback test on interface
stop	Stop remote loopback test on interface
interface	Start/Stop remote loopback test on a specific interface or interfaces
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# link-oam remote-loopback start interface
10GigabitEthernet 1/1-4
EX26484#
```

19 MORE

Display file.

SYNTAX

more <url_file>

more <url_file> | [begin | exclude | include] <line>

Parameters:

<url_file>	File in FLASH or on TFTP server. Syntax: <flash:filename | tftp://server/path-and-filename>. A valid file name is a text string drawn from alphabet (A-Za-z), digits (0-9), dot (.), hyphen (-), under score (_). The maximum length is 63 and hyphen must not be first character. The file name content that only contains '.' is not allowed
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# # more tftp://192.168.1.1/ddd | begin a
% Loading /ddd from TFTP server 192.168.1.1
```

20 NO Commands

Delete trace hunt string.

Syntax

no alarm suppress <kword127>

no alarm suppress <kword127> | [begin | exclude | include] <line>

no debug gdbserver

no debug gdbserver | [begin | exclude | include] <line>

no debug interrupt monitor

no debug interrupt monitor source <cword>

no debug ipv6 nd

no debug ptp ms-pdv log level

no debug trace hunt

no ptp <0-3> wireless mode interface * <port_type_list>

no ptp <0-3> wireless mode interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

no terminal [editing | exec-timeout | history size | length | width]

Parameters:

alarm	alarm
debug	Debugging functions
ptp	Misc non persistent 1588 settings
terminal	Set terminal line parameters
suppress	suppress
<kword127>	alarm name
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

gdbserver

interrupt Application-handled interrupt source

ipv6 IPv6 configuration commands

ptp

trace

monitor Print a line on the console everytime the corresponding source interrupt fires

source Select a particular source interrupt to monitor

<cword> Valid words are 'AMS' 'CLK_ADJ' 'CLK_TSTAMP' 'EGR_ENGINE_ERR' 'EGR_FIFO_OVERFLOW' 'EGR_RW_FCS_ERR' 'EGR_TIMESTAMP_CAPTURED' 'EXT_1_SYNC' 'EXT_SYNC' 'FLNK' 'INGR_ENGINE_ERR' 'INGR_RW_FCS_ERR' 'INGR_RW_PREAM_ERR' 'LOS' 'PTP_PIN_0' 'PTP_PIN_1' 'PTP_PIN_2' 'PTP_PIN_3' 'PUSH_BUTTON' 'SYNC' 'VOE'

nd IPv6 Neighbor Discovery debugging

ms-pdv

log level

hunt

<0-3> Clock instance [0-3]

wireless Enable wireless mode for one or more interfaces

mode Enable wireless mode for an interface

interface Interface
***** All switches or All ports
GigabitEthernet 1 Gigabit Ethernet Port
10GigabitEthernet 10 Gigabit Ethernet Port
<port_type_list> Port list for all port types
<port_type_list> Port list in 1/1-48
<port_type_list> Port list in 1/1-4

editing Enable command line editing

exec-timeout Set the EXEC timeout

history Control the command history function

length Set number of lines on a screen

width Set width of the display terminal

size Set history buffer size

EXAMPLE

```
EX26484# no ptp 3 wireless m interface GigabitEthernet 1/1
Wireless mode not available for ptp instance 3, port 1
Wireless mode requires a two-step or Oam based BC
#
```

21 PING

Send ICMP echo messages.

Syntax

ping ip [<ipv4_addr> | <domain_name>]

ping ip [<ipv4_addr> | <domain_name>] [data <0-255> | quiet | repeat <1-60> | saddr <ipv4_addr> | size <2-1452> | ttl <1-255> | verbose]

ping ip [<ipv4_addr> | <domain_name>] sif (GigabitEthernet | 10GigabitEthernet) <port_type_list>

ping ip [<ipv4_addr> | <domain_name>] sif vlan <vlan_id>

ping ipv6 [<ipv6_addr> | <domain_name>]

ping ipv6 [<ipv6_addr> | <domain_name>] [data <0-255> | quiet | repeat <1-60> | saddr <ipv6_addr> | size <2-1452> | ttl <1-255> | verbose]

ping ipv6 [<ipv6_addr> | <domain_name>] sif (GigabitEthernet | 10GigabitEthernet) <port_type_list>

ping ip [<ipv46_addr> | <domain_name>] sif vlan <vlan_id>

Parameters:

ip	ICMPv4 Echo Request
ipv6	ICMPv6 Echo Request
<domain_name>	Destination hostname or FQDN
<ipv4_addr>	Destination IPv4 address
data	Specify payload data byte value
quiet	Set quiet output
repeat	Specify repeat count
saddr	Send from interface with source address
sif	Send from specified interface
size	Specify datagram size
ttl	Set IPv4 Time-To-Live (TTL)
verbose	Set verbose output
<0-255>	Payload data: 0-255; Default is 0

<1-60>	Packets: 1-60; Default is 5
<ipv4_addr>	Source Address of interface
<2-1452>	Size (bytes): 2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
<1-255>	IPv4 TTL: 1-255; Default is 64
vlan	Send from VLAN interface with source address
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<vlan_id>	Source VLAN interface
<ipv6_addr>	Destination IPv6 address

EXAMPLE

```
EX26484# ping ip 192.168.1.1 repeat 3 size 3
PING 192.168.1.1 (192.168.1.1): 3 data bytes
11 bytes from 192.168.1.1: seq=0 ttl=64
11 bytes from 192.168.1.1: seq=1 ttl=64
11 bytes from 192.168.1.1: seq=2 ttl=64

--- 192.168.1.1 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
EX26484#
```

22 PLATFORM Commands

Platform configuration

SYNTAX

platform debug (allow | deny)

Parameters:

debug	Debug command setting
allow	Allow debug commands
deny	Deny debug commands

EXAMPLE

```
EX26484# platform debug deny
EX26484#
```

23 PTP Commands

Platform configuration

SYNTAX

ptp <0-3> local-clock ratio <-10000000-10000000>

ptp <0-3> local-clock update

ptp <0-3> wireless delay <0-1000000000> <0-1000000> interface *

ptp <0-3> wireless delay <0-1000000000> <0-1000000> interface * <port_type_list>

ptp <0-3> wireless delay <0-1000000000> <0-1000000> interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

ptp <0-3> wireless delay <0-1000000000> interface *

ptp <0-3> wireless delay <0-1000000000> interface * <port_type_list>

ptp <0-3> wireless delay <0-1000000000> interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

ptp <0-3> wireless [mode | pre-notification] interface *

ptp <0-3> wireless [mode | pre-notification] interface * <port_type_list>

ptp <0-3> wireless [mode | pre-notification] interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

ptp cal 1pps <-100000-100000>

ptp cal p2p (GigabitEthernet | 10GigabitEthernet) <port_type_id>

ptp cal port (GigabitEthernet | 10GigabitEthernet) <port_type_id> mode [100m-cu | 10g | 10m-cu | 1g | 1g-cu | 2g5 |5g | all] reset

ptp cal port (GigabitEthernet | 10GigabitEthernet)t <port_type_id> offset <-100000-100000> cable-latency <-100000-100000>

ptp cal port (GigabitEthernet | 10GigabitEthernet) <port_type_id> [reset | start]

ptp cal t-plane (GigabitEthernet | 10GigabitEthernet) <port_type_id> [ext | int]

Parameters:

<0-3>	PTP Clock instance [0-3]
cal	
local-clock	Update local clock current time, or set clock ratio

wireless	Enable wireless mode for one or more interfaces
ratio	Set the local master clock frequency ratio.
update	The local clock is synchronized to the OS system clock
<-10000000-10000000>	Ratio in units of 0,1 PPB, (ratio > 0 => faster clock, ratio < 0 => slower clock)
delay	
mode	Enable wireless mode for an interface.
pre-notification	Issue a pre notification that the wireless modem is going to change
<0-1000000000>	Base wireless transmission delay (in picoseconds)
<0-1000000>	Incremental wireless transmission delay pr. byte (in picoseconds)
interface	Interface parameter
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
interface	Interface
1pps	
p2p	
port	
t-plane	
<-100000-100000>	Latency of the cable used for calibration
<port_type_id>	Port ID in 1/1-48
<port_type_id>	Port ID in 1/1-4
mode	
offset	
reset	
start	

100m-cu

10g

10m-cu

1g

1g-cu

2g5

5g

All

<-100000-100000> 1PPS offset between master and slave (positive value means slave outputs pulse after master)

cable-latency

ext Specifies that external loopback is to be used

int Specifies that internal loopback is to be used

EXAMPLE

```
EX26484# ptp cal port GigabitEthernet 1/1 start
Starting calibration of port: 1 using external reference.
Port link status is 'down' - cannot calibrate.
EX26484#
```

24 RELOAD

Reload system.

Syntax

reload cold

reload defaults

reload defaults keep-ip

Parameters:

cold	Reload cold
defaults	Reload defaults without rebooting.
keep-ip	Attepmt to keep VLAN1 IP setup

EXAMPLE

```
EX26484# reload defaults keep-ip
EX26484#
```

25 SEND

Send a message to other tty lines

Syntax

send { * | <0-16> | console 0 | vty <0~15> } <line128>

Parameters:

*****	All tty lines
<0~16>	Send a message to multiple lines
console	Primary terminal line
vty	Virtual terminal
0	Send a message to a specific line
<0~15>	Send a message to multiple lines
<lINE128>	yMessage to be sent to lines, in 128 char's

EXAMPLE

```
EX26484# send * aaa

----------------------------------------
*** Message from line 0:

----------------------------------------
EX26484#
```

26 SHOW

Show.

Table: SHOW Commands

Command	Function
aaa	Authentication, Authorization and Accounting methods
access	Access management
access-list	Access list
aggregation	Aggregation port configuration
board-data	Model Name
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
eps	Ethernet Protection Switching.
erps	Ethernet Ring Protection Switching
event	Show trap event configuration
green-ethernet	Green ethernet (Power reduction)
history	Display the session command history
interface	Interface
ip	Interface Internet Protocol configuration commands
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP configuration/status
licenses	Display license information
line	TTY line information
link-oam	Link OAM configuration
lldp	Link Layer Discover Protocol
logging	System logging message
loop-protect	Loop protection configuration
mac	Mac Address Table information
mep	Maintenance Entity Point
monitor	Monitoring different system events
mrp	MRP status
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP
platform	Platform configuration

poe	Power over ethernet
port-security	show port security overview status
privilege	Display command privilege
process	process
ptp	Precision time Protocol (1588)
pvlan	PVLAN configuration
qos	Quality of Service
radius-server	RADIUS configuration
rmon	RMON statistics
running-config	Show running system information
sflow	Statistics flow
smtp	Show email information
snmp	Set SNMP server's configurations
spanning-tree	STP Bridge
svl	Shared VLAN Learning configuration
switchport	Display switching mode characteristics
System	system
tacacs-server	TACACS+ configuration
terminal	Display terminal configuration parameters
udld	Unidirectional Link Detection (UDLD) configurations, statistics and status
upnp	show UPnP configurations
users	Display information about terminal lines
version	System hardware and software status
vlan	VLAN status
voice	Voice appliance attributes
web	web

26-1 aaa

Authentication, Authorization and Accounting methods.

SYNTAX

show aaa

show aaa | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show aaa
Authentication :
  console : local
  telnet  : local
  ssh     : local
  http    : local
Authorization :
  console : no, commands disabled
  telnet  : no, commands disabled
  ssh     : no, commands disabled
Accounting :
  console : no, commands disabled, exec disabled
  telnet  : no, commands disabled, exec disabled
  ssh     : no, commands disabled, exec disabled
EX26484#
```

26-2 access

Access management.

SYNTAX

show access management

show access management <1~16>

show access management <1~16> | [begin | exclude | include] <line>

show access management | [begin | exclude | include] <line>

show access management statistics

show access management statistics | [begin | exclude | include] <line>

Parameters:

management	Access management configuration
<1~16>	ID of access management entry list (1-16)
|	Output modifiers
statistics	Statistics data
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show access management 3
Switch access management mode is disabled

W: WEB/HTTPS
S: SNMP
T: TELNET/SSH

Idx VID  Start IP Address             End IP Address               W S T
--- ---  ------------------------------ ------------------------------ - - -
EX26484#
```

26-3 access-list

Access list.

SYNTAX

show access-list | [begin | exclude | include] <line>

show access-list ace statistics

show access-list ace statistics <1~512>

show access-list ace-status

show access-list ace-status [arp-inspection | conflicts | dhcp | ip | ip-source-guard |

ipmc | link-oam | loop-protect | mep | ptp | static | upnp]

show access-list interface *

show access-list interface * <port_type_list>

show access-list interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

show access-list rate-limite

show access-list rate-limiter <1~16>

Parameters:

|	Output modifiers
ace	Access list entry
ace-status	The local ACEs status
interface	Select an interface to configure
rate-limiter	Rate limiter
statistics	Traffic statistics
<1~512>	ACE ID
arp-inspection	The ACEs that are configured by ARP Inspection module
conflicts	The ACEs that did not get applied to the hardware due to hardware limitations
dhcp	The ACEs that are configured by DHCP module
ip	The ACEs that are configured by IP module
ip-source-guard	The ACEs that are configured by IP Source Guard module
ipmc	The ACEs that are configured by IPMC module
link-oam	The ACEs that are configured by Link OAM module
loop-protect	The ACEs that are configured by Loop Protect module
mep	The ACEs that are configured by MEP module
ptp	The ACEs that are configured by PTP module
static	The ACEs that are configured by users manually
upnp	The ACEs that are configured by UPnP module
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port

<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<1~16>	Rate limiter ID

EXAMPLE

```
EX26484# show access-list statistics ace 3

Switch access-list ace number: 0
EX26484#
```

26-4 aggregation

Aggregation port configuration.

SYNTAX

show aggregation

show aggregation | [begin | exclude | include] <line>

show aggregation mode

Parameters:

mode	Traffic distribution mode
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show aggregation mode
Aggregation Mode:

SMAC  : Enabled
DMAC  : Disabled
IP    : Enabled
Port  : Enabled
EX26484#
```

26-5 board-data

Model name

SYNTAX

show board-data

EXAMPLE

```
EX26484# show board-data
Model Name      : SMB500-48MP-740W

Part Number     : 17108108PF2

Hardware Version : A

EX26484#
```

26-6 clock

Configure time-of-day clock.

SYNTAX

show clock

show clock detail

Parameters:

detail Display detailed information

EXAMPLE

```
EX26484# show clock
System Time : 2017-01-01 01:30:50


EX26484#
```

26-7 dot1x

IEEE Standard for port-based Network Access Control.

SYNTAX

show dot1x status

show dot1x status | [begin | exclude | include] <line>

show dot1x status brief

show dot1x status interface * <port_type_list>

show dot1x status interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

show dot1x statistics [eapol | radius | all]

show dot1x statistics [eapol | radius | all] | [begin | exclude | include] <line>

show dot1x statistics [eapol | radius | all] interface * <port_type_list>

show dot1x statistics [eapol | radius | all] interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

statistics	Shows statistics for either EAPoL or RADIUS
Status	Shows dot1x status, such as admin state, port state and last source
|	Output modifiers
brief	Show status in a brief format (deprecated)
interface	Interface

begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
all	Show all dot1x statistics
eapol	Show EAPOL statistics
radius	Show Backend Server statistics

EXAMPLE

```
EX26484# show dot1x statistics radius
                   Rx Access   Rx Other    Rx Auth.    Rx Auth.    Tx         MAC
Interface            Challenges  Requests    Successes   Failures    Responses
Address
--------------------  ----------  ----------  ----------  ----------  ----------  --
-----
Gi              1/1   0         0         0         0         0         -
Gi              1/2   0         0         0         0         0         -
Gi              1/3   0         0         0         0         0         -
Gi              1/4   0         0         0         0         0         -
Gi              1/5   0         0         0         0         0         -
.
.
.
.
Gi              1/N   0         0         0         0         0         -
EX26484#
```

26-8 eps

Ethernet Protection Switching.

SYNTAX SYNTAX

show eps

show eps | [begin | exclude | include] <line>

show eps <range_list>

show eps detail

Parameters:

|	Output modifiers
<range_list>	The range of EPS instances
detail	Show detailed state including configuration information
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show eps detail

EPS state is:
    Inst       State    Wstate    Pstate    TxAps r b    RxAps r b
FopPm    FopCm    FopNr    FopNoAps


EPS Configuration is:
    Inst    Dom    Archi    Wflow    Pflow    Wmep    Pmep    APSmep
Direct    Revert    Wtr    Hold    Aps

EPS Command is:
    Inst        Command
EX26484#
```

26-9 erps

Ethernet Ring Protection Switching.

SYNTAX SYNTAX

show erps

show erps | [begin | exclude | include] <line>

show erps [1~64 | detail | statistics]

Parameters:

1~64	Zero or more ERPS group numbers
|	Output modifiers
detail	Show detailed information
statistics	Show statistics
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# # show erps statistics
% No ERPS groups configured.
EX26484#
```

26-10 event

Show trap event configuration

SYNTAX

show event

EXAMPLE

```
IPGS=2732X-AD# show event
show event
Group Name     Severity Level    Syslog Mode   Trap Mode    SMTP Mode    Digital Out
------------------------------  ---------------  ------------  ------------  -------
-----  ------------
AC-Power             Information      enable       disable      disable      N/A
ACL                  Information      enable       disable      disable      N/A
ACL-Log               Information      enable       disable      disable      N/A
Access-Mgmt           Information      enable       disable      disable      N/A
Auth-Failed           Warning          enable       disable      disable      N/A
Battery-Power         Information      enable       disable      disable      N/A
Cold-Start            Warning          enable       disable      disable      N/A
Config-Info           Information      enable       disable      disable      N/A
DI-1-Abnormal         Information      enable       disable      disable      disable
DI-1-Normal           Information      enable       disable      disable      disable
```

```
IPGS=2732X-AD# show event
show event
Group Name           Severity Level    Syslog Mode   Trap Mode    SMTP Mode    Digital Out
------------------------------  ---------------  ------------  ------------  ------------
------------
DMS                          Information      enable       disable      disable      N/A
Digital-Out                   Information      enable       disable      disable      N/A
FAN                          Information      enable       disable      disable      N/A
Firmware-Upgrade              Information      enable       disable      disable      N/A
Import-Export                 Information      enable       disable      disable      N/A
LACP                         Information      enable       disable      disable      N/A
Link-Status                   Warning          enable       disable      disable      disable
Login                        Information      enable       disable      disable      N/A
Logout                       Information      enable       disable      disable      N/A
Loop-Protect                  Information      enable       disable      disable      disable
Mgmt-IP-Change                Information      enable       disable      disable      N/A
Module-Change                 Warning          enable       disable      disable      N/A
NAS                          Information      enable       disable      disable      N/A
NTP-Sync                     Warning          enable       disable      disable      N/A
Password-Change               Information      enable       disable      disable      N/A
Poe_Auto_Power_Reset          Warning          enable       disable      disable      N/A
Port-Security                 Information      enable       disable      disable      N/A
Spanning-Tree                 Information      enable       disable      disable      N/A
Temperature                   Information      enable       disable      disable      disable
Voltage                      Information      enable       disable      disable      disable
```

26-11 green-ethernet

Green ethernet (Power reduction)

SYNTAX

show green-ethernet

show green-ethernet | [begin | exclude | include] <line>

show green-ethernet [eee | energy-detect | short-reach]

show green-ethernet [eee | energy-detect | short-reach] interface *

show green-ethernet [eee | energy-detect | short-reach] interface * <port_type_list>

show green-ethernet[eee | energy-detect | short-reach] interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

show green-ethernet interface *

show green-ethernet interface * <port_type_list>

show green-ethernet interface (GigabitEthernet | 10GigabitEthernet) <port_type_list>

Parameters:

|	Output modifiers
eee	Shows green ethernet EEE status for a specific port or ports.
energy-detect	Shows green ethernet energy-detect status for a specific port or ports.
interface	Shows green ethernet status for a specific port or ports.
short-reach	Shows green ethernet short-reach status for a specific
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show green-ethernet eee
Interface             Lnk  EEE Capable  EEE Enabled  LP EEE Capable   EEE In Power Save
----------------------  ---  -----------  -----------  ---------------  ---------------
--
GigabitEthernet 1/1    No   Yes          No           No               No
GigabitEthernet 1/2    No   Yes          No           No               No
GigabitEthernet 1/3    No   Yes          No           No               No
GigabitEthernet 1/4    No   Yes          No           No               No
......
10GigabitEthernet 1/1   No   No          N/A          N/A              N/A
10GigabitEthernet 1/2   No   No          N/A          N/A              N/A
10GigabitEthernet 1/3   No   No          N/A          N/A              N/A
10GigabitEthernet 1/4   No   No          N/A          N/A              N/A
EX26484#
```

26-12 history

Display the session command history.

SYNTAX

show history

show history | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show history
  show green-ethernet eee
  show history
EX26484#
```

26-13 interface

Interface.

SYNTAX

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] [capabilities | description | status | transceiver | veriphy]

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] statistics | [begin | exclude | include] <line>

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] statistics

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] statistics [bytes | discards | errors | packets] [up | down]

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] statistics [up | down] [bytes | discards | errors | packets]

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] switchport

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] switchport | [begin | exclude | include] <line>

show interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] switchport [access | hybrid | trunk]

show interface vlan

show interface vlan <vlan_list>

Parameters:

vlan	VLAN status
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types

<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
capabilities	Display capabilities
description	Description of interface
statistics	Display statistics counters
status	Display status
switchport	Show interface switchport information
transceiver	Show interface transceiver
veriphy	Display the latest cable diagnostic results
|	Output modifiers
bytes	Show byte statistics
discards	Show discard statistics
down	Show ports which are down
errors	Show error statistics
filtered	Show filtered statistics
packets	Show packet statistics
priority	Show priority statistics
up	Show ports which are up
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
access	Show access ports status
hybrid	Show hybrid ports status
trunk	Show trunk ports status
<vlan_list>	VLAN list

EXAMPLE

```
EX26484 # show interface GigabitEthernet 1/1-4 capabilities

GigabitEthernet 1/1 Capabilities:
  Speed cap:           10,100,1000,auto
  Duplex cap:          half,full,auto
  Trunk encap. type:    802.1Q
  Trunk mode:          access,hybrid,trunk
  Channel:             yes
  Broadcast suppression: no
  Flowcontrol:         yes
  Fast Start:          no
  QoS scheduling:       tx-(8q)
  CoS rewrite:         yes
  ToS rewrite:         yes
  UDLD:               no
  Inline power:        yes
  RMirror:             yes
  PortSecure:          yes
  Dot1x:              yes
GigabitEthernet 1/2 Capabilities:
  Speed cap:           10,100,1000,auto
  Duplex cap:          half,full,auto
  Trunk encap. type:    802.1Q
  Trunk mode:          access,hybrid,trunk
  Channel:             yes
  Broadcast suppression: no
  Flowcontrol:         yes
  Fast Start:          no
  QoS scheduling:       tx-(8q)
  CoS rewrite:         yes
  ToS rewrite:         yes
  UDLD:               no
  Inline power:        yes
  RMirror:             yes
  PortSecure:          yes
  Dot1x:              yes
EX26484#
```

26-14 ip

Interface Internet Protocol configuration commands.

SYNTAX

Show ip [acd | arp | domain | http | interface | name-server | route | ssh | statistics]

Show ip [acd | arp | domain | http | interface | name-server | route | ssh | statistics] | [begin | exclude | include] <line>

show ip arp inspection

show ip arp inspection entry

show ip arp inspection entry { [dhcp-snooping interface] | [interface] | [static interface] } { * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>] }

show ip arp inspection interface * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show ip arp inspection vlan <vlan_list>

show ip dhcp detailed statistics [client | combined | normal-forward | relay | server | snooping]

show ip dhcp detailed statistics [client | combined | normal-forward | relay | server | snooping] | [begin | exclude | include] <line>

show ip dhcp detailed statistics [client | combined | normal-forward | relay | server | snooping] interface * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show ip dhcp [excluded-address | pool | relay | server | snooping]

show ip dhcp [excluded-address | pool | relay | server | snooping] | [begin | exclude | include] <line>

show ip dhcp pool <word32>

show ip dhcp relay statistics

show ip dhcp server [binding | declined-ip | statistics]

show ip dhcp server [binding | declined-ip] <ipv4_ucast>

show ip dhcp server binding state [allocated | expired | manual]

show ip dhcp server binding state [allocated | expired | manual] type [automatic | expired | manual]

show ip dhcp server binding type [automatic | expired | manual]

show ip dhcp server binding type [automatic | expired | manual] state [allocated | expired | manual]

show ip dhcp snooping interface * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show ip dhcp snooping table

show ip igmp snooping

show ip igmp snooping [detail | group-database | mrouter | vlan <vlan_list>]

show ip igmp snooping group-database sfm-information

show ip interface brief

show ip source binding

show ip source binding dhcp-snooping

show ip source binding dhcp-snooping interface { * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>] }

show ip source binding interface { * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>] }

show ip source binding static

show ip source binding static interface { * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>] }

show statistics system

show ip verify source

show ip verify source interface { * | [(GigabitEthernet | 10GigabitEthernet) <port_type_list>] }

Parameters:

acd	Address Conflict Detection
arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
domain	Default domain name
http	Hypertext Transfer Protocol
igmp	Internet Group Management Protocol
interface	IP interface status and configuration
name-server	Domain Name System
route	Display the current ip routing table
source	source command
ssh	Secure Shell

statistics	Traffic statistics
verify	verify command
inspection	ARP inspection
entry	arp inspection entries
interface	ARP inspection entry interface configuration
vlan	VLAN configuration
dhcp-snooping	learn from dhcp snooping
static	setting from static entries
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<vlan_list>	Select a VLAN id to configure
detailed	DHCP server
excluded-address	Excluded IP database
pool	DHCP pools information
relay	DHCP relay agent configuration
server	DHCP server information
snooping	DHCP snooping
statistics	Traffic statistics
client	DHCP client
combined	Show all DHCP related statistics
normal-forward	DHCP normal L2 or L3 forward
relay	DHCP relay
server	DHCP server
snooping	DHCP snooping
interface	Select an interface to configure
|	Output modifiers
begin	Begin with the line that matches

exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
<word32>	Pool name in 32 characters
statistics	Traffic statistics
binding	DHCP address bindings
declined-ip	Declined IP address
statistics	DHCP server statistics
<ipv4_ucast>	IP address in dotted-decimal notation
state	State of binding
type	Type of binding
allocated	Allocated state
committed	Committed state
expired	Expired state
type	Type of binding
automatic	Automatic binding
expired	Expired binding that is aged out
manual	Manual binding for a specific host
detail	Detail running information/statistics of IGMP snooping
group-database	Multicast group database from IGMP
mrouter	Multicast router port status in IGMP
vlan	Search by VLAN
sfm-information	Including source filter multicast information from IGMP
<vlan_list>	VLAN identifier (VID)
vlan	VLAN interface
brief	Brief IP interface status
neighbor	Neighbor list
<vlan_list>	List of VLAN ID, e.g. 1,3-5,7
source	verify source
system	

EXAMPLE

```
EX26484# show ip interface brief
Interface       Address            Method       Status
--------------- ------------------- ------------ ------
VLAN1          192.168.1.1/24      Manual       UP
EX26484#
```

26-15 ipmc

IPv4/IPv6 multicast configuration

SYNTAX

show ipmc [profile | range]

show ipmc [profile | range] | [begin | exclude | include] <line>

show ipmc [profile | range] [<word16>] [detail]

Parameters:

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
<word16>	Profile name in 16 characters
detail	Detail information of a profile
<word16>	Range entry name in 16 characters
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show ipmc range
EX26484#
```

26-16 ipv6

IPv6 configuration commands.

SYNTAX

show ipv6 [dhcp-client | interface | neighbor | route | statistics]

show ipv6 [dhcp-client | interface | neighbor | route | statistics] | [begin | exclude | include] <line>

show ipv6 dhcp-client interface vlan <vlan_list>

show ipv6 interface brief

show ipv6 mld snooping

show ipv6 mld snooping [vlan <vlan_list> | group-database | detail | mrouter]

show ipv6 mld snooping group-database sfm-information

show ipv6 statistics interface vlan <vlan_list>

Parameters:

dhcp-client	Manage DHCPv6 client service
interface	IPv6 configuration commands
mld	IPv6 configuration commands
neighbor	IPv6 neighbors
route	IPv6 routes
statistics	Traffic statistics
interface	Select an interface to configure
vlan	VLAN of IPv6 interface
<vlan_list>	IPv6 interface VLAN list
brief	Brief summary of IPv6 status and configuration
snooping	Snooping MLD
detail	Detail running information/statistics of MLD snooping
group-database	Multicast group database from MLD
mrouter	Multicast router port status in MLD
vlan	Search by VLAN
sfm-information	Including source filter multicast information from MLD

system	IPv6 system traffic

EXAMPLE

```
EX26484# show ipv6 mld snooping detail

MLD Snooping is enabled to start snooping MLD control plane.
Multicast streams destined to unregistered MLD groups will be
flooding.EX26484#
```

26-17 lacp

LACP configuration/status

SYNTAX

show lacp [internal | statistics | system-id | neighbour] [| {begin | exclude | include } <line>]

show lacp [internal | statistics | system-id | neighbour] detail

Parameters:

internal	Internal LACP configuration
neighbour	Neighbour LACP status
statistics	Internal LACP statistics
system-id	LACP system id
|	Output modifiers
details	LACP state
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show lacp internal
Port  Mode     Key   Role   Timeout  Priority
----  -------- ----  ------ -------  --------
1     Disabled  Auto  Active  Fast    32768
2     Disabled  Auto  Active  Fast    32768
3     Disabled  Auto  Active  Fast    32768
4     Disabled  Auto  Active  Fast    32768
5     Disabled  Auto  Active  Fast    32768
6     Disabled  Auto  Active  Fast    32768
7     Disabled  Auto  Active  Fast    32768
EX26484#
```

26-18 license

Display license information.

SYNTAX

show license

show license | {begin | exclude | include } <line>

show license { [component <uint>] | description | [mtd <word>] [section <uint>] }

Parameters:

|	Output modifiers
component	component key word - Select a specific component to show
description	description keyword - Shows the licenses description, else only an overview is shown.
mtd	MTD keyword - Select a specific MTD (file) to show
section	section key word - Select a specific section to show
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

<uint> Component ID to show

<word> Name of MTD (file) to show

EXAMPLE

```
EX26484 # show licenses
Image Name   SectionID   ComponentID  Component Name          Version                Type
Url
-----------  ----------  -----------  ----------------------  ----------------------  ---------
---------------  -------------------------------------
RedBoot     No licenses found
linux       0           0           libstdc++               6.3.0                   GPLv3 (with
exception)   http://ftpmirror.gnu.org/gcc/gcc-6.3.0/gcc-6.3.0.tar.bz2
linux       0           1           uclibc                  1.0.22                  LGPLv2.1+
http://downloads.uclibc-ng.org/releases/1.0.22/uClibc-ng-1.0.22.tar.xz
linux       0           2           linux-headers           4.9.13                   GPLv2
https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.9.13.tar.xz
linux       0           3           mscc-linux              835a2802137cfe955a2fa48a9e67cb111058021a
GPLv2
linux       0           4           mbedtls                 2.4.0                   Apache-2.0
https://tls.mbed.org/code/releases/mbedtls-2.4.0-apache.tgz
EX26484 #
```

26-19 line

TTY line information.

SYNTAX

show line

show line | {begin | exclude | include } <line>]

show line [alive]

Parameters:

| Output modifiers

alive Display information about alive lines

begin Begin with the line that matches

exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show line alive
Line is con 0.
---------------
   * You are at this line now.
   Alive from Console.
   Default privileged level is 2.
   Command line editing is enabled
   Display EXEC banner is enabled.
   Display Day banner is enabled.
   Terminal width is 80.
           length is 24.
           history size is 32.
           exec-timeout is 10 min 0 second.

   Current session privilege is 15.
   Elapsed time is 0 day 2 hour 19 min 54 sec.
   Idle time is 0 day 0 hour 0 min 0 sec.

EX26484 #
```

26-20 link-oam

Link OAM configuration.

SYNTAX

show link-oam

show link-oam | {begin | exclude | include } <line>

show link-oam interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show link-oam [link-monitor | statistics | status]

Parameters:

|	Output modifiers
interface	Interface status and configuration
link-monitor	Display link-monitor status parameters
statistics	Display statistics parameters
status	Display local and remote node status parameters
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# # show link-oam interface GigabitEthernet 1/1-4

   Interface           Control    Mode       Status
--------------------    ---------  -------   -----------
GigabitEthernet    1/1    disabled  passive   non operational


GigabitEthernet    1/2    disabled  passive   non operational
EX26484#
```

26-21 lldp

Link Layer Discover Protocol.

SYNTAX

show lldp med [media-vlan-policy | remote-device]

show lldp med [media-vlan-policy | remote-device] | {begin | exclude | include } <line>

show lldp med media-vlan-policy <0~31>

show lldp med remote-device interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show lldp [eee | neighbors | preempt | statistics]

show lldp [eee | neighbors | preempt | statistics] | {begin | exclude | include } <line>

show lldp [eee | neighbors | preempt | statistics] interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show lldp

Parameters:

eee	Display LLDP local and neighbor EEE information
med	Display LLDP-MED neighbors information
neighbors	Display LLDP neighbors information
preempt	Display LLDP local and neighbor Preempt information**.**
statistics	Display LLDP statistics information
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
media-vlan-policy	Display media vlan policies
remote-device	Display remote device LLDP-MED neighbors information
<0~31>	List of policies

interface	Interface to display
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show lldp eee interface GigabitEthernet 1/1-4
No LLDP entries found
#EX26484#
```

26-22 logging

System logging message.

SYNTAX

show logging

show logging [<1-4294967295> | error | informational | notice | warning]

show logging <1-4294967295> [exclude | include] <line>

show logging <1-4294967295> switch <switch_list>

show logging | {begin | exclude | include } <line>

Parameters:

<1-4294967295>	Logging ID
|	Output modifiers
error	Severity 3: Error conditions
informational	Severity 6: Informational messages
notice	Severity 5: Normal but significant condition
warning	Severity 4: Warning conditions
exclude	Exclude lines that match

include	Include lines that match
switch	Switch
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
<switch_list>	Switch ID list in 1

EXAMPLE

```
EX26484# show logging informational
Switch logging host mode is disabled
Switch logging host address is null
Switch logging level is informational

Number of entries on Switch 1:
Error       : 0
Warning     : 0
Notice      : 55
Informational: 1
All         : 56

ID        Level         Time & Message
----------  -------------  --------------
       1  Informational  1970-01-01T00:00:45+00:00
                     SYS-BOOTING: Switch just made a cold boot.

EX26484#
```

26-23 loop-protect

Loop protection configuration.

SYNTAX

show loop-protect

show loop-protect interface [* | (GigabitEthernet | 10GigabitEthernet)

<port_type_list>]

Parameters:

interface	Interface status and configuration
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show loop-protect interface GigabitEthernet 1/3

Loop Protection Configuration
=====================================
Loop Protection   : Disable
Transmission Time : 5 sec
Shutdown Time     : 180 sec

GigabitEthernet 1/3
------------------------------
   Loop protect mode is enabled.
   Action is shutdown.
   Transmit mode is enabled.
   No loop.
   The number of loops is 0.
   Status is down.
EX26484#
```

26-24 mac

Mac Address Table information.

SYNTAX

show mac address-table

show mac address-table | [begin | exclude | include] <line>

show mac address-table address <mac_ucast>

show mac address-table address <mac_ucast> vlan <vlan_id>

show mac address-table [aging-time | conf | count | learning | static]

show mac address-table count interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show mac address-table count vlan <vlan_id>

show mac address-table interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show mac address-table learning interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show mac address-table learning vlan <vlan_id>

show mac address-table vlan <vlan_id>

Parameters:

address-table	Mac Address Table
|	Output modifiers
address	MAC address lookup
aging-time	Aging time
conf	User added static mac addresses
count	Total number of mac addresses
interface	Select an interface to configure
learning	Learn/disable/secure state
static	All static mac addresses
vlan	Addresses in this VLAN
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
<mac_ucast>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN lookup
<vlan_id>	VLAN IDs 1-4095
*****	All switches or All ports

GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show mac address-table count interface GigabitEthernet 1/4
Port Dynamic addresses
GigabitEthernet 1/4            0

Total learned dynamic addresses for the switch: 0
Total static addresses in table: 1
EX26484#
```

26-25 mep

Maintenance Entity Point.

SYNTAX

show mep | [begin | exclude | include] <line>

show mep [<range_list>] [peer | cc | lm | dm | lt | lb | tst | aps | client | ais | lck | pm | syslog | tlv | bfd | rt | lst | lm-avail] [lm-hli] [detail]

Parameters:

|	Output modifiers
<range_list>	The range of MEP instances
ais	Show AIS state
aps	Show APS state
cc	Show CC state
client	Show Client state
detail	Show detailed state including configuration information
dm	Show DM state
lb	Show LB state

lck	Show LCK state
lm	Show LM state
lm-avail	show Availability state
lm-hli	show LM HLI state
lst	show LST state
lt	Show LT state
peer	Show peer MEP state
pm	Show PM state
syslog	Show Syslog state
tlv	show TLV state
tst	Show TST state
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show mep 3 ais detail lm-hli

MEP LM High Loss Interval state is:
    Inst    Peer   Near Count   Far Count   Near/Far Consec. Count


MEP LM High Loss Interval Configuration is:
    Inst    Interval   FLR Threshold


MEP AIS Configuration is:
    Inst      Rate    Protection
EX26484#
```

26-26 monitor

Monitoring different system events

SYNTAX

show monitor

show monitor session [<1-5> | all | remote]

Parameters:

session	MIRROR session
<1-5>	MIRROR session number
all	Show all MIRROR sessions
remote	Show only Remote MIRROR sessions

EXAMPLE

```
EX26484# show monitor session remote

Session 1
---------
Mode                  : Disabled
Type                  : Mirror
Source VLAN(s)          :
CPU Port               :

Session 2
---------
Mode                  : Disabled
Type                  : Mirror
Source VLAN(s)          :
CPU Port               :

Session 3
---------
Mode                  : Disabled
Type                  : Mirror
Source VLAN(s)          :
CPU Port               :

Session 4
---------
Mode                  : Disabled
Type                  : Mirror
Source VLAN(s)          :
CPU Port               :

Session 5
---------
Mode                  : Disabled
Type                  : Mirror
Source VLAN(s)          :
CPU Port               :
EX26484#
```

26-27 mrp

MRP status

SYNTAX

show mrp status

show mrp status [all | mvrp]

show mrp status [all | mvrp] interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show mrp status interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

status	Show a collection of MRP statistics for each interface
all	Show MRP statistics for all MRP Applications
Interface interface(s)	Show a collection of MRP statistics for a specific
mvrp	Show MRP statistics for the MVRP Application
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show mrp status interface GigabitEthernet 1/1-4
GigabitEthernet 1/1 :
---------------------
MRP Appl  FailedRegistrations  LastPduOrigin
--------  -------------------  -------------
MVRP      0                  00-00-00-00-00-00

GigabitEthernet 1/2 :
---------------------
MRP Appl  FailedRegistrations  LastPduOrigin
--------  -------------------  -------------
MVRP      0                  00-00-00-00-00-00

EX26484#
```

26-28 mvr

Multicast VLAN Registration configuration.

SYNTAX

show mvr

show mvr | [begin | exclude | include] <line>

show mvr detail

show mvr group-database

show mvr sfm-information

show mvr group-database interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show mvr <word16>

Parameters:

|	Output modifiers
detail	Detail information/statistics of MVR group database
group-database	Multicast group database from MVR
name	Search by MVR name

vlan	Search by VLAN
sfm-information	Including source filter multicast information from MVR
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
interface	Search by port
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<word16>	MVR multicast VLAN name
<vlan_list>	MVR multicast VLAN list

EXAMPLE

```
EX26484# show mvr vlan 11

MVR is currently disabled, please enable MVR to start group
registration.
% Invalid MVR IGMP VLAN 11.

% Invalid MVR MLD VLAN 11.
EX26484#
```

26-29 ntp

Configure NTP.

SYNTAX

show ntp status

Parameters:

status status

EXAMPLE

```
EX26484# show ntp status
NTP Mode : disabled
Idx   Server IP host address (a.b.c.d) or a host name string
---   ------------------------------------------------
1
2
3
4
5
EX26484#
```

26-30 platform

Platform configuration

SYNTAX

Show platform debug

show platform phy | [begin | exclude | include] <line>

show platform phy [failover | id | instance]

show platform phy id interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show platform phy interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

debug	Debug command setting
phy	PHYs' information
|	Output modifiers
failover	Failover status
id	

instance	PHY Instance Information
interface	
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show platform phy interface GigabitEthernet 1/1
Port   API Inst   WAN/LAN/1G Mode      Duplex    Speed     Link
----   ---------  ---------  ----      ------    -----     ----
1     Default    1G        ANEG      FDX       1G        No
EX26484#
```

26-31 poe

Power Over Ethernet.

SYNTAX

show poe

show poe | [begin | exclude | include] <line>

show poe [auto-check | config | power-delay]

show poe [auto-check | config | power-delay] interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show poe interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show poe profile

show poe profile id <1-16>

Parameters:

|	Output modifiers
auto-check	Show PoE Auto Check configuration
config	Display PoE (Power Over Ethernet) config for the switch
interface	
power-delay the switch	Display PoE (Power Over Ethernet) Power Delay config for
profile	poe scheduling profile
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
interface	Show PoE Auto Power Reset configuration
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
id	poe scheduling profile id
<1-16>	profile id from 1 to 16

EXAMPLE

```
EX26484# show poe auto-check interface GigabitEthernet 1/1-4

Ping Check : Disabled

Port  Ping IP Address Start up Interval Retry Failure Log     Failure Action    Reboot
                      Time     Time    Time                                    Time
----  --------------- -------- -------- ----- --------------- ----------------- ----
--
1     0.0.0.0         60       30       3     error=0,total=0  Nothing          15
2     0.0.0.0         60       30       3     error=0,total=0  Nothing          15
EX26484#
```

26-32 port-security

Show Port Security overview status.

SYNTAX

show port-security

show port-security | [begin | exclude | include] <line>

show port-security address

show port-security address interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show port-security switch interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

|	Output modifiers
address	Show MAC Addresses learned by Port Security
interface	Port interface
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports

GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show port-security interface GigabitEthernet 1/4
Users:
  P = Port Security (Admin)
  8 = 802.1X
  V = Voice VLAN

Interface  Users Limit Current Violating Violation Mode State
---------- ----- ----- ------- --------- -------------- -------------
Gi 1/4     ---     N/A      0      N/A Disabled      No users

Aging disabled
Hold time: 300 seconds
EX26484#
```

26-33 privilege

Display command privilege

SYNTAX

show privilege

show privilege | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show privilege
EX26484#
```

26-34 process

process

SYNTAX

show process list

show process list | [begin | exclude | include] <line>

show process list detail

show process load

Parameters:

list	list
load	load
|	Output modifiers
detail	optionally show thread call stack
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show process load
1.65 1.62 1.63 1/169 183
EX26484#
```

26-35 ptp

Precision time Protocol (1588).

SYNTAX

show ptp

show ptp <0-3> [clk | current | default | filter | filter-type | foreign-master-record | ho | local-clock | log-mode | master-table-unicast | parent | port-ds | port-state | port-statistics | servo | slave | slave-cfg | slave-table-unicast | time-property | uni | virtual-port | wireless]

show ptp <0-3> [foreign-master-record | port-ds | port-state | port-statistics | wireless] [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show ptp | [begin | exclude | include] <line>

show ptp [cal | ext | system-time]

show ptp ms-pdv [all-apr-statistics | apr | cur-path-delays | cur-path-delays | path-statistics | psl-fcl-config] cgu <0-3>

show ptp ms-pdv cgu <0-3> server <0-3> status <0-3>

show ptp servo [mode-ref | source]

Parameters:

<0-3>	Show various PTP data
|	Output modifiers
cal	Show the PTP calibration.
ext and	Show the 1PPS and External clock output configuration
	VCXO frequency rate adjustment option.
ms-pdv	Show the configuration of the MS-PDV.
servo	
system-time	Show the PTP <-> system time synchronization mode.
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
clk	Show PTP slave clock options parameters.
current	Show PTP current data set (IEEE1588 paragraph 8.2.2).
default	Show PTP default data set (IEEE1588 paragraph 8.2.1).
filter	Show PTP filter parameters.
filter-type	Show PTP filter type

foreign-master-record	Show PTP port foreign masters.
ho	Show PTP slave holdover parameters.
local-clock	Show local clock current time
log-mode	Show PTP log mode.
master-table-unicast	Show PTP master list of connected unicast slaves.
parent	Show PTP parent data set (IEEE1588 paragraph 8.2.3).
port-ds	Show PTP port data set (IEEE1588 paragraph 8.2.5).
port-state	Show PTP port state.
port-statistics	Show PTP port statistics.
servo	Show PTP servo parameters.
slave	Show PTP slave clock lock threshold parameters.
slave-cfg	Show slave lock configuration
slave-table-unicast	Show the Unicast slave table of the requested unicast masters
time-property	Show PTP time properties data set (IEEE1588 paragraph 8.2.4).
uni	Show PTP slave unicast configuration parameters.
virtual-port	Show the configuration of a PTP clocks virtual port
wireless	Show PTP port wireless parameters.
interface	Define interface list for the 'port' show commands. Default is show all interfaces All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
all-apr-statistics	
apr	
cgu	
cur-path-delays	
path-statistics	

psl-fcl-config

<0-3>

server

<0-3>

status

mode-ref

source

EXAMPLE

```
EX26484# show ptp ext
PTP External One PPS mode: Disable, Clock output enabled: False,
frequency : 1, Preferred adj method: Auto
EX26484#
```

26-36 pvlan

PVLAN configuration.

SYNTAX

show pvlan

show pvlan <range_list>

show pvlan isolation

show pvlan isolation interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

<range_list>	PVLAN ID to show configuration for
isolation	show isolation configuration
interface	List of port type and port ID, ex, Fast 1/1 Gigabit 2/3-5 Gigabit 3/2-4 10 Gigabit 4/6
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port

<port_type_list> Port list for all port types

<port_type_list> Port list in 1/1-48

<port_type_list> Port list in 1/1-4

EXAMPLE

```
EX26484# show pvlan isolation
Port                          Isolation
-------------------------------  ---------
GigabitEthernet 1/1             Disabled
GigabitEthernet 1/2             Disabled
GigabitEthernet 1/3             Disabled
GigabitEthernet 1/4             Disabled
GigabitEthernet 1/5             Disabled.
.
.
.
GigabitEthernet 1/N            Disabled
EX26484#
```

26-37 qos

Quality of Service.

SYNTAX

show qos

show qos | [begin | exclude | include] <line>

show qos interface

show qos interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show qos maps

show qos maps [cos-dscp | dscp-classify | dscp-cos | dscp-egress-translation | dscp-ingress-translation | egress | ingress]

show qos qce <1-256>

show qos [storm | wred]

Parameters:

|	Output modifiers
interface	Interface
maps	QoS Maps/Tables
qce	QoS Control Entry
storm	Storm policer
wred	Weighted Random Early Discard
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
cos-dscp	Map for COS to DSCP
dscp-classify	Map for DSCP classify enable
dscp-cos	Map for DSCP to COS
dscp-egress-translation	Map for DSCP egress translation
dscp-ingress-translation	Map for DSCP ingress translation
egress	Map for egress configuration
ingress	Map for ingress configuration
<1-256>	QCE ID

EXAMPLE

```
EX26484# show qos maps cos-dscp
qos map cos-dscp:
=================
Cos  DSCP DP0   DSCP DP1   DSCP DP2   DSCP DP3
---  ---------  ---------  ---------  ---------
0    0 (BE)    0 (BE)    0 (BE)    0 (BE)
1    0 (BE)    0 (BE)    0 (BE)    0 (BE)
2    0 (BE)    0 (BE)    0 (BE)    0 (BE)
3    0 (BE)    0 (BE)    0 (BE)    0 (BE)
4    0 (BE)    0 (BE)    0 (BE)    0 (BE)
5    0 (BE)    0 (BE)    0 (BE)    0 (BE)
6    0 (BE)    0 (BE)    0 (BE)    0 (BE)
7    0 (BE)    0 (BE)    0 (BE)    0 (BE)
EX26484#
```

26-38 radius-server

RADIUS configuration.

SYNTAX

show radius-server

show radius-server | [begin | exclude | include] <line>

show radius-server statistics

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
statistics	RADIUS statistics

EXAMPLE

```
EX26484# radius-server statistics
Global RADIUS Server Timeout     : 5 seconds
Global RADIUS Server Retransmit   : 3 times
Global RADIUS Server Deadtime    : 0 minutes
Global RADIUS Server Key        :
Global RADIUS Server Attribute 4  :
Global RADIUS Server Attribute 95 :
Global RADIUS Server Attribute 32 :
No servers configured!
EX26484#
```

26-39 rmon

RMON statistics.

SYNTAX

show rmon alarm

show rmon alarm <1-65535>

show rmon event

show rmon event <1-65535>

show rmon history

show rmon history <1-65535>

show rmon statistics

show rmon statistics <1-65535>

Parameters:

alarm	Display the RMON alarm table
event	Display the RMON event table
history	Display the RMON history table
statistics	Display the RMON statistics table
<1~65535>	Alarm entry list
<1-65535>	Event entry list

<1-65535>	History entry list
<1-65535>	Statistics entry list

EXAMPLE

```
EX26484# show rmon statistics 5
EX26484#
```

26-40 running-config

Show running system information.

SYNTAX

show running-config

show running-config | [begin | exclude | include] <line>

show running-config all-defaults

show running-config <cword> all-defaults

show running-config interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show running-config line [console | vty] <range_list>

show running-config line [console | vty] <range_list> all-defaults

show running-config vlan

show running-config vlan <vlan_list>

show running-config vlan <vlan_list> all-defaults

Parameters:

|	Output modifiers
all-defaults	Include most/all default values
feature	Show configuration for specific feature
interface	Show specific interface or interfaces
line	Show line settings
vlan	VLAN
begin	Begin with the line that matches
exclude	Exclude lines that match

include	Include lines that match
<line>	String to match output lines
<cword>	Valid words are 'GVRP' 'MRP' 'MVRP' 'access' 'access-list' 'aggregation' 'alarm' 'arp-inspection' 'auth' 'clock' 'ddmi' 'dhcp' 'dhcp-snooping' 'dhcp6_client_interface' 'dhcp_server' 'dns' 'dot1x' 'eps' 'erps' 'green-ethernet' 'http' 'icli' 'ip-igmp-snooping' 'ip-igmp-snooping-port' 'ip-igmp-snooping-vlan' 'ipmc-profile' 'ipmc-profile-range' 'ipv4' 'ipv6' 'ipv6-mld-snooping' 'ipv6-mld-snooping-port' 'ipv6-mld-snooping-vlan' 'json_rpc_notification' 'lacp' 'link-oam' 'lldp' 'logging' 'loop-protect' 'mac' 'mep' 'mstp' 'mvr' 'mvr-port' 'ntp' 'poe' 'port' 'port-security' 'ptp' 'pvlan' 'qos' 'rmon' 'snmp' 'source-guard' 'ssh' 'udld' 'upnp' 'user' 'vlan' 'voice-vlan' 'vtss-rmirror' 'web-privilege-group-level'
all-defaults	Include most/all default values
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
console	Console
vty	VTY
<range_list>	List of console/VTYs
<vlan_list>	List of VLAN numbers

EXAMPLE

```
EX26484# show running-config vlan
Building configuration...
vlan 1
!
!
end
EX26484#
```

26-41 sflow

Statistics flow

SYNTAX

show sflow

show sflow | [begin | exclude | include] <line>

show sflow statistics receiver

show sflow statistics samplers

show sflow statistics samplers [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
statistics	sFlow statistics.
receiver	Show statistics for receiver.
samplers	Show statistics for samplers.
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show sflow statistics samplers interface GigabitEthernet 1/1

Per-Port Statistics:
====================

Interface            Flow Samples    Counter Samples
---------------------- --------------- ----------------
GigabitEthernet 1/1               0             0
EX26484#
```

26-42 smtp

Show email information

SYNTAX

show smtp

EXAMPLE

```
EX26484# show smtp
Mail Server    :
User Name      :
Password       :
Sender         :
Return Path    :
Email Adress 1  :
Email Adress 2  :
Email Adress 3  :
Email Adress 4  :
Email Adress 5  :
Email Adress 6  :
EX26484#
```

26-43 snmp

Set SNMP server's configurations.

SYNTAX

show snmp

show snmp | [begin | exclude | include] <line>

show snmp access

show snmp access <word32> [v1 | v2c | v3 | any]

show snmp access <word32> [v1 | v2c | v3 | any] [auth | noauth | priv]

show snmp community

show snmp community <word32>

show snmp host

show snmp host <word32>

show snmp mib context

show snmp mib ifmib ifIndex

show snmp mib ifmib ifIndex [aggregation | port | vlan]

show snmp mib ifmib ifIndex

show snmp security-to-group

show snmp security-to-group [v1 | v2c | v3] <word32>

show snmp trap

show snmp trap <cword>

show snmp user

show snmp user <word32>

show snmp user <word32> <word10-64>

show snmp view

show snmp view <word32> <word255>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
access	access configuration
community	Community
host	Set SNMP host's configurations
mib	MIB (Management Information Base)
security-to-group	security-to-group configuration
trap	Set SNMP host's configurations
user	User
view	MIB view configuration

<word32>	Group name
v1	v1 security model
v2c	v2c security model
v3	v3 security model
any	any security model
auth	authNoPriv Security Level
noauth	noAuthNoPriv Security Level
priv	authPriv Security Level
<word32>	Specify community name
<word32>	Name of the host configuration
context	MIB context
ifmib	IF-MIB
ifIndex	The IfIndex that is defined in IF-MIB
aggregation	show aggregation information
port	show port information
vlan	show VLAN information
<word32>	Security user name
<cword>	Valid words are 'authenticationFailure' 'coldStart' 'entConfigChange' 'fallingAlarm' 'linkDown' 'linkUp' 'lldpRemTablesChange' 'newRoot' 'risingAlarm' 'topologyChange' 'warmStart'
<word10-64>	Security Engine ID
<word32>	MIB view name
<word255>	MIB view OID

EXAMPLE

```
EX26484# show snmp view
View Name   : default_view
OID Subtree : .1
View Type   : included
EX26484#
```

26-44 spanning-tree

STP Bridge.

SYNTAX

show spanning-tree

show spanning-tree | [begin | exclude | include] <line>

show spanning-tree [active | detailed summary]

show spanning-tree detailed interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show spanning-tree interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show spanning-tree mst [<0-7> | configuration]

show spanning-tree mst <0-7> interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
active	STP active interfaces
detailed	STP statistics
interface	Choose port
mst	Multiple STP
summary	STP summary
interface	Choose port
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48

<port_type_list>	Port list in 1/1-4
<0-7>	STP bridge instance (CIST=0, MSTI1=1...)
configuration	Show MSTI to VLAN mapping

EXAMPLE

```
EX26484# show spanning-tree summary
Protocol Version: MSTP
Hello Time     : 2
Max Age        : 20
Forward Delay   : 15
Tx Hold Count   : 6
Max Hop Count   : 20
BPDU Filtering  : Disabled
BPDU Guard     : Disabled
Error Recovery  : Disabled
CIST Bridge is active
EX26484#
```

26-45 svl

Shared VLAN Learning configuration

SYNTAX

show svl | [begin | exclude | include] <line>

show svl fid

show svl fid <1~4095>

show svl vlan

show svl vlan <vlan_list>

Parameters:

|	Output modifiers
fid	Show a given FID
vlan	Show a given VLAN ID
begin	Begin with the line that matches
exclude	Exclude lines that match

include	Include lines that match
<line>	String to match output lines
<1~4095>	List of FIDs to show
<vlan_list>	List of VIDs to show

EXAMPLE

```
EX26484# show svl fid 1
FID   VLANs
----  ------------------------------
   1  1 (default)
EX26484#
```

26-46 switchport

Display switching mode characteristics

SYNTAX

show switchport forbidden | [begin | exclude | include] <line>

show switchport forbidden [name <vword> | vlan <vlan_list>]

Parameters:

forbidden	Lookup VLAN Forbidden port entry
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
name	Forbidden VLANs by VLAN name
vlan	Forbidden VLAN by VLAN ID
<vword>	VLAN name
<vlan_list>	VLAN IDs

EXAMPLE

```
EX26484# show switchport forbidden vlan 1
VLAN  Name                           Interfaces
----  -------------------------------  ----------
1    defaulty
EX26484#
```

26-47 system

system.

SYNTAX

show system [cpu | led] status

Parameters:

cpu	CPU
led	led
status	Average load
status	status

EXAMPLE

```
EX26484# show system led status
System LED: green, solid, normal indication.
EX26484#
```

26-48 tacacs-server

TACACS+ configuration.

SYNTAX

show tacacs-server

EXAMPLE

```
EX26484# show tacacs-server
Global TACACS+ Server Timeout     : 5 seconds
Global TACACS+ Server Deadtime    : 0 minutes
Global TACACS+ Server Key         :
No servers configured!
EX26484#
```

26-49 terminal

Display terminal configuration parameters

SYNTAX

show terminal | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show terminal
Line is con 0.
---------------
   * You are at this line now.
   Alive from Console.
   Default privileged level is 2.
   Command line editing is enabled
   Display EXEC banner is enabled.
   Display Day banner is enabled.
   Terminal width is 80.
           length is 24.
           history size is 32.
           exec-timeout is 10 min 0 second.

   Current session privilege is 15.
   Elapsed time is 0 day 1 hour 33 min 36 sec.
   Idle time is 0 day 0 hour 0 min 0 sec.
EX26484#
```

26-50 udld

Unidirectional Link Detection (UDLD) configurations, statistics and status.

SYNTAX

show udld

show udld | [begin | exclude | include] <line>

show udld interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

Parameters:

|	Output modifiers
interface	Choose port
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show udld interface GigabitEthernet 1/3

GigabitEthernet 1/3
---------------------------------------------------------------------
UDLD Mode              : Disable
Admin State            : Disable
Message Time Interval(Sec): 7
Device ID(local)        : 02-00-C1-A8-D2-E2
Device Name(local)      :
Bidirectional state     : Indeterminant

No neighbor cache information stored
---------------------------------------------------------------------
EX26484#
```

26-51 upnp

Display UPnP configuration.

SYNTAX

show upnp

show upnp | [begin | exclude | include] <line>

Parameters:

|	Output modifiers
begin	Begin with the line that matches

exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show upnp ?
   |      Output modifiers
   <cr>
# show upnp
UPnP Mode                  : disabled
UPnP TTL                   : 4
UPnP Advertising Duration    : 100
UPnP IP Addressing Mode      : dynamic
UPnP Static IP Interface ID   : 1
EX26484#
```

26-52 user-privilege

Users privilege configuration

SYNTAX

show user-privilege

EXAMPLE

```
EX26484# show user-privilege
username admin privilege 15 password encrypted
323304556fb07923a9adce8f73e3659b3a07d59c6abc2bd84634d8ae18a9abef2437ae
80ab7c2f42377e75ceaae6442be77a04a9ec8ab2b9401cf64606388516
EX26484#
```

26-53 users

Display information about terminal lines

SYNTAX

show users

show users | [begin | exclude | include] <line>

show users myself

Parameters:

myself	Display information about mine
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show users myself
Line is con 0.
   * You are at this line now.
   Connection is from Console.
   User name is admin.
   Privilege is 15.
   Elapsed time is 0 day 1 hour 51 min 34 sec.
   Idle time is 0 day 0 hour 0 min 0 sec.
EX26484#
```

26-54 version

System hardware and software status.

SYNTAX

show version

show version | [begin | exclude | include] <line>

show version brief

Parameters:

brief	
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show version

MAC Address     : 02-00-c1-a8-d2-e2
Previous Restart : Cold

System Contact   :
System Name      :
System Location  :
System Time      : 1970-01-01T05:45:54+00:00
System Uptime    : 05:45:54



Bootloader
----------
Version         : version 1_5-38e0421
Date            : 18:42:33, May 24 2018

Active Image
------------
Version         :
Date            : 2018-07-13T17:27:19+08:00
Upload filename  : istax_sparxIV_90_48.mfi

Backup Image
------------
Version         :
Date            : 2018-06-20T18:14:46+08:00
Upload filename  : istax_sparxIV_90_48.mfi

------------------
SID : 1
------------------
Chipset ID      : VSC7449
Board Type      : SparX-IV_90_48
Port Count      : 53
Product         : Microsemi SMB500-48MP-740W Switch
Software Version : SMB500-48MP-740Wdev-build by sherry@akira-virtual-machine
2018-07-13T17:27:19+08:00 Config:istax_sparxIV_90_48
Profile:istax_sparxIV_90_48 SDK:2017.02-081-smb
Build Date      : 2018-07-13T17:27:19+08:00
Code Revision    : Enviroment variable 'CODE_REVISION' not set during compile
EX26484#
```

26-55 vlan

VLAN status.

SYNTAX

show vlan

show vlan all

show vlan all [brief | id <vlan_list> | name <vword32>]

show vlan brief

show vlan brief all

show vlan id <vlan_list>

show vlan id <vlan_list> all

show vlan ip-subnet

show vlan ip-subnet <ipv4_addr>

show vlan mac

show vlan mac address <mac_ucast>

show vlan name <vword32>

show vlan name <vword32> all

show vlan protocol

show vlan protocol eth2 [<0x600-0xffff> | arp | at | ip | ipx]

show vlan protocol llc <0x0-0xff> <0x0-0xff>

show vlan protocol snap [<0x0-0xffffff> | rfc-1042 | snap-8021h] <0x0-0xffff>

show vlan status

show vlan status

show vlan status [admin | all | combined | conflicts | erps | gvrp | mep | mstp | mvr | nas | rmirror | vcl | voice-vlan]

show vlan status [admin | all | combined | conflicts | erps | gvrp | mep | mstp | mvr | nas | rmirror | vcl | voice-vlan] interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show vlan status interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>] [admin | all | combined | conflicts | erps | gvrp | mep | mstp | mvr | nas | rmirror | vcl | voice-vlan]

Parameters:

all	Show all VLANs (if left out only access VLANs are shown)
brief	VLAN summary information
id	VLAN status by VLAN id
ip-subnet	Show VCL IP Subnet entries
mac	Show VLAN MAC entries
name	VLAN status by VLAN name
protocol	Protocol-based VLAN status
status	Show the VLANs configured for each interface
<vlan_list>	VLAN IDs
<vword32>	VLAN name
<ipv4_subnet>	Specify a specific IP Subnet
<ipv4_addr>	Destination IPv4 address
address	Show a specific MAC entry
<mac_ucast>	The specific MAC entry to show
<vword32>	VLAN name
eth2	Ethernet protocol based VLAN status
llc	LLC-based VLAN group
snap	SNAP-based VLAN group
<0x600-0xffff>	Ether Type (Range: 0x600 - 0xFFFF)
arp	Ether Type is ARP
at	Ether Type is AppleTalk
ip	Ether Type is IP
ipx	Ether Type is IPX
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
<0x0-0xffffff>	SNAP OUI (Range 0x000000 - 0XFFFFFF)
rfc-1042	SNAP OUI is rfc-1042
snap-8021h	SNAP OUI is 8021h
<0x0-0xffff>	PID (Range: 0x0 - 0xFFFF)

admin	Show the VLANs configured by administrator.
all	Show VLANs configured VLANs for all VLAN users.
combined	Show the combined set of configured VLANs.
conflicts	Show VLAN configurations that have conflicts.
erps	Show the VLANs configured by ERPS.
gvrp	Show the VLANs configured by GVRP.
interface interfaces.	Show the VLANs configured for a specific interface or
mep	Show the VLANs configured by MEP.
mstp	Show the VLANs configured by MSTP.
mvr	Show the VLANs configured by MVR.
nas	Show the VLANs configured by NAS.
rmirror	Show the VLANs configured by Remote mirroring.
vcl	Show the VLANs configured by VCL.
voice-vlan	Show the VLANs configured by Voice VLAN.
interface interfaces	Show the VLANs configured for a specific interface or
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4

EXAMPLE

```
EX26484# show vlan status all interface GigabitEthernet 1/4
GigabitEthernet 1/4 :
---------------------
VLAN User   PortType      PVID  Frame Type    Ing Filter  Tx Tag           UVID  Conflicts
----------  ------------  ----  ------------  ----------  -----------------  ----  ------
---
Combined    C-Port        1     All           Enabled     None             1     No
Admin       C-Port        1     All           Enabled     None             1
NAS                                                                       No
GVRP                                                                      No
MVR                                                                       No
Voice VLAN                                                                 No
MSTP                                                                      No
ERPS                                                                      No
MEP                                                                       No
VCL                                                                       No
RMirror                                                                    No
EX26484#
```

26-56 voice

Voice appliance attributes.

SYNTAX

show voice vlan

show voice vlan | [begin | exclude | include] <line>

show voice vlan interface [* | (GigabitEthernet | 10GigabitEthernet) <port_type_list>]

show voice vlan oui

show voice vlan oui <oui>

Parameters:

vlan	VLAN for voice traffic
|	Output modifiers
interface	Select an interface to configure

oui	OUI configuration
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines
*****	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list for all port types
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
<oui>	OUI value

EXAMPLE

```
EX26484#  show voice vlan interface GigabitEthernet 1/1

GigabitEthernet 1/1 :
---------------------
GigabitEthernet 1/1 switchport voice vlan mode is disabled
GigabitEthernet 1/1 switchport voice security is disabled
GigabitEthernet 1/1 switchport voice discovery protocol is oui

EX26484#
```

26-57 web

web

SYNTAX

show web privilege group [<cword>] level

show web privilege group [<cword>] level | [begin | exclude | include] <line>

show web privilege group level

show web privilege group level | [begin | exclude | include] <line>

Parameters:

privilege	Web privilege
group	Web privilege group
<cword>	Valid words are 'Aggregation' 'Alarm' 'DDMI' 'DHCP' 'DHCPv6_Client' 'Debug' 'Diagnostics' 'EPS' 'ERPS' 'ETH_LINK_OAM' 'FRR' 'Firmware' 'Green_Ethernet' 'IP' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MEP' 'MRP' 'MVR' 'Miscellaneous' 'NTP' 'POE' 'PTP' 'Ports' 'Private_VLANs' 'QoS' 'RMirror' 'Security(access)' 'Security(network)' 'Spanning_Tree' 'System' 'UDLD' 'UPnP' 'VCL' 'VLAN_Translation' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow' 'uFDMA_AIL' 'uFDMA_CIL'
level	Web privilege group level
|	Output modifiers
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<line>	String to match output lines

EXAMPLE

```
EX26484# show web privilege group level
Group Name                    Privilege Level
                             CRO CRW SRO SRW
-------------------------------- --- --- --- ---
Aggregation                    5  10   5  10
Alarm                          5  10   5  10
DDMI                           5  10   5  10
Debug                         15  15  15  15
DHCP                           5  10   5  10
DHCPv6_Client                   5  10   5  10
Diagnostics                    5  10   5  10
EPS                           5  10   5  10
ERPS                           5  10   5  10
.
.
.
.
.
.
.
.
VLANs                          5  10   5  10
Voice_VLAN                      5  10   5  10
XXRP                           5  10   5  10
EX26484#
```

27 TERMINAL

Set terminal line parameters.

Syntax

terminal [editing | help]

terminal exec-timeout <0-1440>

terminal exec-timeout <0-1440> <0-3600>

terminal history size <0-32>

terminal length <0,3-512>

terminal width <0,40-512>

Parameters:

editing	Enable command line editing
exec-timeout	Set the EXEC timeout
help	Description of the interactive help system
history	Control the command history function
length	Set number of lines on a screen
width	Set width of the display terminal
<0-1440>	Timeout in minutes
<0-3600>	Timeout in seconds
size	Set history buffer size
<0-32>	Number of history commands, 0 means disable
<0,3-512>	Number of lines on screen (0 for no pausing)
<0,40-512>	Number of characters on a screen line (0 for unlimited width)

EXAMPLE

```
EX26484# terminal exec-timeout 3
EX26484#
```

28 TRACEROUTE

Copy from source to destination.

SYNTAX

traceroute ip [<domain_name> | <ipv4_addr>]

traceroute ip [<domain_name> | <ipv4_addr>] { [dscp <0-63>] | [firstttl <1-30>] | [icmp] | [maxttl <1-255>] | numeric | [probes <1-60>] | [saddr <ipv4_addr>] | [timeout <1-86400>] }

traceroute ip [<domain_name> | <ipv4_addr>] sif (GigabitEthernet | 10GigabitEthernet) <port_type_list>

traceroute ip [<domain_name> | <ipv4_addr>] sif vlan <vlan_id>

traceroute ip [<domain_name> | <ipv6_addr>]

traceroute ip [<domain_name> | <ipv6_addr>] { [dscp <0-63>] | [firstttl <1-30>] | [icmp] | [maxttl <1-255>] | numeric | [probes <1-60>] | [saddr <ipv6_addr>] | [timeout <1-86400>] }

traceroute ip [<domain_name> | <ipv6_addr>] sif (GigabitEthernet | 10GigabitEthernet) <port_type_list>

traceroute ip [<domain_name> | <ipv6_addr>] sif vlan <vlan_id>

Parameters:

ip	Traceroute (IPv4)
ipv6	Traceroute (IPv6)
<domain_name>	Destination hostname or FQDN
<ipv4_addr>	Destination IPv4 address
dscp	Specify DSCP value (default 0)
firstttl	Specify first number of hops (starting TTL) (default 1)
icmp	Use ICMP instead of UDP
maxttl	Specify max number of hops (max TTL) (default 30)
numeric	Print numeric addresses
probes	Specify number of probes per hop (default 3)
saddr	Send from interface with source address

sif	Send from specified interface
timeout	Specify time to wait for a response in seconds (default 3)
<0-63>	DSCP value (decimal value, default 0)
<1-30>	First number of hops (default 1)
<1-255>	Max number of hops (default 30)
<1-60>	Number of probes per hop (default 3)
<ipv4_addr>	Source Address of interfac
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-48
<port_type_list>	Port list in 1/1-4
vlan	Send from VLAN interface with source address
<vlan_id>	Source VLAN interface
<1-86400>	Time to wait for a response in seconds (default 3)
<ipv6_addr>	Destination IPv6 address
<ipv6_addr>	Source Address of interface

EXAMPLE

```
EX26484# traceroute ip 192.168.1.1 probes 3
traceroute to 192.168.1.1 (192.168.1.1), 30 hops max, 38 byte
packets
 1  192.168.1.1 (192.168.1.1)  0.146 ms  0.149 ms  0.100 ms
EX26484#
```

29 CLI COMMAND REFERENCE

This chapter introduces the CLI privilege level and command modes.

- The privilege level determines whether or not the user can run the particular commands
- To run a particular command, the user has to run the command in the correct mode.

29-1 Privilege level

Every command has a privilege level (0-15). Users can run a command if the session's privilege level is greater than or equal to the command's privilege level. The session's privilege level initially comes from the login account's privilege level, though it is possible to change the session's privilege level after logging in.

PRIVILEGE LEVEL	TYPES OF COMMANDS AT THIS PRIVILEGE LEVEL
0	Display basic system information
13	Configure features except for login accounts, the authentication method sequence, multiple logins, and administrator and enable passwords.
15	Configure login accounts, the authentication method sequence, multiple logins, and administrator and enable passwords.

29-2 Command modes

The CLI is divided into several modes. If a user has enough privilege to run a particular command, the user has to run the command in the correct mode. The modes that are available depend on the session's privilege level.

Command Summary

COMMAND	DESCRIPTION	P	M
show access management	Use the show access management user EXEC command without keywords to display the access management configuration, or use the statistics keyword to display statistics, or use the <AccessId> keyword to display the specific access management entry.	15	EXEC
clear access management statistics	Use the clear access management statistics privileged EXEC command to clear the statistics maintained by access management.	15	EXEC
access management	Use the access management global configuration command to enable the access management. Use the no form of this command to disable the access management.	15	GLOBAL_CONFIG
access management <1-16> <1-4094> <ipv4_addr> [to <ipv4_addr>] { [web] [snmp] [telnet] | all }	Use the access management <AccessId> global configuration command to set the access management entry for IPv4 address.	15	GLOBAL_CONFIG
access management <1-16> <1-4094> <ipv6_addr> [to <ipv6_addr>] { [web] [snmp] [telnet] | all }	Use the access management <AccessId> global configuration command to set the access management entry for IPv6 address.	15	GLOBAL_CONFIG
no access management <1~16>	Use the no access management <AccessIdList> global configuration command to delete the specific access management entry.	15	GLOBAL_CONFIG
access-list action { permit | deny }	Use the access-list action interface	15	INTERFACE_PORT_LIST

	configuration command to configure access-list action. The access-list interface configuration will affect the received frames if it doesn't match any ACE.		
access-list rate-limiter <1-16>	Use the access-list rate-limiter interface configuration command to configure the access-list rate-limiter ID . The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list rate-limiter	Use the no access-list rate-limiter interface configuration command to disable the access-list rate-limiter. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list { redirect | port-copy } interface { <port_type_id> | <port_type_list> }	Use the no access-list redirect interface configuration command to configure the access-list redirect interface.	15	INTERFACE_PORT_LIST
no access-list { redirect | port-copy }	Use the no access-list redirect interface configuration command to disable the access-list redirect. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list mirror	Use the access-list mirror interface configuration command to enable access-list mirror. Use the no form of this command to disable access-list mirror. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list logging	Use the access-list logging interface configuration command to enable access-list logging. Use the no form of this command to disable access-list logging. The access-list interface	15	INTERFACE_PORT_LIST

	configuration will affect the received frames if it doesn't match any ACE.		
access-list shutdown	Use the access-list shutdown interface configuration command to enable access-list shutdown. Use the no form of this command to disable access-list shutdown. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list evc-policer <1-256>	Use the access-list evc-policer interface configuration command to configure the access-list evc-policer ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list evc-policer	Use the no access-list evc-policer interface configuration command to configure the access-list evc-policer ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list policy <0-255>	Use the access-list policy interface configuration command to configure the access-list policy value. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
no access-list policy	Use the no access-list policy interface configuration command to restore the default access-list policy ID. The access-list interface configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
access-list port-state	Use the access-list port-state interface configuration command to enable access-list port state. Use the no form of this command to disable access-list port state.	15	INTERFACE_PORT_LIST

access-list rate-limiter [<1~16>] { pps <1,2,4,8,16,32,64,128,256,512>| 100pps <1-32767> | kpps <1,2,4,8,16,32,64,128,256,512,1024> | 100kbps <0-10000> }	Use the access-list rate-limiter global configuration command to configure the access-list rate-limiter.	15	INTERFACE_PORT_LIST
default access-list rate-limiter [<1~16>]	Use the default access-list rate-limiter global configuration command to restore the default setting of access-list rate-limiter.	15	GLOBAL_CONFIG
access-list ace [update] <1-256> [next {<1-256>|last}] [ingress {switch <switch_id>|switchport {<1-53>|<1~53>}|interface {<port_type_id>|<port_type_list>}|any}] [policy <0-255> [policy-bitmask <0x0-0xFF>]] [tag {tagged|untagged|any}] [vid {<1-4095>|any}] [tag-priority {<0-7>|0-1|2-3|4-5|6-7|0-3|4-7|any}] [dmac-type {unicast|multicast|broadcast|any}] [frametype { any| etype [etype-value {<0x600-0x7ff,0x801-0x805,0x807-0x86dc,0x86de-0xffff>|any}] [smac {<mac_addr>|any}] [dmac {<mac_addr>|any}]| arp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [smac {<mac_addr>|any}] [arp-opcode {arp|rarp|other|any}] [arp-flag [arp-request {<0-1>|any}] [arp-smac {<0-1>|any}] [arp-tmac {<0-1>|any}] [arp-len {<0-1>|any}] [arp-ip {<0-1>|any}] [arp-ether {<0-1>|any}]]| ipv4 [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [ip-protocol {<0,2-5,7-16,18-255>|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-icmp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [icmp-type {<0-255>|any}] [icmp-code {<0-255>|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-udp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-	Use the access-list ace global configuration command to set the access-list ace. The command without the update keywrod will creates or overwrites an existing ACE, any unspecified parameter will be set to its default value. Use the update keyword to update an existing ACE and only specified parameter are modified. The ACE must ordered by an appropriate sequence, the received frame will only be hit on the first matched ACE. Use the next or last keyword to adjust the ACE's sequence order.	15	GLOBAL_CONFIG

options {<0-1>|any}] [ip-fragment {<0-1>|any}]]| ipv4-tcp [sip {<ipv4_subnet>|any}] [dip {<ipv4_subnet>|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [ip-flag [ip-ttl {<0-1>|any}] [ip-options {<0-1>|any}] [ip-fragment {<0-1>|any}]] [tcp-flag [tcp-fin {<0-1>|any}] [tcp-syn {<0-1>|any}] [tcp-rst {<0-1>|any}] [tcp-psh {<0-1>|any}] [tcp-ack {<0-1>|any}] [tcp-urg {<0-1>|any}]]| ipv6 [next-header {<0-5,7-16,18-57,59-255>|any}] [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [hop-limit {<0-1>|any}]| ipv6-icmp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [icmp-type {<0-255>|any}] [icmp-code {<0-255>|any}] [hop-limit {<0-1>|any}]| ipv6-udp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [hop-limit {<0-1>|any}]| ipv6-tcp [sip {<ipv6_addr> [sip-bitmask <uint>]|any}] [sport {<0-65535> [to <0-65535>]|any}] [dport {<0-65535> [to <0-65535>]|any}] [hop-limit {<0-1>|any}] [tcp-flag [tcp-fin {<0-1>|any}] [tcp-syn {<0-1>|any}] [tcp-rst {<0-1>|any}] [tcp-psh {<0-1>|any}] [tcp-ack {<0-1>|any}] [tcp-urg {<0-1>|any}]]}] [action {permit|deny|filter {switchport <1~53>|interface <port_type_list>}}] [rate-limiter {<1-16>|disable}] [evc-policer {<1-256>|disable}] [{redirect|port-copy} {switchport {<1-53>|<1~53>}|interface {<port_type_id>|<port_type_list>}|disable}] [mirror [disable]] [logging [disable]] [shutdown [disable]] [lookup [disable]]			
no access-list ace <1~256>	Use the no access-list ace global configuration command to delete the access-list ace.	15	GLOBAL_CONFIG
show access-list [interface [<port_type_list>]] [rate-limiter [<1~16>]] [ace statistics [<1~256>]]	Use the show access-list privilege EXEC command without keywords to display the access-list configuration, or particularly the show access-list	15	EXEC

	interface for the access-list interface configuration, or use the rate-limiter keyword to display access-list rate-limiter configuration, or use the ace keyword to display access-list ace configuration.		
clear access-list ace statistics	Use the clear access-list ace statistics privileged EXEC command to clear the statistics maintained by access-list, including access-list interface statistics and ACE's statistics.	15	EXEC
show access-list ace-status [static] [link-oam] [loop-protect] [dhcp] [ptp] [upnp] [arp-inspection] [mep] [ipmc] [ip-source-guard] [ip-mgmt] [conflicts] [switch <switch_list>]	Use the show access-list ace-status privilege EXEC command without keywords to display the access-list ace status for all access-list users, or particularly the access-list user for the access-list ace status. Use conflicts keyword to display the access-list ace that doesn't apply on on the hardware. In other word, it means the specific ACE is not applied to the hardware due to hardware limitations.	15	EXEC
show aggregation [mode]		15	EXEC
aggregation mode { [smac] [dmac] [ip] [port] }		15	GLOBAL_CONFIG
no aggregation mode		15	GLOBAL_CONFIG
aggregation group <uint>		15	INTERFACE_PORT_LIST
no aggregation group		15	INTERFACE_PORT_LIST
ip arp inspection	Use the ip arp inspection global configuration command to globally enable ARP inspection. Use the no form of this command to globally disable ARP inspection.	13	GLOBAL_CONFIG
ip arp inspection vlan <vlan_list>	Use the ip arp inspection global configuration command to globally enable ARP inspection. Use the no form of this command to globally disable ARP inspection.	13	GLOBAL_CONFIG
ip arp inspection vlan <vlan_list> logging { deny |		13	GLOBAL_CONFIG

permit | all }			
no ip arp inspection vlan <vlan_list> logging		13	GLOBAL_CONFIG
ip arp inspection entry interface <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>		13	GLOBAL_CONFIG
arp_inspection_translate		13	GLOBAL_CONFIG
arp_inspection_port_mode	Use the ip arp inspection trust interface configuration command to configure a port as trusted for ARP inspection purposes. Use the no form of this command to configure a port as untrusted.	13	INTERFACE_PORT_LIST
arp_inspection_port_check_vlan	Use the ip arp inspection check-vlan interface configuration command to configure a port as VLAN mode for ARP inspection purposes. Use the no form of this command to configure a port as default.	13	INTERFACE_PORT_LIST
ip arp inspection logging { deny | permit | all }	Use the ip arp inspection logging interface configuration command to configure a port as some logging mode for ARP inspection purposes. Use the no form of this command to configure a port as logging none.	13	INTERFACE_PORT_LIST
no ip arp inspection logging	Use the no ip arp inspection logging interface configuration command to configure a port as default logging mode for ARP inspection purposes.	13	INTERFACE_PORT_LIST
show ip arp inspection [interface <port_type_list> | vlan <vlan_list>]		0	EXEC
show ip arp inspection entry [dhcp-snooping | static] [interface <port_type_list>]		13	EXEC
aaa authentication login { telnet | ssh | http } { [local | radius | tacacs] ... }	Use the aaa authentication login command to configure the authentication methods.	15	GLOBAL_CONFIG
no aaa authentication login { telnet | ssh | http }		15	GLOBAL_CONFIG
radius-server timeout <1-1000>	Use the radius-server timeout command to configure the global RADIUS timeout value.	15	GLOBAL_CONFIG

no radius-server timeout	Use the no radius-server timeout command to reset the global RADIUS timeout value to default.	15	GLOBAL_CONFIG
radius-server retransmit <1-1000>	Use the radius-server retransmit command to configure the global RADIUS retransmit value.	15	GLOBAL_CONFIG
no radius-server retransmit	Use the no radius-server retransmit command to reset the global RADIUS retransmit value to default.	15	GLOBAL_CONFIG
radius-server deadtime <1-1440>	Use the radius-server deadtime command to configure the global RADIUS deadtime value.	15	GLOBAL_CONFIG
no radius-server deadtime	Use the no radius-server deadtime command to reset the global RADIUS deadtime value to default.	15	GLOBAL_CONFIG
radius-server key <line1-63>	Use the radius-server key command to configure the global RADIUS key.	15	GLOBAL_CONFIG
no radius-server key	Use the no radius-server key command to remove the global RADIUS key.	15	GLOBAL_CONFIG
radius-server attribute 4 <ipv4_ucast>		15	GLOBAL_CONFIG
no radius-server attribute 4		15	GLOBAL_CONFIG
radius-server attribute 95 <ipv6_ucast>		15	GLOBAL_CONFIG
no radius-server attribute 95		15	GLOBAL_CONFIG
radius-server attribute 32 <line1-253>		15	GLOBAL_CONFIG
no radius-server attribute 32		15	GLOBAL_CONFIG
radius-server host <word1-255> [auth-port <0-65535>] [acct-port <0-65535>] [timeout <1-1000>] [retransmit <1-1000>] [key <line1-63>]	Use the radius-server host command to add a new RADIUS host.	15	GLOBAL_CONFIG
no radius-server host <word1-255> [auth-port <0-65535>] [acct-port <0-65535>]	Use the no radius-server host command to delete an existing RADIUS host.	15	GLOBAL_CONFIG
tacacs-server timeout <1-1000>	Use the tacacs-server timeout command to configure the global TACACS+ timeout value.	15	GLOBAL_CONFIG
no tacacs-server timeout	Use the no tacacs-server timeout command to reset the global TACACS+ timeout value to default.	15	GLOBAL_CONFIG
tacacs-server deadtime <1-1440>	Use the tacacs-server deadtime command to configure the global	15	GLOBAL_CONFIG

	TACACS+ deadtime value.		
no tacacs-server deadtime	Use the no tacacs-server deadtime command to reset the global TACACS+ deadtime value to default.	15	GLOBAL_CONFIG
tacacs-server key <line1-63>	Use the tacacs-server key command to configure the global TACACS+ key.	15	GLOBAL_CONFIG
no tacacs-server key	Use the no tacacs-server key command to remove the global TACACS+ key.	15	GLOBAL_CONFIG
tacacs-server host <word1-255> [port <0-65535>] [timeout <1-1000>] [key <line1-63>]	Use the tacacs-server host command to add a new TACACS+ host.	15	GLOBAL_CONFIG
no tacacs-server host <word1-255> [port <0-65535>]	Use the no tacacs-server host command to delete an existing TACACS+ host.	15	GLOBAL_CONFIG
show aaa	Use the show aaa command to view the currently active authentication login methods.	15	GLOBAL_CONFIG
show radius-server [statistics]	Use the show radius-server command to view the current RADIUS configuration and statistics.	15	EXEC
show tacacs-server	Use the show tacacs-server command to view the current TACACS+ configuration.	15	EXEC
debug auth { telnet | ssh | http } <word31> [<word31>]		debug	EXEC
clock summer-time <word16> recurring [<1-5> <1-7> <1-12> <hhmm> <1-5> <1-7> <1-12> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
clock summer-time <word16> date [<1-12> <1-31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
no clock summer-time		13	GLOBAL_CONFIG
clock timezone <word16> <-23-23> [<0-59>]		13	GLOBAL_CONFIG
no clock timezone		13	GLOBAL_CONFIG
show clock detail		0	EXEC
clock summer-time <word16> recurring [<1-5> <1-7> <1-12> <hhmm> <1-5> <1-7> <1-12> <hhmm> [<1-1440>]]		13	GLOBAL_CONFIG
clock summer-time <word16> date [<1-12> <1-		13	GLOBAL_CONFIG

31> <2000-2097> <hhmm> <1-12> <1-31> <2000-2097> <hhmm> [<1-1440>]]			
no clock summer-time		13	GLOBAL_CONFIG
clock timezone <word16> <-23-23> [<0-59>]		13	GLOBAL_CONFIG
no clock timezone		13	GLOBAL_CONFIG
show clock detail		0	EXEC
show ip dhcp detailed statistics { server | client | snooping | relay | normal-forward | combined } [interface <port_type_list>]	Use the show ip dhcp detailed statistics user EXEC command to display statistics. Notice that the normal forward per-port TX statistics isn't increased if the incoming DHCP packet is done by L3 forwarding mechanism. Notice that the normal forward per-port TX statistics isn't increased if the incoming DHCP packet is done by L3 forwarding mechanism.	0	EXEC
clear ip dhcp detailed statistics { server | client | snooping | relay | helper | all } [interface <port_type_list>]	Use the clear ip dhcp detailed statistics privileged EXEC command to clear the statistics, or particularly the IP DHCP statistics for the interface. Notice that except for clear statistics on all interfaces, clear the statistics on specific port may not take effect on global statistics since it gathers the different layer overview.	15	EXEC
clear ip dhcp relay statistics	Use the clear ip dhcp relay statistics privileged EXEC command to clear the statistics maintained by IP DHCP realy.	15	EXEC
show ip dhcp relay [statistics]	Use the show ip dhcp relay user EXEC command without keywords to display the DHCP relay configuration, or use the statistics keyword to display statistics.	0	EXEC
ip dhcp relay	Use the ip dhcp relay global configuration command to enable the DHCP relay server. Use the no form of thiscommand to disable the DHCP relay server.	15	GLOBAL_CONFIG

ip helper-address <ipv4_ucast>	Use the ip helper-address global configuration command to configure the host address of DHCP relay server.	15	GLOBAL_CONFIG
no ip helper-address	Use the no ip helper-address global configuration command to clear the host address of DHCP relay server.	15	GLOBAL_CONFIG
ip dhcp relay information option	Use the ip dhcp relay information option global configuration command to enable the DHCP relay information option. Use the no form of this command to disable the DHCP relay information option. The option 82 circuit ID format as "[vlan_id][module_id][port_no]". The first four characters represent the VLAN ID, the fifth and sixth characters are the module ID(in standalone device it always equal 0, in stackable device it means switch ID), and the last two characters are the port number. For example, "00030108" means the DHCP message receive form VLAN ID 3, switch ID 1, port No 8. And the option 82 remote ID value is equal the switch MAC address.	15	GLOBAL_CONFIG
ip dhcp relay information policy { drop | keep | replace }	Use the ip dhcp relay information policy global configuration command to configure the DHCP relay information policy. When DHCP relay information mode operation is enabled, if the agent receives a DHCP message that already contains relay agent information it will enforce the policy. The 'Replace' policy is invalid when relay information mode is disabled.	15	GLOBAL_CONFIG
no ip dhcp relay information policy	Use the ip dhcp relay information policy global configuration command to restore the default DHCP relay information policy.	15	GLOBAL_CONFIG

show ip dhcp pool [<word32>]		0	EXEC
show ip dhcp pool counter [<word32>]		debug	EXEC
show ip dhcp excluded-address		0	EXEC
show ip dhcp server binding [state {allocated | committed | expired}] [type {automatic | manual | expired}]		0	EXEC
show ip dhcp server binding <ipv4_ucast>		0	EXEC
show ip dhcp server		0	EXEC
show ip dhcp server statistics		0	EXEC
show ip dhcp server declined-ip		0	EXEC
show ip dhcp server declined-ip <ipv4_addr>		0	EXEC
clear ip dhcp server binding <ipv4_ucast>		13	EXEC
clear ip dhcp server binding { automatic | manual | expired }		13	EXEC
clear ip dhcp server statistics		13	EXEC
ip dhcp server		13	GLOBAL_CONFIG
ip dhcp excluded-address <ipv4_addr> [<ipv4_addr>]		13	GLOBAL_CONFIG
no ip dhcp pool <word32>		13	GLOBAL_CONFIG
ip dhcp server		13	INTERFACE_VLAN
network <ipv4_addr> <ipv4_netmask>		13	DHCP_POOL
no network		13	DHCP_POOL
broadcast <ipv4_addr>		13	DHCP_POOL
no broadcast		13	DHCP_POOL
default-router <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no default-router		13	DHCP_POOL
lease { <0-365> [<0-23> [<uint>]] | infinite }		13	DHCP_POOL
no lease		13	DHCP_POOL
domain-name <word128>		13	DHCP_POOL
no domain-name		13	DHCP_POOL
dns-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no dns-server		13	DHCP_POOL
ntp-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no ntp-server		13	DHCP_POOL

netbios-name-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no netbios-name-server		13	DHCP_POOL
netbios-node-type { b-node | h-node | m-node | p-node }		13	DHCP_POOL
no netbios-node-type		13	DHCP_POOL
netbios-scope <line128>		13	DHCP_POOL
no netbios-scope		13	DHCP_POOL
nis-domain-name <word128>		13	DHCP_POOL
no nis-domain-name		13	DHCP_POOL
nis-server <ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast> [<ipv4_ucast>]]]		13	DHCP_POOL
no nis-server		13	DHCP_POOL
host <ipv4_ucast> <ipv4_netmask>		13	DHCP_POOL
no host		13	DHCP_POOL
client-identifier { fqdn <line128> | mac-address <mac_addr> }		13	DHCP_POOL
no client-identifier		13	DHCP_POOL
hardware-address <mac_ucast>		13	DHCP_POOL
no hardware-address		13	DHCP_POOL
client-name <word32>		13	DHCP_POOL
no client-name		13	DHCP_POOL
vendor class-identifier <string64> specific-info <hexval32>		13	DHCP_POOL
no vendor class-identifier <string64>		13	DHCP_POOL
debug dhcp server memsize		debug	EXEC
debug dhcp server declined add <ipv4_addr>		debug	EXEC
debug dhcp server declined delete <ipv4_addr>		debug	EXEC
show ip dhcp snooping [interface <port_type_list>]	Use the show ip dhcp snooping user EXEC command to display the DHCP snooping configuration.	0	EXEC
show ip dhcp snooping [statistics] [interface <port_type_list>]	Use the show ip dhcp snooping user EXEC command without keywords to display the DHCP snooping configuration, or particularly the ip dhcp snooping statistics for the interface, or use the statistics keyword to display statistics.	0	EXEC

clear ip dhcp snooping statistics [interface <port_type_list>]	Use the clear ip dhcp snooping statistics privileged EXEC command to clear the statistics maintained by IP DHCP snooping, or particularly the IP DHCP snooping statistics for the interface.	15	EXEC
ip dhcp snooping	Use the ip dhcp snooping global configuration command to globally enable DHCP snooping. Use the no form of this command to globally disable DHCP snooping.	15	GLOBAL_CONFIG
dhcp_snooping_port_mode	Use the ip dhcp snooping trust interface configuration command to configure a port as trusted for DHCP snooping purposes. Use the no form of this command to configure a port as untrusted.	15	INTERFACE_PORT_LIST
show ip dhcp snooping table	Use the show ip dhcp snooping table user EXEC command to display the IP assigned information that is obtained from DHCP server except for local VLAN interface IP addresses.	15	EXEC
ip name-server { <ipv4_ucast> | dhcp [interface vlan <vlan_id>] }	Set the DNS server for resolving domain names	15	GLOBAL_CONFIG
no ip name-server	Stop resolving domain names by accessing DNS server	15	GLOBAL_CONFIG
show ip name-server	Display the active domain name server information	0	EXEC
ip dns proxy	Enable DNS proxy service	15	GLOBAL_CONFIG
show version	Use show version to display firmware information.	0	EXEC
firmware upgrade <word>	Use firmware upgrade to load new firmware image to the switch.	15	EXEC
firmware swap	Use firmware swap to swap the active and alternative firmware images.	15	EXEC
show green-ethernet fan	Shows Fan status (chip Temperature and fan speed).	15	GLOBAL_CONFIG
green-ethernet fan temp-on <-127-127>	Sets temperature at which to turn fan on	15	GLOBAL_CONFIG

	to the lowest speed.		
no green-ethernet fan temp-on	Sets temperature at which to turn fan on to the lowest speed to default.	15	GLOBAL_CONFIG
green-ethernet fan temp-max <-127-127>	Sets temperature where the fan must be running at full speed.	15	GLOBAL_CONFIG
no green-ethernet fan temp-max	Sets temperature at which the fan shall be running at full speed to default.	15	GLOBAL_CONFIG
green-ethernet led interval <0~24> intensity <0-100>	Use green-ethernet led interval to configure the LED intensity at specific interval of the day.	15	GLOBAL_CONFIG
no green-ethernet led interval <0~24>		15	GLOBAL_CONFIG
green-ethernet led on-event { [link-change <0-65535>] [error] }*1	Use green-ethernet led on-event to configure when to turn LEDs intensity to 100%%.	15	GLOBAL_CONFIG
no green-ethernet led on-event [link-change] [error]		15	GLOBAL_CONFIG
show green-ethernet eee [interface <port_type_list>]	Shows Green Ethernet EEE status.	15	EXEC
show green-ethernet short-reach [interface <port_type_list>]	Shows Green Ethernet short-reach status.	15	EXEC
show green-ethernet energy-detect [interface <port_type_list>]	Shows Green Ethernet energy-detect status.	15	EXEC
show green-ethernet [interface <port_type_list>]	Shows Green Ethernet status.	15	EXEC
green-ethernet eee	Sets EEE mode.	15	INTERFACE_PORT_LIST
green-ethernet eee urgent-queues [<range_list>]	Sets EEE urgeent queues.	15	INTERFACE_PORT_LIST
green-ethernet eee optimize-for-power	Sets if EEE should be optimized for least traffic latency or least power comsumption	15	GLOBAL_CONFIG
green-ethernet energy-detect	Enables energy-detect power savings.	15	INTERFACE_PORT_LIST
green-ethernet short-reach	Enables short-reach power savings.	15	INTERFACE_PORT_LIST
show ip http server secure status	Use the show ip http server secure status privileged EXEC command to display the secure HTTP web server status.	15	EXEC
ip http secure-server	Use the ip http secure-server global configuration command to enable the secure HTTP web server. Use the no form of this command to disable the	15	GLOBAL_CONFIG

	secure HTTP web server.		
ip http secure-redirect	Use the http secure-redirect global configuration command to enable the secure HTTP web redirection. When the secure HTTP web server is enabled, the feature automatic redirect the none secure HTTP web connection to the secure HTTP web connection. Use the no form of this command to disable the secure HTTP web redirection.	15	GLOBAL_CONFIG
reload { { { cold | warm } [sid <1-16>] } | { defaults [keep-ip] } }	Reload system, either cold (reboot) or restore defaults without reboot.	15	EXEC
show running-config [all-defaults]		15	EXEC
show running-config feature <cword> [all-defaults]		15	EXEC
show running-config interface <port_type_list> [all-defaults]		15	EXEC
show running-config interface vlan <vlan_list> [all-defaults]		15	EXEC
show running-config vlan <vlan_list> [all-defaults]		15	EXEC
show running-config line vty <range_list> [all-defaults]		15	EXEC
copy { startup-config | running-config | <word> } { startup-config | running-config | <word> } [syntax-check]		15	EXEC
dir		15	EXEC
more <word>		15	EXEC
delete <word>		debug	EXEC
debug icfg wipe-flash-fs-conf-block		debug	EXEC
debug icfg wipe-specific-block {local|global} <uint>		debug	EXEC
debug icfg silent-upgrade status		debug	EXEC
debug icfg dir		debug	EXEC
debug icfg error-trace <line>		debug	EXEC
ip routing	Enable routing for IPv4 and IPv6	15	GLOBAL_CONFIG
no ip routing	Disable routing for IPv4 and IPv6	15	GLOBAL_CONFIG
ip address {{<ipv4_addr> <ipv4_netmask>} | {dhcp [fallback <ipv4_addr> <ipv4_netmask>	IP address configuration	15	INTERFACE_VLAN

[timeout <uint>]]}}			
ip dhcp retry interface vlan <vlan_id>	Restart the dhcp client	15	EXEC
no ip address	IP address configuration	15	INTERFACE_VLAN
ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>	Add new IP route	15	GLOBAL_CONFIG
no ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>	Delete an existing IP route	15	GLOBAL_CONFIG
show interface vlan [<vlan_list>]	Vlan interface status	15	EXEC
show ip interface brief	Brief IP interface status	0	EXEC
show ip arp	Print ARP table	0	EXEC
clear ip arp	Clear ARP cache	0	EXEC
show ip route	Routing table status	0	EXEC
ping ip <word1-255> [repeat <1-60>] [size <2-1452>] [interval <0-30>]		0	EXEC
clear ip statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <0~255>]		0	EXEC
show ip statistics [system] [interface vlan <vlan_list>] [icmp] [icmp-msg <0~255>]		0	EXEC
debug ipstack log [ERR|NOERR] [WARNING|NOWARNING] [NOTICE|NONOTICE] [INFO|NOINFO] [DEBUG|NODEBUG] [MDEBUG|NOMDEBUG] [IOCTL|NOIOCTL] [INIT|NOINIT] [ADDR|NOADDR] [FAIL|NOFAIL] [EMERG|NOEMERG] [CRIT|NOCRIT]		debug	EXEC
debug ip kmem		debug	EXEC
debug ip route		debug	EXEC
debug ip sockets		debug	EXEC
debug ip lpm stat ip <vlan_list>		debug	EXEC
debug ip lpm stat ipv6 <vlan_list>		debug	EXEC
debug ip lpm stat clear <vlan_list>		debug	EXEC
debug ip lpm sticky clear		debug	EXEC
debug ip lpm usage		debug	EXEC
debug ip global interface table change		debug	EXEC
debug ip vlan ipv4 created <vlan_list>		debug	EXEC
debug ip vlan ipv4 changed <vlan_list>		debug	EXEC
debug ip vlan ipv6 created <vlan_list>		debug	EXEC
debug ip vlan ipv6 changed <vlan_list>		debug	EXEC

show ip igmp snooping mrouter [detail]		0	EXEC
clear ip igmp snooping [vlan <vlan_list>] statistics		15	EXEC
show ip igmp snooping [vlan <vlan_list>] [group-database [interface <port_type_list>] [sfm-information]] [detail]		0	EXEC
ip igmp snooping		15	GLOBAL_CONFIG
ip igmp unknown-flooding		15	GLOBAL_CONFIG
ip igmp host-proxy [leave-proxy]		15	GLOBAL_CONFIG
ip igmp ssm-range <ipv4_mcast> <4-32>		15	GLOBAL_CONFIG
no ip igmp ssm-range		15	GLOBAL_CONFIG
ip igmp snooping vlan <vlan_list>		15	GLOBAL_CONFIG
no ip igmp snooping vlan [<vlan_list>]		15	GLOBAL_CONFIG
ip igmp snooping		15	INTERFACE_VLAN
ip igmp snooping querier { election | address <ipv4_ucast> }		15	INTERFACE_VLAN
no ip igmp snooping querier { election | address }		15	INTERFACE_VLAN
ip igmp snooping compatibility { auto | v1 | v2 | v3 }		15	INTERFACE_VLAN
no ip igmp snooping compatibility		15	INTERFACE_VLAN
ip igmp snooping priority <0-7>		15	INTERFACE_VLAN
no ip igmp snooping priority		15	INTERFACE_VLAN
ip igmp snooping robustness-variable <1-255>		15	INTERFACE_VLAN
no ip igmp snooping robustness-variable		15	INTERFACE_VLAN
ip igmp snooping query-interval <1-31744>		15	INTERFACE_VLAN
no ip igmp snooping query-interval		15	INTERFACE_VLAN
ip igmp snooping query-max-response-time <0-31744>		15	INTERFACE_VLAN
no ip igmp snooping query-max-response-time		15	INTERFACE_VLAN
ip igmp snooping last-member-query-interval <0-31744>		15	INTERFACE_VLAN
no ip igmp snooping last-member-query-interval		15	INTERFACE_VLAN
ip igmp snooping unsolicited-report-interval <0-31744>		15	INTERFACE_VLAN
no ip igmp snooping unsolicited-report-interval		15	INTERFACE_VLAN
ip igmp snooping immediate-leave		15	INTERFACE_VLAN
ip igmp snooping mrouter		15	INTERFACE_PORT_LIST

ip igmp snooping max-groups <1-10>		15	INTERFACE_PORT_LIST
no ip igmp snooping max-groups		15	INTERFACE_PORT_LIST
ip igmp snooping filter <word16>		15	INTERFACE_PORT_LIST
no ip igmp snooping filter		15	INTERFACE_PORT_LIST
ipv6 mld snooping		15	GLOBAL_CONFIG
ipv6 mld unknown-flooding		15	GLOBAL_CONFIG
ipv6 mld host-proxy [leave-proxy]		15	GLOBAL_CONFIG
ipv6 mld ssm-range <ipv6_mcast> <8-128>		15	GLOBAL_CONFIG
no ipv6 mld ssm-range		15	GLOBAL_CONFIG
ipv6 mld snooping vlan <vlan_list>		15	GLOBAL_CONFIG
no ipv6 mld snooping vlan [<vlan_list>]		15	GLOBAL_CONFIG
ipv6 mld snooping immediate-leave		15	INTERFACE_PORT_LIST
ipv6 mld snooping mrouter		15	INTERFACE_PORT_LIST
ipv6 mld snooping max-groups <1-10>		15	INTERFACE_PORT_LIST
no ipv6 mld snooping max-groups		15	INTERFACE_PORT_LIST
ipv6 mld snooping filter <word16>		15	INTERFACE_PORT_LIST
no ipv6 mld snooping filter		15	INTERFACE_PORT_LIST
show ipv6 mld snooping mrouter [detail]		0	EXEC
clear ipv6 mld snooping [vlan <vlan_list>] statistics		15	EXEC
show ipv6 mld snooping [vlan <vlan_list>] [group-database [interface <port_type_list>] [sfm-information]] [detail]		0	EXEC
ipv6 mld snooping		15	INTERFACE_VLAN
ipv6 mld snooping querier election		15	INTERFACE_VLAN
ipv6 mld snooping compatibility { auto | v1 | v2 }		15	INTERFACE_VLAN
no ipv6 mld snooping compatibility		15	INTERFACE_VLAN
ipv6 mld snooping priority <0-7>		15	INTERFACE_VLAN
no ipv6 mld snooping priority		15	INTERFACE_VLAN
ipv6 mld snooping robustness-variable <1-255>		15	INTERFACE_VLAN
no ipv6 mld snooping robustness-variable		15	INTERFACE_VLAN
ipv6 mld snooping query-interval <1-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping query-interval		15	INTERFACE_VLAN
ipv6 mld snooping query-max-response-time <0-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping query-max-response-time		15	INTERFACE_VLAN
ipv6 mld snooping last-member-query-interval <0-		15	INTERFACE_VLAN

31744>			
no ipv6 mld snooping last-member-query-interval		15	INTERFACE_VLAN
ipv6 mld snooping unsolicited-report-interval <0-31744>		15	INTERFACE_VLAN
no ipv6 mld snooping unsolicited-report-interval		15	INTERFACE_VLAN
ip verify source		13	GLOBAL_CONFIG
i ip verify source		13	INTERFACE_PORT_LIST
ip verify source limit <0-2>		13	INTERFACE_PORT_LIST
no ip verify source limit		13	INTERFACE_PORT_LIST
ip verify source translate		13	GLOBAL_CONFIG
show ip verify source [interface <port_type_list>]		0	EXEC
show ip source binding [dhcp-snooping | static] [interface <port_type_list>]		13	EXEC
ip source binding interface <port_type_id> <vlan_id> <ipv4_ucast> <mac_ucast>		13	GLOBAL_CONFIG
ip source binding interface <port_type_id> <vlan_id> <ipv4_ucast> <ipv4_netmask>		13	GLOBAL_CONFIG
show lacp { internal | statistics | system-id | neighbour }	Show LACP configuration and status	15	EXEC
clear lacp statistics	Clear all LACP statistics	15	EXEC
lacp system-priority <1-65535>	Set the LACP system priority	15	GLOBAL_CONFIG
lacp	Enable LACP on an interface	15	INTERFACE_PORT_LIST
lacp key { <1-65535> | auto }	Set the LACP key	15	INTERFACE_PORT_LIST
lacp role { active | passive }	Set the LACP role, active or passive in transmitting BPDUs	15	INTERFACE_PORT_LIST
lacp timeout { fast | slow }	Set the LACP timeout, i.e. how fast to transmit BPDUs, once a sec or once each 30 sec.	15	INTERFACE_PORT_LIST
lacp port-priority <1-65535>	Set the lacp port priority,	15	INTERFACE_PORT_LIST
lldp holdtime <2-10>	Sets LLDP hold time (The neighbor switch will discarded the LLDP information after \"hold time\" multiplied with \"timer\" seconds)	15	GLOBAL_CONFIG
no lldp holdtime		15	GLOBAL_CONFIG
lldp timer <5-32768>	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).	15	GLOBAL_CONFIG
no lldp timer		15	GLOBAL_CONFIG

lldp reinit <1-10>	Sets LLDP reinitialization delay.	15	GLOBAL_CONFIG
no lldp reinit	Sets LLDP reinitialization delay.	15	GLOBAL_CONFIG
lldp tlv-select {management-address | port-description | system-capabilities | system-description | system-name}	Enables/disables LLDP optional TLVs.	15	INTERFACE_PORT_LIST
lldp transmit	Sets if switch shall transmit LLDP frames.	15	INTERFACE_PORT_LIST
lldp receive	Sets if switch shall update LLDP entry table with incoming LLDP information.	15	INTERFACE_PORT_LIST
show lldp neighbors [interface <port_type_list>]	Shows the LLDP neighbors information.	0	EXEC
show lldp statistics [interface <port_type_list>]	Shows the LLDP statistics information.	0	EXEC
clear lldp statistics	Clears the LLDP statistics.	0	EXEC
lldp transmission-delay <1-8192>	Sets LLDP transmision-delay. LLDP transmission delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)	15	GLOBAL_CONFIG
no lldp transmission-delay		15	GLOBAL_CONFIG
lldp cdp-aware	Configures if the interface shall be CDP aware (CDP discovery information is added to the LLDP neighbor table)	15	INTERFACE_PORT_LIST
show lldp med remote-device [interface <port_type_list>]	Show LLDP-MED neighbor device information.	0	EXEC
show lldp med media-vlan-policy [<0~31>]	Show media vlan policy(ies)	0	EXEC
lldp med location-tlv latitude { north | south } <word8>	Use the lldp med location-tlv latitude to configure the location latitude.	15	GLOBAL_CONFIG
no lldp med location-tlv latitude	Use no lldp med location-tlv latitude to configure the latitude location to north 0 degrees.	15	GLOBAL_CONFIG
lldp med location-tlv longitude { west | east } <word9>	Use the lldp med location-tlv longitude to configure the location longitude.	15	GLOBAL_CONFIG
no lldp med location-tlv longitude	Use no lldp med location-tlv longitude to configure the longitude location to north 0 degrees.	15	GLOBAL_CONFIG
lldp med location-tlv altitude { meters | floors } <word11>	Use the lldp med location-tlv altitude to configure the location altitude.	15	GLOBAL_CONFIG
no lldp med location-tlv altitude	Use the lldp med location-tlv altitude to configure the location altitude.	15	GLOBAL_CONFIG

lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code } <string250>	Use lldp med location-tlv civic-addr to configure the civic address.	15	GLOBAL_CONFIG
no lldp med location-tlv civic-addr { country | state | county | city | district | block | street | leading-street-direction | trailing-street-suffix | street-suffix | house-no | house-no-suffix | landmark | additional-info | name | zip-code | building | apartment | floor | room-number | place-type | postal-community-name | p-o-box | additional-code }		15	GLOBAL_CONFIG
lldp med location-tlv elin-addr <dword25>	Use the lldp med location-tlv elin-addr to configure value for the Emergency Call Service	15	GLOBAL_CONFIG
no lldp med location-tlv elin-addr	Use the no lldp med location-tlv elin-addr to configure value for the Emergency Call Service to default value.	15	GLOBAL_CONFIG
lldp med transmit-tlv [capabilities] [location] [network-policy]	Use the lldp med transmit-tlv to configure which TLVs to transmit to link partner.	15	INTERFACE_PORT_LIST
no lldp med transmit-tlv [capabilities] [location] [network-policy]		15	INTERFACE_PORT_LIST
lldp med datum { wgs84 | nad83-navd88 | nad83-mllw }	Use the lldp med datum to configure the datum (geodetic system) to use.	15	GLOBAL_CONFIG
no lldp med datum		15	GLOBAL_CONFIG
lldp med fast <1-10>	Use the lldp med fast to configure the number of times the fast start LLDPDU are being sent during the activation of the fast start mechanism defined by LLDP-MED (1-10).	15	GLOBAL_CONFIG
no lldp med fast		15	GLOBAL_CONFIG
lldp med media-vlan-policy <0-31> { voice | voice-	Use the media-vlan-policy to create a	15	GLOBAL_CONFIG

signaling | guest-voice-signaling | guest-voice | softphone-voice | video-conferencing | streaming-video | video-signaling } { tagged <vlan_id> | untagged } [l2-priority <0-7>] [dscp <0-63>]	policy, which can be assigned to an interface.		
no lldp med media-vlan-policy <0~31>		15	GLOBAL_CONFIG
lldp med media-vlan policy-list <range_list>	Use the media-vlan policy-list to assign policy to the interface.	15	INTERFACE_PORT_LIST
loop-protect	Loop protection configuration	15	GLOBAL_CONFIG
loop-protect transmit-time <1-10>	Loop protection transmit time interval	15	GLOBAL_CONFIG
no loop-protect transmit-time		15	GLOBAL_CONFIG
loop-protect shutdown-time <0-604800>	Loop protection shutdown time interval	15	GLOBAL_CONFIG
no loop-protect shutdown-time		15	GLOBAL_CONFIG
loop-protect	Loop protection configuration	15	INTERFACE_PORT_LIST
loop-protect action { [shutdown] [log] }*1		15	INTERFACE_PORT_LIST
no loop-protect action		15	INTERFACE_PORT_LIST
loop-protect tx-mode		15	INTERFACE_PORT_LIST
show loop-protect [interface <port_type_list>]		13	EXEC
mac address-table learning [secure]	Enable learning on port	15	INTERFACE_PORT_LIST
show mac address-table [conf | static | aging-time | { { learning | count } [interface <port_type_list>] } | { address <mac_addr> [vlan <vlan_id>] } | vlan <vlan_id> | interface <port_type_list>]		0	EXEC
clear mac address-table		15	EXEC
mac address-table static <mac_addr> vlan <vlan_id> interface <port_type_list>	Assign a static mac address to this port	15	GLOBAL_CONFIG
mac address-table aging-time <0,10-1000000>	Set switch aging time, 0 to disable.	15	GLOBAL_CONFIG
no mac address-table aging-time	Default aging time.	15	GLOBAL_CONFIG
monitor destination interface <port_type_id>	Sets monitor destination port.	15	GLOBAL_CONFIG
no monitor destination	Sets monitor destination port.	15	GLOBAL_CONFIG
monitor source { { interface <port_type_list> } | { cpu [<range_list>] } } { both | rx | tx }	Sets monitor source port(s).	15	GLOBAL_CONFIG
no monitor source { { interface <port_type_list> } | { cpu [<range_list>] } }	Sets monitor source port(s).	15	GLOBAL_CONFIG
debug chip [{ 0 | 1 | all }]		debug	EXEC
debug api [interface <port_type_list>] [{ ail | cil }] [{ init | misc | port | counters | phy | vlan | pvlan | mac-table | acl | qos | aggr | stp | mirror |		debug	EXEC

evc | erps | eps | packet | fdma | ts | pts | wm | ipmc | stack | cmef | mplscore | mplsoam | vxlat | oam | sgpio | l3 | afi | macsec }] [full] [clear]			
debug suspend		debug	EXEC
debug resume		debug	EXEC
debug kr-conf [cm1 <-32-31>] [c0 <-32-31>] [cp1 <-32-31>] [ampl <300-1275>] [{ ps25 | ps35 | ps55 | ps70 | ps120 }] [en-ob | dis-ob] [ser-inv | ser-no-inv]		debug	INTERFACE_PORT_LIST
show spanning-tree [summary | active | { interface <port_type_list> } | { detailed [interface <port_type_list>] } | { mst [configuration | { <0-7> [interface <port_type_list>] }] }]		15	EXEC
clear spanning-tree { { statistics [interface <port_type_list>] } | { detected-protocols [interface <port_type_list>] } }		15	EXEC
spanning-tree mode { stp | rstp | mstp }		15	GLOBAL_CONFIG
no spanning-tree mode		15	GLOBAL_CONFIG
spanning-tree transmit hold-count <1-10>		15	GLOBAL_CONFIG
no spanning-tree transmit hold-count		15	GLOBAL_CONFIG
spanning-tree mst max-hops <6-40>		15	GLOBAL_CONFIG
no spanning-tree mst max-hops		15	GLOBAL_CONFIG
spanning-tree mst max-age <6-40> [forward-time <4-30>]		15	GLOBAL_CONFIG
no spanning-tree mst max-age		15	GLOBAL_CONFIG
spanning-tree mst forward-time <4-30>		15	GLOBAL_CONFIG
no spanning-tree mst forward-time		15	GLOBAL_CONFIG
spanning-tree edge bpdu-filter		15	GLOBAL_CONFIG
spanning-tree edge bpdu-guard		15	GLOBAL_CONFIG
spanning-tree recovery interval <30-86400>		15	GLOBAL_CONFIG
no spanning-tree recovery interval		15	GLOBAL_CONFIG
spanning-tree mst <0-7> priority <0-61440>		15	GLOBAL_CONFIG
no spanning-tree mst <0-7> priority		15	GLOBAL_CONFIG
spanning-tree mst <0-7> vlan <vlan_list>		15	GLOBAL_CONFIG
no spanning-tree mst <0-7> vlan		15	GLOBAL_CONFIG
spanning-tree mst name <word32> revision <0-65535>		15	GLOBAL_CONFIG
no spanning-tree mst name		15	GLOBAL_CONFIG

spanning-tree		15	INTERFACE_PORT_LIST
spanning-tree edge		15	INTERFACE_PORT_LIST
spanning-tree auto-edge		15	INTERFACE_PORT_LIST
spanning-tree link-type { point-to-point | shared | auto }		15	INTERFACE_PORT_LIST
no spanning-tree link-type		15	INTERFACE_PORT_LIST
spanning-tree restricted-role		15	INTERFACE_PORT_LIST
spanning-tree restricted-tcn		15	INTERFACE_PORT_LIST
spanning-tree bpdu-guard		15	INTERFACE_PORT_LIST
spanning-tree mst <0-7> cost { <1-200000000> | auto }		15	INTERFACE_PORT_LIST
no spanning-tree mst <0-7> cost		15	INTERFACE_PORT_LIST
spanning-tree mst <0-7> port-priority <0-240>		15	INTERFACE_PORT_LIST
no spanning-tree mst <0-7> port-priority		15	INTERFACE_PORT_LIST
spanning-tree		15	STP_AGGR
spanning-tree edge		15	STP_AGGR
spanning-tree auto-edge		15	STP_AGGR
spanning-tree link-type { point-to-point | shared | auto }		15	STP_AGGR
no spanning-tree link-type		15	STP_AGGR
spanning-tree restricted-role		15	STP_AGGR
spanning-tree restricted-tcn		15	STP_AGGR
spanning-tree bpdu-guard		15	STP_AGGR
spanning-tree mst <0-7> cost { <1-200000000> | auto }		15	STP_AGGR
no spanning-tree mst <0-7> cost		15	STP_AGGR
spanning-tree mst <0-7> port-priority <0-240>		15	STP_AGGR
no spanning-tree mst <0-7> port-priority		15	STP_AGGR
mvr vlan <vlan_list> type { source | receiver }		15	INTERFACE_PORT_LIST
mvr name <word16> type { source | receiver }		15	INTERFACE_PORT_LIST
no mvr vlan <vlan_list> type		15	INTERFACE_PORT_LIST
no mvr name <word16> type		15	INTERFACE_PORT_LIST
mvr immediate-leave		15	INTERFACE_PORT_LIST
clear mvr [vlan <vlan_list> | name <word16>] statistics		15	EXEC
show mvr [vlan <vlan_list> | name <word16>] [group-database [interface <port_type_list>]		0	EXEC

[sfm-information]] [detail]			
mvr		15	GLOBAL_CONFIG
mvr vlan <vlan_list> [name <word16>]		15	GLOBAL_CONFIG
no mvr vlan <vlan_list>		15	GLOBAL_CONFIG
mvr vlan <vlan_list> mode { dynamic | compatible }		15	GLOBAL_CONFIG
mvr name <word16> mode { dynamic | compatible }		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> mode		15	GLOBAL_CONFIG
no mvr name <word16> mode		15	GLOBAL_CONFIG
mvr vlan <vlan_list> igmp-address <ipv4_ucast>		15	GLOBAL_CONFIG
mvr name <word16> igmp-address <ipv4_ucast>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> igmp-address		15	GLOBAL_CONFIG
no mvr name <word16> igmp-address		15	GLOBAL_CONFIG
mvr vlan <vlan_list> frame priority <0-7>		15	GLOBAL_CONFIG
mvr vlan <vlan_list> frame tagged		15	GLOBAL_CONFIG
mvr name <word16> frame priority <0-7>		15	GLOBAL_CONFIG
mvr name <word16> frame tagged		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> frame priority		15	GLOBAL_CONFIG
no mvr name <word16> frame priority		15	GLOBAL_CONFIG
mvr vlan <vlan_list> last-member-query-interval <0-31744>		15	GLOBAL_CONFIG
mvr name <word16> last-member-query-interval <0-31744>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> last-member-query-interval		15	GLOBAL_CONFIG
no mvr name <word16> last-member-query-interval		15	GLOBAL_CONFIG
mvr vlan <vlan_list> channel <word16>		15	GLOBAL_CONFIG
no mvr vlan <vlan_list> channel		15	GLOBAL_CONFIG
no mvr name <word16> channel		15	GLOBAL_CONFIG
show dot1x statistics { eapol | radius | all} [interface <port_type_list>]	Shows statistics for either eapol or radius.	0	EXEC
show dot1x status [interface <port_type_list>] [brief]	Shows dot1x status, such as admin state, port state and last source.	0	EXEC
clear dot1x statistics [interface <port_type_list>]	Clears the statistics counters	15	EXEC
dot1x re-authentication	Set Re-authentication state	15	GLOBAL_CONFIG

dot1x authentication timer re-authenticate <1-3600>	The period between re-authentication attempts in seconds	15	GLOBAL_CONFIG
no dot1x authentication timer re-authenticate		15	GLOBAL_CONFIG
dot1x timeout tx-period <1-65535>	the time between EAPOL retransmissions.	15	GLOBAL_CONFIG
no dot1x timeout tx-period		15	GLOBAL_CONFIG
dot1x authentication timer inactivity <10-1000000>	Time in seconds between check for activity on successfully authenticated MAC addresses.	15	GLOBAL_CONFIG
no dot1x authentication timer inactivity		15	GLOBAL_CONFIG
dot1x timeout quiet-period <10-1000000>	Time in seconds before a MAC-address that failed authentication gets a new authentication chance.	15	GLOBAL_CONFIG
no dot1x timeout quiet-period		15	GLOBAL_CONFIG
dot1x re-authenticate	Refresh (restart) 802.1X authentication process.	15	INTERFACE_PORT_LIST
dot1x initialize [interface <port_type_list>]	Force re-authentication immediately	15	EXEC
dot1x system-auth-control	Set the global NAS state	15	GLOBAL_CONFIG
dot1x port-control { force-authorized | force-unauthorized | auto | single | multi | mac-based }	Sets the port security state.	15	INTERFACE_PORT_LIST
no dot1x port-control	Sets the port security state.	15	INTERFACE_PORT_LIST
dot1x guest-vlan	Enables/disables guest VLAN	15	INTERFACE_PORT_LIST
dot1x max-reauth-req <1-255>	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN	15	GLOBAL_CONFIG
no dot1x max-reauth-req	The number of times a Request Identity EAPOL frame is sent without response before considering entering the Guest VLAN	15	GLOBAL_CONFIG
dot1x guest-vlan <1-4095>	Guest VLAN ID used when entering the Guest VLAN.	15	GLOBAL_CONFIG
no dot1x guest-vlan	Guest VLAN ID used when entering the Guest VLAN.	15	GLOBAL_CONFIG
dot1x guest-vlan supplicant	The switch remembers if an EAPOL frame has been received on the port for the life-time of the port. Once the switch considers whether to enter the Guest	15	GLOBAL_CONFIG

	VLAN, it will first check if this option is enabled or disabled. If disabled (unchecked; default), the switch will only enter the Guest VLAN if an EAPOL frame has not been received on the port for the life-time of the port. If enabled (checked), the switch will consider entering the Guest VLAN even if an EAPOL frame has been received on the port for the life-time of the port.		
dot1x radius-qos	Enables/disables per-port state of RADIUS-assigned QoS.	15	INTERFACE_PORT_LIST
dot1x radius-vlan	Enables/disables per-port state of RADIUS-assigned VLAN.	15	INTERFACE_PORT_LIST
dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }*1	Globally enables/disables a dot1x feature functionality	15	GLOBAL_CONFIG
show dot1x statistics { eapol | radius | all} [interface <port_type_list>]	Shows statistics for either eapol or radius.	0	EXEC
ntp	Enable NTP	13	GLOBAL_CONFIG
ntp server <1-5> ip-address {<ipv4_ucast>|<ipv6_ucast>|<hostname>}		13	GLOBAL_CONFIG
ntp server <1-5> ip-address {<ipv4_ucast>|<hostname>}		13	GLOBAL_CONFIG
no_ntp_server_ip_address		13	GLOBAL_CONFIG
show ntp status		13	EXEC
show platform phy [interface <port_type_list>]	Show PHY module's information for all or a given interface	15	EXEC
show platform phy id [interface <port_type_list>]	Platform PHY's IDs	15	EXEC
show platform phy instance		15	EXEC
show platform phy failover		15	EXEC
platform phy instance restart { cool | warm }		15	EXEC
platform phy instance default-activate		15	EXEC
show platform phy status [interface <port_type_list>]		15	EXEC
no platform phy instance		15	GLOBAL_CONFIG
platform phy failover		15	INTERFACE_PORT_LIST
debug phy read [<0~31>] [<0-0xffff>] [addr-sort]		debug	INTERFACE_PORT_LIST

debug phy write [<0~31>] <0-0xffff> [<0-0xffff>]		debug	INTERFACE_PORT_LIST
debug phy do-page-chk [enable|disable]		debug	EXEC
debug phy force-pass-through-speed {10G | 1G | 100M }		debug	INTERFACE_PORT_LIST
debug phy reset		debug	INTERFACE_PORT_LIST
debug phy gpio <0-13> mode {output|input|alternative}		debug	INTERFACE_PORT_LIST
debug phy gpio <0-13> get		debug	INTERFACE_PORT_LIST
show poe [interface <port_type_list>]	Use the show poe to show PoE status.	0	EXEC
poe mode { standard | plus }	Use poe mode to configure of PoE mode.	15	INTERFACE_PORT_LIST
no poe mode	Use poe mode to configure of PoE mode.	15	INTERFACE_PORT_LIST
poe priority { low | high | critical }	Use poe priority to configure PoE priority.	15	INTERFACE_PORT_LIST
no poe priority	Use poe priority to configure PoE priority.	15	INTERFACE_PORT_LIST
poe management mode { class-consumption | class-reserved-power | allocation-consumption | allocation-reserved-power | lldp-consumption | lldp-reserved-power }	Use management mode to configure PoE power management method.	15	GLOBAL_CONFIG
no poe management mode		15	GLOBAL_CONFIG
poe power limit { <fword2.1> }	Use poe power limit to configure the maximum allowed power for the interface when power management is in allocation mode.	15	INTERFACE_PORT_LIST
no poe power limit	Use poe power limit to configure the maximum allowed power for the interface when power management is in allocation mode.	15	INTERFACE_PORT_LIST
poe supply sid <1~16> <1-2000>	Use poe supply to specify the maximum power the power supply can deliver.	15	GLOBAL_CONFIG
no poe supply [sid <1~16>]		15	GLOBAL_CONFIG
poe schedule-mode	Configure PoE Schedule mode.	15	INTERFACE_PORT_LIST
no poe schedule-mode	disable PoE power management method.	15	INTERFACE_PORT_LIST
poe select-all <range_list>	Configure PoE Schedule mode.	15	GLOBAL_CONFIG
no poe schedule-all <range_list>	disable PoE power management	15	GLOBAL_CONFIG

	method.		
poe delay-mode <range_list>	Configure PoE Power Delay mode.	15	GLOBAL_CONFIG
no poe delay-mode <range_list>		15	GLOBAL_CONFIG
poe delay-time <range_list> <0-300>	Configure PoE Power Delay time.	15	GLOBAL_CONFIG
poe hour <0-23>	This command is used to set hour time per week to enable PoE.	15	INTERFACE_PORT_LIST
no poe hour <0-23>	This command is used to set hour time per week to disable PoE.	15	INTERFACE_PORT_LIST
poe Sun	This command is used to set hour time on Sunday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Sun	This command is used to set hour time on Sunday to disble PoE.	15	INTERFACE_PORT_LIST
poe Mon	This command is used to set hour time on Monday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Mon	This command is used to set hour time on Monday to disable PoE.	15	INTERFACE_PORT_LIST
poe Tue	This command is used to set hour time on Tuesday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Tue	This command is used to set hour time on Tuesday to disable PoE.	15	INTERFACE_PORT_LIST
poe Wed	This command is used to set hour time on Wednesday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Wed	This command is used to set hour time on Wednesday to disable PoE.	15	INTERFACE_PORT_LIST
poe Thr	This command is used to set hour time on Thursday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Thr	This command is used to set hour time on Thursday to enable PoE.	15	INTERFACE_PORT_LIST
poe Fri	This command is used to set hour time on Friday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Fri	This command is used to set hour time on Friday to disable PoE.	15	INTERFACE_PORT_LIST
poe Sat	This command is used to set hour time on Saturday to enable PoE.	15	INTERFACE_PORT_LIST
no poe Sat	This command is used to set hour time on Saturday to disable PoE.	15	INTERFACE_PORT_LIST
show interface <port_type_list> statistics [{ packets | bytes | errors | discards | filtered |	Shows the statistics for the interface.	0	EXEC

{ priority [<0~7>] } }] [{ up | down }]			
show interface <port_type_list> veriphy	Run and display cable diagnostics.	0	EXEC
clear statistics [interface] <port_type_list>	Clears the statistics for the interface.	0	EXEC
show interface <port_type_list> capabilities		0	EXEC
show interface <port_type_list> status	Display status for the interface.	0	EXEC
mtu <'VTSS_MAX_FRAME_LENGTH_STANDARD'-'VTSS_MAX_FRAME_LENGTH_MAX'>	Use mtu to specify maximum frame size (1518-9600 bytes).	15	INTERFACE_PORT_LIST
no mtu	Use no mtu to set maximum frame size to default.	15	INTERFACE_PORT_LIST
shutdown	Use shutdown to shutdown the interface.	15	INTERFACE_PORT_LIST
speed {2500 | 1000 | 100 | 10 | auto {[10] [100] [1000]} }	Configures interface speed. If you use 10, 100, or 1000 keywords with the auto keyword the port will only advertise the specified speeds.	15	INTERFACE_PORT_LIST
no speed	Use "no speed" to configure interface to default speed.	15	INTERFACE_PORT_LIST
duplex { half | full | auto [half | full] }	Use duplex to configure interface duplex mode.	15	INTERFACE_PORT_LIST
no duplex	Use "no duplex" to set duplex to default.	15	INTERFACE_PORT_LIST
media-type { rj45 | sfp | dual }	Use media-type to configure the interface media type.	15	INTERFACE_PORT_LIST
no media-type	Use to configure the interface media-type type to default.	15	INTERFACE_PORT_LIST
flowcontrol { on | off }	Use flowcontrol to configure flow control for the interface.	15	INTERFACE_PORT_LIST
no flowcontrol	Use no flowcontrol to set flow control to default.	15	INTERFACE_PORT_LIST
excessive-restart	Use excessive-restart to configure backoff algorithm in half duplex mode.	15	INTERFACE_PORT_LIST
show web privilege group [<cword>] level		0	EXEC
web privilege group <cword> level { [cro <0-15>] [crw <0-15>] [sro <0-15>] [srw <0-15>] }*1		15	GLOBAL_CONFIG
no web privilege group [<cword>] level		15	GLOBAL_CONFIG
show port-security port [interface <port_type_list>]	Show MAC Addresses learned by Port Security	0	EXEC
show port-security switch [interface	Show Port Security status.	0	EXEC

<port_type_list>]			
no port-security shutdown [interface <port_type_list>]	Reopen one or more ports whose limit is exceeded and shut down.	15	EXEC
port-security	Enable/disable port security globally.	15	GLOBAL_CONFIG
port-security aging	Enable/disable port security aging.	15	GLOBAL_CONFIG
port-security aging time <10-10000000>	Time in seconds between check for activity on learned MAC addresses.	15	GLOBAL_CONFIG
no port-security aging time		15	GLOBAL_CONFIG
port-security	Enable/disable port security per interface.	15	INTERFACE_PORT_LIST
port-security maximum [<1-1024>]	Maximum number of MAC addresses that can be learned on this set of interfaces.	15	INTERFACE_PORT_LIST
no port-security maximum		15	INTERFACE_PORT_LIST
port-security violation { protect | trap | trap-shutdown | shutdown }	The action involved with exceeding the limit.	15	INTERFACE_PORT_LIST
no port-security violation	The action involved with exceeding the limit.	15	INTERFACE_PORT_LIST
pvlan <range_list>	Use the pvlan add or remove command to add or remove a port from a PVLAN.	13	INTERFACE_PORT_LIST
pvlan isolation	Use the pvlan isolation command to add the port into an isolation group.	13	INTERFACE_PORT_LIST
show pvlan [<range_list>]	Use the show pvlan command to view the PVLAN configuration.	13	EXEC
show pvlan isolation [interface <port_type_list>]	Use the show pvlan isolation command to view the PVLAN isolation configuration.	13	EXEC
show qos [{ interface [<port_type_list>] } | wred | { maps [dscp-cos] [dscp-ingress-translation] [dscp-classify] [cos-dscp] [dscp-egress-translation] } | storm | { qce [<1-256>] }]		15	EXEC
qos map dscp-cos { <0~63> | <dscp> } cos <0-7> dpl <dpl>		15	GLOBAL_CONFIG
no qos map dscp-cos { <0~63> | <dscp> }		15	GLOBAL_CONFIG
qos map dscp-ingress-translation { <0~63> | <dscp> } to { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map dscp-ingress-translation { <0~63> | <dscp> }		15	GLOBAL_CONFIG

qos map dscp-classify { <0~63> | <dscp> }		15	GLOBAL_CONFIG
qos map cos-dscp <0~7> dpl <0~1> dscp { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map cos-dscp <0~7> dpl <0~1>		15	GLOBAL_CONFIG
qos map dscp-egress-translation { <0~63> | <dscp> } <0~1> to { <0-63> | <dscp> }		15	GLOBAL_CONFIG
no qos map dscp-egress-translation { <0~63> | <dscp> } <0~1>		15	GLOBAL_CONFIG
qos wred queue <0~5> min-th <0-100> mdp-1 <0-100> mdp-2 <0-100> mdp-3 <0-100>		15	GLOBAL_CONFIG
qos wred queue <0~5> min-fl <0-100> max <1-100> [fill-level]		15	GLOBAL_CONFIG
no qos wred queue <0~5>		15	GLOBAL_CONFIG
qos storm { unicast | multicast | broadcast } { { <1,2,4,8,16,32,64,128,256,512> [kfps] } | { 1024 kfps } }		15	GLOBAL_CONFIG
no qos storm { unicast | multicast | broadcast }		15	GLOBAL_CONFIG
qos qce { [update] } <uint> [{ next <uint> } | last] [interface <port_type_list>] [smac { <mac_addr> | <oui> | any }] [dmac { <mac_addr> | unicast | multicast | broadcast | any }] [tag { [type { untagged | tagged | c-tagged | s-tagged | any }] [vid { <vcap_vr> | any }] [pcp { <pcp> | any }] [dei { <0-1> | any }] }*1] [inner-tag { [type { untagged | tagged | c-tagged | s-tagged | any }] [vid { <vcap_vr> | any }] [pcp { <pcp> | any }] [dei { <0-1> | any }] }*1] [frame-type { any | { etype [{ <0x600-0x7ff,0x801-0x86dc,0x86de-0xffff> | any }] } | { llc [dsap { <0-0xff> | any }] [ssap { <0-0xff> | any }] [control { <0-0xff> | any }] } | { snap [{ <0-0xffff> | any }] } | { ipv4 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [dip { <ipv4_subnet> | any }] [dscp { <vcap_vr> | <dscp> | any }] [fragment { yes | no | any }] [sport { <vcap_vr> | any }] [dport { <vcap_vr> | any }] } | { ipv6 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [dip { <ipv4_subnet> | any }] [dscp		15	GLOBAL_CONFIG

{ <vcap_vr> | <dscp> | any }] [sport { <vcap_vr> | any }] [dport { <vcap_vr> | any }] } }] [action { [cos { <0-7> | default }] [dpl { <0-1> | default }] [pcp-dei { <0-7> <0-1> | default }] [dscp { <0-63> | <dscp> | default }] [policy { <uint> | default }] }*1]			
no qos qce <'QCE_ID_START'~'QCE_ID_END'>		15	GLOBAL_CONFIG
qos qce refresh		15	GLOBAL_CONFIG
qos cos <0-7>		15	GLOBAL_CONFIG
no qos cos		15	INTERFACE_PORT_LIST
qos dpl <dpl>		15	INTERFACE_PORT_LIST
no qos dpl		15	INTERFACE_PORT_LIST
qos pcp <0-7>		15	INTERFACE_PORT_LIST
no qos pcp		15	INTERFACE_PORT_LIST
qos dei <0-1>		15	INTERFACE_PORT_LIST
no qos dei		15	INTERFACE_PORT_LIST
qos trust tag		15	INTERFACE_PORT_LIST
qos trust dscp		15	INTERFACE_PORT_LIST
qos map tag-cos pcp <0~7> dei <0~1> cos <0-7> dpl <dpl>		15	INTERFACE_PORT_LIST
no qos map tag-cos pcp <0~7> dei <0~1>		15	INTERFACE_PORT_LIST
qos policer <uint> [fps] [flowcontrol]		15	INTERFACE_PORT_LIST
no qos policer		15	INTERFACE_PORT_LIST
qos queue-policer queue <0~7> <uint>		15	INTERFACE_PORT_LIST
qos queue-policer queue <0~7> <uint>		15	INTERFACE_PORT_LIST
no qos queue-policer queue <0~7>		15	INTERFACE_PORT_LIST
qos wrr <1-100> <1-100> <1-100> <1-100> <1-100> <1-100>		15	INTERFACE_PORT_LIST
no qos wrr		15	INTERFACE_PORT_LIST
qos shaper <uint>		15	INTERFACE_PORT_LIST
no qos shaper		15	INTERFACE_PORT_LIST
qos queue-shaper queue <0~7> <uint> [excess]		15	INTERFACE_PORT_LIST
no qos queue-shaper queue <0~7>		15	INTERFACE_PORT_LIST
qos tag-remark { pcp <0-7> dei <0-1> | mapped }		15	INTERFACE_PORT_LIST
no qos tag-remark		15	INTERFACE_PORT_LIST
qos map cos-tag cos <0~7> dpl <0~1> pcp <0-7> dei <0-1>		15	INTERFACE_PORT_LIST

no qos map cos-tag cos <0~7> dpl <0~1>		15	INTERFACE_PORT_LIST
qos dscp-translate		15	INTERFACE_PORT_LIST
qos dscp-classify { zero | selected | any }		15	INTERFACE_PORT_LIST
no qos dscp-classify		15	INTERFACE_PORT_LIST
qos dscp-remark { rewrite | remap | remap-dp }		15	INTERFACE_PORT_LIST
no qos dscp-remark		15	INTERFACE_PORT_LIST
qos storm { unicast | broadcast | unknown } <100-13200000> [fps]		15	INTERFACE_PORT_LIST
no qos storm { unicast | broadcast | unknown }		15	INTERFACE_PORT_LIST
qos qce { [addr { source | destination }] [key { double-tag | normal | ip-addr | mac-ip-addr }] }*1		15	INTERFACE_PORT_LIST
no qos qce { [addr] [key] }*1		15	INTERFACE_PORT_LIST
debug qos shaper cir { <100-3300000> [cbs <4096-258048>] } { [eir <100-3300000> [ebs <4096-258048>]] }		debug	INTERFACE_PORT_LIST
no debug qos shaper		debug	INTERFACE_PORT_LIST
debug qos queue-shaper queue <0~7> { cir <100-3300000> [cbs <4096-258048>] } { [eir <100-3300000> [ebs <4096-258048>]] } [excess]		debug	INTERFACE_PORT_LIST
no debug qos queue-shaper queue <0~7>		debug	INTERFACE_PORT_LIST
debug show qos shapers		debug	EXEC
debug qos cmef [{ enable | disable }]		debug	EXEC
show rmon statistics [<1~65535>]		15	EXEC
show rmon history [<1~65535>]		15	EXEC
show rmon alarm [<1~65535>]		15	EXEC
show rmon event [<1~65535>]		15	EXEC
rmon alarm <1-65535> <word255> <1-2147483647> {absolute | delta} rising-threshold <-2147483648-2147483647> [<0-65535>] falling-threshold <-2147483648-2147483647> [<0-65535>] {[rising | falling | both]}		15	GLOBAL_CONFIG
no rmon alarm <1-65535>		15	GLOBAL_CONFIG
rmon event <1-65535> [log] [trap <word127>] {[description <line127>]}		15	GLOBAL_CONFIG
no rmon event <1-65535>		15	GLOBAL_CONFIG
rmon collection stats <1-65535>		15	INTERFACE_PORT_LIST
no rmon collection stats <1-65535>		15	INTERFACE_PORT_LIST

rmon collection history <1-65535> [buckets <1-65535>] [interval <1-3600>]		15	INTERFACE_PORT_LIST
no rmon collection history <1-65535>		15	INTERFACE_PORT_LIST
show sflow statistics { receiver [<range_list>] | samplers [interface [<range_list>] <port_type_list>]}	Use sflow statistics to show statistics for either receiver or sample interface.	0	EXEC
show sflow	Use show sflow to display the current sFlow configuration.	0	EXEC
clear sflow statistics { receiver [<range_list>] | samplers [interface [<range_list>] <port_type_list>] }	Clearing statistics.	15	EXEC
sflow agent-ip {ipv4 <ipv4_addr> | ipv6 <ipv6_addr>}	The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address.	15	GLOBAL_CONFIG
no sflow agent-ip	Sets the agent IP address used as agent-address in UDP datagrams to 127.0.0.1.	15	GLOBAL_CONFIG
sflow timeout [receiver <range_list>] <0-2147483647>	Receiver timeout measured in seconds. The switch decrements the timeout once per second, and as long as it is non-zero, the receiver receives samples. Once the timeout reaches 0, the receiver and all its configuration is reset to defaults.	15	GLOBAL_CONFIG
no sflow timeout [receiver <range_list>]	Receiver timeout measured in seconds. The switch decrements the timeout once per second, and as long as it is non-zero, the receiver receives samples. Once the timeout reaches 0, the receiver and all its configuration is reset to defaults.	15	GLOBAL_CONFIG
sflow collector-address [receiver <range_list>] [<word>]	Collector address	15	GLOBAL_CONFIG
no sflow collector-address [receiver <range_list>]		15	GLOBAL_CONFIG
sflow collector-port [receiver <range_list>] <1-65535>	Collector UDP port. Valid range is 0-65536.	15	GLOBAL_CONFIG
no sflow collector-port [receiver <range_list>]	Collector UDP port. Valid range is 0-65536.	15	GLOBAL_CONFIG

sflow max-datagram-size [receiver <range_list>] <200-1468>	Maximum datagram size.	15	GLOBAL_CONFIG
no sflow max-datagram-size [receiver <range_list>]	Maximum datagram size.	15	GLOBAL_CONFIG
sflow sampling-rate [sampler <range_list>] [<1-4294967295>]	Specifies the statistical sampling rate. The sample rate is specified as N to sample 1/Nth of the packets n the monitored flows. There are no restrictions on the value, but the switch will adjust it to the closest possible sampling rate.	15	INTERFACE_PORT_LIST
sflow max-sampling-size [sampler <range_list>] [<14-200>]	Specifies the maximum number of bytes to transmit per flow sample.	15	INTERFACE_PORT_LIST
no sflow max-sampling-size [sampler <range_list>]	Specifies the maximum number of bytes to transmit per flow sample.	15	INTERFACE_PORT_LIST
sflow counter-poll-interval [sampler <range_list>] [<1-3600>]	The interval - in seconds - between counter poller samples.	15	INTERFACE_PORT_LIST
no sflow counter-poll-interval [<range_list>]	The interval - in seconds - between counter poller samples.	15	INTERFACE_PORT_LIST
sflow [<range_list>]	Enables/disables flow sampling on this port.	15	INTERFACE_PORT_LIST
show smtp	Email information	0	EXEC
smtp delete { server | username | sender | returnpath | mailaddress <1-6> }	Delete email server	15	GLOBAL_CONFIG
smtp mailaddress <1-6> <word47>	Set email server	15	GLOBAL_CONFIG
smtp returnpath <word47>		15	GLOBAL_CONFIG
smtp returnpath <word47>		15	GLOBAL_CONFIG
smtp sender <word47>		15	GLOBAL_CONFIG
smtp username <word31> <word31>		15	GLOBAL_CONFIG
smtp server <word47>		15	GLOBAL_CONFIG
smtp level <0-7>		15	GLOBAL_CONFIG
show snmp		15	EXEC
show snmp community v3 [<word127>]		15	EXEC
show snmp user [<word32> <word10-32>]			
show snmp security-to-group [{ v1 | v2c | v3 } <word32>]			
show snmp access [<word32> { v1 | v2c | v3 | any } { auth | noauth | priv }]			

show snmp view [<word32> <word255>]			
snmp-server	Enable SNMP server.	13	GLOBAL_CONFIG
snmp-server engine-id local <word10-32>	To specify SNMP server's engine ID.	13	GLOBAL_CONFIG
no snmp-server engined-id local	To set SNMP server's engine ID to default value.	15	GLOBAL_CONFIG
snmp-server version { v1 | v2c | v3 }	Set the SNMP server version to SNMPv1, SNMPv2c or SNMPv3.	15	GLOBAL_CONFIG
no snmp-server version	Set SNMP server's version to default setting.	15	GLOBAL_CONFIG
snmp-server community v2c <word127> [ro | rw]		15	GLOBAL_CONFIG
snmp-server community v3 <word127> [<ipv4_addr> <ipv4_netmask>]		15	GLOBAL_CONFIG
no snmp-server community v2c		15	GLOBAL_CONFIG
no snmp-server community v3 <word127>		15	GLOBAL_CONFIG
snmp-server user <word32> engine-id <word10-32> [{md5 <word8-32> | sha <word8-40> } [priv { des | aes } <word8-32>]]		15	GLOBAL_CONFIG
no snmp-server user <word32> engine-id <word10-32>		15	GLOBAL_CONFIG
snmp-server security-to-group model { v1 | v2c | v3 } name <word32> group <word32>		15	GLOBAL_CONFIG
no snmp-server security-to-group model { v1 | v2c | v3 } name <word32>		15	GLOBAL_CONFIG
snmp-server access <word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv } [read <word255>] [write <word255>]		15	GLOBAL_CONFIG
no snmp-server access <word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv }		15	GLOBAL_CONFIG
snmp-server view <word32> <word255> { include | exclude }		15	GLOBAL_CONFIG
no snmp-server view <word32> <word255>		15	GLOBAL_CONFIG
snmp-server contact <line255>	To specify the system contact string.	15	GLOBAL_CONFIG
no snmp-server contact	To clear the system contact string.	15	GLOBAL_CONFIG
snmp-server location <line255>	To specify the system location string.	15	GLOBAL_CONFIG
no snmp-server location	To specify the system location string.	15	GLOBAL_CONFIG
show snmp mib context	Use the show snmp mib context user EXEC command to display \ the supported MIBs	15	EXEC

	in the switch.		
show snmp mib ifmib ifIndex	Use the show snmp mib ifmib ifIndex user EXEC command to \ display the SNMP ifIndex(defined in IF-MIB) mapping \ information in the switch.	15	EXEC
show snmp mib redefine	Use the show snmp mib redefine user EXEC command to display \ the redefined MIBs in the switch, that are different \ definitions from the standard MIBs.	15	EXEC
snmp-server trap		15	GLOBAL_CONFIG
no snmp-server host <word32>		15	GLOBAL_CONFIG
shutdown		15	SNMPS_HOST
host { <ipv4_ucast> | <hostname> } [<1-65535>] [traps | informs]		15	SNMPS_HOST
host <ipv6_ucast> [<1-65535>] [traps | informs]		15	SNMPS_HOST
no host		15	SNMPS_HOST
version { v1 [<word127>] | v2 [<word127>] | v3 [probe | engineID <word10-32>] [<word32>] }		15	SNMPS_HOST
no version		15	SNMPS_HOST
informs retries <0-255> timeout <0-2147>		15	SNMPS_HOST
no informs		15	SNMPS_HOST
traps [aaa authentication] [system [coldstart] [warmstart]] [switch [stp] [rmon]]		15	SNMPS_HOST
no traps		15	SNMPS_HOST
snmp-server host <word32> traps [linkup] [linkdown] [lldp]		15	INTERFACE_PORT_LIST
no snmp-server host <word32> traps		15	INTERFACE_PORT_LIST
show snmp host [<word32>] [system] [switch] [interface] [aaa]		15	EXEC
switch stack re-elect	Config commands for the switches in the stack	13	EXEC
switch stack priority {local | <1-16>} <1-4>	Configure master election priority	13	GLOBAL_CONFIG
switch stack swap <1-16> <1-16>	Swap switch ID	13	GLOBAL_CONFIG
no switch stack <1-16>		13	GLOBAL_CONFIG

switch stack <1-16> mac <mac_ucast>	MAC address of the switch	13	GLOBAL_CONFIG
switch stack { enable | disable }	Enable/disable stacking	13	GLOBAL_CONFIG
switch stack interface <port_type_list>	Configure stacking interface	13	GLOBAL_CONFIG
show switch stack [details]	Show switch Detail information	0	EXEC
show switch stack debug	Show switch Debug information	debug	EXEC
show ip ssh	Use the show ip ssh privileged EXEC \ command to display the SSH status.	15	EXEC
ip ssh	Use the ip ssh global configuration command to \ enable the SSH. Use the no form of this \ command to disable the SSH.	15	GLOBAL_CONFIG
show network-clock	Show selector state.	0	EXEC
clear network-clock clk-source <range_list>	Clear active WTR timer.	15	EXEC
network-clock clk-source <range_list> nominate { clk-in | {interface <port_type_id>} }	Nominate a clk input to become a selectable clock source.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> nominate		15	GLOBAL_CONFIG
network-clock input-source { 1544khz | 2048khz | 10mhz }	Sets the station clock input frequency	15	GLOBAL_CONFIG
no network-clock input-source		15	GLOBAL_CONFIG
network-clock output-source { 1544khz | 2048khz | 10mhz }	Sets the station clock output frequency	15	GLOBAL_CONFIG
no network-clock output-source		15	GLOBAL_CONFIG
network-clock clk-source <range_list> aneg-mode { master | slave | forced}	Sets the preferred negotiation.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> aneg-mode		15	GLOBAL_CONFIG
network-clock clk-source <range_list> hold-timeout <3-18>	The hold off timer value in 100 ms.Valid values are range 3-18.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> hold-timeout		15	GLOBAL_CONFIG
network-clock selector { { manual clk-source <uint> } | selected | nonrevertive | revertive | holdover | freerun }	Selection mode of nominated clock sources	15	GLOBAL_CONFIG
no network-clock selector		15	GLOBAL_CONFIG

network-clock clk-source <range_list> priority <0-1>	Priority of nominated clock sources.	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> priority		15	GLOBAL_CONFIG
network-clock wait-to-restore <0-12>	WTR time (0-12 min) '0' is disable	15	GLOBAL_CONFIG
no network-clock wait-to-restore		15	GLOBAL_CONFIG
network-clock ssm-holdover { prc | ssua | ssub | eec2 | eec1 | dnu | inv }	Hold Over SSM overwrite	15	GLOBAL_CONFIG
no network-clock ssm-holdover		15	GLOBAL_CONFIG
network-clock ssm-freerun { prc | ssua | ssub | eec2 | eec1 | dnu | inv }	Free Running SSM overwrite	15	GLOBAL_CONFIG
no network-clock ssm-freerun		15	GLOBAL_CONFIG
network-clock clk-source <range_list> ssm-overwrite { prc | ssua | ssub | eec2 | eec1 | dnu }	Clock source SSM overwrite	15	GLOBAL_CONFIG
no network-clock clk-source <range_list> ssm-overwrite		15	GLOBAL_CONFIG
network-clock option { eec1 | eec2 }	EEC options	15	GLOBAL_CONFIG
no network-clock option		15	GLOBAL_CONFIG
network-clock synchronization ssm	SSM enable/disable.	15	INTERFACE_PORT_LIST
show logging [info] [warning] [error] [switch <switch_list>]	Use the show logging privileged EXEC command without keywords to display the logging configuration, or particularly the logging message summary for the logging level.	15	EXEC
show logging <1-4294967295> [switch <switch_list>]	Use the show logging privileged EXEC command with logging ID to display the detail logging message. OC_CMD_DEFAULT =	15	EXEC
clear logging [info] [warning] [error] [switch <switch_list>]	Use the clear logging privileged EXEC command to clear the logging message.	15	EXEC
logging on	Use the logging on global configuration command to enable the logging server. Use the no form of this command to disable the logging server.	15	GLOBAL_CONFIG
logging host { <ipv4_ucast> | <hostname> }	Use the logging host global configuration command to configure the host address of logging server.	15	GLOBAL_CONFIG
no logging host	Use the no logging host global configuration command to clear the host	15	GLOBAL_CONFIG

	address of logging server.		
logging level { info | warning | error }	Use the logging level global configuration command to configure what level of message will send to logging server.	15	GLOBAL_CONFIG
show clock	Show running rmation	0	EXEC
show version	System hardware and software status	0	EXEC
password unencrypted <line31>	Use the password encrypted <password> global configuration command to configure administrator password with unencrypted password for the local switch access.	15	GLOBAL_CONFIG
password encrypted <word4-44>	Use the password encrypted <password> global configuration command to configure administrator password with encrypted password for the local switch access.	15	GLOBAL_CONFIG
password none	Use the password none global configuration command to remove the administrator password.	15	GLOBAL_CONFIG
show system	Show system information	0	EXEC
system contact <line255>	To specify the system contact string.	15	GLOBAL_CONFIG
no system contact	To clear the system contact string.	15	GLOBAL_CONFIG
system location <line255>	To specify the system location string.	15	GLOBAL_CONFIG
no system location	To specify the system location string.	15	GLOBAL_CONFIG
system name <line255>	To specify the system mode name string.	15	GLOBAL_CONFIG
no system name	To specify the system model name string.	15	GLOBAL_CONFIG
show thermal-protect [interface <port_type_list>]	Shows thermal protection status (chip temperature and port status).	15	EXEC
thermal-protect prio <0~3> temperature <0-255>	Thermal protection configuirations.	15	GLOBAL_CONFIG
no thermal-protect prio <0~3>	Sets temperature at which to turn ports with the corresponding priority off.	15	GLOBAL_CONFIG
thermal-protect port-prio <0-3>	Sets temperature at which to turn ports with the corresponding priority off.	15	INTERFACE_PORT_LIST
no thermal-protect port-prio	Sets temperature at which to turn ports with the corresponding priority off.	15	INTERFACE_PORT_LIST

show upnp		15	EXEC
upnp		15	GLOBAL_CONFIG
upnp ttl <1-255>		15	GLOBAL_CONFIG
no upnp ttl		15	GLOBAL_CONFIG
upnp advertising-duration <100-86400>		15	GLOBAL_CONFIG
no upnp advertising-duration		15	GLOBAL_CONFIG
username <word31> privilege <0-15> password unencrypted <line31>	Use the username <username> privilege <level> password encrypted <password> global configuration command to add a user with unencrypted password for the local switch access.	15	GLOBAL_CONFIG
username <word31> privilege <0-15> password encrypted <word4-44>	Use the username <username> privilege <level> password encrypted <password> global configuration command to add a user with encrypted password for the local switch access.	15	GLOBAL_CONFIG
username <word31> privilege <0-15> password none	Use the username <username> privilege <level> password none global configuration command to remove the password for specific username.	15	GLOBAL_CONFIG
no username <word31>	Use the no username <username> global configuration command to delete a local user.	15	GLOBAL_CONFIG
vlan protocol {{eth2 {<0x600-0xffff>|arp|ip|ipx|at}} | {snap {<0x0-0xffffff>|rfc-1042|snap-8021h} <0x0-0xffff>} | {llc <0x0-0xff> <0x0-0xff>} } group <word16>		13	GLOBAL_CONFIG
switchport vlan mac <mac_ucast> vlan <vlan_id>	Use the switchport vlan mac command to associate a MAC address to VLAN ID.	13	INTERFACE_PORT_LIST
switchport vlan protocol group <word16> vlan <vlan_id>	Use the no form of this command to remove the group to vlan mapping.	13	INTERFACE_PORT_LIST
show vlan protocol [eth2 {<0x600-0xffff>|arp|ip|ipx|at}] [snap {<0x0-0xffffff>|rfc-1042|snap-8021h} <0x0-0xffff>] [llc <0x0-0xff> <0x0-0xff>]	Use the switchport vlan protocol group command to add group to vlan mapping.	13	EXEC
show vlan mac [address <mac_ucast>]		13	EXEC

show vlan ip-subnet [id <1-128>]		13	EXEC
switchport vlan ip-subnet id <1-128> <ipv4_subnet> vlan <vlan_id>		13	INTERFACE_PORT_LIST
no switchport vlan ip-subnet id <1~128>		13	INTERFACE_PORT_LIST
debug vcl policy <uint>		debug	INTERFACE_PORT_LIST
no debug vcl policy		debug	GLOBAL_CONFIG
debug show vcl policy		debug	EXEC
switchport mode {access | trunk | hybrid}	Use the switchport mode command to define the type of the port.	13	INTERFACE_PORT_LIST
no switchport mode		13	INTERFACE_PORT_LIST
switchport access vlan <vlan_id>	Use the switchport access vlan command to configure a port to a VLAN. Valid VLAN IDs are 1 to 4095.	13	INTERFACE_PORT_LIST
no switchport access vlan		13	INTERFACE_PORT_LIST
switchport trunk native vlan <vlan_id>	Use the switchport native vlan command to configure a port VLAN ID for a trunk port.	13	INTERFACE_PORT_LIST
no switchport trunk native vlan	Set trunk mode characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid native vlan <vlan_id>	Use the switchport native vlan command to configure a port VLAN ID for a hybrid port.	13	INTERFACE_PORT_LIST
no switchport hybrid native vlan	Set hybrid mode characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid port-type { unaware | c-port | s-port | s-custom-port }	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid port-type	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid ingress-filtering	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid acceptable-frame-type { all | tagged | untagged }	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid acceptable-frame-type	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
switchport hybrid egress-tag {none | all [except-native]}	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid egress-tag	Set hybrid characteristics of the	13	INTERFACE_PORT_LIST

	interface		
switchport trunk vlan tag native	Set trunk characteristics of the interface	13	INTERFACE_PORT_LIST
switchport trunk allowed vlan {all | none | [add | remove | except] <vlan_list>}	Set trunk mode characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport trunk allowed vlan	Set trunk characteristics of the interface,	13	INTERFACE_PORT_LIST
switchport hybrid allowed vlan {all | none | [add | remove | except] <vlan_list>}	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
no switchport hybrid allowed vlan	Set hybrid characteristics of the interface	13	INTERFACE_PORT_LIST
vlan ethertype s-custom-port <0x0600-0xffff>		13	GLOBAL_CONFIG
no vlan {{ethertype s-custom-port} | <vlan_list>}		15	GLOBAL_CONFIG
show interface <port_type_list> switchport [access | trunk | hybrid]	Use the how interfaces command to display the administrative and operational status of all interfaces or a specified interface.	0	EXEC
show vlan [id <vlan_list> | name <vword32> | brief]	Use the show vlan command to view the VLAN configuration.	13	EXEC
show vlan status [interface <port_type_list>] [combined|admin|nas|mvr|voice-vlan|mstp|erps|vcl|evc|gvrp|all|conflicts]	Use the show VLAN status command to view the VLANs configured for each interface.	13	EXEC
name <vword32>	Use the name <vword32> command to configure VLAN name.	13	CONFIG_VLAN
no name	The no form of this command will restore the VLAN name to its default.	13	CONFIG_VLAN
switchport forbidden vlan {add|remove} <vlan_list>	Adds or removes forbidden VLANs from the current list of forbidden VLANs	15	INTERFACE_PORT_LIST
no switchport forbidden vlan	Allows for adding VLANs to an interface	15	INTERFACE_PORT_LIST
show switchport forbidden [{vlan <vlan_id>} | {name <word>}]	Lookup VLAN Forbidden port entry.	0	EXEC
voice vlan	Use the voice vlan global configuration command to enable voice vlan. Use the no form of this command to globally disable voice vlan.	15	GLOBAL_CONFIG
voice vlan vid <vlan_id>	Use the voice vlan vid global configuration command to configure voice vlan vid.	15	GLOBAL_CONFIG
no voice vlan vid	Use the no voice vlan vid global	15	GLOBAL_CONFIG

	configuration command to restore the default voice vlan vid.		
voice vlan aging-time <10-10000000>	Use the voice vlan aging-time global configuration command to configure default voice vlan aging-time.	15	GLOBAL_CONFIG
no voice vlan aging-time	Use the no voice vlan aging-time global configuration command to restore the default voice vlan aging-time.	15	GLOBAL_CONFIG
voice vlan class { <0-7> | low | normal | medium | high }	Use the voice vlan class global configuration command to configure voice vlan class.	15	GLOBAL_CONFIG
no voice vlan class	Use the no voice vlan class global configuration command to restore the default voice vlan class.	15	GLOBAL_CONFIG
voice vlan oui <oui> [description <line32>]	Use the voice vlan oui global configuration command to set the oui entry for voice vlan.	15	GLOBAL_CONFIG
no voice vlan oui <oui>	Use the no voice vlan oui global configuration command to delete the oui entry.	15	GLOBAL_CONFIG
switchport voice vlan mode { auto | force | disable }	Use the switchport voice vlan mode interface configuration command to configure to switchport voice vlan mode.	15	INTERFACE_PORT_LIST
no switchport voice vlan mode	Use the no switchport voice vlan mode interface configuration command to restore the default switchport voice vlan mode.	15	INTERFACE_PORT_LIST
switchport voice vlan security	Use the switchport voice vlan security interface configuration command to configure switchport voice vlan security mode. Use the no form of this command to globally disable switchport voice vlan security mode.	15	INTERFACE_PORT_LIST
switchport voice vlan discovery-protocol {oui | lldp | both}	Use the switchport voice vlan discovery-protocol interface configuration command to configure to switchport voice vlan discovery-protocol.	15	INTERFACE_PORT_LIST
no switchport voice vlan discovery-protocol	Use the no switchport voice vlan	15	INTERFACE_PORT_LIST

	discovery-protocol interface configuration command to restore the default switchport voice vlan discovery-protocol.		
show voice vlan [oui <oui> | interface <port_type_list>]	Use the show voice vlan privilege EXEC command without keywords to display the voice vlan configuration, or particularly switchport configuration for the interface, or use the oui keyword to display oui table.	15	EXEC
debug gvrp protocol-state interface <port_type_list> vlan <vlan_list>		debug	EXEC
debug gvrp msti		debug	EXEC
debug gvrp statistic		debug	EXEC
gvrp		15	GLOBAL_CONFIG
gvrp time { [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>] }*1		15	GLOBAL_CONFIG
gvrp max-vlans <1-4095>		15	GLOBAL_CONFIG
gvrp		15	INTERFACE_PORT_LIST
gvrp join-request vlan <vlan_list>		15	INTERFACE_PORT_LIST
gvrp leave-request vlan <vlan_list>		15	INTERFACE_PORT_LIST

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