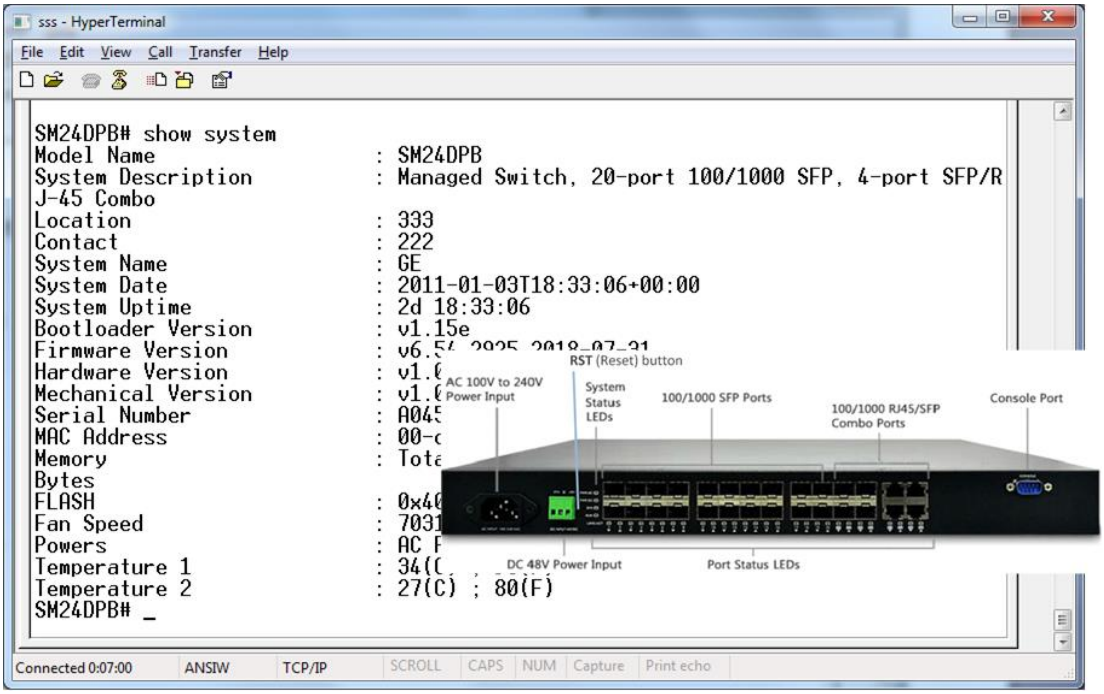
SM24DPB

Managed Layer 2 Gigabit Ethernet Switch

(20) 100/1000Base-X SFP Slots + (4) 100/1000Base-X SFP/RJ-45 Combo Ports



CLI Reference

33683 Rev. C

Safety Warnings and Cautions

These products are not intended for use in life support products where failure of a product could reasonably be expected to result in death or personal injury. Anyone using this product in such an application without express written consent of an officer of Transition Networks does so at their own risk and agrees to fully indemnify Transition Networks for any damages that may result from such use or sale.


Attention: this product, like all electronic products, uses semiconductors that can be damaged by ESD (electrostatic discarge). Always observe appropriate precautions when handling.


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.

SM24DPB Managed Fiber Switch CLI Reference - TN PN 33683 Rev. C

Record of Revisions

Rev	Date	Description of Changes
A	5/25/16	Initial release for software v6.46.
B	9/10/18	Update for firmware version 6.48, update contact information. Update for FW v6.54.2925 to add customized SSL certs, and add port security sticky function.
C	2/18/20	Upgrade for FW v6.54.3187 with password encryption change, add Rapid Ring, remove Force Cool Restart, add SCP feature, and add SNMP Trap over TCP. Upgrade for FW v6.54.3202 to add Traffic Monitor in DMS. FW v6.54.3359: Change DMS Topology view right side function key design. Add Click Save Button when Save Start Button on Web UI. Add message "*Traffic Monitor feature is only available on Master switch*". Add a field to show Aggregated Bandwidth information. Enhance Password encryption. Remove Bonjour Discovery.

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About This Manual

Purpose: This manual gives specific information on how to operate and use the management functions of the switch.

Audience: The manual 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: These conventions are used in this manual:

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

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

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

Related Manuals: The following manuals detail related switch aspects:

- SM24DPB Quick Start Guide, 33680
- SM24DPB Install Guide, 33681
- SM24DPB Web User Guide, 33682
- SFP User Guides (model specific)
- Release Notes (version specific)

There is an online web-based help that describes the management related features. For Transition Networks Drivers, Firmware, etc. go to the Product Support webpage (logon required). For Manuals, Brochures, Data Sheets, Specifications, etc. go to the Support Library (no registration required).

Contents

1. CLI Management

Use the procedure below to make a network connection.

1. Locate the correct DB-9 RS-232 cable with female DB-9 connector. RS-232 cable is used for connecting a terminal or terminal emulator to the Managed Switch's RS-232 port to access the command-line interface.
2. Attach the DB-9 serial port on the switch's front panel which will be used to connect to the switch for console configuration.
3. Attach the other end of the DB-9 cable to an ASCII terminal emulator or PC Com-1, 2 port. For example, a PC running Microsoft Windows HyperTerminal utility.
4. At "Com Port Properties" Menu, configure the parameters as below: (see the next section).

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

1-1 Login

The command-line interface (CLI) is a text-based interface. User can access the CLI through either a direct serial connection to the device or a Telnet session. The default login username and password are:

Username: **admin**

Password: **admin**

After you login successfully, the prompt will be shown as "<sys_name>**#**" . It means you are configured as an administrator and have the privilege for setting the Managed Switch. If not logged as administrator, the prompt is shown as "<sys_name>>", meaning you can only perform as a guest and are only allowed to set the system under the administrator. Each CLI command has a specific privilege level.

```
Username: admin
Password:
SM24DPB#
```

1-2 CLI Commands

The CLI is divided into several modes. A user must have a high enough privilege to run a particular command, and must run the command in the correct mode. To see the commands of each mode, enter a "**?**" after the system prompt, then all commands will be listed on the screen. The command modes are listed below:

Command Modes

Mode	Prompt	Command Function in this Mode
exec	<sys_name>#	Display current configuration, diagnostics, maintenance
config	<sys_name>(config)#	Configure features other than those below
Config-if	<sys_name>(config-interface)#	Configure ports
Config-if-vlan	<sys_name>(config-if-vlan)#	Configure static vlan
Config-line	<sys_name>(config-line)#	Line Configuration
Config-impc-profile	<sys_name>(config-impc-profile)#	IPMC Profile
Config-snmp-host	<sys_name>(config-snmp-host)#	SNMP Server Host
Config-stp-aggr	<sys_name>(config-stp-aggr)#	STP Aggregation
Config-dhcp-pool	<sys_name>(config-dhcp-pool)#	DHCP Pool Configuration

Commands reside in a corresponding mode and can be run only in that mode. To run a particular command, a user must change to the appropriate mode. The command modes are organized as a tree, and users start in exec mode. The table below explains how to change from one mode to another.

Change Between Command Modes

Mode	Enter Mode	Leave Mode
exec	--	--
config	Configure terminal	exit
config-interfcae	Interface <port-type> <port-type-list>	exit
config-vlan	Interface vlan <vlan_list>	exit

Page controls:

next page: Space

continue: g

quit: ^C

1-3 **Global (Exec Mode) Commands**

```
SM24DPB# ?
    CableDiag     Cable Diagnostic keyword
    clear         Reset functions
    configure     Enter configuration mode
    copy          Copy from source to destination
    debug         Debugging functions
    delete        Delete one file in flash: file system
    dir           Directory of all files in 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
    exit          Exit from EXEC mode
    firmware      Firmware upgrade/swap
    help          Description of the interactive help system
    ip            IPv4 commands
    logout        Exit from EXEC mode
    more          Display file
    no            Negate a command or set its defaults
    ping          Send ICMP echo messages
    reload        Reload system.
    send          Send a message to other tty lines
    show          Show running system information
    terminal      Set terminal line parameters
    traceroute    traceroute program
SM24DPB#
```

Exit

Exit from EXEC mode to global mode or exit from Config mode to Exec mode or exit from Interface config mode to Config mode.

Syntax:

exit

Parameters:

None.

Example:

```
SM24DPB(config)# exit
SM24DPB# con ter
SM24DPB(config)# interface GigabitEthernet 1/5
SM24DPB(config-if)# exit
SM24DPB(config)#
```

Help

Description of the interactive help system.

Syntax:

help

Parameters:

None.

Example:

```
SM24DPB(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?'.)


SM24DPB(config)#
```

logout

Exit from EXEC mode.

Syntax:

logout

Parameters:

none

Example:

```
SM24DPB# logout


Username:
Password:
```

end

Go back to EXEC mode.

Syntax:

end

Example:

```
SM24DPB(config)# end
SM24DPB#
```

CableDiag

Cable Diagnostic keyword.

Syntax:

CableDiag interface <port_type> <port_type_id>

Parameters:

interface	Interface keyword
GigabitEthernet	1 Gigabit Ethernet Port
<port_type_id>	Port ID in 1/21-24
<cr>	

Example:

```
SM24DPB# CableDiag interface GigabitEthernet 1/21
Starting Cable Diagnostic - Please wait
Interface               Link Status    Test Result    Length
----------------------  -------------  -------------  -------------
GigabitEthernet 1/21    Link Down      Abnormal               3(m)
SM24DPB# CableDiag interface GigabitEthernet 1/22
Starting Cable Diagnostic - Please wait
Interface               Link Status    Test Result    Length
----------------------  -------------  -------------  -------------
GigabitEthernet 1/22    1G             OK                     2(m)
SM24DPB# 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 be
tween 7-120 meters
SM24DPB# CableDiag interface GigabitEthernet 1/24
Starting Cable Diagnostic - Please wait
Interface               Link Status    Test Result    Length
----------------------  -------------  -------------  -------------
GigabitEthernet 1/24    Link Down       detect error or check cable length is be
tween 7-120 meters
SM24DPB#
```

2. Clear Commands

Table : CLEAR Commands

Command	Function
access	Access management
access-list	Access list
dot1x	IEEE Standard for port-based Network Access Control
ip	Interface Internet Protocol config commands
ipv6	IPv6 configuration commands
lacp	Clear LACP statistics
lldp	Clears LLDP statistics.
logging	Syslog
mac	MAC Address Table
mvr	Multicast VLAN Registration configuration
port-security	Enable/disable port security globally.
sflow	Statistics flow.
spanning-tree	STP Bridge
statistics	Clear statistics for a given interface

access

Access management.

Syntax:

clear access management statistics

Parameter:

management Access management configuration.

statistics Statistics data.

Example:

```
SM24DPB# clear access management statistics
SM24DPB#
```

access-list

Access list.

Syntax:

Clear access-list ace statistics

Parameters:

ace	Access list entry
statistics	Traffic statistics

Example:

```
SM24DPB# clear access-list ace statistics
SM24DPB#
```

dot1x

IEEE Standard for port-based Network Access Control.

Syntax

Clear dot1x statistics

Clear dot1x statistics interface GigabitEthernet < PORT_TYPE_LIST>

Clear dot1x statistics interface 10GigabitEthernet < PORT_TYPE_LIST>

Parameters

statistics	Clears the statistics counters
interface	Interface
GigabitEthernet	1 Gigabit Ethernet Port
GigabitEthernet	10 Gigabit Ethernet Port
PORT_TYPE_LIST	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# clear dot1x statistics interface GigabitEthernet 1/1-24
SM24DPB#
```

ip

Interface Internet Protocol config commands

Syntax

clear ip arp

clear ip dhcp detailed statistics { server | client | snooping | relay | helper | all } [interface (<port_type> [<in_port_list>])]

clear ip dhcp relay statistics

clear ip dhcp server binding <ip>

clear ip dhcp server binding { automatic | manual | expired }

clear ip dhcp server statistics

clear ip dhcp snooping statistics [interface (<port_type> [<in_port_list>])]

clear ip igmp snooping [vlan <v_vlan_list>] statistics

clear ip statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]

Parameters

arp	Clear ARP cache
dhcp	Dynamic Host Configuration Protocol
igmp	Internet Group Management Protocol
statistics	Traffic statistics
relay	DHCP relay agent configuration
snooping	DHCP snooping
interface	Select an interface to configure
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
vlan	IPv4 traffic interface
<vlan_list>	VLAN identifier(s): VID

EXAMPLE

```
SM24DPB# clear ip arp
SM24DPB# clear ip dhcp detailed  statistics all interface GigabitEthernet 1/1-24
SM24DPB# clear ip dhcp relay statistics
SM24DPB# clear ip dhcp server binding 192.168.1.11
SM24DPB# clear ip dhcp server binding automatic
SM24DPB# clear ip dhcp server statistics
SM24DPB# Clear ip dhcp snooping statistics interface GigabitEthernet 1/1-24
SM24DPB# clear ip statistics system interface
SM24DPB# clear ip statistics system interface vlan 1 icmp icmp-msg 2
```

ipv6

IPv6 configuration commands.

Syntax

clear ipv6 mld snooping [vlan <v_vlan_list>] statistics

clear ipv6 neighbors

clear ipv6 statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]

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
icmp	IPv6 ICMP traffic
icmp-msg	IPv6 ICMP traffic for designated message type
interface	Select an interface to configure
system	IPv6 system traffic
< 0~255>	ICMP message type ranges from 0 to 255

EXAMPLE

```
SM24DPB# clear ipv6 mld snooping vlan 3 statistics
SM24DPB# clear ipv6 neighbors
SM24DPB# Clear ipv6 statistics system icmp icmp-msg 2
```

lacp

Clear LACP statistics

Syntax

Clear lacp statistics

Parameters

statistics	Clear all LACP statistics

EXAMPLE

```
SM24DPB# clear lacp statistics
SM24DPB#
```

lldp

Clears LLDP statistics.

Syntax

Clear lldp statistics

Clear lldp statistics| begin | exclude | include >< LINE >

Parameters

statistics	Clears LLDP 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

EXAMPLE

```
SM24DPB# clear lldp statistics | begin LINE
SM24DPB#
```

logging

Configure Syslog.

Syntax

clear logging [info] [warning] [error] [switch <switch_list>]

Parameters

error	Error
info	Information
warning	Warning

EXAMPLE

```
SM24DPB# clear logging info error warning
SM24DPB#
```

mac

MAC Address Table.

Syntax

Clear mac address-table

Parameters

address-table Flush MAC Address table.

EXAMPLE

```
SM24DPB # clear mac address-table
SM24DPB #
```

mvr

Multicast VLAN Registration configuration.

Syntax

clear mvr [vlan <v_vlan_list> | name <mvr_name>] 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

```
SM24DPB# clear  mvr vlan 25 statistics
SM24DPB#
```

Messages:

```
W mvr 06:47:34 51/_mvr_vlan_warning_handler#4002: Warning: Please adjust the man
agement VLAN ports overlapped with MVR source ports!39
```

port-security

Enable/disable port security globally.

Syntax

clear port-security sticky { All | interface (<port_type> [<plist>]) }

Parameters

sticky	port security sticky function per interface.
All	clear all sticky mac at all ports
interface	Choose port
sticky	port security sticky function per interface.
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
PORT_LIST	Port list in 1/1-24

EXAMPLE

```
SM24DPB# clear port-security sticky interface GigabitEthernet 1/22
SM24DPB# clear port-security sticky All
SM24DPB#
```

sflow

Configure Statistics flow.

Syntax

clear sflow statistics { receiver [<receiver_index_list>] | samplers [interface [<samplers_list>] (<port_type> [<v_port_type_list>])] }

Parameter

interface	Interface
receiver	Clear statistics for receiver.
<port_type>	GigabitEthernet or 10Gigabitethernet
<Samplers : option>	runtime
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# clear sflow statistics interface
GigabitEthernet 1/1-24
```

spanning-tree

Configure STP Bridge.

Syntax

clear spanning-tree { { statistics [interface (<port_type> [<v_port_type_list>])] } | { detected-protocols [interface (<port_type> [<v_port_type_list_1>])] } }

Parameter

detected-protocols	Set the STP migration check
statistics	STP statistics
interface	Choose port
<port_type>	GigabitEthernet or 10Gigabitethernet
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# clear spanning-tree detected-protocols interface GigabitEthernet
1/1-24
```

statistics

Clear statistics for a given interface

Syntax

clear statistics interface <port_type> <port_type_list>

clear statistics <port_type> <port_type_list>

Parameter

<port_type>	GigabitEthernet or 10Gigabitethernet
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# clear statistics GigabitEthernet 1/1-13
SM24DPB#
```

3. Configure Commands

Table : Config Mode Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a login banner
clock	Configure time-of-day clock
default	Set a command to its defaults
dms	Enable DMS Master
do	To run exec commands in config mode
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
end	Go back to EXEC mode
event	Trap event severity level
exit	Exit from current mode
gvrp	Enable GVRP feature
help	Description of the interactive help system
hostname	Set system's network name
interface	Select an interface to configure
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP settings
line	Configure a terminal line
lldp	LLDP configurations.
logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
map-api-key	Set google map key string
monitor	Set monitor configuration.
mvr	Multicast VLAN Registration configuration
no	Negate a command or set its defaults
ntp	Configure NTP
port-security	Enable/disable port security globally.
privilege	Command privilege parameters
qos	Quality of Service
radius-server	Configure RADIUS
rapid-ring	Set Rapid Ring's configurations
rmon	Remote Monitoring
sflow	Statistics flow.
smtp	Set email information
snmp-server	Set SNMP server's configurations
spanning-tree	Spanning Tree protocol
system	Set Board Configuration
tacacs-server	Configure TACACS+
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	VLAN commands
voice	Voice appliance attributes
web	Web

terminal

Configure from the terminal (enter config mode).

Syntax

configure terminal

EXAMPLE

```
SM24DPB# configure terminal
SM24DPB(config)#
```

aaa

Configure Authentication, Authorization and Accounting.

SYNTAX

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

Parameter

authentication	Authentication
login	Login
console	Configure Console
http	Configure HTTP
ssh	Configure SSH
telnet	Configure Telnet
local	Use local database for authentication
radius	Use RADIUS for authentication
tacacs	Use TACACS+ for authentication

EXAMPLE

```
SM24DPB(config)# aaa authentication login http radius
SM24DPB(config)#
```

access

Configure Access management.

SYNTAX

access management

access management <access_id> <access_vid> <start_addr> [to <end_addr>] { [web] [snmp] [telnet] | all }

Parameter

management	Access management configuration
< 1-16>	ID of access management entry
< 1-4094>	The VLAN ID for the access management entry
< ipv4_addr>	Start IPv4 address
< ipv6_addr>	Start IPv6 address
all	All services
snmp	SNMP service
telnet	TELNET/SSH service
to	End address of the range
web	Web service

EXAMPLE

```
SM24DPB(config)# access management 10 3 192.168.1.1 all
SM24DPB(config)#
```

aggregation

Configure Aggregation mode.

SYNTAX

aggregation mode { [dmac] [ip] [dmac] [port] }

Parameter

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

```
SM24DPB(config)# aggregation mode ip port dmac smac
SM24DPB(config)#
```

banner

Define a login banner

SYNTAX

banner [motd] <banner>
banner exec <banner>
banner login <banner>

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

```
SM24DPB(config)# banner exec LINE
Enter TEXT message.  End with the character 'L'.
L
SM24DPB(config)#
```

clock

Configure time-of-day clock.

SYNTAX

clock set <icliDate> <icliTime>
clock summer-time <word16> date [<start_month_var> <start_date_var> <start_year_var> <start_hour_var> <end_month_var> <end_date_var> <end_year_var> <end_hour_var> [<offset_var>]]
clock summer-time <word16> recurring [<start_week_var> <start_day_var> <start_month_var> <start_hour_var> <end_week_var> <end_day_var> <end_month_var> <end_hour_var> [<offset_var>]]
clock timezone <word_var> <hour_var> [<minute_var>]

Parameter

set	set clock
summer-time	Configure summer (daylight savings) time
timezone	Configure time zone
<date>	yyyy/mm/dd
<time>	hh:mm:ss
<2000-2097>	Year to start
hh:mm	Time to start (hh:mm)
<1-12>	Month to end
<1-31>	Date to end
<2000-2097>	Year to end
hh:mm	Time to end (hh:mm)
<1-1440>	Offset to add in minutes

<1-5>	Week number to start
<1-7>	Weekday to start
<1-12>	Month to start

EXAMPLE

```
SM24DPB(config)# clock set 2014/11/04 10:22:03
2014-11-04T10:22:03+00:00
SM24DPB(config)# do show clock
System Time     : 2011-01-01T00:05:48+00:00
```

default

Set a command to its defaults

SYNTAX

default access-list rate-limiter [<rate_limiter_list>]

Parameters

access-list	Access list
rate-limiter	Rate limiter
<RateLimiterId : 1-16>	Rate limiter ID

EXAMPLE

```
SM24DPB(config)# default access-list rate-limiter 3
SM24DPB(config)#
```

dms

Enable and configure DMS (Device Management System).

SYNTAX

dms service-mode { disabled | enabled [priority { high | mid | low | non }] }

Parameters

service-mode	DMS mode
disabled	DMS mode is disabled
enabled	DMS mode is enabled
priority	DMS priority. You can choose the priority to change the DMS control level of the switch.
high	DMS priority is high; this switch will become the Controller (Master) DMS switch.
low	DMS priority is low level
mid	DMS priority is mid-level
non	DMS priority is none; this switch will never become the Controller (Master) DMS switch.

EXAMPLE 1

```
SM24DPB(config)# dms service-mode enabled priority high
SM24DPB(config)#
```

do

Run exec commands in config mode.

SYNTAX

do < LINE >{[< LINE >]}

Parameter

<LINE> Exec Command

EXAMPLE

```
SM24DPB(config)# do show vlan
VLAN  Name                          Ports
-------------------------------------------------------------------------------------
1     default                       GigabitEthernet 1/1, GigabitEthernet 1/2, GigabitEthernet 1/3,
                                     GigabitEthernet 1/4, GigabitEthernet 1/5
SM24DPB (config)#
```

dot1x

Configure IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x authentication timer inactivity <v_10_to_100000>
dot1x authentication timer re-authenticate <v_1_to_3600>
dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }*1
dot1x guest-vlan <value>
dot1x guest-vlan supplicant
dot1x max-reauth-req <value>
dot1x re-authentication
dot1x system-auth-control
dot1x timeout quiet-period <v_10_to_1000000>
dot1x timeout tx-period <v_1_to_65535>

Parameters

authentication	Authentication
feature	Globally enables/disables a dot1x feature functionality
guest-vlan	Guest VLAN
max-reauth-req	Guest VLAN ID used when 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>	The number of times a Request Identity EAPOL frame is sent without response before considering 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.
<10-1000000>	seconds
<1-65535>	seconds

EXAMPLE

```
SM24DPB(config)# aaa authentication login http radius
SM24DPB(config)# access management 10 3 192.168.1.1 all
SM24DPB(config)# aggregation mode ip port dmac smac
SM24DPB(config)# default access-list rate-limiter 3
SM24DPB(config)# dot1x authentication timer inactivity 1000
SM24DPB(config)# dot1x feature guest-vlan radius-qos radius-vlan
SM24DPB(config)# dot1x guest-vlan 33
SM24DPB(config)# dot1x max-reauth-req 3
SM24DPB(config)# dot1x re-authentication
SM24DPB(config)# dot1x system-auth-control
SM24DPB(config)# dot1x timeout quiet-period 3000
SM24DPB(config)#
```

enable

Configure login password parameters.

SYNTAX

enable password [level <priv>] <password>
enable secret { 0 | 5 } [level <priv>] <password>

Parameter

password	Assign the privileged level clear password
secret	Assign the privileged level secret
WORD	The UNENCRYPTED (cleartext) 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

```
SM24DPB(config)# enable password level 15 admin
SM24DPB(config)# enable password admin
SM24DPB(config)# enable password level 15 admin
SM24DPB(config)# enable secret 0 admin22
SM24DPB(config)#
```

event

Configure Trap event severity level.

SYNTAX

event group { AC-Power | ACL | ACL-Log | Access-Mgmt | Auth-Failed | AUTO-SAVING | Cold-Start | Config-Info | Firmware-Upgrade | Import-Export | LACP | Link-Status | Login | Logout | Loop-Protect | Mgmt-IP-Change | Module-Change | NAS | Password-Change | Port-Security | Spanning-Tree | Warm-Start | DC-Power | Battery-Power | BCS-Protection | DMS | Advanced | Dying-Gasp | Temperature | Voltage | PoE-Auto-Check | Poe-Auto-Power-Reset | Poe-Device-Guard | FAN | ZTU-FAIL | Surveillance | Power | SCP-Success | SCP-Fail | AGV-Car | Robot-Arm | PoE-PD-On | PoE-PD-Off | Over-Max-PoE-Power-Limitation | PoE-PD-Over-Current } { level <lvl> | syslog { enable | disable } | trap { enable | disable } | smtp { enable | disable } | ipush { enable | disable } }

Parameters

Group	Configure trap event severity level		
<word32>	<word32>		
AC-Power	ACL	ACL-Log	AUTO-SAVING
Access-Mgmt	Auth-Failed	BCS-Protection	Cold-Start
Config-Info	DC-Power	DMS	Dying-Gasp
FAN	Firmware-Upgrade	Import-Export	LACP
Link-Status	Login	Logout	Loop-Protect
Mgmt-IP-Change	Module-Change	NAS	Password-Change
Port-Security	SCP-Fail	SCP-Success	Spanning-Tree
Temperature	Voltage	Warm-Start	

EXAMPLE

```
SM24DPB(config)# event group Access-Mgmt ?
  level     Severity level
  smtp      smtp mode
  syslog    syslog mode
  trap      trap mode
SM24DPB(config)# event group Access-Mgmt level ?
  <0-7>    <0> Emergency ,<1> Alert ,<2> Critical ,<3> Error ,<4> Warning ,<5> Notice ,<6> Informationl ,<7> Debug
SM24DPB(config)# event group Access-Mgmt level 2
SM24DPB(config)# event group Access-Mgmt trap enable
SM24DPB(config)#
```

gvrp

Configure GVRP feature.

SYNTAX

gvrp
gvrp max-vlans <1-4095>
gvrp time { [join-time <1-20>] [leave-time <60-300>] [leave-all-time <1000-5000>] }*1

Parameters

max-vlans Number of simultaneous VLANs that GVRP can control
time Configure GARP protocol timer parameters. IEEE 802.1D-2004, clause 12.11.
<cr>

EXAMPLE

```
SM24DPB(config)# gvrp max-vlans 333
SM24DPB(config)# gvrp time join-time 13 leave-all-time 3000 leave-time 200
SM24DPB(config)#
```

hostname

Set system's network name.

SYNTAX

hostname < WORD >

Parameters

WORD This system's network name.

EXAMPLE

```
SM24DPB(config)# hostname Transition
Transition(config)# hostname SM24DPB
SM24DPB(config)#
```

interface

Select an interface to configure.

SYNTAX

interface (<port_type> [<plist>])
interface vlan <vlist>

Parameters

<port_type> GigabitEthernet or 10Gigabitethernet
vlan VLAN interface configurations
<vlan_list> List of VLAN interface numbers, 1-4095
<port_type_list> Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
* All switches or All ports
GigabitEthernet 1 Gigabit Ethernet Port
vlan VLAN interface configurations
<port_type_list> Port list for all port types

EXAMPLE

```
SM24DPB(config)# interface GigabitEthernet 1/1-13
SM24DPB(config-if)# interface vlan 3
SM24DPB(config-if-vlan)# ip address dhcp
SM24DPB(config-if-vlan)#
```

ip

Internet Protocol.

SYNTAX

ip arp inspection
ip arp inspection entry interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>
ip arp inspection translate [interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>]
ip arp inspection vlan <in_vlan_list>
ip arp inspection vlan <in_vlan_list> logging { deny | permit | all }
ip dhcp excluded-address <low_ip> [<high_ip>]
ip dhcp pool <pool_name>
ip dhcp relay
ip dhcp relay information option
ip dhcp relay information policy { drop | keep | replace }
ip dhcp server per-port
ip dhcp snooping
ip dns proxy
ip helper-address <v_ipv4_ucast>
ip http port <port>
ip http secure-certificate { upload <url_file> [pass-phrase <pass_phrase>] | generate }
ip http secure-server port <port>
ip igmp host-proxy [leave-proxy]
ip igmp snooping
ip igmp snooping vlan <v_vlan_list>
ip igmp ssm-range <v_ipv4_mcast> <ipv4_prefix_length>
ip igmp unknown-flooding
ip link-local interface <ifc>
ip name-server { <v_ipv4_addr> | dhcp [interface vlan <v_vlan_id>] }
ip route <v_ipv4_addr> <v_ipv4_netmask> <v_ipv4_gw>
ip routing
ip scp server { enable | disable }
ip source binding interface <port_type> <in_port_type_id> <vlan_var> <ipv4_var><mask_var>
ip ssh keyregen
ip ssh port <port>
ip telnet port <port>
ip verify source
ip verify source translate

Parameters

arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
dns	Domain Name System
helper-address	DHCP relay server
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
server	support scp server
disable	Set mode to scp Disable
enable	Set mode to scp Enable
source	source command
ssh	Secure Shell
verify	verify command
inspection	ARP inspection
entry	arp inspection entry
interface	arp inspection entry interface config
<port_type>	Port type in Fast, Giga ethernet
<port_type_id>	Port ID in the format of switch-no/port-no
<vlan_id>	Select a VLAN id to configure
<mac_ucast>	Select a MAC address to configure
<ipv4_ucast>	Select an IP Address to configure

deny	log denied entries
permit	log permitted entries
all	log all entries
translate	arp inspection translate all entries
vlan	arp inspection vlan setting
<vlan_list>	arp inspection vlan list
relay	**DHCP relay agent information**
information	DHCP information option <Option 82>
option	DHCP option
information	DHCP information option(Option 82)
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 message that already has it
server	Enable DHCP server
snooping	DHCP snooping
proxy	DNS proxy service
secure-redirect	Secure HTTP web rediction
secure-server	Secure HTTP web server
snooping	Snooping IGMP
<word16>	Profile name in 16 char's
vlan	IGMP VLAN
ssm-range	IPv4 address range of Source Specific Multicast
<ipv4_mcast>	Valid IPv4 multicast address
<4-32>	Prefix length ranges from 4 to 32
unknown-flooding	Flooding unregistered IPv4 multicast traffic
<ipv4_ucast>	A valid IPv4 unicast address
dhcp	Dynamic Host Configuration Protocol
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID
<ipv4_addr>	Network
<ipv4_netmask>	Netmask
<ipv4_addr>	Gateway
binding	ip source binding
interface	ip source binding entry interface config
<port_type>	* or Gigibitethernet
*	All switches or All ports
Gigabitethernet	1 Gigabitethernet Port
10Gigabitethernet	10 Gigabitethernet Port
<port_type_id>	Port ID in the format of switch-no/port-no, ex 1/1-24 for Gigabitethernet
<vlan_id>	Select a VLAN id to configure
<ipv4_ucast>	Select an IP Address to configure
<ipv4_netmask>	Select a subnet mask to configure
<mac_ucast>	Select a MAC address to configure
source	verify source
limit	limit command
<0-2>	the number of limit
translate	ip verify source translate all entries
logging	ARP inspection vlan logging mode config

EXAMPLE

```
SM24DPB(config)# ip arp inspection
SM24DPB(config)# ip dhcp relay
SM24DPB(config)# ip dns proxy
SM24DPB(config)# ip helper-address 192.168.1.1
SM24DPB(config)# ip http secure-server port 65
SM24DPB(config)# ip igmp snooping vlan 3
SM24DPB(config)# ip name-server 192.168.1.6
SM24DPB(config)# ip routing
SM24DPB(config)# ip ssh port 97
SM24DPB(config)# ip verify source translate
```

```
IP Source Guard:
        Translate 0 dynamic entries into static entries.
SM24DPB(config)# ip scp server enable
SM24DPB(config)#
```

Messages:

% Interface routes are automatically generated by system. Can not add interface route manually.

ipmc

IPv4/IPv6 multicast configuration.

SYNTAX

ipmc profile
ipmc profile <profile_name>
ipmc range <entry_name> { <v_ipv4_mcast> [<v_ipv4_mcast_1>] | <v_ipv6_mcast> [<v_ipv6_mcast_1>] }

Parameters

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
< word16>	Range entry name in 16 char's
<ipv4_mcast>	Valid IPv4 multicast address
<ipv6_mcast>	Valid IPv6 multicast address
<EntryName : word16>	Range entry name in 16 char's
deny	Deny matching addresses
permit	Permit matching addresses
log	Log when matching
next	Specify next entry used in profile; Default: Add entry last
<NextEntry : word16>	Range entry name in 16 char's
<cr>	

EXAMPLE

```
SM24DPB(config)# ipmc profile test
SM24DPB(config-ipmc-profile)# ?
    default        Set a command to its defaults
    description    Additional description about the profile in 64 char's
    do             To run exec commands in config mode
    end            Go back to EXEC mode
    exit           Exit from current mode
    help           Description of the interactive help system
    no             Negate a command or set its defaults
    range          A range of IPv4/IPv6 multicast addresses for the profile
SM24DPB(config-ipmc-profile)#
```

ipv6

IPv6 configuration commands

SYNTAX

ipv6 mld host-proxy [leave-proxy]
ipv6 mld snooping
ipv6 mld snooping vlan <v_vlan_list>
ipv6 mld ssm-range <v_ipv6_mcast> <ipv6_prefix_length>
ipv6 mld unknown-flooding
ipv6 route <v_ipv6_subnet> { <v_ipv6_ucast> | interface vlan <v_vlan_id> <v_ipv6_addr> }

Parameters

mld	Multicast 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(s): VID
<ipv6_mcast>	Valid IPv6 multicast address
X:X:X:X::X/<0-128>	IPv6 prefix x:x::y/z

EXAMPLE

```
SM24DPB(config)# ipv6 mld host-proxy leave-proxy
SM24DPB(config)# ipv6 mld snooping vlan 1
SM24DPB(config)#
```

lacp

LACP settings.

SYNTAX

lacp system-priority <1-65535>

Parameter

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

EXAMPLE

```
SM24DPB(config)# lacp system-priority 333
SM24DPB(config)#
```

line

Configure a terminal line.

SYNTAX

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

Parameter

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

EXAMPLE

```
SM24DPB(config)# line  console 0
```

```
SM24DPB(config-line)#
```

lldp

Configure LLDP parameters.

SYNTAX

lldp holdtime <val>
lldp med datum { wgs84 | nad83-navd88 | nad83-mllw }
lldp med fast <v_1_to_10>
lldp med location-tlv altitude { meters | floors } <v_word11>
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 } <v_string250>
lldp med location-tlv elin-addr <v_word25>
lldp med location-tlv latitude { north | south } <v_word8>
lldp med location-tlv longitude { west | east } <v_word9>
lldp med media-vlan-policy <policy_index> { voice | voice-signaling | guest-voice-signaling | guest-voice | softphone-voice | video-conferencing | streaming-video | video-signaling } { tagged <v_vlan_id> | untagged } [l2-priority <v_0_to_7>] [dscp <v_0_to_63>]
lldp reinit <val>
lldp timer <val>
lldp transmission-delay <val>

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	LLDP tx reinitialization delay in seconds.
timer	Sets LLDP TX interval (The time between each LLDP frame transmitted in seconds).
transmission-delay	Sets LLDP transmision-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.
<1-10>	1-10 seconds.
<5-32768>	5-32768 seconds.
<1-8192>	1-8192 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	Use the media-vlan-policy to 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
altitude	Altitude parameter
meter	Altitude value
floors	Altitude value
civic-addr	Civic address information and postal information
country	The two-letter ISO 3166 country code in capital ASCII letters - Eg: DK, DE or US.
state	National subdivisions (state, canton, region, province, prefecture).
county	County, parish, gun (Japan), district.
city	City, township, shi (Japan) - Example: Copenhagen.
district	City division, borough, city district, ward, chou (Japan).
block	Neighbourhood, block.
street	Street - Example: Poppelvej.
leading-street-direction	Leading street direction - Example: N.
trailing-street-suffix	Trailing street suffix - Example: SW.
street-suffix	Street suffix - Example: Ave, Platz.
house-no	House number - Example: 21.
house-no-suffix	House number suffix - Example: A, 1/2.
landmark	Landmark or vanity address - Example: Columbia University.

additional-info	Additional location info - Example: South Wing.
name	Name (residence and office occupant) - Example: Flemming Jahn.
zip-code	Postal/zip code - Example: 2791.
building	Building (structure) - Example: Low Library.
apartment	Unit (Apartment, suite) - Example: Apt 42.
floor	Floor - Example: 4.
room-number	Room number - Example: 450F.
place-type	Place type - Example: Office.
postal-community-name	Postal community name - Example: Leonia.
p-o-box	Post office box (P.O. BOX) - Example: 12345.
additional-code	Additional code - Example: 1320300003.
<string250>	Value for the corresponding selected civic address.
elin-addr	Emergency Location Identification Number, (e.g. E911 etc), as defined by TIA or NENA.
<dword25>	ELIN value
north	Setting latitude direction to north.
south	Setting latitude direction to south.
<word8>	Latitude degrees (0.0000-90.0000).
policy-list	Assignment of policies.
<range_list>	Policies to assign to the interface.
<0-31>	Policy id for the policy which is created.
voice	Create a voice policy.
voice-signaling	Create a voice signaling policy.
guest-voice-signaling	Create a guest voice signaling policy.
guest-voice	Create a guest voice policy.
softphone-voice	Create a softphone voice policy.
video-conferencing	Create a video conferencing policy.
streaming-video	Create a streaming video policy.
video-signaling	Create a video signaling policy.
tagged	The policy uses tagged frames.
<vlan_id>	The VLAN the policy uses tagged frames.
untagged	The policy uses un-tagged frames.
l2-priority	Layer 2 priority.
<0-7>	Priority 0-7
dscp	Differentiated Services Code Point.
<0-63>	DSCP value 0-63.

EXAMPLE

```
SM24DPB(config)# lldp holdtime 5
SM24DPB(config)# lldp med fast 5
SM24DPB(config)# lldp reinit 3
SM24DPB(config)# lldp timer 555
SM24DPB(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 1332
SM24DPB(config)#
```

logging

Configure Syslog (System Logging).

SYNTAX

logging host { <v_ipv4_ucast> | <v_word45> }
logging port <port_no>

Parameters

host	host
on	Enable syslog server
port	Service port number
<hostname>	Domain name of the log server
<ipv4_ucast>	IP address of the log server
<1-65535>	Port number
<cr>	

EXAMPLE

```
SM24DPB(config)# logging on
SM24DPB(config)# logging port 46
SM24DPB(config)# logging host 192.168.1.77
SM24DPB(config)#
```

loop-protect

Loop protection configuration.

SYNTAX

loop-protect
loop-protect shutdown-time <0-604800>

loop-protect transmit-time <1-10>

Parameters

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

EXAMPLE

```
SM24DPB(config)# loop-protect
SM24DPB(config)# loop-protect shutdown-time 50000
SM24DPB(config)# loop-protect transmit-time 5
SM24DPB(config)#
```

mac

MAC table entries/configuration.

SYNTAX

mac address-table aging-time <0,10-1000000>
mac address-table static <mac_addr> vlan <vlan_id> interface <port_type> <port_type_list>

Parameters

address-table	Mac Address Table
aging-time	Mac address aging time
<0,10-1000000>	Aging time in seconds, 0 disables aging
static	Static MAC address
<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
<port_type>	Port type * or Gigabitethernet or 10Gigabitethernet
*	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet port
10Gigabitethernet	10 Gigabit Ethernet port
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB(config)# mac address-table aging-time 3333
SM24DPB(config)#
```

map-api-key

Set Google map key string. You need a valid API key and a Google Cloud Platform billing account to access Google core product. If not, DMS Map View will not be able to load Google Map correctly. Visit the Google website below and following the directions to get API key:
https://developers.google.com/maps/documentation/directions/get-api-key

SYNTAX

map-api-key <key_str>

Parameters

<word127>

EXAMPLE

```
SM24DPB(config)# map-api-key GMK12345
SM24DPB(config)# do show map
Key    : GMK12345
SM24DPB(config)#
```

monitor

Set monitor configuration.

SYNTAX

monitor destination interface <port_type> <in_port_type>
monitor source { { interface (<port_type> [<v_port_type_list>]) } | { cpu [<cpu_switch_range>] } } { both | rx | tx }

Parameters

destination	The destination port. That is the port that trafficed should be mirrored to.
source	The source port(s). That is the ports to be mirrored to the destination port.
interface	Mirror Interface traffic.
<port_type_id>	Port ID in 1/1-24
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
both	Setting source port to both will mirror both ingress and egress traffic.
rx	Setting source port to rx will mirror ingress traffic.
tx	Setting source port to tx will mirror egress traffic.
<cr>	

EXAMPLE

```
SM24DPB(config)# monitor destination interface GigabitEthernet 1/13
SM24DPB(config)# monitor source interface GigabitEthernet 1/9 rx
SM24DPB(config)#
```

mvr

Configure Multicast VLAN Registration configuration.

SYNTAX

mvr
mvr name <mvr_name> channel <profile_name>
mvr name <mvr_name> frame priority <cos_priority>
mvr name <mvr_name> frame tagged
mvr name <mvr_name> igmp-address <v_ipv4_ucast>
mvr name <mvr_name> last-member-query-interval <ipmc_lmqi>
mvr name <mvr_name> mode { dynamic | compatible }
mvr vlan <v_vlan_list> [name <mvr_name>]
mvr vlan <v_vlan_list> channel <profile_name>
mvr vlan <v_vlan_list> frame priority <cos_priority>
mvr vlan <v_vlan_list> frame tagged
mvr vlan <v_vlan_list> igmp-address <v_ipv4_ucast>
mvr vlan <v_vlan_list> last-member-query-interval <ipmc_lmqi>
mvr vlan <v_vlan_list> mode { dynamic | compatible }

Parameters

name	MVR multicast name
<MvrName : word16>	MVR multicast VLAN name
channel	MVR channel configuration
<word16>	Profile name in 16 char's
frame	MVR control frame in TX
priority	Interface CoS priority
<0-7>	CoS priority ranges from 0 to 7
tagged	Tagged IGMP/MLD frames will be sent
igmp-address	MVR address configuration used in IGMP
<ipv4_ucast>	A valid IPv4 unicast address MVR multicast VLAN name
last-member-query-interval	Last Member Query Interval in tenths of seconds
<0-31744>	0 - 31744 tenths of seconds
mode	MVR mode of operation
dynamic	Dynamic MVR operation mode
compatible	Compatible MVR operation mode
vlan	MVR multicast vlan
<vlan_list>	MVR multicast VLAN list
channel	MVR channel configuration
<word16>	Profile name in 16 char's
frame	MVR control frame in TX
priority	Interface CoS priority
<0-7>	CoS priority ranges from 0 to 7
igmp-address	MVR address configuration used in IGMP
<ipv4_ucast>	A valid IPv4 unicast address
<vlan_list>	MVR multicast VLAN list
last-member-query-interval	Last Member Query Interval in tenths of seconds
<0-31744>	0 - 31744 tenths of seconds
compatible	Compatible MVR operation mode

EXAMPLE

```
SM24DPB(config)# mvr vlan 10 mode dynamic
% Invalid MVR VLAN BoB.
% Failed to set MVR interface mode setting.
SM24DPB(config)#
```

ntp

Configure NTP (Network Timing Protocol).

SYNTAX

ntp
ntp automatic
ntp interval <interval>
ntp server <index_var> ip-address { <ipv4_var> | <ipv6_var> | <name_var> }

Parameters

automatic	Configure Automatic
interval	Configure NTP Time-Sync Interval
<5,10,15,30,60,120>	interrval
server	Configure NTP server
<1-5>	index number
ip-address	ip address
<ipv4_ucast>	ipv4 address
<ipv6_ucast>	ipv6 address
<hostname>	domain name

EXAMPLE

```
SM24DPB(config)# ntp server 1 ip-address BoB
SM24DPB(config)# ntp automatic
SM24DPB(config)# ntp interval 5
SM24DPB(config)#
```

port-security

Enable/disable port security globally.

SYNTAX

port-security
port-security aging
port-security aging time <v_10_to_10000000>

Parameters

aging	Time in seconds between check for activity on learned MAC addresses.
time	Time in seconds between check for activity on learned MAC addresses.
<10-10000000>	seconds

EXAMPLE

```
SM24DPB(config)# port-security aging
SM24DPB(config)# port-security aging time 1000
SM24DPB(config)#
```

privilege

Configure command privilege parameters.

SYNTAX

privilege { exec | configure | config-vlan | line | interface | if-vlan | ipmc-profile | snmps-host | stp-aggr | dhcp-pool | rfc2544-profile } level <privilege> <cmd>

Parameters

config-vlan	VLAN Configuration Mode
configure	Global configuration mode
dhcp-pool	DHCP Pool Configuration Mode
exec	Exec mode
if-vlan	VLAN Interface Mode
interface	Port List Interface Mode
ipmc-profile	IPMC Profile Mode
line	Line configuration mode
rfc2544-profile	RFC2544 Profile Mode
snmps-host	SNMP Server Host Mode
stp-aggr	STP Aggregation Mode
level	Set privilege level of command
<0-15>	Privilege level
<LINE>	Initial valid words and literals of the command to modify, in 128 char's

EXAMPLE

```
SM24DPB(config)# privilege configure level 10 LINE
SM24DPB(config)# privilege config-vlan level 10 LINE
SM24DPB(config)# privilege configure level 10 LINE
SM24DPB(config)# privilege dhcp-pool level 10 LINE
SM24DPB(config)#
```

rapid-ring

Set Rapid Ring's parameters.

SYNTAX

rapid-ring entry <entryindex> role disabled
rapid-ring entry <entryindex> role master
rapid-ring entry <entryindex> role member

Parameters

entry	Set entry index
<uint8>	index
role	Set role value
disabled	role value disabled
master	role value master
member	role value member

EXAMPLE

```
SM24DPB(config)# rapid-ring entry 1 role master
SM24DPB(config)# rapid-ring entry 2 role member
SM24DPB(config)# rapid-ring entry 3 role member
SM24DPB(config)# rapid-ring entry 4 role member
SM24DPB(config)# do show rapid
Entry Index               : 1
Rapid Ring Role           : Master
Rapid Ring Port 1         : 1
Rapid Ring Port 2         : 2
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding
```

```
Entry Index               : 2
Rapid Ring Role           : Member
Rapid Ring Port 1         : 3
Rapid Ring Port 2         : 4
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 3
Rapid Ring Role           : Member
Rapid Ring Port 1         : 5
Rapid Ring Port 2         : 6
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 4
Rapid Ring Role           : Member
Rapid Ring Port 1         : 7
Rapid Ring Port 2         : 8
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 5
Rapid Ring Role           : Member
Rapid Ring Port 1         : 9
Rapid Ring Port 2         : 10
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 6
Rapid Ring Role           : Member
Rapid Ring Port 1         : 11
Rapid Ring Port 2         : 12
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding
:::
:::
Entry Index               : 11
Rapid Ring Role           : Disabled
Rapid Ring Port 1         : 21
Rapid Ring Port 2         : 22
Rapid Ring Port 1 State   : Forwarding
Rapid Ring Port 2 State   : Forwarding

Entry Index               : 12
Rapid Ring Role           : Disabled
Rapid Ring Port 1         : 23
Rapid Ring Port 2         : 24
Rapid Ring Port 1 State   : Forwarding
Rapid Ring Port 2 State   : Forwarding
SM24DPB(config)#
```

radius-server

Configure RADIUS.

SYNTAX

radius-server attribute 32 <line1-255>
radius-server attribute 4 <ipv4_ucast>
radius-server attribute 95 <ipv6_ucast>
radius-server deadtime <1-1440>
radius-server host { <word1-255> | <ipv4_ucast> | <ipv6_ucast> } [auth-port <0-65535>] [acct-port <0-65535>] [timeout <1-1000>] [retransmit <1-1000>] [key <line1-63>]
radius-server key <line1-63>
radius-server retransmit <1-1000>
radius-server timeout <1-1000>

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
<Minutes : 1-1440>	Time in minutes
<Host4 : ipv4_ucast>	IPv4 address
<Host6 : ipv6_ucast>	IPv6 address
<HostName : word1-255>	Hostname
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)
<AuthPort : 0-65535>	UDP port number
<Seconds : 1-1000>	Wait time in seconds
<Key : line1-63>	The shared key
<1-1000>	Number of retries for a transaction

EXAMPLE

```
SM24DPB(config)# radius-server host device key 12
SM24DPB(config)#
```

rmon

Configure Remote Monitoring.

SYNTAX

rmon alarm <1-65535> <WORD> <1-2147483647> { absolute | delta } rising-threshold <-2147483648-2147483647> [<0-65535>] falling-threshold <-2147483648-2147483647> [<0-65535>] { [rising | falling | both] }
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
<WORD>	MIB object to monitor
<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
rising	Trigger alarm when the first value is larger than the rising threshold
falling	Trigger alarm when the first value is less than the falling threshold
both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
ifInOctets	The total number of octets received on the interface, including framing characters
ifInUcastPkts	The number of uni-cast packets delivered to a higher-layer protocol
ifInNUcastPkts	The number of broad-cast and multi-cast packets delivered to a higher-layer protocol
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
ifInUnknownProtos	The number of the inbound packets that were discarded because of the unknown or un-support protocol
ifOutOctets	The number of octets transmitted out of the interface , including framing characters
ifOutUcastPkts	The number of uni-cast packets that request to transmit
ifOutNUcastPkts	The number of broad-cast and multi-cast packets that request to transmit
ifOutDiscards	The number of outbound packets that are discarded event the packets is normal
ifOutErrors	The number of outbound packets that could not be transmitted because of errors
<uint>	ifIndex
<1-2147483647>	Sample interval
absolute	Test each sample directly
delta	Test delta between samples
rising-threshold	Configure the rising threshold
description	Specify a description of the event
log	Generate RMON log when the event fires
trap	Generate SNMP trap when the event fires
LINE	Event description
WORD	SNMP community string
<cr>	

EXAMPLE

```
SM24DPB(config)# rmon alarm 10000 ifInErrors 10 9999 absolute rising-threshold 0
 falling-threshold 0 both
% Invalid: rising threshold must be larger than falling threshold
SM24DPB(config)# rmon alarm 10000 ifInErrors 10 9999 absolute rising-threshold 1
 falling-threshold 0 both
SM24DPB(config)# rmon event 1 description LEADTime NotTooLate
SM24DPB(config)# rmon event 1 trap SComStr1
SM24DPB(config)#
```

Messages: *% invalid OID string*

sflow

Configure Statistics flow parameters.

SYNTAX

sflow agent-ip { ipv4 <ipv4_addr> | ipv6 <ipv6_addr> }
sflow collector-address{ <ipv4_addr> | <ipv6_addr> }
sflow collector-port <1-65535>
sflow max-datagram-size [receiver <range_list>] <200-1468>
sflow timeout [receiver <range_list>] <0-2147483647>

Parameters

agent-ip	The agent IP address used as agent-address in UDP datagrams. Defaults to IPv4 loopback address.
Ipv4	ipv4 address
Ipv6	ipv6 address
<ipv4_addr>	ipv6 address
<ipv6_addr>	ipv4 address
collector-address	Collector address
collector-port	Collector UDP port
<1-65535>	Port Number
max-datagram-size	Maximum datagram size.
<200-1468>	Bytes
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.
<0-2147483647>	Number in seconds

EXAMPLE

```
SM24DPB(config)# radius-server host device key 12
SM24DPB(config)# sflow agent-ip ipv4 192.168.1.2
SM24DPB(config)# sflow collector-port 3
SM24DPB(config)# sflow max-datagram-size 333
SM24DPB(config)# sflow timeout 3333
SM24DPB(config)#
```

SMTP

Set email information.

SYNTAX

smtp delete { server | username | sender | returnpath | mailaddress <index> }
smtp mailaddress <index> <mail_addr_name>
smtp returnpath <return_path>
smtp sender <sender_name>
smtp server <hostname>
smtp username <username> <password>

Parameters

delete	Delete command
mailaddress	Configure email address
returnpath	Configure email return path
sender	Configure email sender
server	Configure email server
username	Configure email user name

EXAMPLE

```
SM24DPB(config)# smtp mailaddress 1 jeffs@transition.com
SM24DPB(config)# smtp returnpath jeffs
SM24DPB(config)# smtp sender jeffs
SM24DPB(config)# smtp server homeoffice
SM24DPB(config)# smtp username jeffs testing123
SM24DPB(config)#
```

spanning-tree

Set Spanning Tree protocol parameters.

SYNTAX

spanning-tree
spanning-tree aggregation
spanning-tree edge bpdu-filter
spanning-tree edge bpdu-guard
spanning-tree mode { stp | rstp | mstp }
spanning-tree mst <instance> priority <prio>
spanning-tree mst <instance> vlan <v_vlan_list>
spanning-tree mst forward-time <fwdtime>
spanning-tree mst max-age <maxage> [forward-time <fwdtime>]
spanning-tree mst max-hops <maxhops>
spanning-tree mst name <name> revision <v_0_to_65535>
spanning-tree recovery interval <interval>
spanning-tree transmit hold-count <holdcount>

Parameters

aggregation	Aggregation mode
edge	Edge ports
mode	STP protocol mode
mst	STP bridge instance
recovery	The error recovery timeout
transmit	BPDUs to transmit
auto-edge	Auto detect edge status
bpdu-guard	Enable/disable BPDU guard
edge	Edge port
link-type	Port link-type
mst	STP bridge instance
restricted-role	Port role is restricted (never root port)
restricted-tcn	Restrict topology change notifications
<Instance : 0-7>	Instance 0-7 (CIST=0, MST2=1...)
cost	STP Cost of this port
port-priority	STP priority of this port
<Cost : 1-200000000>	Cost range
auto	Use auto cost
<Prio : 0-240>	Range (lower higher priority)

EXAMPLE

```
SM24DPB(config)# spanning-tree aggregation
SM24DPB(config-stp-aggr)# spanning-tree auto-edge
SM24DPB(config-stp-aggr)# spanning-tree bpdu-guard
SM24DPB(config-stp-aggr)# spanning-tree edge
SM24DPB(config-stp-aggr)# spanning-tree mst 0 port-priority 20
SM24DPB(config-stp-aggr)#
```

system

Configure SNMP server parameters.

SYNTAX

system contact <v_line255>
system description <line128>
system location <v_line255>
system name <v_line255>
system reboot mode { enable | disable }
system reboot { [Sun <hour_v00_0_to_23> <min_v00_0_to_55>] [Mon <hour_v10_0_to_23> <min_v10_0_to_55>] [Tue <hour_v20_0_to_23> <min_v20_0_to_55>] [Wed <hour_v30_0_to_23> <min_v30_0_to_55>] [Thr <hour_v40_0_to_23> <min_v40_0_to_55>] [Fri <hour_v50_0_to_23> <min_v50_0_to_55>] [Sat <hour_v60_0_to_23> <min_v60_0_to_55>] }

Parameters

contact	Set the SNMP server's contact string
description	Configure System Description
location	Set the SNMP server's location string
name	Set the SNMP server's system model name string
reboot	Set the Switch Reboot configurations
Fri	Configure Switch Reboot scheduling on Friday
Mon	Configure Switch Reboot scheduling on Monday
Mon	Configure Switch Reboot scheduling on Monday
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
disable	Disable Switch Reboot
enable	Enable Switch Reboot
<**v_hour : 0-2**3>	start hour
<**v_miniute : 0-55**>	start minute, value must be multiples of 5
<cr>	

EXAMPLE

```
SM24DPB(config)# system contact 222
SM24DPB(config)# system location 333
SM24DPB(config)# system name GE
SM24DPB(config)# system reboot mode enable
SM24DPB(config)# system reboot Fri 12 30
SM24DPB(config)#
```

tacacs-server

Configure TACACS+.

SYNTAX

tacacs-server deadtime <minutes>
tacacs-server host <host_name> [port <port>] [timeout <seconds>] [key <key>]
tacacs-server key <key>
tacacs-server timeout <seconds>

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
<Minutes : 1-1440>	Time in minutes
<Key : line1-63>	The shared key
<Seconds : 1-1000>	Wait time in seconds
<word1-255>	Hostname
<ipv4_ucast>	IPv4 address
<ipv6_ucast>	IPv6 address
port	TCP port for TACACS+ server
<0-65535>	TCP port number

EXAMPLE

```
SM24DPB(config)# tacacs-server deadtime 300
SM24DPB(config)# tacacs-server host 192.168.1.2
SM24DPB(config)# tacacs-server timeout 300
SM24DPB(config)#
```

upnp

Configure Universal Plug and Play parameters.

SYNTAX

upnp
upnp advertising-duration <v_66_to_86400>
upnp ttl <v_1_to_255>

Parameters

advertising-duration	Set advertising duration
ttl	Set TTL value
<66-86400>	advertising duration
<1-255>	TTL value

< cr>

EXAMPLE

```
SM24DPB(config)# upnp
SM24DPB(config)# upnp advertising-duration 40000
SM24DPB(config)# upnp ttl 200
SM24DPB(config)#
```

username

Establish User Name Authentication.

SYNTAX

username <username> privilege <priv> password encrypted <encry_password>
username <username> privilege <priv> password none
username <username> privilege <priv> password unencrypted <password>

Parameters

<Username : word31>	User name allows letters, numbers and underscores
privilege	Set user privilege level
<privilegeLevel : 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
<Password : line31>	The UNENCRYPTED (Plain Text) user password. Any printable characters including space is accepted. Notice that you have no change to get the Plain Text password after this command. The system will always display the ENCRYPTED password.
<Password : word4-44>	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.

EXAMPLE

```
SM24DPB(config)# username jefferson privilege 15 password none
SM24DPB(config)#
```

vlan

Configure VLAN parameters.

SYNTAX

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

Parameters

<vlan_list>	ISL VLAN IDs 1-4095
ethertype	Ether type for Custom S-ports
protocol	Protocol-based VLAN commands
s-custom-port	Custom S-ports configuration
<0x0600-0xffff>	Ether type (Range: 0x0600-0xffff>
eth2	Ethernet-based VLAN commands
<0x600-0xffff>	Ether Type(Range: 0x600 - 0xFFFF)
arp	Ether Type is ARP
ip	Ether Type is IP
ipx	Ether Type is IPX
at	Ether Type is AppleTalk
snap	SNAP-based VLAN group
<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)
llc	LLC-based VLAN group
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
group	Protocol-based VLAN group commands
<word16>	Group Name (Range: 1 - 16 characters)

EXAMPLE

```
SM24DPB(config)# vlan ?
    <vlan_list>    ISL VLAN IDs 1~4095
    ethertype      Ether type for Custom S-ports
    protocol       Protocol-based VLAN commands
SM24DPB(config)# vlan ethertype s-custom-port 0x1111
SM24DPB(config)# vlan protocol eth2 arp group 123
SM24DPB(config)#
SM24DPB(config)# vlan 10
SM24DPB(config-vlan)# ?
    do      To run exec commands in config mode
    end     Go back to EXEC mode
    exit    Exit from current mode
    help    Description of the interactive help system
    name    ASCII name of the VLAN
    no
SM24DPB(config-vlan)#
```

voice

Voice appliance attributes (VLAN for voice traffic).

SYNTAX

voice vlan <cr>
voice vlan aging-time <aging_time>
voice vlan class { <traffic_class> | low | normal | medium | high }
voice vlan oui <oui> [description <description>]
voice vlan vid <vid>

Parameters

advertising-duration	Set advertising duration
vlan	Vlan for voice traffic
aging-time	Set secure learning aging time
<10-10000000>	Aging time, 10-10000000 seconds
class	Set traffic class
<0-7>	Traffic class value
oui	OUI configuration
<oui>	OUI value
description	Set description for the OUI
<line32>	Description line
vid	Set VLAN ID
<vlan_id>	VLAN ID, 1-4095

EXAMPLE

```
SM24DPB(config)# voice vlan aging-time 3333
SM24DPB(config)# voice vlan class 7
SM24DPB(config)# voice vlan vid 300
SM24DPB(config)#
```

web

Web privilege configuration.

SYNTAX

web privilege group <group_name> level { [cro <cro>] [crw <crw>] [sro <sro>] [srw <srw>] }*1

Parameters

privilege	Web privilege
group	Web privilege group
CWORD	Valid words are 'ACTIVATE' 'Aggregation' 'BSC_Protection' 'DHCP' 'DMS_client' 'DMS_server' 'Debug' 'Dhcp_Client' 'Diagnostics' 'GARP' 'GVRP' 'IP2' 'IPMC_Snooping' 'IP_Phone_Auto_Provisioning' 'Install_Wizard' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'SMTP' 'Security' 'Spanning_Tree' 'System' 'TS_client' 'TS_server' 'Timer' 'Trap_Event' 'Trouble_Shooting' 'UPnP' 'VCL' 'VLANs' 'VTUN' 'Voice_VLAN' 'XXRP' 'bonjour' 'cloud_management' 'sFlow'
level	Web privilege group level
cro	Configuration Read-only level
crw	Configuration Read-write level
sro	Status/Statistics Read-only level
srw	Status/Statistics Read-write level

EXAMPLE

```
SM24DPB(config)# web privilege group lacp level cro 10
SM24DPB(config)#
```

Messages:

The privilege level of 'Configuration Read-only' should be less than or equal to 'Configuration Read-write'

3-1 access-list

Table : configure – access-list Commands

Command	Function
ace	Access list entry
rate-limiter	Rate limiter

rate-limiter

Rate limiter configuration.

SYNTAX

access-list rate-limiter [<1~16>] { pps <0-131071> | 100kbps <0-10000> }

Parameters

100kbps	100k bits per second
<RateLimiterList : 1~16>	Rate limiter ID
<**PpsRate** : 0-131071>	Rate value (pps)
<0-10000>	Rate value (kbps)

EXAMPLE

```
SM24DPB(config)# access-list rate-limiter ?
    <RateLimiterList : 1~16>    Rate limiter ID
    pps                         Packets per second
SM24DPB(config)# access-list rate-limiter 1 ?
    pps    Packets per second
SM24DPB(config)# access-list rate-limiter 1 pps ?
    <PpsRate : 0-131071>    Rate value
SM24DPB(config)# access-list rate-limiter 1 pps 5000 ?
    <cr>
SM24DPB(config)# access-list rate-limiter 1 pps 5000
SM24DPB(config)#
```

ace

Access list entry (ACE) configuration.

SYNTAX

access-list ace{ update<1-512> | <1-512> } [action< deny | filter | permit >]
access-list ace{ update<1-512> | <1-512> } [dmac-type < any | broadcast | multicast | unicast >]
access-list ace{ update<1-512> | <1-512> } [frametype < any | arp | etype | ipv4 | ipv4-icmp | ipv4-tcp | ipv4-udp | ipv6 | ipv6-icmp | ipv6-tcp | ipv6-udp >]
access-list ace{ update<1-512> | <1-512> } [ingress] [ingress interface { <port_type> <port_type_id> | <port_type> <port_type_list> } | any }]
access-list ace{ update<1-512> | <1-512> } [logging [disable]]
access-list ace{ update<1-512> | <1-512> } [lookup [disable]]
access-list ace{ update<1-512> | <1-512> } [mirror [disable]]
access-list ace{ update<1-512> | <1-512> } [next { <1-512> | last }]
access-list ace{ update<1-512> | <1-512> } [policy <0-255> [policy-bitmask <0x0-0xFF>]]
access-list ace{ update<1-512> | <1-512> } [rate-limiter { <1-16> | disable }]
access-list ace{ update<1-512> | <1-512> } [redirect | interface { <port_type> <port_type_id> | <port_type> <port_type_list> } | disable }]
access-list ace{ update<1-512> | <1-512> } [shutdown]
access-list ace{ update<1-512> | <1-512> } [tag { tagged | untagged | any }]
access-list ace{ update<1-512> | <1-512> } [tag-priority { <0-7> | any }]
access-list ace{ update<1-512> | <1-512> }[vid { <1-4095> | any }]

Parameters

action	Access list action
dmac-type	The type of destination MAC address
frametype	Frame type
ingress	Ingress
logging	Logging frame information
lookup	Second lookup
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
tag	Tag
tag-priority	Tag priority
vid	VID field
deny	Deny
filter	Filter
permit	Permit
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 etype
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 IPv4
ipv6-icmp	Frame type of IPv6 ICMP
ipv6-tcp	Frame type of IPv6 TCP
ipv6-udp	Frame type of IPv6 UDP
interface	Select an interface to configure
<port_type>	* or Gigabitethernet or 10Gigabitethernet
*	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet port
10Gigabitethernet	10 Gigabit Ethernet port

<port_type_id>	Port ID in the format of switch-no/port-no ex, 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
<port_type>	* or Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24
any	Don't-care the ingress interface
<0-255>	Policy ID
policy-bitmask	The bitmask for policy ID
<0x0-0xFF>	The value of policy bitmask
<1-4095>	The value of VID field
<0-7>	The value of tag priority

EXAMPLE

```
SM24DPB(config)# access-list ace update 1 ?
    action          Access list action
    dmac-type       The type of destination MAC address
    frametype       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.
    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-priority    Tag priority
    vid             VID field
    <cr>
SM24DPB(config)# access-list rate-limiter 1 pps 5000
SM24DPB(config)#
```

3-2 no

Negate a command or set its defaults

Table : configure – no Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a login banner
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
gvrp	Enable GVRP feature
hostname	Set system's network name
interface	none
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP settings
lldp	LLDP configurations.
logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
monitor	Set monitor configuration.
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP
port-security	Enable/disable port security globally.
Privilege	Command privilege parameters
qos	Quality of Service
radius-server	Configure RADIUS
rmon	Remote Monitoring
sflow	Statistics flow.
snmp-server	Enable SNMP server
spanning-tree	STP Bridge
system	Set the SNMP server's configurations
tacacs-server	Configure TACACS+
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	Vlan commands
voice	Voice appliance attributes
web	Web

aaa

Authentication, Authorization and Accounting

SYNTAX

no aaa authentication login { console | telnet | ssh | http }

Parameters

authentication	Authentication
login	Login
console	Disable Console
http	Disable HTTP
ssh	Disable SSH
telnet	Disable Telnet

EXAMPLE

```
SM24DPB(config)# no aaa authentication  login ssh
SM24DPB(config)#
```

access

Access management

SYNTAX

no access management [<1~16>]
no access management

Parameters

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

EXAMPLE

```
SM24DPB(config)# no access management
SM24DPB(config)#
```

access-list

Access list

SYNTAX

no access-list ace <1~256>

Parameters

ace	Access list entry
<AceId : 1-256>	ACE ID

EXAMPLE

```
SM24DPB(config)# access-list ace 1
SM24DPB(config)#
```

aggregation

Aggregation mode

SYNTAX

no aggregation mode

Parameters

mode	Traffic distribution mode

EXAMPLE

```
SM24DPB(config)# no aggregation mode
SM24DPB(config)#
```

banner

Define a login banner

SYNTAX

no banner [motd]
no banner exec
no banner login

Parameters

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

EXAMPLE

```
SM24DPB(config)# no banner login
SM24DPB(config)#
```

clock

Configure time-of-day clock

SYNTAX

no clock summer-time
no clock timezone

Parameters

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

EXAMPLE

```
SM24DPB(config)# no clock summer-time
SM24DPB(config)# no clock timezone
SM24DPB(config)#
```

dot1x

IEEE Standard for port-based Network Access Control

SYNTAX

no dot1x authentication timer inactivity
no dot1x authentication timer re-authenticate
no dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }
no dot1x guest-vlan [supplicant]
no dot1x max-reauth-req
no dot1x re-authentication
no dot1x system-auth-control
no dot1x timeout quiet-period
no dot1x timeout 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
inactivity	Time in seconds between check for activity on successfully authenticated MAC addresses.
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

```
SM24DPB(config)# no dot1x authentication timer inactivity
SM24DPB(config)# no dot1x feature guest-vlan radius-qos radius-vlan
SM24DPB(config)# no dot1x guest-vlan supplicant
SM24DPB(config)# no dot1x max-reauth-req
SM24DPB(config)# no dot1x re-authentication
SM24DPB(config)# no dot1x system-auth-control
SM24DPB(config)# no dot1x timeout tx-period
SM24DPB(config)#
```

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

```
SM24DPB(config)# no enable secret level 15
SM24DPB(config)# no enable password level 15
SM24DPB(config)#
```

hostname

Set system's network name.

SYNTAX

no hostname

EXAMPLE

```
SM24DPB(config)# no hostname
SM24DPB(config)#
```

interface

SYNTAX

no interface vlan < vlan_list >

Parameters

vlan	Vlan interface configurations
<vlan_list>	Vlan list

EXAMPLE

```
SM24DPB(config)# no interface vlan 10
SM24DPB(config)#
```

Ip

Set system's network name.

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 dhcp excluded-address [<ip_address> [<ip_address>]]
no dhcp pool <WORD>
no ip dhcp relay [information {option| policy }]
no ip dhcp server
no ip dhcp snooping
no ip dns proxy
no ip helper-address
no ip http secure-redirect
no ip http secure-server
no ip igmp host-proxy [leave-proxy]
no ip igmp snooping
no ip igmp snooping vlan [<vlan_list>]
no ip igmp ssm-range
no ip igmp unknown-flooding
no ip name-server
no ip route <ipv4_addr> <ipv4_netmask> <ipv4_addr>
no ip routing
no ip source binding interface Gigabitethernet|10Gigabitethernet <port_type_id> <vlan_id> <ipv4_ucast>{ <ipv4_netmask>|<mac_ucast>}
no ip ssh
no ip verify source

Parameters

arp	Address Resolution Protocol
inspection	ARP inspection
entry	arp inspection entry
interface	arp inspection entry interface config
GigabitEthernet	1 Gigabit Ethernet Port
10GigabitEthernet	10 Gigabit Ethernet Port
<port_type_id>	Port ID in the format of switch-no/port-no, 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
<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	arp inspection vlan setting
<vlan_list>	arp inspection vlan list
logging	ARP inspection vlan logging mode config
dhcp	Dynamic Host Configuration Protocol
excluded-address	Prevent DHCP from assigning certain address
<ip_address>	Low IP address and High IP address
<WORD>	Pool name in 32 characters
pool	Configure DHCP address pools
relay	DHCP relay agent configuration
server	enable DHCP server
snooping	DHCP snooping
information	DHCP information option(Option 82)
option	DHCP option
policy	Policy for handling the receiving DHCP packet already include the information option
snooping	DHCP snooping
dns	Domain Name System
proxy	DNS proxy service
helper-address	None.
http	Hypertext Transfer Protocol

secure-redirect	Secure HTTP web rediction
secure-server	Secure HTTP web server
igmp	Internet Group Management Protocol
host-proxy	IGMP proxy configuration
leave-proxy	IGMP proxy for leave configuration
snooping	Snooping IGMP
vlan	IGMP VLAN
<vlan_list>	VLAN identifier(s): VID
ssm-range	IPv4 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv4 multicast traffic
name-server	Domain Name System
Route	none
<ipv4_addr>	Network
<ipv4_netmask>	Netmask
<ipv4_gateway>	Gateway
routing	Disable routing for IPv4 and IPv6
source	source command
binding	ip source binding
interface	ip source binding entry interface config
Gigabitethernet	1 Gigabitethernet port
10Gigabitethernet	10 Gigabitethernet port
<port_type_id>	Port ID in the format of switch-no/port-no, ex., 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
<vlan_id>	Select a VLAN id to configure
<ipv4_ucast>	Select an IP Address to configure
<ipv4_netmask>	Select a subnet mask to configure
<mac_ucast>	Select a MAC address to configure
ssh	Secure Shell
verify	verify command
source	verify source

EXAMPLE

```
SM24DPB(config)# no ip arp inspection vlan 3 logging
SM24DPB(config)# no ip dhcp relay information option
SM24DPB(config)# no ip dns proxy
SM24DPB(config)# no ip helper-address
SM24DPB(config)# no ip http secure-redirect
SM24DPB(config)# no ip igmp snooping
SM24DPB(config)# no ip name-server
SM24DPB(config)# no ip routing
SM24DPB(config)# no ip ssh
SM24DPB(config)# no ip verify source
SM24DPB(config)#
```

ipmc

IPv4/IPv6 multicast configuration

SYNTAX

no ipmc profile <Profilename : word16>
no ipmc range <Entryname : word16>

Parameters

profile IPMC profile configuration
<Profilename : word16> Profile name in 16 char's
range A range of IPv4/IPv6 multicast addresses for the profile
<Entryname : word16> Range entry name in 16 char's

EXAMPLE

```
SM24DPB(config)# no ipmc profile
SM24DPB(config)#
```

ipv6

IPv6 configuration commands

SYNTAX

no ipv6 mld host-proxy [leave-proxy]
no ipv6 mld snooping
no ipv6 mld snooping [vlan <vlan_list>]
no ipv6 mld ssm-range
no ipv6 mld unknown-flooding
no ipv6 route <ipv6_subnet> { <ipv6_ucast> | interface vlan <vlan_id> <ipv6_linklocal> }

Parameters

mld	Multicast Listener Discovery
host-proxy	MLD proxy configuration
leave-proxy	MLD proxy for leave configuration
snooping	Snooping MLD
vlan	MLD VLAN
<vlan_list>	VLAN identifier(s): VID
ssm-range	IPv6 address range of Source Specific Multicast
unknown-flooding	Flooding unregistered IPv6 multicast traffic
route	Configure static routes
<ipv6_subnet>	IPv6 prefix x:x::y/z
<ipv6_ucast>	IPv6 unicast address (except link-local address) of next-hop
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID
<ipv6_linklocal>	IPv6 link-local address of next-hop

EXAMPLE

```
SM24DPB(config)# no ipv6 mld snooping
SM24DPB(config)#
```

lacp

LACP settings

SYNTAX

no lacp system-priority <1-65535>

Parameters

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

EXAMPLE

```
SM24DPB(config)# no lacp system-priority 10000
SM24DPB(config)#
```

lldp

LLDP configurations.

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 { 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 }
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).
tlv-select Which optional TLVs to transmit.
transmission-delay 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.)
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 Use the media-vlan-policy to create a policy, which can be assigned to an interface.
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.
additional-code Additional code - Example: 1320300003.
additional-info Additional location info - Example: South Wing.
apartment Unit (Apartment, suite) - Example: Apt 42.
block Neighbourhood, 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: Flemming Jahn.
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: Poppelvej.
street-suffix Street suffix - Example: Ave, Platz.
trailing-street-suffix Trailing street suffix - Example: SW.

zip-code	Postal/zip code - Example: 2791.
<0~31>	Policy to delete.

EXAMPLE

```
SM24DPB(config)# no lldp holdtime
SM24DPB(config)# no lldp med location-tlv civic-addr floor
SM24DPB(config)# no lldp reinit
SM24DPB(config)# no lldp timer
SM24DPB(config)# no lldp transmission-delay
SM24DPB(config)#
```

logging

Syslog.

SYNTAX

no logging host
no logging on

Parameters

host	host
on	Enable syslog server

EXAMPLE

```
SM24DPB(config)# no logging host
SM24DPB(config)# no logging on
SM24DPB(config)#
```

loop-protect

Loop protection configuration

SYNTAX

no loop-protect
no loop-protect shutdown-time
no loop-protect transmit-time

Parameters

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

EXAMPLE

```
SM24DPB(config)# no loop-protect shutdown-time
SM24DPB(config)# no loop-protect transmit-time
SM24DPB(config)#
```

mac

MAC table entries/configuration

SYNTAX

no mac address-table aging-time [<0,10-1000000>]
no mac address-table static <mac_addr> vlan <vlan_id> interface {*|Gigabitethernet|10Gigabitethernet [<port_type_list>]}

Parameters

address-table	Mac table entries configuration/table
aging-time	Mac address aging time
<0,10-1000000>	Aging time in seconds, 0 disables aging
static	Static MAC address
<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
Gigabitethernet	1 Gigabit Ethernet port
10Gigabitethernet	10 Gigabit Ethernet port
<port_type_list>	Port list in , ex, 1/1-24 for Gigaethernet, 1/1-4 for 10Gigaethernet

EXAMPLE

```
SM24DPB(config)# no mac address-table aging-time 10000
SM24DPB(config)#
```

monitor

Set monitor configuration.

SYNTAX

no monitor destination
no monitor source { interface Gigabitethernet | 10Gigabitethernet <port_type_list> | cpu}

Parameters

Destination	
source	The source port(s). That is the ports to be mirrored to the destination port.
cpu	Mirror CPU traffic.
interface	Mirror Interface traffic.
Gigabitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB(config)# no monitor destination
SM24DPB(config)# no monitor source cpu
SM24DPB(config)#
```

mvr

Multicast VLAN Registration configuration.

SYNTAX

no mvr
no mvr name <word16> channel
no mvr name <word16> frame priority
no mvr name <word16> frame tagged
no mvr name <word16> igmp-address
no mvr name <word16> last-member-query-interval
no mvr name <word16> mode
no mvr vlan <vlan_list>
no mvr vlan <vlan_list> channel
no mvr vlan <vlan_list> frame priority
no mvr vlan <vlan_list> frame tagged
no mvr vlan <vlan_list> igmp-address
no mvr vlan <vlan_list> last-member-query-interval
no mvr vlan <vlan_list> mode [{channel | frame | igmp-address | last-member-query-interval}

Parameters

name	MVR multicast name
<word16>	MVR multicast VLAN name
channel	MVR channel configuration
frame	MVR control frame in TX
priority	Interface CoS priority
tagged	Tagged IGMP/MLD frames will be sent
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
vlan	MVR multicast vlan
<vlan_list>	MVR multicast VLAN list

EXAMPLE

```
SM24DPB(config)# no mvr vlan 12 mode
SM24DPB(config)#
```

ntp

Configure NTP.

SYNTAX

no ntp
no ntp server <1-5>

Parameters

server	Configure NTP server
<1-5>	index number

EXAMPLE

```
SM24DPB(config)# no ntp server 2
SM24DPB(config)#
```

port-security

Enable/disable port security globally.

SYNTAX

no port-security
no port-security aging
no port-security aging time

Parameters

aging Enable/disable port security aging.
time Time in seconds between check for activity on learned MAC addresses.

EXAMPLE

```
SM24DPB(config)# no port-security aging time
SM24DPB(config)#
```

radius-server

Configure RADIUS.

SYNTAX

no radius-server attribute {32 | 4 | 95}
no radius-server deadtime
no radius-server host { <word1-255> | <ipv4_ucast> | <ipv6_ucast> } [auth-port <0-65535>] [acct-port <0-65535>]
no radius-server key
no radius-server retransmit
no radius-server 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

EXAMPLE

```
SM24DPB(config)# no radius-server attribute 4
SM24DPB(config)# no radius-server deadtime
SM24DPB(config)# no radius-server key
SM24DPB(config)# no radius-server retransmit
SM24DPB(config)# no radius-server timeout
SM24DPB(config)#
```

rmon

Remote Monitoring.

SYNTAX

no rmon alarm <alarm : 1-65535>
no rmon event<event : 1-65535>

Parameters

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

EXAMPLE

```
SM24DPB(config)# no rmon alarm 1000
SM24DPB(config)#
```

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

```
SM24DPB(config)# no sflow agent-ip
SM24DPB(config)# no sflow collector-address
SM24DPB(config)# no sflow collector-port
SM24DPB(config)# no sflow max-datagram-size
SM24DPB(config)# no sflow timeout
SM24DPB(config)#
```

snmp-server

Enable SNMP server.

SYNTAX

no snmp-server
no snmp-server access <Groupname : word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv }
no snmp-server community v2c
no snmp-server community v3 <Community : word127>
no snmp-server contact
no snmp-server engined-id local
no snmp-server host <Conf : word32>
no snmp-server location
no snmp-server security-to-group model { v1 | v2c | v3 } name <Securityname : word32>
no snmp-server trap
no snmp-server user <Username : word32> engine-id <Engineid : word10-32>
no snmp-server version
no snmp-server view <Viewname : word32> <Oidsubtree : word255>

Parameters

access	access configuration
<Groupname : 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
community	Set the SNMP community
contact	Clear the SNMP server's contact string
engined-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	Set trap's configurations
user	user who can access SNMP server
version	Set the SNMP server's version
view	MIB view configuration
<Community : word127>	
local	Set SNMP local engine ID
<ConfName : word32>	Name of the host configuration
name	security user
<SecurityName : word32>	security user name
<Username : word32>	name of user
engine-id	engine ID
<Engineid : word10-32>	engine ID octet string
<Viewname : word32>	MIB view name
<Oidsubtree : word255>	MIB view OID

EXAMPLE

```
SM24DPB(config)# no snmp-server access 333 model any level auth
SM24DPB(config)# no snmp-server community v2c
SM24DPB(config)# no snmp-server engined-id local
SM24DPB(config)# no snmp-server host 333
SM24DPB(config)# no snmp-server location
SM24DPB(config)# no snmp-server security-to-group model v2c name 132
SM24DPB(config)# no snmp-server trap
SM24DPB(config)# no snmp-server version
SM24DPB(config)#
```

spanning-tree

STP Bridge.

SYNTAX

no spanning-tree edge bpdu-filter
no spanning-tree edge bpdu-guard
no spanning-tree mode
no spanning-tree mst <instance> priority
no spanning-tree mst <instance> vlan
no spanning-tree mst forward-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	BPDUs to transmit
bpdu-filter	Enable BPDU filter (stop BPDU tx/rx)
bpdu-guard	Enable BPDU guard
<Instance : 0-7>	instance 0-7 (CIST=0, MST2=1...)
priority	Priority of the instance
forward-time	Delay between port states
max-age	Max bridge age before timeout
max-hops	MSTP bridge max hop count
name	Name keyword
vlan	VLAN keyword
interval	The interval
hold-count	Max number of transmit BPDUs per sec
<Holdcount : 1-10>	1-10 per sec, 6 is default

EXAMPLE

```
SM24DPB(config)# no spanning-tree edge bpdu-filter
SM24DPB(config)# no spanning-tree mode
SM24DPB(config)# no spanning-tree mst max-age
SM24DPB(config)# no spanning-tree recovery interval
SM24DPB(config)# no spanning-tree transmit hold-count
SM24DPB(config)#
```

tacacs-server

Configure TACACS+.

SYNTAX

no tacacs-server deadtime
no tacacs-server host <host_name> [port <port>]
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
<Hostname : word1-255>	Host name or IP address
key	Set TACACS+ encryption key
timeout	Time to wait for a TACACS+ server to reply
key	Server specific key (overrides default)
port	TCP port for TACACS+ server
timeout	Time to wait for this TACACS+ server to reply (overrides default)
<Port : 0-65535>	TCP port number

EXAMPLE

```
SM24DPB(config)# no tacacs-server deadtime
SM24DPB(config)# no tacacs-server host 192.168.1.1 port 10000
SM24DPB(config)# no tacacs-server key
SM24DPB(config)# no tacacs-server timeout
SM24DPB(config)#
```

upnp

Set UPnP's configurations.

SYNTAX

no upnp
no upnp advertising-duration
no upnp ttl
<cr>

Parameters

advertising-duration	Set advertising duration
ttl	Set TTL value

EXAMPLE

```
SM24DPB(config)# no upnp advertising-duration
SM24DPB(config)# no upnp ttl
SM24DPB(config)#
```

username

Establish User Name Authentication.

SYNTAX

no username <Username : word31>

Parameters

<Username : word31> User name allows letters, numbers and underscores

EXAMPLE

```
SM24DPB(config)# no username admin
SM24DPB(config)#
```

vlan

VLAN commands.

SYNTAX

no 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>
no vlan { [ethertype s-custom-port] | <vlan_list> }

Parameters

protocol	Protocol-based VLAN commands
eth2	Ethernet-based VLAN commands
<0x600-0xffff>	Ether Type(Range: 0x600 - 0xFFFF)
arp	Ether Type is ARP
ip	Ether Type is IP
ipx	Ether Type is IPX
at	Ether Type is AppleTalk
snap	SNAP-based VLAN group
<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)
llc	LLC-based VLAN group
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
group	Protocol-based VLAN group commands
<word16>	Group Name (Range: 1 - 16 characters)
<vlan_list>	Vlan list
ethertype	
s-custom-port	

EXAMPLE

```
SM24DPB(config)# no vlan 3
SM24DPB(config)# no vlan ethertype s-custom-port
SM24DPB(config)#
```

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

Parameter

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

EXAMPLE

```
SM24DPB(config)# no voice vlan vid
SM24DPB(config)# no voice vlan class
SM24DPB(config)# no voice vlan aging-time
SM24DPB(config)#
```

web

Web.

SYNTAX

no web privilege group [<group_name>] level

Parameters

privilege	Web privilege
group	Web privilege group
<CWORD>	Valid words are 'Aggregation' 'Debug' 'Dhcp_Client' 'Diagnostics' 'EEE' 'GARP' 'GVRP' ''Green_Ethernet' 'IP2' 'IPMC_Snooping' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MEP' 'MVR' 'Maintenance' 'Mirroring' 'NTP"Ports' 'Private_VLANs' 'QoS' 'RPC' 'Security' 'Spanning_Tree' 'System' 'Timer' 'UPnP' 'VCL' 'VLANs' 'Voice_VLAN' 'XXRP' 'sFlow'
level	Web privilege group level

EXAMPLE

```
SM24DPB(config)# no web privilege group LACP level
SM24DPB(config)#
```

3-3 qos

Table : configure – QoSCommands

Command	Function
map	Global QoS Map/Table
qce	QoS Control Entry
wred	Weighted Random Early Discard

map

Global QoS Map/Table.

SYNTAX

qos map cos-dscp <0~7> dpl <dpl : 0~1> dscp { <DscpNum : 0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }
qos map dscp-classify { <dscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }
qos map dscp-cos { < dscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } cos <Cos : 0-7> dpl <dpl>
qos map dscp-egress-translation { < DscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } <Dpl : 0~1> to { <Dscpnum : 0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }
qos map dscp-ingress-translation { < DscpNum : 0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } } to { < DscpNum : 0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } }

Parameters

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
dpl	Specify drop precedence level
<Dpl : 0~1>	Specific drop precedence level or range
dscp	Specify DSCP
<DscpNum : 0-63>	Specific DSCP
cos	Specify class of QoS
<Cos : 0-7>	Specific class of QoS
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)

EXAMPLE

```
SM24DPB(config)# qos ?
    map     Global QoS Map/Table
    qce     QoS Control Entry
    wred    Weighted Random Early Discard
SM24DPB(config)# qos map ?
    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
SM24DPB(config)# qos qce ?
    <Id : 1-256>    QCE ID
    refresh         Refresh QCE tables in hardware
    update          Update an existing QCE
SM24DPB(config)# qos wred ?
    queue    Specify queue
SM24DPB(config)# qos wred queue 1 min-th 50 mdp-1 20 mdp-2 15 mdp-3 30
SM24DPB(config)#
```

qce

QoS Control Entry.

SYNTAX

qos qce refresh

qos qce { [update] } <Id : 1-256> [{ next <Id : 1-256> } | last] [ingress interface *|Gigabitethernet | 10Gigabitethernet <PORT_LIST>] [tag { tagged | untagged | any }] [vid { <vlan_list> | any }] [pcp { <pcp> | any }] [dei { <Dpl : 0-1> | any }] [smac { <mac_addr> | <oui> | any }] [dmac-type { unicast | multicast | broadcast | any }] [frametype { 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 }] [dscp { <0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } | any }] [frag { yes | no | any }] [sport { <0~65535> | any }] [dport { <0~65535> | any }] } | { ipv6 [proto { <0-255> | tcp | udp | any }] [sip { <ipv4_subnet> | any }] [dscp { <0~63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } | any }] [sport { <0~65535> | any }] [dport { <0~65535> | any }] } }] [action { [cos { <0-7> | default }] [dpl { <0-1> | default }] [dscp { <0-63> | { be | af11 | af12 | af13 | af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | cs7 | ef | va } | default }] }]

Parameters

<Id : 1-256>	QCE ID
refresh	Refresh QCE tables in hardware
update	Update an existing QCE
action	Specify action
dei	Specify DEI (Drop Eligible Indicator)
dmac-type	Specify DMAC type
frametype	Specify frame type
ingress	Ingress interfaces
last	Place QCE at the end
next	Place QCE before the next QCE ID
pcp	Specify PCP (Priority Code Point)
smac	Specify SMAC. If 'qos qce dmac-dip' is set, this parameter specifies the DMAC
tag	Specify tag options
vid	Specify VLAN ID
cos	Specify class of service
dpl	Specify drop precedence level
dscp	Specify DSCP
cos	Specify class of service
<Cos : 0-7>	Specific class of service
default	Keep default class of service
<Dpl : 0-1>	Specific drop precedence level
default	Keep default drop precedence level
<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)
default	Keep default DSCP
ef	Expedited Forwarding PHB(DSCP 46)
va	Voice Admit PHB(DSCP 44)
any	Any
broadcast	Broadcast
multicast	Multicast
unicast	Unicast
etype	Ethernet frames
ipv4	IPv4 frames
ipv6	IPv6 frames
llc	LLC frames
snap	SNAP frames
<Etype : 0x600-0x7ff,0x801-0x86dc,0x86de-0xffff>	Specific EtherType
interface	Interfaces
<Next : 1-256>	The next QCE ID
<Pcp : pcp>	Specific PCP (0-7) or range (0-1, 2-3, 4-5, 6-7, 0-3 or 4-7)
<Smac : mac_addr>	Specific SMAC (XX-XX-XX-XX-XX-XX)
tagged	Tagged frames only
untagged	Untags frames only
<Vid : vlan_list>	Specific VLAN ID or range
interface	Interfaces
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<PORT_LIST>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB(config)# qos <tab>
map   qce   wred
SM24DPB(config)# qos??
qos map cos-dscp <cos> dpl <dpl> dscp { <dscp_num> | { be | af11 | af12 | af13 |
 af21 | af22 | af23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3
| cs4 | cs5 | cs6 | cs7 | ef | va } }
qos map dscp-classify { <dscp_num> | { be | af11 | af12 | af13 | af21 | af22 | a
f23 | af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs
6 | cs7 | ef | va } }
qos map dscp-cos { <dscp_num> | { be | af11 | af12 | af13 | af21 | af22 | af23 |
 af31 | af32 | af33 | af41 | af42 | af43 | cs1 | cs2 | cs3 | cs4 | cs5 | cs6 | c
s7 | ef | va } } cos <cos> dpl <dpl>
-- more --, next page: Space, continue: g, quit: ^C
SM24DPB(config)# qos qce 1 action cos default dmac any frame-type llc control an
y dsap any interface GigabitEthernet 1/7 last tag vid any dei any pcp any smac a
ny
%QOS: at least one action parameter must have a non-default value
SM24DPB(config)#
```

wred

Weighted Random Early Discard.

SYNTAX

qos wred queue <queue> min-th <min_th> mdp-1 <mdp_1> mdp-2 <mdp_2> mdp-3 <mdp_3>

Parameters

queue	Specify queue
<Queue : 0~5>	Specific queue or range
<MinTh : 0-100>	Specific minimum threshold in percent
mdp-1	Specify drop probability for drop precedence level 1
<Mdp1 : 0-100>	Specific drop probability in percent
mdp-2	Specify drop probability for drop precedence level 2
<Mdp2 : 0-100>	Specific drop probability in percent
mdp-3	Specify drop probability for drop precedence level 3
<Mdp3 : 0-100>	Specific drop probability in percent
unicast	

EXAMPLE

```
SM24DPB(config)# qos wred queue 1 min-th 33 mdp-1 44 mdp-2 55 mdp-3 66
SM24DPB(config)#
```

3-4 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	Set trap's configurations
user	Set the SNMPv3 user's configurations
version	Set the SNMP server's version
view	MIB view configuration

access

access configuration.

SYNTAX

snmp-server access <GroupName : word32> model { v1 | v2c | v3 | any } level { auth | noauth | priv } [read <ViewName : word255>] [write <WriteName : word255>]

Parameters

<GroupName : 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
<ViewName : word255>	read view name
<WriteName : word255>	write view name

EXAMPLE

```
SM24DPB(config)# snmp-server access text model v2c level noauth write text
SM24DPB(config)#
```

community

Set the SNMP community.

SYNTAX

snmp-server community v2c <Community : word127> [ro | rw]
snmp-server community v3 <word127> [<ipv4_addr> <ipv4_netmask>]

Parameters

v2c	SNMPv2c
<Community : word127>	Community word
ro	Read only
rw	Read write
v3	SNMPv3
<Community : word127>	Community word
<ipv4_addr>	IPv4 address
<ipv4_netmask>	IPv4 netmask

EXAMPLE

```
SM24DPB(config)# snmp-server community v2c text
SM24DPB(config)#
```

contact

Set the SNMP server's contact string.

SYNTAX

snmp-server contact <line255>

Parameters

contact	Set the SNMP server's contact string
<line255>	contact string

EXAMPLE

```
SM24DPB(config)# snmp-server contact text
SM24DPB(config)#
```

engine-id

Set SNMP engine ID.

SYNTAX

snmp-server engine-id local <Engineid : word10-32>

Parameters

local	Set SNMP local engine ID
<Engineid : word10-32>	local engine ID

EXAMPLE

```
SM24DPB(config)# snmp-server engine-id local 1234567891
SM24DPB(config)#
```

host

Set SNMP host's configurations.

SYNTAX

snmp-server host <word32>

Parameter

<word32> Name of the host configuration

EXAMPLE

```
SM24DPB(config)# snmp-server host text
SM24DPB(config-snmps-host)# ?
    do          To run exec commands in config mode
    end         Go back to EXEC mode
    exit        Exit from current mode
    help        Description of the interactive help system
    host        host configuration
    informs     Send Inform messages to this host
    no          Negate a command or set its defaults
    shutdown    Disable the trap configuration
    version     Set SNMP trap version
SM24DPB(config-snmps-host)#
```

location

Set the SNMP server's location string.

SYNTAX

snmp-server location <line255>

Parameters

<line255> location string

EXAMPLE

```
SM24DPB(config)# snmp-server location text
SM24DPB(config)#
```

security-to-group

security-to-group configuration.

SYNTAX

snmp-server security-to-group model { v1 | v2c | v3 } name <SecurityName : word32> group <GroupName : word32>

Parameter

model	security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<SecurityName : word32>	security user name
group	security group
<GroupName : word32>	security group name

EXAMPLE

```
SM24DPB(config)# snmp-server security-to-group model v2c name text group text
SM24DPB(config)#
```

trap

Set trap's configurations.

SYNTAX

snmp-server trap

EXAMPLE

```
SM24DPB(config)# snmp-server trap
SM24DPB(config)#
```

user

Set the SNMPv3 user's configurations.

SYNTAX

snmp-server user <Username : word32> engine-id <Engineid : word10-32> [{ md5 <Md5Passwd : word8-32> | sha <ShaPasswd : word8-40> } [priv { des | aes } <word8-32>]]

Parameters

<Username : word32>	Username
engine-id	engine ID
<Engineid : word10-32>	Engine ID octet string
md5	Set MD5 protocol
<Md5Passwd : word8-32>	MD5 password
sha	Set SHA protocol
<ShaPasswd word8-40>	SHA password
priv	Set Privacy
des	Set DES protocol
aes	Set AES protocol
<word8-32>	Set privacy password

EXAMPLE

```
SM24DPB(config)# snmp-server user text engine-id 1234567891 md5 12345678 priv aes 12345678
SM24DPB(config)#
```

version

Set the SNMP server's version.

SYNTAX

snmp-server version { v1 | v2c | v3 }

Parameters

v1	SNMPv1
v2c	SNMPv2c
v3	SNMPv3

EXAMPLE

```
SM24DPB(config)# snmp-server version v2c
SM24DPB(config)#
```

view

MIB view configuration.

SYNTAX

snmp-server view <ViewName : word32> <OidSubtree : word255> { include | exclude }

Parameters

<ViewName : word32>	MIB view name
<OidSubtree : word255>	MIB view OID
include	Excluded type from the view
exclude	Excluded type from the view

EXAMPLE

```
SM24DPB(config)# snmp-server view text .1 include
SM24DPB(config)#
```

3-5 spanning-tree

Configure Spanning Tree Protocol in Config mode.

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

aggregation

Aggregation mode.

SYNTAX

spanning-tree aggregation

EXAMPLE

```
SM24DPB(config)# spanning-tree  aggregation
SM24DPB(config-stp-aggr)# ?
    do               To run exec commands in config mode
    end              Go back to EXEC mode
    exit             Exit from current mode
    help             Description of the interactive help system
    no               Negate a command or set its defaults
    spanning-tree    Spanning Tree protocol
SM24DPB(config-stp-aggr)#
```

edge

Edge ports.

SYNTAX

spanning-tree edge bpdu-filter
spanning-tree edge bpdu-guard

Parameters

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

EXAMPLE

```
SM24DPB(config)# spanning-tree edge bpdu-filter
SM24DPB(config)#
```

mode

STP protocol mode.

SYNTAX

spanning-tree mode { stp | rstp | mstp }

Parameters

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

EXAMPLE

```
SM24DPB(config)# spanning-tree mode stp
SM24DPB(config)# spanning-tree mode rstp
SM24DPB(config)# spanning-tree mode mstp
SM24DPB(config)#
```

mst

STP bridge instance.

SYNTAX

spanning-tree mst <Instance : 0-7> priority <Prio : 0-61440>
spanning-tree mst < Instance : 0-7> vlan <vlan_list>
spanning-tree mst forward-time <Fwdtime : 4-30>
spanning-tree mst max-age <Maxage : 6-40> [forward-time <Fwdtime : 4-30>]
spanning-tree mst max-hops <Maxhops : 6-40>
spanning-tree mst name <Name : word32> revision <0-65535>

Parameters

<Instance : 0-7>	instance 0-7 (CIST=0, MST2=1...)
forward-time	Delay between port states
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
<Prio : 0-61440>	Range in seconds
<vlan_list>	Range of VLANs
<Fwdtime : 4-30>	Range in seconds
<Maxage : 6-40>	Range in seconds
<Maxhops : 6-40>	Hop count range
<Name : word32>	Name of the bridge
revision	Revision keyword
<0-65535>	Revision number

EXAMPLE

```
SM24DPB(config)# spanning-tree mst 7 vlan 10
SM24DPB(config)# spanning-tree mst 7 priority 6000
STP bridge priority must be one of  0/4096/8192/12288/.../53248/57344/61440 i.e.
 divisable by 4096
SM24DPB(config)# spanning-tree mst 7 priority 4096
SM24DPB(config)#
```

recovery

The error recovery timeouts.

SYNTAX

spanning-tree recovery interval <Interval : 30-86400>

Parameters

interval	The interval
<Interval : 30-86400>	Range in seconds

EXAMPLE

```
SM24DPB(config)# spanning-tree recovery interval 50
SM24DPB(config)#
```

transmit

BPDUs to transmit.

SYNTAX

spanning-tree transmit hold-count <Holdcount : 1-10>

Parameters

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

EXAMPLE

```
SM24DPB(config)# spanning-tree transmit hold-count 5
SM24DPB(config)#
```

4. Copy Commands

Copy from source to destination.

SYNTAX

copy { startup-config | running-config | < flash:filename | tftp://server/path-and-filename > } { startup-config | running-config | < flash:filename | tftp://server/path-and-filename > } [syntax-check][| { begin | exclude | include }{ <LINE >}]

Parameters

flash:filename | tftp://server/path-and-filename	File in FLASH or on TFTP server
running-config	Currently running configuration
startup-config	Startup configuration
|	Output modifiers
syntax-check	Perform syntax check on source configuration
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM24DPB# copy startup-config  running-config syntax-check | include rpm ?
    LINE    String to match output lines
    <cr>
SM24DPB# copy startup-config  running-config syntax-check | include rpm
SM24DPB#
```

5. Debug Commands

Debugging functions. WARNING: The use of 'debug' commands may negatively impact system behavior. Do not enable unless instructed to. Note: 'debug' command syntax, semantics and behavior are subject to change without notice.

SYNTAX

debug gvrp msti
debug gvrp protocol-state interface (<port_type> [<v_port_type_list>]) vlan<v_vlan_list>
debug gvrp statistic
debug prompt <debug_prompt>

Parameters

gvrp	Debug for the GVRP protocol
prompt	Set prompt for testing
msti	protocol-state statistic
|	Output modifiers
WORD	Word for prompt in 32 char's
interface	
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
PORT_LIST	Port list for all port types
vlan	
<vlan_list>	VLAN or VLANs for which information shall be shown
msti	MSTI state
protocol-state	State of Applicant, Registrar and LeaveAll state machines
statistic	statistic
|	Output modifiers
<cr>	

EXAMPLE

```
SM24DPB# debug prompt becareful
becareful# debug prompt SM24DPB
SM24DPB#
SM24DPB# debug gvrp protocol-state interface * vlan 10,20
------ 1 2
             |<-------- State of: ------->||<--- Timer [cs]: -->|
Sw Port VLan  Applicant Registrar LeaveAll  txPDU leave leaveall  GIP-Context
SM24DPB# debug gvrp statistic
SM24DPB#
```

6. Delete Commands

Delete one file in flash: file system.

SYNTAX

Delete <Path : word>

Parameters

<Path : word> Name of file to delete

EXAMPLE

```
SM24DPB# firmware upgrade tftp://10.10.10.10/path/new_image.dat
Download of /path/new_image.dat from 10.10.10.10 failed: Operation timed out.
SM24DPB#
SM24DPB# firmware upgrade tftp://10.10.10.10/C:\Users\jeffs.TRANSITION\Documents
\Downloads/SM24DPB_v6.48.2011.dat
Download of /C:\Users\jeffs.TRANSITION\Documents\Downloads/SM24DPB_v6.48.2011.dat from
10.10.10.10 failed: Operation timed out.
SM24DPB#
```

7. Dir Commands

Directory of all files in flash: file system

SYNTAX

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

```
SM24DPB# dir
Directory of flash:
    r- 2011-01-01 00:00:00      716 default-config
1 file, 716 bytes total.
SM24DPB#
```

8. Disable Commands

Turn off privileged commands.

SYNTAX

disable <0-15>

<cr>

Parameters

<0-15> Privilege level

EXAMPLE

```
SM24DPB# disable ?
    <0-15>
    <cr>
SM24DPB#
SM24DPB# disable 10
SM24DPB#
```

9. Do Commands

Run exec commands in config mode.

SYNTAX

Do <LINE>{[LINE]}

Parameter

LINE Exec Command

EXAMPLE

```
SM24DPB# do show clock
System Time     : 2011-01-01T00:03:44+00:00
```

10. DOT1x Commands

IEEE Standard for port-based Network Access Control. Dot1x can be configured in exec mode, config mode, and interface config mode.

SYNTAX (Exec Mode)

dot1x initialize [interface (<port_type> [<plist>])]

Parameters

interface	Interface
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
<cr>	

EXAMPLE

```
SM24DPB# dot1x initialize interface GigabitEthernet 1/6-9
SM24DPB#
```

SYNTAX (Config Mode)

dot1x IEEE Standard for port-based Network Access Control
dot1x authentication timer inactivity <v_10_to_100000>
dot1x authentication timer re-authenticate <v_1_to_3600>
dot1x feature { [guest-vlan] [radius-qos] [radius-vlan] }*1
dot1x guest-vlan <value>
dot1x guest-vlan supplicant
dot1x max-reauth-req <value>
dot1x re-authentication
dot1x system-auth-control
dot1x timeout quiet-period <v_10_to_1000000>
dot1x timeout tx-period <v_1_to_65535>
<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), t

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

EXAMPLE

```
SM24DPB(config)# dot1x feature guest-vlan
SM24DPB(config)# dot1x guest-vlan 100
SM24DPB(config)# dot1x re-authentication
SM24DPB(config)#
```

SYNTAX (Interface Config Mode)

dot1x guest-vlan
dot1x port-control { force-authorized | force-unauthorized | auto | single | multi | mac-based }
dot1x radius-qos
dot1x radius-vlan
dot1x re-authenticate

Parameters

guest-vlan	Enables/disables guest VLAN
port-control	Sets the port security state.
radius-qos	Enables/disables per-port state of RADIUS-assigned QoS.
radius-vlan	Enables/disables per-port state of RADIUS-assigned VLAN.
re-authenticate	Refresh (restart) 802.1X authentication process.
auto	Port-based 802.1X Authentication
force-authorized	Port access is allowed
force-unauthorized	Port access is not allowed
mac-based	Switch authenticates on behalf of the client
multi	Multiple Host 802.1X Authentication
single	Single Host 802.1X Authentication

EXAMPLE

```
SM24DPB(config-if)# dot1x guest-vlan
SM24DPB(config-if)# dot1x port-control auto
% The 802.1X Admin State must be set to Authorized for ports that are enabled for Spanning Tree
SM24DPB(config-if)#
```

11. Enable Commands

Turn on privileged commands.

Syntax

Enable <1-15>

Parameters

<0-15> Choose privileged level

EXAMPLE

```
SM24DPB# enable 10
SM24DPB#
```

12. Firmware Commands

Firmware upgrade/swap commands.

Syntax

firmware swap
firmware upgrade < TFTPServer_path_file **:** word>

Parameters

swap	Swap between Active and Alternate firmware image.
upgrade	Firmware upgrade
<TFTPServer_path_file : word>	TFTP Server IP address, path and file name for the server containing the new image.

EXAMPLE

```
SM24DPB# firmware upgrade tftp://192.168.1.1/SM24DPB_v6.48.2011.dat
Download of /SM24DPB_v6.48.2011.dat from 192.168.1.1 failed: Operation timed out
.
SM24DPB# firmware swap
Alternate image activated, now rebooting.
SM24DPB#
```

13. No Commands

Negate a command or set its defaults. No commands can be configured in exec mode, config mode, and interface config mode.

Syntax (Exec Mode)

no debug prompt
no port-security shutdown [interface (<port_type> [<v_port_type_list>])]
no terminal editing
no terminal exec-timeout
no terminal history size
no terminal length
no terminal width

Parameters (Exec Mode)

debug	Debugging functions
port-security	Port security (psec limit)
terminal	Set terminal line parameters
shutdown	Reopen one or more ports whose limit is exceeded and shut down.
interface	
<cr>	
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
PORT_LIST	Port list in 1/1-24

EXAMPLE

```
SM24DPB# no terminal exec-timeout
SM24DPB# no port-security shutdown interface GigabitEthernet 1/24
SM24DPB#
```

Parameters (Config Mode)

aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
banner	Define a login banner
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
enable	Modify enable password parameters
gvrp	Enable GVRP feature
hostname	Set system's network name
interface	Select an interface to configure
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP settings
lldp	LLDP configurations.
logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
monitor	Set monitor configuration.
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP

Parameters (Interface Config Mode)

access-list	Access list
aggregation	Aggregation keyword
broadcast-storm-protection	Disable broadcast storm protection port mode
description	Description
dot1x	IEEE Standard for port-based Network Access Control
duplex	Set duplex to default.
excessive-restart	Restart backoff algorithm after 16 collisions
flowcontrol	Configure flow control.
gvrp	Enable GVRP on interface or interfaces
ip	Internet Protocol
ipv6	IPv6 configuration commands
lacp	Enable LACP on this interface
lldp	LLDP configurations.
loop-protect	Loop protection configuration on port
mac	MAC keyword
mtu	Maximum transmission unit
mvr	Multicast VLAN Registration configuration
port-security	Enable/disable port security per interface.
pvlan	Private VLAN
qos	Quality of Service
rmon	Configure Remote Monitoring on an interface
sflow	Statistics flow.
shutdown	Shutdown of the interface.
spanning-tree	Enable/disable STP on this interface
speed	Configure speed to default.
switchport	Switching mode characteristics

14. PING Commands

Send ICMP echo messages.

Syntax

ping ip <v_ip_addr> [repeat <count>] [size <size>] [interval <seconds>]
ping ipv6 <v_ipv6_addr> [repeat <count>] [size <size>] [interval <seconds>] [interface vlan <v_vlan_id>]

Parameters

ip	IP (ICMP) echo
<word1-255>	ICMP destination address
repeat	Specify repeat count
<Count : 1-60>	1-60; Default is 5
size	Specify datagram size
<Size : 2-1452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
interval	Specify repeat interval
<Seconds : 0-30>	0-30; Default is 0
ipv6	IPv6 (ICMPv6) echo
<ipv6_addr>	ICMPv6 destination address
repeat	Specify repeat count
<1-60>	1-60; Default is 5
size	Specify datagram size
<2-1452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
interval	Specify repeat interval
<0-30>	0-30; Default is 0
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID

EXAMPLE

```
SM24DPB# ping ip 192.168.1.77 interval 2 repeat 2 size 24
PING server 192.168.1.77, 24 bytes of data.
32 bytes from 192.168.1.77: icmp_seq=0, time=0ms
32 bytes from 192.168.1.77: icmp_seq=1, time=0ms
Sent 2 packets, received 2 OK, 0 bad
SM24DPB#
```

15. Reload Commands

Reload system.

Syntax

reload { { { cold | warm } [sid <usid>] } | { defaults [keep-ip] } }

Parameters

cold	Reload cold, i.e. reboot.
defaults	Reload defaults without rebooting.
keep-ip	Reload default and try to keep VLAN1 IP setup.

EXAMPLE

```
SM24DPB# reload defaults keep-ip
% Reloading defaults, attempting to keep IP address. Please stand by.
E api_cil/port 00:05:47 31/jr_port_conf_1g_set#2151: Error: Illegal speed: 6
E api_cil/port 00:05:47 31/jr_port_conf_1g_set#2151: Error: Illegal speed: 6
SM24DPB# reload cold
% Cold reload in progress, please stand by.
SM24DPB#
```

16. Send Commands

Send a message to other tty lines.

Syntax

send { * | <session_list> | console 0 | vty <vty_list> } <message>

Parameters

*	All tty lines
<0~16>	Send a message to multiple lines
console	Primary terminal line
0	Send a message to a specific line
vty	Virtual terminal
<0~15>	Send a message to multiple lines
<LINE>	Message to be sent to lines, in 128 char's

EXAMPLE

```
SM24DPB# send * Y yes,i do
Enter TEXT message.  End with the character 'Y'.
* Y yes I do!!

----------------------------------------
*** Message from line 1:
 yes,i do
*
----------------------------------------
SM24DPB#
```

17. Show Commands

Show running system information

Table : SHOW Commands

Command	Function
aaa	Login methods
access	Access management
access-list	Access list
aggregation	Aggregation port configuration
broadcast-storm-protection	Broadcast Storm Protection (BCS)
clock	Configure time-of-day clock
dhcp	Dynamic Host Configuration Protocol
dot1x	IEEE Standard for port-based Network Access Control
event	Show trap event configuration
history	Display the session command history
interface	Interface status and configuration
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	LACP configuration/status
line	TTY line information
lldp	Display LLDP configure information.
logging	Syslog
loop-protect	Loop protection configuration
mac	Mac Address Table information
map-api-key	show google map key configuration
mvr	Multicast VLAN Registration configuration
ntp	Display NTP
platform	Platform specific information
port-security	Port Security Status
privilege	Display command privilege
pvlan	PVLAN configuration
qos	Quality of Service
radius-server	RADIUS configuration
rapid-ring	Display Rapid Ring configuration
rmon	RMON statistics
running-config	Show running system information
sflow	Statistics flow.
smtp	Show email information
snmp	Display SNMP configurations
spanning-tree	STP Bridge
switchport	Display switching mode characteristics
system	Display system information
tacacs-server	TACACS+ configuration
terminal	Display terminal configuration parameters
upnp	Display UPnP configurations
user-privilege	Users privilege configuration
users	Display information about terminal lines
version	System hardware and software status
vlan	VLAN status
voice	Voice appliance attributes
web	Web

aaa

Show Login methods.

SYNTAX

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

```
SM24DPB# show aaa
console : local
telnet  : local
ssh     : local
http    : local
https   : no
SM24DPB#
```

access

Show Access management.

SYNTAX

show access management [statistics | <access_id_list>]

Parameters

management	Access management configuration
statistics	Statistics data
<AccessidList : 1~16>	ID of access management 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

EXAMPLE

```
SM24DPB# show access management
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
--- ---  ------------------------------ ------------------------------ - - -
10  3    192.168.1.1                    192.168.1.1                    Y Y Y
SM24DPB# show access management statistics

Access Management Statistics:
-----------------------------
HTTP     Receive:          0    Allow:          0    Discard:          0
HTTPS    Receive:          0    Allow:          0    Discard:          0
SNMP     Receive:          0    Allow:          0    Discard:          0
TELNET   Receive:          0    Allow:          0    Discard:          0
SSH      Receive:          0    Allow:          0    Discard:          0
SM24DPB#
```

access-list

Show Access list.

SYNTAX

show access-list [interface [* | GigabitEthernet <PORT_LIST>]] [rate-limiter [<RateLimiterList : 1~16>]] [ace statistics [<AceId : 1~256>]]
show access-list ace-status [static] [loop-protect] [dhcp] [upnp] [arp-inspection] [mep] [ipmc] [ip-source-guard] [ip-mgmt] [conflicts]

Parameters

interface	Select an interface to configure
*	All Switches or All Ports
Gigbitethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24
rate-limiter	Rate limiter
< RateLimiterList : 1~16>	Rate limiter ID
ace	Access list entry
statistics	Traffic statistics
<AceId : 1~256>	ACE ID
ace-status	The local ACEs status
static	The ACEs that are configured by users manually
loop-protect	The ACEs that are configured by Loop Protect module
dhcp	The ACEs that are configured by DHCP module
upnp	The ACEs that are configured by UPnP module
arp-inspection	The ACEs that are configured by ARP Inspection module
mep	The ACEs that are configured by MEP module
ipmc	The ACEs that are configured by IPMC module
ip-source-guard	The ACEs that are configured by IP Source Guard module
ip-mgmt	The ACEs that are configured by IP Management module
conflicts	The conflicts ACEs that does not applied to the hardware due to hardware limitations

EXAMPLE

```
SM24DPB# show access-list

Switch access-list ace number: 0

Switch access-list rate limiter ID 1 is 1 pps
Switch access-list rate limiter ID 2 is 1 pps
Switch access-list rate limiter ID 3 is 1 pps
Switch access-list rate limiter ID 4 is 1 pps
Switch access-list rate limiter ID 5 is 1 pps
Switch access-list rate limiter ID 6 is 1 pps
Switch access-list rate limiter ID 7 is 1 pps
Switch access-list rate limiter ID 8 is 1 pps
Switch access-list rate limiter ID 9 is 1 pps
Switch access-list rate limiter ID 10 is 1 pps
Switch access-list rate limiter ID 11 is 1 pps
Switch access-list rate limiter ID 12 is 1 pps
Switch access-list rate limiter ID 13 is 1 pps
Switch access-list rate limiter ID 14 is 1 pps
Switch access-list rate limiter ID 15 is 1 pps
Switch access-list rate limiter ID 16 is 1 pps

GigabitEthernet 1/1 :
---------------------
-- more --, next page: Space, continue: g, quit: ^C
```

aggregation

Show Aggregation port configuration.

SYNTAX

show aggregation [mode] [| {begin | exclude | include } <LINE>]

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

```
SM24DPB# show aggregation  Mode
Aggregation Mode:

SMAC  : Enabled
DMAC  : Enabled
IP    : Enabled
Port  : Enabled
SM24DPB#
```

broadcast-storm-protection

Show Broadcast Storm Protection (BCS).

SYNTAX

show broadcast-storm-protection [interface (<port_type> [<v_port_type_list>])]

Parameters

|	sOutput modifiers
interface	Select an interface to configure
<cr>	

EXAMPLE

```
SM24DPB# show broadcast-storm-protection
Port  Mode      Action            PPS      Timer(seconds)  Status
----  --------  ----------------  -------  --------------  ---------
1     Disable   Shutdown          0        300
2     Enable    Shutdown and Log  10       1
3     Enable    Shutdown and Log  110      300
4     Enable    Shutdown and Log  11110    3
5     Enable    Log Only          99999    300
6     Enable    Shutdown          0        300             Activated
7     Enable    Shutdown          0        300             Activated
8     Disable   Shutdown          0        300
9     Disable   Shutdown          0        300
11    Disable   Shutdown          0        300
12    Disable   Shutdown          0        300
13    Disable   Shutdown          0        300
14    Disable   Shutdown          0        300
15    Disable   Shutdown          0        300
16    Disable   Shutdown          0        300
17    Disable   Shutdown          0        300
18    Disable   Shutdown          0        300
19    Disable   Shutdown          0        300
20    Disable   Shutdown          0        300
-- more --, next page: Space, continue: g, quit: ^C
```

clock

Show time-of-day clock.

SYNTAX

show clock [detail]

Parameters

detail Display detailed time information

EXAMPLE

```
M24DPB# show clock
System Time     : 2011-01-02T03:41:55+00:00

SM24DPB# show clock  detail
System Time     : 2011-01-02T03:42:01+00:00

Timezone : Timezone Offset : 0 ( 0 minutes)
Timezone Acronym :

Daylight Saving Time Mode : Disabled.
Daylight Saving Time Start Time Settings :
        Week: 0
        Day: 0
        Month: 0
        Date: 0
        Year: 0
        Hour: 0
        Minute: 0
Daylight Saving Time End Time Settings :
        Week: 0
        Day: 0
        Month: 0
        Date: 0
        Year: 0
        Hour: 0
        Minute: 0
Daylight Saving Time Offset : 1 (minutes)
SM24DPB#
```

dot1x

Show IEEE Standard for port-based Network Access Control.

SYNTAX

show dot1x statistics { eapol | radius | all } [interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>]

show dot1x status [interface (<port_type> [<port_type_list>])] [brief] [| {begin | exclude | include } <LINE>]

Parameters

statistics	Shows statistics for either eapol or radius.
all	Show all dot1x statistics
eapol	Show EAPOL statistics
radius	Show Backend Server statistics
<port_type >	GigabitEthernet or 10Gigabitethernet
<port_type_list>	Port list in 1/1-24 for GigabitEthernet, 1/1-4 for 10Gigabitethernet
Status	Shows dot1x status, such as admin state, port state and last source.
brief	Show status in a brief format
interface	Interface
*	All Switches or All Ports
Gigbitethernet	1 Gigabit Ethernet Port
10Gigbitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# show dot1x statistics radius
                      Rx Access    Rx Other    Rx Auth.    Rx Auth.    Tx             MAC
Interface            Challenges   Requests    Successes   Failures    Responses      Address
--------------------  ----------  ----------  ----------  ----------  ----------  -------
GigabitEthernet 1/1    0           0           0           0           0   -
GigabitEthernet 1/2    0           0           0           0           0   -
GigabitEthernet 1/3    0           0           0           0           0   -
GigabitEthernet 1/4    0           0           0           0           0   -
GigabitEthernet 1/5    0           0           0           0           0   -
GigabitEthernet 1/6    0           0           0           0           0   -
GigabitEthernet 1/7    0           0           0           0           0   -
GigabitEthernet 1/8    0           0           0           0           0   -
-- more --, next page: Space, continue: g, quit: ^C
```

dhcp

Show dhcp helper debug configuration.

SYNTAX

show dhcp helper debug <cr>

EXAMPLE

```
SM24DPB# show dhcp helper debug
DHCP helper
frame_info_cnt : 0
debug : disable

SM24DPB#
```

event

Show trap event configuration.

SYNTAX

show event

EXAMPLE

```
SM24DPB# show event
Group Name                       Severity Level    Syslog Mode   Trap Mode    SMTP Mode
-------------------------------  ----------------  ------------  -----------  ---------
AC-Power                         Info              enable        disable       disable
ACL                              Info              enable        disable       disable
ACL-Log                          Info              enable        disable       disable
Access-Mgmt                      Info              enable        disable       disable
Auth-Failed                      Warning           enable        disable       disable
BCS-Protection                   Info              enable        disable       disable
Cold-Start                       Warning           enable        disable       disable
Config-Info                      Info              enable        disable       disable
DC-Power                         Info              enable        disable       disable
DMS                              Info              enable        disable       disable
Dying-Gasp                       Crit              enable        disable       disable
FAN                              Warning           enable        disable       disable
Firmware-Upgrade                 Info              enable        disable       disable
-- more --, next page: Space, continue: g, quit: ^C
```

history

Display the session command history.

SYNTAX

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

```
SM24DPB# show history ?
    |       Output modifiers
    <cr>
SM24DPB# show history
  show access management
  show access management statistics
  show access-list
  show aggregation mode
  show broadcast-storm-protection
  show broadcast-storm-protection interface GigabitEthernet 1/1-6
  show broadcast-storm-protection
  con ter
  interface GigabitEthernet 1/4-9
  show dot1x statistics radius
  end
  show dot1x statistics radius
  show dot1x statistics eapol
  show dhcp helper debug
  show event
  show history
SM24DPB#
```

interface

Show Interface status and configuration.

SYNTAX

show interface (<port_type> [<in_port_list>]) switchport [access | trunk | hybrid]
show interface (<port_type> [<v_port_type_list>]) CableDiag
show interface (<port_type> [<v_port_type_list>]) capabilities [detail]
show interface (<port_type> [<v_port_type_list>]) description
show interface (<port_type> [<v_port_type_list>]) statistics [{ packets | b
ytes | errors | discards | filtered | { priority [<priority_v_0_to_7>] } }] [{ up | down }]
show interface (<port_type> [<v_port_type_list>]) status
show interface vlan [<vlist>]

Parameters

*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
vlan	VLAN status
|	Output modifiers
<vlan_list>	VLAN list
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
CableDiag	Display the latest cable diagnostic results.
capabilities	Display capabilities.
description	Display port description.
statistics	Display statistics counters.
status	Display status.
switchport	Show interface switchport information
|	Output modifiers
detail	Display capabilities in detail.
*	All switches or All ports
GigabitEthernet	1 Gigabit Ethernet Port
CableDiag	Display the latest cable diagnostic results.
capabilities	Display capabilities.
description	Display port description.
statistics	Display statistics counters.
status	Display status.
switchport	Show interface switchport information
|	Output modifiers
access	Show access ports status
hybrid	Show hybrid ports status
trunk	Show trunk ports status
<cr>	

EXAMPLE 1

```
SM24DPB# show interface vlan
VLAN1
  LINK: 00-c0-f2-47-45-27 Mtu:1500 <UP BROADCAST RUNNING MULTICAST>
  IPv4: 192.168.1.77/24 192.168.1.255
  IPv4: 169.254.124.67/16 169.254.255.255
  IPv6: fe80::2c0:f2ff:fe47:4527/64 <ANYCAST TENTATIVE AUTOCONF>
VLAN4096
  LINK: 00-c0-f2-47-45-27 Mtu:1500 <BROADCAST MULTICAST>
VLAN4097
  LINK: 00-c0-f2-47-45-27 Mtu:1500 <BROADCAST MULTICAST>
SM24DPB#
```

EXAMPLE 2

```
SM24DPB# show interface GigabitEthernet 1/2-5 capabilities
GigabitEthernet 1/2 Capabilities:
     Tx Central                                    Mon1      Mon2         Mon3
Port Wavelength  Bit Rate   Temperature   Vcc    (Bias)   (Tx PWR)     (Rx PWR)
---- ---------- ----------- ----------- ------- ------ ------------ ------------

  2         850     10 Gbps     40.94 C  3.28 V   6 mA    -2.28 dBm         none


GigabitEthernet 1/3 Capabilities:
     Tx Central                                    Mon1      Mon2         Mon3
Port Wavelength  Bit Rate   Temperature   Vcc    (Bias)   (Tx PWR)     (Rx PWR)
---- ---------- ----------- ----------- ------- ------ ------------ ------------

  3        1310    100 Mbps     46.41 C  3.28 V  16 mA   -10.11 dBm         none


GigabitEthernet 1/4 Capabilities:
     Tx Central                                    Mon1      Mon2         Mon3
Port Wavelength  Bit Rate   Temperature   Vcc    (Bias)   (Tx PWR)     (Rx PWR)
---- ---------- ----------- ----------- ------- ------ ------------ ------------
```

EXAMPLE 3

```
SM24DPB# show interface GigabitEthernet 1/2-5 status
Interface               Mode     Speed & Duplex  Flow Control  Max Frame  Excessive  Link
----------------------  -------  --------------  ------------  ---------  ---------  --------
GigabitEthernet 1/2     enabled  Auto            disabled      10056      Discard    Down
GigabitEthernet 1/3     enabled  Auto            disabled      10056      Discard    Down
GigabitEthernet 1/4     enabled  Auto            disabled      10056      Discard    Down
GigabitEthernet 1/5     enabled  Auto            disabled      10056      Discard    Down
SM24DPB# show interface GigabitEthernet 1/2-5 switchport
Name: GigabitEthernet 1/2
Administrative mode: access
Access Mode VLAN: 1
Trunk Native Mode VLAN: 1
Administrative Native VLAN tagging: disabled
Allowed VLANs: 1-4095
Hybrid port configuration
-------------------------
Port Type: C-Port
Acceptable Frame Type: All
Ingress filter: Disabled
Egress tagging: All except-native
Hybrid Native Mode VLAN: 1
Hybrid VLANs Enabled: 1-4095

Name: GigabitEthernet 1/3
Administrative mode: access
Access Mode VLAN: 1
Trunk Native Mode VLAN: 1
Administrative Native VLAN tagging: disabled
Allowed VLANs: 1-4095
Hybrid port configuration
SM24DPB#
```

ip

Show Internet Protocol.

SYNTAX

show ip arp
show ip arp inspection [interface (<port_type> [<in_port_type_list>]) | vlan <in_vlan_list>]
show ip arp inspection entry [dhcp-snooping | static] [interface (<port_type> [<in_port_type_list>])]
show ip dhcp detailed statistics { server | client | snooping | relay | normal-forward | combined } [interface (<port_type> [<in_port_list>])]
show ip dhcp excluded-address
show ip dhcp pool [<pool_name>]
show ip dhcp relay [statistics]
show ip dhcp server
show ip dhcp server binding <ip>
show ip dhcp server binding [state { allocated | committed | expired }] [type { automatic | manual | expired }]
show ip dhcp server declined-ip
show ip dhcp server declined-ip <declined_ip>
show ip dhcp server statistics
show ip dhcp snooping [interface (<port_type> [<in_port_list>])]
show ip dhcp snooping table
show ip http
show ip http server secure status
show ip igmp snooping [vlan <v_vlan_list>] [group-database [interface (<port_type> [<v_port_type_list>])] [sfm-information]] [detail]
show ip igmp snooping mrouter [detail]
show ip interface brief
show ip link-local interface
show ip name-server
show ip route
show ip source binding [dhcp-snooping | static] [interface (<port_type> [<in_port_type_list>])]
show ip ssh
show ip ssh key
show ip statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]
show ip telnet
show ip verify source [interface (<port_type> [<in_port_type_list>])]

Parameters

arp	Address Resolution Protocol
inspection	ARP inspection
interface	arp inspection entry interface config
<port_type>	* or Gigabitethernet or 10Gigabitethernet
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
vlan	VLAN configuration
<vlan_list>	Select a VLAN id to configure
entry	arp inspection entries
dhcp-snooping	learn from dhcp snooping
static	setting from static entries
dhcp	Dynamic Host Configuration Protocol
relay	DHCP relay agent configuration
statistics	Traffic statistics
snooping	DHCP snooping
http	Hypertext Transfer Protocol
server	HTTP web server
secure	Secure
status	Status
igmp	Internet Group Management Protocol
snooping	Snooping IGMP
vlan	Search by VLAN
<vlan_list>	VLAN identifier(s): VID
group-database	Multicast group database from IGMP
sfm-information	Including source filter multicast information from IGMP
detail	Detail running information/statistics of IGMP snooping

mrouter	Multicast router port status in IGMP
detail	Detail running information/statistics of IGMP snooping
interface	IP interface status and configuration
brief	Brief IP interface status
name-server	Domain Name System
route	Display the current ip routing table
binding	ip source binding
dhcp-snooping	learn from dhcp snooping
ssh	Secure Shell
system	IPv4 system traffic
icmp	IPv4 ICMP traffic
icmp-msg	IPv4 ICMP traffic for designated message type
<0~255>	ICMP message type ranges from 0 to 255
verify	verify command
source	verify source

EXAMPLE 1

```
SM24DPB# show ip statistics system
IPv4 statistics:
  Rcvd:  411 total in 36226 bytes
         273 local destination, 0 forwarding
         0 header error, 0 address error, 0 unknown protocol
         0 no route, 0 truncated, 138 discarded
  Sent:  0 total in 0 byte
         0 generated, 0 forwarded
         0 no route, 0 discarded
  Frags: 0 reassemble (0 reassembled, 0 couldn't reassemble)
         0 fragment (0 fragmented, 0 couldn't fragment)
         0 fragment created
  Mcast: 411 received in 36226 bytes
         0 sent in 0 byte
  Bcast: 273 received, 0 sent
```

EXAMPLE 2

```
SM24DPB# show ip dhcp detailed 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
```

EXAMPLE 3

```
SM24DPB# show ip dhcp detailed statistics combined
GigabitEthernet 1/1 Statistics:
------------------------------
Rx Discover:                        0   Tx Discover:                        0
Rx Offer:                           0   Tx Offer:                           0
Rx Request:                         0   Tx Request:                         0
Rx Decline:                         0   Tx Decline:                         0
Rx ACK:                             0   Tx ACK:                             0
Rx NAK:                             0   Tx NAK:                             0
Rx Release:                         0   Tx Release:                         0
Rx Inform:                          0   Tx Inform:                          0
Rx Lease Query:                     0   Tx Lease Query:                     0
Rx Lease Unassigned:                0   Tx Lease Unassigned:                0
Rx Lease Unknown:                   0   Tx Lease Unknown:                   0
Rx Lease Active:                    0   Tx Lease Active:                    0
Rx Discarded checksum error:        0

GigabitEthernet 1/2 Statistics:
------------------------------
-- more --, next page: Space, continue: g, quit: ^C
```

ipmc

Display current IPv4/IPv6 multicast configuration.

SYNTAX

show ipmc profile [<ProfileName : word16>] [detail] [| {begin | exclude | include } <LINE>]
show ipmc range [<EntryName : word16>] [| {begin | exclude | include } <LINE>]

Parameters

profile	IPMC profile configuration
range	A range of IPv4/IPv6 multicast addresses for the profile
<ProfileName : word16>	Profile name in 16 char's
detail	Detail information of a profile
<EntryName : word16>	Range entry name in 16 char's
|	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

```
SM24DPB# show ipmc range
SM24DPB# show ipmc profile

IPMC Profile is currently disabled, please enable profile to start filtering.

Profile: test (In VER-INI Mode)
Description:
SM24DPB# show ipmc ?
    profile    IPMC profile configuration
    range      A range of IPv4/IPv6 multicast addresses for the profile
SM24DPB# show ipmc??
show ipmc profile [ <profile_name> ] [ detail ]
show ipmc range [ <entry_name> ]
SM24DPB# show ipmc
```

ipv6

Show IPv6 configuration commands.

SYNTAX

show ipv6 interface [vlan <v_vlan_list> { brief | statistics }]
show ipv6 mld snooping [vlan <v_vlan_list>] [group-database [interface (<port_type> [<v_port_type_list>])] [sfm-information]] [detail]
show ipv6 mld snooping mrouter [detail]
show ipv6 neighbor [interface vlan <v_vlan_list>]
show ipv6 route [interface vlan <v_vlan_list>]
show ipv6 statistics [system] [interface vlan <v_vlan_list>] [icmp] [icmp-msg <type>]

Parameters

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
statistics	Traffic statistics
mld	Multicast Listener Discovery
snooping	Snooping MLD
vlan	Search by VLAN
<vlan_list>	VLAN identifier(s): VID
group-database	Multicast group database from MLD
interface	Search by port
<port_type>	* or Gigabitethernet or 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet
sfm-information	Including source filter multicast information from MLD
detail	Detail running information/statistics of MLD snooping
mrouter	Multicast router port status in MLD
neighbor	IPv6 neighbors
route	IPv6 routes
statistics	Traffic statistics
system	IPv6 system traffic
icmp	IPv6 ICMP traffic
icmp-msg	IPv6 ICMP traffic for designated message type
<Type : 0~255>	ICMP message type ranges from 0 to 255
|	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

```
SM24DPB# show ipv6 statistics system
IPv6 statistics:
 Rcvd:  0 total in 0 byte
      0 local destination, 0 forwarding
      0 header error, 0 address error, 0 unknown protocol
      0 no route, 0 truncated, 0 discarded
 Sent:  10 total in 656 bytes
      14 generated, 0 forwarded
      0 no route, 0 discarded
 Frags: 0 reassemble (0 reassembled, 0 couldn't reassemble)
      0 fragment (0 fragmented, 0 couldn't fragment)
      0 fragment created
 Mcast: 0 received in 0 byte
      10 sent in 656 bytes
 Bcast: 0 received, 0 sent
```

```
SM24DPB# show ipv6 interface vlan 1-100 brief

IPv6 Vlan1 interface is up.
 Internet address is fe80::2c0:f2ff:fe47:4527
 Static address is not set
SM24DPB#
```

lacp

Display current LACP configuration/status.

SYNTAX

show lacp { internal | statistics | system-id | neighbour } [| {begin | exclude | include } <LINE>]

Parameters

internal	Internal LACP configuration
neighbour	Neighbour LACP status
statistics	Internal LACP statistics
system-id	LACP system id
|	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

```
SM24DPB# show lacp internal
Port                  Mode      Key   Role    Timeout  Priority
--------------------  --------  ----  ------  -------  --------
Gi 1/1                Disabled  Auto  Active  Fast     32768
Gi 1/2                Disabled  Auto  Active  Fast     32768
Gi 1/3                Disabled  Auto  Active  Fast     32768
Gi 1/4                Disabled  Auto  Active  Fast     32768
Gi 1/5                Disabled  Auto  Active  Fast     32768
Gi 1/6                Disabled  Auto  Active  Fast     32768
Gi 1/7                Disabled  Auto  Active  Fast     32768
Gi 1/8                Disabled  Auto  Active  Fast     32768
Gi 1/9                Disabled  Auto  Active  Fast     32768
Gi 1/10               Disabled  Auto  Active  Fast     32768
Gi 1/11               Disabled  Auto  Active  Fast     32768
Gi 1/12               Disabled  Auto  Active  Fast     32768
Gi 1/13               Disabled  Auto  Active  Fast     32768
Gi 1/14               Disabled  Auto  Active  Fast     32768
-- more --, next page: Space, continue: g, quit: ^C
SM24DPB# show lacp system-id
System Priority: 32768
SM24DPB#
```

line

Show TTY line information.

SYNTAX

show line [alive] [| {begin | exclude | include } <LINE>]

Parameters

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

```
SM24DPB# show line alive
Line is vty 0.
    * You are at this line now.
    Alive from Telnet.
    Default privileged level is 2.
    Command line editing is disabled
    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 7 min 45 sec.
    Idle time is 0 day 0 hour 0 min 0 sec.

SM24DPB#
```

lldp

Display LLDP neighbors information..

SYNTAX

show lldp [interface (<port_type> [<v_port_type_list>])]
show lldp med media-vlan-policy [<v_0_to_31>]
show lldp med remote-device [interface (<port_type> [<port_list>])]
show lldp neighbors [interface (<port_type> [<v_port_type_list>])]
show lldp statistics [interface (<port_type> [<v_port_type_list>])]

Parameters

med	Display LLDP-MED neighbors information.
neighbors	Display LLDP neighbors information.
statistics	Display LLDP statistics information.
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.
<port_type >	* or GigabitEthernet or 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24 for Gigabitethernet, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# show lldp interface GigabitEthernet 1/4-8
LLDP Configuration
------------------
TX Interval : 30
TX Hold : 4
TX Delay : 2
TX Reinit : 2
LLDP Port Configuration, Ena : Enabled, Dis : Disabled
-------------------------------------------------------
Port     TX/RX Mode      CDP Aware      Port Descr      Sys Name     Sys Descr    Sys Capa     Mgmt Addr
-------------------------------------------------------------------------------------------------------
  4      TX/RX           Dis            Ena            Ena          Ena    Ena           Ena
  5      TX/RX           Dis            Ena            Ena          Ena    Ena           Ena
-- more --, next page: Space, continue: g, quit: ^C
```

logging

Show Syslog settings.

SYNTAX

show logging <loggin_id : 1-4294967295> [| {begin | exclude | include } <LINE>]
show logging [info] [warning] [error] [| {begin | exclude | include } <LINE>]

Parameters

<logging_id: 1-4294967295>	Logging ID
error	Error
info	Information
warning	Warning

EXAMPLE

```
SM24DPB# show logging ?
    <logging_id: 1-4294967295>    Logging ID
    |                             Output modifiers
    alert                         Alert
    crit                          Critical
    debug                         Debug
    emerg                         Emergency
    error                         Error
    info                          Information
    notice                        Notice
    warning                       Warning
    <cr>
SM24DPB# show logging info
Switch logging host mode is disabled
Switch logging host address is null
Number of entries on Switch 1:
Emerg  : 0
Alert  : 0
Crit   : 0
Error  : 0
Warning: 19
Notice : 0
Info   : 28
Debug  : 0
All    : 47

ID    Level   Time                       Message
----  ------  -------------------------  ----------------------------
   2  Info    2011-01-01T00:00:04+00:00  Password of user 'admin' was change ...

   4  Info    2011-01-01T00:01:55+00:00  Login passed for user 'admin'
  10  Info    2011-01-01T01:18:16+00:00  Login passed for user 'admin'
  11  Info    2011-01-01T01:28:19+00:00  User 'admin' logout
  12  Info    2011-01-01T01:31:48+00:00  Login passed for user 'admin'
  13  Info    2011-01-01T01:46:42+00:00  User 'admin' logout
-- more --, next page: Space, continue: g, quit: ^C

SM24DPB# show logging 2
Switch : 1
ID     : 2
Level  : Info
Time   : 2011-01-01T00:00:04+00:00
Message:
Password of user 'admin' was changed
SM24DPB# show logging 4
Switch : 1
ID     : 4
Level  : Info
Time   : 2011-01-01T00:01:55+00:00
Message:
Login passed for user 'admin'
through WEB from 192.168.1.99 and authenticated by local method
SM24DPB#
```

loop-protect

Display current Loop protection configuration.

SYNTAX

show loop-protect [interface <port_type> <port_type_list>]

Parameters

interface	Interface status and configuration
<port_type >	* or GigabitEthernet or 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# show loop-protect interface GigabitEthernet 1/4-8

Loop Protection Configuration
======================================
Loop Protection   : Disable
Transmission Time : 5 sec
Shutdown Time     : 180 sec

GigabitEthernet 1/4
------------------------------
    Loop protect mode is enabled.
    Action is shutdown.
    Transmit mode is enabled.
    No loop.
    The number of loops is 0.
    Status is down.

GigabitEthernet 1/5
------------------------------
    Loop protect mode is enabled.
    Action is shutdown.
    Transmit mode is enabled.
    No loop.
-- more --, next page: Space, continue: g, quit: ^C
```

mac

Display Mac Address Table information.

SYNTAX

show mac address-table [conf | static | aging-time | { { learning | count } [interface (<port_type> [<v_port_type_list>])] } | { address <v_mac_addr> [vlan <v_vlan_id>] } | vlan <v_vlan_id_1> | interface (<port_type> [<v_port_type_list_1>])]

Parameters

address-table	Mac Address Table
conf	User added static mac addresses
static	All static mac addresses
aging-time	Aging time
learning	Learn/disable/secure state
count	Total number of mac addresses
interface	Select an interface to configure
<port_type>	* or Gigabitethernet or 10Gigabitethernet
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
address	MAC address lookup
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
vlan	VLAN lookup
<vlan_id>	VLAN IDs 1-4095
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM24DPB# show mac address-table static
Type    VID  MAC Address        Ports
Static  1    33:33:00:00:00:01  GigabitEthernet 1/1-24 CPU
Static  1    33:33:00:00:00:02  GigabitEthernet 1/1-24 CPU
Static  1    33:33:ff:46:ce:fd  GigabitEthernet 1/1-24 CPU
Static  1    ff:ff:ff:ff:ff:ff  GigabitEthernet 1/1-24 CPU
SM24DPB#
```

mvr

Show Multicast VLAN Registration configuration.

SYNTAX

show mvr [vlan <v_vlan_list> | name <mvr_name>] [group-database [interface (<port_type> [<v_port_type_list>])] [sfm-information]] [detail]

Parameters

vlan	Search by VLAN
<vlan_list>	MVR multicast VLAN list
name	Search by MVR name
<word16>	MVR multicast VLAN name
group-database	Multicast group database from MVR
interface	Search by port
<port_type>	* or Gigabitethernet
*	All Switches or All ports
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
sfm-information	Including source filter multicast information from MVR
detail	Detail information/statistics of MVR group database
|	Output modifiers
<LINE>	String to match output lines

EXAMPLE

```
SM24DPB# show mvr
MVR is currently disabled, please enable MVR to start group registration.
SM24DPB# show mvr
MVR is now enabled to start group registration.
Switch-1 MVR-IGMP Interface Status
IGMP MVR VLAN 10 (Name is mvr10) interface is enabled.
Querier status is IDLE
RX IGMP Query:0 V1Join:0 V2Join:0 V3Join:0 V2Leave:0
TX IGMP Query:0 / (Source) Specific Query:0
Interface Channel Profile: <No Associated Profile>
Switch-1 MVR-MLD Interface Status
MLD MVR VLAN 10 (Name is mvr10) interface is enabled.
Querier status is IDLE
RX MLD Query:0 V1Report:0 V2Report:0 V1Done:0
TX MLD Query:0 / (Source) Specific Query:0
Interface Channel Profile: <No Associated Profile>
SM24DPB#
```

ntp

Show NTP status.

SYNTAX

show ntp status <cr>

Parameters

None.

EXAMPLE

```
SM24DPB# show ntp status
NTP Mode : disabled
Automatic: enabled
Idx   Server IP host address (a.b.c.d)
---   ------------------------------------------------------
1

Idx   Server IP host address (a.b.c.d) or a host name string
---   ------------------------------------------------------
1     192.168.1.30
2     192.168.1.40
3
4
5
SM24DPB#
```

platform

Display platform specific information.

SYNTAX

show platform phy [interface (<port_type> [<v_port_type_list>])]
show platform phy failover
show platform phy id [interface (<port_type> [<v_port_type_list>])]
show platform phy instance
show platform phy status [interface (<port_type> [<v_port_type_list>])]

Parameters

|	Output modifiers
failover	Failover status
id	
instance	PHY Instance Information
interface	
status	
<cr>	

EXAMPLE

```
SM24DPB# show platform phy
Port   API Inst   WAN/LAN/1G Mode       Duplex     Speed      Link
----   ---------  ---------  ----       ------     -----      ----
21     Default    1G         ANEG       -          -          No
22     Default    1G         ANEG       -          -          Yes
23     Default    1G         ANEG       -          -          No
24     Default    1G         ANEG       -          -          No
SM24DPB# show platform phy failover
Port         Active     Channel    Broadcast  After reset
----         ------     -------    ---------  ------------
SM24DPB# show platform phy id
Port   Channel    API Base   Phy Id     Phy Rev.
----   -------    --------   -------    ------
21     0          0 (1g)     8664       0
22     1          0 (1g)     8664       0
23     2          0 (1g)     8664       0
24     3          0 (1g)     8664       0
SM24DPB# show platform phy instance
Next Restart    : Cold
Previous Restart: Cold
Current API Version : 1
Previous API Version: 0
Phy Instance Restart Source:1G
Phy Instance Restart Port:0
Current Phy Start Instance:none
SM24DPB# show platform phy status
Port   Issues seen during 1G PHY warmstart Issues during 10G PHY WS
----   ---------------------------------- ------------------------
1      No                                    No
2      No                                    No
3      No                                    No
4      No                                    No
5      No                                    No
6      No                                    No
7      No                                    No
8      No                                    No
9      No                                    No
17     No                                    No
18     No                                    No
19     No                                    No
20     No                                    No
-- more --, next page: Space, continue: g, quit: ^C
```

port-security

Display Port Security Status information.

SYNTAX

show port-security port [interface (<port_type> [<v_port_type_list>])]
show port-security switch [interface (<port_type> [<v_port_type_list>])]

Parameters

port	Show MAC Addresses learned by Port Security
switch	Show Port Security status.
Interface	
<port_type >	* or GigabitEthernet of 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
|	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

```
SM24DPB# show port-security port interface GigabitEthernet 1/4-5
GigabitEthernet 1/4
-------------------
MAC Address       VID   State      Added                 Age/Hold Time
----------------                   ----  ----------       -------------------------                    -------------
<none>

GigabitEthernet 1/5
-------------------
MAC Address       VID   State      Added                 Age/Hold Time
----------------              ----    ----------    -------------------------                    -------------
<none>

SM24DPB# show port-security switch interface GigabitEthernet 1/4-8
Users:
L = Limit Control
8 = 802.1X
V = Voice VLAN
Interface             Users  State        MAC Cnt
----------------------        -----  -------------              -------
GigabitEthernet 1/4     ---   No users          0
GigabitEthernet 1/5     ---   No users          0
GigabitEthernet 1/6     ---   No users          0
GigabitEthernet 1/7     ---   No users          0
GigabitEthernet 1/8     ---   No users          0
SM24DPB#
```

privilege

Display command privilege.

SYNTAX

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

EXAMPLE

```
SM24DPB# show privilege?
  privilege    Display command privilege
  <cr>
SM24DPB# show privilege?
show privilege
SM24DPB# show privilege ?
  |      Output modifiers
  <cr>
SM24DPB# show privilege
SM24DPB#
```

pvlan

Display PVLAN status.

SYNTAX

show pvlan [<pvlan_list>]
show pvlan isolation [interface (<port_type> [<plist>])]

Parameters

<range_list>	PVLAN id to show configuration for
isolation	show isolation configuration
<port_type >	* or GigabitEthernet or 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
|	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

```
SM24DPB# show pvlan isolation interface GigabitEthernet 1/4-8
Port                            Isolation
------------------------------  ---------
GigabitEthernet 1/4             Disabled
GigabitEthernet 1/5             Disabled
GigabitEthernet 1/6             Disabled
GigabitEthernet 1/7             Disabled
GigabitEthernet 1/8             Disabled
SM24DPB#
```

qos

Display Quality of Service.

SYNTAX

show qos [{ interface [(<port_type> [<port>])] } | wred | { maps [dscp-cos] [dscp-ingress-translation] [dscp-classify] [cos-dscp] [dscp-egress-translation] } | storm | { qce [<qce>] }]

Parameters

interface	Interface
<port_type >	* or GigabitEthernet or 10Gigabitethernet
*	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
maps	Global QoS Maps/Tables
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
<Qce : 1-256>	QCE ID

EXAMPLE 1

```
SM24DPB# show qos
interface GigabitEthernet 1/1
 qos cos 0
 qos dpl 0
 qos trust dscp disabled
 qos policer mode: disabled, rate: 500 kbps
 qos shaper mode: disabled, rate: 500 kbps
 qos queue-shaper queue 0 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 1 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 2 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 3 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 4 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 5 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 6 mode: disabled, rate: 500 kbps, excess: disabled
 qos queue-shaper queue 7 mode: disabled, rate: 500 kbps, excess: disabled
 qos wrr mode: disabled, weight: q0:17 q1:17 q2:17 q3:17 q4:17 q5:17
-- more --, next page: Space, continue: g, quit: ^C
```

EXAMPLE 2

```
SM24DPB# show qos qce
No qce entries found!
SM24DPB# show qos wred
qos wred:
=========
Queue  Mode      Min Th  Mdp 1  Mdp 2  Mdp 3
-----  ----      ------  -----  -----  -----
0      disabled      0      1      5     10
1      disabled      0      1      5     10
2      disabled      0      1      5     10
3      disabled      0      1      5     10
4      disabled      0      1      5     10
5      disabled      0      1      5     10

SM24DPB#
SM24DPB# show qos maps
qos map dscp-cos:
```

```
=================
DSCP       Trust     Cos  Dpl
---------  --------  ---  ---
0  (BE)    disabled  0    0
1          disabled  0    0
2          disabled  0    0
3          disabled  0    0
4          disabled  0    0
5          disabled  0    0
6          disabled  0    0
7          disabled  0    0
8  (CS1)   disabled  0    0
9          disabled  0    0
10 (AF11)  disabled  0    0
11         disabled  0    0
12 (AF12)  disabled  0    0
13         disabled  0    0
14 (AF13)  disabled  0    0
15         disabled  0    0
16 (CS2)   disabled  0    0
17         disabled  0    0
```

radius-server

Display RADIUS configuration.

SYNTAX

show radius-server [statistics] [| {begin | exclude | include } <LINE>

Parameters

statistics	RADIUS 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

EXAMPLE

```
SM24DPB# show radius-server ?
    |             Output modifiers
    statistics    RADIUS statistics
    <cr>
SM24DPB# show radius-server
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 hosts configured!
SM24DPB# show 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 hosts configured!
SM24DPB#
```

rapid-ring

Display Rapid Ring configuration.

SYNTAX

show rapid-ring <cr>

EXAMPLE

```
SM24DPB# show rapid-ring
Entry Index               : 1
Rapid Ring Role           : Master
Rapid Ring Port 1         : 1
Rapid Ring Port 2         : 2
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 2
Rapid Ring Role           : Member
Rapid Ring Port 1         : 3
Rapid Ring Port 2         : 4
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 3
Rapid Ring Role           : Member
Rapid Ring Port 1         : 5
Rapid Ring Port 2         : 6
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 4
Rapid Ring Role           : Member
Rapid Ring Port 1         : 7
Rapid Ring Port 2         : 8
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 5
Rapid Ring Role           : Member
Rapid Ring Port 1         : 9
Rapid Ring Port 2         : 10
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 6
Rapid Ring Role           : Member
Rapid Ring Port 1         : 11
Rapid Ring Port 2         : 12
Rapid Ring Port 1 State   : Discarding
Rapid Ring Port 2 State   : Discarding

Entry Index               : 7
Rapid Ring Role           : Disabled
Rapid Ring Port 1         : 13
-- more --, next page: Space, continue: g, quit: ^C
```

rmon

Display RMON alarm / events / history / statistics.

SYNTAX

show rmon alarm [<1~65535>] [| {begin | exclude | include } <LINE>
show rmon event [<1~65535>] [| {begin | exclude | include } <LINE>
show rmon history [<1~65535>] [| {begin | exclude | include } <LINE>
show rmon statistics [<1~65535>] [| {begin | exclude | include } <LINE>

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/Event/History/Statistics entry list
|	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

```
SM24DPB# show rmon alarm?
    alarm    Display the RMON alarm table
    <cr>
SM24DPB# show rmon alarm ?
    <1~65535>    Alarm entry list
    |            Output modifiers
    <cr>
SM24DPB# show rmon alarm
SM24DPB#
```

running-config

Show running system information.

SYNTAX

show running-config [all-defaults] [| {begin | exclude | include } <LINE>
show running-config feature <CWORD> [all-defaults] [| {begin | exclude | include } <LINE>
show running-config interface <port_type> <port_type_list> [all-defaults] [| {begin | exclude | include } <LINE>
show running-config interface vlan <vlan_list> [all-defaults] [| {begin | exclude | include } <LINE>
show running-config line { console | vty } <range_list> [all-defaults] [| {begin | exclude | include } <LINE>
show running-config vlan <vlan_list> [all-defaults] [| {begin | exclude | include } <LINE>

Parameters

all-defaults Include most/all default values
feature Show configuration for specific feature
interface Show specific interface(s)
line Show line settings
vlan VLAN
CWORD Valid words are 'GVRP' 'access' 'access-list' 'aggregation' 'arp-inspection' 'auth' 'clock' 'dhcp' 'dhcp-snooping' 'dns' 'dot1x' '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' 'lacp' 'lldp' 'logging' 'loop-protect' 'mac' 'mep' 'monitor' 'mstp' 'mvr' 'mvr-port' 'ntp' 'phy' 'port' 'port-security' 'pvlan' 'qos' 'rmon' 'sflow' 'snmp' 'source-guard' 'ssh' 'system' 'upnp' 'user' 'vlan' 'voice-vlan' 'web-privilege-group-level'
<port_type > * or GigabitEthernet or 10Gigabitethernet
* All switches or All ports
Gigabitethernet 1 Gigabit Ethernet Port
10Gigabitethernet 10 Gigabit Ethernet Port
<port_type_list> Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
<vlan_list> List of VLAN numbers
console Console
vty VTY
<range_list> List of console/VTYs
| 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

```
SM24DPB# show running-config
Building configuration...
hostname SM24DPB
username admin privilege 15 password encrypted YWRtaW4=
!
vlan 1
!
ip route 0.0.0.0 0.0.0.0 192.168.1.254
mvr
mvr vlan 10 name mvr10
ntp automatic
ntp server 1 ip-address 192.168.1.30
ntp server 2 ip-address 192.168.1.40
tzidx 0
system name SM24DPB
system description Managed Switch, 20-port 100/1000 SFP, 4-port SFP/RJ-45 Combo
!
interface GigabitEthernet 1/1
 mvr name mvr10 type source
interface GigabitEthernet 1/2
-- more --, next page: Space, continue: g, quit: ^C
```

sflow

Statistics flow..

SYNTAX

show sflow

show sflow statistics { receiver [<rcvr_idx_list>] | samplers [interface [<samplers_list>] (<port_type> [<v_port_type_list>])] }

Parameters

statistics	sFlow statistics.
receiver	Show statistics for receiver.
samplers	Show statistics for samplers.
<range_list>	runtime, see sflow_icli_functions.c
<port_type >	* or GigabitEthernet or 10Gigabitethernet
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
begin	Begin with the line that matches
exclude	Exclude lines that match
include	Include lines that match
<LINE>	String to match output lines

EXAMPLE

```
SM24DPB# show sflow statistics receiver
Tx Successes     Tx Errors        Flow Samples     Counter Samples
--------------  --------------  --------------  --------------
             0               0               0               0
SM24DPB# show sflow statistics sampler

Per-Port Statistics:
====================

Interface               Rx Flow Samples  Tx Flow Samples  Counter Samples
----------------------  --------------  --------------  ----------------
GigabitEthernet 1/1                  0               0                0
GigabitEthernet 1/2                  0               0                0
GigabitEthernet 1/3                  0               0                0
GigabitEthernet 1/4                  0               0                0
GigabitEthernet 1/5                  0               0                0
GigabitEthernet 1/6                  0               0                0
GigabitEthernet 1/7                  0               0                0
GigabitEthernet 1/8                  0               0                0
GigabitEthernet 1/9                  0               0                0
GigabitEthernet 1/10                 0               0                0
GigabitEthernet 1/11                 0               0                0
GigabitEthernet 1/12                 0               0                0
GigabitEthernet 1/13                 0               0                0
GigabitEthernet 1/14                 0               0                0
GigabitEthernet 1/15                 0               0                0
GigabitEthernet 1/16                 0               0                0
-- more --, next page: Space, continue: g, quit: ^C
```

smtp

Show email parameters.

SYNTAX

show smtp <cr>

EXAMPLE

```
SM24DPB# 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  :
SM24DPB#
```

snmp

Display SNMP configurations.

SYNTAX

show snmp
show snmp access [<GroupName : word32> { v1 | v2c | v3 | any } { auth | noauth | priv }] [| {begin | exclude | include } <LINE>
show snmp community v3 [<Community : word127>] [| {begin | exclude | include } <LINE>
show snmp host [<ConfName : word32>] [system] [switch] [interface] [aaa] [| {begin | exclude | include } <LINE>
show snmp security-to-group [{ v1 | v2c | v3 } <SecurityName : word32>] [| {begin | exclude | include } <LINE>
show snmp user [<UserName : word32> <EngineId : word10-32>] [| {begin | exclude | include } <LINE>
show snmp view [<ViewName : word32> <OidSubtree : word255>] [| {begin | exclude | include } <LINE>

Parameters

access	access configuration
<GroupName : 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
community	Community
v3	SNMPv3
<Community : word127>	Specify community name
host	Set SNMP host's configurations
<ConfName : word32>	Name of the host configuration
system	System event group
switch	Switch event group
interface	Interface event group
aaa	AAA event group
security-to-group	security-to-group configuration
<SecurityName : word32>	security group name
user	User
<UserName : word32>	Security user name
<EngineId : word10-32>	Security Engine ID
view	MIB view configuration
<ViewName : word32>	MIB view name
<OidSubtree : word255>	MIB view OID

EXAMPLE 1

```
SM24DPB# show snmp

SNMP Configuration
SNMP Mode                     : enabled
SNMP Version                  : 2c
Read Community                : public
Write Community               : private
Trap Mode                     : disabled
Trap Version                  : 1

SNMPv3 Communities Table:
Community   : public
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0

Community   : private
Source IP   : 0.0.0.0
Source Mask : 0.0.0.0
```

```
SNMPv3 Users Table:
User Name               : default_user
Engine ID               : 800007e5017f000001
-- more --, next page: Space, continue: g, quit: ^C
SM24DPB# show snmp access ?
    |                       Output modifiers
    <GroupName : word32>    group name
    <cr>
```

EXAMPLE 2

```
SM24DPB# show snmp access
Group Name       : default_ro_group
Security Model   : any
Security Level   : NoAuth, NoPriv
Read View Name   : default_view
Write View Name  : <no writeview specified>

Group Name       : default_rw_group
Security Model   : any
Security Level   : NoAuth, NoPriv
Read View Name   : default_view
Write View Name  : default_view
```

EXAMPLE 3

```
SM24DPB# show snmp mib ?
    context    MIB context
    ifmib      IF-MIB
SM24DPB# show snmp mib context
BRIDGE-MIB :
    - dot1dBase (.1.3.6.1.2.1.17)
    - dot1dTp (.1.3.6.1.2.1.17.4)
ENTITY-MIB :
    - entityMIBObjects (.1.3.6.1.2.1.47.1)
EtherLike-MIB :
    - transmission (.1.3.6.1.2.1.10)
IEEE8021-MSTP-MIB :
    - ieee8021MstpMib (.1.3.111.2.802.1.1.6)
IEEE8021-PAE-MIB :
    - ieee8021paeMIB (.1.0.8802.1.1.1.1)
IEEE8023-LAG-MIB :
    - lagMIBObjects (.1.2.840.10006.300.43.1)
IF-MIB :
    - ifMIB (.1.3.6.1.2.1.31)
IP-FORWARD-MIB :
    - ipForward (.1.3.6.1.2.1.4.24)
IP-MIB :
    - ipv4InterfaceTable (.1.3.6.1.2.1.4.28)
    - ipv6InterfaceTable (.1.3.6.1.2.1.4.30)
    - ipTrafficStats (.1.3.6.1.2.1.4.31)
    - ipAddressTable (.1.3.6.1.2.1.4.34)
SM24DPB# show snmp mib ifmib ifIndex
ifIndex     ifDescr                                 Interface
----------  --------------------------------------  ---------
         1  Switch  1 - Port  1                     GigabitEthernet 1/1
         2  Switch  1 - Port  2                     GigabitEthernet 1/2
         3  Switch  1 - Port  3                     GigabitEthernet 1/3
         4  Switch  1 - Port  4                     GigabitEthernet 1/4
         5  Switch  1 - Port  5                     GigabitEthernet 1/5
         6  Switch  1 - Port  6                     GigabitEthernet 1/6
```

```
         7  Switch  1 - Port  7                   GigabitEthernet 1/7
         8  Switch  1 - Port  8                   GigabitEthernet 1/8
         9  Switch  1 - Port  9                   GigabitEthernet 1/9
        10  Switch  1 - Port 10                   GigabitEthernet 1/10
        11  Switch  1 - Port 11                   GigabitEthernet 1/11
        12  Switch  1 - Port 12                   GigabitEthernet 1/12
        13  Switch  1 - Port 13                   GigabitEthernet 1/13
        14  Switch  1 - Port 14                   GigabitEthernet 1/14
        15  Switch  1 - Port 15                   GigabitEthernet 1/15
        16  Switch  1 - Port 16                   GigabitEthernet 1/16
        17  Switch  1 - Port 17                   GigabitEthernet 1/17
        18  Switch  1 - Port 18                   GigabitEthernet 1/18
        19  Switch  1 - Port 19                   GigabitEthernet 1/19
        20  Switch  1 - Port 20                   GigabitEthernet 1/20
-- more --, next page: Space, continue: g, quit: ^C
```

spanning-tree

STP Bridge.

SYNTAX

show spanning-tree [summary | active | { interface (<port_type> [<v_port_type_list>]) } | { detailed [interface (<port_type> [<v_port_type_list_1>])] } | { mst [configuration | { <instance> [interface (<port_type> [<v_port_type_list_2>])] }] }]

Parameters

summary	STP summary
active	STP active interfaces
interface	Choose port
<port_type>	* or Gigabitethernet or 10Gigabitethernet
*	All switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
detailed	STP statistics
interface	List of port type and port ID, ex, 1/1-24
mst	Configuration
configuration	STP bridge instance no (0-7, CIST=0, MST2=1...)
<0-7>	Choose port
<port_type >	* or GigabitEthernet or 10Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet

EXAMPLE 1

```
SM24DPB# show spanning-tree
CIST Bridge STP Status
Bridge ID    : 32768.00-C0-F2-47-45-27
Root ID      : 32768.00-C0-F2-47-45-27
Root Port    : -
Root PathCost: 0
Regional Root: 32768.00-C0-F2-47-45-27
Int. PathCost: 0
Max Hops     : 20
TC Flag      : Steady
TC Count     : 0
TC Last      : -
Port       Port Role       State       Pri  PathCost  Edge  P2P  Uptime
---------  --------------  ----------  ---  --------  ----  ---  -------------
Gi 1/22    DesignatedPort  Forwarding  128     20000  Yes   Yes    0d 02:27:21
SM24DPB#
```

EXAMPLE 2

```
SM24DPB# show spanning-tree mst
CIST Bridge STP Status
Bridge ID    : 32768.00-C0-F2-47-45-27
Root ID      : 32768.00-C0-F2-47-45-27
Root Port    : -
Root PathCost: 0
Regional Root: 32768.00-C0-F2-47-45-27
Int. PathCost: 0
Max Hops     : 20
TC Flag      : Steady
TC Count     : 0
TC Last      : -
Mst    Port       Port Role       State       Pri  PathCost  Edge  P2P  Uptime
-----  ---------  --------------  ----------  ---  --------  ----  ---  -------------
```

```
CIST   Gi 1/22    DesignatedPort  Forwarding  128     20000  Yes   Yes    0d 02:28:05
SM24DPB# show spanning-tree summary
Protocol Version: MSTP
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
SM24DPB#
```

switchport

Display switching mode characteristics.

SYNTAX

show switchport forbidden [{ vlan <vlan_id> } | { name <word> }] [| {begin | exclude | include } <LINE>

Parameters

forbidden	Lookup VLAN Forbidden port entry.
name	name - Show forbidden access for specific VLAN name.
vlan	vid - Show forbidden access for specific VLAN id.
<vlan_id>	VLAN id
<word>	VLAN 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

EXAMPLE

```
SM24DPB# show switchport forbidden ?
    |       Output modifiers
    name    name - Show forbidden access for specific VLAN name.
    vlan    vid - Show forbidden access for specific VLAN id.
    <cr>
SM24DPB# show switchport forbidden
Forbidden VLAN table is empty
SM24DPB# show switchport forbidden name ?
    <word>    VLAN name
SM24DPB# show switchport forbidden name VID111
% VLAN name does not exist
SM24DPB# show switchport forbidden vlan ?
    <vlan_id>    VLAN id
SM24DPB# show switchport forbidden vlan 1
Forbidden VLAN table is empty for VLAN ID 1
SM24DPB#
```

system

Display system information. **Note**: The information displayed will be important to have available before calling Transition Networks Technical Support.

SYNTAX

show system

show system cpu status

show system reboot

Parameters

cpu CPU Status
reboot Switch reboot scheduling
status Average load
<cr>

EXAMPLE 1

```
SM24DPB# show system cpu status
    Average load in 100 ms  : 0%
    Average load in   1 sec : 1%
    Average load in  10 sec : 2%
SM24DPB# show system reboot

Switch Reboot Mode: Disable
Switch Reboot Entry:

             Reboot Time
  Week Day     HH : MM
 ----------    -------
  Monday        -  -
  Tuesday       -  -
  Wednesday     -  -
  Thursday      -  -
  Friday        -  -
  Saturday      -  -
  Sunday        -  -


SM24DPB# show system
Model Name                  : SM24DPB
System Description          : Managed Switch, 20-port 100/1000 SFP, 4-port SFP/R
J-45 Combo
Location                    :
Contact                     :
System Name                 : SM24DPB
System Date                 : 2011-01-01T04:28:38+00:00
System Uptime               : 04:28:38
Bootloader Version          : v1.15e
Firmware Version            : v6.54.3359 2019-12-27
Hardware Version            : v1.01
Mechanical Version          : v1.01
Serial Number               : A045116AR2200010
MAC Address                 : 00-c0-f2-47-45-27
Memory                      : Total=72014 KBytes, Free=45486 KBytes, Max=44043 K
Bytes
FLASH                       : 0x40000000-0x41ffffff, 512 x 0x10000 blocks
Fan Speed                   : 7031(rpm)
Powers                      : AC:11.95 V; DC:0.00 V
Temperature 1               : 34(C) ; 93(F)
Temperature 2               : 27(C) ; 80(F)
SM24DPB#
```

```
SM24DPB# show system reboot
Switch Reboot Mode: Disable
Switch Reboot Entry:
             Reboot Time
  Week Day     HH : MM
 ----------    -------
  Monday        -  -
  Tuesday       -  -
  Wednesday     -  -
  Thursday      -  -
  Friday        -  -
  Saturday      -  -
  Sunday        -  -
SM24DPB# show system cpu status
    Average load in 100 ms  : 0%
    Average load in   1 sec : 2%
    Average load in  10 sec : 4%
```

tacacs-server

Show TACACS+ configuration.

SYNTAX

show tacacs-server [| {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
<cr>	

EXAMPLE

```
SM24DPB# show tacacs-server
Global TACACS+ Server Timeout      : 5 seconds
Global TACACS+ Server Deadtime     : 0 minutes
Global TACACS+ Server Key          :
No hosts configured!
SM24DPB#
```

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

```
SM24DPB# show terminal ?
    |       Output modifiers
    <cr>
SM24DPB# show terminal
Line is vty 0.
    * You are at this line now.
    Alive from Telnet.
    Default privileged level is 2.
    Command line editing is disabled
    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 37 min 49 sec.
    Idle time is 0 day 0 hour 0 min 0 sec.

SM24DPB#
```

traceroute

Show the route (path) and measure transit delays of packets across the IP network.

SYNTAX

traceroute ip <v_ip_addr> [protocol { icmp | udp | tcp }] [wait <v_wait_time>] [ttl <v_max_ttl>] [nqueries <v_nqueries>]

Parameters

nqueries	Specify number of probe packets (range 1-10; default is 3).
protocol	Specify protocol including icmp, udp and tcp (default is icmp).
ttl	Specify max TTL (range 1-255; default is 30).
wait	Specify wait time (range 1-60 seconds; default is 5 seconds).
<cr>	

EXAMPLE

```
SM24DPB# traceroute ip 192.168.1.77 nqueries 4 protocol icmp ttl 20 wait 10
traceroute to 192.168.1.77 (192.168.1.77), 20 hops max, 140 byte packets
 1 192.168.1.77  (192.168.1.77)  0 ms  0 ms  0 ms  0 ms
SM24DPB#
```

upnp

Display UPnP (Universal Plug and Play) configuration. The goals of UPnP (Universal Plug and Play) are to allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components. **Caution**: UPnP allows clients in the local network to automatically configure the device. UpnP should only be used (enabled) if necessary and with preventive measures as it can result in high security risks for your network.

SYNTAX

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

```
SM24DPB# show upnp
UPnP Mode                  : Disabled
UPnP TTL                   : 4
UPnP Advertising Duration  : 100
SM24DPB#
```

user-privilege

Display Users privilege configuration.

SYNTAX

show user-privilege <cr>

Parameters

None.

EXAMPLE

```
SM24DPB# show user-privilege
username admin privilege 15 password encrypted YWRtaW4=
SM24DPB#
```

users

Display information about terminal lines.

SYNTAX

show users myself [| {begin | exclude | include } <LINE>

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

```
SM24DPB# show users myself
Line is vty 0.
    * You are at this line now.
    Connection is from 192.168.1.99:50705 by Telnet.
    User name is admin.
    Privilege is 15.
    Elapsed time is 0 day 2 hour 45 min 39 sec.
    Idle time is 0 day 0 hour 0 min 0 sec.

SM24DPB#
```

version

Display system hardware and software status.

SYNTAX

show version [| {begin | exclude | include } <LINE>

Parameters

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

EXAMPLE

```
SM24DPB# show version

MEMORY           : Total=72014 KBytes, Free=45486 KBytes, Max=44043 KBytes
FLASH            : 0x40000000-0x41ffffff, 512 x 0x10000 blocks
MAC Address      : 00-c0-f2-47-45-27
Previous Restart : Cold

System Contact   :
System Name      : SM24DPB
System Location  :
System Time      : 2011-01-01T04:35:26+00:00
System Uptime    : 04:35:26

Active Image
------------
Image            : managed
Version          : SM24DPB (standalone) v6.54.3359
Date             : 2019-12-27T22:44:14+08:00

Alternate Image
---------------
Image            : managed.bk
Version          : SM24DPB (standalone) v6.54.3202
Date             : 2019-07-12T05:50:42+08:00

SM24DPB#
```

vlan

Show VLAN parameters.

SYNTAX

show vlan [id <vlan_list> | name <name> | brief]
show vlan ip-subnet [id <subnet_id>]
show vlan mac [address <mac_addr>]
show vlan membership [id <vlan_list> | name <name>] [combined | admin | nas | mvr | voice-vlan | mstp | erps | vcl | evc | gvrp | forbidden]
show vlan protocol [eth2 { <etype> | arp | ip | ipx | at }] [snap { <oui> | rfc-1042 | snap-8021h } <pid>] [llc <dsap> <ssap>]
show vlan status [interface (<port_type> [<plist>])] [combined | admin | nas | mvr | voice-vlan | mstp | erps | vcl | evc | gvrp | all | conflicts]

Parameters

id	VLAN status by VLAN id
<vlan_list>	VLAN IDs 1-4095
name	VLAN status by VLAN name
<vword32>	A VLAN name
brief	VLAN summary information
protocol	Protocol-based VLAN status
eth2	Ethernet protocol based VLAN status
<0x600-0xffff>	Ether Type(Range: 0x600 - 0xFFFF)
arp	Ether Type is ARP
ip	Ether Type is IP
ipx	Ether Type is IPX
at	Ether Type is AppleTalk
snap	SNAP-based VLAN status
<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)
llc	LLC-based VLAN status
<0x0-0xff>	DSAP (Range: 0x00 - 0xFF)
<0x0-0xff>	SSAP (Range: 0x00 - 0xFF)
admin	Show the VLANs configured by administrator.
all	Show all VLANs configured.
combined	Show the VLANs configured by a combination.
conflicts	Show VLANs configurations that has conflicts.
gvrp	Show the VLANs configured by GVRP.
interface	Show the VLANs configured for a specific interface(s).
mstp	Show the VLANs configured by MSTP.
mvr	Show the VLANs configured by MVR.
nas	Show the VLANs configured by NAS.
vcl	Show the VLANs configured by VCL.
voice-vlan	Show the VLANs configured by Voice VLAN.
<port_type >	GigabitEthernet or 10Gigabitethernet
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet
id	VLAN status by VLAN id
ip-subnet	Show VLAN ip-subnet entries.
mac	Show VLAN MAC entries.
membership	VLAN membership
status	Show the VLANs configured for each interface.
<cr>	

EXAMPLE

```
SM24DPB# show vlan
VLAN  Name                            Interfaces
----  --------------------------------  ----------
1     default                           Gi 1/1-24
```

```
SM24DPB# show vlan status
GigabitEthernet 1/1 :
---------------------
VLAN User  PortType       PVID  Frame Type     Ing Filter  Tx Tag             UVID  Conflicts
---------  -------------  ----  -------------  ----------  -----------------  ----  ---------
Admin      C-Port         1     All            Enabled     All except-native  1 NAS    No  GVRP     No
MVR        C-Port               All                                          10
No
Voice VLAN
                   No
MSTP
                              No
DMS
                              No
VCL
                              No
-- more --, next page: Space, continue: g, quit: ^C
```

voice

Show Voice appliance attributes.

SYNTAX

show voice vlan [oui <oui> | interface <port_type> <port_type_list>] [| {begin | exclude | include } <LINE>

Parameters

vlan	Vlan for voice traffic
oui	OUI configuration
<oui>	OUI value
interface	Select an interface to configure
<port_type>	* or Gigabitethernet
*	All Switches or All ports
Gigabitethernet	1 Gigabit Ethernet Port
10Gigabitethernet	10 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-24, 1/1-4 for 10Gigabitethernet

EXAMPLE

```
SM24DPB# show voice vlan
Switch voice vlan is disabled
Switch voice vlan ID is 1000
Switch voice vlan aging-time is 86400 seconds
Switch voice vlan traffic class is 7

Telephony OUI  Description
-------------  -----------
Voice VLAN switchport is configured on following:

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

GigabitEthernet 1/2 :
---------------------
GigabitEthernet 1/2 switchport voice vlan mode is disabled
GigabitEthernet 1/2 switchport voice security is disabled
GigabitEthernet 1/2 switchport voice discovery protocol is oui

-- more --, next page: Space, continue: g, quit: ^C
```

web

Show web privilege group level.

SYNTAX

show web privilege group [<group_name>] level

Parameters

privilege Web privilege

group Web privilege group

CWORD Valid words are 'ACTIVATE' 'Aggregation' 'BSC_Protection' 'DHCP' 'DMS_client' 'DMS_server' 'Debug' 'Dhcp_Client' 'Diagnostics' 'GARP' 'GVRP' 'IP2' 'IPMC_Snooping' 'IP_Phone_Auto_Provisioning' 'Install_Wizard' 'LACP' 'LLDP' 'Loop_Protect' 'MAC_Table' 'MVR' 'Maintenance' 'Mirroring' 'NTP' 'Ports' 'Private_VLANs' 'QoS' 'RPC' 'SMTP' 'Security' 'Spanning_Tree' 'System' 'TS_client' 'TS_server' 'Timer' 'Trap_Event' 'Trouble_Shooting' 'UPnP' 'VCL' 'VLANs' 'VTUN' 'Voice_VLAN' 'XXRP' 'bonjour' 'cloud_management' 'sFlow'

level Web privilege group level

EXAMPLE

```
M24DPB# show web privilege group level
Group Name                       Privilege Level
                                 CRO CRW SRO SRW
-------------------------------- --- --- --- ---
ACTIVATE                           5  10   5  10
Aggregation                        5  10   5  10
BSC_Protection                     5  10   5  10
cloud_management                   5  10   5  10
Debug                             15  15  15  15
DHCP                               5  10   5  10
Dhcp_Client                        5  10   5  10
Diagnostics                        5  10   5  10
DMS_client                         5  10   5  10
DMS_server                         5  10   5  10
GARP                               5  10   5  10
GVRP                               5  10   5  10
Install_Wizard                     5  10   5  10
IP2                                5  10   5  10
IP_Phone_Auto_Provisioning         5  10   5  10
IPMC_Snooping                      5  10   5  10
LACP                               5  10   5  10
LLDP                               5  10   5  10
-- more --, next page: Space, continue: g, quit: ^C
```

18. Terminal Commands

Set terminal line parameters

Syntax

terminal editing
terminal exec-timeout <min> [<sec>]
terminal help
terminal history size <history_size>
terminal length <lines>
terminal width <width>

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 or 3-512>	Number of lines on screen (0 for no pausing)
<0 or 40-512>	Number of characters on a screen line (0 for unlimited width)

EXAMPLE

```
SM24DPB# terminal exec-timeout ?
    <0-1440>    Timeout in minutes
SM24DPB# terminal exec-timeout 1440 ?
    <0-3600>    Timeout in seconds
    <cr>
SM24DPB# terminal exec-timeout 1440
SM24DPB#
```

19. 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

```
SM24DPB# ip dhcp retry interface vlan 10

% Failed to restart DHCP client on VLAN = 10.

SM24DPB#
```

20. Interface Config Mode Commands

This chapter describes CLI commands used to configure a specific interface that are not described elsewhere in this manual.

Configure Interface Commands

Command	Description
access-list	Access list
aggregation	Create an aggregation
broadcast-storm-protection	Broadcast Storm Protection (BCS)
description	Up to 47 characters describing this interface
do	To run exec commands in config mode
dot1x	IEEE Standard for port-based Network Access Control
duplex	Interface duplex
end	Go back to EXEC mode
excessive-restart	Restart backoff algorithm after 16 collisions
exit	Exit from current mode
flowcontrol	Traffic flow control.
gvrp	Enable GVRP on interface or interfaces
help	Description of the interactive help system
ip	Internet Protocol
ipv6	IPv6 configuration commands
lacp	Enable LACP on this interface
lldp	LLDP configurations.
loop-protect	Loop protection configuration on port
mac	MAC keyword
mtu	Maximum transmission unit
mvr	Multicast VLAN Registration configuration
no	Negate a command or set its defaults
port-security	Enable/disable port security per interface.
pvlan	Private VLAN
qos	Quality of Service
rmon	Configure Remote Monitoring on an interface
sflow	Statistics flow.
shutdown	Shutdown of the interface.
spanning-tree	Spanning Tree protocol
speed	Configures interface speed.
switchport	Switching mode characteristics

Configure VLAN Interface Commands

do	To run exec commands in config mode
end	Go back to EXEC mode
exit	Exit from current mode
help	Description of the interactive help system
ip	Interface Internet Protocol config commands
ipv6	IPv6 configuration commands
no	Negate a command or set its defaults

access-list

Configure access list for a specific interface.

SYNTAX

access-list action { permit | deny }
access-list logging
access-list policy <policy_id>
access-list port-state
access-list rate-limiter <rate_limiter_id>
access-list shutdown
access-list { redirect | port-copy } interface { <port_type> <port_type_id> | (<port_type> [<port_type_list>]) }

Parameters

action	Access list action
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.
policy	Policy
port-state	Re-enable shutdown port that was shut down by access-list module
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).

EXAMPLE

```
SM24DPB(config-if)# access-list action permit
SM24DPB(config-if)# access-list logging
SM24DPB(config-if)# access-list port-state
SM24DPB(config-if)#
```

aggregation

Configure aggregation for a specific interface.

SYNTAX

aggregation group <v_uint>

Parameters

group Create an aggregation group
<uint> The aggregation group id

<cr>

EXAMPLE

```
SM24DPB(config-if)# aggregation group 1
Error: Port already in another group
Could not add port(s) to aggregation
SM24DPB(config-if)#
```

broadcast-storm-protection

Configure Broadcast Storm Protection for a specific interface.

SYNTAX

broadcast-storm-protection
broadcast-storm-protection action { shutdown | log | both }
broadcast-storm-protection pps <v_0_to_1000000>
broadcast-storm-protection timer <v_0_to_65535>

Parameters

action	Configure broadcast storm protection port action
pps	Configure broadcast storm protection port pps
timer	Configure broadcast storm protection port timer
both	Shutdown the port and log event
log	Log the event only
shutdown	Shutdown the port
<0-1000000>	Configure broadcast storm protection pps
<0-65535>	Configure broadcast storm protection timer
<cr>	

EXAMPLE

```
SM24DPB(config-if)# broadcast-storm-protection <cr>
SM24DPB(config-if)# broadcast-storm-protection  action both
SM24DPB(config-if)# broadcast-storm-protection pps 50000
SM24DPB(config-if)# broadcast-storm-protection timer 8765
SM24DPB(config-if)# do show broadcast
Port  Mode      Action            PPS      Timer(seconds)  Status
----  --------  ----------------  -------  --------------  ---------
1     Disable   Shutdown          0        300
2     Enable    Shutdown          1        300
3     Enable    Shutdown and Log  50000    8765
4     Enable    Shutdown and Log  50000    8765
5     Enable    Shutdown and Log  50000    8765
6     Enable    Shutdown and Log  50000    8765
7     Enable    Shutdown and Log  0        600             Activated
8     Enable    Log Only          0        300             Activated
9     Disable   Shutdown          0        300
-- more --, next page: Space, continue: g, quit: ^C
```

description

Configure up to 47 characters describing the specified interface.

SYNTAX

description Up to 47 characters describing this interface

Parameters

description <port_descr>
<line47>
<cr>

EXAMPLE

```
SM24DPB(config-if)# description thethree amigos
SM24DPB(config-if)#
```

do

Run exec commands in config mode.

SYNTAX

do <command>

Parameters

LINE Exec Command

EXAMPLE

```
SM24DPB(config-if)# do show version

MEMORY           : Total=72059 KBytes, Free=45314 KBytes, Max=43791 KBytes
FLASH            : 0x40000000-0x41ffffff, 512 x 0x10000 blocks
MAC Address      : 00-c0-f2-47-45-27
Previous Restart : Cold

System Contact   :
System Name      : SM24DPB
System Location  :
System Time      : 2011-01-01T00:12:33+00:00
System Uptime    : 00:12:33

Active Image
------------
-- more --, next page: Space, continue: g, quit: ^C
```

dot1x

Configure IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x guest-vlan
dot1x port-control { force-authorized | force-unauthorized | auto | single | multi | mac-based }
dot1x radius-qos
dot1x radius-vlan
dot1x re-authenticate

Parameters

guest-vlan	Enables/disables guest VLAN
port-control	Sets the port security state.
radius-qos	Enables/disables per-port state of RADIUS-assigned QoS.
radius-vlan	Enables/disables per-port state of RADIUS-assigned VLAN.
re-authenticate	Refresh (restart) 802.1X authentication process.
auto	Port-based 802.1X Authentication
force-authorized	Port access is allowed
force-unauthorized	Port access is not allowed
mac-based	Switch authenticates on behalf of the client
multi	Multiple Host 802.1X Authentication
single	Single Host 802.1X Authentication

EXAMPLE

```
SM24DPB(config-if)# dot1x guest
SM24DPB(config-if)# dot1x port-control auto
SM24DPB(config-if)# dot1x re-authenticate
SM24DPB(config-if)#
```

duplex

Configure Interface duplex for a specific interface.

SYNTAX

duplex { half | full | auto [half | full] }

Parameters

auto	Auto negotiation of duplex mode.
full	Forced full duplex.
half	Forced half duplex.

EXAMPLE

```
SM24DPB(config-if)# duplex auto
SM24DPB(config-if)#
```

end

Go back to EXEC mode.

SYNTAX

duplex { half | full | auto [half | full] }

Parameters

<cr>

EXAMPLE

```
SM24DPB(config-if)# end
SM24DPB#
```

excessive-restart

Configure Restart backoff algorithm after 16 collisions for a specified interface. No excessive-restart means discard frame after 16 collisions.

SYNTAX
None.

Parameters
<cr>

EXAMPLE
```
SM24DPB(config-if)# excessive-restart ?
<cr>
SM24DPB(config-if)# excessive-restart
GigabitEthernet 1/3 does not support this mode
SM24DPB(config-if)#
```

exit

Exit from current mode.

SYNTAX
None.

Parameters
<cr>

EXAMPLE
```
SM24DPB(config-if)# exit
SM24DPB(config)#
```

flowcontrol

Configure Traffic flow control for a specified interface.

SYNTAX
flowcontrol { on | off }

Parameters

off	Disable flow control.
on	Enable flow control.

EXAMPLE
```
SM24DPB(config-if)# flowcontrol on
GigabitEthernet 1/3 does not support this mode
SM24DPB(config)# interface *
SM24DPB(config-if)# flowcontrol on
GigabitEthernet 1/20 does not support this mode
E api_cil/port 18:46:25 31/jr_port_conf_1g_set#2151: Error: Illegal speed: 6
```

gvrp

Enable GVRP on one or more specified interfaces.

SYNTAX

gvrp join-request vlan <v_vlan_list>

Parameters

join-request	Emit a Join-Request for test purpose
<vlan_list>	List of VLANs
<cr>	

EXAMPLE

```
SM24DPB(config-if)# gvrp join-request vlan 10-20
SM24DPB(config-if)#
```

help

Configure the description of the interactive help system for an interface.

SYNTAX

help

Parameters

<cr>

EXAMPLE

```
SM24DPB(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?'.)

SM24DPB(config)#
```

ip

Configure Internet Protocol parameters for an interface.

SYNTAX

ip arp inspection
ip arp inspection entry interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>
ip arp inspection translate [interface <port_type> <in_port_type_id> <vlan_var> <mac_var> <ipv4_var>]
ip arp inspection vlan <in_vlan_list>
ip arp inspection vlan <in_vlan_list> logging { deny | permit | all }
ip dhcp excluded-address <low_ip> [<high_ip>]
ip dhcp pool <pool_name>
ip dhcp relay
ip dhcp relay information option
ip dhcp relay information policy { drop | keep | replace }
ip dhcp server per-port
ip dhcp snooping
ip dns proxy
ip helper-address <v_ipv4_ucast>
ip http port <port>
ip http secure-certificate { upload <url_file> [pass-phrase <pass_phrase>] | generate }
ip http secure-server port <port>
ip igmp host-proxy [leave-proxy]
ip igmp snooping
ip igmp snooping vlan <v_vlan_list>
ip igmp ssm-range <v_ipv4_mcast> <ipv4_prefix_length>
ip igmp unknown-flooding
ip link-local interface <ifc>
ip name-server { <v_ipv4_addr> | dhcp [interface vlan <v_vlan_id>] }
ip route <v_ipv4_addr> <v_ipv4_netmask> <v_ipv4_gw>
ip routing
ip scp server { enable | disable }
ip source binding interface <port_type> <in_port_type_id> <vlan_var> <ipv4_var> <mask_var>
ip ssh keyregen
ip ssh port <port>
ip telnet port <port>
ip verify source
ip verify source translate

Parameters

arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
dns	Domain Name System
helper-address	DHCP relay server
http	HTTP server
igmp	Internet Group Management Protocol
link-local	Link-Local address binding interface
name-server	Domain Name System
route	Add IP route
routing	Enable routing for IPv4 and IPv6
scp	Secure copy function
source	source command
ssh	Secure Shell
telnet	Telnet
verify	verify command
entry	arp inspection entry
translate	arp inspection translate all entries
vlan	arp inspection vlan setting

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
proxy	DNS proxy service
<Ip : ipv4_ucast>	IP address of the DHCP relay server
port	Service port number
secure-certificate	HTTPS certificate
secure-server	secure 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
interface	Select an interface to configure
<vlan_id>	VLAN IDs 1-4095
<ipv4_addr>	A valid IPv4 unicast address
dhcp	Dynamic Host Configuration Protocol
<ipv4_addr>	Network
disable	Set mode to scp Disable
enable	Set mode to scp Enable
binding	ip source binding
interface	ip source binding entry interface config
GigabitEthernet	1 Gigabit Ethernet Port
<vlan_id>	Select a VLAN id to configure
<ipv4_ucast>	Select an IP Address to configure
<ipv4_netmask>	Select a subnet mask to configure
keyregen	Regenerate ssh key
port	Service port number
<1-65534>	Port number
source	verify source
translate	ip verify source translate all entries
<cr>	

EXAMPLE

```
SM24DPB(config)# ip dns proxy
SM24DPB(config)# ip routing
SM24DPB(config)# ip scp server enable
SM24DPB(config)# ip source binding interface GigabitEthernet 1/9 100 192.168.1.3
0 255.255.255.0
SM24DPB(config)# ip source binding interface GigabitEthernet 1/9 100 192.168.1.3
0 255.255.255.0
SM24DPB(config)# ip verify source translate
IP Source Guard:
        Translate 0 dynamic entries into static entries.
SM24DPB(config)#
```

ipv6

Configure IPv6 configuration commands for an interface.

SYNTAX

ipv6 mld host-proxy [leave-proxy]
ipv6 mld snooping
ipv6 mld snooping vlan <v_vlan_list>
ipv6 mld ssm-range <v_ipv6_mcast> <ipv6_prefix_length>
ipv6 mld unknown-flooding
ipv6 route <v_ipv6_subnet> { <v_ipv6_ucast> | interface vlan <v_vlan_id> <v_ipv6_addr> }

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
X:X:X:X::X/<0-128>	IPv6 prefix x:x::y/z

EXAMPLE

```
SM24DPB(config)# ipv6 mld unknown-flooding
SM24DPB(config)# ipv6 mld snooping
SM24DPB(config)#
```

lacp

Enable LACP on this interface.

SYNTAX

lacp
lacp key { <v_1_to_65535> | auto }
lacp port-priority <v_1_to_65535>
lacp role { active | passive }
lacp timeout { fast | slow }

Parameters

key	Key of the LACP aggregation
port-priority	LACP priority of the port
role	Active / Passive (speak if spoken to) role
timeout	The period between BPDU transmissions
<1-65535>	Key value
auto	Choose a key based on port speed
LINE	Exec Command
<1-65535>	Priority value, lower means higher priority
active	Transmit LACP BPDUs continously
passive	Wait for neighbour LACP BPDUs before transmitting
fast	Transmit BPDU each second (fast timeout)
slow	Transmit BPDU each 30th second (slow timeout)

EXAMPLE

```
SM24DPB(config-if)# lacp key 7500
SM24DPB(config-if)# lacp port-priority 7000
SM24DPB(config-if)# lacp role active
SM24DPB(config-if)# lacp timeout fast
SM24DPB(config-if)#
```

Messages:*Error:Static aggregation is enabled*
Could not set LACP parameter

lldp

Set Link Level Discovery Protocol parameters for an interface.

SYNTAX

lldp cdp-aware
lldp med media-vlan policy-list <v_range_list>
lldp med transmit-tlv [capabilities] [location] [network-policy]
lldp receive
lldp tlv-select { management-address | port-description | system-capabilities | system-description | system-name }
lldp transmit

Parameters

cdp-aware	Configures if the interface shall be CDP aware (CDP discovery information is added to the LLDP neighbor table)
med	Media Endpoint Discovery.
receive	Enable/Disable decoding of received LLDP frames.
tlv-select	Which optional TLVs to transmit.
transmit	Enable/Disabled transmision of LLDP frames.
management-address	Enable/Disable transmission of management address.
port-description	Enable/Disable transmission of port description.
system-capabilities	Enable/Disable transmission of system capabilities.
system-description	Enable/Disable transmission of system description.
system-name	Enable/Disable transmission of system name.

EXAMPLE

```
SM24DPB(config-if)# lldp tlv-select management-address
SM24DPB(config-if)# lldp receive
SM24DPB(config-if)# lldp transmit
SM24DPB(config-if)#
```

loop-protect

Configure Loop protection configuration on specified port.

SYNTAX

loop-protect
loop-protect action { [shutdown] [log] }*1
loop-protect tx-mode

Parameters

action	Action if loop detected
tx-mode	Actively generate PDUs
log	Generate log
shutdown	Shutdown port
<cr>	

EXAMPLE

```
SM24DPB(config-if)# loop-protect
SM24DPB(config-if)# loop-protect action log
SM24DPB(config-if)# loop-protect tx-mode
SM24DPB(config-if)#
```

mac

Configure MAC keyword on a specified interface.

SYNTAX

mac address-table learning [secure]

Parameters

address-table	MAC table configuration
learning	Port learning mode
secure	Port Secure mode
<cr>	

EXAMPLE

```
SM24DPB(config-if)# mac address-table learning
SM24DPB(config-if)# mac address-table learning secure
SM24DPB(config-if)#
```

Messages: *The learn mode can not be changed on port 22 while the learn mode is forced to 'secure' (probably by 802.1X module)*

mtu

Configure Maximum transmission unit on a specified interface.

SYNTAX

mtu <max_length>

Parameters

xxxx	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.
1518-10056	Maximum frame size in bytes.

EXAMPLE

```
SM24DPB(config-if)# mtu?
    mtu    Maximum transmission unit
SM24DPB(config-if)# mtu ?
    1518-10056    Maximum frame size in bytes.
SM24DPB(config-if)# mtu?
    mtu    Maximum transmission unit
SM24DPB(config-if)# mtu?
mtu <max_length>
SM24DPB(config-if)#
```

Messages: *W mvr 00:09:24 51/_mvr_vlan_warning_handler#4002:*
Warning: Please adjust the management VLAN ports overlapped with MVR source ports!

mvr

Configure Multicast VLAN Registration for an interface.

SYNTAX

mvr immediate-leave
mvr name <mvr_name> type { source | receiver }
mvr vlan <v_vlan_list> type { source | receiver }

Parameters

immediate-leave	Immediate leave configuration
name	MVR multicast name
vlan	MVR multicast vlan
MvrName : word16>	MVR multicast VLAN name
type	MVR port role configuration
receiver	MVR receiver port
source	MVR source port

EXAMPLE

```
SM24DPB(config-if)# mvr immediate-leave
SM24DPB(config-if)#
```

port-security

Enable/disable port security per interface.

SYNTAX

port-security
port-security maximum [<v_1_to_1024>]
port-security sticky
port-security sticky <v_mac_addr> vlan <v_vlan_id>
port-security violation { protect | trap | trap-shutdown | shutdown }

Parameters

<Number of addresses : 1-1024>	Number of addresses
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
protect	Don't do anything
shutdown	Shutdown the port
trap	Send an SNMP trap
trap-shutdown	Send an SNMP trap and shutdown the port
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
<cr>	

EXAMPLE

```
SM24DPB(config-if)# port-security
SM24DPB(config-if)# port-security maximum 500
SM24DPB(config-if)# port-security sticky
SM24DPB(config-if)# port-security violation trap
SM24DPB(config-if)#
```

pvlan

Configure Private VLAN on a specified interface.

SYNTAX

pvlan <pvlan_list>

Parameters

<range_list>	list of PVLANs. Range is from 1 to number of ports.
isolation	Port isolation

EXAMPLE

```
SM24DPB(config-if)# pvlan 5
SM24DPB(config-if)# pvlan isolation
SM24DPB(config-if)#
```

qos

Configure Quality of Service for an interface.

SYNTAX

qos cos <cos>
qos dpl <dpl>
qos dscp-classify { zero | selected | any }
qos dscp-remark { rewrite | remap | remap-dp }
qos dscp-translate
qos map cos-tag cos <cos> dpl <dpl> pcp <pcp> dei <dei>
qos policer <rate> [kbps | mbps | fps | kfps] [flowcontrol]
qos queue-shaper queue <queue> <rate> [excess]
qos shaper <rate> [kbps | mbps]
qos storm { unicast | broadcast | unknown } <rate> [fps]
qos tag-remark { pcp <pcp> dei <dei> | mapped }
qos trust dscp
qos wrr <w0> <w1> <w2> <w3> <w4> <w5>

Parameters

cos	Class of service configuration
dpl	Drop precedence level configuration
dscp-classify	DSCP ingress classification
dscp-remark	DSCP egress remarking
dscp-translate	DSCP ingress translation
map	QoS Map/Table configuration
policer	Policer configuration
queue-shaper	Queue shaper configuration
shaper	Shaper configuration
storm	Storm policer
tag-remark	Tag remarking configuration
trust	Trust configuration
wrr	Weighted round robin configuration
<Cos : 0-7>	Specific class of service
<Dpl : dpl>	Specific drop precedence level
any	Classify to new DSCP always
selected	Classify to new DSCP if classify is enabled for specific DSCP value in global dscp-classify map
zero	Classify to new DSCP if DSCP is 0
remap	Rewrite DSCP field using classified DSCP remapped via global dscp-egress-translation map
rewrite	Rewrite DSCP field with classified DSCP value (no translation)
cos-tag	Map for cos to tag configuration
cos	Specify class of service
<Cos : 0~7>	Specific class of service or range
dpl	Specify drop precedence level
<Dpl : 0~1>	Specific drop precedence level or range
pcp	Specify PCP (Priority Code Point)
<Pcp : 0-7>	Specific PCP

dei	Specify DEI (Drop Eligible Indicator)
<Dei : 0-1>	Specific DEI
<Rate : uint>	Policer rate <100-13128072>(kbps) or <1-13128>(mbps) or <1-131071>(fps) or <1-131>(kfps).
queue	Specify queue
<Queue : 0~7>	Specific queue or range
<Rate : 100-13128072>	Shaper rate in kbps
excess	Allow use of excess bandwidth
<Rate : uint>	Shaper rate <100-13128072>(kbps) or <1-13128>(mbps)
kbps	Unit is kilobits per second (default)
mbps	Unit is Megabits per second
broadcast	Police broadcast frames
unicast	Police unicast frames
unknown	Police unknown (flooded) frames
<Rate : 100-13200000>	Policer rate (default kbps)
mapped	Used mapped values (cos,dpl -> pcp,dei)
pcp	Specify default PCP
dscp	DSCP value
qos wrr	<w0> <w1> <w2> <w3> <w4> <w5>

EXAMPLE

```
SM24DPB(config-if)# qos cos 0
SM24DPB(config-if)# qos dpl 1
SM24DPB(config-if)# qos dpl 1
SM24DPB(config-if)# qos dscp-translate
SM24DPB(config-if)# qos map cos-tag cos 0 dpl 0 pcp 4 dei 0
SM24DPB(config-if)# qos queue queue 0 50000 excess
SM24DPB(config-if)# qos shaper 1000 kbps
SM24DPB(config-if)# qos storm unknown 50000
SM24DPB(config-if)# qos tag mapped
SM24DPB(config-if)# qos wrr 1 2 3 4 5 6
SM24DPB(config-if)#
```

rmon

Configure Remote Monitoring on an interface.

SYNTAX

rmon collection history <id> [buckets <buckets>] [interval <interval>]

rmon collection stats <id>

Parameters

collection	Configure Remote Monitoring Collection on an interface
history	Configure history
stats	Configure statistics
buckets	Requested buckets of intervals. Default is 50 buckets
interval	Interval to sample data for each bucket. Default is 1800 seconds
<1-65535>	Requested buckets of intervals
<1-3600>	Interval in seconds to sample data for each bucket
<1-65535>	Statistics entry ID

EXAMPLE

```
SM24DPB(config-if)# rmon collection history 500  buckets 3000 interval 500
SM24DPB(config-if)# rmon collection stats 1
SM24DPB(config-if)#
```

sflow

Configure Statistics flowon an interface.

SYNTAX

sflow [<sampler_idx_list>]
sflow counter-poll-interval [sampler <sampler_idx_list>] [<poll_interval>]
sflow max-sampling-size [sampler <sampler_idx_list>] [<max_sampling_size>]
sflow sampler-type [sampler <sampler_idx_list>] { rx | tx | all }
sflow sampling-rate [sampler <sampler_idx_list>] [<sampling_rate>]

Parameters

counter-poll-interval	The interval - in seconds - between counter poller samples. max-
sampling-size	Specifies the maximum number of bytes to transmit per flow sample.
sampler-type	Specifies the types of flow sample.
sampling-rate	Specifies the statistical sampling rate (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.
<PollInterval : 1-3600>	seconds
<14-200>	bytes
all	Sample all sflows.
rx	Sample just receive sflows.
tx	Sample just transmit sflows.
<1-4294967295>	Sampling rate
<cr>	

EXAMPLE

```
SM24DPB(config-if)# sflow sampling-rate 4000
Note: Sampling rate modified from 4000 to 4096 to cater for H/W limitations
SM24DPB(config-if)# sflow sampler-type all
SM24DPB(config-if)# sflow counter-poll-interval 600
SM24DPB(config-if)#
```

shutdown

Configure Shutdown of the specified interface(s).

SYNTAX

shutdown <cr>

Parameters

shutdown	Shut down of the interface.
<cr>	

EXAMPLE

```
SM24DPB(config)# interface GigabitEthernet 1/13
SM24DPB(config-if)# shutdown
SM24DPB(config-if)#
```

spanning-tree

Configures Spanning Tree protocol for the selected interface(s).

SYNTAX

spanning-tree
spanning-tree auto-edge
spanning-tree bpdu-guard
spanning-tree edge
spanning-tree link-type { point-to-point | shared | auto }
spanning-tree mst <instance> cost { <cost> | auto }
spanning-tree mst <instance> port-priority <prio>
spanning-tree restricted-role
spanning-tree restricted-tcn

Parameters

auto-edge	Auto detect edge status
bpdu-guard	Enable/disable BPDU guard
edge	Edge port
link-type	Port link-type
mst	STP bridge instance
restricted-role	Port role is restricted (never root port)
restricted-tcn	Restrict topology change notifications
auto	Auto detect
point-to-point	Forced to point-to-point
shared	Forced to Shared
cost	STP Cost of this port
port-priority	STP priority of this port
<Cost : 1-200000000>	Cost range
auto	Use auto cost
<Prio : 0-240>	Range (lower higher priority)

EXAMPLE

```
SM24DPB(config-if)# spanning-tree auto-edge
SM24DPB(config-if)# spanning-tree bpdu-guard
SM24DPB(config-if)# spanning-tree edge
SM24DPB(config-if)# spanning-tree link-type shared
SM24DPB(config-if)# spanning-tree mst 1 port-priority 50
SM24DPB(config-if)# spanning-tree restricted-role
SM24DPB(config-if)# spanning-tree restricted-tcn
SM24DPB(config-if)#
```

speed

Configures speed for the selected interface(s). If you use 10, 100, or 1000 keywords with the auto keyword the port will only advertise the specified speeds.

SYNTAX

speed { 10g | 2500 | 1000 | 100 | 10 | 100fx | 100fx-ams | 1000x | 1000x-ams | sfp-auto-ams | auto { [10] [100] [1000] } }

Parameters

10	10Mbps
100	100Mbps
1000	1Gbps
auto	Auto negotiation

EXAMPLE

```
SM24DPB(config-if)# speed auto
SM24DPB(config-if)# speed 10
GigabitEthernet 1/13 does not support this mode
SM24DPB(config-if)#
```

switchport

Configure Switching mode characteristics on a specified interface.

SYNTAX

switchport access vlan <pvid>
switchport forbidden vlan { add | remove } <vlan_list>
switchport hybrid acceptable-frame-type { all | tagged | untagged }
switchport hybrid allowed vlan { all | none | [add | remove | except] <vlan_list> }
switchport hybrid egress-tag { none | all [except-native] }
switchport hybrid ingress-filtering
switchport hybrid native vlan <pvid>
switchport hybrid port-type { unaware | c-port | s-port | s-custom-port }
switchport mode { access | trunk | hybrid }
switchport trunk allowed vlan { all | none | [add | remove | except] <vlan_list> }
switchport trunk native vlan <pvid>
switchport trunk vlan tag native
switchport vlan ip-subnet id <vce_id> <ipv4> vlan <vid>
switchport vlan mac <mac_addr> vlan <vid>
switchport vlan protocol group <grp_id> vlan <vid>
switchport voice vlan discovery-protocol { oui | lldp | both }
switchport voice vlan mode { auto | force | disable }
switchport voice vlan security

Parameters

access	Set access mode characteristics of the interface
forbidden	Adds or removes forbidden VLANs from the current list of forbidden VLANs
hybrid	Change PVID for hybrid port
mode	Set mode of the interface
trunk	Change PVID for trunk port
vlan	VLAN commands
voice	Voice appliance attributes

EXAMPLE

```
SM24DPB(config-if)# switchport access vlan 10
SM24DPB(config-if)# switchport mode access
SM24DPB(config-if)#
```

Configure VLAN Interface Commands

do

To run exec commands in config mode

SYNTAX

do <command>

Parameters

LINE Exec Command

EXAMPLE

```
SM24DPB(config-if-vlan)# do show vlan
VLAN  Name                            Interfaces
----  --------------------------------  ----------
1     default                           Gi 1/1-24
10    VLAN0010                          Gi 1/2-3

SM24DPB(config-if-vlan)#
```

end

Go back to EXEC mode.

SYNTAX

end <cr>

Parameters

None.

EXAMPLE

```
SM24DPB(config-if-vlan)# end
SM24DPB#
```

exit

Exit from current mode.

SYNTAX

Exit <cr>

Parameters

None.

EXAMPLE

```
SM24DPB(config-if-vlan)# exit
SM24DPB(config)#
```

help

Description of the interactive help system.

SYNTAX

help <cr>

Parameters

None.

EXAMPLE

```
SM24DPB(config-if-vlan)# 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?'.)

SM24DPB(config-if-vlan)#
```

ip

Internet Protocol config commands for a VLAN interface.

SYNTAX

ip arp inspection check-vlan
ip arp inspection logging { deny | permit | all }
ip arp inspection trust
ip dhcp snooping trust
ip igmp snooping filter <profile_name>
ip igmp snooping immediate-leave
ip igmp snooping max-groups <throttling>
ip igmp snooping mrouter
ip verify source
ip verify source limit <cnt_var>

Parameters

address	Address configuration
dhcp	Configure DHCP server parameters
igmp	Internet Group Management Protocol
<ipv4_addr>	IP address
dhcp	Enable DHCP client
server	Enable DHCP server per VLAN
snooping	Snooping IGMP
compatibility	Interface compatibility
last-member-query-interval	Last Member Query Interval in tenths of a second
priority	Interface CoS priority
querier	IGMP Querier configuration
query-interval	Query Interval in seconds
query-max-response-time	Query Response Interval in tenths of seconds
robustness-variable	Robustness Variable
unsolicited-report-interval	Unsolicited Report Interval in seconds
auto	Compatible with IGMPv1/IGMPv2/IGMPv3
v1	Forced IGMPv1
v2	Forced IGMPv2
v3	Forced IGMPv3<cr>

EXAMPLE

```
SM24DPB(config-if-vlan)# ip dhcp server
SM24DPB(config-if-vlan)# ip igmp snooping compatibility v2
SM24DPB(config-if-vlan)# ip address 192.168.1.78 255.255.255.0
SM24DPB(config-if-vlan)#
```

ipv6

IPv6 configuration commands for a VLAN interface.

SYNTAX

ipv6 address <subnet>
ipv6 mld snooping
ipv6 mld snooping compatibility { auto | v1 | v2 }
ipv6 mld snooping last-member-query-interval <ipmc_lmqi>
ipv6 mld snooping priority <cos_priority>
ipv6 mld snooping querier election
ipv6 mld snooping query-interval <ipmc_qi>
ipv6 mld snooping query-max-response-time <ipmc_qri>
ipv6 mld snooping robustness-variable <ipmc_rv>
ipv6 mld snooping unsolicited-report-interval <ipmc_uri>

Parameters

address	Configure the IPv6 address of an interface
mld	Multicasat Listener Discovery
X:X:X:X::X/<0-128>	IPv6 prefix x:x::y/z
snooping	Snooping MLD
compatibility	Interface compatibility
last-member-query-interval	Last Member Query Interval in tenths of a second
priority	Interface CoS priority
querier	MLD Querier configuration
query-interval	Query Interval in seconds
query-max-response-time	Query Response Interval in tenths of seconds
robustness-variable	Robustness Variable
unsolicited-report-interval	Unsolicited Report Interval in seconds
auto	Compatible with MLDv1/MLDv2
v1	Forced MLDv1
<IpmcLmqi : 0-31744>	0 - 31744 tenths of seconds
<CosPriority : 0-7>	CoS priority ranges from 0 to 7
election	Act as a MLD Querier to join Querier-Election

EXAMPLE

```
SM24DPB(config-if-vlan)# ipv6 address 2001:db8::/32
SM24DPB(config-if-vlan)#
```

no

Negate a command or set its defaults.

SYNTAX

ip	Interface Internet Protocol config commands
ipv6	IPv6 configuration commands
inspection	ARP inspection
check-vlan	ARP inspection VLAN mode config
logging	ARP inspection logging mode config
trust	ARP inspection trust config
arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
igmp	Internet Group Management Protocol
verify	verify command
snooping	DHCP snooping
trust	DHCP Snooping trust config
snooping	Snooping IGMP
filter	Access control on IGMP multicast group registration
immediate-leave	Immediate leave configuration
max-groups	IGMP group throttling configuration
mrouter	Multicast router port configuration
source	verify source
limit	limit command

Parameters

no ip address
no ip dhcp server
no ip igmp snooping
no ip igmp snooping compatibility
no ip igmp snooping last-member-query-interval
no ip igmp snooping priority
no ip igmp snooping querier { election | address }
no ip igmp snooping query-interval
no ip igmp snooping query-max-response-time
no ip igmp snooping robustness-variable
no ip igmp snooping unsolicited-report-interval
no ipv6 address [<ipv6_subnet>]
no ipv6 mld snooping
no ipv6 mld snooping compatibility
no ipv6 mld snooping last-member-query-interval
no ipv6 mld snooping priority
no ipv6 mld snooping querier election
no ipv6 mld snooping query-interval
no ipv6 mld snooping query-max-response-time
no ipv6 mld snooping robustness-variable
no ipv6 mld snooping unsolicited-report-interval

EXAMPLE

```
SM24DPB(config-if-vlan)#  no ip dhcp server
SM24DPB(config-if-vlan)# no ipv6 mld snooping
SM24DPB(config-if-vlan)#
```

21. CLI Commands Reference

This chapter summarizes CLI privilege levels and command modes.

- The privilege level determines whether or not a user can run a particular command.
- If a user can run a particular command, then they must run the command in the correct mode.

23.1 **Privilege levels**

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.

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 configuration command to configure access-list action. The access-list	15	INTERFACE_PORT_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 configuration will affect the received frames if it doesn't match any ACE.	15	INTERFACE_PORT_LIST
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-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]]	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
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 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.	15	EXEC
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 | permit | all }		13	GLOBAL_CONFIG
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 { console | telnet | ssh | http } { [local | radius | tacacs] ... }	Use the aaa authentication login command to configure the authentication methods.	15	GLOBAL_CONFIG
no aaa authentication login { console | 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 TACACS+ deadtime value.	15	GLOBAL_CONFIG
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	15	EXEC

	configuration and statistics.		
show tacacs-server	Use the show tacacs-server command to view the current TACACS+ configuration.	15	EXEC
debug auth { console | 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> <1-31> <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
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	15	GLOBAL_CONFIG

	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.		
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
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
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
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 { console | 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
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> [timeout <uint>]]}}	IP address configuration	15	INTERFACE_VLAN

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
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 <0-31744>		15	INTERFACE_VLAN
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	15	GLOBAL_CONFIG

	will delayed after LLDP configuration has changed) in seconds.)		
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-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>]	Use the media-vlan-policy to create a policy, which can be assigned to an interface.	15	GLOBAL_CONFIG
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
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>] [sfm-information]] [detail]		0	EXEC
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 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.	15	GLOBAL_CONFIG
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
platform phy instance { 1g | 10g }		15	GLOBAL_CONFIG
no platform phy instance		15	GLOBAL_CONFIG
platform phy failover		15	INTERFACE_PORT_LIST
show interface <port_type_list> statistics [{ packets | bytes | errors | discards | filtered | { priority [<0~7>] } }] [{ up | down }]	Shows the statistics for the interface.	0	EXEC
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 { 10g | 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 <port_type_list>]	Show Port Security status.	0	EXEC
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 { <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]		15	GLOBAL_CONFIG
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		15	INTERFACE_PORT_LIST

<0-1>			
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
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	15	INTERFACE_PORT_LIST

	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.		
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 \	15	EXEC

	the supported MIBs 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
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 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 address of logging server.	15	GLOBAL_CONFIG
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 system information	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 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
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	13	INTERFACE_PORT_LIST

	VLAN. Valid VLAN IDs are 1 to 4095.		
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 interface	13	INTERFACE_PORT_LIST
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 configuration command to restore the default voice vlan vid.	15	GLOBAL_CONFIG
voice vlan aging-time <10-10000000>	Use the voice vlan aging-time global configuration command to configure	15	GLOBAL_CONFIG

	default voice vlan aging-time.		
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 discovery-protocol interface configuration command to restore the default switchport voice vlan discovery-protocol.	15	INTERFACE_PORT_LIST
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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SM24DPB Managed Fiber Switch CLI Reference 33683 Rev. C