SM8TBT2SA and SM24TBT4SA

8 (10/100/1000BASE-T) ports with 4 PoE+ ports and 4 PoE++ ports & 2 Combo 100/1000 RJ-45/SFP ports

24 (10/100/1000BASE-T) ports with 16 PoE+ ports and 8 PoE++ ports & 4 Combo 100/1000 RJ-45/SFP ports

CLI Reference

Part Number 33874

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Intellectual Property

Warranty

For details on the Lantronix warranty policy, go to http://www.lantronix.com/support/warranty.

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Revision History

Date	Rev	Description
4/9/24	A	Initial Lantronix release at FW v1.04.0124.

Contents

1. Introduction

1.1 Overview

This manual describes how to configure and monitor the SMxTBTxSA via the web via its RJ-11 port using the Command Line Interface.

The SM8TBT2SA delivers 8 (10M/100M/1G) RJ45 with **4** PoE+ (PoE output max. 30W per port) and **4** PoE++ (PoE output max. 90W per port) and **2** Combo GbE RJ45/SFP ports.

The SM24TBT4SA delivers 24 (10M/100M/1G) RJ45 with **16** PoE+ (PoE output max. 30W per port) and **8** PoE++ (PoE output max. 90W per port) and **4** Combo GbE RJ45/SFP ports.

1.2 Features

- IPv4/IPv6 dual stack management
- SSH/SSL secured management
- SNMP v1/v2c
- RMON groups 1,2,3,9
- IGMP v1/v2 Snooping
- MLD v1/v2 Snooping
- RADIUS and TACACS+ authentication
- IP Source Guard
- DHCP Relay (Option 82)
- DHCP Snooping
- 802.1d (STP), 802.1w (RSTP) and 802.1s (MSTP)
- LACP and static link aggregation
- Q-in-Q double tag VLAN
- Extend PoE Mode
- Percepxion and LPM support

1.3 About This Manual

This manual gives specific information on how to operate and use the SMxTBTxSA management functions with a terminal or a PC running a terminal Emulation package. This manual is intended for use by network administrators who are responsible for operating and maintaining network equipment; it assumes a working knowledge of general switch functions, the Internet Protocol (IP), and Hypertext Transfer Protocol (HTTP).

1.4 Related Manuals

Related manuals include:

- SMxTBTxSA Quick Start Guide, 33871
- SMxTBTxSA Install Guide, 33872
- SMxTBTxSA Web User Guide, 33873
- Release Notes (version specific)

For Lantronix Drivers, Firmware, Manuals, Product Notifications, Warranty Policy & Procedures, etc. go to the Lantronix Technical Resource Center.

For Lantronix Documentation, Firmware, App Notes, etc. go to https://www.lantronix.com/technical-support/. Visit the Lantronix Web site at www.lantronix.com/support/documentation for the latest documentation. Note that this manual provides links to third party websites for which Lantronix is not responsible.

Cautions and Warnings: See the Install Guide for important Cautions and Warnings.

2. CLI Management

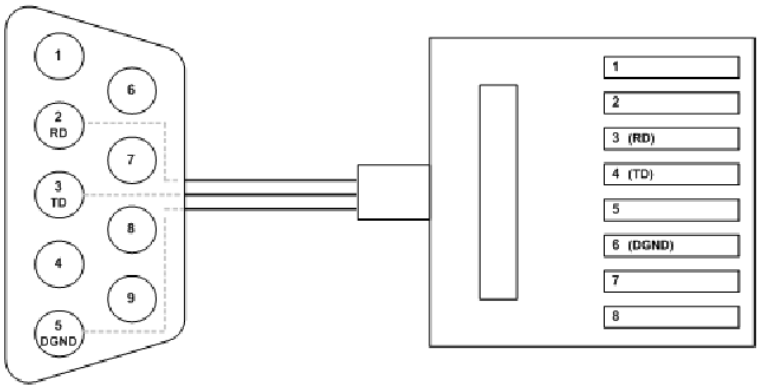
2.1 Console Port

The Console port is for local management by using a terminal emulator or a computer with terminal emulation software.

- DB9 connector connect to PC COM port
- Baud rate: 115200bps
- 8 Data bits, 1 Stop bit
- Priority: None
- Flow control: None

To connect the host PC to the console port, an RJ45 (male) connector-to-RS232 DB9 (female) connector cable is required. The RJ45 connector of the cable is connected to the Console port of the SM8TBT2SA. The DB9 connector of the cable is connected to the PC COM port.

The console cable pin assignments are shown below:



Host PC <------- DB9 Connector ---------- Switch RJ45 Console Port

2.2 Connect and Log In via the Console Port

Access to the Switch is protected by a logon security system. You can log on to the switch with the user name and password. After three failed logon attempts, the system refuses further attempts.

After you log on, the system monitors the interface for periods of inactivity. If the interface is inactive for too long, you are automatically logged off.

The CLI initial user name and password is admin. You should change the password as soon as possible, because the initial password is known to anyone who reads this manual. You can also change the user name or add additional user names. Use the “account add” command to enter a new user identification, password, and authorization level.

Console:	Baud rate:	115200bps
	Data bit:	8
	Parity:	None
	Stop bit:	1
	Flow control:	none
Telnet Port	23	
SSH	Port 22 (In Windows, you can run a terminal emulator such as PuTTY)	

2.3 CLI Initialization and Configuration

1. Connect a PC to the SM8TBT2SA Ethernet port (RJ45 Ethernet port).
2. In Telnet, enter the command `telnet 192.168.1.77`.
3. Login with default account and password (Username: admin / Password: admin).
4. Change the IP with the CLI commands below:

```
SM8TBT2SA# enable
SM8TBT2SA# configure terminal
SM8TBT2SA(config-if-vlan)# ip address 172.16.100.123 255.255.255.0
SM8TBT2SA(config-if-vlan)# exit
SM8TBT2SA(config)#
```

2.4 CLI Management

The RJ-45 cable is used for connecting a terminal or terminal emulator to the Switch’s RJ-45 port to access the command line interface. Attach the RJ-45 serial port on the switch’s front panel which used to connect to the switch for console configuration. Attach the other end of the DB-9 cable to an ASCII terminal emulator or PC Com-1, 2 port (e.g., a PC running HyperTerminal utility).

At the “Com Port Properties” Menu, configure the parameters Baud rate=115200, Stop bits=1, Data bits=8, Parity=N, Flow control=none.

2.5 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 user and password to login into the Managed Switch are Username: admin and Password: admin.

After you login successfully, the prompt will be shown as “<sys_name>#“. This means you can perform as an administrator and have the privilege for setting the Managed Switch. If not logged in as the administrator, the prompt will be shown as “<sys_name>>”, which means you can perform as a guest and are only allowed for setting the system as administrator. Each CLI command has a specific privilege level.

login as: admin
admin@192.168.1.77's password:
SM8TBT2SA
When a partial command list displays, the last line displays these options for continuing:
-- more --, next page: Space, continue: g, quit: ^C

2.6 CLI Command Modes

The CLI is divided into several modes. If a user has enough privilege to run a particular command, you can run the command if in the correct mode. To see the commands of a mode, enter a question mark (?) after the system prompt, then all commands will be displayed on the screen.

2.7 Controls

more	–
next page	Space
continue:	g
quit	^C
show more	?
show syntax	??
show more in tabular format	Tab ->|

2.8 Command Modes

The CLI is divided into several modes. If a user has enough privilege to run a particular command, they can run the command in that mode. To see the commands of the mode, enter a question mark (?) after the system prompt, then all available commands will be displayed. The command modes are listed below:

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

Prompt Examples:

Exec mode: Basic CLI commands; the prompt is `SM8TBT2SA#`

Config mode: Configuration mode commands; the prompt is `SM8TBT2SA(config)#`

Interface Config mode: Interface Configuration mode commands; prompt is `SM8TBT2SA(config-if)#`

2.9 Change Between Command Modes

You must actively change to the appropriate mode. The command modes are organized as a tree, and you start to in Exec mode. The following table explains how to change from one mode to another.

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

2.10 Privilege Levels

The privilege level determines whether or not a user can run a particular command. Every command has a privilege level (0-15). A 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.

2.11 Login

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

Username: admin

Password: admin

After you login successfully, the prompt displays as ""<sys_ name>##". It means you have administrator level privilege for operating the Switch. The switch starts out in Exec command mode (aka, "Global Commands").

```
Username: admin
Password: admin
SM8TBT2SA#
```

2.12 Command Line Messages

Message: *Wrong username or password!*
Recovery: Re-try the login with the correct username and password credentials.

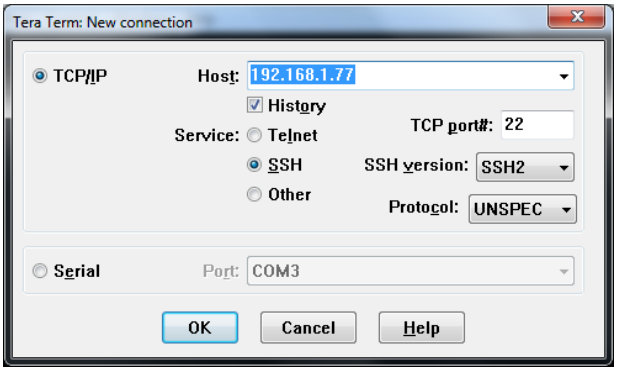
Message: *There are too many users in the system.*
Recovery: Try to log in later.

Message: *Syntax error: Illegal command line*
Recovery: Check the command syntax and try the command again.

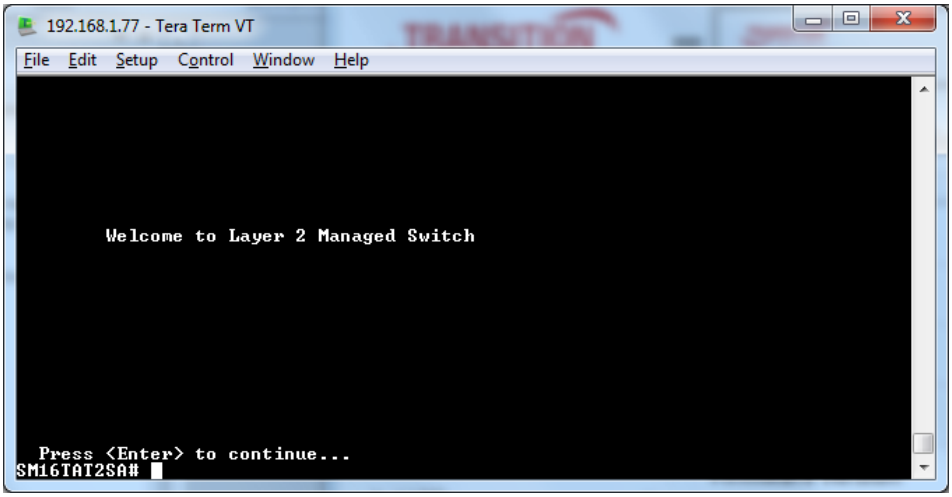
3. CLI Management

This manual documents CLI (Command Line Interface) commands for two similar models: SM8TBT2SA and SM24TBT4SA. The models differ mainly in port count. Model differences are noted where applicable in this manual. Note: the CLI can only be accessed via telnet or SSH. A typical connection procedure is provided below:

1. An-RJ-45 cable is used for connecting a terminal or terminal emulator to an RJ-45 port on the SMxTBTxSA front panel to access the CLI.
2. Attach an RJ-45 port on the switch's front panel to the cable for CLI configuration.
3. Attach the other end of the DB-9 cable to a PC running Tera Term or similar utility.
4. At the "Tera Term New connection" menu, configure the parameters: Host: 192.168.1.77; History: checked; Service: SSH; TCP port # 22; SSH version: SSG2; Protocol: UNSPEC.



5. Follow the on-screen instructions.



3.1 Install / Enable Telnet on Windows 8.1 or Windows 10

The latest Windows versions do not come with a telnet client installed. So by default, you cannot use Windows 10 or 8.1 to connect other network devices without installing a telnet client utility. Installing the telnet client from the Control Panel in Windows 10, 8.1 and 7 will solve this. Install media (e.g., CD, DVD, ISO) or other downloads are not needed for this; you just enable it from the Windows Control Panel or from the Command prompt.

Install from Control Panel

1. Windows 10, right-click on the Start button and select Control Panel.
   In Windows 8.1 and 8, you can use the charm bar by moving the cursor to top right corner or press the Windows key + I from the desktop, then select Control Panel. To access the Control Panel from Windows 7 select Settings > Control Panel.
2. In Windows 8.1, in 'Category' Control Panel view, click 'Programs' (very similar in Windows 10).
3. Click 'Turn Windows features on or off'. A dialogue box displays to let you select extra features to install.
4. Select 'Telnet Client' by ticking the box. Click OK to display a small installation.

Install from the Command Prompt

1. Open the command prompt as Administrator and execute the command
   `pkgmgr /iu:"TelnetClient"`
2. Try the telnet command in the command prompt or search in Apps to get the correct telnet app.

PuTTY is a free alternative telnet client that is fully compatible with Windows 10, 8.1, and Windows 7.
Other PuTTY alternatives can be used to manage and customize telnet sessions from your computer.
Follow the same steps to install Telnet client on Windows 2012 R2 and Windows 2016/2019 server versions.
PuTTY alternatives include KiTTY, SuperPuTTY, PuTTY Tray, Terminals, SmarTTY, and others.

3.2 Telnet Server

The Telnet Server service is not installed by default on all Windows or Windows Server versions.
The procedures to install Telnet Server vary based on the operating system you are using. See the MSDN webpage for details.

3.3 Windows Terminal

Windows Terminal is a new terminal application for command-line users. It includes many of the features frequently requested by users of the original Windows console host (conhost.exe).

Note: Windows Terminal requires Windows 10 1903 (build 18362) or later. See the Windows Terminals System Requirements page for more information.

Get from the Microsoft Store (Recommended): Install the Preview Windows Terminal from the Microsoft Store at https://aka.ms/windowsterminal. This allows you to always be on the latest version when Microsoft releases new builds with automatic upgrades. This is the Microsoft preferred method.

Download from GitHub: For users who are unable to install Terminal from the Microsoft Store, Terminal builds can be manually downloaded from the repository's Releases page GitHub: https://github.com/Microsoft/Terminal.

Note: If you install Terminal manually:

- Be sure to install the Desktop Bridge VC++ v14 Redistributable Package otherwise Terminal may not install and/or run and may crash at startup.
- Terminal will not auto-update when new builds are released so you must regularly install the latest Terminal release to receive all the latest fixes and improvements.

Other command-line tools and shells include Command Prompt, PowerShell, Absolute Telnet, Terminus, HyperACCESS, and WSL.

3.4 Idle Timeout

When the message *Warning: Idle timeout. The session will be closed.* displays after the session times out due to inactivity, you must log back in again. Press Enter to display the Username prompt.

```
SM8TBT2SA#
Warning: Idle timeout. The session will be closed.
<Enter>
Username: admin
Password:
SM8TBT2SA#
```

Command: **exec-timeout autologout**

Description: Set HTTP Auto-logout Timeout period.

Syntax: **exec-timeout** autologout { 0 | 1 | 2 | 3 | 4 | 5 | 10 | 20 | 30 | 40 | 50 | 60 }

Parameters:

0	Off – No Auto-Logout timeout
1	1 minute
10	10 minutes (default)
2	2 minutes
20	20 minutes
3	3 minutes
30	30 minutes
4	4 minutes
40	40 minutes
5	5 minutes
50	50 minutes
60	60 minutes

Example:

```
SM8TBT2SA(config)# exec-timeout autologout 0
SM8TBT2SA(config)#
```

Auto-Logout Timeout: After you change the Auto-Logout timeout and then log out and log back in, the Auto-Logout timeout setting will be the setting saved to the start-up config file.

When the Auto-Logout timeout setting is changed, it directly writes to running-config.

To save the timeout change to start-up config, you must execute a save to startup-config.

To examine the running-config, you can run the CLI command “showing running-config” or in the Web UI just log out and log back in again.

To save the timeout change into startup-config, do a save to startup-config and then reboot the switch.

Autologout summary:

- When you power on the switch, it will get the settings from startup-config.
- When you logout and login (without switch reboot), the switch will get the timeout settings from startup-config.
- When you reload defaults, the switch will get the timeout settings from default-config.

For the “Save to start-up config” behavior, if you don’t save the config, when you change the timeout setting but logout, at the next login the timeout setting remains unchanged as the setting in start-up config.

If you save timeout setting to start-up config:	**If you don’t save timeout setting to start-up config:**
When you change the timeout setting and save to startup-config (click the disc icon), the changed timeout setting will be applied to running-config and start-up config immediately.	When you change the timeout setting (without save to startup-config), the timeout change will be applied to running-config immediately.
After Logout and login, the timeout setting will be the setting saved in start-up config.	After Logout and login, the timeout setting will be the setting saved in start-up configure.
After a switch reboot, the timeout setting will be the setting saved in start-up config.	After you reboot the switch, the timeout setting will be the setting saved in start-up config.

4. Exec Mode Commands

To see the commands of the current mode, type a question mark (**?**) after the prompt to list all available commands for that mode.

```
SM8TBT2SA# ?
  !           Comments
  clear       Reset functions
  configure    Enter configuration mode
  copy        Copy from source to destination
  delete      Delete one file in flash file system
  diagnostics  diagnostics
  dir         Directory of all files in flash file system
  exit        Exit from the CLI
  find-switch  Turn on and off all LED lights 3 times in 15 seconds
  firmware     firmware
  logout      Exit from EXEC mode
  more        Display file
  ping        Send ICMP echo messages
  reload      Reload system
  show        Show running system information
  ssl         Setup SSL certificate
  terminal     Set terminal line parameters
  traceroute   Trace the route to HOST

SM8TBT2SA#
```

? (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 back up 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 entry (e.g. **show pr?**).

Syntax**:** **?**

Parameters**:** None.

Example**:**

```
SM8TBT2SA#?
!           Comments
clear       Reset functions
configure   Enter configuration mode
copy        Copy from source to destination
delete      Delete one file in flash file system
diagnostics  diagnostics
dir         Directory of all files in flash file system
exit        Exit from the CLI
find-switch  Turn on and off all LED light 3 times in 15 seconds
firmware    firmware
logout      Exit from EXEC mode
more        Display file
ping        Send ICMP echo messages
reload      Reload system
show        Show running system information
ssl         Setup SSL certificate
terminal    Set terminal line parameters
traceroute  Trace the route to HOST
SM8TBT2SA#
```

delete

Delete one file in flash file system

Syntax

delete string

Parameters

String

File in FLASH

Example

```
SM8TBT2SA# delete text
SM8TBT2SA#
```

dir

Directory of all files in flash file system

Parameters

none

Example

```
SM8TBT2SA# dir
startup-config
SM8TBT2SA#
```

end

Go back to EXEC mode.

Syntax:

end

Parameters:

none

Example:

```
SM8TBT2SA# configure terminal
SM8TBT2SA(config)# end
SM8TBT2SA#
```

exit

Exit from Config mode to EXEC mode.

Syntax: **exit**

Parameters: None.

Example:

```
SM8TBT2SA(config)# exit
SM8TBT2SA#
```

find switch

Turn all port LEDs on and off 3 times in 15 seconds.

SYNTAX

find-switch <cr>

EXAMPLE

```
SM8TBT2SA# find-switch ?
  find-switch  Turn on and off all LED light 3 times in 15 seconds
  <cr>
SM8TBT2SA# find-switch
SM8TBT2SA#
```

logout

Exit from EXEC mode. You must log back in.

Syntax:

logout

Parameters:

none

Example:

```
SM8TBT2SA# logout
```

more

Display file

Syntax: **more** String

Parameters:

String File in FLASH

Example:

```
SM8TBT2SA# copy running-config startup-config
SM8TBT2SA# more startup-config
username admin privilege 15 password none
!
!
interface GigabitEthernet 1/1
!
interface GigabitEthernet 1/2
!
interface GigabitEthernet 1/3
!
interface GigabitEthernet 1/4
!
interface GigabitEthernet 1/5
!
interface GigabitEthernet 1/6
SM8TBT2SA#
```

5. Clear Commands

Table : Clear Commands

Command	Function
access-list	Access list
ip	Clear DHCP Relay statistics
lldp	Clear LLDP statistics for one or more given interface
logging	Syslog
mac	MAC Address Table
spanning-tree	Execute protocol migration check on interfaces
statistics	Clear statistics for one or more given interface

access-list

Clear Access list

Syntax

Clear access-list ace | statistics

Parameters

ace Access list entry

statistics Traffic statistics

EXAMPLE

```
SM8TBT2SA# clear access-list ace statistics?
statistics Traffic statistics
<cr>
SM8TBT2SA# clear access-list ace statistics ?
<cr>
SM8TBT2SA# clear access-list ace statistics
SM8TBT2SA#
```

ip

Clear IP 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
vlan	IPv4 traffic interface
<vlan_list>	VLAN identifier(s): VID

EXAMPLE

```
SM8TBT2SA# clear ip ?
arp Clear ARP cache
dhcp Dynamic Host Configuration Protocol
igmp Internet Group Management Protocol
statistics Traffic statistics
SM8TBT2SA# clear ip arp
SM8TBT2SA# clear ip dhcp ?
detailed Detailed statistics
relay DHCP relay agent configuration
```

```
server Miscellaneous DHCP server information
snooping DHCP snooping
SM8TBT2SA# clear ip igmp ?
snooping Snooping IGMP
SM8TBT2SA# clear ip igmp snooping ?
statistics Running IGMP snooping counters
vlan Search by VLAN
SM8TBT2SA# clear ip igmp snooping vlan ?
<vlan_list> VLAN identifier(s): VID
SM8TBT2SA# clear ip igmp snooping statistics
SM8TBT2SA#
```

lldp

Clears LLDP statistics for one or more given interfaces.

Syntax

Clear lldp statistics

Parameters

global	Clear global counters
interface	Interface
GigabitEthernet	GigabitEthernet
*	All ports
<port_list>	Port List S/X-Y,Z (1/1-18)

EXAMPLE

```
SM8TBT2SA# clear lldp statistics interface GigabitEthernet 1/3-8
SM8TBT2SA# clear lldp statistics global
SM8TBT2SA#
```

logging

Clears Syslog (System Log).

Syntax

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

Parameters

error	Error
info	Information
warning	Warning

EXAMPLE

```
SM8TBT2SA# clear logging error
SM8TBT2SA# clear logging info
SM8TBT2SA# clear logging warning
SM8TBT2SA# clear logging
SM8TBT2SA#
```

mac

Clears MAC Address Table.

Syntax

Clear mac address-table

Parameters

address-table	Flush MAC Address table.

EXAMPLE

```
SM8TBT2SA# clear mac address-table
SM8TBT2SA#
```

spanning-tree

Clear STP Bridge.

Syntax

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

Parameters

detected-protocols	Set the STP migration check
statistics	STP statistics
interface	Choose port
<port_type>	GigabitEthernet
<port_type_list>	Port list in 1/1-8 for Gigabitethernet

EXAMPLE

```
SM8TBT2SA# clear spanning-tree?
spanning-tree STP Bridge
SM8TBT2SA# clear spanning-tree ?
detected-protocols Set the STP migration check
statistics STP statistics
SM8TBT2SA# clear spanning-tree detected-protocols ?
interface Choose port
<cr>
SM8TBT2SA# clear spanning-tree statistics ?
interface Choose port
<cr>
SM8TBT2SA# clear spanning-tree detected-protocols interface GigabitEthernet
1/1-8
SM8TBT2SA# clear spanning-tree statistics
SM8TBT2SA#
```

statistics

Clear statistics for a given interface.

Syntax

clear statistics interface <port_type> <port_type_list>

clear statistics <port_type> <port_type_list>

Parameters

<port_type>	GigabitEthernet
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet
statistics	Clear statistics for one or more given interfaces
interface	Interface
*	All switches or All ports
GigabitEthernet	GigabitEthernet

EXAMPLE

```
SM8TBT2SA# clear statistics interface GigabitEthernet 1/3-9
SM8TBT2SA#
```

6. Config Mode Commands

To enter Config Mode from Exec Mode type **`configure terminal`** and hit Enter. Then type a **`?`** to display the Config Mode command set.

Table : Configure Mode Commands

```
SM8TBT2SA(config)# ?
!                Comments
aaa              Authentication, Authorization and Accounting
access           Access management
access-list      Access list
aggregation      Aggregation mode
clock            Configure time-of-day clock
dms              DMS Service Mode
do               To run exec commands in config mode
dot1x            IEEE Standard for port-based Network Access Control
end              Go back to EXEC mode
event            Trap Event Level
exec-timeout     auto logout
exit             Exit from configure mode
interface        Select an interface to configure
ip               Internet Protocol
ipmc             IPv4/IPv6 multicast configuration
ipv6             IPv6 configuration commands
lacp             Lacp system configuration
lldp             LLDP configurations
logging          Syslog
loop-protect     Loop protection configuration
mac              MAC table entries/configuration
map-api-key      Set Google Map Key configurations
max-frame-size   Maximum packet length filtering is examined on both rx and tx ports.
monitor          Monitoring different system events
mvr              Multicast VLAN Registration configuration
no               Negate a command or set its defaults
```

```
ntp               Configure NTP
percepxion        Configure Percepxion
poe               Power Over Ethernet
port-security     Enable/disable port security globally
privilege         Privilege level
qos               Quality of Service
radius-server     Configure RADIUS
rmon              Remote Monitoring
smtp              smtp
snmp-server       Set SNMP server's configurations
spanning-tree     Spanning Tree protocol
system            Set the SNMP server's configurations
tacacs-server     Configure TACACS+
trap              Trap
upnp              Set UPnP's configurations
username          Establish User Name Authentication
vlan              VLAN commands
voice             Vlan for voice traffic

SM8TBT2SA(config)#
```

! (Comments)

Arguments - ignored comment text.

Syntax **configure** terminal

EXAMPLE

```
SM8TBT2SA(config)# ! ?
  Arguments  ignored comment text
  <cr>

SM8TBT2SA(config)# !
SM8TBT2SA(config)#
```

configure terminal

Enter Configure mode from Exec mode.

Syntax **configure** terminal

EXAMPLE

```
SM8TBT2SA(config)#
SM8TBT2SA(config)# end
SM8TBT2SA# configure terminal
SM8TBT2SA(config)#
```

aaa

Configure Authentication, Authorization, and Accounting parameters.

SYNTAX

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

Parameters

authentication	Authentication
authorization	Authorization
accounting	Accounting
login	Login
service-port	Service port
ssh	Configure SSH
telnet	Configure Telnet
http	Configure HTTP
https	Configure Secure HTTP
local	Use local database for authentication
radius	Use RADIUS for authentication
tacacs	Use TACACS+ for authentication
redirect	HTTP redirect HTTPS
tacacs	Configure Telnet
tacacs	Configure SSH
commands	Cmd Lvl (0..15)
<0-15>	Cmd Lvl (0..15)
exec	config-commands
config-commands	config-commands
fallback	fallback

EXAMPLE

```
SM8TBT2SA(config)# aaa authentication login http local
SM8TBT2SA(config)# aaa authentication service-port telnet 22
ERROR: Telnet can't bind to port: 22. It's already in used.
SM8TBT2SA(config)# aaa authentication service-port telnet 45
SM8TBT2SA(config)# aaa authorization telnet tacacs commands 12 config-commands fallback
Warning: Idle timeout. The session will be closed.
SM8TBT2SA(config)# aaa accounting ssh tacacs
SM8TBT2SA(config)#
```

access management

Configure Access management parameters.

SYNTAX

access management

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

Parameters

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

```
SM8TBT2SA(config)# access management 1
SM8TBT2SA(config)# access management 10 3 192.168.1.1 all
SM8TBT2SA(config)# access management 2 3 192.168.1.30 ?
  snmp    SNMP service
  telnet  TELNET/SSH service
  web     Web service
  all     All services
  <cr>
SM8TBT2SA(config)# do show access management
Switch access management mode is : Disable
Idx VID  IP Address          HTTP/HTTPS SNMP TELNET/SSH
--- ---- -------------------- ---------- ---- ----------
1   3    192.168.1.1/32      Y          Y    Y


SM8TBT2SA(config)#
```

access list

Configure Access list parameters.

SYNTAX

access list ace < 1-384 >

Parameters

ace	Access list entry
<1-384>	ACE ID (1..384)
action	Access list action < deny > < permit > < shutdown >
ingress	Ingress Port <any > < interface >
mirror	Mirror frame to destination mirror port > disable > > action >
metering	Bandwidth limitation on the traffic flow < disable > <16-1000000>
counter	Count the packet if the ACE rule is matched
frame-type	Frame type < any > < etype > < ipv4 > < ipv4-icmp > < ipv4-tcp > < ipv4-udp > < cr >
deny	Deny
permit	Permit
shutdown	Shutdown the interface
any	Don't-care the ingress interface
interface	Select an interface to configure
*	All switches or All ports
GigabitEthernet	GigabitEthernet
<port_list>	Port list in (1/1-10)
disable	Disable mirror
disable	Disable metering
<16-1000000>	Metering bandwidth in Kbps (16..1000000)
disable	Disable counter
any	Don't-care the frame type
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 UDP
ctag	C-VLAN Tag
ctag-priority	C-VLAN Tag-priority
ctag-vid	C-VLAN ID field
stag	S-VLAN Tag

stag-priority	S-VLAN Tag-priority
stag-vid	S-VLAN ID field
dmac-type	The type of destination MAC address
dmac	Destination MAC address field
smac	Source MAC address field
etype-value	Ether type value
any	Don't-care tagged or untagged
tagged	Tagged
untagged	Untagged
any	Don't-care the value of tag priority field
0-1	The range of tag priority
0-3	The range of tag priority
2-3	The range of tag priority
4-5	The range of tag priority
4-7	The range of tag priority
6-7	The range of tag priority
<0-7>	The value of tag priority (0..7)
any	Don't-care the value of VID field
<vlan_id>	The value of VID field (1-4095)
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 value of source MAC address field
<mac_addr>	The value of source MAC address field
any	Don't-care the value of etype field
<0x0000-0xFFFF>	The value of etype field
action	Acess list action
ingress	Ingress Port
mirror	Mirror frame to destination mirror port
metering	Bandwidth limitation on the traffic flow
counter	Count the packet if the ACE rule is matched
dip	Destination IP address field
sip	Source IP address field
ip-flag	IP flag
tos	IPv4 traffic class field

dport	TCP/UDP destination port field
sport	TCP/UDP source port field
tcp-flag	TCP flag
ip-protocol	IP protocol
icmp-code	ICMP code field
icmp-type	ICMP type field
any	Don't-care the value of ICMP type field
<0-255>	The value of ICMP type field (0..255)
any	Don't-care the value of ICMP code field
<0-255>	The value of ICMP code field (0..255)
any	Don't-care the value of IPv4 traffic class field
dscp	Differentiated services code point of IP packets
ip-precedence	IP precedence traffic class of IP packets
<0-63>	Specify DSCP (0..63)
0-1	The range of ip precedence
0-3	The range of ip precedence
2-3	The range of ip precedence
4-5	The range of ip precedence
4-7	The range of ip precedence
6-7	The range of ip precedence
<0-7>	The value of ip precedence (0..7)

EXAMPLE

```
SM8TBT2SA(config)# access-list ace 1 action permit ingress interface GigabitEthernet 1/6 mirror disable metering 160 counter frame-type etype ctag any ctag-priority any ctag-vid 100 stag tagged stag-priority 0-1 stag-vid any dmac-type broadcast smac 11-22-33-44-55-66 etype-value 0x88a8

SM8TBT2SA(config)# access-list ace 1 frame-type ipv4-icmp icmp-type 5 icmp-code any tos ip-precedence 7
SM8TBT2SA(config)#
```

aggregation

Configure Aggregation mode parameters (Traffic distribution mode parameters).

SYNTAX

aggregation mode < dst-ip > <dst-mac > <src-dst-ip > < src-dst-mac src-ip > < src-mac >

Parameters

mode	Traffic distribution mode
dst-ip	Destination IP address affects the distribution
dst-mac	Destination MAC affects the distribution
src-dst-ip	Source and Destination IP affect the distribution
src-dst-mac	Source and Destination MAC affect the distribution
src-ip	Source IP address affects the distribution
src-mac	Source MAC affects the distribution

EXAMPLE

```
SM8TBT2SA(config)# aggregation mode dst-ip
SM8TBT2SA(config)# aggregation mode dst-mac
SM8TBT2SA(config)# aggregation mode src-dst-mac
SM8TBT2SA(config)# aggregation mode src-ip
SM8TBT2SA(config)# aggregation mode src-mac
SM8TBT2SA(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>]

Parameters

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

```
SM8TBT2SA(config)# clock set 2019/09/13 12:43:33
SM8TBT2SA(config)# do show clock
System Time : 2019-09-13 12:43:38
SM8TBT2SA(config)# clock timezone ?
  acronym      name of time zone.
  clock-offset  Offset from UTC.
SM8TBT2SA(config)# clock summer-time ?
  mode_type  Enable or Disable time zone in summer. (disable/enable)
SM8TBT2SA(config)#
```

dms

Set DMS (Device Management System) service mode parameters. Setting DMS Mode to “high-priority” makes that switch the DMS Controller (Master) switch. DMS Mode must be set to “high-priority” for the DMS Traffic Monitor to work.

SYNTAX

dms-service mode [enabled | priority| high]

Parameters

enabled	Enabled
disabled	Disabled
priority	DMS priority
high	DMS priority is high ; the switch will become the DMS Controller (Master) switch.
mid	DMS priority is mid-level
low	DMS priority is low
non	DMS priority is none; the switch will never become the DMS Controller (Master) switch.

EXAMPLE

```
SM8TBT2SA(config)# dms-service mode enabled priority high
SM8TBT2SA(config)#
```

do

Run Exec mode commands in Config mode or Interface Config mode.

SYNTAX

do < LINE >{[< LINE >]}

Parameters

<LINE> Exec Command

EXAMPLE

```
SM8TBT2SA(config)# do ?
  clear        Reset functions
  configure    Enter configuration mode
  copy         Copy from source to destination
  delete       Delete one file in flash file system
  diagnostics  diagnostics
  dir          Directory of all files in flash file system
  find-switch  Turn on and off all LED light 3 times in 15 seconds
  firmware     firmware
  logout       Exit from EXEC mode
  more         Display file
  ping         Send ICMP echo messages
  reload       Reload system
  show         Show running system information
  ssl          Setup SSL certificate
  terminal     Set terminal line parameters
  traceroute   Trace the route to HOST
SM8TBT2SA(config)# do show trap
                     Community              Severity
No Ver Server IP       Name                   Level
-- --- --------------- ---------------------- ---------
1  v2c    192.168.1.30               private     Error
2
3
4
5
SM8TBT2SA(config)#
```

dot1x

Configure IEEE 802.1x 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 ensablé (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

```
SM8TBT2SA(config)# dot1x authentication timer re-authenticate 600
SM8TBT2SA(config)# dot1x feature guest-vlan
SM8TBT2SA(config)# dot1x guest-vlan ?
  <1-4095>    Guest VLAN ID used when entering the Guest VLAN. (1..4095)
  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.
SM8TBT2SA(config)# dot1x guest-vlan 200
SM8TBT2SA(config)# dot1x max-reauth-req 65
SM8TBT2SA(config)# dot1x re-authentication
SM8TBT2SA(config)# dot1x system-auth-control
SM8TBT2SA(config)# dot1x timeout tx-period 9000
SM8TBT2SA(config)#
```

end

Go back to EXEC mode.

SYNTAX

end <cr>

EXAMPLE

```
SM8TBT2SA(config)# end?
  end  Go back to EXEC mode
  <cr>

SM8TBT2SA(config)# end ?
  <cr>

SM8TBT2SA(config)# end
SM8TBT2SA#
```

event

Configure Trap Event group name parameters.

SYNTAX

event group

802.1x	Group ID IEEE 802.1X
acl	Group ID ACL
access-mgmt	Group ID ACCESS-MGMT
auth-failed	Group ID AUTH-FAILED
cold-start	Group ID COLD-START
lacp	Group ID LACP
link-updown	Group ID LINK-UPDOWN
login	Group ID LOGIN
logout	Group ID LOGOUT
loop-protection	Group ID LOOP-PROTECTION
mac-table	Group ID MAC-TABLE
maintenance	Group ID MAINTENANCE
mgmt-ip-change	Group ID MGMT-IP-CHANGE
over-max-poe-power-limitation	Group ID OVER-MAX-POE-POWER-LIMITATION
poe-auto-power-reset	Group ID POE-AUTO-POWER-RESET
poe-pd-off	Group ID POE-PD-OFF
poe-pd-on	Group ID POE-PD-ON
poe-pd-overcurrent	Group ID POE-PD-OVERCURRENT
port-security	Group ID PORT-SECURITY
sfp	Group ID SFP
user	Group ID USER
warm-start	Group ID WARM-START
level	event group level
syslog	syslog mode
trap	trap mode
smtp	smtp mode
enable	smtp mode enable
disable	smtp mode disable
<0-7>	<0> Emergency ,<1> Alert ,<2> Critical ,<3> Error ,<4> Warning ,<5> Notice ,<6> Informational ,<7>
Debug	Level (0..7)

enable	syslog mode enable
disable	syslog mode disable
enable	trap mode enable
disable	trap mode disable

EXAMPLE

```
SM8TBT2SA(config)# event group acl level 5
SM8TBT2SA(config)# event group poe-auto-power-reset trap enable
SM8TBT2SA(config)# event group poe-auto-power-reset syslog enable
SM8TBT2SA(config)# event group port-security syslog enable trap enable
SM8TBT2SA(config)# event group 802.1x syslog enable smtp enable level 3 trap enable
SM8TBT2SA(config)#
```

exec-timeout

Set exec auto-logout time (auto logout).

SYNTAX

<auto logout time : 0-5|10|20|30|40|50|60 min>

Parameters

auto logout	time in minutes
0-5	automatically log out after 0-5 minutes of inactivity (0 means no automatic logout)
10	automatically log out after 10 minutes of inactivity (default)
20	automatically log out after 20 minutes of inactivity
30	automatically log out after 30 minutes of inactivity
40	automatically log out after 40 minutes of inactivity
50	automatically log out after 50 minutes of inactivity
60 min	automatically log out after 60 minutes of inactivity

EXAMPLE

```
SM8TBT2SA(config)# exec-timeout autologout 0
SM8TBT2SA(config)# exec-timeout autologout 0
SM8TBT2SA(config)# exec-timeout autologout 1
SM8TBT2SA(config)# exec-timeout autologout 2
SM8TBT2SA(config)# exec-timeout autologout 99
SM8TBT2SA(config)#
```

exit

Exit from the CLI.

SYNTAX

exit

EXAMPLE

```
SM8TBT2SA# exit
  <cr>

SM8TBT2SA#
```

interface

Enter Interface Config Mode; select and configure a specific VLAN or GbE interface. See section 7. Interface Config Mode Commands on page 147 for Interface Config mode commands.

SYNTAX

interface (<port_type> [<plist>])

interface vlan <vlist>

Parameters

<port_type>	Gigabit Ethernet
vlan	VLAN interface configurations
<vlan_list>	List of VLAN interface numbers (1-4095)
<port_type_list>	Port list in the format 1/1-26 for Gigabit Ethernet (for the SM24TBT4SA)
<port_list>	Port List S/X-Y,Z (1/1-10)

EXAMPLE 1

```
SM8TBT2SA(config)# interface vlan 10-20
SM8TBT2SA(config)# interface GigabitEthernet ?
  <port_list>  Port List S/X-Y,Z (1/1-18)
SM8TBT2SA(config)# interface GigabitEthernet 1/2-7
SM8TBT2SA(config-if)#
```

EXAMPLE 2

```
SM8TBT2SA(config)# interface vlan 20
SM8TBT2SA(config-if-vlan)# ?
  !     Comments
  do    To run exec commands in config mode
  end   Go back to EXEC mode
  exit  Exit from current mode
  ip    Interface Internet Protocol config commands
  ipv6  Interface IPv6 config commands
  no    Negate a command or set its defaults
SM8TBT2SA(config-if-vlan)#
```

EXAMPLE 3

```
SM8TBT2SA(config-if)#?
!              Comments
aggregation     Aggregation port membership
```

```
description     Configure interface description
do              To run exec commands in config mode
dot1x           IEEE Standard for port-based Network Access Control
duplex          Interface duplex
exit            Exit from current mode
flowcontrol     Traffic flow control
green-ethernet  Green ethernet (Power reduction)
ip              Internet Protocol
lacp            Lacp port configuration
lldp            LLDP configurations on port
loop-protect    Loop protection configuration on port
mac             MAC keyword
mvr             Multicast VLAN Registration configuration
no              Negate a command or set its defaults
poe             Power Over Ethernet
port-security   Enable/disable port security per interface
pvlan           PVLAN configure
qos             Quality of Service
rmon            Configure Remote Monitoring on an interface
shutdown        Shutdown of the interface
spanning-tree   Spanning Tree protocol.
speed           configures interface speed.
switchport      Switching mode characteristics

SM8TBT2SA(config-if)#
```

See section 7. Interface Config Mode Commands on page 147 for Interface Config mode commands.

ip

Configure Internet Protocol settings.

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

ip dhcp server per-port vlan <vlan_id>

ip dhcp snooping

ip helper-address <v_ipv4_ucast>

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 <vlan_id>

ip name-server { <v_ipv4_addr> | dhcp [interface vlan <v_vlan_id>] }

ip route <v_ipv4_addr> <v_ipv4_netmask> <v_ipv4_gw>

ip source binding interface <port_type> <in_port_type_id> <vlan_var> <ipv4_var> <mac_var>

ip verify source

Parameters

arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
helper-address	DHCP relay server
igmp	Internet Group Management Protocol
link-local	Link-Local address binding interface
name-server	Domain Name System
route	Add IP route

source	source command
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
server	Enable DHCP server
snooping	DHCP snooping
proxy	DNS proxy service
secure-redirect	Secure HTTP web redirection
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 GigabitEthernet
*	All switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_id>	Port ID in the format of switch-no/port-no, ex 1/1-26 for Gigabit Ethernet
<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
login	ARP inspection vlan logging mode config
<port_id>	Port ID in (1/1-10)
per-port	Ensable DHCP server per port
<vlan_id>	VLAN id of DHCP server pool (1-4095)

EXAMPLE 1

```
SM8TBT2SA(config)# ip arp inspection
SM8TBT2SA(config)# ip dhcp server per-port
SM8TBT2SA(config)# ip helper-address 123.45.67.89
SM8TBT2SA(config)# ip igmp snooping
SM8TBT2SA(config)# ip verify source
SM8TBT2SA(config)# ip link-local interface 100
SM8TBT2SA(config)# ip name-server 1.2.3.4
SM8TBT2SA(config)# ip verify source
SM8TBT2SA(config)#
```

EXAMPLE 2

```
SM8TBT2SA(config)# ip dhcp server per-port vlan 900
SM8TBT2SA(config)#
```

Messages:

ERROR: The ip interface isn't exist.

ERROR: Already exists (VLAN: 100)

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 provides the rules for specific group addresses.
range	A range of IPv4/IPv6 multicast addresses for the profile
mode	IPMC profile mode
word16	Profile name in 16 char's (word16)
word16	Range entry name in 16 char's (word16)
<ipv4_mcast>	Valid IPv4 multicast address
<ipv6_mcast>	Valid IPv6 multicast address

EXAMPLE

```
SM8TBT2SA(config)# ipmc profile test
SM8TBT2SA(config-ipmc-profile)#
SM8TBT2SA(config)# ipmc mode
SM8TBT2SA(config)#
SM8TBT2SA(config-ipmc-profile)# range Entry1 deny
SM8TBT2SA(config-ipmc-profile)# range Entry1 permit
SM8TBT2SA(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

Parameters

mld	Multicast Listener Discovery
snooping	Snooping MLD
host-proxy	MLD proxy configuration
unknown-flooding	Flooding unregistered IPv6 multicast traffic
ssm-range	IPv6 address range of Source Specific Multicast
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

```
SM8TBT2SA(config)# ipv6 mld snooping
SM8TBT2SA(config)# ipv6 mld unknown-flooding
SM816AT2SA(config)# ipv6 mld host-proxy
SM8TBT2SA(config)# ipv6 mld ssm-range 200:20:20:20:30:30:30:40
  <ipv6_mcast>  Valid IPv6 multicast address (X:X:X:X:X:X:X:X)
SM8TBT2SA(config)#
```

lacp

Configure LACP (Link Aggregation Control Protocol) settings.

SYNTAX

lacp system-priority <1-65535>

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# lacp system-priority 300
SM8TBT2SA(config)#
```

lldp

Configure LLDP (Link Level Discovery Protocol) settings.

SYNTAX

lldp holdtime <2-10>

lldp med datum { wgs84 | nad83_navd88 | nad83_mllw }

lldp med fast <1-10>

lldp med location-tlv altitude { meters | floors } <word11>

lldp med location-tlv civic-addr { 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>

lldp med location-tlv elin-addr <dword25>

lldp med location-tlv latitude { north | south } <word8>

lldp med location-tlv longitude { west | east } <word9>

lldp med media-vlan policy-list <range_list>

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>]

lldp reinit <1-10>

lldp timer <5-32768>

lldp transmission-delay <1-8192>

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 transmission-delay (the amount of time that the transmission of LLDP frames will delayed after LLDP configuration has changed) in seconds.)
<2-10>	2-10 seconds.
<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	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 and others), such 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.
country	The two-letter ISO 3166 country code in capital ASCII letters
state	National subdivisions
county	County, parish, gun (Japan), district
city	City, township, shi (Japan) - Example:Copenhagen
district	City division, borough, city district, ward, chou (Japan)
block	Neighborhood, block
street	Street
leading-street-direction	Leading street direction
trailing-street-suffix	Trailing street suffix
street-suffix	Street suffix
house-no	House number
house-no-suffix	House number suffix
landmark	Landmark or vanity address
additional-info	Additional location info
name	Name (residence and office occupant)

zip-code	Postal/zip code
building	Building (structure)
apartment	Unit (Apartment, suite)
floor	Floor
room-number	Room number
place-type	Place type
postal-community-name	Postal community name
p-o-box	Post office box (P.O. BOX)
additional-code	Additional code

EXAMPLE

```
SM8TBT2SA(config)# lldp timer 350
SM8TBT2SA(config)# lldp holdtime 3
SM8TBT2SA(config)# lldp reinit 4
SM8TBT2SA(config)# lldp transmission-delay 500
The error while request to the config daemon.
SM8TBT2SA(config)# lldp med location-tlv civic-addr country US
SM8TBT2SA(config)# lldp med media-vlan-policy 0 video-signaling tagged 600 dscp
6 l2-priority 2
SM8TBT2SA(config)#
```

logging

Configure Syslog.

SYNTAX

logging host { <ipv4_ucast> | <hostname> }

logging on

Parameters

host	host
<1-6>	host number (1..6)
<ipv4_ucast>	IP address of the log server (X.X.X.X)
<hostname>	Domain name of the log server
on	Enable syslog server

EXAMPLE

```
SM8TBT2SA(config)# logging on
SM8TBT2SA(config)# logging host 1
SM8TBT2SA(config)# do show logging
Switch logging host mode is enable
Host address 1 : 192.168.1.77
Host address 2 :
Host address 3 :
Host address 4 :
Host address 5 :
Host address 6 :

Number of entries on Switch:
ID    Level    Time                 Message
----  -------  -------------------  ----------------------------
1     Warning  2017-01-01 00:00:06   WARM-START: Switch just made a warm boot.
2     Info     2017-01-01 00:46:47   LOGIN: Login passed for user 'admin'
28    Info     2018-03-02 04:27:48   SFP: SFP module inserted on port 18
29    Info     2018-03-02 04:28:04   SFP: Interface GigabitEthernet 1/18 rx power 0.00 exceeds
Alarm-Low Limitation
30    Info     2018-03-02 04:47:42   LOGOUT: User 'admin' logout
31    Info     2018-03-02 05:10:13   LOGIN: Login passed for user 'admin'
SM8TBT2SA(config)#
```

loop-protect

Configure Loop protection settings.

SYNTAX

loop-protect

loop-protect shutdown-time <0-604800>

loop-protect transmit-time <1-10>

Parameters

shutdown-time	Loop protection shutdown time interval
<10-604800>	Shutdown time in second (10..604800)
transmit-time	Loop protection transmit time interval
<1-10>	Transmit time in seconds (1..10)

EXAMPLE

```
SM8TBT2SA(config)# loop-protect transmit-time 10
SM8TBT2SA(config)# loop-protect shutdown-time ?
  <10-604800>  Shutdown time in second (10..604800)

SM8TBT2SA(config)# loop-protect shutdown-time 50000
SM8TBT2SA(config)# do show loop-protect
Loop Protection Configuration
=====================================
Loop Protection   : Enable
Transmission Time : 10 sec
Shutdown Time     : 50000 sec
```

mac

Configure 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
<10-1000000>	Aging time in seconds (10..1000000)
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 Gigabit Ethernet
*	All switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 ?
  block      Drop the packet which MAC Address and VLAN ID is match
  interface  Select an interface to configure
SM8TBT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 block ?
  <cr>
SM8TBT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 interface ?
  GigabitEthernet  1 Gigabit Ethernet Port
  *                All switches or All ports
SM8TBT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 interface
SM8TBT2SA(config)#
```

map-api-key

Set Google Map Key string. This command lets you set up the Google Map API Key from https://console.developers.google.com/ to use DMS Map View for enterprise applications.

Alternate: https://developers.google.com/maps/documentation/embed/get-api-key.

Specify the Google API Key. To use the Google Maps Embedded API, you must register your app project on the Google API Console and get a Google API key which you can add to your app or website.

SYNTAX

map-api-key word127 <cr>

Parameters

word127 Google map key string (word127)

EXAMPLE

```
SM8TBT2SA(config)# map-api-key abcdefg1234567
SM8TBT2SA(config)# do show map-api-key
Key               : abcdefg1234567


SM8TBT2SA(config)#
```

max-frame-size

Maximum packet length filtering is examined on both receiving and transmitting ports. Added at FW VB6.64.0028.

SYNTAX

max-frame-size <size>

Parameters

<1518-10000> Maximum packet length (1518..10000)

EXAMPLE

```
SM8TBT2SA(config)# max-frame-size 1518
SM8TBT2SA(config)# max-frame-size 9999
SM8TBT2SA(config)#
```

monitor

Set monitor configuration (configure a Mirror session).

SYNTAX

monitor session destination interface <port_type> <port_type_id>

monitor session source { interface <port_type> <port_type_list> | cpu } { both | rx | tx }

Parameters

session	Configure a MIRROR session
<1>	MIRROR session number (1..1)
destination	The destination port. That is the port that trafficked should be mirrored to.
interface	MIRROR destination interface
interface	MIRROR source interface
*	All switches or All ports
GigabitEthernet	GigabitEthernet
<port_id>	Port ID in (1/1-10)
both	Mirror both ingress and egress traffic.
rx	Mirror ingress traffic.
tx	Mirror egress traffic.

EXAMPLE

```
SM8TBT2SA(config)# monitor session 1 destination interface GigabitEthernet 1/5
SM8TBT2SA(config)# monitor session 1 source interface GigabitEthernet 1/5 rx
ERROR: ERROR: Failed to set mirror group
SM8TBT2SA(config)# monitor session 1 source interface GigabitEthernet 1/6 tx
SM8TBT2SA(config)#
```

mvr

Configure Multicast VLAN Registration parameters.

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

vlan	MVR multicast VLAN list
name	MVR multicast name
<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 (1-4095)
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
<Range : 0-31744 tenths of seconds>	Last Member Query Interval in tenths of a second (0..31744)
compatible	Compatible MVR operation mode
<Priority : 0-7>	Range : 0-7 (0..7)

EXAMPLE

```
SM8TBT2SA(config)# mvr vlan 200-400 frame tagged tagged
SM8TBT2SA(config)# mvr vlan 200-400 name MvrVid1
SM8TBT2SA(config)# mvr vlan 200-400 frame ?
  priority  Interface CoS priority
  tagged    Tagged IGMP/MLD frames will be sent
SM8TBT2SA(config)# mvr vlan 200-400 frame tagged ?
  untagged/tagged  tagged mode
SM8TBT2SA(config)# mvr vlan 200-400 frame tagged tagged
SM8TBT2SA(config)# mvr vlan 100 mode compatible
SM8TBT2SA(config)# mvr vlan 11 last-member-query-interval 1
SM8TBT2SA(config)#
```

ntp

Configure NTP (Network Timing Protocol).

SYNTAX

ntp

ntp server <1-6> ip-address <hostname>

ntp server <1-6> ip-address <ipv4_ucast>

ntp interval <5-120> available interval time is 5,10,15,30,60,120 minutes

Parameters

server	Configure NTP server
interval	Configure NTP interval
<1-6>	index number (1..6)
ip-address	ip-address
<hostname>	domain name
<ipv4_ucast>	ipv4 address (X.X.X.X)
<5-120>	available interval time is 5,10,15,30,60,120 min.
<cr>	

EXAMPLE

```
SM8TBT2SA(config)# ntp server 1 ip-address 192.168.1.80
SM8TBT2SA(config)# ntp interval 30
SM8TBT2SA(config)# do show ntp status
NTP Mode : Disable
Interval : 30 min
Idx   Server IP host address (a.b.c.d) or a host name string
---   ----------------------------------------------------
1     192.168.1.80
2
3
4
5
6
SM8TBT2SA(config)#
```

percepxion

Configure Percepxion. See chapter 20. Percepxion and LPM Commands on page 260.

poe

Configure PoE (Power over Ethernet).

SYNTAX

poe management mode

poe auto-check < cr>}

poe profile id <1-16> <Mon Tue Wed Thr Fri Sat Sun name>

poe capacitor-detect <cr>

Parameters

management	Use management mode to configure PoE power management method.
capacitor-detect	Enable capacitor detection
auto-check	Enable Ping Check
profile	poe scheduling profile
allocation-consumption	Max. port power determined by allocated, and power is managed according to power consumption.
class-consumption	Max. port power determined by class, and power is managed according to power consumption.
lldp-consumption	Max. port power determined by LLDP Media protocol, and power is managed according to power consumption.
id	poe scheduling profile id, from 1 to 16
<1-16>	Profile id (1..16)
mode	PoE Power Management Mode.
Mon	Monday
Tue	Tuesday
Wed	Wednesday
Thr	Thursday
Fri	Friday
Sat	Saturday
Sun	Sunday
name	name
<0-23>	Start hour (0..23)
<0-55>	Start miniute (0..55)
<0-23>	End hour (0..23)
<0-55>	End miniute (0..55)

EXAMPLE 1

```
SM8TBT2SA(config)# poe management mode allocation-consumption
SM8TBT2SA(config)# poe management mode class-consumption
SM8TBT2SA(config)# do show poe config
Primary Power Supply [W]     : 740
Reserved Power determined by : Class
Capacitor Detection          : Disabled
Interface              Mode      Extend PoE Mode  Priority  Max. Power [W]
---------------------  --------  ---------------  --------  --------------
GigabitEthernet 1/1    Enabled   Disabled         Low                 30
GigabitEthernet 1/2    Enabled   Disabled         Low                 30
GigabitEthernet 1/3    Enabled   Disabled         Low                 30
GigabitEthernet 1/4    Enabled   Disabled         Low                 30
GigabitEthernet 1/5    Enabled   Disabled         Low                 30
GigabitEthernet 1/6    Enabled   Disabled         Low                 30
GigabitEthernet 1/7    Enabled   Disabled         Low                 30
GigabitEthernet 1/8    Enabled   Disabled         Low                 30
GigabitEthernet 1/9    Enabled   Disabled         Low                 30
GigabitEthernet 1/10   Enabled   Disabled         Low                 30
GigabitEthernet 1/11   Enabled   Disabled         Low                 30
GigabitEthernet 1/12   Enabled   Disabled         Low                 30
GigabitEthernet 1/13   Enabled   Disabled         Low                 30
GigabitEthernet 1/14   Enabled   Disabled         Low                 30
GigabitEthernet 1/15   Enabled   Disabled         Low                 30
GigabitEthernet 1/16   Enabled   Disabled         Low                 30
GigabitEthernet 1/17   Enabled   Disabled         Low                 90
GigabitEthernet 1/18   Enabled   Disabled         Low                 90
GigabitEthernet 1/19   Enabled   Disabled         Low                 90
GigabitEthernet 1/20   Enabled   Disabled         Low                 90
GigabitEthernet 1/21   Enabled   Disabled         Low                 90
GigabitEthernet 1/22   Enabled   Disabled         Low                 90
GigabitEthernet 1/23   Enabled   Disabled         Low                 90
GigabitEthernet 1/24   Enabled   Disabled         Low                 90
```

EXAMPLE 2

```
SM8TBT2SA(config)# poe capacitor-detect
SM8TBT2SA(config)# poe auto-check
SM8TBT2SA(config)# poe profile id 2
  Mon   Monday
  Tue   Tuesday
  Wed   Wednesday
  Thr   Thursday
  Fri   Friday
  Sat   Saturday
  Sun   Sunday
  name  name
SM8TBT2SA(config)# poe profile id 2 name Rob
SM8TBT2SA(config)# do show poe auto-check
Ping Check : Enabled
Port    IP              Startup Interval Retry  Failure Log      Failure   Reboot  Max Reboot
                         Time    Time     Time                    Action    Time   Times
------ -------------- ------- -------- ----- ---------------- --------- -----  ----------
 Gi 1/1 192.168.90.203   60       30     3     error=0,total=23 Nothing       15          0
 Gi 1/2 192.168.90.3     60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/3 192.168.90.4     60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/4 192.168.90.5     60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/5 0.0.0.0          60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/6 0.0.0.0          60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/7 0.0.0.0          60       30     3     error=0,total=0  Nothing       15          0
 Gi 1/8 0.0.0.0          60       30     3     error=0,total=0  Nothing       15          0
SM8TBT2SA(config)#
```

Reserved Power determined by select the mode for how the ports/PDs may reserve power:

class-consumption : The PD will negotiate PD class then feed power if the PD request power complies with the standard. If Maximum Power at the port is configured different then factory default value (30W) the PD connects the port again; the PD cannot draw more power than the new configured Maximum Power for the port. Class mode is the factory default mode.

allocation-consumption : The switch will only examine power in the Maximum Power field. So once the switch receives PD request power, the switch will check Maximum Power configuration, and if the configured value is smaller than PD request power, the switch will not supply power.

lldp-consumption : The maximum port power will be determined by LLDP Media protocol, and power is managed according to power consumption. This LLDP-MED mode is similar to the Class mode except that each port determines the amount power it reserves by exchanging PoE information using the LLDP protocol and reserves power accordingly. If no LLDP information is available for a port, the port will reserve power using the Class mode. In Class mode the Maximum Power fields have no effect for all modes: If a port uses more power than the reserved power for the port, the port is shut down.

Capacitor Detection: Enable for legacy IP phones support. The default is disabled.

port-security

Enable/Disable port security globally.

SYNTAX

port-security <cr>

Parameters

None

EXAMPLE

```
SM8TBT2SA(config)# port-security
SM8TBT2SA(config)# do show port-security switch interface *
Interface               State         MAC Cnt
----------------------  ------------  -------
GigabitEthernet 1/1     Disabled      -
GigabitEthernet 1/2     Disabled      -
GigabitEthernet 1/3     Disabled      -
GigabitEthernet 1/4     Disabled      -
GigabitEthernet 1/5     Disabled      -
GigabitEthernet 1/6     Disabled      -
GigabitEthernet 1/7     Disabled      -
GigabitEthernet 1/8     Disabled      -
:    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :
GigabitEthernet 1/18    Disabled      -
SM8TBT2SA(config)#
```

privilege

Configure Command privilege parameters.

SYNTAX

privilege <group> Privilege group name (access-mgmt/arp-inspection/auth-method/dhcp-relay/dhcp-server/dhcp-snooping/diagnostic/dot1x/eee/event/ip/ipmc/ip-source-guard/lacp/lldp/loop-protection/mac-table/mirror/mvr/poe/port/port-security/qos/radius/snmp/stp/system/upnp/vlan)

Parameters

Group:

access-mgmt	acl	arp-inspection	auth-method	dhcp-relay
dhcp-server	dhcp-snooping	diagnostic	dot1x	eee
event	ip	ipmc	ip-source-guard	lacp
lldp	loop-protection	mac-table	maintenance	mirror
mvr	poe	port	port-security	qos
radius	snmp	stp	system	upnp
tacacs	vlan			

level privilege level (ro, rw)

privilege (0-15)

EXAMPLE

```
SM8TBT2SA(config)# privilege group vlan level ro
  <0-15>  Privilege level (0..15)


SM8TBT2SA(config)#
```

qos

Configure Quality of Service.

SYNTAX

qos map cos-queue	Map for CoS to queue
qos map dscp-queue	Map for DSCP to queue
qos map precedence-queue	Map for IP Precedence to queue
qos map queue-cos	Map for queue to CoS
qos map queue-dscp	Map for queue to DSCP
qos map queue-precedence	Map for queue to IP Precedence
qos trust cos	Prioritize packet based on the CoS/802.1p field in the VLAN tag
qos trust cos-dscp	Uses the CoS mode for non-IP packet and DSCP mode for IP packet
qos trust dscp	Prioritize packet based on the DSCP field in the IP header
qos trust ip-precedence	Prioritize packet based on the ip precedence

Parameters

qos map	QoS Global Map/Table
cos	Prioritize packet based on the CoS/802.1p field in the VLAN tag
cos-dscp	Uses the CoS mode for non-IP packet and DSCP mode for IP packet
dscp	Prioritize packet based on the DSCP field in the IP header
ip-precedence	Prioritize packet based on the ip precedence
qos trust	Global trust mode configuration
cos-queue	Map for CoS to queue
dscp-queue	Map for DSCP to queue
precedence-queue	Map for IP Precedence to queue
queue-cos	Map for queue to CoS
queue-dscp	Map for queue to DSCP
queue-precedence	Map for queue to IP Precedence
<0-7>	Specify class of service (0..7)
to	Specify the queue to which the CoS will be mapped
<0-7>	The queue number to which the following CoS values are mapped (0..7)
<0-63>	Specify DSCP (0..63)
to	Specify the queue to which the DSCP will be mapped
<0-7>	The queue number to which the following DSCP values are mapped (0..7)
<0-7>	Specify IP Precedence (0..7)
to	Specify the queue to which the IP Precedence will be mapped

<0-7>	The queue number to which the following IP Precedence values are mapped (0..7)
<0-7>	The queue number for mapping to a specific CoS value (0..7)
to	Specify the CoS to which the queue will be mapped
<0-7>	Specify class of service (0..7)
<0-7>	The queue number for maaping to a specific DSCP value (0..7)
to	Specify the DSCP to which the queue will be mapped
<0-63>	Specify DSCP (0..63)
<0-7>	The queue number for mapping to a specific IP Precedence value (0..7)
to	Specify the IP Precedence to which the queue will be mapped
<0-7>	Specify IP Precedence (0..7)

EXAMPLE

```
SM8TBT2SA(config)# qos trust ip-precedence
SM8TBT2SA(config)# qos trust dscp
SM8TBT2SA(config)# qos trust cos
SM8TBT2SA(config)# qos trust ip-precedence
SM8TBT2SA(config)# qos map cos-queue 0 to 6
SM8TBT2SA(config)# qos map dscp-queue 3 to 5
SM8TBT2SA(config)# qos map precedence-queue 4 to 6
SM8TBT2SA(config)# qos map queue-cos 0 to 4
SM8TBT2SA(config)# qos map queue-dscp 2 to 50
SM8TBT2SA(config)# qos map queue-precedence 1 to 5
SM8TBT2SA(config)#
```

radius-server

Configure RADIUS server parameters.

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	IETF RADIUS Attribute (4, 32, or 95). See below.
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
word255	Hostname or IP address (word255) for RADIUS server
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)
<AcctPort : 0-65535>	UDP port number (0..65535)
<AuthPort : 0-65535>	UDP port number (0..65535)
<Seconds : 1-1000>	Wait time in seconds
<Key : line1-63>	The shared key
<1-1000>	Number of retries for a transaction
32	Radius server attribute 32
4	Radius server attribute 4
95	Radius server attribute 95
<Retries : 1-1000>	Number of retries for a transaction (1..1000)

<Seconds : 1-1000>	Wait time in seconds (1..1000)
encrypted	Specifies an ENCRYPTED key will follow
word63	The shared key (word63)
word128	The shared encrypted key. (word128)
word255	(word255) for radius-server attribute 32
<ipv4_ucast>	(X.X.X.X) for radius-server attribute 4
<ipv6_addr>	(X:X:X:X:X:X:X:X) for radius-server attribute 95

EXAMPLE:

```
SM24TBT4SA(config)# radius-server retransmit 150
SM24TBT4SA(config)# radius-server timeout 90
SM24TBT4SA(config)# radius-server deadtime 10
SM24TBT4SA(config)# radius-server key scrtPemKey123$%^
SM24TBT4SA(config)# radius-server attribute 32 BBBBBBBBB
SM24TBT4SA(config)# radius-server attribute 4 2.4.6.8
SM24TBT4SA(config)# do show radius-server
Global RADIUS Server Timeout      : 90 seconds
Global RADIUS Server Retransmit   : 150 times
Global RADIUS Server Deadtime     : 10 minutes
Global RADIUS Server Key          : scrtPemKey123$%^
Global RADIUS Server Attribute 4  : 2.4.6.8
Global RADIUS Server Attribute 95 :
Global RADIUS Server Attribute 32 : BBBBBBBBB
RADIUS Server #1:
Host name  : 10.0.5.55
Auth port  : 577
Acct port  : 765
Timeout    :
Retransmit : 400 times
Key        :

SM24TBT4SA(config)#
```

IETF RADIUS Attributes

Type	Name	Value
4	NAS-IP-Address	ipv4addr
32	Tunnel-Assignment-Id	string
95	NAS-IPv6-Address	string

Local credentials are only allowed if the switch cannot communicate with the RADIUS server.

Messages:

ERROR: nas key decrypted fail.

ERROR: ERROR! Failed to set host 10.0.5.55 ability

ERROR: ERROR! Failed to set host BobB ability

rmon

Configure RMON (remote monitoring).

SYNTAX

rmon alarm Configure an RMON alarm <1-65535>

rmon event Configure an RMON event <1-65535>

Parameters

<1-65535>	Alarm entry ID (1..65535)
<1-65535>	Event entry ID (1..65535)
ifInDiscards	The number of inbound packets that are discarded even the packets are normal
ifInErrors	The number of inbound packets with errors keeping them from being deliverable to a higher-layer protocol
ifInNUcastPkts	The number of broad-cast and multi-cast packets delivered to a higher-layer protocol
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
ifInUnknownProtos	The number of the inbound packets discarded because of the unknown or un-support protocol
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
ifOutNUcastPkts	The number of broad-cast and multi-cast packets that request to transmit
ifOutOctets	The number of octets transmitted out of the interface, including framing characters
ifOutUcastPkts	The number of uni-cast packets that request to transmit
<uint>	ifIndex (1..10)
1-2147483647>	Sample interval (1..2147483647)
absolute	Test each sample directly
delta	Test delta between samples
rising-threshold	Configure the rising threshold
<-2147483648-2147483647>	rising threshold value (-2147483648..2147483647)
<0-65535>	Event to fire on falling threshold crossing (0..65535)
both	Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold (default)
falling	Trigger alarm when the first value is less than the falling threshold
rising	Trigger alarm when the first value is larger than the rising threshold
description	Specify a description of the event
log	Generate RMON log when the event fires
trap	Generate SNMP trap when the event fires
word31	SNMP community string (word31)

EXAMPLE 1: Configure an RMON alarm:

```
SM8TBT2SA(config)# rmon alarm 1 ifOutErrors 1 10000 delta rising-threshold 90000 falling-
threshold 800
SM8TBT2SA(config)# do show rmon alarm
Alarm ID :    1
----------------
     Interval         : 10000
     Variable         : .1.3.6.1.2.1.2.2.1.20.1
     SampleType       : Delta
     Value            : 0
     Startup          : RisingOrFalling
     RisingThrld      : 90000
     RisingEventIndex  : 1
     FallingThrld     : 800
     FallingEventIndex : 1

SM8TBT2SA(config)#
```

EXAMPLE 2: Configure an RMON event:

```
SM8TBT2SA(config)# rmon event 1 description event1 log trap trpevt1
SM8TBT2SA(config)# do show rmon event
Event ID :    1
----------------
     Description     : event1
     Type            : logandtrap
     Community       : trpevt1
     LastSent        : 0
SM8TBT2SA(config)#
```

smtp

Set Simple Mail Transfer Protocol parameters.

SYNTAX

smtp <mailaddress> <returnpath> <sender> <server> <username>

Parameters

mailaddress	mail address
returnpath	return mail address
sender	sender
server	server
username	smtp
<1-6>	mail address number (1..6)
word48	mail address set (word48)
word48	returnpath set (word48)
word48	sender set (word48)
word48	server set (word48)
word32	User name allows letters, numbers and underscores (word32)
encrypted	Specifies an ENCRYPTED key will follow
word32	Configure password (word32)
word64	The shared encrypted key. (word64)

EXAMPLE

```
SM8TBT2SA(config)# smtp mailaddress 1 BobB
SM8TBT2SA(config)# smtp returnpath xxxxx
SM8TBT2SA(config)# smtp sender TomT
SM8TBT2SA(config)# smtp server Lll
SM8TBT2SA(config)# smtp username LynnL admin2
SM8TBT2SA(config)# smtp username LynnL admin2
SM8TBT2SA(config)# do show smtp
Mail Server     : Lll
User Name       : LynnL
Password        : ********
Sender          : TomT
Return Path     : xxxx
Email Adress 1  : BobB
Email Adress 2  : jeffs@lantronix.com
Email Adress 3  : mickeyabc@aol.com
```

```
Email Adress 4  :
Email Adress 5  :
Email Adress 6  :



SM8TBT2SA(config)#
SM8TBT2SA(config)# smtp username LynnL encrypted 1!2@&*78LynnL&6&5%4$
ERROR: key decrypted fail.
SM8TBT2SA(config)#
```

Messages: *ERROR: key decrypted fail.*

snmp-server

Set the SNMP server parameters.

SYNTAX

snmp-server access <GroupName : word32> group name (word32)

snmp-server community <write-mode> < v2c> < v3>

snmp-server security-to-group model < v1> < v2c> < v3>

snmp-server user name (word32)

snmp-server view name <word32>

Parameters

access	Set access configuration
community	Set the SNMP community
security-to-group	security-to-group configuration
user	Set the SNMPv3 user's configurations
view	MIB view configuration
service	Support the SNMP protocol service.
<GroupName : word32>	group name (word32)
write-mode	SNMPv2c write mode
v2c	SNMPv2c
v3	SNMPv3
model	security model
any	any security model
v1	v1 security model
v2c	v2c security model
v3	v3 security model
name	security user
<SecurityName : word32>	security group name (word32)
group	security user
<GroupName : word32>	group name (word32)
security model	v1, v2c or v3
<Username : word32>	Security user name (word32)
md5	Set MD5 protocol
sha	Set SHA protocol
<Md5Passwd : word8-32>	MD5 password (word8-32)
<ShaPasswd : word8-40>	SHA password (word8-40

priv	Set Privacy
aes	Set AES protocol
des	Set DES protocol
<word8-32>	Set AES protocol (word8-32)
<word8-32>	Set AES protocol (word8-32)
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 : word32>	write view name (word32)
<ViewName : word32>	read view name (word32)
<ViewName : word32>	MIB view name (word32)
<OidSubtree : word128>	MIB view OID (word128)
exclude	Excluded type from the view
include	Excluded type from the view

EXAMPLE

```
SM8TBT2SA(config)# snmp-server access myGroup model any level auth write right read reed
SM8TBT2SA(config)# snmp-server user testTech3 md5 1234!@#$ priv aes 1234567809!@#$%^&*()
SM8TBT2SA(config)# snmp-server user testTech3 sha GreyGhost123$#@! priv des Aesproto5555555
SM8TBT2SA(config)# do show snmp
SNMP Configuration
Mode                        : enabled
Read Community               : public
Write Community              : private
Write Mode                   : enabled

SNMPv3 Communities Table:

SNMPv3 Users Table:
User Name              : S-Usr-1
Security Level         : Auth, Priv
Authentication Protocol : MD5
Privacy Protocol       : DES
```

```
User Name              : testTech3
Security Level         : Auth, Priv
Authentication Protocol : SHA
Privacy Protocol       : DES



SNMPv3 Groups Table:
Security Model : usm
Security Name  : S-Usr-1
Group Name     : Grp-1



SNMPv3 Accesses Table:
Group Name       : Grp-1
Security Model   : (null)
Security Level   : (null)
Read View Name   : 4
Write View Name  : 4



SNMPv3 Views Table:
View Name   : 4
OID Subtree : .0
View Type   : included



SM8TBT2SA(config)#
SM8TBT2SA(config)# snmp-server service
SM8TBT2SA(config)#
```

Messages:

ERROR: The User name isn't exist.

ERROR: The Group name isn't exist.

access

Configure SNMP server Access parameters.

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

```
SM8TBT2SA(config)# snmp-server access text model v2c level noauth write text
SM8TBT2SA(config)#
```

Message: *ERROR: The Group name isn't exist.*

community

Set the SNMP server community parameters.

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

```
SM8TBT2SA(config)# snmp-server community write-mode
SM8TBT2SA(config)# snmp-server community v2c word32 rw
SM8TBT2SA(config)# do show snmp
SNMP Configuration
Mode                        : enabled
Read Community               : public
Write Community              : word32
Write Mode                   : enabled
SNMPv3 Communities Table:
SNMPv3 Users Table:
User Name              : BobB
Security Level         : Auth, Priv
Authentication Protocol : SHA
Privacy Protocol       : DES
SNMPv3 Groups Table:
SNMPv3 Accesses Table:
SNMPv3 Views Table:
SM8TBT2SA(config)#
```

security-to-group

Configure SNMP server Security-to-group configuration.

SYNTAX

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

Parameters

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

```
SM8TBT2SA(config)# snmp-server security-to-group ?
  model  security model
SM8TBT2SA(config)# snmp-server security-to-group model v2c ?
  name  security user
SM8TBT2SA(config)# snmp-server security-to-group model v2c name ?
  <SecurityName : word32>  security group name (word32)
SM8TBT2SA(config)# snmp-server security-to-group model v2c name swgrp ?
  group  security user
SM8TBT2SA(config)# snmp-server security-to-group model v2c name swgrp group
  <GroupName : word32>  group name (word32)
SM8TBT2SA(config)# snmp-server security-to-group model v2c name swgrp group grp1
SM8TBT2SA(config)#
```

Messages: *ERROR: The User name isn't exist.*

user

Set the SNMP server user parameters.

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

```
SM8TBT2SA(config)# snmp-server user ?
  <Username : word32>  Security user name (word32)
SM8TBT2SA(config)# snmp-server user jeffs sha Duffrey1 priv des xxxxxxxxx12
SM8TBT2SA(config)# do show snmp user
SNMPv3 Users Table:
User Name              : jeffs
Security Level         : Auth, Priv
Authentication Protocol : SHA
Privacy Protocol       : DES

SM8TBT2SA(config)#
```

view

Set SNMP server MIB view parameters.

SYNTAX

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

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# snmp-server view ?
  <ViewName : word32>  MIB view name (word32)
SM8TBT2SA(config)# snmp-server view viewname1 ?
  <OidSubtree : word128>  MIB view OID (word128)
SM8TBT2SA(config)# snmp-server view viewname1 .1 ?
  exclude  Excluded type from the view
  include  Included type from the view
SM8TBT2SA(config)# snmp-server view viewname1 .1 include
SM8TBT2SA(config)# do show snmp view
SNMPv3 Views Table:
View Name   : viewname1
OID Subtree : .1
View Type   : included

SM8TBT2SA(config)#
```

spanning tree

Set the Spanning Tree Protocol parameters. The factory default is Spanning Tree enabled.

SYNTAX

spanning-tree mode < mstp> <rstp> <stp>

spanning-tree mst <0-4094> <forward-time> <max-hops> <max-age> <name>

Parameters

mode	STP protocol mode
mst	STP bridge instance
mstp	Multiple Spanning Tree (802.1s)
rstp	Rapid Spanning Tree (802.1w)
stp	802.1D Spanning Tree
<0-4094>	MST instance ID , 0 is for CIST (0..4094)
forward-time	Delay between port states
max-hops	MSTP bridge max hop count
max-age	Max bridge age before timeout
name	Name keyword
vlan	VLAN keyword
priority	Priority of the instance
<0-61440>	Priority value (0..61440)
<4-30>	Range in seconds (4..30)
<6-40>	Hop count range (6..40)
<6-40>	Range in seconds (6..40)
word32	Name of the bridge (word32)
revision	Revision keyword
<0-65535>	Revision number (0..65535)

EXAMPLE

```
SM8TBT2SA(config)# spanning-tree mst name BobB revision 3
SM8TBT2SA(config)# spanning-tree mode rstp
SM8TBT2SA(config)# spanning-tree mst 1 priority 2
SM8TBT2SA(config)# spanning-tree mst forward-time 12
SM8TBT2SA(config)# spanning-tree mst max-age 10
SM8TBT2SA(config)#
```

Messages: *invalid MST instance ID.*

system

Set system name, contact, and location parameters. Space characters are not allowed; other special characters are allowed.

SYNTAX

system <name> <contact> <location>

Parameters

name	Set the system model name string
contact	Set the system contact string
location	Set the system location string
word128	name string (word128)
word128	contact string (word128)
word128	location string (word128)

EXAMPLE

```
SM8TBT2SA(config)# system name sm8tbt2sa-fortest
SM8TBT2SA(config)# system contact Chris
SM8TBT2SA(config)# system location SqaLab
SM8TBT2SA(config)# do show system
System Description   : 4 ports 10M/100M/1G PoE+ RJ45 + 4 ports 10M/100M/1G PoE++ RJ45 +
2 ports 1G RJ45/SFP (PoE 240W)
Model Name          : SM8TBT2SA
Hardware Version    : v1.01
Mechanical Version  : v1.01
Firmware Version    : v1.04.0124
PoE Firmware Version : RNU-1002
MAC Address         : 00-40-C7-1D-53-29
Serial Number       : A229123AR3500002
System Name         : sm8tbt2sa-fortest
Location            : SqaLab
Contact             : Chris
System Date         : 2017-01-01 05:11:53 +0000
System Uptime       : 0 days, 5:12:17

SM8TBT2SA(config)#
```

tacacs+

Set the TACACS+ configuration for up to six TACACS+ servers. Space characters are not allowed.

SYNTAX

tacacs-server deadtime <minutes>

tacacs-server host <host_name> [port <port>] [timeout <seconds>] [key { [unencrypted] <unencrypted_key> | encrypted <encrypted_key> }]

tacacs-server key { [unencrypted] <unencrypted_key> | encrypted <encrypted_key> }

tacacs-server timeout <seconds>

Parameters

timeout	Time to wait for a TACACS+ server to reply.
deadtime	Time to stop using a TACACS+ server that doesn't respond.
key	Set TACACS+ encryption key.
host	Specify a TACACS+ server.
<Seconds : 1-1000>	Wait time in seconds (1..1000)
<Minutes : 0-1440>	Time in minutes (0..1440)
encrypted	Specifies an ENCRYPTED key will follow
word63	The shared key (word63)
word255	Hostname or IP address (word255)
word128	The shared encrypted key. (word128)
port	UDP port for TACACS+ accounting server
timeout	Time to wait for this TACACS+ server to reply (overrides default)
key	Server specific key (overrides default)
<AcctPort : 0-65535>	TCP port number (0..65535)
<Seconds : 1-1000>	Wait time in seconds (1..1000)

EXAMPLE

```
SM24DP4XA(config)# tacacs-server timeout 300
SM24DP4XA(config)# tacacs-server deadtime 360
SM24DP4XA(config)# tacacs-server key MMMMMMMMMM
SM24DP4XA(config)# tacacs-server host 10.0.4.88 key encrypted 1234567*&^%$#@! port 765
timeout 300
SM24DP4XA(config)# tacacs-server key encrypted NNNNNNNNNNN
SM24DP4XA(config)# do show tacacs-server
Global TACACS+ Server Timeout     : 300 seconds
Global TACACS+ Server Deadtime    : 360 minutes
Global TACACS+ Server Key         : 33c191448bb87597852785fa3f49f929dea0c5f5268
```

```
a30dbc6acee8ce001c5b7f2f536915369f8b0047a5ddf6628a1f4ed59834a477b055958306c8f0cf1ee4e
TACACS+ Server #1:
  Host name  : 10.0.4.88
  Port       : 765
  Timeout    : 300 seconds
  Key        : eecee64e1369a3eb2569c67db0c97ec508f041712cfa6af7fc60e222a1e1a3c31
233f295d4ff849a6a6b877bd5aca7a9f507baaa3323af113d2d1611125e00e9
SM24DP4XA(config)#
```

Messages:

ERROR: TACACS key decrypted fail.

No servers configured!

trap

Configure SNMP Traps.

SYNTAX

trap id <1..6> level <v2c> ipv4 address <ipv4_ucast> severity <0..7> community (word32)

Parameters

<1-6>	ID of Trap entry (1..6)
Disabled	Disable SNMP mode operation.
UDP	Enable UDP SNMP mode operation.
TCP	Enable TCP SNMP mode operation.
v2c	v2c
<ipv4_ucast>	ipv4 address (X.X.X.X)
<0-7>	<0> Emergency ,<1> Alert ,<2> Critical ,<3> Error ,<4> Warning ,<5> Notice , <6> Information , <7> Debug (0..7)
word32	trap community (word32)
<1-65535>	trap port (1..65535)

EXAMPLE

```
SM8TBT2SA(config)# trap 1 Disabled v2c 1.2.3.4 5 TRP-1 987
SM8TBT2SA(config)# trap 2 TCP v2c 10.0.4.77 6 TrCom2 888
SM8TBT2SA(config)# do show trap
              Community                                  Severity
No Name       Mode       Ver      Server IP      port     Level
-- -----      ---------- -----     ---------      ------   -------
1  TRP-1      Disabled    v2c       1.2.3.4       987      Notice
2  TrCom2     TCP         v2c       10.0.4.77      888      Info
3
4
5
6
```

upnp

Set UPnP (Universal Plug and Play) configuration.

SYNTAX

upnp <cr>

upnp advertising-duration <66-86400>

upnp ttl <1-255>

upnp interface-vlan <vlan_id> 1..4095 (1-4095)

Parameters

advertising-duration	Set advertising duration <100-86400>
ttl	Set Time To Live value
interface-vlan	Set ip-interface vlan
<advertising duration>	value is 66..86400 (66..86400)
<vlan_id>	value is 1..4095 (1-4095)
<TTL value>	value is 1..255 (1..255)

EXAMPLE

```
SM8TBT2SA(config)# upnp advertising-duration 80000
SM8TBT2SA(config)# upnp interface-vlan 1000
SM8TBT2SA(config)# upnp ttl 125
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Disabled
Interface VLAN            : 1000
UPnP TTL                  : 125
UPnP Advertising Duration  : 100

SM8TBT2SA(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

word31	User name allows letters, numbers and underscores (word31)
privilege	Set user privilege level
<privilegeLevel : 0-15>	User privilege level (0..15)
password	Specify the password for the user
encrypted_sha	Specifies an ENCRYPTED password will follow
none	NULL password
unencrypted	Specifies an UNENCRYPTED password will follow
word64	The ENCRYPTED (hidden) user password. You cannot directly use it as same as the Plain Text and it is not human-readable text normally. (word64)
word31	The UNENCRYPTED (Plain Text) user password. Any printable characters including space is accepted. Notice that you have no chance to get the Plain Text password after this command. The system will always display the ENCRYPTED password. (word31)

EXAMPLE

```
SM8TBT2SA(config)# username Admin11 privilege 14 password none
SM8TBT2SA(config)# username BobB privilege 14 password unencrypted AdminSyy@Hdqtrs
SM8TBT2SA(config)# username Test1 privilege 10 password encrypted_sha MYEncryptedPassword4Now!
ERROR: SHA password length is valid
SM8TBT2SA(config)# username Tomba privilege 15 password unencrypted Admin!
SM8TBT2SA(config)#
```

Messages:

Syntax error: Illegal command line

ERROR: SHA password length is valid

vlan

Configure VLAN commands.

SYNTAX

vlan <vlan_list>

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

vlan ip-subnet <ipv4_addr> Source IP address (X.X.X.X)

vlan mac <mac_ucast> 48 bit unicast MAC address: xx:xx:xx:xx:xx:xx

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	VLAN commands
ethertype	Ether type for Custom S-ports
ip-subnet	IP subnet based VLAN commands
mac	MAC-based VLAN commands
protocol	Protocol-based VLAN commands
<vlan_list>	List of VLAN interface numbers (1-4095)
s-custom-port	Custom S-ports configuration
<ipv4_addr>	Source IP address (X.X.X.X)
<ipv4_netmask>	Source IP address (X.X.X.X)
vlan	vlan keyword
<vlan_id>	VLAN ID required for the group to VLAN mapping. (1-4095)
<ethernet value>	Ether Type(Range: 0x600 - 0xFFFF)
<mac_ucast>	48 bit unicast MAC address: xx:xx:xx:xx:xx:xx
<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)
!	Comments
do	To run exec commands in config mode
end	Go back to EXEC mode
exit	Exit from current mode
name	ASCII name of the VLAN
no	Negate a command or set its defaults
word31	The ASCII name for the VLAN, allows letters, numbers and underscores (word31)

EXAMPLE

```
SM8TBT2SA(config)# vlan ethertype s-custom-port 0x1111
SM8TBT2SA(config)# vlan ethertype s-custom-port 0x8888
SM8TBT2SA(config)# vlan ip-subnet 2.2.2.2 255.255.255.0 vlan 1000
SM8TBT2SA(config)# vlan ethertype s-custom-port 0x88A8
SM8TBT2SA(config)# vlan mac 00-11-22-33-44-55 vlan 1000
SM8TBT2SA(config)# vlan protocol llc 0x01 0x02 group LlcGrp-1
SM8TBT2SA(config)# vlan 1000-2000
SM8TBT2SA(config-vlan)# do show vlan
.....................................
1994  2-20
1995  2-20
1996  2-20
1997  2-20
1998  2-20
1999  2-20
2000  2-20
SM8TBT2SA(config-vlan)# end
SM8TBT2SA#
```

voice vlan

Configure Voice VLAN commands.

SYNTAX

<vlan_id>	VLAN IDs 1-4095 (1-4095)
<AgingTime :	10-10000000> Aging time, 10-10000000 seconds (10..10000000)
class <0-7>	Traffic class value (0..7)
voice vlan oui	<00-01-E3 Siemens AG > <00-03-6B Cisco phones> <00-0F-E2 H3C> <00-60-B9 Philips and NEC AG> <00-D0-1E Pingtel> <00-E0-75 Polycom> <00-E0-BB 3Com>

Parameters

voice vlan vid	Set an entry VLAN ID
voice vlan oui	OUI configuration
description	Set description for the OUI
word32	Description line (word32) for the OUI

EXAMPLE

```
SM8TBT2SA(config)# voice vlan vid 100 aging-time 50000 class 4
SM8TBT2SA(config)# voice vlan oui 00-D0-1E description Pingtel
SM8TBT2SA(config)# do show voice vlan
Switch voice vlan entry 1:
Switch voice vlan is enabled
Switch voice vlan ID is 100
Switch voice vlan aging-time is 50000 seconds
Switch voice vlan traffic class is 4
Switch voice vlan port is

Switch voice vlan entry 2:
Switch voice vlan is enabled
Switch voice vlan ID is 1000
Switch voice vlan aging-time is 86400 seconds
Switch voice vlan traffic class is 0
Switch voice vlan port is 2, 3, 4, 5

Telephony OUI  Description
-------------  -----------
00-d0-1e       Pingtel
```

```
Voice VLAN switchport is configured on following:

GigabitEthernet 1/1 :
---------------------
GigabitEthernet 1/1 switchport voice vlan mode is forced
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 auto
GigabitEthernet 1/2 switchport voice security is enabled
GigabitEthernet 1/2 switchport voice discovery protocol is oui
---------------------
---------------------
---------------------
GigabitEthernet 1/9 :
---------------------
GigabitEthernet 1/9 switchport voice vlan mode is forced
GigabitEthernet 1/9 switchport voice security is disabled
GigabitEthernet 1/9 switchport voice discovery protocol is oui

GigabitEthernet 1/10 :
---------------------
GigabitEthernet 1/10 switchport voice vlan mode is forced
GigabitEthernet 1/10 switchport voice security is disabled
GigabitEthernet 1/10 switchport voice discovery protocol is oui


SM8TBT2SA(config)#
```

6-2 no

Negate a command or set its defaults in Config mode.

Table : configure – no Commands

Command	Function
aaa	Authentication, Authorization and Accounting
access	Access management
access-list	Access list
aggregation	Aggregation mode
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
interface	Select an interface to configure
ip	Internet Protocol
ipmc	IPv4/IPv6 multicast configuration
ipv6	IPv6 configuration commands
lacp	Lacp system configuration
lldp	LLDP configurations
logging	Syslog
loop-protect	Loop protection configuration
mac	MAC table entries/configuration
map-api-key	Set Google Map Api Key configurations
max-frame-size	Maximum packet length filtering is examined on both receiving and transmitting ports.
monitor	Monitoring different system events
mvr	Multicast VLAN Registration configuration
ntp	Configure NTP
poe	Power Over Ethernet
port-security	Enable/disable port security globally
privilege	Privilege level
qos	Quality of Service
radius-server	Configure RADIUS
rmon	Remote Monitoring
smtp	smtp
snmp-server	Set SNMP server's configurations
spanning-tree	Spanning Tree protocol
system	Set the SNMP server's configurations

tacacs-server	Configure TACACS+
trap	Trap
upnp	Set UPnP's configurations
username	Establish User Name Authentication
vlan	VLAN commands
voice	Vlan for voice traffic

aaa

No Authentication, Authorization and Accounting.

SYNTAX

no aaa authentication login { telnet | ssh | http }

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# no aaa authentication  login ssh
SM8TBT2SA(config)# no aaa ?
  authentication  Authentication
  authorization   Authorization
  accounting      Accounting
SM8TBT2SA(config)# no aaa authentication ?
  login         Login
  service-port  Service port
  redirect      HTTP redirect HTTPS
SM8TBT2SA(config)# no aaa authentication login ?
  ssh     Configure SSH
  telnet  Configure Telnet
  http    Configure HTTP
  https   Configure HTTPS
```

```
SM8TBT2SA(config)# no aaa authentication login ssh
SM8TBT2SA(config)# do show aaa
Automatic Redirect : Disabled

 Client  Method1  Method2  Method3 Service Port
------- -------- -------- -------- ------------
 telnet    local                        23
    ssh                                 22
   http    local                        80
  https    local                       443

Authorization :
 Client Method Cmd Lvl Cfg Cmd Fallback
------- ------ ------- ------- --------
 telnet   none       0
    ssh   none       0

Accounting :
 Client Method Cmd Lvl Exec
------- ------ ------- ----
 telnet   none       0
    ssh   none       0

SM8TBT2SA(config)#
```

access

No Access management.

SYNTAX

no access management [<1~16>]

no access management

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# no access management ?
  <1..16>  ID of access management entry (1..16)
  <cr>
SM8TBT2SA(config)# no access management 2
  <cr>
SM8TBT2SA(config)#
```

aggregation

No Aggregation mode.

SYNTAX

no aggregation mode

Parameters

mode	Traffic distribution mode

EXAMPLE

```
SM8TBT2SA(config)# no aggregation ?
  mode  Traffic distribution mode
SM8TBT2SA(config)# no aggregation mode
  <cr>
SM8TBT2SA(config)#
```

clock

No 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

```
SM8TBT2SA(config)# no clock summer-time
SM8TBT2SA(config)# no clock timezone
SM8TBT2SA(config)#
```

dot1x

No IEEE Standard for port-based Network Access Control.

SYNTAX

dot1x authentication feature guest-vlan

max-reauth-req re-authentication system-auth-control timeout

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

```
SM8TBT2SA(config)# no dot1x authentication timer ?
  re-authenticate  The period between re-authentication attempts in seconds
SM8TBT2SA(config)# no dot1x authentication timer re-authenticate
  <cr>
SM8TBT2SA(config)# no dot1x feature ?
  guest-vlan  Globally enables/disables state of guest-vlan.
SM8TBT2SA(config)# no 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.
  <cr>
SM8TBT2SA(config)# no dot1x re-authentication ?
  re-authentication  Set Re-authentication state
  <cr>
SM8TBT2SA(config)# no dot1x system-auth-control ?
  system-auth-control  Set the global NAS state
  <cr>
SM8TBT2SA(config)#
```

interface

No interface configuration.

SYNTAX

no interface vlan < vlan_list >

Parameters

vlan	Vlan interface configurations
<vlan_list>	Vlan list

EXAMPLE

```
SM8TBT2SA(config)# no interface ?
  vlan  VLAN interface configurations

SM8TBT2SA(config)# no interface vlan ?
  <vlan_list>  List of VLAN interface numbers (1-4095)

SM8TBT2SA(config)# no interface vlan 4095 ?
  <cr>

SM8TBT2SA(config)# no interface vlan 4095
ERROR: ERROR: Not Found (VLAN: 4095)
SM8TBT2SA(config)# no interface vlan 40
SM8TBT2SA(config)#
```

Ip

No system's network name.

SYNTAX

no ip arp inspection

no ip arp inspection entry interface Gigabit Ethernet <port_type_id> <vlan_id> <mac_ucast> <ipv4_ucast>

no ip arp inspection vlan <vlan_list> [logging]

no dhcp pool <WORD>

no ip dhcp relay [information {option| policy }]

no ip dhcp snooping

no ip helper-address

no ip igmp host-proxy [leave-proxy]

no ip igmp snooping

no ip igmp snooping vlan [<vlan_list>]

no ip igmp unknown-flooding

no ip name-server

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

no ip source binding interface Gigabit Ethernet <port_type_id> <vlan_id>

<ipv4_ucast>{ <ipv4_netmask>|<mac_ucast>}

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
<port_type_id>	Port ID in the format of switch-no/port-no, 1/1-26 for GigabitEthernet
<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
<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
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
proxy	DNS proxy service
helper-address	None.
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
verify	verify command
source	verify source

EXAMPLE

```
SM8TBT2SA(config)# no ip arp inspection vlan 3 logging
SM8TBT2SA(config)# no ip dhcp relay
SM8TBT2SA(config)# no ip helper-address
SM8TBT2SA(config)#  no ip igmp snooping
SM8TBT2SA(config)# no ip name-server
SM8TBT2SA(config)# no ip verify source
SM8TBT2SA(config)#
```

ipmc

No 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

```
SM8TBT2SA(config)# no ipmc profile DoNotUse
SM8TBT2SA(config)# do show ipmc
```

ipv6

No 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 unknown-flooding

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

```
SM8TBT2SA(config)# no ipv6?
  mld  Multicast Listener Discovery
SM8TBT2SA(config)# no ipv6 mld ?
  snooping         Snooping MLD
  host-proxy       MLD proxy configuration
  unknown-flooding  Flooding unregistered IPv6 multicast traffic
SM8TBT2SA(config)# no ipv6 mld unknown-flooding
SM8TBT2SA(config)#
```

lacp

No LACP settings.

SYNTAX

no lacp system-priority <1-65535>

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# no lacp?
  system-priority  System priority
SM8TBT2SA(config)# no lacp system-priority ?
  <cr>
SM8TBT2SA(config)# no lacp system-priority
SM8TBT2SA(config)#
```

lldp

No 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 by "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 (the amount of time that the transmission of LLDP frames will be 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 Neighborhood, block.

building Building (structure) - Example: Low Library.

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

country The two-letter ISO 3166 country code in capital ASCII letters - E.g.: 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

```
SM8TBT2SA(config)# no lldp holdtime
SM8TBT2SA(config)# no lldp med location-tlv civic-addr floor
SM8TBT2SA(config)# no lldp reinit
SM8TBT2SA(config)# no lldp timer
SM8TBT2SA(config)# no lldp transmission-delay
SM8TBT2SA(config)# do show lldp
LLDP Configuration
====================================
TX Interval : 30 sec
TX Hold : 4 sec
TX Delay : 2 sec
TX Reinit : 2 sec

GigabitEthernet 1/1
------------------------------
TX/RX Mode : Disabled
CDP Aware  : Disable
Port Descr : Enable
Sys Name : Enable
Sys Descr : Enable
Sys Capa : Enable
Mgmt Addr : Enable

SM8TBT2SA(config)# no lldp ?
  timer              LLDP TX interval
  holdtime           LLDP hold time
  reinit             LLDP reinit time
  transmission-delay  LLDP transmission-delay
  med                Media Endpoint Discovery
SM8TBT2SA(config)# no lldp timer
SM8TBT2SA(config)# no lldp holdtime
SM8TBT2SA(config)# no lldp reinit
SM8TBT2SA(config)# no lldp transmission-delay
SM8TBT2SA(config)# no lldp med ?
  datum             Datum 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

SM8TBT2SA(config)# no lldp med datum
SM8TBT2SA(config)# no lldp med fast
SM8TBT2SA(config)# no lldp med location-tlv ?
  altitude    Altitude parameter
  latitude    Latitude parameter
  longitude   Longitude parameter
  elin-addr   Emergency Location Identification Number
  civic-addr  Civic address information and postal information
SM8TBT2SA(config)# do show lldp med media-vlan-policy
Policy Id  Application Type         Tag      Vlan ID  L2 Priority  DSCP
---------  -----------------------  --------  -------  -----------  ----
0         Voice                   Tagged    1       0           0

SM8TBT2SA(config)#
```

logging

No Syslog.

SYNTAX

no logging host

no logging on

Parameters

host	host
on	Enable syslog server

EXAMPLE

```
SM8TBT2SA(config)# no logging host ?
  <1-6>  host number (1..6)
SM8TBT2SA(config)# no logging host 6
SM8TBT2SA(config)# no logging on
SM8TBT2SA(config)#
```

loop-protect

No 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

```
SM8TBT2SA(config)# no loop-protect shutdown-time
SM8TBT2SA(config)# no loop-protect transmit-time
SM8TBT2SA(config)#
```

mac

No 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 {*|Gigabit Ethernet [<port_type_list>]}

Parameters

address-table	Mac table entries configuration/table
aging-time	Mac address aging time
static	Static MAC address
<mac_addr>	48 bit MAC address: xx:xx:xx:xx:xx:xx
interface	Select an interface to configure
Gigabit Ethernet	1 Gigabit Ethernet port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA(config)# no mac address-table ?
  aging-time  Mac address aging time
  static      Static MAC address
SM8TBT2SA(config)# no mac address-table ?
  aging-time  Mac address aging time
  static      Static MAC address
SM8TBT2SA(config)# no mac address-table aging-time ?
  <cr>
SM8TBT2SA(config)# no mac address-table static ?
  <mac_addr>  48 bit MAC address: xx:xx:xx:xx:xx:xx
SM8TBT2SA(config)# no mac address-table static 11:22:33:44:55:66
SM8TBT2SA(config)# no mac address-table static 12:23:34:45:56:67 ?
  vlan  VLAN keyword
  <cr>
SM8TBT2SA(config)# no mac address-table static 12:23:34:45:56:67 vlan ?
  <vlan_id>  VLAN IDs 1-4095 (1-4095)
SM8TBT2SA(config)# no mac address-table static 12:23:34:45:56:67 vlan 40
SM8TBT2SA(config)#
```

map-api-key

No Google Map Api Key configurations.

SYNTAX

no map-api-key <cr>

Parameters

None.

EXAMPLE

```
SM8TBT2SA(config)# no map-api-key
SM8TBT2SA(config)# do show map-api-key
Key               :

SM8TBT2SA(config)#
```

max-frame-size

No Maximum packet length filtering is examined on both receiving and transmitting ports.

SYNTAX

no max-frame-size

Parameters

See below.

EXAMPLE

```
SM8TBT2SA(config)# no max-frame-size <cr>
Syntax error: Incomplete command
SM8TBT2SA(config)# no max-frame-size max-frame-size ?
  <cr>
SM8TBT2SA(config)# no max-frame-size max-frame-size
ERROR: ERROR! Failed to set pkt link config
SM8TBT2SA(config)# no max-frame-size 1518
Syntax error: Illegal parameter
SM8TBT2SA(config)# no max-frame-size 1600
Syntax error: Illegal parameter
SM8TBT2SA(config)# no max-frame-size 16000
Syntax error: Illegal parameter
SM8TBT2SA(config)#
```

monitor

No monitor configuration.

SYNTAX

no monitor destination

no monitor source { interface Gigabit Ethernet <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.
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5 ?
  both  Mirror both ingress and egress traffic.
  rx    Mirror ingress traffic.
  tx    Mirror egress traffic.
SM8TBT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
rx ?
  <cr>
SM8TBT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
tx ?
  <cr>
SM8TBT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
both ?
  <cr>
SM8TBT2SA(config)#
```

mvr

No Multicast VLAN Registration configuration.

SYNTAX

no mvr

Parameters

detail	Detail running information/statistics of MVR
group-database	Multicast group database from MVR

EXAMPLE

```
SM8TBT2SA(config)# do show mvr ?
SM8TBT2SA(config)# no mvr
SM8TBT2SA(config)# do show mvr
MVR is now enabled to start group registration.
SM8TBT2SA(config)#
```

ntp

No NTP configuration.

SYNTAX

no ntp

no ntp server <1-5>

no ntp interval

Parameters

server	Configure NTP server
<1-5>	index number
interval	Configure NTP interval

EXAMPLE

```
SM8TBT2SA(config)# no ntp
SM8TBT2SA(config)# no ntp ?
  server    Configure NTP server
  interval  Configure NTP interval
  <cr>

SM8TBT2SA(config)# no ntp server ?
  <1-6>  index number (1..6)

SM8TBT2SA(config)# no ntp server 1 ?
  <cr>

SM8TBT2SA(config)# no ntp server 1
SM8TBT2SA(config)# no ntp interval ?
  <cr>

SM8TBT2SA(config)# no ntp interval
SM8TBT2SA(config)#
```

poe

Disable Power Over Ethernet in Config mode.

SYNTAX

no poe <auto-check> <capacitor-detect> <management> <mode>

Parameters

auto-check	Enable/disable poe automatic Ping checking.
capacitor-detect	Disable capacitor detection.
management	Use management mode to configure PoE power management method.
mode	PoE Power Management Mode.

EXAMPLE

```
SM8TBT2SA(config)# no poe?
  poe  Power Over Ethernet

SM8TBT2SA(config)# no poe ?
  capacitor-detect  Disable capacitor detection
  auto-check        Disable Ping Check
  management        Use management mode to configure PoE power management method.
SM8TBT2SA(config)# no poe auto-check
SM8TBT2SA(config)# no poe management mode
SM8TBT2SA(config)#
```

port-security

Disable port security globally.

SYNTAX

no port-security

Parameters

<cr> Enable/disable port security globally

EXAMPLE

```
SM8TBT2SA(config)# no port-security?
  port-security  Enable/disable port security globally
  <cr>
SM8TBT2SA(config)# no port-security ?
  <cr>
SM8TBT2SA(config)# no port-security
SM8TBT2SA(config)# do show port-security switch interface GigabitEthernet 1/2-5
Interface               State         MAC Cnt
----------------------  ------------  -------
GigabitEthernet 1/2     Disabled      -
GigabitEthernet 1/3     Disabled      -
GigabitEthernet 1/4     Disabled      -
GigabitEthernet 1/5     Disabled      -
SM8TBT2SA(config)#
```

privilege

Disable Group Privilege level.

SYNTAX

no privilege group vlan level

Parameters

group name :

access-mgmt	acl	arp-inspection	auth-method	dhcp-relay	dhcp-server
dhcp-snooping	diagnostic	dot1x	eee	event	ip
ipmc	ip-source-guard	lacp	lldp	loop-protection	mac-table
maintenance	mirror	mvr	poe	port	port-security
qos	radius	snmp	stp	system	upnp
tacacs	vlan				
level	Privilege group level				

EXAMPLE

```
SM8TBT2SA(config)# no privilege ?
  group  Privilege group name

SM8TBT2SA(config)# no privilege group ?
  <group>  Privilege group name (access-mgmt/arp-inspection/auth-method/dhcp-relay/dhcp-
server/dhcp-snooping/diagnostic/dot1x/eee/event/ip/ipmc/ip-source-guard/lacp/lldp/loop-
protection/mac-table/mirror/mvr/poe/port/port-security/qos/radius/snmp/stp/system/upnp/vlan)
  level    Privilege group level

SM8TBT2SA(config)# no privilege group vlan ?
  level  Privilege group level

SM8TBT2SA(config)# no privilege group vlan level
SM8TBT2SA(config)#
```

qos

Disable Quality of Service.

SYNTAX

no qos cos-queue	Map for CoS to queue
no qos dscp-queue	Map for DSCP to queue
no qos precedence-queue	Map for IP Precedence to queue
no qos queue-cos	Map for queue to CoS
no qos queue-dscp	Map for queue to DSCP
no qos queue-precedence	Map for queue to IP Precedence
no qos trust	Restore global trust mode to default value

Parameters

<0-7> The queue number for mapping to a specific IP Precedence value (0..7)

EXAMPLE

```
SM8TBT2SA(config)# no qos map cos-queue ?
  <0-7>  Specify class of service (0..7)
  <cr>
SM8TBT2SA(config)# no qos map dscp-queue ?
  <0-63>  Specify DSCP (0..63)
  <cr>
SM8TBT2SA(config)# no qos map precedence-queue ?
  <0-7>  Specify IP Precedence (0..7)
  <cr>
SM8TBT2SA(config)# no qos map queue-cos ?
  <0-7>  The queue number for mapping to a specific CoS value (0..7)
  <cr>
SM8TBT2SA(config)# no qos map queue-dscp ?
  <0-7>  The queue number for maaping to a specific DSCP value (0..7)
  <cr>
SM8TBT2SA(config)# no qos map queue-precedence ?
  <0-7>  The queue number for mapping to a specific IP Precedence value (0..7)
  <cr>
SM8TBT2SA(config)#
```

radius-server

Disable 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

retransmit	Specify the number of retries to active server
timeout	Time to wait for a RADIUS server to reply
deadtime	Time to stop using a RADIUS server that doesn't respond
key	Set RADIUS encryption key
host	Specify a RADIUS server
attribute	The IETF attribute (4, 32, or 95). See below.
32	IETF attribute 32
4	IETF attribute 4
95	IETF attribute 95
acct-port	UDP port for RADIUS accounting server
auth-port	UDP port for RADIUS authentication server
<AcctPort : 0-65535>	UDP port number (0..65535)
<AuthPort : 0-65535>	UDP port number (0..65535)

EXAMPLE

```
SM8TBT2SA(config)# no radius-server host 192.168.1.30 auth-port 1813 acct-port 1812
ERROR: ERROR! Failed to set host 192.168.1.30 ability
SM8TBT2SA(config)# no radius-server deadtime
SM8TBT2SA(config)# no radius-server key
SM8TBT2SA(config)#
```

IETF RADIUS Attributes

Type	Name	Value
4	NAS-IP-Address	ipv4addr
32	Tunnel-Assignment-Id	string
95	NAS-IPv6-Address	string

rmon

Disable Remote Monitoring

SYNTAX

no rmon <alarm> <event>

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# no rmon alarm 44
SM8TBT2SA(config)# no rmon event 19
The error while request to the config daemon.
ERROR: Internal error
SM8TBT2SA(config)#
Username:
```

Messages: *The error while request to the config daemon.*

ERROR: Internal error

smtp

Disable SMTP.

SYNTAX

no smtp < mailaddress> <returnpath> <sender> <server> <username>

Parameters

mailaddress	mailaddress
returnpath	returnpath
sender	sender
server	server
username	username
<1-6>	mailaddress number (1..6)

EXAMPLE

```
SM8TBT2SA(config)# no smtp mailaddress 2
SM8TBT2SA(config)# no smtp returnpath
SM8TBT2SA(config)# do show smtp
Mail Server     : myMailServer
User Name       : Bob
Password        : ********
Sender          : sm8tbt2sa
Return Path     : sm8tbt2sa@192.168.90.3
Email Adress 1  : jeffsherman@comcast.net
Email Adress 2  :
Email Adress 3  : mickeyabc@aol.com
Email Adress 4  :
Email Adress 5  :
Email Adress 6  :


SM8TBT2SA(config)#
```

snmp-server

Disable 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 engine-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
engine-id	Set SNMP engine ID
host	Set SNMP host's configurations
location	Clear the SNMP server's location string
security-to-group	security-to-group configuration
trap	Set trap's configurations

user	user who can access SNMP server
version	Set the SNMP server's version
view	MIB view configuration
<Community : word127>	SNMP v3 community
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

```
SM8TBT2SA(config)# no snmp-server access 333 model any level auth
SM8TBT2SA(config)# no snmp-server community v2c
SM8TBT2SA(config)# no snmp-server engine-id local
SM8TBT2SA(config)# no snmp-server host 333
SM8TBT2SA(config)# no snmp-server location
SM8TBT2SA(config)# no snmp-server security-to-group model v2c name 132
SM8TBT2SA(config)# no snmp-server trap
SM8TBT2SA(config)# no snmp-server version
SM8TBT2SA(config)#
```

spanning-tree

Disable 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

```
SM8TBT2SA(config)# no spanning-tree edgebpdu-filter
SM8TBT2SA(config)# no spanning-tree mst max-
  <0-4094>  MST instance ID , 0 is for CIST (0..4094)
  max-hops  MSTP bridge max hop count
  max-age   Max bridge age before timeout
SM8TBT2SA(config)# no spanning-tree mst ?
  <0-4094>     MST instance ID , 0 is for CIST (0..4094)
  forward-time  Delay between port states
  max-hops     MSTP bridge max hop count
  max-age      Max bridge age before timeout
  name         Name keyword
SM8TBT2SA(config)# no spanning-tree mst max-hops ?
  <cr>
SM8TBT2SA(config)# no spanning-tree mst max-age ?
  <cr>
SM8TBT2SA(config)# no spanning-tree mst name ?
  <cr>
SM8TBT2SA(config)# no spanning-tree mst name
```

system

Disable System name, contact, and location settings.

SYNTAX

no system name Clear the system model name string

no system contact Clear the system contact string

no system location Clear the system location string

Parameters

name

contact

location

EXAMPLE

```
SM8TBT2SA(config)# no system name
SM8TBT2SA(config)# no system contact
SM8TBT2SA(config)# no system location
SM8TBT2SA(config)# do show system
Model Name          : SM8TBT2SA
SM8TBT2SA(config)# do show system
System Description   : 4 ports 10M/100M/1G PoE+ RJ45 + 4 ports 10M/100M/1G PoE++ RJ45 + 2 ports
1G RJ45/SFP (PoE 240W)
Model Name          : SM8TBT2SA
Hardware Version    : v1.01
Mechanical Version   : v1.01
Firmware Version    : v1.04.0124
PoE Firmware Version : RNU-1002
MAC Address         : 00-40-C7-1D-53-29
Serial Number       : A229123AR3500002
System Name         : SM8TBT2SA
Location            :
Contact             :
System Date         : 2017-01-02 03:48:37 +0000
System Uptime       : 1 days, 3:49:01
SM8TBT2SA(config)#
```

tacacs-server

Negate TACACS+ settings.

SYNTAX

no

Parameters

timeout	Time to wait for a TACACS+ server to reply
deadtime	Time to stop using a TACACS+ server that doesn't respond
key	Set TACACS+ encryption key
host	Specify a TACACS+ server
word255	Hostname or IP address (word255)
port	UDP port for TACACS+ accounting server
<AcctPort : 0-65535>	UDP port number (0..65535)
word255	Hostname or IP address (word255)
port	UDP port for TACACS+ accounting server

EXAMPLE

```
SM8TBT2SA(config)# no tacacs-server deadtime
SM8TBT2SA(config)# no tacacs-server timeout
SM8TBT2SA(config)# no tacacs-server deadtime
SM8TBT2SA(config)# no tacacs-server key
SM8TBT2SA(config)# no tacacs-server host
SM8TBT2SA(config)# no tacacs-server host 2.4.6.8 port
SM8TBT2SA(config)# no tacacs-server host 2.4.6.8 port 765
SM8TBT2SA(config)# do show tacacs-server
Global TACACS+ Server Timeout     : 5 seconds
Global TACACS+ Server Deadtime    : 0 minutes
Global TACACS+ Server Key         :
SM8TBT2SA(config)#
```

trap

Negate SNMP Trap.

SYNTAX

no trap

Parameters

<1-6> ID of Trap entry (1..6)

EXAMPLE

```
SM8TBT2SA(config)# do show trap
                     Community              Severity
No Name                  Mode     Ver Server IP       port Level
-- ---------------------- -------- --- --------------- ---- ---------
1                TrpCom1      UDP v2c         1.2.3.4 765      Error
2
3
4
5
6
SM8TBT2SA(config)# no trap 1
SM8TBT2SA(config)# do show trap
                     Community              Severity
No Name                  Mode     Ver Server IP       port Level
-- ---------------------- -------- --- --------------- ---- ---------
1
2
3
4
5
6
SM8TBT2SA(config)#
```

upnp

Negate UPnP (Universal Plug n Play) configurations.

SYNTAX

no upnp

no upnp advertising-duration

no upnp ttl

Parameters

advertising-duration	Set advertising duration
interface-vlan	Set ip-interface vlan
ttl	Set TTL value
<advertising duration>	value is 66..86400 (66..86400)
<vlan_id>	value is 1..4095 (1-4095)
<TTL value>	value is 1..255 (1..255)

EXAMPLE

```
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Enabled
Interface VLAN            : 100
UPnP TTL                  : 4
UPnP Advertising Duration  : 1000
SM8TBT2SA(config)# no upnp
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Disabled
Interface VLAN            : 100
UPnP TTL                  : 4
UPnP Advertising Duration  : 1000
SM8TBT2SA(config)# upnp advertising-duration 999
SM8TBT2SA(config)# upnp interface-vlan 10
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Enabled
Interface VLAN            : 10
UPnP TTL                  : 4
UPnP Advertising Duration  : 999
SM8TBT2SA(config)# no upnp advertising-duration
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Enabled
```

```
Interface VLAN            : 10
UPnP TTL                  : 4
UPnP Advertising Duration  : 100

SM8TBT2SA(config)# no upnp interface-vlan 10
Syntax error: Illegal command line
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Enabled
Interface VLAN            : 10
UPnP TTL                  : 4
UPnP Advertising Duration  : 100

SM8TBT2SA(config)# no upnp ttl
SM8TBT2SA(config)# no upnp interface-vlan
SM8TBT2SA(config)# do show upnp
UPnP Mode                 : Enabled
Interface VLAN            : 1
UPnP TTL                  : 4
UPnP Advertising Duration  : 100

SM8TBT2SA(config)#
```

username

Negate User Name Authentication.

SYNTAX

no username <Username : word31>

Parameters

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

EXAMPLE

```
SM8TBT2SA(config)# no username ?
  word31  User name allows letters, numbers and underscores (word31)
SM8TBT2SA(config)# no username installer
ERROR: ERROR: failed to delete user 'installer' account
SM8TBT2SA(config)# no username ADMIN_1
SM8TBT2SA(config)#
```

vlan

Negate VLAN entries.

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

<vlan_list>	List of VLAN interface numbers (1-4095)
ethertype	Ether type for Custom S-ports
ip-subnet	IP subnet based VLAN configuration.
mac	MAC-based VLAN commands.
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
<snap oui>	SNAP OUI(must be 0x000000)
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)
s-custom-port	

EXAMPLE

```
SM8TBT2SA(config)# no vlan 3
SM8TBT2SA(config)# no vlan ethertype s-custom-port
SM8TBT2SA(config)#
```

voice

Negate VLAN for Voice traffic settings.

SYNTAX

no voice vlan vid

Parameters

vlan	voice_vlan_mode help
vid	Set VLAN ID
oui	OUI configuration
<vlan_id>	VLAN IDs 1-4095 (1-4095)
<oui>	OUI value

EXAMPLE

```
SM8TBT2SA(config)# no voice vlan vid 100
SM8TBT2SA(config)# no voice vlan oui 00-D0-1E
SM8TBT2SA(config)#
```

6.3 qos

Table : configure – qos Commands

Command	Function
map	Global QoS Map/Table
trust	Global trust mode configuration

map

Configure Global QoS Map and Trust parameters.

SYNTAX

qos map

qos trust

Parameters

cos-queue	Map for CoS to queue
dscp-queue	Map for DSCP to queue
precedence-queue	Map for IP Precedence to queue
queue-cos	Map for queue to CoS
queue-dscp	Map for queue to DSCP
queue-precedence	Map for queue to IP Precedence
<0-7>	Specify class of service (0..7)
to	Specify the queue to which the CoS will be mapped
<0-7>	The queue number to which the following CoS values are mapped (0..7)
<0-63>	Specify DSCP (0..63)
to	Specify the queue to which the DSCP will be mapped
<0-7>	The queue number to which the following DSCP values are mapped (0..7)
<0-7>	Specify IP Precedence (0..7)
to	Specify the queue to which the IP Precedence will be mapped
<0-7>	The queue number to which the following IP Precedence values are mapped (0..7)
<0-7>	The queue number for mapping to a specific CoS value (0..7)
to	Specify the CoS to which the queue will be mapped
<0-7>	Specify class of service (0..7)
<0-7>	The queue number for maaping to a specific DSCP value (0..7)
to	Specify the DSCP to which the queue will be mapped
<0-63>	Specify DSCP (0..63)

<0-7>	The queue number for mapping to a specific IP Precedence value (0..7)
to	Specify the IP Precedence to which the queue will be mapped
<0-7>	Specify IP Precedence (0..7)

EXAMPLE 1

```
SM8TBT2SA(config)# qos map cos-queue 6 to 4
SM8TBT2SA(config)# do show qos
Global trust mode: CoS
SM8TBT2SA(config)#
SM8TBT2SA(config)# qos map cos-queue 1 to 4
SM8TBT2SA(config)# do show qos
Global trust mode: CoS
SM8TBT2SA(config)# qos map dscp-queue 3 to 6
SM8TBT2SA(config)# qos map precedence-queue 7 to 7
SM8TBT2SA(config)# qos map queue-cos 3 to 4
SM8TBT2SA(config)# qos map queue-dscp 5 to 33
SM8TBT2SA(config)# qos map queue-precedence 2 to 4
SM8TBT2SA(config)#
```

trust

Configure QoS Global Trust mode.

SYNTAX

qos trust <cos> <cos-dscp> < dscp> <ip-precedence>

Parameters

cos	Prioritize packet based on the CoS/802.1p field in the VLAN tag
cos-dscp	Uses the CoS mode for non-IP packet and DSCP mode for IP packet
dscp	Prioritize packet based on the DSCP field in the IP header
ip-precedence	Prioritize packet based on the ip precedence

EXAMPLE:

```
SM8TBT2SA(config)# qos trust cos-dscp
SM8TBT2SA(config)# do show qos
Global trust mode: CoS-DSCP
SM8TBT2SA(config)# qos trust cos
SM8TBT2SA(config)# qos trust cos-dscp
SM8TBT2SA(config)# qos trust dscp
SM8TBT2SA(config)# qos trust ip-precedence
SM8TBT2SA(config)#
SM8TBT2SA(config)# do show qos interface GigabitEthernet 1/5
interface GigabitEthernet 1/5
 qos cos 0
 qos source-cos c-tag
 qos trust disabled
 qos remark cos disabled
 qos remark dscp disabled
 qos remark ip-precedence disabled
 qos policer mode: disabled, rate: 1000000 Kbps
 qos shaper mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 0 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 1 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 2 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 3 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 4 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 5 mode: disabled, rate: 1000000 Kbps
```

```
 qos queue-shaper queue 6 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 7 mode: disabled, rate: 1000000 Kbps
 qos storm broadcast mode: disabled, rate: 500 Kbps
 qos storm unknown-multicast mode: disabled, rate: 500 Kbps
 qos storm unknown-unicast mode: disabled, rate: 500 Kbps
 qos scheduler mode: strict-priority


SM8TBT2SA(config)#
```

6.4 spanning-tree

Configure Spanning Tree Protocol (STP).

Table : configure spanning-tree Commands

Command	Function
mode	STP protocol mode
mst	STP bridge instance

mode

Configure 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

```
SM8TBT2SA(config)# spanning-tree mode mstp
SM8TBT2SA(config)# do show spanning-tree mst ?
  <0-4094>      MST instance ID , 0 is for CIST (0..4094)
  configuration  MST Region Info and MSTI VLAN map
SM8TBT2SA(config)# do show spanning-tree mst configuration
Multiple Spanning Tree Protocol : Enable
Force Version : MSTP
Region Name : 00-40-C7-1C-CB-6E
Revision Level : 50
MSTI 0 (CIST) : vlan 1-3,10-19,21-4094
MSTI 1 : vlan 20
MSTI 2 : vlan 4-9
SM8TBT2SA(config)#
```

mst

Configure 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

<0-4094>	MST instance ID , 0 is for CIST (0..4094)
forward-time	Delay between port states
max-hops	MSTP bridge max hop count
max-age	Max bridge age before timeout
name	Name keyword
vlan	VLAN keyword
priority	Priority of the instance
<vlan_list>	Range of VLANs (1-4095)
<0-61440>	Priority value (0..61440)

EXAMPLE

```
SM8TBT2SA(config)# spanning-tree mst 1 priority 2000
SM8TBT2SA(config)# do show spanning-tree mst configuration
Multiple Spanning Tree Protocol : Enable
Force Version : RSTP
Region Name : BobB
Revision Level : 3

MSTI 0 (CIST) : vlan 1,3-4,6-19,41-99,201-4094
MSTI 1 : vlan 2,5,20-40
MSTI 2 : vlan 100-200

SM8TBT2SA(config)#
```

6.5 vlan

Configure VLANs.

vlan

VLAN commands

SYNTAX

vlan <vlan_list>

vlan ethertype s-custom port <ethernet

vlan protocol eth2 <ethernet group word16

vlan protocol llc <dsap <ssap group word16

vlan protocol snap <snap <pid group word16

vlan ip subnet <ipv4_addr> <ipv4_netmask> vlan <vlan_id>

vlan mac <mac_ucast> vlan <vlan_id>

Parameters:

<vlan_list>	List of VLAN interface numbers, 1~4094 (1 4095)
ethertype	Ether type for Custom S ports
protocol	Protocol based VLAN status
ip	subnet ip subnet VLAN configuration.
mac	MAC based VLAN commands
scustom port	Custom S ports configuration
<ethernet value>	Ether Type(Range: 0x600 0xFFFF)
eth2	Ethernet based VLAN commands
llc	LLC based VLAN group
snap	SNAP based VLAN group
group	Protocol based VLAN group commands
<word16>	Group Name (Range: 1 16 characters) (word16)
<dsap value>	DSAP (Range: 0x00 0xFF)
<ssap value>	SSAP (Range: 0x00 0xFF)
<snap oui>	SNAP OUI(must be 0x000000)
<pid value>	PID (Range: 0x0000 0XFFFF)
<ipv4_addr>	Source IP address (X.X.X.X)
<ipv4_netmask>	Source IP address (X.X.X.X)
vlan	vlan keyword
<vlan_id>	VLAN ID require d for the group to VLAN mapping (1 4095)
<mac_ucast>	48 bit unicast MAC address: xx:xx:xx:xx:xx:xx

EXAMPLE

```
SM8TBT2SA(config)# vlan ethertype s-custom-port 0x1111
SM8TBT2SA(config)# vlan protocol eth2 0x6000 group aa
SM8TBT2SA(config)#
```

6.6 voice vlan

Configure VLANs for voice traffic.

vlan

Voice VLAN commands.

SYNTAX

voice vlan oui <oui>

voice vlan oui <oui> description word32

voice vlan vid <vlan_

voice vlan vid <vlan_ aging time <AgingTime : 10 10000000>

voice vlan vid <vlan_ aging time <AgingTime : 10 10000000> clas s <class : 0 7>

Parameters

vlan	voice_vlan_mode help
vid	Set an entry VLAN ID
oui	OUI configuration
<vlan_id>	VLAN IDs 1-4095 (1-4095)
aging time	Set an entry secure learning aging time
class	Set a entry traffic class
<AgingTime 10-10000000>	Aging time, 10-10000000 seconds (10..10000000)
<0 7>	Traffic class value (0..7)
<oui>	OUI value
description	Set description for the OUI
word32	Description line (word32)

EXAMPLE

```
SM8TBT2SA(config)# vlan ethertype s-custom-port 0x1111
SM8TBT2SA(config)# vlan protocol eth2 0x6000 group aa
SM8TBT2SA(config)#
```

7. Interface Config Mode Commands

Configure a specified interface:

vlan	VLAN interface configurations
GigabitEthernet	1 Gigabit Ethernet Port

7-1. Configure VLAN Interface

SYNTAX

<vlan_list> List of VLAN interface numbers (1-4095)

Parameters

do	To run exec commands in config mode
end	Go back to EXEC mode
exit	Exit from current mode
ip	Interface Internet Protocol config commands
ipv6	Interface IPv6 config commands
no	Negate a command or set its defaults
address	Address configuration
dhcp	Dynamic Host Configuration Protocol
igmp	ip mode
<ipv4_addr>	IP address (X.X.X.X)
dhcp	Enable DHCP client
<ipv4_netmask>	IP netmask (X.X.X.X)
snooping	Snooping IGMP
compatibility	Interface compatibility
last-member-query-interval	Last Member Query Interval in tenths of seconds
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
fallback	DHCP fallback settings

EXAMPLE

```
SM8TBT2SA(config-if-vlan)# ip address 192.168.1.77 255.255.255.0
SM8TBT2SA(config-if-vlan)# ip igmp snooping
SM8TBT2SA(config-if-vlan)# exit
SM8TBT2SA(config)#
```

7.2 Configure 1 Gigabit Ethernet Port

SYNTAX

interface vlan <vlan_list>

interface vlan <vlan_list end

interface vlan <vlan_list exit

interface vlan <vlan_list> ip (address | dhcp | igmp <ipv4_addr> <ipv4_netmask>

interface vlan <vlan_list> ip address dhcp

interface vlan <vlan_list> ip address dhcp fallback <ipv4_addr> <ipv4_netmask>

interface vlan <vlan_list> ip address dhcp fallback <ipv4_addr> <ipv4_netmask> timeout

interface vlan <vlan_list> ip address dhcp fallback <ipv4_addr> <ipv4_netmask> timeout <0 4294967295>

interface GigabitEthernet <port_list>

interface GigabitEthernet [* | <port_id>] extended range

Parameters

<port_list>	Port List S/X-Y,Z (1/1-18) or (1/1-10)
!	Comments
aggregation	Aggregation port membership
description	Configure interface description
do	To run exec commands in config mode
dot1x	IEEE Standard for port-based Network Access Control
duplex	Interface duplex
exit	Exit from current mode
extend	Switch link up to 250 meters for PoE
flowcontrol	Traffic flow control
green-ethernet	Green ethernet (Power reduction)
ip	Internet Protocol
lacp	LACP port configuration
lldp	LLDP configurations on port
loop-protect	Loop protection configuration on port
mac	MAC keyword
mvr	Multicast VLAN Registration configuration
no	Negate a command or set its defaults
poe	Power Over Ethernet
port-security	Enable/disable port security per interface
pvlan	PVLAN configure
qos	Quality of Service
rmon	Configure Remote Monitoring on an interface

shutdown	Shutdown of the interface
spanning-tree	Spanning Tree protocol.
speed	configures interface speed.
switchport	Switching mode characteristics
lacp	dynamic aggregation using LACP
static	Static aggregation
key	LACP key value
<1-8>	Lacp key (1..8)
auto	Auto negotiation of duplex mode.
full	Forced full duplex.
half	Forced half duplex.
off	Disable flow control
on	Enable flow control
eee	Powering down of PHYs when there is no traffic.
arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
igmp	ip mode
verify	verify command
role	Active / Passive (speak if spoken to) role
timeout	The period between BPDU transmissions
receive	Enable/Disable decoding of received LLDP frames
transmit	Enable/Disabled transmission of LLDP frames
cdp-aware	CDP discovery information is added to the LLDP neighbor table
med	Media Endpoint Discovery
tlv-select	Which optional TLVs to transmit
action	Action if loop detected
tx-mode	Actively generate PDUs
address-table	MAC table configuration
learning	Port learning mode
secure	Port Secure mode
immediate-leave	Immediate leave configuration
vlan	MVR multicast VLAN list
mode	PoE mode
power	Setting maximum power for port in allocation mode
priority	Interface priority
auto-check	PoE Auto Check

port-profile	poe scheduling profile
delay-mode	Enable PoE power delay mode
delay-time	PoE Power Delay Time
enable	Set mode to PoE Enable (Maximum power 30.0 W)
disable	Set mode to PoE Disable
force	The switch port will power up the linked PD without any detect/negotiate mechanism (PD limited to 30W)
<1-30>	Power in watts (1..30)
critical	Set priority to critical
high	Set priority to high
low	Set priority to low
ip	Set IP address
startup-time	Set Startup Time
interval-time	Set Interval Time
retry-time	Set Retry Time
failure-action	Set Failure Action
reboot-time	Set Reboot Time
name	poe scheduling profile name
word32	The ASCII name for the profile (word32)
<0-300>	Setting power delay time (0..300)
reopen	When the port shutdown, reopen can open this port.
maximum	Maximum number of MAC addresses that can be learned on this set of interfaces
violation	The action involved with exceeding the limit<Number of addresses> value is 1..1024
protect	Don't do anything
shutdown	Shutdown port
trap	Send an SNMP trap
trap-shutdown	Send an SNMP trap and shutdown the port
<pvlan_list>	PVLAN ID to show configuration for (1-18)
isolation	show isolation configuration
cos	Configure the default CoS value for a port
policer	Policer configuration
queue-shaper	Queue shaper configuration
remark	Configure remarking state of each port
shaper	Shaper configuration
source-cos	Source of CoS value
storm	Storm control configuration

trust	Port prioritize ingress traffic is based on the global trusted mode
wfq	Weighted fair queue configuration
wrr	Weighted round robin configuration
<0-127>	Weight for queue 0 (0..127) (wfq)
<0-127>	Weight for queue 0 (0..127) (wrr)
collection	Configure Remote Monitoring Collection on an interface
stats	Configure statistics
history	Configure history
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	configure auto speed
10	configure 10M full duplex speed
100	configure 100M full duplex speed
1000	configure 1G full duplex speed
voice	Voice appliance attributes
access	Set access mode characteristics of the interface
hybrid	Change PVID for hybrid port
mode	Set mode of the interface
trunk	Change PVID for trunk port
vlan	VLAN commands
vlan	Vlan for voice traffic
mode	Set Voice VLAN port mode
security	Enable Voice VLAN port security mode
discovery-protocol	Set Voice VLAN port discovery protocol
vid	Set an entry VLAN ID
vlan	Set VLAN when interface is in access mode
<vlan_id>	VLAN ID of the VLAN when this port is in access mode (1-4095)
acceptable-frame-type	Set acceptable frame type on a port
allowed	Set allowed VLAN characteristics when interface is in hybrid mode
egress-tag	Egress VLAN tagging configuration
ingress-filtering	VLAN Ingress filter configuration
native	Set native VLAN
port-type	Set port type

access	Set mode to ACCESS unconditionally
hybrid	Set mode to HYBRID unconditionally
trunk	Set mode to TRUNK unconditionally
allowed	Set allowed VLAN characteristics when interface is in trunk mode
native	Set native VLAN
vlan	Vlan commands
protocol	Protocol-based VLAN status
mapping	The VLAN IDs to be mapped
group	Protocol-based VLAN group commands
word16	Group Name (Range: 1 - 16 characters) (word16)
<vlan_list>	The customer VID (C-VLAN) entering the switch from the customer network (1-4095)
poe	Use extend PoE to extend PoE range up to 250 meters.

EXAMPLE 1

```
SM8TBT2SA(config)# interface GigabitEthernet 1/4-8
SM8TBT2SA(config-if)# duplex auto
SM8TBT2SA(config-if)# flowcontrol on
SM8TBT2SA(config-if)# green-ethernet eee
SM8TBT2SA(config-if)# poe delay-mode
SM8TBT2SA(config-if)# poe delay-time 60
SM8TBT2SA(config-if)# port-security reopen
SM8TBT2SA(config-if)# port-security maximum 600
SM8TBT2SA(config-if)# pvlan isolation
SM8TBT2SA(config-if)#
```

EXAMPLE 2

```
SM8TBT2SA(config)# interface GigabitEthernet 1/2-7
SM8TBT2SA(config-if)# poe ?
  mode          PoE mode
  power         Setting maximum power for port in allocation mode
  priority      Interface priority
  auto-check    PoE Auto Check
  port-profile  poe scheduling profile
  delay-mode    Enable PoE power delay mode
  delay-time    PoE Power Delay Time
SM8TBT2SA(config-if)# poe power limit 45
Maximum Power must be an integer value between 1 and 30 W
```

```
SM8TBT2SA(config-if)# poe power limit 30
SM8TBT2SA(config-if)# poe auto-check ip 192.168.1.99 max-reboot-times ?
  <0-10>  Max-Reboot-Times (0..10)
SM8TBT2SA(config-if)# poe auto-check ip 192.168.1.99 max-reboot-times 2
SM8TBT2SA(config-if)# poe auto-check ip 192.168.1.99 reboot-time ?
  <3-120>  Reboot-Time (3..120)
SM8TBT2SA(config-if)# poe auto-check ip 192.168.1.99 reboot-time 60
SM8TBT2SA(config-if)#
```

EXAMPLE 3

```
SM8TBT2SA(config)# interface GigabitEthernet 1/1-28
SM8TBT2SA(config-if)# extend poe
SM8TBT2SA(config-if)#
```

Extend PoE mode: When enabled, the port will transfer data at a rate up to 10 Mbps in full duplex mode and extend the PoE range up to 250 meters. If a PD is connected to the port, the switch follows the IEEE 802.3at PoE+ standard to supply power to the connected PD during power up. **Note**: With this feature enabled on a port after the connected PD starts up completely, you must disable PoE and enable it again, or disconnect and reconnect the cable to the port for PoE Extended Mode to take effect. The default is PoE Extended Mode disabled.

Messages: *Maximum Power must be an integer value between 1 and 30 W*

7-3 Interface Config Mode Commands

7-3-1 config interface vlan Commands

The VLAN Interface number limitation is eight VLANs per switch.

Command: **!**

Description: Comments

Syntax:

Parameters:

!	Comments	
Arguments	ignored comment text	
<cr>		

Example:

```
SM8TBT2SA(config-if-vlan)# ! a aaa
SM8TBT2SA(config-if-vlan)#
```

Command: **do**

Description: Run exec commands in Interface Config mode.

Syntax: **do** <command>

Parameters:

clear	configure	copy	delete	diagnostics	dir
find-switch	firmware	logout	more	ping	reload
show	ssl	terminal	traceroute		

Example:

```
SM8TBT2SA(config-if-vlan)# do show vlan
VLAN  Name                             Members    Untagged
----  -------------------------------  ---------  --------
   1  default                          Gi 1/1     Gi 1/1
                                       Gi 1/2     Gi 1/2
                                       Gi 1/3     Gi 1/3
                                       Gi 1/4     Gi 1/4
                                       Gi 1/5     Gi 1/5
                                       Gi 1/6     Gi 1/6
                                       Gi 1/7     Gi 1/7
                                       Gi 1/8     Gi 1/8
                                       Gi 1/9     Gi 1/9
```

```
                                    Gi 1/10    Gi 1/10
SM8TBT2SA(config-if-vlan)#
```

Command: **end**

Description: Go back to EXEC mode.

Syntax: **end** <cr>

Parameters: None.

Example:

```
SM8TBT2SA(config-if-vlan)# end
SM8TBT2SA#
```

Command: **exit**

Description: Exit from current mode.

Syntax: **exit** <cr>

Parameters: None.

Example:

```
SM8TBT2SA(config-if-vlan)# exit
SM8TBT2SA(config)#
```

Command: **ip**

Description: Set Interface Internet Protocol parameters for a VLAN interface.

Syntax: **ip** <address | dhcp | igmp>

Parameters:

address	Address configuraton
dhcp	Dynamic Host Configuration Protocol
igmp	ip mode
<ipv4_addr>	IP address (X.X.X.X)
<ipv4_netmask>	IP netmask (X.X.X.X)
fallback	DHCP fallback settings
<ipv4_netmask>	IP netmask (X.X.X.X)
timeout	DHCP fallback timeout
<0-4294967295>	DHCP fallback timeout in seconds (0..4294967295)
compatibility	Interface compatibility
last-member-query-interval	Last Member Query Interval in tenths of seconds
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 (RV)
unsolicited-report-interval	Unsolicited Report Interval in seconds
auto	Compatible with IGMPv1/IGMPv2/IGMPv3
v1	Forced IGMPv1
v2	Forced IGMPv2
v3	Forced IGMPv3
<lpmcQi : 1-31744>	1 - 31744 seconds (1..31744)
<lpmcQri : 0-31744>	0 - 31744 tenths of seconds (0..31744)
<lpmcRv : 1-255>	Packet loss tolerance count from 1 to 255 (1..255)
<lpmcUri : 0-31744>	0 - 31744 seconds (0..31744)
<cr>	

Example:

```
SM8TBT2SA(config-if-vlan)# ip address dhcp fallback 192.168.1.77 255.255.255.0 timeout 60000
SM8TBT2SA(config-if-vlan)# ip igmp snooping querier
SM8TBT2SA(config-if-vlan)# ip igmp snooping query-max-response-time 400
SM8TBT2SA(config-if-vlan)# ip igmp snooping robustness-variable 30
SM8TBT2SA(config-if-vlan)#
```

Command: **ipv6**

Description: Configure IPv6 parameters for a VLAN interface.

Syntax: **ipv6** <address | mld>

Parameters:

address	Address configuraton
mld	ipv6 mode
<ipv6_subnet>	IPv6 prefix x:x::y/z (X:X:X:X:X:X:X:X/0-128)
snooping	Snooping MLD
compatibility	Interface compatibility
last-member-query-interval	Last Member Query Interval in tenths of seconds
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
v2	Forced MLDv2
<MldLmqi : 0-31744>	0 - 31744 tenths of seconds (0..31744)
<MldQi : 1-31744>	1 - 31744 seconds (1..31744)
<MldQri : 0-31744>	0 - 31744 tenths of seconds (0..31744)
<MldRv : 1-255>	Packet loss tolerance count from 1 to 255 (1..255)
<MldUri : 0-31744>	0 - 31744 seconds (0..31744)
<cr>	

Example:

```
SM8TBT2SA(config-if-vlan)# ipv6 mld snooping last-member-query-interval 3000
SM8TBT2SA(config-if-vlan)# ipv6 mld snooping querier
SM8TBT2SA(config-if-vlan)# ipv6 mld snooping robustness-variable 175
SM8TBT2SA(config-if-vlan)# ipv6 mld snooping unsolicited-report-interval 9000
SM8TBT2SA(config-if-vlan)#
```

Command: **no**

Description: Negate a command or set its defaults.

Syntax: **no** <ip | ipv6>

Parameters:

ip	Interface Internet Protocol config commands
ipv6	Interface IPv6 config commands
address	Address configuration
dhcp	Dynamic Host Configuration Protocol
igmp	Internet Group Management Protocol
server	Disable DHCP server
querier	IGMP Querier configuration
mld	Multicast Listener Discovery
<ipv6_subnet>	IPv6 prefix x:x::y/z (X:X:X:X:X:X:X:X/0-128)
snooping	Snooping MLD
querier	MLD Querier configuration
<cr>	

Example:

```
SM8TBT2SA(config-if-vlan)# no ip dhcp server
SM8TBT2SA(config-if-vlan)# no ipv6 address
SM8TBT2SA(config-if-vlan)# no ipv6 mld snooping querier
SM8TBT2SA(config-if-vlan)#
```

Messages:

```
SM8TAT2SA(config)# interface vlan 2-300
ERROR: Interface number limitation reached (VLAN: 9)
SM8TAT2SA(config-if-vlan)#
```

7-3-2 config interface GigabitEthernet 1/1-x Commands

Command: **!**

Description: Comments

Syntax: **!** <text>

Parameters: Arguments ignored comment text

<cr>

Example:

```
SM8TBT2SA(config-if)# ! ?
  Arguments  ignored comment text
  <cr>
SM8TBT2SA(config-if)# ! ignore-comment
SM8TBT2SA(config-if)#
```

Command: **aggregation**

Description: Configure port aggregation membership.

Syntax: **aggregation** <lacp | static>

Parameters:

	lacp	dynamic aggregation using LACP
	static	Static aggregation
	key	LACP key value
	<1-8>	Lacp key (1..8)
	<1-8>	Static aggregation group number (1..8)

Example:

```
SM8TBT2SA(config-if)# aggregation lacp key 1
SM8TBT2SA(config-if)# aggregation static group 1
SM8TBT2SA(config-if)#
```

Command: **description**

Description: Configure interface description for a port.

Syntax: **description** <word>

Parameters: word63 Interface description. (word63)

<cr>

Example:

```
SM8TBT2SA(config-if)# description port(s)2-6
SM8TBT2SA(config-if)#
```

Command: **do**

Description: Run Exec commands in Interface Config mode.

Syntax: **do** <command>

Parameters:						
	clear	configure	copy	delete	diagnostics	dir
	find-switch	firmware	logout	more	ping	reload
	show	ssl	terminal	traceroute		

Example:

```
SM8TBT2SA(config-if)# do terminal exec-timeout 1440
SM8TBT2SA(config-if)# do show ip interface brief
Interface         Address              Method             Status
----------------  -------------------  -----------------  ------
VLAN1             10.0.4.3/24          Manual             UP
SM8TBT2SA(config-if)#
```

Command: **dot1x**

Description: Configure IEEE 802.1x Standard parameters for port-based Network Access Control.

Syntax: **dot1x** < re-authenticate | port-control | guest-vlan | radius-vlan>

Parameters:		
	re-authenticate	Refresh (restart) 802.1X authentication process.
	port-control	Sets the port security state.
	guest-vlan	Enables/disables guest VLAN.
	radius-vlan	Enables/disables per-port state of RADIUS-assigned VLAN.
	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:

```
SM8TBT2SA(config-if)# dot1x re-authenticate
SM8TBT2SA(config-if)# dot1x port-control
SM8TBT2SA(config-if)# dot1x port-control auto
SM8TBT2SA(config-if)# dot1x port-control force-authorized
SM8TBT2SA(config-if)# dot1x guest-vlan
SM8TBT2SA(config-if)# dot1x guest-vlan
SM8TBT2SA(config-if)# dot1x re-authenticate
SM8TBT2SA(config-if)# dot1x radius-vlan
SM8TBT2SA(config-if)#
```

Command: **duplex**

Description: Configure duplex mode for an interface.

Syntax: **duplex** <auto | half | full>

Parameters:

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

Example:

```
SM8TBT2SA(config-if)# duplex auto
SM8TBT2SA(config-if)# duplex half
SM8TBT2SA(config-if)# duplex full
SM8TBT2SA(config-if)#
```

Command: **exit**

Description: Exit from current mode.

Syntax: **exit** <cr>

Parameters: None.

Example:

```
SM8TBT2SA(config-if)# exit
SM8TBT2SA(config)#
```

Command: **extend**

Description: Switch link up to 250 meters. With Extend PoE Mode enabled, the port will transfer data at a rate up to 10 Mbps in full duplex mode and extend the PoE range up to 250 meters. If a PD is connected to the port, the switch follows the IEEE 802.3at PoE+ standard to supply power to the connected PD during power up. **Note**: With this feature enabled on a port after the connected PD starts up completely, you must disable PoE and enable it again or disconnect and reconnect the cable to the port for PoE Extended Mode to take effect. The default is Disabled.

Syntax: **extend** poe <cr>

Parameters: poe Used to extend PoE range up to 250 meters.

Example:

```
SM8TBT2SA(config-if)# extend poe
SM8TBT2SA(config-if)# do show poe config
Primary Power Supply [W]     : 240
Reserved Power determined by : Class
Capacitor Detection          : Disabled
Interface              Mode      Extend PoE Mode  Priority  Max. Power [W]
---------------------  --------  ---------------  --------  --------------
GigabitEthernet 1/1    Enabled   Disabled         Low                 30
GigabitEthernet 1/2    Enabled   Disabled         Low                 30
GigabitEthernet 1/3    Enabled   Enabled          Low                 30
GigabitEthernet 1/4    Enabled   Disabled         Low                 30
GigabitEthernet 1/5    Enabled   Disabled         Low                 90
GigabitEthernet 1/6    Enabled   Disabled         Low                 90
GigabitEthernet 1/7    Enabled   Disabled         Low                 90
GigabitEthernet 1/8    Enabled   Disabled         Low                 90

SM8TBT2SA(config-if)
```

Command: **flowcontrol**

Description: Configure traffic flow control.

Syntax: **flowcontrol** <on | off>

Parameters: off Disable flow control

on Enable flow control

Example:

```
SM8TBT2SA(config-if)# flowcontrol off
SM8TBT2SA(config-if)# flowcontrol on
SM8TBT2SA(config-if)#
```

Command: **green-ethernet**

Description: Configure Green Ethernet (Power reduction).

Syntax: **green-ethernet** eee <cr>

Parameters: eee Powering down of PHYs when there is no traffic.

Example:

```
SM8TBT2SA(config-if)# green-ethernet eee
SM8TBT2SA(config-if)#
```

Command: **ip**

Description: Configure Internet Protocol parameters for an interface.

Syntax: **ip** <arp | dhcp | igmp[| verify>

Parameters:

arp	Address Resolution Protocol
dhcp	Dynamic Host Configuration Protocol
Igmp	ip mode
verify	verify command
check-vlan	ARP inspection VLAN mode config
logging	ARP inspection logging mode config
trust	ARP inspection trust config
dhcp	snooping
igmp	snooping
arp	inspection
source	verify source
limit	limit command
<0-2>	the number of limit
immediate-leave	Immediate leave configuration
max-groups	IGMP group throttling configuration
mrouter	Multicast router port configuration
filter	Access control on IGMP multicast group registration
<Throttling : 1-10>	Maximum number of IGMP group registration (1..10)
word16	Profile name in 16 char's (word16)
inspection	ARP inspection
all	log all entries
deny	log denied entries
permit	log permitted entries
snooping	DHCP snooping
trust	DHCP Snooping trust config
snooping	IGMP Snooping

Example:

```
SM8TBT2SA(config-if)# ip arp inspection check-vlan
SM8TBT2SA(config-if)# ip dhcp snooping trust
SM8TBT2SA(config-if)# ip igmp snooping max-groups 4
SM8TBT2SA(config-if)# ip verify source limit 1
SM8TBT2SA(config-if)# ip igmp snooping filter Profile-1
```

Command: **ipmc**

Description: Configure IPv4 multicast parameters for an interface.

Syntax: **ipmc** <arp | dhcp | igmp[| verify> <! | description | do | exit | no | range>

Parameters:

profile	Ipmc profile provides the rules for specific group addresses.
range	A range of IPv4/IPv6 multicast addresses for the profile
mode	IPMC profile mode
word16	Range entry name in 16 char's (word16)
<ipv4_mcast>	Valid IPv4 multicast address (X.X.X.X)
!	Comments
description	Additional description about the profile in 64 char's
do	To run exec commands in config mode
exit	Exit from current mode
no	Negate a command or set its defaults
deny	Deny matching addresses
permit	Permit matching addresses
log	Log when matching
<cr>	

Example:

```
SM8TBT2SA(config)# ipmc profile BobB
SM8TBT2SA(config-ipmc-profile)# range TomT permit log
SM8TBT2SA(config-ipmc-profile)# range TomT deny
SM8TBT2SA(config-ipmc-profile)#
```

Command: **lacp**

Description: Configure Link Aggregation Control Protocol port parameters for an interface.

Syntax: **lacp** <role | timeout>

Parameters:		
	role	Active / Passive (speak if spoken to) role
	timeout	The period between BPDU transmissions
	active	Transmit LACP BPDUs continuously
	passive	Wait for neighbor LACP BPDUs before transmitting
	fast	Transmit BPDU each second (fast timeout)
	slow	Transmit BPDU each 30th second (slow timeout)

Example:

```
SM8TBT2SA(config-if)# lacp role active
SM8TBT2SA(config-if)# lacp role passive
SM8TBT2SA(config-if)# lacp timeout fast
SM8TBT2SA(config-if)# lacp timeout slow
SM8TBT2SA(config-if)#
```

Command: **lldp**

Description: Configure Link Level Discovery Protocol parameters for an interface.

Syntax: **lldp** <receive | transmit | cdp-aware | med >

Parameters:

receive	Enable/Disable decoding of received LLDP frames
transmit	Enable/Disabled transmission of LLDP frames
cdp-aware	CDP discovery information is added to the LLDP neighbor table
med	Media Endpoint Discovery
tlv-select	Which optional TLVs to transmit
media-vlan	Media VLAN assignment
policy-list	Assignment of policies
<policy_list>	e.g. 0,1,2, (0-31)
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:

```
SM8TBT2SA(config-if)# lldp receive
SM8TBT2SA(config-if)# lldp transmit
SM8TBT2SA(config-if)# lldp cdp-aware
SM8TBT2SA(config-if)# lldp med media-vlan policy-list 0
SM8TBT2SA(config-if)# lldp tlv-select management-address
SM8TBT2SA(config-if)# lldp tlv-select port-description
SM8TBT2SA(config-if)#
```

Command: **loop-protect**

Description: Configure Loop protection parameters for an interface.

Syntax: **loop-protect** <action | tx-mode| shutdown | log>

Parameters:

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

Example:

```
SM8TBT2SA(config-if)# loop-protect action shutdown log
SM8TBT2SA(config-if)# loop-protect tx-mode
SM8TBT2SA(config-if)# loop-protect
SM8TBT2SA(config-if)#
```

Command: **mac**

Description: Configure MAC keyword parameters for an interface.

Syntax: **mac** < address-table learning secure>

Parameters: learning Port learning mode

Example:

```
SM8TBT2SA(config-if)# mac address-table learning secure
SM8TBT2SA(config-if)#
```

Command: **mvr**

Description: Configure Multicast VLAN Registration parameters for an interface.

Syntax: **mvr** < immediate-leave | vlan>

Parameters:		
	immediate-leave	Immediate leave configuration
	vlan	MVR multicast VLAN list
	<vlan_list>	MVR multicast VLAN list (1-4095)
	type	MVR multicast VLAN port role
	receiver/source	port role
	type	MVR multicast VLAN port role

Example:

```
SM8TBT2SA(config-if)# mvr vlan 100-200 type source
The error while request to the config daemon.
SM8TBT2SA(config-if)# mvr vlan 200 type receiver
SM8TBT2SA(config-if)# mvr vlan 200 type source
SM8TBT2SA(config-if)#
```

Command: **no**

Description: Negate a command or set its defaults in Interface Config mode.

Syntax: **no** <command>

Parameters:

aaa	access	access-list	aggregation	clock	description
dot1x	duplex	flowcontrol	green-ethernet	interface	ip
ipmc	ipv6	lacp	lldp	logging	loop-protect
mac	map-api-key	max-frame-size	monitor	mvr	ntp
poe	port-security	privilege	pvlan	qos	radius-server
rmon	shutdown	smtp	snmp-server	spanning-tree	speed
switchport	system	tacacs-server	trap	upnp	username
vlan	voice				

Example:

```
SM8TBT2SA(config-if)# no flowcontrol
SM8TBT2SA(config-if)# no shutdown
SM8TBT2SA(config-if)#
```

Command: **poe**

Description: Configure Power Over Ethernet parameters for an interface.

Syntax: **poe** < mode | power | priority | auto-check | port-profile | delay-mode | delay-time>

Parameters:

mode	PoE mode
power	Setting maximum power for port in allocation mode
priority	Interface priority
auto-check	PoE Auto Check
port-profile	poe scheduling profile
delay-mode	Enable PoE power delay mode
delay-time	PoE Power Delay Time
enable	Set mode to PoE Enable (Maximum power 30.0 W)
disable	Set mode to PoE Disable
force	The switch port will power up the linked PD without any detect/negotiate mechanism (PD limited to 30W)
limit	The maximum power
Unsigned integer	Power in watts
critical	Set priority to critical
high	Set priority to high
low	Set priority to low
ip	Set IP address
startup-time	Set Startup Time
interval-time	Set Interval Time
retry-time	Set Retry Time
failure-action	Set Failure Action
reboot-time	Set Reboot Time
max-reboot-times	Set Max Reboot Times
<0-10>	Max-Reboot-Times (0..10)
name	poe scheduling profile name
word32	The ASCII name for the profile (word32)
<0-300>	Setting power delay time (0..300)

Example:

```
SM8TBT2SA(config-if)# poe power limit 30
SM8TBT2SA(config-if)# poe priority critical
SM8TBT2SA(config-if)# poe auto-check ip 18.22.34.56 startup-time 30 failure-action reboot
```

```
max-reboot-times 4
SM8TBT2SA(config-if)# poe port-profile name Prof-1
SM8TBT2SA(config-if)# poe mode force
SM8TBT2SA(config-if)# poe delay-mode
SM8TBT2SA(config-if)# poe delay-time 125
SM8TBT2SA(config-if)#
```

PoE Mode: represents the PoE operating mode for the port (Enabled, Disabled, or Force), where:

Disabled: PoE disabled for the port (default).

Enabled: Enables PoE IEEE 802.3at (Class 4 PDs limited to 30W) (default).

Force: The switch port will power up the linked PD without any detect/negotiate mechanism (PD limited to 30W).

Note: Only connect PDs which support a power input of 48~56V to prevent damage to PDs. When the port changes to Force mode, the port's PoE LED will light immediately. Select Force mode for devices that do not do PoE negotiation (e.g., for a PoE DSRC RSU). **Caution**: Forcing the switch to send POE to non-POE devices can physically damage those devices.

Messages:

Maximum Power must be an integer value between 1 and 30 W

PoE force mode selection is already open.

Command: **port-security**

Description: Enable/disable port security per interface.

Syntax: **port-security** < reopen | maximum | violation>

Parameters:

reopen	When the port shutdown, reopen can open this port.
maximum	Maximum number of MAC addresses that can be learned on this set of interfaces
violation	The action involved with exceeding the limit
protect	Don't do anything
shutdown	Shutdown port
trap	Send an SNMP trap
trap-shutdown	Send an SNMP trap and shutdown the port
<Number of addresses>	value is 1..1024 (1..1024) maximum number of MAC addresses

Example:

```
SM8TBT2SA(config-if)# port-security violation protect
SM8TBT2SA(config-if)# port-security violation trap
SM8TBT2SA(config-if)# port-security violation trap-shutdown
SM8TBT2SA(config-if)#
```

Command: **pvlan**

Description: Configure Private VLAN parameters for an interface.

Syntax: **pvlan** < pvlan_list | isolation>

Parameters:

<pvlan_list>	PVLAN ID to show configuration for (1-10)
isolation	show isolation configuration

Example:

```
SM8TBT2SA(config-if)# pvlan 1
SM8TBT2SA(config-if)# pvlan isolation
SM8TBT2SA(config-if)#
```

Command: **qos**

Description: Configure Quality of Service parameters for an interface.

Syntax: **qos** < cos| policer | queue-shaper | remark | shaper | source-cos | storm | trust |wfq | wrr>

Parameters:

cos	Configure the default CoS value for a port
policer	Policer configuration
queue-shaper	Queue shaper configuration
remark	Configure remarking state of each port
shaper	Shaper configuration
source-cos	Source of CoS value
storm	Storm control configuration
trust	Port prioritize ingress traffic is based on the global trusted mode
wfq	Weighted fair queue configuration
wrr	Weighted round robin configuration
<0-7>	Specify the default class of service (0..7)
<16-1000000>	Policer rate in kbps. Internally rounded up to the nearest value supported by the port policer. (16..1000000)
queue	Specify queue.
<0~7>	Specific queue or range (0-7)
<16-1000000>	Shaper rate in kbps. Internally rounded up to the nearest value supported by the queue shaper (16..1000000).
cos	Remarking CoS value
dscp	Remarking DSCP value
ip-precedence	Remarking IP precedence value
c-tag	Get CoS value in customer VLAN tag
s-tag	Get CoS value in service VLAN tag
broadcast	Broadcast packets
unknown-multicast	Unknown multicast packets
unknown-unicast	Unknown unicast packets
<0-262143>	Policer rate in packets per second (0..262143)

Example:

```
SM8TBT2SA(config-if)# qos cos 0
SM8TBT2SA(config-if)# qos policer 50000
SM8TBT2SA(config-if)# qos queue-shaper queue 0 50000
```

```
SM8TBT2SA(config-if)# qos remark cos
SM8TBT2SA(config-if)# qos remark dscp
SM8TBT2SA(config-if)# qos remark ip-precedence
SM8TBT2SA(config-if)# qos source-cos c-tag
SM8TBT2SA(config-if)# qos source-cos s-tag
SM8TBT2SA(config-if)# qos storm broadcast 5000
SM8TBT2SA(config-if)# qos storm unknown-multicast 20000
SM8TBT2SA(config-if)# qos trust
SM8TBT2SA(config-if)#
```

Command: **rmon**

Description: Configure Remote Monitoring parameters for an interface.

Syntax: **rmon** <collection | stats | history>

Parameters:		
	collection	Configure Remote Monitoring Collection on an interface
	stats	Configure statistics
	history	Configure history
	<1-65535>	Statistics entry ID (1..65535)
	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..65535)
	<1-3600>	Interval in seconds to sample data for each bucket (1..3600)

Example:

```
SM8TBT2SA(config-if)# rmon collection stats 5000
SM8TBT2SA(config-if)# rmon collection history 4000 buckets 9000 interval 2500

SM8TBT2SA(config-if)# rmon collection history 10 buckets 5000 interval 900
SM8TBT2SA(config-if)#
```

Command: **shutdown**

Description: Shutdown of the interface.

Syntax: **shutdown** <cr>

Parameters: None.

Example:

```
SM8TBT2SA(config-if)# shutdown
```

Command: **spanning-tree**

Description: Configure Spanning Tree protocol parameters for an interface.

Syntax: **spanning-tree** <edge | link-type | mst | restricted-role | restricted-tcn >

Parameters:

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
<0-4094>	MST instance ID , 0 is for CIST (0..4094)
cost	STP Cost of this port
port-priority	STP priority of this port
<0-200000000>	Cost Range (0..200000000)
auto	Use auto cost
<0-240>	Port Priority value (0..240)

Example:

```
SM8TBT2SA(config-if)# spanning-tree edge
SM8TBT2SA(config-if)# spanning-tree link-type point-to-point
SM8TBT2SA(config-if)# spanning-tree link-type shared
SM8TBT2SA(config-if)# spanning-tree mst 0 cost 50000
SM8TBT2SA(config-if)# spanning-tree restricted-role
SM8TBT2SA(config-if)# spanning-tree restricted-tcn
```

```
SM8TBT2SA(config-if)# spanning-tree mst 0 port-priority 100
SM8TBT2SA(config-if)# spanning-tree
SM8TBT2SA(config-if)#
```

Command: **speed**

Description: Configure speed parameters for an interface.

Syntax: **speed** < auto | 10 | 100 | 1000 >

Parameters:

auto	configure auto speed
10	configure 10M full duplex speed
100	configure 100M full duplex speed
1000	configure 1G full duplex speed

Example:

```
SM8TBT2SA(config-if)# speed 100
SM8TBT2SA(config-if)# speed 1000
SM8TBT2SA(config-if)# speed auto
SM8TBT2SA(config-if)#
```

Command: **switchport**

Description: Configure Switching mode characteristics for an interface.

Syntax: **switchport** <sub-command>

Parameters:

voice	Voice appliance attributes
access	Set access mode characteristics of the interface
hybrid	Change PVID for hybrid port
mode	Set mode of the interface
trunk	Change PVID for trunk port
vlan	VLAN commands
vlan	Vlan for voice traffic
mode	Set Voice VLAN port mode
security	Enable Voice VLAN port security mode
discovery-protocol	Set Voice VLAN port discovery protocol
vid	Set an entry VLAN ID
auto	Enable auto detect mode
force	Force to join Voice VLAN
both	Detect telephony device by OUI address and LLDP
lldp	Detect telephony device by LLDP
<vlan_id>	VLAN IDs 1-4095 (1-4095)
vlan	Set VLAN when interface is in access mode
<vlan_id>	VLAN ID of the VLAN when this port is in access mode (1-4095)
egress-tag	Egress VLAN tagging configuration
ingress-filtering	VLAN Ingress filter configuration
native	Set native VLAN
port-type	Set port type
all	Allow all frames
tagged	Allow only tagged frames
untagged	Allow only untagged frames
vlan	Set allowed VLANs when interface is in hybrid mode
all	Tag all frames
none	No egress tagging
<vlan_id>	VLAN ID of the native VLAN when this port is in hybrid mode (1-4095)
access	Set mode to ACCESS unconditionally
hybrid	Set mode to HYBRID unconditionally

trunk	Set mode to TRUNK unconditionally
allowed	Set allowed VLAN characteristics when interface is in trunk mode
native	Set native VLAN
vlan	Vlan commands
vlan	Set allowed VLANs when interface is in trunk mode
add	Add VLANs to the current list
all	All VLANs
except	All VLANs except the following
none	No VLANs
remove	Remove VLANs from the current list
<vlan_list>	VLAN IDs of the allowed VLANs when this port is in trunk mode (1-4095)
protocol	Protocol-based VLAN status
mapping	The VLAN IDs to be mapped
group	Protocol-based VLAN group commands
word16	Group Name (Range: 1 - 16 characters) (word16)
vlan	vlan keyword
<vlan_id>	VLAN ID required for the group to VLAN mapping. (1-4095)
<vlan_list>	The customer VID (C-VLAN) entering the switch from the customer network (1-4095)
dot1q-tunnel	Assign a tunnel port to a VLAN ID that is dedicated to tunneling
<vlan_id>	The outer VID (S-VLAN) of the service provider network (1-4095)
acceptable-frame-type	Set acceptable frame type on a port
vlan	Set native VLAN when interface is in hybrid mode
c-port	Customer port
s-custom-port	Custom Provider port
s-port	Provider port
unaware	Port is not aware of VLAN tags

Example:

```
SM8TBT2SA(config-if)# switchport voice vlan mode auto

SM8TBT2SA(config-if)# switchport voice vlan mode force

SM8TBT2SA(config-if)# switchport voice vlan security

SM8TBT2SA(config-if)# switchport voice vlan discovery-protocol lldp

SM8TBT2SA(config-if)# switchport voice vlan vid 100

ERROR: No Vlan ID 100 entry is set.

SM8TBT2SA(config-if)# switchport access vlan 100
```

```
SM8TBT2SA(config-if)# switchport hybrid ingress-filtering
SM8TBT2SA(config-if)# switchport hybrid native vlan 200
SM8TBT2SA(config-if)# switchport trunk allowed vlan except 400
SM8TBT2SA(config-if)# switchport vlan protocol group Grp-1 vlan 500
SM8TBT2SA(config-if)# switchport vlan mapping 600 dot1q-tunnel 700
SM8TBT2SA(config-if)#
```

8. Copy Commands

Copy from source to destination for backup, restore, and activate purposes.

SYNTAX

copy running config startup config | flash:filename | tftp://server/path to file

copy startup config running config | flash:filename | tftp://server/path to file

copy flash:filename startup config running config | tftp://server/path to file

copy tftp://server/path to file startup config running config | flash:filename

Parameters

running-config	Copy currently running configuration
startup-config	Copy the Startup configuration
running-config	Copy currently running configuration for backup and restore purposes
startup-config	Copy startup configuration for backup and restore purposes
flash:filename	Copy file in FLASH
tftp://server/path-to-file	Copy file on TFTP server
merge	Merge source file with running-config
replace	Replace running-config with source file, default action

EXAMPLE

```
SM8TBT2SA# copy startup-config ?
  running-config             Current running configuration
  flash:filename             File in FLASH
  tftp://server/path-to-file  File on TFTP server
SM8TBT2SA# copy startup-config running-config
SM8TBT2SA# copy running-config flash:xxx
SM8TBT2SA#
```

9. Delete Commands

Delete one file in flash: file system.

SYNTAX

Delete <String>

Parameters

String File in FLASH

EXAMPLE

```
SM8TBT2SA# delete text
SM8TBT2SA#
```

10. Dir Commands

Display a directory of all files in flash: file system.

SYNTAX

dir <cr>

Parameters

EXAMPLE

```
SM8TBT2SA# dir
startup-config
SM8TBT2SA# dir
startup-config  test1
SM8TBT2SA#
```

11. Firmware Commands

Upgrade or swap firmware.

Syntax

firmware swap

firmware swap always-on-poe

firmware upgrade <tftp://server/path and filename>

Parameters

swap	Swap between Active and Alternate firmware image
always-on-poe	When the switch restart, it will retain PoE sourcing. Always On PoE (soft reboot) allows a warm reboot of the switch without affecting the PoE output to the PD, providing continuous power even during firmware upgrade.
upgrade	upgrade
<tftp://server/path and filename>	TFTP Server IP address, path & file name for server with the new image

EXAMPLE

```
SM8TBT2SA# firmware swap
<re-open the session>

Username: admin
Password:*****
SM8TBT2SA# show version
Active Image
------------
Partition       : secondary
Version         : v1.04.0124
Date            : 2023-12-19 11:10:26 UTC

Alternate Image
------------
Partition       : primary
Version         : v1.04.0102
Date            : 2023-08-18 10:11:52 UTC
SM8TBT2SA#
```

12. Ping Commands

Send ICMP echo messages.

Syntax

ping ip <ipv4_addr>

ping ip <ipv4_addr> repeat < Count : 1 60>] [size < Size : 2 1452>]

ping ipv6 <ipv6_addr>

ping ipv6 <ipv6_addr> [repeat < Count : 1 60>] [size < Size : 2 1452>]

ping hostname

Parameters

ip	IP (ICMP) echo
ipv6	IPv6 (ICMPv6) echo
hostname	domain name address
<ipv4_addr>	ICMP destination address (X.X.X.X)
repeat	Specify repeat count
size	Specify datagram size
<Count : 1 60>	1-60; Default is 5 (1..60)
<Size : 21452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers) (2..1452)
<ipv6_addr>	ICMPv6 destination address (X:X:X:X:X:X:X:X)

EXAMPLE

```
SM8TBT2SA# ping ip 192.168.1.77 repeat 5 size 3
PING 192.168.1.77 (192.168.1.77): 3 data bytes
11 bytes from 192.168.1.77: seq=0 ttl=64
11 bytes from 192.168.1.77: seq=1 ttl=64
11 bytes from 192.168.1.77: seq=2 ttl=64
11 bytes from 192.168.1.77: seq=3 ttl=64
11 bytes from 192.168.1.77: seq=4 ttl=64
--- 192.168.1.77 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
SM8TBT2SA#
```

13. Reload Commands

Reload system.

Syntax

reload warm

reload warm always-on-poe

reload defaults

reload defaults keep ip

Parameters

warm	Reload warm
defaults	Reload defaults without rebooting.
keep-ip	Attempt to keep VLAN1 IP setup.
always-on-poe	When the switch restarts, it will retain PoE sourcing.

EXAMPLE

```
SM8TBT2SA# reload ?
  warm      Reload warm
  defaults  Reload defaults without rebooting
SM8TBT2SA# reload defaults keep-ip
SM8TBT2SA#
SM8TBT2SA# reload defaults keep-ip
SM8TBT2SA# reload warm always-on-poe
<re-connect>
```

Note : when “always-on-poe” is disabled, the expected behavior for the command “Reload warm always-on-poe” is “keep providing PoE”. So with the command “always-on-poe”, the behavior of “keep providing PoE” is applied.

14. Show Commands

Show current system information.

Command	Function
aaa	Login methods
access	Access management configuration
access-list	Access list
aggregation	Aggregation configuration and Status
clock	Configure time-of-day clock
dot1x	IEEE Standard for port-based Network Access Control
event	Show trap event configuration
interface	Interface status and configuration
ip	Internet Protocol
ipv6	IPv6 configuration commands
lldp	show lldp configuration
logging	Syslog
loop-protect	show loop protection
mac	Mac Address Table information
map-api-key	show Google Maps API key configuration
mvr	Internet Protocol
ntp	Configure NTP
poe	show poe
port-security	show port security
privilege	Display privilege level configuration
pvlan	PVLAN status
qos	Quality of Service
radius-server	RADIUS configuration
rmon	RMON statistics
running-config	Current operating configuration
smtp	Show smtp configuration
snmp	Display SNMP configurations
spanning-tree	Spanning Tree protocol
system	Show system information
tacacs-server	TACACS+ configuration
trap	Trap configuration
upnp	show upnp configuration

version System software status
vlan VLAN status
voice show voice

aaa

Display Login methods.

SYNTAX

show aaa <cr>

EXAMPLE

```
SM8TBT2SA# show aaa
Automatic Redirect : Disabled

 Client  Method1  Method2  Method3 Service Port
------- -------- -------- -------- ------------
 telnet    local                       23
    ssh    local                       22
   http    local                       80
  https    local                      443

Authorization :
 Client Method Cmd Lvl Cfg Cmd Fallback
------- ------ ------- ------- --------
 telnet     no      0
    ssh tacacs     15      v       v

Accounting :
 Client Method Cmd Lvl Exec
------- ------ ------- ----
 telnet     no      0
    ssh tacacs     15    v

SM8TBT2SA#
```

access

Display Access management.

SYNTAX

show access management [<access_id_list>]

Parameters

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

EXAMPLE

```
SM8TBT2SA# show access management 1
Switch access management mode is : Disable
Idx VID  IP Address          HTTP/HTTPS SNMP TELNET/SSH
--- ---- -------------------- ---------- ---- ----------
1   3    192.168.1.30/32     N          N    N
SM8TBT2SA# show access management
Switch access management mode is : Disable
Idx VID  IP Address          HTTP/HTTPS SNMP TELNET/SSH
--- ---- -------------------- ---------- ---- ----------
1   3    192.168.1.30/32     N          N    N
SM8TBT2SA#
```

access-list

Display Access list.

SYNTAX

show access-list ace-status [static] [loop-protect] [dhcp] [upnp] [arp-inspection] [mep] [ipmc] [ip-source-guard] [ip-mgmt] [conflicts]

Parameters

ace	Access list entry
status	Show Access List status
<1~384>	ACE ID (1-384)
interface	Interface status.
*	All switches or All ports
GigabitEthernet	GigabitEthernet
<port_list>	Port List S/X-Y,Z (1/1-10)

EXAMPLE

```
SM8TBT2SA# show access-list ace
ID   Ingress Port    Frame        Action  Metering (Kbps)  Mirror    Counter
---  --------------  -----------  ------  ---------------  --------  -------
1    Any             IPv4-ICMP    Permit  Disabled         Disabled  Disabled
                     Redirect
2    Any             EType        Permit  Disabled         Disabled  Disabled
3    Any             IPv4         Permit  Disabled         Disabled  Disabled

Switch access-list ace number: 3
SM8TBT2SA#
SM8TBT2SA# show access-list ace 1
ID   Ingress Port    Frame        Action  Metering (Kbps)  Mirror    Counter
---  --------------  -----------  ------  ---------------  --------  -------
1    Any             IPv4-ICMP    Permit  Disabled         Disabled  Disabled
                     Redirect

Switch access-list ace number: 1
SM8TBT2SA#
SM8TBT2SA# show access-list status interface GigabitEthernet *
Syntax error: Illegal parameter
```

```
SM8TBT2SA# show access-list status interface GigabitEthernet 1/5
Interface               State
----------------------  -------------
GigabitEthernet 1/5     None

SM8TBT2SA#
SM8TBT2SA# show access-list status
Interface               State
----------------------  -------------
GigabitEthernet 1/1     None
GigabitEthernet 1/2     None
GigabitEthernet 1/3     None
GigabitEthernet 1/4     None
GigabitEthernet 1/5     None
GigabitEthernet 1/6     None
GigabitEthernet 1/7     None
GigabitEthernet 1/8     None
GigabitEthernet 1/9     None
GigabitEthernet 1/10    None

SM8TBT2SA#
```

aggregation

Display Aggregation port configuration.

SYNTAX

show aggregation [aggregators] [lacp] [mode] [status]

Parameters

aggregators	aggregator status
lacp	lacp local and neighbor info
mode	Traffic distribution mode
status	aggregation port status

EXAMPLE 1

```
SM8TBT2SA# show aggregation aggregators
Aggregator Gi 1/1
Method : LACP
Member Ports : Gi 1/1
Ready Ports :

Aggregator Gi 1/2
Method : Static
Member Ports : Gi 1/2
Ready Ports : Gi 1/2
::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::::::::
Aggregator Gi 1/17
Method : None
Member Ports : Gi 1/17
Ready Ports :

Aggregator Gi 1/18
Method : None
Member Ports : Gi 1/18
Ready Ports :


SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show aggregation lacp
Aggregator Gi 1/1 Information:
             Actor                          Partner
--------------------------------- ---------------------------------
System Priority    MAC Address    System Priority    MAC Address
--------------- ----------------- --------------- -----------------
     32768      00-40-C7-1C-CB-6E      32768      00-00-00-00-00-00

 Port    Key      Trunk Status         Port             Key
------ -------- ----------------- --------------- -----------------
   1     257           ---             1               0

SM8TBT2SA# show aggregation mode
Aggregation Hash Mode : src-dst-mac
LACP System Priority : 32768

SM8TBT2SA# show aggregation status
          Trunk Port Setting            Trunk Port Status
---------------------------------------- -----------------
port      Method Group LACP Role Timeout Aggregator Status
========== ====== ===== ========= ======= ========== ======
Gi 1/1     None     0   Active    Fast    Gi 1/1     Ready
Gi 1/2     None     0   Active    Fast    Gi 1/2     ---
Gi 1/3     None     0   Active    Fast    Gi 1/3     ---
Gi 1/4     None     0   Active    Fast    Gi 1/4     ---
Gi 1/5     LACP     1   Active    Fast    Gi 1/5     ---
Gi 1/6     None     0   Active    Fast    Gi 1/6     ---
Gi 1/7     None     0   Active    Fast    Gi 1/7     ---
Gi 1/8     None     0   Active    Fast    Gi 1/8     ---
Gi 1/9     None     0   Active    Fast    Gi 1/9     ---
Gi 1/10    None     0   Active    Fast    Gi 1/10    ---

SM8TBT2SA#
```

clock

Display time-of-day clock settings.

SYNTAX

show clock [detail]

Parameters

EXAMPLE

```
SM8TBT2SA# show clock
System Time : 2020-12-09 13:58:01
SM8TBT2SA#
```

dot1x

Display IEEE Standard for port-based Network Access Control.

SYNTAX

show dot1x status

show dot1x status interface { * | [Gigbitethernet <port _list>]

show dot1x statistics [eapol | radius | all] interface { * | [Gigbitethernet <port _list>]

show dot1x statistics [eapol | radius | all]

Parameters

statistics	Shows statistics for either eapol or radius.
all	Show all dot1x statistics
eapol	Show EAPOL statistics
radius	Show Backend Server statistic
<port_type >	GigabitEthernet
<port_type_list>	Port list in 1/1-26 for GigabitEthernet
Status	Shows dot1x status, such as admin state, port state and last source.
interface	Interface
*	All Switches or All Ports
GigabitEthernet	1 Gigabit Ethernet Port

EXAMPLE

```
SM8TBT2SA# show dot1x status interface GigabitEthernet 1/1-2
GigabitEthernet 1/1
---------------------
```

```
Admin State        Port State            Last Source       Last ID       Current Radius VLAN
Current Guest VLAN
-----------------  --------------------  ----------------  ------------  ---
---------------  ------------------
Force Authorized    Globally Disabled       -                -             -
                -
GigabitEthernet 1/2
---------------------
Admin State        Port State            Last Source       Last ID       Current Radius VLAN
Current Guest VLAN
-----------------  --------------------  ----------------  ------------  ---
---------------  ------------------
Force Authorized    Globally Disabled       -                -             -
                  -
SM8TBT2SA#

SM8TBT2SA# show dot1x statistics radius interface GigabitEthernet 1/5
                     Rx Access   Rx Other    Rx Auth.    Rx Auth.    Tx   MAC
Interface             Challenges  Requests    Successes   Failures    Responses
   Address
--------------------  ----------  ----------  ----------  ----------  ----------  -------
GigabitEthernet 1/5    0          0          0          0          0   -
SM8TBT2SA#
```

event

Show trap event configuration.

SYNTAX

show event <cr>

Parameters None.

EXAMPLE

```
SM8TBT2SA# show event
Group Name                      Severity Level     Syslog Mode    Trap Mode
------------------------------- ----------------   ------------   ------------
ACCESS-MGMT                     Info               Enabled        Disabled
ACL                             Info               Enabled        Disabled
ARP-INSPECTION                  Warning            Enabled        Disabled
AUTH-FAILED                     Warning            Enabled        Disabled
BCS-PROTECTION                  Info               Enabled        Disabled
COLD-START                      Warning            Enabled        Disabled
DHCP                            Info               Enabled        Disabled
DHCP-SNOOPING                   Info               Enabled        Disabled
IP-SOURCE-GUARD                 Info               Enabled        Disabled
LACP                            Info               Enabled Disabled
LINK-UPDOWN                     Warning            Enabled Disabled
LOGIN                           Info               Enabled Disabled
LOGOUT                          Info               Enabled Disabled
LOOP-PROTECTION                 Info               Enabled Disabled
MAC-TABLE                       Info Enabled Disabled
MAINTENANCE                     Info Enabled Disabled
MGMT-IP-CHANGE                  Info Enabled Disabled
NAS                             Info Enabled Disabled
PORT                            Info Enabled Disabled
PORT-SECURITY                   Info Enabled Disabled
RMON                            Info Enabled Disabled
SFP                             Info Enabled Disabled
SPANNING-TREE                   Info Enabled Disabled
SYSTEM                          Info Enabled Disabled
USER                            Info Enabled Disabled
WARM-START                      Warning Enabled Disabled
SM8TBT2SA#
```

interface

Display Interface status and configuration.

SYNTAX

show interface vlan <vlan_list>

show interface vlan

show interface { * | [GigabitEthernet <port _list>] } green ethernet

show interface { * | [GigabitEthernet <port _list>] capabilities

show interface { * | [GigabitEthernet <port _list>] } statistic s [bytes | discards | errors | packets] [up | down]

show interface { * | [GigabitEthernet <port _list>] } statistics [up | down] [bytes | discards | errors | packets

show interface { * | [GigabitEthernet <port _list>] } status

Parameters

vlan	VLAN status
*	All switches or All ports
GigabitEthernet	GigabitEthernet
green-ethernet	Display green-ethernet
status	Display status
statistics	Display statistics
capabilities	Display interface capabilities
<port_list>	Port List S/X-Y,Z (1/1-18)
<vlan_list>	List of VLAN interface numbers (1-4095)
bytes	Show byte statistics
discards	Show discard statistics
errors	Show error statistics
packets	Show packet statistics
up	Show ports which are up
down	Show ports which are down

EXAMPLE 1

```
SM8TBT2SA# show interface vlan
VLAN1
  Link: 00-C0-F2-7C-57-3F UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
  IPv4: 192.168.1.77/24 Manual
  IPv6: fe80::2c0:f2ff:fe7c:573f/64 Link Local Address
SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show interface * 1/2-4 status
                                Speed       Rx    Tx    Flow
Interface               Link     Configured   Pause Pause Control
------------------------       --------    -----------     -----  -----   --------
GigabitEthernet 1/2      down     Auto        Off   Off   Disabled
GigabitEthernet 1/3      down     Auto        Off   Off   Disabled
GigabitEthernet 1/4      down     Auto        Off   Off   Disabled
SM8TBT2SA# show interface * 1/2 statistics
GigabitEthernet 1/2 Statistics:
Rx Packets:                        0  Tx Packets:                        0
Rx Octets:                         0  Tx Octets:                         0
Rx Unicast:                        0  Tx Unicast:                        0
Rx Multicast:                      0  Tx Multicast:                      0
Rx Broadcast:                      0  Tx Broadcast:                      0
Rx Pause:                          0  Tx Pause:                          0
Rx 64:                             0  Tx 64:                             0
Rx 65-127:                         0  Tx 65-127:                         0
Rx 128-255:                        0  Tx 128-255:                        0
Rx 256-511:                        0  Tx 256-511:                        0
Rx 512-1023:                       0  Tx 512-1023:                       0
Rx 1024-1518:                      0  Tx 1024-1518:                      0
Rx 1519-    :                      0  Tx 1519-    :                      0
Rx Drops:                          0  Tx Drops:                          0
Rx Undersize:                      0  Tx Undersize:                      0
Rx Oversize:                       0  Tx Oversize:                       0
Rx CRC/Alignment:                  0  Tx Late Coll.:                     0
Rx Fragments:                      0  Tx Excessive Coll.:                0
Rx Jabbers:                        0
SM8TBT2SA#
```

EXAMPLE 3

```
SM8TBT2SA# show interface GigabitEthernet 1/9 capabilities
GigabitEthernet 1/9 Capabilities:
Connector Type      : SFP or SFP Plus - LC
Fiber Type          : Multi-mode (MM)
Tx Central Wavelength: 850
```

```
Bit Rate            : 1000 Mbps
Vendor OUI          : 00-c0-f2
Vendor Name         : Transition
Vendor P/N          : TN-SFP-SXD
Vendor Revision     : 0000
Vendor Serial Number : 8672105
Date Code           : 091027
Temperature         : 48.25 C
Vcc                 : 3.27 V
Mon1 (Bias)         : 15 mA
Mon2 (TX PWR)       : -6.14 dBm
Mon3 (RX PWR)       : none

SM8TBT2SA#
```

ip

Display Internet Protocol settings.

SYNTAX

show ip arp

show ip arp inspection

show ip arp inspection entry { [dhcp snooping interface] | [interface] | [static interface] } { * | [GigabitEthernet <port _list>]

show ip arp inspection interface { * | [GigabitEthernet <port _list>]

show ip arp inspection vlan <vlan_list>

show ip dhcp pool

show ip dhcp pool <vlan_id>

show ip dhcp relay

show ip dhcp relay statistics

show ip dhcp server

show ip dhcp server status

show ip dhcp snooping

show ip dhcp snooping table

show ip dhcp snooping interface { * | [GigabitEthernet <port _list>]

show ip dhcp snooping statistics

show ip dhcp snooping statistics interface { * | [GigabitEthernet <port _list>]

show ip igmp snooping

show ip igmp snooping [detail | group database | mrouter | vlan]

show ip interface brief

show ip name server

show ip route

show ip source binding

show ip source binding dhcp snooping

show ip source binding dhcp snooping interface { * | [GigabitEthernet <port _list>]

show ip source binding interface { * | [GigabitEthernet <port _list>] }

show ip source binding static

show ip source binding static interface { * | [GigabitEthernet <port _list>] }

show ip verify source

show ip verify source interface { * | [GigabitEthernet <port _list>]

Parameters

arp	Address Resolution Protocol
inspection	ARP inspection
interface	arp inspection entry interface config
<port_type>	Gigabit Ethernet
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet
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
link-local	Link-Local address binding interface
pool	DHCP server pool
interface	IP address binding interface
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

```
SM8TBT2SA# show ip dhcp snooping
Switch DHCP snooping is disabled
DHCP snooping is configured on following
GigabitEthernet 1/1 trusted
GigabitEthernet 1/2 trusted
GigabitEthernet 1/3 trusted
GigabitEthernet 1/4 trusted
GigabitEthernet 1/5 trusted
GigabitEthernet 1/6 trusted
GigabitEthernet 1/7 trusted
GigabitEthernet 1/8 trusted
SM8TBT2SA# show ip igmp snooping
IGMP Snooping is disabled to stop snooping IGMP control plane.
SM8TBT2SA# show ip igmp snooping group-database
IGMP Snooping is disabled to stop snooping IGMP control plane.
Groups in range 232.0.0.0/8 follow IGMP SSM registration service model.
SM8TBT2SA# show ip interface brief
Network             Gateway           Interface  Status
------------------- ----------------- ---------- ----------
127.0.0.0/24         0.0.0.0           OS:lo     UP
192.168.1.0/24       0.0.0.0           VLAN1     UP
169.254.0.0/16       0.0.0.0           VLAN1     UP
0.0.0.0/0           192.168.1.254      VLAN1     UP GATEWAY
0.0.0.0/0           0.0.0.0           VLAN1     UP
SM8TBT2SA# show ip name-server
Current DNS server is not set.
SM8TBT2SA# show ip dhcp pool 1
```

```
VLAN id of Pool: 1
-------------------------------------------
  Start IP address is 10.0.4.10
  End IP address is 10.0.4.17
  Lease time is 86400 seconds
  Subnet Mask is 255.255.255.0
  Default router is not configured
  DNS server is not configured
SM8TBT2SA# show ip link-local interface
Link-Local Address binding interface: 100
SM8TBT2SA# show ip dhcp relay
Switch DHCP relay mode is disable
Switch DHCP relay server address is 0.0.0.0
Switch DHCP relay information option is disable
Switch DHCP relay information policy is replace
SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show ip route
Network             Gateway           Interface  Status
------------------- ----------------- ---------- ----------
127.0.0.0/24        0.0.0.0           OS:lo     UP
192.168.1.0/24      0.0.0.0           VLAN1     UP
169.254.0.0/16      0.0.0.0           VLAN1     UP
0.0.0.0/0           192.168.1.254     VLAN1     UP GATEWAY
0.0.0.0/0           0.0.0.0           VLAN1     UP
SM8TBT2SA# show ip source binding
Type     Port                    IP Address      MAC Address
----     ----                    ----------      -----------
SM8TBT2SA# show ip verify source
IP Source Guard Mode : Enabled
Port                    Port Mode Max Dynamic Clients
----                    --------- ------------------
GigabitEthernet 1/1      disabled  unlimited
GigabitEthernet 1/2      disabled  unlimited
GigabitEthernet 1/3      disabled  unlimited
GigabitEthernet 1/4      disabled  unlimited
```

```
GigabitEthernet 1/5      disabled  unlimited
GigabitEthernet 1/6      disabled  unlimited
GigabitEthernet 1/7      disabled  unlimited
GigabitEthernet 1/8      disabled  unlimited
SM8TBT2SA#
SM24TBT4SA# show ip interface brief
Interface        Address              Method             Status
---------------  -------------------  -----------------  ------
VLAN1            192.168.1.77/24      Manual             UP
VLAN10           1.2.3.4/16           DHCP Fallback      UP
SM24TBT4SA#
SM8TBT2SA# show ip interface brief
Interface Address Method Status
--------------- ------------------- ------------- ------
VLAN1 192.168.1.1/24 Manual UP
SM8TBT2SA#
```

ipv6

Display IPv6 configuration.

SYNTAX

show ipv6 interface [vlan <vlan_list> { brief | statistics }] [| {begin | exclude | include } <LINE>]

show ipv6 mld snooping [vlan <vlan_list>] [group-database [interface <port_type> <port_type_list>] [sfm-information]] [detail]

show ipv6 mld snooping mrouter [detail]

show ipv6 neighbor [interface vlan <vlan_list>]

show ipv6 route [interface vlan <vlan_list>]

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>	Gigabit Ethernet
*	All Switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet
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
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

EXAMPLE

```
SM8TBT2SA# show ipv6 mld snooping detail
MLD Snooping is disabled to stop snooping IGMP control plane.
Multicast streams destined to unregistered MLD groups will be flooding.
SM8TBT2SA#

SM8TBT2SA# show ipv6 interface vlan 1 brief
IPv6 VLAN1 interface is up.
  Internet address is fe80::240:c7ff:fe1c:cb6e/64
  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
SM8TBT2SA#

SM8TBT2SA# show ipv6 neighbor interface vlan 1
SM8TBT2SA#

SM8TBT2SA# show ipv6 route
::1/128 via :: in OS:lo is UP
fe80::240:c7ff:fe1c:cb6e/128 via :: in OS:lo is UP
fe80::/64 via :: in VLAN1 is UP
ff00::/8 via :: in VLAN1 is UP
SM8TBT2SA#
```

Messages:

MLD Snooping is enabled to start snooping IGMP control plane.

(MLD proxy for JOIN/LEAVE mechanism is active)

Multicast streams destined to unregistered MLD groups will be flooding.

lldp

Display LLDP neighbors information.

SYNTAX

show lldp med media-vlan-policy [<0~31>]

show lldp med remote-device [interface <port_type> <port_type_list>]

show lldp neighbors [interface <port_type> <port_type_list>]

show lldp statistics [interface <port_type> <port_type_list>]

Parameters

interface	Interface to display.
med	Display LLDP-MED neighbors information.
neighbors	Display LLDP neighbors information.
statistics	Display LLDP statistics information.

EXAMPLE 1

```
SM8TBT2SA# show lldp interface GigabitEthernet 1/2
LLDP Configuration
======================================
TX Interval : 30 sec
TX Hold : 4 sec
TX Delay : 2 sec
TX Reinit : 2 sec


GigabitEthernet 1/2
------------------------------
TX/RX Mode : Enabled
CDP Aware  : Enable
Port Descr : Enable
Sys Name : Enable
Sys Descr : Enable
Sys Capa : Enable
Mgmt Addr : Enable



SM8TBT2SA
```

EXAMPLE 2

```
SM8TBT2SA# show lldp neighbors
------------------------------
Local Interface     : Port 9
Chassis ID          : 00-C0-F2-4C-43-A2
Port ID             : 29
Port Description     : 10GigabitEthernet 1/1
System Name        : SISPM1040-3248-L
System Description   : Managed Hardened PoE+ Switch, (24) 10/100/1000Base-T PoE+ports + (4)
100/1000Base-X SFP/RJ-45 Combo + (4) 1G/10G SFP+
System Capabilities   : Bridge(+)
Management Address  : 192.168.90.51 (IPv4)
Power Over Ethernet :


------------------------------
Local Interface      : Port 10
Chassis ID          : 00-C0-F2-46-87-38
Port ID             : 17
Port Description     : SM8TBT2SA
System Name       : SM16TAT2DPA
System Description  : Managed Switch, 16-port Gigabit PoE+, 2-port SFP/RJ-45 Combo
System Capabilities  : Bridge(+)
Management Address  : 192.168.90.4 (IPv4)
Power Over Ethernet :



SM8TBT2SA#
SM8TBT2SA# show lldp neighbors
No LLDP entries found

SM8TBT2SA#
```

EXAMPLE 3

```
SM8TBT2SA# show lldp med media-vlan-policy
Policy Id  Application Type         Tag      Vlan ID  L2 Priority  DSCP
---------  -----------------------  -------  -------  -----------  ----
0          Voice                    Tagged   1        0            0
SM8TBT2SA# show lldp statistics interface GigabitEthernet 1/1
LLDP global counters
=====================================
Neighbor entries was last changed at : 5844 days, 0:36:01
 (504923761 sec. ago)
Total Neighbors Entries Added    : 0
Total Neighbors Entries Deleted  : 0
Total Neighbors Entries Dropped  : 0
Total Neighbors Entries Aged Out : 0

LLDP local counters
=====================================
GigabitEthernet 1/1
------------------------------
TX Frames : 0
RX Frames : 0
RX Errors : 0
RX Discards : 0
RX TLV Errors : 0
RX TLV Unknown : 0
RX TLV Organiz. : 0
Aged : 0


SM8TBT2SA#
```

logging

Display Syslog information.

SYNTAX

show logging <loggin_id : 1-4294967295>

show logging [alert] [crit] [debug] [emerg] [error] [info] [notice] [warning]

Parameters

<logging_id>	Logging ID (1..4294967295)
alert	Alert
crit	Critical
debug	Debug
emerg	Emergency
error	Error
info	Information
notice	Notice
warning	Warning
<cr>	

EXAMPLE

```
SM8TBT2SA# show logging <tab>
alert   crit    debug   emerg   error   info    notice  warning
SM8TBT2SA# show logging info
Switch logging host mode is enable
Host address 1 : 192.168.1.77
Host address 2 :
Host address 3 :
Host address 4 :
Host address 5 :
Host address 6 :

Number of entries on Switch:
ID    Level    Time                 Message
----  -------  -------------------  ----------------------------
1     Warning  2017-01-01 00:00:06    WARM-START: Switch just made a warm boot.
2     Warning  2017-01-01 00:00:18    LINK-UPDOWN: Interface GigabitEthernet 1/2, changed state to
up.
```

```
3     Info     2017-01-01 00:13:48    LOGIN: Login passed for user 'admin'
4     Info     2017-01-01 00:46:20    LOGOUT: User 'admin' logout
5     Info     2017-01-01 00:46:47    LOGIN: Login passed for user 'admin'
28    Info     2018-03-02 04:27:48    SFP: SFP module inserted on port 18
29    Info     2018-03-02 04:27:48    SFP: SFP module inserted on port 17
30    Info     2018-03-02 04:27:49    SFP: Interface GigabitEthernet 1/17 rx power 0.00 exceeds
Alarm-Low Limitation
31    Info     2018-03-02 04:28:04    SFP: Interface GigabitEthernet 1/18 rx power 0.00 exceeds
Alarm-Low Limitation
32    Info     2018-03-02 04:47:42    LOGOUT: User 'admin' logout
33    Info     2018-03-02 05:10:13    LOGIN: Login passed for user 'admin'
34    Info     2018-03-02 05:49:24    LOGOUT: User 'admin' logout
SM8TBT2SA#
```

loop-protect

Display Loop protection configuration settings.

SYNTAX

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

Parameters

interface	Interface status and configuration
<port_type >	GigabitEthernet
*	All Switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA# show loop-protect interface GigabitEthernet ?
  <port_list>  Port List S/X-Y,Z (1/1-18)
SM8TBT2SA# show loop-protect interface GigabitEthernet 1/1-2
Loop Protection Configuration
====================================
Loop Protection   : Disable
Transmission Time : 5 sec
Shutdown Time     : 180 sec
GigabitEthernet 1/1
------------------------------
Mode : Enabled
Action : Shutdown
Transmit mode : Disabled
The number of loops : 0
loop : -
Status : Up

SM8TBT2SA#
```

mac

Display Mac Address Table information.

SYNTAX

address	MAC address lookup
aging-time	Aging time
conf	User added static mac addresses
count	Total number of mac addresses
interface	Select an interface to configure
learning	Learn/disable/secure state
static	All static mac addresses
vlan	Addresses in this VLAN

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>	Gigabit Ethernet
*	All switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26
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
vlan	Addresses in this VLAN
<vlan_id>	VLAN IDs 1-4095
interface	Select an interface to configure
<port_type>	GigabitEthernet
*	All Switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE 1

```
SM8TBT2SA# show mac address-table
Type    VID  MAC Address       Block Ports
------- ---- ----------------- ----- -------------------------
Dynamic 1    00-18-85-11-E4-0B  No    GigabitEthernet 1/1
Static  1000 00-C0-F2-49-AB-14  No    CPU
Dynamic 1    00-00-5E-00-01-04  No    GigabitEthernet 1/1
Static  1    00-C0-F2-49-AB-14  No    CPU
Static  100  00-C0-F2-49-AB-14  No    CPU
Dynamic 1    AC-CC-8E-AD-F8-2A  No    GigabitEthernet 1/1
Dynamic 1    00-C0-F2-44-A6-ED  No    GigabitEthernet 1/1
Dynamic 1    00-80-A3-D1-1E-3A  No    GigabitEthernet 1/1
Dynamic 1    00-C0-F2-4A-F9-FB  No    GigabitEthernet 1/1
Dynamic 1    00-C0-F2-7F-8F-00  No    GigabitEthernet 1/1
Dynamic 1    00-C0-F2-4C-3D-72  No    GigabitEthernet 1/1
Dynamic 1    00-0D-B9-50-B7-74  No    GigabitEthernet 1/1


SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show mac address-table static
Type    VID  MAC Address       Block Ports
------- ---- ----------------- ----- -------------------------
Static  1    00-40-C7-1C-CB-6E  No    CPU
SM8TBT2SA#
SM8TBT2SA# show mac address-table learning
Port                     Learning
-------------------------  --------
GigabitEthernet 1/1       auto
GigabitEthernet 1/2       auto
GigabitEthernet 1/3       auto
GigabitEthernet 1/4       auto
GigabitEthernet 1/5       auto
GigabitEthernet 1/6       auto
GigabitEthernet 1/7       auto
GigabitEthernet 1/8       auto
GigabitEthernet 1/9       auto
```

```
GigabitEthernet 1/10      auto
SM8TBT2SA#
SM8TBT2SA# show mac address-table vlan 1
Type    VID  MAC Address       Block Ports
------- ---- ----------------- ----- -------------------------
Dynamic 1    00-1B-11-B2-6D-4B  No    GigabitEthernet 1/1
Static  1    00-40-C7-1C-CB-6E  No    CPU

SM8TBT2SA#
```

map-api-key

Display Google Map Key configurations. This command lets you view the Google Map API Key from https://developers.google.com/maps/documentation/embed/get-api-key to use DMS Map View for enterprise applications.

Specify the Google API Key. To use the Google Maps Embed API, you must register your app project on the Google API Console and get a Google API key which you can add to your app or website.

SYNTAX

map-api-key word127 <cr>

Parameters

word127 Google map key string (word127)

EXAMPLE

```
SM8TBT2SA(config)# map-api-key abcdefg1234567
SM8TBT2SA(config)# do show map-api-key
Key               : abcdefg1234567
SM8TBT2SA# show map-api-key
Key               : abcdefg1234567
SM8TBT2SA#
```

mvr

Display Multicast VLAN Registration configuration settings.

SYNTAX

show mvr [vlan <vlan_list> | name <word16>] [group-database [interface <port_type> <port_type_list>] [sfm-information]] [detail] [| {begin | exclude | include } <LINE>]

Parameters

detail Detail running information/statistics of MVR

group-database Multicast group database from MVR

<cr>

EXAMPLE

```
SM8TBT2SA# show mvr detail
MVR is currently disabled, please enable MVR to start group registration.

Switch-1 MVR-IGMP Interface Status

SM8TBT2SA# show mvr group-database
MVR is currently disabled, please enable MVR to start group registration.

MVR Group Database

Switch-1 MVR Group Count: 0
SM8TBT2SA#
```

ntp

Show NTP status.

SYNTAX

show ntp status

Parameters

status status

EXAMPLE

```
SM8TBT2SA# show ntp status
NTP Mode : Disable
Interval : 1440 min
Idx   Server IP host address (a.b.c.d) or a host name string
---   ----------------------------------------------------
1     1.2.6.8
2
3
4
5
6

SM8TBT2SA#
```

poe

Show PoE parameters.

SYNTAX

show poe auto-check [interface (<port_type> [<v_port_type_list>])]

show poe config [interface (<port_type> [<v_port_type_list>])]

show poe power-delay [interface (<port_type> [<v_port_type_list>])]

show poe auto check

show poe profile

show poe profile id <1--16>

show poe status

show poe status interface { * | [interface { * | [GigabitEthernet <port _list>] }<port _list>] }

show poe non-stop-poe

Parameters

status	Display PoE (Power Over Ethernet) status for the switch.
auto-check	Display PoE Auto Checking config for the switch.
config	Display PoE (Power Over Ethernet) config for the switch.
power-delay	Display PoE (Power Over Ethernet) Power Delay config for the switch.
profile	Poe scheduling profile.
always-on-poe	When the switch restart, it will retain PoE sourcing.
interface	Interface status and configuration.
*	All ports
GigabitEthernet	GigabitEthernet
<port_list>	Port List S/X-Y,Z (1/1-10)
id	show poe profile
<1-16>	Profile id (1..16)

EXAMPLE 1

```
SM8TBT2SA# show poe config
Primary Power Supply [W]        : 240
Reserved Power determined by : Class
Capacitor Detection              : Disabled
Interface                    Mode         Extend PoE Mode   Priority   Max. Power [W]
---------------------   --------   ---------------   --------   --------------
GigabitEthernet 1/1      Enabled    Enabled             Critical                  30
GigabitEthernet 1/2      Enabled    Enabled             High                      30
```

```
GigabitEthernet 1/3     Enabled   Enabled          Low                 30
GigabitEthernet 1/4     Enabled   Enabled          Low                 30
GigabitEthernet 1/5     Enabled   Enabled          High                90
GigabitEthernet 1/6     Enabled   Enabled          High                90
GigabitEthernet 1/7     Enabled   Disabled         Low                 90
GigabitEthernet 1/8     Enabled   Enabled          Low                 90

SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show poe status
                                              Power    Power      Power    Current
Interface               PD Class  Port Status    Override Alloc [W]  Used[W] Used[mA] Priority
----------------------  --------  --------------  -------- --------- ------- -------- ------
GigabitEthernet 1/1        0  Voltage injection    0        15.4       0.0        0   Critical
GigabitEthernet 1/2        3  PoE turned ON         0       15.4        5.5      103   High
GigabitEthernet 1/3        3  Invalid PD            0        15.4       0.0        0   High
GigabitEthernet 1/4        2  Invalid PD            0         7.0       0.0        0   Low
GigabitEthernet 1/5        -  No PD detected        0         0.0       0.0        0   Low
GigabitEthernet 1/6        -  No PD detected        0         0.0       0.0        0   Low
GigabitEthernet 1/7        -  No PD detected        0         0.0       0.0        0   Low
GigabitEthernet 1/8        -  No PD detected        0         0.0       0.0        0   Low
Total                                                        53.2       5.5      103
Balance PoE Power Available      76.8 [W]
SM8TBT2SA#
```

EXAMPLE 3

```
SM8TBT2SA# show poe auto-check
Ping Check : Enabled
Port    IP           Startup Interval Retry Failure Log      Failure   Reboot    Max Reboot
                     Time    Time     Times                  Action    Time      Times
------- ------------ ------- -------- ----- ---------------- --------- -----     ---------
Gi 1/1 192.168.1.77   60       30       1     error=0,total=0  Reboot       3        2
Gi 1/2 10.0.4.104     60       40       2     error=0,total=0  Reboot      30        1
Gi 1/3 172.16.46.55   60       50       3     error=0,total=0  Reboot      15        7
Gi 1/4 172.16.46.43   60       60       4     error=0,total=0  Reboot      11        0
```

```
Gi 1/5 10.0.4.3       60       30       5     error=0,total=0  Reboot       15         0
Gi 1/6 10.0.4.4       60       30       2     error=0,total=0  Reboot       10         0
Gi 1/7 0.0.0.0        60       30       3     error=0,total=0  Reboot       15        0
Gi 1/8 0.0.0.0        60       30       3     error=0,total=0  Reboot       15        0
SM8TBT2SA# show poe always-on-poe
Non-Stop-PoE Status : Disabled


SM8TBT2SA#
```

port-security

Show Port Security Interface status and configuration.

SYNTAX

show port-security switch <port_list> Port List S/X-Y,Z (1/1-18)

Parameters

switch	Show Port Security status.
Interface	**Select interface**
<port_type >	GigabitEthernet
*	All Switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA# show port-security switch interface GigabitEthernet 1/1-2
Interface               State         MAC Cnt
----------------------  ------------  -------
GigabitEthernet 1/1     Disabled      -
GigabitEthernet 1/2     Disabled      -
SM8TBT2SA# show port-security switch interface *
Interface               State         MAC Cnt
----------------------  ------------  -------
GigabitEthernet 1/1     Disabled      -
GigabitEthernet 1/2     Ready         0
GigabitEthernet 1/3     Ready         0
GigabitEthernet 1/4     Ready         0
GigabitEthernet 1/5     Ready         0
GigabitEthernet 1/6     Ready         1
GigabitEthernet 1/7     Disabled      -
GigabitEthernet 1/8     Disabled      -
GigabitEthernet 1/9     Disabled      -
GigabitEthernet 1/10    Disabled      -

SM8TBT2SA#
```

privilege

Show Privilege group status.

SYNTAX

show privilege group

Parameters

Privilege group name (access mgmt / arp inspection / auth method / dhcp relay / dhcp snooping / diagnostic / dot1x / eee / event / forward failure / ip / ipmc / ip source guard / lacp / lldp / loop protection / mac table / mirror / mvr / poe / port / port security / qos / radius / snmp / stp / system / upnp / vlan)

EXAMPLE

```
SM8TBT2SA# show privilege group auth-method level
Group Name                     Read-only  Read-write
-----------------------------  ---------  ----------
auth-method                            5         10


SM8TBT2SA#
SM8TBT2SA# show privilege ?
  group  Privilege group name
SM8TBT2SA# show privilege group level
Group Name                     Read-only  Read-write
-----------------------------  ---------  ----------
access-mgmt                            5         10
account                               15         15
acl                                    5         10
arp-inspection                         5         10
auth-method                            5         10
dhcp-relay                             5         10
dhcp-server                            5         10
dhcp-snooping                          5         10
diagnostic                             5         10
dot1x                                  5         10
eee                                    5         10
event                                  5         10
ip                                     5         10
ipmc                                   5         10
ip-source-guard                        5         10
```

```
lacp                                5          10
lldp                                5          10
loop-protection                      5          10
mac-table                           5          10
maintenance                        15          15
mirror                              5          10
mvr                                 5          10
poe                                 5          10
port                                5          10
port-security                        5          10
privilege-level                    15          15
qos                                 5          10
radius                              5          10
tacacs                              5          10
snmp                                5          10
stp                                 5          10
system                              5          10
upnp                                5          10
vlan                                5          10

SM8TBT2SA#
```

pvlan

Display PVLAN (Private VLAN) status.

SYNTAX

<pvlan_list> PVLAN ID to show configuration for (1-18)

isolation show isolation configuration

<cr>

Parameters

<range_list>	PVLAN id to show configuration for 1-18 (on the SM8TBT2SA)
isolation	show isolation configuration
<port_type >	GigabitEthernet
*	All Switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet

EXAMPLE

```
SM8TBT2SA# show pvlan isolation interface GigabitEthernet 1/1-2
Port                          Isolation
------------------------------ ---------
GigabitEthernet 1/1            Disabled
GigabitEthernet 1/2            Enabled
SM8TBT2SA#

SM8TBT2SA# show pvlan
PVLAN ID  Ports
--------  --------------------------------------------------------------------------------
1         GigabitEthernet 1/4 GigabitEthernet 1/5 GigabitEthernet 1/6

SM8TBT2SA#
```

qos

Display Quality of Service status.

SYNTAX

show qos [{ interface [<port_type> <port_type_list>] } | wred | { maps [dscp-cos] [dscp-ingress-translation] [dscp-classify] [cos-dscp] [dscp-egress-translation] } | storm | { qce [<Qce : 1-256>] }] [| {begin | exclude | include } <LINE>

Parameters

interface	QoS Interface status and configuration
map	Display global QoS Maps/Tables
GigabitEthernet	GigabitEthernet
*	All switches or All ports
<port_list>	Port List S/X-Y,Z (1/1-10)
cos-queue	Map for CoS to queue
dscp-queue	Map for DSCP to queue
precedence-queue	Map for IP Precedence to queue
queue-cos	Map for queue to CoS
queue-dscp	Map for queue to DSCP
queue-precedence	Map for queue to IP Precedence

EXAMPLE 1

```
SM8TBT2SA# show qos interface * 1/5
interface GigabitEthernet 1/5
 qos cos 0
 qos source-cos c-tag
 qos trust disabled
 qos remark cos disabled
 qos remark dscp disabled
 qos remark ip-precedence disabled
 qos policer mode: disabled, rate: 1000000 Kbps
 qos shaper mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 0 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 1 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 2 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 3 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 4 mode: disabled, rate: 1000000 Kbps
```

```
 qos queue-shaper queue 5 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 6 mode: disabled, rate: 1000000 Kbps
 qos queue-shaper queue 7 mode: disabled, rate: 1000000 Kbps
 qos storm broadcast mode: disabled, rate: 500 Kbps
 qos storm unknown-multicast mode: disabled, rate: 500 Kbps
 qos storm unknown-unicast mode: disabled, rate: 500 Kbps
 qos scheduler mode: strict-priority

SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show qos map

CoS to Queue mappings
 CoS     0  1  2  3  4  5  6  7
-------+------------------------
 Queue   6  4  2  3  4  5  6  7

DSCP to Queue mappings
 DSCP Queue  DSCP Queue  DSCP Queue  DSCP Queue
 ----+-----  ----+-----  ----+-----  ----+-----
   0     0     1     0     2     0     3     6
   4     0     5     0     6     0     7     0
   8     1     9     1    10     1    11     1
  12     1    13     1    14     1    15     1
  16     2    17     2    18     2    19     2
  20     2    21     2    22     2    23     2
  24     3    25     3    26     3    27     3
  28     3    29     3    30     3    31     3
  32     4    33     4    34     4    35     4
  36     4    37     4    38     4    39     4
  40     5    41     5    42     5    43     5
  44     5    45     5    46     5    47     5
  48     6    49     6    50     6    51     6
  52     6    53     6    54     6    55     6
  52     6    53     6    54     6    55     6
```

```
   60     7    61     7    62     7    63     7



IP Precedence to Queue mappings
 IP Precedence   0  1  2  3  4  5  6  7
---------------+------------------------
 Queue           0  1  2  3  6  5  6  7

Queue to CoS mappings
 Queue   0  1  2  3  4  5  6  7
-------+------------------------
 CoS     4  1  2  4  4  5  6  7

Queue to DSCP mappings
 Queue   0  1  2  3  4  5  6  7
-------+------------------------
 DSCP    0  8  50 24 32 33 48 56

Queue to IP Precedence mappings
 Queue           0  1  2  3  4  5  6  7
---------------+------------------------
 IP Precedence   0  5  4  3  4  5  6  7

SM8TBT2SA#
```

radius-server

Display RADIUS configuration status and statistics.

SYNTAX

show radius-server [statistics]

Parameters

statistics RADIUS statistics

EXAMPLE

```
SM8TBT2SA# 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         : 51164fc2a4b3e3299a83310b04180a552e76508a3e07 ec2c9f4601ab3b6d53

Global RADIUS Server Attribute 4  : 192.168.1.111

Global RADIUS Server Attribute 95 :

Global RADIUS Server Attribute 32 : Bobb

RADIUS Server #1:

Host name  : 111111

Auth port  : 1812

Acct port  : 1813

Timeout    : 5 seconds

Retransmit : 3 times

Key        : admin

RADIUS Server #2:

Host name  : 10.0.5.55

Auth port  : 577

Acct port  : 765

Timeout    :

Retransmit : 400 times

Key        :

RADIUS Server #1 (111111:1812) Authentication Statistics:

Rx Access Accepts:                 0   Tx Access Requests:                0

Rx Access Rejects:                 0   Tx Access Retransmissions:          0

Rx Access Challenges:              0   Tx Pending Requests:               0

Rx Malformed Acc. Responses:        0   Tx Timeouts:                       0

Rx Bad Authenticators:             0
```

```
Rx Unknown Types:                  0

Rx Packets Dropped:                0

State:                         Ready

Round-Trip Time:                   0 ms


RADIUS Server #1 (111111:1813) Accounting Statistics:

Rx Responses:                      0   Tx Requests:                      0

Rx Malformed Responses:            0   Tx Retransmissions:               0

Rx Bad Authenticators:             0   Tx Pending Requests:              0

Rx Unknown Types:                  0   Tx Timeouts:                      0

Rx Packets Dropped:                0

State:                         Ready

Round-Trip Time:                   0 ms


RADIUS Server #2 (10.0.5.55:577) Authentication Statistics:

Rx Access Accepts:                 0   Tx Access Requests:               0

Rx Access Rejects:                 0   Tx Access Retransmissions:        0

Rx Access Challenges:              0   Tx Pending Requests:              0

Rx Malformed Acc. Responses:       0   Tx Timeouts:                      0

Rx Bad Authenticators:             0

Rx Unknown Types:                  0

Rx Packets Dropped:                0

State:                         Ready

Round-Trip Time:                   0 ms

RADIUS Server #2 (10.0.5.55:765) Accounting Statistics:

Rx Responses:                      0   Tx Requests:                      0

Rx Malformed Responses:            0   Tx Retransmissions:               0

Rx Bad Authenticators:             0   Tx Pending Requests:              0

Rx Unknown Types:                  0   Tx Timeouts:                      0

Rx Packets Dropped:                0

State:                         Ready

Round-Trip Time:                   0 ms


SM8TBT2SA#
```

rmon

Display RMON statistics, history, alarms, and events.

SYNTAX

show rmon statistics <1-65535> Statistics entry list (1..65535)

show rmon history <1-65535> History entry list (1..65535)

show rmon alarm <1-65535> Alarm entry list (1..65535)

show rmon alarm <cr>

show rmon event <1-65535> Event entry list (1..65535)

Parameters

statistics	Display the RMON statistics table
history	Display the RMON history table
alarm	Display the RMON alarm table
event	Display the RMON event table
<1-65535>	Statistics entry list (1..65535)
<1-65535>	History entry list (1..65535)
<1-65535>	Alarm entry list (1..65535)
<1-65535>	Event entry list (1..65535)

EXAMPLE

```
SM8TBT2SA# show rmon statistics 1
Statistics ID :     1
----------------------
   Data Source : .1.3.6.1.2.1.2.2.1.1.1
   etherStatsDropEvents         : 0
   etherStatsOctets             : 0
   etherStatsPkts               : 0
   etherStatsBroadcastPkts      : 0
   etherStatsMulticastPkts      : 0
   etherStatsCRCAlignErrors     : 0
   etherStatsUndersizePkts      : 0
   etherStatsCRCAlignErrors     : 0
   etherStatsUndersizePkts      : 0
   etherStatsOversizePkts       : 0
   etherStatsFragments          : 0
   etherStatsJabbers            : 0
   etherStatsCollisions         : 0
```

```
    etherStatsPkts64Octets       : 0
    etherStatsPkts65to127Octets   : 0
    etherStatsPkts128to255Octets  : 0
    etherStatsPkts256to511Octets  : 0
SM8TBT2SA# show rmon history
History ID :    1
------------------
    EtherHistorySampleIndex : 1
        etherHistoryIntervalStart : 1d 4:01:39(100899)
        etherHistoryDropEvents    : 0
        etherHistoryOctets       : 1560000
        etherHistoryPkts         : 7800
        etherHistoryBroadcastPkts : 156
        etherHistoryMulticastPkts : 234
        etherHistoryCRCAlignErrors: 78
        etherHistoryUndersizePkts : 0
        etherHistoryOversizePkts  : 0
        etherHistoryFragments     : 39
        etherHistoryJabbers       : 0
        etherHistoryCollisions    : 19
        etherHistoryUtilization   : 0

    EtherHistorySampleIndex : 2
        etherHistoryIntervalStart : 1d 4:31:39(102699)
        etherHistoryDropEvents    : 0
        etherHistoryOctets       : 120000
        etherHistoryPkts         : 600
        etherHistoryBroadcastPkts : 12
        etherHistoryMulticastPkts : 18
        etherHistoryCRCAlignErrors: 6
        etherHistoryUndersizePkts : 0
        etherHistoryOversizePkts  : 0
        etherHistoryFragments     : 3
        etherHistoryJabbers       : 0
        etherHistoryCollisions    : 1
        etherHistoryUtilization   : 0
```

```
SM8TBT2SA# show rmon alarm
Alarm ID :    1
----------------
     Interval         : 30
     Variable         : .1.3.6.1.2.1.2.2.1.10.9
     SampleType       : Delta
     Value            : 0
     Startup          : RisingOrFalling
     RisingThrld      : 4
     RisingEventIndex  : 4
     FallingThrld     : 2
     FallingEventIndex : 2

SM8TBT2SA# show rmon event
Event ID :    1
----------------
     Description     : BobB
     Type            : log and trap
     Community       : trpp11
     LastSent        : 0

Event ID :    2
----------------
     Description     : port1 -
     Type            : snmp trap
     Community       : sTrap1
     LastSent        : 0

SM8TBT2SA#
```

running-config

Show running system information.

SYNTAX

show running-config

EXAMPLE 1

```
SM8TBT2SA# show running-config
username admin privilege 15 password encrypted_sha 8c6976e5b5410415bde908bd4dee1
5dfb167a9c873fc4bb8a81f6f2ab448a918
!
vlan 1
!
poe management mode class-consumption
dms service-mode enabled priority non
!
interface GigabitEthernet 1/1
!
interface GigabitEthernet 1/2
!
interface GigabitEthernet 1/3
!
interface GigabitEthernet 1/4
!!!!!!!!!!!!!
interface GigabitEthernet 1/9
!
interface GigabitEthernet 1/10
!
!
interface vlan 1
 ip address 192.168.1.77 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.1.254
end
SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show running-config

username admin privilege 15 password encrypted_sha 8c6976e5b5410415bde908bd4dee1

5dfb167a9c873fc4bb8a81f6f2ab448a918

exec-timeout autologout 0

!

vlan 1

!

ipmc profile 4

 description 44

ipmc mode

ip dhcp snooping

ip dhcp relay

ip helper-address 1.2.3.4

ip dhcp relay information option

ip dhcp relay information policy drop

access-list ace 1

access-list ace 2 frame-type etype

access-list ace 3 frame-type ipv4

ip igmp snooping

ipv6 mld host-proxy

ipv6 mld snooping

mvr vlan 1 name 4

mvr vlan 1 igmp-address 0.0.0.0

mvr vlan 1 mode dynamic

mvr vlan 1 frame tagged tagged

mvr vlan 1 frame priority 0

mvr vlan 1 last-member-query-interval 5

mvr vlan 1 channel 4

radius-server key encrypted A937FA9640CFDAF857690CD3D926AF4F4CBE44ED20138409B8A8

E6EB9A598A5DEC1E8D282913B27D51B79529C8AA3CA32836B5859F69BE9287945E57C041B430

radius-server attribute 4 192.168.1.111

radius-server attribute 32 Bobb

radius-server host 111111 auth-port 1812 acct-port 1813 timeout 5 retransmit 3 k

ey encrypted BFDA4650D3169D389889E6A0CC23659D

radius-server host 10.0.5.55 auth-port 577 acct-port 765 retransmit 400
```

```
aggregation mode src-mac
spanning-tree
spanning-tree mst name 00-C0-F2-49-AB-14 revision 1
spanning-tree mst 1 vlan 2,5,20-40
spanning-tree mst 2 vlan 100-200
spanning-tree mst max-hops 11
spanning-tree mst max-age 10
spanning-tree mst forward-time 11
spanning-tree mst 0 priority 36864
spanning-tree mst 1 priority 28672
poe management mode class-consumption
poe auto-check
trap 1 TCP v2c 10.0.4.3 3 S-Trap1 678
ip dhcp pool 1
 start-ip 10.0.4.10
 end-ip 10.0.4.17
 mask 255.255.255.0
!
ip dhcp server per-port
rmon alarm 1 ifInOctets 9 30 delta rising-threshold 4 4 falling-threshold 2 2 both
rmon event 1 description BobB log trap trpp11
rmon event 2 description port1 -  trap sTrap1
dms service-mode enabled priority high
event group 802.1X level 4 trap enable smtp enable
event group ACCESS-MGMT smtp enable
event group AUTH-FAILED smtp enable
event group OVER-MAX-POE-POWER-LIMITATION smtp enable
event group POE-AUTO-POWER-RESET smtp enable
!
interface GigabitEthernet 1/1
 mvr vlan 1 type source
 rmon collection history 1 interval 1800 buckets 50
!
interface GigabitEthernet 1/2
spanning-tree mst 1 cost 500000
spanning-tree mst 1 port-priority 144
```

```
 ipv6 mld snooping max-groups 2
 ipv6 mld snooping mrouter
 ipv6 mld snooping immediate-leave
 mvr immediate-leave
!
interface GigabitEthernet 1/3
 ip igmp snooping max-groups 2
 ip igmp snooping mrouter
 ipv6 mld snooping immediate-leave
 mvr immediate-leave
 mvr vlan 1 type receiver
!
!
interface GigabitEthernet 1/10
!
!
interface vlan 1
 ip address 10.0.4.3 255.255.255.0
 ip dhcp server
 no ipv6 mld snooping
 no ipv6 mld snooping querier
 ipv6 mld snooping compatibility auto
 ipv6 mld snooping robustness-variable 2
 ipv6 mld snooping query-interval 125
 ipv6 mld snooping query-max-response-time 100
 ipv6 mld snooping last-member-query-interval 10
 ipv6 mld snooping unsolicited-report-interval 1
!
interface vlan 100
 no ip address
!
interface vlan 1000
 ip igmp snooping
 no ip igmp snooping querier
 ip igmp snooping compatibility auto
 ip igmp snooping robustness-variable 2
```

```
 ip igmp snooping query-interval 125
 ip igmp snooping query-max-response-time 100
 ip igmp snooping last-member-query-interval 10
 ip igmp snooping unsolicited-report-interval 1
!
interface vlan 2000
 no ip igmp snooping
 ip igmp snooping querier
 ip igmp snooping compatibility v2
 ip igmp snooping robustness-variable 2
 ip igmp snooping query-interval 125
 ip igmp snooping query-max-response-time 100
 ip igmp snooping last-member-query-interval 10
 ip igmp snooping unsolicited-report-interval 1
!
interface vlan 3000
 ip igmp snooping
 ip igmp snooping querier
 ip igmp snooping compatibility v3
 ip igmp snooping robustness-variable 2
 ip igmp snooping query-interval 125
 ip igmp snooping query-max-response-time 100
 ip igmp snooping last-member-query-interval 10
 ip igmp snooping unsolicited-report-interval 1
!
ip route 0.0.0.0 0.0.0.0 10.0.4.1
end
SM8TBT2SA
```

smtp

Show smtp configuration.

SYNTAX

show smtp <cr>

Parameters

None

EXAMPLE

```
SM8TBT2SA# show smtp
Mail Server     : myMailServer
User Name       : Bob
Password        : ********
Sender          : sm8tbt2sa
Return Path     : sm8tbt2sa@192.168.90.3
Email Adress 1  : jsherman@comcast.net
Email Adress 2  : jeffs@lantronix.com
Email Adress 3  : mickeyabc@aol.com
Email Adress 4  :
Email Adress 5  :
Email Adress 6  :


SM8TBT2SA#
```

snmp

Display SNMP configuration parameters.

SYNTAX

show snmp access [<GroupName : word32> { v1 | v2c | v3 | any } { auth | noauth | priv }

show snmp community v3 [<Community : word127>]

show snmp security-to-group [{ v1 | v2c | v3 } <SecurityName : word32>]

show snmp user [<UserName : word32> <EngineId : word10-32>]

show snmp view [<ViewName : word32> <OidSubtree : word255>]

show snmp <cr>

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
<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

```
SM8TBT2SA# show snmp
SNMP Configuration
Read Community               : public
Write Community              : private
Write Mode                   : enabled

SNMPv3 Communities Table:

SNMPv3 Users Table:
User Name              : S-Usr-1
Security Level         : Auth, Priv
Authentication Protocol : MD5
Privacy Protocol       : DES

SNMPv3 Groups Table:
Security Model : usm
Security Name  : S-Usr-1
Group Name     : Grp-1

SNMPv3 Accesses Table:
Group Name      : Grp-1
Security Model   : (null)
Security Level   : (null)
Read View Name   : 4
Write View Name  : 4

SNMPv3 Views Table:
View Name   : 4
OID Subtree : .0
View Type   : included

SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show snmp access
SNMPv3 Accesses Table:
Group Name       : Grp-1
Security Model   : (null)
Security Level   : (null)
Read View Name   : 4
Write View Name  : 4

SM8TBT2SA# show snmp user
SNMPv3 Users Table:
User Name              : S-Usr-1
Security Level         : Auth, Priv
Authentication Protocol : MD5
Privacy Protocol       : DES

SM8TBT2SA# show snmp view
SNMPv3 Views Table:
View Name   : 4
OID Subtree : .0
View Type   : included


SM8TBT2SA#
```

spanning-tree

Display Spanning Tree protocol.

SYNTAX

show spanning-tree [summary | active | { interface <port_type> <port_type_list> } | { detailed [interface <port_type> <port_type_list>] } | { mst [configuration | { <0-7> [interface <port_type> <port_type_list>] }]

Parameters

summary	STP summary
active	STP active interfaces
interface	Choose port
<port_type>	Gigabit Ethernet
*	All switches or All ports
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet
detailed	STP statistics
interface	List of port type and port ID, ex, 1/1-26
mst	Configuration
configuration	STP bridge instance no (0-7, CIST=0, MST2=1...)
<0-7>	Choose port
<0-4094>	MST instance ID , 0 is for CIST (0..4094)
configuration	MST Region Info and MSTI VLAN map

EXAMPLE 1

```
SM8TBT2SA# show spanning-tree mst 0
MSTP State : Enabled
Force Version : MSTP
MST ID : 0 (CIST)
Bridge Max Age : 20
Bridge Forward Delay : 15
Bridge Max Hops : 20
Instance Priority : 32768
Bridge Mac Address : 00-40-C7-1C-CB-6E
CIST ROOT PRIORITY : 32768
CIST ROOT MAC : 00-40-C7-1C-CB-6E
CIST EXTERNAL ROOT PATH COST : 0
CIST ROOT PORT ID : 0
```

```
CIST REGIONAL ROOT PRIORITY : 32768
CIST REGIONAL ROOT MAC : 00-40-C7-1C-CB-6E
CIST INTERNAL ROOT PATH COST : 0
CIST CURRENT MAX AGE : 20
CIST CURRENT FORWARD DELAY : 15
TIME SINCE LAST TOPOLOGY CHANGE (SECs) : 259384
TOPOLOGY CHANGE COUNT (SECs) : 0
```

EXAMPLE 2

```
SM8TBT2SA# show spanning-tree mst configuration
Multiple Spanning Tree Protocol : Enable
Force Version : MSTP
Region Name : 00-40-C7-1C-CB-6E
Revision Level : 50
MSTI 0 (CIST) : vlan 1-3,10-19,21-4094
MSTI 1 : vlan 20
MSTI 2 : vlan 4-9
SM8TBT2SA#
```

EXAMPLE 3

```
SM8TBT2SA# show spanning-tree mst 0 port configuration
CIST Port Configuration :
========== ========== ========= ======== =Administration= =Restricted=
   Port    STP Enable Path Cost Priority Edge-Port   P2P   Role   Tcn
========== ========== ========= ======== =========  ===== ====== =====
 Gi 1/1      enable       Auto    128      yes      auto  false false
 Gi 1/2      enable       Auto    128      yes      auto  false false
 Gi 1/3      enable       Auto    128      yes      auto  false false
 Gi 1/4      enable       Auto    128      yes      auto  false false
 Gi 1/5      enable       Auto    128      yes      auto  false false
 Gi 1/6      enable       Auto    128      yes      auto  false false
 Gi 1/7      enable       Auto    128      yes      auto  false false
 Gi 1/8      enable       Auto    128      yes      auto  false false
 Gi 1/9      enable       Auto    128      yes      auto  false false
 Gi 1/10     enable       Auto    128      yes      auto  false false


SM8TBT2SA#
```

```
SM8TBT2SA# show spanning-tree mst 0 port
MSTP disabled or force version is not MSTP or invalid MSTI
```

system

Show system information.

SYNTAX

show system <cr>

EXAMPLE 1

```
SM8TBT2SA# show system
System Description   : 4 ports 10M/100M/1G PoE+ RJ45 + 4 ports 10M/100M/1G PoE++ RJ45 + 2 ports
1G RJ45/SFP (PoE 240W)
Model Name          : SM8TBT2SA
Hardware Version     : v1.01
Mechanical Version   : v1.01
Firmware Version     : v1.04.0124
PoE Firmware Version : RNU-1002
MAC Address         : 00-40-C7-1D-53-29
Serial Number       : A229123AR3500002
System Name         : SM8TBT2SA
Location            :
Contact             :
System Date         : 2017-01-01 00:01:18 +0000
System Uptime       : 0 days, 0:01:42

SM8TBT2SA#
```

tacacs-server

Statistics TACACS+ server configuration.

SYNTAX

show tacacs-server <cr>

Parameters None

EXAMPLE

```
SM8TBT2SA# show tacacs-server
Global TACACS+ Server Timeout     : 5 seconds
Global TACACS+ Server Deadtime    : 0 minutes
Global TACACS+ Server Key         :
SM8TBT2SA# show tacacs-server
Global TACACS+ Server Timeout     : 5 seconds
Global TACACS+ Server Deadtime    : 0 minutes
Global TACACS+ Server Key         : 51164fc2a4b3e3299a83310b04180a552e76508a3e0
7 ec2c9f4601ab3b6d53
TACACS+ Server #1:
Host name  : 111111
Port       : 456
Timeout    : 60 seconds
Key        : admin123!@#<:>

SM8TBT2SA#
```

trap

Display trap configuration.

SYNTAX

show trap <cr>

EXAMPLE

```
SM8TBT2SA# show trap
   Community              Severity
No Name         Mode     Ver   Server IP   port    Level
-- ----------  ------   ---   --------    ---     --------------- ----
1  S-Trap1      TCP      v2c   10.0.4.3    678     Error
2
3
4
5
6

SM8TBT2SA#
SM8TBT2SA# show trap
                     Community              Severity
No Name                   Mode     Ver Server IP       port Level
-- ----------------------- -------- --- --------------- ---- ---------
1  admin1      UDP v2c    192.168.1.30 162      Alert
2  adminadmin      TCP v2c    192.168.1.40 162    Warning
3  Bob Disabled v2c    192.168.1.10 162       Info
4
5
6

SM8TBT2SA#
```

upnp

Display Universal Plug and Play parameter settings.

SYNTAX

show upnp <cr>

EXAMPLE

```
SM8TBT2SA# show upnp
UPnP Mode                   : Enabled
Interface VLAN              : 1
UPnP TTL                    : 4
UPnP Advertising Duration   : 100

SM8TBT2SA#
```

version

Display System hardware and software version information.

SYNTAX

show version <cr>

EXAMPLE

```
SM8TBT2SA# show version
Active Image
------------
Partition       : secondary
Version         : v1.04.0124
Date            : 2023-12-19 11:10:26 UTC

Alternate Image
------------
Partition       : primary
Version         : v1.04.0102
Date            : 2023-08-18 10:11:52 UTC

SM8TBT2SA#
```

vlan

Display VLAN status and settings.

SYNTAX

show vlan [id <vlan_list> | name <vword32> | brief]

show vlan protocol [eth2 { <0x600-0xffff> | arp | ip | ipx | at }] [snap { <0x0-0xffffff> | rfc_1042 | snap_8021h } <0x0-0xffff>] [llc <0x0-0xff> <0x0-0xff>]

show vlan status [admin [interface] | all | combined | conflicts | gvrp | interface | mstp | mvr | nas | vcl | voice-vlan] [<port_type ><port_type_list>]

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.
interface	Show the VLANs configured for a specific interface(s).
<port_type >	GigabitEthernet
Gigabit Ethernet	1 Gigabit Ethernet Port
<port_type_list>	Port list in 1/1-26 for Gigabit Ethernet
ip-subnet	Show VLAN ip-subnet entries.
mac	Show VLAN MAC entries.
mapping	Show VLAN Selective QinQ entries.
status	Show the VLANs configured for each interface.
membership	VLAN membership

EXAMPLE 1

```
SM8TBT2SA# show vlan <tab>
brief    id       ip-subnet   mac      mapping   protocol  status    membership
SM8TBT2SA# show vlan
VLAN  Name                            Members    Untagged
----  --------------------------------  ---------  --------
   1  default                          Gi 1/1     Gi 1/1
                                       Gi 1/2     Gi 1/2
                                       Gi 1/3     Gi 1/3
                                       Gi 1/4     Gi 1/4
                                       Gi 1/5     Gi 1/5
                                       Gi 1/6     Gi 1/6
                                       Gi 1/7     Gi 1/7
                                       Gi 1/8     Gi 1/8
                                       Gi 1/9     Gi 1/9
                                       Gi 1/10    Gi 1/10
                                       Gi 1/11    Gi 1/11
                                       Gi 1/12    Gi 1/12
                                       Gi 1/13    Gi 1/13
                                       Gi 1/14    Gi 1/14
                                       Gi 1/15    Gi 1/15
```

```
                                    Gi 1/16    Gi 1/16
                                    Gi 1/17    Gi 1/17
                                    Gi 1/18    Gi 1/18
SM8TBT2SA# show vlan mapping
Index CVID SPVID Ports
----- ---- ----- --------------------------------------------------------------
   1    1     1  GigabitEthernet 1/2 GigabitEthernet 1/3 GigabitEthernet 1/4
                 GigabitEthernet 1/5
SM8TBT2SA#
```

EXAMPLE 2

```
SM8TBT2SA# show vlan status
GigabitEthernet 1/1 :
---------------------
VLAN User  PortType       PVID  Frame Type     Ing Filter  Tx Tag
---------  -------------  ----  -------------  ----------  -----------------
Admin      C-Port         1     All            Enabled     None
802.1x
MVR
Voice VLAN
MSTP
DMS
Combined   C-Port         1     All            Enabled     None
////////////////////////////////////////////////////////////////////////////////
GigabitEthernet 1/18 :
---------------------
VLAN User  PortType       PVID  Frame Type     Ing Filter  Tx Tag
---------  -------------  ----  -------------  ----------  -----------------
Admin      C-Port         1     All            Enabled     None
802.1x
MVR
Voice VLAN
MSTP
DMS
Combined   C-Port         1     All            Enabled     None
```

voice

Display Voice VLAN configuration.

SYNTAX

show voice vlan <cr>

EXAMPLE

```
SM8TBT2SA# show voice vlan
Switch voice vlan entry 1:
Switch voice vlan is enabled
Switch voice vlan ID is 1000
Switch voice vlan aging-time is 86400 seconds
Switch voice vlan traffic class is 0
Switch voice vlan port is 2, 3, 4, 5
Voice VLAN switchport is configured on following:
GigabitEthernet 1/1 :
---------------------
GigabitEthernet 1/1 switchport voice vlan mode is forced
GigabitEthernet 1/1 switchport voice security is disabled
GigabitEthernet 1/1 switchport voice discovery protocol is oui
GigabitEthernet 1/4 switchport voice security is enabled
GigabitEthernet 1/4 switchport voice discovery protocol is both
GigabitEthernet 1/5 :
---------------------
GigabitEthernet 1/5 switchport voice vlan mode is forced
GigabitEthernet 1/5 switchport voice security is disabled
GigabitEthernet 1/5 switchport voice discovery protocol is oui

GigabitEthernet 1/10 :
---------------------
GigabitEthernet 1/10 switchport voice vlan mode is forced
GigabitEthernet 1/10 switchport voice security is disabled
GigabitEthernet 1/10 switchport voice discovery protocol is oui

SM8TBT2SA
```

15. SSL Commands

Re-generate a new SSL (Secure Socket Layer) certificate. Use the **ssl** command to set up an SSL certificate.

Note that average key creation time increases with certificate encryption length.

Syntax

ssl days<1 10950>

ssl days length <2048|4096|8192>

Parameters

ssl	Setup SSL certificate.
days	SSL certificate effective date
length	SSL certificate RSA encryption length
<1-10950>	SSL certificate effective date (1..10950)
<2048|4096|8192>	SSL certificate RSA encryption length (2048..2147483647)
<certificate information>	See Example below.

EXAMPLE

```
SM8TBT2SA# ssl length 8192 days 10950
Generating a 8192 bit RSA private key
.....................................................................
.....................................................................
.....................................................................
..................++
.....................................................................
.....................................................................
.++
writing new private key to '/tmp/lighttpd.pem'
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [US]:US
State or Province Name (full name) [MN]:MN
```

```
Locality Name (eg, city) [Plymouth]:Plymouth
Organization Name (eg, company) [Internet Widgits Pty Ltd]: Lantronix
Organizational Unit Name (eg, section) [Lantronix]:
Common Name (e.g. server FQDN or YOUR name) [lantronix.com]:
Email Address [techsupport@lantronix.com]:
SM8TBT2SA#
```

SSL Messages:

string is too long, it needs to be less than 2 bytes long

719972100:error:0307F076:bignum routines:BNRAND:bits too small:bn_rand.c:125:

719972100:error:04081003:rsa routines:RSA_BUILTIN_KEYGEN:BN lib:rsa_gen.c:241:

A **Distinguished Name** (**DN**) is a sequence of relative distinguished names (RDNs) connected by commas. An RDN is an attribute with an associated value in the form attribute=value, normally expressed in a UTF-8 string format. RDN attribute types include DC (domainComponent), CN (commonName), OU (organizationalUnitName), O (organizationName), STREET (streetAddress), L (localityName), ST (stateOrProvinceName), C (countryName), UID (userid). See IETF RFC 4514 for details.

16. Terminal Commands

Set the terminal EXEC timeout parameter.

Syntax

terminal exec-timeout <0-1440>

Parameters

exec-timeout	Set the EXEC timeout in minutes. The max setting is 1440 minutes (24 hours).
<0-1440>	Timeout in minutes

EXAMPLE

```
SM8TBT2SA# terminal exec-timeout 1440
  <cr>

SM8TBT2SA#
```

17. Traceroute Commands

traceroute tracks the route packets take from an IP network on their way to a given host.

SYNTAX

traceroute ip

traceroute ipv6

Parameters

ip	IP address; IP destination address (X.X.X.X).
protocol	< icmp (default)> < udp>
wait	Set the number of seconds to wait for response to a probe <1-60>. Default is 3.
ttl	Set the max number of hops <1-255> in hops. Default is 30 hops.
nqueries <1-10>	Max number of quires; set the number of probes per each hop.
icmp	Use ICMP ECHO for tracerouting (default)
udp	Use UDP Port for tracerouting
ip	Internet protocol version 4
ipv6	Internet protocol version 6
hostname	domain name address
<ipv4_addr>	IP destination address (X.X.X.X)
<1-60>	Time in seconds to wait for a response. Default is 3s. (1..60)
<1-255>	Max time-to-live. Default is 30. (1..255) (ttl)
<1-10>	Max time-to-live. Default is 3. (1..10) (nqueries)

EXAMPLE

```
SM8TBT2SA# traceroute ip 192.168.1.77
traceroute to 192.168.1.77 (192.168.1.77), 30 hops max, 38 byte packets
 1  192.168.1.77  0.000 ms  0.000 ms  0.000 ms
SM8TBT2SA#
SM8TBT2SA# traceroute ip 192.168.1.90
traceroute to 192.168.1.90 (192.168.1.90), 30 hops max, 38 byte packets
 1  192.168.90.1  10.000 ms  0.000 ms  0.000 ms
 2  172.16.44.254  0.000 ms  0.000 ms  0.000 ms
 3  74.202.111.126  0.000 ms  0.000 ms  0.000 ms
 4  *  *  50.236.7.109  0.000 ms !A
 5  *  *  *
 6  50.236.7.109  0.000 ms !A  *  *
 7  *  *  *
```

```
 8  *  *  *
 9  50.236.7.109  0.000 ms !A  *  *
10  *  50.236.7.109  0.000 ms !A  *
11  *  *  *
12  *  50.236.7.109  0.000 ms !A  *
13  *  50.236.7.109  0.000 ms !A  *
14  *  *  *
15  *  *  *
16  *  *  50.236.7.109  0.000 ms !A
17  *  *  50.236.7.109  0.000 ms !A
18  *  *  50.236.7.109  0.000 ms !A
19  *  *  *
20  50.236.7.109  0.000 ms !A  *  0.000 ms !A
SM8TBT2SA#
```

18. Cable Diagnostics Commands

Diagnostics

Run the cable diagnostics on a port.

SYNTAX: diagnostics cable interface { * | [GigabitEthernet <port_list>]

Parameters:

cable	cable
interface	Interface status and configuration
GigabitEthernet	GigabitEthernet
*	All ports
<port_list>	Port List S/X Y,Z (1/1-28)

EXAMPLE

```
SM24TBT4SA# diagnostics cable interface GigabitEthernet 1/1
Port                Link Status  Test Result  Length
------------------  -----------  -----------  -------
GigabitEthernet 1/1   1G          OK          0.00 (m)

SM24TBT4SA# diagnostics cable interface GigabitEthernet 1/3
Port                Link Status  Test Result  Length
------------------  -----------  -----------  -------
GigabitEthernet 1/3   Link Down    Abnormal     1.60 (m)

SM24TBT4SA# diagnostics cable interface GigabitEthernet 1/5
Port                Link Status  Test Result  Length
------------------  -----------  -----------  -------
GigabitEthernet 1/5   1G          OK          0.00 (m)

SM24TBT4SA# diagnostics cable interface GigabitEthernet 1/6
Port                Link Status  Test Result  Length
------------------  -----------  -----------  -------
GigabitEthernet 1/6   1G          OK          0.00 (m)

SM24TBT4SA#
```

19. Configure DHCP per Port

19.1 DHCP per Port

These commands let you configure and view DHCP Per Port. The DHCP Per Port feature allows attached devices to always get the same IP address on a per-port basis.

The switch's DHCP server assigns IP addresses. Clients get IP addresses in sequence and the switch assigns IP addresses to on a per-port basis starting from the configured IP range. For example, if the IP address range is configured as 192.168.10.20 - 192.168.10.37 with one DHCP device connected to port 1, the client will always get IP address 192.168.10.20, then port 3 is always distributed IP address 192.168.10.22, even if port 2 is an empty port (because port 2 is always distributed IP address 192.168.10.21).

The switch does not allow a DHCP per Port pool to include the switch's address.

IP address assigned range and VLAN 1 should stay in the same subnet mask.

The configurable IP address range is allowed to configure over 18 IP addresses, but the switch always assigns one IP address per port connecting device.

The DHCP Per Port function is only supported on VLAN 1. When the DHCP Per Port function is enabled, the switch software will automatically create the related DHCP pool named "DHCP_Per _Port". When the DHCP Per Port function is enabled on one switch, IPv4 DHCP client at VLAN1 mode (DMS DHCP mode), DHCP server mode are all limited to be enabled at the same time (an error message displays if attempted).

If the DHCP server pool has been configured, once you enable the DHCP Per port function that DHCP server pool configuration will be overwritten.

Only for VLAN 1, clients issued DHCP packets will not be broadcast/forwarded to other ports. DHCP packets in other VLANs will be broadcast/forwarded to other ports.

The DHCP Per Port function allows the switch to connect only one DHCP client device.

The DHCP Per Port function is configured and shown using these CLI commands:

- **# show ip dhcp server**
- (config)# **ip dhcp ~~server~~ per-port**
- (config)# **no ip dhcp server per-port**
- (config)# **ip dhcp server per-port**
- (config)# **ip dhcp server per-port vlan**

The CLI commands to configure and show DHCP Per Port are described below.

Command: Show the current DHCP Server and DHCP Per Port configuration

Syntax: **show ip dhcp server** <cr>

show ip dhcp server status <cr>

Description: Show if DHCP server is globally enabled or disabled, if all VLANs are disabled or enabled, and if the DHCP server Per Port function is disabled or enabled.

Example: Display the current DHCP Server and Per Port configuration, change the config, and display the results:

```
SM8TBT2SA# show ip dhcp server
VLAN id of Pool: 1
  DHCP server mode is On

SM8TBT2SA# show ip dhcp server status
VLAN id of Pool: 1
-----------------------------------------------
  DHCP server type is Static
  Start IP address is 10.0.4.10
  End IP address is 10.0.4.17
  Lease time is 86400 seconds
  Subnet Mask is 255.255.255.0
  Default router is not configured
  DNS server is not configured

SM8TBT2SA#
```

Command: Configure the DHCP per Port function.

Syntax: **ip dhcp server per-port** <cr>

ip dhcp server per-port vlan <vlan id>

Parameters: **vlan** DHCP server per port VLAN

<cr>

Description: Toggle the DHCP per Port function from Disabled (default) to Enabled.

Example 1: Toggle the DHCP per Port function and show the resulting config:

```
SM16TAT2DPA# show ip dhcp server
DHCP server is globally disabled.
  All VLANs are disabled.
```

```
SM16TAT2DPA# configure terminal
SM16TAT2DPA(config)# ip dhcp server
SM16TAT2DPA(config)# end
SM16TAT2DPA# show ip dhcp server
DHCP server is globally enabled.
  All VLANs are disabled.
SM8TBT2SA(config)# ip dhcp server per-port
SM8TBT2SA(config)# do show ip dhcp server
VLAN id of Pool: 1
  DHCP server mode is On

SM8TBT2SA(config)# do show ip dhcp server status
VLAN id of Pool: 1
---------------------------------------------
  DHCP server type is Static
  Start IP address is 10.0.4.10
  End IP address is 10.0.4.17
  Lease time is 86400 seconds
  Subnet Mask is 255.255.255.0
  Default router is not configured
  DNS server is not configured

SM8TBT2SA(config)#
```

Example 2: Set DHCP per Port VLAN ID

```
SM8TBT2SA(config)# ip dhcp server per-port vlan ?
  <vlan_id>  Set DHCP server per port VLAN (1-4095)

SM8TBT2SA(config)# ip dhcp server per-port vlan 1
SM8TBT2SA(config)#

SM8TBT2SA(config)# ip dhcp server per-port vlan 100
ERROR: Already exists (VLAN: 100)
SM8TBT2SA(config)#
```

20. Percepxion and LPM Commands

Percepxion is Lantronix on-premise and cloud-hosted management platform that provides a single pane of glass for centralized management and automated monitoring of Lantronix devices, along with real-time notifications, managed APIs and data dashboards.
For more Percepxion information see https://www.lantronix.com/percepxion/. Percepxion support requires switch firmware v1.04.0124 or above.

LPM Note: Lantronix Provisioning Manager (LPM) is a software application that provisions, configures, and updates Lantronix-devices for local site installations and deployments. LPM discovery is enabled by default and is not configurable. For more information see https://www.lantronix.com/products/lantronix-provisioning-manager/.

To enter Percepxion Config mode from Config mode:

```
SM8TBT2SA(config)# percepxion <cr>
SM8TBT2SA(config-percepxion)#
```

20.1 Using the ? and <tab> Functions

There is a difference between using ? and <Tab>.

Pressing **?** shows the commands that can only be run from that path. The output with the ? command shows 12 commands. These Percepxion commands are documented in this chapter.

Pressing <tab> shows the global commands. These are commands that can only be run from that path, plus the global commands that can be run from that path. The output with the <tab> command shows 53 commands. The additional commands are documented in related chapters.

20.2 Percepxion Command Set

These Percepxion commands are documented in this chapter.

!	Comments
active	Sets active connection to Connection <number>
apply	Sets the mode on firmware updates
connection	Sets the connection 1 or connection 2
content	Sets the firmware and configuration check interval
device	Sets the Device ID, description, key, and name
do	To run exec commands in config mode
exit	Exit from current mode
no	Removes device parameter(s)
show	Displays the current configuration
state	Percepxion state
status	Sets the status update interval

20.3 Percepxion Command Set <tab>

The following commands are documented in related chapters:

aaa	access	access-list	aggregation	clock
dms	dot1x	end	event	exec-timeout
interface	ip	ipmc	ipv6	lacp
lldp	logging	loop-protect	mac	map-api-key
max-frame-size	monitor	mvr	ntp	poe
port-security	privilege	qos	radius-server	rmon
smtp	snmp-server	spanning-tree	system	tacacs-server
trap	upnp	username	vlan	voice

To enter Percepxion config mode:

```
SM8TBT2SA# configure terminal
SM8TBT2SA(config)# percepxion
SM8TBT2SA(config-percepxion)#
```

20.4 Percepxion Command Descriptions

Command: **active**

Description: Sets the Percepxion active connection to Connection 1 or 2.

Syntax: **active** connection connection <number>

Parameters:

connection		Sets active connection to Connection <number>
	<1-2>	Sets active connection to Connection <1|2>

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# active connection connection 1
SM8TBT2SA(config-percepxion)# active connection connection 2
SM8TBT2SA(config-percepxion)#
```

Command: **apply**

Description: Sets the Percepxion mode on configuration updates and firmware updates.

Syntax: **apply** configuration updates disable
apply configuration updates enable
apply firmware updates disable
apply firmware updates enable

Parameters:

configuration		Sets the action on configuration updates
firmware		Sets the mode on firmware updates
updates		Sets the action on configuration updates
disable		Sets the action on configuration updates to disable
enable		Sets the action on configuration updates to enable
updates		Sets the mode on firmware updates
disable		Restores the default action on new firmware (do not apply)
enable		Automatically apply new firmware

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# apply firmware updates enable
SM8TBT2SA(config-percepxion)# apply configuration updates disable
SM8TBT2SA(config-percepxion)# apply configuration updates enable
SM8TBT2SA(config-percepxion)#
```

Command: **connection**

Description: Sets the Percepxion Connection 1 or Connection 2 parameters.

Syntax: **connection** <con> host <host_name>

connection <con> port <number>

connection <con> secure port disable

connection <con> secure port enable

connection <con> validate certificates disable

connection <con> validate certificates enable

connection <con> connect to <cloud >

connection <con> connect to < on premise>

Parameters (?):

connection	Sets the connection 1 or connection 2
connect	Sets the mode to connect
to	Sets the mode to connect
cloud	Sets the cloud mode to connect
on	Sets the on premise mode to connect
premise	Sets the on premise mode to connect
host	Sets the Hostname or IP address of Percepxion
port	Sets the Port of Percepxion
secure	Sets the mode on HTTPS
validate	Sets the mode on certificate validation
<word256>	Sets the Hostname or IP address of Percepxion
<1-65535>	Sets the Port of Percepxion
port	Sets the mode on HTTPS
disable	Disables HTTPS for Percepxion client
enable	Enables HTTPS for Percepxion client
certificates	Sets the mode on certificate validation
disable	Disables certificate validation for Percepxion client
enable	Enables certificate validation for Percepxion client

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config)# percepxion
SM8TBT2SA(config-percepxion)# connection 1 host BobB
SM8TBT2SA(config-percepxion)# connection 1 port 456
SM8TBT2SA(config-percepxion)# connection 1 secure port enable
SM8TBT2SA(config-percepxion)# connection 1 validate certificates enable
```

```
SM8TBT2SA(config-percepxion)# connection 2 host TomT
SM8TBT2SA(config-percepxion)# connection 2 port 456
SM8TBT2SA(config-percepxion)# connection 2 secure port disable
SM8TBT2SA(config-percepxion)# connection 2 validate certificates disable

SM8TBT2SA(config-percepxion)#
SM8TBT2SA(config-percepxion)# connection 1 connect to cloud
SM8TBT2SA(config-percepxion)# connection 1 connect to on premise
SM8TBT2SA(config-percepxion)#
```

Command: **content**

Description: Sets the Percepxion firmware and configuration check interval. FW v1.04.0124 or above allows a dash (-) character for Status Update Interval and Content Check Interval.

Syntax: **content** check interval <hours>

Parameters:

check		Sets the firmware and configuration check interval
interval		Sets the firmware and configuration check interval
<1-56160>		Sets the firmware and configuration check interval

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# content check interval 9000
SM8TBT2SA(config-percepxion)#
```

Command: **device**

Description: Sets the Device parameters in Percepxion.

Syntax: **device** description <device_desp>

device id <device_id>

device key <device_key>

device name <device_name>

Parameters:

description	Sets the Device Description
id	Sets the Device ID
key	Sets the Device Key
name	Sets the Device Name
word64	Device Description (word64)
word64	Device ID (word64)
word64	Device Key (word64)
word64	Device Name (word64)

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# device description 384-lrt-c
SM8TBT2SA(config-percepxion)# device id 384-lrt-c
SM8TBT2SA(config-percepxion)# device key 384-lrt-c
SM8TBT2SA(config-percepxion)# device name 384-lrt-c
SM8TBT2SA(config-percepxion)#
```

Command: **do**

Description: To run Exec commands in Percepxion Config mode.

Syntax: **do** <command>

Parameters: <command> Command to be run:

clear	configure	copy	delete	diagnostics dir	find-switch
firmware	logout	more	ping	reload	show
ssl	terminal	traceroute			

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# do show ip interface brief
Vlan Address             Method   Status
---- ------------------- -------- ------
   1 192.168.1.77/24      Manual   UP
SM8TBT2SA(config-percepxion)# do enable
SM8TBT2SA(config-percepxion)# do dir
Directory of flash:
    r- 2011-01-01 00:00:00      716 default-config
    rw 2011-01-01 21:39:03     8243 startup-config
2 files, 8959 bytes total.
SM8TBT2SA(config-percepxion)#
```

Command: **end**

Description: Go back to EXEC mode from Percepxion Config mode.

Syntax: **end** <cr>

Parameters:

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# end
SM8TBT2SA
```

Command: **exit**

Description: Exit from Percepxion Config mode to Config mode.

Syntax: **exit** <cr>

Parameters:

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# exit
SM8TBT2SA(config)#
```

Command: **no**

Description: Removes a Percepxion device parameter.

Syntax: **no** device <id | key | name | description>

Parameters:

	device	Removes a device parameter.
	id	Removes the Device ID
	key	Removes the Device Key
	name	Removes the Device Name
	description	Removes the Device Description

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# no device description
SM8TBT2SA(config-percepxion)# no device name
SM8TBT2SA(config-percepxion)#
```

Command: **show**

Description: Displays current Percepxion parameters.

Syntax: **show** connection <con>

show statistics

show <cr>

Parameters:

connection	Shows the Percepxion connection (Connection 1 or Connection 2)
statistics	Displays the Percepxion statistics
<1-2>	Shows the Percepxion connection (Connection 1 or Connection 2)
<cr>	Show Percepxion Configuration

Mode: Configure Percepxion mode

Example 1:

```
SM8TBT2SA(config-percepxion)# show connection 1
Percepxion Connection 1 Configuration:
Connect To : Cloud
Host : percepxion.com
Port : 443
Secure Port : Enabled
Validate Certificates: Enabled

SM8TBT2SA(config-percepxion)# show connection 2
Percepxion Connection 2 Configuration:
Connect To : Cloud
Host : percepxion.com
Port : 443
Secure Port : Enabled
Validate Certificates: Enabled

SM8TBT2SA(config-percepxion)#
```

Example 2:

```
SM8TBT2SA(config-percepxion)# show <cr>
Percepxion Configuration:
State : Enabled
Device ID :
Device Key : (Configured)
Device Name : SM8TBT2SA-3E96
```

```
Device Description : Lantronix SM8TBT2SA
Status Update Interval : 1 minutes
Content Check Interval : 1 minutes
Apply Firmware Updates : Enabled
Apply Configuration Updates : Enabled
Active Connection : Connection 1
Connection 1 Host : percepxion.com
Connection 1 Port : 443
Connection 1 Secure Port : Enabled
Connection 1 Validate Certificates: Enabled
Connection 2 Host : percepxion.com
Connection 2 Port : 443
Connection 2 Secure Port : Enabled
Connection 2 Validate Certificates: Enabled

SM8TBT2SA(config-percepxion)#
```

Example 3:

```
SM8TBT2SA(config-percepxion)# show statistics
Client Status : Running
Not registered -
Last Status Update : Not available
Last Content Check : Not available
Available Firmware Updates: Not available
Available Configuration Updates: Not available
SM8TBT2SA(config-percepxion)#
```

Command: **state**

Description: Sets the Percepxion state to enabled or disabled.

Syntax: **state** disable | enable

Parameters:

disable	Disables the Percepxion client
enable	Enables the Percepxion client

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# state disable
SM8TBT2SA(config-percepxion)# state enable
SM8TBT2SA(config-percepxion)#
```

Command: **status**

Description: Sets the Percepxion status update interval.

Syntax: **status** update interval <minutes>

Parameters:

update	Sets the status update interval
interval	Sets the status update interval
<1-1440>	Sets the status update interval

Mode: Configure Percepxion mode

Example:

```
SM8TBT2SA(config-percepxion)# status update interval 1
SM8TBT2SA(config-percepxion)# status update interval 1440
SM8TBT2SA(config-percepxion)#
```

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