LANTRONIX®

```
sm-12 - HyperTerminal
File  Edit  View  Call  Transfer  Help

SM16TAT2SA#
    !              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
    ping
    reload
    show
    ssl
    terminal       Set terminal line parameters
    traceroute     Trace the route to HOST

SM16TAT2SA#

Connected 0:28:59    ANSIW    TCP/IP    SCROLL  CAPS  NUM  Capture  Print echo
```

SM8TAT2SA, SM16TAT2SA, SM24TAT2SA and SM8TAT2SA-DC

Smart Managed Gigabit Ethernet PoE+ Switches

8-/16-/24-Port Gigabit PoE+, 2-Port 100/1000 SFP

CLI Reference

Intellectual Property

Warranty

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

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Disclaimer

Revision History

| Date	Rev	Description
2/1/23	L	SM8TAT2SA FW v1.04.0079: Add ConsoleFlow and LPM support. Change Auth Method defaults. Change Filename extension to .imgs. Remove CLI command summary.
8/24/23	M	FW v1.04.0095: Add ConsoleFlow On-premise support. Update DHCP per port VLAN. Update contact information. Please see the Release Notes for more information.
9/29/23	N	FW v1.04.0110: Change ConsoleFlow to Percepxion. Allow a dash (-) value for Status Update Interval and Content Check Interval. Automatically save Configuration Update from Percepxion Explore tab and configuration of all element changes to Start-Up Config. Add CLI command to modify SSL certificate effective date.
6/12/24	P	FW v1.04.0124: Remove hidden command "Special ip-cam poe-force-mode on". Add a Caution that Forcing the switch to send POE to non-POE devices can physically damage those devices. Add more support for Percepxion cloud management. Skipped Rev O. Remove references to console port. See the Release Notes for details.

Contents

1. CLI Management

This manual documents CLI (Command Line Interface) commands for four similar models: SM8TAT2SA, SM16TAT2SA, SM24TAT2SA, and SM8TAT2SA-DC. The models differ mainly in port count. Model differences are noted where applicable in this manual. Note: the CLI can only be accessed via SSH. A typical connection procedure is provided below:

1. Attach an RJ-45 cable to any RJ-45 port on the switch front panel to access the CLI.
2. Attach the other end of the cable to a terminal or a PC running Tera Term or similar terminal emulator.
3. At the "Tera Term New connection" menu, set the parameters: Host: 192.168.1.77; History: checked; Service: SSH; TCP port # 22; SSH version: SSG2; Protocol: UNSPEC.
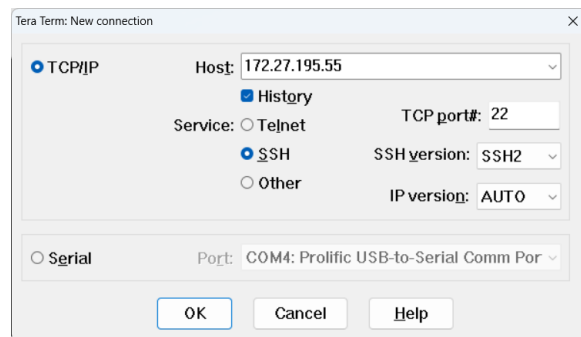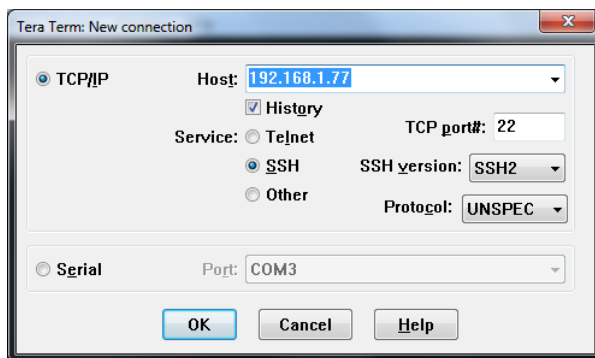
4. Follow the on-screen instructions.
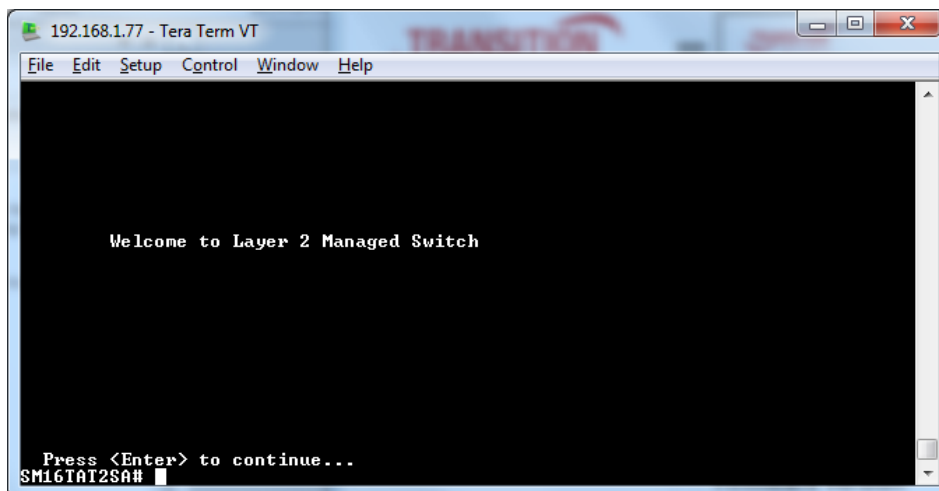
1-1 Related Manuals

For Lantronix Documentation, Firmware, App Notes, etc. go to https://www.lantronix.com/technical-support/. Note that this manual provides links to third party web sites for which Lantronix is not responsible. This manual describes how to install, configure, and troubleshoot the SMxTAT2SA switch. Other related manuals include:

- SMxTAT2SA Quick Start Guide, 33715

- SMxTAT2SA Install Guide, 33716

- SMxTATS2A Web User Guide, 33717

- SM8TAT2SA-DC Quick Start Guide, 33813

- SM8TAT2SA-DC Install Guide, 33814

- SMxTAT2SA Unified API User Guide, 33825

- Release Notes (version specific)

1-2 Privilege Levels

Every command has a privilege level (0-15). You 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.

1-3 Command Modes

The CLI is divided into several modes. If you have a high enough privilege level to run a particular command, you can run the command if in the correct mode. The modes that are available depend on the session's privilege level. To see the commands of the mode, enter a "**?**" (question mark) after the system prompt, then all commands will be listed in the screen. The command modes are listed below:

Command Modes

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

Change Between Command Modes

Commands reside in the corresponding modes and can run only in that mode. If you want to run a particular command, you just change to the appropriate mode. The command modes are organized as a tree, starting 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 <port-type> <port-type-list>	exit
config-vlan	Interface vlan <vlan_list>	exit

1-4 Login

The command-line interface (CLI) is a text-based interface that you can access the CLI via a direct serial connection to the device. The default username and password to login into the switch are Username: admin and Password: admin.

After you login successfully, the prompt displays as "<sys_name>#". This means you are an administrator and have the highest privilege for setting the switch. If logged in as other than the administrator, the prompt displays as "<sys_name>>", which means you have guest privileges and are only allowed for setting the system under the administrator. Each CLI command has its privilege level pre-assigned. See below.

```
Username: admin <Enter>
Password: admin <Enter>
SM16TAT2SA
```

Command Line Navigation

To display	Press	Description
more	**-**	dash key
next page	Space	space bar
continue	g	g key
quit	^C	Control C
parameters	?	Single question mark
syntax	??	Two question marks
available commands in table format	Tab key	available commands in table format

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.

1-5 Idle Timeout

Warning: Idle timeout. The session will be closed.

After the session times out due to inactivity, you must log back in again. Press Enter to display the Username prompt.

```
SM16TAT2SA#
Warning: Idle timeout. The session will be closed.
<Enter>
Username: admin
Password:
SM16TAT2SA#
```

Command:	**exec-timeout autologout**
Description:	Set HTTP Auto-logout Timeout period. Added at FW v1.02.1476.
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:

```
SM8TAT2SA(config)# exec-timeout autologout 0
SM8TAT2SA(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 (added at FW v1.02.1476).

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.

In 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.

2. 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.

```
SM16TAT2SA# ?
  !           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

SM16TAT2SA#
```

Exit

Exit from Config mode to EXEC mode.

Syntax**:**   **exit**

Parameters**:**   None.

Example**:**

```
SM16TAT2SA(config)# exit
SM16TAT2SA#
```

? (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**:**

```
SM16TAT2SA#?
!           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
SM16TAT2SA#
```

logout

Exit from EXEC mode. You must log back in.

Syntax:

logout

Parameters:

Example:

```
SM16TAT2SA# logout
```

end

Go back to EXEC mode.

Syntax:

end

Parameters:

Example:

```
SM16TAT2SA# configure terminal
SM16TAT2SA(config)# end
SM16TAT2SA#
```

find switch

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

SYNTAX

find-switch <cr>

EXAMPLE

```
SM16TAT2SA# find-switch ?
  find-switch  Turn on and off all LED light 3 times in 15 seconds
  <cr>
SM16TAT2SA# find-switch
SM16TAT2SA#
```

3. 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

```
SM8TAT2SA# clear access-list ace statistics?

statistics Traffic statistics

<cr>

SM8TAT2SA# clear access-list ace statistics ?

<cr>

SM8TAT2SA# clear access-list ace statistics

SM8TAT2SA#
```

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

```
SM8TAT2SA# clear ip ?

arp Clear ARP cache

dhcp Dynamic Host Configuration Protocol

igmp Internet Group Management Protocol

statistics Traffic statistics

SM8TAT2SA# clear ip arp

SM8TAT2SA# clear ip dhcp ?

detailed Detailed statistics

relay DHCP relay agent configuration

server Miscellaneous DHCP server information
```

```
snooping DHCP snooping

SM8TAT2SA# clear ip igmp ?

snooping Snooping IGMP

SM8TAT2SA# clear ip igmp snooping ?

statistics Running IGMP snooping counters

vlan Search by VLAN

SM8TAT2SA# clear ip igmp snooping vlan ?

<vlan_list> VLAN identifier(s): VID

SM8TAT2SA# clear ip igmp snooping statistics

SM8TAT2SA#
```

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

```
SM8TAT2SA# clear lldp statistics interface GigabitEthernet 1/3-8

SM8TAT2SA# clear lldp statistics global

SM8TAT2SA#
```

logging

Clears Syslog (System Log).

Syntax

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

Parameters

error   Error

info   Information

warning   Warning

EXAMPLE

```
SM8TAT2SA# clear logging error

SM8TAT2SA# clear logging info

SM8TAT2SA# clear logging warning

SM8TAT2SA# clear logging

SM8TAT2SA#
```

mac

Clears MAC Address Table.

Syntax

Clear mac address-table

Parameters

address-table   Flush MAC Address table.

EXAMPLE

```
SM16TAT2SA# clear mac address-table

SM16TAT2SA#
```

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

```
SM8TAT2SA# clear spanning-tree?

spanning-tree STP Bridge

SM8TAT2SA# clear spanning-tree ?

detected-protocols Set the STP migration check

statistics STP statistics

SM8TAT2SA# clear spanning-tree detected-protocols ?

interface Choose port

<cr>

SM8TAT2SA# clear spanning-tree statistics ?

interface Choose port

<cr>

SM8TAT2SA# clear spanning-tree detected-protocols interface GigabitEthernet

1/1-8

SM8TAT2SA# clear spanning-tree statistics

SM8TAT2SA#
```

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

```
SM16TAT2SA# clear statistics interface GigabitEthernet 1/3-9

SM16TAT2SA#
```

4. Config Mode Commands

Table : Configure Mode Commands

```
SM16TAT2SA(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

SM16TAT2SA(config)#
```

! (Comments)

Arguments - ignored comment text.

Syntax   **configure** terminal

EXAMPLE

```
SM16TAT2SA(config)# ! ?
  Arguments  ignored comment text
  <cr>

SM16TAT2SA(config)# !
SM16TAT2SA(config)#
```

configure terminal

Enter Configure mode from Exec mode.

Syntax   **configure** terminal

EXAMPLE

```
SM16TAT2SA(config)#

SM16TAT2SA(config)# end

SM16TAT2SA# configure terminal

SM16TAT2SA(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

```
SM8TAT2SA(config)# aaa authentication login http local

SM8TAT2SA(config)# aaa authorization tacacs commands 12 config-commands fallback

Warning: Idle timeout. The session will be closed.

SM8TAT2SA(config)# aaa accounting ssh tacacs

SM8TAT2SA(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

```
SM16TAT2SA(config)# access management 1

SM16TAT2SA(config)# access management 10 3 192.168.1.1 all

SM16TAT2SA(config)# access management 2 3 192.168.1.30 ?

  snmp    SNMP service

  telnet  TELNET/SSH service

  web     Web service

  all     All services

  <cr>

SM16TAT2SA(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


SM16TAT2SA(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

```
SM8TAT2SA(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
SM8TAT2SA(config)# access-list ace 1 frame-type ipv4-icmp icmp-type 5 icmp-code any tos ip-
precedence 7
SM8TAT2SA(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

```
SM8TAT2SA(config)# aggregation mode dst-ip

SM8TAT2SA(config)# aggregation mode dst-mac

SM8TAT2SA(config)# aggregation mode src-dst-mac

SM8TAT2SA(config)# aggregation mode src-ip

SM8TAT2SA(config)# aggregation mode src-mac

SM8TAT2SA(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

```
SM8TAT2SA(config)# clock set 2019/09/13 12:43:33
SM8TAT2SA(config)# do show clock
System Time : 2019-09-13 12:43:38
SM16TAT2SA(config)# clock timezone ?
  acronym      name of time zone.
  clock-offset  Offset from UTC.
SM16TAT2SA(config)# clock summer-time ?
  mode_type  Enable or Disable time zone in summer. (disable/enable)
SM16TAT2SA(config)#
```

dms

Set DMS (Device Management System) service mode parameters. The "show DMS" command was removed at Firmware Version: v1.01.1201. 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

```
SM8TAT2SA(config)# dms-service mode enabled priority high

SM8TAT2SA(config)#
```

do

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

SYNTAX

do   < LINE >{[< LINE >]}

Parameters

<LINE>   Exec Command

EXAMPLE

```
SM16TAT2SA(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

SM16TAT2SA(config)# do show trap

                   Community              Severity

No Ver Server IP      Name                  Level

-- --- --------------- ---------------------- ---------

1  v2c   192.168.1.30                 private    Error

2

3

4

5

SM16TAT2SA(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

```
SM16TAT2SA(config)# dot1x authentication timer re-authenticate 600

SM16TAT2SA(config)# dot1x feature guest-vlan

SM16TAT2SA(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.

SM8TAT2SA(config)# dot1x guest-vlan 200

SM8TAT2SA(config)# dot1x max-reauth-req 65

SM8TAT2SA(config)# dot1x re-authentication

SM8TAT2SA(config)# dot1x system-auth-control

SM8TAT2SA(config)# dot1x timeout tx-period 9000

SM16TAT2SA(config)#
```

end

Go back to EXEC mode.

SYNTAX

end <cr>

EXAMPLE

```
SM16TAT2SA(config)# end?

  end  Go back to EXEC mode

  <cr>


SM16TAT2SA(config)# end ?

  <cr>


SM16TAT2SA(config)# end

SM16TAT2SA#
```

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

```
SM8TAT2SA(config)# event group acl level 5

SM8TAT2SA(config)# event group poe-auto-power-reset trap enable

SM8TAT2SA(config)# event group poe-auto-power-reset syslog enable

SM8TAT2SA(config)# event group port-security syslog enable trap enable

SM8TAT2SA(config)# event group 802.1x syslog enable smtp enable level 3 trap enable

SM8TAT2SA(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

```
SM8TAT2SA(config)# exec-timeout autologout 0

SM8TAT2SA(config)# exec-timeout autologout 0

SM8TAT2SA(config)# exec-timeout autologout 1

SM8TAT2SA(config)# exec-timeout autologout 2

SM8TAT2SA(config)# exec-timeout autologout 99

SM8TAT2SA(config)#
```

exit

Exit from the CLI.

SYNTAX

exit

EXAMPLE

```
SM16TAT2SA(config)# exit ?

SM16TAT2SA# exit ?

  exit  Exit from the CLI

  <cr>


SM16TAT2SA# exit

  <cr>


SM16TAT2SA#
```

interface

Enter Interface Config Mode; select and configure a specific VLAN or GbE interface. See section 5. Interface Config Mode Commands on page 138 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 SM24TAT2SA)
<port_list>	Port List S/X-Y,Z (1/1-10)

EXAMPLE 1

```
SM16TAT2SA(config)# interface vlan 10-20

SM16TAT2SA(config)# interface GigabitEthernet ?

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

SM16TAT2SA(config)# interface GigabitEthernet 1/2-7

SM16TAT2SA(config-if)#
```

EXAMPLE 2

```
SM16TAT2SA(config)# interface vlan 20

SM16TAT2SA(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

SM16TAT2SA(config-if-vlan)#
```

EXAMPLE 3

```
SM16TAT2SA(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

SM16TAT2SA(config-if)#
```

See section 5. Interface Config Mode Commands on page 138 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

```
SM8TAT2SA(config)# ip arp inspection

SM8TAT2SA(config)# ip dhcp server per-port

SM8TAT2SA(config)# ip helper-address 123.45.67.89

SM8TAT2SA(config)# ip igmp snooping

SM8TAT2SA(config)# ip verify source

SM8TAT2SA(config)# ip link-local interface 100

SM8TAT2SA(config)# ip name-server 1.2.3.4

SM8TAT2SA(config)# ip verify source

SM8TAT2SA(config)#
```

EXAMPLE 2

```
SM16TAT2SA(config)# ip dhcp server per-port vlan 900

SM16TAT2SA(config)#
```

EXAMPLE 3: Enable DHCP Server on VLAN 100

1. Create VLAN 100:

```
SM8TAT2SA# configure terminal

SM8TAT2SA(config)# interface vlan 100

SM8TAT2SA(config-if-vlan)# ip address 10.1.1.1 255.0.0.0

SM8TAT2SA(config-if-vlan)# exit
```

2. Config DHCP Pool 100:

```
SM8TAT2SA(config)# ip dhcp pool 100

SM8TAT2SA(config-dhcp-pool)# start-ip 10.1.1.100

SM8TAT2SA(config-dhcp-pool)# end-ip 10.1.1.200

SM8TAT2SA(config-dhcp-pool)# lease 10

SM8TAT2SA(config-dhcp-pool)# mask 255.0.0.0

SM8TAT2SA(config-dhcp-pool)# default-router 10.1.1.223

SM8TAT2SA(config-dhcp-pool)# dns-server 1.1.1.1

SM8TAT2SA(config-dhcp-pool)# exit
```

3. Enable DHCP Server on VLAN 100:

```
SM8TAT2SA(config)# interface vlan 100

SM8TAT2SA(config-if-vlan)# ip dhcp server

SM8TAT2SA(config-if-vlan)# exit

SM16TAT2SA(config)#
```

4. Show Running Config:

```
SM8TAT2SA# show running-config

username admin privilege 15 password encrypted_sha

8c6976e5b5410415bde908bd4dee15dfb167a9c873fc4bb8a81f6f2ab448a918

exec-timeout autologout 3

vlan 1

poe management mode class-consumption

no aaa authentication login telnet

aaa authentication login http redirect

ip dhcp pool 100

 start-ip 10.1.1.100
```

```
 end-ip 10.1.1.200
 lease 10
 mask 255.0.0.0
 default-router 10.1.1.223
 dns-server 1.1.1.1
dms service-mode enabled priority non
percepxion
interface GigabitEthernet 1/1
interface GigabitEthernet 1/2
interface GigabitEthernet 1/3
interface GigabitEthernet 1/4
interface GigabitEthernet 1/5
interface GigabitEthernet 1/6
interface GigabitEthernet 1/7
interface GigabitEthernet 1/8
interface GigabitEthernet 1/9
interface GigabitEthernet 1/10
!
interface vlan 1
 ip address 192.168.137.61 255.255.255.0
!
interface vlan 100
 ip address 10.1.1.1 255.0.0.0
 ip dhcp server
!
ip route 0.0.0.0 0.0.0.0 192.168.137.1
end
SM8TAT2SA#
```

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

```
SM16TAT2SA(config)# ipmc profile test

SM16TAT2SA(config-ipmc-profile)#

SM16TAT2SA(config)# ipmc mode

SM16TAT2SA(config)#

SM8TAT2SA(config-ipmc-profile)# range Entry1 deny

SM8TAT2SA(config-ipmc-profile)# range Entry1 permit

SM8TAT2SA(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

```
SM16TAT2SA(config)# ipv6 mld snooping

SM16TAT2SA(config)# ipv6 mld unknown-flooding

SM816AT2SA(config)# ipv6 mld host-proxy

SM16TAT2SA(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)

SM16TAT2SA(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

```
SM16TAT2SA(config)# lacp system-priority 300

SM16TAT2SA(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

```
SM8TAT2SA(config)# lldp timer 350

SM8TAT2SA(config)# lldp holdtime 3

SM8TAT2SA(config)# lldp reinit 4

SM8TAT2SA(config)# lldp transmission-delay 500

The error while request to the config daemon.

SM8TAT2SA(config)# lldp med location-tlv civic-addr country US

SM8TAT2SA(config)# lldp med media-vlan-policy 0 video-signaling tagged 600 dscp

6 l2-priority 2

SM8TAT2SA(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

```
SM8TAT2SA(config)# logging on

SM8TAT2SA(config)# logging host 1

SM16TAT2SA(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'

SM16TAT2SA(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

```
SM16TAT2SA(config)# loop-protect transmit-time 10

SM16TAT2SA(config)# loop-protect shutdown-time ?

  <10-604800>  Shutdown time in second (10..604800)


SM16TAT2SA(config)# loop-protect shutdown-time 50000

SM16TAT2SA(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

```
SM16TAT2SA(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

SM16TAT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 block

  <cr>

SM16TAT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 interface

  GigabitEthernet  1 Gigabit Ethernet Port

  *               All switches or All ports

SM16TAT2SA(config)# mac address-table static 11:22:33:44:55:66 vlan 20 interface

SM16TAT2SA(config)#
```

map-api-key

Set Google Map Key configurations. 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

```
SM16TAT2SA(config)# map-api-key abcdefg1234567

SM16TAT2SA(config)# do show map-api-key

Key              : abcdefg1234567


SM16TAT2SA(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

```
SM8TAT2SA(config)# max-frame-size 1518

SM8TAT2SA(config)# max-frame-size 9999

SM8TAT2SA(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

```
SM8TAT2SA(config)# monitor session 1 destination interface GigabitEthernet 1/5

SM8TAT2SA(config)# monitor session 1 source interface GigabitEthernet 1/5 rx

ERROR: ERROR: Failed to set mirror group

SM8TAT2SA(config)# monitor session 1 source interface GigabitEthernet 1/6 tx

SM8TAT2SA(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

```
SM8TAT2SA(config)# mvr vlan 200-400 frame tagged tagged

SM8TAT2SA(config)# mvr vlan 200-400 name MvrVid1

SM8TAT2SA(config)# mvr vlan 200-400 frame ?

  priority  Interface CoS priority

  tagged    Tagged IGMP/MLD frames will be sent

SM8TAT2SA(config)# mvr vlan 200-400 frame tagged ?

  untagged/tagged  tagged mode

SM8TAT2SA(config)# mvr vlan 200-400 frame tagged tagged

SM8TAT2SA(config)# mvr vlan 100 mode compatible

SM8TAT2SA(config)# mvr vlan 11 last-member-query-interval 1

SM8TAT2SA(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 <10-2880 minutes> (before FW v1.02.1363)

<5-120>   available interval time is 5,10,15,30,60,120 minutes (FW v1.02.1363 and after)

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

```
SM8TAT2SA(config)# ntp server 1 ip-address 192.168.1.80

SM8TAT2SA(config)# ntp interval 30

SM8TAT2SA(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

SM8TAT2SA(config)#
```

percepxion

Configure Percepxion. See chapter 18. Percepxion and LPM Commands on page 252.

poe

Configure PoE (Power over Ethernet).

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

```
SM16TAT2SA(config)# poe management mode allocation-consumption

SM16TAT2SA(config)# poe management mode class-consumption

SM16TAT2SA(config)# do show poe config

Primary Power Supply [W]    : 250

Reserved Power determined by : Class

Capacitor Detection         : Disabled

Interface             Mode      Priority  Max. Power [W]

--------------------- --------  --------  --------------

GigabitEthernet 1/1     Enabled   Low              30

GigabitEthernet 1/2     Enabled   Low              30

GigabitEthernet 1/3     Enabled   Low              30

GigabitEthernet 1/4     Enabled   Low              30

GigabitEthernet 1/5     Enabled   Low              30

GigabitEthernet 1/6     Enabled   Low              30

GigabitEthernet 1/7     Enabled   Low              30

GigabitEthernet 1/8     Enabled   Low              30

GigabitEthernet 1/9     Enabled   Low              30

GigabitEthernet 1/10    Enabled   Low              30

GigabitEthernet 1/11    Enabled   Low              30

GigabitEthernet 1/12    Enabled   Low              30

GigabitEthernet 1/13    Enabled   Low              30

GigabitEthernet 1/14    Enabled   Low              30

GigabitEthernet 1/15    Enabled   Low              30

GigabitEthernet 1/16    Enabled   Low              30

SM16TAT2SA(config)# poe capacitor-detect

SM16TAT2SA(config)# poe auto-check

SM16TAT2SA(config)# poe profile id 2

  Mon   Monday

  Tue   Tuesday

  Wed   Wednesday

  Thr   Thursday

  Fri   Friday

  Sat   Saturday

  Sun   Sunday

  name  name
```

```
SM16TAT2SA(config)# poe profile id 2 name Rob

SM8TAT2SA(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


SM8TAT2SA(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. **Note**: Starting at FW v1.01.1195, when the Maximum Power per port value is changed, it will change the mode to Allocation mode. When Class mode is set, PoE allocated value will display after PoE negotiation.

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. LLDP-Med: This 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: Check to enable or uncheck to disable the capacitor configuration. The default is disabled. Check to enable legacy IP phones support.

port-security

Enable/Disable port security globally.

SYNTAX

port-security <cr>

Parameters

None

EXAMPLE

```
SM16TAT2SA(config)# port-security?

  port-security  Enable/disable port security globally

  <cr>

SM16TAT2SA(config)# port-security

SM16TAT2SA(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        -

SM16TAT2SA(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

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			

EXAMPLE

```
SM16TAT2SA(config)# privilege group vlan level ro

  <0-15>  Privilege level (0..15)


SM16TAT2SA(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

SM16TAT2SA(config)# **qos trust ip-precedence**

SM16TAT2SA(config)# **qos trust dscp**

SM16TAT2SA(config)# **qos trust cos**

SM16TAT2SA(config)# **qos trust ip-precedence**

SM16TAT2SA(config)#

SM8TAT2SA(config)# **qos map cos-queue 0 to 6**

SM8TAT2SA(config)# **qos map dscp-queue 3 to 5**

SM8TAT2SA(config)# **qos map precedence-queue 4 to 6**

SM8TAT2SA(config)# **qos map queue-cos 0 to 4**

SM8TAT2SA(config)# **qos map queue-dscp 2 to 50**

SM8TAT2SA(config)# **qos map queue-precedence 1 to 5**

SM8TAT2SA(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:

```
SM24TAT2SA(config)# radius-server retransmit 150

SM24TAT2SA(config)# radius-server timeout 90

SM24TAT2SA(config)# radius-server deadtime 10

SM24TAT2SA(config)# radius-server key scrtPemKey123$%^

SM24TAT2SA(config)# radius-server attribute 32 BBBBBBBBB

SM24TAT2SA(config)# radius-server attribute 4 2.4.6.8

SM24TAT2SA(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        :


SM24TAT2SA(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:

```
SM8TAT2SA(config)# rmon alarm 1 ifOutErrors 1 10000 delta rising-threshold 90000 falling-
threshold 800
SM8TAT2SA(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

SM8TAT2SA(config)#
```

EXAMPLE 2: Configure an RMON event:

```
SM16TAT2SA(config)# rmon event 1 description event1 log trap trpevt1
SM16TAT2SA(config)# do show rmon event
Event ID :    1
----------------
     Description    : event1
     Type           : logandtrap
     Community      : trpevt1
     LastSent       : 0
SM16TAT2SA(config)#
```

smtp

Set SMTP parameters for an interface.

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

SM8TAT2SA(config)# **smtp mailaddress 1 BobB**

SM8TAT2SA(config)# **smtp returnpath xxxxx**

SM8TAT2SA(config)# **smtp sender TomT**

SM8TAT2SA(config)# **smtp server LlI**

SM8TAT2SA(config)# **smtp username LynnL admin2**

SM8TAT2SA(config)# **smtp username LynnL admin2**

SM8TAT2SA(config)# **do show smtp**

Mail Server   : LlI

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   :

SM8TAT2SA(config)#

SM8TAT2SA(config)# smtp username LynnL encrypted 1!2@&*78LynnL&6&5%4$

ERROR: key decrypted fail.

SM8TAT2SA(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	
<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
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	Included type from the view

EXAMPLE

```
SM16TAT2SA(config)# snmp-server access myGroup model any level auth write right read reed
SM8TAT2SA(config)# snmp-server user testTech3 md5 1234!@#$ priv aes 1234567809!@#$%^&*()
SM8TAT2SA(config)# snmp-server user testTech3 sha GreyGhost123$#@! priv des Aesproto5555555
SM8TAT2SA(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



SM8TAT2SA(config)#

SM16TAT2SA(config)# snmp-server service

SM16TAT2SA(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

```
SM16TAT2SA(config)# snmp-server access text model v2c level noauth write text
SM16TAT2SA(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

```
SM16TAT2SA(config)# snmp-server community v2c text ?
  ro  Read only
  rw  Read write
SM16TAT2SA(config)# snmp-server community v2c text rw ?
  <cr>
SM16TAT2SA(config)# snmp-server community v2c text rw
SM16TAT2SA(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

```
SM16TAT2SA(config)# snmp-server security-to-group ?
  model  security model
SM16TAT2SA(config)# snmp-server security-to-group model v2c ?
  name  security user
SM16TAT2SA(config)# snmp-server security-to-group model v2c name ?
  <SecurityName : word32>  security group name (word32)
SM16TAT2SA(config)# snmp-server security-to-group model v2c name swgrp ?
  group  security user
SM16TAT2SA(config)# snmp-server security-to-group model v2c name swgrp group
  <GroupName : word32>  group name (word32)
SM16TAT2SA(config)# snmp-server security-to-group model v2c name swgrp group grp1
SM16TAT2SA(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

```
SM16TAT2SA(config)# snmp-server user ?
  <Username : word32>  Security user name (word32)
SM16TAT2SA(config)# snmp-server user jeffs sha Duffrey1 priv des xxxxxxxxx12
SM16TAT2SA(config)# do show snmp user
SNMPv3 Users Table:
User Name            : jeffs
Security Level       : Auth, Priv
Authentication Protocol : SHA
Privacy Protocol     : DES


SM16TAT2SA(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

```
SM16TAT2SA(config)# snmp-server view ?

  <ViewName : word32>  MIB view name (word32)

SM16TAT2SA(config)# snmp-server view viewname1 ?

  <OidSubtree : word128>  MIB view OID (word128)

SM16TAT2SA(config)# snmp-server view viewname1 .1 ?

  exclude  Excluded type from the view

  include  Included type from the view

SM16TAT2SA(config)# snmp-server view viewname1 .1 include

SM16TAT2SA(config)# do show snmp view

SNMPv3 Views Table:

View Name   : viewname1

OID Subtree : .1

View Type   : included


SM16TAT2SA(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

```
SM8TAT2SA(config)# spanning-tree mst name BobB revision 3

SM8TAT2SA(config)# spanning-tree mode rstp

SM8TAT2SA(config)# spanning-tree mst 1 priority 2

SM8TAT2SA(config)# spanning-tree mst forward-time 12

SM8TAT2SA(config)# spanning-tree mst max-age 10

SM8TAT2SA(config)#
```

Messages: *invalid MST instance ID.*

system

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

SYNTAX

system name <v_line255>

system contact <v_line255>

system location <v_line255>

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

```
SM8TAT2SA(config)# system name sm8tat2sa-fortest

SM8TAT2SA(config)# system contact Chris

SM8TAT2SA(config)# system location SvtLab

SM8TAT2SA(config)# do show system

Model Name          : SM8TAT2SA

System Description   : Smart Managed Switch, 8-port Gigabit PoE+, 2-port 100/1000 SFP

Hardware Version    : v1.02

Mechanical Version   : v1.01

Firmware Version    : v1.04.0110

PoE Firmware Version : 220-224

MAC Address         : 00-C0-F2-4C-22-C3

Serial Number       : C020319AR2400167

System Name         : sm8tat2sa-fortest

Location            : SvtLab

Contact             : Chris

System Date         : 2017-01-01 21:17:48 +0000

System Uptime       : 0 days, 21:18:02


SM8TAT2SA(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 MMMMMMMMMMM
SM24DP4XA(config)# tacacs-server host 10.0.4.88 key encrypted 1234567*&^%$#@! port 765
timeout 300
SM24DP4XA(config)# tacacs-server key encrypted NNNNNNNNNNNN
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.

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

```
SM8TAT2SA(config)# trap 1 Disabled v2c 1.2.3.4 5 TRP-1 987

SM8TAT2SA(config)# trap 2 TCP v2c 10.0.4.77 6 TrCom2 888

SM8TAT2SA(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>

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

Parameters

advertising-duration   Set advertising duration <100-86400>

ttl   Set TTL 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

```
SM8TAT2SA(config)# upnp advertising-duration 80000

SM8TAT2SA(config)# upnp interface-vlan 1000

SM8TAT2SA(config)# upnp ttl 125

SM8TAT2SA(config)# do show upnp

UPnP Mode                : Disabled

Interface VLAN           : 1000

UPnP TTL                 : 125

UPnP Advertising Duration  : 100


SM8TAT2SA(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

```
SM8TAT2SA(config)# username Admin11 privilege 14 password none
SM8TAT2SA(config)# username BobB privilege 14 password unencrypted AdminSyy@Hdqtrs
SM8TAT2SA(config)# username Test1 privilege 10 password encrypted_sha MYEncryptedPassword4Now!
ERROR: SHA password length is valid
SM8TAT2SA(config)# username Tomba privilege 15 password unencrypted Admin!
SM8TAT2SA(config)#
```

Messages:

Syntax error: Illegal command line

ERROR: SHA password length is valid

vlan

Configure VLAN commands.

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

```
SM16TAT2SA(config)# vlan ethertype s-custom-port 0x1111

SM16TAT2SA(config)# vlan ethertype s-custom-port 0x8888

SM8TAT2SA(config)# vlan ip-subnet 2.2.2.2 255.255.255.0 vlan 1000

SM8TAT2SA(config)# vlan ethertype s-custom-port 0x88A8

SM8TAT2SA(config)# vlan mac 00-11-22-33-44-55 vlan 1000

SM8TAT2SA(config)# vlan protocol llc 0x01 0x02 group LlcGrp-1

SM8TAT2SA(config)# vlan 1000-2000

SM8TAT2SA(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

SM8TAT2SA(config-vlan)# end

SM8TAT2SA#
```

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

```
SM16TAT2SA(config)# voice vlan vid 100 aging-time 50000 class 4

SM8TAT2SA(config)# voice vlan oui 00-D0-1E description Pingtel

SM8TAT2SA(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



SM8TAT2SA(config)#
```

3-1 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

```
SM16TAT2SA(config)# no aaa authentication  login ssh
SM16TAT2SA(config)# no aaa ?
  authentication  Authentication
  authorization   Authorization
  accounting      Accounting
SM16TAT2SA(config)# no aaa authentication ?
  login         Login
  service-port  Service port
  redirect      HTTP redirect HTTPS
SM16TAT2SA(config)# no aaa authentication login ?
  ssh     Configure SSH
  telnet  Configure Telnet
  http    Configure HTTP
  https   Configure HTTPS
```

```
SM16TAT2SA(config)# no aaa authentication login ssh
SM16TAT2SA(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


SM16TAT2SA(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

```
SM16TAT2SA(config)# no access management ?
  <1..16>  ID of access management entry (1..16)
  <cr>
SM16TAT2SA(config)# no access management 2
  <cr>
SM16TAT2SA(config)#
```

aggregation

No Aggregation mode.

SYNTAX

no aggregation mode

Parameters

mode   Traffic distribution mode

EXAMPLE

```
SM16TAT2SA(config)# no aggregation ?
  mode  Traffic distribution mode
SM16TAT2SA(config)# no aggregation mode
  <cr>
SM16TAT2SA(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

```
SM16TAT2SA(config)# no clock summer-time

SM16TAT2SA(config)# no clock timezone

SM16TAT2SA(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

```
SM16TAT2SA(config)# no dot1x authentication timer ?

  re-authenticate  The period between re-authentication attempts in seconds

SM16TAT2SA(config)# no dot1x authentication timer re-authenticate

  <cr>

SM16TAT2SA(config)# no dot1x feature ?

  guest-vlan  Globally enables/disables state of guest-vlan.

SM16TAT2SA(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>

SM16TAT2SA(config)# no dot1x re-authentication ?

  re-authentication  Set Re-authentication state

  <cr>

SM16TAT2SA(config)# no dot1x system-auth-control ?

  system-auth-control  Set the global NAS state

  <cr>

SM16TAT2SA(config)#
```

interface

No interface configuration.

SYNTAX

no interface vlan < vlan_list >

Parameters

vlan   Vlan interface configurations

<vlan_list>   Vlan list

EXAMPLE

```
SM16TAT2SA(config)# no interface ?

  vlan  VLAN interface configurations


SM16TAT2SA(config)# no interface vlan ?

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


SM16TAT2SA(config)# no interface vlan 4095 ?

  <cr>


SM16TAT2SA(config)# no interface vlan 4095
ERROR: ERROR: Not Found (VLAN: 4095)
SM16TAT2SA(config)# no interface vlan 40
SM16TAT2SA(config)#
```

Ip

No system's network name.

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

```
SM16TAT2SA(config)# no ip arp inspection vlan 3 logging

SM16TAT2SA(config)# no ip dhcp relay

SM16TAT2SA(config)# no ip helper-address

SM16TAT2SA(config)#  no ip igmp snooping

SM16TAT2SA(config)# no ip name-server

SM16TAT2SA(config)# no ip verify source

SM16TAT2SA(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

```
SM16TAT2SA(config)# no ipmc profile DoNotUse
SM16TAT2SA(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

```
SM16TAT2SA(config)# no ipv6?

  mld  Multicast Listener Discovery

SM16TAT2SA(config)# no ipv6 mld ?

  snooping          Snooping MLD

  host-proxy        MLD proxy configuration

  unknown-flooding  Flooding unregistered IPv6 multicast traffic

SM16TAT2SA(config)# no ipv6 mld unknown-flooding

SM16TAT2SA(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

```
SM16TAT2SA(config)# no lacp?
  system-priority  System priority
SM16TAT2SA(config)# no lacp system-priority ?
  <cr>
SM16TAT2SA(config)# no lacp system-priority
SM16TAT2SA(config)#
```

lldp

No LLDP configurations.

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

```
SM16TAT2SA(config)# no lldp holdtime

SM16TAT2SA(config)# no lldp med location-tlv civic-addr floor

SM16TAT2SA(config)# no lldp reinit

SM16TAT2SA(config)# no lldp timer

SM16TAT2SA(config)# no lldp transmission-delay

SM16TAT2SA(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


SM16TAT2SA(config)# no lldp ?

  timer               LLDP TX interval

  holdtime            LLDP hold time

  reinit              LLDP reinit time

  transmission-delay  LLDP transmission-delay

  med                 Media Endpoint Discovery

SM16TAT2SA(config)# no lldp timer

SM16TAT2SA(config)# no lldp holdtime

SM16TAT2SA(config)# no lldp reinit

SM16TAT2SA(config)# no lldp transmission-delay

SM16TAT2SA(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


SM16TAT2SA(config)# no lldp med datum

SM16TAT2SA(config)# no lldp med fast

SM16TAT2SA(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

SM16TAT2SA(config)# do show lldp med media-vlan-policy

Policy Id  Application Type          Tag      Vlan ID  L2 Priority  DSCP

---------  -----------------------  --------  -------  -----------  ----

0          Voice                    Tagged    1        0            0


SM16TAT2SA(config)#
```

logging

No Syslog.

SYNTAX

no logging host

no logging on

Parameters

host   host

on   Enable syslog server

EXAMPLE

```
SM16TAT2SA(config)# no logging host ?

  <1-6>  host number (1..6)

SM16TAT2SA(config)# no logging host 6

SM16TAT2SA(config)# no logging on

SM16TAT2SA(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

```
SM16TAT2SA(config)# no loop-protect shutdown-time

SM16TAT2SA(config)# no loop-protect transmit-time

SM16TAT2SA(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

```
SM16TAT2SA(config)# no mac address-table ?
  aging-time  Mac address aging time
  static      Static MAC address
SM16TAT2SA(config)# no mac address-table ?
  aging-time  Mac address aging time
  static      Static MAC address
SM16TAT2SA(config)# no mac address-table aging-time ?
  <cr>
SM16TAT2SA(config)# no mac address-table static ?
  <mac_addr>  48 bit MAC address: xx:xx:xx:xx:xx:xx
SM16TAT2SA(config)# no mac address-table static 11:22:33:44:55:66
SM16TAT2SA(config)# no mac address-table static 12:23:34:45:56:67 ?
  vlan  VLAN keyword
  <cr>
SM16TAT2SA(config)# no mac address-table static 12:23:34:45:56:67 vlan ?
  <vlan_id>  VLAN IDs 1-4095 (1-4095)
SM16TAT2SA(config)# no mac address-table static 12:23:34:45:56:67 vlan 40
SM16TAT2SA(config)#
```

map-api-key

No Google Map Api Key configurations.

SYNTAX

no map-api-key <cr>

Parameters

None.

EXAMPLE

```
SM8TAT2SA(config)# no map-api-key

SM8TAT2SA(config)# do show map-api-key

Key               :


SM8TAT2SA(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

```
SM8TAT2SA(config)# no max-frame-size <cr>

Syntax error: Incomplete command

SM8TAT2SA(config)# no max-frame-size max-frame-size ?

  <cr>

SM8TAT2SA(config)# no max-frame-size max-frame-size

ERROR: ERROR! Failed to set pkt link config

SM8TAT2SA(config)# no max-frame-size 1518

Syntax error: Illegal parameter

SM8TAT2SA(config)# no max-frame-size 1600

Syntax error: Illegal parameter

SM8TAT2SA(config)# no max-frame-size 16000

Syntax error: Illegal parameter

SM8TAT2SA(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

```
SM16TAT2SA(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.
SM16TAT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
rx ?
  <cr>
SM16TAT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
tx ?
  <cr>
SM16TAT2SA(config)# no monitor session 1 source interface GigabitEthernet 1/2-5
both ?
  <cr>
SM16TAT2SA(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

```
SM16TAT2SA(config)# do show mvr ?

SM16TAT2SA(config)# no mvr

SM16TAT2SA(config)# do show mvr

MVR is now enabled to start group registration.

SM16TAT2SA(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

```
SM16TAT2SA(config)# no ntp
SM16TAT2SA(config)# no ntp ?
  server    Configure NTP server
  interval  Configure NTP interval
  <cr>


SM16TAT2SA(config)# no ntp server ?
  <1-6>  index number (1..6)


SM16TAT2SA(config)# no ntp server 1 ?
  <cr>


SM16TAT2SA(config)# no ntp server 1
SM16TAT2SA(config)# no ntp interval ?
  <cr>


SM16TAT2SA(config)# no ntp interval
SM16TAT2SA(config)#
```

poe

Disable Power Over Ethernet in Config mode.

SYNTAX

no poe auto-check

no poe capacitor-detect

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

```
SM16TAT2SA(config)# no poe?

  poe  Power Over Ethernet


SM16TAT2SA(config)# no poe ?

  capacitor-detect  Disable capacitor detection

  auto-check        Disable Ping Check

  management        Use management mode to configure PoE power management method.
SM16TAT2SA(config)# no poe auto-check

SM16TAT2SA(config)# no poe management mode

SM16TAT2SA(config)#
```

port-security

Disable port security globally.

SYNTAX

no port-security

Parameters

<cr>   Enable/disable port security globally

EXAMPLE

```
SM16TAT2SA(config)# no port-security?
  port-security  Enable/disable port security globally
  <cr>
SM16TAT2SA(config)# no port-security ?
  <cr>
SM16TAT2SA(config)# no port-security
SM16TAT2SA(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        -
SM16TAT2SA(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

```
SM16TAT2SA(config)# no privilege ?

  group  Privilege group name


SM16TAT2SA(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


SM16TAT2SA(config)# no privilege group vlan ?

  level  Privilege group level


SM16TAT2SA(config)# no privilege group vlan level
SM16TAT2SA(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

```
SM16TAT2SA(config)# no qos map cos-queue ?

  <0-7>  Specify class of service (0..7)

  <cr>

SM16TAT2SA(config)# no qos map dscp-queue ?

  <0-63>  Specify DSCP (0..63)

  <cr>

SM16TAT2SA(config)# no qos map precedence-queue ?

  <0-7> Specify IP Precedence (0..7)

  <cr>

SM16TAT2SA(config)# no qos map queue-cos ?

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

  <cr>

SM16TAT2SA(config)# no qos map queue-dscp ?

  <0-7>  The queue number for maaping to a specific DSCP value (0..7)

  <cr>

SM16TAT2SA(config)# no qos map queue-precedence ?

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

  <cr>

SM16TAT2SA(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

```
SM8TAT2SA(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

SM8TAT2SA(config)# no radius-server deadtime

SM8TAT2SA(config)# no radius-server key

SM8TAT2SA(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

```
SM8TAT2SA(config)# no rmon alarm 44

SM8TAT2SA(config)# no rmon event 19

The error while request to the config daemon.

ERROR: Internal error

SM8TAT2SA(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

```
SM8TAT2SA(config)# no smtp mailaddress 2

SM8TAT2SA(config)# no smtp returnpath

SM8TAT2SA(config)# do show smtp

Mail Server    : myMailServer

User Name      : Bob

Password       : ********

Sender         : sm8tat2sa

Return Path    : sm8tat2sa@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 :



SM8TAT2SA(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

```
SM16TAT2SA(config)# no snmp-server access 333 model any level auth

SM16TAT2SA(config)# no snmp-server community v2c

SM16TAT2SA(config)# no snmp-server engine-id local

SM16TAT2SA(config)# no snmp-server host 333

SM16TAT2SA(config)# no snmp-server location

SM16TAT2SA(config)# no snmp-server security-to-group model v2c name 132

SM16TAT2SA(config)# no snmp-server trap

SM16TAT2SA(config)# no snmp-server version

SM16TAT2SA(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

```
SM16TAT2SA(config)# no spanning-tree edgebpdu-filter

SM16TAT2SA(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

SM16TAT2SA(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

SM16TAT2SA(config)# no spanning-tree mst max-hops ?

  <cr>

SM16TAT2SA(config)# no spanning-tree mst max-age ?

  <cr>

SM16TAT2SA(config)# no spanning-tree mst name ?

  <cr>

SM16TAT2SA(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

```
SM8TAT2SA(config)# no system name

SM8TAT2SA(config)# no system contact

SM8TAT2SA(config)# no system location

SM8TAT2SA(config)# do show system

Model Name           : SM8TAT2SA

System Description   : Smart Managed Switch, 8-port Gigabit PoE+, 2-port 100/1000 SFP

Hardware Version     : v1.02

Mechanical Version   : v1.01

Firmware Version     : v1.04.0124

PoE Firmware Version : 220-224

MAC Address          : 00-C0-F2-4C-22-C3

Serial Number        : C020319AR2400167

System Name          :

Location             :

Contact              :

System Date          : 2017-01-01 00:38:55 +0000

System Uptime        : 0 days, 0:39:09


SM8TAT2SA(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

```
SM8TAT2SA(config)# no tacacs-server deadtime

SM8TAT2SA(config)# no tacacs-server timeout

SM8TAT2SA(config)# no tacacs-server deadtime

SM8TAT2SA(config)# no tacacs-server key

SM8TAT2SA(config)# no tacacs-server host

SM8TAT2SA(config)# no tacacs-server host 2.4.6.8 port

SM8TAT2SA(config)# no tacacs-server host 2.4.6.8 port 765

SM8TAT2SA(config)# do show tacacs-server

Global TACACS+ Server Timeout      : 5 seconds

Global TACACS+ Server Deadtime     : 0 minutes

Global TACACS+ Server Key          :

SM8TAT2SA(config)#
```

trap

Negate SNMP Trap.

SYNTAX

no trap

Parameters

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

EXAMPLE

```
SM8TAT2SA(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
SM8TAT2SA(config)# no trap 1
SM8TAT2SA(config)# do show trap
                   Community            Severity
No Name                   Mode    Ver Server IP     port Level
-- ---------------------- -------- --- --------------- ---- ---------
1
2
3
4
5
6
SM8TAT2SA(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

```
SM8TAT2SA(config)# do show upnp

UPnP Mode               : Enabled

Interface VLAN          : 100

UPnP TTL                : 4

UPnP Advertising Duration  : 1000

SM8TAT2SA(config)# no upnp

SM8TAT2SA(config)# do show upnp

UPnP Mode               : Disabled

Interface VLAN          : 100

UPnP TTL                : 4

UPnP Advertising Duration  : 1000

SM8TAT2SA(config)# upnp advertising-duration 999

SM8TAT2SA(config)# upnp interface-vlan 10

SM8TAT2SA(config)# do show upnp

UPnP Mode               : Enabled

Interface VLAN          : 10

UPnP TTL                : 4

UPnP Advertising Duration  : 999

SM8TAT2SA(config)# no upnp advertising-duration

SM8TAT2SA(config)# do show upnp

UPnP Mode               : Enabled
```

```
Interface VLAN          : 10

UPnP TTL                : 4

UPnP Advertising Duration  : 100


SM8TAT2SA(config)# no upnp interface-vlan 10

Syntax error: Illegal command line

SM8TAT2SA(config)# do show upnp

UPnP Mode               : Enabled

Interface VLAN          : 10

UPnP TTL                : 4

UPnP Advertising Duration  : 100


SM8TAT2SA(config)# no upnp ttl

SM8TAT2SA(config)# no upnp interface-vlan

SM8TAT2SA(config)# do show upnp

UPnP Mode               : Enabled

Interface VLAN          : 1

UPnP TTL                : 4

UPnP Advertising Duration  : 100


SM8TAT2SA(config)#
```

username

Negate User Name Authentication.

SYNTAX

no username <Username : word31>

Parameters

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

EXAMPLE

```
SM16TAT2SA(config)# no username ?

  word31  User name allows letters, numbers and underscores (word31)

SM16TAT2SA(config)# no username installer

ERROR: ERROR: failed to delete user 'installer' account

SM16TAT2SA(config)# no username ADMIN_1

SM16TAT2SA(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

```
SM16TAT2SA(config)# no vlan 3
SM16TAT2SA(config)# no vlan ethertype s-custom-port
SM16TAT2SA(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

```
SM8TAT2SA(config)# no voice vlan vid 100

SM8TAT2SA(config)# no voice vlan oui 00-D0-1E

SM8TAT2SA(config)#
```

3-2 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

```
SM16TAT2SA(config)# qos map cos-queue 6 to 4

SM16TAT2SA(config)# do show qos

Global trust mode: CoS

SM16TAT2SA(config)#

SM8TAT2SA(config)# qos map cos-queue 1 to 4

SM8TAT2SA(config)# do show qos

Global trust mode: CoS

SM8TAT2SA(config)# qos map dscp-queue 3 to 6

SM8TAT2SA(config)# qos map precedence-queue 7 to 7

SM8TAT2SA(config)# qos map queue-cos 3 to 4

SM8TAT2SA(config)# qos map queue-dscp 5 to 33

SM8TAT2SA(config)# qos map queue-precedence 2 to 4

SM8TAT2SA(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 1

```
SM16TAT2SA(config)# qos trust cos-dscp

SM16TAT2SA(config)# do show qos

Global trust mode: CoS-DSCP

SM8TAT2SA(config)# qos trust cos

SM8TAT2SA(config)# qos trust cos-dscp

SM8TAT2SA(config)# qos trust dscp

SM8TAT2SA(config)# qos trust ip-precedence

SM8TAT2SA(config)#

SM8TAT2SA(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



SM8TAT2SA(config)#
```

3-3 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

```
SM16TAT2SA(config)# spanning-tree mode mstp

SM16TAT2SA(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

SM16TAT2SA(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

SM16TAT2SA(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

```
SM8TAT2SA(config)# spanning-tree mst 1 priority 2000

SM8TAT2SA(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


SM8TAT2SA(config)#
```

5. Interface Config Mode Commands

Configure a specified interface:

vlan   VLAN interface configurations

GigabitEthernet   1 Gigabit Ethernet Port

5-1-1 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

```
SM16TAT2SA(config-if-vlan)# ip address 192.168.1.77 255.255.255.0

SM16TAT2SA(config-if-vlan)# ip igmp snooping

SM16TAT2SA(config-if-vlan)# exit

SM8TAT2SA(config)#
```

5-1-1 Configure 1 Gigabit Ethernet Port

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
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)

EXAMPLE

```
SM16TAT2SA(config)# interface GigabitEthernet 1/4-8

SM16TAT2SA(config-if)# duplex auto

SM16TAT2SA(config-if)# flowcontrol on

SM16TAT2SA(config-if)# green-ethernet eee

SM16TAT2SA(config-if)# poe delay-mode

SM16TAT2SA(config-if)# poe delay-time 60

SM16TAT2SA(config-if)# port-security reopen

SM16TAT2SA(config-if)# port-security maximum 600

SM16TAT2SA(config-if)# pvlan isolation

SM16TAT2SA(config-if)#
```

EXAMPLE

```
SM8TAT2SA(config)# interface GigabitEthernet 1/2-7

SM8TAT2SA(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

SM8TAT2SA(config-if)# poe power limit 45

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

SM8TAT2SA(config-if)# poe power limit 30

SM8TAT2SA(config-if)# poe auto-check ip 192.168.1.99 max-reboot-times ?

  <0-10>  Max-Reboot-Times (0..10)

SM8TAT2SA(config-if)# poe auto-check ip 192.168.1.99 max-reboot-times 2

SM8TAT2SA(config-if)# poe auto-check ip 192.168.1.99 reboot-time ?

  <3-120>  Reboot-Time (3..120)

SM8TAT2SA(config-if)# poe auto-check ip 192.168.1.99 reboot-time 60

SM8TAT2SA(config-if)#
```

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

5-1 Interface Config Mode Commands

5-1-1 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:

```
SM8TAT2SA(config-if-vlan)# ! a aaa
SM8TAT2SA(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:

```
SM8TAT2SA(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
SM8TAT2SA(config-if-vlan)#
```

Command: **end**

Description: Go back to EXEC mode.

Syntax: **end** <cr>

Parameters: None.

Example:

```
SM8TAT2SA(config-if-vlan)# end
SM8TAT2SA#
```

Command: **exit**

Description: Exit from current mode.

Syntax: **exit** <cr>

Parameters: None.

Example:

```
SM8TAT2SA(config-if-vlan)# exit
SM8TAT2SA(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

                <IpmcQi : 1-31744>   1 - 31744 seconds (1..31744)

                <IpmcQri : 0-31744>   0 - 31744 tenths of seconds (0..31744)

                <IpmcRv : 1-255>   Packet loss tolerance count from 1 to 255 (1..255)

                <IpmcUri : 0-31744>   0 - 31744 seconds (0..31744)

                <cr>

Example:

```
SM8TAT2SA(config-if-vlan)# ip address dhcp fallback 192.168.1.77 255.255.255.0 timeout 60000

SM8TAT2SA(config-if-vlan)# ip igmp snooping querier

SM8TAT2SA(config-if-vlan)# ip igmp snooping query-max-response-time 400

SM8TAT2SA(config-if-vlan)# ip igmp snooping robustness-variable 30

SM8TAT2SA(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:

```
SM8TAT2SA(config-if-vlan)# ipv6 mld snooping last-member-query-interval 3000
SM8TAT2SA(config-if-vlan)# ipv6 mld snooping querier
SM8TAT2SA(config-if-vlan)# ipv6 mld snooping robustness-variable 175
SM8TAT2SA(config-if-vlan)# ipv6 mld snooping unsolicited-report-interval 9000
SM8TAT2SA(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 configuraton

                 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:

```
SM8TAT2SA(config-if-vlan)# no ip dhcp server

SM8TAT2SA(config-if-vlan)# no ipv6 address

SM8TAT2SA(config-if-vlan)# no ipv6 mld snooping querier

SM8TAT2SA(config-if-vlan)#
```

Messages:

```
SM8TAT2SA-DC(config)# interface vlan 2-300

ERROR: Interface number limitation reached (VLAN: 9)

SM8TAT2SA-DC(config-if-vlan)#
```

5-1-2 config interface GigabitEthernet 1/1-10 Commands

Command: **!**

Description: Comments

Syntax: **!** <text>

Parameters: Arguments   ignored comment text

                  <cr>

Example:

```
SM8TAT2SA(config-if)# ! ?
  Arguments  ignored comment text
  <cr>
SM8TAT2SA(config-if)# ! ignore-comment
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# aggregation lacp key 1
SM8TAT2SA(config-if)# aggregation static group 1
SM8TAT2SA(config-if)#
```

Command: **description**

Description: Configure interface description for a port.

Syntax: **description** <word>

Parameters: word63   Interface description. (word63)

          <cr>

Example:

```
SM8TAT2SA(config-if)# description port(s)2-6
SM8TAT2SA(config-if)#
```

Command: **do**

Description: Run Exec commands in Config mode.

Syntax: **do** <command>

Parameters: clear   configure   copy   delete   diagnostics   dir

                 find-switch   firmware   logout   more   ping   reload

                 show   ssl   terminal   traceroute

Example:

```
SM8TAT2SA(config-if)# do terminal exec-timeout 1440
SM8TAT2SA(config-if)# do show ip interface brief
Interface        Address              Method             Status
----------------  --------------------  ------------------  ------
VLAN1            10.0.4.3/24          Manual             UP
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# dot1x re-authenticate

SM8TAT2SA(config-if)# dot1x port-control

SM8TAT2SA(config-if)# dot1x port-control auto

SM8TAT2SA(config-if)# dot1x port-control force-authorized

SM8TAT2SA(config-if)# dot1x guest-vlan

SM8TAT2SA(config-if)# dot1x guest-vlan

SM8TAT2SA(config-if)# dot1x re-authenticate

SM8TAT2SA(config-if)# dot1x radius-vlan

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# duplex auto

SM8TAT2SA(config-if)# duplex half

SM8TAT2SA(config-if)# duplex full

SM8TAT2SA(config-if)#
```

Command: **exit**

Description: Exit from current mode.

Syntax: **exit** <cr>

Parameters: None.

Example:

```
SM8TAT2SA(config-if)# exit

SM8TAT2SA(config)#
```

Command: **flowcontrol**

Description: Configure traffic flow control.

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

Parameters: off   Disable flow control

                on   Enable flow control

Example:

```
SM8TAT2SA(config-if)# flowcontrol off

SM8TAT2SA(config-if)# flowcontrol on

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# green-ethernet eee

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# ip arp inspection check-vlan

SM8TAT2SA(config-if)# ip dhcp snooping trust

SM8TAT2SA(config-if)# ip igmp snooping max-groups 4

SM8TAT2SA(config-if)# ip verify source limit 1

SM8TAT2SA(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:

```
SM8TAT2SA(config)# ipmc profile BobB

SM8TAT2SA(config-ipmc-profile)# range TomT permit log

SM8TAT2SA(config-ipmc-profile)# range TomT deny

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# lacp role active
SM8TAT2SA(config-if)# lacp role passive
SM8TAT2SA(config-if)# lacp timeout fast
SM8TAT2SA(config-if)# lacp timeout slow
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# lldp receive

SM8TAT2SA(config-if)# lldp transmit

SM8TAT2SA(config-if)# lldp cdp-aware

SM8TAT2SA(config-if)# lldp med media-vlan policy-list 0

SM8TAT2SA(config-if)# lldp tlv-select management-address

SM8TAT2SA(config-if)# lldp tlv-select port-description

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# loop-protect action shutdown log

SM8TAT2SA(config-if)# loop-protect tx-mode

SM8TAT2SA(config-if)# loop-protect

SM8TAT2SA(config-if)#
```


Command: **mac**

Description: Configure MAC keyword parameters for an interface.

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

Parameters: learning   Port learning mode

Example:

```
SM8TAT2SA(config-if)# mac address-table learning secure

SM8TAT2SA(config-if)#
```

Command: **mtu**

Description: Configure Maximum Transmission Units to set max. frame size. Set Maximum Frame Size
per System (max= 10,000, default value = 10,000). Enter the maximum frame size allowed
for the switch port, including FCS. The range is 1518-4776 bytes. **Note**: This command was
removed at FW v1.04.0020; see the 'max-frame-size' Config mode command.

Syntax: **mtu** <max_length>

Parameters: 1518-4776   Maximum frame size in bytes.

Example:

```
SM24DP4XA(config-if)# do show interface GigabitEthernet 1/6 status

Interface            Mode     Speed & Duplex  Flow Control  Max Frame  Excessive  Link

---------------------  -------  --------------  ------------  ---------  ---------  ---------

GigabitEthernet 1/6    enabled  Auto            disabled      4776       Discard    Down

SM24DP4XA(config-if)# mtu 2500

SM24DP4XA(config-if)# do show interface GigabitEthernet 1/6 status

Interface            Mode     Speed & Duplex  Flow Control  Max Frame  Excessive  Link

---------------------  -------  --------------  ------------  ---------  ---------  ---------

GigabitEthernet 1/6    enabled  Auto            disabled      2500       Discard    Down

SM24DP4XA(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:

```
SM8TAT2SA(config-if)# mvr vlan 100-200 type source
The error while request to the config daemon.
SM8TAT2SA(config-if)# mvr vlan 200 type receiver
SM8TAT2SA(config-if)# mvr vlan 200 type source
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# no flowcontrol
SM8TAT2SA(config-if)# no shutdown
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# poe power limit 30
SM8TAT2SA(config-if)# poe priority critical
SM8TAT2SA(config-if)# poe auto-check ip 18.22.34.56 startup-time 30 failure-action reboot
```

```
max-reboot-times 4
SM8TAT2SA(config-if)# poe port-profile name Prof-1
SM8TAT2SA(config-if)# poe mode force
SM8TAT2SA(config-if)# poe delay-mode
SM8TAT2SA(config-if)# poe delay-time 125
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# port-security violation protect
SM8TAT2SA(config-if)# port-security violation trap
SM8TAT2SA(config-if)# port-security violation trap-shutdown
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# pvlan 1
SM8TAT2SA(config-if)# pvlan isolation
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# qos cos 0

SM8TAT2SA(config-if)# qos policer 50000

SM8TAT2SA(config-if)# qos queue-shaper queue 0 50000
```

```
SM8TAT2SA(config-if)# qos remark cos

SM8TAT2SA(config-if)# qos remark dscp

SM8TAT2SA(config-if)# qos remark ip-precedence

SM8TAT2SA(config-if)# qos source-cos c-tag

SM8TAT2SA(config-if)# qos source-cos s-tag

SM8TAT2SA(config-if)# qos storm broadcast 5000

SM8TAT2SA(config-if)# qos storm unknown-multicast 20000

SM8TAT2SA(config-if)# qos trust

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# rmon collection stats 5000

SM8TAT2SA(config-if)# rmon collection history 4000 buckets 9000 interval 2500


SM16TAT2SA(config-if)# rmon collection history 10 buckets 5000 interval 900

SM16TAT2SA(config-if)#
```

Command: **shutdown**

Description: Shutdown of the interface.

Syntax: **shutdown** <cr>

Parameters: None.

Example:

```
SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# spanning-tree edge

SM8TAT2SA(config-if)# spanning-tree link-type point-to-point

SM8TAT2SA(config-if)# spanning-tree link-type shared

SM8TAT2SA(config-if)# spanning-tree mst 0 cost 50000

SM8TAT2SA(config-if)# spanning-tree restricted-role
```

```
SM8TAT2SA(config-if)# spanning-tree restricted-tcn

SM8TAT2SA(config-if)# spanning-tree mst 0 port-priority 100

SM8TAT2SA(config-if)# spanning-tree

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# speed 100

SM8TAT2SA(config-if)# speed 1000

SM8TAT2SA(config-if)# speed auto

SM8TAT2SA(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:

```
SM8TAT2SA(config-if)# switchport voice vlan mode auto

SM8TAT2SA(config-if)# switchport voice vlan mode force

SM8TAT2SA(config-if)# switchport voice vlan security

SM8TAT2SA(config-if)# switchport voice vlan discovery-protocol lldp

SM8TAT2SA(config-if)# switchport voice vlan vid 100

ERROR: No Vlan ID 100 entry is set.

SM8TAT2SA(config-if)# switchport access vlan 100
```

```
SM8TAT2SA(config-if)# switchport hybrid ingress-filtering

SM8TAT2SA(config-if)# switchport hybrid native vlan 200

SM8TAT2SA(config-if)# switchport trunk allowed vlan except 400

SM8TAT2SA(config-if)# switchport vlan protocol group Grp-1 vlan 500

SM8TAT2SA(config-if)# switchport vlan mapping 600 dot1q-tunnel 700

SM8TAT2SA(config-if)#
```

6. Copy Commands

Copy from source to destination for backup, restore, and activate purposes. FW v1.04.0013-rcvd 210208: add API support for "copy startup-config to running-config" in replace mode.

SYNTAX

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

Parameters

flash:filename | tftp://server/path-and-filename   Copy file in FLASH or on TFTP server

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

```
SM16TAT2SA# copy startup-config ?

  running-config            Current running configuration

  flash:filename            File in FLASH

  tftp://server/path-to-file  File on TFTP server

SM16TAT2SA# copy startup-config running-config

Syntax error on line /mnt/custfs/klish/startup-config:3 "ipmc profile IPMC-Profile-Cfg-
Fisrt_IPMC_ProCfg": Illegal parameter

Syntax error on line /mnt/custfs/klish/startup-config:4 "description Fisrt_IPMC_ProCfg":
Unknown command

Syntax error on line /mnt/custfs/klish/startup-config:10 "lldp med location-tlv civic-addr
state New York": Illegal command line

SM16TAT2SA#

SM8TAT2SA# copy running-config flash:xxx

SM8TAT2SA#
```

7. Delete Commands

Delete one file in flash: file system.

SYNTAX

Delete <String>

Parameters

String   File in FLASH

EXAMPLE

```
SM16TAT2SA# delete text
SM16TAT2SA#
```

8. Dir Commands

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

SYNTAX

dir <cr>

Parameters

EXAMPLE

```
SM16TAT2SA# dir
startup-config
SM16TAT2SA#
```

9. Firmware Commands

Upgrade or swap firmware.

Syntax

firmware swap

firmware update < TFTPServer_path_file **:** word>

Parameters

swap   Swap between Active and Alternate firmware image.

update   Upgrade the Firmware version.

<tftp://server/path-and-filename>   TFTP Server IP address, path and file name for the server containing the new

image.

EXAMPLE

```
SM8TAT2SA-DC# firmware swap

<re-open the session>


Username: admin

Password:*****

SM8TAT2SA-DC# show version

Active Image

------------

Partition       : primary

Version         : v1.04.0124

Date            : 2024-04-21 17:56:19 UTC


Alternate Image

------------

Partition       : secondary

Version         : v1.04.0105

Date            : 2020-07-28 22:34:42 UTC

SM8TAT2SA-DC#
```

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.

10. Ping Commands

Send ICMP echo messages.

Syntax

ping ip <word1-255> [repeat <Count : 1-60>] [size <Size : 2-1452>] [interval <Seconds : 0-30>]

ping ipv6 <ipv6_addr> [repeat <Count : 1-60>] [size <Size : 2-1452>] [interval <Seconds : 0-30>] [interface vlan

<vlan_id>]

ping hostname <domain name address>

Parameters

ip	IP (ICMP) echo
<ipv4_addr>	ICMP destination address (X.X.X.X)
repeat	Specify repeat count
<Count : 1-60>	1-60; Default is 5
size	Specify datagram size
<Size : 2-1452>	2-1452; Default is 56 (excluding MAC, IP and ICMP headers)
interval	Specify repeat interval
<Seconds : 0-30>	0-30; Default is 0
ipv6	IPv6 (ICMPv6) echo
<ipv6_addr>	ICMPv6 destination address (X:X:X:X:X:X:X:X)
<0-30>	0-30; Default is 0
interface	Select an interface to configure
vlan	VLAN Interface
<vlan_id>	VLAN identifier(s): VID
hostname	domain name address
<host name>	domain name address

EXAMPLE

```
SM16TAT2SA# 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

SM16TAT2SA#
```

11. Reload Commands

Reload system.

Syntax

reload { { { cold | warm } [sid <usid>] } | { defaults [keep-ip] } }   (FW v 1.02.1363 and before)

reload <warm> <defaults> | <keep-ip>   (FW v 1.02.1368 and after)

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   FW v 1.02.1368 and after:

```
SM16TAT2SA# reload ?
  warm     Reload warm
  defaults  Reload defaults without rebooting
SM16TAT2SA# reload defaults keep-ip
SM16TAT2SA#
SM8TAT2SA# reload defaults keep-ip
SM8TAT2SA# 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.

12. 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 map 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

```
SM8TAT2SA# 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


SM8TAT2SA#
```

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

```
SM16TAT2SA# 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

SM16TAT2SA# 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

SM16TAT2SA#
```

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

```
SM8TAT2SA# 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
SM8TAT2SA# 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
SM8TAT2SA# show access-list status interface GigabitEthernet *
Syntax error: Illegal parameter
SM8TAT2SA# show access-list status interface GigabitEthernet 1/5
Interface              State
```

```
----------------------  -------------

GigabitEthernet 1/5     None


SM8TAT2SA# 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


SM8TAT2SA#
```

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

```
SM16TAT2SA# 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 :



SM16TAT2SA#
```

EXAMPLE 2

```
SM16TAT2SA# 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


SM16TAT2SA# show aggregation mode

Aggregation Hash Mode : src-dst-mac

LACP System Priority : 32768


SM8TAT2SA# 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   ---


SM8TAT2SA#
```

clock

Display time-of-day clock settings.

SYNTAX

show clock [detail]

Parameters

EXAMPLE

```
SM8TAT2SA# show clock

System Time : 2020-12-09 13:58:01

SM8TAT2SA#
```

dms

Display DMS (Device Management System) settings. **Note**: the "show dms" command was removed at Firmware Version v1.01.1209.

dot1x

Display IEEE Standard for port-based Network Access Control.

SYNTAX

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

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

Parameters

statistics	Shows statistics for either eapol or radius.
all	Show all dot1x statistics
eapol	Show EAPOL statistics
radius	Show Backend Server 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

```
SM8TAT2SA-DC# 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        -                  -              -
```

```
                      -
SM8TAT2SA-DC#


SM8TAT2SA# 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   -
SM8TAT2SA#
```

event

Show trap event configuration

SYNTAX

show event <cr>

Parameters

None.

EXAMPLE

```
SM8TAT2SA# show event
Group Name                      Severity Level   Syslog Mode   Trap Mode     SMTP
------------------------------  ---------------  ------------  ------------  ------------
802.1X                          Warning          Enabled       Enabled       Enabled
ACCESS-MGMT                     Info             Enabled       Disabled      Enabled
ACL                             Info             Enabled       Disabled      Disabled
AUTH-FAILED                     Warning          Enabled       Disabled      Enabled
COLD-START                      Warning          Enabled       Disabled      Disabled
LACP                            Info             Enabled       Disabled      Disabled
LINK-UPDOWN                     Warning          Enabled       Disabled      Disabled
LOGIN                           Info             Enabled       Disabled      Disabled
LOGOUT                          Info             Enabled       Disabled      Disabled
LOOP-PROTECTION                 Info             Enabled       Disabled      Disabled
MAC-TABLE                       Info             Enabled       Disabled      Disabled
MAINTENANCE                     Info             Enabled       Disabled      Disabled
MGMT-IP-CHANGE                  Info             Enabled       Disabled      Disabled
OVER-MAX-POE-POWER-LIMITATION   Info             Enabled       Disabled      Enabled
POE-AUTO-POWER-RESET            Warning          Enabled       Disabled      Enabled
POE-PD-OFF                      Warning          Enabled       Disabled      Disabled
POE-PD-ON                       Info             Enabled       Disabled      Disabled
POE-PD-OVERCURRENT              Info             Enabled       Disabled      Disabled
PORT-SECURITY                   Info             Enabled       Disabled      Disabled
SFP                             Info             Enabled       Disabled      Disabled
USER                            Info             Enabled       Disabled      Disabled
WARM-START                      Warning          Enabled       Disabled      Disabled


SM8TAT2SA#
```

green-ethernet

Display Green Ethernet (Power reduction).

SYNTAX

show interface GigabitEthernet 1/2-4 green-ethernet

Parameters

interface	interface to display
vlan	VLAN status
*	All switches or All ports
GigabitEthernet	GigabitEthernet
<port_list>	Port List S/X-Y,Z (1/1-18)
green-ethernet	Display green-ethernet
status	Display status
statistics	Display statistics
capabilities	Display interface capabilities

EXAMPLE

```
SM16TAT2SA# show interface GigabitEthernet 1/2-4 green-ethernet

Energy Efficient Ethernet Configuration

Interface               Configure

------------------------ ---------

GigabitEthernet 1/2      Disabled

GigabitEthernet 1/3      Disabled

GigabitEthernet 1/4      Disabled


SM16TAT2SA#
```

interface

Display Interface status and configuration.

SYNTAX

show interface <port_type> <port_type_list> [switchport [access | trunk | hybrid]]

show interface <port_type> <port_type_list> capabilities

show interface <port_type> <port_type_list> statistics [{ packets | bytes | errors | discards | filtered | { priority

[<0~7>] } }] [{ up | down }]

show interface <port_type> <port_type_list> status

show interface <port_type> <port_type_list> veriphy

show interface vlan [<vlan_list>]

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

```
SM8TAT2SA-DC# 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
SM8TAT2SA-DC#
```

EXAMPLE 2

SM16TAT2SA# **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

SM16TAT2SA# **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		

SM16TAT2SA#

EXAMPLE 3

SM8TAT2SA-DC# **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


SM8TAT2SA-DC#
```

ip

Display Internet Protocol settings.

SYNTAX

show ip arp

show ip arp inspection [interface {<port_type> <port_type_list>} | vlan <vlan_list>]

show ip arp inspection entry [dhcp-snooping | static] [interface <port_type> <port_type_list>]

show ip dhcp relay [statistics]

show ip dhcp snooping [statistics] [interface <port_type> <port_type_list>]

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

show ip igmp snooping mrouter [detail]

show ip interface brief

show ip name-server

show ip route

show ip source binding [dhcp-snooping | static] [interface <port_type> <port_type_list>]

show ip verify source [interface <port_type> <port_type_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

```
SM8TAT2SA# 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

SM16TAT2SA# show ip igmp snooping

IGMP Snooping is disabled to stop snooping IGMP control plane.

SM16TAT2SA# 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.

SM16TAT2SA# 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

SM16TAT2SA# show ip name-server

Current DNS server is not set.

SM8TAT2SA# 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

SM8TAT2SA# show ip link-local interface

Link-Local Address binding interface: 100

SM8TAT2SA# 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

SM8TAT2SA#
```

```
SM16TAT2SA# 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

SM16TAT2SA# show ip source binding

Type    Port                    IP Address      MAC Address

----    ----                    ----------      -----------

SM8TAT2SA# 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

SM16TAT2SA#

SM24TAT2SA# 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

SM24TAT2SA#
```

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

```
SM16TAT2SA# 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.

SM16TAT2SA#


SM16TAT2SA# 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

SM16TAT2SA#


SM16TAT2SA# show ipv6 neighbor interface vlan 1

SM16TAT2SA#


SM16TAT2SA# 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

SM16TAT2SA#
```

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

```
SM16TAT2SA# 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



SM16TAT2SA
```

EXAMPLE 2

```
SM8TAT2SA# 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    : SM8TAT2SA

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 :



SM8TAT2SA#

SM8TAT2SA-DC# show lldp neighbors

No LLDP entries found


SM8TAT2SA-DC#
```

EXAMPLE 3

```
SM16TAT2SA# show lldp med media-vlan-policy

Policy Id  Application Type          Tag      Vlan ID L2 Priority  DSCP

---------  -----------------------   --------  -------  -----------  ----

0          Voice                     Tagged    1        0            0

SM16TAT2SA# 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



SM16TAT2SA#
```

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

```
SM16TAT2SA# show logging <tab>

alert   crit    debug   emerg   error   info    notice  warning

SM16TAT2SA# 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

SM16TAT2SA#
```

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

```
SM16TAT2SA# show loop-protect interface GigabitEthernet ?

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

SM16TAT2SA# 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


SM16TAT2SA#
```

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

```
SM8TAT2SA# 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


SM8TAT2SA#
```

EXAMPLE 2

```
SM16TAT2SA# show mac address-table static

Type    VID  MAC Address       Block Ports

------- ---- ----------------- ----- --------------------------

Static  1    00-40-C7-1C-CB-6E  No    CPU

SM16TAT2SA#

SM8TAT2SA# 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

SM8TAT2SA#

SM16TAT2SA# 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


SM16TAT2SA#
```

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 Maps key string (word127)

EXAMPLE

```
SM16TAT2SA(config)# map-api-key abcdefg1234567

SM16TAT2SA(config)# do show map-api-key

Key              : abcdefg1234567

SM16TAT2SA# show map-api-key

Key              : abcdefg1234567

SM16TAT2SA#
```

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

```
SM16TAT2SA# show mvr detail

MVR is currently disabled, please enable MVR to start group registration.


Switch-1 MVR-IGMP Interface Status


SM16TAT2SA# show mvr group-database

MVR is currently disabled, please enable MVR to start group registration.


MVR Group Database


Switch-1 MVR Group Count: 0

SM16TAT2SA#
```

ntp

Show NTP status.

SYNTAX

show ntp status

Parameters

status   status

EXAMPLE

```
SM16TAT2SA# 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


SM16TAT2SA#
```

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>])]

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

```
SM8TAT2SA# show poe config
Primary Power Supply [W]        : 130
Reserved Power determined by : Class
Capacitor Detection             : Disabled
Interface             Mode      Priority     Max. Power [W]
--------------------- --------  --------     -----------------
GigabitEthernet 1/1   Enabled   Low                    30
GigabitEthernet 1/2   Enabled   Low                    30
GigabitEthernet 1/3   Enabled   Low                    30
GigabitEthernet 1/4   Enabled   Low                    30
GigabitEthernet 1/5   Enabled   Low                    30
GigabitEthernet 1/6   Enabled   Low                    30
GigabitEthernet 1/7   Enabled   Low                    30
SM8TAT2SA#
```

EXAMPLE 2

```
SM8TAT2SA# 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]
SM8TAT2SA#
```

EXAMPLE 3

```
SM8TAT2SA# 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
SM8TAT2SA# show poe always-on-poe
Non-Stop-PoE Status : Disabled


SM8TAT2SA#
```

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

```
SM16TAT2SA# show port-security switch interface GigabitEthernet 1/1-2

Interface            State          MAC Cnt
---------------------- ------------- -------
GigabitEthernet 1/1    Disabled      -
GigabitEthernet 1/2    Disabled      -
SM8TAT2SA-DC# 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      -


SM8TAT2SA-DC#
```

privilege

Show Privilege group status.

SYNTAX

show privilege group

Parameters

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		

EXAMPLE

```
SM8TAT2SA-DC# show privilege group auth-method level

Group Name                      Read-only  Read-write

-----------------------------   ---------  ----------

auth-method                           5         10


SM8TAT2SA-DC#

SM16TAT2SA# show privilege ?

  group   Privilege group name

SM16TAT2SA# 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

SM16TAT2SA#
```

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 SM16TAT2SA)

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

```
SM16TAT2SA# show pvlan isolation interface GigabitEthernet 1/1-2

Port                            Isolation

-------------------------------- ---------

GigabitEthernet 1/1             Disabled

GigabitEthernet 1/2             Enabled

SM16TAT2SA#


SM16TAT2SA# show pvlan

PVLAN ID  Ports

--------  --------------------------------------------------------------------------

1         GigabitEthernet 1/4 GigabitEthernet 1/5 GigabitEthernet 1/6


SM16TAT2SA#
```

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

```
SM8TAT2SA# 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


SM8TAT2SA#
```

EXAMPLE 2

```
SM8TAT2SA# 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


SM8TAT2SA#
```

radius-server

Display RADIUS configuration status.

SYNTAX

show radius-server [statistics]

Parameters

statistics   RADIUS statistics

EXAMPLE

```
SM8TAT2SA# 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


SM8TAT2SA#
```

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

```
SM16TAT2SA# 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
```

SM8TAT2SA# **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
```

```
SM8TAT2SA# 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


SM8TAT2SA# 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


SM8TAT2SA#
```

running-config

Show running system information.

SYNTAX

show running-config

EXAMPLE 1

```
SM8TAT2SA-DC# 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

SM8TAT2SA-DC#
```

EXAMPLE 2

```
SM8TAT2SA# 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

SM8TAT2SA
```

smtp

Show smtp configuration.

SYNTAX

show smtp <cr>

Parameters

None

EXAMPLE

```
SM8TAT2SA# show smtp

Mail Server     : myMailServer

User Name       : Bob

Password        : ********

Sender          : sm8tat2sa

Return Path     : sm8tat2sa@192.168.90.3

Email Adress 1  : jeffsherman@comcast.net

Email Adress 2  : jeffs@lantronix.com

Email Adress 3  : mickeyabc@aol.com

Email Adress 4  :

Email Adress 5  :

Email Adress 6  :



SM8TAT2SA#
```

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

```
SM8TAT2SA# 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


SM8TAT2SA#
```

EXAMPLE 2

```
SM8TAT2SA# show snmp access

SNMPv3 Accesses Table:

Group Name      : Grp-1

Security Model   : (null)

Security Level   : (null)

Read View Name   : 4

Write View Name  : 4


SM8TAT2SA# show snmp user

SNMPv3 Users Table:

User Name              : S-Usr-1

Security Level         : Auth, Priv

Authentication Protocol : MD5

Privacy Protocol       : DES


SM8TAT2SA# show snmp view

SNMPv3 Views Table:

View Name   : 4

OID Subtree : .0

View Type   : included



SM8TAT2SA#
```

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

```
SM16TAT2SA# 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

```
SM16TAT2SA# 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

SM16TAT2SA#
```

EXAMPLE 3

```
SM8TAT2SA# 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


SM8TAT2SA#
```

```
SM8TAT2SA# 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

```
SM8TAT2SA# show system
Model Name          : SM8TAT2SA
System Description   : Smart Managed Switch, 8-port Gigabit PoE+, 2-port 100/1000 SFP
Hardware Version     : v1.02
Mechanical Version   : v1.01
Firmware Version     : v1.04.0110
PoE Firmware Version : 220-224
MAC Address          : 00-C0-F2-4C-22-C3
Serial Number        : C022319BR2100002
System Name          : SM8TAT2SA
Location             : Experience Center
Contact              : Experience Center Admin
System Date          : 2021-07-27 17:26:52 +0000
System Uptime        : 0 days, 0:03:36
SM8TAT2SA#
```

EXAMPLE 2

```
SM8TAT2SA-DC# show system
Model Name          : SM8TAT2SA-DC
System Description   : Managed Switch, 8-port Gigabit PoE+, 2-port 100/1000 SFP
Hardware Version     : v1.02
Mechanical Version   : v1.01
Firmware Version     : v1.02.1474
PoE Firmware Version : 208-211
MAC Address          : 00-C0-F2-7C-57-81
Serial Number        : C039320BR1300004
System Name          : SM8TAT2SA-DC
```

```
Location         :
Contact          :
System Date      : 2017-01-01 01:55:58 +0000
System Uptime    : 0 days, 1:56:12
SM8TAT2SA-DC#
```

tacacs-server

Statistics TACACS+ server configuration.

SYNTAX

show tacacs-server <cr>

Parameters   None

EXAMPLE

```
SM8TAT2SA# show tacacs-server
Global TACACS+ Server Timeout      : 5 seconds
Global TACACS+ Server Deadtime     : 0 minutes
Global TACACS+ Server Key          :
SM8TAT2SA# 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!@#<:>


SM8TAT2SA#
```

trap

Display trap configuration.

SYNTAX

show trap <cr>

EXAMPLE

```
SM8TAT2SA# 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


SM8TAT2SA#
SM8TAT2SA# 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


SM8TAT2SA#
```

upnp

Display Universal Plug and Play parameter settings.

SYNTAX

show upnp   <cr>

EXAMPLE

```
SM16TAT2SA# show upnp

UPnP Mode                 : Enabled

Interface VLAN        : 1

UPnP TTL              : 4

UPnP Advertising Duration  : 100


SM16TAT2SA#
```

version

Display System hardware and software status.

SYNTAX

show version <cr>

EXAMPLE

```
SM8TAT2SA# show version

Active Image

------------

Partition      : primary

Version        : v1.04.0110

Date           : 2023-08-12 17:29:50 UTC


Alternate Image

------------

Partition      : secondary

Version        : v1.04.0079

Date           : 2022-11-09 15:50:29 UTC


SM8TAT2SA#
```

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

```
SM16TAT2SA# show vlan <tab>

brief     id        ip-subnet    mac       mapping    protocol   status    membership

SM16TAT2SA# 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

SM16TAT2SA# show vlan mapping

Index CVID SPVID Ports

----- ---- ----- -------------------------------------------------------------

   1    1     1  GigabitEthernet 1/2 GigabitEthernet 1/3 GigabitEthernet 1/4

                 GigabitEthernet 1/5

SM16TAT2SA#
```

EXAMPLE 2

```
SM16TAT2SA# 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

```
SM8TAT2SA# 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


SM8TAT2SA
```

13. 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.

FW before v1.02.1261 will generate a 2048 bit RSA private key.

FW v1.02.1261 and above will generate an 8192 bit RSA private key.

Syntax   **ssl** [Days] [Length] <cr>

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 Examples below.

EXAMPLE 1

```
SM8TAT2SA# ssl days 365 length 2048

Generating a 2048 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

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

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]:CSI

Organizational Unit Name (eg, section) [Lantronix]:.^Lantronix
```

```
Common Name (e.g. server FQDN or YOUR name) [lantronix.com]:js@lantronix.com

Email Address [techsupport@lantronix.com]:.

SM8TAT2SA#
```

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.

EXAMPLE 2

```
SM8TAT2SA-DC# ssl days 365 length 4096

Generating a 4096 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 ?

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

Country Name (2 letter code) [US]:US

State or Province Name (full name) [MN]:MN

Locality Name (eg, city) [Plymouth]:Hopkins
```

```
Organization Name (eg, company) [Internet Widgits Pty Ltd]:CSI

Organizational Unit Name (eg, section) [Lantronix]:Lantronix

Common Name (e.g. server FQDN or YOUR name) [lantronix.com]:lantronix.com

Email Address [techsupport@lantronix.com]:jeffs#^H^H^H

SM8TAT2SA-DC#
```

EXAMPLE 3 At FW v1.02.1471: use TN SSL certificate for Web GUI and CLI.

```
SM8TAT2SA# 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]:

SM8TAT2SA#
```

ssl

Setup SSL certificate. CLI command to manually modify SSL certificate effective date (based on current date) at FW v1.04.0108.

Syntax

ssl days <xxx> | length <xxxx>

Parameters

days	SSL certificate effective date <1-10950>
length	SSL certificate RSA encryption length
<1-10950>	SSL certificate effective date (1..10950)
<2048|4096|8192>	SSL certificate RSA encryption length (2048..2147483647)

Procedure

To modify SSL certificate effective date (based on current date) follow the steps below:

1. Login to CLI.
2. Enter the command `ssl days <1-10950> length <2048|4096|8192>`.
3. Type **?** to see the command help text.

EXAMPLE

```
SM8TAT2SA-DC# ssl ?
days SSL certificate effective date
length SSL certificate RSA encryption length


SM8TAT2SA-DC# ssl days ?
<1-10950> SSL certificate effective date (1..10950)


SM8TAT2SA-DC# ssl days 10 length ?
<2048|4096|8192> SSL certificate RSA encryption length (2048..2147483647)


SM8TAT2SA-DC# ssl days 10 length 2048
Generating a RSA private key
...................................+++++
...........................+++++
writing new private key to '/tmp/lighttpd.pem'
```

14. 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

```
SM16TAT2SA# terminal exec-timeout 1440

  <cr>


SM16TAT2SA#
```

15. 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

```
SM16TAT2SA# 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

SM16TAT2SA#

SM8TAT2SA# 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
SM8TAT2SA#
```

16. Cable Diagnostics Commands

Run the cable diagnostics on a port.

Syntax

diagnostics cable interface < GigabitEthernet | * >

Parameters

GigabitEthernet	GigabitEthernet
*	All ports
<port_id>	Port List S/X-Y,Z (1/1-18)
<port_id>	Port List S/X-Y,Z (1/1-10)

EXAMPLE

```
SM16TAT2SA# diagnostics cable interface GigabitEthernet 1/2

Port                Link Status  Test Result  Length

-------------------  -----------  -----------  -------

GigabitEthernet 1/2   Link Down    Abnormal    0.00 (m)

SM16TAT2SA# diagnostics cable interface GigabitEthernet 1/4

Port                Link Status  Test Result  Length

-------------------  -----------  -----------  -------

GigabitEthernet 1/4   1G           OK           8.00 (m)


SM16TAT2SA#

SM8TAT2SA# diagnostics cable interface * 1/1

Port                Link Status  Test Result  Length

-------------------  -----------  -----------  -------

GigabitEthernet 1/1   1G           OK           6.00 (m)


SM8TAT2SA# diagnostics cable interface * 1/2-4

Syntax error: Illegal parameter

SM8TAT2SA# diagnostics cable interface * 1/2

Port                Link Status  Test Result  Length

-------------------  -----------  -----------  -------

GigabitEthernet 1/2   10/100M      OK           2.00 (m)


SM8TAT2SA#
```

Messages: *Syntax error: Illegal parameter*

Port 9 is not support cable diagnostics

17. Configure DHCP per Port

17.1 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:

```
SM8TAT2SA# show ip dhcp server
VLAN id of Pool: 1
  DHCP server mode is On


SM8TAT2SA# 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


SM8TAT2SA#
```

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.

SM16TAT2SA(config)# ip dhcp server per-port

SM8TAT2SA(config)# do show ip dhcp server

VLAN id of Pool: 1

  DHCP server mode is On


SM8TAT2SA(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


SM8TAT2SA(config)#
```

Example 2:   Set DHCP per Port VLAN ID

```
SM8TAT2SA(config)# ip dhcp server per-port vlan ?

  <vlan_id>  Set DHCP server per port VLAN (1-4095)


SM8TAT2SA(config)# ip dhcp server per-port vlan 1

SM8TAT2SA(config)#


SM8TAT2SA(config)# ip dhcp server per-port vlan 100

ERROR: Already exists (VLAN: 100)

SM8TAT2SA(config)#
```

18. 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 all deployed Lantronix Remote Environment Management and IoT products, along with real-time notifications, managed APIs and data dashboards.

For more Percepxion information see https://www.lantronix.com/percepxion/. Percepxion support requires SMxTAT2SA 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:

```
SM16TAT2SA(config)# percepxion <cr>
SM16TAT2SA(config-percepxion)#
```

18-1 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.

18-2 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

18-3 Percepxion Command Set <tab>

These commands are documented in related chapters.

!	aaa	access	access-list	active
aggregation	apply	clock	connection	content
device	dms	do	dot1x	end
event	exec-timeout	exit	interface	ip
ipmc	ipv6	lacp	lldp	logging
loop-protect	mac	map-api-key	max-frame-size	monitor
mvr	no	ntp	percepxion	poe
port-security	privilege	qos	radius-server	rmon
show	smtp	snmp-server	spanning-tree	state
status	system	tacacs-server	trap	upnp
username	vlan	voice		

To enter Percepxion config mode:

```
SM8TAT2SA# configure terminal
SM8TAT2SA(config)# percepxion
SM8TAT2SA(config-percepxion)#
```

18-3 Percepxion Command Descriptions

Command: **active**

Description: Sets the Percepxion active connection to Connection <number>.

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:

```
SM16TAT2SA(config-percepxion)# active connection connection 1

SM16TAT2SA(config-percepxion)# active connection connection 2

SM16TAT2SA(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:

```
SM16TAT2SA(config-percepxion)# apply firmware updates enable

SM16TAT2SA(config-percepxion)# apply configuration updates disable

SM16TAT2SA(config-percepxion)# apply configuration updates enable

SM16TAT2SA(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:

```
SM16TAT2SA(config)# percepxion

SM16TAT2SA(config-percepxion)# connection 1 host BobB

SM16TAT2SA(config-percepxion)# connection 1 port 456

SM16TAT2SA(config-percepxion)# connection 1 secure port enable

SM16TAT2SA(config-percepxion)# connection 1 validate certificates enable
```

```
SM16TAT2SA(config-percepxion)# connection 2 host TomT

SM16TAT2SA(config-percepxion)# connection 2 port 456

SM16TAT2SA(config-percepxion)# connection 2 secure port disable

SM16TAT2SA(config-percepxion)# connection 2 validate certificates disable


SM16TAT2SA(config-percepxion)#

SM16TAT2SA(config-percepxion)# connection 1 connect to cloud

SM16TAT2SA(config-percepxion)# connection 1 connect to on premise

SM16TAT2SA(config-percepxion)#
```

Command: **content**

Description: Sets the Percepxion firmware and configuration check interval. FW v1.04.0110 and 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:

```
SM16TAT2SA(config-percepxion)# content check interval 9000

SM16TAT2SA(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:

```
SM16TAT2SA(config-percepxion)# device description 384-lrt-c

SM16TAT2SA(config-percepxion)# device id 384-lrt-c

SM16TAT2SA(config-percepxion)# device key 384-lrt-c

SM16TAT2SA(config-percepxion)# device name 384-lrt-c

SM16TAT2SA(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:

```
SM16TAT2SA(config-percepxion)# do show ip interface brief

Vlan Address            Method   Status

---- -------------------- -------- ------

  1 192.168.1.77/24     Manual   UP

SM16TAT2SA(config-percepxion)# do enable

SM16TAT2SA(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.

SM16TAT2SA(config-percepxion)#
```


Command: **end**

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

Syntax: **end** <cr>

Parameters:

Mode: Configure Percepxion mode

Example:

```
SM16TAT2SA(config-percepxion)# end

SM16TAT2SA
```

Command: **exit**

Description: Exit from Percepxion Config mode to Config mode.

Syntax: **exit** <cr>

Parameters:

Mode: Configure Percepxion mode

Example:

```
SM16TAT2SA(config-percepxion)# exit

SM16TAT2SA(config)#
```

Command: **no**

Description: Remove 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:

```
SM16TAT2SA(config-percepxion)# no device description

SM16TAT2SA(config-percepxion)# no device name

SM16TAT2SA(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:

```
SM16TAT2SA(config-percepxion)# show connection 1

Percepxion Connection 1 Configuration:

Connect To : Cloud

Host : percepxion.com

Port : 443

Secure Port : Enabled

Validate Certificates: Enabled


SM16TAT2SA(config-percepxion)# show connection 2

Percepxion Connection 2 Configuration:

Connect To : Cloud

Host : percepxion.com

Port : 443

Secure Port : Enabled

Validate Certificates: Enabled


SM16TAT2SA(config-percepxion)#
```

Example 2:

```
SM16TAT2SA(config-percepxion)# show <cr>

Percepxion Configuration:

State : Enabled

Device ID :

Device Key : (Configured)
```

```
Device Name : SM16TAT2SA-3E96

Device Description : Lantronix SM16TAT2SA

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


SM16TAT2SA(config-percepxion)#
```

Example 3:

```
SM16TAT2SA(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

SM16TAT2SA(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:

```
SM16TAT2SA(config-percepxion)# state disable
SM16TAT2SA(config-percepxion)# state enable
SM16TAT2SA(config-percepxion)#
```

Command: **status**

Description: Sets the Percepxion status update interval. FW v1.04.0110 and above allows a dash (-)
                 character for Status Update Interval and Content Check 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:

```
SM16TAT2SA(config-percepxion)# status update interval 1
SM16TAT2SA(config-percepxion)# status update interval 1440
SM16TAT2SA(config-percepxion)#
```

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