

LSS2200-8P

Managed Layer 2 Gigabit Ethernet PoE++ Switch

(8) 10/100/1000Base-T IEEE 802.3bt + (2) 10G/5G/2.5G/1G SFP+ Multi-Gig Slots

CLI Reference

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Revision History

Date	Rev.	Comments
6/6/23	C	FW v 1.7.0.0R5: 1) Removed the global "lldp-med" command. The LLDP service can be activated or deactivated globally, which also enables or disables LLDP-Med; the timing parameters are still set globally. LLDP-Med is then enabled or disabled per port in the respective interface view. Note: Any backup files made prior to 1.7.0.0 that enable LLDP on a port will need the global "lldp" command to be added. 2) Added "ignore peer-dns-server" command to the VLAN interface configuration view and to the "show interface vlan <vid>" response. 3) Added notes regarding firmware upgrades. 4) Updated OpenWRT.
1/29/24	D	FW v 2.0.0.0R4: Change 'ConsoleFlow' to 'PercepXion' in Web UI, CLI, REST API and Logs. Update 'route' and 'no route' commands. Add configure SSH interface commands. Add 'max startups' parameter to ssh server commands. Remove 'poe max power' parameter from CLI. Allow CLI to modify 'gateway address' and 'interface' in routing config. Add summary of do and no commands. Publish Audit log to PercepXion server. Ignore the 'interface' field for ping and traceroute commands. Add new PSE Controller. The show system command shows the new PSE controller as PD69220bt and the old as PD69200bt. Note that you may need to run the command a second time.
4/25/24	E	Update default password.
10/22/24	F	FW v 2.0.0.1R2: <ul style="list-style-type: none"> ◆ Correct default password and add note to wait for login prompt after reboot. ◆ Add Syslog support in PercepXion. ◆ Fix auto logout timer in CLI. ◆ Add note to reboot/logout and login required (CLI only). ◆ Update OpenSSH to 9.8p1 for CVE-2024-6387. ◆ Fix problem with switch access after BLE disconnect. ◆ Add Note on using SSH. See the Release Notes for details.
1/7/25	G	FW v 2.1.0.0R2: <ul style="list-style-type: none"> ◆ Add Static Link Aggregation and note to disable STP for it to function. ◆ Fix Static Routing feature. ◆ Fix issue of DHCP Snooping not functioning with other DHCP features. ◆ Add Remote Access CLI Connect via Web Terminal. ◆ Add two API endpoints for managing the Static Link Aggregation configuration. See the Release Notes for more information.

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1. Introduction

Product Description

The LSS2200-8P is a managed Layer 2+ Gigabit Ethernet switch offering eight (8) 1Gbase-T interfaces with full IEEE 802.3bt 90W support, two (2) 10/5/2.5/1Gbase-T multi-gigabit SFP+ slots, two (2) programmable Digital Input/Outputs with 12V power output, and one (1) RJ-45 console port. The switch features Near Field Communications (NFC) support for simplified transfer of pre-configuration onto units prior to powering up and dispatching to install sites through the LSS2200-8P Mobile App.

The LSS2200-8P switch offers 720W total PoE budget for powering LED lighting, high-powered security and surveillance cameras and other IP devices. Its small footprint and hardened temperature rating make it ideal for powering IP devices distributed throughout a building. The LSS2200-8P also incorporates Bluetooth Low Energy (BLE) for wireless CLI without requiring physical access to troubleshoot, configure or reset the device. Cloud management and APIs for integrating with building management systems make the switch very easy to deploy and manage.

About This Manual

This manual gives specific information on how to operate and use the management functions of the switch via its Command Line Interface (CLI). This manual is intended for use by network administrators who are responsible for operating and maintaining network equipment; it assumes a strong knowledge of Ethernet switch functions, the RS-232 Console, Internet Protocol (IP), and Telnet/SSH protocol. Note that this manual may provide links to third party websites for which Lantronix is not responsible.

Related Manuals

- LSS2200-8P Quick Start Guide, 33859
- LSS2200-8P Install Guide, 33860
- LSS2200-8P Web User Guide, 33861
- LSS2200-8P CLI Reference, 33862
- LSS2200-8P REST API User Guide, 33863
- LSS2200-8P MobileApp User Guide, 33870
- Release Notes (revision specific)

Safety Information

See the LSS2200-8P Install Guide for additional safety information.

2. Initial Switch Connection

Connect and Log In to the Switch Using the CLI

Access to the Switch is protected by a logon security system. You can log in to the switch with the user name and password. After a failed logon attempt, the system displays *Wrong username or password!*. After you log on, the system monitors the interface for periods of inactivity.

1. Use the provided Cisco Blue RJ-45 to DB9 cable to connect a terminal or PC/terminal emulator to the switch port to access the CLI.
2. Attach the other end of the DB-9 cable to a PC running SSH/Telnet or a terminal emulation program such as HyperTerminal or Tera Term.
3. Use Console port settings Baud rate: 115200bps, Data bit: 8, Parity: None, Stop bit: 1 Flow control: none. Telnet Port 23. SSH Port 22.
4. Enter the CLI default user name `admin` and password `ltrx-admin`.
5. After a successful initial login, you are prompted to change the password. Note that all fields are required.
6. Perform initial switch configuration using the CLI (Command Line Interface).

Using SSH

Note that Telnet is not secure and can expose data to potential eavesdroppers. Consider using SSH for more secure communications. Per a Microsoft Tutorial dated 5/29/24 (<https://learn.microsoft.com/en-us/windows/terminal/tutorials/ssh>): "The latest builds of Windows 10 and Windows 11 include a built-in SSH server and client that are based on OpenSSH, a connectivity tool for remote sign-in that uses the SSH protocol. OpenSSH encrypts all traffic between client and server to eliminate eavesdropping, connection hijacking, and other attacks. Windows has a built-in SSH client and SSH server that you can use in Windows Terminal."

Windows 10: Microsoft announced it was bringing an integrated OpenSSH client to Windows in 2015. They've hidden an SSH client in Windows 10 Fall Creators Update. You can now connect to a Secure Shell server from Windows without installing PuTTY or any other third-party software. The built-in SSH client is enabled by default in Windows 10's April 2018 Update.

Windows 11: See the "Get started with OpenSSH for Windows" article (https://learn.microsoft.com/en-us/windows-server/administration/openssh/openssh_install_firstuse?tabs=gui&pivots=windows-server-2025) dated 08/16/2024. The article applies to Windows 11, Windows 10, Windows Server 2025 and 2022, and Windows Server 2019.

3. Command Line Interface (CLI) Operation

The command-line interface (CLI) is a text-based interface. You can access the CLI via either a direct serial connection to the device or an SSH / Telnet session

Supported User Groups

The set of privilege levels includes:

readonly : user can only use show commands to view data; cannot perform config commands.

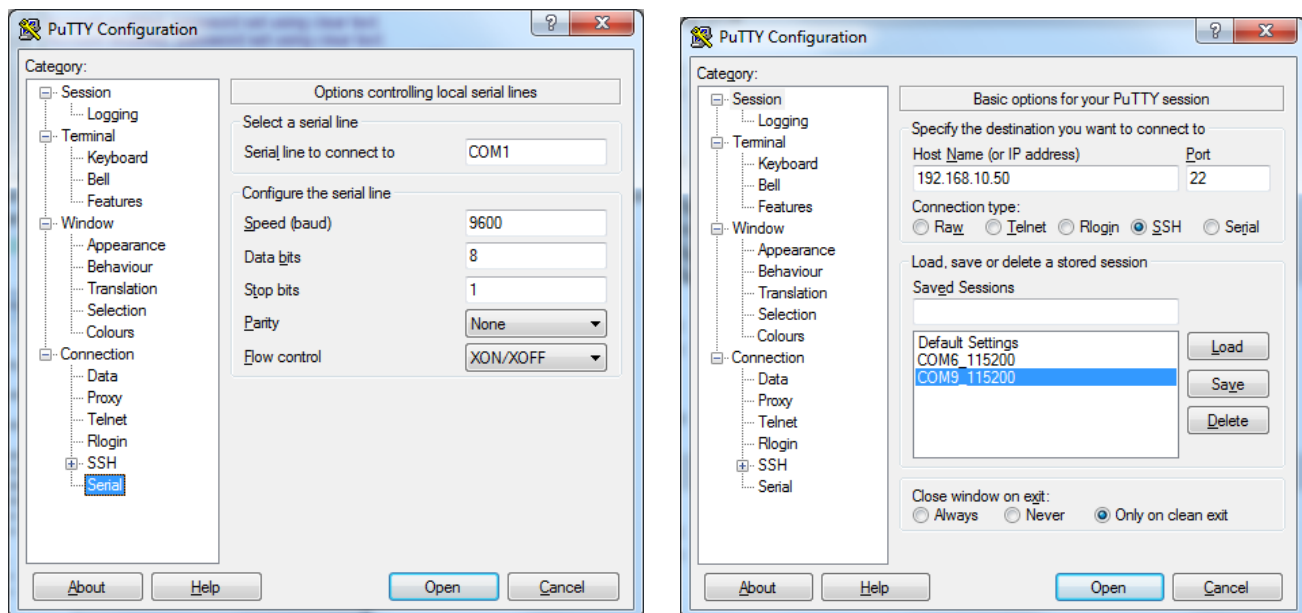
Config : user can perform show commands to view data and perform config commands to set parameters.

Admin : user has full access to any and all CLI commands.

See the Management > Users page for more information on setting user privilege levels.

PuTTY Settings

Speed (baud): 115200, Data bits: 8, Stop bits: 1, Parity: None, Flow control: XON/XOFF.



Login Procedure

```
LSS2200-8P login: admin <Enter>
LSS2200-8P login: ltrx-admin <Enter>
--: LSS2200-8P :--
```

Note: Wait for the command prompt. After a successful initial login, a prompt displays to change the password.

```
Password:
--: EOS :--

*** Password change required ***
New password:
Confirm password:
Password change succeeded. Please login again.
Please press Enter to activate this console.

LSS2200-8P # exit
Please press Enter to activate this console.

LSS2200-8P # login:
Login timed out Please press Enter to activate this console.
```

CLI Command Modes

The CLI command modes are Exec mode, Config mode, Config Admin mode, and Interface Config mode. Each mode has its own prompt and set of available CLI commands, as described in the following sections.

Note: When entering a field with a space in the name, always quote the field.

After initial login, you should create an account for one or more personalized user names. It is recommended to create at least one other account in the “admin” group, then verify the ability to login to that account, and then delete the default “admin” user name.

CLI Controls

Using the ? and <tab> Functions

The CLI is flexible in that it will accept global commands from anywhere. So if you run a spanning tree command from the vlan path, it changes directories to where the spanning tree command was run. This is why there is a difference between using ? and <Tab>.

While in a VLAN interface, pressing ? shows the VLAN interface specific commands, and pressing <tab> shows the global commands. For example:

```
LSS2200-8P (config)# interface vlan 100
LSS2200-8P (config-vlan-if)# ?
  dns      Add to DNS Server list
  end      Go back to EXEC View
  exit     Exit from interface configuration mode
  ignore   Ignore information configured/received
  ip       IPv4 address configuration
  no       Negate a command or set its defaults

LSS2200-8P (config-vlan-if)# <tab>
admin      aging-time  alarm      ble         clock      dns         do
end        exec-timeout exit       ignore     interface  ip          lldp
logging    loop-detect lpm        monitor    nfc        no          ntp
percepxi   poe          qos        rest-server route       snmp       snmptrap
spanning-tree ssh-server  start     system     telnet

LSS2200-8P (config-vlan-if)#
```

Entering a “?” shows the commands that can only be run from that path. **Output of ? command:** 22 commands:

```
LSS2200-8P (config)# interface 10GigabitEthernet 1/2
LSS2200-8P (config-if)# ?
auto-negotiate  Enable Auto-negotiate the switch port
description     Update the switch port description
duplex          Update the switch port's duplex
enable          Enable the switch port
end             Go back to EXEC View
exit            Exit from interface configuration mode
flow-control    Update the switch port's flow control
ip              IP Configuration
jumbo-frame     Enable Jumbo-Frame on switch port
lldp            Configure LLDP
lldp-med        Enables LLDP-MED on the interface
loop-detect     Loop Detect Configuration
monitor         Monitoring different system events
no              Negate a command or set its defaults
poe             Enable to configure Power over Ethernet
port-security   Enable port security for the port
pvlan           Set PVLAN membership
qos             QoS configuration for port
sfp-mode        Update the switch port's sfp mode
spanning-tree   Spanning tree port configuration
speed           Update the switch port's speed
switchport      Switching mode characteristics
```

Entering a “<Tab>” shows the commands that can only be run from that path, plus the global commands that can be run from that path. The global commands are at this path:

Output with <tab> command: 41 commands

```
LSS2200-8P (config-if)# <tab>
admin      aging-time    alarm        auto-negotiate ble        clock        description
do         duplex        enable       end        exit        flow-control interface
ip         jumbo-frame  lldp        lldp-med   logging    loop-detect  lpm
monitor   nfc          no          ntp        percepxion poe          port-security
pvlan     qos          rest-server  route      sfp-mode   snmp        snmptrap
spanning-tree speed        start       switchport system      telnet
LSS2200-8P (config-if)#
```

CLI Command Messages

CLI Timeout Message

The CLI session times out after 10 minutes of inactivity.

```
LSS2200-8P (config-if)#
Warning: Idle timeout. The session will be closed.
Please press Enter to activate this console.
```

CLI Syntax Error Message

```
LSS2200-8P (config)# interface
Syntax Error: Incomplete Command
LSS2200-8P (config)#
```

CLI Illegal Parameter Message

```
LSS2200-8P (config-admin)# firmware verify ftp:
Syntax error: Illegal parameter
LSS2200-8P (config-admin)#
```

CLI Login KEX algorithm Message

Message: *TTSSH unknown KEX algorithm: 10hicag-hellman-group1-sha1*

Meaning: Key Exchange (KEX) Method Names do not match.

Recovery: **1.** Click OK to clear the message dialog. **2.** Try logging in again with the same app (Tera Term). **3.** Try a different connection service. **4.** Try a different app to log in (PuTTY, HyperTerminal, HYPERACCESS, Windows Terminal).

CLI Commands

Exec Mode Commands (default view)

The CLI starts up mode in Exec mode. To show the available Exec mode commands type a ? (question mark) and hit Enter. To show the available CLI commands in Exec mode:

```
LSS2200-8P # ?
!           Comments
alarm      Actions for alarm conditions
clear      Clear or reset status or conditions
clock      Configure time settings
configure  Enter configuration mode
copy       copy system configuration
debug      Debug led
exit       Exit from the CLI
nslookup   nslookup command for network diagnostics
ping       Ping command for network diagnostics
reload     Rebooting or defaulting the device
show       show information
ssh        SSH for secure, encrypted connection
telnet     telnet to transfer data in plain text.
traceroute Traceroute command for network diagnostics
who        Show logged in users
```

```
LSS2200-8P #
```

Command: **!**
 Description: Comments
 Mode: Exec mode
 Parameters: Arguments ignored comment text
 Example:

```
LSS2200-8P # !
Arguments ignored comment text
<cr>
```

```
LSS2200-8P #
```

Command: **alarm**
 Description: Actions for alarm conditions
 Mode: Exec mode
 Parameters: mute Silence an active alarm notification
 unmute Clear the muting of an active alarm notification
 Arguments ignored comment text
 Alarm Name The name of the alarm, Tab to complete/list

Example:

```
LSS2200-8P # alarm mute 10GigabitEthernet-1/2-Temperature-high-alarm
LSS2200-8P # alarm unmute CPU-Temperature
LSS2200-8P # alarm mute <tab>
10GigabitEthernet-1/1-Temperature-high-alarm          10GigabitEthernet-1/1-Temperature-low-alarm
10GigabitEthernet-1/1-Temperature-high-warning        10GigabitEthernet-1/1-Temperature-low-warning
10GigabitEthernet-1/1-Voltage-high-alarm              10GigabitEthernet-1/1-Voltage-low-alarm
10GigabitEthernet-1/1-Voltage-high-warning            10GigabitEthernet-1/1-Voltage-low-warning
10GigabitEthernet-1/1-Bias-high-alarm                  10GigabitEthernet-1/1-Bias-low-alarm
10GigabitEthernet-1/1-Bias-high-warning                10GigabitEthernet-1/1-Bias-low-warning
10GigabitEthernet-1/1-Tx-Power-high-alarm              10GigabitEthernet-1/1-Tx-Power-low-alarm
10GigabitEthernet-1/1-Tx-Power-high-warning            10GigabitEthernet-1/1-Tx-Power-low-warning
10GigabitEthernet-1/1-Rx-Power-high-alarm              10GigabitEthernet-1/1-Rx-Power-low-alarm
10GigabitEthernet-1/1-Rx-Power-high-warning            10GigabitEthernet-1/1-Rx-Power-low-warning
10GigabitEthernet-1/2-Temperature-high-alarm           10GigabitEthernet-1/2-Temperature-low-alarm
10GigabitEthernet-1/2-Temperature-high-warning         10GigabitEthernet-1/2-Temperature-low-warning
10GigabitEthernet-1/2-Voltage-high-alarm               10GigabitEthernet-1/2-Voltage-low-alarm
10GigabitEthernet-1/2-Voltage-high-warning             10GigabitEthernet-1/2-Voltage-low-warning
10GigabitEthernet-1/2-Bias-high-alarm                  10GigabitEthernet-1/2-Bias-low-alarm
10GigabitEthernet-1/2-Bias-high-warning                10GigabitEthernet-1/2-Bias-low-warning
10GigabitEthernet-1/2-Tx-Power-high-alarm              10GigabitEthernet-1/2-Tx-Power-low-alarm
10GigabitEthernet-1/2-Tx-Power-high-warning            10GigabitEthernet-1/2-Tx-Power-low-warning
10GigabitEthernet-1/2-Rx-Power-high-alarm              10GigabitEthernet-1/2-Rx-Power-low-alarm
10GigabitEthernet-1/2-Rx-Power-high-warning            10GigabitEthernet-1/2-Rx-Power-low-warning
loop-shutdown-GigabitEthernet-1/1                    loop-shutdown-GigabitEthernet-1/2
loop-shutdown-GigabitEthernet-1/3                    loop-shutdown-GigabitEthernet-1/4
loop-shutdown-GigabitEthernet-1/5                    loop-shutdown-GigabitEthernet-1/6
loop-shutdown-GigabitEthernet-1/7                    loop-shutdown-GigabitEthernet-1/8
loop-shutdown-10GigabitEthernet-1/1                  loop-shutdown-10GigabitEthernet-1/2
port-security-GigabitEthernet-1/1-shutdown            port-security-GigabitEthernet-1/1-limit-reached
port-security-GigabitEthernet-1/2-shutdown            port-security-GigabitEthernet-1/2-limit-reached
port-security-GigabitEthernet-1/3-shutdown            port-security-GigabitEthernet-1/3-limit-reached
port-security-GigabitEthernet-1/4-shutdown            port-security-GigabitEthernet-1/4-limit-reached
port-security-GigabitEthernet-1/5-shutdown            port-security-GigabitEthernet-1/5-limit-reached
port-security-GigabitEthernet-1/6-shutdown            port-security-GigabitEthernet-1/6-limit-reached
port-security-GigabitEthernet-1/7-shutdown            port-security-GigabitEthernet-1/7-limit-reached
port-security-GigabitEthernet-1/8-shutdown            port-security-GigabitEthernet-1/8-limit-reached
port-security-10GigabitEthernet-1/1-shutdown          port-security-10GigabitEthernet-1/1-limit-reached
port-security-10GigabitEthernet-1/2-shutdown          port-security-10GigabitEthernet-1/2-limit-reached
CPU-Temperature
LSS2200-8P #
```

Command: **clear**

Description: Clear or reset status or conditions

Mode: Exec mode

Parameters:

ip	Clear IP Configuration
lldp	Clear LLDP counters
loop-detect	Clear loop detect statistics or condition
port-security	Clear port-security condition
reload	Abandon any previous reload in/at request
statistics	Clear the port statistics on the specified port
Arguments	ignored comment text
dhcp	Clear IP DHCP Configuration
server	Clear IP DHCP Server Configuration
binding	Clear IP DHCP Server bindings
server	DHCP Server Server Name
ip	Ipv4 address
mac	MAC address
String	DHCP Server Server Name
A.B.C.D	Ipv4 address
xx:xx:xx:xx:xx:xx	MAC address
counters	Resets the LLDP counters to 0
shutdown	Clear the active loop-detect shutdown condition on the specified port
shut-down	Enable a port that is shut down by the port-security module
statistics	Clear the loop-detect statistics on the specified port
port	Port type (GigabitEthernet/10GigabitEthernet)
Port number	The switch port number, Tab to complete/list
name	port type
name	The switch port type (GigabitEthernet/10GigabitEthernet)
name	GigabitEthernet (1/1 ½ 1/3 ¼ 1/5 1/6 1/7 1/8)
name	10GigabitEthernet (1/1 ½)

Example:

```
LSS2200-8P # clear ip dhcp server binding server BobB ip 1.2.3.4 mac 11:22:33:44:55:66
LSS2200-8P # clear lldp counters
LSS2200-8P # clear loop-detect
LSS2200-8P # clear port-security shut-down name 10GigabitEthernet ½
LSS2200-8P # clear statistics name GigabitEthernet ½
LSS2200-8P # clear reload
The previous reload request has been cancelled
LSS2200-8P #
```

Messages:*Error: Pool with the name BobB does not exist**There was no previous reload request to cancel*

Command: **clock**

Description: Configure time settings. **Note** that changing the System Time requires Web UI or CLI users to log in again.

Mode: Exec mode

Parameters: set Configure system date and time
time in HH:MM HH:MM format system time
Date in YYYY-MM-DD format for system date

Example:

```
LSS2200-8P # clock set 11:30 2022-08-29
LSS2200-8P #
```

Messages:

The system clock cannot be changed if NTP is active

Command: **configure**

Description: Enter Configuration mode. See [Config Mode Commands](#) starting on page 64.

Mode: Exec mode

Parameters: terminal Configure from the terminal

Example:

```
LSS2200-8P # configure terminal
lss2200-8p (config)#
```

Command: **copy**

Description: Copy commands - copy/backup/restore system configuration or backup system log. Log file rotation is implemented to rotate the audit log file daily (or hourly if the current audit log file has exceeded 100k bytes). The Audit log supports a maximum of 7 files of up to 100kb each. Added at FW v 2.0.0.0R4.

Mode: Exec mode

Parameters:	default-config	Reset running-config or startup-config to factory defaults
	log	Backup system log to a remote file
	running-config	Save running-config to startup-config or backup running-config to a remote file
	saved-logs	Backup saved logs (zipped tarfile) to a remote file. Allows downloading logs that were saved prior to the last restart or firmware update to a remote file. The file is a zipped archive, and so the destination file name should have ".tgz" suffix. The "copy saved-logs" command can only be run by an admin user.
	startup-config	Apply startup-config to running-config or backup startup-config to a remote file
	<URI>	<URI> - examples: tftp://192.168.60.10/running_backup scp://user:passwd@192.168.60.10:/home/user/running_backup
	running-config or startup-config	Destination for copy startup-config
	startup-config or URI	Destination for copy running-config
	running-config or URI	Destination for copy startup-config
	<URI>	Remote destination for saved logs
	<URI>	Remote destination for system log
	https	HTTPS
	http	HTTP
	scp	Secure Copy Protocol
	tftp	TFTP
	ftp	FTP
	running-config or startup-config	Destination for copy startup-config
	heading	Include date and version header in remote backup file (heading)

Example:

```
LSS2200-8P # copy running-config startup-config
Copy succeeded
LSS2200-8P # copy running-config startup-config heading
Copy to startup-config succeeded
LSS2200-8P # copy saved-logs tftp://192.168.60.101/todaylog.tgz
LSS2200-8P # copy to tftp://192.168.60.101/todaylog.tgz succeeded
LSS2200-8P # copy saved-logs tftp://192.168.60.101/lss2200-logs-20230622.tgz
LSS2200-8P # copy to tftp://192.168.60.101/lss2200-logs-20230622.tgz succeeded
LSS2200-8P # copy saved-logs https:1.2.3.4
There are no saved logs to copy
Copy to https:1.2.3.4 failed
LSS2200-8P # copy startup-config running-config heading

Copy to running-config succeeded
LSS2200-8P # copy saved-logs tftp://192.168.60.101/todaylog.tgz

Copy to tftp://192.168.60.101/todaylog.tgz succeeded
```

Messages:

```
[ERR]: Callback event "done" with ID 9 processing timed out.
Exception sending backup for log: Failed to put : (28, 'TFTP response timeout')
Copy failed
Log destination must be a URL
Copy failed
```

Command: **debug**

Description: Debug LED(s)

Mode: Exec mode

Parameters:

test	Debug led
all-leds	this command tests all LEDs in sequence
led	Select sequence to test all LEDs
String	Led to test, pass all to test all LEDs sequence else pass system1, system2, and CPLD for individual
state	on, off for individual LEDs. Ex: ON, OFF, ALERT.
System1	System (S1) LED
system2	System (S2) LED
cpld	Complex Programmable Logic Device
String	on, off for individual LEDs. Ex: ON,OFF,ALERT.

Example:

```
LSS2200-8P # debug test led system1 state ON
LSS2200-8P # debug test led system1 state OFF
LSS2200-8P # debug test led system1 state ALERT
LSS2200-8P # debug test led pass ON,OFF,ALERT
LSS2200-8P # debug test all-leds
LSS2200-8P # debug test led cpld state ON
LSS2200-8P #
```

Messages:

```
Invalid LED state Ex: ON/OFF/ALERT
Syntax error: Illegal command line
```

Command: **exit**

Description: Exit from the CLI

Mode: Exec mode

Syntax: **exit** <cr>

Parameters:

Example:

```
LSS2200-8P # exit
Please press Enter to activate this console.

LSS2200-8P login:
```


Command: **nslookup**
 Description: nslookup command for network diagnostics. It queries DNS records for a given domain name.
 Mode: Exec mode
 Parameters: host Look up information for host using the current default server
 String Look up information for host using the current default server

Example:

```
LSS2200-8P # nslookup host 127.0.0.1
Server:      127.0.0.1
Address:     127.0.0.1:53

1.0.0.127.in-addr.arpa name = localhost
```

```
LSS2200-8P #
```

Messages:

```
;; connection timed out; no servers could be reached
*** Can't find string: No answer
** server can't find 1.60.168.192.in-addr.arpa: NXDOMAIN
```

Command: **ping**
 Description: Ping command for network diagnostics. The ping utility uses the ICMP protocol's mandatory ECHO_REQUEST datagram to elicit an ICMP ECHO_RESPONSE from a host or gateway. ECHO_REQUEST datagrams ("pings") have an IP and ICMP header, followed by a "struct timeval" and then an arbitrary number of "pad" bytes used to fill out the packet.
 Mode: Exec mode
 Parameters: host Hostname or IP-address to ping
 interface Optional source IP-address or interface for sending packets
 repeat Requests to send count, default is 5
 String Hostname or IP-address to ping
 String Source IP-address or interface name
 Unsigned integer Requests count (1..65535)

Example:

```
LSS2200-8P # ping host 192.168.60.1 interface 192.168.60.1 repeat 3
PING 192.168.60.1 (192.168.60.1) from 192.168.60.1: 56 data bytes
64 bytes from 192.168.60.1: seq=0 ttl=64 time=0.232 ms
64 bytes from 192.168.60.1: seq=1 ttl=64 time=0.238 ms
64 bytes from 192.168.60.1: seq=2 ttl=64 time=0.240 ms

--- 192.168.60.1 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.232/0.236/0.240 ms
LSS2200-8P
```

Messages:

```
ping: can't set multicast source interface
Syntax Error: Incomplete Command – Require host name or IP Address
Syntax error: Illegal command line
```

Command: **reload**

Description: Reboot or default the device. **Note:** during a reboot, do not hit any keys until the login prompt displays again before proceeding. Let the switch boot up for about 20-30 seconds. If you do press a key too early, the '=' prompt displays; perform another 'reload' to fix it.

Mode: Exec mode

Parameters:

defaults	Set defaults on device
warm	Reboot the box
at	Reboot the box at a specified time / date
in	Reboot the box after a given duration
time in HH:MM	HH:MM time of day to reboot
date to reboot	Date in YYYY-MM-DD format
time in HH:MM	when to reboot

Example:

```
LSS2200-8P # reload warm in 04:00
LSS2200-8P # reload defaults

Copy succeeded

LSS2200-8P #

LSS2200-8P # reload warm at 23:23 2022-12-22
LSS2200-8P # show reload
Reload was requested at 2022-12-22 23:23:00
Remaining: 8 days, 9:53:38
LSS2200-8P # reload warm at 23:23 2022-12-26
LSS2200-8P # show reload
Reload was requested at 2022-12-26 23:23:00
Remaining: 12 days, 9:52:40
LSS2200-8P # show reload
Reload was requested in 11:11:00
Remaining: 11:06:41
LSS2200-8P # clear reload
The previous reload request has been cancelled
LSS2200-8P # show reload
No future reload has been requested
LSS2200-8P # reload warm
```

Message: the '=' in the console connection indicates the boot was interrupted by a keypress and went into the uboot menu.

Command: **show**

Description: Show information (see the [Show Commands](#) section on page 22).

Command: **ssh**

Description: SSH for secure, encrypted connection. SSH (Secure Shell) is a method for secure and encrypted remote login from one device to another.

Mode: Exec mode

Parameters:

Hostname or IP Address	Hostname or IP address to remove the particular host key
delete	Remove the particular host key from SSH's known_hosts file
name@hostname/ipaddress	ssh targethost [e.g. ssh name@1.2.3.4]

Example:

```
LSS2200-8P # ssh delete 1.2.3.4
SSH error: Command '['/usr/bin/ssh-keygen', '-R', '1.2.3.4']' returned non-zero exit status 255.
LSS2200-8P # ssh ssh1@192.168.1.60
ssh: connect to host 192.168.1.60 port 22: Network unreachable
LSS2200-8P #
```

Command: **telnet**

Description: Transfer data in plain text. **Warning:** Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission of Sensitive Information. Setup and verify SSH, then disable Telnet.

Mode: Exec mode

Parameters:

host Host name or IP address to connect

port Port number to connect. If no port number is specified, telnet attempts at the standard port 23.

String Host name or IP address to connect

Unsigned integer Port number to connect. If no port number is specified, telnet attempts at the standard port 23. (1..65535)

Example:

```
LSS2200-8P # telnet host 192.168.10.50 port 23
Connected to 192.168.10.50
Entering character mode
Escape character is '^]'.
Eos login:
LSS2200-8P # telnet BobB
Syntax error: Illegal command line
LSS2200-8P # telnet <cr>
BusyBox v1.35.0 (2023-04-18 23:50:04 UTC) multi-call binary.
Usage: telnet HOST [PORT]
Connect to telnet server
LSS2200-8P #
```

Messages: *telnet: bad address 'AdminHost'*

telnet: can't connect to remote host (1.2.3.4): Network unreachable

Command: **traceroute**

Description: Traceroute command for network diagnostics. The traceroute command takes interface names as eth1.x rather than VLAN interface names such as VLAN1, VLAN2, etc. **Note** that only VLAN interfaces should be given as source interfaces.

Mode: Exec mode

Parameters:

host	IP address or domain name of the host to trace
interface	Optional source interface to use for sending packets (VLAN interface name such as VLAN1)
String	IP address or domain name of the host to trace
String	Source interface to use for sending packets

Example 1:

```
LSS2200-8P # traceroute host 172.27.100.32
traceroute to 172.27.100.32 (172.27.100.32), 30 hops max, 46 byte packets
 1 * * *
 2 * * *
 3 * * *
 4 * * *
 5 * * *
 6 * * *
 7 * * *
 8 * * *
 9 * * *
10 *
```

Example 2:

```
LSS2200-8P # traceroute host 172.27.197.38 interface 172.27.197.43
traceroute to 172.27.197.38 (172.27.197.38), 30 hops max, 46 byte packets
 1 172.27.197.38 (172.27.197.38) 0.029 ms 0.025 ms 0.017 ms
LSS2200-8P # traceroute interface vlan1 host 172.27.197.38
traceroute: can't bind to interface vlan1: No such device
traceroute to 172.27.197.38 (172.27.197.38), 30 hops max, 46 byte packets
 1 172.27.197.38 (172.27.197.38) 0.029 ms 0.028 ms 0.017 ms
LSS2200-8P # traceroute host 192.168.60.99
traceroute to 192.168.60.99 (192.168.60.99), 30 hops max, 46 byte packets
 1 192.168.60.1 (192.168.60.1) 3063.089 ms !H 3071.043 ms !H 3071.375 ms !H
LSS2200-8P #
```

Messages:

1traceroute: sendto: Network unreachable

traceroute: bad address 'BobB'

Syntax Error: Incomplete Command – Require host name or IP Address

Syntax error: Illegal command line

traceroute: can't bind to interface vlan10: No such device

Command: **who**
Description: Show logged in users
Mode: Exec mode
Syntax: **who** <cr>
Parameters: None
Example:

```
LSS2200-8P # who
+-----+-----+-----+
| Username | From   | Since                |
+-----+-----+-----+
| admin    | network | 2023-05-20 23:31:26 |
| admin    | network | 2023-05-20 23:46:08 |
+-----+-----+-----+

LSS2200-8P #
```

Show Commands

alarm	Show alarm related information
audit-log	Show the security audit log
banner	Display the banner.
ble	BLE commands
clock	Display the configured system time settings
ddmi	show ddmi basic information
interface	Display port information for the given port
ip	Show IP related information
lldp	LLDP global config information
log	show system log
logging	Show SYSLOG related information
loop-detect	Show Loop Detect related information
lpm	Show LPM (Discovery) configuration/ status
mac	Show MAC Address related information
monitor	Port Mirroring information
nfc	NFC state
ntp	Show NTP related information
percepixon	Show Percepixon client configuration/ status
poe	Show PoE related information
port-security	Show port-security related information
pvlan	Display PVLAN configuration
qos	Show QOS related information
reload	Show information about any pending reload
rest-server	Show REST Server related information
route	Show route related information
running-config	Show Running Config in CLI format
snmp	Show SNMP related information
snmptrap	Show SNMP trap related information
spanning-tree	Show spanning tree related information
ssh-server	Show information about the SSH service
startup-config	Show Startup Config in CLI format
system	Show system information
telnet	Show telnet related information
uptime	Show system uptime
users	Show user accounts
vct	Display most recent Virtual Cable Test results for the given port
version	show version
vlan	Show VLAN related information
Arguments	ignored comment text

Command: **show alarm**
Description: Show alarm related information
Mode: Exec mode
Parameters: config Show alarm configuration (Disabled Alarms List)
 status Show alarm status (Active or muted alarms)

Example:

```
LSS2200-8P # show alarm config
Disabled Alarms List
=====rnet-1/1-Temperature-high-alarm
10GigabitEthernet-1/1-Temperature-high-warning
10GigabitEthernet-1/1-Temperature-low-warning
LSS2200-8P # show alarm status
Active or muted alarms
=====
Alarm Name : 10GigabitEthernet-1/1-Temperature-high-alarm
=====
Message      : Temperature 52.3125 is above threshold
State        : active
Timestamp    : 2023-05-19T19:03:11+00:00
Level        : error

Alarm Name : 10GigabitEthernet-1/1-Voltage-high-alarm
=====
Message      : Voltage 3.3744 is above threshold
State        : active
Timestamp    : 2023-05-19T19:03:11+00:00
Level        : error

Alarm Name : 10GigabitEthernet-1/1-Bias-high-alarm
=====
Message      : Bias 30.912 is above threshold
State        : active
Timestamp    : 2023-05-19T19:03:11+00:00
Level        : error

Alarm Name : 10GigabitEthernet-1/1-Tx-Power-high-alarm
=====
Message      : Tx Power 0.0254 is above threshold
State        : active
Timestamp    : 2023-05-19T19:03:11+00:00
Level        : error

Alarm Name : 10GigabitEthernet-1/1-Rx-Power-high-alarm
=====
Message      : Rx Power 0.0 is above threshold
State        : active
Timestamp    : 2023-05-19T19:03:11+00:00
Level        : error

LSS2200-8P #
```

Command: **show audit-log**

Description: Show the security audit log. Log file rotation is implemented to rotate the audit log file daily (or hourly if the current audit log file has exceeded 100k bytes). The Audit log supports a maximum of 7 files of up to 100kb each.

Parameters: None

Example:

```
LSS2200-8P # show audit-log
2023-07-25 20:29:32 system system Security audit log started.
2023-07-25 20:29:51 system system Initializing running-config from startup-config
2023-07-25 20:30:12 system system running-config initialization complete
2023-07-25 20:33:12 admin CLI Login via CLI from 192.168.60.101
2023-07-25 20:33:49 admin CLI Login via CLI from 192.168.60.101
2023-07-25 20:47:29 admin CLI Copy config requested from running-config to
startup-config
2023-07-25 20:47:30 admin CLI Copy to startup-config succeeded
2023-07-25 21:01:04 admin CLI Logout from 192.168.60.101 (idle timeout)
2023-07-25 21:12:37 admin CLI Login via CLI from 192.168.60.101
2023-07-25 21:22:54 admin CLI Copy config requested from default-config to
running-config
2023-07-25 21:23:00 admin CLI Copy to running-config succeeded
2023-07-25 21:29:03 admin CLI Logout from 192.168.60.101
2023-07-25 21:29:38 admin CLI Login via CLI from 192.168.60.101
2023-07-25 21:30:57 admin web Login via web from 192.168.60.101
2023-07-25 21:31:34 admin CLI Login via CLI from 192.168.60.101
2023-07-25 21:38:19 admin CLI Login via CLI from 192.168.60.101
2023-07-25 21:41:45 admin web Logout from client 192.168.60.101
2023-07-25 21:48:06 admin CLI Logout from 192.168.60.101 (idle timeout)
LSS2200-8P #
```

Command: **show banner**

Description: Display the banner.

Mode: Exec mode

Syntax: **show banner <cr>**

Parameters: None

Example:

```
LSS2200-8P # show banner
Banner
=====
--: EOS :--
LSS2200-8P #
```


Command: **show ble**
 Description: Display Bluetooth Low Energy parameters
 Mode: Exec mode
 Parameters: broadcast BLE broadcast state
 connection BLE software connection state
 mac BLE mac address
 status BLE status Information
 version BLE software version

Example:

```
LSS2200-8P # show ble broadcast
BLE Broadcast State
=====
Broadcast Status      : Enabled
LSS2200-8P # show ble connection
BLE Software Connection State
=====
Connection State     : BLE Disconnected
LSS2200-8P # show ble mac
BLE MAC Info.
=====
BLE MAC              : D0:CF:5E:96:FC:72
LSS2200-8P #
LSS2200-8P # show ble status
BLE Status
=====
Broadcast Status     : Enabled
Connection State     : BLE Disconnected
BLE Version          : LN BLE 1.0.3
BLE MAC              : D0:CF:5E:96:FC:72
LSS2200-8P # show ble status
BLE Status
=====
Broadcast Status     : Enabled
Connection State     : BLE Connected
BLE Version          : LN BLE 1.0.3
BLE MAC              : A4:6D:D4:3E:0C:D8
LSS2200-8P #
LSS2200-8P # show ble version
BLE Version Info.
=====
BLE Version          : LN BLE 1.0.3
LSS2200-8P #
```

Command: **show clock**
Description: Display the configured system time and date settings
Mode: Exec mode
Parameters: None
Example:

```
LSS2200-8P # show clock
System Clock
=====
22:06:38 25 July, 2023
Timezone: UTC

LSS2200-8P # show clock
System Clock
=====
11:37:53 20 September, 2024
Timezone: Asia/Kolkata

LSS2200-8P #
```

Command: **show ddm**

Description: Show basic or extended Digital Diagnostics Monitoring Interface (DDMI) information.

Mode: Exec mode

Parameters: extended show ddm extended information

Example:

```
LSS2200-8P # show ddm
DDMI Basic Information
=====
| Part Number      | Serial Number    | Vendor Name      | Date Code | Revision |
+-----+-----+-----+-----+-----+
| 10GigabitEthernet 1/1 | TN-10GSFP-SR    | 8801095         | 2012/07/31 | 0001    |
| 10GigabitEthernet 1/2 | TN-SFP-LX1      | 90%16          | 2008/05/02 | 0000    |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
| Port              | Type             | Alarm status    | Current Value | High Alarm | Low Alarm |
High Warning | Low Warning |
+-----+-----+-----+-----+-----+
| 10GigabitEthernet 1/1 | Bias            | Normal         | 5.456         | 20.0      | 1.0      |
15.0         | 2.0          |
| 10GigabitEthernet 1/1 | Rx Power       | Normal         | 0.1868        | 1.0       | 0.0646   |
0.7943      | 0.1023      |
| 10GigabitEthernet 1/1 | Temperature    | Normal         | 44.1562       | 90.0      | -5.0     |
85.0        | 0.0          |
| 10GigabitEthernet 1/1 | Tx Power       | Normal         | 0.5248        | 1.0       | 0.1479   |
0.7943      | 0.1862      |
| 10GigabitEthernet 1/1 | Voltage        | Normal         | 3.348         | 3.6       | 3.0      |
3.5         | 3.1         |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
| Port              | Type             | Alarm status    | Current Value | High Alarm | Low Alarm |
High Warning | Low Warning |
+-----+-----+-----+-----+-----+
| 10GigabitEthernet 1/2 | Bias            | Normal         | %688          | 20.512    | 0.026    |
17.948      | 0.128       |
| 10GigabitEthernet 1/2 | Rx Power       | Normal         | %2776         | 2.9946    | 0.0347   |
2.3796      | 0.0646     |
| 10GigabitEthernet 1/2 | Temperature    | Normal         | %.25          | 90.0      | -10.0    |
85.0        | -5.0       |
| 10GigabitEthernet 1/2 | Tx Power       | Normal         | %2168         | 0.8283    | 0.0738   |
0.658       | 0.0929     |
| 10GigabitEthernet 1/2 | Voltage        | Normal         | %34           | 3.75      | 2.75     |
3.55        | 2.92       |
+-----+-----+-----+-----+-----+
LSS2200-8P #
```

Command: **show interface**
 Description: Display port information for the given port
 Mode: Exec mode
 Parameters: * Display port information for all ports
 vlan Display status of the vlan interface
 The switch port type port type (GigabitEthernet/10GigabitEthernet)
 Display Info Type show type (config/status/statistics)
 config Show interface configuration information
 status Show interface status
 statistics Show interface statistics
 Vlan ID (1..4094) Number in the range 1-4094
 Number in the range 1-4094 Vlan ID (1..4094)
 port-number The switch port number, Tab to complete/list

Example 1:

```
LSS2200-8P # show interface * config
Port Configuration
=====
+-----+-----+-----+-----+-----+-----+-----+
| Port Name      | Enabled | Speed | Duplex | Flow Ctrl | Autonegotiate | Jumbo Frame |
+-----+-----+-----+-----+-----+-----+-----+
| GigabitEthernet 1/1 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/2 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/3 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/4 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/5 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/6 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/7 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
| GigabitEthernet 1/8 | Enabled | 1G   | full  | None     | Enabled       | Disabled  |
+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+
| Port Name      | Enabled | SFP Mode | Flow Ctrl | Jumbo Frame |
+-----+-----+-----+-----+-----+
| 10GigabitEthernet 1/1 | Enabled | 10G-BASE-R | None     | Disabled  |
| 10GigabitEthernet 1/2 | Enabled | 10G-BASE-R | None     | Disabled  |
+-----+-----+-----+-----+-----+

LSS2200-8P #
```

Example 2:

```
LSS2200-8P # show interface GigabitEthernet 1/7
Con
    Speed : 1G
    Duplex : full
    Flow Control : None
    Autonegotiate : Enabled
    Jumbo Frame : Disab1/7
=====
    Enabled : Enabled
    Link : Up
    Speed : 100M
    Duplex : full
    Flow Control : None
```

```

Autonegotiate : Enabled
  Jumbo Frame : Ethernet 1/7
=====
  Bytes : in:2471786 out:12063541 total:14535327
  Unicast : in:17 out:4 total:21
Broadcast : in:7548 out:32079 total:39627
Multicast : in:0t:0 total:0
  Errors : in:0 out:0 total:0
  Pause : in:0 out:0 total:0

```

Queue Statistics for port : GigabitEthernet 1/7

```

=====
| Queue Number | Queued          | Egress packets |
=====
| 0            | 0              | 0              |
| 2            | 0              | 0              |
| 4            | 0              | 0              |
| 5            | 0              | 0              |
| 6            | 0              | 2              |
| 7            | 0              | 0              |

```

LSS2200-8P #

Example 3:

```

LSS2200-8P # show interface vlan 1
Interface Configuration
=====
Interface                : VLAN1
VLAN ID                  : 1
Protocol                  : Static
IP address                : 192.168.60.1
Netmask                   : 255.255.255.0
Interface Status
=====
IPv4 Address              : 192.168.60.1
IPv4 Netmask              : 255.255.255.0
MTU                       : 10240
State                     : UP
MAC                       : 00:c0:f2:96:08:c1
RX Bytes                  : 486813092
RX Packets                : 1682018
RX Errors                  : 0
RX Dropped                : 44751
RX Overrun                : 0
RX Multicast              : 926388
TX Bytes                  : 12435306
TX Packets                : 14480
TX Errors                  : 0
TX Dropped                : 0
LSS2200-8P #

```

Messages:

Interface "VLAN11" does not exist

Interface Status not available!

Command: **show ip**
 Description: Show Internet Protocol related information
 Mode: Exec mode
 Parameters:

dhcp	Show IP DHCP Relay Information
interface	Show IPv4 address configuration
neighbors	Show all entries in ARP Table
relay	Show IP DHCP Relay Information
server	Show IP DHCP Server Information
snooping	Show IP DHCP Snooping Information
brief	Show Brief IP interface status
binding	Show IP DHCP Server Binding Information
String	DHCP Server Pool Name
server	DHCP Server Pool Name
	Output modifiers
<ipv4_ucast>	IP address in dotted-decimal notation
state	State of binding
type	Type of binding
<cr>	

Example 1:

```
LSS2200-8P # show ip dhcp relay
DHCP Relay Configuration
=====
Relay Status      : Disabled
Relay Address     : ---
Relay Interface  : ---
Server Address   : ---
Server Interface  : ---
```

```
LSS2200-8P #
```

Example 2:

```
LSS2200-8P # show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin | Status
=====
| VLAN 1        | 192.168.60.1/24 | Static   | UP
LSS2200-8P # show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin | Status
| VLAN 1        | 192.168.60.1/WN
| VLAN 5        | 10.4.52.62/16   | DHCP     | UP
LSS2200-8P # show ip dhcp server binding server Pool1
DHCP Server Bindings
=====
Error: Pool with the name Pool1 does not exist
LSS2200-8P #
```

Example 3:

```
LSS2200-8P # show ip neighbors
```

IP address	HW address	Device	Router	State
192.168.60.101	38:f3:ab:ef:83:92	VLAN1	No	REACHABLE
fe80::20f:2cff:fe01:9a84	00:0f:2c:01:9a:84	VLAN1	No	STALE
fe80::20f:2cff:fe01:8450	00:0f:2c:01:84:50	VLAN1	No	STALE
fe80::cd00:ab9e:744b:dc5c	84:69:93:94:ba:95	VLAN1	No	STALE
fe80::90d5:d31c:5049:55a	a0:ce:c8:3d:be:38	VLAN1	No	STALE
fe80::4a9e:bdf:fe70:a9cd	48:9e:bd:70:a9:cd	VLAN1	No	STALE
fe80::20f:2cff:fe01:86ac	00:0f:2c:01:86:ac	VLAN1	No	STALE
fe80::914a:da38:486f:b497	c4:63:fb:07:83:c1	VLAN1	No	STALE
fe80::7580:3328:58de:b532	00:e0:db:73:4e:50	VLAN1	No	STALE
fe80::2c0:f2ff:fe6a:9126	00:c0:f2:6a:91:26	VLAN1	No	STALE
fe80::6a2f:86f2:e3d0:9117	c4:63:fb:00:23:95	VLAN1	No	STALE

```
LSS2200-8P #
```

Example 4:

```
LSS2200-8P # show ip dhcp snooping
```

```
DHCP Snooping Configuration
```

```
=====
```

```
Snooping Status Trusted |
```

10GigabitEthernet 1/1	UnTrusted
10Gig	
GigabitEthernet 1/1	UnTrusted
GigabitEthernet 1/3	UnTrusted
GigabitEthernet 1/5	UnTrusted
GigabitEthernet 1/6	UnTrusted
GigabitEthernet 1/7	UnTrusted
GigabitEthernet 1/8	UnTrusted

```
LSS2200-8P #
```

```
Messages: Error: Pool with the name Pool1 does not exist
```

Example 5:

```
LSS2200-8P # show ip dhcp server
DHCP Server Configuration
=====
DHCP Server Name   : TEST
=====
  Authoritative    : Yes
  Listen IP Address : Not Configured
  Max Leases       : 1000
  Lease Time       : 1 hours

  IP Pool Range
  -----
  Range : 192.168.20.10 - 192.168.20.20
  Netmask      : 255.255.255.0
  Lease Time   : 1 days

  Host MAC Bindings
  -----

  Host Client-Id Bindings
  -----

  DHCP Options
  -----

  DHCP Vendor Specific Info
  -----

LSS2200-8P #
```


Command: **show lldp**
 Description: Show LLDP global config information
 Mode: Exec mode
 Parameters: config Display LLDP config
 med Display LLDP-MED Remote devices
 neighbors Displays information about LLDP neighbors
 statistics Display LLDP counters

Example 1:

```
LSS2200-8P # show lldp config
LLDP Configuration
=====
LLDP          : Enabled
TxInterval    : 90
Holdtime      : 360

LLDP Port configurations
=====
+-----+-----+-----+
| Port                | LLDP | MED  |
+-----+-----+-----+
| 10GigabitEthernet 1/1 | Both | Enabled |
| 10GigabitEthernet 1/2 | Both | Enabled |
| GigabitEthernet 1/1  | Both | Enabled |
| GigabitEthernet 1/2  | Both | Disabled |
| GigabitEthernet 1/3  | Both | Enabled |
| GigabitEthernet 1/4  | Both | Enabled |
| GigabitEthernet 1/5  | Both | Enabled |
| GigabitEthernet 1/6  | Both | Enabled |
| GigabitEthernet 1/7  | Both | Enabled |
| GigabitEthernet 1/8  | Both | Enabled |
+-----+-----+-----+

LSS2200-8P # show lldp med
MED Information
=====

MED Capability Codes:
  (NP) Network Policy, (LI) Location Identification
  (PS) Power Source Entity, (PD) Power Device
  (IN) Inventory

Local Interface   : GigabitEthernet 1/2
Port ID           : 38:f3:ab:ef:83:92
Capabilities      : LLDP-MED Capabilities
Device Type       : Endpoint Class 1
S/W revision      : not advertised
H/W revision      : not advertised
Manufacturer      : not advertised
Model             : not advertised
-----
LSS2200-8P #
```

Example 2:

```
LSS2200-8P # show lldp neighbors
```

```
LLDP Neighbor Information
```

```
=====
```

```
Local Interface      : GigabitEthernet 1/2
Chassis ID           : 38:f3:ab:ef:83:92
Port ID              : 38:f3:ab:ef:83:92
Port Description     : None
System Name          : None
System Description   : None
Time-To-Live         : 3601
Time Remaining       : 3439 seconds
System Capabilities  : None
```

```
Local Interface      : GigabitEthernet 1/4
Chassis ID           : ac:cc:8e:ba:f7:c1
Port ID              : ac:cc:8e:ba:f7:c1
Port Description     : eth0
System Name          : axis-accc8ebaf7c1
System Description   : AXIS P1447-LE Network Camera 7.35.2.3
Time-To-Live         : 120
Time Remaining       : 115 seconds
System Capabilities  : Bridge (Switch):Off, WLAN Access Point:Off, Router:Off, Station:On
Management Addresses : 192.168.0.90
LSS2200-8P #
```

Example 4:

```
LSS2200-8P # show lldp statistics
```

```
LLDP Statistics
```

```
=====
```

```
Total frames transmitted : 493100
Total frames received     : 198134
Total entries aged        : 0
Total entries discarded    : 0
```

```
LSS2200-8P #
```

Command: **show log**
 Description: Show system log
 Mode: Exec mode
 Parameters: paged Display log in paged output
 filter Filter for logread (read the ring buffer records and display them chronologically).
 filter Filter for paged logread
 String Filter for logread
 Ctrl C Abort operation

Example:

```
LSS2200-8P # show log
Sep 19 15:08:19 LSS2200-8P daemon.err python3[2007]: result = func(*args, **kwargs)
Sep 19 15:08:19 LSS2200-8P daemon.err python3[2007]: File "/usr/lib/python3.8/site-
packages/eos/modules/percepXion_client.py", line 2278, in _cf_client_main
Sep 19 15:08:19 LSS2200-8P daemon.err python3[2007]: ret_value =
PercepXionClient().main(signal_parent)
Sep 19 15:08:19 LSS2200-8P daemon.err python3[2007]: File "/usr/lib/python3.8/site-
packages/eos/modules/percepXion_client.py", line 2242, in main
Sep 19 15:08:19 LSS2200-8P daemon.err python3[2007]: if self.connect_server(subscribe_msg_Q) is
not SUCCESS:
↓↓↓↓↓↓
Sep 19 15:38:18 LSS2200-8P daemon.info start_umsd[1904]: msdBspRmuTxRx(248) : ERROR : Sequence numb"r
error, got 1, expected 66
Sep 19 15:38:20 LSS2200-8P daemon.err python3[2007]: 2022-09-19 15:38:20,962 WARNING
launcher.launch_child:224 - launcher.MainThread eos.modules.percepXion_client did not signal ready()
Sep 19 15:38:25 LSS2200-8P daemon.info start_umsd[1904]: msdBspRmuTxRx(248) : ERROR : Sequence number
error, got 1, expected 67
<Enter>
(END)Operation aborted
LSS2200-8P # show log filter 2023
May 20 20:48:34 LSS2200-8P daemon.err python3[2430]: 2023-05-20 20:48:34,405 ERROR
percepXion_client.main:2453 - percepXion_client.MainThread *****Connection Failed, will retry after
330*****
May 21 01:25:50 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:25:50,930 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
May 21 01:26:20 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:26:20,944 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
May 21 01:26:50 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:26:50,959 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
May 21 01:27:20 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:27:20,973 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
May 21 01:27:50 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:27:50,985 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
May 21 01:28:21 LSS2200-8P daemon.err python3[2430]: 2023-05-21 01:28:21,015 ERROR
protocol.__init__:461 - lldp.MainThread TLV Type is ZERO, Breaking the while loop
```

Command: **show logging**
 Description: Show Syslog configuration
 Mode: Exec mode
 Parameters: config show syslog configuration

Example:

```
LSS2200-8P # show logging config
Syslog Configuration
=====
Buffer size: 7000 KiB
Output Level: warning
Syslog remote server: 192.168.60.1
Port: 514
Protocol: udp
LSS2200-8P #
```

Command: **show loop-detect**
 Description: Show Loop Detect related information
 Mode: Exec mode
 Parameters: config Show Loop Detect configuration
 status Show Loop Detect status

Example:

```
LSS2200-8P # show loop-detect config
Loop detect configuration
=====
Enable           Disabled
Port shutdown time 75555
Tx period        5
```

Port	Enable	Action
GigabitEthernet 1/1	Disabled	log-shutdown
GigabitEthernet 1/2	Disabled	log-shutdown
GigabitEthernet 1/3	Disabled	log-shutdown
GigabitEthernet 1/4	Disabled	log-shutdown
GigabitEthernet 1/5	Disabled	log-shutdown
GigabitEthernet 1/6	Disabled	log-shutdown
GigabitEthernet 1/7	Disabled	log-shutdown
GigabitEthernet 1/8	Disabled	log-shutdown
10GigabitEthernet 1/1	Disabled	log-shutdown
10GigabitEthernet 1/2	Disabled	log-shutdown

```
LSS2200-8P # show loop-detect status
Loop detect status
=====
```

Name	Loop count	Loop detected	Port shutdown	Last loop time
GigabitEthernet 1/1	0	No	No	-
GigabitEthernet 1/2	0	No	No	-
GigabitEthernet 1/3	0	No	No	-
GigabitEthernet 1/4	0	No	No	-
GigabitEthernet 1/5	0	No	No	-
GigabitEthernet 1/6	0	No	No	-

GigabitEthernet 1/7	0	No	No	-
GigabitEthernet 1/8	0	No	No	-
10GigabitEthernet 1/1	0	No	No	-
10GigabitEthernet 1/2	0	No	No	-

LSS2200-8P #

Command: **show lpm**

Description: Show LPM (Discovery) configuration/ status

Mode: Exec mode

Parameters: config LPM (Discovery) State
 status show LPM (Discovery) status

Example:

```
LSS2200-8P # show lpm config
LPM State
=====
LPM State      : Enabled
LSS2200-8P # show lpm status
LPM status
=====
Status: Running
Queries:
  Valid: 0
  Unknown: 0
Erroneous Packets: 0
Errors: 0
Last Connection: 0.0.0.0/0

LSS2200-8P # show lpm config
LPM State
====State      : Enabled
LSS2200-8P # show lpm status
LPM status
====us: Running
Queries:
  Valid: 0
  Unknown: 0
Erroneous Packets: 0
Errors: 0
Last Connection: 0.0.0.0/0

LSS2200-8P #
```

Command: **show mac**
 Description: Show MAC Address related information
 Mode: Exec mode
 Parameters: address table Display all entries in MAC Table

Example:

```
LSS2200-8P # show mac address-table
MAC Address Table
=====
+-----+-----+-----+
| MAC Address      | VLAN | Ports                |
+-----+-----+-----+
| 00:09:18:4e:20:e9 | 1     | GigabitEthernet 1/3 |
| 00:09:18:4f:bc:3a | 1     | GigabitEthernet 1/1 |
| ac:cc:8e:ba:f7:c1 | 1     | GigabitEthernet 1/4 |
| e0:55:3d:84:a8:96 | 1     | GigabitEthernet 1/6 |
| 38:f3:ab:ef:83:92 | 1     | GigabitEthernet 1/2 |
| 00:c0:f2:96:08:c1 | 1     | CPU                  |
+-----+-----+-----+

LSS2200-8P #
```

Command: **show monitor**
 Description: Show Port Mirroring information
 Mode: Exec mode
 Parameters: config Display MIRROR session information

Example:

```
LSS2200-8P # show monitor config
Port Mirroring
=====
Ingress Mirror Port : Not Configured
Egress Mirror Port  : Not Configured

+-----+-----+-----+
| Port                | Rx  | Tx  |
+-----+-----+-----+
| 10GigabitEthernet 1/1 | No  | No  |
| 10GigabitEthernet 1/2 | No  | No  |
| GigabitEthernet 1/1  | No  | No  |
| GigabitEthernet 1/2  | No  | No  |
| GigabitEthernet 1/3  | No  | No  |
| GigabitEthernet 1/4  | No  | No  |
| GigabitEthernet 1/5  | No  | No  |
| GigabitEthernet 1/6  | No  | No  |
| GigabitEthernet 1/7  | No  | No  |
| GigabitEthernet 1/8  | No  | No  |
+-----+-----+-----+

LSS2200-8P #
```

Command: **show nfc**

Description: Show Near Field Communication information. Near Field Communications [technology](#) lets two NFC-enabled devices communicate when held in close proximity to each other. **Note:** NFC support in the web UI and CLI will be provided in an upcoming release.

Mode: Exec mode

Parameters: data Read NFC tag data
state nfc tag state

Example:

```
LSS2200-8P # show nfc data
NFC Data
=====
No NFC data available
LSS2200-8P # show nfc state
NFC State
=====
NFC State      : Enabled
LSS2200-8P #
```

Command: **show ntp**

Description: Show Network Time Protocol information

Mode: Exec mode

Parameters: status show NTP Status

Example:

```
LSS2200-8P # show ntp status
NTP Configuration
=====
STATUS: Enabled

Servers
=====
NAME      | ADDRESS
pool.ntp.org | pool.ntp.org
LSS2200-8P #
```

Command: **show percepixon**

Description: Show Percepixon client configuration/ status. Lantronix Percepixon™ software can provision remotely deployed Lantronix devices without user intervention. Added at FW v 2.0.0.0R4. See the Lantronix [Percepixon webpage](#) for more information.

Mode: Exec mode

Parameters: config Show Percepixon client configuration
status Show Percepixon client status

Example 1:

```
LSS2200-8P # show percepixon status
Percepixon client status
=====
Status: Started
Device Id: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Device Key: <Configured>
Last Status Update: <Not Available>
Last Content Check: <Not Available>
Available Updates:
  Firmware: <Not Available>
  Configuration: <Not Available>

LSS2200-8P
```

Example 2:

```
LSS2200-8P # show percepixon config
Percepixon client configuration
=====
State: Enabled
Device Name: LSS2200-8P-2QB9
Device Description: Lantronix LSS2200-8P
Status Update Interval: 1
Content Check Interval: 24
Apply Firmware Updates: Enabled
Apply Configuration Updates: always
Remote Access Local Port: <Random>
Active Connection: Connection:1

Connection:1
=====
Host: api.percepixon.ai
Connect to: Cloud
Port: 443
Secure Port: Enabled
Validate Certificates: Enabled
Local Port: <Random>
MQTT Security: Enabled
MQTT Local Port: <Random>
Use Proxy: Disabled
Proxy Type: SOCKS5
Proxy Host:
Proxy Port: 80
Proxy Username:
Proxy Password:

Connection:2
```



```

=====
Host:  api.percepixon.ai
Connect to:  Cloud
Port:  443
Secure Port:  Enabled
Validate Certificates:  Enabled
Local Port:  <Random>
MQTT Security:  Enabled
MQTT Local Port:  <Random>
Use Proxy:  Disabled
Proxy Type:  SOCKS5
Proxy Host:
Proxy Port:  80
Proxy Username:
Proxy Password:

```

LSS2200-8P

Command: **show poe**

Description: Show Power over Ethernet related information.

Mode: Exec mode

Parameters:

- apr-status Display PoE APR status per port
- config Display PoE configuration for all ports
- global Show global PoE settings
- pse-status Display status information for the PSE controller
- schedule Display PoE Schedule Profile configuration.
- schedule-status Display PoE Schedule status per port
- status Display PoE status for all ports

<cr>

Example 1:

```
LSS2200-8P # show poe apr-status
```

```
PoE APR Status
```

```

=====
+-----+-----+
| Port                | APR Status |
+-----+-----+
| GigabitEthernet 1/1 | Off       |
| GigabitEthernet 1/2 | Off       |
| GigabitEthernet 1/3 | Off       |
| GigabitEthernet 1/4 | Off       |
| GigabitEthernet 1/5 | Off       |
| GigabitEthernet 1/6 | Off       |
| GigabitEthernet 1/7 | Off       |
| GigabitEthernet 1/8 | Off       |
+-----+-----+

```

LSS2200-8P #

Example 2:

```
LSS2200-8P # show poe config
```

```
PoE Configuration
```

```
=====
```

Port	Enabled	Force	Priority	Oper-mode	Max Power	Schedule Id
GigabitEthernet 1/1	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/2	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/3	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/4	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/5	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/6	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/7	Enabled	Disabled	low	IEEE-802.3bt	0.0	
GigabitEthernet 1/8	Enabled	Disabled	low	IEEE-802.3bt	0.0	

```
PoE APR Configuration
```

```
=====
```

Port	APR Enabled	Failure	Interval	IP Address	Retries
GigabitEthernet 1/1	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/2	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/3	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/4	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/5	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/6	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/7	Disabled	ResetLogTrap	10	0.0.0.0	3
GigabitEthernet 1/8	Disabled	ResetLogTrap	10	0.0.0.0	3

```
LSS2200-8P #
```

Example 3:

```
LSS2200-8P # show poe global
```

```
PoE Global Config:
```

```
=====
```

```
Fast PoE: Enabled
```

```
PS1 Power (W): 1600
```

```
PS2 Power (W): 0
```

Example 4:

```
LSS2200-8P # show poe pse-status
```

```
PoE PSE Controller Status
```

```
=====
```

```
PS1 Status: Off
```

```
PS2 Status: Powered
```

```
PSE Power Allocated: 62.200001
```

```
PSE Power Available: 645.000000
```

```
PSE Firmware Version: 1.3.0B9
```

```
LSS2200-8P #
```

Example 5:

```
LSS2200-8P # show poe schedule
PoE Schedule List
=====
PoE Schedule Name : PoE-ResetSunday
=====
+-----+-----+-----+-----+
| Day | Hour | Minute | Action |
+-----+-----+-----+-----+
| sun | 1    | 30    | reset  |
+-----+-----+-----+-----+

LSS2200-8P # show poe schedule-status
PoE Schedule Status
=====
+-----+-----+-----+-----+
| Port                | Schedule Status |
+-----+-----+-----+-----+
| GigabitEthernet 1/1 | Off             |
| GigabitEthernet 1/2 | Off             |
| GigabitEthernet 1/3 | Off             |
| GigabitEthernet 1/4 | Off             |
| GigabitEthernet 1/5 | Off             |
| GigabitEthernet 1/6 | Off             |
| GigabitEthernet 1/7 | Off             |
| GigabitEthernet 1/8 | Off             |
+-----+-----+-----+-----+

LSS2200-8P # show poe global
PoE Global Config:
=====
Fast PoE:          Disabled
PS1 Power (W): 0
PS2 Power (W): 0
LSS2200-8P #
```

Example 6:

```
LSS2200-8P # show poe status
PoE Status
=====
+-----+-----+-----+-----+-----+-----+
| Port                | PD-Class | Power Used (W) | Current Used (mA) | PD Voltage (V) | Temperature (C) |
+-----+-----+-----+-----+-----+-----+
| GigabitEthernet 1/1 | 2        | 1.8            | 33.0              | 56.2           | 36.25           |
| GigabitEthernet 1/2 | -        | 0.1            | 3.0               | 56.2           | 36.25           |
| GigabitEthernet 1/3 | 2        | 1.9            | 34.0              | 56.26          | 35.0            |
| GigabitEthernet 1/4 | 3        | 4.9            | 88.0              | 56.33          | 33.75           |
| GigabitEthernet 1/5 | -        | 0.0            | 0.0               | 56.01          | 35.0            |
| GigabitEthernet 1/6 | 4        | 5.9            | 105.0             | 56.39          | 33.75           |
| GigabitEthernet 1/7 | -        | 0.0            | 0.0               | 0.0            | 33.75           |
| GigabitEthernet 1/8 | -        | 0.0            | 0.0               | 0.0            | 33.75           |
+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+
| Port                | Power Requested (W) | Power Allocated (W) | Status |
+-----+-----+-----+-----+-----+-----+
| GigabitEthernet 1/1 | 0.0                | 15.0                | PD-Detected-4-Pair-IEEE-802.3bt-Single-Signature |
| GigabitEthernet 1/2 | 0.0                | 0.0                 | PD-Forced |
| GigabitEthernet 1/3 | 0.0                | 15.0                | PD-Detected-4-Pair-IEEE-802.3bt-Single-Signature |
| GigabitEthernet 1/4 | 0.0                | 15.0                | PD-Detected-4-Pair-IEEE-802.3bt-Single-Signature |
| GigabitEthernet 1/5 | 0.0                | 0.0                 | PD-Forced |
| GigabitEthernet 1/6 | 0.0                | 60.0                | PD-Detected-4-Pair-IEEE-802.3bt-Single-Signature |
+-----+-----+-----+-----+-----+-----+
```

GigabitEthernet 1/7	0.0	0.0	No-PD-Detected
GigabitEthernet 1/8	0.0	0.0	No-PD-Detected

-----+

LSS2200-8P #

The PoE PSE firmware supports these port status values:

- Disabled-PHO - PoE Hardware Override is active (DIP switch setting). **Note:** PHO is not currently an available feature and status should not be changed until fully supported
- Port-Off - PoE is configured as disabled for the port or for the switch as a whole.
- No-PD-Detected.
- unknown.
- PD-Detected-2-Pair-IEEE-802.3bt-Single-Signature.
- PD-Detected-4-Pair-IEEE-802.3bt-Sign-ature.
- PD-Forced - PoE is configured to deliver power in Forced mode (ignoring PD classification). In Forced mode the switch port will power up the linked PD without an- detect/negotiate mechanism so it is important that you know what the PD is capable of accepting to prevent damage. In Forced mode the PD is limited to the Operation Mode setting. **Note:** you must set PoE Mode t- Disabled before setting PoE Mode to Forced.

The PoE Auto Power Reset status can include:

- **Off** : PoE APR is disabled.
- **On** : PoE APR is enabled.
- **Monitoring - Duration: 0s Consecutive Failures: 0 Failure Events: 0** : PoE APR monitoring has begun.
- **Discovery Phase 1 - Duration: 0s** : PoE discovery phase 1 has begun.
- **Port Disabled - APR Failure - Discovery failed after 20 minutes, please verify configuration:** the PoE APR discovery failed after 20 minutes; check the port config.
- **APR Failure - Discovery failed after 20 -minutes, please verify configuration:** the PoE APR discovery failed after 20 minutes; check the APR config.

Command: **show pvlan**

Description: Display Port VLAN configuration

Mode: Exec mode

Parameters:

interface Display Interface PVLAN configuration

The switch port type port type (GigabitEthernet/10GigabitEthernet)

GigabitEthernet The switch port number, Tab to complete–list port-number (1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8)

10GigabitEthernet 1/1 1/2

Example:

```
LSS2200-8P # show pvlan interface GigabitEthernet 1/2
```

```
Port                PVLANS
=====
GigabitEthernet 1/2      1
```

```
LSS2200-8P # show pvlan
```

```
PVLAN              Ports
=====
    1              GigabitEthernet 1/1
                  GigabitEthernet 1/2
                  GigabitEthernet 1/3
                  GigabitEthernet 1/4
                  GigabitEthernet 1/5
                  GigabitEthernet 1/6
                  GigabitEthernet 1/7
                  GigabitEthernet 1/8
                  10GigabitEthernet 1/1
                  10GigabitEthernet 1/2
    2              GigabitEthernet 1/1
    3              GigabitEthernet 1/2
    4              GigabitEthernet 1/3
    5              GigabitEthernet 1/3
    6              GigabitEthernet 1/3
    7              GigabitEthernet 1/4
    8              GigabitEthernet 1/4
```

```
LSS2200-8P #
```

Command: **show port-security**
 Description: Show port-security related information
 Mode: Exec mode
 Parameters: config Show Port security configuration
 status Show Port security status

Example:

```
LSS2200-8P # show port-security config
```

```
Port Security Configuration
```

```
=====
```

```
Aging Configuration
```

```
=====
```

```
Aging enabled : True
```

```
Aging Time : 300
```

Port	Enabled	Maximum	Violation
10GigabitEthernet 1/1	Disabled	1023	protect
10GigabitEthernet 1/2	Disabled	1023	protect
GigabitEthernet 1/1	Enabled	1023	protect
GigabitEthernet 1/2	Enabled	1023	protect
GigabitEthernet 1/3	Enabled	1023	shutdown
GigabitEthernet 1/4	Disabled	1023	shutdown
GigabitEthernet 1/5	Enabled	1023	protect
GigabitEthernet 1/6	Enabled	1023	protect
GigabitEthernet 1/7	Disabled	1023	protect
GigabitEthernet 1/8	Disabled	1023	protect

```
LSS2200-8P # show port-security status
```

```
Port Security Status
```

```
=====
```

Port	Learn Count	State
10GigabitEthernet 1/1	0	disabled
10GigabitEthernet 1/2	0	disabled
GigabitEthernet 1/1	1	limit-not-reached
GigabitEthernet 1/2	2	limit-not-reached
GigabitEthernet 1/3	0	limit-not-reached
GigabitEthernet 1/4	0	disabled
GigabitEthernet 1/5	0	limit-not-reached
GigabitEthernet 1/6	1	limit-not-reached
GigabitEthernet 1/7	0	disabled
GigabitEthernet 1/8	0	disabled

```
LSS2200-8P #
```

Command: **show qos**
 Description: Show QoS related information
 Mode: Exec mode
 Parameters: config Show QoS Port configuration

Example:

```
LSS2200-8P # show qos config
```

```
LSS2200-8P # show qos config
```

```
QoS Global Configuration
```

```
=====
```

```
Weight distribution : default
```

```
Queue (0-7) weights : 11 12 16 1 1 1 1 1
```

```
QoS Port Configuration
```

```
=====
```

Port	Egress-Limit (Kbps)	Ingress-Limit (Kbps)	Scheduling Method
GigabitEthernet 1/1			WRR
GigabitEthernet 1/2			SP
GigabitEthernet 1/3			WRR
GigabitEthernet 1/4	Disabled	Disabled	WRR
GigabitEthernet 1/5			SP
GigabitEthernet 1/6	Disabled		WRR
GigabitEthernet 1/7	Disabled	Disabled	WRR
GigabitEthernet 1/8	Disabled	Disabled	WRR
10GigabitEthernet 1/1	Disabled	Disabled	WRR
10GigabitEthernet 1/2	Disabled	Disabled	WRR

```
QoS Ingress Configuration
```

```
=====
```

Port	Priority Mode	Queue Priority	Frame Priority
GigabitEthernet 1/1	vlan-ip-port	1	4
GigabitEthernet 1/2	ip-port	2	5
GigabitEthernet 1/3	vlan-ip-port	3	3
GigabitEthernet 1/4	vlan-ip-port	4	2
GigabitEthernet 1/5	vlan-port	0	1
GigabitEthernet 1/6	port	0	0
GigabitEthernet 1/7	vlan-ip-port	0	0
GigabitEthernet 1/8	vlan-ip-port	0	0
10GigabitEthernet 1/1	vlan-ip-port	0	0
10GigabitEthernet 1/2	vlan-ip-port	0	0

```
Mapping and Queue Configuration
```

```
=====
```

Port	Vlan Priority	Egress Queue
GigabitEthernet 1/1	0	0
	1	1
	2	2
	3	3
	4	4
	5	5

	6	6	
	7	7	
GigabitEthernet 1/2	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	
	7	7	



GigabitEthernet 1/7	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	
GigabitEthernet 1/8	7	7	
	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	
10GigabitEthernet 1/1	7	7	
	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	
10GigabitEthernet 1/2	7	7	
	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	
	7	7	

LSS2200-8P #

Command: **show reload**
 Description: Show information about any pending reload
 Mode: Exec mode
 Parameters: <cr>
 Example:

```
LSS2200-8P # show reload
No future reload has been requested
LSS2200-8P # show reload
Reload was requested at 2023-06-10 03:42:00
Remaining: 20 days, 0:33:59
LSS2200-8P #
```

Command: **show rest-server**
 Description: Show REST Server related information
 Mode: Exec mode
 Parameters: config show REST API server configuration
 Example:

```
LSS2200-8P # show rest-server config
REST API Server Configuration
=====
REST Server Enabled: Enabled
REST Server Port: 8000
```

Command: **show route**
 Description: Show route related information
 Mode: Exec mode
 Parameters: config Display all configuration of routes
 status Display all routes in Routing Table

Example:

```
LSS2200-8P # show route config
Configured Routes
=====
+-----+-----+-----+-----+
| Route-name | Target/Netmask | Interface | Gateway |
+-----+-----+-----+-----+
+-----+-----+-----+-----+

LSS2200-8P # show route status
Routing Table
=====
+-----+-----+-----+-----+-----+
| Target/Netmask | Gateway | Interface | MTU | Metric |
+-----+-----+-----+-----+-----+
| 192.168.60.0/24 | 0.0.0.0 | eth1.1 | 1500 | 0 |
+-----+-----+-----+-----+-----+

LSS2200-8P #
```

Command: [show running-config](#)

Description: Show Running Config in CLI format. **Note** that the “no poe” command is not included in the show running-config output if either PoE mode is enabled or if PoE Force mode is enabled. Disable poe before setting poe forced. Settings that are at default values are generally omitted. You can include them using the "all-defaults" option parameter.

Mode: Exec mode

Parameters: all-defaults Include most/all defaults (all-defaults)
 heading Include date and version heading (heading)

Example 1:

```
LSS2200-8P # show running-config

# RUNNING Config
# =====

system name LSS2200-8P

percepXion
  device_name LSS2200-8P-2QB9
  device_description "Lantronix LSS2200-8P"

ntp
ntp server name pool.ntp.org address pool.ntp.org

interface vlan 100

lldp
lldp txinterval 90

loop-detect tx 5

poe schedule "PoE-ResetSunday" day sun hour 0 min 0 action on

logging buffer-size 7000
logging host 192.168.60.1 transport udp port 514

admin
  username admin password $5$6.NEOZRYfPR0glkK$VZtz4moqwdCvoh06bRwnYyw0Bxhqv4VSQMGwo5HJ4eB group admin
  username JeffS password $5$b0NkgeESq2St/wtT$ej3qtq.5PPqa8iDigQuC7PTAr3fBvR7ruPjEFQVOYH9 group readonly

interface GigabitEthernet 1/1
  pvlan 1,2

  lldp both
  lldp-med

  port-security

  poe priority critical
  poe maxpower 30.0
  poe schedule "PoE-ResetSunday"

  qos egress limit
  qos ingress limit
  qos ingress default queue 1 frame 4

interface GigabitEthernet 1/2
  pvlan 1,3

  lldp both

  port-security

  poe force
  poe priority high
```

```
poe maxpower 40.0
poe schedule "PoE-ResetSunday"

qos egress limit
qos ingress limit
qos schedule SP
qos ingress priority-mode ip-port
qos ingress default queue 2 frame 5

interface GigabitEthernet 1/3
  pvlan 1,4,5,6

  lldp both
  lldp-med

  port-security
  port-security violation-mode shutdown

  poe maxpower 30.0
  poe schedule "PoE-ResetSunday"

  qos egress limit
  qos ingress limit
  qos ingress default queue 3 frame 3

interface GigabitEthernet 1/4
  pvlan 1,7,8

  lldp both
  lldp-med

  port-security violation-mode shutdown

  poe opermode IEEE-802.3at
  poe maxpower 20.0

  qos ingress default queue 4 frame 2

interface GigabitEthernet 1/5
  lldp both
  lldp-med

  port-security

  poe force
  poe opermode IEEE-802.3af
  poe maxpower 10.0

  qos egress limit
  qos ingress limit
  qos schedule SP
  qos ingress priority-mode vlan-port
  qos ingress default queue 0 frame 1

interface GigabitEthernet 1/6
  lldp both
  lldp-med

  port-security

  qos ingress limit
  qos ingress priority-mode port

interface GigabitEthernet 1/7
  lldp both
  lldp-med

interface GigabitEthernet 1/8
  lldp both
```

```
lldp-med

interface 10GigabitEthernet 1/1
lldp both
lldp-med

interface 10GigabitEthernet 1/2
lldp both
lldp-med
```

LSS2200-8P #

Example 2:

```
LSS2200-8P # show running-config all-defaults heading
↓↓↓↓
↓↓↓↓
LSS2200-8P # show running-config all-defaults heading
# RUNNING Config : V 2.0.0.0R4 ( 23:12:48 25 Sept, 2023 )

system name LSS2200-8P

clock timezone UTC

ble broadcast

percepXion
state
device_name LSS2200-8P-2QB9
device_description "Lantronix LSS2200-8P"
status_update_interval 1
content_check_interval 24
apply_firmware_updates
apply_configuration_updates always
remote_access_local_port 0
active_connection Connection:1
connection connection:1
host api.percepXion.ai
connect_to Cloud
port 443
secure_port
validate_certificates
local_port 0
mqtt_security
connection connection:2
host api.percepXion.ai
connect_to Cloud
port 443
secure_port
validate_certificates
local_port 0
mqtt_security

lpm

nfc

no telnet server

ntp
ntp server name pool.ntp.org address pool.ntp.org

rest-server

interface vlan 1
no ignore peer-dns-server
ip address 192.168.60.1 netmask 255.255.255.0
```

```
interface vlan 100
  no ignore peer-dns-server

lldp
lldp txinterval 90
lldp holdtime 4

no ip dhcp snooping

no loop-detect
loop-detect tx 5

aging-time 300

system DigitalIO 1
  input snmp-trap disable
  input snmp-action low-to-high
system DigitalIO 2
  input snmp-trap disable
  input snmp-action low-to-high

no poe fast_mode
poe pse ps1 0
poe pse ps2 0

poe schedule "PoE-ResetSunday" day sun hour 0 min 0 action on

logging buffer-size 7000
logging severity warning
logging host 192.168.60.1 transport udp port 514

no snmp
snmp community public

qos weights default
↓↓↓↓
↓↓↓↓
no loop-detect
loop-detect action all

LSS2200-8P #
```

Command: **show snmp**
 Description: Show SNMP related information
 Mode: Exec mode
 Parameters: config show SNMP configuration
 Example:

```
LSS2200-8P # show snmp config
SNMP global Configuration
=====
Enable: Enabled

SNMP v2c Configuration
=====
| Community | Access | Host/Network | Restricted OID |
=====
| public | read-only | | |

SNMP v3 User Configuration
=====
| User name | Security level | Auth Protocol | Priv Protocol | View name |
=====
| MaryK | authNoPriv | MD5 | | |

SNMP v3 View Configuration
=====
| View name | Type | OID |
=====
LSS2200-8P #
```

Command: **show snmptrap**
 Description: Show SNMP trap related information
 Mode: Exec mode
 Parameters config trap configuration
 Example:

```
LSS2200-8P # show snmptrap config
SNMP Trap Configuration
=====
Authentication Trap: Enabled
Link Up/Link Down Trap: Enabled
Cold Start Trap: Enabled
Trap Server: 192.168.70.99
LSS2200-8P #
```

Command: **show spanning-tree**
 Description: Show spanning tree related information
 Mode: Exec mode
 Parameters: config Show spanning tree configuration
 statistics Show spanning tree statistics
 status Show spanning tree status

Example 1:

```
LSS2200-8P # show spanning-tree config
```

```
Spanning tree configuration
=====
```

```
Bridge configuration:
```

```
Enabled          : Disabled
Protocol version : RSTP
Priority          : 32768
Forward delay    : 15
Maximum age      : 20
Transmit hold count : 6
```

```
Port configurations:
```

Name	Auto cost	Admin cost	Priority	Auto edge	Admin edge	P2P	Role	TCN prop
GigabitEthernet 1/1	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/2	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/3	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/4	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/5	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/6	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/7	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
GigabitEthernet 1/8	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
10GigabitEthernet 1/1	Enabled	-	128	Enabled	False	auto	Allowed	Allowed
10GigabitEthernet 1/2	Enabled	-	128	Enabled	False	auto	Allowed	Allowed

```
LSS2200-8P #
```

Example 2:

```
LSS2200-8P # show spanning-tree statistics
```

```
Spanning tree statistics
=====
```

```
Bridge statistics:
```

```
Topology changes : 0
```

```
Port BPDU statistics
```

Name	Tx STP	Tx TCN	Tx RST	Tx MST	Tx SPT	Rx STP	Rx TCN	Rx RST	Rx MST	Rx SPT
GigabitEthernet 1/1	0	0	0	0	0	0	0	0	0	0
GigabitEthernet 1/2	0	0	0	0	0	0	0	0	0	0
GigabitEthernet 1/3	0	0	0	0	0	0	0	0	0	0

```

| GigabitEthernet 1/4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| GigabitEthernet 1/5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| GigabitEthernet 1/6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| GigabitEthernet 1/7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| GigabitEthernet 1/8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| 10GigabitEthernet 1/1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
| 10GigabitEthernet 1/2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+-----+-----+
LSS2200-8P #

```

Example 3:

```

LSS2200-8P # show spanning-tree status

Spanning tree status
=====

Bridge status:

Running          : No

Port status:
+-----+-----+-----+-----+-----+-----+-----+-----+
| Name                | Id | Role | State   | Path cost | Edge | P2P | Up time |
+-----+-----+-----+-----+-----+-----+-----+-----+
| GigabitEthernet 1/1 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/2 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/3 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/4 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/5 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/6 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/7 | -  | -    | forwarding | -         | -    | -   | -       |
| GigabitEthernet 1/8 | -  | -    | forwarding | -         | -    | -   | -       |
| 10GigabitEthernet 1/1 | -  | -    | forwarding | -         | -    | -   | -       |
| 10GigabitEthernet 1/2 | -  | -    | forwarding | -         | -    | -   | -       |
+-----+-----+-----+-----+-----+-----+-----+-----+

LSS2200-8P #

```


Command: **show startup-config**

Description: Show Startup Config in CLI format. Settings that are at default values are generally omitted. You can include them using the "all-defaults" option parameter.

Mode: Exec mode

Parameters: all-defaults Include most/all defaults (all-defaults)
heading Include date and version heading (heading)

Example:

```
LSS2200-8P # show startup-config
# STARTUP Config
# =====

system name LSS2200-8P

no ble broadcast

percepXion
  device_name SET_BY_MO_WATCHER
  device_description "SET_BY_MO_WATCHER"

ntp
ntp server name pool.ntp.org address pool.ntp.org

admin
  username admin password $5$8H6156VxKCqr9JQ7$xMX4ke1n5Baqtq18p92TbXvAftfmKeLWk/z8b1d2JvB
  group admin

LSS2200-8P #
```

Command: **show ssh-server**

Description: Show information about the SSH service. Added at FW v 2.0.0.0R4.

Mode: Exec mode

Parameters:

ssh-server	Show information about the SSH service
Arguments	ignored comment text
config	Show configuration settings for the SSH service
host-keys	Show host keys for the SSH service
status	Show status information for the SSH service

Example:

```
LSS2200-8P # show ssh-server config
```

```
SSH Server:           Enabled
Login Wait Time (sec): 120
Max Authentication Tries: 10
Max Startups:         10
```

```
LSS2200-8P # show ssh-server host-keys
```

```
Local Host Keys:
```

```
RSA:
```

```
AAAAB3NzaC1yc2EAAAADAQABAAQGDcIiyPNyI2z9u0Kw2QH9+iESiTRYhaclzQKaf1glUgyCk9ksSLuoRkxSLL0dA
gXxvh7XmFbEDRazTttIP2Rd0OC0qR0yuaMq1Ji21bRH4DKYBt5kzhM54JZe5YUvUACWw84dlibIuqPLCvLFw4Eue9t
6DBUBNF2rGSD10zivje1dh/VUhexDLfQ/tfNKmJhkGUERm2noSU9GVmp+iRNHsBqI14RNTY+sxSMo82NOxMVMDmMn2+
+FX/q0Nyq/1uFyAxSfXk3iDghrA9u8fKL8tUWubh4qOUY/01Uk2aAXHwIcDRF0XDPGDtFZRHOFZSECWxTXIi15GI99I
qQpEJHziHowZh61HviGy+C073YkKSXwChqapin3gx91sjHAGYECrJvpx49ydbKEcWnRjsTJSLKDvI2L9CF1gd2V3uEZ
XW0vi/v/PSDIwlj1Ui0pqSN2m7NG+NObEvTgPAXqJgzNfUlgkFPSZX5z/FXksuSnGGcHxe9ax5z5GxDHNG119p8M=
```

```
ED25519: AAAAC3NzaC1lZDI1NTE5AAAAIAKSS4x6vsysQ+keJTjxME7LwNFzRQo/P3Y9QF28/AmF
```

```
LSS2200-8P # show ssh-server status
```

```
SSH Server Status:  running
SSH Version: 2
```

```
LSS2200-8P #
```

Command: **show system**
 Description: Show system information
 Mode: Exec mode
 Parameters: config Show system information
 cpu Show CPU usage
 DigitalIO System Digital IO Information
 memory Show Memory usage
 power Show system power usage
 temperature Show CPU system temperature
 config System Digital IO Information
 status System Digital IO Information
 <cr>

Example 1:

```
LSS2200-8P # show system config
System Name:      LSS2200-8P
Contact:
Location:         Experience Center
LSS2200-8P # show system cpu
current: 22.77%
 5 mins : 19.21%
15 mins : 21.90%
LSS2200-8P # show system DigitalIO config
System Digital IO Configuration
=====
DigitalIO 1:
  Name           :
  IO Type        : input
  IO active      :
  SNMP trap      : Disabled
  SNMP input action : low-to-high
DigitalIO 2:
  Name           :
  IO Type        : input
  IO active      :
  SNMP trap      : Disabled
  SNMP input action : low-to-high
LSS2200-8P # show system DigitalIO status
System Digital IO Status
=====
DigitalIO 1:
  IO Type        : input
  State          : input
  State          : Low
LSS2200-8P #
LSS2200-8P # show system memory
Total           : 912.875MB
Available      : 400.727MB [43.90%]
```

Example 2:

```
LSS2200-8P # show system power
System Power Status
=====
Voltage:      56.19V
Current:      0.36A
Power:        20.23W
LSS2200-8P # show system temperature
CPU Temperature: 48.28C
LSS2200-8P #
```

Command: **show telnet**
Description: Show telnet related information
Mode: Exec mode
Parameters: server Show telnet server configuration
<cr>

Example:

```
LSS2200-8P # show telnet server ?
Telnet service enabled
LSS2200-8P # show telnet server
Telnet service enabled
Warning: Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission
of Sensitive Information. Setup and verify SSH, then disable Telnet.
LSS2200-8P #
```

Command: **show uptime**
Description: Show system uptime
Mode: Exec mode
Parameters:

Example:

```
LSS2200-8P # show uptime
System Uptime
=====
3 days, 1:03:36
LSS2200-8P #
```

Command: **show users**
 Description: Show user accounts
 Mode: Exec mode

Parameters:

Example:

```
LSS2200-8P # show users
```

```
Local Users:
```

Name	Group	Status
admin	admin	Enabled
BobB	config	Enabled
PLM1	config	Enabled
TechSuppt	readonly	Enabled

```
LSS2200-8P #
```

Command: **show vct**
 Description: Display most recent Virtual Cable Test results for the given port.
 Mode: Exec mode

Parameters:

all show virtual cable test diagnostics for all ports
 The 1G switch port type port type (GigabitEthernet)
 The switch port number, Tab to complete/list: 1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8

Example:

```
LSS2200-8P # show vct GigabitEthernet 1/1
```

```
Cable diagnostics for port : GigabitEthernet 1/1 (Timestamp: 2023-05-21 20:13:22.488883)
```

pair	Status	Length (meters)
A	Pair Ok	-
B	Pair Ok	-
C	Pair Short	0
D	Pair Short	0

```
LSS2200-8P # show vct GigabitEthernet 1/2
```

```
Cable diagnostics for port : GigabitEthernet 1/2 (Timestamp: 2023-05-21 20:13:44.004023)
```

pair	Status	Length (meters)
A	Pair Ok	-
B	Pair Ok	-
C	Pair Ok	-
D	Pair Ok	-

```
LSS2200-8P #
```

Messages: *Interface GigabitEthernet 1/9 does not valid for virtual cable test*

Command: **show version**
 Description: Show version information.
 Mode: Exec mode

Parameters:

Example:

```
LSS2200-8P # show version
Version Information
=====
Model:          LSS2200-8P
Firmware Version: 2.1.0.0R2
Hardware Rev:   EAB
MAC Address:    00:C0:F2:96:2A:A0
Serial Number:  00C0F2962AA0
LSS2200-8P #
```

Command: **show vlan**
 Description: Show VLAN related information
 Mode: Exec mode
 Parameters: config Display VLAN configuration
 Arguments ignored comment text

Example:

```
LSS2200-8P # show vlan config
Port                Mode   PVID   Allowed VLANs
=====
GigabitEthernet 1/18
GigabitEthernet 1/2   access   4   4
GigabitEthernet 1/3   trunk    2   1,10
GigabitEthernet 1/4   trunk    3   1,2,11-15
GigabitEthernet 1/5   access  4000 4000
GigabitEthernet 1/6   access   1   1
GigabitEthernet 1/7   access   1   1
GigabitEthernet 1/8   access   1   1
10GigabitEthernet 1/1 access   1   1
10GigabitEthernet 1/2 access   1   1
LSS2200-8P #
```

Config Mode Commands

In Config mode perform config commands to set parameters. To enter Config mode from Exec mode:

```
LSS2200-8P # configure terminal
LSS2200-8P (config)#
```

To negate a command (reverse its setting), prefix the command with "no". For example, "no telnet" disables the Telnet protocol, and "no lldp rx" disables Link Layer Discovery Protocol in the receive direction on the port identified by the current Interface Mode.

To run an Exec Mode (default view) command while in Config Mode, prefix the command with "do". For example, "do show running-config".

To display available Config mode commands, enter a ? (question mark) and hit Enter.

```
lss2200-8p (config)# ?
  admin          Security administration view
  aging-time     Enable MAC address aging
  alarm          Enable alarm
  ble            BLE Commands
  clock          Configure time settings
  do             To run exec commands in config mode
  end            Go back to EXEC View
  exec-timeout   Set the inactivity timeout for automatic logout
  exit           Exit from configure mode
  interface      Select an interface to configure
  ip             IP Configuration
  lldp           Enable LLDP
  logging        Configure Syslog
  loop-detect    Loop Detection Enabled
  lpm            Enable LPM (Discovery) Tool
  monitor        Monitoring different system events
  nfc            Enable NFC
  no             Negate a command or set its defaults
  ntp            enable ntp
  percepxion     Configure Percepxion client settings
  poe            Power over Ethernet configuration settings
  qos            Configure QoS Parameters
  rest-server    Enable REST API server
  route          Create Static route. Creates network routes.
  snmp           enable SNMP access
  snmptrap       Configure SNMP Traps
  spanning-tree  Enable spanning tree
  ssh-server     Enable and start the SSH server.
  start          Start Virtual Cable Test
  system         configure system settings
  telnet         Configure the Telnet server
lss2200-8p (config)#
```

Command: **admin**

Description: Security administration view; enter Config Admin mode. See the [Config Admin Mode Commands](#) on page 97.

Mode: Config mode

Parameters:

Example:

```
lss2200-8p (config)# admin
lss2200-8p (config-admin)#
```

Command: **aging-time**

Description: Enable MAC address aging

Mode: Config mode

Parameters: MAC address aging time in seconds Set MAC address aging time (4..956)

Example:

```
lss2200-8p (config)# aging-time 300
lss2200-8p (config)#
```

Command: **alarm**

Description: Enable the specified alarm.

Mode: Config mode

Parameters: alarm The name of the alarm, Tab to complete/list Alarm Name

Alarm Categories:

10GigabitEthernet-1/1-Temperature-high-alarm	10GigabitEthernet-1/1-Temperature-low-alarm
10GigabitEthernet-1/1-Temperature-high-warning	10GigabitEthernet-1/1-Temperature-low-warning
10GigabitEthernet-1/1-Voltage-high-alarm	10GigabitEthernet-1/1-Voltage-low-alarm
10GigabitEthernet-1/1-Voltage-high-warning	10GigabitEthernet-1/1-Voltage-low-warning
10GigabitEthernet-1/1-Bias-high-alarm	10GigabitEthernet-1/1-Bias-low-alarm
10GigabitEthernet-1/1-Bias-high-warning	10GigabitEthernet-1/1-Bias-low-warning
10GigabitEthernet-1/1-Tx-Power-high-alarm	10GigabitEthernet-1/1-Tx-Power-low-alarm
10GigabitEthernet-1/1-Tx-Power-high-warning	10GigabitEthernet-1/1-Tx-Power-low-warning
10GigabitEthernet-1/1-Rx-Power-high-alarm	10GigabitEthernet-1/1-Rx-Power-low-alarm
10GigabitEthernet-1/1-Rx-Power-high-warning	10GigabitEthernet-1/1-Rx-Power-low-warning
10GigabitEthernet-1/2-Temperature-high-alarm	10GigabitEthernet-1/2-Temperature-low-alarm
10GigabitEthernet-1/2-Temperature-high-warning	10GigabitEthernet-1/2-Temperature-low-warning
10GigabitEthernet-1/2-Voltage-high-alarm	10GigabitEthernet-1/2-Voltage-low-alarm
10GigabitEthernet-1/2-Voltage-high-warning	10GigabitEthernet-1/2-Voltage-low-warning
10GigabitEthernet-1/2-Bias-high-alarm	10GigabitEthernet-1/2-Bias-low-alarm
10GigabitEthernet-1/2-Bias-high-warning	10GigabitEthernet-1/2-Bias-low-warning
10GigabitEthernet-1/2-Tx-Power-high-alarm	10GigabitEthernet-1/2-Tx-Power-low-alarm
10GigabitEthernet-1/2-Tx-Power-high-warning	10GigabitEthernet-1/2-Tx-Power-low-warning
10GigabitEthernet-1/2-Rx-Power-high-alarm	10GigabitEthernet-1/2-Rx-Power-low-alarm
10GigabitEthernet-1/2-Rx-Power-high-warning	10GigabitEthernet-1/2-Rx-Power-low-warning
loop-shutdown-GigabitEthernet-1/1	loop-shutdown-GigabitEthernet-1/2
loop-shutdown-GigabitEthernet-1/3	loop-shutdown-GigabitEthernet-1/4
loop-shutdown-GigabitEthernet-1/5	loop-shutdown-GigabitEthernet-1/6
loop-shutdown-GigabitEthernet-1/7	loop-shutdown-GigabitEthernet-1/8
loop-shutdown-10GigabitEthernet-1/1	loop-shutdown-10GigabitEthernet-1/2
port-security-GigabitEthernet-1/1-shutdown	port-security-GigabitEthernet-1/1-limit-reached
port-security-GigabitEthernet-1/2-shutdown	port-security-GigabitEthernet-1/2-limit-reached
port-security-GigabitEthernet-1/3-shutdown	port-security-GigabitEthernet-1/3-limit-reached
port-security-GigabitEthernet-1/4-shutdown	port-security-GigabitEthernet-1/4-limit-reached


```
port-security-GigabitEthernet-1/5-shutdown      port-security-GigabitEthernet-1/5-limit-reached
port-security-GigabitEthernet-1/6-shutdown      port-security-GigabitEthernet-1/6-limit-reached
port-security-GigabitEthernet-1/7-shutdown      port-security-GigabitEthernet-1/7-limit-reached
port-security-GigabitEthernet-1/8-shutdown      port-security-GigabitEthernet-1/8-limit-reached
port-security-10GigabitEthernet-1/1-shutdown    port-security-10GigabitEthernet-1/1-limit-reached
port-security-10GigabitEthernet-1/2-shutdown    port-security-10GigabitEthernet-1/2-limit-reached
CPU-Temperature
```

Example:

```
lss2200-8p (config)# alarm 10GigabitEthernet-1/1
lss2200-8p (config)# alarm 10GigabitEthernet-1/2-Bias
lss2200-8p (config)# alarm loop-shutdown-shutdown
lss2200-8p (config)#
```

Command: `ble`

Description: Bluetooth Low Energy commands.

Mode: Config mode

Parameters: `broadcast` Enable BLE Broadcast
 `disconnect` `ble disconnect`

Example:

```
LSS2200-8p (config)# ble broadcast
LSS2200-8p (config)# ble disconnect
LSS2200-8P (config)# do show ble broadcast
BLE Broadcast State
=====
Broadcast Status      : Enabled
LSS2200-8P (config)# do show ble connection
  <cr>

LSS2200-8P (config)# do show ble connection
BLE Software Connection State
=====
Connection State     : BLE Disconnected
LSS2200-8P (config)#
```

BLE Configure Commands:

1. `ble broadcast enable/disable` is used to enable/disable broadcasting. Broadcast is enabled by default.
2. `ble disconnect` is used to disconnect the existing software connection.

BLE Show Commands:

1. `show broadcast` displays state as *Enabled* or *Disabled*.
2. `show connection` displays the software connection status as *BLE Connected* or *BLE Disconnected*.
3. `show mac` displays the BLE MAC add:xx.
4. `show version` displays the BLE Version (currently "TN BLE 1.0.5").
5. `show status` displays the BLE status information as all above parameters as Broadcast Status, Connection State, BLE Version, BLE MAC

Procedure to use BLE Application:

1. Configure username (e.g., `username admin group admin`).
2. Set password as "admin".
3. Scan PoE++ devices from mobile application.
4. Connect to PoE++.
5. Use username as "admin" and password as "admin" to login.
6. Use Clish commands in text area to diagnose or get the different status information.
7. Click on "Disconnect" to disconnect from device.

Note: Do not use "SET IP ADDRESS", "POE ON", "POE OFF", or "REBOOT DEVICE" buttons for now.

Known BLE Issues:

1. The "`show ble connection`" command used from The LSS2200-8P MobileApp gives "*BLE Disconnected*" response.
2. "SET IP ADDRESS", "POE ON", "POE OFF", "REBOOT DEVICE" buttons not verified & tested. (Might be mobile application side change required)
3. On LSS2200-8P device reboot, send "powerdown" notification to is not implemented.

Command: `clock`

Description: Configure time settings. The time zones are case-sensitive.

Mode: Config mode

Parameters: `timezone` Configure system time zone

String	system Time zone:		
Africa/Abidjan	Africa/Accra	Africa/Addis_Ababa	Africa/Algiers
Africa/Asmara	Africa/Bamako	Africa/Bangui	Africa/Banjul
Africa/Bissau	Africa/Blantyre	Africa/Brazzaville	Africa/Bujumbura
Africa/Cairo	Africa/Ceuta	Africa/Conakry	Africa/Dakar
↓	↓	↓	↓
America/Anguilla	America/Antigua	America/Araguaina	America/Argentina/Buenos_Aires
America/Whitehorse	America/Winnipeg	America/Yakutat	America/Yellowknife
Antarctica/Casey	Antarctica/Davis	Antarctica/DumontDUrville	Antarctica/Macquarie
Antarctica/Mawson	Antarctica/McMurdo	Antarctica/Palmer	Antarctica/Rothera
Antarctica/Syowa	Antarctica/Troll	Antarctica/Vostok	Arctic/Longyearbyen
Asia/Aden	Asia/Almaty	Asia/Amman	Asia/Anadyr
Asia/Aqtau	Asia/Aqtobe	Asia/Ashgabat	Asia/Atyrau
↓	↓	↓	↓
Atlantic/Bermuda	Atlantic/Canary	Atlantic/Cape_Verde	Atlantic/Faroe
Atlantic/Madeira	Atlantic/Reykjavik	Atlantic/South_Georgia	Atlantic/St_Helena
Atlantic/Stanley	Australia/Adelaide	Australia/Brisbane	Australia/Broken_Hill
Australia/Currie	Australia/Darwin	Australia/Eucla	Australia/Hobart
Australia/Lindeman	Australia/Lord_Howe	Australia/Melbourne	Australia/Perth
Australia/Sydney	Etc/GMT	Etc/GMT+1	Etc/GMT+10
Etc/GMT+11	Etc/GMT+12	Etc/GMT+2	Etc/GMT+3
Etc/GMT+4	Etc/GMT+5	Etc/GMT+6	Etc/GMT+7
Etc/GMT+8	Etc/GMT+9	Etc/GMT-1	Etc/GMT-10
Etc/GMT-11	Etc/GMT-12	Etc/GMT-13	Etc/GMT-14
Etc/GMT-2	Etc/GMT-3	Etc/GMT-4	Etc/GMT-5
Etc/GMT-6	Etc/GMT-7	Etc/GMT-8	Etc/GMT-9
Europe/Amsterdam	Europe/Andorra	Europe/Astrakhan	Europe/Athens
Europe/Belgrade	Europe/Berlin	Europe/Bratislava	Europe/Brussels
Europe/Bucharest	Europe/Budapest	Europe/Busingen	Europe/Chisinau
Pacific/Tahiti	Pacific/Tarawa	Pacific/Tongatapu	Pacific/Wake
Pacific/Wallis	UTC		

Example:

```
lss2200-8p (config)# clock timezone america/chicago
Invalid Timezone
lss2200-8p (config)# clock timezone America/Chicago
lss2200-8p (config)#
```

Command: **do**

Description: To run Exec mode commands in Config mode

Mode: Config mode

Parameters: ! Comments

alarm Actions for alarm conditions

clear Clear or reset status or conditions

clock Configure time settings

configure Enter configuration mode

copy copy system configuration

debug Debug led

exit Exit from the CLI

nslookup nslookup command for network diagnostics

ping Ping command for network diagnostics

reload Rebooting or defaulting the device

show show information

ssh SSH for secure, encrypted connection

telnet telnet to transfer data in plain text.

traceroute Traceroute command for network diagnostics

who Show logged in users

mute Silence an active alarm notification

unmute Clear the muting of an active alarm notification

Arguments ignored comment text

The name of the alarm, Tab to complete/list Alarm Name

ip Clear IP Configuration

lldp Clear LLDP counters

loop-detect Clear loop detect statistics or condition

port-security Clear port-security condition

reload Abandon any previous reload in/at request

statistics Clear the port statistics on the specified port

The switch port type port type (GigabitEthernet/10GigabitEthernet)

The switch port number, Tab to complete/list port-number

set Configure system date and time

time in HH:MM HH:MM format system time

Date in YYYY-MM-DD format for system date

terminal Configure from the terminal

Web URI or (log|(startup|temp|running|default)-config) source of the copy
(uri|(startup|running|default)-config)

test Debug led

all-leds this command tests all leds in sequence

led Select sequence to test all leds

host Look up information for host using the current default server

String Look up information for host using the current default server

host Hostname or IP-address to ping

interface Optional source IP-address or interface for sending packets


```

=====
Status:  Running
Queries:
  Valid:  0
  Unknown: 0
Erroneous Packets:  0
Errors:  0
Last Connection:  0.0.0.0/0

LSS2200-8P (config)#

```

Command: **end**
Description: Go back to Exec mode
Mode: Config mode
Parameters:
Example:

```

LSS2200-8P (config)# end
LSS2200-8P #

```

Command: **exec-timeout**

Description: Set the inactivity timeout for automatic logout. Added at FW v 2.0.0.0R4. Note: reboot/logout and re-login required (CLI only). The logout time is set when the session is created (at login) so you must logout and log back in to see the timeout work as set. The point of this feature is to log out other users' forgotten idle sessions, not so much for the person that sets the timeout. So whoever sets the timeout would know to logout and back when the timeout for their session occurs. The command `no exec-timeout autologout` sets it back to 10 minutes (the default) and removes the command from running-config.

Mode: Config mode

Parameters:

autologout Length of idle time after which the session is closed
Idle time Time, in minutes, for login session auto-logout (0 disables auto-logout) Length of idle time after which the session is closed.
minutes 0|1|2|3|4|5|10|20|30|40|50|60

Example:

```

LSS2200-8P (config)# exec-timeout autologout 5
LSS2200-8P (config)# exec-timeout autologout 10
LSS2200-8P (config)# exec-timeout autologout 60
LSS2200-8P (config)#

```

Messages: *libyang[0]: Value "15" does not satisfy the constraint "0|1|2|3|4|5|10|20|30|40|50|60" (range, length, or pattern). (path: /csi-system:auto-timeout)*

libyang[0]: Failed to create node "auto-timeout" as a child of "system". (path: /csi-system:system/auto-timeout)

Exception setting MOAttribute:

Operation failed: Invalid argument

Command: [exit](#)

Description: Exit from Configure mode

Mode: Config mode

Parameters:

Example:

```
LSS2200-8P (config)# exit
LSS2200-8P #
```

Command: [interface](#)on: Select an interface to configure. Enter Interface Config mode; see [Interface Config Mode Commands](#) on page 112.

Mode: Config mode

Parameters:	10GigabitEthernet	Ethernet IEEE 802.3
	GigabitEthernet	Ethernet IEEE 802.3
	Switch/Interface number	Ethernet 1G interface number (1/1 1/2)
	Switch/Interface number	Ethernet 10G interface number (1/1 1/2)
	vlan	VLAN ID
	Number in the range 1-4094	VLAN Identifier (1..4094)

Example: Enter Config mode and display the available commands:

```
LSS2200-8P # configure terminal
LSS2200-8P (config)# interface ?
 10GigabitEthernet Ethernet IEEE 802.3
 GigabitEthernet Ethernet IEEE 802.3
 vlan VLAN ID
 <cr>

LSS2200-8P (config)#
```

Command:	ip
Description:	Configure IP parameters and enter DHCP Config mode.
Mode:	Config mode
Parameters:	
dhcp	IP DHCP Configuration
relay	Enable DHCP Relay
server	Create a DHCP server
snooping	Enable DHCP Snooping
address	Local Address DHCP Relay listens on
server	DHCP Server IP Address
A.B.C.D	Local IPv4 address to listen for DHCP Requests
interface	Local Interface Name to Listen for DHCP Requests
String	Local Interface Name to Listen for DHCP Requests
A.B.C.D	IPV4 address of the DHCP server
interface	Interface Name to accept DHCP server replies
String	DHCP Server Name
authoritative	Set DHCP Server as Authoritative
default-router	Configure the Default Router Address List for the Pool
dns-server	Configure the DNS Server Address List for the Pool
domain-name	Configure the Domain Name for the Pool
exit	Exit from DHCP Server configuration mode
host	Configure Host Based IP Address for DHCP Server
lease	DHCP Address Lease Time
netbios-name-server	Configure the Netbios Name SERVER Address List for the Pool
netbios-node-type	Configure the Netbios Node Type
netbios-scope	Configure the netbios scope option
nis-domain-name	Configure the NIS Domain Name option
nis-server	Configure the NIS SERVER Address List for the Pool
no	Negate a command or set its defaults
ntp-server	Configure the NTP SERVER Address List for the Pool
option	Configure the DHCP Option
range	Configure the DHCP Pool Range
server	DHCP Server Address List Configuration
vendor	Configure vendor specific Information
A.B.C.D	Comma separated list of Default Router Address
A.B.C.D	Comma separated list of DNS Address
String	Domain Name
client-id	Configure Client ID based Fixed IP Address mapping in DHCP Server
mac	Configure Host MAC Address based Fixed IP Address in DHCP Server
String	Client Identifier
xx:xx:xx:xx:xx:xx	MAC Address
hostname	Host Name
lease	DHCP Address Lease Time
time	DHCP Address Lease Time
DHCP Lease time	Lease value (0-365)days/(1-24)hours/(1-60)minutes (1..365)

DHCP Lease for Days/Hours/Minutes	Lease Type (days/hours/minutes)		
A.B.C.D	IP Address		
A.B.C.D	Comma separated list of NetBios Name Server Address		
NetBios Node Type Option	broadcast(b)/peer-to-peer(p)/mixed(m)/hybrid(h)		
Netbios Node Type (b/p/m/h)	(broadcast/peer-to-peer/mixed/hybrid)		
String	Netbios scope		
String	NIS Domain Name		
A.B.C.D	Comma separated list of NIS Server Address		
no	Negate a command or set its defaults; valid entries are:		
aging-time	alarm	authoritative	ble
clock	default-router	dns-server	domain-name
host	interface	ip	lease
lldp	lldp-med	logging	loop-detect
monitor	netbios-name-server	netbios-node-type	netbios-scope
nfc	nis-domain-name	nis-server	ntp
ntp-server	option	poe	qos
range	rest-server	route	server
snmp	snmptrap	spanning-tree	system
telnet	vendor		
A.B.C.D	Comma separated list of NTP Server Addresses		
DHCP Option Code	Option Code (1..254)		
A.B.C.D	IPv4 DHCP Pool Start Address		
A.B.C.D	IPv4 DHCP Pool End Address		
netmask	IPv4 DHCP Pool Netmask		
broadcast	IPv4 DHCP Pool Broadcast Address		
vendor	Vendor Class Identifier		
user	User Class Identifier		
lease	DHCP Address Lease Time		
A.B.C.D	IPv4 DHCP Pool Broadcast Address		
String	Vendor Identifier		
address	DHCP Server Listen Address List Configuration		
A.B.C.D	Comma separated list of listen Address		
specific	Configure vendor specific Information		
info	Configure the vendor specific info		

Example:

```

lss2200-8p (config)# ip dhcp relay address 192.168.1.99
lss2200-8p (config)# ip dhcp server 2.4.6.8
lss2200-8p (config)# ip dhcp snooping
lss2200-8p (config)# ip dhcp server DhcpSrvr1
lss2200-8p (config-dhcp)# authoritative
lss2200-8p (config-dhcp)# default-router 2.3.4.5
lss2200-8p (config-dhcp)# dns-server 192.168.10.100
lss2200-8p (config-dhcp)# domain-name BobB
lss2200-8p (config-dhcp)# host client-id Sams 4.3.2.1 hostname DHost1 lease time 10 days
lss2200-8p (config-dhcp)# host mac 11:22:33:44:55:66 1.2.3.4
lss2200-8p (config-dhcp)# netbios-name-server 1.2.3.4

```

```
lss2200-8p (config-dhcp)# netbios-node-type broadcast
lss2200-8p (config-dhcp)# netbios-node-type peer-to-peer
lss2200-8p (config-dhcp)# netbios-scope BBSstring1
lss2200-8p (config-dhcp)# nis-domain-name NisD1
lss2200-8p (config-dhcp)# nis-server 5.4.3.2
lss2200-8p (config-dhcp)# ntp-server 192.168.1.77
lss2200-8p (config-dhcp)#
```

Command: **lldp**

Description: Configure Link Level Discovery Protocol.

LLDP Configuration:

Note 1: FW v 1.7.0.0R5 removed the global "lldp-med" command. The LLDP service can be activated or deactivated globally, which also enables or disables LLDP-Med; the timing parameters are still set globally. LLDP-Med is then enabled or disabled per port in the respective interface view.

Note 2: Any backup files made prior to 1.7.0.0 that enable LLDP on a port will require the global "lldp" command to be added. This command can go anywhere above the first "interface" view, left-aligned, and not in an indented section. Without this, the interface "lldp" commands will fail to apply during restore.

Note 3: Ports must be enabled individually for LLDP; a global `no lldp` will disable all ports, a global re-enable will not activate ports, just the service.

Mode: Config mode

Parameters: holdtime LLDP Hold time (the neighbor switch will discard the LLDP information after 'hold time' multiplied by 'txinterval' seconds).

txinterval LLDP Packet Transmission Interval.

Tx Hold Time Transmit holdtime multiplier value (2..10).

Tx Interval The interval (in seconds) at which LLDP packets are sent to neighbors (5..120).

<cr> Enable LLDP globally

Example:

```
LSS2200-8P (config)# lldp holdtime 5
LSS2200-8P (config)# lldp txinterval 50
LSS2200-8P (config)# do show lldp config
```

LLDP Configuration

```
=====
LLDP          : Enabled
TxInterval    : 50
Holdtime      : 250
```

LLDP Port configurations

```
=====
+-----+-----+-----+
| Port          | LLDP | MED   |
+-----+-----+-----+
| 10GigabitEthernet 1/1 | Both | Enabled |
| 10GigabitEthernet 1/2 | Both | Enabled |
| GigabitEthernet 1/1   | Both | Enabled |
| GigabitEthernet 1/2   | Both | Disabled |
+-----+-----+-----+
```

```
| GigabitEthernet 1/3 | Both | Enabled |
| GigabitEthernet 1/4 | Both | Enabled |
| GigabitEthernet 1/5 | Both | Enabled |
| GigabitEthernet 1/6 | Both | Enabled |
| GigabitEthernet 1/7 | Both | Enabled |
| GigabitEthernet 1/8 | Both | Enabled |
+-----+-----+-----+
```

```
LSS2200-8P (config)#
```

Messages:

Error: lldp is disabled, please enable.

Command: **logging**

Description: Configure Syslog. Note that when you configure the logging severity, that severity level applies to the internal log and to log message forwarding to a syslog server. Note: only Admin users may view the system and audit logs and copy logs to a server.

Mode: Config mode

Parameters:

buffer-size	Configure Syslog buffer size
host	Add Syslog server
severity	Configure Syslog output severity level
Unsigned integer	Syslog buffer size (1..65535)
A.B.C.D	IP address of Syslog server
Syslog severity level	Syslog output severity level (emergency/alert/critical/error/warning/notice/info/debug)
transport	Syslog server transport protocol
port	Syslog server port
Syslog transport protocol choice	Syslog server transport protocol (tcp/udp)
port	Syslog server port
Unsigned integer	Syslog server port (1..65535)

Example 1:

```
lss2200-8p (config)# logging buffer-size 5000
lss2200-8p (config)# logging host 192.168.1.77
lss2200-8p (config)# logging severity warning
LSS2200-8P (config)# logging host 192.168.60.1 transport udp port 3391
LSS2200-8P (config)# logging host 192.168.60.1 transport tcp port 999
lss2200-8p (config)#
```

Example 2:

```
LSS2200-8P (config)# logging host 172.27.100.88
LSS2200-8P (config)# logging buffer-size 7500
LSS2200-8P (config)# logging severity alert
LSS2200-8P (config)# logging host 192.168.60.1 transport tcp port 678
LSS2200-8P (config)# logging host 192.168.60.1 transport udp port 6514
LSS2200-8P (config)#
```

Command: **loop-detect**

Description: Loop Detection Enabled

Mode: Config mode

Parameters: shutdown Loop Detect Shutdown Time Period
 tx Loop Detect frame transmission interval
 (0..604800) Loop Detect Shutdown Time Period In seconds
 (1..10) Loop Detect frame transmission interval in seconds
 <cr>

Example:

```
lss2200-8p (config)# loop-detect shutdown 3000
lss2200-8p (config)# loop-detect tx 4
lss2200-8p (config)#
```

Command: **lpm**

Description: Enable LPM Discovery tool. Lantronix Provisioning Manager allows easy administration of Lantronix devices. With LPM, you can quickly update firmware, update configuration, and provision one or more devices at the same time. See the LPM webpage at <https://docs.lantronix.com/products/lpm/5.x/>.

Mode: Config mode

Parameters: None

Example:

```
LSS2200-8P (config)# do show lpm config
LPM State
=====
LPM State      : Enabled
LSS2200-8P (config)# do show lpm status
LPM status
=====
Status: Running
Queries:
  Valid: 0
  Unknown: 0
Erroneous Packets: 0
Errors: 0
Last Connection: 0.0.0.0/0

LSS2200-8P (config)
```

Command: **monitor**

Description: Monitoring different system events

Mode: Config mode

Parameters:

destination	MIRROR destination port
egress	Configure a MIRROR destination egress port
ingress	Configure a MIRROR destination ingress port
The switch port type	Gigabit Ethernet Port Type (GigabitEthernet/10GigabitEthernet)
The switch port type	Gigabit Ethernet Port Type (GigabitEthernet/10GigabitEthernet)

1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8

Example:

```
lss2200-8p (config)# monitor destination egress GigabitEthernet 1/4
lss2200-8p (config)# monitor destination ingress 10GigabitEthernet 1/8
lss2200-8p (config)#
```

Command: **nfc**

Description: Enable Near Field Communication via the LSS2200-8P MobileApp.

Parameters:

Example:

```
lss2200-8p (config)# nfc
lss2200-8p (config)# do show nfc state
NFC State
=====
NFC State      : Enabled
lss2200-8p (config)# no nfc
lss2200-8p (config)# do show nfc state
NFC State
=====
NFC State      : Disabled
lss2200-8p (config)#
LSS2200-8P (config)# do show nfc data
NFC Data
=====
No NFC data available
LSS2200-8P (config)#
```

Command: **no**

Description: Negate a command or set its defaults.

Mode: Config mode

Parameters:	aging-time	alarm	ble	clock	exec-timeout	interface
ip	lldp	logging	loop-detect	lpm	monitor	nfc
ntp	poe	qos	rest-server	route	snmp	snmptrap
spanning-tree	ssh-server	system	telnet			

The name of the alarm, Tab to complete/list	Alarm Name
broadcast	Disable BLE Broadcast
timezone	Restore the default time zone settings
server	Remove a server from NTP Servers list
String	Name of server to delete
fast_mode	Disable power at boot, do not wait for startup config
schedule	Clear Power over Ethernet Scheduling settings
String	PoE Schedule Profile Name
day	Day of Week
hour	Hour HH
min	Minute MM
weights	Set QoS queue weights to defaults
rest-server	Disable REST API server
Name	Name of static route to delete
community	Delete the SNMP v2c community
user	Delete the SNMP v3 user
view	Delete SNMP v3 view
The name of the SNMP v2c community, Tab to complete/list	SNMP v2c community string for read-only access
The name of the SNMP v3 user, Tab to complete/list	SNMP v3 user name
The name of the SNMP v3 view, Tab to complete/list	SNMP v3 MIB view identifier
authentication-failure	disable SNMP Authentication failure Traps
link-up-down	disable SNMP Link Up/Link Down Traps
server	Delete the SNMP v2c Traps Sink server
contact	Default system contact to blank
location	Default system location to blank
name	Default system name to 'eos'
server	Disable the Telnet server
autologout	Revert to default inactivity timeout for automatic logout (10 minutes)

Example:

```

lss2200-8p (config)# no ble broadcast
lss2200-8p (config)# no clock Timezone
lss2200-8p (config)# no qos weights
lss2200-8p (config)# no rest-server
lss2200-8p (config)# no snmptrap authentication-failure
lss2200-8p (config)# no spanning-tree
lss2200-8p (config)# no telnet server
lss2200-8p (config)#

```

Command: **ntp**

Description: Enable Network Time Protocol

Mode: Config mode

Parameters: server Add an NTP Server or modify its address
 name Server name
 address Server address (IPv4 address or DNS domain name)
 String Server name

Example:

```
lss2200-8p (config)# ntp server name Srvr1 address 192.168.1.200
lss2200-8p (config)#
```

Command: **percepixon**Description: Configure Percepixon client settings in Percepixon Config mode. The Lantronix Percepixon software platform provides automation by provisioning remotely deployed Lantronix devices without user intervention. See <https://www.lantronix.com/percepixon/> for more information.

Mode: Config mode > Percepixon

Parameters (shown by ? command):

active_connection	Connection instance to use when connecting to Percepixon (connection:1 or connection:2)
apply_configuration_updates	Controls whether configuration updates will be applied (never or always).
apply_firmware_updates	Automatically apply new firmware
connection	Configure Percepixon client connection settings
content_check_interval	Sets the firmware and configuration check interval
device_description	Sets the Device Description
device_name	Sets the Device Name
do	To run exec commands in Config mode: ! alarm clear clock configure copy debug exit nslookup ping reload shell show ssh telnet traceroute who
end	Go back to EXEC View
exit	Go back to Configure view
no	Negate a command or set its defaults
remote_access_local_port	Local port for Percepixon Remote Access. When configured, a total of 16 consecutive ports will be reserved
state	enable the Percepixon client
status_update_interval	Sets the status update interval
Instance (connection:1/connection:2)	Controls if and when configuration updates will be applied (never/if/unchanged/unchanged)/always)
Instance (connection:1/connection:2)	Unsigned integer Local port (1..65535)
no	active_connection aging-time alarm apply_configuration_updates apply_firmware_updates ble clock content_check_interval device_description device_name interface ip lldp lldp-med logging loop-detect lpm monitor nfc ntp poe qos remote_access_local_port

	rest-server	route	snmp	snmptrap	spanning-tree
	state	status_update_interval		system	telnet
enable/ disable	(enable/disable)				
time period in minutes	(1..2160) content_check_interval				
String	device description				
String	device ID				
String	device key				
String	device name				
enable/ disable	reboot_after_firmware_update (enable/disable)				
enable/ disable	reboot_after_update				
port number	0 or in range 1024-65520				
port number 0 or in range 1024-65520	port number	local port			
time period in minutes	status_update_interval (1..1440)				
monitor	set mirroring				
destination	the monitor destination (mirroring)				
egress ingress	mirror destination				
time period in minutes	(1..1440)				
active_connection	sets to default value				
apply_configuration_updates	sets to default value				
apply_firmware_updates	sets to default value				
content_check_interval	sets to default value				
device_description	sets to default value				
device_name	sets to default value				
remote_access_local_port	sets to default value				
no state	disable the client				
status_update_interval	sets to default value				

Example 1:

```
LSS2200-8P (config)# percepXion
lss2200-8p (config-percepXion)# apply_firmware_updates enable
apply_firmware_updates:enable
lss2200-8p (config-percepXion)#
```

Example 2:

```
lss2200-8p (config-percepXion)# content_check_interval 300
content_check_interval:300
LSS2200-8P (config-percepXion)# state
state:enable
LSS2200-8P (config-percepXion)# apply_firmware_updates
apply_firmware_updates:enable
LSS2200-8P (config-percepXion)# apply_configuration_updates?
Controls if no configuration updates will be applied, or if the device will always apply
configuration updates. (never/always)
LSS2200-8P (config-percepXion)# apply_configuration_updates always ?
<cr>
LSS2200-8P (config-percepXion)# apply_configuration_updates always
```



```
apply_configuration_updates:always
LSS2200-8P (config-percepXion)#
```

Example 3:

```
lss2200-8p (config-percepXion)# state enable
state:enable
lss2200-8p (config-percepXion)#
```

Example 4:

```
lss2200-8p (config-percepXion)# status_update_interval 240
status_update_interval:240
lss2200-8p (config-percepXion)#
```

Example 5: Enter specified PercepXion connection mode and display available commands. See the following section for PercepXion Connection commands.

```
lss2200-8p (config-percepXion)# connection connection:1
lss2200-8p (config-percepXion -connection:1)# ?
do                To run exec commands in config mode
end               Go back to EXEC View
exit              Go back to configure view
host              Hostname or IP address of percepXion
local_port        Local port for percepXion client. When configured, a total of 16
                  consecutive ports will be reserved
mqtt_security     Enable SSL for MQTT
mqtt_state        Enable or Disable MQTT
no                Negate a command or set its defaults
port              Port of percepXion
secure_port       Enable https for PercepXion client
validate_certificates Enable server certificate validation on PercepXion client
lss2200-8p (config-percepXion)#
```

Example 6:

```
lss2200-8p (config-percepXion)# do show percepXion status
PercepXion client status
=====
Status: Exited
Device Id: .....
Device Key: <Configured>
Last Status Update: <Not Available>
Last Content Check: <Not Available>
Available Updates:
  Firmware: <Not Available>
  Configuration: <Not Available>

LSS2200-8P (config-percepXion)# do show percepXion config
PercepXion client configuration
=====
State: Enabled
Device Name: LSS2200-8P-T51A
Device Description: Lantronix LSS2200-8P
Status Update Interval: 24
Content Check Interval: 24
Apply Firmware Updates: Enabled
Apply Configuration Updates: always
```

```
Remote Access Local Port: <Random>
Active Connection: Connection:1
```

```
Connection:1
```

```
=====
```

```
Host: api.percepixon.ai
Connect to: Cloud
Port: 443
Secure Port: Enabled
Validate Certificates: Enabled
Local Port: <Random>
MQTT Security: Enabled
MQTT Local Port: <Random>
Use Proxy: Disabled
Proxy Type: SOCKS5
Proxy Host:
Proxy Port: 80
Proxy Username:
Proxy Password:
```

```
Connection:2
```

```
=====
```

```
Host: api.percepixon.ai
Connect to: Cloud
Port: 443
Secure Port: Enabled
Validate Certificates: Enabled
Local Port: <Random>
MQTT Security: Enabled
MQTT Local Port: <Random>
Use Proxy: Disabled
Proxy Type: SOCKS5
Proxy Port: 80
Proxy Username:
Proxy Password:
LSS2200-8P (config-percepixon)# state
state:enable
LSS2200-8P (config-percepixon)# no state
state:disable
LSS2200-8P (config-percepixon)#
```

Parameters (shown by **tab** command):

active_connection	admin	time	alarm
apply_configuration_updates	apply_firmware_updates	ble	clock
connection	content_check_interval	device_description	device_name
do	end	exit	interface
ip	lldp	lldp-med	logging
loop-detect	lpm	monitor	nfc
no	ntp	percepixon	poe
qos	remote_access_local_port	rest-server	route
snmp	snmptrap	spanning-tree	start
state	status_update_interval	system	telnet

See the following section for Percepixon Connection commands.

Command: [percepixon connection](#)

Description: Configure Percepixon connection settings in config-percepixon-connection mode.

Mode: Config Percepixon Connection mode

Parameters: (shown by ? command):

connect_to Instance Connect to cloud or on-premise VM
(Cloud/On-Premise)

do To run Exec commands in Config mode

end Go back to EXEC View

exit Go back to configure view

host Hostname or IP address of Percepixon

local_port Local port for Percepixon client. When configured, a total of 16 consecutive ports will be reserved

mqtt_security Enable SSL for MQTT

no Negate a command or set its defaults

port Port of Percepixon

secure_port Enable https for Percepixon client

validate_certificates Enable server certificate validation on Percepixon client

do Run Exec commands in Config mode:

!	alarm	clear	clock	configure	copy	debug
exit	nslookup	ping	reload	shell	show	ssh
telnet	traceroute	who				

local_port port number 0 or in range 1024-65520

monitor mirroring

no:

clock	host	interface	ip	lldp
lldp-med	local_port	logging	loop-detect	monitor
mqtt_security	nfc	ntp	poe	port
qos	rest-server	route	secure_port	snmp
snmptrap	spanning-tree	system	telnet	

port CF port Unsigned integer (1..65535)

egress The switch port type Gigabit Ethernet Port Type (GigabitEthernet/10GigabitEthernet)

ingress The switch port type Gigabit Ethernet Port Type (GigabitEthernet/10GigabitEthernet)

Port Type 1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8

Example 1:

```

lss2200-8p (config-percepixon-connection:1)# do show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin | Status
=====
| VLAN 1        | 192.168.10.10/24 | Static    | UP
lss2200-8p (config-percepixon-connection:1)# host BobB
host:BobB
lss2200-8p (config-percepixon-connection:1)# local_port 0
local_port:0
LSS2200-8P (config-percepixon-connection:2)# monitor destination egress 10GigabitEther% 1/8
%2200-8P (config-percepixon-connection:2)#
lss2200-8p (config-percepixon-connection:1)# mqtt_security
mqtt_security:enable

```

```
lss2200-8p (config-percepXion-conneG-percepXion-connection:1)# validate_certificates
validate_certificates:enable
lss2200-8p (config-percepXion-connection:1)#
```

Example 2: Go to PercepXion Config mode from PercepXion Config Connection mode

```
LSS2200-8P (config-percepXion-connection:2)# percepXion
LSS2200-8P (config-percepXion)#
```

Example 3: Set Hostname or IP address of PercepXion:

```
lss2200-8p (config-percepXion-connection:1)# host BobB
host:BobB
lss2200-8p (config-percepXion-connection:1)#
```

Example 4: Set local port:

```
LSS2200-8P (config-percepXion-connection:1)# local_port 1024
local_port:1024
LSS2200-8P (config-percepXion-connection:1)#
```

Example 5: Enable MQTT (Message Queuing Telemetry Transport):

```
lss2200-8p (config-percepXion-connection:1)# mqtt_security enable
mqtt_security:enable
lss2200-8p (config-percepXion-connection:1)# mqtt_state enable
mqtt_state:enable
lss2200-8p (config-percepXion-connection:1)
```

Example 6: Set Connection mode:

```
LSS2200-8P (config-percepXion-connection:2)# connect_to Cloud
connect_to:Cloud
LSS2200-8P (config-percepXion-connection:2)# connect_to On-Premise
connect_to:On-Premise
LSS2200-8P (config-percepXion-connection:2)#
```

Example 6:

```
lss2200-8p (config-percepXion-connection:1)# port 987
port:987
lss2200-8p (config-percepXion-connection:1)# secure_port enable
secure_port:enable
lss2200-8p (config-percepXion-connection:1)# do show percepXion config
PercepXion client configuration
=====
State: Enabled
Device Name: LSS2200-8P-2QB9
Device Description: Lantronix LSS2200-8P
Status Update Interval: 1
Content Check Interval: 24
Apply Firmware Updates: Enabled
Apply Configuration Updates: always
Remote Access Local Port: <Random>
Active Connection: Connection:1

Connection:1
=====
Host: api.percepXion.ai
```

```

Connect to: Cloud
Port: 987
Secure Port: Enabled
Validate Certificates: Enabled
Local Port: <Random>
MQTT Security: Enabled
MQTT Local Port: <Random>
Use Proxy: Disabled
Proxy Type: SOCKS5
Proxy Host:
Proxy Port: 80
Proxy Username:
Proxy Password:

Connection:2
=====
Host: api.percepixon.ai
Connect to: Cloud
Port: 443
Secure Port: Enabled
Validate Certificates: Enabled
Local Port: <Random>
MQTT Security: Enabled
MQTT Local Port: <Random>
Use Proxy: Disabled
Proxy Type: SOCKS5
Proxy Host:
Proxy Port: 80
Proxy Username:
Proxy Password:
lss2200-8p (config-percepixon-connection:1)# exit
lss2200-8p (config-percepixon)# end
LSS2200-8P #

```

Parameters: (shown by tab command):

```

LSS2200-8P (config-percepixon-connection:2)# <tab>
admin          aging-time    alarm         ble
clock          connect_to   do            end
exit           host         interface     ip
lldp           lldp-med    local_port    logging
loop-detect    lpm         monitor       mqtt_security
nfc            no          ntp           percepixon
poe            port        qos           rest-server
route          secure_port snmp          snmptrap
spanning-tree  start       system        telnet
validate_certificates
LSS2200-8P (config-percepixon-connection:2)#

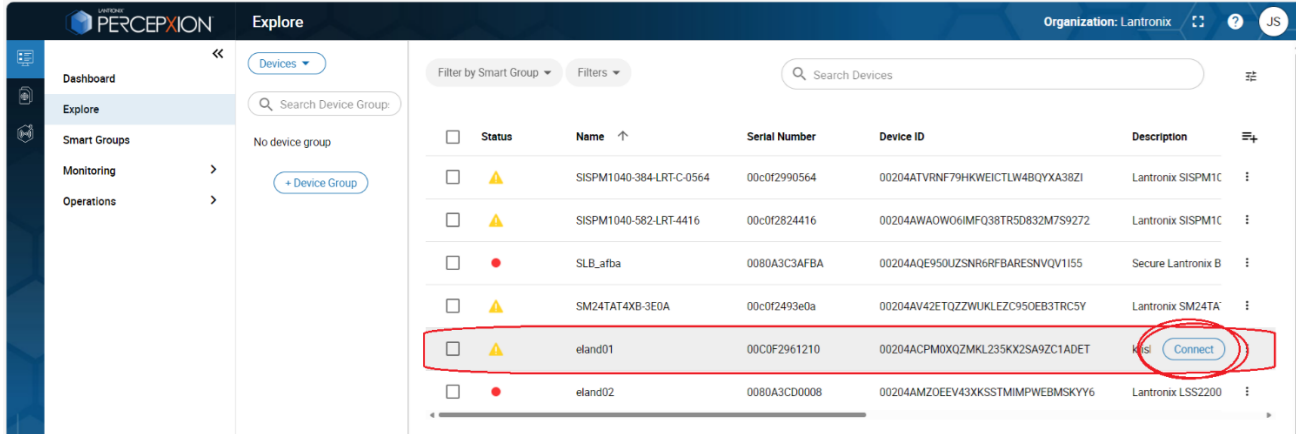
```

Remote Access CLI Connect via Web Terminal

The PercepXion client provides a method to make a secure, encrypted connection via SSL/TLS to a Lantronix device CLI. This connection opens a web terminal session in a new browser tab. The connection to the Lantronix device is terminated when you close the web terminal session. (Added at LSS2200-8P FW v 2.1.0.0R2.)

To connect:

1. In the PercepXion client navigation menu, click Explore.
2. Hover in the row to highlight the device, and then click the Connect button:



3. The Web terminal opens in a new browser tab. Enter your username and password and hit Enter to display the Web Terminal screen:



4. Type help at the prompt to view a list of CLI commands.
5. To end the session, close the browser tab.

Note: In the PercepXion server Web UI, a Web button may appear next to the Connect button for certain devices. The Web button provides a method to make a secure Web connection to the device, which opens the web interface in a new browser tab to allow for remote device configuration. For more information, see the PercepXion server online Help Document, just click the Help (?) button in the top right corner of the PercepXion webpage.

Command: **poe**

Description: Configure Power over Ethernet settings. **Note** that when 'poe force' is entered, then PoE Force mode is set to 'True' and PoE is set to 'False'. The 'no poe' command is not added if either PoE or PoE Force mode is enabled (for both 'show config' and 'show config with defaults').

Note that you must disable PoE before setting PoE to Forced mode.

Mode: Config mode

Parameters:

fast_mode	Enable power at boot, do not wait for startup config
pse	Set power supply delivery budgets
schedule	Configure Power over Ethernet Scheduling Profile
Power supply identifier ('ps1', 'ps2')	Power supply (ps1/ps2)
Power supply budget in Watts (30..1600)	Power budget (30..1600)
String	PoE Schedule Profile Name
day	Day of Week
hour	Hour HH
min	Minute MM
action	Scheduled Action
PoE Schedule Day of Week	Day of Week (sun/mon/tue/wed/thu/fri/sat)
PoE Schedule Action Type	Scheduled Action (on/off/reset)

Example:

```
lss2200-8p (config)# poe fast_mode
Fast PoE is Enabled
lss2200-8p (config)# no poe fast_mode
Fast PoE is Disabled
lss2200-8p (config)# poe pse ps1 1600
lss2200-8p (config)# poe pse ps2 1350
lss2200-8p (config)# poe schedule Prof1 day sun hour 12 min 30 action reset
lss2200-8p (config)#
```

Command: **qos**

Description: Configure QoS parameters

Mode: Config mode

Parameters:

weights	QoS queue weights distribution mode
QoS queue weights distribution mode options	QoS queue weights distribution mode (even/default/custom)
Queue weights for queues 0-7	Weight for Queue 0 (1..16)

Example:

```
lss2200-8p (config)# qos weights even
lss2200-8p (config)# qos weights default
lss2200-8p (config)# qos weights custom 1 2 3 4 5 6 7 8
lss2200-8p (config)#
```

Command: `rest-server`

Description: Enable REST API server.

Mode: Config mode

Example:

```
lss2200-8p (config)# rest-server
lss2200-8p (config)# do show rest-server config
REST API Server Configuration
=====
REST Server Enabled: Enabled
REST Server Port: 8000
lss2200-8p (config)#
```

Command: `route`

Description: Create Static route. CLI at v 2.0.0.0Rx: When creating a route, the “name” and “interface” parameters are now optional; “address” (with or without subnet prefix) and “gateway” are required (example: “route address 10.0.4.0/24 gateway 10.0.4.1”). When deleting a route, only the address value is required (example: “no route 10.0.4.0/24”).

Mode: Config mode

Parameters:

address	Destination network ip/prefix (required with or without subnet prefix)
gateway	The network gateway (required)
interface	The route interface (optional)
name	Name of static route to add (optional)
A.B.C.D[/mask]	Destination network ip/prefix. Routes created with network address.
A.B.C.D	The network gateway
Interface Name	The route interface
Name	Name of static route to add

Example:

```
lss2200-8p (config)# route name route6 address 1.2.3.4 gateway 2.3.4.5 interface VLAN1
route_name='route66', target_ip='1.2.3.4', gateway='2.3.4.5', interface='VLAN1'
lss2200-8p (config)#
```

Messages:

*Failed to add static route**Route-name already exists!!**Syntax Error: Incomplete Command - Require Gateway address**Operation failed: " does not appear to be an IPv4 or IPv6 network*

Command: **snmp**

Description: Enable SNMP access

Mode: Config mode

Parameters:

community	Create SNMP v2c community
user	Create SNMP v3 user
view	Create SNMP v3 view
The name of the SNMP v2c community, Tab to complete/list	SNMP v2c community string for read-only access
The name of the SNMP v3 user, Tab to complete/list	SNMP v3 user name
The name of the SNMP v3 view, Tab to complete/list	SNMP v3 MIB view identifier
host-access	Host/network access for community
restrict-oid	Restrict community to the specified OID
A.B.C.D[/mask]	Host/network access for community
String	Restrict community to the specified OID
security-level	Security levels of group which defines their access right
auth-protocol	Authentication type of the user
auth-key	Private key to use with authentication protocol
priv-protocol	Type of privacy protocol
priv-key	Associated key to use with the privacy protocol
view-name	MIB view to which this user belongs to
SNMP v3 user security level	Security levels of group which defines their access right: (noAuthNoPriv/authNoPriv/authPriv)
SNMP v3 user authentication type	Authentication type of the user (MD5/SHA)
String	Private key to use with authentication protocol
SNMP v3 user privacy protocol	Type of privacy protocol (DES/AES)
String	Associated key to use with the privacy protocol
The name of the SNMP v3 view,	Tab to complete/list MIB view to which this user belongs to.
oid	The OID to include or exclude from this view
type	MIB view type
String	The OID to include or exclude from this view
SNMP v3 MIB view type	MIB view type (included/excluded)

Example:

```
lss2200-8p (config)# snmp community public restrict-oid
lss2200-8p (config)# snmp community public host-access 1.2.3.4/255.255.255.0
Syntax error: Illegal parameter
lss2200-8p (config)#
lss2200-8p (config)# snmp user BobB security-level authPriv auth-protocol SHA auth-key
adminadmin priv-protocol AES priv-key abc123 view-name myView
Privacy key is under minimum length of 8
lss2200-8p (config)# snmp user BobB security-level authPriv auth-protocol SHA auth-key
adminadmin priv-protocol AES priv-key abc123!@# view-name myView
lss2200-8p (config)# snmp view ssssss type excluded oid .1.2.3.4.5.6
lss2200-8p (config)#
```

Command: **snmptrap**

Description: Configure SNMP Traps

Mode: Config mode

Parameters: authentication-failure enable SNMP Authentication failure Traps
 link-up-down enable SNMP Link Up/Link Down Traps.
 server Add SNMP v2c Traps Sink server
 A.B.C.D IP address of SNMP v2c Traps Sink server

Example:

```
lss2200-8p (config)# snmptrap authentication-failure
lss2200-8p (config)# snmptrap link-up-down
lss2200-8p (config)# snmptrap server
Syntax error: Incompleted command
lss2200-8p (config)# snmptrap server 1.2.3.4
A SNMPTrap with Sink Server IP 1.2.3.4 already exists
lss2200-8p (config)# snmptrap server 2.3.4.5
lss2200-8p (config)# do show snmptrap config
```

SNMP Trap Configuration

=====

```
Authentication Trap: Enabled
Link Up/Link Down Trap: Enabled
Cold Start Trap: Enabled
Trap Server: 1.2.3.4, 192.168.10.50, 2.3.4.5
lss2200-8p (config)#
```

Command: **spanning-tree**

Description: Enable spanning tree

Mode: Config mode

Parameters: forward-delay Delay when transitioning ports to forwarding
 max-age Maximum age of information transmitted by bridge
 priority Priority, lowest value selects root
 transmit-hold-count Limits BPDU / per second sent by bridge port
 Delay in seconds: set so max age does not exceed 2 x (forward delay -1) (4..30)
 Age in seconds: set so max age does not exceed 2 x (forward delay -1) (6..40)
 Priority value in range 0 through 61440 (steps of 4096)
 BPDU per second (1..10) transmit hold count

Example:

```
lss2200-8p (config)# spanning-tree forward-delay 6
lss2200-8p (config)# spanning-tree max-age 10
lss2200-8p (config)# spanning-tree priority 4096
lss2200-8p (config)# spanning-tree transmit-hold-count 3
lss2200-8p (config)#
```

Command: `ssh-server`

Description: Enable and configure the SSH server. Added at FW v 2.0.0.0R4.

Mode: Config mode

Parameters:

login-wait-time	Time in seconds the SSH server will wait for a login attempt to succeed
auth-tries	Maximum number of authentication attempts permitted per connection
max-startups	Maximum number of concurrent unauthenticated connections
[1..600] (default 120)	Time in seconds the SSH server will wait for a login attempt to succeed (1..600)
[4..20] (default 6)	Maximum number of authentication attempts permitted per connection (4..20)
[2..16] (default 10)	Maximum number of concurrent unauthenticated connections (2..16)
<cr>	Show current SSH Server state

Example:

```
LSS2200-8P (config)# ssh-server
SSH server enabled
LSS2200-8P (config)# ssh-server login-wait-time 100
LSS2200-8P (config)# ssh-server auth-tries 10
LSS2200-8P (config)# ssh-server max-startups 8
LSS2200-8P (config)# do show ssh-server ?
  config      Show configuration settings for the SSH service
  host-keys   Show host keys for the SSH service
  status      Show status information for the SSH service
LSS2200-8P (config)# do show ssh-server config
SSH Server:           Enabled
Login Wait Time (sec): 100
Max Authentication Tries: 10
Max Startups:        8

LSS2200-8P (config)# do show ssh-server host-keys
Local Host Keys:

RSA:
AAAAB3NzaC1yc2EAAAADAQABAAQGDcIiyPNyI2z9u0Kw2QH9+iESiTRYhaclzQKaf1glUgyCk9ksSLuoRkxSLL0dA
gXxvh7XmFbEDRazTtttIP2Rd0OC0qROyuaMq1Ji2lbrH4DKYBt5kzhM54JZe5YUvUACWw84dlibIuqPLCvLFw4Eue9t
6DBUbNF2rGSD10zivje1dh/VUhexDLfQ/tfNkmJhkGUERm2noSU9GVmp+iRNHsBqI14RNTY+sxSMo82NOxMVMDmMn2+
+FX/q0Nyq/1uFyAxSfxk3iDghrA9u8fKL8tUWubh4qOUY/01Uk2aAXHwIcDRF0XDPGDtFZRHOFZSECWxTXIi15GI99I
qQpEJHziHowZh61HviGy+C073YkKSXwChqapin3gx91sjHAGYECrJvpx49ydbKEcWnRjsTJSLKDVl2L9CF1gd2V3uEZ
XW0vi/v/PSDIwlj1Ui0ppqSN2m7NG+N0bEvTgPAXqJgzNfU1gkFPSZX5z/FXksuSnGGcHxe9ax5z5GxDHNG119p8M=

ED25519: AAAAC3NzaC1lZDI1NTE5AAAAIAKSS4x6vsysQ+keJTjxME7LwNFzRQo/P3Y9QF28/AmF

LSS2200-8P (config)#
LSS2200-8P (config)# do show ssh-server status
SSH Server Status:  running
SSH Version: 2
```

Command: **start**

Description: Start Virtual Cable Test

Mode: Config mode

Parameters:

vct Run Virtual Cable Test on the specified port
 (GigabitEthernet)
 The 1G switch port type port type
 The switch port number, Tab to complete/list port-number
 1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8

Example:

```
LSS2200-8P (config)# start vct GigabitEthernet 1/1
Cable diagnostics for port : GigabitEthernet 1/1 (Timestamp: 2022-09-09 14:29:32.113456)
=====
| pair   | Status          | Length (meters) |
=====
| A      | Pair Ok         | -                |
| B      | Pair Ok         | -                |
| C      | Pair Ok         | -                |
| D      | Pair Ok         | -                |
LSS2200-8P (config)# start vct GigabitEthernet 1/2
Cable diagnostics for port : GigabitEthernet 1/2 (Timestamp: 2022-09-09 14:31:22.475284)
=====
| pair   | Status          | Length (meters) |
=====
| A      | Pair Ok         | -                |
| B      | Pair Ok         | -                |
| C      | Pair Short      | 0                |
| D      | Pair Short      | 0                |
LSS2200-8P (config)#
```

Messages:

Interface GigabitEthernet 1/9 does not valid for virtual cable test

Command: **system**

Description: Configure system settings. See the Install Guide for related DIO hardware information. The system name supports a simple name (including both '_' and '.') or a fully-qualified domain name, where a domain name is a dot-delimited series of simple sub-strings. The "system name" supports a maximum length of 63 characters.

Mode: Config mode / DIO configuration mode

Parameters:

contact	set system contact
DigitalIO	set system digital io
Digital IO number	Digital IO number (1..99) / enter Digital I/O mode
location	set system location
name	set system name
String	system contact
do	To run exec commands in Config mode
exit	Exit from DIO Config mode
input	set system digital input
name	set system DIO name
output	set system digital output
snmp-action	set system dio1 snmp
snmp-trap	set system dio1 snmp
high-to-low	set system dio2 snmp action
low-to-high	set system dio2 snmp action
high	set system dio output high
low	set system dio output low
high-to-low	set system dio2 snmp action
low-to-high	set system dio2 snmp action
disable	set system dio2 snmp disable
enable	set system dio2 snmp enable
do:	! alarm clear clock configure copy debug exit nslookup ping reload show ssh telnet traceroute who

Example 1: Set and view system parameters:

```
lss2200-8p (config)# system contact EngSvcS
LSS2200-8P (config)# system location Eng-2ndFloor
LSS2200-8P (config)# system name lss2200-8p
lss2200-8p (config)# do show system config
System Name:      lss2 LSS2200-8P (config)# system location Eng-2ndFloor
Contact:          EngSvcS
Location:         Eng-2ndFloor
lss2200-8p (config)#
```

Example 2: Enter DIO Configuration mode and set DIO parameters:

```

lss2200-8p (config)# system DigitalIO 1
lss2200-8p (config-dio)# ?
  do      To run exec commands in config mode
  exit    Exit from DIO configuration mode
  input   set system digital input
  name    set system DIO name
  output  set system digital output
lss2200-8p (config-dio)# input snmp-action high-to-low
lss2200-8p (config-dio)# input snmp-trap ?
  disable set system dio1 snmp disable
  enable  set system input dio1 snmp enable
  <cr>

lss2200-8p (config-dio)# input snmp-trap enable
lss2200-8p (config-dio)# name DioCfg-1
lss2200-8p (config-dio)# output high

lss2200-8p (config-dio)# exit
lss2200-8p (config)#

LSS2200-8P (config-dio)# do show system Digitalio <tab>
config status
LSS2200-8P (config-dio)# do show system Digitalio config
System Digital IO Configuration
=====
DigitalIO 1:
  Name           : amport_1.3
  IO Type        : output
  IO active      : low
  SNMP trap      : Enabled
  SNMP input action : low-to-high
DigitalIO 2:
  Name           :
  IO Type        : input
  IO active      :
  SNMP trap      : Disabled
  SNMP input action : low-to-high
LSS2200-8P (config-dio)# do show system Digitalio status
System Digital IO Status
=====
DigitalIO 1:
  IO Type        : output
  State          : Low

```

```
DigitalIO 2:
  IO Type      : input
  State        : Low
LSS2200-8P (config-dio)# exit
LSS2200-8P (config)# system DigitalIO ?
  Digital IO number  Digital IO number (1..99)
LSS2200-8P (config)# system DigitalIO <tab>
1 2
LSS2200-8P (config)# system DigitalIO 3
DigitalIO 3 does not exist
LSS2200-8P (config)#
```

Messages:

Message: *Error 404: Digital I/O configuration data not found.*

Problem: Digital IO Config and Status break after upgrade from v1.5.0.0R16 to v1.6.0.0R6.

Description: After upgrading from v1.5.0.0R16 to v1.6.0.0R6, the Digital IO webpages stop displaying, and the CLI commands don't return anything.

Recovery: To restore Digital IO functionality:

1. Backup the running config to a remote file.
2. Edit the backup file to remove all "DIO*" commands.
3. Restore running-config from the edited backup file.
4. If the restore succeeds, then optionally change DigitalIO settings as desired, and then copy running-config to startup-config.

If the above steps fail, try these steps (note that the following procedure would lose all modified config settings):

1. Reload Factory Defaults.
2. Copy the running-config to the startup-config.
3. Reboot the switch.

Message: *DigitalIO x does not exist*

Description: The switch does not recognize the DIO instance.

Recovery: Create the desired DIO instance.

Example:

```
LSS2200-8P (config)# system DigitalIO 99
DigitalIO 99 does not exist
LSS2200-8P (config)#
```

Command: `telnet`

Description: Enable the Telnet server.

Mode: Config mode

Parameters:

Example:

```
lss2200-8p (config)# telnet server
Warning: Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission
of Sensitive Information. Setup and verify SSH, then disable Telnet.
lss2200-8p (config)# do show telnet server
Telnet service enabled
Warning: Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission
of Sensitive Information. Setup and verify SSH, then disable Telnet.
lss2200-8p (config)#
```


Config Admin Mode Commands

An Admin user has full access to any and all CLI commands. To enter Config Admin mode from Config mode:

```
lss2200-8p (config)# admin
lss2200-8p (config-admin)#
```

To display the available Config Admin Mode commands:

```
lss2200-8p (config-admin)# ?
  banner      First level of banner commands.
  do          To run exec commands in config mode
  end         Go back to EXEC View
  exit        Exit from configure mode
  firmware    Firmware commands
  no          Negate a command or set its defaults
  password    Change password for the specified user account
  username    Create or modify a local user account
  webserver   upload and install SSL certificate, private key file, and optional passphrase
lss2200-8p (config-admin)#
```

Command: **banner**

Description: First level of banner commands.

Mode: Config Admin mode

Parameters:

amend	Configure banner line by line.
edit	Enter a new login banner interactively.
none	Remove the whole banner.
String	Configure banner line by line.

Example:

```
lss2200-8p (config-admin)# banner edit

  Input banner then type Ctrl-D to finish, Ctrl-E<Enter> to cancel

^C^E

Banner input was cancelled
Command failed
lss2200-8p (config-admin)#

LSS2200-8P (config-admin)# do show banner
Banner
=====
LSS2200-*P New Banner text
LSS2200-8P (config-admin)#
```

Command: **do**

Description: To run Exec commands in Config mode

Mode: Config Admin mode

Parameters:	!	Comments
	alarm	Actions for alarm conditions
	clear	Clear or reset status or conditions
	clock	Configure time settings
	configure	Enter configuration mode
	copy	Copy system configuration
	debug	Debug led
	exit	Exit from the CLI
	nslookup	nslookup command for network diagnostics
	ping	Ping command for network diagnostics
	reload	Rebooting or defaulting the device
	show	Show information
	ssh	SSH for secure, encrypted connection
	telnet	Telnet to transfer data in plain text.
	traceroute	Traceroute command for network diagnostics
	who	Show logged in users
	mute	Silence an active alarm notification
	unmute	Clear the muting of an active alarm notification
	Arguments	ignored comment text
	Alarm Name	The name of the alarm, Tab to complete/list
	ip	Clear IP Configuration
	lldp	Clear LLDP counters
	loop-detect	Clear loop detect statistics or condition
	port-security	Clear port-security condition
	reload	Abandon any previous reload in/at request
	statistics	Clear the port statistics on the specified port
	Arguments	ignored comment text
	set	Configure system date and time
	time in HH:MM	HH:MM format system time
	Date in YYYY-MM-DD format	for system date
	terminal	Configure from the terminal
	Web URI or (log (startup temp running default)-config)	source of the copy (uri (startup running default)-config)
	test	Debug led
	all-leds	this command tests all leds in sequence
	led	Select sequence to test all leds
	host	Look up information for host using the current default server
	String	Look up information for host using the current default server
	host	Hostname or IP-address to ping
	interface	Optional source IP-address or interface for sending packets
	repeat	Requests to send count, default is 5

defaults	Set defaults on device			
warm	Reboot the box			
Arguments	ignored comment text			
show commands:				
alarm	banner	ble	clock	ddmi
interface	ip	lldp	log	logging
loop-detect	mac	monitor	nfc	ntp
percepixon	poe	port-security	qos	reload
rest-server	route	running-config	snmp	snmptrap
spanning-tree	startup-config	system	telnet	uptime
users	version	vlan		
delete	Remove the particular host key from SSH's known_hosts file			
name@hostname/ipaddress	ssh targethost [e.g. ssh name@1.2.3.4]			
host	Host name or IP address to connect			
port	Port number to connect. If no port number is specified, telnet attempts at the standard port 23.			
host	IP address or domain name of the host to trace			
interface	Optional source interface to use for sending packets			
String	IP address or domain name of the host to trace			
String	Source interface to use for sending packets			
Login name for the user account, Tab to complete/list	Login name for the user account to add or modify			
firmware	Show the currently selected firmware bank			

Example:

```
lss2200-8p (config-admin)# do clear reload
There was no previous reload request to cancel
lss2200-8p (config-admin)# do configure terminal
lss2200-8p (config)# admin
lss2200-8p (config-admin)# do show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin | Status
=====
| VLAN 1        | 192.168.10.50/24 | Static   | UP
lss2200-8p (config-admin)# do who
+-----+-----+-----+
| Username | From   | Since           |
+-----+-----+-----+
| root    | console | 2022-04-28 22:48:35 |
| root    | network | 2022-04-30 02:04:18 |
+-----+-----+-----+

lss2200-8p (config-admin)# show firmware
Currently selected bank : a
lss2200-8p (config-admin)#
```

Command: **end**

Description: Go back to Exec mode from Config Admin mode

Mode: Config Admin mode

Parameters: None

Example:

```
lss2200-8p (config-admin)# end
LSS2200-8P #
```

Command: **exit**

Description: Go back to Config mode from Config-admin mode

Mode: Config Admin mode

Parameters: None

Example:

```
lss2200-8p (config-admin)# exit
lss2200-8p (config)#
```

Command: **firmware**

Description: Firmware commands.

Mode: Config Admin mode

Parameters:

update Upload, activate, and reboot to a new firmware image from the specified source

verify Verify a new firmware image from the specified source

URI for update image source of the update (uri) -- URI examples: [tftp://<address>/device_image.tgz] | [scp://<username>:<password>@<address>:/device_image.tgz]

https: http: scp: tftp: ftp:

URI for update image source of the update (uri)

timeout Maximum allowed time to complete the image file transfer

Image upload timeout Maximum allowed time to complete the image file transfer (10..3600)

Arguments ignored comment text

Example:

```
LSS2200-8P (config-admin)# firmware update tftp://192.168.60.50/LSS2200-
8P_2.1.0.0R2_image.tgz
Fetching Update
Performing Update-8P_2.1.0.0R2_image.tgz: 56991497 of 56991497 (100%)
Update Failed:
Image verification passed, proceeding with update...
{
  "status": "running",
  "timeout": 60,
  "frequency": 5,
  "magicclose": true
}
Fri Sep 13 22:49:16 UTC 2024 upgrade: Image metadata not present
Fri Sep 13 22:49:17 UTC 2024 upgrade: Saving config files...
etc/config/default.data
etc/config/dhcp
```

```
etc/config/eos/log_levels.json
etc/config/eos_default_cert.crt
etc/config/eos_private_key.pem
etc/config/firewall
etc/config/network
etc/config/nginx.conf
etc/config/qos
etc/config/snmpd.conf
etc/config/system
etc/config/update.key
etc/crontabs/root
etc/group
etc/hosts
etc/inittab
etc/logrotate.conf
etc/nginx/fastcgi_params
etc/nginx/koi-utf
etc/nginx/koi-win
etc/nginx/mime.types
etc/nginx/naxsi_core.rules
etc/nginx/restrict_locally
etc/nginx/uci.conf
etc/nginx/uci.conf.template
etc/nginx/uwsgi_params
etc/nginx/win-utf
etc/opkg/keys/0490417c6c0e870f
etc/opkg/keys/b5043e70f9a75cde
etc/passwd
etc/profile
etc/profile.d/sys_bashrc.sh
etc/rc.local
etc/shadow
etc/shells
etc/shinit
etc/ssh/sshd_config
etc/sysctl.conf
Fri Sep 13 22:49:22 UTC 2024 upgrade: Commencing upgrade. Closing all shell sessions.
```

```
admin@192.168.60.1's password:
```

```
--: EOS :--
```

```
LSS2200-8P # show version
```

```
Version Information
```

```
=====
```

```
Model:                LSS2200-8P
Firmware Version:    2.1.0.0R2
Hardware Rev:        DAB
MAC Address:         00:C0:F2:96:07:A0
Serial Number:       00C0F29607A0
LSS2200-8P #
```

```
Messages:
```

```
Fetching Update
```

```
Fetching Image for verification
```

```
Failed to get /update.tgz: TFTP response timeout
```

```
Failed to get contents from: tftp://192.168.10.50/update.tgz
Cannot open file: Failed to get /update.tgz: TFTP response timeout
Failed to get : Operation timed out after 10000 milliseconds with 0 out of 0 bytes received
Cannot open file: Failed to get : Operation timed out after 10000 milliseconds with 0 out of 0 bytes received
Command failed: ubus call system sysupgrade { "prefix": "VtmpVroot", "path": "VtmpVLSS2200-8P_2.1.0.0R2_image.img", "backup": "VtmpVsysupgrade.tgz", "command": "VlibVupgradeVdo_stage2", "options": { "save_partitions": 1 } } (Connection failed)
```

```
LSS2200-8P (config-admin)# Connection to 192.168.60.1 closed by remote host.
Connection to 192.168.60.1 closed.
```

Issue: Firmware backup failed

Recovery:

1. Backup the running config to a remote file.
2. Edit the backup file to remove all "DIO*" commands.
3. Copy default-config to startup-config.
4. Perform the firmware upgrade.
5. Restore running-config from the edited backup file.
6. If the restore succeeds, then optionally change DigitalIO settings as desired, and then copy running-config to startup-config.

Note 1: If the above steps fail, then after upgrading from v1.5.0.0R16 to v1.6.0.0R6, reload defaults and save or do a factory reset. This recovery procedure will lose all modified config settings.

Note 2: If upgrading from v1.5.0.0R16 to v1.6.0.0R6, reload defaults and save or do a factory reset.

Note 3: If upgrading from v1.6.0.0R6 to v1.7.0.0R5, reload defaults is not required; however, backups from v1.6.0.0R6 will be missing the global LLDP command if it had been enabled. The new command would have to be added to backup or a new backup created.

Command: **no**

Description: Negate a command or set its defaults

Mode: Config Admin mode

Parameters:

username	Delete or disable a user account
login name for the user account, Tab to complete/list	User account to delete or disable
enable	Do not enable user account (prohibit login)
webserver	Remove web server settings
certificate	Remove current SSL certificate and key files and clear key passphrases

Example:

```
Lss2200-8p (config-admin)# no username BobB
User BobB not found
LSS2200-8P (config-admin)# no username admin enable
Lss2200-8p (config-admin)# no webserver certificate
LSS2200-8P (config-admin)#
```

Command: `password`

Description: Change password for the specified user account

Mode: Config Admin mode

Parameters: Login name for the user account, Tab to complete/list User account to modify

Example:

```
LSS2200-8P (config-admin)# password BobB
User BobB not found
LSS2200-8P (config-admin)# password admin
New password:
Password must be at least 6 characters long.  Retry.
New password:
Confirm password:
LSS2200-8P (config-admin)# password <tab>
admin      PLM1      TechSuppt
LSS2200-8P (config-admin)# password PLM1
New password:
Confirm password:
LSS2200-8P (config-admin)# password Admin123
User Admin123 not found - cannot change password
LSS2200-8P (config-admin)#
```

Messages: *Password must be at least 6 characters long. Retry.*

Note: It is generally easier to omit the password when creating a user account, and then immediately follow with the "password <user>" command, which prompts for password entry and does not echo it to the screen.

Command: **username**

Description: Create or modify a local user account.

To create a user account if the name does not match a configured user:

- the name and group are required; an encrypted password is optional.

To modify a user account if the name matches a configured user:

- a name is required.

- the group and enable are optional, but at least one of them is required.

Mode: Config Admin mode

Parameters:

Login name for the user account, Tab to complete/list Login name for the user account to add or modify.

enable Enable existing user account (allow login).

group Assign user group for command authorization.

password Encrypted password in MD5 or SHA-256 format.

User group (authorization) Assign user group for command authorization (readonly/config/admin).

Regex pattern for encrypted password in MD5 or SHA-256 format Encrypted password in MD5 or SHA-256 format.

User group (authorization) Assign user group for command authorization (readonly/config/admin/sdk)

admin

RO User

Example 1:

```
lss2200-8p (config-admin)# username BobB enable group config password All40ne!
Syntax error: Illegal command line
lss2200-8p (config-admin)# username TomT enable
User TomT not found
lss2200-8p (config-admin)# username BobB enable group config password Abcd1234!@#$
Syntax error: Illegal command line
lss2200-8p (config-admin)# username BobB enable group config
Add user BobB succeeded
lss2200-8p (config-admin)# do show users
Local Users:
| Name          | Group          | Status  |
|-----|-----|-----|
| admin         | admin         | Enabled |
| BobB          | config        | Enabled |
lss2200-8p (config-admin)#
```

Example 2:

```
LSS2200-8P (config-admin)# username ConfigUser1 enable group config
Add user ConfigUser1 succeeded
LSS2200-8P (config-admin)# do show users
Local Users:
| Name          | Group          | Status  |
|-----|-----|-----|
| admin         | admin         | Enabled |
| RO User      | readonly      | Enabled |
| ConfigUser1  | config        | Enabled |
```



```
LSS2200-8P (config-admin)# username SdkUser1 enable group sdk
Add user SdkUser1 succeeded
LSS2200-8P (config-admin)# do show users
Local Users:
| Name           | Group           | Status   |
|=====|
| admin          | admin           | Enabled  |
| RO User        | readonly        | Enabled  |
| ConfigUser1    | config          | Enabled  |
| SdkUser1       | sdk             | Enabled  |
LSS2200-8P (config-admin)#
```

Example 3:

```
LSS2200-8P (config-admin)# username admin group sdk enable
Modify user admin succeeded
User admin is not authorized to set requested data
LSS2200-8P (config-admin)#

LSS2200-8P (config-admin)# username admin group readonly enable Admin123
Syntax error: Illegal command line
LSS2200-8P (config-admin)# username admin group readonly enable
User admin is not authorized to set requested data
Modify user admin failed
User admin is not authorized to set requested data
LSS2200-8P (config-admin)#
LSS2200-8P (config-admin)# username admin group config enable
User admin is not authorized to set requested data
Modify user admin failed
User admin is not authorized to set requested data
LSS2200-8P (config-admin)#
```

User Groups:

Read Only: This user can view (read) information but cannot configure (write) new or edit existing parameters. A Read Only user can only use show commands to view data and cannot perform config commands.

Config: This user can perform show commands to view data and perform Web UI config functions and CLI commands to set parameters.

Admin: This user has full access to any and all Web UI menu items and CLI commands.

Web Server Commands

SSL Certificate, Private Key file, and optional Passphrase Commands

FW 1.6.0.0R6 adds CLI commands to upload and install a self-signed SSL server certificate, private key file, and optional passphrase if it was used to encrypt the key. The following file combinations are supported:

- Certificate and key in a single file.
- Separate certificate and key files (both may be installed in a single command, or each may be installed in a separate command).
- Optional key encryption with password protection (user must provide the password).
- Users may set one persistent and/or one temporary password. If a temporary password is provided, it takes precedence over a persistent password; however, it will not survive a restart.

Note the following:

- If a key is encrypted with password protection, the current implementation expects a minimum password length of 6 characters.
- A second CLI session for watching the system log is optional. Viewing the log about a minute after installing a certificate and password-protected key is an easy way to check whether the web server files loaded successfully.
- If the web services need a password in order to load the certificate, there is no alarm or visible indication other than log messages. This will be provided in a future release.
- A Lantronix self-signed certificate and private key are used by default, both during initial launch and after removing a custom cert.
- The web proxy and REST server will not load a certificate unless the certificate and key are consistent.
- If the key is password protected, the web proxy and REST server will not load the key unless the (persistent or temporary) passphrase for that key has been entered.
- The web proxy and REST server will not load an installed custom cert and key unless and until the “webservice reload” command is executed.
- Depending on your browser settings (e.g., cache enabled), if you accepted the self-signed cert exception when testing one certificate, you might need to remove the exception in order for the browser to accept a new self-signed cert.
- The Web UI and REST API share the same SSL files. When a certificate and key are installed and reloaded, both servers are updated together. When a new certificate is loaded, current web users and REST API clients must reconnect and login again.

Known Issues:

Reloading factory defaults does not remove a customer installed webservice certificate. It can be removed with this command: LSS2200-8P (config-admin)# **no webservice certificate**

Web Server Config Admin Mode Commands

To display available Web Server commands, at the Config Admin mode prompt, enter a ? (question mark):

```
LSS2200-8P (config-admin)# webserv ?
install-certificate Upload and install a custom SSL certificate from the specified URL,
with optional key file and key encryption password
install-key Upload and install a custom SSL private key from the specified URL,
with optional key encryption password
reload Signal the web server to reload its config and activate new cert
file(s)
set-password Prompt for a key encryption password (persistent over restarts and
firmware updates)
set-temp-password Prompt for a temporary key encryption password (does not survive
restarts)
LSS2200-8P (config-admin)#
```

Command: **webserv install-certificate** <url> [key <url>] [password_prompt true|false]]

Description: Install a custom certificate file, which may or may not contain a private key. If cert and key files are separate, optionally install the key file too. If password_prompt is true then prompt for the password needed to decrypt the key. After entering this command, it is suggested to follow up with "**webserv reload**" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

Remote URI (<protocol>://<address>/<file_or_path>) Remote URI of the cert file to upload -- URI examples: [tftp://<address>/custom_cert.pem] | [scp://<username>:<password>@<address>:/custom_cert.pem]

Protocol: https, http, scp, tftp, ftp

Example:

```
LSS2200-8P (config-admin)# webserv install-certificate https:
//192.168.1.66/customcert@192.168.1.66:customcert.pem
Syntax error: Illegal parameter
LSS2200-8P (config-admin)#
```

Note the typo in the URL in the above example. The following URL would be valid and attempted, although the command will only succeed if there is a web server running on the host at that address and the file name is accessible and contains a certificate: **https://192.168.1.66:customcert.pem**.

Command: **webservers install-key** <url> [password_prompt true|false]

Description: Install a private key file, which might be encrypted and protected with a password. If password_prompt is true then prompt for the password needed to decrypt the key. Use this command if the certificate and key files are separate and you installed a certificate without using the option to install the key. After entering this command, it is suggested to follow up with "webservers reload" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

install-key Upload and install a custom SSL private key from the specified URL, with optional key encryption password.

Remote URI (<protocol>://<address>/<file_or_path>) Remote URI of the private key file to upload -- URI examples: [tftp://<address>/custom_key.pem] | [scp://<username>:<password>@<address>/custom_key.pem]

Example:

```
LSS2200-8P (config-admin)# webservers install-key
scp://admin:adminadmin@192.168.1.66:custom_key.pem
Failed to install SSL certificate from scp://admin:adminadmin@192.168.1.66:custom_key.pem
LSS2200-8P (config-admin)#
```

Command: **webservers reload**

Description: Restart the REST server and signal the web proxy to reload its config. **Note:** Changes do not take effect until this command is executed successfully. After entering this command, it is suggested to follow up with "webservers reload" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

Example:

```
LSS2200-8P (config-admin)# webservers reload
lss2200-8p (config-admin)#
```

Command: **webservers set-password**

Description: Prompt for a persistent password for decrypting the private key. The password is written to the persistent password file, replacing previous contents of that file. After entering this command, it is suggested to follow up with "webservers reload" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

Example:

```
LSS2200-8P (config-admin)# webservers set-password
SSL key password:
Confirm password:
lss2200-8p (config-admin)# webservers set-password
SSL key password:
Confirm password:
lss2200-8p (config-admin)#
```

Messages: *Passwords do not match. Retry.*

Password must be at least 6 characters long. Retry.

Failed to add SSL password

Command: **webserver set-temp-password**

Description: Prompt for a temporary password for decrypting the private key. The password is written to the temporary password file, replacing previous contents of that file. After entering this command, it is suggested to follow up with "webserver reload" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

Example:

```
LSS2200-8P (config-admin)# webserver set-temp-password
Temporary SSL key password:
Confirm password:
LSS2200-8P (config-admin)#
lss2200-8p (config-admin)# webserver set-temp-password
Temporary SSL key password:
Confirm password:
Passwords do not match.  Retry.
Temporary SSL key password:
Confirm password:
lss2200-8p (config-admin)#
```

Messages:

Password must be at least 6 characters long. Retry.

Failed to add SSL password

Command: **no webserver certificate**

Description: Remove the current certificate (and associated files) and install the default cert and key files. After entering this command, it is suggested to follow up with "webserver reload" command to apply the newly installed file(s) and optional password.

Mode: Config Admin mode

Parameters:

Example:

```
lss2200-8p (config-admin)# no webserver certificate
lss2200-8p (config-admin)#
```

Example Showing the Complete Procedure

1. Connect a web browser to the LSS2200-8P Web UI. View the certificate and verify the creation date is 13 Jan 2022 (the LSS2200-8P default cert date).

2. Generate a certificate and private key, optionally setting an encryption password for the key. Examples:

Password-protected key:

```
openssl req -x509 -days 3650 -newkey rsa:4096 -keyout private_key_pw.pem -out custom_cert.crt
```

Password-less (add `-nodes` – i.e., no DES encryption):

```
openssl req -x509 -days 3650 -nodes -newkey rsa:4096 -keyout selfsigned.key -out selfsigned.crt
```

3. If needed, copy the cert and key files to where the switch can retrieve them via URL, such as to a tftp server.

4. From the LSS2200-8P CLI, install the certificate and key in a single command, then reload the web server config. Example:

```
lss2200-8p # configure terminal
lss2200-8p (config)# admin
lss2200-8p (config-admin)# webserver install-certificate tftp://192.168.60.101/custom_cert.crt key
tftp://192.168.60.101/private_key.pem password_prompt true
SSL key password:
Confirm password:
lss2200-8p (config-admin)# webserver reload
lss2200-8p (config-admin)#
```

5. Connect a web browser to the LSS2200-8P Web UI. View the certificate and verify the creation date matches the custom cert creation date.

6. Login to verify the REST API is also working. Note that it might take more than one attempt, as the REST server takes a while to load. Depending on your browser, you might also need to remove the exception from when you accepted the previous certificate.

7. Revert to the default certificate:

```
lss2200-8p (config-admin)# no webserver certificate
lss2200-8p (config-admin)# webserver reload
```

8. Connect a web browser to the LSS2200-8P Web UI. View the certificate and verify the creation date is 13 Jan 2022 (LSS2200-8P default certificate date).

9. Login to verify the REST API works.

10. Install the cert and key using separate commands, as in the example below. (You can request a prompt for the passphrase in the same command as the key, or separately using `webserver set-password` or `webserver set-temp-password`. The web proxy logs an error if you install a password-protected key without providing a password, although adding the password later will resolve it. If you set the password before installing the key, then the Web proxy will accept the key right away.)

```
lss2200-8p (config-admin)# webserver install-certificate t<tftp://192.168.60.101/custom_cert.crt>
lss2200-8p (config-admin)# webserver install-key t<tftp://192.168.60.101/private_key.pem>
password_prompt true
SSL key password:
Confirm password:
lss2200-8p (config-admin)# webserver reload
lss2200-8p (config-admin)#
```

11. Connect a web browser to the LSS2200-8P Web UI. View the certificate and verify the creation date matches the custom cert creation date.

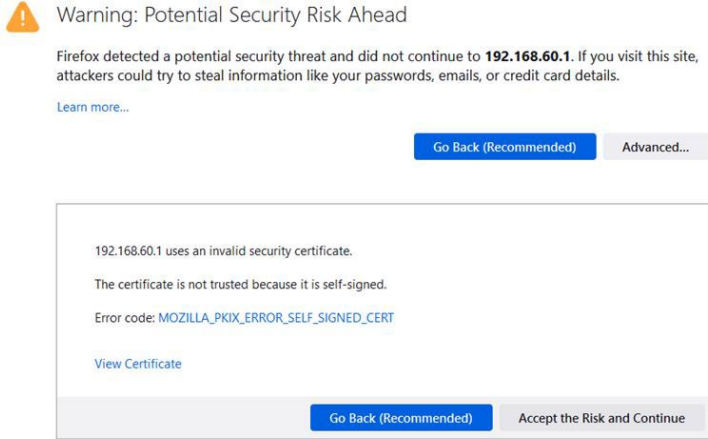
12. Login to verify the REST API works.

IMPORTANT! : When you are done, make sure your web services come up properly at the next boot. Either (A) revert to the default certificate using either of the command sequences listed below, or (B) if you've installed a custom certificate and password-protected key and want to continue using them, then make sure you have

entered the persistent password needed to decrypt that key. If you only entered a temporary password, it will be lost when the system reboots or shuts down.

```
lss2200-8p (config-admin)# no webserver certificate
lss2200-8p (config-admin)# webserver reload
```

It is possible to view the installed certificate in the web browser. It is presented in different ways. For example, in Firefox, use the View certificate link:



Interface Config Mode Commands

Interface config mode commands exist for these interfaces:

- 10GigabitEthernet
- GigabitEthernet
- pvlan
- vlan

10GbE and GbE Interface Config Mode Commands

To show available Interface Config mode commands for 10GbE and GbE interfaces enter a `?`.

```
lss2200-8p (config)# interface GigabitEthernet 1/2
lss2200-8p (config-if)# ?
auto-negotiate  Enable Auto-negotiate the switch port
description     Update the switch port description
duplex          Update the switch port's duplex
enable          Enable the switch port
end             Go back to EXEC View
exit            Exit from interface configuration mode
flow-control    Update the switch port's flow control
ip              IP Configuration
jumbo-frame     Enable Jumbo-Frame on switch port
lldp            Configure LLDP
lldp-med        Enables LLDP-MED on the interface
loop-detect     Loop Detect Configuration
monitor         Monitoring different system events
no              Negate a command or set its defaults
poe             Enable to configure Power over Ethernet
port-security   Enable port security for the port
pvlan           Set PVLAN membership
qos             QoS configuration for port
sfp-mode        Update the switch port's sfp mode
spanning-tree   Spanning tree port configuration
speed           Update the switch port's speed
switchport      Switching mode characteristics

lss2200-8p (config-if)#
```

Command: [admin](#)

Description: Enter Config Admin mode. See [Config Admin Mode Commands](#) on page 97.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: None

Example:

```
LSS2200-8P (config-if)# admin
LSS2200-8P (config-admin)#
```


Command: **aging-time**

Description: Set MAC address aging time

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: MAC address aging time in seconds Set MAC address aging time (4..956)

Example:

```
LSS2200-8P (config-if)# aging-time 4
LSS2200-8P (config)# interface GigabitEthernet 1/2
LSS2200-8P (config-if)# aging-time 956
LSS2200-8P (config)#
```

Command: **alarm**

Description: Set alarms

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

```
LSS2200-8P (config-if)# alarm
10GigabitEthernet-1/1-Temperature-high-alarm 10GigabitEthernet-1/1-Temperature-low-alarm
10GigabitEthernet-1/1-Temperature-high-warning 10GigabitEthernet-1/1-Temperature-low-warning
10GigabitEthernet-1/1-Voltage-high-alarm 10GigabitEthernet-1/1-Voltage-low-alarm
10GigabitEthernet-1/1-Voltage-high-warning 10GigabitEthernet-1/1-Voltage-low-warning
10GigabitEthernet-1/1-Bias-high-alarm 10GigabitEthernet-1/1-Bias-low-alarm
10GigabitEthernet-1/1-Bias-high-warning 10GigabitEthernet-1/1-Bias-low-warning
10GigabitEthernet-1/1-Tx-Power-high-alarm 10GigabitEthernet-1/1-Tx-Power-low-alarm
10GigabitEthernet-1/1-Tx-Power-high-warning 10GigabitEthernet-1/1-Tx-Power-low-warning
10GigabitEthernet-1/1-Rx-Power-high-alarm 10GigabitEthernet-1/1-Rx-Power-low-alarm
10GigabitEthernet-1/1-Rx-Power-high-warning 10GigabitEthernet-1/1-Rx-Power-low-warning
10GigabitEthernet-1/2-Temperature-high-alarm 10GigabitEthernet-1/2-Temperature-low-alarm
10GigabitEthernet-1/2-Temperature-high-warning 10GigabitEthernet-1/2-Temperature-low-warning
10GigabitEthernet-1/2-Voltage-high-alarm 10GigabitEthernet-1/2-Voltage-low-alarm
10GigabitEthernet-1/2-Voltage-high-warning 10GigabitEthernet-1/2-Voltage-low-warning
10GigabitEthernet-1/2-Bias-high-alarm 10GigabitEthernet-1/2-Bias-low-alarm
10GigabitEthernet-1/2-Bias-high-warning 10GigabitEthernet-1/2-Bias-low-warning
10GigabitEthernet-1/2-Tx-Power-high-alarm 10GigabitEthernet-1/2-Tx-Power-low-alarm
10GigabitEthernet-1/2-Tx-Power-high-warning 10GigabitEthernet-1/2-Tx-Power-low-warning
10GigabitEthernet-1/2-Rx-Power-high-alarm 10GigabitEthernet-1/2-Rx-Power-low-alarm
10GigabitEthernet-1/2-Rx-Power-high-warning 10GigabitEthernet-1/2-Rx-Power-low-warning
loop-shutdown-GigabitEthernet-1/1 loop-shutdown-GigabitEthernet-1/2
loop-shutdown-GigabitEthernet-1/3 loop-shutdown-GigabitEthernet-1/4
loop-shutdown-GigabitEthernet-1/5 loop-shutdown-GigabitEthernet-1/6
loop-shutdown-GigabitEthernet-1/7 loop-shutdown-GigabitEthernet-1/8
loop-shutdown-10GigabitEthernet-1/1 loop-shutdown-10GigabitEthernet-1/2
port-security-GigabitEthernet-1/1-shutdown port-security-GigabitEthernet-1/1-limit-reached
port-security-GigabitEthernet-1/2-shutdown port-security-GigabitEthernet-1/2-limit-reached
port-security-GigabitEthernet-1/3-shutdown port-security-GigabitEthernet-1/3-limit-reached
port-security-GigabitEthernet-1/4-shutdown port-security-GigabitEthernet-1/4-limit-reached
port-security-GigabitEthernet-1/5-shutdown port-security-GigabitEthernet-1/5-limit-reached
port-security-GigabitEthernet-1/6-shutdown port-security-GigabitEthernet-1/6-limit-reached
port-security-GigabitEthernet-1/7-shutdown port-security-GigabitEthernet-1/7-limit-reached
port-security-GigabitEthernet-1/8-shutdown port-security-GigabitEthernet-1/8-limit-reached
port-security-10GigabitEthernet-1/1-shutdown port-security-10GigabitEthernet-1/1-limit-reached
port-security-10GigabitEthernet-1/2-shutdown port-security-10GigabitEthernet-1/2-limit-reached
CPU-Temperature
```

Example:

```
LSS2200-8P (config-if)# alarm loop-shutdown-GigabitEthernet-1/3
LSS2200-8P (config)#
```

Command: **auto-negotiate**

Description: Enable Auto-negotiate on 1GbE and 10GbE (copper) ports.

Mode: 10GbE and GbE Interface Config Modes

Parameters: None

Example:

```
lss2200-8p (config-if)# auto-negotiate
lss2200-8p (config-if)#
lss2200-8p (config-if)# auto-negotiate
WARNING- auto-neg setting fixed by sfp mode
lss2200-8p (config-if)#
```

Command: **ble**

Description: Bluetooth Low energy commands

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: broadcast Enable BLE Broadcast
disconnect ble disconnect

Example:

```
LSS2200-8P (config)# ble disconnect
LSS2200-8P (config)# ble broadcast
lss2200-8p (config)# do show ble broadcast
BLE Broadcast State
=====
Broadcast Status      : Enabled
lss2200-8p (config)# do show ble connection
BLE Software Connection State
=====
Connection State     : BLE Disconnected
lss2200-8p (config)# do show ble mac
BLE MAC Info.
=====
BLE MAC              : 00:0B:57:4E:FD:A1
lss2200-8p (config)# do show ble status
BLE Status
=====
Broadcast Status     : Enabled
Connection State     : BLE Disconnected
BLE Version          : LN BLE 1.0.3
BLE MAC              : 00:0B:57:4E:FD:A1
lss2200-8p (config)# do show ble version
BLE Version Info.
=====
BLE Version          : LN BLE 1.0.3
lss2200-8p (config)#
```

Command: `clock`

Description: Configure time settings. **Note:** if system time is changed, any Web UI users and REST API clients must log in again.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: `timezone` Configure system time zone

String `system timezone`

Africa/Abidjan	Africa/Accra	Africa/Addis_Ababa
Africa/Algiers	Africa/Asmara	Africa/Bamako
Africa/Bangui	Africa/Banjul	Africa/Bissau
Africa/Blantyre	Africa/Brazzaville	Africa/Bujumbura
Africa/Cairo	Africa/Ceuta	Africa/Conakry
Africa/Dakar	Africa/Dar_es_Salaam	Africa/Djibouti
Africa/Douala	Africa/Freetown	Africa/Gaborone
Africa/Harare	Africa/Johannesburg	Africa/Juba
Africa/Kampala	Africa/Khartoum	Africa/Kigali
Africa/Kinshasa	Africa/Lagos	Africa/Libreville
Africa/Lome	Africa/Luanda	Africa/Lubumbashi
Africa/Lusaka	Africa/Malabo	Africa/Maputo
Africa/Maseru	Africa/Mbabane	Africa/Mogadishu
Africa/Monrovia	Africa/Nairobi	Africa/Ndjamena
Africa/Niamey	Africa/Nouakchott	Africa/Ouagadougou
Africa/Porto-Novo	Africa/Sao_Tome	Africa/Tripoli
Africa/Tunis	Africa/Windhoek	America/Adak
America/Anchorage	America/Anguilla	America/Antigua
America/Araguaina	America/Argentina/Buenos_Aires	America/Argentina/Catamarca
America/Argentina/Cordoba	America/Argentina/Jujuy	America/Argentina/La_Rioja
America/Argentina/Mendoza	America/Argentina/Rio_Gallegos	America/Argentina/Salta
America/Argentina/San_Juan	America/Argentina/San_Luis	America/Argentina/Tucuman
America/Argentina/Ushuaia	America/Aruba	America/Asuncion
America/Atikokan	America/Bahia	America/Bahia_Banderas
America/Barbados	America/Belem	America/Belize
America/Boa_Vista	America/Bogota	America/Blanc-Sablon
America/Cambridge_Bay	America/Bogota	America/Boise
America/Caracas	America/Campo_Grande	America/Boise
America/Chicago	America/Cayenne	America/Cancun
	America/Cayman	America/Cayman
	America/Chihuahua	America/Costa_Rica
		America/Costa_Rica



Europe/Zurich	Indian/Antananarivo	Indian/Chagos
Indian/Christmas	Indian/Cocos	Indian/Comoro
Indian/Kerguelen	Indian/Mahe	Indian/Maldives
Indian/Mauritius	Indian/Mayotte	Indian/Reunion
Pacific/Apia	Pacific/Auckland	Pacific/Bougainville
Pacific/Chatham	Pacific/Chuuk	Pacific/Easter
Pacific/Efate	Pacific/Enderbury	Pacific/Fakaofu
Pacific/Fiji	Pacific/Funafuti	Pacific/Galapagos
Pacific/Gambier	Pacific/Guadalcanal	Pacific/Guam
Pacific/Honolulu	Pacific/Kiritimati	Pacific/Kosrae
Pacific/Kwajalein	Pacific/Majuro	Pacific/Marquesas
Pacific/Midway	Pacific/Nauru	Pacific/Niue
Pacific/Norfolk	Pacific/Noumea	Pacific/Pago_Pago
Pacific/Palau	Pacific/Pitcairn	Pacific/Pohnpei
Pacific/Port_Moresby	Pacific/Rarotonga	Pacific/Saipan
Pacific/Tahiti	Pacific/Tarawa	Pacific/Tongatapu
Pacific/Wake	Pacific/Wallis	UTC

Example:

```
LSS2200-8P (config-if)# clock timezone UTC
LSS2200-8P (config)#
```

Command: **description**

Description: Update the switch port description
 Mode: 10GbE and GbE Interface Config Modes
 Parameters: String Port description

Example:

```
lss2200-8p (config-if)# description 10GbE Cu Port1
Syntax error: Illegal command line
lss2200-8p (config-if)# description 10GbECuPort1
lss2200-8p (config-if)#
```

Command: **do**

Description: Run Exec mode commands in Interface Config mode.
 Mode: Interface Config mode for 10GbE and 1GbE ports
 Parameters:

!	alarm	clear	clock	configure	copy	debug
exit	nslookup	ping	reload	show	ssh	telnet
traceroute	who					

host Hostname or IP-address to ping
 interface Optional source IP-address or interface for sending packets
 repeat Requests to send count, default is 5
 <cr>

Arguments ignored comment text

Example:

```
LSS2200-8P (config-if)# do show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin | Status
=====
| VLAN 1         | 172.27.100.84/24 | DHCP      | UP
LSS2200-8P (config-if)#
```

Command: **duplex**

Description: Update the switch port's duplex mode
 Mode: 10GbE and GbE Interface Config Modes
 Parameters: full or half Full duplex or Half duplex (full/half)

Example:

```
lss2200-8p (config-if)# duplex half
WARNING : auto_negotiate is set, duplex will not have any effect
1G half-duplex not supported
Validation failed.
lss2200-8p (config-if)# duplex full
WARNING : auto_negotiate is set, duplex will not have any effect
lss2200-8p (config-if)# exit
lss2200-8p (config)# interface 10GigabitEthernet 1/7
Port 10GigabitEthernet 1/7 does not exist
lss2200-8p (config)# interface 10GigabitEthernet 1/1
```

```
lss2200-8p (config-if)# duplex half
WARNING- duplex setting fixed by sfp mode
lss2200-8p (config-if)#
```

Command: **enable**

Description: Enable the switch port
Mode: 10GbE and GbE Interface Config Modes
Parameters: None
Example:

```
lss2200-8p (config-if)# enable
lss2200-8p (config-if)#
```

Command: **end**

Description: Go to Exec mode from Interface Config mode
Mode: Interface Config mode for 10GbE and 1GbE ports
Parameters: None
Example:

```
LSS2200-8P (config-if)# end
LSS2200-8P #
```

Command: **exit**

Description: Exit from this Interface Config mode
Mode: 10GbE and GbE Interface Config Modes
Parameters: None
Example:

```
LSS2200-8P # configure terminal
lss2200-8p (config)# interface GigabitEthernet 1/2
lss2200-8p (config-if)# exit
lss2200-8p (config)#
```

Command: **flow-control**

Description: Update the switch port's flow control
Mode: 10GbE and GbE Interface Config Modes
Parameters: Directions to enable flow control (none/rx/tx/both)
Example:

```
lss2200-8p (config-if)# flow-control none
lss2200-8p (config-if)# flow-control rx
lss2200-8p (config-if)#
```

Command: **interface**

Description: Select an interface to configure

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters (?): 10GigabitEthernet Ethernet 10G interface (1/1 1/2)
 GigabitEthernet Ethernet 1G interface (1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8)
 vlan VLAN interface
 Switch/Interface number Ethernet 10G interface number
 Switch/Interface number Ethernet 1G interface number
 Number in the range 1-4094 VLAN Identifier (1..4094)
 address Comma separated list of DNS servers

Example:

```
LSS2200-8P (config)# interface 10GigabitEthernet 1/1
LSS2200-8P (config-if)#
LSS2200-8P (config-if)# interface vlan 10
LSS2200-8P (config-vlan-if)# ?
  dns      Add to DNS Server list
  end      Go back to EXEC View
  exit     Exit from interface configuration mode
  ignore   Ignore information configured/received
  ip       IPv4 address configuration
  no       Negate a command or set its defaults

LSS2200-8P (config-vlan-if)#

LSS2200-8P (config-vlan-if)# dns address 1.2.3.4,2.4.6.8
libyang[0]: Invalid value "" in "dns" element. (path: /csi-logical-interfaces:dns[.=''])
LSS2200-8P (config-vlan-if)#
LSS2200-8P (config-vlan-if)# exit
LSS2200-8P (config)#
```

Parameters (tab):

admin	aging-time	alarm	ble	clock	dns	do	end	exit	interface
ip	lldp	lldp-med	logging	loop-detect	lpm	monitor	percepixon	nfc	no
ntp	poe								

Command:	ip
Description:	IP Configuration
Mode:	10GbE and GbE Interface Config Modes
Parameters:	<p>dhcp IP DHCP Configuration</p> <p>relay Relay Configuration <displays for a <tab> but not for a ?></p> <p>server Server Configuration</p> <p>snooping Snooping Configuration <displays for a <tab> but not for a ?></p> <p>trusted Set Port as Trusted for DHCP Snooping</p> <p>String DHCP Server Name</p> <p>authoritative Set DHCP Server as Authoritative</p> <p>default-router Configure the Default Router Address List for the Pool</p> <p>dns-server Configure the DNS Server Address List for the Pool</p> <p>domain-name Configure the Domain Name for the Pool</p> <p>exit Exit from DHCP Server configuration mode</p> <p>host Configure Host Based IP Address for DHCP Server</p> <p>lease DHCP Address Lease Time</p> <p>netbios-name-server Configure the Netbios Name SERVER Address List for the Pool</p> <p>netbios-node-type Configure the Netbios Node Type</p> <p>netbios-scope Configure the netbios scope option</p> <p>nis-domain-name Configure the NIS Domain Name option</p> <p>nis-server Configure the NIS SERVER Address List for the Pool</p> <p>no Negate a command or set its defaults</p> <p>ntp-server Configure the NTP SERVER Address List for the Pool</p> <p>option Configure the DHCP Option</p> <p>range Configure the DHCP Pool Range</p> <p>server DHCP Server Address List Configuration</p> <p>vendor Configure vendor specific Information</p> <p>A.B.C.D Comma separated list of Default Router Address</p> <p>A.B.C.D Comma separated list of DNS Address</p> <p>String Domain Name</p> <p>client-id Configure Client ID based Fixed IP Address mapping in DHCP Server</p> <p>mac Configure Host MAC Address based Fixed IP Address in DHCP Server</p> <p>String Client Identifier</p> <p>A.B.C.D IP Address</p> <p>hostname Host Name</p> <p>Hostname Host Name</p> <p>time DHCP Address Lease Time</p> <p>DHCP Lease time Lease value (0-365)days/(1-24)hours/(1-60)minutes (1..365)</p> <p>DHCP Lease for Days/Hours/Minutes Lease Type (days/hours/minutes)</p> <p>name NTP Server name</p> <p>address NTP Server address (IPv4 address or DNS domain name)</p> <p>Server NTP Server address (IPv4 address or DNS domain name)</p> <p>DHCP Option Code Option Code (1..254)</p> <p>String Option Value (DHCP)</p>

A.B.C.D	IPv4 DHCP Pool Start Address
A.B.C.D	IPv4 DHCP Pool Start Address
A.B.C.D	IPv4 DHCP Pool End Address
netmask	IPv4 DHCP Pool Netmask
broadcast	IPv4 DHCP Pool Broadcast Address
vendor	Vendor Class Identifier
user	User Class Identifier
lease	DHCP Address Lease Time
A.B.C.D	IPv4 DHCP Pool Broadcast Address
String	Vendor Identifier
address	DHCP Server Listen Address List Configuration
A.B.C.D	Comma separated list of listen Address
specific	Configure vendor specific Information
info	Configure the vendor specific info

Example:

```
lss2200-8p (config-dhcp)# authoritative
lss2200-8p (config-dhcp)# host client-id client1 1.2.3.4 lease time 300 days
lss2200-8p (config-if)# ip dhcp snooping trusted
lss2200-8p (config-dhcp)# ntp server name NtpSrvr1 address 4.3.2.1
lss2200-8p (config-dhcp)# option 1 DhcpOpt1
Vendor-class-id 1 already exists
lss2200-8p (config-dhcp)# option 100 DhcpOpt100
lss2200-8p (config-dhcp)# option 92 DhcpOpt92
lss2200-8p (config-dhcp)# range 1.2.3.4 1.2.3.9 netmask 255.255.255.0 broadcast 2.3.4.6
vendor ssssss user lease 10
lss2200-8p (config-dhcp)# server address 3.4.5.6
lss2200-8p (config-dhcp)# vendor specific info 60 43
lss2200-8p (config-dhcp)# exit
lss2200-8p (config)#
```

Command: [jumbo-frame](#)

Description: Enable Jumbo-Frame on switch port; up to 10K bytes.

Mode: 10GbE and GbE Interface Config Modes

Parameters: None

Example:

```
lss2200-8p (config-if)# jumbo-frame
lss2200-8p (config-if)#
```


Command: **lldp**

Description: Configure LLDP

Mode: 10GbE and GbE Interface Config Modes

Parameters: both LLDP packets are both received and sent on the interface
receive LLDP packets are received on the interface.
transmit LLDP packets are sent on the interface

Example:

```
lss2200-8p (config-if)# lldp both
lss2200-8p (config-if)# lldp receive
lss2200-8p (config-if)# lldp transmit
lss2200-8p (config-if)#
```

Command: **lldp-med**

Description: Enables LLDP-MED on the interface. LLDP must be enabled globally.

Mode: 10GbE and GbE Interface Config Modes

Parameters: None

Example:

```
lss2200-8p (config-if)# lldp-med
lss2200-8p (config-if)#
```

Command: **loop-detect**

Description: Loop Detect configuration

Mode: 10GbE and GbE Interface Config Modes

Parameters: action Set Loop Detect Action Type
Action to take on loop detection Action to take on loop detection (log/shutdown/all)

Example:

```
lss2200-8p (config-if)# loop-detect action log
lss2200-8p (config-if)# loop-detect action shutdown
lss2200-8p (config-if)# loop-detect action all
lss2200-8p (config-if)#
```

Command: **monitor**

Description: Monitoring different system events

Mode: 10GbE and GbE Interface Config Modes

Parameters: both Mirror received and transmitted traffic
rx Mirror received traffic only
tx Mirror transmitted traffic only

Example:

```
lss2200-8p (config-if)# monitor both
lss2200-8p (config-if)# monitor tx
lss2200-8p (config-if)# monitor rx
lss2200-8p (config-if)#
```

Command: **nfc**

Description: Enable Near Field Communication for an interface

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: None

Example:

```
LSS2200-8P (config-if)# nfc
LSS2200-8P (config)#
```

Command: **no**

Description: Negate a command or set its defaults

Mode: 10GbE and GbE Interface Config Modes

Parameters:	auto-negotiate	Disable Auto-negotiate the switch port
	description	Default the switch port's description to clear
	duplex	Default the switch port's duplex to full
	enable	Disable the switch port
	flow-control	Default the switch port's flow control to none
	ip	IP Configuration
	jumbo-frame	Disable Jumbo-Frame on switch port
	lldp	Clear Interface specific LLDP Configuration
	lldp-med	Disables LLDP-MED on the interface
	loop-detect	Disable loop detection on port.
	monitor	Disable Port Mirroring
	poe	Disable Power over Ethernet
	port-security	Disable port security for the port
	pvlan	Remove PVLAN membership
	qos	Clear QoS configuration for ports
	speed	Default the switch port's speed to 1G
	switchport	Switching mode characteristics
	server	DHCP Server
	snooping	Snooping Configuration
	String	DHCP Server Name
	trusted	Set Port as Untrusted for DHCP Snooping
	apr	Disable PoE APR
	maxpower	Disable supplying maximum power to powered device.
	opermode	Disable PoE operation mode.
	priority	Disable PoE port power priority
	schedule	Remove PoE Scheduling Profile
	access	Set access VLAN to default.
	mode	Set mode to default.
	trunk	Set trunk native VLAN to default.
	vlan	Set access VLAN to default.
	allowed	Set trunk allowed VLANs to default.
	native	Set trunk native VLAN to default.
	failure	Default PoE APR what to do on Failure

interval	Default PoE APR Intervals between Pings
ip	Default PoE APR IP Address of Device
retries	Default PoE APR how many Ping retries

Example:

```
lss2200-8p (config-if)# no auto-negotiate
lss2200-8p (config-if)# no description
lss2200-8p (config-if)# no speed
lss2200-8p (config-if)#
```

Command: **ntp**

Description: Enable and configure Network Timing Protocol for an interface.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

server	Add an NTP Server or modify its address
name	Server name
address	Server address (IPv4 address or DNS domain name)
String	Server name
Server	Server address (IPv4 address or DNS domain name)

Example:

```
LSS2200-8P (config-if)# ntp
LSS2200-8P (config)#
LSS2200-8P (config-if)# ntp server name BobB address 192.168.1.66
LSS2200-8P (config)#
```

Command: `poe`

Description: Enable to configure Power over Ethernet for an interface

Mode: 10GbE and GbE Interface Config Modes

Parameters:

`apr` Enable PoE APR

`fast_mode` Enable power at boot, do not wait for startup config <shows w/ tab but not with ?>

`force` Provide max power through interface; no negotiation with powered device. Note: you must disable poe before setting poe forced. **Setting the Power Supply Values in Switch Software:**

CAUTION: Always match the PSx input supply to the Power Supply 1 and Power Supply 2 software setting. Mismatching will cause the LSS2200-8P to think it can draw more power from the external supply than it is capable of providing and results could be detrimental.

Note: The power supply wattage value(s) must be manually set in the software by the user to match the connected external power supply(ies). The LLSS2200-8P uses this wattage as the "PSE Power Available" to determine if enough power is available during PoE PD classification to power up connected PDs. See additional details on power requirements in the Install Guide. **Caution:** PoE device components may fail due to transient voltage spikes on the PoE line. It is strongly suggested that a surge suppressor be used on each PoE port, especially in areas with frequent lightning and other types of interference.

`maxpower` Configure maximum power to supply to powered device based on opermode.

`opermode` Configure PoE operation mode.

`priority` Configure PoE port power priority

`pse` Set power supply delivery budgets <shows w/ tab but not ?>

Power supply (ps1/ps2) Power supply identifier ('ps1', 'ps2')

Power budget (30..1600) Power supply budget in Watts (30..1600)

Power supply identifier ('ps1', 'ps2') Power supply (ps1/ps2)

`schedule` Configure PoE scheduling profile.

`failure` Configure PoE APR what to do on Failure

`interval` Configure PoE APR Intervals between Pings

`ip` Configure PoE APR IP Address of Device

`retries` Configure PoE APR how many Ping retries

PoE APR Failure Log and Trap on Error or also reset device (LogTrap/ResetLogTrap)

PoE APR Interval (in Secs) Ping Interval Gap (10..120)

A.B.C.D Device's IP Address

PoE APR Retries No. of Ping Retries (1..5)

`force` Provide max power through interface; no negotiation with powered device

PoE Power Maximum power value in Watts (00.00-90.00)

PoE Operation Mode Operation mode value (IEEE-802.3af/IEEE-802.3at/IEEE-802.3bt)

PoE Priority Port power priority value (low/high/critical)

String Scheduling Profile Id

Example:

```
lss2200-8p (config-if)# poe <tab>
```

```
apr fast_mode force maxpower opermode priority pse schedule
```

```
lss2200-8p (config-if)# poe apr failure logtrap
```

```
lss2200-8p (config-if)# poe apr failure resetlogtrap
lss2200-8p (config-if)# poe apr interval 20
lss2200-8p (config-if)# poe apr ip 192.168.10.23
lss2200-8p (config-if)# poe apr retries 3
lss2200-8p (config-if)# poe apr
lss2200-8p (config-if)# poe force
lss2200-8p (config-if)# poe fast_mode
Fast PoE is Enabled
lss2200-8p (config-if)# poe maxpower 60.00
lss2200-8p (config-if)# poe maxpower 45.25
lss2200-8p (config-if)# poe opermode IEEE-802.3af
lss2200-8p (config-if)# poe opermode IEEE-802.3at
lss2200-8p (config-if)# poe opermode IEEE-802.3bt
lss2200-8p (config-if)# poe priority low
lss2200-8p (config-if)# poe priority high
lss2200-8p (config-if)# poe priority critical
lss2200-8p (config-if)# poe schedule Profile1
lss2200-8p (config-if)#
```

Messages: *WARNING- PoE not valid on 10 Gig Port.*

Command: `port-security`

Description: Enable port security for the port

Mode: 10GbE and GbE Interface Config Modes

Parameters:

learn-limit MAC address learn limit Maximum number of MAC-addresses (1..1023)

violation-mode Protect against unknown traffic or shutdown the port

Port security violation mode options Violation mode to be configured (protect/shutdown)

Example:

```
lss2200-8p (config-if)# port-security violation-mode protect
lss2200-8p (config-if)# port-security violation-mode shutdown
lss2200-8p (config-if)#
```

Command: `pvlan`

Description: Set port VLAN membership. A virtual LAN provides a method to restrict communication between switch ports. At layer 2, the network is partitioned into multiple, distinct, mutually isolated broadcast domains. Starting in v 1.7.0.0R5, interfaces can be part of PVLAN in the interface config itself.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: String List of PVLANs separated by commas and ranges are specified with dash separating lower and upper bound. VLAN ID should be between 1 and Max number of ports on the switch.

Example:

```
LSS2200-8P # configure terminal
LSS2200-8P (config)# interface GigabitEthernet 1/1
LSS2200-8P (config-if)# pvlan 10
LSS2200-8P (config-if)# interface GigabitEthernet 1/2
LSS2200-8P (config-if)# pvlan 10
LSS2200-8P (config-if)# interface GigabitEthernet 1/3
LSS2200-8P (config-if)# pvlan 15
Invalid vlan range
LSS2200-8P (config-if)# pvlan 9
LSS2200-8P (config-if)# exit
LSS2200-8P (config)# do show pvlan ?
  interface Display Interface PVLAN configuration
  <cr>
```

```
LSS2200-8P (config)# do show pvlan
PVLAN      Ports
=====
  1         GigabitEthernet 1/1
           GigabitEthernet 1/2
           GigabitEthernet 1/3
           GigabitEthernet 1/4
           GigabitEthernet 1/5
           GigabitEthernet 1/6
           GigabitEthernet 1/7
           GigabitEthernet 1/8
           10GigabitEthernet 1/1
           10GigabitEthernet 1/2
```

```
    9      GigabitEthernet 1/3
   10     GigabitEthernet 1/1
         GigabitEthernet 1/2
LSS2200-8P (config-if)# interface GigabitEthernet 1/3
LSS2200-8P (config-if)# no pvlan 1,10
LSS2200-8P (config-if)# no pvlan 9
Port should be part of at least one PVLAN
LSS2200-8P (config-if)# do show pvlan
  PVLAN      Ports
=====
    1      GigabitEthernet 1/2
          GigabitEthernet 1/4
          GigabitEthernet 1/5
          GigabitEthernet 1/6
          GigabitEthernet 1/7
          GigabitEthernet 1/8
          10GigabitEthernet 1/1
          10GigabitEthernet 1/2
    9      GigabitEthernet 1/3
   10     GigabitEthernet 1/1
LSS2200-8P (config-if)#
```

Messages:

Invalid vlan range

Port should be part of at least one PVLAN

Command: **qos**

Description: QoS configuration for port

Mode: 10GbE and GbE Interface Config Modes

Parameters:

egress	QoS configuration for egress
ingress	QoS configuration for ingress
schedule	QoS queuing method used to service the egress queues
Egress rate limit (64..1000000)	Egress rate limit in kilobits/second
Egress rate limit in kilobits/second	Egress rate limit (64..1000000)
default	Configure Queue/Frame priority value for the port
limit	QoS ingress rate limit for ports
priority-mode	Configure Ingress priority mode
vlan	Map Ingress vlan-priority onto a egress queue number
queue	Queue priority
frame	Frame priority
Queue priority (0..7)	Indicates Priority value for a queue
Frame priority (0..7)	Indicates Priority value for a frame
Ingress rate limit in kilobits/second (64..10000000)	
Ingress Priority mode	Ingress Priority modes (port/vlan-port/ip-port/vlan-ip-port/ip-vlan-port)
Indicates Priority value	vlan priorities 0-7 (0..7)
queue	Egress queue number corresponding to vlan priority
Indicates Priority value	Egress queue number corresponding to vlan priority (0..7)
QoS queue scheduling method options	QoS queuing method (WRR/SP)

Example:

```

lss2200-8p (config-if)# qos egress limit 50000
lss2200-8p (config-if)# qos ingress default queue 2 frame 0
lss2200-8p (config-if)# qos ingress limit 100000
lss2200-8p (config-if)# qos ingress priority-mode port
lss2200-8p (config-if)# qos ingress priority-mode vlan-port
lss2200-8p (config-if)# qos ingress vlan 2 queue
lss2200-8p (config-if)# qos ingress vlan 2 queue 0
lss2200-8p (config-if)# qos schedule wrr
lss2200-8p (config-if)# qos schedule sp
lss2200-8p (config-if)#

```

Note: The QoS Ingress limit valid range is 64 to 10000000; however, setting the ingress rate limiting to a value below 50 has no effect.

Command: **rest-server**

Description: Enable the Rest API server

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: None

Example:

```

LSS2200-8P (config-if)# rest-server
LSS2200-8P (config)#

```


Command: **route**

Description: Create Static route. Creates network routes.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

name	Name of static route to add
address	Destination network ip/prefix. Routes created with network address.
gateway	The network gateway
interface	The route interface
Name	Name of static route to add (VLAN ID)
Interface Name	The route interface

Example:

```
LSS2200-8P (config-if)# route name Route-1 address 172.27.100.55 gateway 172.27.100.0
interface RteInt
Syntax error: Illegal parameter
LSS2200-8P (config-if)# route name Route-1 address 172.27.100.55 gateway 172.27.100.0
interface VLAN10
Failed to add static route
LSS2200-8P (config-if)#
```

Messages:

*Syntax Error: Incomplete Command - Require Target address**Invalid IPv4 address or network mask prefix: Address cannot be empty***Command:** **sfp-mode**

Description: Update the switch port's SFP mode. USXGMII mode is only used when P #9 and/or P #10 are set to the expansion port and the 2x10GBase-T expansion card (future release) is installed. If detected, this mode will be selected automatically by the software. When using the TN-SFP-10G-T, the port mode should be set to 10GBase-R.

Mode: 10GbE Interface Config Mode only

Parameters: 1000BASE-X, SGMII, 2500BASE-X, 5G-BASE-R, 10G-BASE-R, USXGMII

Select the mode compatible with the inserted SFP module (1000BASE-X/SGMII/2500BASE-X/5G-BASE-R/10G-BASE-R/USXGMII)

Example:

```
lss2200-8p (config-if)# sfp-mode 1000BASE-X
lss2200-8p (config-if)# sfp-mode SGMII
lss2200-8p (config-if)# sfp-mode 2500BASE-X
lss2200-8p (config-if)# sfp-mode 5G-BASE-R
lss2200-8p (config-if)# sfp-mode 10G-BASE-R
lss2200-8p (config-if)#
```

Messages: *WARNING- sfp mode not applicable, ignored*

Command: **snmp**

Description: Set SNMP parameters.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

community	Create SNMP v2c community
user	Create SNMP v3 user
view	Create SNMP v3 view
The name of the SNMP v2c community	Tab to complete/list SNMP v2c community string for read-only access
host-access	Host/network access for community
restrict-oid	Restrict community to the specified OID
String	Restrict community to the specified OID
A.B.C.D[/mask]	Host/network access for community
The name of the SNMP v3 user,	Tab to complete/list SNMP v3 user name
security-level	Security levels of group which defines their access right
auth-protocol	Authentication type of the user
auth-key	Private key to use with authentication protocol
priv-protocol	Type of privacy protocol
priv-key	Associated key to use with the privacy protocol
view-name	MIB view to which this user belongs to
SNMP v3 user security level	Security levels of group which defines their access right (noAuthNoPriv / authNoPriv / authPriv)
The name of the SNMP v3 view,	Tab to complete/list SNMP v3 MIB view identifier
oid	The OID to include or exclude from this view
type	MIB view type
String	The OID to include or exclude from this view
SNMP v3 MIB view type	MIB view type (included/excluded)

Example:

```
LSS2200-8P (config-if)# snmp community public host-access 172.27.100.33 restrict-oid .1
LSS2200-8P (config-if)# snmp view View3 oid .1 type included
LSS2200-8P (config-if)# snmp user SnmpV3User-1 security-level authPriv auth-protocol md5
auth-key XXXXXXXXXXXX priv-protocol DES priv-key XXXXXXXXXXXX
libyang[1]: Value "SnmpV3User-1" does not satisfy the constraint "[a-zA-Z0-9_]+" (range, length, or pattern).
(path: /csi-snmp:userName)
LSS2200-8P (config)# do show snmp config
SNMP global Configuration
=====
Enable: Disabled

SNMP v2c Configuration
=====
| Community | Access | Host/Network | Restricted OID |
=====
| public | read-only | 172.27.100.33 | .1 |

SNMP v3 User Configuration
=====
| User name | Security level | Auth Protocol | Priv Protocol | View name |
```

```
=====
SNMP v3 View Configuration
=====
```

View name	Type	OID
View3	included	.1

```
LSS2200-8P (config-if)#
```

Command: `snmptrap`

Description: Set SNMP trap parameters.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

authentication-failure	Authentication trap enable
link-up-down	Link Up / Link Down trap enable
server	SNMP v2c Traps Sink server
A.B.C.D	IP address of SNMP v2c Traps Sink server

Example:

```
LSS2200-8P (config-if)# snmptrap authentication-failure
LSS2200-8P (config-if)# snmptrap link-up-down
LSS2200-8P (config-if)# snmptrap server 172.27.100.34
LSS2200-8P (config-if)#
```

Command: **spanning-tree**

Description: Spanning tree port configuration

Mode: 10GbE and GbE Interface Config Modes

Parameters:

admin-edge	Sets initial port state as connected directly to an edge device
auto-edge	Automatically detects whether connected device is an edge device
auto-path-cost	Enable automatic calculation of path cost
forward-delay	Delay in seconds: set so max age does not exceed 2 x (forward delay -1) (4..30)
max-age	Age in seconds: set so max age does not exceed 2 x (forward delay -1) (6..40)
path-cost	Path cost when auto-calculation disabled
point-to-point	Configures detection of connection to a point-to-point link
priority	Priority, lower value favours port
restricted-role	Prevents the port from having root role; Warning: can cause lack of spanning tree connectivity
restricted-tcn	Prevents the port from propagating received topology change; Warning: can cause temporary loss of spanning tree connectivity
path-cost	Port path cost when automatic calculation disabled (1..200000000)
point-to-point	Force point-to-point true / Force point-to-point false / Auto-detect (force-true/force-false/auto)
transmit-hold-count	BPDUs per second (1..10)

Example:

```
lss2200-8p (config-if)# spanning-tree admin-edge
lss2200-8p (config-if)# spanning-tree auto-edge
lss2200-8p (config-if)# spanning-tree auto-path-cost
lss2200-8p (config-if)# spanning-tree path-cost 750000
lss2200-8p (config-if)# spanning-tree max-age 15
lss2200-8p (config-if)# spanning-tree forward-delay 8
lss2200-8p (config-if)# spanning-tree point-to-point force-true
lss2200-8p (config-if)# spanning-tree point-to-point force-false
lss2200-8p (config-if)# spanning-tree point-to-point auto
lss2200-8p (config)# spanning-tree transmit-hold-count 5
lss2200-8p (config-if)#
```

Command: **speed**

Description: Update the switch port's speed

Mode: 10GbE and GbE Interface Config Modes

Parameters: 10 100 1000 port speed in Mbps

Example:

```
lss2200-8p (config-if)# speed 10
lss2200-8p (config-if)# speed 100
lss2200-8p (config-if)# speed 1000
lss2200-8p (config-if)#
```

Command: **start**

Description: Run Virtual Cable Test on the specified port

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: vct Run Virtual Cable Test on the specified port
 The 1G switch port type port type (GigabitEthernet)
 The switch port number, Tab to complete/list port-number (1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8)

Example:

```
LSS2200-8P (config-if)# start vct GigabitEthernet 1/2
Cable diagnostics for port : GigabitEthernet 1/2 (Timestamp: 2022-09-16 15:22:14.373980)
=====
| pair   | Status           | Length (meters) |
=====
| A      | Pair Ok          | -                |
| B      | Pair Ok          | -                |
| C      | Pair Short       | 0                |
| D      | Pair Short       | 0                |
LSS2200-8P (config)#
```

Command: **switchport**

Description: Switching mode characteristics

Mode: 10GbE and GbE Interface Config Modes

Parameters:

access	Set access mode characteristics of the interface
mode	Set mode of the interface
trunk	Set trunk mode characteristics of the interface
vlan	Set VLAN when interface is in access mode
Number in the range 1-4094	Native VLAN Id (1..4094)
Mode of the interface	Access or Trunk (access/trunk)
allowed	Set allowed VLANs when interface is in trunk mode
native	Set native VLAN
vlan	Set allowed VLAN characteristics when interface is in trunk mode
VLAN IDs list/range	Set Allowed VLANs. List of VLANs separated by commas and ranges are specified with dash separating lower and upper bound. Each VLAN ID should be between 1 and 4094.
vlan	Set native VLAN when interface is in trunk mode
Number in the range 1-4094	Trunk Native VLAN Id (1..4094)

Example:

```
lss2200-8p (config-if)# switchport access vlan 100
lss2200-8p (config-if)# switchport mode access
lss2200-8p (config-if)# switchport mode trunk
lss2200-8p (config-if)# switchport trunk allowed vlan 100,200
lss2200-8p (config-if)# switchport trunk allowed vlan 100-300
lss2200-8p (config-if)# switchport trunk native vlan 100
lss2200-8p (config-if)# switchport trunk native vlan 100,200
Syntax error: Illegal parameter
lss2200-8p (config-if)# switchport trunk native vlan 100-300
Syntax error: Illegal parameter
lss2200-8p (config-if)#
LSS2200-8P (config-if)# switchport trunk allowed vlan 100
Invalid config for Access mode. Mode should be Trunk.
LSS2200-8P (config-if)#
LSS2200-8P (config-if)# switchport mode trunk
LSS2200-8P (config-if)# switchport trunk native vlan 100
LSS2200-8P (config-if)#
```

Command: **system**

Description: Configure system settings

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters:

contact	set system contact
DigitalIO	set system digital io
Digital IO number	Digital IO number (1..99)
do	To run exec commands in config mode
exit	Exit from DIO configuration mode
input	set system digital input
name	set system DIO name
output	set system digital output
snmp-action	set system dio1 snmp
snmp-trap	set system dio1 snmp
high-to-low	set system snmp action
low-to-high	set system snmp action
disable	set system dio1 snmp disable
enable	set system input dio1 snmp enable
high	set system dio output high
low	set system dio output low
location	set system location
name	set system name
input	set system digital input 1
name	set system DIO1 name
output	set system digital output
snmp-action	set system dio1 snmp
String	system DIO2 name
high	set system dio2 output high
low	set system dio2 output low
String	system contact (the space character is not allowed)
String	system location (the space character is not allowed)
String	System name must be alphanumeric and may be hyphenated (max length 63) (the space character is not allowed)

Example:

```
LSS2200-8P (config-if)# system name lss2200-8p
lss2200-8p (config-if)# system name LSS2200-8P
LSS2200-8P (config-if)# system location Minn-Engineering Lab
Syntax error: Illegal command line
LSS2200-8P (config-if)# system location Minn-EngineeringLab
LSS2200-8P (config-if)#
LSS2200-8P (config)# system DigitalIO 1
LSS2200-8P (config-dio)# ?
  do      To run exec commands in config mode
  exit    Exit from DIO configuration mode
  input   set system digital input
  name    set system DIO name
  output  set system digital output
LSS2200-8P (config-dio)#
```

```

LSS2200-8P (config-dio)# input snmp-action high-to-low
LSS2200-8P (config-dio)# input snmp-action low-to-high
LSS2200-8P (config-dio)# input snmp-trap disable
LSS2200-8P (config-dio)# input snmp-trap enable
LSS2200-8P (config-dio)# name amport_1.3
LSS2200-8P (config-dio)# output high
LSS2200-8P (config-dio)# output low

LSS2200-8P (config-dio)#

LSS2200-8P (config-dio)# do show system DigitalIO config
System Digital IO Configuration
=====
DigitalIO 1:
  Name           : amport_1.3
  IO Type        : output
  IO active      : low
  SNMP trap      : Enabled
  SNMP input action : low-to-high
DigitalIO 2:
  Name           :
  IO Type        : input
  IO active      :
  SNMP trap      : Disabled
  SNMP input action : low-to-high
LSS2200-8P (config-dio)# do show system DigitalIO status
System Digital IO Status
=====
DigitalIO 1:
  IO Type        : output
  State          : Low
DigitalIO 2:
  IO Type        : input
  State          : Low
LSS2200-8P (config-dio)#

```

Parameters <tab>:

```

LSS2200-8P (config-dio)# do <tab>
!          alarm      clear      clock      configure  copy       debug
exit      nslookup    ping      reload     show       ssh        telnet
traceroute who
LSS2200-8P (config-dio)# no

LSS2200-8P (config-dio)# no <tab>
aging-time alarm      ble        clock      interface
ip         lldp        lldp-med   logging    loop-detect
lpm        monitor     nfc        ntp        poe
qos        rest-server route      snmp       snmptrap
spanning-tree system    telnet
LSS2200-8P (config-dio)# end
LSS2200-8P #

```

Note: At FW v 1.6.0.0R6 the Digital IO command syntax changed "system DIO1" to "system DigitalIO 1"

Command: **telnet**

Description: Configure the Telnet server. **Warning:** Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission of sensitive information. Setup and verify SSH, then disable Telnet.

Mode: Interface Config mode for 10GbE and 1GbE ports

Parameters: server Enable the Telnet server

Example:

```
LSS2200-8P (config-if)# telnet server
```

```
LSS2200-8P (config)#
```

```
LSS2200-8P (config-if)# telnet ?
```

```
<cr>
```

```
LSS2200-8P (config-if)# telnet server
```

```
Warning: Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission of Sensitive Information. Setup and verify SSH, then disable Telnet.
```

```
LSS2200-8P (config)#
```

```
LSS2200-8P (config)# ssh-server ?
```

```
login-wait-time Time in seconds the SSH server will wait for a login attempt to succeed
```

```
auth-tries Maximum number of authentication attempts permitted per connection
```

```
max-startups Maximum number of concurrent unauthenticated connections
```

```
<cr>
```

```
LSS2200-8P (config)#
```

vlan Interface Config Mode Commands

To display available Interface Config mode commands for VLAN interfaces, enter a ? (question mark) and hit Enter:

```
lss2200-8p (config)# interface vlan 10
lss2200-8p (config-vlan-if)# ?
  dns      Add to DNS Server list
  end      Go back to EXEC View
  exit     Exit from interface configuration mode
  ignore   Ignore information configured/received
  ip       IPv4 address configuration
  no       Negate a command or set its defaults

lss2200-8p (config-vlan-if)#
```

Command: **admin**

Description: Enter Config Admin mode. See the [Config Admin Mode Commands](#) on page 97.

Mode: vlan Interface Config Mode

Parameters:

banner	First level of banner commands.
do	To run exec commands in config mode
end	Go back to EXEC View
exit	Exit from configure mode
firmware	Firmware commands
no	Negate a command or set its defaults
password	Change password for the specified user account
username	Create or modify a local user account

Example:

```
LSS2200-8P (config-vlan-if)# admin
LSS2200-8P (config-admin)# ?
  banner    First level of banner commands.
  do        To run exec commands in config mode
  end       Go back to EXEC View
  exit      Exit from configure mode
  firmware  Firmware commands
  no        Negate a command or set its defaults
  password  Change password for the specified user account
  username  Create or modify a local user account

LSS2200-8P (config-admin)#
```

Command: **aging-time**

Description: Set MAC address aging time in seconds

Mode: vlan Interface Config Mode

Parameters: MAC address aging time in seconds Set MAC address aging time (4..956)

Example:

```
LSS2200-8P (config-vlan-if)# aging-time 300
LSS2200-8P (config)#
```

Command: **alarm**

Description: Set alarm parameters

Mode: vlan Interface Config Mode

Parameters: alarm Enable alarm

10GigabitEthernet-1/1-Temperature-high-alarm	10GigabitEthernet-1/1-Temperature-low-alarm
10GigabitEthernet-1/1-Temperature-high-warning	10GigabitEthernet-1/1-Temperature-low-warning
10GigabitEthernet-1/1-Voltage-high-alarm	10GigabitEthernet-1/1-Voltage-low-alarm
10GigabitEthernet-1/1-Voltage-high-warning	10GigabitEthernet-1/1-Voltage-low-warning
10GigabitEthernet-1/1-Bias-high-alarm	10GigabitEthernet-1/1-Bias-low-alarm
10GigabitEthernet-1/1-Bias-high-warning	10GigabitEthernet-1/1-Bias-low-warning
10GigabitEthernet-1/1-Tx-Power-high-alarm	10GigabitEthernet-1/1-Tx-Power-low-alarm
10GigabitEthernet-1/1-Tx-Power-high-warning	10GigabitEthernet-1/1-Tx-Power-low-warning
10GigabitEthernet-1/1-Rx-Power-high-alarm	10GigabitEthernet-1/1-Rx-Power-low-alarm
10GigabitEthernet-1/1-Rx-Power-high-warning	10GigabitEthernet-1/1-Rx-Power-low-warning
10GigabitEthernet-1/2-Temperature-high-alarm	10GigabitEthernet-1/2-Temperature-low-alarm
10GigabitEthernet-1/2-Temperature-high-warning	10GigabitEthernet-1/2-Temperature-low-warning
10GigabitEthernet-1/2-Voltage-high-alarm	10GigabitEthernet-1/2-Voltage-low-alarm
10GigabitEthernet-1/2-Voltage-high-warning	10GigabitEthernet-1/2-Voltage-low-warning
10GigabitEthernet-1/2-Bias-high-alarm	10GigabitEthernet-1/2-Bias-low-alarm
10GigabitEthernet-1/2-Bias-high-warning	10GigabitEthernet-1/2-Bias-low-warning
10GigabitEthernet-1/2-Tx-Power-high-alarm	10GigabitEthernet-1/2-Tx-Power-low-alarm
10GigabitEthernet-1/2-Tx-Power-high-warning	10GigabitEthernet-1/2-Tx-Power-low-warning
10GigabitEthernet-1/2-Rx-Power-high-alarm	10GigabitEthernet-1/2-Rx-Power-low-alarm
10GigabitEthernet-1/2-Rx-Power-high-warning	10GigabitEthernet-1/2-Rx-Power-low-warning
loop-shutdown-GigabitEthernet-1/1	loop-shutdown-GigabitEthernet-1/2
loop-shutdown-GigabitEthernet-1/3	loop-shutdown-GigabitEthernet-1/4
loop-shutdown-GigabitEthernet-1/5	loop-shutdown-GigabitEthernet-1/6
loop-shutdown-GigabitEthernet-1/7	loop-shutdown-GigabitEthernet-1/8
loop-shutdown-10GigabitEthernet-1/1	loop-shutdown-10GigabitEthernet-1/2
port-security-GigabitEthernet-1/1-shutdown	port-security-GigabitEthernet-1/1-limit-reached
port-security-GigabitEthernet-1/2-shutdown	port-security-GigabitEthernet-1/2-limit-reached
port-security-GigabitEthernet-1/3-shutdown	port-security-GigabitEthernet-1/3-limit-reached
port-security-GigabitEthernet-1/4-shutdown	port-security-GigabitEthernet-1/4-limit-reached
port-security-GigabitEthernet-1/5-shutdown	port-security-GigabitEthernet-1/5-limit-reached
port-security-GigabitEthernet-1/6-shutdown	port-security-GigabitEthernet-1/6-limit-reached
port-security-GigabitEthernet-1/7-shutdown	port-security-GigabitEthernet-1/7-limit-reached
port-security-GigabitEthernet-1/8-shutdown	port-security-GigabitEthernet-1/8-limit-reached
port-security-10GigabitEthernet-1/1-shutdown	port-security-10GigabitEthernet-1/1-limit-reached
port-security-10GigabitEthernet-1/2-shutdown	port-security-10GigabitEthernet-1/2-limit-reached
CPU-Temperature	

Example:

```
LSS2200-8P (config-vlan-if)# alarm CPU-Temperature
LSS2200-8P (config-vlan-if)# alarm loop-shutdown-GigabitEthernet-1/6
LSS2200-8P (config-if)# alarm port-security-GigabitEthernet-1/1-limit-reached
LSS2200-8P (config)#
```

Command: **ble**

Description: Bluetooth Low Energy commands

Mode: vlan Interface Config Mode

Parameters: broadcast Set BLE broadcast
disconnect Set BLE disconnect

Example:

```
LSS2200-8P (config-vlan-if)# ble broadcast
LSS2200-8P (config)# int vlan 10
LSS2200-8P (config-vlan-if)# ble disconnect
LSS2200-8P (config)#
```

Command: **clock**

Description: Set clock time zone

Mode: vlan Interface Config Mode

Parameters: clock timezone
String system timezone (case-sensitive)

Africa/Abidjan	Africa/Accra	Africa/Addis_Ababa
Africa/Algiers	Africa/Asmara	Africa/Bamako
↓↓↓		
Africa/Porto-Novo	Africa/Sao_Tome	Africa/Tripoli
Africa/Tunis	Africa/Windhoek	America/Adak
America/Anchorage	America/Anguilla	America/Antigua
America/Kentucky/Monticello	America/Kralendijk	America/La_Paz
America/Lima	America/Los_Angeles	America/Lower_Princes
Asia/Dhaka	Asia/Dili	Asia/Dubai
Asia/Dushanbe	Asia/Famagusta	Asia/Gaza
Asia/Hebron	Asia/Ho_Chi_Minh	Asia/Hong_Kong
Asia/Hovd	Asia/Irkutsk	Asia/Jakarta
Asia/Jayapura	Asia/Jerusalem	Asia/Kabul
Asia/Kamchatka	Asia/Karachi	Asia/Kathmandu
Etc/GMT-3	Etc/GMT-4	Etc/GMT-5
Etc/GMT-6	Etc/GMT-7	Etc/GMT-8
Etc/GMT-9	Europe/Amsterdam	Europe/Andorra
Europe/Astrakhan	Europe/Athens	Europe/Belgrade
↓↓↓		
Pacific/Port_Moresby	Pacific/Rarotonga	Pacific/Saipan
Pacific/Tahiti	Pacific/Tarawa	Pacific/Tongatapu
Pacific/Wake	Pacific/Wallis	UTC

Example:

```
LSS2200-8P (config)# clock timezone america toronto
Syntax error: Illegal command line
LSS2200-8P (config)# clock timezone America/Toronto
LSS2200-8P (config)#
```

Command: **do**

Description: To run Exec commands in Config mode

Mode: vlan Interface Config Mode

Parameters: ! alarm clear clock configure copy debug exit nslookup
ping reload show ssh telnet traceroute who

Example:

```
LSS2200-8P (config-percepexion)# do show ip interface brief
| Interface      | IPv4/Netmask    | IP Origin  | Status
=====
| VLAN 1         | 172.27.100.84/24 | DHCP       | UP
LSS2200-8P (config-percepexion)#
```

Command: **dns**

Description: Add to DNS Server list

Mode: vlan Interface Config Mode

Parameters: address Comma separated list of DNS servers
A.B.C.D Comma separated list of DNS servers

Example:

```
lss2200-8p (config-vlan-if)# dns ?
  address Comma separated list of DNS servers
lss2200-8p (config-vlan-if)# dns address 1.2.3.4
libyang[0]: Invalid value "" in "dns" element. (path: /csi-logical-interfaces:dns[.=''])
lss2200-8p (config-vlan-if)#
```

Command: **end**

Description: Go back to EXEC View

Mode: vlan Interface Config Mode

Parameters: None

Example:

```
lss2200-8p (config-vlan-if)# end
LSS2200-8P #
```

Command: **exec-timeout**

Description: Set the length of idle time after which the CLI session is closed.

Mode: vlan Interface Config Mode

Parameters: autologout Length of idle time after which the session is closed

Idle time, in minutes, for login session auto-logout (0 disables auto-logout) Length of idle time after which the session is closed

Example:

```
LSS2200-8P (config-vlan-if)# exec-timeout autologout 60
LSS2200-8P (config)# exec-timeout autologout 0
LSS2200-8P (config)#
```

Command: [exit](#)

Description: Exit from interface configuration mode

Mode: vlan Interface Config Mode

Parameters: None

Example:

```
LSS2200-8p (config-vlan-if)# exit
LSS2200-8p (config)#
```

Command: [ignore peer-dns-server](#)

Description: Ignore DHCP provided name servers and use in-house or static DNS Servers. This command lets you change DNS server priority or delete the servers which came from DHCP and use only those manually configured. Added at FW v 1.7.0.0R5.

Mode: VLAN Interface Config Mode

Parameters: peer-dns-server Ignore DNS Server received via DHCP on this Interface

Example:

```
LSS2200-8P (config-vlan-if)# ignore peer-dns-server
LSS2200-8P (config-vlan-if)# exit
LSS2200-8P (config)# end
LSS2200-8P # ping host testsite.com
Ping: bad address 'testsite.com'
LSS2200-8P # ping host 111.22.333.444
PING 111.22.333.444 (111.22.333.444): 56 data bytes
64 bytes from 111.22.333.444: seq=0 ttl=54 time=40.710 ms
64 bytes from 111.22.333.444: seq=1 ttl=54 time=40.108 ms
64 bytes from 111.22.333.444: seq=2 ttl=54 time=46.972 ms
64 bytes from 111.22.333.444: seq=3 ttl=54 time=39.235 ms
64 bytes from 111.22.333.444: seq=4 ttl=54 time=40.317 ms

--- 111.22.333.444 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 39.235/41.868/46.972 ms
LSS2200-8P
```

Command: [no ignore peer-dns-server](#)

Description: Do not ignore DHCP provided name servers and use in-house or static DNS Servers. Added at FW v 1.7.0.0R5.

Mode: VLAN Interface Config Mode

Parameters:

Example: Change from ignore DNS server to no ignore DNS server showing ping results:

```
LSS2200-8P # ping host testsite.com
Ping: bad address 'testsite.com'
LSS2200-8P # ping host 111.22.333.444
PING 111.22.333.444 (111.22.333.444): 56 data bytes
64 bytes from 111.22.333.444: seq=0 ttl=54 time=40.710 ms
64 bytes from 111.22.333.444: seq=1 ttl=54 time=40.108 ms
64 bytes from 111.22.333.444: seq=2 ttl=54 time=46.972 ms
```

```

64 bytes from 111.22.333.444: seq=3 ttl=54 time=39.235 ms
64 bytes from 111.22.333.444: seq=4 ttl=54 time=40.317 ms

--- 111.22.333.444 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 39.235/41.868/46.972 ms
LSS2200-8P # ping host testsite.com
ping: bad address "testsite.com"
LSS2200-8P # configure terminal
LSS2200-8P (config)# interface vlan 1
LSS2200-8P (config-vlan-if)# no ignore peer-dns-server
LSS2200-8P (config-vlan-if)# exit
LSS2200-8P (config)# exit
LSS2200-8P # ping host testsite.com
PING testsite.com (111.22.333.444): 56 data bytes
64 bytes from 111.22.333.444: seq=0 ttl=54 time=41.710 ms
64 bytes from 111.22.333.444: seq=1 ttl=54 time=46.108 ms
64 bytes from 111.22.333.444: seq=2 ttl=54 time=39.972 ms
64 bytes from 111.22.333.444: seq=3 ttl=54 time=38.235 ms
64 bytes from 111.22.333.444: seq=4 ttl=54 time=38.317 ms

--- testsite.com ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 38.235/39.868/41.972 ms
LSS2200-8P #

```

Command: **interface**

Description: Select an interface to configure

Mode: vlan Interface Config Mode

Parameters:	10GigabitEthernet	Ethernet 10G interface
	GigabitEthernet	Ethernet 10G interface number
	vlan	VLAN Identifier
	Switch/Interface number	Ethernet 10G interface number
	Switch/Interface number	Ethernet 1G interface number
	Number in the range 1-4094	VLAN Identifier (1..4094)

Example:

```

LSS2200-8P (config-percepXion)# interface vlan 10
LSS2200-8P (config-vlan-if)# ?
  dns      Add to DNS Server list
  end      Go back to EXEC View
  exit     Exit from interface configuration mode
  ignore   Ignore information configured/received
  ip       IPv4 address configuration
  no       Negate a command or set its defaults

LSS2200-8P (config-vlan-if)#

```

Command: **ip**

Description: Set IPv4 address configuration

Mode: vlan Interface Config Mode

Parameters:

address	Set the IP address of a management VLAN interface
dhcp	Set the IP address mode of a management VLAN interface to DHCP
A.B.C.D	IPv4 address
netmask	IPv4 netmask
relay	Set DHCP Relay parameters
server	Set DHCP Server parameters
snooping	Set DHCP Snooping parameters
address server	IP address of a management VLAN interface
String	DHCP Server Name
A.B.C.D	Local IPv4 address to listen for DHCP Requests
A.B.C.D	IPv4 netmask

Example:

```
LSS2200-8P (config-vlan-if)# ip dhcp snooping
lss2200-8p (config-vlan-if)# ip address 1.2.3.4 netmask 255.255.255.0
lss2200-8p (config-vlan-if)# ip address dhcp
lss2200-8p (config-vlan-if)#
```

Command: **lldp**

Description: Set Link Level Discovery Protocol parameters.

Mode: vlan Interface Config Mode

Parameters:

holdtime	LLDP Hold Time. The time that an LLDP device maintains neighbor information before aging it.
txinterval	LLDP transmit interval. The interval (in seconds) at which LLDP packets are sent to neighbors.
Tx Hold Time	In seconds (2..10). The "actual" Hold Time equals the Tx Interval multiplied by this TX Hold Time value.
Tx Interval	interval (in seconds) at which LLDP packets are sent to neighbors (5..120). The default value is 30 seconds.

Example:

```
LSS2200-8P (config-vlan-if)# lldp holdtime 4
LSS2200-8P (config-vlan-if)# lldp txinterval 45
LSS2200-8P (config)#
```

In the example above, the '4' actually means 4 x 30 (Tx Interval) = 120 seconds.

Command: **logging**

Description: Set Syslog parameters

Mode: vlan Interface Config Mode

Parameters:	buffer-size	Syslog buffer size
	host	Syslog host's IP address
	severity	Syslog severity setting
	Unsigned integer	Syslog buffer size (1..65535)
	A.B.C.D	IP address of Syslog server
	Syslog severity level choice	(emergency/alert/critical/error/warning/notice/info/debug)
	transport	Syslog server transport protocol
	port	Syslog server port
	Unsigned integer	Syslog server port (1..65535)
	Syslog severity level choice	Syslog Syslog output severity level (emergency/alert/critical/error/warning/notice/info/debug)

Example:

```
LSS2200-8P (config)# logging buffer-size 9000
LSS2200-8P (config)# logging host 192.168.60.2 transport tcp port 943
LSS2200-8P (config)# logging host 192.168.60.2 transport udp port 8500
LSS2200-8P (config)# logging severity critical
LSS2200-8P (config)#
```

Command: **loop-detect**

Description: Set Loop detection parameters.

Mode: vlan Interface Config Mode

Parameters:	shutdown	Loop detect shutdown time
	tx	Loop Detect frame transmission interval
	Loop Detect Shutdown Time	In seconds (0..604800)
	Loop Detect frame transmit interval	in seconds (1..10)

Example:

```
LSS2200-8P (config-vlan-if)# loop-detect shutdown 30000
LSS2200-8P (config-vlan-if)# loop-detect tx 3
LSS2200-8P (config)#
```

Command: **lpm**

Description: Enable LPM (Discovery) Tool (Lantronix Provisioning Manager) parameters. LPM is currently enabled by default and cannot be configured.

Mode: vlan Interface Config Mode

Parameters: None.

Example:

```
LSS2200-8P (config-vlan-if)# lpm
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# do show lpm status
LPM status
=====
Status: Running
Queries:
  Valid: 0
  Unknown: 0
Erroneous Packets: 0
Errors: 0
Last Connection: 0.0.0.0/0
LSS2200-8P (config-vlan-if)#
```

Command: **monitor**

Description: Set monitor mirror parameters

Mode: vlan Interface Config Mode

Parameters: destination

egress

ingress

The switch port type Gigabit Ethernet Port Type (GigabitEthernet/1GigabitEthernet)

The switch port type Gigabit Ethernet Port Type (GigabitEthernet/10GigabitEthernet)

GigabitEthernet The switch port number, Tab to complete/list Gigabit Ethernet Port Number (1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8)

10GigabitEthernet The switch port number, Tab to complete/list 10Gigabit Ethernet Port Number (1/1 1/2)

Example:

```
LSS2200-8P (config-vlan-if)# monitor destination egress GigabitEthernet 1/4
LSS2200-8P (config)#
LSS2200-8P (config-vlan-if)# monitor destination egress 10GigabitEthernet 1/2
LSS2200-8P (config)#
LSS2200-8P (config-vlan-if)# monitor destination ingress 10GigabitEthernet 1/1
LSS2200-8P (config-vlan-if)#
```

Command: **nfc**

Description: Set Near Field Communication parameters.

Mode: vlan Interface Config Mode

Parameters:

Example:

```
LSS2200-8P (config-vlan-if)# nfc ?
  <cr>
LSS2200-8P (config-vlan-if)# nfc
LSS2200-8P (config)#
```

Command: **no**

Description: Negate a command or set its defaults

Mode: vlan Interface Config Mode

Parameters: dns Remove from DNS Server list
 address Comma separated list of DNS servers
 A.B.C.D Comma separated list of DNS servers

Parameters (tab):

aging-time	alarm	ble	clock	dns	interface	ip
lldp	lldp-med	logging	loop-detect	lpm	monitor	nfc
ntp	poe	qos	rest-server	route	snmp	snmptrap
spanning-tree	system	telnet				

Example:

```
lss2200-8p (config-vlan-if)# no aging-time
lss2200-8p (config-vlan-if)# no dns
lss2200-8p (config)# interface vlan 10
lss2200-8p (config-vlan-if)# no monitor destination egress
lss2200-8p (config-vlan-if)# no monitor destination ingress
lss2200-8p (config)# interface vlan 10
lss2200-8p (config-vlan-if)# no loop-detect
lss2200-8p (config)#
```

Command: **ntp**

Description: Set Network Timing Protocol parameters for a VLAN interface

Mode: vlan Interface Config Mode

Parameters: server Add an NTP Server or modify its address
 name Server name
 address Server address (IPv4 address or DNS domain name)
 Server Server address (IPv4 address or DNS domain name)
 String Server name
 Server Server address (IPv4 address or DNS domain name)

Example:

```
LSS2200-8P (config-vlan-if)# ntp server address 1.2.3.4
LSS2200-8P (config)#
```

Command: **poe**

Description: Set Power over Ethernet parameters for a VLAN interface

Mode: vlan Interface Config Mode

Parameters:	fast_mode	Enable power at boot, do not wait for startup config
	pse	Power supply identifier ('ps1', 'ps2')
	schedule	Power over Ethernet Scheduling Profile
	Power supply identifier ('ps1', 'ps2')	Power supply (ps1/ps2)
	Power supply budget in Watts (0..1600)	Power budget (0..1600)
	String	PoE Schedule Profile Name
	day	Day of Week
	hour	Hour HH
	min	Minute MM
	action	Scheduled Action
	PoE Schedule Day of Week	Day of Week (sun/mon/tue/wed/thu/fri/sat)
	PoE Schedule Hour	Hour HH (0..23)
	PoE Schedule Action Type	Scheduled Action (on/off/reset)
	PoE Schedule Minute	Minute MM (0..59)

Example:

```
LSS2200-8P (config-vlan-if)# poe fast_mode
Fast PoE is Enabled
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# poe pse ps1 1200
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config)# poe schedule Profile1 day sat hour 1 action reset min 30
LSS2200-8P (config)#
```

Command: **qos**

Description: Set Quality of Service parameters

Mode: vlan Interface Config Mode

Parameters:	weights	QoS queue weights distribution mode
	QoS queue weights distribution mode options	QoS queue weights distribution mode (even/default/custom)
	even	Use even QoS queue weights
	default	Use default QoS queue weights
	custom	Set custom QoS queue weights
	Queue weights for queues 0-7	Weight for Queue 0 (1..16)

Example:

```
LSS2200-8P (config-vlan-if)# qos weights even
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# qos weights default
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# qos weights custom 1 2 3 4
Syntax error: Incompleted command
LSS2200-8P (config-vlan-if)# qos weights custom 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Syntax error: Illegal command line
LSS2200-8P (config-vlan-if)# qos weights custom 0
LSS2200-8P (config-vlan-if)# qos weights custom 0 1
Syntax error: Illegal parameter
LSS2200-8P (config-vlan-if)#
```

Command: **rest-server**

Description: Set REST API server parameters

Mode: vlan Interface Config Mode

Parameters:

Example:

```
LSS2200-8P (config-vlan-if)# rest-server
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config)# do show rest-server config
REST API Server Configuration
=====
REST Server Enabled: Enabled
REST Server Port: 8000
LSS2200-8P (config)#
```

Command: **route**

Description: Create Static route. Creates network routes.

Mode: vlan Interface Config Mode

Parameters:

name	Name of static route to add
address	Destination network ip/prefix. Routes created with network address.
gateway	The network gateway
interface	The route interface
Name	Name of static route to add
A.B.C.D[/mask]	Destination network ip/prefix. Routes created with network address.
A.B.C.D	The network gateway
Interface Name	The route interface

Example:

```
LSS2200-8P (config-vlan-if)# route name SRoute1 address 1.2.3.4 gateway 2.3.4.5 interface vlan
Syntax error: Illegal parameter
LSS2200-8P (config-vlan-if)# route name SRoute1 address 1.2.3.4 gateway 2.3.4.5 interface SRoute1
Syntax error: Illegal parameter
LSS2200-8P (config-vlan-if)# route name SRoute1 address 1.2.3.4 gateway 2.3.4.5 interface eth1.1
Syntax error: Illegal parameter
LSS2200-8P (config-vlan-if)#
```

Command: **snmp**

Description: Set SNMP parameters for a VLAN interface

Mode: vlan Interface Config Mode

Parameters:

community The name of the SNMP v2c community, Tab to complete/list SNMP v2c community string for read-only access

user The name of the SNMP v3 user, Tab to complete/list SNMP v3 user name

view The name of the SNMP v3 view, Tab to complete/list SNMP v3 MIB view identifier

public SNMP v2c community string for read-only access

private SNMP v2c community string for read-write access

host-access Host/network access for community

restrict-oid Restrict community to the specified OID

A.B.C.D[/mask] Host/network access for community

String Restrict community to the specified OID

security-level Security levels of group which defines their access right

auth-protocol Authentication type of the user

auth-key Private key to use with authentication protocol

priv-protocol Type of privacy protocol

priv-key Associated key to use with the privacy protocol

view-name MIB view to which this user belongs

SNMP v3 user security level Security levels of group which defines their access right (noAuthNoPriv/authNoPriv/authPriv)

SNMP v3 user authentication type Authentication type of the user (MD5/SHA)

String Private key to use with authentication protocol

SNMP v3 user privacy protocol Type of privacy protocol (DES/AES)

String Associated key to use with the privacy protocol

view-name The name of the SNMP v3 view, Tab to complete/list MIB view to which this user belongs to

Example:

```
LSS2200-8P (config-vlan-if)# snmp community public host-access 1.2.3.4 restrict-oid
.1.2.3.4.5.6.7.8
LSS2200-8P (config)#
LSS2200-8P (config-vlan-if)# snmp user BobB security-level authPriv auth-protocol MD5 auth-
key ACG486 priv-protocol DES priv-key ACG486 view-name TomR
<cr>

LSS2200-8P (config-vlan-if)# snmp user BobB security-level authPriv auth-protocol MD5 auth-
key ACG486 priv-protocol DES priv-key ACG486 view-name TomR
Authentication key is under minimum length of 8
LSS2200-8P (config)#
```

Command: **snmptrap**

Description: Set SNMP Trap parameters for a VLAN interface

Mode: vlan Interface Config Mode

Parameters: authentication-failure Authentication failed trap
link-up-down Link up / Link down trap
server SNMP trap server
A.B.C.D IP address of SNMP v2c Traps Sink server

Example:

```
LSS2200-8P (config-vlan-if)# snmptrap authentication-failure
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# snmptrap link-up-down
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# snmptrap server 2.4.6.8
LSS2200-8P (config)#
```

Command: **spanning-tree**

Description: Set STP parameters

Mode: vlan Interface Config Mode

Parameters:

forward-delay Delay in seconds: set so max age does not exceed 2 x (forward delay -1) (4..30)
max-age Age in seconds: set so max age does not exceed 2 x (forward delay -1) (6..40)
priority Priority value in range 0 - 61440 (in steps of 4096)
transmit-hold-count BPDU per second (1..10)

Example:

```
LSS2200-8P (config-vlan-if)# spanning-tree forward-delay 20
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# spanning-tree max-age 25
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# spanning-tree priority 4096
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# spanning-tree transmit-hold-count 5
LSS2200-8P (config)#
```


Command: **start**

Description: Begin VCT diagnostic. Run Virtual Cable Test on the specified GbE port.

Mode: vlan Interface Config Mode

Parameters: vct Virtual Cable Test
 GigabitEthernet The 1G switch port type
 1/1 1/2 1/3 1/4 1/5 1/6 1/7 1/8 port number (GigabitEthernet)

Example:

```
LSS2200-8P (config-vlan-if)# start vct GigabitEthernet 1/1
Cable diagnostics for port : GigabitEthernet 1/1 (Timestamp: 2022-09-30 20:11:51.628054)
=====
| pair   | Status          | Length (meters) |
=====
| A      | Pair Open       | 0                |
| B      | Pair Open       | 0                |
| C      | Pair Open       | 0                |
| D      | Pair Open       | 0                |
LSS2200-8P (config)#

LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# start vct GigabitEthernet 1/2
Cable diagnostics for port : GigabitEthernet 1/2 (Timestamp: 2022-09-30 20:16:35.205812)
=====
| pair   | Status          | Length (meters) |
=====
| A      | Pair Ok         | -                |
| B      | Pair Ok         | -                |
| C      | Pair Short      | 0                |
| D      | Pair Short      | 0                |
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config)# start vct GigabitEthernet 1/8
Cable diagnostics for port : GigabitEthernet 1/8 (Timestamp: 2022-09-30 20:31:38.783682)
=====
| pair   | Status          | Length (meters) |
=====
| A      | Pair Open       | 0                |
| B      | Pair Open       | 0                |
| C      | Pair Open       | 0                |
| D      | Pair Open       | 1                |
LSS2200-8P (config)#
```

Command: **system**

Description: Set system parameters.

Mode: vlan Interface Config Mode

Parameters:

contact	set system contact
DigitalIO	set system digital io
Digital IO number	Digital IO number (1..99)
location	set system location
name	set system name
String	system contact
String	system location
high-to-low	set system snmp action
low-to-high	set system snmp action
disable	set system dio1 snmp disable
enable	set system input dio1 snmp enable
input	set system digital input 2
name	set system DIO2 name
output	set system digital output
String	System name must be alphanumeric and may be hyphenated (max length 63)
snmp-action	set system dio1 snmp
snmp-trap	set system dio1 snmp
high-to-low	set snmp action from high to low
low-to-high	set snmp action from low to high
String	system DIO1 name
high	set system dio output high
low	set system dio output low
do	To run exec commands in config mode
exit	Exit from DIO configuration mode
input	set system digital input
name	set system DIO name
output	set system digital output

Example:

```
LSS2200-8P (config-vlan-if)# system contact S.M.L.
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# system DIO2 output high
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# system DIO1 output low
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# system DIO1 output high
LSS2200-8P (config)# interface vlan 10
LSS2200-8P (config-vlan-if)# system name BobB@Engineering
Syntax error: Illegal parameter
LSS2200-8P (config-vlan-if)# system name BobB-Engineering
BobB-Engineering (config)#
```

Command: `telnet`

Description: Configure the Telnet server

Mode: vlan Interface Config Mode

Parameters: Server enable telnet server

Example:

```
LSS2200-8P (config-vlan-if)# telnet server
```

Warning: Non-secure Telnet State is enabled. Device is vulnerable to Cleartext Transmission of Sensitive Information. Setup and verify SSH, then disable Telnet.

```
LSS2200-8P (config)#
```

Do Commands

The do commands let you run Exec mode commands in several different CLI command modes as summarized below. Modes are Config mode, GbE and 10GbE Interface Config mode, VLAN Interface Config mode, and Security Administration (Admin) mode.

LSS2200-8P (config)# **do ?**

1. ! Comments
2. alarm Actions for alarm conditions
3. clear Clear or reset status or conditions
4. clock Configure time settings
5. configure Enter configuration mode
6. copy Copy commands - copy/backup/restore system configuration or backup system log
7. debug Debug led
8. exit Exit from the CLI
9. nslookup nslookup command for network diagnostics
10. ping Ping command for network diagnostics
11. reload Rebooting or defaulting the device
12. show show information
13. ssh SSH for secure, encrypted connection
14. telnet telnet to transfer data in plain text.
15. traceroute Traceroute command for network diagnostics
16. who Show logged in users

LSS2200-8P (config)#

No Commands

The no commands let you negate a command or set its defaults and are available in several CLI command modes as summarized below.

No Commands in Config Mode

LSS2200-8P (config)# no ?

- | | |
|-------------------|--|
| 1. aging-time | Disable MAC address aging |
| 2. alarm | Disable alarm |
| 3. ble | BLE Commands |
| 4. clock | Restore time settings |
| 5. exec-timeout | Revert to the default inactivity timeout for automatic logout (10 minutes) |
| 6. interface | delete ip interface |
| 7. ip | Delete IP Configuration |
| 8. lldp | Disables LLDP on device |
| 9. logging | Delete Syslog Configurations |
| 10. loop-detect | Loop Detection Disable |
| 11. lpm | Disable LPM (Discovery) Tool |
| 12. monitor | Disable Monitoring different system events |
| 13. nfc | Disable nfc tag |
| 14. ntp | disable ntp |
| 15. poe | Clear Power over Ethernet configuration settings |
| 16. qos | Set QoS global configuration to defaults |
| 17. rest-server | Disable REST API server |
| 18. route | Delete Static route |
| 19. snmp | disable SNMP access |
| 20. snmptrap | Delete SNMP Traps configuration |
| 21. spanning-tree | Disable spanning tree |
| 22. ssh-server | Disable and stop the SSH server. |
| 23. system | Remove System Details |
| 24. telnet | Remove Telnet server configuration settings |

LSS2200-8P (config)#

No Commands in 1 GbE Interface Config Mode

LSS2200-8P (config-if)# no ?

- | | |
|-------------------|--|
| 1. auto-negotiate | Disable Auto-negotiate the switch port |
| 2. description | Default the switch port's description to clear |
| 3. duplex | Default the switch port's duplex to full |
| 4. enable | Disable the switch port |
| 5. flow-control | Default the switch port's flow control to none |
| 6. ip | IP Configuration |
| 7. jumbo-frame | Disable Jumbo-Frame on switch port |
| 8. lldp | Clear Interface specific LLDP Configuration |
| 9. lldp-med | Disables LLDP-MED on the interface |
| 10. loop-detect | Disable loop detection on port. |
| 11. monitor | Disable Port Mirroring |
| 12. poe | Disable Power over Ethernet |
| 13. port-security | Disable port security for the port |
| 14. pvlan | Remove PVLAN membership |
| 15. qos | Clear QoS configuration for ports |
| 16. speed | Default the switch port's speed to 1G |
| 17. switchport | Switching mode characteristics |

LSS2200-8P (config-if)#

No Commands in 10 GbE Interface Config Mode

LSS2200-8P (config-if)# **no** ?

1. auto-negotiate Enable Auto-negotiate the switch port
2. description Update the switch port description
3. duplex Update the switch port's duplex
4. enable Enable the switch port
5. end Go back to EXEC View
6. exit Exit from interface configuration mode
7. flow-control Update the switch port's flow control
8. ip IP Configuration
9. jumbo-frame Enable Jumbo-Frame on switch port
10. lldp Configure LLDP
11. lldp-med Enables LLDP-MED on the interface
12. loop-detect Loop Detect Configuration
13. monitor Monitoring different system events
14. no Negate a command or set its defaults
15. poe Enable to configure Power over Ethernet
16. port-security Enable port security for the port
17. pvlan Set PVLAN membership
18. qos QoS configuration for port
19. sfp-mode Update the switch port's sfp mode
20. spanning-tree Spanning tree port configuration
21. speed Update the switch port's speed
22. switchport Switching mode characteristics

LSS2200-8P (config-if)#

No Commands in VLAN Interface Config Mode

LSS2200-8P (config-vlan-if)# **no** ?

1. dns Remove from DNS Server list
2. ignore Ignore information configured/received

LSS2200-8P (config-vlan-if)#

No Commands in Security Administration (Admin) Mode

LSS2200-8P (config-admin)# **no** ?

1. username Delete or disable a user account
2. webserver Remove web server settings

LSS2200-8P (config-admin)#

Static Link Aggregation Commands

Static Link Aggregation is a way to combine multiple switch ports in parallel to form a single logical connection. It is manually configured and provides increased throughput. Static link aggregation does not automatically adjust based on network load, which makes it different than dynamic link aggregation. Member ports' aggregation states in a static link aggregation group are not affected by its peer ports. A link aggregation group (LAG) is the combination of multiple physical ports. Link failover (redundancy) is supported. Added at FW v 2.1.0.0R2.

Note:

1. STP must be disabled for LAG to function.
2. Each link must be set to full duplex mode.
3. Link failure: with two ports in a group, the traffic flows through both the ports. If one link fails, all traffic will be routed through another port.
4. A maximum of 8 ports/links per Group.

The Static Link Aggregation commands include:

1. aggregation group <group-no>
2. aggregation mode <mode>
3. no aggregation group
4. show aggregation config

Command: **aggregation group** <group-no>

Description: Create 1-4 static link aggregation groups.

Mode: Interface Config mode

Parameters: <group-no> Group number; valid range is between 1 and 4.

Example:

```
LSS2200-8P # configure terminal
LSS2200-8P (config)# interface 10GigabitEthernet 1/1
LSS2200-8P (config-if)# aggregation group 2
LSS2200-8P (config-if)# interface 10GigabitEthernet 1/2
LSS2200-8P (config-if)# aggregation group 2
LSS2200-8P (config-if)#
```

Messages: *Invalid Group ID. Valid range is between 1 and 4*

Command: **aggregation mode** <mode>

Description: Set the static aggregation mode. The LSS2200-8P supports two modes of hash calculation for load balancing. Trunk load balancing is accomplished by either 1) using the frame's DA and SA fields and the hash computed for address table lookups is used for the link selection or 2. using the lower 3 bits of the frame's DA and SA XOR'ed together to select the port/link to use.

Mode: Config mode

Parameters: da-sa-table-lookup Use the Destination Address + Source Address table lookup mode.

da-sa-xor Use the Destination Address + Source Address + Exclusive Or mode.

Example:

```
LSS2200-8P # configure terminal
LSS2200-8P (config)# aggregation mode ?
Aggregation Hash mode mode (da-sa-table-lookup/da-sa-xor)
LSS2200-8P (config)# aggregation mode da-sa-table-lookup
LSS2200-8P (config)#
```


4. Troubleshooting

See the LSS2200-8P Install Guide for troubleshooting information.

5. Regulatory Agency Information

See the LSS2200-8P Install Guide for all regulatory agency information.

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