Oracle® Switch ES1-24 Product Notes

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Contents

Using This Documentation

- **Overview** – Provides late-breaking information about Oracle Switch ES1-24
- **Audience** – Technicians, system administrators, and authorized service providers
- **Required knowledge** – Advanced experience troubleshooting and replacing hardware

Product Documentation Library

Documentation and resources for this product and related products are available at http://www.oracle.com/goto/es1-24/docs.

Feedback

Provide feedback about this documentation at http://www.oracle.com/goto/docfeedback.

Late-Breaking Information

These product notes provide important late-breaking information and instructions for upgrading the firmware to the latest version.

Documentation Reading Order

All of the switch product documentation and related documentation can be found at: `http://www.oracle.com/goto/es1-24/docs`

Read the documentation in this order.

Step	Document Title or Type	Information Provided
1.	*Oracle Switch ES1-24 Product Notes*	Late-breaking information, supported configurations, and system limitations.
2.	README files	Located in the download package, lists of corrected issues and special instructions for applying patches.
3.	*Oracle Switch ES1-24 Configuration Guide*	Software configuration instructions.
4.	*Oracle Switch ES1-24 Service Manual*	Removal and installation of replaceable parts.
5.	Administration Guides	Reference and administration information for the software.

Step	Document Title or Type	Information Provided
6.	*Sun Ethernet Fabric Operating System CLI Base Reference Manual CLI Base Reference Manual*	Base command descriptions, examples, and reference information.
7.	*Sun Ethernet Fabric Operating System CLI Enterprise Reference Manual CLI Base Reference Manual*	Enterprise command descriptions, examples, and reference information.

New Features

These new features are supported for this release:

Logical Link Aggregation

Logical Link Aggregation (LLA) is a Layer 2 feature providing the aggregation of links from a server connected to two physical switches resulting in increased redundancy and capacity. LLA is supported when the switch is running a Layer 2 configuration. LLA is also supported in Layer 3 configurations, starting with 1.3.1.9.

Refer to the *Sun Ethernet Fabric Operating System LLA Administration Guide* for more information.

Edge Virtual Bridging

Edge Virtual Bridging enables the coordination of configuration and management of a virtualized networking environment between an end station running Oracle Solaris and the external SEFOS bridge.

Refer to the *Sun Ethernet Fabric Operating System EVB Administration Guide* for more information.

IEEE DCBX

Data center bridging (DCB) Ethernet enhancements are available to improve Ethernet networking and management in data center environments. DCB is a framework that defines the enhancements that are required for switches and endpoints. DCB includes the following features:

- PG, also known as ETS, which is a priority grouping specification that provides bandwidth management as well as a scheduling algorithm for various traffic classes on a converged link.
- PFC, which is an enhancement to the existing Ethernet-pause protocol, that enables 0-drop packet delivery for certain traffic classes.

This release of the SEFOS DCB feature supports DCB version 1.0.1 and IEEE DCBX as specified by the DCB task group.

Refer to the *Sun Ethernet Fabric Operating System IEEE DCBX Administration Guide* for more information.

In-Band Management

In-band configuration mode on the switch enables access to the switch's Oracle ILOM interface from one of the 24 10 GbE in-band ports.

See “Configuring In-Band Management” on page 23.

Reflective Relay

Reflective relay enables the packet from a device to be returned back from the same downstream port that delivered the packets. The most common use case is when the same interface is used to transmit and receive packets. This usage can be seen while using Virtual Ethernet Packet Aggregation (VEPA).

Refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual* for more information.

Port Mirroring

Port mirroring enables forwarding a copy of a packet received on one interface (source) to another interface (destination) on the same switch.

Refer to the *Sun Ethernet Fabric Operating System Port Mirroring Administration Guide* for more information.

Uplink Port Trailing

The Uplink Port Trailing feature monitors the state of the uplink port and manages the downlink ports according to the state of the uplink port. When the uplink goes down, the downlink ports are shut down, providing the HA feature with the feedback it needs to switch over to alternate link or path. For more details, refer to the *Uplink Trailing Administration Guide*.

VRRPv3

VRRPv3 (VRRP version 3) extends capability to IPv6 in addition to IPv4. Version 3 supports subsecond operation. VRRPv3 also supports accept-mode configuration. For more details, refer to the *VRRPv3 Administration Guide*.

Oracle ILOM 3.0 Updates

Support for Fault Management Architecture (FMA) for environmental monitoring and fault management.

Upgrading the Switch Firmware

- "Back Up the Current Configuration Before Upgrading" on page 12
- "Download the Switch Firmware Package" on page 14
- "Install the Switch Firmware" on page 15

▼ Back Up the Current Configuration Before Upgrading

Save the current configuration to a remote site before upgrading the software. Refer to the *Oracle Switch ES1-24 Configuration Guide* for additional information.

You can also use the backup and restore feature from Oracle ILOM to save the current Oracle ILOM and SEFOS configurations to a remote server. You can then restore the switch configuration after upgrading the firmware. See “Include the SEFOS Configuration in Backups” on page 25.

Note - During the upgrade, if you answer `yes` to the question `Preserve existing configuration (y/n)?`, the Oracle ILOM and SEFOS configurations are automatically preserved. There is no need to explicitly restore the configuration.

---

1. **Configure the default IP address.**

   a. **Enter Global Configuration mode.**

   ```
   SEFOS# configure terminal
   ```

   b. **Configure the default IP address and subnet mask as `10.0.0.100` and `255.255.0.0`.**

```
SEFOS(config)# default ip address 10.0.0.100 subnet-mask 255.255.0.0
```

   c. **Exit Global Configuration mode.**

   ```
   SEFOS(config)# end
   ```

2. **Configure the restoration file name.**

   a. **Enter Global Configuration mode.**

   ```
   SEFOS# configure terminal
   ```

   b. **Configure a configuration restoration file name.**

   ```
   SEFOS(config)# default restore-file myconfig.conf
   ```

   c. **Exit Global Configuration mode.**

   ```
   SEFOS(config)# end
   ```

3. **Save the current configuration for restoration.**

```
SEFOS(config)# write startup-config
```

4. **Copy the configuration file to a remote location.**

```
SEFOS(config)# copy startup-config tftp://12.0.0.100/switch.conf
```

5. **Exit and restart the switch.**

```
SEFOS# exit
-> reset /SP
Are you sure you want to reset /SP (y/n)? y
Performing reset on /SP
```

6. **Log in and save the current configuration again before starting the upgrade.**

```
SEFOS# write startup-config
SEFOS# copy startup-config tftp://12.0.0.100/switch.conf
```

7. **Download the switch firmware package.**

See "Download the Switch Firmware Package" on page 14.

Download the Switch Firmware Package

After backing up your current configuration, download the newest switch firmware package, for example, `Oracle_Switch_ES1-24_sefos-1_3_1_15.pkg`.

1. **Log in to My Oracle Support at:**

   http://support.oracle.com

2. **Select the Patches & Updates tab.**

3. **Under the Patch Search section, select Product or Family (Advanced Search).**

4. **Type `switch` in the Product field and select Oracle Switch ES1-24.**

5. **Select the down arrow in the Release field and select the Oracle Switch ES1-24 folder.**

6. **Select the newest release number.**
7. **Click the Search button.**
8. **Click the number in the Patch Name column.**
9. **Click Download.**
10. **Click the filename of the .zip file to begin the download.**
11. **Save the file to an appropriate location.**
12. **Upgrade the firmware.**
    See "Install the Switch Firmware" on page 15.

▼ Install the Switch Firmware

Note - You must be logged in as `root` to perform the upgrade.

Note - Before upgrading the switch firmware, back up the current configuration as described in "Back Up the Current Configuration Before Upgrading" on page 12.

1. **Ensure that you have a network configuration in place on the switch.**
   For more information, refer to the *Oracle Switch ES1-24 Installation Guide*.
2. **Use TFTP, FTP, or the Oracle ILOM web interface to copy the firmware image to your server.**
3. **Answer the questions that appear on the screen as you proceed through the installation.**
   The following example illustrates the upgrade process using FTP from a server with an IP address of `192.168.1.100`.

```
-> cd /SP/firmware/
/SP/firmware

-> load -source ftp://username:password@192.168.1.100/Oracle_Switch_ES1-24_sefos-
1_3_1_15.pkg

Downloading firmware image. This will take several minutes.
```

```
.

NOTE: An upgrade takes several minutes to complete. ILOM
      will enter a special mode to load new firmware. No
      other tasks can be performed in ILOM until the
      firmware upgrade is complete and ILOM is reset.

Are you sure you want to load the specified file (y/n)? y
Preserve existing configuration (y/n)? y
Starting FW upgrade. This will take approximately 3 minutes.

Checking "root file system image"

Starting Root File System upgrade
Upgrading Root File System image to partition 1
............................................................
............................................................
............................................................
............................................................
Checking "compressed kernel image"

Starting kernel upgrade

Upgrading image to partition 1
....
Syncing configuration files
..............................
Checking "FPGA image"

Starting FPGA upgrade. This process may take up to 3 minutes.
Programming FPGA image
FPGA upgrade requires SEFOS to be stopped. Please wait while
FPGA is being programmed.
Skip upgrading FPGA (same version).
.
Checking "U-Boot image"
Starting U-Boot upgrade
Skip upgrading U-Boot (same version).

Firmware update is complete.
The system must be reset for the new image to be loaded

-> reset /SP
Are you sure you want to reset /SP (y/n)? y
Performing reset on /SP
```

Note - If the hostname was not set prior to upgrade, the switch displays `SUNSP-unknown` in the login prompt. You must reset the switch a second time to clear this condition.

4. **When the switch reboots after the upgrade, type the `version` command to verify that software version is upgraded.**

5. **To show the system information, type these commands.**

```
-> cd /SYS/fs_cli
cd: Connecting to Fabric Switch CLI

ORACLESP-AK00242424 SEFOS# show system information

Hardware Version                 : 2.5.8_00209384
Firmware Version                 : ES1-24-1.3.1.15
Switch Name                      : Oracle ES1-24
System Contact                   :
System Location                  :
Logging Option                   : Console Logging
Login Authentication Mode        : Local
Config Save Status               : Not Initiated
Remote Save Status               : Not Initiated
Config Restore Status            : Not Initiated
```

Configuring the Switches

Configure 1 Gbps Mode on SFP+ Interfaces

The four SFP+ ports, 21 to 24, are dual-speed capable ports and can provide 1 Gbps connectivity when used with the supported transceivers and configured for 1 Gbps operation from the SEFOS CLI.

- To configure a 1 Gbps fiber link, use the supported 10 Gbps/1 Gbps SFP+ transceiver (PN x2129a). The speed must be changed to 1 Gbps on the appropriate port (see the following example).
- To configure a 1 Gbps copper link, use the supported SFP transceiver (PN x2123a), which provides a RJ-45 interface. This is a 1 Gbps-only transceiver and the speed must be changed to 1 Gbps on the appropriate port (see the following example).

Caution - When using 1 Gbps mode, autonegotiation **must be** disabled on the link-partner. The link-partner must be configured in 1 Gbps-Forced-FDX mode.

1. **Obtain the SEFOS prompt.**
2. **Configure the speed to 1 Gbps.**

   For example, to configure ports 21 and 22:

```
SEFOS# config terminal
SEFOS(config)# interface range extreme-ethernet 0/21-22
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 1000
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

Configure Speed on the 10GBASE-T Interfaces

The 20 10GBASE-T ports, 1 to 20, are triple-speed capable ports and can provide 10 Gbps, 1 Gbps, and 100 Mbps connectivity. The 10GBASE-T ports operate in autonegotiation mode only and support all three speeds by default. For most deployments, the default setting would be optimal, permitting link-partners with any speed to link up. If required, the maximum advertised speed can be changed from the SEFOS CLI.

1. **Obtain the SEFOS prompt.**
2. **Configure the maximum advertised speed to 1 Gbps.**

For example, to configure ports 11 and 12.

```
SEFOS#
SEFOS(config)# interface range extreme-ethernet 0/11-12
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 1000
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

Note - The ports only advertise 1 Gbps and 100 Mbps speeds.

3. **Configure the maximum advertised speed to 100 Mbps.**
For example, to configure ports 1 and 4.

```
SEFOS# config terminal
SEFOS(config)# interface extreme-ethernet 0/1
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# exit
SEFOS(config)# interface extreme-ethernet 0/4
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

Note - The ports only advertise 100 Mbps and can only link up with a link-partner at 100 Mbps (if supported by the link-partner).

▼ Fine Tune the VLAN Setup

The switch provides flexibility in managing ingress VLAN traffic. For example, you can enable port ingress filtering and can also specify the acceptable frame type to implement fine-grained control on the ingress traffic. Refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual* for details.

1. **Obtain the SEFOS prompt.**

2. **Display the default port configuration.**

```
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
------------------------------
Port Ex0/3
Port Vlan ID                      : 1
Port Acceptable Frame Type        : Admit All
Port Ingress Filtering            : Disabled
Port Mode                         : Hybrid
Port Gvrp Status                  : Enabled
Port Gmrp Status                  : Enabled
Port Gvrp Failed Registrations    : 0
Gvrp last pdu origin              : 00:00:00:00:00:00
Port Restricted Vlan Registration : Disabled
Port Restricted Group Registration: Disabled
Mac Based Support                 : Disabled
Subnet Based Support              : Disabled
Port-and-Protocol Based Support   : Enabled
Default Priority                  : 0
Filtering Utility Criteria        : Default
Port Protected Status             : Disabled
-------------------------------------------------------
```

3. Reconfigure the port.

For example, to reconfigure the 10 GbE port `Ex0/3` as a tagged port in `vlan 3` and permit only tagged frames:

```
SEFOS# config terminal
SEFOS(config)# vlan 3
SEFOS(config-vlan)# port extreme-ethernet 0/3
SEFOS(config-vlan)# exit
SEFOS(config)# interface extreme-ethernet 0/3
SEFOS(config-if)# switchport ingress-filter
SEFOS(config-if)# switchport acceptable-frame-type tagged
SEFOS(config-if)# end
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
------------------------------
Port Ex0/3
Port Vlan ID                      : 1
Port Acceptable Frame Type        : Admit Only Vlan Tagged
Port Ingress Filtering            : Enabled
Port Mode                         : Hybrid
Port Gvrp Status                  : Enabled
```

```
Port Gmrp Status                    : Enabled
Port Gvrp Failed Registrations      : 0
Gvrp last pdu origin                : 00:00:00:00:00:00
Port Restricted Vlan Registration   : Disabled
Port Restricted Group Registration  : Disabled
Mac Based Support                   : Disabled
Subnet Based Support                : Disabled
Port-and-Protocol Based Support     : Enabled
Default Priority                    : 0
Filtering Utility Criteria          : Default
Port Protected Status               : Disabled
```

4. Add an untagged port.

- To use the preferred method, go to Step 5.
- To use the alternate method, go to Step 6.

5. Add an untagged port using the preferred method.

a. Type these commands.

For example, add 10 GbE port `Ex0/3` to `vlan 3` as untagged.

```
SEFOS# configure terminal
SEFOS(config)# interface extreme-ethernet 0/3
SEFOS(config-if)# switchport access vlan 3
SEFOS(config-if)# end
```

b. Verify the port VLAN ID.

```
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
-----------------------------
Port Ex0/3
 Port Vlan ID                       : 3
 Port Acceptable Frame Type         : Admit All
 Port Ingress Filtering             : Enabled
 Port Mode                          : Hybrid
 Port Gvrp Status                   : Disabled
 Port Gmrp Status                   : Disabled
 Port Gvrp Failed Registrations     : 0
 Gvrp last pdu origin               : 00:00:00:00:00:00
 Port Restricted Vlan Registration  : Disabled
 Port Restricted Group Registration : Disabled
```

```
 Mac Based Support                  : Disabled
 Subnet Based Support               : Disabled
 Port-and-Protocol Based Support    : Enabled
 Default Priority                   : 0
 Dot1x Protocol Tunnel Status       : Peer
 LACP Protocol Tunnel Status        : Peer
 Spanning Tree Tunnel Status        : Peer
 GVRP Protocol Tunnel Status        : Peer
 GMRP Protocol Tunnel Status        : Peer
 IGMP Protocol Tunnel Status        : Peer
 Filtering Utility Criteria         : Default
 Port Protected Status              : Disabled
```

6. Add an untagged port using the alternate method.

a. Type these commands.

For example, add 10 GbE port `Ex0/4` to `vlan 4` as untagged.

```
SEFOS# configure terminal
SEFOS(config)# vlan 4
SEFOS(config-vlan)# ports extreme-ethernet 0/4 untagged extreme-ethernet 0/4
SEFOS(config-vlan)# exit
SEFOS(config)# interface extreme-ethernet 0/4
SEFOS(config-if)# switchport pvid 4
SEFOS(config-if)# end
```

b. Verify the port VLAN ID.

```
SEFOS# show vlan port config port extreme-ethernet 0/4

Vlan Port configuration table
-----------------------------
Port Ex0/4
 Port Vlan ID                       : 4
 Port Acceptable Frame Type         : Admit All
 Port Ingress Filtering             : Enabled
 Port Mode                          : Hybrid
 Port Gvrp Status                   : Disabled
 Port Gmrp Status                   : Disabled
 Port Gvrp Failed Registrations     : 0
 Gvrp last pdu origin               : 00:00:00:00:00:00
 Port Restricted Vlan Registration  : Disabled
 Port Restricted Group Registration : Disabled
 Mac Based Support                  : Disabled
 Subnet Based Support               : Disabled
```

```
Port-and-Protocol Based Support     : Enabled
Default Priority                    : 0
Dot1x Protocol Tunnel Status        : Peer
LACP Protocol Tunnel Status         : Peer
Spanning Tree Tunnel Status         : Peer
GVRP Protocol Tunnel Status         : Peer
GMRP Protocol Tunnel Status         : Peer
IGMP Protocol Tunnel Status         : Peer
Filtering Utility Criteria          : Default
Port Protected Status               : Disabled
```

Configuring In-Band Management

Typically, you can access the Oracle ILOM interface within the switch through the NET MGT port. By configuring in-band management, the Oracle ILOM interface becomes accessible through one of the 24 10 GbE ports. The NET MGT port remains active, and simultaneous access to Oracle ILOM is possible.

- "Requirements for Configuring In-Band Management" on page 23
- "Configure In-Band Management" on page 24

Requirements for Configuring In-Band Management

These requirements must be met to configure in-band management:

- In-band and NET MGT networks must be in different subnets.
- Configure DHCP on only one of the interfaces. Otherwise, the switch receives two default routes.
- Configure one IP gateway only. You can configure the IP gateway using either network management or in-band settings. The IP gateway setting of the other gateway must be set to `0.0.0.0`.

  Note - If the IP gateway is changed to another subnet, the current `ssh` session stops responding.

- On the in-band network, ports used to connect to the switch must be in the default VLAN. No other configuration is required in SEFOS.

Note - If SEFOS has an IP address on a L3 VLAN interface in the same subnet, you might see ICMP error messages.

▼ Configure In-Band Management

Caution - Configure the in-band settings from the serial console to avoid losing access to the switch in case of a misconfiguration.

1. Telnet to the serial console of the switch.

```
ORACLESP-SPNAME login: root
Password: password
Last login: Wed Oct  3 01:46:55 from hostname.us.oracle.com

Oracle(R) Integrated Lights Out Manager (Fabric Component Edition)

Version 3.0.16.0 r78530

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Warning: The system appears to be in manufacturing test mode. Contact Service immediately.

Warning: password is set to factory default.
```

2. Configure the in-band management settings.

```
-> cd /SP/inband_network/
/SP/inband_network
-> set pendingipaddress=xx.xxx.xxx.xx
Set 'pendingipaddress' to 'xx.xxx.xxx.xx'
-> set pendingipgateway=xx.xxx.xxx.x
Set 'pendingipgateway' to 'xx.xxx.xxx.x'
-> set commitpending=true
Set 'commitpending' to 'true'
-> set state=enabled
Set 'state' to 'enabled'
-> ls
 /SP/inband_network
    Targets:
        test

    Properties:
        commitpending = (Cannot show property)
        dhcp_server_ip = none
        ipaddress = xx.xxx.xxx.xx
        ipgateway = xx.xxx.xxx.x
        ipnetmask = 255.255.255.0
```

```
        macaddress = 00:xx:xx:xx:xx:xx
        pendingipaddress = xx.xxx.xxx.xx
        pendingipdiscovery = static
        pendingipgateway = xx.xxx.xxx.x
        pendingipnetmask = 255.255.255.0
        state = enabled
...
->
```

3. **(Optional) Disable the out-of-band network if needed.**

```
-> cd /SP/network
/SP/network

-> set state=disabled
Set 'state' to 'disabled'
```

Managing SEFOS Configurations

These tasks assist in managing SEFOS configurations:

- “Include the SEFOS Configuration in Backups” on page 25
- “Restore the Configuration” on page 26

▼ Include the SEFOS Configuration in Backups

By default, only the Oracle ILOM configuration is backed up when the backup feature is used. Complete the following tasks to include the SEFOS configuration in this backup.

1. **Before backing up your SEFOS configuration using the Oracle ILOM backup feature, complete the following steps.**

   a. **Save the switch configuration.**

```
SEFOS# write startup-config
Building configuration ...
[OK]
```

   b. **Set a passphrase.**

```
-> cd /SP/config
```

```
/SP/config
-> set passphrase=abc123
Set 'passphrase' to 'abc123'
```

Note - The passphrase you provide must not contain the @, ‘ (apostrophe), " (quotes), or \ (back slash) symbols.

2. **Ensure that you have proper login credentials for the server where the configuration is to be backed up.**

3. **Back up the configuration to a remote server.**

```
-> set dump_uri=ftp://username:password@192.168.1.100/tmp/mySwitchConfig.bak
Dump successful
```

▼ Restore the Configuration

Note - The administrator must always reset the SNMP engine ID prior to doing the backup or restore operation. Because of CR 6934622, the SNMP engine ID (even when previously set) is not visible after a reset of the system, and the administrator must record and set the ID explicitly.

1. **Configure the network settings on the Oracle ILOM network management interface to communicate with the backup server.**

```
-> cd /SP/network
```

2. **Set the passphrase to the same value that was used for backup.**

See “Include the SEFOS Configuration in Backups” on page 25.

```
-> cd /SP/config
/SP/config
-> set passphrase=abc123
Set 'passphrase' to 'abc123'
```

3. **Restore the configuration from the server.**

```
-> set load_uri=ftp://username:password@192.168.1.100/tmp/mySwitchConfig.bak
Load successful.
```

Note - If DHCP is used for network configuration, the DNS setting is overwritten with values supplied by the DHCP server upon restoration.

Configuring TACACS+

These topics describe how to configure TACACS+:

- "TACACS+ Properties" on page 27
- "Configure TACACS+ Settings" on page 28

TACACS+ Properties

CLI Property	Default Value	Description
`address [`*tacacs+_server_IP_address*`]`	`0.0.0.0`	Specifies the IP address or DNS name of the TACACS+ server. If you use DNS, ensure that DNS is configured and functional.
`Defaultrole [a|u|o|c|r|s|Administrator|Operator]`	`Operator`	Specifies the access role that is granted to all authenticated TACACS+ users. This property supports the following legacy roles: ■ `Administrator` ■ `Operator` ■ Any individual role ID combinations where `a` = Admin, `u` = User Management, `o` = Operator, `c` = Console, `r` = Reset and Host Control, and `s` = Service.
`fs_privilege` [1|15]	`1`	Specifies the `fs_privilege` that enables TACACS+ authenticated users to access and control SEFOS.
`port [`*port_number*`]`	`49`	Specifies the port number used to communicate with the TACACS+ server.
`protocol`	`ip`	`protocol` identifies the TACACS+ protocol type. `service` identifies the TACACS+ service type.†
`service`	`ppp`	
`secret [`*tacacs+_secret*`]`	[none]	Specifies the shared secret that is used to protect sensitive data and to ensure that the client and server recognize each other.
`state [enabled|disabled]`	`Disabled`	Specifies whether the TACACS+ client is enabled or disabled.

†In the TACACS+ server, the combination of `ppp` and `ip` can be configured to send additional fields in packet data. For Oracle ILOM clients, this configuration is used to send Oracle ILOM-specific fields like `sefos-fs-privilege` and `ilom-role`.

▼ Configure TACACS+ Settings

Before You Begin

Note - Before you configure TACACS+ settings for use with SEFOS, ensure that the User Management (u) role is enabled. Also ensure that you have collected all relevant information about your TACACS+ environment, then configure the appropriate settings from Oracle ILOM to enable authentication using TACACS+.

1. **Log in to the Oracle ILOM CLI.**

2. **Navigate to the `tacacs+` directory.**

```
-> cd /SP/clients/tacacs+
```

3. **Use the `set` command to configure the TACACS+ properties.**

```
-> set/SP/clients/tacacs+ state=enabled address=10.12.235.32
Set 'state' to 'enabled'
Set 'address' to '10.12.235.32'
```

4. **Use the `show` command to view the TACACS+ properties.**

```
-> show /SP/clients/tacacs+
/SP/clients/tacacs+
Targets:

Properties:
   address = 10.12.235.32
   defaultrole = o
   fs_privilege = 1
   port = 49
   protocol = ip
   secret = *****
   service = ppp
   state = enabled

Commands:
   cd
   set
   show
```

Known Issues

These are known issues at the time of this release.

SSL V3.0 POODLE DISABLE SSL V3 (19842504)

Workaround: Disable SSLv3 from ILOM under /SP/service/https.

```
-> cd /SP/services/https
/SP/services/https

-> set sslv3=disabled
Set 'sslv3' to 'disabled'

-> show
/SP/services/https
   Targets:
       ssl

   Properties:
       port = 443
       servicestate = enabled
       sslv2 = disabled
       sslv3 = disabled
       tlsv1 = enabled
       weak_ciphers = disabled

   Commands:
       cd
       set
       show
```

Switch Might Get Stuck at `uboot` on SSD Related Error (16922931)

There is a very small chance when a switch is rebooted that it could hang while loading the kernel image early in the boot cycle. If the hang happens, you see a register dump appear on the console.

Workaround: Reboot the switch. If rebooting does not correct the problem, initiate a service call.

Loss of Access to Management Node Oracle ILOM When Starting or Resetting the System (16893765)

When using the sideband feature on the Oracle ILOM X4170-M2/ZFSSA-controller to connect to the management network through the Oracle Switch ES1-24, the port might not link up after the host is shut down. This issue results in loss of access to the node.

Workaround: Explicitly set the speed to 100 Mbps on the switch port where the X4170-M2/ZFSSA-controller is connected. For example, if the port is being used in `ex 0/2`, run these commands to set the speed to 100 Mbps.

```
SEFOS# config terminal
SEFOS(config)# interface extreme-ethernet 0/2
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

CPU Hang on Power Up (16822073)

During a power cycle, it is possible that the CPU might not power-on. If this rare case occurs, all front panel LEDs remain off and nothing is displayed on console output.

Workaround: Power cycle the system again. If the problem reoccurs, initiate a service call.

`slb_lla`: Long Time to Report Correct Status When the Link Is Down or Up (16424341)

When links configured as part of an SLB group are shut down or brought back up on both SLB active and SLB standby switches, the SLB status on an SLB standby switch does not get updated until the ARP timeout happens.

Workaround: There is no workaround. Check for the availability of a patch for this issue. You must wait for the default ARP timeout to happen before the SLB status gets updated.