

Oracle Switch ES2-72 and Oracle Switch ES2-64 Product Notes

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Using This Documentation

- **Overview** – Provides late-breaking information about Oracle Switch ES2-72 and Oracle Switch ES2-64
- **Audience** – Technicians, system administrators, and authorized service providers
- **Required knowledge** – Advanced experience installing and configuring Ethernet switches

Product Documentation Library

Documentation and resources for this product and related products are available at http://www.oracle.com/goto/es2-72_es2-64/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 newest version.

- “Documentation Reading Order” on page 9
- “Enhancements” on page 10
- “Upgrading the Switch Firmware” on page 10
- “Configuring the Switches” on page 18
- “Known Issues” on page 30

Documentation Reading Order

All of the switch product documentation and related documentation can be found at http://www.oracle.com/goto/es2-72_es2-64/docs.

Read the documentation in this order.

Step	Document Title or Type	Information Provided
1.	<i>Oracle Switch ES2-72 and Oracle Switch ES2-64 Product Notes</i>	Late-breaking information, supported configurations, upgrade procedures, and system limitations.
2.	README files	Lists corrected issues and any special instructions for applying patches.
3.	<i>Oracle Switch ES2-72 and Oracle Switch ES2-64 Installation Guide</i>	Installation instructions.
4.	<i>Oracle Switch ES2-72 and Oracle Switch ES2-64 Configuration Guide</i>	Software configuration instructions.
5.	<i>Oracle Switch ES2-72 and Oracle Switch ES2-64 Service Manual</i>	Removal and installation of replaceable parts.
6.	Administration guides	Reference and administration information for the software.
7.	<i>Sun Ethernet Fabric Operating System CLI Reference Manual</i> , Volumes 1 to 8	Base command descriptions, examples, and reference information.

Enhancements

This release includes enhancements, change requests, and corrected issues for Oracle Ethernet Switch ES2-72 and Oracle Ethernet Switch ES2-64.

For installation instructions, refer to the [Oracle Switch ES2-72 and Oracle Switch ES2-64 Installation Guide](#).

For a list of issues resolved by this release, refer to the README files.

Upgrading the Switch Firmware

Note - The SP address and the host address are two different IP addresses in the management network.

Use the following procedures to update to the newest release.

- [“Prepare the Host for Upgrade” on page 10](#)
- [“Prepare the Service Processor for Upgrade” on page 12](#)
- [“Download the Switch Firmware Package” on page 14](#)
- [“Upgrade the Host \(SEFOS\)” on page 14](#)
- [“Upgrade the Service Processor” on page 16](#)

▼ Prepare the Host for Upgrade

Like the SP, the host must have a valid IP address configured on its management interface.

1. **If the host is not powered on, power it on now.**

```
-> start /SYS
Are you sure you want to start /SYS (y/n)? y
```

2. **Connect to the host console from the SP.**

```
-> start /HOST/console
Are you sure you want to start /HOST/console (y/n)? y
```

The switch host's Oracle ILOM login prompt appears if the host is powered on..

3. Log in to the Oracle ILOM CLI on the host.

The default user is root. The default password is changeme. The switch Oracle ILOM prompt, ES2->, appears.

4. Validate the network configuration.

DHCP is enabled by default, so the host can get the network configuration automatically if there is a DHCP server on the network.

The names and addresses in the following examples are only for demonstration.

```
ES2-> cd /SP/network/
/SP/network
ES2-> show
/SP/network
Targets:
    ipv6
    test
Properties:
    commitpending = (Cannot show property)
    dhcp_clientid = none
    dhcp_server_ip = 10.134.178.5
    ipaddress = 10.134.178.167
    ipdiscovery = dhcp
    ipgateway = 10.134.178.1
    ipnetmask = 255.255.255.0
    macaddress = 00:19:0F:16:D4:19
    pendingipaddress = 10.134.178.167
    pendingipdiscovery = dhcp
    pendingipgateway = 10.134.178.1
    pendingipnetmask = 255.255.255.0
    state = enabled
    vlan_id = (none)
Commands:
    cd
    set
    show
```

5. (Optional) Configure the static network settings for the host if no DHCP server is available.

```
ES2-> set pendingipaddress=10.134.178.167
Set 'pendingipaddress' to '10.134.178.167'
ES2-> set pendingipnetmask=255.255.255.0
Set 'pendingipnetmask' to '255.255.255.0'
ES2-> set pendingipgateway=10.134.178.1
Set 'pendingipgateway' to '10.134.178.1'
ES2-> set pendingipdiscovery=static
```

```
Set 'pendingipdiscovery' to 'static'
ES2-> set commitpending=true
Set 'commitpending' to 'true'

ES2-> show
/SP/network
  Targets:
    ipv6
    test
  Properties:
    commitpending = (Cannot show property)
    dhcp_clientid = none
    dhcp_server_ip = none
    ipaddress = 10.134.178.167
    ipdiscovery = static
    ipgateway = 10.134.178.1
    ipnetmask = 255.255.255.0
    macaddress = 00:19:0F:14:2F:BD
    pendingipaddress = 10.134.178.170
    pendingipdiscovery = static
    pendingipgateway = 10.134.178.1
    pendingipnetmask = 255.255.255.0
    pendingvlan_id = (none)
    state = enabled
    vlan_id = (none)
```

▼ Prepare the Service Processor for Upgrade

The SP must have a valid IP address configured on its management interface.

Note - IMPORTANT! The HOST (SEFOS) **must** be upgraded to 2.0.0.7 **before** upgrading the Service Processor.

1. Log in to Oracle ILOM running on the SP.

```
ORACLESP-AKCH444444 login: root
changeme>Password: password configured by the admin or the default password
```

```
Hostname: ORACLESP-AKCH444444
->
```

2. Validate the network configuration.

DHCP is enabled by default, so the host can get the network configuration automatically if there is a DHCP server on the network.

The names and addresses in the following examples are only for demonstration.

```
-> cd /SP/network
/SP/network
-> show
/SP/network
  Targets:
    ipv6
    test
  Properties:
    commitpending = (Cannot show property)
    dhcp_clientid = none
    dhcp_server_ip = 10.134.178.5
    ipaddress = 10.134.178.170
    ipdiscovery = dhcp
    ipgateway = 10.134.178.1
    ipnetmask = 255.255.255.0
    macaddress = 00:21:28:79:8B:58
    pendingipaddress = 10.134.178.170
    pendingipdiscovery = dhcp
    pendingipgateway = 10.134.178.1
    pendingipnetmask = 255.255.255.0
    pendingvlan_id = (none)
    state = enabled
```

3. (Optional) Configure static network settings on the SP if no DHCP server is available.

```
-> set pendingipaddress=10.134.178.170
Set 'pendingipaddress' to '10.134.178.170'
-> set pendingipnetmask=255.255.255.0
Set 'pendingipnetmask' to '255.255.255.0'
-> set pendingipgateway=10.134.178.1
Set 'pendingipgateway' to '10.134.178.1'
-> set pendingipdiscovery=static
Set 'pendingipdiscovery' to 'static'
-> set commitpending=true
Set 'commitpending' to 'true'
```

```
-> show
/SP/network
  Targets:
    ipv6
    test
  Properties:
    commitpending = (Cannot show property)
    dhcp_clientid = none
    dhcp_server_ip = none
```

```
ipaddress = 10.134.178.170
ipdiscovery = static
ipgateway = 10.134.178.1
ipnetmask = 255.255.255.0
macaddress = 00:21:28:79:8B:58
pendingipaddress = 10.134.178.170
pendingipdiscovery = static
pendingipgateway = 10.134.178.1
pendingipnetmask = 255.255.255.0
pendingvlan_id = (none)
state = enabled
vlan_id = (none)
```

▼ Download the Switch Firmware Package

1. **Sign in to My Oracle Support at:**
<http://support.oracle.com>
2. **Select the Patches & Updates tab from the top of the web page.**
3. **Under the Patch Search section, select "Number/Name or Bug Number (Simple)".**
4. **Type in Patch Number 21378426.**
5. **Click the Search button.**
6. **Click the number in the Patch Name column.**
7. **Click Download.**
8. **Click the file name of the zip file to begin the download.**
9. **Save the file to an appropriate location.**
10. **Unzip the file to obtain the .pkg images for SP and host:**
 - ES2-72_64_SP_3.2.5.60_r109079.pkg
 - ES2-72_64_SEFOS_2.0.0.7.pkg

▼ Upgrade the Host (SEFOS)

Upgrade the host at the ES2-> prompt.

1. **Log in as root.**
2. **Connect to the host console or ssh to the host IP address.**
3. **Determine if the firmware version running on the host needs to be upgraded.**
Run the `version` command and compare the `SP filesystem` version to the version in the new image.
In the `ES2-72_64_SEFOS_2.0.0.7.pkg`, the version number is `2.0.0.7`.

```
ES2-> version
SP firmware 3.2.5.60
SP firmware build number: 100744
SP firmware date: Wed Jul 15 11:07:33 PDT 2015
SP filesystem version: 2.0.0.3
```

4. **Ensure that you have a network configuration in place on the switch.**
5. **Use TFTP, FTP, SCP, HTTP, HTTPS, or SFTP to upgrade the host image.**

Note - The Oracle ILOM web interface is not supported on the host.

Answer the questions that appear on the screen as you proceed through the upgrade. The following example illustrates the upgrade process using FTP from a server with an IP address of `192.168.1.100`.

Note - You must reboot the host after the upgrade. The switching and routing functions are disrupted while the switch reboots.

```
-> load -source ftp://username:password@192.168.1.100/ES2-72_64_SEFOS_2.0.0.7.pkg
Enter remote user password: enter password
```

```
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
```

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

```
ES2->
```

```
ES2-> reset /SP
Are you sure you want to reset /SP (y/n)? y
Performing hard reset on /SP
```

6. **When the switch reboots after the upgrade, type the version command to verify that software version is upgraded.**
7. **To show the system information, type these commands.**

```
ES2-> cd /SYS/fs_cli/
cd: Connecting to Fabric Switch CLI

localhost SEFOS# show system information show system information

Hardware Version           : patch-319710_3.3.11_00306215
Firmware Version          : ES2-R72-2.0.0.7

Hardware Part Number      : 1-0-0
Software Serial Number    : 1-0-0
Software Version          : 7.3.2
Switch Name               : Oracle-ES2-72
System Contact            :
System Location           :
Logging Option            : Console Logging
Device Uptime             : 0 Days, 1 Hrs, 48 Mins, 43 Secs
Login Authentication Mode  : Local
Config Save Status        : Not Initiated
Remote Save Status        : Not Initiated
Config Restore Status     : Successful
Traffic Separation Control : none
```

Note - Due to the fix for "Bug 21810986 - FS privilege feature for ES2-72 x86 platform" the non-root local users do not get restored after upgrade to 2.0.0.7. You must recreate the local users and assign the `fs_privilege` level explicitly.

▼ Upgrade the Service Processor

Upgrade the SP at the -> prompt.

1. **Log in as root.**
2. **Connect to the SP serial console or ssh to the SP IP address.**

3. **Ensure that you have a network configuration in place on the switch.**
4. **Use the `version` command to determine if the firmware version running on the SP needs to be upgraded.**

Compare the SP firmware build number to the build number in the new image.

In ES2-72_64_SP_3.2.5.60_r109079.pkg, the build number is r109079.

5. **Use TFTP, FTP, SCP, HTTP, HTTPS, SFTP, or the Oracle ILOM web interface to upgrade the SP image with the firmware image file ES2-72_64_SP_3.2.5.60_r109079.pkg.**

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.

Note - The SP reboots automatically after the upgrade. The switch keeps running as normal.

```
-> load -source ftp://username:password@192.168.1.100/ES2-72_64_SP_3.2.5.60_r109079.pkg
```

```
Enter remote user password: enter password
```

```
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
```

```
.....
.....
.....
.....
```

```
Firmware update is complete.
```

```
ILOM will now be restarted with the new firmware.
```

```
-> /sbin/reboot
```

6. **When the SP reboots after the upgrade, verify the software build number.**

```
-> version
```

```
SP firmware 3.2.5.60
```

```
SP firmware build number: 109079
```

```
SP firmware date: Fri Mar 25 15:47:10 PDT 2016
```

SP filesystem version: 0.2.10

Note - This version allows you to explicitly set a policy to auto power on the host after a power event. If you prefer the host to power on automatically when main power is applied, set the policy as shown in the example.

```
-> show /SP/policy/

/SP/policy
  Targets:

  Properties:
    HOST_AUTO_POWER_ON = disabled
    HOST_LAST_POWER_STATE = disabled

-> set /SP/policy/ HOST_AUTO_POWER_ON=enabled
Set 'HOST_AUTO_POWER_ON' to 'enabled'

-> show /SP/policy/

/SP/policy
  Targets:

  Properties:
    HOST_AUTO_POWER_ON = enabled
    HOST_LAST_POWER_STATE = disabled
```

Configuring the Switches

- [“Port Capabilities” on page 18](#)
- [“Configure Speed on the QSFP+ Interfaces” on page 19](#)
- [“Configure Speed on the 10GBASE-T Interfaces on ES2-R64” on page 21](#)
- [“Fine Tune the VLAN Setup” on page 22](#)
- [“Configuring TACACS+” on page 26](#)
- [“Configuring In-Band Management” on page 28](#)

Port Capabilities

Oracle Switch ES2-72 has 18 QSFP+ ports that are 40Gbps/10Gbps/1Gbps capable. Ports on Oracle Switch ES2-72 are referred to as extreme-ethernet 0/1 to 0/72.

Oracle Switch ES2-64 has 6 QSFP+ ports which are 40Gbps/10Gbps/1Gbps capable and 40 RJ-45 ports which are 10Gbps/1Gbps/100Mbps capable. Ports on Oracle Switch ES2-64 are referred to as extreme-ethernet 0/1 to 0/64.

▼ Configure Speed on the QSFP+ Interfaces

All the QSFP ports on the switch can provide 40/10/1 Gbps connectivity. The default mode of a QSFP port is 4x10Gbps. You can configure the port for 40Gbps or 1 Gbps operation from the SEFOS CLI.

- When changing speed from 40Gbps to 10Gbps/1Gbps or from 1Gbps/10Gbps to 40Gbps, change the admin state explicitly to UP after you change the speed.
- For 40Gbps operation, only the head ports of the QSFP interfaces, extreme-ethernet 0/1, 5, 9, 13, 17, 21 (for ES2-R64) and extreme-ethernet 0/1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61, 65, 69 (for ES2-R72), need to be configured. See the example below.
When the speed of a port is changed to 40Gbps, only the head port remains visible.



Caution - All QSFP ports operate in Forced mode. You must disable autonegotiation on the link-partner.

1. **Obtain the SEFOS prompt.**
2. **Configure the speed to 40 Gbps.**

For example, to configure ports 5 and 21:

```
ES2-72-primary SEFOS# configure terminal
ES2-72-primary SEFOS(config)# int extreme-ethernet 0/5
ES2-72-primary SEFOS(config-if)# speed 40000
% Port state will be admin down during speed change during 10G to 40G or 40G to 10G or 40G to 1G
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# exit
ES2-72-primary SEFOS(config)# int extreme-ethernet 0/21
ES2-72-primary SEFOS(config-if)# speed 40000
% Port state will be admin down during speed change during 10G to 40G or 40G to 10G or 40G to 1G
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# exit
ES2-72-primary SEFOS(config)# end
ES2-72-primary SEFOS# write startup-config

ES2-72-primary SEFOS# sh interface status
```

Port	Status	Duplex	Speed	Negotiation
----	-----	-----	-----	-----
Ex0/1	not connected	Full	10 Gbps	No-Negotiation
Ex0/2	not connected	Full	10 Gbps	No-Negotiation
Ex0/3	not connected	Full	10 Gbps	No-Negotiation
Ex0/4	not connected	Full	10 Gbps	No-Negotiation
Ex0/5	not connected	Full		
40 Gbps	No-Negotiation			
Ex0/9	not connected	Full	10 Gbps	No-Negotiation
Ex0/10	not connected	Full	10 Gbps	No-Negotiation
Ex0/11	not connected	Full	10 Gbps	No-Negotiation
Ex0/12	not connected	Full	10 Gbps	No-Negotiation
Ex0/13	not connected	Full	10 Gbps	No-Negotiation
Ex0/14	not connected	Full	10 Gbps	No-Negotiation
Ex0/15	not connected	Full	10 Gbps	No-Negotiation
Ex0/16	not connected	Full	10 Gbps	No-Negotiation
Ex0/17	not connected	Full	10 Gbps	No-Negotiation
Ex0/18	not connected	Full	10 Gbps	No-Negotiation
Ex0/19	not connected	Full	10 Gbps	No-Negotiation
Ex0/20	not connected	Full	10 Gbps	No-Negotiation
Ex0/21	not connected	Full		
40 Gbps	No-Negotiation			

3. Configure the speed from 40Gbps to 10 Gbps or 1Gbps.

For example, to configure port 5 to 1Gbps and port 21 to 10Gbps:

```
ES2-72-primary SEFOS# configure terminal
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/5
ES2-72-primary SEFOS(config-if)# speed 10000 <---- Change to 10000 first
% Port state will be admin down during speed change during 10G to 40G or 40G to 10G or 40G to 1G
ES2-72-primary SEFOS(config-if)# speed 1000
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# ex
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/21
ES2-72-primary SEFOS(config-if)# speed 10000
% Port state will be admin down during speed change during 10G to 40G or 40G to 10G or 40G to 1G
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# end
ES2-72-primary SEFOS# write startup-config
```

```
ES2-72-primary SEFOS# show interface status
```

Port	Status	Duplex	Speed	Negotiation
----	-----	-----	-----	-----
Ex0/1	not connected	Full	10 Gbps	No-Negotiation
Ex0/2	not connected	Full	10 Gbps	No-Negotiation
Ex0/3	not connected	Full	10 Gbps	No-Negotiation

Ex0/4	not connected	Full	10 Gbps	No-Negotiation
Ex0/5	not connected	Full		
1 Gbps	No-Negotiation			
Ex0/6	not connected	Full	10 Gbps	No-Negotiation
Ex0/7	not connected	Full	10 Gbps	No-Negotiation
Ex0/8	not connected	Full	10 Gbps	No-Negotiation
Ex0/9	not connected	Full	10 Gbps	No-Negotiation
Ex0/10	not connected	Full	10 Gbps	No-Negotiation
Ex0/11	not connected	Full	10 Gbps	No-Negotiation
Ex0/12	not connected	Full	10 Gbps	No-Negotiation
Ex0/13	not connected	Full	10 Gbps	No-Negotiation
Ex0/14	not connected	Full	10 Gbps	No-Negotiation
Ex0/15	not connected	Full	10 Gbps	No-Negotiation
Ex0/16	not connected	Full	10 Gbps	No-Negotiation
Ex0/17	not connected	Full	10 Gbps	No-Negotiation
Ex0/18	not connected	Full	10 Gbps	No-Negotiation
Ex0/19	not connected	Full	10 Gbps	No-Negotiation
Ex0/20	not connected	Full	10 Gbps	No-Negotiation
Ex0/21	not connected	Full		
10 Gbps	No-Negotiation			
Ex0/22	not connected	Full	10 Gbps	No-Negotiation
Ex0/23	not connected	Full	10 Gbps	No-Negotiation
Ex0/24	not connected	Full	10 Gbps	No-Negotiation

▼ Configure Speed on the 10GBASE-T Interfaces on ES2-R64

The 40 10GBASE-T ports, 25 to 64 are tri-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 25 and 26:

```
ES2-72-primary SEFOS# configure terminal
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/25
ES2-72-primary SEFOS(config-if)# shutdown
ES2-72-primary SEFOS(config-if)# speed 1000
ES2-72-primary SEFOS(config-if)# no shutdown
```

```
ES2-72-primary SEFOS(config-if)# ex
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/26
ES2-72-primary SEFOS(config-if)# shutdown
ES2-72-primary SEFOS(config-if)# speed 1000
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# end
ES2-72-primary 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 31 and 34:

```
ES2-72-primary SEFOS# configure terminal
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/31
ES2-72-primary SEFOS(config-if)# shutdown
ES2-72-primary SEFOS(config-if)# speed 100
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# ex
ES2-72-primary SEFOS(config)# interface extreme-ethernet 0/34
ES2-72-primary SEFOS(config-if)# shutdown
ES2-72-primary SEFOS(config-if)# speed 100
ES2-72-primary SEFOS(config-if)# no shutdown
ES2-72-primary SEFOS(config-if)# end
ES2-72-primary 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 Reference Manuals* 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 permitting 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 TACACS+

- [“TACACS+ Properties” on page 26](#)
- [“Configure TACACS+ Settings” on page 27](#)

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: <ul style="list-style-type: none"> ■ 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	Identifies the TACACS+ protocol type.
service	ppp	Identifies the TACACS+ service type. [†]
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

Note - The same procedure applies to TACACS+ configuration on SP and Host ILOM.

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

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

```
-> 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 = 0
  fs_privilege = 1
  port = 49
  protocol = ip
  secret = *****
  service = ppp
  state = enabled
```

```
Commands:
  cd
  set
  show
```

Configuring In-Band Management

In a typical deployment, one of the 10G/40G ports, designated the uplink port, will be connected to the data-center's network. Inband configuration mode on the ES2-72 allows access to the switch's ILOM interface from one of the data ports. The switch can be accessed simultaneously via the dedicated, out-of-band network interface and the in-band network.

- [“Guidelines for Configuring In-Band Management” on page 28](#)
- [“Configure In-Band Management” on page 28](#)

Guidelines for Configuring In-Band Management

- In-band and out-of-band must be in different subnets.
- DHCP can be configured on only one of the interfaces. Otherwise DHCP would get two default routes.
- Only one gateway ip must be configured. It can be configured either under the out-of-band or in-band settings.

Note - If the gateway is changed to another subnet, the current session (ssh) will stop to respond.

- If vlans will be used for the in-band configuration, then the vlan **must** be configured and made Active in SEFOS prior to doing in-band network configuration.

▼ Configure In-Band Management

The following configuration provides an example of how to configure an ES2-72 switch.



Caution - To avoid losing access to the switch due to a misconfiguration, do the in-band configuration from the serial console.

1. Telnet to the serial console of the switch.

```
ORACLESP-AK000777777 login: root
Password: changeme
```

2. Configure the switch.

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

```
/SP/inband-network

-> set pendingipaddress=10.134.171.38
Set 'pendingipaddress' to '10.134.171.38'

-> set commitpending=true
Set 'commitpending' to 'true'

-> set pendingipgateway=10.134.171.1
Set 'pendingipgateway' to '10.134.171.1'

-> 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 = 10.134.171.38
    ipdiscovery = static
    ipgateway = 10.134.171.1
    ipnetmask = 255.255.255.0
    macaddress = 00:E0:0C:02:77:8D
    pendingipaddress = 10.134.171.38
    pendingipdiscovery = static
    pendingipgateway = 10.134.171.1
    pendingipnetmask = 255.255.255.0

Commands:
    cd
    set
    show

->
```

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

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

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

Known Issues

These are known issues at the time of this release.

- [“General Software Issues” on page 30](#)
- [“Oracle ILOM-x86 Issues” on page 31](#)

General Software Issues

- Port-channel recovery conflicts with UPT when port-channels are used as uplink (22120613)

Workaround — If a port-channel will be used as an uplink or downlink port, then the port-channel recovery feature must be disabled by running these commands at the SEFOS prompt:

```
configure terminal
  set port-channel error-recovery-time 0
end
copy run start
```

- FS privilege feature for ES2-72 x86 platform (21810986)

Due to this fix, non-root local users do not get restored after an upgrade to 2.0.0.5.

Workaround — You must recreate the local users and assign the fs_privilege level explicitly.

- No way to reset NTP back to default without a global reset (21240834)

Workaround — None.

- SLB failover and fallback behavior discrepancy between IPv4 and IPv6 routes

Discrepancies in behavior during a failover or fallback event are the result of changes to SLB in release 2.0.0.5 that fix certain SLB IPv6 related issues.

After a failover to a standby, if the standby server also goes down and no servers in the LBG are up, then the output of `show slb` shows all the IPv6 routes as cleared. The IPv6 routes, however, show as idle or failed.

Similarly, when the standby comes back up, the IPv4 routes show the state transition correctly, but IPv6 remains in the same state and does not show the routes completely

Currently there is no distinction between the behavior when a single link goes down versus when all the links go down in SLB IPv6. Similarly, when the single link comes back up, the state does not change until all the links are up.

This issue is related only to SLB IPv6. SLB IPv4 is not affected. This behavior also is seen when the servers are one hop away from the switch where SLB is configured, but not when the servers are connected directly to the switch.

Oracle ILOM-x86 Issues

- Cannot perform power cycle of host from SP via Oracle ILOM web interface (20766502)
Workaround — Do not use Power Cycle. Use Power Off, followed by Power On. .
- Incorrect processor data on System Information Processors screen under SP Oracle ILOM (20766289).
Workaround — None.
- snmp properties changes do not take affect without a servicestate toggle (20823021).
Workaround — Disable and then enable servicestate.


```
-> set servicestate=disabled
Set 'servicestate' to 'disabled'
.
-> set servicestate=enabled
Set 'servicestate' to 'enabled'
```
- Superfluous trap when snmp agent is restarted on the host Oracle ILOM (20823179).
Workaround — None.
- snmp write returns incorrect message when set as read-only on the host Oracle ILOM (20816876).
 snmpset returns a value of noAccess instead of notWritable.
Workaround — None.
- /SP/clock timezone displayed incorrectly on ILOM host (20815455).
 The clock timezone can be set correctly on the SP, but not on the host.
Workaround — None.
- snmp write data does not show up under the host Oracle ILOM CLI (20808643).
 Edits to snmp values may be successful on the SP but not on the host.
Workaround — None.
- Alertmgmt test rule does not generate a trap (20807736).

When an snmp manager is set up to receive traps from the host Oracle ILOM and a testrule is performed to test the connection, traps are generated on the SP but not on the host.

Workaround — None.

- Error when attempting to walk sefos mibs on host and mib data missing (20807119).

When sefos OID is walked, it returns an error. Data might not be available afterward.

Workaround — None.