

Sun Ethernet Fabric Operating System

EVB Administration Guide



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Using This Documentation

SEFOS EVB is the Oracle implementation of IEEE standard Edge virtual bridging. This document describes the basic configuration examples of EVB.

- “Product Notes” on page 1
- “Related Documentation” on page 2
- “Acronyms and Abbreviations” on page 2
- “CLI Command Modes” on page 3
- “Feedback” on page 3
- “Support and Accessibility” on page 3

Product Notes

For late-breaking information and known issues about the following products, refer to the product notes at:

Oracle Switch ES1-24:

<http://www.oracle.com/goto/ES1-24/docs>

Sun Network 10GbE Switch 72p:

<http://www.oracle.com/goto/SN-10GbE-72p/docs>

Sun Blade 6000 Ethernet Switched NEM 24p 10GbE:

<http://www.oracle.com/goto/SB6K-24p-10GbE/docs>

Related Documentation

Documentation	Links
All Oracle products	http://oracle.com/documentation
Oracle Switch ES1-24	http://www.oracle.com/goto/ES1-24/docs
Sun Network 10GbE Switch 72p	http://www.oracle.com/goto/SN-10GbE-72p/docs
Sun Blade 6000 Ethernet Switched NEM 24p 10GbE	http://www.oracle.com/goto/SB6K-24p-10GbE/docs
Sun Blade 6000 modular system	http://www.oracle.com/pls/topic/lookup?ctx=sb6000
Oracle Integrated Lights Out Manager (Oracle ILOM) 3.0	http://www.oracle.com/pls/topic/lookup?ctx=ilom30

For detailed information about the commands and options described in this document, refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual*.

Acronyms and Abbreviations

Acronym or Abbreviation	Explanation
EVB	Edge virtual bridging
LLDP	Link Layer Discovery Protocol
SEFOS	Sun Ethernet Fabric Operating System
VDP	VSI Discovery and Configuration Protocol
VEB	Virtual Ethernet bridging
VEPA	Virtual Ethernet port aggregator
VSI	Virtual station instance (VNIC)
VSIID	Virtual station instance ID

CLI Command Modes

The following table lists the configuration modes used in this document with their access and exit methods.

Command Mode	Access Method	Prompt	Exit Method
User EXEC	Access SEFOS from Oracle ILOM with read-only rights (privilege level 1).	SEFOS>	Use the <code>logout</code> or <code>exit</code> command to return to the Oracle ILOM prompt.
Privileged EXEC	Access SEFOS from Oracle ILOM with full administrative rights (privilege level 15).	SEFOS#	Use the <code>logout</code> or <code>exit</code> command to return to the Oracle ILOM prompt.
Global Configuration	From Privileged EXEC mode, use the <code>configure terminal</code> command.	SEFOS(config)#	Use the <code>end</code> command to return to Privileged EXEC mode.
Interface Configuration	From Global Configuration mode, use the <code>interface interface-type interface-id</code> command.	SEFOS(config-if)#	Use the <code>exit</code> command to return to Global Configuration mode, or use the <code>end</code> command to return to Privileged EXEC mode.

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EVB Overview

These sections describe the EVB protocol and supported CLI commands.

- [“Protocol Description” on page 5](#)
- [“Supported CLI Commands” on page 6](#)

Protocol Description

EVB is an IEEE standard that enables you to coordinate the configuration and management of a virtualized networking environment between an end station running Oracle Solaris and the external SEFOS bridge. EVB extends network virtualization features into the physical network infrastructure, enabling you to manage bandwidth and to increase utilization resources.

EVB defines protocols for an end station to exchange configuration information about its VNICs to SEFOS. This situation helps in automating configuration, and avoids the need to configure VNICs on an end station and also manually configuring the external bridge appropriately (typically these bridges are administered by different administrators).

VM to VM communication over a port can happen in two ways:

- Packets can be looped back within the host (VEB)
- Packets can be sent to the external switch and looped back (VEPA)

EVB enables a switch to indicate whether it supports reflective relay, if the switch does, it advertises its state (enabled or disabled). An EVB station can request the EVB switch to enable or disable the reflective relay feature based on its configuration, whether VM-VM traffic should be looped back internally or externally.

Note – The current implementation on SEFOS only supports VEB and does not support VEPA, and is only compatible with the Oracle Solaris implementation of EVB. In addition, the current implementation of EVB only supports MTU sizes of 1500 and 9000. VNICs or VSIs created with any other MTU size will not be accepted by SEFOS.

Supported CLI Commands

You can use the following CLI commands to configure EVB:

- `set lldp enable`
- `set lldp disable`
- `no shutdown lldp`
- `shutdown lldp`
- `no shutdown evb`
- `shutdown evb`
- `lldp tlv-select dot1evb`
- `no lldp tlv-select dot1evb`
- `set vdp enable`
- `set vdp disable`
- `show vdp profiles interface IFLIST name`
- `show evb interface IFLIST name`
- `show evb`

Refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual* for the complete set of commands and the various options available for configuring EVB.

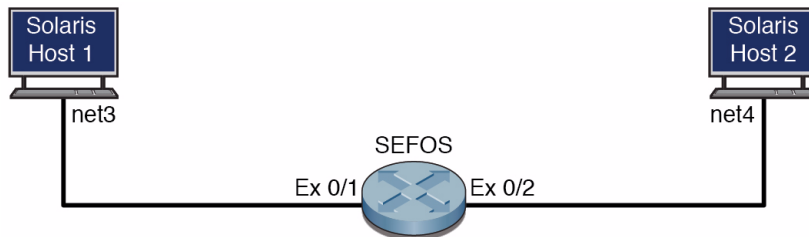
Configuring EVB

These sections provide examples of configuring EVB on the switch with an Oracle Solaris host.

- [“Example Configuration” on page 7](#)
- [“Configuring EVB on the Switch” on page 7](#)

Example Configuration

This figure shows two Oracle Solaris hosts connected to two individual ports on the switch.



Configuring EVB on the Switch

Before setting EVB on the switch, you need to configure and enable EVB on the Oracle Solaris host.

Refer to [Managing Network Datalinks in Oracle Solaris 11.2](#) to set up EVB on Oracle Solaris.

- [“Configure and Enable EVB on an Oracle Solaris Host” on page 8](#)
- [“Show Commands” on page 8](#)

▼ Configure and Enable EVB on an Oracle Solaris Host

These steps are used to set up the configuration in “[Example Configuration](#)” on [page 7](#).

1. Enable the LLDP module.

```
SEFOS# conf t
SEFOS(config)# set lldp enable
SEFOS(config)# no shutdown lldp
```

2. Enable the EVB module.

```
SEFOS(config)# no shutdown evb
```

Note – By default EVB module is enabled on the switch.

3. Enable TLV and VDP on the interface.

```
SEFOS(config)# interface ex 0/1
SEFOS(config-if)# lldp tlv-select dot1evbtlv
SEFOS(config-if)# set vdp enable
SEFOS(config-if)# exit
SEFOS(config)# interface ex 0/2
SEFOS(config-if)# lldp tlv-select dot1evbtlv
SEFOS(config-if)# set vdp enable
SEFOS (config-if)# end
SEFOS#
```

▼ Show Commands

1. Check the configuration.

```
SEFOS# show evb
EVB Global Information
-----
System Control           : Start

SEFOS# show evb interface extreme-ethernet 0/1
Port                     : Ex0/1
Show Type                 : Admin State
```

```
EVB Capable State      : on

SEFOS# show evb interface extreme-ethernet 0/2
Port                   : Ex0/2
Show Type              : Admin State
EVB Capable State     : on
```

2. Check the VDP profiles and status.

Perform this step after creating multiple VNICs on the Oracle Solaris host (net3).

```
SEFOS# show vdp profiles int ex 0/1
Name      VSIID          State      VSIType    maxbw(%)  mtu
----      -
vnic4     02:08:20:3d:0d:68  ASSOC     133/0      25         1500
vnic3     02:08:20:fd:3f:de  ASSOC     130/0      10         1500
vnic2     02:08:20:92:2f:9c  ASSOC     138/0      50         1500
vnic1     02:08:20:c8:91:03  ASSOC     129/0      5          1500

SEFOS# show vdp profiles int ex 0/2
% No vdp profile for port 2
```

