Release Notes for Host Drivers for Oracle Solaris 11.1, 5.2.1

These release notes document information about Oracle Virtual Network host drivers for Oracle Solaris 11.1 hosts.

Additional release notes exist for:

- Oracle Fabric Interconnect and Oracle XgOS
- Oracle Fabric Manager GUI and plug-ins
- Oracle Virtual Networking host drivers for Oracle Solaris 10 Update 11 servers
- Oracle Virtual Networking host drivers for Oracle Linux
- Oracle Virtual Networking host drivers for Oracle VM
- Oracle Virtual Networking host drivers for Oracle SDN
- Oracle Virtual Networking host drivers for VMware ESX Server Classic 4.1 and ESXi 4.1 servers
- Oracle Virtual Networking host drivers for VMware ESXi 5.0 servers
- Oracle Virtual Networking host drivers for Windows servers

These notes contain the following sections:

ORACLE
VIRTUAL NETWORKING

2

Overview

Oracle's Fabric Interconnect is a service-oriented platform that interconnects data-center resources based on application demands.

Customers and partners are requested to send comments and report bugs by filing a customer case through the My Oracle Support web portal. Oracle is fully committed to responding to all feedback regarding our product and greatly appreciates customer involvement. If you need to contact Oracle for support assistance, you can facilitate your interaction with Customer Support by gathering some troubleshooting information. For more information, see Accessing Oracle Support on page 17.

What's New in this Release

This release contains the following new content:

- An IDR is required to run Solaris 11.1 with this version of Oracle Virtual Networking host drivers. Contact Oracle Support and request the IDR for Solaris 11.1 SRU13.
- Support for MPxIO on Solaris 11.1 hosts. Additional multipathing solutions are supported in this release in case you do not want to use MPxIO. However, to use non-MPxIO multipathing, make sure that MPxIO is disabled. By default, MPxIO is disabled on Solaris 11 U 1 hosts. If you need to disable MPxIO, see To Use Non-MPxIO Multipathing, MPxIO Must Be Disabled.
- Fixes for customer-reported issues have been added. For information, see Fixed Problems.


Note

After upgrading to the 5.2.1 Oracle Virtual Networking host drivers for Solaris 11.1, two fixes for servers running Veritas DMP require that you edit the `/etc/system` file as a workaround. For these fixes to take effect, be aware that you must upgrade to 5.2.1 host drivers, edit `/etc/system`, then successfully reboot the server. If Veritas DMP is not in use, the workarounds are not required. For information about the workarounds, see 16758070 and 17025682 in Fixed Problems on page 15.

System Requirements

This section documents the system requirements for this version of host drivers.

Required Minimum XgOS Version

Support for Solaris 11.1 hosts requires XgOS version 3.9.0 or higher running on the Oracle Fabric Interconnect. If your Fabric Interconnect(s) are not running this version, you must upgrade to this version if you want the VP780 to support Solaris 11.1 hosts.

Supported Host Platform

Version 5.2.1-SL has been tested and qualified to run on 64-bit Sun x86 and SPARC-based platforms.

Supported OS Level

The following 64-bit architecture is tested in this release:

- Oracle Solaris 11.1

Supported Firmware Version for HCAs

Version 5.2.1-SL supports Oracle HCAs as well as third-party manufacturers' HCAs with the requirement that the HCAs use the required version of firmware. Oracle HCAs include:

- Sun InfiniBand Dual Port 4x QDR PCIe Low Profile Host Channel Adapter M2. For information, including the required firmware version, see http://docs.oracle.com/cd/E19241-01/index.html
- Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2. For information, including the required firmware version, see http://docs.oracle.com/cd/E19157-01/index.html
- Oracle Dual Port QDR InfiniBand Adapter M3. For information, including the required firmware version, see http://docs.oracle.com/cd/E40985_01/index.html

For third-party HCAs, consult the manufacturer's documentation for the required firmware version.

System Limitations and Restrictions

This section documents system limitations and restrictions for this version of the Solaris host driver.

The fcadm, fcinfo, and cfgadm Utilities are Not Supported

The host HBA utilities fcadm, fcinfo, and cfgadm are not supported in this release.

A vNIC or vHBA on a Solaris Host Cannot be Deleted if It is Part of an LDom or Solaris Zone

Currently, a vNIC or vHBA cannot be deleted from a Solaris host if that vNIC or vHBA is part of a Solaris Logical Domain (LDom) or zone, the vNIC or VHBA cannot just be deleted from the host. Instead, to delete a vNIC or vHBA that is in an online zone or LDom, you must first disassociate the vNIC or vHBA from the zone/LDom, then delete the vNIC or vHBA.

Names for vNICs and vHBAs Cannot Be the Same on a Solaris Host

Release 5.2.1-SL host drivers do not support creation of a vNIC and vHBA with the same name. Be aware that when you create a vNIC or vHBA, the two names must be different.

Limitation on the Length of Virtual Resource Names Under Solaris

With Solaris operating systems, the names of virtual resources are restricted to the following lengths:

- vNICs: 10 characters
- vHBAs: 15 characters
- server profiles: 31 characters

Consideration for Naming vNICs and vHBAs under Solaris

With Solaris operating systems, vNICs and vHBAs can be named with the standard Oracle notation of:

- `<vnic-name>.<server-profile>`
- `<vhba-name>.<server-profile>`

However, Oracle strongly recommends that you use a numeral at the end of a vNIC and vHBA name so that the vNIC and vHBA receive correctly enumerated instance numbers. There are no special numerals in the vNIC or vHBA name string (for example, 0 is not reserved). You can use any number of numerals in the vNIC and vHBA strings, as long as the entire name string complies with the name length limitation documented in Limitation on the Length of Virtual Resource Names Under Solaris on page 3.

Some examples of acceptable vNIC and vHBA names:

- vnic0.profile1, vnic01.profile1, vnic001.profile1
- vhba1.profile1, vhba123.profile1, vhba987.profile1
- oracle2.profile1, webapps9.profile1, backups3.profile1

Virtual Resources Supported per Server

On Solaris servers, 8 vNICs and 4 vHBAs per server have been tested in this release.

- vNICs support:
  - a maximum of 8 standalone vNICs
  - HA vNICs are not yet supported from the Fabric Interconnect. However, server-based HA vNICs are available natively though the IPMP on the Solaris server.
- vHBAs support:
  - a maximum of 8 standalone vHBAs
  - Connectivity to commonly available Brocade FC switches in fabric-port mode (f-port). NPIV login must be enabled on the FC switch.
  - Dynamic LUN discovery is supported in situations when no LUN masking is present and either an RSCN message is sent from the storage target, or a user-initiated rescan occurs on the vHBA.

User Guides

Oracle provides the following Fabric Interconnect product documentation in PDF format:

- *Fabric Interconnect Hardware and Host Drivers Installation Guide*
- *XgOS Software Upgrade Guide*
- *XgOS Command-Line User Guide*
- *XgOS Remote Booting Guide*
- *Fabric Manager User's Guide*
- *XgOS vNIC Switching Configuration Guide*

Release notes are also available for the Oracle Fabric Interconnect and XgOS product, the Oracle Fabric Manager product, and the various Oracle Virtual Networking host drivers. Release Notes and manuals are available as PDF files on the Oracle Technical Network web portal:

Step 1 Go to http://docs.oracle.com/cd/E38500_01/index.html

Step 2 After locating the documentation you need, click the ***Download*** button to pull a copy of the PDF file to your local machine.

Documentation Additions

The following section contains additional text for the Oracle Virtual Networking technical documentation.

Additional Step Required to Install Drivers

The "Installing Solaris Software" chapter of the *Fabric Director Hardware and Host Drivers Installation Guide* has an incomplete procedure for installing host drivers for Solaris 11.1. The following text supplements the text for the installation procedure:

After installing the host drivers, the `xsadmd` service sometimes is set to disabled state. After the drivers are installed, but before rebooting the server, issue the following commands to check the state of `xsadmd` and re-enable it if it is disabled:

```
svccfg -s application/xsadmd:default setprop general/enabled = true
svccfg -s application/xsadmd:default refresh
```

Allow these commands to complete, then reboot the server with either **`reboot --rv`** or **`shutdown -y -g0 -ib`**

This additional text is applicable only to the installation procedure in the manual. The installation procedure documented in these release notes contains the additional text.

To Use Non-MPxIO Multipathing, MPxIO Must Be Disabled

In this release of host drivers for Oracle Solaris 11.1 hosts, MPxIO multipathing is supported. By default, MPxIO multipathing software is enabled when the host drivers are installed. However, your network might use a different multipathing solution—for example, DMP.

This release of host drivers for Oracle Solaris 11.1 supports using non-MPxIO multipathing software with the requirement that MPxIO is explicitly disabled before using the other multipathing software.

To disable MPxIO on an Oracle Solaris 11.1 host, you must edit the `xsvhba.conf` file. Follow this procedure:

Step 1 Using vi, emacs, gedit, or any other common text editor, open `/kernel/drv/xsvhba.conf` for editing.

Step 2 In `xsvhba.conf`, find the **`mpxio-disable=`** stanza, which is highlighted in the following example:

```
# Copyright (c) 2012, Oracle and/or its affiliates. All rights reserved.
#

#
# The xsvhba driver, as a pHCI driver, must specify the vHCI class it #
belongs to(scsi_vhci).
```

```
#
ddi-vhci-class="scsi_vhci";
#
# I/O multipathing (MPxIO) is enabled. Don't edit this property manually.
#
mpxio-disable="no";

# Any global properties here
ddi-no-autodetach=1;
```

Step 3 For **mpxio-disable=** set the value to yes. For example:

```
mpxio-disable="yes";
```

Step 4 Save and close the file.

Step 5 Reboot the server. After the server reboot, MPxIO is disabled, and another multipathing software solution can be installed and used on the Solaris 11 Update host.

Solaris Command Equivalents Table

Table 1 contains some commonly used Red Hat Linux commands and their equivalent Solaris commands. Online help is available for these commands through the Solaris manual pages (**man** <command-name>).

Table 1 Solaris Command Equivalents

Red Hat Command	Solaris Command
rpm -ivh <package>	**pkg install**
rpm -qa | grep ORCLovn	**pkg list**
rpm -qi <package>	**pkg uninstall**
yum install <package>	**pkg-get -if** <package>
rpm -e <package>	**pkgrm** <package>
dhclient <vnic>	**ipadm create-addr -T dhcp** <interface>
service sshd status	**svcs -a ssh**
service sshd restart	**svcadm restart ssh**
chkconfig sshd on	**svcadm enable ssh**
cat /var/log/messages	**cat /var/adm/messages**
cat /etc/fstab	**cat /etc/vfstab**
fdisk -l	**format**
ping -c 5 <host>	**ping** <host> **64 5** where 64 is the ping packet size and 5 is the ping delay (5 ms)
cat /proc/driver/xsvnic/devices/<vnic>	**prtconf -D then kstat -I** <instance>
(There is no equivalent in Red Hat)	**top prstat** In 5.2.1-SL, this command is supported on vNICs only.

Table 1 (continued) Solaris Command Equivalents

Red Hat Command	Solaris Command
`iostat`	`free vmstat`

Supported Host Drivers

This section describes the Oracle Virtual Networking host drivers package for Solaris 11.1 hosts and how to obtain it.

Downloading Supported Drivers

Oracle Virtual Networking host drivers for Solaris hosts are available through My Oracle Support (MOS), which requires a valid user account and password. Software is available through MOS, but not documentation. For release notes for this release, you can go to http://docs.oracle.com/cd/E38500_01/index.html.

To get the software:

Step 1 Point your browser to My Oracle Support—for example:

```
https://support.oracle.com
```

Step 2 Log in with your account name and password.

Step 3 On the MOS home page, click the *Patches & Updates* tab as shown in Figure 1.

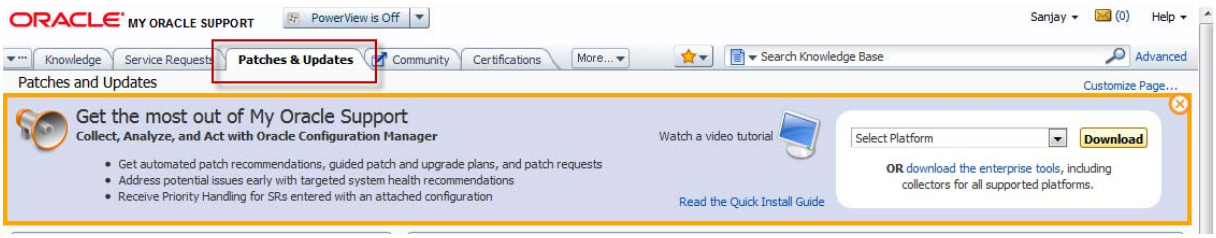

Figure 1 My Oracle Support — Patches and Updates Tab

Step 4 In the Patch Search panel, click the *Product Or Family (Advanced)* link as shown in Figure 2.

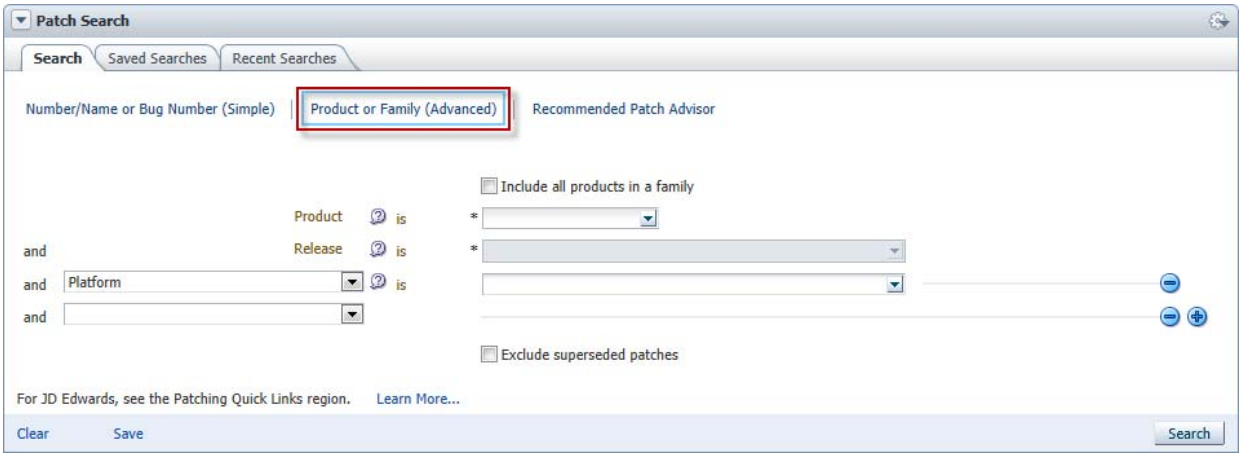

Figure 2 My Oracle Support — Search for Product or Family

Step 5 From the *Product is* dropdown menu, start typing Oracle Virtual Networking Host Drivers. When you enter enough characters for the string to be unique, the dropdown will contain the entry you seek.

Step 6 Click *Oracle Virtual Networking Drivers* as shown in Figure 3.

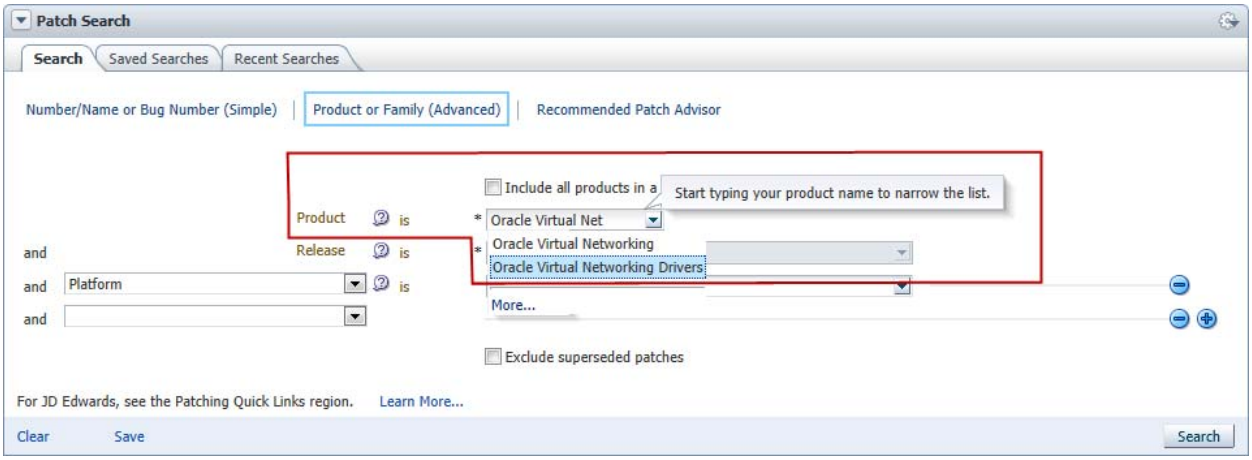

Figure 3 My Oracle Support — Searching for Oracle Virtual Networking Host Drivers

Step 7 From the *Release is* dropdown menu, click the checkbox for this version of host drivers.

Step 8 When the product and release have been selected, click the ***Search*** button to display the search results as shown in Figure 4. (This figure shows the results for a different release of host drivers but provides an example of the results page.)

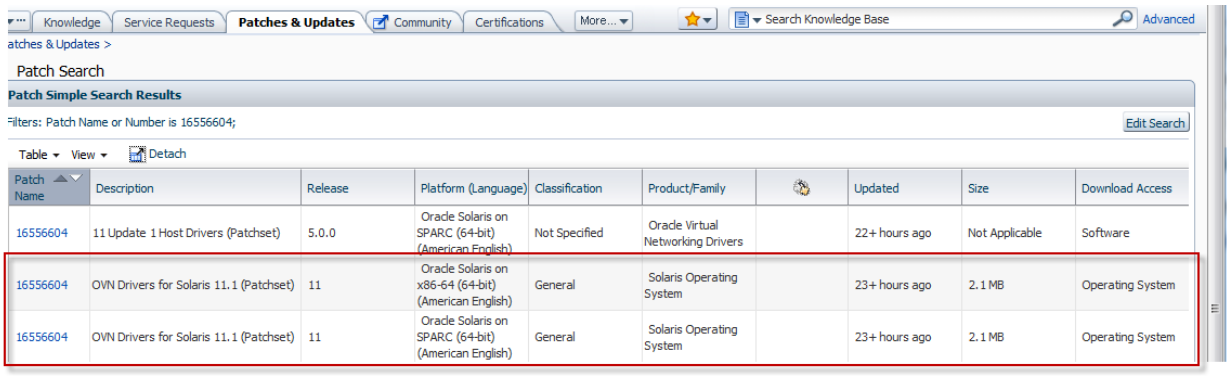

Figure 4 My Oracle Support— Download Oracle Virtual Networking Software for Solaris

Step 9 To download the host drivers you need, select either the SPARC or x86 version of the host driver package, and click the correct item in the table to download the software.

Installing Solaris Host Drivers

This section documents the installation procedure for Oracle Virtual Networking Solaris host drivers.

Pre-Installation Considerations

Before installing the Oracle Virtual Networking Solaris host drivers, be aware of the following considerations.

- The Solaris hosts must be running Solaris 11.1 with SRU13, and that OS and patch must already be installed and running before attempting to install the host drivers.
- The Solaris hosts must have at least one dual-port Oracle ConnectX2 QDR HCA.
- The HCA installed in the host must be running the correct minimum version of firmware for the corresponding HCA. For more information, see Supported Firmware Version for HCAs on page 3.
- Packages can be downloaded to any directory in the file system that the package-server user can read, but Oracle recommends that you do not download the file to `/opt`.
- Root access is required on the Solaris 11.1 server in order to install the host drivers.
- Oracle Virtual Networking host drivers for Solaris 11.1 can be installed on either a web repository or a server's local device. If you are installing the host drivers from a web repository, you can specify the URL for the location of the file. For example, `https://deploy-srv1/oracle/system/io/ORCLovn-drv` for a server named "deploy-srv1" to install the host drivers in the "oracle" directory.

Installation Procedure

OVN host drivers for Solaris 11.1 hosts can be installed either locally or from a web repository. For illustrative purposes, this installation procedure assumes a local install.

To install the Solaris host drivers, follow this procedure:

Step 1 Locate the host software as documented in Downloading Supported Drivers on page 7.

Step 2 Log in to the Solaris 11.1 server as root.

Step 3 Copy the drivers onto the server. These packages can go anywhere in the file system (for example, `/usr`, `/tmp`, or `/oracle`). For illustrative purposes, this procedure assumes the drivers will be downloaded to `/usr`.


Note

If you are using a web repository, then download to a directory on that server.

Step 4 Untar the TAR ball by using the **`tar xvzf`** command in the directory where you downloaded the host drivers.

```
tar xvzf ORCLovn-5.2.1-SL-sparcv.tgz
```

When the package is untarred, the host drivers are contained in the `ORCLovn` directory.

Step 5 Set up the publisher by using the **`pkg set-publisher`** command and specifying the path to the directory in which the host driver file resides. For example:

```
pkg set-publisher -p /usr/ORCLovn
```

Step 6 Install the host drivers by using the **`pkg install`** command and specifying the host driver file name.


Note

This step assumes an installation from a local repository. If you are installing the host drivers from a web repository, you can specify the URL for the location of the file.

For example:

```
pkg install ORCLovn-drv
```

Step 7 As an option, unset the publisher by using the **`pkg unset-publisher`** command and specifying the directory location where the host driver file is located. For example:

```
pkg unset-publisher /usr/ORCLovn
```

Step 8 After installing the host drivers, the `xsadmd` service sometimes is set to disabled state. After the drivers are installed, but before rebooting the server, issue the following commands to check the state of `xsadmd` and re-enable it if it is disabled:

```
svccfg -s application/xsadmd:default setprop general/enabled = true
svccfg -s application/xsadmd:default refresh
```

Step 9 Allow these commands to complete, then reboot the server to load the drivers into memory. For example:

```
reboot --rv
```

or

```
shutdown -y -g0 -i6
```

Step 10 After the reboot, you can verify the host drivers are installed by issuing any of the following options:

- Issue the **`pkg list`** command while grepping for “ORCLovn-drv” (part of the driver file name).
- Issue the **`svcs xsadmd`** command. If the `xsadmd` service is present and online, OVN host drivers are installed.
- Issue the **`modinfo`** command while grepping for “xs” to see the modules that were installed.

After the packages have been successfully added, you can configure vNICs and vHBAs.


Note

MPxIO multipathing will be used by default. If your deployment requires a different multipathing solution, MPxIO must be disabled on the Solaris 11.1 host, If you need to disable MPxIO on the host, see To Use Non-MPxIO Multipathing, MPxIO Must Be Disabled.

Removing the Host Drivers

In the unlikely event that you will need to remove the installed OVN host drivers for Solaris 11.1 (for example, if you need to do a fresh install instead of an upgrade), you can use the following procedure:

Step 1 Halt all network and storage traffic. For example, set the interfaces to down state, and wait for network and storage traffic to quiesce.

Step 2 Unset the publisher by using the **`pkg unset-publisher`** command and specifying the directory where the host driver file exists. For example:

```
pkg unset-publisher /usr/ORCLovn
```

Step 3 Remove the currently installed host drivers by using the **`pkg uninstall`** command and specifying the host driver file name. For example:

```
pkg uninstall ORCLovn-drv
```

Step 4 Reboot the Solaris server to clear the host drivers from memory. For example:

```
reboot --rv
```

or

```
shutdown -y -g0 -i6
```

Step 5 Allow the server to completely reboot, then log back in as root.

Known Problems

Table 2 lists known problems in the Oracle Virtual Networking Solaris host drivers for this version.

Table 2 Known Problems in Version 5.2.1-SL Host Drivers

Bug	Description
17490439	Solaris 11.1 hosts fail to detect LUN 0 when LUN 0 is added to a vHBA after that vHBA is already created. You can work around this problem by either: • always mapping a vHBA to LUN when the vHBA is being created, or • if a vHBA is added without mapping it to LUN 0, or if LUN 0 is created on storage after the vHBA is created, then set the vHBA down, then up to have the LUN visible on the Solaris 11.1 host.
17487287	A problem can cause Solaris 11.1 hosts to crash in some situations while vHBAs are being deleted. This problem occurs if you delete multiple vHBAs and immediately attempt to delete vNICs while the vHBA deletion process is still ongoing. Also, this problem can occur when you issue the **`format`** command on the host while the vHBA deletion process is still ongoing. You can work around this situation by: • deleting vNICs before deleting vHBAs, or if you need to delete vHBAs first, wait until all vHBAs have been completely deleted before starting to delete vNICs. • not running the format command on the host while vHBAs are being deleted.
17444507	A problem causes the **`format`** command on Solaris 11.1 hosts to hang when dynamically adding LUNs from some EMC storage targets. This problem has been observed on Solaris 11.1. hosts running SRU7 connected to EMC VNX5100 storage. You can work around this problem by contacting Oracle Support and requesting an IDR for the SRU running on your Solaris 11.1 hosts.
17370928	In this release, LUN Masking is not supported from the Fabric Interconnect. Do not use the LUN Mask feature from the Fabric Interconnect because it will not properly mask, and all LUNs will be visible. As a workaround, configure any LUN Masking from the storage target.
17337836	When LUNs and Targets are dynamically added or deleted, entries are written to the /dev directory. However, a problem prevents the proper cleanup of these entries, and as a result, stale entire can accumulate in /dev. When enough entries have accumulated, issuing the **`format`** command hangs. You can avoid this problem by periodically manually cleaning up the entries in /dev. Issue the following command: **`devfsadm -Cv`**
17254225	Per SCSAv3, LUN 0 (zero) is required and should be mapped to vHBAs for correct reporting. However, the Oracle Virtual Networking host drivers do not check or enforce this requirement, so it is possible that LUN 0 is not mapped vHBAs. If LUN 0 is not mapped to vHBAs, inconsistencies can occur on those vHBAs. You can work around this problem by making sure that LUN 0 is mapped to vHBAs.

Table 2 (continued)Known Problems in Version 5.2.1-SL Host Drivers

Bug	Description

17234437	A problem prevents LUNs on NetApp storage from being visible when issuing the **`format`** command on a Solaris 11.1 host.
	
	You can work around this problem by adding lines to the `scsi_vhci.conf` file on the Solaris host. Follow this procedure:
	
	Step 1 Log into the Solaris 11.1 host, and using vi, emacs, gedit, or any standard text editor, open the `/kernel/drv/scs_vhci.conf` file for editing.
	
	Step 2 Find the **`scsi-vhci-failover-override =`** lines, and add the following:
	
	`scsi-vhci-failover-override =`
	
	`"3PARdataVV", "f_sym",`
	`"COMPELNTCompellent Vol", "f_sym",`
	`"DGC VRAID", "f_asym_emc",`
	`"HITACHI DF600F", "f_sym",`
	`"HITACHI HU", "f_sym", # Hitachi (GST) UltraStar's`
	`"HGST HU", "f_sym", # Hitachi (GST) UltraStar's (Dell)`
	`"HP HSV2", "f_sym",`
	`"HP MB", "f_sym", # HP, rebadged WD's`
	`"HP EG0600FBDSR", "f_sym", # HP, rebadged WD S25`
	`"HP OPEN", "f_sym",`
	`"NETAPP LUN", "f_sym",`
	`"OCZ TALOS", "f_sym", # OCZ Talos SSD's, all`
	`"Pliant L", "f_sym", # Pliant SSD's`
	`"SAMSUNG MZ6ER", "f_sym", # Samsung SSD`
	`"SmrtStorT", "f_sym", #SMART SSD`
	`"STEC Z", "f_sym", # Zeus*`
	`"TOSHIBA M", "f_sym", # Toshiba HDD/SSD's`
	`"TOSHIBA AL13SEB900", "f_sym", # Toshiba SAS HDD 900Gb`
	`"VIOLIN SAN ARRAY", "f_sym", # VIOLIN Memory SAN Array (iSCSI?)`
	`"WD W", "f_sym"; # WD HDD/SSD's`
	
	The lines shown are for many of the typical storage target manufacturers. The NetApp line is highlighted to show its inclusion.

Table 2 (continued)Known Problems in Version 5.2.1-SL Host Drivers

Bug	Description
16530626	In a LUN Mask assigned to a Solaris host, the original LUNs remain masked even if the configuration of the LUN Mask has been changed. If you edit the LUN Mask the changes do not take effect. For example, if you create a LUN Mask with 2 LUNs, then remove those LUNs and add 2 more, the LUN Mask will incorrectly contain 4 LUNS (the two newly added LUNs, plus the 2 LUNs from the original LUN Mask). This problem occurs even after rescanning the vHBA. Because LUN Masking is not assigned dynamically, you must set the vHBA down, then up. To work around this issue, when you make any changes to a LUN Mask that is already created: Step 1 Set the vHBA down: **`set vhba <name>.<server-profile-name> down`** Step 2 Set the vHBA up again: **`set vhba <name>.<server-profile-name> up`**
16493871	With multiple vNICs on a Fabric Interconnect's Gigabit Ethernet I/O card, either resetting the IO card or cycling the Fabric Interconnect's I/O Card between `up` and `down` state multiple times can sometimes cause some of the vNICs to get stuck in `up/down` state. Also, when continuously disconnecting and reconnecting a Server Profile that has vNICs associated with it, vNICs can get set to `up/indeterminate` state. When a vNIC is in `up/down` or `up/indeterminate` state, you can work around this problem by following this procedure: Step 1 Set the vNIC to admin state down: **`set vnic <vnic-name>.<server-profile-name> down`** Step 2 Set the vNIC to admin state up: **`set vnic <vnic-name>.<server-profile-name> up`**
16338332	On Solaris 11.1 hosts, the **`cfgadm -al`** command does not show vHBA disks.

Table 2 (continued)Known Problems in Version 5.2.1-SL Host Drivers

Bug	Description

16338290	When adding or deleting a vNIC interface, spurious messages are displayed on the Solaris host. Be aware that messages are displayed, but they are not always errors. You will need to scan the messages to determine if an actual error exists. For example, in the following chunk of messages, only the red text (shown here to highlight the message) is an actual error:
	`Jan 25 10:17:27 sparc1-prb xsvnic: [ID 903756 kern.notice] NOTICE:@ xsvnic5(ipmp0) start_rx_response received`
	`Jan 25 10:17:29 sparc1-prb nwamd[756]: [ID 588122 daemon.error] 1:@ nwamd_set_unset_link_properties: dladm_set_linkprop(mtu) failed for net25: @ operation not supported`
	`@ Jan 25 10:17:29 sparc1-prb xsvnic: [ID 546354 kern.notice] NOTICE:@ xsvnic5(ipmp0) Executing xsvnic_start`
	`@ Jan 25 10:17:29 sparc1-prb xsvnic: [ID 940960 kern.notice] NOTICE:@ xsvnic5(ipmp0) Executed xsvnic_start`
	`@ Jan 25 10:17:29 sparc1-prb nwamd[756]: [ID 387169 daemon.error] 1:@ nwamd_unconfigure_interface: disable failed for net25: Operation failed`

Fixed Problems

Table 3 shows the fixes included in this version of Oracle Virtual Networking host drivers. This release might contain fixes from earlier versions of host drivers. If so, such fixes are noted in text.

Table 3 Fixed Problems in Version 5.2.1-SL Host Drivers

Bug	Description
17498283	In previous releases, Pillar storage with Symantec DMP was not supported in this release. In this configuration, Solaris hosts hang if continuous traffic was run on the DMP Pillar LUN.
17652162	A problem prevented a software routine from completing, and as a result, LUNs on Hitachi storage were not being displayed on Solaris 11.1 hosts.
17353701	In a previous version of host driver, a problem in the underlying Solaris NDI framework prevented all LUNs available to the Solaris 11.1 server from being displayed.

Table 3 (continued) Fixed Problems in Version 5.2.1-SL Host Drivers

Bug	Description
17025682	On Oracle M5 and T5 servers connected to Fabric Interconnects through ConnectX-2 HCAs, a problem caused vHBAs to not reconnect when the servers were rebooted when the servers were running Veritas DMP. When this problem occurred, numerous `ibc_attach failed` and `attach_ibcattach_fail` error messages were displayed. This problem is fixed by using the following workaround which requires editing a system file on the server: **Step 1** Using vi, emacs, any standard document editor, open the `/etc/system` file. **Step 2** In `/etc/system` file, locate the Veritas `vxvm` entry. **Step 3** Just before the `vxvm` entry, add the following line: **`forceload: drv/ib`** **Step 4** Save and close `/etc/system` **Step 5** Reboot the server.
16918716	In a split domain deployment (one primary domain and one I/O domain) with a virtual Multipath Disk for a vHBA LUN in each domain, when the I/O domain was rebooted the server panicked and entered a reboot loop. This bug is fixed in SRU 12.5. Upgrade to SRU 12. if you need this fix.
16758070	If a Solaris 11.1 server with Oracle Virtual Networking host drivers installed is also running Veritas DMP, the host can experience a problem that crashed the server. The problem is not a bug in the host drivers, but instead an issue with the Veritas DMP application. While waiting on a fix for this problem from the vendor, you can work around this issue by using the following interim fix which requires editing a system file on the server: **Step 1** Using vi, emacs, any standard document editor, open the `/etc/system` file. **Step 2** In `/etc/system` file, find the ZFS lines, and add the following: **`set zfs:zfs_vdev_enable_mvector=0`** **Step 3** Save and close `/etc/system`. **Step 4** Reboot the server.
16338330	After a reboot of the Oracle Solaris 11.1 host, when LUNs came back online a problem prevented any LUNs that were not restored (repaired) from being available to the ZFS Zpool.

Accessing Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/us/corporate/acquisitions/xsigo/support-1849142.html or visit http://www.oracle.com/us/corporate/accessibility/support/index.html if you are hearing impaired.

Gathering Information for Oracle Technical Support — Solaris

If the Oracle Fabric Interconnect is supporting Solaris servers and you encounter problems, please gather the information in the following section before contacting Oracle Technical Support or filing a case through the support website.

On the Oracle Fabric Interconnect

From the Oracle Fabric Interconnect, gather the following information and have it ready to communicate to Oracle Support Engineers:

- Type and number of servers connected (brand, model, number of CPUs, size and type of memory)
- Output from the **`get-log-files -all`** command (for the Oracle Fabric Interconnect), which will gather the show-tech support information plus all log files, and place this information into `xsigo-logs.tar.gz`

On the Host Server

On the Oracle Solaris 11.1 server, gather the following information and have it ready to communicate to Oracle Support Engineers:

- The output of xsigo-support. The **`/opt/orclovn/scripts/xsigo-support`** command automatically creates a `.bz2` file. The output from the commands is put into the `.bz2` file, which can then be sent to Oracle Support.