

SAN Host 1.1 for Fibre Channel Protocol on Solaris® Release Notes

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SAN Host 1.1 for Fibre Channel Protocol on Solaris overview

New features

The SAN Host 1.1 for Fibre Channel Protocol on Solaris adds support for the following:

- ◆ Solaris 9
- ◆ VERITAS® Volume Manager 3.5
- ◆ VERITAS File System 3.5
- ◆ VERITAS Cluster Server 3.5
- ◆ Version 5.01b of the Emulex® LP9002L driver

HBA hardware and software kit components

The SAN Host 1.1 includes the software and hardware components you need to configure a Sun® Solaris machine into the host component of a NetApp® SAN environment. The following table lists the components.

Component	Content
PCI attach kit	◆ Emulex LP9002L-F2 HBAs with standard PCI bracket, single port ◆ One low-profile PCI mounting bracket
Open Me First envelope	◆ <i>SAN Setup Overview 1.0</i> ◆ <i>Host Bus Adapter Installation and Setup Guide 1.1 for Fibre Channel Protocol on Solaris</i>
Media package	◆ CD-ROM with ntap_solaris_fcp_1_1.tar.Z software driver and firmware ◆ License agreement ◆ <i>SAN Host Release Notes 1.1 for Fibre Channel Protocol on Solaris</i> (this document)

System requirements

Sun SPARC system requirements

The following table lists the minimum system requirements for installing the HBA and the NetApp Solaris Fibre Channel software package on the host at the time this document was printed.

Note

For the most current and complete system requirements, see the online *NetApp SAN Support Matrix* at <http://now.netapp.com/NOW/knowledge/docs/san/supportmatrix/>.

Component	Requirement
HBA	◆ Emulex LP9002L-F2 ◆ Firmware level: 3.90a7 or later ◆ Driver level: 5.01b or later
PCI slot for HBA	◆ One open 32-bit or 64-bit (recommended) PCI bus slot can be either 3.3V DC or 5.0V DC signaling interface ◆ PCI bus clock rate of 33 MHz or 66 MHz (recommended)
Hardware platforms	Sun SPARC PCI-based systems Note_____ The LP9002L-F2 HBA requires PCI slots providing 3V bus power. The Sun Ultra-2, Ultra-5, and Ultra-10 platforms do not provide the necessary voltages and are not supported.

Component	Requirement
Operating system and patch level	Solaris 8 and Solaris 9 Following are the minimum supported Solaris patches for each operating system: ◆ Solaris 8: Recommended Patch Cluster from November 18, 2002. ◆ Solaris 9: Recommended Patch Cluster from November 12, 2002. You can obtain the Solaris patches from http://sunsolve.sun.com.
VERITAS applications	See the NetApp SAN Support Matrix for the the most current patch and package requirements.

System compatibility issues

You must use the HBA driver provided by Network Appliance. The HBA driver distributed by Network Appliance is a special driver that was thoroughly tested with the filer. The configuration settings and driver version are certified to work correctly with this product. Drivers obtained directly from Emulex are not supported.

Supported host HBAs

The following Fibre Channel HBAs are supported on the same host:

- ◆ The Emulex LP9002L Fibre Channel HBA provided by Network Appliance

Note

All other Emulex Fibre Channel HBAs are not supported.

- ◆ Sun native Fibre Channel HBA, which may be preinstalled in the system

Before installing the SAN host attach kit software, you must uninstall any drivers used by other Fibre Channel HBAs and remove the HBAs physically from the system.

**For more
information**

For the most current and complete system requirements, see the following documents on the NetApp On the Web (NOW) site:

- ◆ *SAN Support Matrix* at
<http://now.netapp.com/NOW/knowledge/docs/san/supportmatrix/>
- ◆ *System Configuration Guide* for Data ONTAP 6.3 at
<http://now.netapp.com/NOW/knowledge/docs/hardware/NetApp/syscfg/>

Limitations and known problems

About this section

This section lists known problems and limitations of the SAN Host 1.1 for Fibre Channel Protocol on Solaris at the time of this release. For the most up-to-date list of limitations and known problems, see the NetApp NOW Web site.

Accessing information about bug fixes

From time to time, problems with the SAN Host Attach Kit 1.1 are listed in an online system called Bugs Online. For a list of fixed bugs, access Bugs Online by completing the following steps.

Step	Action
1	Use a Web browser to go to http://now.netapp.com .
2	Click Service & Support.
3	Click Bugs Online.
4	Enter the Bug ID in the Quick Search text box and click Go.

Bug reference ID: 75324

Symptom: The `format unit` command does not work for disks larger than 65 GB. The command runs for approximately two minutes and then fails.

Explanation: At this time, the `format unit` command is not supported from Solaris hosts for LUNs larger than 65 GB. The LUN is still valid. It can be labeled and used, but this specific command does not work.

Bug reference ID: 70725 (filer-related)

Symptom: The filer has two different target IDs on the same host HBA.

Example: There are two filers with one LUN each mapped to a single Solaris client, as follows:

```
Filer (iop-3) - Target 3
Filer (iop-4) - Target 4
```

After the LUNs are exported, Target 0 for Filer 'iop-3' is displayed. This is not the case for 'iop-4'. The `san lun lun show` command reports the following output:

```
filer: lun-pathname device filename adapter lun size lun state
iop-f3: /vol/vol1/lun0 /dev/rdisk/c3t0d0s2 lpfc0 1024.0m (1073741312) GOOD
iop-f3: /vol/vol1/lun0 /dev/rdisk/c3t3d0s2 lpfc0 1024.0m (1073741312) GOOD
iop-f4: /vol/vol1/lun0 /dev/rdisk/c3t4d0s2 lpfc0 1024.0m (1073741312) GOOD
```

Explanation: This behavior occurs when multiple target ports with the same WWNN are visible to the same HBA on the Solaris host. The host has more than one active connection to a single filer. For example, you connected the A ports of two different HBAs on a single filer in a cluster to a switch, or you connected both ports of a single HBA on a standalone filer to a switch.

Because multiple target ports are associated with one WWNN, a host HBA can use a different target port for the path to the LUN each time you reboot the host.

Workaround: To ensure that a host HBA uses the same target ID to access a LUN, you must zone ports on the switch so that only one filer port is visible to each host HBA.

Obtaining the latest versions of HBA software

What you need

The SAN Host 1.1 for Fibre Channel Protocol on Solaris media CD contains the latest HBA driver and firmware at time of shipment. However, there might be later versions of both the driver and firmware released after the media kit was shipped. Therefore, you should check the NetApp NOW support web site for the latest updates.

Obtaining the software from NOW

To download the software from the NOW site, complete the following steps.

Step	Action
1	Use a Web browser to log in to the NOW site at http://now.netapp.com . ◆ Type your user name and password. ◆ From the Select Start Page list box, click Service and Support. ◆ Click the Login button.
2	Click Download Software.
3	In the SAN Host Attach Kit product row of the Software Download table, select Solaris in the Select Platform list box.
4	Click Go!
5	Follow the prompts to reach the Software Download page.
6	Download the <code>ntap_solaris_fcp_1_n.tar.Z</code> software file to a local directory, for example, the <code>/tmp</code> directory.
7	For instructions about extracting and installing this file, see the <i>Host Bus Adapter Installation and Setup Guide 1.1 for Fibre Channel Protocol on Solaris</i> .

Obtaining other NetApp SAN information

About SAN documentation

This section provides you with a quick look at all NetApp SAN documentation for the SAN Host HBA kits (Solaris and Windows®), SAN filer components, and various interconnect methods.

Where to go for host and filer information

The following table describes documents on NetApp's NOW Web site with the most current information about host and filer system requirements, supported configurations, and cabling instructions.

If you need information about...	See the following NetApp product documentation...
The latest supported configurations	◆ <i>SAN Configuration Guide</i> at http://now.netapp.com ◆ <i>NetApp SAN Support Matrix</i> at http://now.netapp.com ◆ <i>System Configuration Guide</i> at http://now.netapp.com
Configuring the storage appliance	◆ <i>Best Practices for Reliability: New System Installation</i> at http://now.netapp.com ◆ <i>Data ONTAP™ 6.3 Software Setup Guide</i>
Installing and configuring the HBA in your Windows host	◆ <i>Host Bus Adapter Installation and Setup Guide 1.0 for Fibre Channel Protocol on Windows</i>
Installing and configuring the HBA in your Solaris host	◆ <i>Host Bus Adapter Installation and Setup Guide 1.1 for Fibre Channel Protocol on Solaris</i>
Installing and configuring SnapDrive 2.0 software for Windows hosts	◆ <i>SnapDrive 2.0 Installation and Administration Guide</i>
Managing SAN storage on the storage appliance	◆ <i>Command Reference</i> ◆ <i>Quick Reference Guide</i> ◆ <i>Data ONTAP 6.3 SAN System Administrator's Guide</i> ◆ <i>FilerView® Online Help</i> ◆ <i>Best Practices for Reliability: Maintenance</i> at http://now.netapp.com

If you need information about...	See the following NetApp product documentation...
Verifying compatibility of storage appliances with environmental requirements	<i>Site Requirements Guide</i>

