

SAN Host 1.0 for Fibre Channel Protocol on Linux® Release Notes

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SAN Host 1.0 for Fibre Channel Protocol on Linux overview

Attach kit components

The SAN Host Attach Kit 1.0 for Linux® includes the components you need to configure a Linux® machine as the host in a Network Appliance™ SAN environment. The following table lists the components.

Component	Content
Documentation	◆ <i>SAN Setup Overview for FCP</i> ◆ <i>Installation and Setup Guide for Fibre Channel Protocol on Linux</i>
Media package	◆ CD-ROM with the netapp_linux_tools_1_0.tar.gz file, which contains the sanlun utility and other scripts that NetApp supplies with this release ◆ License agreement ◆ <i>SAN Host Release Notes for Fibre Channel Protocol on Linux</i> (this document)

System requirements

System requirements

The following table lists the minimum system requirements for using a Linux server with a NetApp® FCP storage appliance running Data ONTAP™ 6.4.1 at the time this document was printed.

NetApp does not provide the HBA, driver, or QLogic® SANsurfer utility. If you have any questions about setting up any of the components, see the Linux documentation that came with your system and the QLogic documentation that came with your driver and SANsurfer utility.

Note

For the most current and complete system requirements, see the support matrix in the online *FCP/iSCSI Configuration Guide*. This guide is located at http://now.netapp.com/NOW/knowledge/docs/san/fcp_iscsi_config/.

Component	Requirement
HBA	◆ QLogic QLA2342 or QLA2342L HBA for Linux
Driver	◆ Failover version of QLogic's driver version 6.04.00 for Linux You download this driver from the QLogic Web site (www.qlogic.com).
SANsurfer	◆ QLogic SANsurfer for Linux version 2.0.24 You download this utility from the QLogic Web site (www.qlogic.com).
Operating system	◆ Red Hat® Enterprise Linux 2.1 ◆ SuSE® Enterprise Server 8

System compatibility issues

You must use the failover version of the driver. QLogic only supports SANsurfer for Linux on the failover version of the driver.

For more information

For the most current and complete system requirements, see the following documents on the site:

- ◆ *FCP/iSCSI Configuration Guide* at http://now.netapp.com/NOW/knowledge/docs/san/fcp_iscsi_config/
- ◆ *System Configuration Guide* for Data ONTAP 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 1.0 for Fibre Channel Protocol on Linux 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 Attach Kit 1.0 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.

The sanlun utility hangs if FCP is not running

Symptom: If you issue a sanlun command and the FCP service is not running on the filer, the utility hangs. It does not time out.

What to do: Enter Ctrl-C to halt the sanlun utility. Then start the FCP service on the filer by entering the following command:

```
fcv start
```

Once the FCP service has started, re-enter the sanlun command.

Brocade 3900 switches

Symptom: In configurations with Brocade 3900 switches, a multipath host might lose access to the LUNs on the filer during a reboot or a cluster takeover. The host console shows I/O errors, and the filer log shows up to a 60-second delay between FCP startup and the target card's Link Up messages.

Note

This problem is rare. It affects only Brocade 3900 switches running Brocade firmware version 4.0.2c.

Explanation: When a reboot or takeover occurs, the filer reloads firmware to the target cards. During the reload, the filer does not send Fibre Channel messages to the switch. The switch sets a 60-second timeout, but the filer cannot

log back into the switch before this timeout expires. This delay exceeds the default timeout on the host, and the host sends I/O errors to the application while waiting for the filer to come back up.

Preventing this problem: You can prevent loss of access to the LUNs by increasing the value of the Port Down Retry Count parameter to 90 seconds for each adapter attached to the Brocade 3900 switch. To increase this timeout value, complete the following steps.

Step	Action
1	Make sure the <code>qlremote</code> (RPC) process is running. If this process did not automatically start when you started the host, start it now by entering the following command line: <pre># /etc/init.d/qlremote start</pre> The <code>qlremote</code> process runs in the background and sends messages to <code>/dev/null</code>. You can also run <code>qlremote</code> directly from another xterm window by entering the following command line: <pre># /usr/local/bin/qlremote</pre> Running <code>qlremote</code> this way enables you to view the error messages.
2	Execute SANsurfer by entering the following command from the directory where you installed SANsurfer: <pre># ./SANSurfer &</pre> The default location for this utility is <pre>/opt/QLogic_Corporation/SANSurfer</pre> Executing the <code>./SANSurfer</code> command brings up the SANblade Manager in a GUI window. To get the SANblade Manager window to appear on a Windows PC, execute the utility in an xterm window to the Linux host.
3	In the SANblade Manager window, click the Connect button. Result: The Connect to Host dialog box appears.
4	Select your host and click OK.

Step	Action
5	Highlight an adapter in the left pane of the SANblade Manager window.
6	Click the Settings tab in the right pane of the SANblade Manager window. Information about that adapter's settings appears in the right pane.
7	In the pull-down list next to Select Settings section, choose the Advanced Adapter Settings option.
8	If you have a Brocade 3200 switch or 3800 switch, set the Port Down Retry Count value to 60. For a Brocade 3900 switch, set the value to 90.
9	Click Save.
10	At the dialog box that appears, enter the password and click OK. Note _____The default password is "config".
11	Repeat Steps 5 through 10 for each adapter.
12	From the File menu, choose Exit to halt the SANblade Manager. Note _____If you are using a RAMDISK image, you must re-create that image now, or it won't include these configuration changes.
13	Reboot the host and load the driver module. Note _____The driver module is automatically reloaded if you use a RAMDISK image. To load it manually, use the <code>modprobe</code> command.

Obtaining the latest version of the NetApp software

What you need

The SAN Host Attach Kit 1.0 for Fibre Channel Protocol on Linux package that you download from the NOW site is the most recent version of the NetApp software. This package contains the NetApp sanlun utility, troubleshooting scripts, license, and documentation.

Obtaining the software from NOW

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

Step	Action
1	Log in to the NOW site at http://now.netapp.com . In the fields on the right side of the page ◆ Type your user name and password. ◆ From the Select Start Page list box, click Service and Support. ◆ Click the Login button.
2	In the Software Download section, click Download Software.
3	Go to the SAN Host Attach Kit product row of the Software Download table and select Linux from the Select Platform drop-down list.
4	Click Go!
5	Follow the prompts to reach the Software Download page.
6	Download the <code>netapp_linux_tools_1_0.tar.gz</code> file to a local directory, for example, the <code>/tmp</code> directory.
7	For instructions about extracting and installing this file, see the <i>Installation and Setup Guide 1.0 for Fibre Channel Protocol on Linux</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 (Linux, 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 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>FCP/iSCSI Configuration Guide</i> at http://now.netapp.com/NOW/knowledge/docs/docs.shtml ◆ <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™ Software Setup Guide</i>
Installing and setting up the driver in your Linux host	<i>Installation and Setup Guide 1.0 for Fibre Channel Protocol on Linux</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 1.2 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 SAN System Administrator's Guide</i> ◆ <i>FilerView® Online Help</i> ◆ <i>Best Practices for Reliability: Maintenance</i> at http://now.netapp.com
Verifying compatibility of storage appliances with environmental requirements	<i>Site Requirements Guide</i>

