



Sun StorEdge™ 2G FC PCI Dual Channel Network Adapter Product Notes

Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054 U.S.A.
650-960-1300

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Sun StorEdge 2G FC PCI Dual Channel Network Adapter Product Notes

This document contains the latest supplementary information. Use it with the latest version of the *Sun StorEdge 2G FC PCI Dual Channel Network Adapter Installation Guide* (part number 816-5003).

This document contains the following sections:

- “Qualified Platforms” on page 3
- “Software Component Patches and Packages” on page 4
- “Bugs” on page 7
- “Diagnostic Issues” on page 8

Qualified Platforms

The supported host platforms for this product are:

- Ultra 60, 80 servers
- Sun Blade 1000, 2000 servers
- Sun Enterprise™ 220R, 250, 420R, 450 servers
- Sun Fire™ 280, 480R server
- Sun Fire V880 server
- Sun Fire 4800, 4810 servers
- Sun Fire 6800 server

This product supports the following storage systems:

- Sun StorEdge 39x0 series
- Sun StorEdge 99x0 series
- Sun StorEdge T3+ array
- Sun StorEdge A5200 array
- Sun StorEdge FC tape drives 9840A and 9840B¹ with the Sun StorEdge L180, L700, L5500 and L6000 tape libraries

Sun Solaris™ Operating Environments and diagnostic:

- The minimum level is Solaris 8 Update 4 operating environment with the Solaris 8 Recommended Patch Cluster.
- The Solaris 9 operating environment with the Solaris 9 Recommended Patch Cluster is also supported.

Software Component Patches and Packages

Before installing the Sun StorEdge 2G FC PCI Dual Channel Network Adapter card, the host must have both the Solaris 8 update 4 operating environment release with the recommended patch cluster and the Sun StorEdge 2G FC PCI Dual Channel Network Adapter driver.

This section contains the following topics:

- “Packages” on page 4
- “Patches” on page 5
- “To Download Packages” on page 5
- “To Install the Packages” on page 6
- “To Download the Patches” on page 6
- “To Install the Patches” on page 6

Packages

TABLE 1 lists the packages and their location. You need to install the packages before you install the patches. If the packages are already on the system from a previous installation, you do not need to install them again.

1. FC-AL mode for the Sun StorEdge 9840B

Check <http://www.sun.com/download/> or <http://www.sun.com/storage/san> for updates. There is one set of packages for the Solaris 8 operating environment and another for the Solaris 9 operating environment available under the respective links for the operating environments. The SUNWsan package is interchangeable between the releases.

TABLE 1 Packages

Packages	Location
SUNWsan	http://www.sun.com/download/
SUNWcfpl	or
SUNWcfplx	http://www.sun.com/storage/san

Patches

TABLE 2 contains a list of the minimum level patches necessary to use the Sun StorEdge 2G FC PCI Dual Channel Network Adapter. Check <http://sunsolve.sun.com> for updates.

TABLE 2 Patches

Name	Solaris operating environment 8 Patches	Solaris operating environment 9 Patches
Sun StorEdge Traffic Manager patch	111412-09	113039-01
fcntl/fp/fcp/usoc driver	111095-10	113040-01
fcip driver	111096-04	113041-01
qlc driver	111097-10	113042-02
luxadm/liba5k and libg_fc patch	111413-08	113043-01
cfgadm fp plug-in library patch	111846-04	113044-01
SAN Foundation Kit patch	111847-04	111847-04

▼ To Download Packages

- Go to** <http://www.sun.com/download/>.
The browser is redirected to <http://www.sun.com/software/download>.
- Under Browse Downloads, click View All.**

3. Click SAN 3.x or 4.x.
4. Register, if you have not already; otherwise enter your registration information.
5. Click Accept and Continue on the Legal/License Agreement page.
6. Click Download All.

▼ To Install the Packages

- Use the `pkgadd` command to install the packages in TABLE 1.
Read the README file for the packages and follow the instructions.

▼ To Download the Patches

1. Go to <http://sunsolve.sun.com>.
2. Download patches 111412-09, 111095-10, 111096-04, 111097-09, 111413-08, 111846-04, and 111847-04 for the Solaris 8 operating environment.
For the Solaris 9 operating environment, download patches 113039-01, 113040-01, 113041-01, 113042-01, 113043-01, 113044-01, and 111847-04.
You can access these by navigating the links PatchPro -> Network Storage Products. Check the box next to the adapter of your choice and then click Generate Patch List.
3. Unzip the patches in the `/tmp` directory.

▼ To Install the Patches

Install the packages before you install the patches.

- Use the `patchadd` command to install the patches in TABLE 2.
You must install the patches in the following order: 111412-09, 111095-10, 111096-04, 111097-09, 111413-08, 111846-04, and 111847-04. For the Solaris 9 operating environment, install the patches in the following order: 113039-01, 113040-01, 113041-01, 113042-01, 113043-01, 113044-01, and 111847-04.

Bugs

- **Bug 4631419:** When you remove slices and add the same slice numbers back to a Sun StorEdge T3+ array using firmware version 2.1, the `cfgadm` output might list the port WWNs of the slices as unusable. The workaround is to use the command `cfgadm unconfigure` on the storage device before removing a slice from the array and then use `cfgadm configure` after you add the slice back to the array.
- **Bug 4648206:** After you perform DR successfully and I/O is flowing through a failover path, cleanup on the failed path fails. This might happen when cables are pulled. The workaround is to disable VxDMP before doing an unconfigure operation.
- **Bug 4659903:** The `luxadm remove_device` command fails on a Sun StorEdge A5x00 enclosure with the error message, “Devices’s Node WWN is not found in the WWN list.” You can not use the `luxadm` command to remove the enclosure. The workaround is:
 - 1) Ensure no file systems are mounted on the devices belonging to the enclosure to be removed.
 - 2) Ensure all data on the devices is backed up.
 - 3) Stop I/O to the devices belonging to the enclosure. Issue the `luxadm -e offline` command on each device and disconnect the enclosure from the host.
 - 4) Issue the `devfsadm -C` command to remove dangling `/dev` links.
- **Bug 4660223:** Do not use the FCIP layer protocol to communicate between hosts. IP packets sent to a broadcast address eventually generate errors back to the application. However, you can use ethernet to connect hosts for IP traffic. Disable FCIP by removing the files `/etc/hostname.fcip*` to prevent FCIP from being automatically configured upon reboot.
- **Bug 4662998:** The `cfgadm` utility might report some misleading error messages when a Sun StorEdge T3+ array is configured in a fabric and you remove a LUN before you unconfigure the whole array. Some operations are reported as partially successful when they are actually fully successful, and the storage device is not automatically configured upon reboot. The workaround is to use the command `cfgadm unconfigure` on the array before removing a LUN from the array and then use `cfgadm configure` after you add the LUN back to the array.
- **Bug 4678598:** The `luxadm display` command intermittently fails on a device that is experiencing a faulty link. The workaround is to reissue the `luxadm display` command or fix the faulty link.
- **Bug 4683995:** I/O stops after a drive is pulled on a RAID 5 LUN. When you use VERITAS Volume Manager volumes and VxDMP instead of the Sun StorEdge Traffic Manager application to coordinate multiple paths to SAN devices, I/O can stop if a connection is lost to one of the storage devices in the volume. The workaround is to first configure the Sun StorEdge Traffic Manager application to manage multiple paths to the devices and then create the VERITAS volume.

- **Bug 4686590:** The `cfgadm` output lists Sun StorEdge T3+ arrays as configured in a fabric, but sometimes the array does not get reconfigured upon reboot. The workaround is to issue the `cfgadm configure` command for the storage device again.
- **Bug 4676841:** A panic occurs in the `fp/fctl` layer when high error rates are occurring while two threads are executing in parallel. This occurs from simultaneous execution of a `plogi/logo` using `fp's ioctl` thread doing error recovery and a job thread doing a `plogi`, such as running a configuration. If you see high error rates, replace or disable the bad hardware before doing system configurations.
- **Bug 4688839:** In a multi-initiator SAN environment, when many initiators have access to the same Sun StorEdge 9900 port or LUNs, under heavy I/O loads timeout values can be reached. You might see messages like this in the systems messages file: "May 21 10:45:04 hostname scsi: [ID 243001 kern.warning] WARNING: /pci@5c,700000/SUNW,qlc@1/fp@0,0/ssd@w500060e8027aa70b,22 (ssd419):May 21 10:45:04 hostname SCSI transport failed: reason 'timeout': retrying command." Increase the `ssd` timeout values and apply `ssd` I/O throttles so no more than 256 commands are sent to the storage device port. The workaround is: 1) Set the `ssd_max_throttle` value in the `/etc/system` file using the formula: active initiators for each port / active LUNs for each port <= 256 for each port. For example, one active initiator / two active LUNs for each port requires the throttle value 128. The `/etc/system` entry would look like: `set ssd:ssd_max_throttle=128`. 2) Set the `ssd_io_time` value to 180 seconds in `/etc/system` file, so that it looks like: `set ssd:ssd_io_time=180`. 3) Reboot the system so the changes in `/etc/system` take effect.

Diagnostic Issues

- The Storage Automated Diagnostic Environment 2.0 does not support the Sun StorEdge 2G FC PCI Dual Channel Network Adapter. Full support for the Sun StorEdge 2G FC PCI Dual Channel Network Adapter will be available with Storage Automated Diagnostic Environment version 2.1 later.