



Sun Fire™ V490 Server Product Notes

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Sun Fire V490 Server Product Notes

These Product Notes apply to the Sun Fire™ V490 server. Included in these notes is important information about installation, features, and known system limitations that arrived too late for publication in other documents.

Document Revision History

The first published version of this document is 817-4193-11, September 2004.

This version is 817-4193-12, September 2004. The differences in this version of the document consist of updated versions of the software patches for the supported Solaris™ Operating System versions 8 and 9.

Accessing Online Documentation

A complete set of online documentation supporting the Sun Fire V490 server is available at either of these two sites:

- <http://docs.sun.com>
- <http://www.sun.com/products-n-solutions/hardware/docs/Servers/>

Check either site periodically for the latest revisions of Sun Fire V490 server product documentation, including the latest version of these Product Notes.

Preinstalled Software

Your Sun Fire V490 server comes preinstalled with the Solaris Operating System and Java Enterprise System software (formerly known as Sun ONE software). For important information about how to get started with the preinstalled software, go to:

<http://www.sun.com/software/preinstall>

Software and OpenBoot Firmware Requirements

The following table lists the minimum Solaris™ Operating System and OpenBoot™ PROM firmware requirements for Sun Fire V490 servers.

Minimum Required Solaris Operating System	Minimum Required OpenBoot Firmware Level*
Solaris 8 2/04*	OpenBoot Firmware 4.15.0*
Solaris 9 4/04*	

* Or a compatible version that supports the system

To verify that the proper version of the operating system is installed on the Sun Fire V490 server, examine the `/etc/release` file. This file should contain the text "Solaris X X/XX" or identify a Solaris release that is compatible with the Sun Fire V490 system.

To determine the current OpenBoot firmware version on a server, use one of the following methods:

- **While the Solaris Operating System is running, type the following command:**

```
# /usr/sbin/prtconf -v
```

Or,

- From the `ok` prompt, type the following command:

```
ok.version
```

For more information about obtaining and installing OpenBoot firmware, see [“Required and Recommended Software Patches”](#) on page 3.

Required and Recommended Software Patches

This section lists software patches for the Sun Fire V490 server. You can obtain these patches from your authorized Sun service provider or by downloading them from the SunSolve OnlineSM web site at:

<http://sunsolve.sun.com>

The patches described in these Product Notes are listed by the Solaris Operating System version you might have installed on your server. For patch installation instructions, see the README file that accompanies each patch.

Note – If you are using the version of Solaris 9 that comes preinstalled on your server, refer to the preinstalled software Web site at:

<http://www.sun.com/software/preinstall>

The patch information in this section applies if you have manually installed a different version of Solaris 9, or if you have installed Solaris 8.

Required Patches for Solaris 9

The following table lists the required patches that are specific to the Sun Fire V490 server with the Solaris 9 4/04 Operating System installed. These patches are available as of the publication date of these Product Notes.

Sun Fire V490 Required Patches for Solaris 9

Patch ID	Description
112817-17 or later	SunOS 5.9: SunGigaSwift Ethernet 1.0 driver patch
111847-08 or later	SAN Foundation Kit patch (MPxIO/leadville)*
113039-04 or later	SunOS 5.9: Sun StorEdge Traffic Manager patch*
113040-06 or later	SunOS 5.9: fctl/fp/fcp/usoc driver patch*
113041-04 or later	SunOS 5.9: fcip driver patch*
113042-04 or later	SunOS 5.9: qlc driver patch*
113043-05 or later	SunOS 5.9: luxadm, liba5k and libg_fc patch*
113044-04 or later	cfgadm patch*
113447-21 or later	SunOS 5.9: libprtdiag_psr patch
117171-05 or later	SunOS 5.9: kernel patch
115553-11 or later	SunOS 5.9: USB Drivers and Framework patch

* Patches 111847, 113039, 113040, 113041, 113042, 113043 and 113044 require the package SUNWsan (SAN Foundation Kit). If you are using the preinstalled version of Solaris 9 that comes with your server, the SAN Foundation Kit and these patches are also preinstalled.

The SUNWsan package is available via the Sun Download Center at:

<http://www.sun.com/storage/san/>

From that site, download the latest SAN release software/firmware upgrade.

Recommended Software Patch for Solaris 9

The following table lists the recommended patch specific to the Sun Fire V490 server with the Solaris 9 4/04 Operating System installed. This patch is available as of the publication date of these Product Notes.

Sun Fire V490 Recommended Patches for Solaris 9

Patch ID	Description
116363-07 or later	RSC 2.2.2 patch

Required Software Patches for Solaris 8

The following table lists required patches that are specific to the Sun Fire V490 server with the Solaris 8 02/04 Operating System installed. These patches are available as of the publication date of these Product Notes.

Sun Fire V490 Required Patches for Solaris 8

Patch ID	Description
109873-25 or later	SunOS 5.8: prtdiag and platform libprtdiag_psr.so.1 patch
109896-27 or later	USB drivers patch
111095-15 or later	SunOS 2.8: fctl/fp/fcp/usoc driver patch*
111096-08 or later	SunOS 2.8: fcip driver patch*
111097-14 or later	SunOS 2.8: qlc driver patch*
111412-13 or later	SunOS 2.8: Sun StorEdge Traffic Manager patch*
111413-12 or later	SunOS 2.8: luxadm, liba5k, and libg_fc patch*
111846-08 or later	SunOS 2.8: cfgadm patch*
111847-08 or later	SAN Foundation Kit patch*
111883-24 or later	SunOS 5.8: GigaSwiftEthernet driver patch
116962-01 or later	pcisch driver patch
116975-01 or later	SunOS 5.8: kadb patch
117000-05 or later	SunOS 5.8: kernel patch

* Patches 111095, 111096, 111097, 111412, 111413, and 111846 require the package SUNWsan (SAN Foundation Kit).

The SUNWsan package is available from the Sun Download Center at:

<http://www.sun.com/storage/san/>

From that site, download the latest SAN release software/firmware upgrade.

Recommended Software Patches for Solaris 8

The following table lists the recommended patches that are specific to the Sun Fire V490 server with the Solaris 8 02/04 Operating System installed. These patches are available as of the publication date of these Product Notes.

Sun Fire V490 Recommended Patches for Solaris 8

Patch ID	Description
108813-17 or later	GEM patch
117255-01 or later	RSC 2.2.2 patch

Hardware Issues

The following sections describe various hardware issues associated with the Sun Fire V490 server.

Fan Trays Are Not Hot-Pluggable: Do Not Attempt to Remove When System Is Running

The CPU Fan Tray (FT 0) and the PCI Fan Tray (FT 1) are not components that you can “hot-plug”; that is, do not remove either fan tray while the system is running. You could also damage the system hardware by “hot-plugging” a fan tray. Serious injury can result if you attempt to remove a fan while the system is turned on.

Instructions for Installing a Server Into a Cabinet Requiring M6 Screws

To install a server into a cabinet requiring M6 screws, follow the instructions in the *Sun Fire V490 Server Setup and Rackmounting Guide*. Where the instructions specify 10-32 screws, use the M6 screws included in the rackmounting kit box. Use a Phillips No. 2 screwdriver with the M6 screws. Replace the 10-32 captive screws (if present) on the front trim panel with M6 screws before you install the server into the cabinet.

Use Shielded RJ-45 Cables for Server and SC Card Serial Connections

The Sun Fire V490 Server ship kit includes two special shielded RJ-45 cables. Use these cables when you set up serial connections from the server and from the SC card.

Software Issues

The following sections describe various software issues associated with the Sun Fire V490 server product.

Sun Remote System Control (RSC) 2.2.2 Software

The Sun Fire V490 server comes with the system controller (SC) card installed.

The following list summarizes how the Sun™ Remote System Control (RSC) 2.2.2 software and the system controller (SC) hardware work together.

- The SC card does not have an on-board modem. The modem/pager commands and variables in the RSC 2.2.2 software do not work with the SC card. These commands and variables are documented in the *Sun Remote System Control (RSC) 2.2 User's Guide*, but they are not supported on the SC card in the Sun Fire V490 server.
- The SC card does not have a system backup battery. It receives its power directly from the server's 5V standby power. The card runs even when the server is powered down or on standby, as long as the server is plugged in to an AC outlet.

For more information about using RSC 2.2.2 software with SC hardware, refer to the *Sun Fire V490 Server Administration Guide*.

OpenBoot PROM Enhancements for Diagnostic Operation

OpenBoot PROM Version 4.15 provides diagnostics that are enabled by default. Full OpenBoot Diagnostics run at power-on. For more information about these enhancements, the new and redefined configuration variables, and the new standard (default) configuration, refer to *OpenBoot PROM Enhancements for Diagnostic Operation*, which is available on the Sun Fire V490 Documentation CD included with the Sun Fire V490 server.

These diagnostics change the behavior of some applications that detect and report information about the server. For example, they change some reporting and console functionality in Sun Remote System Control (RSC) software. Refer to [“Sun Remote System Control \(RSC\) 2.2.2 Software” on page 7](#) for more information about these changes.

In addition, the diagnostics change the behavior of the server LEDs during startup. While power-on self-test (POST) is executing, the Locator and System Fault LEDs slowly blink simultaneously. After POST has completed and OpenBoot Diagnostics run, the LEDs return to normal function.

Note – Enhanced diagnostics can result in increased boot time.

Sun Management Center Software Support

Sun Management Center software, Version 3.5 Product Update 1, supports the Sun Fire V490 server. For more information about the Sun Management Center software, refer to the *Sun Management Center 3.5 Supplement for VSP High-End Entry Servers (Workgroup Servers)*.

Sun StorEdge Traffic Manager Software

Sun StorEdge Traffic Manager software automates multipath I/O failover, failback, and SAN-wide load balancing on multiple platforms. It also allows you to perform dynamic database configuration. This software can help provide improved I/O performance, increased availability, and time-saving manageability on your mission-critical SAN.

To learn more about Sun StorEdge Traffic Manager software, to take an interactive tour of its features, and to price and purchase the product for your installation, go to:

http://www.sun.com/storage/software/storage_mgmt/traffic_manager/index.xml

Documentation Notes

Sun Management Center 3.5 Support

The *Sun Management Center 3.5 Supplement for VSP High-End Entry Servers (Workgroup Servers)* does not specify Sun Fire V490 support. However, this version of the software does support the Sun Fire V490 server.

OpenBoot Firmware Documentation

The Sun Fire V490 server uses OpenBoot 4.15 system firmware. Instructions for using the firmware are provided in the *OpenBoot 4.x Command Reference Manual*, which is available at the following web site under Solaris on Sun Hardware:

<http://docs.sun.com>

Sun GigaSwift Ethernet Adapter Documentation

The *Sun GigaSwift Ethernet Adapter Installation and User's Guide*, Sun Part No. 816-1702-11 provides information about installing and using the Sun GigaSwift Ethernet UTP adapter and the Sun GigaSwift Ethernet MMF adapter. This guide also provides a reference on how to configure the system's Ethernet device driver software.

This document includes information on how to create a `ce.conf` file in the `/platform/sun4u/kernel/drv` directory, which is the recommended way to configure the onboard network interfaces for the Sun Fire V490 server.

Note – Setting the Sun GigaSwift Ethernet adapter driver parameters using the `/etc/system` file is not supported.

This guide is available online at the following Web site:

http://www.sun.com/products-n-solutions/hardware/docs/Network_Connectivity

RSC Documentation Location

After you install the Solaris Operating System and the software from the Solaris Software Supplement CD, you have access to the online version of Sun Remote System Control (RSC) documentation. You can find the PDF version of the *Sun Remote System Control (RSC) 2.2 User's Guide* in the following location within the Solaris Operating System:

```
/opt/rsc/doc/<locale>/pdf/user_guide.pdf
```

After you install RSC software on a Microsoft Windows-based PC, you can find the appropriate User's Guide in the following location within the Microsoft Windows environment:

```
C:\Program Files\Sun Microsystems\Remote System Control\doc\  
<locale>\pdf\user_guide.pdf
```

RSC documentation is also included on the Sun Fire V490 Documentation CD that is shipped with the server, and on the Solaris Software Supplement CD for your Solaris release.

Open Issues

This section describes bugs and anomalies associated with the Sun Fire V490 server. In many cases, software patches that provide fixes for these bugs are available. Visit the SunSolve Online web site, or contact your Sun authorized service provider for information about patch availability. For more information, see [“Required and Recommended Software Patches”](#) on page 3.

RSC Console Switches to the Server Console Without Warning When OpenBoot PROM Enhanced Diagnostics Are On or the Control Switch Is in the Diagnostics Position

When `service-mode?` is set to true, the `rsc-console` output automatically gets sent to the server console (`ttya`). When this occurs, the RSC console may appear not to respond to RSC commands. This behavior also happens if you are using RSC while the front panel system control switch of the Sun Fire V490 server is set to the Diagnostics position. This is normal behavior, and is set at the factory.

When the system control switch is set to Normal, you can direct the `rsc-console` output to the RSC console as described in the *Sun Fire V490 Server Administration Guide*. This manual is located on the Documentation CD shipped with your server.

Do Not Operate the On-board Ethernet Ports in Gigabit Half-Duplex Mode

The on-board Ethernet interfaces do not support Gigabit half-duplex (1000HDX) mode. Gigabit full-duplex mode is fully supported.

Disk Errors Are Reported in `loghistory` While Running SunVTS, But No Errors Are Reported in SunVTS or Solaris

If you run SunVTS software and RSC software simultaneously, you may see disk errors reported using the `loghistory` command that do not appear in SunVTS tests. This occurs because SunVTS cannot suspend RSC monitoring while tests are running. RSC reports each state change as a disk error. These messages do not appear when SunVTS is not running tests.

`ce0` and `ce1` Nomenclature

The Sun Fire V490 server provides two on-board Ethernet interfaces, which reside on the system centerplane and operate at 10 Mbps, 100 Mbps, or 1000 Mbps. Two back panel ports with RJ-45 connectors provide access to these interfaces.

In certain software output, these Ethernet interfaces are referred to as `ce0` and `ce1`:

- `ce` is the name of the Ethernet device driver.
- `0` and `1` are the two instance numbers.

GEM Interface Drops Connections Under heavy Load Using the `sync-TTCP` Test Suite

If you run the `sync-TTCP` Test Suite software while the server is experiencing heavy network loads, the Gigabit Ethernet (GEM) interface may drop connections. If this happens, perform the following procedure:

1. Use a text editor to open the `/etc/system` file.
2. Add the following lines to the file:

```
set ge:ge_put_cfg=0
set ge:ge_nos_tmds=8192
```
3. Save the file and close it.
4. Reboot your server.

