



Solaris 7 3/99

**Includes Additional Release
Notes and End-of-Support
Statements for Solaris 7 3/99
Running on Sun Hardware
Products**

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Late Breaking News

This manual provides the following information:

- Late breaking news (this chapter)
- End-of-support statements (chapter 2)
- Open Issues (chapter 3)

This manual supplements the *Solaris 7 3/99 Sun Hardware Platform Guide* and the *Solaris 7 3/99 Release Notes*.

Service Contract Upgrades to Solaris 7 3/99

You may have received a Solaris Server Media Kit to upgrade systems to the Solaris 7 3/99 operating environment. Please note that your service contract entitles you to use only those products that apply to your original Solaris operating environment license. The following products, which may be in the media kit you received, are licensed solely to customers with the Solaris Easy Access Server 2.0 product or the Solaris[™] Server Intranet Extension[™] product, which was included as part of Sun Microsystems Computer Corporation's Solaris 2.6, Solaris 2.6 Hardware: 3/98, or Solaris 2.6 Hardware: 5/98 SPARC[™] Server Media Kits:

- Solstice[™] AdminSuite[™]
- Solstice AutoClient[™]
- Solstice DiskSuite[™]
- Solstice Data Backup Utility
- Solstice PPP

- TotalNET Advanced ServerTM
- JavaTM IDL
- Solaris Management ConsoleTM
- SunTM WebServerTM
- Solstice Internet Mail ServerTM
- Sun Directory Services
- Solstice NFS ClientTM

Unbundled Product Support

If you are upgrading from an existing version of Solaris and have installed unbundled products, either from Sun or from a different company, you must ensure that all those products are supported on Solaris 7 3/99 prior to upgrading. Depending on the status of each unbundled product, you have three options for each unbundled product:

- Verify that the existing version of the unbundled product is supported on Solaris 7 3/99.
- Acquire and install a new version of the unbundled product which is supported on Solaris 7 3/99. Note that in this case you may need to remove the previous version of the unbundled product prior to upgrading to Solaris 7 3/99. See the unbundled product documentation for more details.
- Remove the unbundled product prior to upgrading to Solaris 7 3/99.

For additional information contact the supplier of the unbundled product or your service provider or go to:

<http://sunsolve.sun.com/sunsolve/pubpatches/patches.html>

PC File Viewer Update

For updated information about PC file viewer, direct your browser to:

<http://shop.sun.com/>

From "Free Downloads" at this site, choose "PC file viewer".

Documents on the Solaris 7 3/99 Sun Computer Systems Supplement CD

Table 1-1 lists the documents available on the Supplement CD:

TABLE 1-1 Documents on the Supplement CD

Path	Comment
Docs/HWPG/EOS.html	List of future end-of-support peripheral products
Docs/HWPG/Hardware.ps	Supported hardware matrices
Docs/HWPG/HWPG_en.ps	<i>Solaris 7 3/99 Sun Hardware Platform Guide</i>
Docs/ODBC/ README.ODBC_en.html	Readme file for ODBC
Docs/ShowMeTV1.2.1/ UG_en.ps	<i>ShowMe TV 1.2.1 User's Guide</i>
Docs/README_en.html/	Readme file for Solaris 7 3/99 Sun Computer Systems Supplement CD

Note - The _en indicates an English language document. Other languages may be indicated, depending on locale.

The Supplement CD also contains other documentation in AnswerBook[™] packages and in man page packages. The documentation in AnswerBook packages can only be read through the AnswerBook2[™] server software provided on the Solaris Documentation CD. Documents in the man page packages can only be read through the man command. Refer to the *Solaris 7 3/99 Sun Hardware Platform Guide* for details on installing these packages from the Supplement CD.

Product Name and Title Changes

Sun Microsystems Name Changes

Earlier publications, documents, and software have included the names SunSoft[™] and Sun Microsystems Computer Company or SMCC. Due to a Sun Microsystems reorganization, those names are no longer applicable.

For example, in some documents you may find references to a manual that was called *SMCC Hardware Platform Guide*. In this release, that document is now called *Solaris 7 3/99 Sun Hardware Platform Guide*. Another example is the supplement CD, which used to be called the SMCC Supplement CD, is now called the Solaris 7 3/99 Sun Computer Systems Supplement CD.

Solaris Name Change

This release of Solaris is called Solaris 7 instead of Solaris 2.7. As the Solaris product line continues to grow, this name change will make it easier for you to determine which products in the Solaris line you might want to use.

In Solaris 7, the transition to the new name change is in process. That means that you will still see references to Solaris 2.7, and even to Solaris 2.x.

The name of the core operating system has not changed. In this release, it is SunOS[™] 5.7.

Solaris Server Intranet Extension Name Change

The new[™] version of the Solaris[™] Server Intranet Extension[™] 1.0 product is named the Solaris[™] Easy Access Server 2.0 product.

Flash PROM Update for 64-bit Operations

Some sun4u systems need to be updated to a higher level of OpenBoot[™] firmware in the flash PROM before they can run the 64-bit mode of the Solaris 7 3/99 operating environment. Systems that can only run the 32-bit mode (such as those in the sun4c,

sun4d, and sun4m platform groups) do not require updated firmware to run Solaris 7 3/99 software.

The only systems that may require this flash PROM update are the following:

- Ultra[™] 1
- Ultra 2
- Ultra 450 and Sun[™] Enterprise[™] 450
- Sun Enterprise 3000, 4000, 5000, and 6000 systems

See the *Solaris 7 3/99 Sun Hardware Platform Guide* for instructions for determining whether your system needs a flash PROM update and for instructions on performing that update.

For the Ultra and Ultra 2 systems, an antistatic wrist strap may be required for the update. If you need a wriststrap, send e-mail to strap@eng.sun.com

Flash PROM Update Multimedia AnswerBook CD

This CD provides video clips that illustrate how to perform steps involving hardware that are part of the procedures for updating the Flash PROM on some sun4u systems.

The video clips on this CD can be accessed several ways. Some software products are present on this CD to facilitate viewing of the videos directly from the CD. Do not use the AnswerBook2 server software or the ShowMe TV software on this CD to install these products permanently on a system. Instead, use the Solaris 7 3/99 Documentation CD to install AnswerBook2 server software and use the Supplement CD to install ShowMe TV software.

Note - The video clips on the Flash PROM Update Multimedia AnswerBook CD have English language audio tracks. The volume level for the audio tracks is set to minimum. If you want to hear the English language audio track, you must adjust the audio level.

Software No Longer Included

The following software that was included in earlier Solaris 2.6 releases is not included in this Solaris 7 3/99 release:

- Solstice[™] SyMON[™]
- Sun[™] MediaCenter[™] One
- Dynamic Reconfiguration for the Enterprise 10000

- Alternate Pathing for the Enterprise 3x00, 4x00, 5x00, and 6x00 servers

Solstice SyMON

A completely new product, Sun Enterprise SyMON 2.0, has replaced Solstice SyMON. For information on availability of Sun Enterprise SyMON 2.0 go to:

<http://www.sun.com/servers/symon.html>

Sun StorEdge A5000

For the latest firmware and patch information for the Sun StorEdge[™] A5000, go to:

<http://sunsolve1.Sun.COM>

Click on SSA/A5000 Matrix under Free Services: Public Information.

End-of-Support Products

This chapter contains a list of the end-of-support products for the Solaris 7 release, including the Solaris 7 3/99 release.

End-of-Support Products

The following hardware and software products are no longer supported in this Solaris 7 3/99 release. For more information, contact your authorized Sun support provider.

Network Devices — BEC Device and be Driver

The BEC device and be driver are not supported in the Solaris 7 3/99 release.

Graphics Devices—Discontinued Frame Buffers

The following frame buffers are not supported in the Solaris 7 3/99 release.

- MG1 (bwtwo)
- MG2 (bwtwo)
- CG2 (cgtwo)
- CG4 (cgfour)
- TC (cgeight)
- ZX (leo)
- TZX (leo)

PEX Graphics Library

The Solaris[™] PEX[™] graphics library and server extension are no longer supported in this Solaris 7 3/99 release.

Future End-of-Support Products

Support for the following products may be discontinued in future releases. For more information, contact your support provider.

Sun4c-based Systems

The following sun4c architecture systems and servers based on these systems may no longer be supported in future releases:

SPARCstation[™] SLC, SPARCstation ELC, SPARCstation IPC, SPARCstation IPX, SPARCstation 1, SPARCstation 1+, and SPARCstation 2

Note - All hardware options (such as SCSI devices) and supported configurations that are dependent upon the sun4c architecture may no longer be supported in future releases. A list of these options is included in the Supplement CD `/docs` directory in the file named `EOS.html`.

SPARCstation Voyager

SPARCstation[™] Voyager[™] systems may no longer be supported in future releases.

SPARC Xterminal 1

SPARC Xterminal[™] 1 systems may no longer be supported in future releases.

Open Issues

Prestoserve 2.4.2 — Patch Required

The Prestoserve[™] 2.4.2 release will not function properly with the Solaris 7 3/99 software environment if the workaround below is not implemented. Below is a partial list of some of the platforms and hardware options that may be affected:

- Ultra[™] 1 Creator Model 170E
- Ultra 1 Creator3D Model 170E
- Sun[™] Enterprise[™] 1 Model 170E
- SunSwift[™] SBus Adapter Card

If you installed Prestoserve 2.4.2 and are using a platform or hardware option listed above, you must do the following steps to provide compatibility:

1. **Edit the `/etc/system` file and add the following information:**

```
set fas:fas_enable_sbus64 = 0
```

2. **Reboot your system.**



Caution - Failure to reboot your system can corrupt data.

A Prestoserve patch (#103043-08) that automatically adds the above information to the `/etc/system` file is available. If you prefer to make this change using the Prestoserve patch, contact your authorized Sun support provider. If you edit the `/etc/system` file as described above, you do not need the Prestoserve patch.

If you installed Prestoserve 2.4.2 and are using an Ultra 2 platform (200MHz or 300MHz), you must do the following steps to provide compatibility:

1. Edit the `/etc/system` file and add the following information:

```
set fas:fas_enable_sbus64 = 0
```

2. Reboot your system.
3. Use `pkgadd` to add the `SUNWprsto` package.
4. Add the Prestoserve patch (103043-08).

Note - If the above steps are not followed, your Ultra 2 system may panic.

Booting From Partitions Greater Than 2-Gbytes (1234177)

Due to PROM limitations, all sun4c, sun4d, and sun4m architectures will not boot from partitions greater than 2-Gbytes. These systems will fail with the following message:

```
bootblk: can't find the boot program
```

Note - All sun4u architectures support booting from larger partitions.

One related bug (4023466) reports a problem with `re-preinstall` where the boot image for large disks creates root partitions greater than 2-Gbytes. System Administrators are cautioned not to use `re-preinstall` on sun4c, sun4d, and sun4m systems with large root disks (4-Gbytes and greater).

SunFDDI Adapters Cannot Boot Sun4d Diskless Clients (4144414)

Sun4d diskless clients cannot be booted using SunFDDI[™] adapters (FDDI/S 6.0 or FDDI/P 2.0) installed in servers running the Solaris 7 3/99 operating environment. If you intend using a Sun4d as a diskless client, deploy it in an ethernet section of your network.

Quad Ethernet Controller—Dynamic Reconfiguration Not Supported

The Quad Ethernet (QE) and Quad Ethernet Controller (QEC) must be configured with other non-Dynamic Reconfiguration (DR) boards. DR does not support QE and QEC on Sun Enterprise X000 platforms running the Solaris 7 3/99 operating environment or compatible versions.

Serial Parallel Controller Driver

Serial Parallel Controller Driver Does Not Support Dynamic Reconfiguration (4177805)

Contact your service provider for availability of patch 106827-01. The patch is not available at the time of this release.

ISDN — Power Management Not Supported

ISDN does not support the Power Management[™] suspend and resume features.

`/usr/ucblib/sparcv9` is Not Available (4114650)

Any application requiring `ucblib` will not link or run with the 64-bit Solaris operating environment.

Workaround: No workaround is available at this time. Contact your authorized Sun support provider for more information.

SunScreen SKIP 1.1.1 Not Supported in Solaris 7 3/99

If you have SunScreen[™] SKIP 1.1.1 currently installed on your system, you should remove the SKIP packages before installing or upgrading to Solaris 7. The packages you should remove are:

- `SICGbdcdr`
- `SICGc3des`
- `SICGcdes`
- `SICGcrc2`
- `SICGcrc4`
- `SICGcsafe`
- `SICGes`
- `SICGkdsup`
- `SICGkeymg`
- `SICGkisup`

Solstice SyMON Not Supported in Solaris 7 3/99

If you have Solstice SyMON currently installed on your system, you should remove the SyMON packages before installing or upgrading to Solaris 7. The packages you should remove are:

- SUNWsysc
- SUNWsyec
- SUNWsym
- SUNWsyrt
- SUNWsys
- SUNWsyu
- SUNWsyua
- SUNWsyub
- SUNWsyuc
- SUNWsyud
- SUNWsyue
- SUNWsyuf

For information on the availability of Sun Enterprise SyMON 2.0, go to:

<http://www.sun.com/servers/symon.html>

SunVTS 3.1 Issues

The following issues apply to the SunVTS[™] 3.1 product.

SunVTS Tests Not Available in 64-Bit Mode

The following SunVTS tests are not available in the 64-bit mode:

`cg14test`, `isdntest`, `pstest`, `sctest`, and `tcxtest`

SunVTS Online Diagnostics through SyMON

The SunVTS 3.1 online diagnostics feature (`SUNWodu`) is no longer accessible through the SyMON interface.

To start SunVTS to safely run in an online environment, use the `vtsui.online` command.

Example:

```
# /opt/SUNWvts/bin/vtsui.online -h hostname
```

For more information about running SunVTS in an online or offline environment, refer to the *SunVTS 3.1 User's Guide*.

The SunVTS User Interface Disappears (4122829)

In some cases, the SunVTS user interface disappears during a SunVTS test session. The SunVTS kernel is still active and the test session may continue to run.

Workaround: Restart the SunVTS user interface.

Example (starting the SunVTS CDE user interface):

```
# /opt/SUNWvts/bin/vtsui
```

The `rtvctest` is Not Available in SunVTS 3.0 and SunVTS 3.1 (4172722)

The `rtvctest` verifies the functionality of the SunVideo SBus card.

This test is not supported on SunVTS version 3.0 and version 3.1, even though the test is listed in the SunVTS 3.0 Test Reference manual.

To run `rtvctest`, run SunVTS version 2.1.3 with the Solaris 2.6 5/98 operating environment.

SunVTS OPEN LOOK User Interface Support

The SunVTS OPEN LOOK user interface may not support the latest SunVTS features. For full feature support, use the SunVTS CDE or TTY interface. The SunVTS OPEN LOOK user interface will be sustained, but not enhanced, as long as OPEN LOOK is supported in the Solaris environment.

Trace Mode Update

When using the physical map view, you can only see one level in the hierarchy (such as one controller on a system board). Therefore, some devices that are several levels down are not available to trace. In this case, use the logical view to select tracing for these devices.

enatest and socaltest Cannot Run at the Same Time (4065417)

When the SunVTS `enatest` is run concurrently with the `socaltest`, the `enatest` may fail.

Workaround: Do not select `socaltest` when `enatest` is selected and vice-versa.

socaltest FATAL: Failed ioctl FCIO_DIAG_XRAM (4065420)

When the SunVTS `socaltest` is run concurrently with `enatest` and `disktest`, the `socaltest` may fail.

Workaround: Do not select `enatest` when `socaltest` is selected and vice-versa.

Disk and Floppy Drives Test (`disktest`) Update

File System Mounting

As of SunVTS 3.0, SunVTS `disktest` by default does not mount any mountable partitions. To have SunVTS mount all partitions which contain a file system, set the environment variable `BYPASS_FS_PROBE` to 0 (zero), then start SunVTS as shown below:

```
# BYPASS_FS_PROBE=0; export BYPASS_FS_PROBE
# ./sunvts
```

To return to the SunVTS default behavior so no file systems are mounted, either set the `BYPASS_FS_PROBE` to a non-zero value, or unset it.

Even if `BYPASS_FS_PROBE` is set to 0 (zero), the SunVTS disk probe checks for the existence of Sun Enterprise Volume Manager and Solstice DiskSuite on the system, and does not mount any partitions if their presence is detected.

If SunVTS is invoked from the Solstice SyMON graphical user interface, SunVTS will not mount any partitions in this case either.



Caution - If a power failure occurs while the `disktest` is running, disk data may be destroyed.



Caution - Running the Media subtest on a disk partition in the WriteRead mode may cause data corruption if the same partition is being used by other programs. Only select this mode when the system is offline (not used by any other users or programs).

disktest Option File Note

Loading an option file that was created when `BYPASS_FS_PROBE` was set to 0 (zero) might not work if the `BYPASS_FS_PROBE` environment variable no longer set to 0 (zero). Testing may fail with the following error:

```
SUNWvts.disktest.8088 07/24/98 15:47:22 disktest c0t0d0
FATAL: "Couldn't get file system information on /distest_c0t0d0s0, statvfs()
system call failure error: No such file or directory.
```

This error is caused when SunVTS expects to use the predefined mount point names (`/disktest_c0t0d0s0`) that are created when `BYPASS_FS_PROBE` is set to 0 (zero), but these mount points do not exist while `BYPASS_FS_PROBE` is not set to 0 (zero).

Workaround: Create two separate option files for the two different states of the `BYPASS_FS_PROBE` environment variable.

Sun Enterprise 10000

This section contains general issues, known bugs, patches, and notes about the Solaris 7 release on the Sun[™] Enterprise[™] 10000.

General Issues

Only Alternate Pathing (AP) is supported in the Solaris 7 3/99 release. Dynamic Reconfiguration (DR) and Inter-Domain Networks (IDN) are not supported.

Note - Before beginning the fresh install or upgrade procedures, you must install the SSP patches described in "Solaris 7 3/99 and the SSP" on page 15.

Solaris 7 and Boot-Disk Partition Sizes

If you are upgrading the operating environment from Solaris 2.6 to Solaris 7 3/99 and you used the partition layout suggested in the *SMCC Hardware Platform Guide Solaris 2.6*, the partitions may not be large enough for the upgrade to succeed. For instance, the `/usr` partition must be at least 653 megabytes. If `/usr` is smaller than the size needed to perform the upgrade, `suninstall` uses the Dynamic Space Reallocation (DSR) mode to reallocate the space of the disk partitions.

DSR may calculate a partition layout which is not acceptable for some systems. For instance, DSR may select partitions that appear to DSR as being unused (non-UFS partitions which may contain raw data or other types of file systems). If DSR selects a used partition, data loss may occur. Therefore, you must know the current status of the partitions DSR wants to use before you allow DSR to continue with the reallocation of the disk partitions.

After DSR presents an acceptable layout and you choose to proceed with the reallocation, DSR will adjust the affected file systems, and the upgrade will continue. However, if you cannot constrain the layout so that it is acceptable for your needs, then you may need to manually repartition the boot device, or you may have to perform a fresh install.

Operating Mode

On the Enterprise 10000, you can check whether a domain is running in 32-bit or 64-bit mode by using the following command:

```
domain_name# isainfo -k  
sparcv9
```

The returned value, `sparcv9`, indicates that the domain is running the 64-bit operating mode; otherwise, the domain is running in 32-bit mode.

You can also use another command, `isalist`, to check the operating mode; however, the return value, `sparcv9+vis`, differs from the return value of the `isainfo -k` command. The values are synonymous. They both indicate that the domain is running in 64-bit mode.

Solaris 7 3/99 and the SSP

If you are installing Solaris 7 3/99 on a domain or upgrading a domain's current Solaris operating environment, you must have SSP 3.1 installed on the SSP. SSP 3.0 does not support Solaris 7 3/99 on a domain. In addition, before you perform the Solaris 7 3/99 upgrade on an Enterprise 10000 domain, the SSP must have Patch-ID 105684-04. This patch is on your Sun Computer Systems Supplement CD.

Note - If the CD contains later versions of the patches, indicated by a higher-numbered suffix, use those patches instead of the patch numbers indicated in these instructions.

Patch-ID 105684-04

Description: OBP/download_helper needs to support 2.7

BugIDs fixed with this patch: 4078459 4083870 4084325 4097230 4102171 4118746
4137422 4146592

SSP Patches

The following patches should be installed on the SSP.

Patch-ID 106281-01

Description:

SSP 3.1 sys_id -m doesn't work in year 2000 or after (Y2K bug)

BugIDs fixed with this patch: 4105569

Patch-ID 106282-01

Description: SSP 3.1 Hostview suppresses trap messages after 1999

BugIDs fixed with this patch: 4108443

Fixed Bugs

This section lists important bugs that have been fixed. Minor bugs are not included. Each entry includes a 7-digit BugID assigned by Sun to aid in bug-tracking and a one-line description of the bug.

4110199 - /etc/init.d/cvc Implementation, Packaging Inconsistent

Dynamic Reconfiguration of Sun Enterprise 3x00, 4x00, 5x00, and 6x00 Servers

These release notes provide the latest information on Dynamic Reconfiguration (DR) functionality for Sun[™] Enterprise 3x00/4x00/5x00/6x00 Servers running Solaris 7 3/99. For complete information on Sun Enterprise Server Dynamic Reconfiguration, please refer to *Dynamic Reconfiguration User's Guide For Sun Enterprise 3x00/4x00/5x00/6x00 Systems*.

For Solaris 7 3/99 software on Sun Enterprise 3x00/4x00/5x00/6x00 Servers, DR functionality is limited to I/O boards and does not include CPU/Memory boards.

Supported Hardware

Before proceeding, ensure the system has Dynamic Reconfiguration capabilities. If you see the following message on your console or in your console logs, the hardware is of an older design and not suitable for Dynamic Reconfiguration:

```
Hot Plug not supported in this system
```

Supported I/O boards are listed in the “Solaris 7” section on the web site

<http://sunsolve2.sun.com/sunsolve/Enterprise-dr/>

:

The supported hardware includes type 1 and 4 Sun Enterprise I/O boards.

Firmware Issues for Dynamic Reconfiguration

FC-AL Disk Arrays or Internal Drives

For Sun StorEdge[™] A5000 disk arrays or for internal FC-AL disks in the Sun Enterprise 3500, the firmware version must be at least ST19171FC 0413. For more information, refer to the “Solaris 7” section at the DR web site:

<http://sunsolve2.sun.com/sunsolve/Enterprise-dr/>

PROM Updates for CPU and I/O Boards

To perform Dynamic Reconfiguration operations your machine may require one or more firmware updates. If an update is needed, the following message will appear during boot:

```
Firmware does not support Dynamic Reconfiguration
```

Your machine must be running at least CPU PROM version 3.2.16. If you updated your firmware from the Solaris 7 3/99 CD for 64-bit operation, you already have version 3.2.16 installed.

To see your current PROM revision, enter `.version` and `banner` at the `ok` prompt. Your display may be similar to the following:

TABLE 3-1 Determining PROM Revision Level

```
ok .version
Board 0: OBP 3.2.16 1998/06/08 16:58 POST 3.9.4 1998/06/09 16:25
Board 1: FCODE 1.8.3 1997/11/14 12:41 iPOST 3.4.6 1998/04/16 14:22
Board 2: FCODE 1.8.7 1997/12/08 15:39 iPOST 3.4.6 1998/04/16 14:22
Board 4: FCODE 1.8.7 1997/12/08 15:39 iPOST 3.4.6 1998/04/16 14:22
Board 5: FCODE 1.8.3 1997/11/14 12:41 iPOST 3.4.6 1998/04/16 14:22
Board 6: FCODE 1.8.7 1997/12/08 15:39 iPOST 3.4.6 1998/04/16 14:22
Board 7: OBP 3.2.16 1998/06/08 16:58 POST 3.9.4 1998/06/09 16:25
{5} ok banner
8-slot Sun Enterprise 4000/5000, No Keyboard
OpenBoot 3.2.16, 1024 MB memory installed, Serial #9039599.
Ethernet address 8:0:xx:xx:xx:xx, Host ID: xxxxxxxx.
```

For information on how to enable Dynamic Reconfiguration functionality in the PROM, refer to the “Solaris 7” section at this web site.

<http://sunsolve2.sun.com/sunsolve/Enterprise-dr/>

If you have not updated to PROM version 3.2.16, the web page also provides information on the following:

- How to download the DR capable PROM
- How to upgrade the PROM

Software Issues for Dynamic Reconfiguration

- The `pln_enable_detach_suspend` and `soc_enable_detach_suspend` variables must be set in the `/etc/system` file. As root, edit the file and add the following lines:

```
set pln:pln_enable_detach_suspend=1
set soc:soc_enable_detach_suspend=1
```

- On a large system, the `cfgadm -x quiesce-test` command may run as much as a minute or so. During this time no messages are displayed if `cfgadm` does not find incompatible drivers. This is normal behavior.
- The system cannot use boards that are listed in the `disabled-board-list`. To remove all boards from the disabled board list, set the `disabled-board-list` variable to a null set by entering the system command:

```
# eeprom disabled-board-list=
```

If you are at the OpenBoot prompt, use this OBP command instead:

```
OK set-default disabled-board-list
```

- If it is necessary to unload detach-unsafe drivers, use the `modinfo(1M)` line command to find the module IDs of the drivers. You can then use the module IDs in the `modunload(1M)` command to unload detach-unsafe drivers.

Open Issues for Dynamic Reconfiguration

Bug List on the Internet

For the current list of DR software bugs, refer to the “Solaris 7” section at this web site:

<http://sunsolve2.sun.com/sunsolve/Enterprise-dr/>

Cannot unconfigure board in slot 15; operation fails (4101093)

On Sun Enterprise 6000 and 6500 systems, the unconfigure operation fails for an I/O board in slot 15.

Cannot remove central I/O board (4112730)

The “central” I/O board cannot be removed under Dynamic Reconfiguration. On Sun Enterprise x000 and x500 systems the lowest-numbered I/O board is considered a key resource and cannot be removed.

PCI I/O board experiences Privileged Timeout Error during Connect (4122455)

The PCI I/O board (type 3 I/O board) experiences Privileged Timeout Error during connect. The PCI I/O board is therefore not supported at this time.

ShowMe TV 1.2.1 Known Problems

- ShowMe TV does not recover gracefully from viewing MPEG1 movies which are corrupted. Switching back and forth between two MPEG1 movies when one is corrupted, can cause ShowMe TV to fail.
- You cannot switch between CIF and QCIF H.261 streams (i.e. regular resolution, or 356x288 size frames, and low resolution, or 176x144 size frames) on non-Ultra systems.
- Sending mail (to the broadcaster or to `showmetv-comments@Sun.COM`) from within ShowMe TV does not work in Asian languages. You can use the Solaris mail functions instead.
- Mixing Asian and ASCII characters in one line of text can confuse the input/output functions in ShowMe TV. In particular, if a user sets up a transmission in which the transmission name and/or the hostname contain Asian characters, then saving/recovering these parameters to/from the `.showmetv-programs-<hostname>` configuration file might not work correctly.

PCMCIA Issues

The following bugs have been filed against PCMCIA:

If the PC ATA, `pcata`, module is modunloaded the system will appear to hang (4096137)

Description: If there is a PCMCIA I/O card in a slot that has been accessed and the card driver is unloaded (as occurs during `modunload -i 0` at the end of multi-user boot) the system will appear to hang. Sometimes removing the card will bring the system back.

Workaround: none

The PCMCIA, `pcic nexus`, driver, does not support 3.3Volts PC Card (4098998)

Description: The PCMCIA, `pcic nexus`, driver does not support 3.3V on devices. Cards that are 3.3V and 3.3V/5V will not work properly (seems to hang the system).

Workaround: none

The PC ATA, `pcata`, disk driver crashes and hangs the system and causes a memory leaks (4106401)

Description: Most attempts to insert/remove and use PCMCIA cards will crash or hang the machine. If it does not crash the machine it can cause memory leaks or create situations where other modules will not load.

Workaround: none

When booting Solaris 7 3/99 initially with 64-bit kernel the device `/dev/term/pc0`, PC card serial driver, may not get created (4162969)

Description: When booting Solaris 7 3/99 initially with 64-bit kernel, `/dev/term/pc0` hardware device node for PC card serial device may not be created.

Workaround: Boot the system up with 32-bit kernel first, then reboot with 64-bit kernel.

The PC ATA, `pata`, driver panics the 64-bit kernel (4174177)

Description: Inserting the PC card after system init panics the 64-bit Solaris. Booting the 32-bit Solaris and accessing the card will not panic the system. The PC ATA driver is not a 64-bit driver.

Workaround: none

PC File Viewer Issues

Install in the `/opt` Directory

The *Solaris 7 3/99 Sun Hardware Platform Guide* provides installation instructions that may indicate that PC file viewer can be installed in a directory other than the default directory. PC file viewer *must* be installed in the default (`/opt`) directory.

Known Bugs

- Backdrop image is not displayed in PowerPoint97 document (4159447)
- Cannot display non-standard fonts in PowerPoint97 (4159448)
- Excel graph/table in PowerPoint97 document is not displayed (4159449)
- Can not display scaled font, colored text, italic-underlined text in PowerPoint97 (4159450, 4159451, 4159452)
- Copy and Paste of certain files into a text editor results in * (asterisks) instead of actual text (4165089)
- Searching does not work for multi-byte (tch, ko) in PC file viewer (4151774)
- Wrong string is reversed in PC file viewer search on Japanese locales (4171815)
- Cannot display TCH Word95 saved in Word97 or PowerPoint97 formats in zh.TW.BIG5 locale (4150413)

Sun Remote System Control (RSC) Release Notes

Hardware and Software Configurations Supported for RSC

These release notes are applicable to Sun Remote System Control (RSC) Version 1.0, Firmware Version 1.12.

Supported Server

The only supported server is the Sun Enterprise 250 server, running the Solaris 2.6 5/98, Solaris 7, or Solaris 7 3/99 operating environments.

The Sun Enterprise 250 flash PROM must be updated to version 3.7.7 or later before installing the RSC software. Failing to do so may cause server and RSC malfunctions. For update instructions and a downloadable image, see the Sun Enterprise 250 Supplement Web page at

<http://sunsolve2.Sun.COM/sunsolve/E250/flash.html>. If you install RSC from the Solaris 7 3/99 Sun Computer Systems Supplement CD, you can update the flash PROM as part of the installation process.

Supported GUI Clients

- Sun systems running the Solaris 7 3/99 operating environment
- Sun systems running the Solaris 2.6 5/98 operating environment
- Systems running the Microsoft Windows 95 operating environment
- Systems running the Microsoft Windows 98 operating environment
- Systems running the Windows NT Workstation operating environment

Supported CLI Clients

- ASCII character terminals
- Systems running ASCII terminal emulation software
- Systems with telnet client software

Uninterruptible Power Supply (UPS)

An American Power Conversion SmartUPS 1000 with PowerChute plus 4.2.2 software was used for testing.

SunVTS

As of Solaris 7 3/99, SunVTS 3.1 supports the diagnostic testing of the RSC with a test called `rsctest`. The `rsctest` is automatically installed when SunVTS is installed. For more information on the SunVTS diagnostic, refer to the *SunVTS 3.1 User's Guide* which is part of the Solaris 7 on Sun Hardware AnswerBook collection. It is also available at <http://docs.sun.com>.

Paging Support

RSC paging requires that the customer's paging service adhere to the TAP protocol. Paging services in the Americas and Europe generally are TAP-compliant, but this is not necessarily so in other locales.

Testing RSC Paging

Due to the many variables associated with paging, Sun strongly recommends that you test the RSC paging mechanism to insure that your configuration options are set correctly.

The easiest way to test that all the components associated with RSC paging are functioning properly is to use the `rscadm send_event -c` command. This command can be invoked from a UNIX shell and will initiate an RSC alert. If the RSC `page_enabled` flag is set to true, this alert will send a page to the recipients specified by the `page_info1` and `page_info2` environment variables.

If RSC fails to send a page, a message similar to the following will be added to the event log:

```
THU AUG 27 22:31:09 1998 sst4828: 00060006: "Failed to send page alert for recent even
```

If RSC successfully transmits a page, no error message is added to the event log.

RSC can fail to send a page notification for the following reasons:

1. It failed to communicate with the modem.
2. It failed to contact the paging service specified by the `page_info1` or `page_info2` variable.
3. A failure occurred while RSC was communicating with the paging service TAP server.

When a page fails, check the following:

1. That your modem dip switch and software configuration variables are set correctly.
2. That all the RSC `page_variables` (`page_info1` and 2, `page_init1` and 2, and `page_baud1` and 2) are set correctly and match the settings for your paging service.
3. Insure that your paging service supports the TAP protocol. Check with the paging service to insure that you have the proper phone number and modem configuration parameters.
4. Attempt to connect with the paging service manually. Refer to the "Troubleshooting Modem Problems" section in Appendix B of the *RSC User's Guide* for instructions on manually connecting to a TAP paging service.

Troubleshooting

In some cases, it might be desirable to extend the pause period to allow the modem to recognize the dial tone of the phone line. This can be accomplished on most modems by increasing the value in the S8 register. See documentation that came with your modem for more details.

Known Issues

- 4151918: The SunVTS `rsctest` subtest does not provide adequate failure information.
- 4168110: The RSC GUI "OK" button in dialog boxes cannot be translated.
- 4171924: The RSC GUI occasionally reports invalid exceptions when you Logout or Exit.
- 4168266: Heavy use of UNIX `tcsh` shell commands in an RSC console session may stop RSC from responding to requests. Killing the `tcsh` shell restores RSC to normal behavior.
- 4167862: A `loghistory` error is reported when the "index -n" value you specify is greater than the number of lines in the buffer.
- 4171929: RSC sometimes reports a fan failure erroneously after a thermal shutdown.
- 4172574: The CLI reports a DC Power Failure when the host is powered off.
- 4145761: An RSC reset is required for changes to the `serial_hw_handshake` variable (or "Enable Hardware Handshaking" setting in the GUI) to take effect, but should not be required.
- 4167651: RSC default configuration settings for pagers do not match modem configuration settings suggested in documentation.
- 4152840: RSC shell commands do not issue a confirmation query before resetting the host system.

- 4171431: The GUI event log output differs from the CLI loghistory output.
- 4170988: The RSC GUI Back button for the first instance of Help does not return you to the previous view.
- 4172337: The error message displayed for an attempted third telnet or fifth user session needs improvement.
- 4162419: In the Windows operating environment, the RSC GUI goes to the background when you cancel an operation after an error message.
- 4158400: The message "[Loaded DTD html32 in 142ms]" appears when the RSC Help file is displayed.
- 4151674: Clicking on "Set RSC Date and Time" sometimes displays a duplicate image of the "Set RSC Date and Time" option just above the option list, and below the "RSC for <hostname>" title.
- 4170986: The GUI "Set Date/Time" dialog box displays 0:00:00 when time changes to noon and midnight. This is an invalid time format.
- 4159618: A GUI reset request and the resulting reset event are recorded in the incorrect order in the RSC event log.
- 4159562: The telnet connection resets intermittently when you try to connect to the RSC console from the GUI.
- 4159564: The Java Runtime Environment (JRE) may crash in the Windows 95 operating environment when you modify an RSC user account.
- 4172331: In the RSC GUI Serial Port settings, there is a typo in the error message for Invalid IP Address.
- 4159135: The RSC GUI has no option which shows the information returned by the CLI shownetwork command.
- 4157854: Sometimes when a thermistor displays a warning in the Environmental Status window and you refresh the screen, the warning is mistakenly displayed for a different thermistor. Another refresh corrects this problem.
- 4173022: The escape sequence for exiting from the RSC console does not work if the `escape_char` variable is set to "^?".
- 4175561: When connected to the server's console through RSC, a paste operation of over 336 characters into the window connected to RSC may hang the console connection. A reset of RSC is required to recover. The operation of the server is not affected.