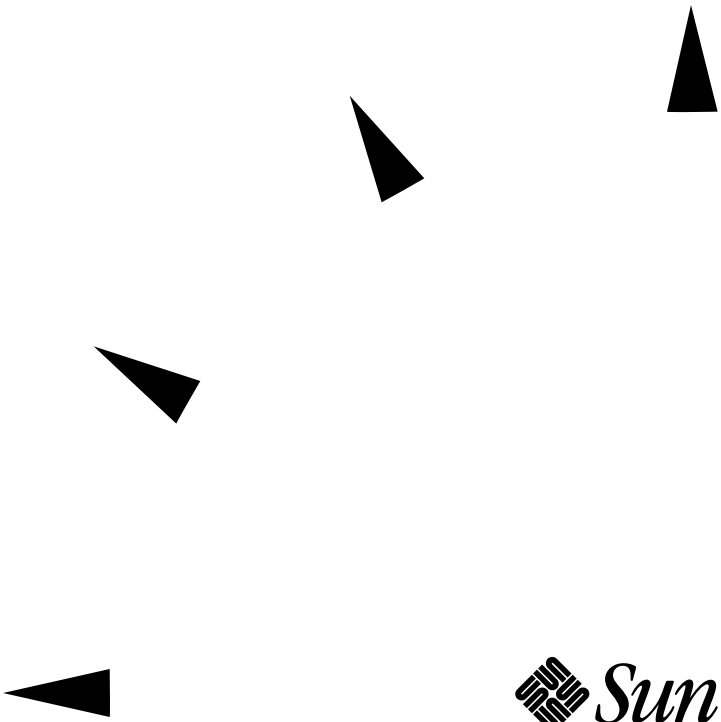
Trusted Solaris 2.5.1 Release Notes



Sun Microsystems Federal, Inc.
A Sun Microsystems, Inc. Business
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Sun microsystems

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Trusted Solaris 2.5.1 Release

Note – We strongly recommend that you read and use *Trusted Solaris Installation and Configuration* (PN 805-8026-10) to guide you in installing the Trusted Solaris operating environment. The differences between this secure operating environment and a base Solaris operating environment, such as – clearance confirmations, obligatory passwords, security configuration choices, NIS+ domain setup, secure network setup, no superuser – require planning and guidance during installation and configuration.

The Trusted Solaris 2.5.1 operating environment is an upgrade to the Trusted Solaris 2.5 release, and a security-features-enhanced version of the following software: Solaris 2.5.1 operating environment (including 11/97 upgrades), CDE 1.1 (Common Desktop Environment), and Solstice AdminSuite 2.3 administrative interface. It incorporates patches that were released earlier to patch the Trusted Solaris 2.5 operating environment, and patches for the Solaris, CDE and AdminSuite releases.

Caution – Do not apply patches that may be available for the standard releases of Solaris 2.5.1, CDE, or Solstice AdminSuite 2.3.

Getting Help

The document set for the Trusted Solaris 2.5.1 product is available printed, and from a CD in PostScript format. For extra copies of the document set or a particular book in the set, print using the PostScript file from the documentation CD.

The *Trusted Solaris 2.5.1 AnswerBook* is available after September 1998.

For assistance in using the document set, see the *Trusted Solaris Documentation Roadmap* (PN 805-8021-10).

Ordering Solaris 2.5.1 Printed Documentation

The SunDocs[SM] program makes available for individual sale product documentation from Sun Microsystems™ Computer Company and SunSoft™. For a list of documents and order information, see the catalog section of the *SunExpress™ On The Internet* site at `http://www.sun.com/sunexpress`.

Ordering CDE Manuals

The CDE manuals are not Sun manuals. They are available in local bookstores or from Addison-Wesley Publishing.

Common Desktop Environment: User's Guide
(48951) Cost: US$24.75

Common Desktop Environment: Advanced User's and System Administrator's Guide
(48952) Cost: US$24.75

- Call Addison-Wesley Publishing at 1-800-822-6339 for information.
- Fax orders to Addison-Wesley Publishing at 617-944-8243.
- Mail orders to

  Addison-Wesley Publishing Company
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  One Jacob Way
  Reading, MA 01867

Compatibility

SPARC Platforms

The Trusted Solaris 2.5.1 release supports most SPARC workstation and server hardware supported by Solaris 2.5.1, 11/97 release. This hardware includes the following architecture types:

- sun4c (for example, SPARCstation 1, 1+, and 2)
- sun4m (for example, SPARCstation 4, 5, 10, 20, and SPARCserver 6xx)
- sun4d (for example, SPARCserver 1000 and 2000)
- sun4u (for example, Ultra 1, 2, 5, 10, 30, and 60; and the Enterprise Server series 150, 450, 3500, 4500, 5500, and 6500)

Note – The SPARC Xterminal 1, a sun4m machine, is not supported. The Enterprise 10000, a sun4u machine, is also not supported.

List of Hardware Options

For a full list of hardware options, see Appendix D of *Trusted Solaris Installation and Configuration* for the Trusted Solaris 2.5.1 release.

Note – The Trusted Solaris 2.5.1 release supports the PCI cards supported by Solaris 2.5.1, 11/97 release.
For a list of PCI cards supported by Solaris 2.5.1, go to the URL `http://www.sun.com/pci/pci.solutions.html`.

Differences from Base Solaris Releases

Login Retries: The Solaris 2.6 release implements limiting logins with the RETRIES parameter in the file `/etc/default/login`. The Trusted Solaris 2.5.1 release implements limiting logins with the MAXBADLOGINS parameter in the file `/etc/default/passwd`.

Interfaces Not Supported in the Trusted Solaris 2.5.1 Release

The following interfaces are not supported in Trusted Solaris 2.5.1:

`bsmconv(1M)` `bsmunconv(1M)`	Are *not* used to en/disable auditing in Trusted Solaris. *Bug ID:4128846,4128842*
`rexecd(1M)`	Not supported with the same criteria as telnet/ftp. *Bug ID:4092045*
`rusers(1)`	Can see a Solaris host, but not a Trusted Solaris host. *Bug ID:4117797*
`spell(1)`	Cannot access `/var/adm/spellhist`. Its behavior is inconsistent with the man page. *Bug ID: 4049560*
`sys-unconfig(1)`	Does not remove Trusted Solaris configuration changes.
`talk(1)`	Does not work as it does in base Solaris. *Bug ID: 4048071*

Patches

The Trusted Solaris 2.5.1 release includes the following base product patches:

Table 1 Base Product Patches Integrated in Trusted Solaris 2.5.1

Product	Patch No.	Area Affected
CDE 1.1	105203	Dtmail
Solstice AdminSuite 2.3	None	No applicable patches.
Solaris 2.5.1	various	All patches incorporated into the Solaris 2.5.1 releases in April and November 1997 (4/97 and 11/97).

Trusted Solaris 2.5 Patches

The following patches to the Trusted Solaris 2.5 release are incorporated in the Trusted Solaris 2.5.1 release.

Table 2 Patches (including Y2000) Integrated in Trusted Solaris 2.5.1

Patch No.	Area Affected	Patch No.	Area Affected
106071-01	Trusted fixes for 103866-03	106097-01	Libkrb
106074-01	Acct programs	106098-01	Listen
106077-01	AdminSuite	106099-01	Lp Model
106078-01	At, atq, cron	106100-01	OW calendar
106079-01	Auditreduce	106101-01	OW File Mgr
106080-01	CDE calendar	106102-01	OW Imagetool
106088-01	CDE Dtexec	106103-01	OW Mailtool
106089-01	CDE Dtfile	106104-01	OW Perfmeter
106090-01	CDE help print	106105-01	PAM
106091-01	CDE Sdtimage	106106-01	Passwd
106092-01	Date	106107-01	Sar
106093-01	Face (lp banner)	106108-01	Troff
106094-01	Fsck	106109-01	Ufsdump

Table 2 Patches (including Y2000) Integrated in Trusted Solaris 2.5.1

106095-01	Libadm (ckdate)	106110-01	Uucp
106096-01	Libc (strptime, getdate)	106111-01	OW Xterm
106208-01	SKIP SunScreen panic		

Trusted Solaris 2.5 Bugs Fixed in This Release

The following bugs reported in the *Trusted Solaris 2.5 Release Notes* have been fixed in the Trusted Solaris 2.5.1 software:

- The documentation no longer reports, incorrectly, a limitation on disk partition size.
- The install account can use lockscreen.
- Failed logins are controlled.
- IL floating is fully implemented.
- Network now returns audit information.
- Window security policy is being audited.
- Initial display of labels now correct for tnrhtp database.
- Save As tnrhdb database now saves file in correct format.
- Device special files now inherit ACLs.
- mmapped files support IL floating.
- The Label Builder is robust even when many keys are simultaneously pressed.
- Booting a client over the net can be done through a secondary interface.
- NFS file systems support ACLs.
- Printers can now be added through the Device Manager and Printer Manager.
- Administrative tasks no longer require all privileges.
- The `runpd` command can follow secondary child processes, and handles X protocol privileges.
- The privileges `net_nofloat` and `sys_suser_compat` are implemented.
- The `mount`, `mount_tmpfs`, and `mount_hsfs` commands recognize the options `devices`, `nodevices`, `priv`, and `nopriv`.
- Using the `setfpriv` command to change the permitted set of privileges of a process does not change the process' inheritable set.
- The `snoop` command works for token-ring and FDDI networks.
- The library routine `t6last_attr(3NTSOL)` returns the correct attributes.
- The window manager saves the current session when a user logs out.
- Dragging and dropping selected text to a front panel icon works.

- Unmodified Solstice AdminSuite databases, such as Host Manager, no longer display a NIS Naming Service option.
- The Selection manager confirmer comes up as needed when using the keyboard to copy and paste.
- The Label button on the User Manager consistently brings up the label builder.
- NIS+ commands are audited through the Solstice_Apps GUI.
- Window security policy is audited.
- The network transports supplemental groups and audit information.

Known Problems with the Software

This section identifies known problems in the Trusted Solaris 2.5.1 software, describes them, and suggests solutions to them. These bugs may or may not be fixed in a future release.

Area	Short Description	See ...
Hardware	*Elite 3D*	*page 7*
	m64 Frame Buffer	*page 8*
	Diskless Clients with ffb or ffb2+ Frame Buffer	*page 8*
Installing and Booting	*Reinstalling Standard Solaris*	*page 8*
Auditing	*msix and tsol Audit Characteristics*	*page 9*
	Revised Audit Disable Procedure	*page 9*
Database Files	*auth_names.h*	*page 10*
	label_encodings File	*page 10*
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Hardware

Elite 3D

Cannot install Trusted Solaris 2.5.1 on Elite 3D machines. The message “Driver not installed for console device” comes up at boot time because the install media do not have a driver for the afb frame buffer.

Workaround: Add driver by loading the appropriate patches.

1. **Replace the afb frame buffer with the ffb frame buffer.**
2. **Boot and reconfigure:**

```
> boot -r
```

3. **Install Trusted Solaris 2.5.1.**
4. **Install the Elite 3D system software (Part # 704-6134-10, Revision A of February 1998).**
   Follow the procedure in the sleeve notes of the CD. The software is shipped with Elite 3D machines (to support the Solaris 2.5.1 11/97 release).

Note – The `afb_install` script in the Elite 3D system software CD *cannot* be used to install the software on Trusted Solaris 2.5.1, because it checks for the presence of the Solaris 2.5.1 (11/97) operating environment. Use `pkgadd` instead. Details are in the CD sleeve notes.

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5. **Install the latest revisions of patches 105789, 105791 and 106022.**
   Trusted Solaris 2.5.1 is shipped with patches 105789-01 and 105791-04.

   For Sun customers, the patches are available under the categories “Creator (Graphics)” and “Elite3D (Graphics)” at:

`http://sunsolve.sun.com/sunsolvei/patchpages/prod-patches.html`

6. **Replace the ffb frame buffer with the afb frame buffer.**

7. Boot and reconfigure:

```
> boot -r
```

m64 Frame Buffer

The X server dumps core if the security administrator configures the `/usr/openwin/server/tsol/config.privs` file without the `win_dga` privilege when an m64 frame buffer is in use. The m64 frame buffer must load the DGA extension with the X server, and loading the DGA extension requires the `win_dga` privilege in the `config.privs` file. *Bug ID: 4150776*

Workaround: When an m64 frame buffer is in use, do not configure the `config.privs` file without the `win_dga` privilege.

Diskless Clients with ffb or ffb2+ Frame Buffer

Diskless clients will not work with an ffb or an ffb2+ frame buffer. *Bug ID: 4085157*

Workaround:

- **Install the latest revision of patch 105790-06 on the diskless client.** Trusted Solaris 2.5.1 is shipped with the patch.

Installing and Booting

Reinstalling Standard Solaris

Installing standard Solaris on a machine previously installed with the Trusted Solaris operating system, results in panics. *Bug ID: 1264491*

Workaround: Immediately after booting the Solaris CDROM, bring up a `cmdtool` from the workspace menu and run `newfs(1M)` or `format(1M)` on the disks to prevent the Trusted Solaris UFS file systems from being misinterpreted by the standard Solaris system.

Auditing

msix and tsol Audit Characteristics

Audit values for the `msix` (Trusted Solaris 1.2) host type in the `tnrhtp` do not correspond well with their Trusted Solaris 1.2 definitions. *Bug ID: 4048995*

Table 3 Audit Characteristics Defined in Different Trusted Solaris Releases

Trusted Solaris 1.2 Audit Characteristics	**Trusted Solaris 1.2 Audit Definitions in Trusted Solaris 2.5.1** `tnrhtp`
def_audit_uid = 4294967294	def_audit_auid=3
def_audit_mask = 0,0	def_audit_mask=0x0000000000000000
def_audit_terminal = 0,0	def_audit_termid=0x0000000000000000
	def_audit_asid=0

Revised Audit Disable Procedure

The system can panic when auditing is disabled. *Bug ID: 4156817*

Workaround: Disable kernel auditing.

To disable auditing, *replace* steps 4 - 5 in *Trusted Solaris Audit Administration* under "To Disable Auditing" by the following:

1. **As** `secadmin` **or** `root`**, open the script** `/etc/init.d/drvconfig` **using the Admin Editor.**
2. **Add the following lines to the end of the file**:

```
# Disable kernel auditing
#
/usr/bin/adb -wk /dev/ksyms /dev/mem > /dev/null <<end
audit_active/W 0
end
```

To enable auditing after having disabled it, *replace* steps 4 - 5 in *Trusted Solaris Audit Administration* under "To Enable Auditing" by the following:

1. **As** `secadmin`**, open the script** `/etc/init.d/drvconfig` **using the Admin Editor.**

2. **Comment out the Disable kernel auditing lines:**

```
# Disable kernel auditing
#
# /usr/bin/adb -wk /dev/ksyms /dev/mem > /dev/null <<end
# audit_active/W 0
# end
```

Database Files

`auth_names.h`

Only 127 authorizations are allowed, rather than the advertised 128. Also, the reserved authorizations are parsed as if they are real authorizations.
Bug ID: 4017899

Workaround: Do not specify more than 127 authorizations, and do not use the reserved authorizations.

`label_encodings` *File*

The `label_encodings` file is not protected from reading. *Bug ID: 4029612*

Workaround: None.

The `label_encodings` file contains locale-sensitive information. However, not all system programs that use the file are guaranteed to be locale-aware.

Workaround: In multi-byte locales or non-C locales where upper/lower case are not a direct mapping of the C locale, the classification and word names, short names, alternate names in the `label_encodings` file and all string labels in all databases *must be in upper case only.* Also, all labels must be entered in upper case only:

- on the command line where the locale has not been set, or
- to commands which do not call the library function `setlocale(3C)` with the correct locale.

File System

Multi-Part ILs as a Mount Option

Cannot specify an IL with multiple parts as options to the `mount(1MTSOL)` command, for example, with the value of “unclassified all eyes”.
Bug ID: 4128804

Workaround: None.

Networking

NFS

When a Trusted Solaris workstation is a client of an NFS server running a different trusted operating environment, the Trusted Solaris client enforces its own MAC policy in addition to that enforced by the server. *Bug ID: 4055374*

Workaround: None.

Communicating with Trusted Solaris 1.2 Workstations

Communication fails using the `rup`, `telnet`, or `rlogin` command from a Trusted Solaris 2.5.1 workstation to a Trusted Solaris 1.2 workstation.
Bug ID: 4151377

Workaround: For the `rlogin` and `telnet` commands: Assign the privilege `net_mac_read` to the communicating process, since Trusted Solaris 1.2 uses the admin_low label for its TCP control segments, and you are logging in remotely at a user label.

For the `rup` command: In the role admin, use the Database Manager to
a) add the group `wheel` to the Group database, and
b) make the role `root` a member of the `wheel` group.

Commands and Library Routines

The following commands and library routines are not fully functional.

Interface	Description and Workaround, where available
`rpcinfo(1MTSOL)`	Requires privilege to contact a TS1.2 workstation. *Bug ID: 4040593*
`snoop(1MTSOL)`	When used with the `-v` option to display an output file, dumps core if it encountered the TSIX SATMP protocol in the file. *Bug ID: 4024442*
`libtsol` label functions	Binary to string-coded and string-coded to binary label translation is not MT safe. *Bug ID: 4029584*
	`libtsol` label functions change logging behavior of programs that use the label functions, that is, they change `syslog` parameters. *Bug ID: 4055191*
`t6recvfrom(3NTSOL)`	The mask argument of `t6recvfrom`() should contain the bits for the new attributes if `t6new_attr(3NTSOL)` is called. Instead, it contains the full set of attributes. *Bug ID: 1249220*
`t6set_endpt_defaul t(3NTSOL)`	Should require `sys_audit` privilege. Currently network interfaces succeed in setting audit attributes without `sys_audit` privilege. For TSOL connections, the audit attributes are ignored. For TSIX connections, the audit attributes are transmitted to the remote peer. *Bug ID: 1239143*

Window System and GUI Applications

The following window system and GUI applications are not fully functional.

Trusted Solaris versus Solaris

Parts of Solaris 2.5.1 that were not modified by Trusted Solaris have not been modified to reflect what Trusted Solaris supports. The following are known to be affected; there may be more.

- Host Manager displays Solaris for Trusted Solaris. *Bug ID: 4046981*

Workaround: Ignore the discrepancy; select GUI options supported by the Trusted Solaris software.

Calendar Manager

Opening calendar attachments from `dtmail` is broken. *Bug ID: 4152592*

Workaround: Look at the raw text of the attached file.

File Manager

Drag and drop between file managers fails for downgrade. *Bug ID: 4150917*

Workaround: Using the command line, move the file to the correct directory, then downgrade the label of a file using the command `setlabel(1TSOL)`.

Monochrome terminal

On a monochrome terminal, sometimes the workspace name is not visible for an SL of C or TS. *Bug ID: 4060714*

Workaround: Use lighter colors in the color definitions of the `label_encodings` file for these SLs.

Documentation

In *Trusted Solaris 2.5.1 AnswerBook*, the Trusted Solaris books are not available from the Trusted Solaris Reference Manual pages. *Bug ID: 4159259*

Workaround: From AnswerBook™, choose the desired Trusted Solaris book.