



Solaris 9 Maintenance Update 2 Installation Guide

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Introduction

The *Solaris 9 Maintenance Update 2 Installation Guide* explains how to install and back out the Solaris™ 9 Maintenance Update 2 (MU2) software. This guide is for system administrators who are installing the MU2 software. For late-breaking MU2 issues that were identified too late to be included in this guide, refer to the *Solaris 9 Maintenance Update 2 Installation Guide* at <http://docs.sun.com>.

If you need more information on general procedures for system administration, refer to the Solaris 9 System Administrator Collection.

What Is the Solaris 9 Maintenance Update 2?

The Solaris 9 MU2 contains the same set of patches that is prepackaged on the Solaris 9 12/02 software CDs. The MU2 installation automatically updates your system without regressing any patches that you have previously installed.

The Solaris 9 MU2 is available as a file for downloading from the Web.

When to Install the Solaris 9 Maintenance Update 2

First, your system must be running the Solaris 9 operating environment.

You can then install the Solaris 9 MU2 if you meet both of the following conditions:

- You are applying patches that were released in the Solaris 9 12/02 operating environment.
- You are retaining patches that you previously applied to your system.

If your system is running the Solaris 9 operating environment, or a Solaris 9 Update release, and you want to fully upgrade to new features and hardware support, install the Solaris 9 12/02 operating environment. The patches that were applied by installing the Solaris 9 12/02 operating environment replace previously installed Solaris 9 patches. The newly installed patches cannot be backed out of the release.

Maintenance Updates are primarily designed to update the Solaris operating environment to a known, tested patch level. If you want to apply a particular patch, and only that patch, do so through your normal support channels.

Note – The name of this product is Solaris 9 MU2. Code or package path names might use Solaris 2.9 or SunOS™ 5.9. Always follow the code or path as it is written in this document.

Installing the Solaris 9 Maintenance Update 2

This chapter describes how to install your Solaris 9 MU2 software. If you are installing the Solaris 9 MU2 software as part of a custom JumpStart™ installation, refer to the *Solaris 9 Installation Guide*.

Time Considerations

The Solaris 9 MU2 installation time varies, depending on the following:

- CPU speed of your machine
- `install_mu` option you select
- Transfer speed of the hard drive or network you use to access the `install_mu` code and patch set

If you install the MU2 with the `-backout` option disabled, installation proceeds more quickly. However, you cannot then back out any of the patches MU2 delivers.

Requirements

The MU2 can only be installed on a system that is running the Solaris 9 operating environment.

Space requirements for each file system vary, depending on the following:

- Whether you select the `-backout` option
- The location of the backout directory when saving backout data

- The disk partitions and the space available in each file system, relative to the patch disk space that is needed for each file system
- Your system's locale
- Whether some of the Maintenance Update patches are already installed on your system

The `install_mu` script performs a space analysis and reports the space that is needed for each file system, including backout space if applicable. The space calculations are completed in several minutes.

The `install_mu` script does not proceed if it determines that space is lacking in one or more file systems. The patch installation space that is needed is calculated with some precision. However, the backout data space need is estimated. The reported need might be higher than the actual need.

Run `install_mu` with the `-f` option if you meet both of the following conditions:

- You know that you have enough disk space to apply the patch set and backout data if desired
- If you are bypassing the space calculation

Installing the Solaris 9 MU2

Solaris 9 MU2 software can only be installed if the system that is running `install_mu` is already running the Solaris 9 operating environment.

Note – Relocatable root and service areas are not supported in the Solaris 9 MU2.

Ideally, you reboot your system in single-user mode before installing MU2 because MU2 applies patches to system libraries. Avoid introducing instability to individual systems in a multiuser system. Ensure that no processes have mapped to an unpatched version of a library. Otherwise, those processes might later attempt to map to different sections of the old library.

In single-user mode, network services are not available. You must copy the MU2 image from the network to your local system before booting your system in single-user mode.

You need to install MU2 by using NFS in multiuser mode if you meet one of the following criteria:

- You cannot reboot the system in single-user mode

- You do not have enough disk space to make a local copy of the MU2 image

In this case, you should have the system in as quiet a state as possible, without users logged on or running jobs.

When in single-user mode or multiuser mode, you must reboot your system after MU2 is installed. Do not use the `exit` command. If the `exit` command is used, the system is brought to `init 3`, and no one can log in until the system is rebooted. If the root user has logged out, and no other root users remain logged in, the system must be rebooted. See Chapter 4, "Known Problems", for more detail.

Note – Ensure that you have backed up your system's operating system before proceeding.

To install the Solaris 9 MU2 software:

1. **Ensure that no important user or system processes are running.**

Note – You must kill the `powerd` process if it is running.

2. **Exit the current session.**

The CDE login screen is displayed.

3. **Click the Options button and select Command Line Login.**

The system prompts you to log in.

4. **Type your login name as root and type the root password:**

```
login: root
password: root password
```

5. **Reboot in single-user mode. From the root shell prompt, type:**

```
# reboot -- -s
```

6. **Type the root password.**

Check that the system displays the following message and is now in system maintenance mode.

```
Entering System Maintenance Mode

Sun Microsystems Inc. SunOS 5.9 Generic May 2002
#
```

7. **Run `install_mu`. From a local copy of the MU2 image, type:**

```
# cd local_directory
# ./install_mu options
```

You can use the following options at the command line.

TABLE 2-1 Command-Line Options for `install_mu`

| Option | Description |
|----------------------|--|
| -d | Specifies that patches will not be backed up. Use of this argument decreases the time to install the software, but it also prevents you from backing out individual patches. Cannot be specified with -B option. |
| -p <i>patchdir</i> | Specifies directory that includes all the patches. |
| -q | Disables the display of dots that indicate <code>install_mu</code> activity. |
| -B <i>backoutdir</i> | Specifies that the backout data is saved in the indicated directory. Cannot be specified with the -d option. |
| -f | Forces installation of patch set without checking for sufficient disk space. Use of this option is quicker. However, use it only if you know that you have enough space. |

8. When the installation is complete, check that the following message is displayed.

```
install_mu completed at date_time.
```

- If you see this message, go to Step 9.
- If you encounter any errors, go to Chapter 5.

9. Reboot the system by typing:

```
# sync ; reboot
```

You are then prompted for a login.

Note – To prevent the library conflict problem, you must reboot your system after installing MU2.

10. Type your login name and password:

```
login: login
password: password
```

Identifying the Version of Your Solaris 9 Maintenance Update

To identify the version of your Solaris 9 MU software, type:

```
# cat /etc/release
```

To identify the patches the MU software applied to your system, type:

```
# showrev -p
```


Backing Out the Solaris 9 Maintenance Update 2

If you need to remove one of the patches, you can do so. However, you must not have used the `-d` option of `install_mu` during the installation of the Solaris 9 MU2 software.

Instructions for backing out individual patches are located in each patch directory. Patch directories are located in `/var/sadm/patch/`.

Note – Backing out the entire MU is not possible if you selected the `-d` option of `install_mu`.

Backing Out the Solaris 9 MU2

Ideally, you reboot your system in single-user mode before backing out the MU2. MU2 applies patches to system libraries. Avoid introducing instability to individual systems in a multiuser system. Ensure that no processes have mapped to a patched version of a library. Otherwise, those processes might later attempt to map to different sections of the old library.

In single-user mode, network services are not available. You must copy the MU2 image from the network to your local system before booting your system in single-user mode.

You need to backout MU2 by using NFS in multiuser mode if you meet one fo the following conditions:

- You cannot reboot the system in single-user mode
- You do not have enough disk space to make a local copy of the MU2 image

The `backout_mu` script that is provided by MU2 enables you to back out an entire MU.

To back out the Solaris 9 MU2 software:

1. Ensure that no important user or system processes are running.

2. Exit the current session.

The CDE login screen is displayed.

3. Click the Options button and select Command Line Login.

The system prompts you to log in.

4. Type your login name as root and type the root password:

```
login: root
password: root password
```

5. Reboot in single-user mode. From the root shell prompt, type:

```
# reboot -- -s
```

6. Type the root password.

Check that the system displays the following message and is now in system maintenance mode.

```
Entering System Maintenance Mode

Sun Microsystems Inc. SunOS 5.9 Generic May 2002
#
```

7. Run `backout_mu`. From a local copy of the MU2 image, type:

```
# cd local_directory
# ./backout_mu options
```

TABLE 3-1 Command-Line Options for `backout_mu`

| Option | Description |
|----------------------|---|
| -q | Disables the display of dots that indicate <code>backout_mu</code> activity |
| -B <i>backoutdir</i> | Specifies an alternate directory for storing the information that is required to back out a patch |

8. When the backout is complete, check that the following message is displayed.

```
backout_mu completed at date_time.
```

- If you see this message, go to Step 9 to complete the backout.
- If you encounter any errors, go to Chapter 5.

9. Reboot the system by typing:

```
# sync ; reboot
```

You are then prompted for a login.

Note – To prevent the library conflict problem, you must reboot your system after backing out MU2.

10. Type your login name and password:

login: *login*

password: *password*

Known Problems

This chapter describes known problems that relate to the installation and use of the Solaris 9 MU2 software.

Installation Bugs

`patchadd` Displays Error Message if a Patch That Supports Multiple Patch Architecture Is Installed (4706994)

If you install a patch that supports multiple package architecture, an error that is similar to the following benign error message might be displayed in the `/var/sadm/install_data/Maintenance_Update_log`.

```
Installing xxxxx-yy (x of xx)
See /var/sadm/patch/xxxxx-yy log for details
grep: can't open pdgabbrev.extension/pkginfo
```

For example, if patch `123456-01` contains patch packages `SUNWcar` and `SUNWcar.u`, the following error message is displayed.

```
grep: can't open SUNWcar.u/pkginfo
```

Workaround: Ignore the error message. The message does not affect the installation of the patch. The message indicates that `patchadd(1M)` does not pass the correct parameter to the `remove_PATCH_PROPERTIES()` function.

install_mu Does Not Function Correctly if Started With sh (4062334)

Because of problems that stem from the interactions between `sh(1)` and `ksh(1)`, the `install_mu` utility might fail to install certain patches correctly. This failure occurs when you start the utility by using the following command from the command line or from an administrative script:

```
# /bin/sh ./install_mu options
```

Workaround: Execute `install_mu` from the command line or from an administrative script as follows:

```
# ./install_mu options
```

patchadd Displays an Error That It Is Terminating

One of the following benign messages might be displayed by `install_mu`:

```
One or more patch packages included in  
XXXXXX-YY are not installed on this system.
```

```
Patchadd is terminating.
```

Or:

```
Installation of XXXXXX-YY failed:  
Attempting to patch a package that is not installed.
```

These messages indicate `patchadd` could not find on your system any of the packages that it intended to patch, so `patchadd` skipped the indicated patch.

The message is displayed when `patchadd` notices a discrepancy while installing a patch of one architecture onto a system with a different architecture. For example, a `sun4u` patch on a `sun4m` system.

This message might also be the result of one or more missing packages. The package might have been removed by the administrator, or never installed, for example, if a cluster that was smaller than the Entire Distribution was installed.

Workaround: Ignore the message.

Cannot login if System Is Not Rebooted (4423853)

When installing in single-user mode, do not use the `exit` command when you are done. Use the `reboot` command. If the `exit` command is used instead of the `reboot` command, the following occurs:

- The system is brought to `init 3`, and you cannot log in until the system is rebooted.
- No other users can log in until the system is rebooted.
- `pam_projects.so.1` dumps core when any user or process tries to log in. The following message is displayed:

```
NOTICE: core_log: in.rshd[1479] core dumped:
/var/crash/core.in.rshd.1479
```

- If a process attempts to access the `pam_projects.so.1` module, load module messages are displayed on the system console. A message similar to the following is displayed:

```
cron[1433]: load_modules: can not open module
/usr/lib/security/pam_projects.so.1
```

These messages are also displayed if MU2 is installed in multiuser mode. In both cases, the messages are no longer displayed after the system is rebooted.

Workaround: If the `exit` command is used after installing in single-user mode, reboot the system.

If the `exit` command is used after installing in multiuser mode and no root users remain logged in, reboot the system.

Error Messages

The screen messages that are displayed during the execution of `install_mu` and `backout_mu` do not include all errors that might have occurred. Therefore, check the detail log file for additional information about any patches or packages that were not installed or backed out.

```
# more /var/sadm/install_data/log_file.mu_version_name.date_time
```

In this example, the following applies:

- `log_file` is the name of the log file for the process you completed. For install, the name is `Maintenance_Update_log`. For backout, the name is `MU_Backout_log`.
- `mu_version_name` is the name of the MU (it is `Solaris_9MU2` for MU2).
- `date_time` is the designated date and time that was copied from `date +%Y%m%d%H%M%S` (`yyyymmddHHMMSS` or `year-month-day-hour-minute-second`).

Note – `/var/sadm/install_data/log_file` is a symbolic link to the most recent MU log file.

Note – You see only the error text when the message is displayed. You cannot see the error code number that is included here. The error code numbers have been included here for reference. You might write a script that calls the `install_mu` or `backout_mu`. Your script then needs to check the return values for the failure conditions.

signal detected.

install_mu (backout_mu) is terminating.

Explanation and recommended action: (Error Code 1) You interrupted install_mu (or backout_mu) by pressing Control-C. Reinvoke the program. If you reinvoke install_mu, error messages about previously applied patches are displayed in the log file. Ignore the error messages.

install_mu (backout_mu) is unable to find the INST_RELEASE file for the target file system. This file must be present for install_mu (backout_mu) to function correctly.

Explanation and recommended action: (Error Code 2) The program cannot find the file /var/sadm/system/admin/INST_RELEASE on the system. The system has become corrupted. The system must be reinstalled.

ERROR: Cannot find *\$xcommand* which is required for proper execution of install_mu (backout_mu).

Explanation and recommended action: (Error Code 3) install_mu and backout_mu require certain system utilities (for example awk, sed, grep) to be present in the /usr/bin and /usr/sbin directories. One, of these utilities, is missing. Contact your system administrator for assistance.

The -B and -d arguments are mutually exclusive.

Explanation and recommended action: (Error Code 4) The -d option requests that no backout data be saved. The -B option specifies a directory to store backout data. You cannot use these two options together. Reinvoke install_mu with only one of these options.

The -p parameter must be a directory. *\$uPATCHDIR* is not a directory.

Explanation and recommended action: (Error Code 5) You selected the -p option and supplied a path that is not a valid directory. Reinvoke install_mu (or backout_mu) with a valid path to the -p option.

The -B parameter must be a directory. *\$l* is not a directory.

Explanation and recommended action: (Error Code 6) You supplied an option to -B that is not a directory. Reinvoke install_mu (or backout_mu) with a valid path to the -B option.

Permissions on backout directory *\$BACKOUTDIR* not adequate.

Explanation and recommended action: (Error Code 7) You supplied an option to -B that is not a writable directory. Contact your system administrator for assistance.

Invalid option.

Explanation and recommended action: (Error Code 10) You selected an unrecognized option. Read the usage message displayed and reinvoke install_mu (or backout_mu).

Can't write to Log File: *\$LOGFILE*

Explanation and recommended action: (Error Code 11) `install_mu` and `backout_mu` need to write its log into the `/var/sadm/install_data` directory. Check that the `install_data` directory is writable, then reinvoke `install_mu` (or `backout_mu`).

SUNWcar (core architecture root) package does not exist in `/var/sadm/pkg`.

Explanation and recommended action: (Error Code 12) The `/var/sadm/pkg/SUNWcar` directory is missing on the system. Your system has become corrupted. Contact your system administrator for assistance.

`install_mu` (`backout_mu`) only supports the sparc architecture.
`install_mu` (`backout_mu`) has detected ARCH=*\$LPROC*

Explanation and recommended action: (Error Code 13) You ran `install_mu` (or `backout_mu`) on a system that is not based on SPARC™ architecture. Reinvoke `install_mu` (or `backout_mu`) on a SPARC platform.

`-p` parameter does not point to a directory containing a `.order` file. Looked in *\$uPATCHDIR* and in *\$uPATCHDIR/MU/sparc/Patches*.

Explanation and recommended action: (Error Code 14) You provided a path to a patch directory. However, `install_mu` could not find a `.order` file in that directory, which it needs to determine the correct patch installation order. `install_mu` checked the *\$path_you_specified* and in the *\$path_you_specified/MU/sparc/Patches*. Check for the existence of a `.order` file and reinvoke `install_mu`.

`install_mu` cannot locate patch order (`.order`) file. Paths searched: `./sparc/Patches`, `MU/sparc/Patches`, `./$uPATCHDIR/MU/sparc/Patches`.

Explanation and recommended action: (Error Code 15) You did not supply `install_mu` (or `backout_mu`) with the `-p` option to identify the patch directory and `install_mu` (or `backout_mu`) could not locate the patch directory. Reinvoke `install_mu` (or `backout_mu`) with the `-p` option.

You must be root to execute this script.

Explanation and recommended action: (Error Code 16) You need root privileges to run `install_mu` or `backout_mu` because only user root can apply and remove patches. Reinvoke the program as root.

`install_mu` (`backout_mu`) can only patch version 2.9 systems. Target system is version *\$TrgOSVers*.

Explanation and recommended action: (Error Code 17) You asked `install_mu` to apply patches to a system not running Solaris 9, or you asked `backout_mu` to back out patches from a system not running Solaris 9. `install_mu` and `backout_mu` must be run on a Solaris 9 system.

Not enough disk space to apply entire patch set.

Explanation and recommended action: (Error Code 22) `install_mu` analyzed your system and determined that not enough disk space was on one or more file systems to install the entire patch set. Make disk space available in the deficient file systems reported and reinvoke `install_mu`. If you believe that you have enough disk space to apply the Maintenance Update, reinvoke `install_mu` with the `-f` option.

Not enough disk space to save patch backout data.

Explanation and recommended action: (Error Code 23) `install_mu` analyzed your system and determined that not enough disk space was in the backout directory to save patch backout data. Select a backout directory with enough space, then reinvoke `install_mu`. If you believe that you really have enough disk space in the backout directory, reinvoke `install_mu` with the `-f` option.

Dry run disk space check failed.

Explanation and recommended action: (Error Code 24) `install_mu` invokes `pkgadd` with a special option to check for sufficient disk space. `pkgadd` failed, probably because `/` or `/var` is very low on disk space or because your system has become corrupted. Contact your system administrator for assistance.

The `-f` and `-D` options are mutually exclusive.

Explanation and recommended action: (Error Code 25) The `-f` option instructs `install_mu` to skip the dry-run disk space calculation phase. The `-D` option requests that only the dry-run calculations be made. Choose one option, but not both.

Cannot find state file. Looked for a file of the form `/var/sadm/install_data/.mu_state.{root_or_usr.date_time}`.

Explanation and recommended action: (Error Code 27) `backout_mu` requires a file that contains a list of the patches `install_mu` applied in order to know which patches to back out. If this file is missing, `backout_mu` cannot function. To remove the MU2 patch set, run the `backout_mu` program from the MU2 software distribution.

Solaris 9 Maintenance Update 2

Contents

This chapter provides the contents of the Solaris 9 MU2.

An example is the following patch:

```
108561-02 : CDE 1.4 Window Manager Features Patch
4301525 4301522 4299651 4301229 4300013 4303415 4304468 4302626
```

The parts of a patch are as follows:

- 108561-02 is the patch ID number.
- CDE 1.4 Window Manager Features Patch is the synopsis patch description.
- 4301525 4301522 4299651 4301229 4300013 4303415 4304468 4302626 are the identification numbers of the bugs that are fixed by patch ID 108561-02.

Patch List

- **111703-02: SunOS 5.9: /usr/ccs/bin/sccs and /usr/ccs/bin/make patch**
4654328 4222874 4514485 4483221 4504348 4631517 4654957
- **111711-01 – SunOS 5.9: 32-bit Shared library patch for C++**
4618537
- **111712-01 – SunOS 5.9: 64-Bit Shared library patch for C++**
4618537
- **111722-01 – SunOS 5.9: Math Library (libm) patch**
4652341 4664522
- **112233-03 – SunOS 5.9: Kernel Jumbo Patch**

4114317 4360843 4382913 4462509 4466085 4484338 4496935 4498831 4500536 4511634 4521521
4521525 4522402 4525533 4527648 4532512 4533078 4533108 4533270 4618812 4619870 4623395
4627510 4629569 4630754 4633008 4633015 4636049 4637031 4638346 4638608 4638981 4642754
4643857 4644123 4644346 4644731 4647361 4648171 4649851 4650210 4651201 4655634 4659588
4666799 4669486 4672677 4672730 4674788 4675827 4676707 4677620 4682258 4682918 4686943
4687362 4691127 4691670 4693350 4693574 4698325 4701854 4702559 4707874 4709147 4709805
4711133 4712247 4714245 4717581 4718366 4719361 4719365 4720790 4729479 4731198 4745795
4757023

■ **112540-06 – SunOS 5.9: Expert3D IFB Graphics Patch**

4652111 4645735 4650501 4316968 4515693 4494062 4497748 4649811 4652804 4654897 4659006
4663042 4624812 4663732 4664981 4651919 4697564 4703423 4668373 4655393 4675933 4698167
4691212 4617170 4720843 4731406 4733511

■ **112565-08 – SunOS 5.9: XVR-1000 GFB Graphics Patch**

4636225 4640002 4629777 4638125 4635704 4643375 4587680 4636721 4639155 4643767 4637546
4636748 4641167 4641177 4636866 4636788 4636846 4637796 4652512 4669035 4668381 4670095
4674533 4679353 4685579 4708069 4664996 4671387 4675252 4679830 4699753 4703545 4730199
4717529 4676118 4739840 4734313

■ **112601-04 – SunOS 5.9: PGX32 Graphics**

4502887 4633850 4688024 4728662

■ **112617-01 – CDE 1.5: rpc.cmsd patch**

4641721

■ **112620-01 – SunOS 5.9: Elite3D AFB Graphics Patch**

4651358 4714683

■ **112621-02 – SunOS 5.9: Creator 9 FFB Graphics Patch**

4649465 4651358 4714683

■ **112622-05 – SunOS 5.9: M64 Graphics Patch**

4531901 4632595 4668719 4672129 4682681 4452851 4633941 4684877 4692693

■ **112661-02 – SunOS 5.9: IIIM and X Input & Output Method patch**

4645171 4643078 4664772 4604634 4617694 4617691 4629783 4471922 4691871 4686165 4515546

■ **112764-02 – SunOS 5.9: Sun Quad FastEthernet qfe driver**

4411205 4664588 4655451 4292608 4645631

■ **112771-05 – Motif 1.2.7 and 2.1.1: Runtime library patch for Solaris 9**

4512887 4663311 4664492 4679034 4615922 4661767 4699202

■ **112783-01 – X11 6.6.1: xterm patch**

4636452 4657934

■ **112785-09 – X11 6.6.1: Xsun patch**

4649617 4651949 4642632 4644622 4531892 4692623 4700844 4712590 4710958 4710402 4703884
4638864 4729267 4675755 4677235 4729905 4763009

■ **112787-01 – X11 6.6.1: twm patch**

4659947

- **112804-01 – CDE 1.5: sdtname patch**

4666081

- **112805-01 – CDE 1.5: Help volume patch**

4666089

- **112806-01 – CDE 1.5: sdtaudiocontrol patch**

4666089

- **112807-02 – CDE 1.5: dtlogin patch**

4667119 4648724

- **112808-03 – OpenWindows 3.6.3: Tooltalk patch**

4668701 4707187 4713445

- **112809-01 – CDE:1.5 Media Player (sdtjmplay) patch**

4663628

- **112810-01 – CDE 1.5: dtmail patch**

4712584

- **112811-01 – OpenWindows 3.7.0: Xview Patch**

4690979

- **112812-01 – CDE 1.5: dtlp patch**

4646929

- **112817-06 – SunOS 5.9: Sun GigaSwift Ethernet 1.0 driver patch**

4658962 4651090 4648346 4647988 4645885 4637950 4629291 4675241 4640855 4686107 4686121
4686126 4704372 4696480 4703803 4699088 4698533 4687821 4678583 4704413 4703839 4707612
4702980 4690650 4690643 4730696 4728208 4724811 4717637 4717385 4681554 4708816 4678908
4710796 4735212 4708099 4735224 4735240 4746230 4739846 4738499 4753634 4754360 4753629
4763533 4762837

- **112834-02 – SunOS 5.9: patch scsi**

4628764 4656322 4656416

- **112835-01 – SunOS 5.9: patch /usr/sbin/clinfo**

4638788

- **112836-02 – SunOS 5.9: patch scsa2usb**

4660516 4756231

- **112837-01 – SunOS 5.9: patch /usr/lib/inet/in.dhcpd**

4621740

- **112838-02 – SunOS 5.9: pcicfg Patch**

4407705 4716448

- **112839-02 – SunOS 5.9: patch libthread.so.1**

4647410 4647927 4663077

- **112840-02 – SunOS 5.9: patch platform/SUNW,Sun-Fire-15000/kernel/drv/sparcv9/axq**

4652995 4756231

- **112841-04 – SunOS 5.9: drmach patch**

4652995 4659588 4664749 4696700

- **112854-02 – SunOS 5.9: icmp should be QNEXTLESS icmp Patch**

4511634 4647983

- **112868-05 – SunOS 5.9: ON Localization message patch**

4658681 4685336 4706059 4681374 4733193 4734495

- **112874-09 – SunOS 5.9: patch libc**

1258570 4192824 4248430 4318178 4390053 4444569 4503048 4510326 4635556 4661997 4669963
4683320 4700602 4704190 4756113 4770160

- **112875-01 – SunOS 5.9: patch /usr/lib/netsvc/rwall/rpc.rwalld**

4664537

- **112902-07 – SunOS 5.9: kernel/drv/ip Patch**

4396697 4417647 4425786 4479794 4488694 4502640 4592876 4639079 4644731 4645471 4647361
4648388 4649557 4656795 4658216 4662169 4673676 4682913 4691577 4712511 4724336

- **112903-02 – SunOS 5.9: tun Patch**

4396697 4417647 4425786 4479794 4592876 4648388 4667724

- **112904-01 – SunOS 5.9: tcp Patch**

4645471

- **112905-02 – SunOS 5.9: ippctl Patch**

4644731 4647361 4712511

- **112906-01 – SunOS 5.9: ipgpc Patch**

4644731 4647361

- **112907-01 – SunOS 5.9: libgss Patch**

4197937 4220042 4642879

- **112908-04 – SunOS 5.9: gl_kmech_krb5 Patch**

4197937 4220042 4521000 4642879 4657596 4666887 4671577 4690212 4691352

- **112911-02 – SunOS 5.9: ifconfig Patch**

4396697 4417647 4425786 4479794 4488694 4592876 4648388 4661975 4676731

- **112912-01 – SunOS 5.9: libinetcfg Patch**

4396697 4417647 4425786 4479794 4592876 4648388

■ **112913-01 – SunOS 5.9: fruadm Patch**

4505850

■ **112914-04 – SunOS 5.9: in.routed in.mpathd Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434
4635766 4637330 4637788 4648299 4661975 4676731 4690565 4701276

■ **112915-01 – SunOS 5.9: snoop Patch**

1148813 1240645 4075054 4327168 4341344 4396697 4417647 4425786 4475921 4479794 4532805
4532808 4532860 4559001 4587434 4592876 4635766 4637330 4637788 4648299 4648388

■ **112916-01 – SunOS 5.9: rtquery Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434
4635766 4637330 4637788 4648299

■ **112917-01 – SunOS 5.9: ifrt Patch**

4645471

■ **112918-01 – SunOS 5.9: route Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434
4635766 4637330 4637788 4645471 4648299

■ **112919-01 – SunOS 5.9: netstat Patch**

4645471

■ **112920-02 – SunOS 5.9: libipp Patch**

4644731 4647361 4712511

■ **112921-01 – SunOS 5.9: libkadm5 Patch**

4197937 4220042 4642879

■ **112922-01 – SunOS 5.9: krb5 lib Patch**

4197937 4220042 4642879

■ **112923-02 – SunOS 5.9: krb5 usr/lib Patch**

4197937 4220042 4642879 4703622

■ **112924-01 – SunOS 5.9: kdestroy kinit klist kpasswd Patch**

4197937 4220042 4642879

■ **112925-02 – SunOS 5.9: ktutil kdb5_util kadmin kadmin.local kadmind Patch**

4197937 4220042 4642879 4646370

■ **112926-03 – SunOS 5.9: smartcard Patch**

4366894 4524620 4629775 4635010 4635082 4635106 4636389 4639842 4642726 4646472 4646476
4646497 4647454 4647542 4649161 4655166 4676018 4682730 4683241

■ **112927-01 – SunOS 5.9: IPQos Header Patch**

4644731 4647361

■ **112928-01 – SunOS 5.9: in.ndpd Patch**

4396697 4417647 4425786 4479794 4592876 4648388

■ **112929-01 – SunOS 5.9: RIPv2 Header Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434
4635766 4637330 4637788 4648299

■ **112941-03 – SunOS 5.9: sysidnet Utility Patch**

4519228 4678406 4698391 4698500 4704974 4711830 4719195

■ **112943-04 – SunOS 5.9: Volume Management Patch**

4429002 4508734 4516578 4632847 4637525 4645142 4648750 4656914 4656931 4660125 4664713
4704081

■ **112945-05 – SunOS 5.9: wbem Patch**

4626762 4639638 4641801 4641818 4641851 4643267 4644880 4645051 4645080 4645105 4645146
4645581 4645811 4647508 4648811 4649058 4654765 4655882 4656941 4674537 4686244 4699585
4700539 4701067 4754758

■ **112951-04 – SunOS 5.9: patchadd and patchrm Patch**

4421583 4529289 4623249 4625879 4639323 4678605 4706994 4723617 4725419 4728892 4731056
4737767 4744964 4750803 4759158

■ **112954-02 – SunOS 5.9: uata Driver Patch**

4506478 4643720

■ **112955-01 – SunOS 5.9: patch kernel/fs/autofs kernel/fs/sparcv9/autofs**

4471199 4631449

■ **112958-01 – SunOS 5.9: patch pci.so**

4657365

■ **112959-01 – SunOS 5.9: patch libfru**

4643255 4661738

■ **112960-03 – SunOS 5.9: patch libsldap ldap_cachemgr**

4357827 4614945 4630226 4645604 4648140 4648146 4658625 4660019 4677591 4682120 4683522

■ **112961-01 – SunOS 5.9: patch platform/SUNW,Ultra-Enterprise/kernel/drv/sysctrl**

4638234

■ **112962-01 – SunOS 5.9: patch libthread_db.so.1**

4667173

■ **112963-03 – SunOS 5.9: linker patch**

4526752 4529912 4533195 4546416 4616944 4621479 4622472 4624658 4630224 4633860 4638070
4642829 4651493 4651709 4654406 4655066 4662575 4664855 4668517 4669582 4671493 4696204
4701749 4706503 4707808 4710814 4716929

- 4223444 4702798

 - **112964-02 – SunOS 5.9: ksh using control Z under ksh does not work well with vi**
- 4467555 4467562 4479894 4496082 4518457 4528597 4546894 4599774 4637678

 - **112965-01 – SunOS 5.9: patch /kernel/drv/sparcv9/eri**
 - **112966-01 – SunOS 5.9: patch /usr/sbin/vold**
- 4638163

 - **112967-04 – SunOS 5.9: patch /kernel/drv/nca nca Patch**
- 4487572 4629396 4631903 4650210 4681040

 - **112968-01 – SunOS 5.9: patch /usr/bin/renice**
- 4502191

 - **112969-02 – SunOS 5.9: vold slows down the boot process**
- 4592827 4715363

 - **112970-02 – SunOS 5.9: patch libresolv.so.2**
- 4646349 4708913

 - **112971-02 – SunOS 5.9: patch kernel/fs/cacheefs**
- 4398885 4493561 4615194

 - **112972-01 – SunOS 5.9: patch /usr/lib/libssagent.so.1 /usr/lib/libssasmp.so.1**
- 4395096 4633918 4643121

 - **112975-01 – SunOS 5.9: patch /kernel/sys/kaio**
- 4682197

 - **112985-01 – SunOS 5.9: Volume Management Localization message patch**
- 4692900

 - **112987-01 – SunOS 5.9: patch /platform/sun4u/kernel/tod/sparcv9/todsg**
- 4618950

 - **112998-02 – SunOS 5.9: patch /usr/sbin/syslogd**
- 4243984 4424387 4558909 4665297 4670382 4670414 4670468 4674435 4705713

 - **113020-01 – SunOS 5.9: SUNW_LOC changes needed and Thai date format updated**
- 4674651 4683429

 - **113021-01 – SunOS 5.9: yesstr, nostr nl_langinfo() strings incorrect**
- 4660271

 - **113023-01 – SunOS 5.9: Broken preremove scripts in S9 ALC packages**
- 4707449

- 4114317 4699257

 - **113024-02 – SunOS 5.9: wrsm Driver Patch**
- 4640559

 - **113025-01 – SunOS 5.9: libpsvcpolicy_psr.so.1 Patch**
- 4615383 4662172

 - **113026-02 – SunOS 5.9: /kernel/drv/md Patch**
- 4687199

 - **113027-01 – SunOS 5.9: libfrureg.so.1 Patch**
- 4645622 4658416

 - **113028-01 – SunOS 5.9: patch /kernel/ipp/flowacct**
- 4222093 4491712 4529739 4529831 4529893 4635940 4635945 4665847

 - **113029-02 – SunOS 5.9: libaio.so.1 librt.so.1 and abi_libaio.so.1 Patch**
- 4659950

 - **113030-01 – SunOS 5.9: /kernel/sys/doorfs Patch**
- 4635504

 - **113031-01 – SunOS 5.9: /usr/bin/edit Patch**
- 4503048

 - **113032-01 – SunOS 5.9: /usr/sbin/init Patch**
- 4521066 4657311 4661696 4672156 4682951

 - **113033-02 – SunOS 5.9: patch /kernel/drv/isp and /kernel/drv/sparcv9/isp**
- 4695070 4742031 4688476 4710452 4717366

 - **113038-02 – SunOS 5.9: JFP manpages patch**
- 4614828 4668356 4668371

 - **113061-01 – SunOS 5.9: UTF-8 locale UMLE patch**
- 4672995

 - **113068-01 – SunOS 5.9: hpc3130 patch**
- 4615387 4653481 4665951 4683907

 - **113069-03 – SunOS 5.9: metadisk patch**
- 4658282

 - **113070-01 – SunOS 5.9: ftp patch**
- 4696138

 - **113071-01 – SunOS 5.9: patch /usr/sbin/acctadm**
- 4696138

 - **113072-01 – SunOS 5.9: patch /usr/sbin/format**

- 4670999
 - **113073-02 – SunOS 5.9: ufs_log patch**
- 1101554 4409244 4651323
 - **113074-03 – SunOS 5.9: ngdr.conf patch**
- 4654448 4712441
 - **113075-01 – SunOS 5.9: pmap patch**
- 4660871
 - **113076-01 – SunOS 5.9: dhcpmgr.jar Patch**
- 4643257 4673713 4687991
 - **113077-02 – SunOS 5.9: patch su driver**
- 4666211 4709299
 - **113085-01 – SunOS 5.9: Thai font enhancement**
- 4688066 4708093
 - **113086-01 – SunOS 5.9: iconv modules between zh_CN.euc and UTF-8 are incompatible**
- 4672806
 - **113087-01 – SunOS 5.9: Cannot use other fonts to display Asian characters in xterm**
- 4692528
 - **113096-02 – X11 6.6.1: OWconfig patch**
- 4684184 4682788 4707897
 - **113098-03 – X11 6.6.1: X RENDER extension patch**
- 4684184 4737595 4750162
 - **113100-01 – X11 6.6.1: VFB loadable DDX module patch**
- 4682788
 - **113125-01 – SunOS 5.9: missing libc_psr.so.1 symlink**
- 4704023
 - **113145-02 – SunOS 5.9: Naturetech /platform links are not exist**
- 4707235
 - **113146-01 – SunOS 5.9: Apache Security Patch**
- 4705227
 - **113167-01 – SunOS 5.9: JFP manpages patch**
- 4700173
 - **113218-04 – SunOS 5.9: patch pcipsy**

- 4114317 4640542 4669486 4674788 4678396 4682258 4697219 4704996
- **113219-01 – SunOS 5.9: patch /platform/SUNW,Ultra-Enterprise/kernel/drv/fhc**
- 4114317
- **113220-01 – SunOS 5.9: patch /platform/sun4u/kernel/drv/sparcv9/upa64s**
- 4114317
- **113221-02 – SunOS 5.9: libprtdiag_psr.so.1 Patch**
- 4664349 4665239 4697505
- **113222-02 – SunOS 5.9: patch /kernel/misc/nfssrv and /kernel/misc/sparcv9/nfssrv**
- 4531662 4658316 4683308
- **113223-01 – SunOS 5.9: idn Patch**
- 4524236
- **113224-01 – SunOS 5.9: efdaemon Patch**
- 4633009
- **113225-01 – SunOS 5.9: 2002c Timezone Patch**
- 4649654 4683487
- **113226-01 – SunOS 5.9: hme Driver Patch**
- 4364929
- **113228-01 – SunOS 5.9: 64 bit locale links missing in Solaris 9**
- 4664306
- **113273-01 – SunOS 5.9: /usr/lib/ssh/sshd Patch**
- 4708590
- **113274-01 – SunOS 5.9: libdhcputil Patch**
- 4118738
- **113275-01 – SunOS 5.9: procfs Patch**
- 4664249
- **113276-02 – SunOS 5.9: md_trans Patch**
- 1101554 4409244 4696312
- **113277-03 – SunOS 5.9: sd and ssd Patch**
- 4500536 4651386 4655315 4656322 4656416
- **113278-01 – SunOS 5.9: NFS Daemon Patch**
- 4492876
- **113279-01 – SunOS 5.9: klmmod Patch**
- 4492876

- 4646589 4661824 4674849 4677773 4679533 4679805 4688928

 - 113280-01 – SunOS 5.9: patch /usr/bin/cpio
- 4515621

 - 113281-01 – SunOS 5.9: patch /usr/lib/netsvc/yp/ypbind
- 4640578

 - 113282-01 – SunOS 5.9: patch /usr/sbin/metaset
- 4724529

 - 113313-01 – SunOS 5.9: /usr/sbin/install.d/pfinstall Patch
- 4427971 4658316

 - 113318-01 – SunOS 5.9: patch /kernel/fs/nfs and /kernel/fs/sparcv9/nfs
- 1226166 4517003 4648085 4680691 4690775 4691127

 - 113319-04 – SunOS 5.9: patch /usr/lib/libnsl.so.1
- 4655495

 - 113320-01 – SunOS 5.9: patch se driver
- 4451550 4589401 4643768 4657427

 - 113321-02 – SunOS 5.9: patch sf and social
- 4686442

 - 113322-01 – SunOS 5.9: patch uucp
- 4687515

 - 113323-01 – SunOS 5.9: patch /usr/sbin/passmgmt
- 4313732 4358054 4360365 4375499 4527668 4624524 4645691 4651339 4651679 4654850 4672504
4673243 4722426

 - 113324-02 – SunOS 5.9: patch st driver
- 4678303 4697189 4697205

 - 113325-01 – SunOS 5.9: patch powerd
- 4662552

 - 113326-01 – SunOS 5.9: tar Patch
- 4684948

 - 113327-01 – SunOS 5.9: pppd Patch
- 4682537

 - 113328-01 – SunOS 5.9: tmpfs Patch
- 4640166

 - 113329-01 – SunOS 5.9: lp Patch
- 113330-01 – SunOS 5.9: rpcbind Patch

1226166 4690775

- **113331-01 – SunOS 5.9: usr/lib/nfs/rquotad Patch**

4683311

- **113332-03 – SunOS 5.9: libc_psr.so.1 Patch**

4666069

- **113333-01 – SunOS 5.9: libmeta Patch**

4718706

- **113334-01 – SunOS 5.9: udfs Patch**

4548887 4651869 4655796 4714259

- **113335-01 – SunOS 5.9: devinfo Patch**

4522638

- **113361-02 – SunOS 5.9: Sun Gigabit Ethernet 3.0 driver patch**

4671573 4527681 4759414 4656013 4718277 4650055 4707744

- **113374-01 – X11 6.6.1: xpr patch**

4704388

- **113390-01 – SunOS 5.9 : CTYPE errors in "ar" locale**

4728460

- **113391-01 – SunOS 5.9 : S9 : CTYPE errors in "He_IL"/"he" locales**

4728469

- **113424-01 – CDE 1.5: message patch to add IM title in the workspace menu**

4731995

- **113432-03 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
- **113434-02 – SunOS 5.9: libspmiapp.so.1 Patch**

4642585 4707022 4761562

- **113445-01 – SunOS 5.9: schpc Patch**

4640542 4697219 4704996

- **113446-01 – SunOS 5.9: dman Patch**

4640542 4697219 4704996

- **113447-01 – SunOS 5.9: libprtdiag_psr Patch**

4640542 4697219 4704996

- **113449-01 – SunOS 5.9: gld Patch**

4667724

- **113451-02 – SunOS 5.9: IKE Patch**

4508547 4628774 4628901 4653051 4741543

- **113453-02 – SunOS 5.9: sockfs Patch**

4653919 4681040

- **113454-04 – SunOS 5.9: ufs Patch**

1101554 4409244 4507281 4512855 4640210 4662795 4663287 4714988 4734635 4764514 4766103

- **113456-01 – SunOS 5.9: adb modules**

1101554 4409244

- **113457-01 – SunOS 5.9: ufs headers**

1101554 4409244

- **113459-01 – SunOS 5.9: udp patch**

4511634

- **113464-01 – SunOS 5.9: IPMP Headers Patch**

4661975 4676731

- **113467-01 – SunOS 5.9: seg_drv & seg_mapdev Patch**

4533078 4533108 4630754 4638608 4644346 4648171

- **113470-01 – SunOS 5.9: winlock Patch**

4533078 4533108 4630754 4638608 4644346 4648171

- **113471-01 – SunOS 5.9: truss Patch**

4533078 4533108 4630754 4638608 4644346 4648171

- **113472-01 – SunOS 5.9: madv & mpss lib Patch**

4533078 4533108 4630754 4638608 4644346 4648171

- **113475-02 – SunOS 5.9: usr/lib/security crypt Patch**

4192824 4248430 4390053 4700602 4715561

- **113476-04 – SunOS 5.9: usr/lib/passwdutil.so.1 pam_ldap Patch**

4192824 4248430 4357827 4390053 4658625 4660019 4670947 4677591 4682120 4683522 4700602
4709300 4756113

- **113480-02 – SunOS 5.9: usr/lib/security/pam_unix.so.1 Patch**

4192824 4248430 4390053 4700602 4756113

- **113481-03 – SunOS 5.9: usr/sbin/sprc.nispasswd Patch**

4192824 4248430 4390053 4700602 4753610 4756113

- **113482-01 – SunOS 5.9: sbin/sulogin Patch**

4192824 4248430 4390053 4700602

- **113483-01 – SunOS 5.9: usr/lib/netshvc/yp/rpc.yppasswd Patch**

4192824 4248430 4390053 4700602

- 4733195

 - **113484-02 – SunOS 5.9: WBEM SDK Localization message patch**
- 4703981 4715000

 - **113488-01 – SunOS 5.9: Field Replacement Unit ID (FRU ID) Platform and Access Library Patch**
- 4641546 4696700

 - **113489-02 – SunOS 5.9: sbd & sbdp Patch**
- 4660099 4670245 4701098

 - **113490-01 – SunOS 5.9: Audio Device Driver Patch**
- 4525396 4643091

 - **113491-01 – SunOS 5.9: rpc Library Patch**
- 4640210 4693730 4714988 4734635

 - **113492-01 – SunOS 5.9: fsck Patch**
- 4725696

 - **113493-01 – SunOS 5.9: libproc.so.1 Patch**
- 4511098 4679590

 - **113494-01 – SunOS 5.9: iostat Patch**
- 4433415 4672974

 - **113495-01 – SunOS 5.9: cfgadm Library Patch**
- 4383820

 - **113496-01 – SunOS 5.9: inetd Patch**
- 4501772

 - **113504-01 – SunOS 5.9: flarcreate Patch**
- 4731970

 - **113513-01 – X11 6.6.1: platform support for new hardware**
- 4696700 4756231

 - **113538-03 – SunOS 5.9: ngdr Patch**
 - **113539-01 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
 - **113541-01 – X11 6.6.1: XKB patch**
- 4689365

 - **113543-01 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
 - **113571-01 – SunOS 5.9: eFCode Patch**

- 4495650
 - **113572-01 – SunOS 5.9: docbook-to-man.ts Patch**
- 4649171
 - **113573-01 – SunOS 5.9: libpsvc Patch**
- 4487110 4718737
 - **113574-01 – SunOS 5.9: SUNW,Sun-Fire-880 libpsvc Patch**
- 4487110 4718737
 - **113575-01 – SunOS 5.9: sendmail Patch**
- 4678365 4704672 4704675 4720281 4725387
 - **113576-01 – SunOS 5.9: /usr/bin/dd Patch**
- 4632818
 - **113577-01 – SunOS 5.9: /usr/kernel/sched/FX Patch**
- 4701391
 - **113578-01 – SunOS 5.9: inetboot Patch**
- 4670609
 - **113579-01 – SunOS 5.9: ypserv/ypxfrd Patch**
- 4737417
 - **113580-01 – SunOS 5.9: mount Patch**
- 4715028
 - **113581-01 – CDE 1.5: message patch to add to /usr/dt/bin/dt1p**
- 4646929
 - **113584-01 – SunOS 5.9: yesstr, nostr nl_langinfo() strings incorrect in S9**
- 4745109
 - **113628-01 – SunOS 5.9: System Administration Core Libraries Patch**
- 4660835
 - **113713-01 – SunOS 5.9: pkginstall Patch**
- 4720211
 - **113742-01 – SunOS 5.9: smcpreconfig.sh Patch**
- 4704611
 - **113799-01 – SunOS 5.9: solregis Patch**
- 4762680
 - **113965-01 – SunOS 5.9: usr/sbin/ttinstall Patch**
- 4763919

- **113971-01 – SunOS 5.9: ATOK12 patch**

4770994 284000