



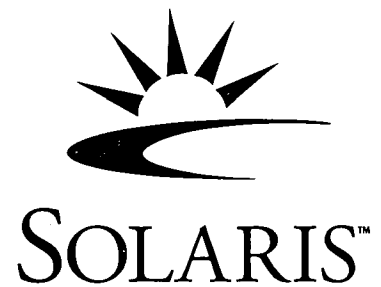
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## Solaris™ 7 Maintenance Update 2 Release Notes

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# Introduction

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The *Solaris 7 Maintenance Update 2 Release Notes* explain how to install the Solaris™ 7 Maintenance Update™ 2 (MU2) software, a set of patches that have been tested together and packaged for one-step installation. These release notes are for system administrators installing the MU2 software. If you need more information on general procedures for system administration, refer to the *Solaris 7 System Administration Guide*.

The Solaris 7 MU2 applies to all systems running Solaris 7 software and to all Solaris 7 locales. The installation automatically updates previously installed patches without regressing any patches that are resident on your system.

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

The Solaris 7 MU2 (Intel Platform Edition) contains bug fixes and performance improvements to existing driver support. If you intend to upgrade your hardware, use the Solaris 7 5/99 CD for additional hardware support.

---

**Note** - The name of this product is Solaris 7 MU2, but code and path or package path names may use Solaris 2.7 or SunOS™ 5.7. Always follow the code or path as it is written in this document.

---

The Solaris 7 MU2 installation procedure takes much less time than it takes to install the MU2 patches individually. The Solaris 7 MU2 installation time varies depending on:

- CPU speed of your machine
- `install_mu` option you select
- Transfer speed of the CD-ROM drive, 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 will proceed more quickly. However, you will not be able to back out any of the patches MU2 delivers.

If you are performing an initial installation and want to make `install_mu` run slightly faster, use the `-u` option, which skips the validation step of `install_mu`. The validation step verifies that the files to be updated were not changed since the initial installation.

# Installing the Solaris 7 Maintenance Update

---

This chapter describes how to install your Solaris 7 MU2 software on a standalone system or on a diskless client or Solstice™ AutoClient™ from a server. If you want to install the Solaris 7 MU2 software as part of a customized JumpStart™ (automatic installation) process, refer to the *Solaris Advanced Installation Guide*.

---

## Requirements

Space requirements per file system vary depending on:

- Whether you select the back out option
- The location of the back out directory when saving backout data
- The disk partitions and the space available in each file system versus the patch disk space needed per file system
- Your system's locale
- Whether some of the Maintenance Update patches are already installed on your system
- Whether you are patching a client, a server, or a service area

The `install_mu` script performs a space analysis for you and reports the space needed per file system, including back out space if applicable. The space calculations take several minutes.

The `install_mu` script does not proceed if it determines that space is lacking in one or more file systems. Although the patch installation space needed is calculated fairly

precisely, the back out data space need is estimated and the reported need may be higher than the actual need.

- If you are certain that you have enough space to apply the patch set (and back out data if desired) and you want to bypass the space calculation, run `install_mu` with the `-f` option.
- If you would like to have `install_mu` report on your disk space availability and need without applying any patches, run `install_mu` with the `-D` option.

---

**Note** - The MU may only be installed on a system running the Solaris 7 operating environment. In a client/server environment, the MU can only be applied to a client if both the client and server are running the Solaris 7 operating environment.

---

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## Installing Maintenance Update 2

Solaris 7 MU2 software can only be installed if both the system running `install_mu` and the target systems are already running Solaris 7.

It is best to reboot your system in single-user mode before installing MU2 because MU2 applies patches to system libraries. Individual systems in a multi-user system will be unstable if any processes have mapped to an unpatched version of a library and later attempt to map to different sections of the old library.

In single-user mode, network services are not available. If the MU2 image is on the network rather than on a CD, you must copy the MU2 image from the network to your local system before booting your system in single-user mode.

If it is not possible to reboot the system in single-user mode or if you do not have enough disk space to make a local copy of the MU2 image, you will need to install MU2 using NFS in multi-user mode. In this case, you should have the system in as quiet a state as possible, without users logged on or running jobs.

---

**Note** - Be sure that you have backed up your system's operating system before proceeding.

If a system shares a service area with any diskless clients or Solstice AutoClients, you need to invoke `install_mu` again with the `-R` option for each client using the service area. Failure to do so makes the client unstable because patches have not been applied correctly.

---

To install the Solaris 7 MU2 software:

1. **Make sure that no important user or system processes are running.**
2. **Exit the current session.**

The CDE login screen appears.

**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 enter the root password:**

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

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

```
# reboot --s
```

---

**Note** - Changing the run level from multi-user mode to single-user mode with the shutdown or init command might leave the vold process running. This may cause problems mounting the MU2 CD in single-user mode.

---

**6. Enter 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 5.7 Generic October 1998
#
```

- If you are running install\_mu from the CD, go to Step 7 on page 5.
- If you are running install\_mu from a local copy of the MU2 image, go to Step 8 on page 6.

**7. To mount the MU2 CD, place the CD in the drive and from the root shell prompt, type:**

```
# mount -o ro -F hsfs /dev/dsk/c0t6d0s0 /cdrom
```

---

**Note** - In some cases the CD-ROM drive may be on a controller other than `c0` or a target other than `t6`, which would require a different path to the CD-ROM device. Check with your system administrator if you have questions about mounting the CD-ROM drive.

---

8. Run `install_mu`.

- From a local copy of the MU2 image, type:

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

- From the MU2 CD, type:

```
# cd /cdrom
# ./install_mu any desired options
```

The following options can be used on the command line.

TABLE 2-1 Command Line Options for `install_mu`

Option	Description
<code>-u</code>	Unconditional install; does not verify that files to be updated were not changed since the initial installation.
<code>-d</code>	Specifies that patches will not be backed up. Using this argument decreases the time it takes to install the software, but it also prevents you from backing out individual patches. Cannot be specified with <code>-B</code> option.
<code>-p patchdir</code>	Specifies directory that includes all the patches.
<code>-q</code>	Disables the display of dots that indicate <code>install_mu</code> activity.

TABLE 2-1 Command Line Options for `install_mu` (continued)

Option	Description
<code>-B backoutdir</code>	Specifies that the back out data is saved in the indicated directory. Cannot be specified with the <code>-d</code> option.
<code>-f</code>	Force installation of patch set without checking for sufficient disk space. Using this option saves time, but you should only use it if you are certain that you have enough space. Cannot be specified with the <code>-D</code> option.
<code>-D</code>	Dry run mode; reports the amount of needed disk space without applying patches. Cannot be specified with <code>-f</code> option.
<code>-R rootdir</code>	Specifies an alternate root directory. Use to apply MU2 to clients whose package system information files are located in a directory tree starting in the specified <i>rootdir</i> . Cannot be specified with the <code>-S</code> option.
<code>-S servicedir</code>	Specifies an alternate service directory. Use to apply MU2 to a service area for clients of a different operating system or architecture than the server. Cannot be specified with the <code>-R</code> option.

When the installation is complete, the following message is displayed:

```
install_mu completed successfully.
```

- If you see this message, go to Step 9 on page 7.
  - If you encounter any errors, go to Step 12 on page 8.
9. Check to see if you need to add special patches as described in “Installing Special Patches” on page 8.

10. Reboot the system by typing:

```
# sync ; reboot
```

You are then prompted for a login.

---

**Note** - It is very important that you reboot your system after installing MU2 to prevent the library conflict problem.

---

## 11. Type your login name and password:

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

## 12. If you encounter errors, check the detail log file for error information.

Errors encountered during patch installation are displayed after installation is complete. Check the detail log file for additional information about any patches or packages that were not installed.

```
# more \  
$ROOTDIR/var/sadm/install_data/Maintenance_Update_log.mu_version_name.date_time
```

where:

- *\$ROOTDIR* is the root directory of the system that you have just updated; for example, / for the local system and /export/root/*clientname* for a diskless client.
- *mu\_version\_name* is the name of the MU (it is Solaris\_7MU2 for MU2).
- *date\_time* is the designated date and time copied from `date +%y%m%d%H%M%S` ( *yyyymmddHHMMSS* or *year-month-day-hour-minute-second*).

---

**Note** - *\$ROOTDIR/var/sadm/install\_data/Maintenance\_Update\_log* is a symbolic link to the most recent MU log file.

---

For explanations and recommended actions for error codes, see Appendix A.

---

# Installing Special Patches

Some MU2 patches are not automatically installed on systems running the Solaris 7 operating environment. The patch set that is included in the MU2 is complete only for systems running the Solaris 7 3/99 operating environment. If you want to apply

MU2 patches to systems running the Solaris 7 operating environment, you will need to apply additional patches.

To determine if these additional patches should be applied to your system, check the `/etc/release` file for the release date by typing:

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

If your screen displays this version of the Solaris operating environment, you must apply special patches.

```
Solaris 7 s998_21a12b SPARC
Copyright 1998 Sun Microsystems, Inc. All Rights Reserved.
Assembled 06 October 1998
```

If your screen displays January 1999, go back to Step 10 on page 7 in "Installing Maintenance Update 2" on page 4.

**TABLE 2-2** Solaris Release Versions

Date	Version of Operating Environment	Perform the following Task:
October 1998	Solaris 7	Apply additional set of patches in the Special Patch directory
January 1999	Solaris 7 3/99	Do not apply additional patches in the Special Patch directory

1. Change directory to the special patch directory by typing:

- From a local copy of the MU2 image, type:

```
# cd local_directory/Solaris_7_MU2/platform/Patches/special_patches
```

- From the MU2 CD, type:

```
# cd /cdrom/Solaris_7_MU2/platform/Patches/special_patches
```

where *platform* is either `sparc` or `i386`.

2. Install the special patches using the following command:

```
# patchadd -M . patchlist
```

The patches contained in the Special Patch directory for the SPARC platform of the MU2 include:

107612-01	SunOS 5.7	koi8-R -ow hung before dtlogin screen
107616-01	SunOS 5.7	European locale updates
107693-01	SunOS 5.7	l10n_euro message updates for SUNW* is SUNW*os 599
107707-01	SunOS 5.7	WOS Message Updates

The patches contained in the Special Patch directory for the x86 platform of the MU2 include:

107613-01	SunOS 5.7_x86	koi8-R -cde and ow hung before dtlogin screen
107617-01	SunOS 5.7_x86	European locale updates
107694-01	SunOS 5.7_x86	l10n_euro message updates for SUNW*is SUNW*os 599
107708-01	SunOS 5.7_x86	WOS Message Updates

3. Return to Step 10 on page 7 in "Installing Maintenance Update 2" on page 4 to complete the installation.

---

## Backing Out

The patches in the Solaris 7 MU2 software have been tested together as a set and, for the greatest stability, should be used that way. If you need to remove one of the patches, you may do so provided that you did not use the `-d` option of `install_mu` during the installation of the Solaris 7 MU2 software.

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

---

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

If a system shares a service area with any diskless clients or Solstice AutoClients, you need to invoke `backout_mu` again with the `-R` option for each client using the service area. Failure to do so makes the client unstable because patches have not been backed out correctly.

---

It is best to reboot your system in single-user mode before backing out the MU2. MU2 applies patches to system libraries. Individual systems in a multi-user system will be unstable if any processes have mapped to a patched version of a library and later attempt to map to different sections of the old library.

In single-user mode, network services are not available. If the MU2 image is on the network rather than on a CD, you must copy the MU2 image from the network to your local system before booting your system in single-user mode.

If it is not possible to reboot the system in single-user mode or if you do not have enough disk space to make a local copy of the MU2 image, you will need to back out MU2 using NFS in multi-user mode. In this case, you should have the system in as quiet a state as possible without users logged on or running jobs.

The `backout_mu` script provided by MU2 enables you to back out an entire MU. To back out the Solaris 7 MU2 software:

1. **Make sure that no important user or system processes are running.**
2. **Exit the current session.**  
The CDE login screen appears.
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 enter the root password:**

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

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

```
# reboot --s
```

---

**Note** - Changing the run level from multi-user mode to single-user mode with the shutdown or init command might leave the vold process running. This may cause problems mounting the MU2 CD in single-user mode.

---

**6. Enter 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 5.7 Generic October 1998  
#
```

**7. If you are running the Solaris 7 operating environment on your system and have installed special patches, as described in "Installing Special Patches" on page 8, then you must back out patches individually, as described in "Backing Out Special Patches" on page 15.**

- If you are running backout\_mu from the CD, go to Step 8 on page 12.
- If you are running backout\_mu from a local copy of the MU2 image, go to Step 9 on page 12.

**8. To mount the MU2 CD, place the CD in the drive and from the root shell prompt, type:**

```
# mount -o ro -F hsfs /dev/dsk/c0t6d0s0 /cdrom
```

---

**Note** - In some cases, the CD-ROM drive may be on a controller other than c0 or a target other than t6, which would require a different path to the CD-ROM device. Check with your system administrator if you have questions about mounting the CD-ROM drive.

---

**9. Run backout\_mu.**

- From a local copy of the MU2 image, type:

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

- From the MU2 CD, type:

```
# cd /cdrom
# ./backout_mu any desired options
```

TABLE 2-3 Command Line Options for `backout_mu`

Option	Description
<code>-T <i>tooldir</i></code>	Specifies the location of the patch tools directory.
<code>-q</code>	Disables the display of dots that indicate <code>backout_mu</code> activity.
<code>-B <i>backoutdir</i></code>	Specifies an alternate directory in which patches have been saved.
<code>-R <i>rootdir</i></code>	Specifies an alternate root directory.
<code>-S <i>servicedir</i></code>	Specifies an alternate service directory.

When the back out is complete, the following message is displayed:

```
backout_mu completed successfully.
```

- If you see this message, go to Steps 10 and 11 to complete the back out.
- If you encounter any errors, go to Step 12.

#### 10. Reboot the system by typing:

```
# sync ; reboot
```

You are then prompted for a login.

---

**Note** - It is very important that you reboot your system after backing out MU2 to prevent the library conflict problem.

---

### 11. Type your login name and password:

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

### 12. If you encounter errors, check the detail log file for error information.

Errors encountered during patch back out are displayed after back out has been completed. Check the detail log file for additional information about any patches or packages that were not backed out.

```
# more \  
$ROOTDIR/var/sadm/install_data/MU_Backout_log.mu_version_name.date_time
```

where:

- *\$ROOTDIR* is the root directory of the system that you have just updated; for example, / for the local system and /export/root/clientname for a diskless client.
- *mu\_version\_name* is the name of the MU ( it is Solaris\_7MU2 for MU2).
- *date\_time* is the designated date and time copied from date +%y%m%d%H%M%S (i.e., yyyyymmddHHMMSS or year-month-day-hour-minute-second).

---

**Note** - *\$ROOTDIR/var/sadm/install\_data/MU\_Backout\_log* is a symbolic link to the most recent MU log file.

---

For explanations and recommended actions for error codes, see Appendix A.

---

# Backing Out Special Patches

1. Type the following command for each of the patches:

```
# patchrm patch_id  
  
Checking installed packages and patches...  
  
Backing out patch patch_id ...
```

where *patch\_id* is the ID of the special patch.

2. Return to Step 7 on page 12 in “Backing Out” on page 10 to complete the backout process.

---

# Installing on a Diskless Client or Solstice AutoClient from a Server

You can install the Solaris 7 MU2 software on a diskless client or Solstice AutoClient from a server that is in multiuser mode. However, you cannot run `install_mu` before you add a client. Refer to *Solaris 7 Installation Library* for details on using Solstice™ AdminSuite™.

You need to decide whether to use `admclientpatch` or `install_mu` to install the Solaris 7 MU2 software in a client/server environment. Use the following table and discussion to decide which method to use.

**TABLE 2-4** Differences between `admclientpatch` and `install_mu`

	<code>admclientpatch</code>	<code>install_mu</code>
Patching speed	Slower	Faster
Service area handling	Automatic	Manual
Ease of patching	More involved	Simple
Integration with AdminSuite	Complete	None

`admclientpatch` is an AdminSuite utility that manages the installation and removal of a collection of patches on a set of managed clients. Applying the MU patch set via `install_mu` bypasses AdminSuite's patch management process and makes it more difficult later to manage the patch set shared by multiple clients. This is a concern if the number of clients is large or if patches other than those in the MU set are installed or removed.

`admclientpatch` automatically patches client service areas. With `install_mu`, each client needs to be patched with the `-R` option, then `install_mu` must be executed with the `-S` option for each service area. If there are multiple clients that share a single service area, you only need to run `install_mu` once with the `-S` option. This procedure ensures that both the service area and root area of a client remain consistent.

`install_mu` patches clients more quickly because it bypasses the `admclientpatch` patch management process and because `admclientpatch` removes older revisions of patches before applying newer ones. In environments with few clients and service areas, `install_mu` may be a good way to patch clients and service areas.

`install_mu` may be easier to use because it recognizes the MU set of patches. The MU distribution patch directory contains a file (`.order`) that lists all of the patches it will apply in the correct order, considering patch requirements. To patch clients with `admclientpatch`, write a script that reads the `.order` file, applies the patches to the `admclientpatch` spool area, and then invokes `admclientpatch` to install the patches to the clients. Run `install_mu` with the `-D` (dry run) option to identify the location of the `.order` file.

For more information about managing clients and patches, see the *Solstice AutoClient 2.1 Administration Guide* at <http://docs.sun.com>.

---

**Note** - `install_mu` can be installed on servers that support SPARC and x86 server or client root paths. It can also be installed in a server's service area for either SPARC or x86 clients. The MU2 can only be installed on a system that is running the Solaris 7 operating environment. In a client/server environment, the MU2 can only be installed on a client if both the client and the server are running the Solaris 7 operating environment.

---

## Installing With `install_mu`

To install the Solaris 7 MU2 software on a diskless client or AutoClient from a server using `install_mu`:

1. Halt the diskless client or AutoClient.
2. On the server, run the `install_mu` script located in the local product directory, with the client's root directory as the argument.
  - From a local copy of the MU2 image that corresponds to the client platform, type:

```
# cd local_directory
# ./install_mu -R /export/root/client_name
```

where `client_name` is the hostname of the diskless client or AutoClient.

- From the MU2 CD, mount the CD and type:

```
# cd /cdrom/s7_maintenance_update_2_platform
# ./install_mu -R /export/root/client_name
```

where `platform` is `sparc` or `x86` and `client_name` is the hostname of the diskless client or AutoClient.

3. Repeat this process for each diskless client or AutoClient being served.
4. Install the Solaris 7 MU2 software on the server's service area. From a local copy of the MU2 image that corresponds to the server platform, type:

```
# cd local_directory
# ./install_mu -S Solaris_2.7
```

---

**Note** - If a service area is shared by the server, you also need to apply the same Maintenance Update patch set to the server's root area. Failure to do so will result in an improperly patched and unstable server.

---

5. Check to see if you need to install special patches as described in "Installing Special Patches on a Diskless Client or Solstice AutoClient from a Server."
6. Boot the diskless client or AutoClient.

## Installing Special Patches on a Diskless Client or Solstice AutoClient from a Server

Some MU2 patches are not automatically installed on systems running the Solaris 7 operating environment. The patch set that is included in the MU2 is complete only for systems running the Solaris 7 3/99 operating environment. If you want to apply MU2 patches to systems running the Solaris 7 operating environment, you will need to apply additional patches.

To determine if these additional patches should be applied to your system, check the `/etc/release` file for the release date by typing:

```
# cat /export/root/client_name/etc/release
```

If your screen displays this version of the Solaris operating environment, you must apply special patches.

```
Solaris 7 s998_21a12b SPARC
Copyright 1998 Sun Microsystems, Inc. All Rights Reserved.
Assembled 06 October 1998
```

If your screen displays January 1999, go back to Step 6 on page 18 in "Installing With install\_mu."

TABLE 2-5 Solaris Release Versions

Date	Version of Operating Environment	Perform the following Task:
October 1998	Solaris 7	Apply additional set of patches in the Special Patch directory
January 1999	Solaris 7 3/99	Do not apply additional patches in the Special Patch directory

1. Change directory to the special patch directory by typing:

- From a local copy of the MU2 image, type:

```
# cd local_directory/Solaris_7_MU2/platform/Patches/special_patches
```

- From the MU2 CD, type:

```
# cd /cdrom/Solaris_7_MU2/platform/Patches/special_patches
```

where *platform* is either **sparc** or **i386**.

2. Install the special patches using the following command accordingly:

- For each client root area:

```
# patchadd -R /export/root/client_root -M . patchlist
```

- For the service area:

```
# patchadd -S Solaris_2.7 -M . patchlist
```

The patches contained in the Special Patch directory for the SPARC platform of the MU2 include:

107612-01	SunOS 5.7	koi8-R -ow hung before dtlogin screen
107616-01	SunOS 5.7	European locale updates
107693-01	SunOS 5.7	l10n_euro message updates for SUNW* is SUNW*os 599
107707-01	SunOS 5.7	WOS Message Updates

The patches contained in the Special Patch directory for the x86 platform of the MU2 include:

107613-01	SunOS 5.7_x86	koi8-R -cde and ow hung before dtlogin screen
107617-01	SunOS 5.7_x86	European locale updates
107694-01	SunOS 5.7_x86	l10n_euro message updates for SUNW*is SUNW*os 599
107708-01	SunOS 5.7_x86	WOS Message Updates

3. Return to Step 6 on page 18 in "Installing With install\_mu" to complete the installation.

## Backing Out With backout\_mu

To back out the Solaris 7 MU2 software on a diskless client or AutoClient from a server using backout\_mu:

1. **Halt the diskless client or AutoClient.**
2. **If you are running the Solaris 7 operating environment on your system and have installed special patches on a diskless client or a Solstice AutoClient, as described in "Installing Special Patches on a Diskless Client or Solstice AutoClient from a Server," then you must back out patches individually, as described in "Backing Out Special Patches on a Diskless Client or Solstice AutoClient from a Server."**
3. **On the server, run the backout\_mu script located in the local product directory, with the client's root directory as the argument.**
  - From a local copy of the MU2 image that corresponds to the client platform, type:

```
# cd local_directory
# ./backout_mu -R /export/root/client_name
```

where *client\_name* is the hostname of the diskless client or AutoClient.

- From the MU2 CD, mount the CD and type:

```
# cd /cdrom/s7_maintenance_update_2_platform
# ./backout_mu -R /export/root/client_name
```

where *platform* is `sparc` or `x86` and *client\_name* is the hostname of the diskless client or AutoClient.

4. Repeat this process for each diskless client or AutoClient being served.
5. If you are running the Solaris 7 operating environment on your system and have installed special patches on a server's service area, as described in "Installing Special Patches on a Diskless Client or Solstice AutoClient from a Server," then you must back out patches individually, as described in "Backing Out Special Patches on a Diskless Client or Solstice AutoClient from a Server."
6. Back out the Solaris 7 MU2 software on the server's service area. From a local copy of the MU2 image that corresponds to the server platform, type:

---

**Note** - If you are backing out the MU2 from a server's service area on a SPARC server that has x86 clients, refer to bug ID 4228999 in "Backout Bugs" on page 35.

---

```
# cd local_directory
# ./backout_mu -S Solaris_2.7
```

---

**Note** - If a service area is shared by the server, you also need to remove the same Maintenance Update patch set from the server's root area. Failure to do so will result in an improperly patched and unstable server.

---

7. Boot the diskless client or AutoClient.

## Backing Out Special Patches on a Diskless Client or Solstice AutoClient from a Server

### For a Client Root Area

1. Type the following command for each patch that you must back out.

```
# patchrm -R /export/root/client_name patch_id
Checking installed packages and patches...
Backing out patch patch_id ...
```

where *patch\_id* is the id of the special patch.

2. Return to Step 3 on page 20 in the “Backing Out With *install\_mu*” section to complete the client backout process.

### For a Server’s Service Area

1. Type the following command for each patch that you must back out.

```
# patchrm -S Solaris_2.7 patch_id
Checking installed packages and patches...
Backing out patch patch_id ...
```

where *patch\_id* is the id of the special patch.

2. Return to Step 6 on page 21 in the “Backing Out With *install\_mu*” section to complete the server’s service area backout process.

---

# Identifying the Version of Your Solaris 7 Maintenance Update

To identify the version of your Solaris 7 MU software, type:

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



## Error Messages

---

The screen messages displayed during the execution of `install_mu` and `backout_mu` do not include all errors that may have occurred. Therefore, verify the results of the installation by looking at the `Maintenance_Update_log` or `MU_Backout_log` file in the `/var/sadm/install_data` directory. Messages recorded in this log file reflect the installation or back out status of each patch and package. Some error message examples follow.

---

**Note** - You will see only the error text when the message appears, not the error code number included here. The error code numbers are included here in case you are writing a script that calls the `install_mu` or `backout_mu` and your script needs to know the return values for the failure conditions.

---

### Error Code 1

```
signal detected.
```

```
install_mu (backout_mu) is terminating.
```

**Explanation and recommended action:** 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 will appear in the log file. Ignore the error messages.

### Error Code 2:

```
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:** The program cannot find the file `/var/sadm/system/admin/INST_RELEASE` in the client's root area. The client

was not created properly or has become corrupted. Back up the client, then remove and recreate it.

**Error Code 3:**

ERROR: Cannot find *\$xcommand* which is required for proper execution of *install\_mu* (*backout\_mu*).

**Explanation and recommended action:** *install\_mu* and *backout\_mu* require a number of system utilities (for example *awk*, *sed*, *grep*) to be present in the server's */usr/bin* and */usr/sbin* directories. One of these utilities is missing. Contact your system administrator for assistance.

**Error Code 4:**

The *-B* and *-d* arguments are mutually exclusive.

**Explanation and recommended action:** The *-d* option requests that no backout data be saved. The *-B* option specifies a directory to store backout data. These two options cannot be used together. Reinvoke *install\_mu* with only one of these options.

**Error Code 5:**

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

**Explanation and recommended action:** 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.

**Error Code 6:**

The *-B* parameter must be a directory. *\$1* is not a directory.

**Explanation and recommended action:** 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.

**Error Code 7:**

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

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

**Error Code 8:**

The *-R* parameter must be a directory. *\$ROOTDIR* is not a directory.

**Explanation and recommended action:** You supplied an option to `-R` that is not a directory. Reinvoke `install_mu` (or `backout_mu`) with a valid path for the `-R` option.

**Error Code 9:**

The `-S` parameter must be a directory. `/export/$1` is not a directory.

**Explanation and recommended action:** `install_mu` and `backout_mu` look in `/export` for the service area you supply to the `-S` option. Currently `Solaris_2.7` is the only valid option to `-S`. The `/export/Solaris_2.7` directory must exist. If it does not, then the service area does not exist. Contact your system administrator for assistance.

**Error Code 10:**

Invalid option.

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

**Error Code 11:**

Can't write to Log File: `$LOGFILE`

**Explanation and recommended action:** `install_mu` and `backout_mu` need to write its log into the `$ROOTDIR/var/sadm/install_data` directory, where `$ROOTDIR` specifies the root directory of your client or server. Check that the `install_data` directory is writable, then reinvoke `install_mu` (or `backout_mu`).

**Error Code 12:**

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

**Explanation and recommended action:** The `/var/sadm/pkg/SUNWcar` directory is missing in the client or server's root area. Your client or server has become corrupted. Contact your system administrator for assistance.

**Error Code 13:**

`install_mu` (`backout_mu`) only supports `sparc` and `i386` architectures. `install_mu` (`backout_mu`) has detected `ARCH=$LPROC`.

**Explanation and recommended action:** You ran `install_mu` (or `backout_mu`) on a system whose architecture is not `SPARC` or `i386`. Reinvoke `install_mu` (or `backout_mu`) on a supported platform.

**Error Code 14:**

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

**Explanation and recommended action:** You provided a path to a patch directory but install\_mu could not find a .order file in that directory, which it needs to determine the correct patch installation order. install\_mu (or backout\_mu) looked in \$path\_you\_specified and in \$path\_you\_specified/MU/\$sarch/Patches, where \$sarch is either "sparc" or "i386." Check for the existence of a .order file and reinvoke install\_mu (or backout\_mu).

#### Error Code 15:

install\_mu cannot locate patch order (.order) file. Paths searched: ./LPROC/Patches, \$MU\_TOP/\$LPROC/Patches, /cdrom/cdrom0/\$LPROC/Patches, ./uPATCHDIR, and ./uPATCHDIR/\$MU\_TOP/\$LPROC/Patches.

**Explanation and recommended action:** 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.

#### Error Code 16:

You must be root to execute this script.

**Explanation and recommended action:** You need root privileges to run install\_mu or backout\_mu since only user root can apply and remove patches. Reinvoke the program as root.

#### Error Code 17:

install\_mu (backout\_mu) can only patch version 2.7 systems. Target system is version \$TrgOSVers.

**Explanation and recommended action:** You asked install\_mu to apply patches to a server or client not running Solaris 7, or you asked backout\_mu to back out patches from a server or client not running Solaris 7; install\_mu and backout\_mu must be run on a Solaris 7 system.

#### Error Code 18:

Directory with patch tools, \$TOOLS DIR, not found.

**Explanation and recommended action:** install\_mu (or backout\_mu) cannot find the Tools directory distributed with the Maintenance Update. If you copied the Maintenance Update distribution to your system, then the copy has probably become corrupted or modified. Reinstall the Maintenance Update distribution.

#### Error Code 19:

`$TOOLS_DIR/patchadd` (or `patchrm`) does not exist or is not executable.

**Explanation and recommended action:** The Maintenance Update distribution comes with its own versions of `patchadd` and `patchrm`. One of these is missing or is not executable. If you copied the Maintenance Update distribution to your system, then the copy has probably become corrupted or modified. Reinstall the Maintenance Update distribution.

**Error Code 20:**

The service area must be `Solaris_2.7`.

**Explanation and recommended action:** The `-S` option supports Solaris 7 service areas. Use a valid Solaris 7 service area by reinvoking `install_mu` (or `backout_mu`) with the argument `Solaris_2.7` to the `-S` option.

**Error Code 21:**

The `-S` and `-R` arguments are mutually exclusive.

**Explanation and recommended action:** If you are applying (or backing out) the Maintenance Update to a diskless client or AutoClient, then you need to invoke `install_mu` (or `backout_mu`) twice, once with the `-R` option to patch (or backout) the client's root area and again with the `-S` option to patch (or backout) the client's service area.

**Error Code 22:**

Not enough disk space to apply entire patch set.

**Explanation and recommended action:** `install_mu` analyzed your system and determined that there was not enough disk space 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.

**Error Code 23:**

Not enough disk space to save patch backout data.

**Explanation and recommended action:** `install_mu` analyzed your system and determined that there was not enough disk space in the back out directory to save patch back out data. Select a back out directory with enough space, as is reported needed, then reinvoke `install_mu`. If you believe that you really have enough disk space in the back out directory reinvoke `install_mu` with the `-f` option.

**Error Code 24:**

Dry run disk space check failed.

**Explanation and recommended action:** `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.

**Error Code 25:**

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

**Explanation and recommended action:** 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 or the other, but not both.

**Error Code 26:**

The `$service_area` service cannot be found on this system.

**Explanation and recommended action:** `install_mu` expected to find the `/export/$service_area/var/sadm/pkg` directory, where `$service_area` is the argument to the `-S` option. The directory was not found. Check that you have a valid service area. Contact your system administrator for assistance.

**Error Code 27:**

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

**Explanation and recommended action:** `backout_mu` requires a file containing a list of patches `install_mu` applied 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.

**Error Code 28:**

The `-T` parameter must be a directory. `$uTOOLDIR` is not a directory.

**Explanation and recommended action:** You supplied an option to `-T` that is not a directory. Reinvoke `backout_mu` with a valid path to the `-T` option.

**Error Code 29:**

`-T` parameter does not point to a directory containing patching tools. Looked in `$uTOOLDIR` and in `$uTOOLDIR/MU/common/Tools`.

**Explanation and recommended action:** `backout_mu` requires the tools `installpatch.fast` and `backoutpatch.fast`. These tools could not be found in the directory specified by the `-T` option. Reinvoke `backout_mu` with a valid path to the `-T` option.

**Error Code 30:**

backout\_mu cannot locate tools directory. Paths searched: ./  
common/Tools, MU/common/Tools, /cdrom/cdrom0/MU/common/Tools

**Explanation and recommended action:** backout\_mu searched unsuccessfully in various directories for the patch tools `installpatch.fast` and `backoutpatch.fast`. Reinvoke backout\_mu with the `-T` option and a path to these tools.



## Known Problems

---

---

### Known Problems in Solaris 7 MU2

This chapter describes known problems relating to the installation and use of the Solaris 7 MU2 software.

#### Installation Bugs

##### `install_mu` Does Not Function Correctly When Starting It Using `sh` 4062334

Because of problems regarding the interactions between `sh(1)` and `ksh(1)`, the `install_mu` utility may fail to install certain patches correctly whenever you start it using the following command from the command line or from an administrative script:

```
# /bin/sh ./install_mu arguments
```

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

```
# ./install_mu arguments
```

## install\_mu Leaves Files in the /tmp Directory 4108278

install\_mu leaves files and working directories in /tmp. The files and directories could cause /tmp to become full, potentially leading to system problems. Files and directories left in /tmp are of the form install\* and SUNW\*.

**Workaround:** After install\_mu has completed execution, check /tmp for files and directories named install\* and SUNW\*. If the files were created recently by root, remove them. Or, if the MU was applied to a stand alone machine or server, reboot the system.

## Patchadd Displays an Error That It Is Terminating

One of the following benign messages may 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 that patchadd could not find on your system any of the packages that it intended to patch, so it skipped the indicated patch.

The message is displayed when patchadd notices a discrepancy installing a patch of one architecture onto a system with a different architecture (for example, a sun4u patch on a sun4c system.)

This may also be the result of one or more packages being missing from the system. The package may have been removed by the administrator, or never installed, as in the case of installing a cluster smaller than the Entire Distribution. This is common with diskless clients and AutoClients.

**Workaround:** Ignore the message.

# Backout Bugs

## Postpatch Script in 106542-04 Incorrectly Removes /devices Entries on a SPARC Server (4228999)

---

**Note** - This condition only applies to SPARC servers that have x86 diskless clients or x86 Solstice AutoClients.

---

The postpatch script included in the MU2 with patch 106542-04 (x86) removes two /devices/pseudo entries from \$ROOTDIR. Deleting these two entries may leave the server in a condition in which /var/utmpx cannot be written to during a subsequent reboot.

**Workaround:** After backing out the MU2 from a SPARC server that has an x86 diskless client or a Solstice AutoClient service area, execute the postpatch script using any -04 or later revision of patch 106541 for the SPARC platform or patch 106542 for the x86 platform to recreate the missing devices entries on the server.

### ▼ Before Rebooting a Server:

1. Copy the postpatch script from the following locations on the MU2 CD to the /tmp directory before you reboot the server:

- SPARC platform:

```
# /cdrom/s7_maintenance_update_2_sparc/Solaris_7_MU2/sparc/Patches  
/106541-04/postpatch
```

- x86 platform:

```
# /cdrom/s7_maintenance_update_2_x86/Solaris_7_MU2/i386/Patches  
/106542-04/postpatch
```

---

**Note** - The script is identical on the SPARC and x86 platforms.

---

2. Edit the postpatch script that you copied by adding the following line at the top of the script before any other commands.

```
ROOTDIR=/
```

3. Execute the postpatch script.

```
# /tmp/postpatch
```

## ▼ If a Server Has Already Been Rebooted:

1. Boot in single user mode from the CD or the network and mount the root filesystem to /a.
2. Copy the postpatch script from the following locations on the MU2 CD to the /a/tmp directory.
3. Edit the postpatch script that you copied by adding the following line at the top of the script before any other commands.

```
ROOTDIR=/a
```

4. Execute the postpatch script.

```
# /a/tmp/postpatch
```

## Solaris 7 Maintenance Update Contents

---

This chapter provides the contents of the Solaris 7 MU2.

For example, the following patch:

106541-01 : SunOS 5.7: kernel update patch

4139770 4140352 4170500 4174167 4179407

lists all parts of a patch where:

- 106541-01: is the patch ID number
- SunOS 5.7: kernel update patch is the synopsis patch description

4139770 4140352 4170500 4174167 4179407 are the identification numbers of the bugs fixed by patch ID 106541-01

---

## SPARC Platform Patch List

106146-05 : SunOS 5.7 M64 Graphics Patch

4147781 4166676 4166564 4167729 4174185 4174287 4174783 4175630 4175668 4175851  
4178198 4182726 4185216 4185486 4189734 4175585 4191155 4191632 4194640 4198192  
4199987 4204624 4205110

106147-01 : SunOS 5.7 VIS/XIL Graphics Patch

4163883 4172620

106541-04 : SunOS 5.7 kernel update patch

4104625 4112730 4115711 4115715 4132290 4136059 4138467 4139770 4140352 4147402  
4143503 4152055 4155392 4159337 4165983 4154939 4167270 4168739 4170410 4170500  
4174167 4174331 4175350 4175558 4176940 4177334 4177496 4178298 4179342 4179407  
4179883 4181570 4182043 4182047 4182227 4182234 4182240 4182970 4184015 4184305

(continued)

4184430 4184852 4184877 4185366 4185742 4186155 4188005 4190083 4190117 4190138  
4190405 4190566 4190796 4190807 4190812 4191544 4192056 4192227 4192420 4192698  
4192639 4193375 4193378 4193379 4193380 4193381 4193383 4193467 4193657 4194789  
4196986 4197418 4197450 4197461 4198134 4198723 4198942 4199606 4199032 4200817  
4201921 4203394 4204046 4210841 4211024 4211033 4211618 4212524 4212620 4212634  
4213705 4214739 4216224 4217122

106733-05 : SunOS 5.7 Create a patch analyzer  
4170691 4175875 4178977 4132282 4186583 4186586 4186587 4186588

106793-02 : SunOS 5.7 ufsdump and ufsrestore patch  
4077276 4132365 4145883 4169853 4184189

106812-04 : SunOS 5.7 ctl print utility patch  
4172142 4173334

106843-01 : OpenWindows 3.6.1 (japanese) fixed OW ws menu bug for sparc  
4177882

106857-04 : SunOS 5.7 European locale updates  
4179837 4175110 4203951 4193529

106879-01 : Power\_Mgmt-SW 7 sys-suspend patch  
4174133

106915-01 : SunOS 5.7 dtmail in zh.GBK can't read 2.5.1 Chinese email by default.  
4182320

106917-01 : SunOS 5.7 when view mails change charset, dtmail dump core.  
4175029

106924-01 : SunOS 5.7 /kernel/drv/isp and /kernel/drv/sparcv9/isp patch  
4166035

106925-01 : SunOS 5.7 /kernel/drv/glm and /kernel/drv/sparcv9/glm patch  
4162302 4176924

106926-03 : SunOS 5.7 sdtudctool, sdtudc\_register and sdtudc\_extract patch  
4199125 4178971 4183926 4178952 4178964 4162315 4176705 4179808 4192450

106934-03 : CDE 1.3 libDtSvc Patch  
4181281 4167347 4191060 1194724

106936-01 : SunOS 5.7 /etc/cron.d/logchecker patch  
4094591

106938-01 : SunOS 5.7 libresolv patch  
4134616

106940-01 : SunOS 5.7 /usr/sbin/makedbm patch  
4144726

106942-01 : SunOS 5.7 libnsl patch

(continued)

- 4157559 4161969
- 106944-01 : SunOS 5.7 /kernel/fs/fifofs and /kernel/fs/sparcv9/fifofs patch  
4166116
- 106946-01 : SunOS 5.7 /usr/sbin/sar patch  
4175435
- 106948-01 : SunOS 5.7 /kernel/drv/qe and /kernel/drv/sparcv9/qe patch  
4154455
- 106949-01 : SunOS 5.7 BCP (binary compatibility) patch  
4169198
- 106950-03 : SunOS 5.7 linker patch  
4159122 4173576 4174468 4176579 4179880 4188527 4188843 4205087
- 106952-01 : SunOS 5.7 /usr/bin/uux patch  
4179980
- 106959-01 : SunOS 5.7 last portion of audio file gets chopped or repeats  
4184851
- 106960-01 : SunOS 5.7 Manual Pages for patchadd.1m and patchrm.1m  
4178212
- 106963-01 : SunOS 5.7 /kernel/drv/esp and /kernel/drv/sparcv9/esp patch  
4176942
- 106967-01 : SunOS Release 5.7 htt server unexpectedly restart  
4172429
- 106969-01 : SunOS 5.7 zh.GBK, Input Method, Alt+1 sometimes can not work properly  
4183054
- 106971-01 : xetops of zh.GBK locale doesn't process TAB character  
4187748
- 106973-01 : SunOS 5.7 Correct translation error.  
4176030
- 106978-06 : SunOS 5.7 fix for sysid  
4166260 1213369 4204782 4205403 4207595 4208607 4211403 4225369
- 106980-04 : SunOS 5.7 libthread patch  
4157739 4173285 4173422 4189981 4207409 4209710 4209713
- 106982-01 : SunOS 5.7 /kernel/drv/fas and /kernel/drv/sparcv9/fas patch  
4172361
- 106985-01 : SunOS 5.7 /usr/sbin/uadmin and /sbin/uadmin patch  
4167438

(continued)

- 106987-02 : SunOS 5.7 /usr/sbin/tar patch  
4118310 4159872
- 106999-01 : SunOS 5.7 /usr/lib/adb/sparcv9/adbsub.o patch  
4164583
- 107001-01 : CDE 1.3 Actions patch  
4157154
- 107003-03 : SunOS 5.7 Updated Lucida Hebrew Fonts for Solaris 7  
4187022
- 107011-01 : CDE 1.3 sdtwebclient patch  
4110777 4164680 4185288
- 107014-01 : XIL 1.4 Deskset Loadable Pipeline Libraries  
4177176 4174709
- 107018-01 : SunOS 5.7 /usr/sbin/in.named patch  
4134616
- 107022-02 : CDE 1.3 Calendar Manager patch  
4184188 4117156
- 107031-01 : SunOS 5.7 /usr/ucb/ucblinks patch  
4161576
- 107033-01 : Solaris 7 xetops crashes for BIG5  
4188052
- 107038-01 : SunOS 5.7 apropos/catman/man/whatis patch  
4107178 4154565
- 107042-03 : SunOS 5.7 JFP install/sysadm messages patch  
4217570 4221453
- 107044-01 : SunOS 5.7 Russian and Polish print failure on some printers  
4190105
- 107049-01 : Solaris 7 dtlogin language menu displays wrong info  
4176962
- 107059-01 : SunOS 5.7 /usr/bin/sort and /usr/xpg4/bin/sort patch  
4181185
- 107063-01 : Solaris 7 Thai engine crashes in 64bit mode  
4186151
- 107072-01 : CDE 1.3 Spell Checker patch  
4185079
- 107074-01 : SunOS 5.7 SUNWultratest doesn't support sun4us platform  
4190729

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- 107076-01 : SunOS 5.7 /usr/kernel/drv/vol and /usr/kernel/drv/sparcv9/vol patch  
4181968
- 107081-03 : Motif 1.2.7 Runtime library patch backdrop scale regression  
4159034 4149711 4171291 4170491 4162369 4165677 4171723 4174322 4183749 4186734  
4186826 4128879 4191550 4197157 4197924
- 107094-02 : CDE 1.3 dtterm libDtTerm.so.2 Patch  
4177487 4190065
- 107115-01 : SunOS 5.7 /usr/lib/libprint.so.2 patch  
4179341
- 107117-03 : SunOS 5.7 libbsm patch  
4166626 4167174 4168892 4172111 4172702 4174308 4182072 4187811 4188193 4194454  
4196408 4196541
- 107119-04 : SunOS 5.7 JFP manpages patch  
4185342 4190255 4195644 4199110 4222912
- 107121-01 : SunOS 5.7 uata and dad driver patch  
4179264 4186223
- 107124-02 : SunOS 5.7 JFP message files patch  
4195663 4216216
- 107127-02 : SunOS 5.7 /usr/lib/autofs/automountd patch  
4188020
- 107136-01 : Solaris 7 Fixed Dtmal Shortcuts to be consistent with English  
4181490
- 107138-01 : Solaris 7 Fixed SUNW5ttf package to display ps files  
4178539
- 107147-03 : SunOS 5.7 pci driver patch  
4170981 4177530 4180438 4205258 4205298 4224713
- 107148-03 : SunOS 5.7 /kernel/fs/cachefs and /kernel/fs/sparcv9/cachefs patch  
4170190 4170376 4171181
- 107171-02 : SunOS 5.7 Fixes for patchadd and patchrm  
4186941 4176890 4190866 4150762 4193454 4194281 4194308 4224092
- 107178-01 : CDE 1.3 libDtHelp.so.1 patch  
4193245
- 107180-04 : CDE 1.3 dtlogin patch  
4178402 4178408 4178415 4178431 4184874 4189472 4190072 4190214 4201306 4205939  
4198977
- 107185-01 : SunOS 5.7 Miscellaneous Russian KOI8-R problems

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4195697 4189003 4194495

107187-01 : SunOS 5.7 Miscellaneous Eastern European locale problems  
4174452 4179411 4138017

107200-03 : CDE 1.3 dtmail patch  
4190570 4201459 4191180

107209-03 : Solaris 7 WOS Message Updates

107219-01 : CDE 1.3 dtprintinfo patch  
4007233 4191060 4191065

107226-03 : CDE 1.3 dtwm patch  
4169837 4209745 4212855

107233-01 : OpenWindows 3.6.1 xterm patch  
4184297

107248-01 : CDE 1.3 sdtaudio patch  
4189907

107250-02 : OpenWindows 3.6.1 libsv8.so.1 Patch  
4194602

107259-01 : SunOS 5.7 /usr/sbin/vold patch  
4194660

107285-01 : SunOS 5.7 passwd & pam\_unix.so.1 patch  
4172457

107292-01 : SunOS 5.7 ifp driver patch  
4185774

107293-01 : SunOS 5.7 libgss.so.1 and gsscred patch  
4195223

107306-01 : CDE 1.3 dtfile patch  
1194724 4195992 4185042

107316-01 : SunOS 5.7 localeconv() returns wrong results for French  
4192615

107318-04 : SunOS 5.7 Manual Pages for Solaris 7 update 2  
4166583 4214692 4214697 4167270 4169315 4180075 4193614 4189427 4173822 4186746  
1070678 4136939 4153439 4162004 4171658 4170933 4169829 4146611 4147612 4165502  
4166848 4178133 4179296 4181039 4181145

107330-01 : SunOS 5.7 /usr/sbin/ntpdate patch  
4201436

107359-01 : SunOS 5.7 BCP (binary compatibility) patch

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4198681

- 107401-01 : SunOS 5.7 /usr/bin/iostat patch  
4085790
- 107403-01 : SunOS 5.7 rlmmod & telmod patch  
4204044
- 107409-01 : Solaris 7 dtfile Menu is localized  
4181159
- 107413-01 : Solaris 7 Fix Translation "Incomplete last line" in vi for zh/zh.GBK  
4202972
- 107415-01 : Solaris 7 Result of TAB in xetops of zh.GBK isn't the same with vi  
4202006
- 107419-01 : Solaris 7 missing snapshot files  
4181454
- 107430-01 : SunOS 5.7 Installer utility used by NCR breaks under Solaris 7  
4205603
- 107437-02 : Solaris 7 support IBM Cp837 and Cp874 iconv modules(th\_TH)  
4212930
- 107438-01 : SunOS 5.7 iso8859-15 locale copy and paste fix  
4203951
- 107441-01 : SunOS 5.7 /usr/bin/mailx patch  
4207629
- 107443-03 : SunOS 5.7 packaging utilities patch  
4155622 4176616 4197238 4199317 4222097 4226928
- 107445-01 : SunOS 5.7 SEA SNMP patch  
4144431 4166235 4171108 4172607 4176076 4178419
- 107448-01 : SunOS 5.7 /usr/lib/fs/cachefs/cachefsd patch  
4204223
- 107450-01 : SunOS 5.7 /platform/SUNW,Ultra-Enterprise-10000/lib/cvcd patch  
4198962
- 107451-01 : SunOS 5.7 /usr/sbin/cron patch  
4196408
- 107453-01 : SunOS 5.7 Ultra-80 platform patch  
4210707
- 107454-01 : SunOS 5.7 /usr/bin/ftp patch  
4138598

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- 107456-01 : SunOS 5.7 /etc/nsswitch.dns patch  
1194875
- 107458-01 : SunOS 5.7 sd & ssd drivers patch  
4169315 4169319 4196836
- 107459-01 : SunOS 5.7 qec driver patch  
4106428
- 107460-01 : SunOS 5.7 st driver patch  
4166568 4166583
- 107462-01 : SunOS 5.7 /kernel/sched/TS patch  
4201921
- 107499-02 : SunOS 5.7 koi8-R -ow hanged before dtlogin screen  
4192535
- 107546-02 : OpenWindows 3.6.1 Ultra 80 Support Patch  
4212493
- 107577-01 : SunOS 5.7 japanese installer utility patch  
4221385
- 107628-01 : SunOS 5.7 sdtwebstart.dt 599 I10n\_euro message updates
- 107691-01 : SunOS 5.7 I10n\_euro message updates for SUNW\*is SUNW\*os 599
- 107700-01 : Solaris 7 Fixes the installation warning for zh.GBK  
4222076

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## Intel Platform Patch List

- 106542-04 : SunOS 5.7\_x86 kernel update patch  
1264344 4104844 4115711 4115715 4122009 4136059 4138467 4139770 4143503 4147402  
4152055 4155392 4163335 4165983 4167270 4168739 4170410 4170500 4170602 4174167  
4174331 4174354 4175558 4176940 4177496 4178298 4179342 4179407 4179883 4181570  
4182043 4182047 4182227 4182234 4182240 4182970 4184015 4184430 4184852 4184877  
4185366 4185742 4186155 4186202 4188005 4188212 4190083 4190138 4190405 4190566  
4190796 4190807 4190812 4190962 4190995 4191544 4192056 4192420 4192639 4193375  
4193378 4193379 4193380 4193381 4193383 4193467 4193657 4194509 4196986 4196994

4196998 4197140 4197418 4197422 4197461 4198134 4198723 4198942 4199032 4199042  
4199606 4200447 4200817 4200972 4201921 4202082 4203157 4204046 4205612 4212524  
4212620 4212634 4214739 4217122

- 106734-05 : SunOS 5.7\_x86 Create a patch analyzer  
4170691 4175875 4178977 4132282 4186583 4186586 4186587 4186588
- 106794-02 : SunOS 5.7\_x86 ufsdump and ufsrestore patch  
4077276 4132365 4145883 4169853 4184189
- 106821-03 : SunOS 5.7\_x86 ctl print utility patch  
4172142 4173334
- 106916-01 : SunOS 5.7\_x86 dtmail in zh.GBK can't read 2.5.1 Chinese email.  
4182320
- 106918-01 : SunOS 5.7\_x86 when view mails change charset, dtmail dump core.  
4175029
- 106927-03 : SunOS 5.7\_x86 sdtudctool, sdtudc\_register and sdtudc\_extract patch  
4199125 4178971 4183926 4178952 4178964 4162315 4176705 4179808 4192450
- 106928-01 : OpenWindows 3.6.1 (japanese) OW ws menu bug for \_x86  
4177882
- 106931-04 : SunOS 5.7\_x86 European locale updates  
4179837 4175110 4193529 4203951
- 106935-03 : CDE 1.3\_x86 libDtSvc Patch  
4181281 4167347 4191060 1194724
- 106937-01 : SunOS 5.7\_x86 /etc/cron.d/logchecker patch  
4094591
- 106939-01 : SunOS 5.7\_x86 libresolv patch  
4134616
- 106941-01 : SunOS 5.7\_x86 /usr/sbin/makedbm patch  
4144726
- 106943-01 : SunOS 5.7\_x86 libnsl patch  
4157559 4161969
- 106945-01 : SunOS 5.7\_x86 /kernel/fs/fifofs patch  
4166116
- 106947-01 : SunOS 5.7\_x86 /usr/sbin/sar patch  
4175435
- 106951-03 : SunOS 5.7\_x86 linker patch  
4159122 4173576 4174468 4176579 4176796 4179880 4188527 4188843 4205087
- 106953-01 : SunOS 5.7\_x86 /usr/bin/uux patch

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- 4179980
- 106961-01 : SunOS 5.7\_x86 Manual Pages for patchadd.1m and patchrm.1m  
4178212
- 106968-01 : SunOS 5.7\_x86 htt server unexpectedly restart  
4172429
- 106970-01 : SunOS 5.7\_x86 zh.GBK, Input Method, Alt+1 sometimes work improperly  
4183054
- 106972-02 : SunOS 5.7\_x86 xetops of zh.GBK locale doesn't process TAB character  
4187748
- 106979-06 : SunOS 5.7\_x86 fix for sysid  
4166260 1213369 4204782 4205403 4207595 4208607 4211403 4225369
- 106981-04 : SunOS 5.7\_x86 libthread patch  
4157739 4173285 4173422 4189981 4207409 4209710 4209713
- 106986-01 : SunOS 5.7\_x86 /usr/sbin/uadmin and /sbin/uadmin patch  
4167438
- 106988-02 : SunOS 5.7\_x86 /usr/sbin/tar patch  
4118310 4159872
- 107002-01 : CDE 1.3\_x86 Actions patch  
4157154
- 107012-01 : CDE 1.3\_x86 sdtwebclient patch  
4110777 4164680 4185288
- 107015-02 : SunOS 5.7\_x86 sd bug fixes.  
4170911 4165914 4170657 4182538 4165905 4171479
- 107016-01 : SunOS 5.7\_x86 NCR pcplusmp patch  
4181438
- 107017-01 : SunOS 5.7\_x86 SPWR Patch  
4155766 4183567
- 107019-01 : SunOS 5.7\_x86 /usr/sbin/in.named patch  
4134616
- 107023-02 : CDE 1.3\_x86 Calendar Manager patch  
4184188 4117156
- 107025-01 : SunOS 5.7\_x86 ata bug fixes.  
4183194
- 107032-01 : SunOS 5.7\_x86 /usr/ucb/ucblinks patch  
4161576

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- 107034-01 : Solaris 7\_x86 xetops crashes for BIG5  
4188052
- 107039-01 : SunOS 5.7\_x86 apropos/catman/man/whatis patch  
4107178 4154565
- 107043-03 : SunOS 5.7\_x86 JFP install/sysadm messages patch  
4217570 4221453
- 107045-01 : SunOS 5.7\_x86 Russian and Polish print failure on some printers  
4190105
- 107050-01 : Solaris 7\_x86 dtlogin language menu displays wrong info  
4176962
- 107060-01 : SunOS 5.7\_x86 /usr/bin/sort and /usr/xpg4/bin/sort patch  
4181185
- 107073-01 : CDE 1.3\_x86 Spell Checker patch  
4185079
- 107075-01 : SunOS 5.7\_x86 SUNWultratest doesn't support sun4us platform  
4190729
- 107077-01 : SunOS 5.7\_x86 /usr/kernel/drv/vol patch  
4181968
- 107082-03 : Motif 1.2.7\_x86 Runtime library patch backdrop scale regression  
4159034 4149711 4171291 4170491 4162369 4165677 4171723 4174322 4183749 4186734  
4186826 4128879 4191550 4197157 4197924
- 107095-02 : CDE 1.3\_x86 dtterm libDtTerm.so.2 Patch  
4177487 4190065
- 107116-01 : SunOS 5.7\_x86 /usr/lib/libprint.so.2 patch  
4179341
- 107118-03 : SunOS 5.7\_x86 libbsm patch  
4166626 4167174 4168892 4172111 4172702 4174308 4182072 4187811 4188193 4194454  
4196408 4196541
- 107120-04 : SunOS 5.7\_x86 JFP manpages patch  
4185342 4190255 4195644 4199110 4222912
- 107125-01 : SunOS 5.7\_x86 JFP message files patch  
4195663
- 107128-01 : SunOS 5.7\_x86 /usr/lib/autofs/automountd patch  
4188020
- 107129-01 : SunOS 5.7\_x86 /usr/sbin/i86/sysdef patch  
4187740

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- 107137-01 : Solaris 7\_x86 Fixed Dtmal Shortcuts to be consistent with English  
4181490
- 107139-01 : Solaris 7\_x86 Fixed SUNW5ttf package to display ps files  
4178539
- 107149-02 : SunOS 5.7\_x86 /kernel/fs/cachefs patch  
4170190 4171181
- 107172-02 : SunOS 5.7\_x86 Fixes for patchadd and patchrm  
4186941 4176890 4190866 4150762 4193454 4194281 4194308 4224092
- 107179-01 : CDE 1.3\_x86 libDtHelp.so.1 patch  
4193245
- 107181-04 : CDE 1.3\_x86 dtlogin patch  
4178402 4178408 4178415 4178431 4184874 4189472 4190072 4190214 4201306 4205939  
4198977
- 107184-02 : SunOS 5.7\_x86 Updated Lucida Hebrew Fonts for Solaris 7  
4187022
- 107188-02 : SunOS 5.7\_x86 Miscellaneous Eastern European locale problems  
4174452 4179411 4138017
- 107201-03 : CDE 1.3\_x86 dtmail patch  
4190570 4201459 4191180
- 107210-03 : Solaris 7\_x86 WOS Message Updates
- 107220-01 : CDE 1.3\_x86 dtprintinfo patch  
4007233 4191060 4191065
- 107227-03 : CDE 1.3\_x86 dtwm patch  
4169837 4209745 4212855
- 107234-01 : OpenWindows 3.6.1\_x86 xterm patch  
4184297
- 107249-01 : CDE 1.3\_x86 sdtaudio patch  
4189907
- 107260-01 : SunOS 5.7\_x86 /usr/sbin/vold patch  
4194660
- 107286-01 : SunOS 5.7\_x86 passwd & pam\_unix.so.1 patch  
4172457
- 107294-01 : SunOS 5.7\_x86 libgss.so.1 and gsscred patch  
4195223
- 107307-01 : CDE 1.3\_x86 dtfile patch

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1194724 4195992 4185042

107317-01 : SunOS 5.7\_x86 localeconv() returns wrong results for French  
4192615

107319-04 : SunOS 5.7\_x86 Manual Pages for Solaris 7 update 2  
4166583 4214692 4214697 4167270 4169315 4180075 4193614 4189427 4173822 4186746  
1070678 4136939 4153439 4162004 4171658 4170933 4169829 4146611 4147612 4165502  
4166848 4178133 4179296 4181039 4181145

107323-01 : SunOS 5.7\_x86 /etc/driver\_aliases patch  
4193228

107331-01 : SunOS 5.7\_x86 /usr/sbin/ntpdate patch  
4201436

107393-02 : SunOS 5.7\_x86 bootconf bug fixes.  
4162292 4173065 4219717 4219988

107402-01 : SunOS 5.7\_x86 /usr/bin/iostat patch  
4085790

107404-01 : SunOS 5.7\_x86 rlmmod & telmod patch  
4204044

107410-01 : Solaris 7\_x86 dtfile Menu is localized  
4181159

107411-02 : Solaris 7\_x86 support IBM Cp837 and Cp874 iconv modules(th\_TH)  
4212930

107414-01 : Solaris 7\_x86 Fix Translation "Incomplete last line" in vi  
4202972

107416-01 : Solaris 7\_x86 Result of TAB in xetops isn't the same with vi  
4202006

107420-01 : Solaris 7\_x86 missing snapshot files  
4181454

107431-01 : SunOS 5.7\_x86 Installer utility used by NCR breaks under Solaris 7  
4205603

107439-01 : SunOS 5.7\_x86 iso8859-15 locale copy and paste fix  
4203951

107442-01 : SunOS 5.7\_x86 /usr/bin/mailx patch  
4207629

107444-03 : SunOS 5.7\_x86 packaging utilities patch  
4155622 4176616 4197238 4199317 4222097 4226928

107446-01 : SunOS 5.7\_x86 SEA SNMP patch

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4144431 4166235 4171108 4172607 4176076 4178419

107447-01 : SunOS 5.7\_x86 /kernel/misc/i2o\_msg patch  
4203495

107449-01 : SunOS 5.7\_x86 /usr/lib/fs/cachefs/cachefsd patch  
4204223

107452-01 : SunOS 5.7\_x86 /usr/sbin/cron patch  
4196408

107455-01 : SunOS 5.7\_x86 /usr/bin/ftp patch  
4138598

107457-01 : SunOS 5.7\_x86 /etc/nsswitch.dns patch  
1194875

107461-01 : SunOS 5.7\_x86 st driver patch  
4166568 4166583

107463-01 : SunOS 5.7\_x86 /kernel/sched/TS patch  
4201921

107500-02 : SunOS 5.7\_x86 koi8-R -cde & ow hanged before dtlogin screen  
4192535

107578-01 : SunOS 5.7\_x86 japanese installer utility patch  
4221385

107629-01 : SunOS 5.7\_x86 sdtwebstart.dt 599 l10n\_euro message updates

107692-01 : SunOS 5.7\_x86 l10n\_euro message updates for SUNW\*is SUNW\*os 599

107701-01 : Solaris 7\_x86 Fixes the installation warning for zh.GBK  
4222076



