

Tru64 UNIX Version 5.0

Patch Summary and Release Notes for Patch Kit-0004

July 2001

This manual contains the release notes and describes the contents of Patch Kit-0004. It provides any special instructions for installing individual patches.

For information about installing or removing patches, baselining, and general patch management, see the *Patch Kit Installation Instructions*.

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About This Manual

This manual contains information specific to Patch Kit-0004 for the Tru64 UNIX Version 5.0 operating system. It provides a list of the patches contained in each kit and provides any information for installing specific patches.

For information about installing or removing patches, baselining, and general patch management, see the *Patch Kit Installation Instructions*.

Audience

This manual is for the person who installs and removes the patch kit and for anyone who manages patches after they are installed.

Organization

This manual is organized as follows:

Chapter 1 Contains the release notes for this patch kit.

Chapter 2 Summarizes the base operating system patches included in the kit.

Related Documentation

In addition to this manual, you should be familiar with the concepts and mechanisms described in the following Tru64 UNIX documents:

- Tru64 UNIX *Patch Kit Installation Instructions*
- Tru64 UNIX *Installation*
- Tru64 UNIX *Administration*
- dupatch(8) Reference Page
- Any release-specific installation documentation

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Release Notes

This chapter provides information that you must be aware of when working with Tru64 UNIX Version 5.0 Patch Kit-0004.

1.1 Patch Process Resources

Compaq provides Web sites to help you with the patching process:

- To obtain the latest patch kit for your operating system and cluster:
<http://ftp1.support.compaq.com/public/unix/>
- To view or print the latest version of the *Patch Kit Installation Instructions* or the *Patch Summary and Release Notes* for a specific patch kit:
<http://www.tru64unix.compaq.com/faqs/publications/patch/>
- To visit Compaq's main support page:
<http://www.compaq.com/support/index.shtml>
- To visit the Tru64 UNIX homepage:
<http://www.tru64unix.compaq.com/>

1.2 Required Storage Space

The following storage space is required to successfully install this patch kit:

Base Operating System

- Temporary Storage Space
A total of ~250 MB of storage space is required to untar this patch kit. It is recommended that this kit not be placed in the `/`, `/usr`, or `/var` file systems because this may unduly constrain the available storage space for the patching activity.
- Permanent Storage Space
Up to ~31 MB of storage space in `/var/adm/patch/backup` may be required for archived original files if you choose to install and revert all patches. See the *Patch Kit Installation Instructions* for more information.
Up to ~32 MB of storage space in `/var/adm/patch` may be required for original files if you choose to install and revert all patches. See *Patch Kit Installation Instructions* for more information.
Up to ~881 KB of storage space is required in `/var/adm/patch/doc` for patch abstract and README documentation.
A total of ~168 KB of storage space is needed in `/usr/sbin/dupatch` for the patch management utility.

1.3 Release Note for Tru64 UNIX Patch 508.00

This patch contains changes to the `rexecd` reference page.

OPTIONS

- s Causes `rexecd` to check for the `ptys` keyword in the `/etc/securettys` file and to deny execution of the request if it is from root and on a pseudoterminal.

DESCRIPTION

6. The rxd server then validates the user as is done at login time and, if started with the -s option, verifies that the /etc/securettys file is not setup to deny the user. If the authentication was successful, rxd changes to the user's home directory, and establishes the user and group protections for the user. If any of these steps fail, the connection is aborted with a diagnostic message returned.

1.4 Release Note for Tru64 UNIX Patches 539.00 and 541.00

This patch delivers version V1.0-032 of the libots3 library. Version 2.0 of the libots3 library is delivered with the Compaq FORTRAN Compiler, Versions 5.3 ECO1 and 5.4, or the Developers Tool Kit (DTK) (OTABASE subset). If libots3 V2.0 is already installed on your system, and you install this patch, you will receive the following informational message:

```
Problem installing:
```

```
- Tru64_UNIX_V4.0G / Software Development Environment Patches:
```

```
Patch 00XXX.00 - Fix for parallel processing support library
```

```
./usr/shlib/libots3.so: is installed by:
```

```
OTABASE212 and can not be replaced by this patch.
```

```
This patch will not be installed.
```

To determine what version of libots3 library is installed on your system, execute the following command:

```
# what /usr/shlib/libots3.so
```

```
libots3.so:
```

```
libots3.a V2.0-094 GEM 27 Feb 2001
```

1.5 Release Note for Patch 479.00

This patch provides information for Patch 479.00.

1.5.1 PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA)

This patch provides the driver support for the PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA) (also known as the ITI6021E Fast Ethernet NIC 3D Video Combination Adapter, InterServer Combo, or JIB). In order to obtain full support for the PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA), you must also select Patch 58.00, which is the X server portion of the patch.

If you have a system with this adapter, you will need to reconfigure and rebuild the kernel after installing this patch. To do this, follow these steps:

1. Shut down the system:

```
# /usr/sbin/shutdown -h now
```
2. Boot genvmunix to single-user mode:

```
>>> boot -fi genvmunix -fl s
```
3. After the system boots to single-user mode, mount the file systems, run the update command, and activate the swap partition:

```
# sbin/bcheckrc
# /sbin/update
```


- ```
/sbin/swapon -a
```
4. Run `doconfig` to create a new kernel configuration file and rebuild the kernel:

```
/usr/sbin/doconfig
```

---

**Note**

---

Do not specify the `-c` option to `doconfig`. If you do, `doconfig` will use the existing kernel configuration file which will not have the appropriate controller entry for the PCI To Ethernet/Graphics Combo Adapter.

---

5. Save the old `/vmunix` file and move the new kernel to `/vmunix`.
6. Shut down the system:

```
/usr/sbin/shutdown -h now
```
7. Boot the new kernel:

```
>>> boot
```

If you remove this patch from your system after you have rebuilt the kernel to incorporate support for the PCI To Ethernet/Graphics Combo Adapter as described previously, you will need to rebuild the kernel again to restore generic VGA graphics support. To do this, follow the steps described previously.

If you run `doconfig` on the original, unpatched `genvmunix`, it will not recognize the PCI To Ethernet/Graphics Combo Adapter and will include generic VGA graphics support in the resulting kernel.

## 1.5.2 DEGPA-TA Gigabit Ethernet Device

This patch provides support for DEGPA-TA (1000BaseT) Gigabit Ethernet device. If you have a system with this new Ethernet device, you will need to reconfigure and rebuild the kernel after installing this patch.

To do this, follow these steps:

1. Shut down the system:

```
/usr/sbin/shutdown -h now
```
2. Boot `genvmunix` to single-user mode:

```
>>> boot -fi genvmunix -fl s
```
3. After the system boots to single-user mode, mount the file systems, run the `update` command, and activate the swap partition:

```
/sbin/bcheckrc
/sbin/update
/sbin/swapon -a
```
4. Run `doconfig` to create a new kernel configuration file and rebuild the kernel:

```
/usr/sbin/doconfig
```

---

**Note**

---

Do not specify the `-c` option to `doconfig`. If you do, `doconfig` will use the existing kernel configuration file which will not have the appropriate controller entry for the new graphics card.

---

5. Save the old `/vmunix` file and move the new kernel to `/vmunix`.

6. Shut down the system:
 

```
/usr/sbin/shutdown -h now
```
7. Boot the new kernel:
 

```
>>> boot
```

If you remove this patch from your system after you have rebuilt the kernel to incorporate support for the new Ethernet card as described previously, you will need to rebuild the kernel. To do this, follow the steps given previously. The `doconfig` running on the original, unpatched `genvmunix` will not recognize the new Ethernet driver.

### 1.5.3 UFS throttle mount Option

A new mount option, `throttle`, has been added in this patch. To activate this new option, update your `/etc/fstab` entries to enable the selected mount option (`throttle`) on the selected UFS filesystems.

For example, change from:

```
/dev/disk/dsk12e /mnt/test ufs rw 0 2
```

to:

```
/dev/disk/dsk12e /mnt/test ufs rw,throttle 0 2
```

Append to `/etc/sysconfigtab` any tuning changes. Refer to the Tuning notes that follow for a description of the new `io-throttle-shift` and `io-throttle-maxmzthruput` tunables. These tunables are configured in the `vfs` stanza. The following three lines make up an example:

```
vfs:
 io-throttle-shift = 1
 io-throttle-maxmzthruput = 1
```

---

#### Note

---

If you already have a `vfs` stanza in your `sysconfigtab` file, then just add the two `io-throttle` entries.

---

When removing this patch, be sure to remove any additions to `/etc/fstab` you may have made (see previous instructions).

Failure to remove `/etc/fstab` modifications may result in unknown attribute messages, particularly upon system reboot.

#### Tuning

The purpose of this patch is to minimize system stalls resulting from a heavy system I/O load.

I/O throttling addresses the concern of locking dirty pages on the device queue. It enforces a limit on the number of delayed I/O requests allowed to be on the device queue at any point in time. This allows the system to be more responsive to any synchronous requests added to the device queue, such as a read or the loading of a new program into memory. This may decrease the duration of process stalls for specific dirty buffers, as pages remain available until placed on the device queue.

The relevant tunable variables are as follows:

```
io-throttle-shift
```

The greater the number of requests on an I/O device queue, the longer the time required to process those requests and make those pages and device available. The

number of concurrent delayed I/O requests on an I/O device queue can be throttled by setting the `io-throttle-shift` tunable. The throttle value is based on this tunable and the calculated I/O completion rate. The throttle value is proportional to the time required to process the I/O device queue.

The correspondences between `io-throttle-shift` values and the time to process the device queue areas follows:

| <code>io-throttle-shift</code> | time to process device queue (sec) |
|--------------------------------|------------------------------------|
| -2                             | 0.25                               |
| -1                             | 0.5                                |
| 0                              | 1                                  |
| 1                              | 2                                  |
| 2                              | 4                                  |

For example, an `io-throttle-shift` value of 0 corresponds to accommodating 1 second of I/O requests. The valid range for this tunable is [-4..4] (not all values are shown in the above table; you can extrapolate). The default value of `io-throttle-shift` is 1. Environments particularly sensitive to delays in accessing the I/O device might consider reducing the `io-throttle-shift` value.

`io-maxmzthruput`

This is a toggle which trades off maximizing I/O throughput against maximizing the availability of dirty pages. Maximizing I/O throughput works more aggressively to keep the device busy, but within the constraints of the throttle. Maximizing the availability of dirty pages is more aggressive at decreasing stall time experienced when waiting for dirty pages.

The environment in which you might consider setting `io-maxmzthruput` to off (0) is one in which I/O is confined to a small number of I/O intensive applications, such that access to a specific set of pages becomes more important for overall performance than does keeping the I/O device busy. The default value of `io-maxmzthruput` is 1. Environments particularly sensitive to delays in accessing sets of frequently used dirty pages might consider setting `io-maxmzthruput` to 0.

`io-throttle-static`

If nonzero, the device queue limit is set to this value and it is not dynamically altered.

#### 1.5.4 UFS delayed mount Option

This new mount option, `delayed`, allows for disabling synchronous metadata writes on a specified filesystem.

To maintain the file system's consistency, UFS metadata (such as inode, directory, and indirect blocks) is updated synchronously by default.

Metadata updates are typically performed synchronously to prevent filesystem corruption after a crash. The trade-off for this filesystem integrity, however, is performance. In some cases, such as a filesystem serving as a cache, performance (faster metadata update) is more important than preserving data consistency across a system crash; for example, files under `/tmp` or web proxy servers such as Squid.

This means two things. One is that multiple updates to one block becomes only one block write, as opposed to multiple writes of the same block with traditional synchronous metadata update. The other is that users can experience much better responsiveness when they run metadata intensive applications because metadata writes will not go out to the disk immediately while users get their prompt back as soon as the metadata updates are queued.

This `delayed` option should not be used on the `/` or `/usr` filesystems. It should be used only on filesystems that do not need to survive across a system crash.

To enable the `delayed` option, run:

```
mount -o delayed
```

or

```
mount -u -o delayed mount -u -o delayed
```

## 1.6 Release Note for Patch 25.00

This patch removes a Granularity Hint Regions (also called GH chunks) restriction which may be encountered on AlphaServer DS20 and ES40 systems running the Tru64 UNIX 5.0 release. This restriction can reduce performance for certain data base applications.

The following error message on the system's console terminal (also logged in `/var/adm/messages`) indicates possible performance loss for applications using GH chunks:

```
gh_chunks value of # invalid
```

where `#` is a number which varies depending on memory size.

To remove the GH chunks restriction you need to modify your target kernel configuration file (and rebuild the kernel) and change the state of a console firmware environment variable. Use the following procedure to make these changes:

1. Follow the steps the *Guide to System Administration*, with the following exceptions:

In step 4, edit the configuration file and add the following line:

```
makeoptions LOADADDR="fffffc0000430000"
```

just before the first line starting with `makeoptions`.

In step 6, instead of `/usr/sbin/shutdown -r now`, add the following:

```
/usr/sbin/shutdown -h now
```

2. Check the console firmware version:

```
P00>>>show version
```

If the version is not V5.5 or later, you need to upgrade your firmware to V5.5 or later.

3. Change the value of the `console_memory_allocation` environment variable from `old` to `new` and reset the system:

```
P00>>>set console_memory_allocation new
```

```
P00>>>init
```

4. Boot the new kernel:

```
P00>>>boot
```

In the unlikely event the new kernel fails to boot:

```
P00>>>set console_memory_allocation old
```

```
P00>>>init
```

```
P00>>>boot -fi vmunix.save
```

or:

```
P00>>>boot -fi genvmunix
```

Correct the error and repeat the above procedure.

#### Additional Information

- If you encounter the following error message, you have most likely attempted to boot a kernel with the old load address:

```
Bootstrap address collision, image loading aborted
```

To boot old kernels:

```
P00>>>set console_memory_allocation old
```

```
P00>>>init
```

```
P00>>>boot
```

---

#### Note

---

The generic kernel (`/genvmunix`) will boot with `console_memory_allocation` set to `old` or `new`.

---

- The patch kit installs a new `/usr/sbin/sizer` command. If you rebuild the kernel using section 4.5.1 or 4.5.2 of the *Guide to System Administration*, the new `sizer` will automatically adjust the kernel's load address.

---

#### Note

---

If you customized your existing configuration file, `doconfig` allows you to edit the new configuration file so you can restore your customizations.

---

## 1.7 Release Note for Patch 275.00

For more information about the functionality provided and special installation instructions related to Patch 275.00, please refer to the online README file located at:

<http://www.service.digital.com/patches/>

From this URL directory, click on the link that has the name:

`t64v50wlseco2.README`

---

#### Note

---

It may be necessary to navigate additional directories below this top-level URL to find the specific README file related to this patch.

---

## 1.8 Release Note for Patches 335.00 and 337.00

This release notes contains the new reference page for `ttauth`.

NAME

`ttauth` - ToolTalk authority file utility

SYNOPSIS

```
ttauth [[-f] | [authfile]] [[-vqib]] [[command arg ...]]
```

DESCRIPTION

The `ttauth` program is used to edit and display the authorization information used in connecting to ToolTalk. This program is usually used to extract authorization records from one machine and merge them in on

another (as is the case when using remote logins or granting access to other users). Commands (described below) may be entered interactively, on the ttauth command line, or in scripts. Note that this program does not contact the ToolTalk server, tsession. Normally ttauth is not used to create the authority file entry in the first place; tsession does that.

## OPTIONS

The following options may be used with ttauth. They may be given individually or may be combined.

- f authfile  
This option specifies the name of the authority file to use. By default, ttauth uses the file specified by the TTAUTHORITY environment variable or the .TTauthority file in the user's home directory.
- q This option indicates that ttauth should operate quietly and not print unsolicited status messages. This is the default if an ttauth command is given on the command line or if the standard output is not directed to a terminal.
- v This option indicates that ttauth should operate verbosely and print status messages indicating the results of various operations (for example, how many records have been read in or written out). This is the default if ttauth is reading commands from its standard input and its standard output is directed to a terminal.
- i This option indicates that ttauth should ignore any authority file locks. Normally, ttauth refuses to read or edit any authority files that have been locked by other programs (usually tsession or another ttauth).
- b This option indicates that ttauth should attempt to break any authority file locks before proceeding. Use this option only to clean up stale locks.

## COMMANDS

The following commands may be used to manipulate authority files:

add protoname protodata netid authname authdata  
An authorization entry for the indicated ToolTalk session using the given protocol name (protoname), protocol data (protodata), ToolTalk session id (netid), authentication name (authname), and authentication data (authdata) is added to the authorization file. The protocol name should always be the string "TT". The protocol data should always be the empty string. The ToolTalk session ID is formatted string consisting of the tsession program number, the tsession authorization level, the IP address of the host running tsession, and the RPC version number of the tsession. See the TTSESSION IDENTIFIERS section below for information on constructing ToolTalk session ID's for the authority file. The authentication name should always be the string "MIT-MAGIC-COOKIE-1". The authentication data is specified as an even-lengthed string of hexadecimal digits, each pair representing one octet. The first digit of each pair gives the most significant 4 bits of the octet, and the second digit of the pair gives the least significant 4 bits. For example, a 32 character hexkey would represent a 128-bit value.

[n]extract filename  
Authorization entries which match the specified fields are written to the indicated file. If the nextract command is used, the entries are written in a numeric format suitable for non-binary transmission (such as secure electronic mail). The extracted entries can be read back in using the merge and nmerge commands. If the file name consists of just a single dash, the entries will be written to the standard output.

- [n]list  
 Authorization entries which match the specified fields (or all if nothing is specified) are printed on the standard output. If the nlist command is used, entries are shown in the numeric format used by the nextract command; otherwise, they are shown in a textual format. Key data is always displayed in the hexadecimal format given in the description of the add command.
- [n]merge [filename1 ...]  
 Authorization entries are read from the specified files and are merged into the authorization database, superseding any matching existing entries. If the nmerge command is used, the numeric format given in the description of the extract command is used. If a file name consists of just a single dash, the standard input will be read if it hasn't been read before.
- remove  
 Authorization entries which match the specified fields are removed from the authority file.
- source filename  
 The specified file is treated as a script containing ttauth commands to execute. Blank lines and lines beginning with a pound sign (#) are ignored. A single dash may be used to indicate the standard input, if it has not already been read.
- info  
 Information describing the authorization file, whether or not any changes have been made, and from where ttauth commands are being read is printed on the standard output.
- exit  
 If any modifications have been made, the authority file is written out (if allowed), and the program exits. An end of file is treated as an implicit exit command.
- quit  
 The program exits, ignoring any modifications. This may also be accomplished by pressing the interrupt character.
- help [string]  
 A description of all commands that begin with the given string (or all commands if no string is given) is printed on the standard output.
- ?  
 A short list of the valid commands is printed on the standard output.

## TTSESSION IDENTIFIERS

The ToolTalk session identifiers (netid) in the authority file and used by the add, [n]extract, [n]list, and remove commands are derived from the TT\_SESSION identifier constructed by ttsession at startup. The ttsession rendezvous with clients by writing the TT\_SESSION identifier as a property on the root window or as an environment variable in the client's environment (see ttsession -c). In addition, ttsession creates an entry in the user's authority file. The authority file entry has a netid component which is derived from the TT\_SESSION identifier.

The TT\_SESSION(String) = "01 1433 1342177279 1 1 2002 130.105.9.22 4" identifier is composed of the following elements:

|                                 |                |
|---------------------------------|----------------|
| <Dummy Number>                  | = 01           |
| <ttsession Process Id>          | = 1433         |
| <ttsession Program Number>      | = 1342177279   |
| <DummyNumber>                   | = 1            |
| <ttsession Authorization Level> | = 1            |
| <ttsession UID>                 | = 2002         |
| <Host IP Address>               | = 130.105.9.22 |
| <RPC Version Number>            | = 4            |

The ToolTalk session identifiers (netid) in the authority file are composed of the <ttsession Program Number>, <ttsession Authorization Level>, <Host IP Address>, and <RPC Version Number> fields of the TT\_SESSION identifier as follows:

```
1342177279/1/130.105.9.22/4
```

#### EXAMPLE

The most common use for ttauth is to extract the entry for the current ttsession, copy it to another machine, and merge it into the user's authority file on the remote machine:

```
% xprop -root | grep TT_SESSION
```

```
TT_SESSION(STRING) = "01 1433 1342177279 1 1 2002 130.105.9.22 4"
_SUN_TT_SESSION(STRING) = "01 1433 1342177279 1 1 2002 130.105.9.22 4"
```

```
% ttauth extract - netid=1342177279/1/130.105.9.22/4 | rsh otherhost ttauth
merge -
```

#### ENVIRONMENT

This ttauth program uses the following environment variables:

##### TTAUTHORITY

Gets the name of the authority file to use if the -f option is not used.

#### FILES

##### .TTauthority

Default authority file in the user's home directory if TTAUTHORITY is not defined.

#### RESTRICTIONS

Users that have unsecure networks should take care to use encrypted file transfer mechanisms to copy authorization entries between machines. Similarly, the MIT-MAGIC-COOKIE-1 protocol is not very useful in unsecure environments. Sites that are interested in additional security may need to use encrypted authorization mechanisms such as Kerberos.

Spaces are currently not allowed in the protocol name. Quoting could be added for the truly perverse.

#### SEE ALSO

Commands: ttsession(1)

ToolTalk Reference Manual

The options section of the ttsession manpage should now look like this:

##### -a level

Set the server authentication level. The following level string values are supported:

##### cookie

The sender and receiver must share the same cookie. This means that messages which do not specify a handler "ptype" are delivered even if the cookies do not match. This is the default authorization scheme. For "full security" use the -F option. Refer to the ttauth(1) reference page for more information.

## 1.9 Release Note for Patch 599.00

This patch contains a solution for the following issue:



Compaq has advised owners of DS10, DS10L, ES40 AlphaServers, and XP900 AlphaStations that Compaq has determined in laboratory testing that there is a theoretical possibility that during read and write operations to the floppy disk on these systems, a single byte of data may be inaccurately read or written without notice to the user or system. The potential for this anomaly exists only if floppy disk read or write operations are attempted while there is extremely heavy traffic on these Alpha systems' internal input/output busses.

Although Compaq has observed the anomaly only in laboratory tests designed to create atypical system stresses, including almost constant use of the floppy disk drive, Compaq has informed owners of the remote possibility that the anomaly could occur so that they may take precautions to prevent it.

Compaq recommends that the solution be installed by all DS10, DS10L, ES40 AlphaServers, and XP900 AlphaStation customers.

The solution to this issue is also available as an individual, manually installed patch kit named `floppy_csp_v50.tar.gz`, available from:

<http://ftp1.support.compaq.com/public/unix/v5.0>



## Summary of Base Operating System Patches

This chapter summarizes the base operating system patches included in Patch Kit-0004.

Table 2–1 lists patches that have been updated.

Table 2–2 provides a summary of patches in Patch Kit-0004.

**Table 2–1: Updated Base Operating System Patches**

| Patch IDs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Change Summary             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Patches 490.00, 494.00, 508.00, 510.00, 515.00, 519.00, 523.00, 525.00, 527.00, 529.00, 531.00, 533.00, 537.00, 539.00, 541.00, 543.00, 547.00, 551.00, 556.00, 560.00, 562.00, 564.00, 566.00, 568.00, 572.00, 574.00, 580.00, 584.00, 588.00, 590.00, 593.00,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | New                        |
| Patches 33.00, 401.00, 131.00, 153.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Superseded by Patch 444.00 |
| Patches 43.00, 30.00, 95.00, 70.00, 276.00, 277.00, 278.00, 279.00, 280.00, 282.00, 2.00, 3.00, 6.00, 9.00, 10.00, 13.00, 31.00, 44.00, 47.00, 48.00, 64.00, 80.00, 83.00, 91.00, 93.00, 98.00, 101.00, 108.00, 112.00, 120.00, 127.00, 128.00, 129.00, 65.00, 88.00, 94.00, 97.00, 49.00, 132.00, 114.00, 14.00, 17.00, 74.00, 92.00, 100.00, 103.00, 119.00, 7.00, 139.00, 12.00, 104.00, 96.00, 20.00, 45.00, 51.00, 143.00, 73.00, 5.00, 76.00, 84.00, 113.00, 141.00, 135.00, 4.00, 130.00, 156.00, 157.00, 158.00, 159.00, 160.00, 161.00, 162.00, 163.00, 164.00, 165.00, 166.00, 167.00, 168.00, 169.00, 170.00, 171.00, 172.00, 173.00, 174.00, 175.00, 176.00, 177.00, 178.00, 179.00, 180.00, 181.00, 182.00, 183.00, 184.00, 185.00, 186.00, 187.00, 188.00, 189.00, 190.00, 191.00, 192.00, 193.00, 194.00, 195.00, 196.00, 197.00, 198.00, 199.00, 200.00, 201.00, 202.00, 203.00, 204.00, 205.00, 206.00, 207.00, 208.00, 209.00, 210.00, 211.00, 212.00, 213.00, 214.00, 215.00, 216.00, 217.00, 218.00, 219.00, 220.00, 221.00, 222.00, 223.00, 225.00, 445.00, 446.00, 447.00, 448.00, 449.00, 450.00, 451.00, 452.00, 453.00, 454.00, 455.00, 456.00, 457.00, 458.00, 459.00, 460.00, 461.00, 462.00, 463.00, 464.00, 465.00, 466.00, 467.00, 468.00, 469.00, 470.00, 471.00, 472.00, 473.00, 474.00, 475.00, 476.00, 477.00 | Superseded by Patch 479.00 |
| Patch 321.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Superseded by Patch 481.00 |
| Patches 102.00, 121.00, 236.00, 237.00, 238.00, 239.00, 240.00, 241.00, 242.00, 243.00, 245.00, 482.00, 483.00, 484.00, 485.00, 486.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Superseded by Patch 488.00 |
| Patches 136.00, 252.00, 254.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Superseded by Patch 492.00 |
| Patches 26.00, 495.00, 496.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Superseded by Patch 498.00 |
| Patches 32.00, 270.00, 499.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Superseded by Patch 501.00 |
| Patches 15.00, 23.00, 502.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Superseded by Patch 504.00 |
| Patches 36.00, 58.00, 283.00, 285.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Superseded by Patch 506.00 |
| Patches 1.00, 68.00, 305.00, 511.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Superseded by Patch 513.00 |
| Patches 306.00, 307.00, 308.00, 309.00, 311.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Superseded by Patch 517.00 |
| Patch 54.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Superseded by Patch 521.00 |

**Table 2–1: Updated Base Operating System Patches (cont.)**

|                                                     |                            |
|-----------------------------------------------------|----------------------------|
| Patches 29.00, 90.00, 342.00, 344.00                | Superseded by Patch 535.00 |
| Patch 349.00                                        | Superseded by Patch 545.00 |
| Patch 351.00                                        | Superseded by Patch 549.00 |
| Patches 359.00, 552.00                              | Superseded by Patch 554.00 |
| Patch 39.00                                         | Superseded by Patch 558.00 |
| Patch 385.00                                        | Superseded by Patch 570.00 |
| Patches 11.00, 69.00, 79.00, 392.00, 575.00, 576.00 | Superseded by Patch 578.00 |
| Patch 86.00                                         | Superseded by Patch 582.00 |
| Patches 24.00, 142.00                               | Superseded by Patch 586.00 |
| Patch 591.00                                        | Superseded by Patch 593.00 |
| Patches 72.00, 106.00, 140.00, 432.00               | Superseded by Patch 595.00 |
| Patches 67.00, 105.00, 134.00                       | Superseded by Patch 597.00 |
| Patches 435.00, 437.00                              | Superseded by Patch 599.00 |
| Patch 439.00                                        | Superseded by Patch 601.00 |

**Table 2–2: Summary of Base Operating System Patches**

| Patch IDs                 | Abstract                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patch 16.00<br>OSF500-017 | <p><b>Patch:</b> Fix for stdhosts command</p> <p><b>State:</b> Existing</p> <p>This patch fixes a problem with the stdhosts command when the file processed has lines longer than 256 characters. The following error message is displayed:</p> <p style="padding-left: 40px;">stdhost:malformed line "ignored"</p>                                                        |
| Patch 21.00<br>OSF500-024 | <p><b>Patch:</b> Fix for crontab command</p> <p><b>State:</b> Existing</p> <p>This patch fixes a problem with crontab in which, when root runs crontab -e user, the user's crontab file is edited and saved, but is not re-read by the cron daemon. Instead, root's crontab file is re-read.</p>                                                                           |
| Patch 25.00<br>OSF500-030 | <p><b>Patch:</b> Restriction lifted for AlphaServer DS20 and ES40</p> <p><b>State:</b> Existing</p> <p>This patch removes a Granularity Hint Regions (also called GH chunks) restriction which may be encountered on AlphaServer DS20 and ES40 systems running the Tru64 UNIX 5.0 release. This restriction can reduce performance for certain data base applications.</p> |
| Patch 27.00<br>OSF500-035 | <p><b>Patch:</b> Security (SSRT0583Z)</p> <p><b>State:</b> Existing</p> <p>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</p>                                        |
| Patch 28.00<br>OSF500-034 | <p><b>Patch:</b> Fix for binmail</p> <p><b>State:</b> Existing</p> <p>This patch corrects a problem with binmail which was resulting in partial delivery of mail messages when account quota or disk capacity was reached.</p>                                                                                                                                             |

**Table 2–2: Summary of Base Operating System Patches (cont.)**

|                               |                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patch 37.00<br>OSF500X11-002  | <b>Patch:</b> Fix for segmentation fault on X font server (xfs)<br><b>State:</b> Existing<br>This patch fixes a problem where the X font server (xfs) sometimes failed with a segmentation fault when it received an invalid request.                                                                                |
| Patch 38.00<br>OSF500X11-003  | <b>Patch:</b> Fix for problem in X Display Manager (xdm)<br><b>State:</b> Existing<br>This patch fixes a problem in the X Display Manager (xdm) where XDMCP Indirect queries do not work.                                                                                                                            |
| Patch 40.00<br>OSF500CDE-002  | <b>Patch:</b> Security (SSRT0614U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability. |
| Patch 41.00<br>OSF500CDE-003  | <b>Patch:</b> Security (SSRT0571U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, users may gain unauthorized access. Compaq has corrected this potential vulnerability.                                                                    |
| Patch 42.00<br>OSF500-001     | <b>Patch:</b> rc.config and rc.config.common files may be corrupt<br><b>State:</b> Existing<br>This patch fixes a problem where the rc.config and rc.config.common files can be corrupted if the system takes a non-syncing halt after rcmgr updates these files.                                                    |
| Patch 46.00<br>OSF500-048     | <b>Patch:</b> Fix for simple lock timeout panic<br><b>State:</b> Existing<br>This patch fixes a problem on some AlphaServer GS140/GS60 configurations where a simple lock timeout or TB shoot ack timeout panic may occur.                                                                                           |
| Patch 50.00<br>OSF500CDE-001B | <b>Patch:</b> Fix for dxaccounts static library<br><b>State:</b> Existing<br>This patch fixes a problem where the Account Manager application, dxaccounts, gets a "BadPixmap" error when selecting an account after the View Preferences Display Icons By Name option has been selected.                             |
| Patch 52.00<br>OSF500CDE-005  | <b>Patch:</b> Security (SSRT0615U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability. |
| Patch 56.00<br>OSF500DX-005   | <b>Patch:</b> Fix for Insight Manager configuration tool<br><b>State:</b> Existing<br>The Insight Manager configuration tool now correctly operates on the remote cluster node being configured. Previously, changes would not take affect until Insight Manager was restarted manually on the remote node.          |
| Patch 66.00<br>OSF500-102     | <b>Patch:</b> Fix for unaligned access panic in dli_input<br><b>State:</b> Existing<br>This patch fixes an unaligned access panic in dli_input.                                                                                                                                                                      |

**Table 2–2: Summary of Base Operating System Patches (cont.)**

|                            |                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patch 71.00<br>OSF500-107  | <b>Patch:</b> Corrects a problem with the compress utility<br><b>State:</b> Existing<br>This patch corrects a problem with the (un)compress utility which could result in either an incomplete compressed file and loss of the original uncompressed file, or an incomplete uncompressed file and loss of the original compressed file.                          |
| Patch 75.00<br>OSF500-111  | <b>Patch:</b> NIS client has a different shell listed than server<br><b>State:</b> Existing<br>This patch corrects a problem where an NIS client has a different shell listed for an NIS user than does the server. When the user tried to change their NIS password, the password change failed, but the shell was updated.                                     |
| Patch 82.00<br>OSF500-119  | <b>Patch:</b> Fixes callback on freed CCB panics<br><b>State:</b> Existing<br>This patch fixes callback on freed CCB panics.                                                                                                                                                                                                                                     |
| Patch 87.00<br>OSF500-124  | <b>Patch:</b> In C2 environment imap authentication fails<br><b>State:</b> Existing<br>This patch corrects a problem where, in an enhanced security (C2) environment, imap authentication fails.                                                                                                                                                                 |
| Patch 89.00<br>OSF500-126  | <b>Patch:</b> sendmail core dumps sending 8-bit mime-encoded files<br><b>State:</b> Existing<br>Fixes a problem where sendmail core dumped when trying to send certain 8-bit, mime-encoded files.                                                                                                                                                                |
| Patch 99.00<br>OSF500-032  | <b>Patch:</b> Fix for AS1200 systems with multiple memory cards<br><b>State:</b> Existing<br>This patch fixes a problem where AS1200 systems with more than three pairs of memory cards display the following warning on the console during boot:<br><br>pmap_get_align: Unaligned memory hole found..<br>Please reset the system to clear any previous memlimit |
| Patch 109.00<br>OSF500-060 | <b>Patch:</b> Fix for lex problems<br><b>State:</b> Existing<br>This patch fixes a problem in lex that causes it to generate incorrect tables that result in the lexical analyzer failing to recognize some kinds of regular expressions involving exclusive start states.                                                                                       |
| Patch 111.00<br>OSF500-062 | <b>Patch:</b> Fix for news command<br><b>State:</b> Existing<br>This patch fixes a problem in which the news command fails due to the appending of additional characters to file names in the /usr/news directory.                                                                                                                                               |
| Patch 115.00<br>OSF500-066 | <b>Patch:</b> Fix for rpc.statd hang<br><b>State:</b> Existing<br>This patch fixes a problem where rpc.statd hangs as it tries to notify dead remote systems.                                                                                                                                                                                                    |
| Patch 116.00<br>OSF500-067 | <b>Patch:</b> mailsetup does not complete if hostname ends in zero<br><b>State:</b> Existing<br>This patch fixes a problem of not completing mailsetup if the hostname ends with 0 (zero). The error message produced follows:<br><br>Error creating /var/adm/sendmail/.cf: exiting                                                                              |

**Table 2–2: Summary of Base Operating System Patches (cont.)**

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patch 117.00<br>OSF500-071  | <b>Patch:</b> lprsetup incorrectly sets up certain printers<br><b>State:</b> Existing<br>This patch fixes a problem where the lprsetup command would incorrectly set up certain types of printers, such as the hp1120c, hp4000tn, or hp61.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Patch 123.00<br>OSF500-078  | <b>Patch:</b> Fixes core dump problem with ftp<br><b>State:</b> Existing<br>This patch fixes a core dump problem with ftp(1) when a .netrc file contains an invalid macdef (macro definition).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Patch 124.00<br>OSF500-079  | <b>Patch:</b> Fixes problem with fverify -n flag<br><b>State:</b> Existing<br>This patch fixes a problem with the fverify -n flag creating directories.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Patch 133.00<br>OSF500-088  | <b>Patch:</b> Fixes a problem with the KZPSA driver<br><b>State:</b> Supersedes patches OSF500-072 (118.00), OSF500-080 (125.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the KZPSA driver. A timer is not being canceled causing a panic with the following error message:<br/><br/>xpt_callback: callback on freed CC</li><li>• Fixes a problem in which the system can panic with the following message:<br/><br/>KZPSA PANIC SPO_RET_CARRIER:CARRIER NOT IN USE</li><li>• Fixes a problem with tmv2_notify_cbf messages being logged from KPBSA adapters and creating very large binary.errlog files in a clustered environment.</li></ul> |
| Patch 137.00<br>OSF500-092  | <b>Patch:</b> Corrects a disk write failure<br><b>State:</b> Existing<br>This patch corrects a Disk write failure when using the -swap option and the simple disk on the original disk starts at offset 0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Patch 138.00<br>OSF500-093  | <b>Patch:</b> Fix for ris script<br><b>State:</b> Existing<br>This patch corrects the following problems with the /usr/sbin/ris script: <ul style="list-style-type: none"><li>• It incorrectly queried the user for a gateway to be used to serve a specific client when no gateway was required.</li><li>• It could fail if no default route had been established.</li></ul>                                                                                                                                                                                                                                                                                                                            |
| Patch 149.00<br>OSF500-065B | <b>Patch:</b> Corrects problems in AdvFS property list handling<br><b>State:</b> Existing<br>This patch corrects two problems in AdvFS property list handling: <ul style="list-style-type: none"><li>• Creation of property lists entries in AdvFS filesets with no available mcells will result in kernel memory fault (kmf).</li><li>• The get_proplist_entry function (used to disassemble the property list buffer returned by the getproplist system call) returned an incorrect name length on property list names longer than 127 characters.</li></ul>                                                                                                                                           |
| Patch 151.00<br>OSF500-253  | <b>Patch:</b> Corrects problem in the LAT driver<br><b>State:</b> Existing<br>This patch corrects a problem in the LAT driver which caused improper processing of the ioctl TCSBRK as well as the generation of spurious <BREAK> characters when the libc routine tcdrain() was used.                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 2–2: Summary of Base Operating System Patches (cont.)**

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|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patch 155.00<br>OSF500-224    | <b>Patch:</b> Fixes problem in kernel debugger, kdbx<br><b>State:</b> Supersedes patch OSF500-061 (110.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in the kernel debugger, kdbx, where several commands, particularly list_action and slot, are broken. Other commands such as mount_action and array_action that rely on list_action will also fail.</li><li>• Fixes problems with the kdbx extensions mount and swap. Information about the file system type is incorrect in the mount command. The device name is missing in the swap command.</li></ul>                                                                                                                                                                                                                                                    |
| Patch 229.00<br>OSF500-208A   | <b>Patch:</b> Fix for dbx<br><b>State:</b> Supersedes patches OSF500-214 (226.00), OSF500-221A (227.00)<br>This patch fixes the following problems in dbx: <ul style="list-style-type: none"><li>• Fixes two problems in dbx:<ul style="list-style-type: none"><li>– Dbx stack trace is incomplete.</li><li>– Assignment to a variable would fail after viewing a non-local symbol.</li></ul></li><li>• Fixes a segmentation fault problem with the profiling tool prof. The problem is in library routines that access the line number information in the symbol table, and can affect other commands that look at the symbol table.</li><li>• Fixes a problem with two routines in the libst library, st_obj_open() and st_obj_write(). The ability to change a file permission using these two libst routines is denied if group has write permissions.</li></ul> |
| Patch 231.00<br>OSF500-221B   | <b>Patch:</b> prof -pixie -asm command core dumps<br><b>State:</b> Supersedes patch OSF500-009 (8.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem where prof -pixie -asm would dump core if the executable being profiled contains extremely long symbol names.</li><li>• Fixes a segmentation fault problem with the profiling tool prof. The problem is in library routines that access the line number information in the symbol table, and can affect other commands that look at the symbol table.</li></ul>                                                                                                                                                                                                                                                                                                  |
| Patch 233.00<br>OSF500-208B   | <b>Patch:</b> Fix for libst library<br><b>State:</b> Existing<br>This patch fixes a problem with two routines in the libst library, st_obj_open() and st_obj_write(). The ability to change a file permission using these two libst routines is denied if group has write permissions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Patch 235.00<br>OSF500X11-022 | <b>Patch:</b> Support for Euro character to keymap files<br><b>State:</b> Existing<br>This patch adds support for the Euro character to keymap files.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Patch 247.00<br>OSF500-156B   | <b>Patch:</b> Security (SSRT0636U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Patch 249.00<br>OSF500-258    | <b>Patch:</b> Fix for umount command<br><b>State:</b> Existing<br>This patch prevents "not currently mounted" warning messages from being displayed for file systems that had not been requested to umount.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 251.00<br>OSF500-228 | <b>Patch:</b> Fix for DECEvent Version 3.2<br><b>State:</b> Existing<br>This patch fixes a problem with DECEvent Version 3.2, where the evmshow -d command and the SysMan event viewer will hang when attempting to translate binary error log events.                                                                                                                                                                                                                                                                                                                                                                                          |
| Patch 258.00<br>OSF500-199 | <b>Patch:</b> Fix for grep command<br><b>State:</b> Supersedes patches OSF500-182 (255.00), OSF500-196 (256.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the grep command in which the options -p -v together does not produce any output.</li><li>• Corrects a problem with the fgrep command; when it is used with the -s flag all output is suppressed.</li><li>• Fixes a limitation problem with the grep and fgrep commands. If the line length is too long, grep displays a "wordlist too large" error message, and fgrep displays an "input too long" error message.</li></ul> |
| Patch 261.00<br>OSF500-217 | <b>Patch:</b> Fix for bcreate command<br><b>State:</b> Supersedes patch OSF500-172 (259.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the bcreate command where default restore fails if disklabel is different.</li><li>• Fixes a problem with bcreate not waiting long enough for the next tape to be loaded with some media changers.</li></ul>                                                                                                                                                                                                                                     |
| Patch 263.00<br>OSF500-290 | <b>Patch:</b> showfdmn sometimes core dumps<br><b>State:</b> Supersedes patch OSF500-118 (81.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in which advfs showfdmn would sometimes core dump.</li><li>• Fixes two separate problems with vdf:<ul style="list-style-type: none"><li>– vdf does not run at non-root level.</li><li>– vdf may give incorrect information.</li></ul></li></ul>                                                                                                                                                                                                  |
| Patch 265.00<br>OSF500-200 | <b>Patch:</b> Fix for find command<br><b>State:</b> Existing<br>This patch fixes a problem with the find command. Find fails to show filenames that start with a period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Patch 268.00<br>OSF500-176 | <b>Patch:</b> Fix for ATM atm_cmm_connect API routine<br><b>State:</b> Supersedes patch OSF500-148 (266.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in the ATM atm_cmm_connect API routine when trying to create a VC.</li><li>• Fixes a kernel memory fault when using ATM.</li></ul>                                                                                                                                                                                                                                                                                                    |
| Patch 272.00<br>OSF500-229 | <b>Patch:</b> Fix for incorrect cursor display<br><b>State:</b> Existing<br>This patch fixes a problem where the cursor is displayed incorrectly when the image plane is set to 1 and the mask plane is set to 0.                                                                                                                                                                                                                                                                                                                                                                                                                               |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 275.00<br>OSF500X11-014 | <p><b>Patch:</b> Implements Xlocales definitions</p> <p><b>State:</b> Supersedes patches OSF500X11-008 (62.00), OSF500X11-013 (273.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Implements Xlocales definitions that allow X applications to run under the ISO8859-15 locales. Using ISO8859-15 locales allows users to enter and use newly defined ISO8859-based characters such as the Euro monetary symbol.</li><li>• Provides missing compose definitions when in ISO8859-15 based locales for the scaron, Scaron, zcaron, and Zcaron characters.</li><li>• Fixes a problem where all the LATIN-9 characters except ASCII characters are not drawn in LATIN-9 (ISO8859-15) locale.</li></ul> |
| Patch 288.00<br>OSF500CDE-014 | <p><b>Patch:</b> Fix for dtlogin</p> <p><b>State:</b> Supersedes patch OSF500CDE-013 (286.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem where the Common Desktop Environment (CDE) login daemon, dtlogin, core dumps occasionally when servicing requests from XDMCP clients such as X terminals or PCs running X servers.</li><li>• Fixes a problem with the Common Desktop Environment (CDE) login process where, if you selected the Command Line Login option and logged in, sometimes the CDE login screen would be redisplayed before you had logged out.</li></ul>                                                                                                         |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 299.00<br>OSF500DX-010 | <p><b>Patch:</b> Fixes problem with duplicate user identifier (UID)</p> <p><b>State:</b> Supersedes patches OSF500DX-006 (57.00), OSF500DX-001 (34.00), OSF500DX-002 (35.00), OSF500DX-004 (55.00), OSF500DX-018 (289.00), OSF500DX-013 (290.00), OSF500DX-017 (291.00), OSF500DX-016 (292.00), OSF500DX-009 (293.00), OSF500DX-015 (294.00), OSF500DX-019 (295.00), OSF500DX-008 (296.00), OSF500DX-022 (297.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a situation in which a system running dxaccounts under C2 security mode experiences problems with a core dump when a user attempts to lock a retired user account.</li><li>• Fixes the problem with the useradd, usermod, and userdel commands, removing the last entry of the /etc/passwd file when the last line of the /etc/passwd file does not end with the new line character (\n).</li><li>• Fixes a problem in which the command usermod was not allowing any commas in the comment field when the current GECOS fields are filled.</li><li>• Fixes a problem in which duplicate user identifier (UID) is accepted at a second attempt even if the no duplicate user identifier policy is set.</li><li>• Fixes the following two problems existing in the cli command useradd:<ul style="list-style-type: none"><li>– When running useradd X and useradd Y on the same machine but from separate terminals, two different type of contention error message are displayed.</li><li>– The following commands does not display an error message, which it should, when executed from a NIS client:<br/><br/>usermod (or useradd) -x local=0<br/>groupmod (or groupadd) -x local=0</li></ul></li><li>• Fixes a situation in which a system running ASU experiences dxaccounts crash problem when a user is deleted from PC User view.</li><li>• Fixes the following problems of a dxaccounts application on ASU systems:<ul style="list-style-type: none"><li>– dxaccounts crashes when the root icon is double clicked.</li><li>– The fullname of a new PC account is not mapped to a UNIX user.</li><li>– Erasing a PC account's fields does not work: the values erased remains.</li><li>– The default values of Home Directory, Login Script, and User Profile Path for a PC user are invalid.</li></ul></li><li>• Fixes the problem of enabling to change root's login/uid through cli/dxaccounts utilities.</li><li>• Fixes the problem of not setting c2 security attributes values when useradd/usermod commands with -x account_inactive   account_expiration are executed.</li><li>• Fixes a dxaccounts problem which prevents creating a new user from the PC Users view on a system with ASU installed.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 299.00<br>continued    | <ul style="list-style-type: none"><li>• Fixes the problem of -t flag in useradd and usermod commands' usage.</li><li>• Fixes the problem of incorrect results from the command usermod -G.</li><li>• Fixes a problem where the new home directory for a new user ID is created with the date and time stamp of the /usr/skel directory.</li><li>• Fixes the problem of dxaccounts dialog messages incorrectly displayed when a user is added with no password entry.</li></ul>                                                                 |
| Patch 301.00<br>OSF500-230A  | <b>Patch:</b> Fix for incorrect timestamp display<br><b>State:</b> Existing<br>evmshow and the event viewer display incorrect timestamps for binlog events on some Alpha EV6 systems.                                                                                                                                                                                                                                                                                                                                                          |
| Patch 303.00<br>OSF500-230B  | <b>Patch:</b> Fix for evmshow<br><b>State:</b> Existing<br>evmshow and the event viewer display incorrect timestamps for binlog events on some Alpha EV6 systems.                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 313.00<br>OSF500-174   | <b>Patch:</b> Fix for tftpd problem<br><b>State:</b> Existing<br>This patch fixes a tftpd problem when responding to a broadcast read request and it adds the -b option to control whether to respond to any broadcasts.                                                                                                                                                                                                                                                                                                                       |
| Patch 315.00<br>OSF500-202   | <b>Patch:</b> Fix for restore command<br><b>State:</b> Existing<br>This patch fixes a problem in which the restore command can fail with the following error:<br><br>Cannot malloc space for property list                                                                                                                                                                                                                                                                                                                                     |
| Patch 317.00<br>OSF500-297   | <b>Patch:</b> Fix for collect information tool<br><b>State:</b> Supersedes patch OSF500-114 (77.00)<br>This patch fixes the following two problems with the collect information tool used by the sys_check utility: <ul style="list-style-type: none"><li>• A security hole where a user can become root.</li><li>• collect can not start at boot time due to incorrectly handling SIGHUP signal.</li><li>• Fixes several problems with the collect command and adds sysloging when collect suspends, resumes, or receives a signal.</li></ul> |
| Patch 319.00<br>OSF500DX-007 | <b>Patch:</b> Problem when Sysman processes NFS configuration<br><b>State:</b> Existing<br>This patch fixes problems that occur when Sysman processes NFS configuration parameters in the /etc/rc.config files.                                                                                                                                                                                                                                                                                                                                |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 323.00<br>OSF500X11-025A | <b>Patch:</b> Fix for toggle button problem<br><b>State:</b> Supersedes patches OSF500X11-005A (59.00), OSF500X11-009A (63.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the toggle button where if a display is closed and reopened then the X Server may generate an "Invalid Pixmap Error".</li><li>• Fixes a problem with the Motif libraries where sometimes widgets or windows were created with the wrong size (XmNwidth and XmNheight were very small).</li><li>• Fixes various memory leaks in the Motif library (libXm) that could occur when creating and destroying Motif List, Text, and TextField widgets.</li></ul>             |
| Patch 325.00<br>OSF500X11-025B | <b>Patch:</b> X server generates Invalid Pixmap Error<br><b>State:</b> Supersedes patches OSF500X11-005B (145.00), OSF500X11-009B (147.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the toggle button where if a display is closed and reopened then the X Server may generate an "Invalid Pixmap Error".</li><li>• Fixes a problem with the Motif libraries where sometimes widgets or windows were created with the wrong size (XmNwidth and XmNheight were very small).</li><li>• Fixes various memory leaks in the Motif library (libXm) that could occur when creating and destroying Motif List, Text, and TextField widgets.</li></ul> |
| Patch 327.00<br>OSF500CDE-009  | <b>Patch:</b> Adds ISO8859-15 functionality to Xresource file<br><b>State:</b> Supersedes patch OSF500CDE-006 (53.00)<br>This patch adds the ISO8859-15 functionality to the main Xresource file on the system and to the specific dtlogin resource file. With these changes, X applications to have ISO8859-15 locale support integrated directly into the application. This patch adds Catalan (ISO8859-15) to the list of languages from which users can choose when logging in. The additional item identifies the Catalan Latin-9 locale, which supports the Euro currency sign.                                                                                                                   |
| Patch 329.00<br>OSF500-218     | <b>Patch:</b> C shell causes segmentation fault<br><b>State:</b> Supersedes patches OSF500-020 (19.00), OSF500-076 (122.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Corrects how the C shell handles 2-byte characters when running in the Japanese SJIS locale.</li><li>• Fixes a problem in the C shell (csh) in which a segmentation fault will occur when the user defines an environmental variable which exceeds the 2048 character limitation. This limit has been lengthened to 8192 characters.</li><li>• Fixes a C shell problem where multibyte characters may not be displayed properly inside quotes.</li></ul>                                      |
| Patch 331.00<br>OSF500-254     | <b>Patch:</b> Fix for advscan<br><b>State:</b> Existing<br>This patch fixes a problem where advscan -a -g does not display bootable partitions properly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 333.00<br>OSF500-249     | <b>Patch:</b> Fix for salvage command<br><b>State:</b> Existing<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes two infinite loops that could make salvage run forever.</li><li>• salvage could core dump when encountering a deleted property list.</li></ul>                   |
| Patch 335.00<br>OSF500CDE-010A | <b>Patch:</b> Security (SSRT0617U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability. |
| Patch 337.00<br>OSF500CDE-010B | <b>Patch:</b> Security (SSRT0617U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability. |
| Patch 339.00<br>OSF500-282     | <b>Patch:</b> Fix for what command<br><b>State:</b> Existing<br>The what command was unable to process more than one input file at once.                                                                                                                                                                             |
| Patch 341.00<br>OSF500-266     | <b>Patch:</b> Security (SSRT0683U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability. |
| Patch 347.00<br>OSF500-286     | <b>Patch:</b> Fix for mv command<br><b>State:</b> Supersedes patch OSF500-277 (345.00)<br>This patch corrects the problem with the mv(1) command deleting files in the directory when the user moves a directory to itself.                                                                                          |
| Patch 353.00<br>OSF500-189     | <b>Patch:</b> quotactl prototype now meets POSIX standards<br><b>State:</b> Existing<br>This patch changes the quotactl prototype in /usr/include/ufs/quota.h to meet POSIX standards.                                                                                                                               |
| Patch 355.00<br>OSF500-246     | <b>Patch:</b> Fix for encoding problem with audit<br><b>State:</b> Existing<br>This patch fixes a problem where encoding for the SysV Open call audit parameter was incorrect. This could cause a system panic.                                                                                                      |
| Patch 357.00<br>OSF500-168     | <b>Patch:</b> Fixes DE500 interfaces using Micro Linear ML6694F PHY<br><b>State:</b> Existing<br>This patch corrects a problem with some DE500 interfaces that use the Micro Linear ML6694F PHY.                                                                                                                     |
| Patch 361.00<br>OSF500DX-011   | <b>Patch:</b> Fix for CDE setup application<br><b>State:</b> Existing<br>This patch fixes the problem where the CDE setup Application does not come up when invoked from unicode locales if localized setup files do not exist. This patch adds error detection when no localized setup files exist.                 |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 363.00<br>OSF500DX-023  | <b>Patch:</b> Fix for diskconfig<br><b>State:</b> Existing<br>This fixes a problem that was causing diskconfig to issue the error message "can't read tminor: no such variable" upon startup.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Patch 365.00<br>OSF500CDE-011 | <b>Patch:</b> Fix for CDE application manager<br><b>State:</b> Existing<br>This patch fixes a problem where the Common Desktop Environment (CDE) Application Manager did not re-create the list of application groups at login. After customizing the application groups, users would see the old groups instead of the new groups.                                                                                                                                                                                                                                                                                                                                               |
| Patch 367.00<br>OSF500-183    | <b>Patch:</b> Fixes a hang in the shutdown process<br><b>State:</b> Existing<br>This patch fixes a hang in the shutdown process (shutdown now) of a system when a device has flow control switched off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Patch 369.00<br>OSF500-147    | <b>Patch:</b> Fixes various AdvFS problems<br><b>State:</b> Existing<br>This patch fixes the following AdvFS problems: <ul style="list-style-type: none"><li>• The mount_advfs utility will core dump upon a return error of ENODEV from the kernel.</li><li>• When a valid AdvFS domain has a corrupted pointer to a domain volume, a ENODEV error is returned, but is incorrectly reported as an E_ADVFS_NOT_INSTALLED error.</li></ul>                                                                                                                                                                                                                                         |
| Patch 371.00<br>OSF500-146    | <b>Patch:</b> Fix for SCU command<br><b>State:</b> Existing<br>This patch fixes the following problems: <ul style="list-style-type: none"><li>• Processes may hang due to waiting for I/O interrupts.</li><li>• The SCU command set pages pcf will hang a system when ATAPI CDrom device is selected.</li></ul>                                                                                                                                                                                                                                                                                                                                                                   |
| Patch 373.00<br>OSF500-171    | <b>Patch:</b> Fix for comsat daemon core dump problem<br><b>State:</b> Existing<br>This patch fixes a problem where the comsat daemon core dumps each time it receives reports of incoming mail and notifies users who request this service.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Patch 375.00<br>OSF500-213    | <b>Patch:</b> Fix for sort command<br><b>State:</b> Supersedes patches OSF500-023 (22.00), OSF500-122 (85.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in which sort -i a_file &gt;b_file aborts with the message "A line of the input file contains more than 20480 characters" when LANG = da_DK.ISO8859-1.</li><li>• Fixes a problem in which the sort command aborts with the message "A line of the input file contains more than 20480 characters" when running in a Japanese locale.</li><li>• Fixes a problem that sometimes occurs when sorting large data files in a multibyte locales such as Japanese.</li></ul> |
| Patch 377.00<br>OSF500-158    | <b>Patch:</b> UFS disk quotas do not automatically update<br><b>State:</b> Existing<br>This patch fixes a problem where UFS disk quotas are not updating automatically.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 379.00<br>OSF500X11-024A | <b>Patch:</b> Fix for memory leak in the X Toolkit library<br><b>State:</b> Supersedes patch OSF500X11-007A (61.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a memory leak in the X Toolkit library (libXt). This memory leak could be seen by applications that create and destroy many Motif ScrolledWindow widgets.</li><li>• Fixes a memory leak in the X Window System's X Toolkit library (Xt) that could occur when creating and destroying Motif List, Text, and TextField widgets.</li></ul>                                                            |
| Patch 381.00<br>OSF500X11-024B | <b>Patch:</b> Fix for memory leak in the X Toolkit library<br><b>State:</b> Supersedes patch OSF500X11-007A (61.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a memory leak in the X Toolkit library (libXt). This memory leak could be seen by applications that create and destroy many Motif ScrolledWindow widgets.</li><li>• Fixes a memory leak in the X Window System's X Toolkit library (Xt) that could occur when creating and destroying Motif List, Text, and TextField widgets.</li></ul>                                                            |
| Patch 383.00<br>OSF500-247     | <b>Patch:</b> Fix for snmpd<br><b>State:</b> Existing<br>This patch fixes a problem where snmpd sends SNMPv1 trap messages with an internal address field ==0.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 388.00<br>OSF500X11-015  | <b>Patch:</b> Fix for libDXm.so svn widget<br><b>State:</b> Supersedes patch OSF500X11-011A (386.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in which the svn widget of libDXm.so creates identical backgrounds and foregrounds.</li><li>• Fixes a problem where the acl settings are lost when they are changed by using the GUI dxsetacl command.</li></ul>                                                                                                                                                                                         |
| Patch 390.00<br>OSF500X11-011B | <b>Patch:</b> libDXm static library fix<br><b>State:</b> Existing<br>This patch fixes a problem in which the svn widget of libDXm.so creates identical backgrounds and foregrounds.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Patch 394.00<br>OSF500-141     | <b>Patch:</b> Fix for defragment program<br><b>State:</b> Supersedes patch OSF500-081 (126.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes the defragment program to properly report on extremely large (&gt;4.3GB) freespace holes. Previously it would report Free space percentages larger than 100% and would add these large holes to the smallest range (&lt;100K) instead of the largest range (&gt;10M) where they belong.</li><li>• Fixes a problem in which defragment reports incorrect extent counts on files with a large number of extents.</li></ul> |
| Patch 396.00<br>OSF500-244     | <b>Patch:</b> Fix for CPU hang<br><b>State:</b> Existing<br>This patch fixes a kernel panic seen when running Classical IP over the lfa ATM driver. This panic would only occur in lockmode 4. If not in lockmode 4, the symptom would be a CPU hang.                                                                                                                                                                                                                                                                                                                                                       |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 399.00<br>OSF500-178     | <b>Patch:</b> Fix for problem that occurs when creating ATM ELANs<br><b>State:</b> Supersedes patches OSF500-019 (18.00), OSF500-248 (397.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem with the creation of multiple ATM ELANS. When running ATM Lan Emulation, using more than four ATM NetRAIN interfaces can result in recursive calls causing a kernel stack not valid halt.</li><li>• Fixes a problem in which the system may panic with the error message "Unaligned kernel space access from kernel mode" when running ATM ELANs.</li></ul>                     |
| Patch 405.00<br>OSF500X11-012A | <b>Patch:</b> Fix for Xlib memory leaks<br><b>State:</b> Supersedes patches OSF500X11-023A (402.00), OSF500X11-017 (403.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes two memory leaks in the X Window System's X library (Xlib) that can occur when creating and destroying Motif List, Text, and TextField widgets.</li><li>• Fixes a problem in which some 8-bit characters cannot be entered directly from the keyboard when the Caps Lock setting is on.</li><li>• Fixes a problem where font selection in dtterm produces a corrupted output for LATIN-2 locales.</li></ul> |
| Patch 408.00<br>OSF500X11-012B | <b>Patch:</b> Fix for memory leaks<br><b>State:</b> Supersedes patch OSF500X11-023B (406.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes two memory leaks in the X Window System's X library (Xlib) that can occur when creating and destroying Motif List, Text, and TextField widgets.</li><li>• Fixes a problem where font selection in dtterm produces a corrupted output for LATIN-2 locales.</li></ul>                                                                                                                                                                        |
| Patch 410.00<br>OSF500-287     | <b>Patch:</b> Fix for bootlink failure<br><b>State:</b> Existing<br>This patch fixes a problem in which the bootlink can fail on AlphaStations 600, 600A, and 500/400.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Patch 412.00<br>OSF500-212     | <b>Patch:</b> Update for Danish locale<br><b>State:</b> Existing<br>This patch updates the Danish (da_DK.ISO8859-1) locale to use all lowercase month names.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Patch 414.00<br>OSF500-154     | <b>Patch:</b> Security (SSRT0624U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                        |
| Patch 416.00<br>OSF500X11-018  | <b>Patch:</b> Fix for lbxproxy utility<br><b>State:</b> Existing<br>This patch fixes a problem where the X windows lbxproxy utility, which is used to make Low Bandwidth X (LBX) connections to an X server, did not accept local connections.                                                                                                                                                                                                                                                                                                                                                                              |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 418.00<br>OSF500-188     | <b>Patch:</b> Updates lfa ATM driver to V1.0.16<br><b>State:</b> Supersedes patch OSF500-058 (107.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Updates the lfa ATM driver to V1.0.16 and fixes the following two ATM driver problems:<ul style="list-style-type: none"><li>– Fixes a soft hang that can occur when running NFS over ATM.</li><li>– Allows the ATM subsystem to be shut down successfully in the event of a board hang.</li></ul></li><li>• Updates the lfa ATM device driver to V1.0.17 and adds some enhancements as well as a fix for a kernel memory fault seen when either shutting down or restarting the device driver.</li></ul>                                                                                                                                                                                                                                                      |
| Patch 422.00<br>OSF500-136     | <b>Patch:</b> Security (SSRT0642U)<br><b>State:</b> Supersedes patches OSF500-099 (144.00), OSF500-177 (419.00), OSF500-275 (420.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• A potential security vulnerability has been discovered, where under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li><li>• Corrects a “permission denied” error when writing to the /var/tcb/files/dblogs/[logfile] while running pop3d and enhanced security.</li><li>• Fixes a problem for Enhanced Security configurations where the Maximum Login Interval (u_max_login_intvl) field was being ignored for account templates.</li><li>• Corrects a problem of the rsh command displaying a warning message instead of the rsh command output when C2 security is configured.</li></ul> |
| Patch 424.00<br>OSF500DX-020   | <b>Patch:</b> SNMP subagent core dumps at boot up time<br><b>State:</b> Existing<br>This patch fixes a problem that causes Compaq SNMP subagent (cpq_mibs) to coredump at boot-up time or when being reinvoked, which results in invalid display of information on Insight Manager web pages.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Patch 426.00<br>OSF500X11-020A | <b>Patch:</b> Security (SSRT0656U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 428.00<br>OSF500X11-020B | <b>Patch:</b> Security (SSRT0656U)<br><b>State:</b> Existing<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 430.00<br>OSF500-207    | <p><b>Patch:</b> Fixes various problems with om</p> <p><b>State:</b> Supersedes patches OSF500-115 (78.00), OSF500-116B (148.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes various problems with om (/usr/lib/cmplrs/om).</li><li>• Fixes a problem where the linker and om would not properly process a large (multi-GOT) image in the presence of the -om option. This patch also fixes a problem with the linker not properly handling scTlsUndefined symbols.</li><li>• Fixes three errors that are occasionally seen when compiling with the -om switch:<br/><br/>om: fast access range error<br/><br/>om: value(0x1201704de) not in range of GP table<br/><br/>core dumping in the routine reloc_abs()</li></ul> |
| Patch 434.00<br>OSF500CDE-012 | <p><b>Patch:</b> Fix for dtmail problem</p> <p><b>State:</b> Existing</p> <p>This patch fixes a dtmail problem in which a From line with quotes in it incorrectly finds the date of the mail message. This error is displayed on the main screen under the header Date and Time and shows up as Dec. 31 or as a blank field.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Patch 442.00<br>OSF500-267    | <p><b>Patch:</b> crontab jobs run multiple times in same minute</p> <p><b>State:</b> Supersedes patch OSF500-226 (440.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem where some crontab jobs would run multiple times in the same minute.</li><li>• Fixes two cron problems:<ul style="list-style-type: none"><li>– The cron daemon does intensive logging and fills up the disk.</li><li>– Multiple cron daemons continue to run and consume system resources due to the fact that, after a user is deleted from the system, there are still jobs running on the user's behalf.</li></ul></li></ul>                                                                                                          |
| Patch 444.00<br>OSF500-369    | <p><b>Patch:</b> Various fixes for vrestore and vdump commands</p> <p><b>State:</b> Supersedes patches OSF500-044 (33.00), OSF500-273 (401.00), OSF500-086 (131.00), OSF500-220 (153.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• The vdump program would dump core with the following message:<br/><br/>nnnn Resources lost(coredump)</li><li>• Fixes a problem where the vdump command will sometimes store symbolic link files as directories in the vdump archive.</li></ul>                                                                                                                                                                                                                                            |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 444.00<br>continued | <ul style="list-style-type: none"><li>• Fixes the following vrestore problems:<ul style="list-style-type: none"><li>– The command was slow to complete when a partial restore operation was requested.</li><li>– The command failed to ignore extended attribute records for the files which were not requested for a vrestore operation.</li><li>– Fixes problem with vrestore where vrestore fails to restore certain files and directories having ACLs from a compressed vdump saveset, reporting:<br/><br/>vrestore: error setting extended attributes 22</li><li>– A previous patch caused incomplete restores.</li><li>– A warning message is displayed when the path for the first file in a group of hardlinks is created without using original protection codes and property lists.</li><li>– A warning message is displayed and vrestore aborts if it fails to malloc space for a property list.</li><li>– A message which had been inserted at the end of the message file had the wrong message category (could cause messaging confusion).</li><li>– An uninitialized variable in the code that restores property lists could cause malloc failures, memory faults, "error setting extended attributes", and infinite loops using the -l option.</li><li>– Corrupted property list information could cause an infinite loop.</li></ul></li><li>• Fixes the following problems the vdump command:<ul style="list-style-type: none"><li>– Fixes a problem where the vdump command will sometimes store symbolic link files as directories in the vdump archive.</li><li>– Failed to flag compressed extended attributes records that are split across a vdump BLOCK boundary.</li><li>– Overrides the -D option when source path describes a root fileset Note: If you want to backup quota files, you must not use the -D option.</li><li>– Corrects "Rewinding" message to avoid a segfault with Internationalized messages.</li></ul></li><li>• Fixes the following problems with the vrestore command:<ul style="list-style-type: none"><li>– Fails to properly handle extended attributes records in compressed archives. This results in malloc failures, proplist corruption, program abort, program crashes due to segfault or invalid memory access, and the display of the error message "error setting extended attributes".</li><li>– Fails to set extended attributes due to confusion over selective restore of the file or directory associated. Also results in display of error message "error setting extended attributes".</li><li>– Selective restore of hardlinked files is incomplete when they exist in different directories (fails to create directory for second occurrence of file with same inode number).</li><li>– The -Q option is added to vrestore to allow the user to request that the the quota files are ignored (thus avoiding the time it takes to process them).</li></ul></li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>OSF500-350 | <b>Patch:</b> Security (SSRT0700U, SSRT0713U, SSRT0676U, SSRT0675U)<br><b>State:</b> Supersedes patches OSF500-033 (43.00), OSF500-037 (30.00), OSF500-135 (95.00), OSF500-106 (70.00), OSF500-170 (276.00), OSF500-293 (277.00), OSF500-186 (278.00), OSF500-295 (279.00), OSF500-299 (280.00), OSF500-240 (282.00), OSF500-003 (2.00), OSF500-004 (3.00), OSF500-007 (6.00), OSF500-010 (9.00), OSF500-011 (10.00), OSF500-014 (13.00), OSF500-038 (31.00), OSF500-040 (44.00), OSF500-049 (47.00), OSF500-053 (48.00), OSF500-100 (64.00), OSF500-117 (80.00), OSF500-120 (83.00), OSF500-128 (91.00), OSF500-130 (93.00), OSF500-143 (98.00), OSF500-045 (101.00), OSF500-059 (108.00), OSF500-063 (112.00), OSF500-074 (120.00), OSF500-082 (127.00), OSF500-083 (128.00), OSF500-084 (129.00), OSF500-101 (65.00), OSF500-125 (88.00), OSF500-131 (94.00), OSF500-139 (97.00), OSF500-054 (49.00), OSF500-087 (132.00), OSF500-065A (114.00), OSF500-015 (14.00), OSF500-018 (17.00), OSF500-110 (74.00), OSF500-129 (92.00), OSF500-039 (100.00), OSF500-051 (103.00), OSF500-073 (119.00), OSF500-008 (7.00), OSF500-094 (139.00), OSF500-013 (12.00), OSF500-052 (104.00), OSF500-138 (96.00), OSF500-022 (20.00), OSF500-046 (45.00), OSF500-069 (51.00), OSF500-098 (143.00), OSF500-109 (73.00), OSF500-006 (5.00), OSF500-113 (76.00), OSF500-121 (84.00), OSF500-064 (113.00), OSF500-096 (141.00), OSF500-090 (135.00), OSF500-005 (4.00), OSF500-085 (130.00), OSF500-219 (156.00), OSF500-180 (157.00), OSF500-263 (158.00), OSF500-232 (159.00), OSF500-236 (160.00), OSF500-155 (161.00), OSF500-274 (162.00), OSF500-251 (163.00), OSF500-151 (164.00), OSF500-153 (165.00), OSF500-255 (166.00), OSF500-285 (167.00), OSF500-257 (168.00), OSF500-276 (169.00), OSF500-241 (170.00), OSF500-145 (171.00), OSF500-167 (172.00), OSF500-149 (173.00), OSF500-181 (174.00), OSF500-281 (175.00), OSF500-235 (176.00), OSF500-289 (177.00), OSF500-238 (178.00), OSF500-150 (179.00), OSF500-243 (180.00), OSF500-133 (181.00), OSF500-175 (182.00), OSF500-231 (183.00), OSF500-194 (184.00), OSF500-140 (185.00), OSF500-279 (186.00), OSF500-261 (187.00), OSF500-163 (188.00), OSF500-298 (189.00), OSF500-270 (190.00), OSF500-262 (191.00), OSF500-152 (192.00), OSF500-284 (193.00), OSF500-209 (194.00), OSF500-227 (195.00), OSF500-165 (196.00), OSF500-265 (197.00), OSF500-269 (198.00), OSF500-234 (199.00), OSF500-272 (200.00), OSF500-216 (201.00), OSF500-169 (202.00), OSF500-132 (203.00), OSF500-210 (204.00), OSF500-193 (205.00), OSF500-278 (206.00), OSF500-197 (207.00), OSF500-162 (208.00), OSF500-157 (209.00), OSF500-211 (210.00), OSF500-222 (211.00), OSF500-159 (212.00), OSF500-268 (213.00), OSF500-137 (214.00), OSF500-237 (215.00), OSF500-206 (216.00), OSF500-161 (217.00), OSF500-250 (218.00), OSF500-173 (219.00), OSF500-142 (220.00), OSF500-198 (221.00), OSF500-296 (222.00), OSF500-271 (223.00), OSF500-166 (225.00), OSF500-384 (445.00), OSF500-356 (446.00), OSF500-321 (447.00), OSF500-323 (448.00), OSF500-315 (449.00), OSF500-407 (450.00), OSF500-367 (451.00), OSF500-366 (452.00), OSF500-351 (453.00), OSF500-370 (454.00), OSF500-319 (455.00), OSF500-320 (456.00), OSF500-393 (457.00), OSF500-387 (458.00), OSF500-341 (459.00), OSF500-339 (460.00), OSF500-396 (461.00), OSF500-401A (462.00), OSF500-303 (463.00), OSF500-382 (464.00), OSF500-305 (465.00), OSF500-388 (466.00), OSF500-354 (467.00), OSF500-379 (468.00), OSF500-389 (469.00), OSF500-329 (470.00), OSF500-374 (471.00), OSF500-373 (472.00), OSF500-312 (473.00), OSF500-302 (474.00), OSF500-304 (475.00), OSF500-324 (476.00), OSF500-340 (477.00) |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Corrects a problem where a Tru64 UNIX NFS server incorrectly handles &gt; 8K I/O requests.</li><li>• Fixes a system panic with the panic string:<br/><br/>simple_lock: time limit exceeded</li><li>• Provides the graphics driver support for the PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA) (also known as the ITI6021E Fast Ethernet NIC 3D Video Combination Adapter, InterServer Combo, or JIB).</li><li>• Upgrades to the Gigabit ethernet driver Version 1.0.12 to fix various performance problems.</li><li>• Provides the latest driver for the PowerStorm 4D10T (ELSA Gloria Synergy, SN-PBXGK-BB) graphics card and the latest graphics driver for the PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA).</li><li>• Prevents a possible NFS over TCP hang. NFS TCP threads will be blocked in sosbwait() causing the system to appear to be hung.</li><li>• Updates the DE602 ethernet driver to V1.0.5 and fixes the following three driver problems and adds support for the DE602-FA device:<ul style="list-style-type: none"><li>– Transmit Timeout errors following adapter reset or loss of link connection.</li><li>– Kernel memory fault panic on system experiencing many Receive Overrun errors.</li><li>– Multicast addresses not being received by device.</li></ul></li><li>• Provides support for the DEGPA-TA (1000BaseT) Gigabit Ethernet device.</li><li>• Fixes the following DE600/DE602 10/100 Ethernet adapters problems:<ul style="list-style-type: none"><li>– The primary CPU may appear hung on networks where switches send Flow Control Pause frames if they become overloaded.</li><li>– Transmit timeout messages appearing in the console log due to the driver timing out a frame.</li></ul></li><li>• Updates the emx Fiber Channel driver to revision 1.21 which corrects a Data Error that is seen when running with the latest Emulex firmware. This error corrupts data when reading from the disk.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Fixes "simple_lock: time limit exceeded" panics.</li><li>• Fixes a panic in the kernel with the following error message:<br/><br/>simple_lock: time limit exceeded</li><li>• Fixes a problem that causes the Tru64 UNIX Version 5.0 update install procedure to exit with core dumps and /sbin/loader failures on a system.</li><li>• Fixes a problem where applications using the fcntl() system calls may appear to hang.</li><li>• Fixes a "lock hierarchy violation" panic from running the fuser -d command on AdvFS when lockmode is set to 4.</li><li>• Fixes a problem where process accounting data was not written to the accounting file when the accounting file was on an NFS mounted file system.</li><li>• Fixes a system "pause" seen when doing a lot of I/O to UFS filesystems.</li><li>• Fixes system hangs that occur when there are NFS mounted files, the system is actively paging and the NFS server is unavailable.</li><li>• Fixes a "page owner not valid" system panic or a system hang on large memory systems. This can be seen when SSM objects are created and accessed on systems experiencing heavy paging and swapping activity.</li><li>• Fixes an AdvFS problem in which processes may hang but the system will not panic.</li><li>• Fixes problems in the AdvFS file system. The problems included an EBUSY unmount problem and a panic that occurred when executing bs_real_invalidate_pages().</li><li>• Fixes a problem in which unmounting an NFS mounted directory can cause a user process to core dump.</li><li>• Fixes a problem with hangs on AlphaServer ES40 when specifying granularity hints.</li><li>• Fixes a problem where ubc_msync() may not flush out all the pages in the requested range.</li><li>• Fixes a problem involving register corruption.</li><li>• Fixes var adm messages from truncation on larger configurations by raising the default size (4096) of msgbuf_size to 8192.</li><li>• Fixes a problem where systems with Patch Kit-0001 installed would run low on kernel memory after process accounting had been running for a while.</li><li>• Fixes a problem with soclose() that caused permanent looping on exit while aborting pending connections at a TCP/IP listener socket.</li><li>• Fixes a problem that could result in a incorrect scheduling of threads when they were dispatched from the idle state.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Fixes a problem with virtual memory. When running the Oracle database, Oracle can not detach from a shared memory segment.</li><li>• Fixes two separate panics with the following error messages:<br/><br/>vm_page_activate: already active<br/><br/>or<br/><br/>simple_lock: time limit exceeded</li><li>• Fixes a simple_lock: hierarchy violation in sigq_abort() when lockmode is set to 4.</li><li>• Adds the following kernel features:<ul style="list-style-type: none"><li>– Enhanced core path support which allows applications to specify the directory where core files will be generated.</li><li>– XA_FORK exit action support which allows applications to register actions to be performed when a process forks().</li></ul></li><li>• Corrects a problem in which a "device busy" error would be reported; the behavior has been changed to wait for the busy pages to be released.</li><li>• Fixes a problem in the AdvFS system. A panic occurs with the following error message:<br/><br/>lock_read: hierarchy violation</li><li>• Fixes a problem where a single CPU system using AdvFS can hang in cleanup_closed_list().</li><li>• Fixes a problem where several 8K pages in a file on an AdvFS filesystem can incorrectly contain all zeros instead of the data that was written to that portion of the file.</li><li>• Corrects an AdvFS problem involving clone filesets. The read-ahead code was incorrectly passing up opportunities to do read-ahead on clone filesets, resulting in a large performance penalty.</li><li>• Fixes a problem with making a msfs_putpage() call. The length argument may get its upper bits truncated which will result in an incorrect length calculation.</li><li>• Corrects two problems in AdvFS property list handling:<ul style="list-style-type: none"><li>– Creation of property lists entries in AdvFS filesets with no available mcells will result in kernel memory fault (kmf).</li><li>– The get_proplist_entry function (used to disassemble the property list buffer returned by the getproplist system call) returned incorrect name length on property list names longer than 127 characters.</li></ul></li><li>• Corrects a hang of the FDDI interface if the interface is brought down following a read-and-zero-counters request (netstat -z on the FDDI interface, for example).</li><li>• Fixes a kernel memory fault and an SMP race condition with the AltaVista Firewall 98 server on a multi-CPU system.</li><li>• Fixes a problem in which the system may panic with the error message "kernel memory fault".</li><li>• Fixes a system panic:<br/><br/>tcphdr too big</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Provides changes necessary for AV firewall 98 to pass ICSA certification.</li><li>• Fixes a kernel memory fault caused when a network application walked an inpq array.</li><li>• Fixes a problem where RCP commands issued from a Sun Solaris system to Compaq Tru64 UNIX may sometimes fail incorrectly with the error message:<br/><br/>Connection reset by peer</li><li>• Fixes a problem in which the system may panic with the error message:<br/><br/>tcp_output REXMT</li><li>• Fixes a TCP performance problem if the TCP window scale option is turned off when using the HIPPI interface.</li><li>• Fixes a problem with packetfilter applications that use IP packets greater than 8K.</li><li>• Corrects a problem where ICMP redirect packets can modify the default route.</li><li>• This patch involves virtual mac addressing.</li><li>• Fixes a kmf problem when the type of SCSI device dynamically changes.</li><li>• Fixes an error in the SCSI device probe code. On systems with shared bus configurations, heavy I/O loads can cause duplicate device files to be created for the same device.</li><li>• Fixes a hardware management problem that will cause a system hang at boot time (in dsfmgr) whenever a hardware CPU upgrade is performed.</li><li>• Fixes a problem in which the system can panic with a kernel memory fault.</li><li>• Fixes a problem where partitioned AlphaServer 8200/8400 systems return incorrect CPU data for CPUs that are not in the partition.</li><li>• Fixes the following Compaq AlphaServer problems:<ul style="list-style-type: none"><li>– On the ES40 and DS20, nonfatal 680 environment machine checks are being logged as fatal/noncorrectable errors.</li><li>– On the DS20, a fix has been made to the handling of power supply, temperature, and fan events so that they are reported correctly.</li><li>– Provides support for the Compaq AlphaServer DS20E.</li></ul></li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Allows the com1_environment variables to be stored in NVRAM. On a DS10 platform, when resetting console baud rate to anything other than the rate it was running, a system panic occurs at boot.</li><li>• Corrects siginfo codes for floating point and integer overflow exceptions.</li><li>• Fixes single-step support in a debugger, such as Ladebug, for instructions that trap or fault.</li><li>• Fixes a problem where registers might be corrupted with the pre-emption_on/off interfaces.</li><li>• Fixes a problem which could result in unit attention status being missed.</li><li>• Fixes the following Universal Serial Bus (USB) problems:<ul style="list-style-type: none"><li>– The USB mouse no longer functions after resetting the Xserver.</li><li>– System panics may occur in error handling after USB device fails a request.</li><li>– The USB device may not deconfigure properly when unplugged from the bus.</li><li>– Problems that will prevent some USB devices from being configured at boot time.</li><li>– A key on a USB keyboard will continue to repeat after being unplugged.</li><li>– USB keyboards may transmit the incorrect keycode for several keys.</li></ul></li><li>• When booting at times the USB controller number may be -1. This causes doconfig to fail.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Includes UFS delayed metadata mount option that fixes metadata intensive application performance.</li><li>• Fixes a panic in the UFS filesystem which has the following error message:<br/><br/>blkfree: freeing free block</li><li>• Fixes a problem in which operations on NFS files can hang indefinitely.</li><li>• Fixes a problem in which a reboot will fail after hwmgr is used to delete or add devices.</li><li>• Corrects a problem in which the perrmask register on Tsunami systems can be overwritten.</li><li>• Fixes a system hang that can occur during an NFS operation on a system running granularity hints.</li><li>• Addresses a binary compatibility problem seen with four networking system calls: sendmsg, osendmsg, recvmsg, and orecvmsg. In certain cases, executables compiled on other versions of Tru64 UNIX will not work correctly when using these system calls.</li><li>• Corrects a problem with four networking system calls, sendmsg/osendmsg and recvmsg/orecvmsg. Any of these calls may return an unexpectedly large negative value.</li><li>• Fixes the following two filesystem problems:<ul style="list-style-type: none"><li>– In AdvFS, a system panic with the following error message:<br/><br/>panic: bs_logflush_start: cannot write lsn</li><li>– NFS errors are received when doing file I/O on an AdvFS exported file system.</li></ul></li><li>• Fixes a panic in in_pcbfree() when NFS is implemented over TCP.</li><li>• There is a potential for a system panic in routine sbflush() if there is an attempt to flush a socket buffer while it is locked by another thread. This patch corrects this problem.</li><li>• Fixes a problem with AdvFS where all processes are waiting for buffers causing the system to hang.</li><li>• Fixes two panics that have the following error messages:<br/><br/>simple_lock: time limit exceeded<br/><br/>simple_lock: lock already owned by cpu</li><li>• Fixes a problem where, when opening a RAID type device, the ALL_DTYPE_RAID was not being allowed.</li><li>• Fixes a problem in which the system can hang if there is no CPU in slot 0. It also fixes an instruction fault due to a divide by 0.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Fixes a problem where, if the size of the message queue was increased, writers to the queue that were blocked would not wake up for processing.</li><li>• Fixes a problem that causes corruption in the floating point registers whereby the flag fields <code>nxm_fp_owned</code> are overwritten with 0s.</li><li>• Fixes a problem with <code>verify</code>. When <code>verify</code> is run on a brand new domain, NFS warnings are displayed even though no NFS related activity is being done.</li><li>• Fixes a problem in AdvFS. When calling <code>bs_startio</code>, the wrong number of parameters was being used, resulting in a potential slow down of some flushes.</li><li>• Fixes the following two problems in the I/O subsystem:<ul style="list-style-type: none"><li>– Only the first byte of the HSZ serial number is checked.</li><li>– The time allowed for the command timeout on AIT tape drives is increased to from 5 seconds to 5 minutes.</li></ul></li><li>• Fixes a problem in AdvFS. The function <code>bfflush_range()</code> may return success before flushing all the pages it should.</li><li>• Fixes a race condition in the UBC code where a lookup is done on a page being invalidated (freed).</li><li>• Fixes a kernel memory fault in VMAC code <code>if_addnewaddr()</code>.</li><li>• Corrects a problem which could cause the system to spend excessive time in the internet checksum routine, resulting in a degradation of system performance.</li><li>• Fixes a problem with VM page corruption that has the following panic message:<br/><code>vm_pg_alloc: page not free</code></li><li>• Fixes a panic which has the following error message:<br/><code>simple_lock: hierarchy violation</code></li><li>• Fixes "can_replace: slot replacement mismatch" panics which can occur when running multi-threaded applications.</li><li>• Fixes a panic which has the following error message:<br/><code>lock_clear_recursive: recursion not enabled</code></li><li>• Fixes a problem in which metadata buffers are being written asynchronously instead of on a delayed basis.</li><li>• Fixes a problem in AdvFS where <code>v_numoutput</code> is not being decremented, causing AdvFS to hang.</li><li>• Corrects a problem when a network interface is configured using a CIDR bitmask and lies in a certain address range; it could be unreachable by users on the local system and remote systems that choose not to use the routing table but simply transmit on an interface.</li><li>• Fixes a problem in which network daemons, such as NIS and NFS, do not function properly because of mislabeled packets.</li><li>• Fixes a hang or <code>simple_lock_state_violation/simple_lock_fault</code> panic in <code>biodone</code>.</li><li>• Fixes a problem that caused an incorrect <code>bcache</code> size to be returned to the kernel from the HWRPB. This problem occurred on Professional Workstation 900 and 1000 systems and AlphaServer DS10, DS20, DS20E, ES40, GS80, GS160, and GS320 systems.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Prevents a deadlock in NFS over TCP that could occur if the client is not responding properly. The hang will be seen in the NFS TCP threads in rrok3free().</li><li>• This patch fixes a system panic with panic string:<br/><br/>psig: catch not set</li><li>• Fixes a problem where some network-based multimedia applications will cause a kernel memory fault when exiting.</li><li>• Fixes a "lock_terminate: lock held" panic when deleting a process group.</li><li>• Fixes a kernel memory fault caused by either one of the following conditions:<ul style="list-style-type: none"><li>– On EV6 platforms, when the debugger is used to view the OT_DEVMAP object mapping memory in I/O space that is mapped to a user process.</li><li>– When routine pmap_coproc_exit_notify() modifies the pmap's coproc_tbi function to be 0, a null pointer, while it is being checked by routine pmap_remove_all().</li></ul></li><li>• Fixes a problem in AdvFS. A panic occurs with the following error message:<br/><br/>lock_read: hierarchy violation</li><li>• Fixes a problem with AdvFS. An AdvFS domain becomes inaccessible when using the mount -d option.</li><li>• Fixes a problem in AdvFS in which a system that had already domain panicked results in a system panic.</li><li>• Provides support for an increase in the number of binlog records for FRU/config tables to greater than 32K.</li><li>• Corrects several cam device related problems:<ul style="list-style-type: none"><li>– The ddr database entry for HSG80 is now handled correctly by the .mrg file.</li><li>– A kernel memory fault while performing HSZ80 failover has been corrected.</li><li>– The RA3000 (HSZ22) now correctly reports the value for AWRE/ARRE in the error page.</li><li>– Corrects a problem that caused HSG70 or HSG80 pairs to fail to respond to selection when performing a transparent failover from one controller to another. Prior to this patch, the HSG70 or HSG80 pairs were unable to see paths to devices; consequently the devices were declared unreachable.</li></ul></li><li>• Fixes a race condition involving signals and threads that only happens on multiprocessor systems.</li><li>• Fixes a problem in which the POSIX interval timer is not resilient to clock slowdown caused either by NTP or by a backwards change of the clock.</li><li>• Fixes a bug such that, when fuser -k is issued on a dismounted NFS mount point in which some process is running, a hang will occur.</li><li>• Fixes an "unaligned kernel space access from kernel mode" panic when doing a malloc from kmembucket 26, 896 byte bucket. The faulting virtual address will be the lock signature for thread_deallocate().</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li><li>• Fixes a problem in AdvFS where user data may be lost when a clone file is migrated.</li><li>• Fixes a problem where a root user was not allowed to check file access on behalf of a user without completely becoming the user. The functionality is needed by the ASU (Advanced Server for UNIX) product.</li><li>• Fixes a problem in which an application can hang because of an undelivered signal.</li><li>• Fixes a simple_lock time limit exceeded panic due to an SMP race condition in namecache.</li><li>• Fixes a kernel memory fault in u_anon_faultpage() when it access the backing object for the anonymous page.</li><li>• Fixes a problem where the operating system only looks in slot 0 for the primary CPU.</li><li>• Fixes a problem where the hardware manager reports inaccurately the CPU speed.</li><li>• Fixes a problem with AdvFS in which a hang occurs due to a deadlock between bsbuff.state and bmt extent map lock.</li><li>• Fixes a problem in which an invalid error status is returned from the remove_entry system call.</li><li>• Corrects a kernel memory fault caused by hwmgr.</li><li>• Fixes a kernel memory fault seen under certain conditions when setting a thread's priority.</li><li>• Fixes a problem where, in the output of a ps command, the PAGEIN column reports 0 for all processes.</li><li>• Fixes support of converting bootable tape bootstrings to device names and converting device names back to bootable tape bootstrings.</li><li>• Fixes several panics on systems with holes in memory. The error messages are listed below:<br/><br/>panic: put_free_ptepage: invalid pvh state<br/><br/>panic: kernel memory fault<br/>trap: invalid memory read access from kernel mode<br/><br/>panic: not wired<br/>simple_lock: hierarchy violation</li><li>• Fixes a problem in which the SCSI version number was not checked for SCSI-3 device. With this patch, SCSI-2 and SCSI-3 devices are checked.</li><li>• Fixes a panic in in_pcbfree() associated with ASE service failover.</li><li>• Fixes panics and memory corruption in setuid/setgid.</li><li>• Corrects a problem where, under certain unlikely conditions, a b-tree index for a directory could become corrupted.</li><li>• Fixes a problem where the system appears to hang. A child process is holding a lock too long and preventing other processes from doing work.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued | <ul style="list-style-type: none"><li>• Fixes a kernel memory fault and invalid memory ifetch panic which can occur in AlphaServer SC systems running Quadrics' RMS software.</li><li>• Fixes a problem where, under certain circumstances, a Tru64 UNIX system can panic with the string: "lock_write: simple lock owned" in the if_slowtimo() routine.</li><li>• Fixes a problem in UFS. The O_SYNC does not work properly causing the inode update to fail on a synchronous write.</li><li>• Fixes a panic in AdvFS which has the following error message:<br/><br/>panic: Unaligned kernel space access from kernel mode</li><li>• Fixes a problem in which the wrong status was returned from EEROM read.</li><li>• Fixes a "simple_unlock: lock not owned by cpu" panic in the biodone routine.</li><li>• Fixes an issue with lightweight wiring of pages and shared memory regions.</li><li>• A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li><li>• Fixes a "u_anon_free: page busy" panic.</li><li>• Fixes a system hang caused by netisr queue corruption due to a race condition that is primarily encountered by third party drivers and layered products that call schednetisr_nospl().</li><li>• Fixes a panic in AdvFS with the following error message:<br/><br/>cfs_do_pfs_mount: pfs and cfs fsids differ on failover</li><li>• Fixes a lock hierarchy violation in AdvFs.</li><li>• Fixes the corruption of the CAM hardware database when using hwmgr. This typically can result in a kernel memory fault when the database is being written to disk after a hwmgr operation.</li><li>• Fixes inaccuracy problems when using setrlimit/getrlimit with a threaded application.</li><li>• Fixes a problem in which the system call fcntl(fd, F_DUPFD, 15) fails with "too many files" even after fd limits have been increased.</li><li>• Fixes a problem with the driver for Gigabit Ethernet adapters (DEGPA-FA and DEGPA-TA) which prevented its use in a NetRAIN (Redundant Array of Independent Network Adapters) set.</li><li>• This patch modifies AdvFS kernel code and several utilities. AdvFS will no longer panic with the following error:<br/><br/>ADVFS EXCEPTION : panic cpu(0) : bad frag free list<br/><br/>The code is modified so that during frag allocation when AdvFS determines that the frag group header's free list has been corrupted, it stops using it and marks it BAD. It is then removed from the free list so no more allocations can take place and no deallocations are performed. The verify, shfragbf, and vfragpg programs are modified to report BAD frag groups.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 479.00<br>continued   | <ul style="list-style-type: none"><li>• Fixes a problem in AdvFS where a kernel memory fault and an AdvFS assertion failure occurs.</li><li>• Fixes a hang in the UFS filesystem.</li><li>• Updates to an AdvFS file via directIO may not correctly merge the old data and the new data if: 1) the write is to the frag and, 2) the write does not completely overwrite all the old data. This patch fixes that symptom.</li><li>• This patch corrects an AdvFS panic which can occur during a rmfset operation. The panic string:<br/><br/>rbf_delete_int: can't find bf attributes</li><li>• Fixes a kernel memory fault when writing to /proc, while anon_rss_enforce is set to 2.</li><li>• Fixes a problem where threads can hang in x_load_in-mem_xtnt_map().</li><li>• Fixes a potential problem flushing data to disk when using data logging with sparse files.</li><li>• Fixes a problem where the setgid bit of a directory was not being set when created, if its parent directory has the setgid bit set.</li><li>• Fixes a performance problem in AdvFS. Checksum calculation loops were removed to speed up performance.</li><li>• Fixes a problem in which rmvol would hang in a wait state.</li><li>• Fixes a kernel memory fault from ufs_mount().</li><li>• Increases the efficiency of the tcp_timers.</li><li>• Fixes a kernel memory fault panic in anon_getpage(), _ms_free(), and locking issues regarding the vm_kanon hash list. Incorrect locking around the vm_kanon hash list searching and removal could lead to kernel memory faults, simple lock timeouts, or corrupted kernel data.</li><li>• Addresses two problems with the ee driver for DE60x Ethernet cards. These problems affect all Tru64 systems containing ee cards.<ul style="list-style-type: none"><li>– Fixes a race condition where the card could stop receiving packets from the network under rare circumstances.</li><li>– Fixes for the lan_config user options -x and -s.</li></ul></li></ul> |
| Patch 481.00<br>OSF500-401B | <p><b>Patch:</b> Fix for AdvFS panic</p> <p><b>State:</b> Supersedes patch OSF500-192 (321.00)</p> <p>This patch modifies AdvFS kernel code and several utilities. AdvFS will no longer panic with the following error:</p> <p>ADVFS EXCEPTION : panic cpu(0) : bad frag free list</p> <p>The code is modified so that during frag allocation when AdvFS determines that the frag group header's free list has been corrupted, it stops using it and marks it BAD. It is then removed from the free list so no more allocations can take place and no deallocations are performed. The verify, shfragbf, and vfragpg programs are modified to report BAD frag groups.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 488.00<br>OSF500-361 | <p><b>Patch:</b> Security (SSRT0636U, SSRT0689U)</p> <p><b>State:</b> Supersedes patches OSF500-047 (102.00), OSF500-075 (121.00), OSF500-294 (236.00), OSF500-245 (237.00), OSF500-204 (238.00), OSF500-191 (239.00), OSF500-280 (240.00), OSF500-233 (241.00), OSF500-156A (242.00), OSF500-288 (243.00), OSF500-242 (245.00), OSF500-328 (482.00), OSF500-322 (483.00), OSF500-355A (484.00), OSF500-375 (485.00), OSF500-359 (486.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem in which <code>ufs_fsck</code> can get blocked while attempting to flush NFS buffers for a service that has become suspended.</li><li>• Fixes a problem that was causing the <code>csch</code> globbing function to be extremely slow when accessing file information on NFS, AFS, or VMS file systems.</li><li>• Fixes a problem for those applications that assume initial allocations of memory from the C run-time library's <code>malloc()</code> function will return only zero-filled memory.</li><li>• Fixes a problem in <code>libc</code> that affects debugger tracebacks of code containing split procedures.</li><li>• Fixes a problem in <code>libc</code> where <code>gmtime()</code> would return a <code>tm</code> struct containing an incorrect <code>tm_zone</code> abbreviation if previous calls to both <code>gmtime()</code> and <code>localtime()</code> were made.</li><li>• Fixes regressions in the regular expression logic used by <code>grep</code>.</li><li>• Fixes a problem in <code>libc</code> that affects the <code>mktemp</code>, <code>tmpnam</code>, and <code>tempnam</code> functions. The temporary file names that were generated might contain the <code>#</code> character, which violates the file-naming standard and may cause problems if a shell script containing a reference to that filename is generated.</li><li>• Corrects the problem with <code>/usr/bin/login</code> in an NIS environment to better handle group information processing.</li><li>• A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li><li>• This patch fixes a problem where a TZ environment variable setting of ":" yields incorrect (or missing) time zone information after calling <code>tzset()</code> and incorrect error reporting from <code>mktime()</code>.</li><li>• Adds functionality to terminate the resulting string from calls to <code>swprintf()</code>.</li><li>• Corrects a regular expression performance problem in <code>libc</code>.</li><li>• Fixes the declaration of <code>cuserid()</code> in <code>stdio.h</code> and <code>unistd.h</code> so that no conflicts exist when using the C++ compiler.</li><li>• Fixes the problem of optimized programs printing incorrect values for long doubles.</li><li>• Restores correct behavior that existed on pre-V5.0 releases for <code>ecvt()</code> and <code>fcvt()</code>. Floating point exceptions and core dumps no longer occur when denormalized values are passed to <code>ecvt()</code> and <code>fcvt()</code>.</li><li>• Resolves issues with customer applications that experienced floating point exceptions and core dumps when passing denormalized values to <code>ecvt()</code> and <code>fcvt()</code> that subsequently caused INFORMIX databases to crash.</li><li>• Fixes regular expression handling with non-default locale settings.</li></ul> |
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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 490.00<br>OSF500-355B | <b>Patch:</b> Fixes declaration of cuserid<br><b>State:</b> New<br>This patch fixes the declaration of cuserid() in stdio.h and unistd.h so that no conflicts exist when using the C++ compiler.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Patch 492.00<br>OSF500-316  | <b>Patch:</b> Fix for system boot problem when using tape<br><b>State:</b> Supersedes patches OSF500-091 (136.00), OSF500-184 (252.00), OSF500-239 (254.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in which an invalid PCI entry in sysconfigtab can cause the system to be unbootable.</li><li>• Fixes several problems specific to AlphaServer 1200 and AlphaServer 4100 systems:<ul style="list-style-type: none"><li>– The user.log file has the following message:<br/>redundant power supply failure</li><li>– The messages file has the following intermittent messages:<br/>ERROR: i2c_read_temp: environmental monitoring error<br/>ERROR: i2c_read_fail_reg: environmental monitoring error<br/>ERROR: i2c_read_func_reg: environmental monitoring error</li><li>– Systems were shutting themselves down displaying the following message:<br/>System has reached a high temperature condition.<br/>Possible problem source: Clogged air filter or high ambient room temperature</li></ul></li><li>• Provides PCI Resource Management support for the Atalla AXL200 cryptographic accelerator card. It also fixes a problem where genvmunix does not boot on a system with a Atalla AXL200 card installed.</li><li>• Fixes a problem that will cause a system to not boot when the boot device is a tape created by btcreate.</li></ul> |
| Patch 494.00<br>OSF500-308  | <b>Patch:</b> Fix for quotacheck -v command<br><b>State:</b> New<br>This patch fixes a bug where quotacheck -v <filesystem> will report that it has fixed some quotas. If you keep running the command, it will keep reporting the exact same fixes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Patch 498.00<br>OSF500-378  | <b>Patch:</b> Threads hang renaming files on NFS mounted file system<br><b>State:</b> Supersedes patches OSF500-031 (26.00), OSF500-383 (495.00), OSF500-307 (496.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Corrects a problem that can cause an NFS client application to hang, or causes a "lock already owned by thread" panic when lockmode=4.</li><li>• Corrects a problem where a race condition in NFS can result in a kernel memory fault.</li><li>• Corrects a problem where a directory entry may be attempted to be changed to "." and the code checks for this prevents it from happening.</li><li>• Fixes a problem where threads can hang while renaming files on NFS mounted file systems.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 501.00<br>OSF500-310 | <p><b>Patch:</b> tar -F ignores files named err</p> <p><b>State:</b> Supersedes patches OSF500-043 (32.00), OSF500-205 (270.00), OSF500-371 (499.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• The tar/pax program did not always read the last tape record of an archive. This caused confusion for scripts that were reading a series of archives on the no-rewind device.</li><li>• Fixes a cpio hanging problem in the Japanese locales.</li><li>• Corrects pax/tar/cpio to properly extract explicitly specified files. When an archive contained a file with extended attributes and a different file (occurring later in the archive) was specified to be extracted, improper buffer pointer management resulted in the following display (example uses tar):</li></ul> <pre>tar: /dev/nrmt0h : This doesn't look like a tar archive tar: /dev/nrmt0h : Skipping to next file... tar: Memory allocation failed for extended data while reading : Not enough space</pre> <p>The directory option was similarly affected. In this case the information for the specified file was not reported.</p> <ul style="list-style-type: none"><li>• Fixes a problem where the tar -F (Fasttar) option ignores files named err but does not ignore files named errs and directories named SCCS and RCS.</li></ul> |
| Patch 504.00<br>OSF500-372 | <p><b>Patch:</b> ksh problems occur in multi-byte Asian locales</p> <p><b>State:</b> Supersedes patches OSF500-016 (15.00), OSF500-027 (23.00), OSF500-349 (502.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Corrects a problem that may cause ksh to core dump when displaying a large here-document in a ksh script.</li><li>• Fixes a problem in ksh which required 2 SIGTERM signals to be sent to the process when it exec'ed.</li><li>• Fixes a possible handling problem with multibyte character boundary conditions in ksh script processing.</li><li>• Fixes two ksh problems that occur in multi-byte Asian locales.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 506.00<br>OSF500X11-029 | <b>Patch:</b> Fix for PowerStorm 4D10T graphics card<br><b>State:</b> Supersedes patches OSF500X11-001 (36.00), OSF500X11-010 (58.00), OSF500X11-016 (283.00), OSF500X11-019 (285.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem where, on systems with a Powerstorm 4D10T (ELSA Gloria Synergy) graphics board, sometimes the X server does not draw lines correctly.</li><li>• Provides the X server support for the PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA) (also known as the ITI6021E Fast Ethernet NIC 3D Video Combination Adapter, InterServer Combo, or JIB).</li><li>• Fixes a problem where, on systems with a PowerStorm 4D10T (ELSA Gloria Synergy, SN-PBXGK-BB) graphics card or a PCI To Ethernet/Graphics Combo Adapter (3X-DEPVD-AA), sometimes lines and images are not drawn correctly in scrolled windows.</li><li>• Fixes synchronization and drawing problems in the X server for the PowerStorm 4D10T (ELSA Gloria Synergy, SN-PBXGK-BB) graphics card.</li><li>• Fixes a memory leak in the X server on systems with a PowerStorm 4D10T (ELSA GLoria Synergy, SN-PBXGK-BB) graphics card that could occur when a client repeatedly created and destroyed buffers for the X Window System Multibuffering Extension (XmbufCreateBuffers/XmbufDestroyBuffers).</li></ul> |
| Patch 508.00<br>OSF500-365    | <b>Patch:</b> Security (SSRT1-19U)<br><b>State:</b> New<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Patch 510.00<br>OSF500X11-021 | <b>Patch:</b> X server grows excessively<br><b>State:</b> New<br>This patch fixes a problem where the X server can grow excessively when accessing certain fonts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 513.00<br>OSF500-398 | <p><b>Patch:</b> Fix for kmf on EV6 systems using ITPSA driver</p> <p><b>State:</b> Supersedes patches OSF500-002 (1.00), OSF500-104 (68.00), OSF500-201 (305.00), OSF500-385 (511.00)</p> <p>This patch corrects the following problems on the KZPCM and 8952U adapters:</p> <ul style="list-style-type: none"><li>• A panic, machine check, or hang can occur when aborting an I/O due to a command timeout or aborting an application program with pending I/Os.</li><li>• Fixes problems related to the ITPSA driver where errors can occur while the system is processing a SCSI bus or SCSI bus device reset request that is issued.</li><li>• Includes a fix to a problem on the 8951U and 8952U adapters. SCSI bus resets are lost when these adapters are connected to single ended drives.</li><li>• Fixes a lockmode 4 panic on boot.</li><li>• Fixes a problem where chip interrupt register fields in error log are incorrect.</li><li>• Fixes that lessen the opportunity of aborts being issued for an already completed I/O.</li><li>• Fixes a kernel memory fault panic caused by a SWS data structure being released twice.</li><li>• Fixes a simple lock timeout panic. It was possible for a bus reset to be generated before the previous bus reset was processed causing excessive processing within the ISR.</li><li>• Fixes a problem with the ITPSA driver. The driver negotiated for ULTRA2 speed when it was attached to a single-ended bus.</li><li>• Fixes a problem with ITPSA driver in which the system will panic in <code>itpsa_allocReq()</code> on boot when <code>lockmode=4</code> is set.</li><li>• Fixes a problem with some slower tape devices serviced by the ITPSA driver by lengthening the timeout value used.</li><li>• Fixes a problem that can cause a simple lock timeout or a kernel memory fault on EV6 systems using the ITPSA driver.</li></ul> |
| Patch 515.00<br>OSF500-381 | <p><b>Patch:</b> Fix for kernel build failures</p> <p><b>State:</b> New</p> <p>This patch fixes kernel build failures due to an undefined <code>ss_sched</code> function.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 517.00<br>OSF500-327   | <p><b>Patch:</b> Various print fixes</p> <p><b>State:</b> Supersedes patches OSF500-164 (306.00), OSF500-256 (307.00), OSF500-264 (308.00), OSF500-185 (309.00), OSF500-301 (311.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• When printing jobs, a timeout can occur after five minutes which causes some large print jobs to stop, then resume printing from the beginning of the print job.</li><li>• When slave lpd daemons try to process jobs on the print queue, some of them can fail to obtain a lock on the lock file, and exit with an error.</li><li>• Print jobs will print out twice.</li><li>• A remote print job may fail to print, with the error message:<br/><br/>lstat/open failed for dfA... no such file or directory</li><li>• If a print job is printing, and the connection to the remote printer is lost, the print job does not resume printing after the connection is restored.</li><li>• Sometimes, as sequence numbers wrap around from 999 to 000, job 000 gets submitted before, and prints before, job 999.</li><li>• lpstat -u output is incorrect.</li><li>• When using the I18N ya option, the queue daemon filters will terminate after 32 jobs.</li><li>• Under certain circumstances, print jobs are terminated when printing to certain printers that are connected to a DECserver through TCP/IP.</li><li>• When lpd reads any data from the printer that has not been read, for local and remote connections, the read-backs for remote connections cause an additional 2-second time out which may cause a job-submit failure on the job-number wraparound.</li><li>• Corrects a problem in which, under certain conditions, unnecessary error messages are written to the lpr.log file.</li><li>• A user is unable to delete a print job from a remote system with a hostname greater than 32 characters because the hostname was truncated.</li><li>• When a TCP/IP connection fails, the retry algorithm would take longer to print jobs due to a long retry interval.</li><li>• A timing hole during lpd last-job completion and shutdown needed to be closed.</li><li>• It was not possible to print to the lpd queue using Windows 2000.</li><li>• Introduces the JJ /etc/printcap parameter, which allows the user to choose either one TCP/IP connection for all jobs in the print queue (JJ=1), or a TCP/IP connection for each job in the print queue (.). It also closes a timing hole that existed when lpd was shutting down.</li><li>• Fixes a problem in which lpd hangs when printing to advanced server queues (using /dev/null).</li></ul> |
| Patch 519.00<br>OSF500DX-026 | <p><b>Patch:</b> dop tool causes segmentation fault</p> <p><b>State:</b> New</p> <p>This patch fixes a problem in which the dop tool would cause a segmentation fault when a non-root user entered the root password.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 521.00<br>OSF500CDE-016 | <b>Patch:</b> Fixes a problem on multi-head systems<br><b>State:</b> Supersedes patch OSF500CDE-007 (54.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem where when running the Common Desktop Environment (CDE) on a system with more than one graphics card and monitor (multihead), sometimes new windows were visible when the screen was locked.</li><li>• Fixes a problem on multi-head systems in which the unlock display only works if the default display is screen 0.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Patch 523.00<br>OSF500-392    | <b>Patch:</b> Fixes heartbeat timer in memory channel driver<br><b>State:</b> New<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes an incorrect heartbeat timer within the memory channel driver which caused rail failures to be incorrectly reported on memory channel Version 2 cards. With the heartbeat timer set too short, the system can be erroneously led to believe a hardware failure has occurred. Messages of the form "rmerror_int: ..." are output to the messages file containing an error_type which has bit 29 set in error_type (heartbeat timeout). The binary error log will also have this data. Typically, the error_type data will be 0xe0000000. The messages are followed by the system hanging or panicking. When panicking, the following message is produced:<br/><br/>panic (cpu 0): rm_failover_if_necessary, both rails bad<br/><br/>A real hardware failure produces the same symptoms and stack trace. For example, having an error_type of 0xe0000002 indicates a write transmit hardware fatal failure.</li></ul> |
| Patch 525.00<br>OSF500-332    | <b>Patch:</b> ATM set up script fails when configuring ELAN<br><b>State:</b> New<br>This patch fixes a problem of the ATM setup script failing when configuring an ELAN if the lane subsystem is not loaded.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 527.00<br>OSF500-368    | <b>Patch:</b> inetd terminates without notice<br><b>State:</b> New<br>This patch corrects a problem with inetd which could result in its termination without notice and without a core file.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 529.00<br>OSF500-377    | <b>Patch:</b> Fix for program hang when using debugger<br><b>State:</b> New<br>This patch corrects a problem where attaching to a program with a debugger will cause periodic timers to be lost and will make the program hang.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Patch 531.00<br>OSF500-335    | <b>Patch:</b> Fix for newgrp command failure<br><b>State:</b> New<br>This patch corrects the problem where newgrp(1) fails if the file /etc/group contains multiple lines for one group.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Patch 533.00<br>OSF500DX-027  | <b>Patch:</b> Fixes a problem in diskconfig<br><b>State:</b> New<br>This patch fixes a problem in diskconfig where partitions with an offset and size of zero cannot be selected. It also fixes a problem where overlapping partitions cannot be adjusted if the existing partitions are not in alphabetical order.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 535.00<br>OSF500-362  | <b>Patch:</b> Fixes for Compaq C compiler<br><b>State:</b> Supersedes patches OSF500-036 (29.00), OSF500-127 (90.00), OSF500-215 (342.00), OSF500-291 (344.00)<br>This patch fixes the following problems in the Compaq C compiler: <ul style="list-style-type: none"><li>• A compile-time performance problem with a very large (1.6 MB) array initialization.</li><li>• A compiler crash when compiling intrinsic memset.</li><li>• A run-time error for a program containing an unsigned long in a for loop and is compiled -arch ev6 -O.</li><li>• A compiler crash when using cc -feedback.</li><li>• A run-time error for a program involving the incorrect evaluation of temp = w*(iter+1); in a while loop.</li><li>• A run-time error for a program containing k = (char)(l &gt;&gt; 8) is not sign-extended when compiled using -O.</li><li>• A compiler crash when duplicate function prototypes found in function scope.</li><li>• A compiler crash when using the -MD flag to generate dependency files in a non-writable directory.</li><li>• A compiler crash when compiling Xemacs 21.1.4 with -O4.</li><li>• An optimizer problem in loop unrolling that suppressed intermediate updates to induction variables under certain conditions.</li><li>• A potential problem with scheduling and .arch ev6 when producing assembly files using -S.</li><li>• An optimizer problem that produced incorrect code when certain bounds checking within a loop was moved outside the loop.</li><li>• A virtual memory exhausted error when compiling the Open Source encryption library OpenSSL.</li><li>• An optimizer problem in loop unrolling that caused an incorrect result under certain conditions.</li><li>• Various compiler crashes under certain conditions.</li><li>• An optimizer problem that caused some of the exception handling example programs in Chapter 11 of the Programmer's Guide to fail.</li><li>• An optimizer problem that caused a Perl validity test to fail when using a long double NaN.</li><li>• An optimizer problem that caused the wrong answer to be produced for a program involving tail recursion.</li><li>• Fixes a problem in bounds checking that caused a compilation to fail with a virtual memory exceeded error.</li></ul> |
| Patch 537.00<br>OSF500-311  | <b>Patch:</b> Fix for os_mibs core dump problem<br><b>State:</b> New<br>This patch fixes a problem where os_mibs would core dump.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Patch 539.00<br>OSF500-406A | <b>Patch:</b> Delivers version V1.0-032 of libots3 library<br><b>State:</b> New<br>This patch fixes a problem in the parallel processing support library that caused incorrect run-time results for an OpenMP program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Patch 541.00<br>OSF500-406B | <b>Patch:</b> Fix for libots3 static library<br><b>State:</b> New<br>This patch fixes a problem in the parallel processing support library that caused incorrect run-time results for an OpenMP program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 543.00<br>OSF500-336   | <b>Patch:</b> Security (SSRT0672U)<br><b>State:</b> New<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                        |
| Patch 545.00<br>OSF500-360   | <b>Patch:</b> Fixes automount handling of the nogrpid option<br><b>State:</b> Supersedes patch OSF500-195 (349.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Prevents the message "nfscast: select: Invalid argument" message from appearing in the daemon.log when the server is not available.</li><li>• Changes the "trymany: servers not responding: RPC: Unable to receive" message to an informational rather than an error message.</li><li>• Fixes the automount handling of the nogrpid option.</li></ul>                                                                                 |
| Patch 547.00<br>OSF500-309   | <b>Patch:</b> Fixes a problem in rpc.lockd<br><b>State:</b> New<br>This patch fixes a problem in rpc.lockd where the FCNTL () function fails to lock NFS mounted directories.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Patch 549.00<br>OSF500-346   | <b>Patch:</b> vi core dumps when it finds invalid syntax<br><b>State:</b> Supersedes patch OSF500-160 (351.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Corrects the error handling when invalid multibyte sequences are encountered by the vi, ex, or more commands.</li><li>• Fixes a problem in which the vi editor core dumps when it finds invalid syntax during a substitute operation.</li></ul>                                                                                                                                                                                           |
| Patch 551.00<br>OSF500DX-025 | <b>Patch:</b> Security (SSRT0654U, SSRT0662U, SSRT0663U)<br><b>State:</b> New<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                  |
| Patch 554.00<br>OSF500-345   | <b>Patch:</b> Upgrades sys_check utility to V120<br><b>State:</b> Supersedes patches OSF500-292 (359.00), OSF500-380 (552.00)<br>This patch upgrades sys_check utility to Version 119.1 and provides the following changes: <ul style="list-style-type: none"><li>• Two NFS bugs.</li><li>• Utilizes Compaq Analyze when available.</li><li>• Utilizes storage's new cliscript tool in place of hszterm.</li><li>• Updated ASU section.</li><li>• Fixes errors generated by syscheck when NFS is not configured and reduces execution time for certain configurations of disks.</li><li>• Upgrades sys_check to Version 120.</li></ul> |
| Patch 556.00<br>OSF500-353   | <b>Patch:</b> Replaces declarations of wcstok and wcsftime<br><b>State:</b> New<br>This change replaces declarations of wcstok() and wcsftime() interfaces with the correct declarations defined in ISO/IEC 9899:1990/Amendment 1:1994(E).                                                                                                                                                                                                                                                                                                                                                                                             |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 558.00<br>OSF500CDE-017 | <b>Patch:</b> Fix for dtpad utility<br><b>State:</b> Supersedes patch OSF500CDE-001A (39.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem where the Account Manager application, dxaccounts, gets a "BadPixmap" error when selecting an account after the View Preferences Display Icons By Name option has been selected.</li><li>• Fixes a problem where, if dtpad cannot allocate enough memory, it will exit and leave a zero-length file in place of the file being edited.</li></ul> |
| Patch 560.00<br>OSF500-313    | <b>Patch:</b> Corrects a stack overflow panic<br><b>State:</b> New<br>This patch corrects a stack overflow panic encountered during the startup of the system management daemon(smsd) on configurations with more than 255 devices.                                                                                                                                                                                                                                                                                                         |
| Patch 562.00<br>OSF500X11-030 | <b>Patch:</b> X server now dynamically retrieves vendor string<br><b>State:</b> New<br>This patch changes the X server to dynamically retrieve its vendor string information when running on COSIX64.                                                                                                                                                                                                                                                                                                                                       |
| Patch 564.00<br>OSF500-395    | <b>Patch:</b> Fix for Korn shell hang<br><b>State:</b> New<br>This patch fixes a problem where the Korn shell (ksh) could hang if a large number of commands were pasted to it when it was running in a terminal emulator window (such as an xterm).                                                                                                                                                                                                                                                                                        |
| Patch 566.00<br>OSF500X11-028 | <b>Patch:</b> Fixes a memory leak in the X server<br><b>State:</b> New<br>This patch fixes a memory leak in the X server that could occur when a client repeatedly created and destroyed buffers for the X Window System Multibuffering Extension (XmbufCreateBuffers/XmbufDestroyBuffers).                                                                                                                                                                                                                                                 |
| Patch 568.00<br>OSF500-347    | <b>Patch:</b> Corrects a memory leak in XTI socket code<br><b>State:</b> New<br>This patch corrects a memory leak in XTI socket code                                                                                                                                                                                                                                                                                                                                                                                                        |
| Patch 570.00<br>OSF500-334    | <b>Patch:</b> Fix for ATM signalling problem<br><b>State:</b> Supersedes patch OSF500-223 (385.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem in which the system may panic with the error message "simple lock: time limit exceeded" when running ATM.</li><li>• Fixes a problem of ATM signalling going into the "connection released" after a system reboot.</li></ul>                                                                                                                |
| Patch 572.00<br>OSF500-342    | <b>Patch:</b> OSF500-342<br><b>State:</b> New<br>This patch prevents a panic on TurboLaser systems with a DE600 in PCI slot 0. Misidentification of the DE600 in PCI slot 0 causes data structure corruption.<br>TurboLaser systems include the following:<br><br>AlphaServer 8200<br>AlphaServer 8400<br>AlphaServer GS60<br>AlphaServer GS60E<br>AlphaServer GS140<br><br>A DE600 is a single-port 10/100 Mbps Fast Ethernet NIC.                                                                                                         |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 574.00<br>OSF500-314 | <b>Patch:</b> Fix for fsx exerciser<br><b>State:</b> New<br>This patch corrects a problem in which fsx would disregard the -s flag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Patch 578.00<br>OSF500-364 | <b>Patch:</b> Various fixes for ld command<br><b>State:</b> Supersedes patches OSF500-012 (11.00), OSF500-105 (69.00), OSF500-116A (79.00), OSF500-190 (392.00), OSF500-344 (575.00), OSF500-348 (576.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Fixes a problem where the linker (ld) would insert incorrect values for the symbols etext and _etext when building kernels larger than 4 MB.</li><li>• Fixes a problem where the linker (ld) could not read arguments longer than 1024 characters in input files. This also adds proper support for line continuation characters.</li><li>• Fixes a problem where the linker and OM would not properly process a large (multi-GOT) image in the presence of the -om option. This patch also fixes a problem with the linker not properly handling scTlsUndefined symbols.</li><li>• Including a shared library on a link line twice with another library in between caused unresolved symbols in some cases.</li><li>• Linking large applications with -om -call_shared with very large numbers of external symbols sometimes failed to link.</li><li>• Fixes two errors that occur when using the -f switch with the linker (ld):<ul style="list-style-type: none"><li>– Using the -f switch produces link errors.</li><li>– Any unsupported switch beginning with -f gets interpreted to mean -f.</li></ul></li><li>• Fixes a problem where the linker defined symbol _fpdata would end up being undefined if it was referenced by a program but not used by the linker.</li><li>• Fixes two problems in the linker where it would erroneously report "multiply defined symbol" errors or "unresolved symbol" errors:<ul style="list-style-type: none"><li>– Modifies the linker's symbol resolution to enable it to recognize when a reference to a symbol defined in a shared library is replaced by a symbol defined in an object file or archive.</li><li>– Modifies the linker to cause it to re-scan shared libraries before reporting unresolved symbols.</li></ul></li><li>• Fixes a problem where the linker may incorrectly optimize the jsr Alpha instruction when linking large applications at -O2 or higher. This could result in an incorrect function call. The likelihood of encountering this problem is extremely rare because numerous low-level conditions must also be true during the link.</li><li>• Fixes a problem where the linker defined symbol _fpdata would end up being undefined if it was referenced by a program but not used by the linker.</li></ul> |
| Patch 580.00<br>OSF500-386 | <b>Patch:</b> Security (SSRT1-15, SSRT0713U)<br><b>State:</b> New<br>A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 582.00<br>OSF500-338 | <b>Patch:</b> Security (SSRT0592U)<br><b>State:</b> Supersedes patch OSF500-123 (86.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li><li>• Corrects a problem in the rdist utility which was causing segmentation faults on files with more than one link.</li></ul>                                                                                                                                               |
| Patch 584.00<br>OSF500-317 | <b>Patch:</b> Kernel memory fault occurs while using tablet<br><b>State:</b> New<br>This patch fixes a kernel memory fault which occurs while using a tablet instead of a mouse.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Patch 586.00<br>OSF500-357 | <b>Patch:</b> Hang on multi-CPU systems using NFS-over-TCP<br><b>State:</b> Supersedes patches OSF500-029 (24.00), OSF500-097 (142.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Corrects problems with NFS V3 XDR encoding. It also corrects a problem where the system may hang due to a problem with NFS write gathering code.</li><li>• Fixes a system hang problem due to a bug in the NFS write-gathering code. The code does not fully synch all writes.</li><li>• Corrects a hang that can be seen on multi-CPU systems using NFS-over-TCP. The SMP race is seen between the <code>nfs_tcp_input</code> and the <code>nfs_tcp_thread</code> functions.</li></ul> |
| Patch 588.00<br>OSF500-376 | <b>Patch:</b> Fix for DS10/DS20 performance problems<br><b>State:</b> New<br>This patch fixes DS10/DS20 performance problems introduced with the i2c driver by using thread blocking, rather than <code>event_timeout()</code> and <code>DELAY()</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Patch 590.00<br>OSF500-330 | <b>Patch:</b> Fix for unaligned kernel space panic<br><b>State:</b> New<br>This patch fixes a problem in which the system may panic with the panic string "Unaligned kernel space access from kernel mode".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Patch 593.00<br>OSF500-306 | <b>Patch:</b> Security (SSRT0664U)<br><b>State:</b> New. Supersedes patch OSF500-343 (591.00)<br>This patch corrects the following: <ul style="list-style-type: none"><li>• Corrects a problem with the <code>ftpd</code> daemon which could result in PC ftp clients hanging when transferring some files in ASCII mode.</li><li>• A potential security vulnerability has been discovered where, under certain circumstances, system integrity may be compromised. This may be in the form of improper file or privilege management. Compaq has corrected this potential vulnerability.</li></ul>                                                                                                           |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 595.00<br>OSF500-358 | <p><b>Patch:</b> CDFS media burned in 2001 shows the wrong dates</p> <p><b>State:</b> Supersedes patches OSF500-108 (72.00), OSF500-057 (106.00), OSF500-095 (140.00), OSF500-259 (432.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem where the system can panic with the panic string "secsize_resid &lt; d_reclen" when accessing a defective CD-ROM.</li><li>• Fixes a problem in which system may memory fault if CFS server no longer had access to the CD-ROM device.</li><li>• Fixes a panic in cdfs that has the following error message:<br/>Panic: "simple_unlock: no locks owned by cpu; vnode.v_lock class"</li><li>• Fixes a problem with CDFS. Fatal errors occur when trying to load data from a CDFS CD-ROM over NFS.</li><li>• CDFS media burned in 2001 shows the wrong dates.</li></ul>                                                                                                                                                                                                                                                                                                  |
| Patch 597.00<br>OSF500-363 | <p><b>Patch:</b> Fix for joint problem</p> <p><b>State:</b> Supersedes patches OSF500-103 (67.00), OSF500-055 (105.00), OSF500-089 (134.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem in which joint does not listen on interfaces configured with DECnet and returns "unaligned access" messages.</li><li>• Fixes a problem of the joint daemon not appending the hostname to the load file specified in the bf flag in the /etc/bootptab file.</li><li>• Fixes a problem in which bprelay does not work properly and displays the error message "bprelay[658]: can't find interface which received packet".</li><li>• Corrects a problem with joint which caused it to respond to certain client dhcp requests via the wrong port.</li></ul>                                                                                                                                                                                                                                                                                                                                                             |
| Patch 599.00<br>OSF500-352 | <p><b>Patch:</b> System may core dump when accessing FDI floppy</p> <p><b>State:</b> Supersedes patches OSF500-187 (435.00), OSF500-325 (437.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"><li>• Fixes a problem with the floppy driver which causes data inconsistencies.</li><li>• Compaq has determined in laboratory testing that there is a theoretical possibility that during read and write operations to the floppy disk on DS10, DS10L and ES40 AlphaServers and VS10 and XP900 AlphaStations, a single byte of data may be inaccurately read or written without notice to the user or system. The potential for this anomaly exists only if floppy data read and write operations are attempted while there is extremely heavy traffic on these Alpha systems' internal input/output busses. Although Compaq has observed the anomaly only in laboratory tests designed to create atypical system stresses, including almost constant use of the floppy disk drive, we are supplying this patch to address this potential issue.</li><li>• Corrects a potential system crash when accessing the FDI floppy.</li></ul> |

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**Table 2–2: Summary of Base Operating System Patches (cont.)**

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| Patch 601.00  | <b>Patch:</b> Fix for CDE window manager looping problem                                                                                                                                                                                                                                                                                              |
| OSF500CDE-018 | <b>State:</b> Supersedes patch OSF500CDE-015 (439.00)                                                                                                                                                                                                                                                                                                 |
|               | This patch corrects the following:                                                                                                                                                                                                                                                                                                                    |
|               | <ul style="list-style-type: none"><li>• Fixes a problem in which the Window Manager (dtwm) intermittently hangs on a system which uses multiple displays.</li><li>• Fixes a problem where the Common Desktop Environment (CDE) window manager loops or aborts when creating and deleting workspaces or when displaying the CDE Window List.</li></ul> |

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