Tru64 UNIX Version 5.0

Patch Summary and Release Notes for Patch Kit-0002

April 2000

This manual contains the release notes and describes the contents of Patch Kit-0002. 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-0002 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 Guide*
- Tru64 UNIX *System Administration*
- Any release-specific installation documentation

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1

Release Notes

This chapter provides information that you must be aware of when working with Tru64 UNIX Version 5.0 Patch Kit-0002.

1.1 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 ~55.6 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 ~67.7 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 ~858 KB of storage space is required in /var/adm/patch/doc for patch abstract and README documentation.

  A total of ~128 KB of storage space is needed in /usr/sbin/dupatch for the patch management utility.

1.2 New dupatch Features

Beginning with Revision 26–02 of dupatch, this patch tool utility has been enhanced to provide new features, as described in the following sections. For more information, see the *Patch Kit Installation Instructions*.

1.2.1 Patch Installation from Multiuser Mode

Patches can now be installed when a system is in multiuser mode.

There are no restrictions on performing patch selection and preinstallation checking in multiuser mode.

However, although you can now install patches in multiuser mode, Compaq recommends that you bring down your system to single-user mode when installing patches that affect the operation of the Tru64 UNIX operating system (or the product you are patching). If your system must remain in multiuser mode, it is recommended that you apply the patches when the system is as lightly loaded as possible.

1.2.2 Patch Installation from a Pseudo-Terminal

Patches can now be installed on the system from a pseudo-terminal (pty) while in single-user mode. To do this, log into the system as root from a remote location and

specify that the patches are to be installed in single-user mode. Once all the patch prerequisites are completed, the system will be taken to single-user mode while maintaining the network connection for the root user. The patches will then be installed by the system.

1.2.3 Automatic Kernel Build

If the patches installed indicate that a kernel build is required, `dupatch` will initiate the kernel build automatically.

Most times a reboot is required to complete the installation and bring the system to a consistent running environment. Certain file types, such as libraries, are not moved into place until you reboot the system.

When installing patches in multiuser mode, you can take one of three options after the kernel build is complete:

- Reboot the system immediately.
- Reboot the system at a specified time.
- Forgo a system reboot.

1.3 Release Note for dupatch

When you are installing the patch kit you may see a message similar to the following::

```
=== Installing "Tru64 UNIX V5.0" Patches:

/usr/sbin/dupatch:  //usr/sbin/setld:  not found
```

If you see this message, halt `dupatch` and restart the installation. The prior operation did not affect your system in any way, and `dupatch` should now operate properly.

1.4 Release Note for Patch 96.00

A new `mount` option, called `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:

io-throttle-shift	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 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 Tru69 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 Adminstration*, 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.

1.6 Release Note for Patch 95.00

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.

1.7 Release Note for Patch 53.00

For more information about the functionality provided and special installation instructions related to Patch 53.00, 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 Patch 62.00

For more information about the functionality provided and special installation instructions related to Patch 62.00, 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.

2

Summary of Base Operating System Patches

This chapter summarizes the base operating system patches included in Patch Kit-0002.

Table 2–1 lists patches that have been updated.

Table 2–2 provides a summary of patches in Patch Kit-0002.

Table 2–1: Updated Base Operating System Patches

Patch IDs	Change Summary
Patches 52.00, 53.00, 54.00, 56.00, 57.00, 61.00, 62.00, 63.00, 66.00, 70.00, 71.00, 75.00, 77.00, 81.00, 82.00, 86.00, 87.00, 89.00, 99.00, 107.00, 109.00, 110.00, 111.00, 115.00, 116.00, 117.00, 121.00, 123.00, 124.00, 126.00, 131.00, 133.00, 134.00, 135.00, 136.00, 137.00, 138.00, 140.00, 144.00, 146.00, 147.00, 148.00, 149.00	New
Patch 69.00	Superseded by Patch 63.00
Patch 102.00	Superseded by Patch 121.00
Patches 118.00, 125.00	Superseded by Patch 133.00
Patches 67.00, 105.00	Superseded by Patch 134.00
Patches 72.00, 106.00	Superseded by Patch 140.00
Patch 145.00	Superseded by Patch 147.00
Patch 78.00	Superseded by Patch 148.00
Patches 34.00, 35.00	Superseded by Patch 55.00
Patch 36.00	Superseded by Patch 58.00
Patch 1.00	Superseded by Patch 68.00
Patch 11.00, 69.00	Superseded by Patch 79.00
Patches 22.00	Superseded by Patch 85.00
Patch 29.00	Superseded by Patch 90.00
Patch 43.00, 30.00	Superseded by Patch 95.00
Patches 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	Superseded by Patch 96.00
Patch 19.00	Superseded by Patch 122.00
Patch 4.00	Superseded by Patch 130.00
Patches 73.00, 5.00, 76.00, 84.00, 113.00	Superseded by Patch 141.00
Patch 24.00	Superseded by Patch 142.00
Patch 20.00, 45.00, 51.00	Superseded by Patch 143.00

Table 2–2: Summary of Base Operating System Patches

Patch IDs	Abstract
Patch 8.00 OSF500-009	**Patch:** prof -pixie -asm command core dumps **State:** Existing This patch fixes a problem where prof -pixie -asm would dump core if the executable being profiled contains extremely long symbol names.
Patch 16.00 OSF500-017	**Patch:** Fix for stdhosts command **State:** Existing This patch fixes a problem with the stdhosts command when the file processed has lines longer than 256 characters. The error message: stdhost:malformed line "ignored" is displayed.
Patch 18.00 OSF500-019	**Patch:** Fix for problem that occurs when creating ATM ELANs **State:** Existing This patch fixes a problem with the creation of multiple ATM ELANs.
Patch 21.00 OSF500-024	**Patch:** Fix for crontab command **State:** Existing 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.
Patch 23.00 OSF500-027	**Patch:** Fix for ksh core dump problem **State:** Supersedes patch OSF500-016 (15.00) This patch corrects the following: • Corrects a problem that may cause ksh to core dump when displaying a large here-document in a ksh script. • Fixes a problem in ksh which required two SIGTERM signals to be sent to the process when it exec'ed.
Patch 25.00 OSF500-030	**Patch:** Restriction lifted for AlphaServer DS20 and ES40 **State:** Existing 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.
Patch 26.00 OSF500-031	**Patch:** Fix for NFS client application hang **State:** Existing This patch corrects a problem that can cause an NFS client application to hang, or causes a "lock already owned by thread" panic when lockmode=4.
Patch 27.00 OSF500-035	**Patch:** Security (SSRT0583Z) **State:** Existing 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 28.00 OSF500-034	**Patch:** Fix for binmail **State:** Existing This patch corrects a problem with binmail which was resulting in partial delivery of mail messages when account quota or disk capacity was reached.

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

Patch 32.00 OSF500-043	**Patch:** Fix for tar/pax program **State:** Existing 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.
Patch 33.00 OSF500-044	**Patch:** Fix for vdump program dumping core **State:** Existing The vdump program would dump core with the following message: nnnn Resources lost(coredump)
Patch 37.00 OSF500X11-002	**Patch:** Fix for segmentation fault on X font server (xfs) **State:** Existing 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 OSF500X11-003	**Patch:** Fix for problem in X Display Manager (xdm) **State:** Existing This patch fixes a problem in the X Display Manager (xdm) where XDMCP Indirect queries do not work.
Patch 39.00 OSF500CDE-001A	**Patch:** Fix for dxaccounts shared library **State:** Existing 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 40.00 OSF500CDE-002	**Patch:** Security (SSRT0614U) **State:** Existing 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 OSF500CDE-003	**Patch:** Security (SSRT0571U) **State:** Existing 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 OSF500-001	**Patch:** rc.config and rc.config.common files may be corrupt **State:** New 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 OSF500-048	**Patch:** Fix for simple lock timeout panic **State:** Existing 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 OSF500CDE-001B	**Patch:** Fix for dxaccounts static library **State:** Existing 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.

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

Patch 52.00 OSF500CDE-005	**Patch:** Security (SSRT0615U) **State:** New 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 53.00 OSF500CDE-006	**Patch:** Adds ISO8859-15 functionality to Xresource file **State:** New 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.
Patch 54.00 OSF500CDE-007	**Patch:** New windows visible when screen is locked **State:** New This patch 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.
Patch 55.00 OSF500DX-004	**Patch:** Fixes problem with duplicate user identifier (UID) **State:** Supersedes patches OSF500DX-001 (34.00), OSF500DX-002 (35.00) This patch corrects the following: • 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). • Fixes a problem in which the command usermod was not allowing any commas in the comment field when the current GECOS fields are filled. • 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.
Patch 56.00 OSF500DX-005	**Patch:** Fix for Insight Manager configuration tool **State:** New 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 57.00 OSF500DX-006	**Patch:** Running dxaccounts with C2 security causes core dump **State:** New This patch fixes a situation in which a system running Dxaccounts under C2 security mode experiences problems with a core dump when a user attemps to lock a retired user account.
Patch 58.00 OSF500X11-010	**Patch:** X server support for PCI to Ethernet/Graphics adapter **State:** Supersedes patch OSF500X11-001 (36.00) This patch corrects the following: • Fixes a problem where, on systems with a Powerstorm 4D10T (ELSA Gloria Synergy) graphics board, sometimes the X server does not draw lines correctly. • 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).

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

Patch 61.00 OSF500X11-007A	**Patch:** Fix for memory leak in the X Toolkit library **State:** New This patch 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.
Patch 62.00 OSF500X11-008	**Patch:** Implements Xlocales definitions **State:** New This patch implements Xlocales definitions which 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.
Patch 63.00 OSF500X11-009A	**Patch:** Fix for toggle button problem **State:** New. Supersedes patch OSF500X11-005A (59.00) This patch corrects the following: • 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". • Fixes a problem with the Motif libraries where sometimes widgets or windows were created with the wrong size (XmNwidth and XmNheight were very small).
Patch 66.00 OSF500-102	**Patch:** Fix for unaligned access panic in dli_input **State:** New This patch fixes an unaligned access panic in dli_input.
Patch 68.00 OSF500-104	**Patch:** Fix for ITPSA driver **State:** Supersedes patch OSF500-002 (1.00) This patch corrects the following: • 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. • 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. • 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. • Fixes a lockmode 4 panic on boot. • Fixes a problem where chip interrupt register fields in error log are incorrect. • Fixes that lessen the opportunity of aborts being issued for an already completed I/O. • Fixes kernel memory fault panic caused by a SWS data structure being released twice. • 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. • Fixes a problem with the ITPSA driver. The driver negotiated for ULTRA2 speed when it was attached to a single-ended bus.
Patch 70.00 OSF500-106	**Patch:** Upgrade to Gigabit Ethernet driver Version 1.0.12 **State:** New This patch upgrades to the Gigabit ethernet driver Version 1.0.12 to fix various performance problems.

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

Patch 71.00 OSF500-107	**Patch:** Corrects a problem with the compress utility **State:** New 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 OSF500-111	**Patch:** NIS client has a different shell listed than server **State:** New 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 77.00 OSF500-114	**Patch:** Fix for collect information tool **State:** New This patch fixes the following two problems with the collect information tool used by the sys_check utility: • A security hole where a user can become root. • collect can not start at boot time due to incorrectly handling SIGHUP signal.
Patch 79.00 OSF500-116A	**Patch:** Various fixes for ld command **State:** Supersedes patches OSF500-012 (11.00), OSF500-105 (69.00) This patch corrects the following: • Fixes a problem where the linker (ld) would insert incorrect values for the symbols etext and _etext when building kernels larger than 4 MB. • 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. • 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.
Patch 81.00 OSF500-118	**Patch:** showfdmn sometimes core dumps **State:** New This patch fixes a problem in which AdvFS showfdmn would sometimes core dump.
Patch 82.00 OSF500-119	**Patch:** Fixes callback on freed CCB panics **State:** New This patch fixes callback on freed CCB panics.
Patch 85.00 OSF500-122	**Patch:** Fix for sort command **State:** Supersedes patch OSF500-023 (22.00) This patch corrects the following: • Fixes a problem in which sort -i a_file >b_file aborts with the message "A line of the input file contains more than 20480 characters" when LANG = da_DK.ISO8859-1. • 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.

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

Patch 86.00 OSF500-123	**Patch:** Security (SSRT0592U) **State:** New 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 87.00 OSF500-124	**Patch:** In C2 environment imap authentication fails **State:** New This patch corrects a problem where, in an enhanced security (C2) environment, imap authentication fails.
Patch 89.00 OSF500-126	**Patch:** sendmail core dumps sending 8-bit mime-encoded files **State:** New Fixes a problem where sendmail core dumped when trying to send certain 8-bit, mime-encoded files.
Patch 90.00 OSF500-127	**Patch:** Fix for Compaq C compiler **State:** Supersedes patch OSF500-036 (29.00) This patch fixes the following problems in the Compaq C compiler: • A compile-time performance problem with a very large (1.6 MB) array initialization. • A compiler crash when compiling intrinsic memset. • A run-time error for a program containing an unsigned long in a for loop and is compiled -arch ev6 -O. • A compiler crash when using cc -feedback. • A run-time error for a program involving the incorrect evaluation of temp = w*(iter+1); in a while loop. • A run-time error for a program containing k = (char)(l >> 8) is not sign-extended when compiled using -O. • A compiler crash when duplicate function prototypes found in function scope. • A compiler crash when using the -MD flag to generate dependency files in a non-writable directory. • A compiler crash when compiling Xemacs 21.1.4 with -O4. • An optimizer problem in loop unrolling that suppressed intermediate updates to induction variables under certain conditions. • A potential problem with scheduling and .arch ev6 when producing assembly files using -S. • An optimizer problem that produced incorrect code when certain bounds checking within a loop was moved outside the loop.
Patch 95.00 OSF500-135	**Patch:** Driver support for PCI to Ethernet/Graphics adapter **State:** Supersedes patches OSF500-033 (43.00), OSF500-037 (30.00) This patch corrects the following: • - Corrects a problem where a Tru64 UNIX NFS server incorrectly handles > 8k I/O requests. • Fixes a system panic with the panic string: simple_lock: time limit exceeded • 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).

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

Patch 96.00 OSF500-138	**Patch:** ICMP redirect packets can modify default route **State:** Supersedes patches 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) This patch corrects the following: • Fixes "simple_lock: time limit exceeded" panics. • Fixes a panic in the kernel with the following error message: simple_lock: time limit exceeded • 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. • Fixes a problem where applications using the fcntl() system calls may appear to hang. • Fixes a "lock hierarchy violation" panic from running "fuser -d" command on AdvFS when lockmode is set to 4. • 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. • Fixes a system "pause" seen when doing a lot of I/O to UFS filesystems. • Fixes system hangs that occur when there are nfs mounted files, the system is actively paging and the nfs server is unavailable. • 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. • Fixes an AdvFS problem in which processes may hang but the system will not panic. • 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(). • Fixes a problem in which unmounting an NFS mounted directory can cause a user process to core dump. • Fixes a problem with hangs on AlphaServer ES40 when specifying granularity hints. • Fixes a problem where ubc_msync() may not flush out all the pages in the requested range. • Fixes a problem involving register corruption. • Fixes var adm messages from truncation on larger configurations by raising the default size (4096) of msgbuf_size to 8192. • 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.

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

Patch 96.00 continued	• Fixes a problem with soclose() that caused permanent looping on exit while aborting pending connections at a TCP/IP listener socket. • Fixes a problem that could result in a incorrect scheduling of threads when they were dispatched from the idle state. • Fixes a problem with virtual memory. When running the Oracle database, Oracle can not detach from a shared memory segment. • Fixes two separate panics with the following error messages: vm_page_activate: already active or simple_lock: time limit exceeded • Fixes a simple_lock: hierarchy violation in sigq_abort() when lockmode is set to 4. • Adds the following kernel features: – Enhanced core path support which allows applications to specify the directory where core files will be generated. – XA_FORK exit action support which allows applications to register actions to be performed when a process forks(). • 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. • Fixes a problem in the AdvFS system. A panic occurs with the following error message: lock_read: hierarchy violation • Fixes a problem where a single CPU system using AdvFS can hang in cleanup_closed_list(). • 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. • 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. • 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. • Corrects two problems in AdvFS property list handling: – Creation of property lists entries in AdvFS filesets with no available mcells will result in kernel memory fault (kmf). – 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. • 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). • Fixes a kernel memory fault and an SMP race condition with the AltaVista Firewall 98 server on a multi-CPU system. • Fixes a problem in which the system may panic with the error message "kernel memory fault". • Fixes a system panic: tcphdr too big

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

Patch 96.00 continued	• Changes necessary for AV firewall 98 to pass ICSA certification. • Fixes a kernel memory fault caused when a network application walked an inpq array. • Fixes a problem where RCP commands issued from a Sun Solaris system to Compaq Tru64 UNIX may sometimes fail incorrectly with the error message: Connection reset by peer • Fixes a problem in which the system may panic with the error message: tcp_output REXMT • Fixes a TCP performance problem if the TCP window scale option is turned off when using the HIPPI interface. • Fixes a problem with packetfilter applications that use ip packets greater than 8K. • Corrects a problem where ICMP redirect packets can modify the default route. • This patch involves virtual mac addressing.
Patch 99.00 OSF500-032	**Patch:** Fix for AS1200 systems with multiple memory cards **State:** New 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: pmap_get_align: Unaligned memory hole found... Please reset the system to clear any previous memlimit
Patch 107.00 OSF500-058	**Patch:** Updates lfa ATM driver to V1.0.16 **State:** New This patch updates the lfa ATM driver to V1.0.16 and fixes the following two ATM driver problems: • Fixes a soft hang that can occur when running NFS over ATM. • Allows the ATM subsystem to be shut down successfully in the event of a board hang.
Patch 109.00 OSF500-060	**Patch:** Fix for lex problems **State:** New 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 110.00 OSF500-061	**Patch:** Fixes problem in kernel debugger, kdbx **State:** New This patch 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.
Patch 111.00 OSF500-062	**Patch:** Fix for news command **State:** New 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.

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

Patch 115.00 OSF500-066	**Patch:** Fix for rpc.statd hang **State:** New This patch fixes a problem where rpc.statd hangs as it tries to notify dead remote systems.
Patch 116.00 OSF500-067	**Patch:** mailsetup does not complete if hostname ends in zero **State:** New This patch fixes a problem of not completing mailsetup if the hostname ends with "0" (zero). The error message produced follows: Error creating /var/adm/sendmail/.cf: exiting
Patch 117.00 OSF500-071	**Patch:** lprsetup incorrectly sets up certain printers **State:** New 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 121.00 OSF500-075	**Patch:** csh globbing function is extremely slow **State:** New. Supersedes patch OSF500-047 (102.00) This patch corrects the following: • Fixes a problem in which ufs_fsck can get blocked while attempting to flush NFS buffers for a service that has become suspended. • Fixes a problem that was causing the csh globbing function to be extremely slow when accessing file information on NFS, AFS, or VMS file systems.
Patch 122.00 OSF500-076	**Patch:** C shell causes segmentation fault **State:** Supersedes patch OSF500-020 (19.00) This patch corrects the following: • Corrects how the C shell handles 2-byte characters when running in the Japanese SJIS locale. • 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.
Patch 123.00 OSF500-078	**Patch:** Fixes core dump problem with ftp **State:** New This patch fixes a core dump problem with ftp(1) when a .netrc file contains an invalid macdef (macro definition).
Patch 124.00 OSF500-079	**Patch:** Fixes problem with fverify -n flag **State:** New This patch fixes a problem of the fverify -n flag creating directories.
Patch 126.00 OSF500-081	**Patch:** Fix for defragment program **State:** New This patch fixes the defragment program to properly report on extremely large (>4.3GB) freespace holes. Previously it would report Free space percentages larger than 100% and would add these large holes to the smallest range (<100K), instead of the largest range (>10M) where they belong.

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

Patch 130.00 OSF500-085	**Patch:** USB controller may cause doconfig to fail **State:** Supersedes patch OSF500-005 (4.00) This patch corrects the following: • Fixes the following Universal Serial Bus (USB) problems: – The USB mouse no longer functions after resetting the Xserver. – System panics may occur in error handling after USB device fails a request. – The USB device may not deconfigure properly when unplugged from the bus. – Problems that will prevent some USB devices from being configured at boot time. – A key on a USB keyboard will continue to repeat after being unplugged. – USB keyboards may transmit the incorrect keycode for several keys. • When booting at times the USB controller number may be -1. This causes doconfig to fail.
Patch 131.00 OSF500-086	**Patch:** Fix for vrestore command **State:** New This patch fixes the following problems in the vrestore command: • vrestore is slow to complete when a partial restore operation is requested. • vrestore fails to ignore extended attribute records for those files that are not requested in a vrestore operation. • vrestore fails to restore certain files and directories having ACLs from a compressed vdump saveset, reporting: vrestore: error setting extended attributes 22
Patch 133.00 OSF500-088	**Patch:** Fixes a problem with the KZPSA driver **State:** New. Supersedes patches OSF500-072 (118.00), OSF500-080 (125.00) This patch corrects the following: • Fixes a problem with the KZPSA driver. A timer is not being canceled causing a panic with the following error message: xpt_callback: callback on freed CC • Fixes a problem in which the system can panic with the following message: KZPSA PANIC SPO_RET_CARRIER:CARRIER NOT IN USE • Fixes a problem with tmv2_notify_cbf messages being logged from KPBSA adapters and creating very large binary.errlog files in a clustered environment.

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

Patch 134.00 OSF500-089	**Patch:** Fix for joind problem **State:** New. Supersedes patches OSF500-103 (67.00), OSF500-055 (105.00) This patch corrects the following: • Fixes a problem in which joind does not listen on interfaces configured with DECnet and returns "unaligned access" messages. • Fixes a problem of the joind daemon not appending the hostname to the load file specified in the bf flag in the /etc/bootptab file. • Fixes a problem in which bprelay does not work properly and displays the error message "bprelay[658]: can't find interface which received packet".
Patch 135.00 OSF500-090	**Patch:** Fix for problem that results in status being missed **State:** New This patch fixes a problem which could result in unit attention status being missed.
Patch 136.00 OSF500-091	**Patch:** sysconfigtab can cause system to be unbootable **State:** New This patch fixes a problem in which an invalid PCI entry in sysconfigtab can cause the system to be unbootable.
Patch 137.00 OSF500-092	**Patch:** Corrects a disk write failure **State:** New 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 OSF500-093	**Patch:** Fix for ris script **State:** New This patch corrects the following problems with the /usr/sbin/ris script: • It incorrectly queried the user for a gateway to be used to serve a specific client when no gateway was required. • It could fail if no default route had been established.
Patch 140.00 OSF500-095	**Patch:** Fixes a panic in cdfs **State:** New. Supersedes patches OSF500-108 (72.00), OSF500-057 (106.00) This patch corrects the following: • Fixes a problem where the system can panic with the panic string "secsize_resid < d_reclen" when accessing a defective CD-ROM. • Fixes a problem in which system may memory fault if CFS server no longer had access to the CD-ROM device. • Fixes a panic in cdfs that has the following error message: Panic: "simple_unlock: no locks owned by cpu; vnode.v_lock class"

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

Patch 141.00 OSF500-096	**Patch:** Fixes a problem with corrupted registers **State:** Supersedes patches OSF500-109 (73.00), OSF500-006 (5.00), OSF500-113 (76.00), OSF500-121 (84.00), OSF500-064 (113.00) This patch corrects the following: • Fixes a problem where partitioned AlphaServer 8200/8400 systems return incorrect CPU data for CPUs that are not in the partition. • Fixes the following Compaq AlphaServer problems: – On the ES40 and DS20, nonfatal 680 environment machine checks are being logged as fatal/noncorrectable errors. – On the DS20, a fix has been made to the handling of power supply, temperature, and fan events so that they are reported correctly. – Provides support for the Compaq AlphaServer DS20E. • 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. • Corrects siginfo codes for floating point and integer overflow exceptions. • Fixes single-step support in a debugger, such as Ladebug, for instructions that trap or fault. • Fixes a problem where registers might be corrupted with the preemption_on/off interfaces.
Patch 142.00 OSF500-097	**Patch:** Fixes system hang due to problem in NFS write code **State:** Supersedes patch OSF500-029 (24.00) This patch corrects the following: • 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. • Fixes a system hang problem due to a bug in the nfs write gathering code. The code does not fully synch all writes.
Patch 143.00 OSF500-098	**Patch:** System panics with a kernel memory fault **State:** Supersedes patches OSF500-022 (20.00), OSF500-046 (45.00), OSF500-069 (51.00) This patch corrects the following: • Fixes a kmf problem when the type of SCSI device dynamically changes. • 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. • Fixes a hardware management problem that will cause a system hang at boot time (in dsfmgr) whenever a hardware CPU upgrade is performed. • Fixes a problem in which the system can panic with a kernel memory fault.
Patch 144.00 OSF500-099	**Patch:** Security (SSRT0642U) **State:** New 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.

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

Patch 146.00 OSF500X11-007B	**Patch:** Memory leak destroys Motif ScrolledWindow widgets **State:** New This patch 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.
Patch 147.00 OSF500X11-009B	**Patch:** X server generates Invalid Pixmap Error **State:** New. Supersedes patch OSF500X11-005B (145.00) This patch corrects the following: • 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". • Fixes a problem with the Motif libraries where sometimes widgets or windows were created with the wrong size (XmNwidth and XmNheight were very small).
Patch 148.00 OSF500-116B	**Patch:** Fixes various problems with om **State:** New. Supersedes patch OSF500-115 (78.00) This patch corrects the following: • Fixes various problems with om (/usr/lib/cmplrs/om). • 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.
Patch 149.00 OSF500-065B	**Patch:** Corrects problems in AdvFS propertly list handling **State:** New This patch corrects two problems in AdvFS property list handling: • Creation of property lists entries in AdvFS filesets with no available mcells will result in kernel memory fault (kmf). • 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.