

Tru64 UNIX 4.0G and TruCluster 1.6

Patch Summary and Release Notes for Patch Kit-0001

August 2000

This manual describes the release notes and contents of Patch Kit-0001. It provides any special instructions for installing individual patches.

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

© 2000 Compaq Computer Corporation

COMPAQ and the Compaq logo are registered in the U.S. Patent and Trademark Office. Alpha, AlphaServer, NonStop, TruCluster, Tru64, and VMS are trademarks of Compaq Computer Corporation.

Microsoft and Windows NT are registered trademarks of Microsoft Corporation. Intel, Pentium, and Intel Inside are registered trademarks of Intel Corporation. UNIX is a registered trademark and The Open Group is a trademark of The Open Group in the United States and other countries. Other product names mentioned herein may be the trademarks of their respective companies.

Possession, use, or copying of the software described in this publication is authorized only pursuant to a valid written license from Compaq Computer Corporation or an authorized sublicensor.

Compaq Computer Corporation shall not be liable for technical or editorial errors or omissions contained herein. The information in this document is subject to change without notice.

Contents

About This Manual

1 Release Notes

1.1	Required Storage Space	1-1
1.2	New dupatch Features	1-2
1.2.1	Patch Installation from Multiuser Mode	1-2
1.2.2	Automatic Kernel Build	1-2
1.2.3	Patch Installation from a Pseudo-Terminal	1-2
1.3	Release Note for TruCluster Server	1-2
1.4	Release Note for Tru64 UNIX Patch 48.00	1-2
1.5	Release Note for Tru64 UNIX Patch 57.00	1-3

2 Summary of Base Operating System Patches

3 Summary of TruCluster Software Patches

Tables

2-1	Updated Base Operating System Patches	2-1
2-2	Summary of Base Operating System Patches	2-1
3-1	Updated TruCluster Software Patches	3-1
3-2	Summary of TruCluster Patches	3-1

About This Manual

This manual contains information specific to Patch Kit-0001 for the Tru64™ UNIX 4.0G operating system and TruCluster™ 1.6 software products. It provides lists of the patches contained in the kit and describes any information you need to know when 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 or 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 Tru64 UNIX operating system patches included in the kit.

Chapter 3 Summarizes the TruCluster software 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 and TruCluster documents:

- Tru64 UNIX and TruCluster *Patch Kit Installation Instructions*
- Tru64 UNIX *Installation Guide*
- Tru64 UNIX *System Administration*
- TruCluster Server *Software Installation*
- TruCluster Server *Administration*
- Any release-specific installation documentation

Reader's Comments

Compaq welcomes any comments and suggestions you have on this and other Tru64 UNIX manuals.

You can send your comments in the following ways:

- Fax: 603-884-0120 Attn: UBPG Publications, ZK03-3/Y32
- Internet electronic mail: readers_comment@zk3.dec.com

A Reader's Comment form is located on your system in the following location:

`/usr/doc/readers_comment.txt`

- Mail:

Compaq Computer Corporation
UBPG Publications Manager
ZK03-3/Y32
110 Spit Brook Road
Nashua, NH 03062-9987

Please include the following information along with your comments:

- The full title of this document.
- The section numbers and page numbers of the information on which you are commenting.
- The version of Tru64 UNIX or TruCluster products that you are using.
- If known, the type of processor that is running the Tru64 UNIX software.

The Tru64 UNIX Publications group cannot respond to system problems or technical support inquiries. Please address technical questions to your local system vendor or to the appropriate Compaq technical support office. Information provided with the software media explains how to send problem reports to Compaq.

Release Notes

This chapter provides information that you must be aware of when working with Tru64 UNIX 4.0G and TruCluster 1.6 Patch Kit-0001.

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. We recommend that this kit not be placed in the `/`, `/usr`, or `/var` file systems because doing so may unduly constrain the available storage space for the patching activity.

- Permanent Storage Space

Up to ~25 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 ~25.7 MB of storage space in `/var/adm/patch` may be required for original files if you choose to install and revert all patches. See the *Patch Kit Installation Instructions* for more information.

Up to ~259 KB of storage space is required in `/var/adm/patch/doc` for patch abstract and README documentation.

A total of ~136 KB of storage space is needed in `/usr/sbin/dupatch` for the patch management utility.

TruCluster Server

- Temporary Storage Space

A total of ~250 MB of storage space is required to untar this patch kit. We recommend that this kit not be placed in the `/`, `/usr`, or `/var` file systems because doing so may unduly constrain the available storage space for the patching activity.

- Permanent Storage Space

Up to ~25 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 ~26 MB of storage space in `/var/adm/patch` may be required for original files if you choose to install and revert all patches. See the *Patch Kit Installation Instructions* for more information.

Up to ~187 KB of storage space is required in `/var/adm/patch/doc` for patch abstract and README documentation.

A total of ~144 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

You can now install patches when a system is in multiuser mode.

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

Although you can now install patches in multiuser mode, Compaq recommends that you bring down your system to single-user mode when you install 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, we recommend that you apply the patches when the system is as lightly loaded as possible.

1.2.2 Automatic Kernel Build

If the patches that are 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.
- Do not reboot the system.

1.2.3 Patch Installation from a Pseudo-Terminal

You can now install patches on the system from a pseudo-terminal (pty) while in single-user mode. To do this, log in to the system as root from a remote location and specify that the patches are to be installed in single-user mode. After all the patch prerequisites are completed, the system goes into single-user mode while it maintains the network connection for the root user. The system then installs the patches.

1.3 Release Note for TruCluster Server

If you are installing only TCR patches, you **MUST** rebuild the kernel and reboot the machine for the changes to take effect. If removing only TCR patches, you **MUST** also rebuild the kernel and reboot the machine for the changes to take effect.

1.4 Release Note for Tru64 UNIX Patch 48.00

If the system configurable parameter `lsm:lsm_V_ROUND_enhanced` is set (value = 1), the enhanced read round robin policy is activated. This new policy stores the last block accessed by the previous I/O request. When returning for another block in round robin (`V_ROUND`) mode, that value is compared to the current read. If it is within a predefined, user-configurable value (`lsm:lsm_V_ROUND_enhance_proximity`) then the same plex is used. Otherwise, the next plex is used as for a normal round robin behavior.

The two new additional tunable parameters are `lsm_V_ROUND_enhanced` set to 0 by default (`V_ROUND_enhanced` read is not activated), and `lsm_V_ROUND_enhance_proximity` is set to 512 by default.

Append to `/etc/sysconfigtab` any tuning changes. Refer to the Tuning notes following for a description of the new `lsm_V_ROUND_enhanced` and `lsm_V_ROUND_enhance_proximity` tunables. These tunables are configured in the `lsm` stanza. For example:

```
lsm:  
lsm_V_ROUND_enhanced = 1  
lsm_V_ROUND_enhance_proximity = 1024
```

Note

If you already have an `lsm` stanza in your `sysconfigtab` file, then just add the two `lsm_V_ROUND` entries.

Tuning

The purpose of this patch is to increase performance with sequential reads. This patch introduces a new enhanced round robin mode where the last block read is now compared to the next block to read and a check is added to see if last block number-next block number is less than or equal to `lsm_V_ROUND_enhance_proximity`. If it is, read from the same plex. This is to attempt to hit the disk cache, and so increase performance.

The relevant tunable variables are as follows:

`sm_V_ROUND_enhanced` This variable activates the new enhanced round robin read policy if it is set to TRUE (1). Otherwise the policy is deactivated. DEFAULT = 0

`lsm_V_ROUND_enhance_proximity` This variable indicates the proximity in which the last read and new read must lie in an attempt to read data from the disk's cache by reading from the same plex. The variable can be adjusted from 0 to 4096. DEFAULT = 512

1.5 Release Note for Tru64 UNIX Patch 57.00

UFS delayed metadata mount option

This new `mount` option allows for disabling synchronous metadata writes on a specified file system. The new mount option is `delayed`.

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 file system corruption after a crash. The trade-off for filesystem integrity, however, is performance. In some cases, such as a file system 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 has two results. One, multiple updates to one block become only one block write as opposed to multiple writes of the same block with traditional synchronous metadata update. Two, 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.

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

Usage

To enable the `delayed` option, run:

```
mount -o delayed <device> <mount point>
```

or

```
mount -u -o delayed <mount point>
```

Summary of Base Operating System Patches

This chapter summarizes the base operating system patches included in Patch Kit-0001.

Table 2–1 lists patches that have been updated.

Table 2–2 provides a summary of patches.

Table 2–1: Updated Base Operating System Patches

Patch IDs	Change Summary
Patches 1.00, 2.00, 3.00, 6.00, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 13.00, 19.00, 20.00, 23.00, 24.00, 25.00, 26.00, 28.00, 31.00, 33.00, 34.00, 35.00, 36.00, 37.00, 39.00, 40.00, 42.00, 43.00, 46.00, 47.00, 48.00, 49.00, 50.00, 51.00, 52.00, 53.00, 56.00, 57.00, 58.00, 59.00, 60.00, 61.00, 62.00, 63.00, 64.00, 67.00, 69.00, 70.00, 73.00, 74.00, 75.00, 76.00, 77.00, 79.00, 80.00, 82.00, 83.00, 84.00, 85.00, 87.00, 88.00	New
Patches 4.00, 5.00	Superseded by Patch 6.00
Patches 14.00, 81.00, 29.00	Superseded by Patch 35.00
Patches 18.00, 32.00, 41.00	Superseded by Patch 57.00
Patches 15.00, 21.00, 22.00, 30.00, 44.00, 54.00, 66.00, 68.00	Superseded by Patch 69.00
Patch 55.00	Superseded by Patch 73.00
Patch 72.00	Superseded by Patch 74.00
Patches 17.00, 45.00, 71.00, 78.00	Superseded by Patch 75.00
Patch 38.00	Superseded by Patch 76.00
Patch 65.00	Superseded by Patch 77.00
Patch 86.00	Superseded by Patch 88.00

Table 2–2: Summary of Base Operating System Patches

Patch IDs	Abstract
Patch 1.00 OSF445CDE-001A	<p>Patch: dtfile ICDE COSE tool does not work</p> <p>State: New</p> <p>This patch fixes a problem in which dtfile ICDE COSE tool does not work when TMPDIR is defined as /ldata/disk_local/tmp. dtfile returns this error:</p> <pre>/ldata/disk_local/tmp/sdtbcbache_AAAaadmma: Cross-device link /ldata/disk_local/tmp/sdtbcbache_BAAaadmma: Cross-device link Floating exception (core dumped)</pre>
Patch 2.00 OSF445CDE-002	<p>Patch: Fix for file permission problem</p> <p>State: New</p> <p>This patch fixes a problem in which file permissions allow any user to write to the /.dt/Trash/.trashinfo file.</p>

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

Patch 3.00 OSF445CDE-003	Patch: CDE does not re-create list of application groups State: New 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 6.00 OSF445DX-003	Patch: Fixes problems with dxaccounts State: New. Supersedes patches OSF445DX-001 (4.00), OSF445DX-002 (5.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem in which the dxaccounts application does not allow users to be added to groups with Group ID lower than the default minimum specified in the General Options dialog.• Fixes the following cli/dxaccounts problems:<ul style="list-style-type: none">– The error message displayed when the Account Manager fails to start due to the detection of an Account Manager lock file (/etc/.AM_is_running) is not clear.– The command uermod -D does not display the Expire date when it is set.– Enabling to change root's login/uid through cli/dxaccounts utilities.• Fixes a problem in which dxaccounts does not allow the system manager to add NIS users when the system is running enhanced security.
Patch 7.00 OSF445X11-001	Patch: ccedilla and Ccedilla characters do not display State: New This patch fixes the Turkish F keyboard problem, where the characters Ccedilla and ccedilla can not be entered from the keyboard directly.
Patch 8.00 OSF445X11-002	Patch: 8-bit characters cannot be entered directly State: New This patch fixes a problem in which some 8-bit characters cannot be entered directly from the keyboard when the Caps Lock setting is on.
Patch 9.00 OSF445X11-003A	Patch: Shared library fix for libDXm State: New This patch fixes a problem in which the svn widget of libDXm.so creates identical backgrounds and foregrounds.
Patch 10.00 OSF445X11-004	Patch: Provides missing compose definitions State: New This patch provides missing compose definitions when in ISO8859-15 based locales for the scaron, Scaron, zcaron, and Zcaron characters.
Patch 11.00 OSF445X11-005A	Patch: Fixes problems with X font server State: New This patch fixes various problems with the X font server and with the X server's interaction with X font servers.
Patch 12.00 OSF445X11-006	Patch: X server may core dump State: New This patch fixes a problem where the X server could core dump or get unaligned access errors when clients used the Multi-Buffering extension.

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

Patch 13.00 OSF445X11-007	Patch: Fixes for PowerStorm 4D10T graphics card State: New This patch corrects the following: <ul style="list-style-type: none">• 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), lines and images sometimes are not drawn correctly in scrolled windows.• Fixes synchronization and drawing problems in the X server for the PowerStorm 4D10T (ELSA Gloria Synergy, SN-PBXGK-BB) graphics card.
Patch 19.00 OSF445-014	Patch: Fixes a problem with the find command State: New This patch fixes a problem with the find command. Find fails to show file names that start with a period.
Patch 20.00 OSF445-015	Patch: OS only looks in slot 0 for primary CPU State: New This patch fixes a problem where the operating system only looks in slot 0 for the primary CPU.
Patch 23.00 OSF445-018	Patch: permask register on Tsunami systems is overwritten State: New This patch corrects a problem in which the permask register on DS10, DS20, ES40, and P1000 systems can be overwritten.
Patch 24.00 OSF445-019	Patch: Fixes a problem in ksh State: New. Supersedes patch OSF445-011 (16.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem in ksh. When the current working directory is / and the command cd .. is entered, the following error message is displayed: ksh: ..: bad directory• Fixes a problem in ksh in which a space after the -p switch would cause the command to fail.
Patch 25.00 OSF445-020	Patch: Fix for mv command State: New This patch corrects the following problems with the mv command: <ul style="list-style-type: none">• An invalid error message when attempting to move files in which the source name is the same as the destination name.• When using mv -i to rename a symlink pointing to a file on a different filesystem owned by a different user, this results in the prompt: Ownership of y will change. Continue?• When moving a file from one file system to another, the mv command will copy the file rather than using the rename() system call, which can result in file loss.
Patch 26.00 OSF445-021	Patch: Fix for restore command failure State: New This patch fixes a problem in which the restore command can fail with the following error: Cannot malloc space for property list

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

Patch 28.00 OSF445-024A	Patch: Adds missing prototype for stime function State: New This patch adds the missing prototype for the stime() function to <sys/time.h>, allowing C++ programs and other software to properly resolve it.
Patch 31.00 OSF445-028	Patch: Fixes a tftpd problem State: New 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 33.00 OSF445-003	Patch: Panic when running Classical IP over lfa ATM driver State: New 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.
Patch 34.00 OSF445-030	Patch: Security (SSRT0636U) 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 35.00 OSF445-031	Patch: Increases length of user names for rsh and rexec State: New. Supersedes patches OSF445-001 (14.00), OSF445-023 (81.00), OSF445-025 (29.00) This patch corrects the following: <ul style="list-style-type: none">• Adds a NULL to the resulting string output of swprintf() calls.• Fixes a problem in libc that affects debugger tracebacks of code containing split procedures.• Fixes a problem where gmtime() was erroneously setting the tzname[0] array.• Increases the length of the user names for rsh and rexec to allow for NT interoperability.
Patch 36.00 OSF445-032A	Patch: Fixes problem with logins in DCE/C2 environment State: New. Supersedes patch OSF445-022A (27.00) This patch corrects the following: <ul style="list-style-type: none">• Corrects a problem of the rsh command displaying a warning message instead of the rsh command output when C2 security is configured.• Fixes a problem with logins in a DCE/C2 environment. You could encounter an error "Bad priority setting" if there is a u_priority setting used in /etc/auth/system/default file.
Patch 37.00 OSF445-033	Patch: quotactl prototype is now POSIX compliant State: New This patch changes the quotactl prototype in /usr/include/ufs/quota.h to meet POSIX standards.
Patch 39.00 OSF445-035	Patch: Fixes problem with NetRAIN devices State: New This patch fixes a problem of NetRAIN devices failing to come up after the rcinet restart command is entered.

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

Patch 40.00 OSF445-036	Patch: Corrects problem of invalid messages in daemon file State: New This patch prevents the "nfsstat: select: Invalid argument" message from appearing in the daemon.log when the server is not available. It also changes the "trymany: servers not responding: RPC: Unable to receive" message to an informational vs an error message.
Patch 42.00 OSF445-038	Patch: Fixes vrestore problems State: New This patch corrects the following vrestore problems: <ul style="list-style-type: none">• A previous patch caused incomplete restores.• 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.• A warning message is displayed and vrestore aborts if it fails to malloc space for a property list.• A message which had been inserted at the end of the message file had the wrong message category (could cause messaging confusion).• 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.• Corrupted property list information could cause an infinite loop.
Patch 43.00 OSF445-039	Patch: Fixes a kernel memory fault State: New This patch fixes a kernel memory fault caused by either of the following conditions: <ul style="list-style-type: none">• 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.• When routine pmap_coproc_exit_notify() modifies the pmaps' coproc_tbi function to be 0, a null pointer, while it is being checked by routine pmap_remove_all().
Patch 46.00 OSF445-041	Patch: Fix for if.h file State: New This patch fixes a typo found in /usr/sys/include/if.h file.
Patch 47.00 OSF445-042	Patch: Fixes problems in Compaq C compiler State: New This patch fixes the following problems in the Compaq C compiler: <ul style="list-style-type: none">• A "virtual memory exhausted" error when compiling the Open Source encryption library OpenSSL.• An optimizer problem in loop unrolling that caused an incorrect result under certain conditions.• Various compiler crashes under certain conditions.
Patch 48.00 OSF445-043	Patch: Performance problem for round robin sequential reads State: New This patch fixes a performance problem for round robin sequential reads on LSM mirrored volumes.

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

Patch 49.00 OSF445-044	Patch: Fixes assembler problem State: New This patch resolves a problem that caused the assembler to flag any identifiers whose length exceeded 1024 characters with an assembly-time error. With this patch, such identifiers are now accepted.
Patch 50.00 OSF445-045	Patch: Prevents vold from dumping core State: New This patch prevents /sbin/vold from dumping core during an execution of a volprint or other query command.
Patch 51.00 OSF445-046	Patch: crontab jobs run multiple times in same minute State: New This patch fixes a problem where some crontab jobs would run multiple times in the same minute.
Patch 52.00 OSF445-047	Patch: genvmunix does not boot on system with Atalla AXL200 State: New This patch fixes a problem where genvmunix does not boot on a system with an Atalla AXL200 card installed.
Patch 53.00 OSF445-048	Patch: Fixes a kernel memory fault in procfs_get_s5_dir State: New This patch fixes a kernel memory fault in procfs_get_s5_dir.
Patch 56.00 OSF445-050	Patch: Fixes panic when deleting a process group State: New This patch fixes a "lock_terminate: lock held" panic when deleting a process group.
Patch 57.00 OSF445-052	Patch: Fixes a race condition in the UBC code State: New. Supersedes patches OSF445-013 (18.00), OSF445-029 (32.00), OSF445-037 (41.00) This patch corrects the following: <ul style="list-style-type: none">• 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.• Fixes a simple_lock time limit exceeded panic due to an SMP race condition in namecache.• Fixes a race condition in the UBC code where a lookup is done on a page being invalidated (freed).• Includes UFS delayed metadata mount option that fixes metadata intensive application performance.
Patch 58.00 OSF445-053	Patch: Fixes problem with btcreate command State: New This patch fixes a problem with btcreate command where default restore fails if disklabel is different. This patch also fixes a btextract character missing problem and extends the robot media changer sleep time for slower media changers.
Patch 59.00 OSF445-054	Patch: Cursor is displayed incorrectly State: New 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.

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

Patch 60.00 OSF445-055	Patch: KMF when type of SCSI device dynamically changes State: New This patch fixes a problem when the type of SCSI device dynamically changes, which can result in a kernel memory fault or memory corruption panic.
Patch 61.00 OSF445-056	Patch: Fixes a problem with the psiop driver State: New Fixes a problem with the psiop driver that causes it to fail when vdump is used. The following error is displayed: vdump : unable to write to device
Patch 62.00 OSF445-057	Patch: Provides latest driver for PowerStorm 4D10T card State: New This patch 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).
Patch 63.00 OSF445-059	Patch: Fixes a hang in shutdown process of system State: New This patch fixes a hang in shutdown process ("shutdown now") of a system when a device has flow control switched off.
Patch 64.00 OSF445-006	Patch: Fixes a kernel memory fault when using ATM State: New This patch fixes a kernel memory fault when using ATM.
Patch 67.00 OSF445-063	Patch: Updates emx Fiber Channel driver to revision 1.22 State: New This patch updates the emx Fiber Channel driver to Revision 1.22, correcting a successive command timeout problem. This error would cause degraded performance.

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

Patch 69.00 OSF445-066	Patch: Fix for kernel memory fault State: New. Supersedes patches OSF445-010 (15.00), OSF445-016 (21.00), OSF445-017 (22.00), OSF445-026 (30.00), OSF445-004 (44.00), OSF445-049 (54.00), OSF445-062 (66.00), OSF445-064 (68.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem where the following can occur during a system panic:<ul style="list-style-type: none">– System calls interrupts.– <code>mpsleep()</code> returns an <code>EINTR</code> error when the <code>panicstr</code> is non-NULL.– An indefinite looping at a very high priority.• Fixes a bug such that when <code>fuser -k</code> is issued on a dismantled NFS mount point in which some process is running, a hang will occur.• Fixes a problem in which operations on NFS files can hang indefinitely.• Fixes a problem that causes corruption in the floating point registers whereby the flag fields <code>nxm_fp_owned</code> are overwritten with 0s.• 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.• Fixes a system panic with panic string: <code>psig: catch not set</code>• 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.• 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.• Fixes a kernel memory fault seen under certain conditions when setting a thread's priority.
Patch 70.00 OSF445-067	Patch: Fix for dbx problems State: New This patch fixes three problems in dbx: <ul style="list-style-type: none">• dbx stack trace is incomplete.• Assignment to a variable would fail after viewing a non-local symbol.• The use of <code>vfork</code> would raise a signal 66.
Patch 73.00 OSF445- OSF445-007	Patch: Adds fix to VMAC functionality when used with NetRAIN State: New. Supersedes patch OSF445-005 (55.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a kernel memory fault in VMAC code <code>if_addnewaddr()</code>.• Adds a fix to VMAC functionality when used with NetRAIN.
Patch 74.00 OSF445-008	Patch: Fixes a panic in <code>in_pcbfree</code> State: New. Supersedes patch OSF445-069 (72.00) This patch corrects the following: <ul style="list-style-type: none">• Corrects a problem with the incorrect ordering of network interfaces which was resulting in network partitions.• Fixes a panic associated with ASE service failover.

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

Patch 75.00 OSF445-079	Patch: Fixes kernel memory fault on smp machine State: New. Supersedes patches OSF445-012 (17.00), OSF445-040 (45.00), OSF445-068 (71.00), OSF445-073 (78.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem with verify. When verify is run on a brand new domain, NFS warnings are displayed even though no NFS related activity is being done.• Fixes a system hang that could last up to a few minutes with large files when performing synchronous IO requests and a flushing loop.• Fixes a problem where, in the output of a ps command, the PAGEIN column reports 0 for all processes.• Patch turns off AdvFS assert which, when turned on, a performance degradation in AdvFS occurs.• A kernel memory fault can occur on an smp machine when one thread is extending a clone frags file and another thread does a stat system call on a file with a frag.
Patch 76.00 OSF445-078	Patch: Corrects problems with fgrep command State: New. Supersedes patch OSF445-034 (38.00) This patch corrects the following: <ul style="list-style-type: none">• Corrects a problem with the fgrep command; when it is used with the -s flag all output is suppressed.• Fixes two problems with fgrep:<ul style="list-style-type: none">– The command fgrep -f searchlist causes the following error message: wordlist too large if the searchlist is too long. In the test case it was 1500 entries.– The command fgrep -f searchlist displays datafiles verbatim if the searchlist has blank lines.
Patch 77.00 OSF445-074	Patch: Fixes SCSI problems State: New. Supersedes patch OSF445-060 (65.00) This patch fixes problems with: <ul style="list-style-type: none">• Continuous resets when an I/O command is causing the resets• Read capacity recovery failure• Bad block replacement (BBR) processing• A simple lock panic.
Patch 79.00 OSF445-072	Patch: Printer fixes State: New. This patch fixes a printing problem where 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 two-second timeout which may cause a job-submit failure on the job-number wrap-around.
Patch 80.00 OSF445-071	Patch: Fix for memx command State: New This patch fixes a problem with the memx command where it improperly handles memory sizes of 2 GB or greater.

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

Patch 82.00 OSF445-080	Patch: Provides enhancements for GS-series platforms State: New This patch provides enhancements for the GS-series platforms. The header information in Hierarchical Switch machine checks was incorrect. The early revisions of PCA hardware do not allow Window 3 DAC for DMA.
Patch 83.00 OSF445CDE-001B	Patch: Fix for dtfile error State: New This patch fixes a problem in which dtfile ICDE COSE tool does not work when TMPDIR is defined as /ldata/disk_local/tmp. dtfile returns this error: /ldata/disk_local/tmp/sdtdbcache_AAAAadmma: Cross-device link /ldata/disk_local/tmp/sdtdbcache_BAAAadmma: Cross-device link Floating exception (core dumped)
Patch 84.00 OSF445X11-003B	Patch: Static library fix for libDXm State: New This patch fixes a problem in which the svn widget of libDXm.so creates identical backgrounds and foregrounds.
Patch 85.00 OSF445X11-005B	Patch: Fix for X server interaction with X font server State: New This patch fixes various problems with the X font server and with the X server's interaction with X font servers.
Patch 87.00 OSF445-024B	Patch: C++ functions do not properly resolve stime function State: New This patch adds the missing prototype for the stime() function to <sys/time.h>, allowing C++ programs and other software to properly resolve it.
Patch 88.00 OSF445-032B	Patch: Fix for bad priority setting error State: New. Supersedes patch OSF445-022B (86.00) This patch corrects the following: <ul style="list-style-type: none">• Corrects a problem of the rsh command displaying a warning message instead of the rsh command output when C2 security is configured.• Fixes a problem with logins in a DCE/C2 environment. You could encounter an error "Bad priority setting" if there was a u_priority setting used in /etc/auth/system/default file.

Summary of TruCluster Software Patches

This chapter summarizes the TruCluster software patches included in Patch Kit-0001.

Table 3–1 lists patches that have been updated.

Table 3–2 provides a summary of patches in Patch Kit-0001.

Table 3–1: Updated TruCluster Software Patches

Patch IDs	Change Summary
Patches 30.00, 33.00, 34.00, 35.00, 36.00, 37.00, 45.00, 48.00	New
Patches 6.00, 15.00, 40.00	Patch 42.00
Patches 2.00, 9.00, 10.00, 5.00, 13.00, 16.00, 17.00, 14.00, 29.00, 31.00, 38.00, 39.00, 47.00, 21.00, 49.00, 32.00	Patch 43.00
Patches 41.00, 44.00	Patch 45.00
Patch 27.00	Patch 48.00
Patch 20.00	Patch 46.00
Patches 22.00, 23.00, 24.00, 25.00, 50.00	Patch 51.00

Table 3–2: Summary of TruCluster Patches

Patch IDs	Abstract
Patch 3.00 TCR160-003	<p>Patch: DRD Permissions May Be Lost</p> <p>State: Existing</p> <p>This patch fixes a problem where DRD permissions could be lost if a service is modified more than once.</p>
Patch 4.00 TCR160-004	<p>Patch: Fix for Kernel Memory Fault On DRD Client Nodes</p> <p>State: Existing</p> <p>This patch fixes a kernel memory fault on the DRD client nodes just as or after the DRD server node has initiated MC2 hub failover.</p>
Patch 7.00 TCR160-010	<p>Patch: Fix for Reliable Datagram API</p> <p>State: Supersedes patch TCR160-001 (1.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none"> Reliable Datagram (RDG) messaging support. RDG: bug fix to the completion queue synchronization protocol.
Patch 8.00 TCR160-011	<p>Patch: doconfig may hang when running in TruCluster environment</p> <p>State: Existing</p> <p>This patch fixes two problems that could cause doconfig to appear to hang when running in a TruCluster environment.</p>
Patch 12.00 TCR160-018	<p>Patch: Fixes problem with Networker displaying characters</p> <p>State: Existing</p> <p>This patch corrects a problem with Networker displaying garbage characters following service names. It occurs when the service name is 8 characters or greater.</p>

Table 3–2: Summary of TruCluster Patches (cont.)

Patch 26.00 TCR160-032	Patch: Fixes <code>rm_update_single_lock_miss</code> panic State: Supersedes patches TCR160-017 (11.00), TCR160-027 (19.00) <ul style="list-style-type: none">Fixes a problem where both nodes in a cluster will panic at the same time with a <code>simple_lock</code> timeout panic.Fixes a kernel memory fault in <code>rm_lock_update_retry()</code>.Fixes a problem which can cause the following panic: <code>panic (cpu 0): rm_update_single_lock_miss: time limit exceeded</code>
Patch 30.00 TCR160-034	Patch: Fix for boot failure on a cluster State: New This patch fixes a problem which caused a boot failure on a cluster with a large number of shared SCSI buses.
Patch 33.00 TCR160-037	Patch: Fix for <code>drdadmin</code> problems State: New This patch fixes various problems with <code>drdadmin</code> to be user friendly.
Patch 34.00 TCR160-038	Patch: Fixes a limitation in <code>ase_reconfig_bus</code> State: New This patch fixes a limitation in <code>ase_reconfig_bus</code> . Now up to 99 buses can be reconfigured with this command.
Patch 35.00 TCR160-039	Patch: LSM disk information not updated in ASE database State: New. Supersedes patch TCR160-030 (28.00) This patch corrects the following: <ul style="list-style-type: none">Fixes a problem that would cause an error from <code>awk(1)</code> when modifying an ASE service that contained a large number of LSM volumes. The error would prevent the service from being properly modified.Fixes a problem where LSM disk information was not properly updated in the ASE database when volumes were removed from a disk service.
Patch 36.00 TCR160-040	Patch: Fix for <code>asedirector</code> hang State: New This patch fixes a problem that could cause an NFS or Disk Service that has a hyphen (-) in the service name to end up unassigned after a disk failure. A side effect of the problem was that the <code>asedirector</code> would hang after the disk failure was corrected.
Patch 37.00 TCR160-041	Patch: <code>clu_ivp</code> does not recognize Emulex adapter State: New This patch fixes a problem where the Emulex Fibre Channel adapter was not recognized by <code>clu_ivp</code> .

Table 3–2: Summary of TruCluster Patches (cont.)

Patch 42.00 TCR160-046	<p>Patch: Processes may get referenced several times</p> <p>State: Supersedes patches TCR160-008 (6.00), TCR160-023 (15.00), TCR160-044 (40.00)</p> <p>This patch corrects the following:</p> <ul style="list-style-type: none">• Fixes a problem in which a cluster node can panic with the panic string "convert_lock: bad lock state".• Corrects a problem in which a failure in the session layer can cause DLM messages to become corrupt resulting in random DLM panic on the receiving member.• Fixes a problem that can cause a TruCluster member to panic during shutdown.• Fixes a bug where sometimes a certain shared sequence number will not be freed after use. It also fixes a problem where certain processes could get referenced several times.
---------------------------	---

Table 3–2: Summary of TruCluster Patches (cont.)

Patch 43.00 TCR160-047A	<p>Patch: Fix for asemgr utility</p> <p>State: Supersedes patches TCR160-002 (2.00), TCR160-009A (9.00), TCR160-016 (10.00), TCR160-007 (5.00), TCR160-021A (13.00), TCR160-024 (16.00), TCR160-025 (17.00), TCR160-022A (14.00), TCR160-033 (29.00), TCR160-035 (31.00), TCR160-042 (38.00), TCR160-043 (39.00), TCR160-051 (47.00), TCR160-031A (21.00), TCR160-053 (49.00), TCR160-036A (32.00)</p> <p>This patch corrects the following</p> <ul style="list-style-type: none">• Fixes two problems in the asedirector:<ul style="list-style-type: none">– An ASE command timeout problem encountered by large ASE services.– An incorrect decision made by the asedirector as a result of a failed inquire services command.• This is a performance improvement in the startup of start scripts. It will reduce the necessary system calls to start the scripts.• Fixes a problem where the Host Status Monitor (asehsm) incorrectly reports a network down (HSM_NI_STATUS DOWN) if the counters for the network interface get zeroed.• Fixes an ASE problem where, under certain circumstances, the service scripts could cause the ASE agent to loop during a start or stop service.• Corrects a problem with member add in a large environment.• Corrects a problem with TruCluster Available Server or Production Server cluster in which services have been started with elevated priority and scheduling algorithm. Under significant load this could lead to intermittent network and cluster problems.• Fixes a problem which caused a service not to start when there was a short network failure. This was seen only with long running stop scripts and special network configurations.• Corrects a problem which causes asemgr to core dump when modifying a single drd service to add more than 200 devices.• Fixes a problem that caused aseagent or asehsm to core dump when starting NFS and Disk Services that contain several LSM volumes.• Fixes a problem where the asemgr will hang as it continuously create and kill multiple directors.• Corrects a problem that causes the ASE director to core dump during initialization.• Corrects a problem where modifying a service with a large number of DRDs will fail and a "could not malloc" message is seen in the daemon.log.• Fixes a problem where the MEMBER_STATE variable always is shown as BOOTING instead of RUNNING. After first installing TCR, there is no way to have scripts know the MEMBER_STATE. This problem is cleared on a reboot.• Corrects a problem in which a network cable failure that corrects within 7 seconds of the failure can leave the services in a bad state.• Fixes a problem that caused the asemgr to get a memory fault when adding multiple services in a row.• Fixes a problem with extraneous compiler warnings about strdup() function calls from ASE.• Fixes a problem that caused the asemgr utility to not run when called from a program that is owned by root and has the setuid bit turned on.
----------------------------	---

Table 3–2: Summary of TruCluster Patches (cont.)

Patch 45.00 TCR160-049	Patch: UFS device name does not display when using asemgr State: New. Supersedes patches TCR160-045 (41.00), TCR160-048 (44.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem that caused the setting of the force unmount option to be incorrectly displayed by the asemgr utility.• Fixes a problem that caused shell errors if an invalid mount option was specified via the asemgr menu.• Fixes a problem that caused the device name for a Unix File System (UFS) to not be displayed when modifying the force unmount option via the asemgr utility.
Patch 46.00 TCR160-050	Patch: Fix for panic caused by using Memory Channel API State: Supersedes patch TCR160-029 (20.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a hang problem in a cluster when two nodes communicate using the mc-api and a third node, not involved in the calculation, is rebooted.• Fixes a problem that can cause a panic in <code>mcs_wait_cluster_event()</code> when using the Memory Channel API.
Patch 48.00 TCR160-052	Patch: Error msg incorrectly logged for cnxmibd State: New. Supersedes patch TCR160-028 (27.00) This patch corrects the following: <ul style="list-style-type: none">• Fixes a problem that can cause the Cluster MIB daemon (cnxmibd) to core dump in Available Server environments.• Fixes a problem which caused an error message to be logged for the cnxmibd even though no error had occurred.
Patch 51.00 TCR160-047B	Patch: asemgr does not run when called by root owned program State: Supersedes patches TCR160-009B (22.00), TCR160-021B (23.00), TCR160-022B (24.00), TCR160-031B (25.00), TCR160-036B (50.00) This patch corrects the following: <ul style="list-style-type: none">• This is a performance improvement in the startup of start scripts. It will reduce the necessary system calls to start the scripts.• Corrects a problem with member add in a large environment.• Corrects a problem which causes asemgr to core dump when modifying a single drd service to add more than 200 devices.• Fixes a problem that caused aseagent or asehsm to core dump when starting NFS and Disk Services that contain several LSM volumes.• Fixes a problem with extraneous compiler warnings about <code>strdup()</code> function calls from ASE.• Fixes a problem that caused the asemgr utility to not run when called from a program that is owned by root and has the <code>setuid</code> bit turned on.
