# Read Before Installing or Updating Workstation Additional Core Enhancements (June 1999)

**HP 9000 Computers** 



B3782-90741 June 1999

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## **Before You Install...**

This Workstation Additional Core Enhancements release consists of two CD-ROMs. The Install/Update/Recovery CD-ROM is the latest version of the install media for HP-UX 10.20 which includes the original HP-UX 10.20 Operating System plus the June 1999 versions of the Additional Core Enhancements (ACE) software and Expert Recovery Tools.

The Workstation Independent Product Release (IPR) CD-ROM contains two depots -- one with on-line diagnostic software for Workstations, the other containing the latest version of the Workstation Quality Pack for HP-UX 10.20 (including all other IPR 10.20 depots). An Instant Information CD is also included (see "Accessing HP-UX Information" below).

### How to Use the HP-UX Media Kit

- 1. Read *Installing or Updating Workstation Additional Core Enhancements for HP-UX 10.20 (June 1999)* (see Documentation section, below).
- 2. Install or update with HP-UX 10.20 Install and Core OS CD (in the Media Kit). See the *Installing* . . . manual (above) for instructions.
- 3. Update your system with the June 1999 Quality Pack (strongly recommended).
- 4. Install applications from the Application CDs, as needed.
- 5. HP also recommends that you install the *Workstation Independent Product Release Media* (including the Diagnostics software depot).

#### **Accessing HP-UX Information**

To access HP-UX information on the HP Instant Information CD, load the CD in the CD-ROM drive. On HP-UX systems, type

```
/usr/sbin/mount -o cdcase
```

then follow the instructions in the file /uxinstall/readme. On a PC, follow the instructions in the file /pcinstal/readme.txt.

Before You Install . . .

### **Web References**

To view Hewlett-Packard Web sites, start here:

http://www.hp.com

To obtain information on HP's Year 2000 Program:

http://www.hp.com/year2000

To obtain information on HP-UX patches from HP Electronic Support Centers:

http://us-support.external.hp.com

http://europe-support.external.hp.com

To obtain security information on HP computer systems:

http://us-support.external.hp.com

http://europe-support.external.hp.com

Send reports of security problems to: security-alert@hp.com.

To obtain information and tools for HP-UX 10.20 to 11.0 transitions:

http://www.software.hp.com/stk

#### **Documentation**

See the following documents for information on the ACE (June 1999) release:

- Known problems for this release and a complete listing of patches are documented in the *Read Before Installing....* (this document).
- Installing and Updating Workstation Additional Core Enhancements for HP-UX 10.20 (June 1999) HP Part No. B3782-90732 gives complete instructions on how to install this release.
- Release Notes (These are found on your system at /usr/share/doc, or on the HP Software Depot Web site.). See these documents for detailed feature information and changes from previous releases.
  - Release Note for Workstation Additional Core Enhancements for HP-UX 10.20 (June 1999). Online as /usr/share/doc/RelNotes10.20ACE.doc.

These Release Notes are cumulative and contain information on previous Additional Core Enhancement releases (June 1998 and earlier).

- To read the Release Notes for the new euro character, see:
   http://www.hp.com/unixwork/euro/release\_notes/index.html
- See the HP Software Depot website for more information about the ACE (June 1999) release at: http://www.software.hp.com.

To view all the latest HP-UX user documentation, visit: http://docs.hp.com.

### **Notes on this Release**

**Bundle Name Change:** The name of the Workstation Quality Pack Bundle has been changed from XSW700QPK1020 to 700QPK1020. If the XSW700QPK1020 bundle is currently on your system and you load the current Workstation Quality Pack (700QPK1020), the previous bundle will be visible in a swlist. It is neither necessary nor desirable to remove the older XSW700QPK1020 bundle.

**Duplicate Patches:** Duplicate patches are present on the ACE (June 1999) Workstation Bundle, Networking Bundle and Quality Pack so these bundles can be loaded and used independently. When loading the Quality Pack, after installing the ACE (June 1999) Workstation Bundle, several NOTE/ERROR messages may be generated and placed in the /var/adm/sw/swagent.log logfile in one of the following three forms:

NOTE: The fileset "PHSS\_XXXXX.PHSS\_XXXXX,r=B.10.00.00.AA" is already installed. If you wish to reinstall this fileset, change the "reinstall" option to "true".

NOTE: The "checkinstall" script for "PHKL\_XXXXX" gave an "exclude" return (exit code "3"). The script location was "/SD\_CDROM/700QPK1020/catalog/PHKL\_XXXX/pfiles/checkinstall".

ERROR: The patch PHNE\_XXXXX is already installed on the system. To reinstall this patch, deinstall it first before attempting to reinstall it.

Despite these errors, the patches are installed. There is no need to reinstall these patches. In fact, if they ARE reinstalled it will disable your ability to rollback to the previous patch level for that patch.

## **Known Problems**

The following are the known problems only for this Workstation Additional Core Enhancements (June 1999) release.

### 1. Symptom: SAM driver description fields are missing.

**Cause:** When using SAM to add a driver to the kernel, the "description" field for some of the ACE (June 1999) drivers is missing.

The drivers that do NOT have a description are:

Driver	Description
SCentIf	Built-in Parallel Interface
ccio2	I/O Adapter
hcd	Built-in USB Interface Host Controller Driver
hid	USB Human Interface Driver
hub	USB Interface Root Hub Driver
lba	Local PC Bus Module
side	Superio IDE Driver
siofdc	Built-in Floppy Driver
sioflop	HP PC FDC Floppy Driver

**Action:** Missing fields and descriptions will be included in a future SAM patch. Check the HP Atlanta Patch Hub.

## 2. Symptom: After cold install, dhcpdb2conf gets error.

**Cause:** After cold installing, the system reboots for the final time and runs set\_parms to setup networking. The system received its IP through a DHCP server. Right after booting and right before set\_parms is run, the following message is displayed:

/sbin/auto\_parms, checking network for DHCP
server (see /etc/auto\_parms.log)

dhcpdb2conf(ERR): Couldn't access
/etc/resolv.conf for writing

After this, set\_parms runs and the system is normal.

**Action:** This is an extraneous error which can be ignored.

#### 3. Symptom:

#### **Cannot Create A Usable Kernel on NFS Diskless Clients.**

**Cause**: Loading the ACE (June 1999) and Quality Pack bundles in an NFSD environment may result in an unbootable kernel. This is because the swcluster(1M) utility forces the reinstall=true option when software is installed in the NFSD environment. In this case, the reinstall breaks the dependencies in a Kernel Base patch (PHKL\_99136) which results in a bad kernel.

**Action**: Download the latest version of PHKL\_99136 from the ESC or from the HP Atlanta Patch Hub and install it AFTER loading both the Quality Pack and ACE (1999) patch bundles. Then reboot.

#### 4. Symptom:

# Support Tool Manager (STM) PCI Information module will not provide any information with the current diag1 driver.

Cause: When the June 1999 IPR/Diagnostic Media is installed with the ACE (June 1999) Workstation release, the Support Tool Manager (STM) PCI Information module will not provide any information with the current diag1 driver. Running a PCI Information module on any PCI interface card will result in the tool ending with an unsuccessful status. The message in the tool activity log will indicate that the diag1 driver needs to be updated.

**Action:** The correct diag1 driver can be obtained with patch PHKL\_17589 (or a superseding patch).

### 5. Symptom:

### **Product(s) not contained in a bundle.**

**Cause:** After installing ACE (June 1999), or receiving an Ignited ACE system, WITHOUT the ONC+ Networking Enhancements (the April 1998 B6378CA bundle), there are six patches and one product from the Networking bundle that are installed anyway. You may notice the following message if you run swlist:

# Product(s) not contained in a Bundle:

#### **Known Problems**

B6378CA\_TEXT ACE.199906.01 Title for Product B6378CA\_TEXT PHCO\_14645 B.10.00.00.AA libc cumul. header file patch PHCO\_15344 B.10.00.00.AA df(1M) cumulative patch PHCO\_16723 B.10.00.00.AA libc cumulative patch PHKL\_15185 B.10.00.00.AA vasusage, ACE2 bundle patch PHKL\_15240 B.10.00.00.AA Header file conformance for types .h and unistd.h

PHKL\_8693 B.10.00.00.AA sys/time.h fix for select(2)/C++ defects

These products/patches are "unbundled," that is, not contained within a bundle currently installed on your system. They belong in the Networking bundle.

**Fix/Workaround:** None. This message occurs only on systems without ONC+ Networking.

#### 6. Symptom:

# Executing dd(1) on a CD using raw device and 8K blocks results in error.

**Cause:** There is a known problem in the IDE/ATAPI CD-ROM driver for the ACE (June 1999) release which causes problems when a dd(1) command is executed with a block size of 8K.

**Action:** When using dd(1) to read a CD-ROM on the internal drive on the HP VISUALIZE Model B1000, C3000 and J5000 Workstations, specify a block size of 2K when using the character device file for the CD-ROM drive. If it is necessary to use a block size other than 2K, use the block device file for the CD-ROM drive with dd(1).

#### 7. Symptom:

#### HP SAM does not list IDE floppy devices.

**Cause:** The SAM "Disks and File Systems" screen, which lists all disk drives, CD-ROM drives and floppy drives, does not list Model B1000, C3000 and J5000 Workstation IDE floppy drives.

**Action:** Refer to the mediainit(1) man page for instructions on how to format floppy disks from the command line.

### 8. Symptom:

#### lanadmin(1M) returns incorrect station address.

**Cause:** When run interactively, the current version of lanadmin(1M) will return an incorrect permanent (factory) station address of the interface corresponding to NetMgmtID.

**Action:** To obtain the correct address, run lanscan(1M). If your system or application programmatically depends on this address, use the output from lanscan(1M) for the appropriate values. See the man page for lanadmin(1M) for more information. This problem will be fixed in a future patch.

#### 9. Symptom:

#### Spurious messages in swagent.log file.

**Cause:** After cold installing the Workstation ACE (June 1999) software, the /var/adm/sw/swagent.log file may contain:

NOTE: The PowerShade product (fileset "SURF3D-RUN") is not on this system at the time this product is being installed. Without PowerShade, HP-PEX can only render wireframe images. See the "Release Information" section of the document, "Read Me Before Installing or Using HP-PEX," for additional information.

/var/ncs: No such file or directory

chmod: can't access /var/ncs

WARNING: Failed to modify attributes for "/var/ncs"

**Action**: Despite this spurious message, the swinstall session successfully completes. You may ignore the warning message.

#### 10. Symptom:

#### POSIX shell interrupt problem.

**Cause:** The keyboard on HP VISUALIZE Multiprocessor Workstations appears to "hang" and keystrokes are not displayed on the graphics monitor. This occurs when using the Integrated Terminal Emulator (that is, not running X) and sending an interrupt during the execution of a program that outputs characters to the monitor. For example, if you press Ctrl c while a program such as /etc/ping or /usr/sbin/ping is running.

For this to happen, your system must have multiple processors with all processors enabled and you must also be using the default POSIX shell (/sbin/sh).

**Action:** Reset the shell by pressing the Pause/Break key. Any buffered keystrokes are processed after Pause/Break is pressed.

HP will produce a patch to fix this problem. In the meantime, you can avoid the problem by using a shell other than the default POSIX shell.

#### **Known Problems**

## 11. Symptom:

## Using SAM to roll back to previous kernel parameters.

**Cause:** If, after installing the June 1999 ACE release on your system, you wish to return to a previous set of kernel parameters, do not use SAM to roll back to the old parameters. This will create a new kernel that is unbootable.

**Action:** To recover a previous set of parameters, interact with the IPL at boot time and use the previous kernel, vmunix.prev.

# **Inadvertent Detaching of Keyboard or Mouse**

CAUTION: If you inadvertently unplug either the mouse or keyboard from this system while it is running, you may have to re-start the X-Server without the benefit of either (or both) of these devices.

If the above happens, one alternative is to turn off power to the machine, re-attach and seat all connections and then turn the power back on. However, if cycling the power is not possible or desirable, please follow these instructions to re-start the X-Server.

# If the mouse is mistakenly unplugged (and the keyboard is still functional):

- 1. Re-attach the mouse (use the special "tether" clip on the back of the computer to hold the cable which prevents the connector from being inadvertently disconnected in the future).
- 2. Press Alt+Tab to toggle between and close all open windows and applications
- 3. Press Alt+Tab until you are in the CDE menu bar and use the left or right arrow keys to move between CDE controls.
- 4. When the EXIT control is highlighted, press Enter. This will log you out of the CDE environment. The CDE login screen will appear and the mouse should be functional again.

# If the keyboard becomes detached (and the mouse is still functional):

- 1. Re-attach the keyboard (use the special "tether" clip on the back of the computer to hold the cable which prevents the connector from being inadvertently disconnected in the future).
- 2. Use the mouse to close all windows/applications (all except previously saved work will be lost).
- 3. Click the left-mouse button on the EXIT control on the CDE menu bar. This will log you out of the CDE environment. The CDE login screen will then appear and the keyboard should be functional again.

OR

1. Use the mouse to close all open windows/applications.

#### **Inadvertent Detaching of Keyboard or Mouse**

- 2. Click the right mouse button in an open space on the desktop.
- 3. Select Log Out... from the menu which appears. This will log you out of the CDE environment. The CDE login screen will then appear and the keyboard should be functional again.

# If both the mouse and the keyboard are detached and are non-functional:

- Re-attach both devices (use the special "tether" clip on the back of the computer to hold the cable which prevents the connector from being inadvertently disconnected in the future).
- 2. rlogin to the affected machine from another workstation.
- 3. From that workstation, execute the following command:

```
ps -ef | grep X
```

- 4. Look for a line that starts with: /usr/bin/X11/X... and note the process id (PID) number of that process.
- 5. Execute the following command:

```
kill -SIGHUP <PID_number_of_X>
```

This will kill the process and log you out of the CDE environment. The CDE login screen will then appear and the keyboard and mouse should be functional again.

Workstation Additional Core Enhancements (June 1999) Software

Patch Name	Description
PHCO_10947	Cumulative libHcurses patch
PHCO_13952	Upgrade utilities for B180, C200, J2240
PHCO_14039	Set_parms year 2000 patch
PHCO_15384	iconv(1) methods library cumulative patch
PHCO_16591	fsck_vxfs(1M) cumulative patch
PHCO_16724	lpspool cumulative patch for HPDPS
PHCO_16752	HPDPS cumulative patch
PHCO_17352	ISO8859-15 locales src, binary
PHCO_17353	ISO8859-15 converter tables
PHCO_17389	LVM commands cumulative patch
PHCO_17555	mediainit sioflop driver support
PHCO_17585	NetInstall for ACE June 1999
PHCO_17632	USB hot attach/detach daemon patch
PHCO_17633	USB & floppy support patch
PHCO_17634	itemap(1M) for USB keyboards
PHCO_17636	Release Notes cumulative patch
PHCO_17654	64-bit enablement patch
PHCO_17828	diskinfo support for class "floppy"
PHCO_17839	ITE_* terminfo files patch
PHCO_17871	Cumulative SAM/ObAM Patch
PHKL_10759	hpux(1m) boot loader can't boot over PCI LAN

Patch Name	Description
PHKL_12339	VxFS (JFS) fsck fix and mount perf. improve
PHKL_12513	Enable MP on systems faster than 214 MHz
PHKL_14852	PC floppy cumulative patch
PHKL_15282	Diag1 change for PCI Info. tool under STM
PHKL_16750	SIG_IGN/SIGCLD,LVM,JFS,PCI/SCSI cumulative patch
PHKL_16959	Physical dump devices configuration patch
PHKL_17012	LOFS cumulative patch
PHKL_17253	Correct process hangs on ufs inodes
PHKL_17499	Data corruption,diaglogd prob,drv log
PHKL_17637	USB Driver patch
PHKL_17638	IDE/ATAPI CDROM patch
PHKL_17640	NFS diskless client kernel patch
PHKL_17639	WSIO SCSI cumulative patch
PHKL_17641	Kernel Parameter Values Enhancement
PHKL_17644	Enable Superio Parallel interface
PHKL_17645	Enable Superio Core Interfaces
PHKL_17646	ccio2 IO adapter, lba PCI bus bridge
PHKL_17649	PCXW processor support
PHKL_17651	Softpower cumulative patch
PHKL_17653	Perf. imp. for TLB purge on 2.0 processors
PHKL_17655	Enable 64 bit Core SCSI
PHKL_17656	GSC to PCI, PCI to PCI bridge cum. patch
PHKL_17657	Enable install kernel utsname
PHKL_17658	SuperIO floppy driver patch

Patch Name	Description
PHKL_17714	Correct thrashing algorithm & FS process hang
PHKL_17835	New graphics, ITE USB, cumulative
PHKL_17837	New audio h/w support + cumulative
PHNE_10770	dhcpclient for 100BT lan
PHNE_16999	LAN products cumulative Patch
PHNE_17096	Cumulative ARPA Transport patch
PHNE_17642	Serial,Mux,Pty cumulative patch
PHNE_17643	CORE PCI 100Base-T cumulative patch
PHSS_14731	HP C++ core library components
PHSS_15380	ld(1) and som tools cumulative patch
PHSS_15391	dld.sl(5) cumulative patch
PHSS_16585	HP aC++ runtime libraries (aCC A.01.18)
PHSS_16690	LIBCL cumulative patch
PHSS_17145	Xserver cumulative patch
PHSS_17146	3D Common Runtime patch
PHSS_17147	PEX 5.1/Starbase/Hardcopy Runtime patch
PHSS_17331	X/Motif Runtime Jan 99 Periodic Patch
PHSS_17332	Delta XClients Jan 99 Patch
PHSS_17463	JSE patch (USB keyboards support)
PHSS_17464	KSE patch (USB keyboards support)
PHSS_17465	SSE/TSE patch (USB keyboards support)
PHSS_17534	X11R6 Font Server Jan. 99 cumulative Patch
PHSS_17554	AudioSubsystem Feb.1999 Patch
PHSS_17560	Delta CDE msg catalog Feb. 99 Patch
PHSS_17566	CDE Runtime Feb 99 Patch

## **Quality Pack Patches**

Patch Name	Description
PHCO_7892	Config fails with library table overflow
PHCO_8009	Make audusr(1M) more efficient
PHCO_8246	SAM to read terminal control database
PHCO_8247	SAM update terminal control database
PHCO_8621	10.20 xargs patch - allow '-' as argument
PHCO_8696	expr(1) match operation return value
PHCO_8788	nice(1) patch
PHCO_8915	Patch for last(1)
PHCO_8927	stty(1) patch to fix -g option
PHCO_8934	jfs fscat large offset patch
PHCO_8935	Fix for vxfs volcopy with LFS disk
PHCO_9508	Cumulative kermit(1) patch
PHCO_9533	gencat(1) cumulative patch
PHCO_9534	dumpmsg(1) cumulative patch
PHCO_9535	findmsg(1) cumulative patch
PHCO_9597	chfn(1) cumulative patch
PHCO_9602	chsh(1) cumulative patch
PHCO_10124	date(1)
PHCO_10175	libc year2000 white paper
PHCO_10272	Cumulative fixes for vipw
PHCO_10295	Allow umount disabled vxfs snapshot FS
PHCO_10578	extendfs_hfs fix for very large file sys.
PHCO_10663	HP-UX cut (1) cumulative patch
PHCO_10947	Cumulative libHcurses patch

Patch Name	Description
PHCO_11214	pw_id_map corruption & getspwent loop
PHCO_11436	localedef(1) patch
PHCO_11437	ed(1) patch
PHCO_11647	HP-UX Upgrade Transition links patch
PHCO_11715	VME Configuration Program
PHCO_12097	Cumulative newgrp(1) patch
PHCO_12140	Patch cleanup utility
PHCO_12236	Cumulative SAM trusted user patch
PHCO_12355	acctcms(1m) patch
PHCO_12435	fsck_hfs(1M) cumulative patch
PHCO_12512	Fixes incorrect output of ioscan
PHCO_13084	awk(1) cumulative patch
PHCO_13451	[ef]grep(1) cumulative patch
PHCO_13544	Cumulative patch for ls(1) utf8 changes
PHCO_13667	ex(1),vi(1),expreserve(1) cum. patch
PHCO_13734	passwd(1) cumulative patch
PHCO_13832	quota(1) cumulative patch
PHCO_13913	Cumulative login patch
PHCO_13952	Upgrade utilities for B180, C200, J2240
PHCO_14039	Set_parms year 2000 patch
PHCO_14214	Cumulative vxdump patch
PHCO_14249	libcur_colr patch
PHCO_14258	Cumulative su patch
PHCO_14306	top(1) cumulative patch
PHCO_14378	mkboot(1M) and rmboot(1M) patch

Patch Name	Description
PHCO_14454	tztab(4) cumulative patch
PHCO_14598	Patch for lif commands
PHCO_14645	libc cumulative header file patch
PHCO_14967	sar(1M) cumulative Y2K patch
PHCO_15218	setup(1M) Year 2000 fix(Y2K
PHCO_15224	Locales Y2K patch
PHCO_15262	Cumulative patch for find(1)
PHCO_15336	tar(1) cumulative patch
PHCO_15384	iconv(1) methods library cum. patch
PHCO_15453	Cumulative PFS patch
PHCO_15468	sed(1) cumulative patch
PHCO_15833	sort(1) cumulative patch
PHCO_16031	fbackup (1M)/frecover (1M) cum. patch
PHCO_16194	mc(1m) cumulative patch
PHCO_16205	asa(1) cumulative patch
PHCO_16235	mount(1M) cumulative patch
PHCO_16340	Disk Array Utilities w/AutoRAID Mgr.
PHCO_16363	ksh(1) cumulative patch
PHCO_16591	fsck_vxfs(1M) cumulative patch
PHCO_16723	libc cumulative patch
PHCO_16724	lpspool subsystem cumulative patch
PHCO_16734	POSIX shell cumulative patch
PHCO_16752	HPDPS cumulative patch
PHCO_16809	du(1) cumulative patch
PHCO_16874	umount(1) cumulative patch

Patch Name	Description
PHCO_16877	pax(1) cumulative patch
PHCO_16923	make(1) cumulative patch
PHCO_16961	Xcurses library cumulative patch
PHCO_16964	Year 2000 rcs(1) cumulative patch
PHCO_17075	Year 2000 cumulative SCCS(1) patch
PHCO_17187	csh(1) cumulative patch
PHCO_17189	useradd(1M) cumulative patch
PHCO_17218	Cum. fix - SAM convert /unconvert
PHCO_17226	Cumulative mount_hfs(1M) patch
PHCO_17240	10.10 10.20 patch for libportnls.a
PHCO_17275	savecore(1M) cumulative patch
PHCO_17389	LVM commands cumulative patch
PHCO_17552	Year 2000 cumulative cron/at/crontab
PHCO_17555	mediainit sioflop driver support
PHCO_17585	NetInstall for ACE June 1999
PHCO_17630	Year 2000 nroff(1) cumulative patch
PHCO_17633	USB & floppy support patch
PHCO_17806	Year 2000 HP-UX O S Patch Tool
PHCO_17871	Cumulative SAM/ObAM Patch
PHKL_8376	Fix vmtrace bug
PHKL_8693	sys/time.h fix for select(2)/C++ defects
PHKL_8779	panic on GSC/HSC MP machines on kernel semaphore
PHKL_9270	Fix for current path name in proc/thread
PHKL_9940	VxFS fsadm resize fails when growing >2Gb
PHKL_10163	EBUSY err if pgrp chg'd after async open

Patch Name	Description
PHKL_10460	Fix for pfdat page unlocking
PHKL_10759	hpux(1m) boot loader can't boot over PCI LAN
PHKL_10801	fuser(1M) misses proc's blocked on fifo open
PHKL_12339	VxFS (JFS) fsck fix & mount perf. improve.
PHKL_12447	SystemV semaphores cumulative patch
PHKL_12513	Enable MP on systems faster than 214 MHz
PHKL_13611	Message queue hang
PHKL_14282	select() performance; process hang
PHKL_14288	Illegal vnode op, bad dir on CD_ROM panic
PHKL_14375	Data page fault from lpmc on PA 2.0 sys
PHKL_14852	PC floppy cumulative patch
PHKL_15061	Perf. improvement for apps using pipes
PHKL_15185	vasusage, ACE 2 bundle cum. patch
PHKL_15240	Header file conf. for types.h and unistd.h
PHKL_15292	VME Services Patch
PHKL_15952	VxFS Quota/Attr.panic during log replay
PHKL_15996	disquota panic while running sendmail
PHKL_16300	vmstat(1) support: fix -z, count blocked proc's
PHKL_16498	UFS disk leak/UFS small mmap file hang
PHKL_16750	SIG_IGN/SIGCLD, LVM, JFS, PCI/SCSI cumulative patch
PHKL_16869	Datapage fault - moving directories in HFS
PHKL_16918	JFS corruption, stack overflow panic
PHKL_16959	Physical dump devices configuration
PHKL_17012	LOFS cumulative patch
PHKL_17059	proc_open synchronization fixes

Patch Name	Description
PHKL_17253	Correct process hangs on ufs inodes
PHKL_17334	Fix device swap problems
PHKL_17499	Data corruption, diaglogd prob, drv log issue
PHKL_17640	NFS diskless client kernel patch
PHKL_17658	unofficial_test_patch floppy driver patch
PHKL_17714	Correct thrashing algorithm & FS process hang
PHKL_17716	VxFS (JFS) mount, fsck cumulative changes
PHKL_17835	New graphics, ITE USB, cumulative
PHKL_17837	New audio h/w support + cumulative
PHNE_6190	Cumulative ocd(1M) patch
PHNE_7671	telnet(1) binary negotiation problem
PHNE_8421	nettune for so_qlimit_max
PHNE_9504	arp general patch
PHNE_9860	Megapatch for elm(1)
PHNE_10043	Cumulative talk patch
PHNE_10770	dhcpclient for 100BT lan
PHNE_11017	rbootd cumulative patch + XTERM300
PHNE_11019	NTPv3.5 timeservices upgrade +utilities
PHNE_12190	rdpd general patch
PHNE_12492	ifalias command patch
PHNE_12665	tftpd(1M) patch
PHNE_13194	gated(1M) cumulative patch
PHNE_13413	Kernel portion of Telnet cumulative patch
PHNE_13414	Cumulative telnetd(1M) patch
PHNE_13597	ftpd(1M) and ftp(1M) cumulative patch

Patch Name	Description
PHNE_13619	r-commands cumulative mega-patch
PHNE_14041	sendmail(1m) 8.8.6 cumulative patch
PHNE_14042	vacation patch
PHNE_14617	BIND 4.9.7 components
PHNE_14975	Streams PTY accumulative patch
PHNE_15159	nsswitch.conf patch for automounter
PHNE_15202	Streams cumulative patch (incl. XTI/TLI)
PHNE_15287	ppl general patch
PHNE_15544	kftpd and kftp patch
PHNE_16188	ping general patch
PHNE_16298	traceroute general patch
PHNE_16692	NetTL, Nettladm cumulative patch
PHNE_16832	inetd(1M) cumulative patch
PHNE_16855	mailx(1) cumulative patch
PHNE_16924	NFS Kernel gen. release & performance
PHNE_16999	LAN products cumulative Patch
PHNE_17061	EISA FDDI B.10.20.0[1-5] cum. patch
PHNE_17062	HSC FDDI B.10.20.0[1-6] cum. patch
PHNE_17096	Cumulative ARPA Transport patch
PHNE_17098	NFS/NIS cumulative megapatch
PHNE_17123	Cumulative bootpd/DHCP patch
PHNE_17642	Serial,Mux,Pty cumulative patch
PHNE_17643	CORE PCI 100Base-T cumulative patch
PHSS_7754	VUE MSG catalog patch - Asian locales
PHSS_8629	MSG catalogs for multi-byte locales

Patch Name	Description
PHSS_8660	Nov96 Periodic patch for SharedPrint
PHSS_9397	HP_UX VM for Java Environment
PHSS_11392	libhppa.a Overflow (+z) problem
PHSS_11482	SD-OV/A.01.02 SD-UX/B.10.20 cum. patch
PHSS_11749	Core Screencapture Jul 1997 periodic patch
PHSS_12887	HP-VUE to CDE Migration Tools Nov 97
PHSS_13172	HP Vue 3.0 Jan98 Periodic Patch
PHSS_14731	HP C++ core library comp. (A.10.36)
PHSS_15273	datebook Year 2000 patch
PHSS_15314	freedisk tool Year 2000 patch
PHSS_15380	ld(1) and som tools cumulative patch
PHSS_15389	10.01 10.10 10.20 MILLI cum. patch
PHSS_15391	dld.sl(5) cumulative patch
PHSS_16585	HP aC++ runtime libraries (aCC A.01.18)
PHSS_16648	Receiver Services Oct. 1998 Patch
PHSS_16690	LIBCL cumulative patch
PHSS_17122	Imaging Subsytem Dec. 1998 Patch
PHSS_17145	Xserver cumulative patch
PHSS_17146	3D Common Runtime patch
PHSS_17147	PEX 5.1/Starbase/Hardcopy Runtime
PHSS_17152	OpenGL 1.1 Runtime patch
PHSS_17331	X/Motif Runtime Jan. 99 Periodic Patch
PHSS_17332	Delta XClients Jan. 99 Patch
PHSS_17534	X11R6 Font Server Jan. 99 cum. patch

Patch Name	Description
PHSS_17554	AudioSubsystem Feb. 1999 Patch
PHSS_17560	Delta CDE msg catalog Feb. 99 Patch
PHSS_17566	CDE Runtime Feb. 99 Patch

Networking Additional Core Enhancement Patches

Patch Name	Description
PHCO_13838	tar(1) cumulative patch
PHCO_13839	fbackup (1M)/frecover (1M) cum. patch
PHCO_13840	Cumulative patch for find(1)
PHCO_13841	Patch for chmod(1)
PHCO_13842	Enhanced bdf(1M) to support AutoFS
PHCO_13844	Enhanced du(1) to support NFSv3
PHCO_13845	fsclean(1M) support for NFSv3
PHCO_13846	/sbin/is_local_root support for NFSv3
PHCO_13847	mount(1M) cumulative patch
PHCO_13848	mountall(1M) supp. NFSv3 & CacheFS
PHCO_13849	umount(1M) support for NFSv3
PHCO_13850	umountall(1M) support for NFSv3
PHCO_13851	Docs for Networking ACE (April 1998)
PHCO_14645	libc cumulative header file patch
PHCO_15344	df(1M) cumulative patch
PHCO_16591	fsck_vxfs(1M) cumulative patch
PHCO_16723	libc cumulative patch
PHCO_17389	LVM commands cumulative patch
PHKL_8693	sys/time.h fix for select(2)/C++ defects

Patch Name	Description
PHKL_12339	VxFS (JFS) fsck fix & mount perf. imp.
PHKL_15185	vasusage, ACE 2 bundle cum. patch
PHKL_15240	Header file conform. types.h & unistd.h
PHKL_16750	SIG_IGN/SIGCLD,LVM,JFS,PCI/SCSI cumulative patch
PHKL_16959	Physical dump dev. configuration patch
PHKL_17012	LOFS cumulative patch
PHKL_17253	Correct process hangs on ufs inodes
PHNE_13833	NFS Kernel gen. release & performance
PHNE_13835	NFS/NIS cumulative megapatch
PHNE_13836	nsswitch.conf patch for automounter
PHNE_13837	NetTL patch for NFSv3 functionality
PHNE_17096	Cumulative ARPA Transport patch