

HP-UX 11i Version 2 December 2007

Release Notes

Operating Environments Update Release

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Publication History

This document is part of a series. Each document in the series describes what is new, changed, deprecated, or obsoleted since the previous release of HP-UX 11i v2 (or, in the case of the initial release, since HP-UX 11i v1.6).

For the most recent documents in this series, see the HP-UX 11i v2 documentation at <http://www.docs.hp.com/hpux/os/11iV2>. Documents in this series are also available on the Instant Information media.

To ensure that you receive any new editions, you should subscribe to the appropriate product support service. See your HP sales representative for details.

Current Document in This Series

- *HP-UX 11i Version 2 December 2007 Release Notes*
December 2007, Edition 1, MPN 5992-1968

Previous Documents in This Series

- *HP-UX 11i Version 2 June 2007 Release Notes*, Edition 2, MPN 5992-2872
- *HP-UX 11i Version 2 June 2007 Release Notes*, Edition 1, MPN (retired and replaced by Edition 2)
- *HP-UX 11i Version 2 September 2006 Release Notes*, Edition 1, MPN 5991-5535
- *HP-UX 11i Version 2 June 2006 Release Notes*, Edition 1, MPN 5991-5320
- *HP-UX 11i Version 2 March 2006 Release Notes*, Edition 2, MPN 5991-6741
- *HP-UX 11i Version 2 March 2006 Release Notes*, Edition 1, MPN (retired and replaced by Edition 2)
- *HP-UX 11i Version 2 December 2005 Release Notes*, Edition 1, MPN 5991-2710
- *HP-UX 11i Version 2 May 2005 Release Notes*, Edition 1, MPN 5991-1101
- *HP-UX 11i Version 2 September 2004 Release Notes*, Edition 2, MPN 5992-2852
- *HP-UX 11i Version 2 September 2004 Release Notes*, Edition 1, MPN (retired and replaced by Edition 2)
- *HP-UX 11i Version 2 March 2004 Release Notes*, Edition 1, MPN 5990-6739
- *HP-UX 11i Version 2 Release Notes* (October 2003) Edition 3, MPN 5992-2854

- *HP-UX 11i Version 2 Release Notes* (October 2003) Edition 2, MPN (retired and replaced by Edition 3)
- *HP-UX 11i Version 2 Release Notes* (September 2003), Edition 1, MPN (retired and replaced by Edition 2)

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Or, use the form at the following Web site to send us feedback:

<http://docs.hp.com/en/feedback.html>

Typographic Conventions

We use the following typographical conventions.

<i>audit(5)</i>	An HP-UX manpage. <i>audit</i> is the name and 5 is the section in the <i>HP-UX Reference</i> . On the Web and on the Instant Information media, it may be a hot link to the manpage itself. From the HP-UX command line, enter “man <i>audit</i> ” or “man 5 <i>audit</i> ” to view the manpage. See <i>man(1)</i> .
<i>Book Title</i>	The title of a book. On the Web and on the Instant Information media, it may be a hot link to the book itself.
<i>Emphasis</i>	Text that is emphasized.
Emphasis	Text that is strongly emphasized.
ComputerOut	Text displayed by the computer.
Command	A command name or qualified command phrase.
Computer	Computer font indicates literal items displayed by the computer. For example: <code>file not found</code>
Filename	Text that shows a filename and/or filepath.
UserInput	Commands and other text that you type.
<i>Variable</i>	The name of a variable that you may replace in a command or function or information in a display that represents several possible values.
[]	The contents are optional in formats and command descriptions.
{ }	The contents are required in formats and command descriptions. If the contents are a list separated by , you must choose one of the items
...	The preceding element may be repeated an arbitrary number of times.
	Separates items in a list of choices.

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1 Overview of the Release Notes

What is in This Chapter?

This chapter will help you use these release notes along with related HP-UX documentation effectively. The following topics are covered in this overview:

- “What is the Purpose of the HP-UX 11i Version 2 December 2007 Release Notes?” (page 20)
- “Where Should I Begin?” (page 21)
- “Locating Release Notes for Previous Versions of HP-UX” (page 22)
- “Other Sources of Information about This Release” (page 23)
- “What is in the Remaining Chapters?” (page 25)

What is the Purpose of the HP-UX 11i Version 2 December 2007 Release Notes?

This document is part of a series. Each document in the series describes what is new, changed, deprecated, or obsoleted since the previous release of HP-UX 11i v2 (or, in the case of the initial release, since HP-UX 11i v1.6).

The *HP-UX 11i Version 2 December 2007 Release Notes* describes what is new, has changed, or has been deprecated or obsoleted in HP-UX 11i v2 since the HP-UX 11i v2 June 2007 Operating Environment update.

As with other HP-UX release notes, the *HP-UX 11i Version 2 December 2007 Release Notes* does not completely document all the features of this release. Instead, it contains high-level information and pointers to more detailed operating system and product-specific documentation. Where appropriate, it also notes changes in the support of products. These release notes generally apply only to features that are delivered on the HP-UX 11i v2 Operating Environments (OE) media and, where specified, the Software Pack (SPK) media.

For pointers to product-specific release notes, see the individual products documented elsewhere in this document. Additional product-specific release notes files are often located in the `/opt` directory, in sub-directories named `[name]/newconfig/RelNotes` (where *name* represents the name of the product).



NOTE: The name of the initial HP-UX 11i v2 release was “HP-UX 11i Version 2.” Unlike its subsequent updates, it does not have a date in its name, although we may sometimes note parenthetically that it was released in October 2003.

Where Should I Begin?

This book is organized in such a way that you need only read Chapter 3: “What is New at a Glance” (page 39) for a quick overview of what is new, has changed, and has been deprecated or obsoleted in the current and previous releases of the HP-UX 11i v2 Operating Environments (OE) and Software Pack (SPK).

The section “What is New in the December 2007 Release?” (page 40), in particular, will give you a general overview of how this release differs from the June 2007 release of HP-UX 11i v2 (B.11.23).

For further information about a particular item, you can go to the corresponding section in the remainder of the book or, if the item pertains to a previous release, to an earlier version of this document.



NOTE: All features and products described in this document are delivered on the OE media, unless otherwise noted.

HP-UX system release notes can be found in the following locations:

- The HP-UX Instant Information media. See “HP-UX 11i v2 Instant Information Media” (page 23) for more information.
- At the Web site <http://www.docs.hp.com/hpux/os/11iV2/>.

Be sure to consult the version most appropriate to your release. If you are concerned with just the initial (October 2003) release of HP-UX 11i v2, consult the *HP-UX 11i Version 2 Release Notes*. If, on the other hand, you are concerned about an update to the initial release, then you should begin with the *Release Notes* version appropriate to that release. For instance, the *HP-UX 11i Version 2 September 2004 Release Notes* would be most appropriate to the September 2004 update release.

For details on performing an installation, be sure to review the appropriate *HP-UX 11i Version 2 Installation and Update Guide* at the above Web site.

For critical, late-breaking cold-install and update issues not in the *HP-UX 11i Version 2 Installation and Update Guide*, you should also review the media booklet, *Read Before Installing or Updating to HP-UX 11i Version 2*, which is also available at the above Web site.



NOTE: The most current version of these documents, as well as most HP documentation, can always be found at <http://www.docs.hp.com/>.

Locating Release Notes for Previous Versions of HP-UX

Release notes for previous versions of HP-UX are found in the following locations:

- HP-UX Instant Information DVD. See “HP-UX 11i v2 Instant Information Media” (page 23) for more information.
- The `/usr/share/doc/` directory of your HP-UX 11i v2 system. Please note, however, that the latest editions may not be contained in this directory and are instead located at <http://www.docs.hp.com/>.
- The HP Documentation Site at <http://www.docs.hp.com/>. Here you will find the release notes pertinent to all previous releases of HP-UX, as well as release notes for various individual products.
 - Information about the HP-UX 11i v1.5 release is available on the Web at <http://docs.hp.com/en/hpuxos11iv1.5.html>.
 - Information about HP-UX 11i v1.6 release is available at <http://www.docs.hp.com/hpux/os/11iV1.6/>.
 - Information about HP-UX 11i v1 release is available at <http://www.docs.hp.com/hpux/os/11i/>.

See “HP Documentation Web Site” (page 23) for more information.

Other Sources of Information about This Release

In addition to these release notes, you have many other sources of information related to the HP-UX 11i v2 release available to you on the Web at

<http://www.docs.hp.com/hpux/os/11iV2>

The following documents, which are found at the above Web site, may be of particular interest:

- *Read Before Installing or Updating to HP-UX 11i Version 2*
- *HP-UX 11i Version 2 Installation and Update Guide*
- *HP-UX 11i Version 2 Reference*
- *Ignite-UX Administration Guide*
- *Patch Management User Guide for HP-UX 11.x Systems*
- *Software Distributor Administrator's Guide*
- *nPartition Administrators Guide*
- *Managing Systems and Workgroups*: This document provides simple, reliable guidelines and recipes for managing and administrating multi-system workgroups, as well as covering the basics of single-system administration.

Some or all of these documents are available on the Instant Information DVD and in printed form.

Of additional interest is the *HP-UX Networking Ports Reference Guide*, which can be found in the "I/O Cards and Networking Software" section of <http://docs.hp.com>:

Additionally, the following Web sites may be of interest in obtaining a variety of information regarding the HP-UX 11i v2 release:

- Application Availability Matrix: <http://hp.com/go/softwareinfo/MATRIX>
- Enterprise Servers, Workstations, and Systems Hardware Documentation: <http://docs.hp.com/hpux/hw/>
- HP Software Depot: <http://hp.com/go/softwaredepot>
- HP Software Releases and Media: <http://www.hp.com/software/releases/releases-media2/index.html>
- HP Servers and Enterprise Systems: <http://hp.com/go/servers>
- HP Workstations: <http://hp.com/go/workstations>
- Software Transition Kit and Software Solutions: <http://hp.com/go/STK>
- IT Resource Center (ITRC): <http://itrc.hp.com>
- Developer & Solution Partner Program (DSPP): <http://www.hp.com/dspp>
- Development Resource Central: <http://devresource.hp.com>

HP Documentation Web Site

HP provides a Web site where the latest HP-UX documentation and updates are available. This Web site is found at

<http://www.docs.hp.com/>

HP-UX 11i v2 Instant Information Media

The Instant Information media provides HP-UX documentation on DVD. With this DVD, you can view documentation supporting the release before you install the software. The Instant Information DVD provides improved online presentation, print quality, and search capabilities.

HP-UX 11i Home Page

The HP-UX 11i Home page, "HP-UX 11i, the Proven Foundation for the Adaptive Enterprise," provides links to a wide variety of information about HP-UX 11i, including the HP-UX Information

Library, the Software Depot, and the IT Resource Center, as well as information about hardware, operating environment services, and training courses. The page is found at

<http://hp.com/go/hp-ux>

HP-UX Welcome Page

The HP-UX Welcome Page on your HP-UX 11i v2 system contains pointers to information that will help you use your HP-UX system.

Manual Pages

For the HP-UX 11i v2 release, the manual pages (manpages) are available on the HP-UX Welcome Page of your system, on the Instant Information DVD under the title *HP-UX Reference*, through the use of the man command, and on the Web at

http://docs.hp.com/hpux/os/man_pages.html

README Documents

README (or *Read Before Installing*) documents are media booklets that contain information about the installation process that may not appear in the *HP-UX 11i Version 2 Installation and Update Guide*. Any product contained in the release may have a README document, so several README documents may be included. The README document specific to HP-UX 11i v2 is included with your media kit.

White Papers on HP-UX

White papers associated with the HP-UX 11i v2 release are available at

<http://www.docs.hp.com/hpux/os/11iV2>

Other white papers, including an HP-UX 11i v2 overview, can be found at the HP-UX Information Library at

<http://www.hp.com/products1/unix/operating/infolibrary/index.html>

What is in the Remaining Chapters?

The remaining chapters of these release notes are as follows:

- Chapter 2: “Introduction to HP-UX 11i Version 2” (page 27), provides an overview of the four Operating Environments, along with information about Software Pack and about compatibility issues.
- Chapter 3: “What is New at a Glance” (page 39), furnishes a quick overview of what is new, has changed, or has been deprecated or obsoleted in this and previous releases of HP-UX 11i v2.
- Chapter 4: “Hardware-Specific Information” (page 89), presents information regarding supported systems, networking and mass storage cards and drivers, as well as other information that is server-specific.
- Chapter 5: “General System Administration” (page 107), includes information of particular interest to system administrators.
- Chapter 6: “Disk and File Management” (page 137), presents information regarding directory, file system, and disk management.
- Chapter 7: “Internet and Networking” (page 141), covers changes to networking functionality and Internet services.
- Chapter 8: “Security” (page 149), covers changes and enhancements to security services.
- Chapter 9: “Commands and System Calls” (page 157), includes information about new and changed commands and system calls.
- Chapter 10: “Libraries and Programming” (page 159), provides information of particular interest to programmers, including changes to compilers, editors, and libraries.
- Chapter 11: “Internationalization” (page 163), presents information about text fonts and converters relating to various international languages.
- Chapter 12: “Other Functionality” (page 165), includes additional applications or functionality in the Operating Environments.

2 Introduction to HP-UX 11i Version 2

What is in This Chapter?

This chapter provides an introduction to HP-UX 11i v2, along with an overview of the four Operating Environments and the features delivered on the Software Pack media. Also included is information about compatibility issues.

- “Welcome to the HP-UX 11i v2 December 2007 Update Release” (page 28)
- “HP-UX 11i Release Names and Release Identifiers” (page 29)
- “HP-UX 11i v2 Software and Driver Bundle Types” (page 29)
- “HP-UX 11i v2 Operating Environments” (page 30)
 - “Overview” (page 30)
 - “HP-UX 11i v2 Foundation Operating Environment ” (page 30)
 - “HP-UX 11i v2 Enterprise Operating Environment” (page 33)
 - “HP-UX 11i v2 Mission Critical Operating Environment” (page 33)
 - “HP-UX 11i v2 Technical Computing Operating Environment” (page 34)
- “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34)
- “HP-UX 11i v2 Compatibility ” (page 35)
 - “HP-UX 11i Compatibility for HP Integrity and HP 9000 Servers” (page 35)
 - “Introduction” (page 35)
 - “Compatibility across Operating System Releases and Hardware Platforms” (page 35)
 - “Compatibility within HP-UX 11i Virtualization Solutions” (page 35)
 - “Compatibility between Architecture Families” (page 35)
 - “Support” (page 36)
 - “Definition of Terms and Levels of Compatibility” (page 36)
 - “For More Information” (page 36)
 - “Compatibility Issues or Exceptions in HP-UX 11i v2 December 2007” (page 36)
 - “Support of Products” (page 37)

Welcome to the HP-UX 11i v2 December 2007 Update Release

The December 2007 update release of HP-UX 11i v2 continues to support both the HP 9000 and HP Integrity server families. This Enterprise update release offers the full range of HP-UX Operating Environments (OEs) and capabilities.

HP's Business Critical Servers group places a premium on customer and partner investment protection. HP-UX 11i v2 maintains compatibility between HP 9000 and HP Integrity servers in the following ways:

- Common “look and feel” for HP-UX 11i on both server families
- Application Build Environment compatibility (source, makefile, and script compatibility)
- Data compatibility (identical data formats)
- Binary compatibility (the Aries dynamic code translation technology, a standard integrated component of every copy of HP-UX 11i for HP Integrity, executes HP 9000 programs on HP Integrity without recompiling or relinking)

With this December 2007 update, HP-UX 11i v2 continues as a transition bridge between the PA-RISC architecture and the Itanium®-based architecture, and continues to provide a smooth transition path for HP-UX customers and partners on to the next-generation Itanium®-based architecture.



NOTE: Before updating your system with any individual patches, patch bundles, or products released from September 2004 forward, you must consult the current *Read Before Installing or Updating to HP-UX 11i Version 2* and the *HP-UX 11i Version 2 Installation and Update Guide*. Both are available at <http://www.docs.hp.com/hpux/os/11iV2>.

HP-UX 11i Release Names and Release Identifiers

Each HP-UX 11i release has an associated release name and release identifier. The following table shows the releases available for HP-UX 11i:

Table 2-1 HP-UX 11i Releases

Release Name	Release Identifier	Supported Processor Architecture
HP-UX 11i v1	B.11.11	PA-RISC
HP-UX 11i v1.5	B.11.20	Intel® Itanium®
HP-UX 11i v1.6	B.11.22	Intel® Itanium®
HP-UX 11i v2	B.11.23	Intel® Itanium® PA-RISC ¹
HP-UX 11i v3	B.11.31	Intel® Itanium® PA-RISC

¹ PA-RISC is supported on HP-UX 11i v2 starting with the September 2004 release.

The `uname(1)` command with the `-r` option returns the release identifier.

You can also determine the update release date and the Operating Environment by entering the following:

```
# swlist | grep HPUX11i
```

The resulting output will list the current release identifier, update release date, and Operating Environment. For example:

```
HPUX11i-MCOE B.11.23.0712 HP-UX Mission Critical Operating Environment  
Component
```

The above revision string represents the following:

B.11.23 = HP-UX 11i v2

0712 = December 2007 Update Release

HP-UX 11i v2 Software and Driver Bundle Types

The HP-UX 11i v2 media contains all of the software and network driver bundles for your system to run the latest version of HP-UX 11i v2. Additional software and network driver bundles are included, which you may choose to either select or de-select prior to install or update. HP-UX 11i v2 contains three types of bundles:

- **Always-Installed:** Software and network driver bundles required by HP-UX 11i v2. Other always-installed bundles are also included as part of your operating environment. Examples include the core OS bundles, some software bundles, and some network and mass-storage drivers.
- **Default-Installed:** Software bundles that are installed by default. You can manually de-select the bundles before you install or update system. Examples include Mozilla Application Suite and the HP-UX Web Server Suite bundles.
- **Selectable:** Software bundles that are *not* installed or updated by default. You must manually select these bundles before you install or update your system. Examples include Ignite-UX and security.

For a detailed list of the always-installed, default-installed, and selectable bundles, see the *HP-UX 11i Version 2 Installation and Update Guide*, available at <http://www.docs.hp.com>.

In the following section, “HP-UX 11i v2 Operating Environments” (page 30), products are listed according to their bundle type.

HP-UX 11i v2 Operating Environments

Overview

Operating Environments (OEs) are tested and integrated application bundles designed to work with the operating system and provide the functionality needed for your system's purpose. The following lists the currently available HP-UX 11i v2 OEs:

- **HP-UX 11i v2 Foundation OE (FOE)** — Designed for the demands of Web servers, content servers and front-end servers, this OE includes applications such as HP-UX Web Server Suite, Java for HP-UX, and Mozilla Application Suite. This OE is bundled as HP-UX11i-OE. For more details, see “HP-UX 11i v2 Foundation Operating Environment” (page 30).
- **HP-UX 11i v2 Enterprise OE (EOE)** — Designed for database application servers and logic servers, this OE contains the HP-UX 11i v2 Foundation OE bundles and additional applications such as GlancePlus Pak to enable an enterprise-level server. This OE is bundled as HP-UX11i-OE-Ent. For more details, see “HP-UX 11i v2 Enterprise Operating Environment” (page 33).
- **HP-UX 11i v2 Mission Critical OE (MCOE)** — Designed for the large, powerful back-end application servers and database servers that access customer files and handle transaction processing, this OE contains the Enterprise OE bundles, plus applications such as HP Serviceguard and Workload Manager to enable a mission-critical server. This OE is bundled as HP-UX11i-OE-MC. For more details, see “HP-UX 11i v2 Mission Critical Operating Environment” (page 33).



IMPORTANT: HP-UX 11i v2 May 2005 was last release that included the Minimal Technical OE (MTOE). After May 2005, the HP-UX 11i v2 MTOE is no longer available. If you have questions, contact your HP sales representative.

- **HP-UX 11i v2 Technical Computing OE (TCOE)** — This OE contains extensive graphics applications and Math Libraries. This OE is bundled as HP-UX11i-TCOE. For more details, see “HP-UX 11i v2 Technical Computing Operating Environment” (page 34).



IMPORTANT: The HP-UX 11i v2 May 2005 TCOE was the last release that was supported on Itanium®-based workstations. It will continue to be updated for servers. If you have questions, contact your HP sales representative.

HP-UX 11i v2 Foundation Operating Environment

The HP-UX 11i v2 Foundation Operating Environment is the standard OE from which the Enterprise OE and Mission Critical OE have been derived by adding appropriate applications. The HP-UX 11i v2 Foundation OE includes the base 64-bit HP-UX operating system, plus the following features. (For an overview of the features that are new or have changed in this release, see Chapter 3: “What is New at a Glance” (page 39).)

Always-Installed Features¹

- Base-VXVM (VERITAS Volume Manager)
- BUNDLE11i
- CommonIO
- Disks and File Systems (f sweb)
- Event Monitoring Service
- FEATURE11i
- FDDI (PCI)
- FibreChannel (PCI)

1. For definitions of *always-installed*, *default-installed*, and *selectable*, see “HP-UX 11i v2 Software and Driver Bundle Types” (page 29).

- GigEther-00 (PCI)
- GigEther-01 (PCI)
- HP CIFS Client
- HP CIFS Server
- HP Instant Capacity (iCAP, formerly iCOD)
- HP WBEM Services for HP-UX
- HP-UX Accounts for Users and Groups
- HP-UX Kernel Configuration
- HP-UX Peripheral Device Tool (pdweb)
- HP-UX Security Attributes Configuration
- HP-UX WBEM LVM Provider
- HWEEnable11i
- IEther-00 (PCI/PCI-X/PCIe)
- Logical Volume Manager (LVM)
- LDAP-UX Integration
- nPartition Provider
- Obsolescence Bundle
- ONC+
- Online Diagnostics
- OpenSSL
- PAM Kerberos
- PRMKernelSW (not available on TCOE)
- PRMLibraries (not available on TCOE)
- Quality Pack Patch Bundle
- RAID-01
- Runtime Plug-in (JPI) for Mozilla for the Java™ 2 Platform v1.4
- SAM-NNC
- scsiU320-00
- SerialSCSI-00
- Software Distributor (SD)
- SWGETTOOLS
- SysMgmtBASE
- System Administration Manager (SAM)
- System Fault Management (SysFaultMgmt)
- Update-UX
- USB-00

Default-Installed Features

- AVIO Guest SSN (GuestAvioLan)
- AVIO Host SSN (HostAvioLan)
- Distributed Systems Administration Utilities
- Dynamic Root Disk
- FibrChan1-02
- Firefox
- Firefox Source
- GTK
- GTK Source
- GTK+ Libraries
- Guest Virtual Storage Driver (GuestAVIOStor)
- Host Virtual Storage Driver (HostAVIOStor)

- HP Integrity VM Support Library (VMGuestLib)
- HP System Management Homepage
- HP-UX Bastille
- HP-UX IPFilter
- HP-UX Java Runtime Environment (JRE) 5.0
- HP-UX Java Development Kit (JDK) for the Java™ 2 Platform Standard Edition (J2SE) 5.0
- HP-UX Secure Shell
- HP-UX Software Assistant
- HP-UX Software Development Kit and Runtime Environment for the Java 2 Platform Standard Edition v1.4
- HP-UX Web Server Suite (including HP-UX Apache-based Web Server, HP-UX Tomcat-based Servlet Engine, HP-UX Webmin-based Admin, and HP-UX XML Web Server Tools)
- Instant Support Enterprise Edition (ISEE) (Servers only)
- Java for HP-UX Add-On C++ Libraries for SDK/JDK and RTE/JRE (PA-RISC only) 1.4 and 5.0
- Judy Libraries
- Mozilla Application Suite
- Mozilla Source
- Partition Manager
- Perl
- ProviderDefault
 - HP Application Discovery Agent
 - HP Global Workload Manager Agent
 - HP Integrity Virtual Machines Provider (VM Provider)
 - HP-UX WBEM File System Provider
 - HP-UX WBEM IOTree Indication Provider
 - HP-UX WBEM Kernel Providers
 - HP-UX WBEM Fibre Channel Provider
 - HP-UX WBEM LAN Provider (WBEMP-LAN-00)
 - HP-UX WBEM RAIDSA Provider
 - HP-UX WBEM SAS Provider
 - HP-UX WBEM SCSI Provider
 - Utilization Provider
 - vPar Provider
- Sec00Tools
- Thunderbird
- Thunderbird Source

Selectable Features

- 10 Gigabit Ethernet
- ATM-00
- Base-VXFS
- EnableVxFS 4.1
- HP OnlineJFS 3.5 (available on EOE and MCOE only)
- HP Pay per use
- HP Systems Insight Manager
- HP-UX Host Intrusion Detection System (HIDS) (not available on TCOE)
- HP-UX iSCSI Software Initiator
- HP-UX Mobile IPv4

- HyperFabric
- Ignite-UX
- Java Out-of-Box
- Mobile IPv6
- Netscape Directory Server
- Red Hat Directory Server for HP-UX
- PCI MUX
- Security Level 10
- Security Level 20
- Security Level 30
- Software Package Builder
- Token Ring

HP-UX 11i v2 Enterprise Operating Environment

The HP-UX 11i v2 Enterprise Operating Environment is targeted especially for database application servers and logic servers. In addition to the features found in the HP-UX 11i v2 Foundation OE (described on (page 30)), the Enterprise OE includes the following additional features. (For an overview of the features that are new or have changed in this release, see Chapter 3: “What is New at a Glance” (page 39).)

Always-Installed Features²

- High Availability Monitors
- MirrorDisk/UX
- GlancePlus Pak
- HP OnlineJFS 4.1 (B3929EA)
- HP Process Resource Manager

Default-Installed Features

- See “Default-Installed Features” (page 31)

Selectable Features

- HP OnlineJFS 3.5 (B3929DA) (EOE and MCOE only)
- Also see “Selectable Features” (page 32)

HP-UX 11i v2 Mission Critical Operating Environment

The HP-UX 11i v2 Mission Critical Operating Environment is a high-availability Operating Environment for HP servers. In addition to the features found in the Foundation and Enterprise OEs, the Mission Critical OE includes the following features. (For an overview of the features that are new or have changed in this release, see Chapter 3: “What is New at a Glance” (page 39).)

Always-Installed Features²

- Enterprise Cluster Master Toolkit
- HP Serviceguard
- HP Serviceguard NFS Toolkit
- HP-UX Workload Manager
- HP-UX Workload Manager Toolkits

Default-Installed Features

- See “Default-Installed Features” (page 31)

Selectable Features

- HP OnlineJFS 3.5 (B3929DA) (EOE and MCOE only)
- Also see “Selectable Features” (page 32)

2. For definitions of *always-installed*, *default-installed*, and *selectable*, see “HP-UX 11i v2 Software and Driver Bundle Types” (page 29).



IMPORTANT: HP-UX 11i v2 May 2005 was last release that included the Minimal Technical OE (MTOE). After May 2005, the HP-UX 11i v2 MTOE is no longer available. If you have questions, contact your HP sales representative.

HP-UX 11i v2 Technical Computing Operating Environment

The Technical Computing Operating Environment contains all the base functionality that is common to the other three OEs, including the base 64-bit HP-UX operating system, network drivers, and other always-installed functionality. From the December 2005 release and forward, the Technical Computing OE for HP-UX 11i v2 is available only for technical servers.

The HP-UX 11i v2 Technical Computing OE includes the following features. (For an overview of the features that are new or have changed in this release, see Chapter 3: “What is New at a Glance” (page 39).)

Always-Installed Features³

- HP 3D Technology for the Java 2 Standard Edition Platform (Itanium®-based systems only)
- HP Message Passing Interface (MPI)
- HP MLIB
- HP-UX 3D Graphics Run Time Environment and Developer’s Kit (Workstations not supported)
- Runtime Plug-in (JPI) for Mozilla for the Java™ 2 Platform v1.4
- Technical System Configuration (TechSysConf)
- Also see “Always-Installed Features” (page 30)

Default-Installed Features

- See “Default-Installed Features” (page 31)

Selectable Features

- See “Selectable Features” (page 32)

Software Pack (Optional HP-UX 11i v2 Core Enhancements)

The HP-UX 11i v2 Software Pack (SPK) contains optional core enhancements for HP-UX 11i v2.

For the December 2007 release of HP-UX 11i v2, there is no media release of SPK. However, several SPK products have been released in 2007 on the web, and one product has been released on the December 2007 Application Release (AR) media, as well as the web:

- Released in 2007 on the web:
 - “BIND” (page 146) (updated)
 - “HP-UX Memory File System” (page 138) (updated)
 - “HP-UX Parallel Umounts” (page 139) (new)
 - “Kerberos Client” (page 154) (updated)
- Released in December 2007 on the AR Media and on the web:
 - “PCI Error Handling” (page 100) (updated)

You can download SPK products from the HP Software Depot:

- Go to <http://hp.com/go/softwaredepot>.
- Search for **SWPACKv2** (use the search box).
- Click **HP-UX Software Pack (Optional HP-UX 11i v2 Core Enhancements)**. At this site, you can read descriptions of specific products, as well as download them.

3. For definitions of *always-installed*, *default-installed*, and *selectable*, see “HP-UX 11i v2 Software and Driver Bundle Types” (page 29).

HP-UX 11i v2 Compatibility

HP-UX 11i Compatibility for HP Integrity and HP 9000 Servers

Introduction

Hewlett-Packard (HP) understands your need for investment protection. By providing multiple levels of compatibility between operating system versions, between hardware platforms, on virtual machines, and even between chip architectures, we believe the HP-UX operating system provides the most comprehensive investment protection in the industry. (For a definition of levels of compatibility, see “Definition of Terms and Levels of Compatibility” (page 36))

Compatibility across Operating System Releases and Hardware Platforms

For “Well-behaved” user space applications Hewlett-Packard (For a definition of “Well-behaved” and other terms, see “Definition of Terms and Levels of Compatibility” (page 36)):

Maintains forward data, source, build environment, and binary compatibility across all hardware platforms of the same architecture family (e.g., Integrity or HP 9000) which are supported by the same version of HP-UX;

Provides forward data, source, build environment, and binary compatibility across HP-UX versions on HP 9000 servers and Integrity servers on their respective architectures. This is true for 32bit or 64bit applications on either architecture family;

Delivers new features and improved performance with each new HP-UX release. Binary compatibility across Operating System versions applies to legacy features (features that were present in the earlier release) and often still holds true for new features. There are some instances, however, where applications may be required to recompile in order to use or leverage a new feature. See the release notes for each version of HP-UX for information on new features that may require changes to applications.

Compatibility within HP-UX 11i Virtualization Solutions

“Well-behaved” applications built on HP-UX 11i are binary compatible to run within HP-UX Virtual Partitions (vPars) on the same architecture family. No changes, recompilation or re-certification is necessary.

“Well-behaved” applications built on HP-UX 11i Integrity are binary compatible to run within an HP Integrity Virtual Machine. This binary compatibility applies to applications with no specific device dependencies and to applications that depend only on devices currently virtualized by Integrity VM. Most applications do not have specific device dependencies. However, if your application has specific device dependencies, please refer to the *HP Integrity Virtual Machines QuickSpecs* at http://h18004.www1.hp.com/products/quickspecs/12715_div/12715_div.HTML for details.

Compatibility between Architecture Families

In addition to the compatibility provided within an architecture family, HP-UX 11i on HP 9000 servers is data, source, and build environment compatible with HP-UX 11i on Integrity servers. Build environments and source files can be moved from HP 9000 servers to Integrity servers and be rebuilt without modification.

Application binaries that were built on HP-UX on HP 9000 servers are binary compatible, with some limitations, with HP-UX on HP Integrity servers when running through the Aries Dynamic Code Translator. The use of Aries can be completely transparent. For more information about Aries, see <http://www.hp.com/go/aries>.

Support

HP is committed to providing investment protection via compatibility as outlined above. Any owner of application code that meets the criteria for compatibility, who has encountered a compatibility failure as defined by this document, should contact HP through a special support line (for North America) at 1-800-249-3294 and use option 2. Help is also available alternatively by sending an e-mail to dspp.dev@hp.com. Please identify the problem as a “compatibility failure.”

Definition of Terms and Levels of Compatibility

There are multiple types of compatibility that need to be defined.

- Forward Compatibility means that there is compatibility between a version and a later version. It does not mean or include compatibility going from the later version to the previous version. All references to compatibility in this document are for forward compatibility only.
- Build environment compatibility means that application build environments (makefiles, script files, etc.) can be moved and used unchanged from the original system to the target system.
- Source compatibility refers to the ability to compile the same application code source file on an original system and a compatible system with different versions of the HP compiler.
- Binary compatibility refers to the ability to compile an application on a specific solution (architecture, hardware platform, Operating system version) to produce a binary file. That binary file, without modification, can be run on the solution where it was created and it can be on a target solution which is binary compatible.
- Data compatibility means that the data format on the different targets is the same.
- “Well-behaved” User Space Applications: HP-UX provides compatibility for applications that are user space (as opposed to kernel intrusive) applications that are “well behaved.” A “well behaved” user space application is an application that adheres to the following characteristics:
 - Uses only documented public application programming interfaces (APIs) (Documented interfaces are those found in the system manual [man] pages or at <http://docs.hp.com>)
 - Is not a kernel intrusive application
 - Adheres to standard development practices (for example: a shared library cannot be dependent on an archive library, etc.)
 - Does not use features that are specifically documented as having platform architecture or configuration limitations
 - Has no software dependencies on specific types of hardware (e.g., specific mass storage devices or specific I/O or networking adapters)
 - Does not decompose an HP-UX product and then reuse the results of the decomposition. (For example: extracting and using a module from a system library, or copying a system library or command from one release to another, etc.)

For More Information

See the following Web sites:

- <http://www.hp.com/go/hpux11i>
- <http://www.hp.com/go/integrity>

Compatibility Issues or Exceptions in HP-UX 11i v2 December 2007

Compatibility issues or exceptions have been noted for the following products or features that have been updated in December 2007. For details, see the indicated pages.⁴

4. For documentation of compatibility issues or exceptions in previous updates to HP-UX 11i v2, see the previous editions of the *HP-UX 11i v2 Release Notes*, available at <http://docs.hp.com/en/oshpux11iv2.html>. The *HP-UX 11i v2 September 2004 Release Notes*, in particular, lists compatibility exceptions from HP-UX 11i v1 to HP-UX 11i v2.

Chapter 4 (page 89)

- “USB-00” (page 98)

Chapter 5 (page 107)

- “HP Application Discovery” (page 112)
- “HP Integrity Virtual Machines Provider (VM Provider)” (page 115)
- “HP Integrity Virtual Machines (VMGuestLib)” (page 115)
- “Utilization Provider” (page 119)
- “Quality Pack Patch Bundles” (page 125)

Chapter 6 (page 137)

- “HP-UX Memory File System” (page 138)

Chapter 8 (page 149)

- “HP-UX IPFilter” (page 151)



NOTE: Before updating your system with any individual patches, patch bundles, or products released from September 2004 forward, you must consult the current *Read Before Installing or Updating to HP-UX 11i Version 2* and the *HP-UX 11i Version 2 Installation and Update Guide*. Both are available at <http://docs.hp.com/en/oshpux11iv2.html>.

Support of Products

For information about the support of products not listed elsewhere in this document, refer to the product’s individual documentation, which may be found at the following locations:

- HP Technical Documentation: <http://docs.hp.com>
- HP Software Depot: <http://hp.com/go/softwaredepot>
- HP IT Resource Center: <http://itrc.hp.com>.

3 What is New at a Glance

What is in This Chapter?

This chapter provides a quick overview of what is new, has changed, and has been deprecated or obsoleted in each HP-UX 11i v2 release. For further details, see the cross-referenced pages in the remainder of this book or, as noted, in previous editions.

- “What is New in the December 2007 Release?” (page 40)
- “What is New in the June 2007 Release?” (page 44)
- “What is New in the September 2006 Release?” (page 48)
- “What is New in the June 2006 Release?” (page 51)
- “What is New in the March 2006 Release?” (page 53)
- “What is New in the December 2005 Release?” (page 57)
- “What is New in the May 2005 Release?” (page 60)
- “What is New in the September 2004 Release?” (page 64)
 - “What is New in September 2004 for Customers Migrating from HP-UX 11i v1?” (page 64)
 - “What is New in September 2004 for Existing Customers of HP-UX 11i v2?” (page 72)
- “What is New in the March 2004 Release?” (page 77)
- “What is New in the Initial (October 2003) HP-UX 11i v2 Release?” (page 79)

What is New in the December 2007 Release?

In the following summaries, you can obtain a general picture of how the December 2007 release of HP-UX 11i v2 differs from the June 2007 release of HP-UX 11i v2.

For further information, see the indicated sections in the remainder of this document.

Chapter 4 (page 89)

- **CommonIO:** Updated with quality improvements. See “CommonIO” (page 90).
- **Hardware Enablement Patch Bundle (HWEEnable11i):** Includes patches for support with Intel® Integrity® Family 9100 Processors and PCIe SAS I/O adapters in HP Integrity Servers, and Mezzanine I/O adapters for HP Server Blades. See “Hardware Enablement Patch Bundle for HP-UX 11i v2 (11.23)” (page 90).
- **HP Instant Support Enterprise Edition Client:** Version A.03.95.510.46.03 has defect fixes. See “HP Instant Support Enterprise Edition” (page 91).
- **“Networking and Mass Storage Drivers”** (page 92)
 - **10GigEthr-00:** Now supports new network card AD385A. Supports Accelerated Virtual I/O (AVIO) to significantly improve HPVM I/O performance. See “10GigEthr-00 (10 Gigabit Ethernet)” (page 94).
 - **FibrChanl-00:** Updated to version B.11.23.0712. The (td) driver includes a defect fix. See “FibrChanl-00 (HP PCI Tachyon TL/TS/XL2 Fibre Channel Driver)” (page 95).
 - **FibrChanl-01:** Updated to incorporate defect fixes. See “FibrChanl-01 (Fibre Channel Mass Storage Driver for HP-UX 11i v2)” (page 96).
 - **FibrChanl-02:** Updated to incorporate defect fixes. HP strongly recommends all users of fibre channel HBAs claimed by the fc1p driver (AD299A or AD355A) should upgrade to version B.11.23.0712 or later. See “FibrChanl-02 (Fibre Channel Mass Storage Driver for HP-UX 11i v2)” (page 99).
 - **GigEther-01:** Supports Accelerated Virtual I/O (AVIO) to significantly improve HPVM I/O performance. See “GigEther-01 (Gigabit Ethernet Networking Driver Bundle)” (page 92).
 - **IEther-00:** Supports Accelerated Virtual I/O (AVIO) to significantly improve HPVM I/O performance. Supports PCIe 4-Port Gigabit Ethernet Mezzanine Card on HP Integrity BladeSystem c3000 and c7000 enclosures and BL870c Server Blade. See “IEther-00 (Gigabit Ethernet Networking Driver Bundle)” (page 93).
 - **RAID-01:** Updated with quality improvements. See “RAID-01” (page 97).
 - **scsiU320-00:** Updated with quality improvements. See “scsiU320-00” (page 97).
 - **SerialSCSI-00:** Updated with quality improvements. See “SerialSCSI-00” (page 98).
 - **USB-00:** Updated to version C.01.04.07 so the operating system install from local USB devices will be faster. See “USB-00” (page 98).
- **PCI Error Handling:** Updated to add support for the PCI/PCI-X slots available on rx3300 and rx6600 and for the PCIe slots available with the upgraded I/O backplanes and extenders for rx7640, rx8640, and Integrity Superdome sx2000. (This is a Software Pack product available on the Application Release [AR] media and on the web.) See “PCI Error Handling” (page 100).
- **“Utility Pricing Solutions”** (page 103)
 - **HP Instant Capacity:** Updated to version B.11.23.08.03.00. Support for vPars A.03.05 and support for the integrated virtual partition environment on HP-UX 11i v1 systems. The icapstatus command now displays the fill iCAP version number, and more. GiCAP Disaster Recovery allows customers to transfer usage rights to other group members when a member is unavailable. See “HP Instant Capacity” (page 103).

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- Distributed Systems Administration Utilities: Updated to incorporate defect fixes. See “Distributed Systems Administration Utilities” (page 108).
- Dynamic Root Disk (DRD): Introduces support for root volumes managed by VxVM Release 4.1. See “Dynamic Root Disk” (page 108).
- Feature Enablement Patch Bundle: FEATURE11i bundle consists of all its previous patches plus new enablement patches for HPVM, PCIe error handling, Audio Development Kit, PCI Mux, Trusted Computing Services, and vPars. See “Feature Enablement Patch Bundle - Feature11i” (page 109).
- HP OpenView GlancePlus Pak: Updated to version 4.70. A set of new metrics have been added in HP Performance Agent. See “HP OpenView GlancePlus Pak” (page 110).
- “HP Partitioning and Virtual Server Environment” (page 111)
 - **New:** Accelerated Virtual I/O: This solution is composed of four new products: GuestAvioLan, HostAvioLan, GuestAvioStor, and HostAvioStor. The new AVIO storage and lan devices deliver a new re-architected I/O path for HPVM, and provide significant performance improvements over the existing VIO products. All four AVIO products are Default-Installed. See “Accelerated Virtual I/O” (page 111).
 - Application Discovery Agent (AppDiscAgent): Updated to version 3.0.01 to incorporate defect fixes. See “HP Application Discovery” (page 112).
 - HP Global Workload Manager: Updated to version A.03.00.01.x to provide more flexibility in managing your systems. Changes include conditional policies that take effect based on Serviceguard events, new gwlmstatus command, and other features. Support for Linux managed nodes has been removed. See “HP Global Workload Manager” (page 113).
 - HP Integrity Virtual Machines Provider (VM Provider): Upgraded from A.03.00 to A.03.50 to provide support for new features in HP Integrity Virtual Machines. See “HP Integrity Virtual Machines Provider (VM Provider)” (page 115)
 - HP Integrity Virtual Machines (VMGuestLib): Upgrade from version A.03.00 includes support for the new features of HP Integrity Virtual Machines A.03.50. See “HP Integrity Virtual Machines (VMGuestLib)” (page 115).
 - HP-UX Virtual Partitions: Version A.04.05. provides support for mixed HP-UX 11i v1/v2 vPars environments, which enable virtual partitions running HP-UX 11i v1 (B.11.11) and HP-UX 11i v2 (B.11.23) to exist in the same nPartition. Purchased separately. See “HP-UX Virtual Partitions” (page 116).
 - HP-UX Workload Manager (AR Media Release): As of version A.03.01, WLM on the AR media no longer includes PRM in the bundle. However, with your purchase of WLM, you are entitled to a PRM license. See “HP-UX Workload Manager (AR Media Release)” (page 117).
 - nPartition Provider: Updated to version B.01.07 to incorporate defect fixes. See “nPartition Provider” (page 118).
 - Utilization Provider: Updated to a new version number (A.01.06.03.01) to correct errors in the previous release (version A.01.06.02.xx), which does not operate correctly under HP-UX 11i v2. See “Utilization Provider” (page 119)
- HP System Management Homepage: Updated to version A.2.2.7 to incorporate defect fixes. See “HP System Management Homepage” (page 120).
- HP-UX Accounts for Users and Groups: Updated to support SHA 512-based password hashing in HP-UX. See “HP-UX Accounts for Users and Groups” (page 120).
- HP-UX Kernel Configuration: Updated to incorporate defect fixes. See “HP-UX Kernel Configuration” (page 121).
- HP-UX Peripheral Devices Manager: Updated to incorporate defect fixes. See “HP-UX Peripheral Device Tool” (page 122).

- Ignite-UX: Updated to version C.7.4. New features include support for USB 2.0 I/O protocol; recovery support for Agile SAS addressing; enhanced search/sort capabilities for large numbers of disks; and more. See “Ignite-UX” (page 123).
- Online Diagnostics: Now supports the HP Integrity BL870c Server Blade. Enabled to handle PCIe errors on specified Integrity systems. Additional cards and storage units are supported. See “Online Diagnostics” (page 124).
- Quality Pack Patch Bundles: Updated for the December 2007 release. See “Quality Pack Patch Bundles” (page 125).
- Software Distributor: Updated to incorporate defect fixes. See “Software Distributor” (page 125).
- Software Package Builder: Now supports the Java Runtime Environment (JRE) version 1.5 in addition to the Java Runtime Environment (JRE) version 1.4. See “Software Package Builder” (page 126).
- System Fault Management: Now supports the HP Integrity BL870c Server Blade. Supports the PCI Express interface events on selected systems. Includes defect fixes. See “System Fault Management” (page 127).
- Update-UX: Updated to reflect defect fixes. See “Update-UX” (page 128).
- WBEM Services and Providers
 - HP WBEM Services for HP-UX: Updated to version A.02.05.08 to incorporate defect fixes. See “HP WBEM Services for HP-UX” (page 128).
 - HP-UX WBEM Fibre Channel Provider: Updated to version 11.23.0712. Supported by the System Management Homepage, plus other changes. See “HP-UX WBEM Fibre Channel Provider” (page 129).
 - HP-UX WBEM IOTree Indication Provider: Updated to version 11.23.0712 to incorporate defect fixes. See “HP-UX WBEM IOTree Indication Provider” (page 130).
 - **New:** HP-UX WBEM Kernel Providers: Used obtain information related to kernel parameters and swap space available on the system. See “HP-UX WBEM Kernel Providers” (page 131).
 - HP-UX WBEM LAN Provider: LAN Provider is supported by the System Management Homepage. See “HP-UX WBEM LAN Provider” (page 132).
 - HP-UX WBEM LVM Provider: Updated to version R11.23.009. Provides association between a VolumeGroup and the LogicalVolumes created within the group; provides association between a PhysicalVolume and the VolumeGroup for a spare physical volume; and more, See “HP-UX WBEM LVM Provider” (page 133).
 - HP-UX WBEM RAIDSAs Provider: Updated with quality improvements and with a defect fix. See “HP-UX WBEM RAIDSAs Provider” (page 133).
 - HP-UX WBEM SAS Provider: Updated with quality improvements and with a defect fix. See “HP-UX WBEM SAS Provider” (page 134).
 - HP-UX WBEM SCSI Provider: Updated to version 11.23.0712. Now supported by the System Management Homepage. See “HP-UX WBEM SCSI Provider” (page 135).

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- HP CIFS Server: Updated to enhance the wbinfo tool with two new options, -c and -C, which can be used to display the total number of users or groups for a domain. See “HP CIFS Server” (page 138).
- HP-UX Memory File System (MemFS): Updated to allow the customer to mount a MemFS instance without the need of a separate swap device, and more. (This is a Software Pack product available on the web.) See “HP-UX Memory File System” (page 138).
- **New:** HP-UX Parallel Umounts (UmountallCmdEnh) implements parallel unmounts. (This is a Software Pack product available on the web.) See “HP-UX Parallel Umounts” (page 139).

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- Firefox, FirefoxSrc: Updated to version 2.0.0.4. Fixes several security vulnerabilities reported by the Mozilla Foundation. See “Browsers” (page 142).
- Thunderbird, ThunderbirdSrc: Updated to version 2.0.0.6. Fixes several security vulnerabilities reported by the Mozilla Foundation. See “Browsers” (page 142).
- **New:** HP-UX Mobile IPv4: Provides mobility support for mobile devices to migrate from their home network to other networks, either within the same administrative domain or to other administrative domains on the Internet. See “HP-UX Mobile IPv4” (page 143).
- “HP-UX Web Server Suite” (page 143)
 - HP-UX Apache-based Web Server: Updated to v.2.0.59.01 as primarily a security and defect-fix release. See “HP-UX Apache-based Web Server” (page 144).
 - HP-UX Tomcat-based Servlet Engine: Updated to version 5.5.23 as primarily a security release and defect fix release. See “HP-UX Tomcat-based Servlet Engine” (page 145).
 - HP-UX Webmin-based Admin: Updated to version 1.070.10 as primarily a defect fix release. See “HP-UX Webmin-based Admin” (page 145).
- “Internet Services” (page 146)
 - BIND: Updated to version 9.3.2 to incorporate a fix to one security defect. (This is a Software Pack product available on the web.) See “BIND” (page 146).
- LDAP-UX Integration: Updated to version B.04.15. Supports the new set of non-interactive LDAP command-line tools that allow you to list, add, modify or delete user accounts and groups in an LDAP directory server. See “LDAP-UX Integration” (page 146).
- Red Hat Directory Server for HP-UX: Version B.07.10.30 mainly provides defect fixes. See “Red Hat Directory Server for HP-UX” (page 148).

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- HP-UX Bastille and Install Time Security: Update includes integration with HP-UX Software Assistant (carried over from September 2007), defect fixes, security configuration reporting, and configuration drift detection from saved baseline. See “HP-UX Bastille and Install Time Security” (page 150).
- HP-UX IPFilter: Updated so that Dynamic Connection Allocation (DCA) feature and `ipftest` utility now support IPv6 rules. Includes other changes. See “HP-UX IPFilter” (page 151).
- HP-UX Secure Shell: Updated to version A.04.50.21 to incorporate defect fixes. See “HP-UX Secure Shell” (page 152).
- HP-UX Security Attributes Configuration: Text user interface (TUI) now supports form-based inputs. Updated to incorporate defect fixes. See “HP-UX Security Attributes Configuration” (page 152).
- HP-UX Software Assistant: Updated to version C.01.02 to incorporate defect fixes. See “HP-UX Software Assistant” (page 153).
- Kerberos Client: Updated to version D.1.3.5.07 to incorporate defect fixes. (This is a Software Pack product available on the web.) See “Kerberos Client” (page 154).
- OpenSSL: Updated to incorporate defect fixes. No new features. See “OpenSSL” (page 155).

Chapter 9 (page 157)

- There are no changes in December 2007 for the products or features that are normally documented in this chapter.

Chapter 10 (page 159)

- JDK, JRE, and Plug-In for HP-UX for the Java Platform: JDK/JRE version 5.0 and SDK/RTE 1.4.2 have been updated to incorporate defect fixes. See “JDK, JRE, and Plug-In for HP-UX for the Java Platform” (page 160).
- Java Out-of-Box: Updated to version 2.04.00 to incorporate defect fixes. See “Java Out-of-Box” (page 161).

Chapter 11 (page 163)

- There are no changes in December 2007 for the products or features that are normally documented in this chapter.

Chapter 12 (page 165)

- There are no changes in December 2007 for the products or features that are normally documented in this chapter.

What is New in the June 2007 Release?

In the following summaries, you can obtain a general picture of how the June 2007 release of HP-UX 11i v2 differs from the September 2006 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 June 2007 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends that you consult the *HP-UX 11i Version 2 June 2007 Release Notes* for information that is not included here.

June 2007 Release Notes, Chapter 4: “Hardware-Specific Information”

- CommonIO bundle: Updated with quality improvements.
- Hardware Enablement Patch Bundle for HP-UX 11i v2 (HWEEnable11i): Includes new support for PCI-Express I/O adapters in HP Integrity Servers, and HP-UX support for HP servers with PA8900 processors and the sx2000 chipset.
- HP Instant Support Enterprise Edition (ISEE): Updated to version to incorporate defect fixes.
- Networking and Mass Storage Drivers
 - 10GigEther-00: Updated to enable future products.
 - FibrChan1-00 (HP PCI Tachyon TL/TS/XL2 Fibre Channel Driver): Updated with several quality and performance enhancements for the `td` driver, as well as defect fixes.
 - FibrChan1-01 (Fibre Channel Mass Storage Driver for HP-UX 11i v2): Updated to incorporate defect fixes.
 - **New:** FibrChan1-02 (Fibre Channel Mass Storage Driver for HP-UX 11i v2): Supports a new set of PCIe fibre channel host bus adapters, starting with the AD299A. The driver name is `fclp`, which is default-installed.
 - IEther-00: PCI Express (PCIe) technology enabled on HP-UX 11i v2 to support PCIe dual-port cards. New `lanadmin` option to enable writing VPD `asset_tag` on eeprom. HP strongly recommends that the default values of four tunables not be changed.
 - RAID-01: Updated with quality improvements and support for Instance Provider.
 - scsiU320-00: Updated with quality improvements.
 - SerialSCSI-00: Updated with quality improvements, new HBA firmware, and support for Instance Provider.
 - USB-00: Updated to version C.01.04.03 to incorporate defect fixes.
- Utility Pricing Solutions
 - HP Instant Capacity (iCAP): Updated to version B.11.23.08.01.01.x with update to the required version of nPartition Provider, defect fixes, modifications to the installation procedure, and more.

June 2007 Release Notes, Chapter 5: “General System Administration”

- Distributed Systems Administration Utilities: Updated to version 1.4 to incorporate defect fixes.
- **New:** DUMPAAEnable: Version B.11.23.0609.01. Enables high-availability features for HP's Active-Active Disk Arrays when configured as dump devices. Available on Software Pack.
- **New:** Dynamic Root Disk (DRD): An HP-UX system administration toolset used to clone an HP-UX system image to an inactive disk for software maintenance and recovery.

- Enterprise Cluster Master Toolkit: Updated to version B.04.01. Enhanced Oracle toolkit, README file of each toolkit in the ECMT bundle. Includes support for HP Apache, HP CIFS and Oracle 9i and 10g with Cluster File System (CFS) 5.0, and more.
- Event Monitoring Services: Enhanced to support Web Based Enterprise Management (WBEM) notifications. Also includes defect fixes. Bundle name changed from B67609BA to EventMonitoring.
- Feature Enablement Patch Bundle: FEATURE111 bundle consists of all its previous patches plus new enablement patches for Dynamic Root Disk, vPars, and VxFS products.
- High Availability Monitors: Updated to support the update of Event Monitoring Service.
- HP Integrity Virtual Machines Provider (VM Provider): Upgrade from A.01.20 to A.03.00 provides support for Windows guests in addition to HP-UX guests.
- HP Integrity Virtual Machines (VMGuestLib): Upgrade from version A.01.20 to A.03.00 includes support for Windows guests.
- HP OpenView GlancePlus Pak: Updated to version 4.60 with enhancements including (for OVPA) support for HP Virtual Machine 2.0, configurable logging intervals, additional logging thresholds, flush interval, and (for GlancePlus) gpm has been renamed as xglance, ability to monitor HP Virtual Machine 2.0 guests from the HPVM host system, and more.
- HP Partitioning and Virtual Server Environment
 - **New:** HP Application Discovery: Application Discovery agent (AppDiscAgent) is default-installed on the OE media. The agent securely supplies data to Application Discovery server at intervals that can be set by a system administrator.
 - HP Global Workload Manager: Updated to version A.03.00.00.x with several changes, including: conditional policies that take effect based on Serviceguard events; enablement of use of Temporary Instant Capacity (TiCAP) resources on the policy level; support for Hyper-Threading; new gwlmstatus command; and more.
 - HP Process Resource Manager: Now provides an interface inside HP Systems Insight Manager; xprm interface has been removed.
 - HP-UX Virtual Partitions: Updated to version A.04.04. Provides support for HP 9000 servers based on the HP sx2000 chipset, support for SCSI tape boot and recovery within a vPars A.04.04 environment for supported HP Integrity servers. Purchased separately.
 - nPartition Provider: Updated to version B.01.03 with defect fixes.
 - PRMKernelSW: Formerly PRM Libraries, now known as PRMKernelSW, which contains only the PRM kernel fileset, PRM-Sw-Krn.
 - PRMLibraries: Now contains PRM API. Previous content of this product is now in the PRMKernelSW product.
 - Utilization Provider: Updated to version A.01.06.xx.xx to include defect fixes and support for new features of the VSE Management Software. Now provides support for Application Discovery and for Serviceguard failover.
 - vPar Provider: Provides defect fixes for improving product performance.
- HP Serviceguard: Updated to version A.11.18. Changes include new, streamlined package-creation process; explicit support for external scripts; general-purpose support for package dependencies on the same node; general-purpose support for multi-node packages (volume groups must be mounted in shared mode); and more. Bundle name changed from T1905BA to T1905CA.
- HP Serviceguard NFS Toolkit: Updated to version A.11.23.07 with fix for a problem with hanfs.sh script and a new white paper that describes how Serviceguard NFS Toolkit works with the Cluster File System in a Serviceguard environment.
- HP System Management Homepage for HP-UX: Updated to version A.2.2.6.x to incorporate defect fixes.

- HP Systems Insight Manager: Updated with support for HP VSE Management Software 3.0 products; enhancement to better identify associations between systems when those systems convert to a different subtype; and change in the name of orphan systems.
- HP WBEM Services for HP-UX: Updated to version A.02.05.x, which is a major update to version A.02.00 and is based on OpenPegasus 2.5 source base and CIM Schema 2.9. Key differentiators include association providers, internationalization support for CIM operations, CIM schema upgrade, and more. Bundle name changed from B8465BA to WBEMsvcs.
- HP-UX Kernel Configuration: Now available as a tool in the HP System Management Homepage. TUI is no longer ObAM-based.
- HP-UX WBEM Fibre Channel Provider: Updated to version 11.23.0706. New Consolidated Status Provider (CSP), new Indication Provider, and contains defect fixes.
- **New:** HP-UX WBEM File System Provider: Makes available file system information. The FSPProvider instruments the *HPUX_HFS*, *HP_LOFS*, *HP_CDFS*, *HP_VxFS*, *HP_NFS*, *HP_MountPoint* and *HPUX_Mount* classes.
- **New:** HP-UX WBEM IOTree Indication Provider: Enables management clients to subscribe to WBEM indications. Indication consumers can receive indications whenever there is a state change in the hot swappable slots of the PCI-IO sub-system.
- HP-UX WBEM LAN Provider for Ethernet Interfaces: Delivers two new providers: HP-UX LAN Indication Provider and LAN Consolidated Status Provider. Installation of DLPI patch PHNE_35545 is recommended.
- HP-UX WBEM LVM Provider: Updated to version 11.23.008 to incorporate defect fixes.
- **New:** HP-UX WBEM RAIDSA Provider: Used by client applications to determine information about Smart Array HBAs present on the system.
- **New:** HP-UX WBEM SAS Provider: Used by client applications to determine information about SAS HBAs present on the system.
- HP-UX WBEM SCSI Provider: Updated to version 11.23.0706. Supports Consolidated Status Provider feature and contains defect fixes.
- Ignite-UX: Updated to version C.7.2.xx. This is the final Ignite-UX release supporting HP-UX 11.00 installation and recovery. Significant changes to the default system configuration for HP-UX 11i v2 have been made to support software added to HP-UX after initial release, better handle larger mass storage devices and support future updates to other HP-UX releases. Will now recover the Memory File System (MemFS) configuration. Has introduced the ability to block particular paths and protocols during inventory. An example script has been added to simplify creation of recovery DVD media. Support for new hardware and defect fixes.
- ObsIOTreePro: Upon update from HP-UX 11i v1 to HP-UX 11i v2, will remove the ISU IOTree Provider product and will retain the core IOTree Indication Provider product.
- Obsolescence Bundle: Used during an update, automatically removes obsolete or incompatible products and/or drivers.
- Online Diagnostics: Updated to support Emulex PCI-e Fibre Channel Mass Storage Adapters AD299A and AD355A. The new monitor for these cards (*dm_fc1p_adapter*) is included in this release for Itanium®-based systems. Other I/O devices, as well as new systems and storage arrays are also supported.
- Quality Pack Patch Bundles: Updated for the HP-UX 11i v2 (B.11.23) June 2007 release.
- Software Distributor: Updated to incorporate defect fixes.
- Software Package Builder: Updated to incorporate defect fixes, including quality improvements to the manpage and graphical user interface (GUI).

- System Fault Management: Updated with changes including new providers, the choice of the SFMIndicationProvider instead of EMS Hardware Monitors on Itanium®-based systems, the ability to view indications generated by the High Availability Monitors, and more.
- Update-UX: Updated to reflect defect fixes. There are no new features or functionality in update-ux.

June 2007 Release Notes, Chapter 6: "Disk and File Management"

- HP CIFS Client: Updated to version A.02.02.01 with support for MS Distributed File System (DFS) and new configuration parameters; and other features.
- HP CIFS Server: Updated to 3.0g version A.02.03.01. Based on Samba 3.0.22 with 3.0.23 selected fixes. Also includes fixes and enhancements provided in HP CIFS Server 3.0f version A.02.03. Enhancements include Winbind code re-design and TDB memory map support.

June 2007 Release Notes, Chapter 7: "Internet and Networking"

- Firefox and FirefoxSrc: Updated to version 1.5.0.8. Fixes several security vulnerabilities reported by the Mozilla Foundation.
- **New:** HP-UX Enhanced Publickey-LDAP: Enhanced with the newkey/chkey commands and the getpublickey/getsecretkey APIs. Available on Software Pack.
- HP-UX Web Server Suite
 - HP-UX Apache-based Web Server: Updated to version 2.0.58.01 as primarily a security/defect fix release.
 - HP-UX Tomcat-based Servlet Engine: Tomcat upgraded to version 5.5.20.00.
 - HP-UX Webmin-based Admin: Updated as primarily a defect fix release. Webmin upgraded to 1.070.09.
 - HP-UX XML Web Server Tools: XML Web Server tools upgraded to version 2.03.
- LDAP-UX Integration: Updated to version B.04.10. Provides defect fix and new features, including Dynamic Group Support, PAM_AUTHZ enhancements, and more.
- Mozilla: Updated to 1.7.13.01. Contains security fixes.
- Netscape Directory Server for HP-UX: Updated to B.06.21.50. Contains defect fixes in addition to new features provided in version B.06.21, including support for four-way multi-master replication, support for fine-grained password policy, and more.
- Red Hat Directory Server for HP-UX: Updated to version B.07.10.20.20 to provide defect fixes.
- Thunderbird and ThunderbirdSrc: Updated to 1.5.08.00. Fixes several security vulnerabilities reported by the Mozilla Foundation.

June 2007 Release Notes, Chapter 8: "Security"

- HP-UX Bastille: With version 3.0.x, new enhancements, capabilities, features, and benefits (including bastille_drift analysis) represent additional items that Bastille will be able to lock down, additional usability improvements, and a new ability for Bastille to check a given system to ensure its security state is the same as a saved baseline. Bundle name changed from B6849AA to HPUXBastille.
- HP-UX Host Intrusion Detection System: Updated to version 4.1. Supports an alert volume reduction feature; enables the generation of customized and consolidated alert reports that are easy to view and print; provides a tuning tool that reduces the time and effort to deploy and maintain Surveillance Schedules; and more.
- HP-UX IPFilter: Updated to version A.03.05.14 with Filtering for IPv6 packets equivalent to IPv4 packet filtering while maintaining IPv4 support; Stateful filtering for TCP (limited stateful filtering for UDP and ICMPv6); IPv6 fragmentation support (the ability to block fragmented traffic); and other changes.
- HP-UX Security Attributes Configuration: Defects are fixed in this release.

- **Install-Time Security:** Includes the bundles `Sec00Tools`, `Sec10Host`, `Sec20MngDMZ`, and `Sec30DMZ`. Updated to version 1.4.x with new questions/configuration, diagnostic daemon configure to local-only use (not network), and `syslog` local-only.
- **OpenSSL:** Updated to version A.00.09.071.003. Incorporates defect fixes. If OpenSSL A.00.09.08d is enabled, additional security features are available.
- **HP-UX Role-based Access Control:** Updated to version B.11.23.04 with introduction of a set of “privilege shells,” integration with HP System Management Homepage, integration with select commands, and defect fixes. Available on Software Pack.
- **HP-UX Secure Shell:** Updated to version A.04.40.011. Features include change to `ssh` ControlMaster directive for Connection Sharing; improved performance for remote-to-local and local-to-remote file transfers; and features introduced in OpenSSH4.4p1.
- **New:** HP-UX Software Assistant: A command-line based tool that consolidates and simplifies patch management and security bulletin management on HP-UX systems.
- **HP-UX Standard Mode Security Extensions:** Version B.11.23.02 introduces integration with HP-UX Role-based Access Control, allowing more granular access controls. In addition, also introduces the `userstat` command for querying the status of user account information. Available on Software Pack.

June 2007 Release Notes, Chapter 9: “Commands and System Calls”

- **New:** LoginNLS: Version B.11.23.01. Provides French Native language support for `login(1)`. Available on Software Pack.
- **New:** TRUFGREP: Provides a new command - `trufgrep(1)`, which searches the input text files for a pattern. Uses a different algorithm to implement `fgrep(1)`. Available on Software Pack.
- **New:** `usermod` Command Enhancement (Restricted Movement of Home Directories): With this enhancement, `usermod(1M)` can selectively prevent the movement of home directories with the `-m` option. Available on Software Pack.

June 2007 Release Notes, Chapter 10: “Libraries and Programming”

- **HP MPI:** Updated to version 2.2.5 with MPI-2 name publishing support, new `mpi run` option `-netaddr`, and new environment variables.
- **HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java™ 2 Platform Standard Edition (JDK/JRE):** Versions 1.4 and 5.0 (1.5) of the JDK/JRE, Add-ons, and Plugins updated to incorporate defect fixes.
- **Perl:** Updated to version 5.8.8 build 817.1 with improvements to performance, changes to several commands, defect fixes, and much more.

June 2007 Release Notes, Chapter 11: “Internationalization”

- There are no changes in June 2007 for the products or features that are normally documented in this chapter.

June 2007 Release Notes, Chapter 12: “Other Functionality”

- There are no changes in June 2007 for the products or features that are normally documented in this chapter.

What is New in the September 2006 Release?

In the following summaries, you can obtain a general picture of how the September 2006 release of HP-UX 11i v2 differs from the June 2006 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 September 2006 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends that you consult the *HP-UX 11i Version 2 September 2006 Release Notes* for information that is not included here.

September 2006 Release Notes, Chapter 4: “Hardware-Specific Information”

- CommonIO Bundle: Updated with packaging changes.
- Hardware Enablement Patch Bundle for HP-UX 11i v2 (HWEenable11i): Includes future HP-UX support for PCI-Express I/O adapters, in addition to the latest changes for the new Dual-Core Intel® Itanium® 2 processors in the following HP servers.
- Networking and Mass Storage Drivers
 - FibrChan1-01: Updated with quality and diagnostic improvements.
 - GigEther-01: Updated to version 11.23.0609 to pre-enable future technology.
 - IETHER-00: Updated to version 11.23.0609 to pre-enable future technology.
 - **New Product:** PCIMUX-00: Supports the AD278A and AD279A cards.
 - RAID-01: Updated with quality and diagnostic improvements, and defect fixes.
 - scsiU320-00: Updated with quality and diagnostic improvements for Ultra320 SCSI solutions.
 - SerialSCSI-00: Updated with quality improvements.
 - USB-00: Updated to version C.01.04.01 with quality improvements. Now supports the A6869A and A6869B cards.
- Utility Pricing Solutions
 - HP Instant Capacity: Updated to version B.11.23.08.00.01 to incorporate defect fixes related to powered-off cells and remote complexes.
 - HP Pay per use: Updated to version B.11.23.08.00.01 to incorporate a defect fix.

September 2006 Release Notes, Chapter 5: "General System Administration"

- Distributed Systems Administration Utilities: Updated to V1.2 with updated and enhanced features to `csync_wizard`, enhanced consolidated logging, and a new command, `cwall`, as well as other changes.
- Feature Enablement Patch Bundle (FEATURE11i): Added new patches for HP Integrity Virtual Machines (HPVM), HPDesktopDev, and Veritas products.
- HP Integrity Virtual Machines Provider (VMProvider): Updated to version A.01.20.69 with support for Windows on Integrity as well as HP-UX guests.
- HP Integrity VM Support Library (VMGuestLib): Updated to version A.01.20.69 to incorporate defect fixes.
- HP Partitioning
 - HP Global Workload Manager: Updated to version A.02.50.00.x with ability to nest partitions (with gWLM managing resources for all the partition types); ability to display and compare previous configurations; and ability to use Java JRE/JDK 1.4.2 or Java 1.5 (5.0); as well as other changes.
 - HP Process Resource Manager: Updated to version C.03.02 with HP System Management Homepage integration, ability to map UNIX groups to PRM groups, and extended regular expressions in alternate names for application records.
 - HP-UX Virtual Partitions: Provides tape device support on version A.04.03. Purchased separately.
 - HP-UX Workload Manager: Updated to version A.03.02 with ability to map UNIX groups to workload groups, extended regular expressions in alternate names for application records, and other changes.
 - HP-UX Workload Manager Toolkits: Updated to version A.01.10 with the removal of Pay Per Use Toolkit, including its `utilitydc` command. Bundle name has changed from T1302AA to WLMToolkits.
 - nPartition Provider: Updated to version B.23.01.06.02 with the ability to enable and disable Hyper-Threading for nPartitions whose cells have processors that are Hyper-Threading-capable.

- PRMKernelSW (formerly PRM Libraries): Name has changed from “PRM Libraries” to “PRMKernelSW.” No other changes.
- PRMLibraries: Updated to version C.03.02. Now contains the PRM API. Bundle name is PRMLibraries. Previous content now in the PRMKernelSW product.
- HP Serviceguard NFS Toolkit: Updated to version A.11.23.06 with a fix for a problem with the HA-NFS File Lock Migration script, `nfs.flm`.
- HP System Management Homepage: Updated to version A.2.2.4.x to incorporate defect fixes.
- HP Systems Insight Manager: Updated with support for HP BladeSystem C-Class blade and enclosure, delivery of the HP BladeSystem Integrated Manager 2.1, and defect fixes.
- HP WBEM Services for HP-UX: Updated to version A.02.00.11 to incorporate defect fixes.
- HP-UX IPQoS: Will be removed by the Obsolescence Bundle upon update from HP-UX 11i v1 to HP-UX 11i v2. To continue using, you can download the HP-UX IPQoS product for HP-UX 11i v2 free from Software Depot.
- HP-UX WBEM Fibre Channel Provider: Updated to version 11.23.0609.02 to incorporate defect fixes.
- HP-UX WBEM LVM Provider: Updated to version 11.23.007 to incorporate defect fixes.
- HP-UX WBEM SCSI Provider: Updated to version 11.23.050 to incorporate defect fixes, as well as new functionality to provide more management information to the upper layers.
- Ignite-UX: Updated to version C.6.9.x with support for system recovery and system cloning of systems using VxFS 5.0 and VxVM 5.0 (cold install of systems with VxFS 5.0 and VxVM 5.0 not supported); compression of install kernels on B.11.23; support for new hardware enabled by the HP-UX release.
- Online Diagnostics
 - OnlineDiag Bundle: Updated with support for legacy functionality of PCI-express host bridge adapter on Zx2 platforms, as well as support for other, future cards.
 - SysFaultMgmt (System Fault Management): Updated with support for new platforms and to incorporate defect fixes.
- Quality Pack Patch Bundle: Included in this release as a superset of the March 2006 HP-UX 11i v2 Quality Pack. Not updated in June 2006.
- System Administration Manager: `sam(1M)` command has been deprecated and is planned for future obsolescence.
- Software Distributor: Updated to incorporate defect fixes.
- Update-Ux: Updated to incorporate defect fixes. No new features or functionality.
- Utilization Provider: Updated to version A.01.04.x to incorporate defect fixes.

September 2006 Release Notes, Chapter 6: “Disk and File Management”

- Disks and File Systems: Updated to provide defect fixes and an improved GUI.
- EnableVxFS Bundle: Now supports VxFS 5.0 as well as VxFS 4.1.
- HP CIFS Client: Updated to version A.02.02 with support for MS Distributed File System (DFS), the HP CIFS Client DLKM feature, and new configuration parameters.
- HP CIFS Server: Updated to 3.0e (version A.02.02.01) with minor enhancements and defect fixes.
- HP OnlineJFS 3.5: Updated to improve product quality. Now customer-selectable on all OEs.
- HP OnlineJFS 4.1: Base-VXVM 4.1 is no longer a prerequisite for HP OnlineJFS 4.1. Now always-installed on the EOE and MCOE only.

September 2006 Release Notes, Chapter 7: “Internet and Networking”

- **New Products:** Firefox/Firefox Source: Web browser includes Firefox 1.5.x changes from the Mozilla Foundation. Fixes several security vulnerabilities reported in Firefox 1.5.0.0 from the Mozilla Foundation.
- **New Products:** GTK/GTK Source: Added to support FireFox/Thunderbird.
- **GTK+ Libraries:** Updated to incorporate a packaging change.
- **Mozilla Web Browser:** Updated to version 1.7.12.01.x to incorporate a packaging change.
- **New Products:** Thunderbird/Thunderbird Source: Supported email client on HP-UX, provides online browsing and searching tools for HP-UX Integrity and PA-RISC customers.

September 2006 Release Notes, Chapter 8: "Security"

- **PAM Kerberos:** Now delivered on the HP-UX 11i v2 Operating Environments. Version 1.24 includes a new error message for *pamkrbval*(1M), better troubleshooting, and other changes. Bundle name has changed from J5849AA to PAMKerberos.
- **HP-UX Secure Shell:** Updated to version A.04.30.007 to incorporate defect fixes.

September 2006 Release Notes, Chapter 9: "Commands and System Calls"

- No changes in this release.

September 2006 Release Notes, Chapter 10: "Libraries and Programming"

- **Java 2 Standard Edition Platform**
 - HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java™ 2 Platform Standard Edition (JDK/JRE): Versions 1.4 and 5.0 (1.5) of the JDK/JRE, Add-ons, and Plugins updated to incorporate packaging changes.
 - *ObsJava12* (Obsolescence for Java 1.2) and *ObsJava13* (Obsolescence for Java 1.3): Updated to incorporate packaging changes.
 - **Java Out-of-Box:** Updated to version 2.03.07 to incorporate packaging changes.
- **Perl:** Updated to version 5.8.3 build 809 to incorporate defect fixes.

September 2006 Release Notes, Chapter 11: "Internationalization"

- No changes in this release.

September 2006 Release Notes, Chapter 12: "Other Functionality"

- No changes in this release.

What is New in the June 2006 Release?

In the following summaries, you can obtain a general picture of how the June 2006 release of HP-UX 11i v2 differs from the March 2006 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 June 2006 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends that you consult the *HP-UX 11i Version 2 June 2006 Release Notes* for information that is not included here.

June 2006 Release Notes, Chapter 4: "Hardware-Specific Information"

- **New Bundle:** *CommonIO*: Contains common files that are used for multiple drivers. Currently contains infrastructure components for *SerialSCSI-00*.
- **Hardware Enablement Patch Bundle for HP-UX 11i v2** (*HWEnable11i*): Includes patches for HP servers with the Dual-Core Intel® Itanium® 2 processors.
- **HP Instant Support Enterprise Edition:** Updated to version A.03.95.057 to incorporate defect fixes.
- **Networking and Mass Storage Drivers**
 - *FibrChan1-01*: Includes fixes and support for the newly released AB379A card.
 - *GigEther-01*: Includes changes to Checksum Offload. Supports PCI Error Handling.
 - *IEther-00*: Includes changes to Checksum Offload. Supports PCI Error Handling.
 - *RAID-01*: Updated with quality and diagnostic improvements and defect fixes.

- `scsiU320-00`: Updated with quality and diagnostic improvements for Ultra320 SCSI solutions. Now always-installed.
- `SerialSCSI-00`: Updated with quality improvements.
- Utility Pricing Solutions
 - HP Instant Capacity: Updated to version B.11.23.08.00.xx with support for Global Instant Capacity, terminology changes, command enhancements, and other changes.
 - HP Pay per use: Updated to version B.11.23.08.00.xx with terminology changes, support for HP Integrity Virtual Machines, command enhancement, and other changes.

June 2006 Release Notes, Chapter 5: “General System Administration”

- Feature Enablement Patch Bundle (`FEATURE11i`): Added new patches for HP Integrity Virtual Machines (HPVM).
- HP Integrity Virtual Machines Provider (`VMProvider`): Updated to version A.01.20 with build and MOF changes to work with the latest WBEM Services, a new interface to get only the IDs of the VMs, and additions to get more VxVM information from each VM.
- HP Integrity VM Support Library (`VMGuestLib`): Updated to version A.01.20 to incorporate a very minor packaging change.
- HP Partitioning
 - HP Global Workload Manager: Updated to version A.02.00.00.x. Now part of the HP Virtual Server Environment (VSE) Management Software suite, can now manage virtual machines created using the HP Integrity Virtual Machines software, and has other changes.
 - `nPartition` Provider: Updated to version B.23.01.06.01 to resolve problems and limitations.
 - Partition Manager: Updated to version B.23.02.01.03 to resolve problems and limitations.
 - `vPar` Provider: Updated to incorporate defect fixes.
- **New Product:** HP Serviceguard WBEM Providers: Will provide current Serviceguard cluster configuration, membership, and status information to Common Information Model (CIM) clients using HP WBEM Services on HP-UX platforms.
- HP System Management Homepage: Updated to version A.2.2.3 to incorporate defect fixes.
- HP WBEM Services for HP-UX: Updated to version A.02.00.10 to incorporate defect fixes.
- HP-UX Kernel Configuration: Updated to incorporate defect fixes.
- Ignite-UX: Ignite-UX 11i v1 (B.11.11) installation kernel now includes the 4 GB patch to support files on ISO9660 media (CDFS) that are greater than 2 GB in size. SAS support is introduced, as well as the use of `ssh` for the creation of recovery images, providing enhanced security.
- Online Diagnostics
 - `OnlineDiag` Bundle: Updated to support AD279A, AD278A, AB345C, and AB286C cards, as well as pre-enables future cards. The new Serial-Attached SCSI (SAS) Mass Storage Adapter Monitor (`dm_sas_adapter`) is included for Itanium®-based systems.
 - `SysFaultMgmt` Bundle: Updated version introduces new indication provider `SFMIndicationProvider`, which replaces some EMS monitors; provides LED reporting on Field Replaceable Units; and other changes, including defect fixes.
- Quality Pack Patch Bundle: Not updated in June 2006 release. March 2006 QPK was carried forward into this release. Next QPK update will occur in the September 2006 release.
- Software Distributor: Updated to incorporate defect fixes.
- Update-UX: Updated to reflect defect fixes. No new features or functionality.
- Utilization Provider: Updated to version A.01.03 to include defect fixes.

June 2006 Release Notes, Chapter 6: “Disk and File Management”

- EnableVxFS Bundle: Now a customer-selectable product in the June 2006 release of HP-UX 11i v2 (formerly, was always-installed).
- VERITAS File System (HP JFS/HP OnlineJFS): HP OnlineJFS 4.1 (B3929EA): Updated to incorporate a defect fix. Base-VXVM 4.1 is now a prerequisite for HP OnlineJFS 4.1.

June 2006 Release Notes, Chapter 7: "Internet and Networking"

- GTK+ Libraries: Updated to incorporate a packaging change.
- HP-UX Web Server Suite
 - HP-UX Apache-based Web Server: Updated to v.2.0.55.03 as primarily a security/bug fix release.
 - HP-UX Tomcat-based Servlet Engine: Updated to version 5.5.9.04 to incorporate defect fixes.
 - HP-UX Webmin-based Admin: Updated to version 1.070.07 as primarily a bug fix release.
- Mozilla Web Browser: Updated to version 1.7.12.01.01 to incorporate a packaging change.

June 2006 Release Notes, Chapter 8: "Security"

- HP-UX OpenSSL: Updated to provide more stringent error checking and general defect fixes.
- HP-UX Role-based Access Control: Updated with a usability enhancement known as "Hierarchical Roles" that allows you to define relationships between roles. Also includes defect fixes.
- HP-UX Secure Shell: Updated to version A.04.20.009 with High Performance Enabled SSH/SCP and Auth Selection patches, new configuration directives in the server, increase in the default size of RSA and DSA keys, delayed compression, and other changes.
- SecurityExt Bundle: Updated to version B.11.23.02 with update of HP-UX Role-based Access Control and new manpages. Available on Software Pack.

June 2006 Release Notes, Chapter 9: "Commands and System Calls"

- No changes in this release.

June 2006 Release Notes, Chapter 10: "Libraries and Programming"

- HP MPI: Updated to version 2.2 with C++ bindings, new `mpirun` command line options, MPI-2 supported ROMIO, CPU bind support, signal propagation, scalability, and new environment variables.
- Java 2 Standard Edition Platform
 - HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java™ 2 Platform Standard Edition (JDK/JRE): Versions 1.4 and 5.0 (1.5) of the JDK/JRE, Add-ons, and Plugins updated to incorporate defect fixes as well as packaging changes.
 - Java Out-of-Box: Updated to version 2.03.05 to incorporate packaging changes.
- Perl: Updated to version 5.8.3 build 809. Includes changes to the hash code, to the Perl API, and to some C macros, as well as other changes.

June 2006 Release Notes, Chapter 11: "Internationalization"

- No changes in this release.

June 2006 Release Notes, Chapter 12: "Other Functionality"

- No changes in this release.

What is New in the March 2006 Release?

In the following summaries, you can obtain a general picture of how the March 2006 release of HP-UX 11i v2 differs from the December 2005 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 March 2006 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends that you consult the *HP-UX 11i Version 2 March 2006 Release Notes* for information that is not included here.

March 2006 Release Notes, Chapter 4: "Server-Specific Information"

- Hardware Enablement Patch Bundle: New servers with the sx2000 chipset now qualified.
- HP Instant Support Enterprise Edition: Updated to version A.03.95.043 to incorporate defect fixes.
- Networking and Mass Storage Drivers
 - `HyprFabrc-00`: Updated to support large user count. Erratum: At the initial release of HP-UX 11i v2, the `/opt/clic/bin/clic_probe` superseded the `/opt/clic/bin/clic_ping` utility.
 - `scsiU320-00`: Updated to version B.11.23.0603 with disablement of Quick Arbitration and Selection (QAS), significantly reducing the occurrence of any SCSI-related issues seen in a mixed speed disk configuration.
 - `SerialSCSI-00`: Updated with quality improvements. Added in December 2005 to support future cards.
 - `USB-00`: Updated to version C.01.03.01 with various quality improvements from previous releases, a dynamically managed device file system, and USB mass storage encryption support.
- **New Product:** PCI Error Handling: Allows an HP-UX system to avoid a Machine Check Abort (MCA) or a High Priority Machine Check (HPMC) if a PCI error occurs. Now available on Software Pack media.

March 2006 Release Notes, Chapter 5: "General System Administration"

- Distributed Systems Administration Utilities: Updated to incorporate defect fixes. Now delivered as a default-installed product on all OEs, including the TCOE.
- Enterprise Cluster Master Toolkit: Included documentation for version B.03.00 has been updated to include support for the VERITAS Cluster File System (CFS) in selected HP Serviceguard Storage Management Suite bundles.
- Feature Enablement Patch Bundle (`FEATURE11i`): Added new patches for VERITAS and Infiniband.
- HP Partitioning
 - HP Global Workload Manager: CMS updated to version A.01.01.02 with changes, new features, and defect fixes for a more robust product. The CMS is now delivered via HP Software Depot at <http://hp.com/go/softwaredepot>.
 - HP Process Resource Manager: Updated to version C.03.01 with integration with HP SIM and ability to control shared memory. Now works inside HP Integrity Virtual Machines.
 - HP-UX Virtual Partitions: Updated to version A.04.02 with flexible administration capabilities, additional CPU support, and customer-requested fixes. Purchased separately.



NOTE: Correction: HP-UX Virtual Partitions version A.04.02 does not provide tape device support on PA-RISC servers and DRD integration, as was previously documented in the *HP-UX 11i v2 March 2006 Release Notes*.

- HP-UX Workload Manager: Updated to version A.03.01 with more flexibility in process placement, more workload groups, and more management combinations.
- HP-UX Workload Manager Toolkits: Updated to version A.01.09 with an SAP Toolkit to simplify integration between SAP and WLM.
- PRM Libraries: `PRM-Sw-Krn` fileset has been updated to version C.01.04 to incorporate defect fixes.

- HP Serviceguard: Included documentation for version A.11.17 has been updated to include support for the VERITAS Cluster File System (CFS) in selected HP Serviceguard Storage Management Suite bundles.
- HP Serviceguard NFS Toolkit: Updated to incorporate a defect fix.
- HP System Management Homepage: Updated to version A.2.2.2 with defect fixes as well as improved event and hardware management.
- HP Systems Insight Manager: Updated with support for integration with HP Storage Essentials Enterprise Edition, integration with HP ProLiant Essentials Virtual Machine Management Pack, and integration with HP ProLiant Essentials Server Migration Pack.
- HP WBEM Services for HP-UX: Updated to version A.02.00.09 to incorporate defect fixes.
- HP-UX Accounts for Users and Groups tool: Updated to incorporate defect fixes.
- HP-UX WBEM Fibre Channel Provider: Updated to version 11.23.0603.02 to incorporate defect fixes. No new functionality.
- HP-UX WBEM LVM Provider: Updated to version 11.23.005 to incorporate defect fixes. No new functionality.
- HP-UX WBEM SCSI Provider: Updated to version 11.23.010 to incorporate defect fixes. No new functionality.
- Ignite-UX: Updated to version C.6.7.x with defect fixes and security improvements.
- Online Diagnostics
 - OnlineDiag Bundle: Updated to enable new HP servers.
 - **New Product:** SysFaultMgmt Bundle: Provides System Fault Management, a collection of tools for monitoring the health of HP servers and receiving information about hardware such as memory, CPU, power supplies, and cooling devices.
- Quality Pack Patch Bundle: Included in this release as a superset of the December 2005 HP-UX 11i v2 Quality Pack.
- Software Distributor: Updated to incorporate defect fixes.
- Update-UX: Updated to incorporate defect fixes.
- Utilization Provider: Updated to version A.01.01 to provide defect fixes which enable utilization data to be more reliable for resource partitions and systems that contain more than 255 active disks.

March 2006 Release Notes, Chapter 6: "Disk and File Management"

- HP CIFS Server: Updated to 3.0d (version A.02.02) with fixes and functionality from the new Samba base (version 3.0.14a), including support for the `idmap_rid` facility and support for publishing printers in an MS Windows 2000/2003 ADS domain, as well as other enhancements.
- HP OnlineJFS: Version 1.4 is now "customer-selectable" instead of "default-installed" as in the previous release.

March 2006 Release Notes, Chapter 7: "Internet and Networking"

- Mozilla for HP-UX: Updated to version 1.7.12.01 with enhancements including improved Asian font support, the Japanese Language Pack, and fixes for security vulnerabilities.
- **New Product:** Red Hat Directory Server for HP-UX: Version B.07.10.10 added to HP-UX 11i v2 with Windows user synchronization, get effective rights control, wide-area network replication, fractional replication, and other features.

March 2006 Release Notes, Chapter 8: "Security"

- HP-UX Host Intrusion Detection System: Updated to version 4.0 with new features and enhancements, including support for reduction of alert volume by aggregation, reduction of alert volume by monitoring only critical files, the ability to specify critical users, and more.
- HP-UX Security Attributes Configuration tool: Updated to incorporate defect fixes.
- OpenSSL: Has a new version number due to a packaging change. No change in functionality.

March 2006 Release Notes, Chapter 9: “Commands and System Calls”

- No changes in this release.

March 2006 Release Notes, Chapter 10: “Libraries and Programming”

- Java 2 Standard Edition Platform
 - HP 3D Technology for the Java™ 2 Standard Edition Platform: Upon installation of the OEs, v1.3 will be removed by the ObsJava13 bundle.
 - HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java™ 2 Platform Standard Edition (JDK/JRE): Version 5.0 updated to incorporate defect fixes. Now included in the TCOE. ObsJava13 bundle will remove SDK/RTE and Plug-In 1.3.
 - Java Out-of-Box: Updated to incorporate defect fixes.
- Perl: Updated to incorporate defect fixes.

March 2006 Release Notes, Chapter 11: “Internationalization”

- No changes in this release.

March 2006 Release Notes, Chapter 12: “Other Functionality”

- No changes in this release.

What is New in the December 2005 Release?

In the following summaries, you can obtain a general picture of how the December 2005 release of HP-UX 11i v2 differs from the May 2005 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 December 2005 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends you consult the *HP-UX 11i Version 2 December 2005 Release Notes* for information that is not included here.

December 2005 Release Notes, Chapter 2: "Introduction to HP-UX 11i Version 2"

- HP-UX 11i v2 Minimal Technical Operating Environment (MTOE): May 2005 was last release that included the Minimal Technical OE (MTOE). After May 2005, the HP-UX 11i v2 MTOE is no longer available.

December 2005 Release Notes, Chapter 4: "Server-Specific Information"

- Hardware Enablement Patch Bundle (HWEnable11i): Added support for hp BladeSystems Itanium BL60p servers. Several I/O driver bundles added or updated.
- HP Instant Support Enterprise Edition (ISEE): Updated to incorporate defect fixes and feature enhancements.
- Networking and Mass Storage Drivers
 - 10GigEthr-00: The ixgbe driver updated to version B.11.23.06 for December 2005. With the installation of separately available patches, the driver supports port-based steering multiqueue and TCP packet-reassembly in the driver.
 - FibrChanl-00: Updated to incorporate driver fixes.
 - FibrChanl-01: Updated to version B.11.23.04.01 with defect fixes and support for to-be-released AB378A and AB379A cards.
 - GigEther-00: Updated to incorporate defect fixes.
 - RAID-01: Updated to incorporate defect fixes.
 - scsiU320-00: Updated with quality and diagnostic improvements for Ultra320 SCSI solutions.
 - **New Product:** SerialSCSI-00: Added to the HP-UX 11i v2 Operating Environments to support cards that will be released in the future.
 - USB-00: Updated to version C.01.02.01 with quality improvements.
- Supported Systems: HP-UX 11i v2 not supported on HP Workstations.

December 2005 Release Notes, Chapter 5: "General System Administration"

- **New Product:** Distributed Systems Administration Utilities: Improves manageability of distributed systems and Serviceguard clusters.
- Enterprise Cluster Master Toolkit: Updated to version B.03.00 with defect fixes and Support for Cluster File System (CFS) in a Serviceguard A.11.17 environment.
- Event Monitoring Services: Updated to incorporate defect fixes. Will be deprecated post HP-UX 11i v3.
- Feature Enablement Patch Bundle (FEATURE11i): Provides new patches required for vPars, VERITAS products, Infiniband, and Serial SCSI functionality.
- GlancePlus Pak: Updated to version C.04.50 with elimination of the dependency of `tttd` to have `rpcbind` or `portmap` running; support for both HTTP and HTTPS-based single port communication; replacement of `perfalarm` by DCE-based alarm management daemon, `alarmgen`; new metrics and other enhancements.
- High Availability Monitors: Updated to support the update of Event Monitoring Service (EMS).
- **New Product:** HP Integrity Virtual Machines Provider: Allows HP Systems Insight Manager (SIM) to display information about HP systems that support HP Integrity Virtual Machines. Not invoked directly by the user.

- **New Product:** HP Integrity VM Support Library (`VMGuestLib`): Subset of the HP Integrity Virtual Machines API Library used by HP Integrity Virtual Machines Provider.
- HP Partitioning
 - HP Global Workload Manager: Central Management Server (CMS), one of the gWLM components that was delivered on the AR media, has been removed from the media.
 - HP-UX Workload Manager: Updated to version A.03.00.01 with cleaner installations and the ability to manage a complex with mixed architectures.
 - nPartition Provider: Updated to version B.23.01.05.01 to add support for new cell-based HP servers.
 - Partition Manager v2.0: Updated to version B.23.02.01.02 to add support for new cell-based HP servers, improvements under HP SIM and HP SMH, and defect fixes.
 - **New Product:** vPar Provider: Used by HP WBEM Services for HP-UX to extract information about virtual partitions on the system.
- HP Serviceguard: Updated to version A.11.17 with support for HP-UX 11i Security Containment, HP Fabric Clustering System for Infiniband, and Distributed Systems Administration Utilities. Includes enhanced security, a new command option, and a change in memory allocation, as well as other changes.
- HP Serviceguard NFS Toolkit: Updated to version A.11.23.04 to incorporate fixes for two defects.
- HP System Management Homepage (`SysMgmtWeb`): Updated to version 2.2.1.x with integration of SAM Web-based applications; support for legacy SAM X Launch; WBEM-based property pages for OS and software information.
- HP Systems Insight Manager: Updated to version 5.0 with numerous enhancements, including the ability to view more information and perform more tasks; new CLI commands; a First Time Wizard; support for Oracle databases; and other enhancements.
- HP WBEM Services for HP-UX: Updated to version A.02.00.08 to incorporate defect fixes.
- **New Product:** HP-UX Accounts for Users and Groups: Web-based tool (`ugweb`) allows the user to manage the local user accounts, NIS user accounts and groups.
- HP-UX Kernel Configuration: Now a plug-in tool in the HP System Management Homepage. TUI changed from previous ObAM-based TUI.
- HP-UX Peripheral Device Tool: Updated to version B11.23.05. The `wacnf(1M)` command and the `WEB-ADM` fileset now obsolete and replaced by the HP System Management Homepage, which now integrates the HP-UX Peripheral Device Tool.
- **New Product:** HP-UX WBEM Fibre Channel Provider: Used by client applications to determine information about Fibre Channel HBAs and their properties.
- **New Product:** HP-UX WBEM LAN Provider for Ethernet Interfaces: Used by client applications to determine 100bt and Gigabit links available on the system and collect information about them.
- **New Product:** HP-UX WBEM LVM Provider: Used by client applications to determine information about the LVM via HP WBEM Services for HP-UX.
- **New Product:** HP-UX WBEM SCSI Provider: Used by client applications to determine information about SCSI HBAs present on the system.
- Ignite-UX: Updated to version C.6.5.x with updated documentation, defect fixes, enhancements, and support for VxVM 4.1. No longer supports HP-UX 11i v1.6 (B.11.22). For December 2005, available only on the AR DVD; it is not included in the December 2005 Operating Environments.
- Obsolescence Bundle: Upon update to December 2005, now removes MySQL in addition to other obsolete products.
- Online Diagnostics: Updated to include HPVM enablement, as well as integration of `slview` with HP System Management Homepage.

- **Quality Pack Patch Bundle:** Included in this release as a superset of the May 2005 HP-UX 11i v2 Quality Pack.
- **Software Distributor:** Updated to incorporate defect fixes.
- **SysMgmtBASE bundle:** First added to the HP-UX 11i v2 OEs in May 2005, provides the TUI framework for HP-UX Security Configuration tool and HP-UX Kernel Configuration. Updated in December 2005 to incorporate defect fixes.
- **Software Package Builder:** Updated to incorporate defect fixes.
- **Update-UX:** Updated to version B.11.23.0512.033. No longer supports update from HP-UX 11i v1.6 (B.11.22) to HP-UX 11i v2 December 2005 or later releases.
- **New Product:** Utilization Provider: Lightweight daemon (`utild`) records system-utilization data on a 5-minute interval.

December 2005 Release Notes, Chapter 6: "Disk and File Management"

- **New Product:** Disks and File Systems (`fsweb`): Provides a GUI to HP-UX system administration tasks.
- **New Bundle:** `EnableVxFS`: Provides libraries and commands for VVFS.
- **HP CIFS Client:** Updated to version A.02.01 with a substantially revised and improved code base.
- **HP CIFS Server:** Updated to 3.0c (version A.02.01.02), which is based on Samba 3.0.7 and provides minor enhancements and defect fixes, as well as the new features provided in HP CIFS Server 3.0a (version A.02.01).
- **New Product:** VERITAS File System (HP JFS/HP OnlineJFS): Version 4.1 now available with support for large file systems and large files, as well as other features.
- **New Product:** VERITAS Volume Manager (VxVM): Version 4.1 now available with enhancements including VERITAS Intelligent Storage Provisioning Service, Cross-Platform Data Sharing, and Storage Expert, as well as many other features.

December 2005 Release Notes, Chapter 7: "Internet and Networking"

- **HP-UX Web Server Suite:**
 - HP-UX Apache-based Web Server: Updated to version 2.0.54.03 as primarily a bug fix release.
 - HP-UX Tomcat-based Servlet Engine: Updated to version 5.5.9.03 with implementation of the Servlet 2.4 and JavaServer Pages 2.0 specifications. Designed to run on JDK and later versions.
 - HP-UX Webmin-based Admin: Updated to version 1.070.05 as primarily a bug fix release.
- **New Product:** LDAP-UX Integration product: Uses LDAP to centralize user, group and network information management in an LDAP directory. Provides functionality to support migration from the NIS or NIS+ environment to an LDAP environment.
- **Mozilla for HP-UX:** Updated to version 1.7.x with enhancements including improved Asian font support, the Japanese Language Pack, and fixes for security vulnerabilities.
- **Netscape Directory Server for HP-UX:** Updated to version B.06.21.30 with support for four-way multi-master replication, support for fine-grained password policy, new configuration attributes, and other features and defect fixes.

December 2005 Release Notes, Chapter 8: "Security"

- **HP-UX 11i Security Containment** provides a highly secure, easy to maintain, and backwards-compatible environment to deploy business applications. Now available on Software Pack media.
- **HP-UX IPFilter:** Updated to version A.03.05.12 with NOSYNC pre-enablement, RPC enhancements, and defect fixes.

- HP-UX Role-based Access Control: Allows you to distribute administrative responsibilities by creating roles with appropriate authorizations and assigning them to non-root users and groups. Now available on Software Pack media.
- HP-UX Secure Shell: Updated to version A.04.00.003 with address binding for port forwarding connections, remote binding control, hashing of host names and addresses, and other changes.
- **New Product:** HP-UX Security Attributes Configuration tool (*secweb*): Provides a GUI and TUI for configuring the system-wide and per-user values of security attributes of local and Network Information Service (NIS) users.

December 2005 Release Notes, Chapter 9: “Commands and System Calls”

- No changes in this release.

December 2005 Release Notes, Chapter 10: “Libraries and Programming”

- HP MLIB: Updated to version 9.4 with quality enhancements.
- HP MPI: Updated to version 2.1.1 with several enhancements, including additional supported interconnects, and improved gather performance for TCP/IP, alltoall performance and other improvements.
- Java 2 Standard Edition Platform:
 - HP-UX Software Development Kit and Runtime Environment for the Java™ 2 Standard Edition Platform (SDK/RTE) v1.3 and v1.4: Updated to incorporate defect fixes.
 - **New Product:** HP-UX JDK for the Java™ 2 Platform Standard Edition and HP-UX Java Runtime Environment (JDK/JRE) 5.0: New with the December 2005 release of HP-UX 11i v2.
 - Java Out-of-Box: Updated to incorporate defect fixes.
- Judy Libraries: Updated to version B.11.23.04.17 to incorporate packaging changes. Also now removes empty *MANPATH* file that was created at product installation.
- Perl 5.8.3 build 809: Includes better Unicode support and numeric accuracy, new I/O and thread implementation, and other changes.

December 2005 Release Notes, Chapter 11: “Internationalization”

- No changes in this release.

December 2005 Release Notes, Chapter 12: “Other Functionality”

- No changes in this release.

What is New in the May 2005 Release?

In the following summaries, you can obtain a general picture of how the May 2005 release of HP-UX 11i v2 differs from the September 2004 release of HP-UX 11i v2. For further information, see the indicated chapters in the *HP-UX 11i Version 2 May 2005 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following summaries are not exhaustive, so HP strongly recommends that you consult the *HP-UX 11i Version 2 May 2005 Release Notes* for information that is not included here.

May 2005 Release Notes, Chapter 2: “Introduction to HP-UX 11i Version 2”

- HP-UX 11i v2 Minimal Technical Operating Environment (MTOE): HP-UX 11i v2 May 2005 is the last release that will include the MTOE. After May 2005, the MTOE will no longer be delivered.
- HP-UX 11i v2 Technical Computing OE (TCOE): The HP-UX 11i v2 May 2005 TCOE is the last release that will be supported on Itanium®-based workstations. It will continue to be updated for servers.
- Software Pack: SPK media with optional core enhancements now delivered for HP-UX 11i v2.

May 2005 Release Notes, Chapter 4: “Workstation- and Server-Specific Information”

- Hardware Enablement Patch Bundle (HWE`enable11i`): Diagnostics qualified with new DAT and LTO tape drives, and updated for new I/O cards. Updated I/O driver bundles noted.
- HP Instant Support Enterprise Edition (ISEE): Updated to incorporate defect fixes and few feature enhancements.
- Networking and Mass Storage Drivers:
 - **New Product:** `10GigEthr-00`: Adds support for the AB287A PCI-X 10 Gigabit Ethernet card. Now available as a selectable product in the OEs.
 - `FibrChanl-01`: Now supports the AB465A card.
 - `GigEther-01`: Now supports the AB465A card.
 - `IEther-00`: Now supports the AB290A and AB545A cards.
 - `RAID-01`: Updated to incorporate defect fixes.
 - `scsiU320-00`: Supports the A7173A card and now, the AB290A card.
 - `USB-00` version C.01.00: Enables USB DVD boot support for future HP servers. Now an always-installed product for Itanium®-based servers.
- Utility Pricing Solutions:
 - HP Instant Capacity (iCAP) (formerly Instant Capacity on Demand, or iCOD): Updated to version B.11.23.07.00. Can now be used in an integrated virtual partitioned environment. Email connectivity no longer required and boot-time compliance check now performed.
 - HP Pay per use (PPU): Updated to version B.11.23.07.02 to support HP-UX Virtual Partitions (vPars) and the Node and Host Name Expansion product.

May 2005 Release Notes, Chapter 5: "General System Administration"

- Enterprise Cluster Master Toolkit: Updated to version B.02.21 with scripts for Oracle 9i and 10g database applications, HP Apache, and HP CIFS, as well as enhancements to the Oracle Toolkit.
- Event Monitoring Services: Now supports the Node and Host Name Expansion feature that is available on Software Pack.
- **New Bundle:** Feature Enablement Patch Bundle (FEATURE`11i`): Consists of patches required for HP-UX Virtual Partitions (vPars) functionality, `USB-00`, and future products with new features.
- GlancePlus Pak: Updated to version C.03.86 with new `parm` file parameters and new metrics, as well as enhancements to `gpm` and `glance`.
- High Availability Monitors: Now supports the Node and Host Name Expansion feature.
- HP Partitioning:
 - **New Product:** HP Global Workload Manager (gWLM): Allows you to centrally define resource-sharing policies that you can use across multiple HP servers. Now delivered with HP-UX 11i v2.
 - HP Process Resource Manager (PRM) version C.03.00: Includes integration with HP-UX 11i Security Containment and HP Systems Insight Manager, as well as support for 256 PRM groups and other changes.
 - **New to HP-UX 11i v2:** HP-UX Virtual Partitions (vPars) A.04.01: Will be available as a separate product that can be purchased at <http://software.hp.com/portal/swdepot/displayProductInfo.do?productNumber=T1335BC>. The vPars product enables multiple instances of a selected HP-UX 11i v2 OE to run simultaneously on one server or within one nPartition, with each OE instance hosting its own set of applications in an isolated environment. The FEATURE`11i` patch bundle, delivered on the OE media, includes required patches for the installation of this product.
 - HP-UX Workload Manager: Updated to version A.03.00 with more flexibility in resource management and more secure environments.

- HP-UX Workload Manager Toolkits: Pay Per Use Toolkit and its `utilitydc` command now deprecated.
- nPartition Provider: Upgraded to version B.11.23.01.04.00.x to incorporate defect fixes and performance improvements.
- Partition Manager: Now runs as an application under HP System Management Homepage, which has several effects.
- PRM Libraries: Bundle updated to version C.03.00. `PRM-Sw-Krn` files set updated to version C.01.03. When upgrading HP Process Resources Manager, you will need to reboot the system.
- **New Product:** vPar Provider: Extracts information about virtual partitions on a system. Now delivered with HP-UX 11i v2.
- HP Servicecontrol Manager: Replaced by HP Systems Insight Manager.
- HP Serviceguard: Unchanged for this release. Support for HP-UX Virtual Partitions and HP-UX 11i Security Containment tested and confirmed. Current Serviceguard products certified by HP for coexistence with Shadow Passwords. Limit of 31 bytes for `hostname` within Serviceguard clusters. Note that Serviceguard uses ports and services which may be disabled or blocked in certain Bastille configurations, security levels, or firewall configurations. Thus Serviceguard is incompatible with those specific configurations.
- HP Serviceguard NFS Toolkit: Updated to version A.11.23.03 with improved failover performance for `rpcbind` failures, as well as defect fixes.
- **New Product:** HP System Management Homepage (bundle `SysMgmtWeb`): A Web-based interface that consolidates and simplifies single system management for HP servers, now available for HP-UX 11i v1 and v2.
- **New to HP-UX 11i v2 OEs:** HP Systems Insight Manager: Replaces HP Servicecontrol Manager. Updated to version 4.2 with support for System Management Homepage and other products.
- HP-UX Peripheral Device Tool (`pdweb`): Updated to version B.11.23.04 with support for the Node and Host Name Expansion, as well as updating of the `waconf` command.
- Ignite-UX: Updated to version C.6.2.x with updated documentation, defect fixes, and enhancements.
- Kernel tunable `hdlpreg_hash_locks`: Deprecated and planned for future obsolescence.
- **New Product:** Node and Host Name Expansion (`NodeHostNameXpnd`) product bundle: Provides the ability to set node and host names up to 255 bytes. Now available on Software Pack.
- Obsolescence Bundle: Now removes ObAM 5 and HP-UX Software Development Kit and Runtime Environment for the Java® 2 Standard Edition Platform (SDK/RTE) v1.2, in addition to other obsolete products, upon installation of HP-UX 11i v2 May 2005.
- Online Diagnostics (`OnlineDiag`): Now includes support for HP-UX Virtual Partitions (vPars) A.04.01 and Node and Host Name Expansion, as well as other changes.
- Quality Pack: Once again HP-UX 11i v2 includes Quality Pack, as will future releases of HP-UX 11i v2.
- Software Distributor: Updated with new versions of the `gzip` and `swpackage` commands to provide added capability and increased performance.
- Software Package Builder: Updated with product enhancements.
- Update-UX: Updated to reflect defect fixes. No new features or functionality.
- Upper Layer Module (ULM) Services: Deprecated.

May 2005 Release Notes, Chapter 6: “Disk and File Management”

- 32 Terabyte (TB) File System Support: VxFS 3.5 file systems of up to 32 TB now certified.
- HFS: HP-UX’s implementation of UFS, now deprecated and planned for future obsolescence.
- HP CIFS Client: Updated to version A.01.09.03 to incorporate defect fixes.

- HP CIFS Server: Updated to version A.01.11.04 with security patches. Also now based on Samba 2.2.12.
- VERITAS File System 3.5 (HP JFS / HP OnlineJFS): Now provides permanent licenses for HP OnlineJFS. Support for 32 TB file systems now certified.

May 2005 Release Notes, Chapter 7: "Internet and Networking"

- HP WBEM Services for HP-UX: Updated to version A.02.00.07 with numerous defect fixes, as well as support for CIM Process Indications as defined by the DMTF WBEM Specification.
- HP-UX Web Server Suite:
 - HP-UX Apache-based Web Server: Updated to v.2.0.53.00 as primarily a security and bug fix release.
 - HP-UX Tomcat-based Servlet Engine: Updated to v4.1.29.04 as primarily a bug fix release, with Commons-DBCP upgraded to 1.2.1.
 - HP-UX Webmin-based Admin: Updated as primarily a security and bug fix release.
- Netscape Directory Server for HP-UX: Updated to version B.06.11.30.001 to provide defect fixes and a minor packaging change.

May 2005 Release Notes, Chapter 8: "Security"

- **New Product:** HP-UX 11i Security Containment: Provides the next generation of security features. Available on the Web at <http://hp.com/go/softwaredepot> and expected to be released in the near future.
- HP-UX Auditing System: Upon installation of the HP-UX Standard Mode Security Extensions bundle, can now perform audits without converting the system to trusted mode.
- HP-UX Host Intrusion Detection System: Upgraded to release 3.1 with better performance and CPU utilization, as well as many enhancements and defect fixes. HP-UX HIDS v2.x deprecated and planned for future obsolescence. You are strongly encouraged to upgrade to the latest version of HIDS.
- HP-UX IPFilter: Updated to version A.03.05.11.01 with defect fixes and performance enhancements.
- HP-UX Secure Shell: Updated to A.03.91.009 with new features, including `sshd re-exec` for each new connection, permission and ownership checks for program configuration files, `sftp(1)` interface improvements, and several other features.
- **New Product:** HP-UX Security Attributes Configuration (bundle `SecConfig`): Used to configure systemwide and per-user values of security attributes of local users and NIS users. Now delivered with HP-UX 11i v2.
- **New Bundle:** HP-UX Standard Mode Security Extensions: Enables new security features to be used in standard mode. Now available on Software Pack.
- OpenSSL: Updated to version A.00.09.07e with automatic generation of a self-signed host certificate and a private key.

May 2005 Release Notes, Chapter 9: "Commands and System Calls"

- The `hostname` Command: With installation of the Node and Host Name Expansion product (available on Software Pack), `hostname` now able to set and display the name of the current host system at up to 255 bytes in length.
- The `setuname` Command: With installation of the Node and Host Name Expansion product (available on Software Pack), `setuname` now able to modify the value for the system and/or node name to up to 255 bytes.
- The `uname` Command: With installation of the Node and Host Name Expansion product (available on Software Pack), `uname` now able to set and display the current system and/or node name to up to 255 bytes.

May 2005 Release Notes, Chapter 10: "Libraries and Programming"

- HP MLIB: Updated to version 9.0 with new features, including support for arbitrary length FFTs, FFT performance enhancements, and support for VMATH, CXML, and BCS.
- HP MPI: Updated to version 2.1.1 with support for InfiniBand on Intel® Itanium®, HyperFabric2, and TCP/IP on clusters. Includes improved gather performance for TCP/IP, and other improvements.
- Java 2 Standard Edition Platform:
 - HP-UX Software Development Kit and Runtime Environment for the Java 2 Standard Edition Platform: Updated with later versions of 1.3 and 1.4 to provide the most current Java technology. Version 1.3 deprecated and planned for future obsolescence.
 - Java for HP-UX Add-on Standard C++ Runtime Libraries: Updated to coincide with the updating of SDK and RTE.
 - Runtime Plug-in (JPI) for Mozilla for the Java 2 Platform versions 1.3 and 1.4: Updated to be compatible with SDK 1.3 and 1.4. Netscape no longer supported. Version 1.3 deprecated and planned for future obsolescence.
 - ObsJava12: Added to remove previously-installed Java version 1.2.
- Perl 5.8.2 build 808: Includes better Unicode support and numeric accuracy, new I/O and thread implementation, and other changes.
- **New Product:** Portability Package (version B.11.23.0505): Now available on Software Pack, provides select Tru64 UNIX Application Program Interfaces (APIs), as well as enhancements to existing APIs, to ease the migration of code from Tru64 UNIX and Sun Microsystems Solaris OS to HP-UX 11i v2.
- Software Transition Kit: Provides tools and documents to help transition applications from various operating systems, such as Tru64 UNIX or Sun Microsystems Solaris, or from earlier versions of HP-UX. Available on the Application Release media.
- Termcap and Curses Interfaces: Termcap (`libtermcap`, `libterm`) and HP curses (`libHcurses`) interfaces deprecated in HP-UX 10.20 and to be removed in a future release. Applications utilizing these libraries should migrate to the standard X/Open curses interfaces.

May 2005 Release Notes, Chapter 11: "Internationalization"

- No changes in this release.

May 2005 Release Notes, Chapter 12: "Other Functionality"

- Common Desktop Environment (CDE): X11, Xt, Motif, and Audio support for expanded nodenames and hostnames now available on Software Pack.

What is New in the September 2004 Release?

The following summaries pertain to the September 2004 HP-UX 11i v2 release. For further information, see the indicated chapters in the *HP-UX 11i Version 2 September 2004 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

The following are not exhaustive lists, so HP strongly recommends that you consult the *HP-UX 11i Version 2 September 2004 Release Notes* for information that is not included here.

The summaries for the September 2004 release are divided into two lists:

- "What is New in September 2004 for Customers Migrating from HP-UX 11i v1?" (page 64)
- "What is New in September 2004 for Existing Customers of HP-UX 11i v2?" (page 72)

What is New in September 2004 for Customers Migrating from HP-UX 11i v1?

In the following summaries, you can obtain a general picture of how the current release of HP-UX 11i v2 differs from the June 2004 release of HP-UX 11i v1. For further details, see the indicated chapters in the *HP-UX 11i Version 2 September 2004 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

In addition, you should review the list “What is New in September 2004 for Existing Customers of HP-UX 11i v2?” (page 72) for a picture of how the September 2004 release differs from the March 2004 release of HP-UX 11i v2.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 4: “Workstation- and Server-Specific Information”

- HP Instant Support Enterprise Edition: Formerly delivered on the HP-UX 11i v1 Support Plus media; now available with this release on HP-UX 11i v2.
- HP StorageWorks Command View SDM v1.08.00: Supports HP-UX 11i v2 on Itanium®-based platforms only. Near the release of HP-UX 11i v2 September 2004, a version of CVSDM to support HP-UX 11i v2 on PA-RISC platforms will be available on the Web.
- HP StorageWorks Secure Path V3.0E for HP-UX: Provides EVA Boot and Dump support on HP-UX 11i v2 September 2004 and later releases.
- HP-UX 11i v2 Driver Development Kit: Enhanced to support the current release of HP-UX 11i v2. Includes sample drivers and makefiles, as well as driver development tools for both PA-RISC and Itanium®-based systems, and other enhancements.
- HP-UX 3D Graphics Run Time Environment and Developer's Kit: Modules for hardware-accelerated OpenGL rendering removed because PA-RISC Workstations are not supported by this release. OpenGL rendering to remote displays supported via GLX protocol and HP Virtual Memory Driver.
- Networking and Mass Storage Drivers:
 - Always-Installed Networking Drivers:
 - Gigabit Ethernet and Fast Ethernet: Includes TCP Segmentation Offload (TSO) support for `iether` and `igelan` drivers; 64-bit MIB statistics support; HP-UX LAN provider support.
 - PCI FDDI: Enhanced to provide the FDDI network connectivity from Itanium®-based platforms, in addition to existing PA-RISC platforms. Deprecated and planned for future obsolescence.
 - Selectable Networking Drivers:
 - HyperFabric: Now supports a transparent local failover feature.
 - PCI ATM: Support for A5513A (155 Mbps ATM adapter over MMF) available on IO expander slots of rp8400 platform.
 - PCI Token Ring: Now available on Itanium®-based 64-bit platforms, in addition to existing PA-RISC platforms. Deprecated and planned for future obsolescence.
 - Always-Installed Mass Storage Drivers:
 - `disc3` Driver: Obsolete.
 - Fibre Channel Tachlite Driver: Supports A6795A, A5158A. Boot support provided. Online diagnostic tool changed to support A6826A. Supports Interrupt Migration and OLAR.
 - `FibrChnl-01`: Default interrupt delay settings tuned to improve performance.
 - HP-UX Ultra320 SCSI Driver: Updated with quality and diagnostic improvements for Ultra320 SCSI solutions, including core and add-on HP adapters.
 - RAID-01: Delivers the driver `ciss`, which supports the A7143A, A9890A, and A9891A cards.
 - SCSI Drivers: Support limited to PCI cards. New cards A5149A and A5838A supported, with limitations on Intel® Itanium®. HVD cards A4800A, A5159A, and

A5159B not supported. OLAR of A6828A and A6869A cards supported. Interrupt migration supported.

- Selectable Mass Storage Drivers:
 - HP-UX iSCSI Software Initiator: Now available on HP-UX 11i v2.
- Online Addition and Replacement (OL* or OLAR): The `rad` command no longer available. SAM no longer used for OL*. The `olrad` command now used; performs a critical resource analysis to ensure system integrity will not be compromised.
- On Demand Solutions:
 - Instant Capacity on Demand (iCOD) 6.03: Incremented from version 6.02 for support on HP-UX 11i 2.
 - Pay Per Use B.07.00: Updated so that either pricing model can be used as the metric and so that a processor cap can be specified, as well as other changes.
- Supported Servers and Workstations: Many 64-bit PA-RISC servers are supported on this release. No 32-bit servers are supported. PA-RISC workstations are not supported.
- Technical System Configuration (TechSysConf): TC-OpenSource tools removed. Remaining TC-SysSetup alters kernel configurable parameters, as well as selected system configuration files, for improved system performance.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 5: "General System Administration"

- Compressed Dump: New feature with HP-UX 11i v2. Speeds up the crash dump process.
- Enterprise Cluster Master Toolkit B.02.11: DB2, Informix, and Sybase not supported. Mixed IA-PA failover for the Oracle9i package not supported.
- Event Monitoring Services: Framework and GUI available as 32-bit native applications on PA-RISC and Intel® Itanium®. 64-bit EMS Itanium®-based native libraries also available. Deprecated. Will be replaced post HP-UX 11i v3 with WBEM.
- GlancePlus Pak C.03.85: Contains enhancements to OVPA and GlancePlus, including new parm file parameters and new process-level metrics, as well as updated default adviser symptoms and alarms.
- High Availability Monitors: Available as 32-bit native binaries on PA-RISC & Itanium®-based platforms. Deprecated. Will be obsoleted post HP-UX 11i v3.
- HP Partitioning:
 - HP Process Resource Manager C.02.03: Installing this or later versions of PRM will not result in a reboot. Installing PHKL patches will.
 - HP-UX nPartition Configuration Commands: Management scope of commands extended to remote partitions and complexes. Additional enhancements added.
 - HP-UX Processor Sets: Once an optional product for the HP-UX 11i v1 release, now part of the HP-UX 11i v2 core kernel.
 - HP-UX Virtual Partitions (vPars) A.04.01: Will not release simultaneously with the September 2004 HP-UX 11i v2 release. Targeted to release in the middle of 2005.
 - HP-UX Workload Manager A.02.03: In most cases, installing this version (or later) will not result in a reboot. Installing PHKL patches will.
 - HP-UX Workload Manager Toolkits A.01.07: the `utilitydc` command, part of the Pay Per Use Toolkit, has been modified.
 - nPartition Provider B.01.03.00. x: Now supported on both PA-RISC and Itanium®-based systems.
 - Partition Manager 2.0: Features now brought to PA-RISC partitionable systems (as well as Itanium®-based), including improved GUI, support for CLM, and ability to configure nPartitions on remote complexes.

- HP Serviceguard A.11.16: Now supports clusters with mixed servers (HP Integrity and HP 9000).
- HP Serviceguard Quorum Server: Supported on both PA-RISC and Itanium®-based systems.
- HP-UX 11i v2 Required Patch Bundle (BUNDLE11i): Delivered with this release. Consists of patches for HP-UX 11i v2 that are required to install and update the operating system (OS).
- HP-UX Kernel Configuration: The `kcweb` application incorporates changes and new features. The `maxusers` tunable obsoleted. Kernel Configuration (KC) commands replaced by a new set of commands. Changes made in kernel location, boot-time selection, and automatic backup creation. The `/stand/system/` file enhanced.
- The Peripheral Device Tool (`pdweb`) B11.23.02: New for customers migrating from HP-UX 11i v1.
- Ignite-UX, version B.6.0. x: Includes ability to install and recover the HP-UX releases 11.0, B.11.11, B.11.22, B.11.23 PA-RISC, and B.11.23 Itanium®-based clients from a single Ignite-UX server. Also includes booting of both PA-RISC and Itanium®-based, known as dual boot, from a single media source; and installing one unified PA-RISC/Itanium®-based core HP-UX operating system bundle.
- Improved Database Startup and Shutdown Times: Database startup and shutdown times have been drastically reduced.
- Interrupt Migration: New for customers migrating from HP-UX 11i v1, this feature can be used to view and modify the interrupt configuration of the system.
- MySQL: Updated with tightened security. Product has been deprecated.
- Obsolescence Product: New product, used in an update when obsolete software on the system needs to be removed.
- OnlineDiag: Includes cell-local memory (CLM) support for PA-RISC platform, as well as various bug fixes and enhancements. Support added for new devices.
- Quality Pack Patch Bundle: All patches that were in the March 2004 HP-UX 11i v2 Quality Pack will be superseded by dual-architecture patches, which will be placed in BUNDLE11i.
- SAM-NNC: Added support for VLAN, IPoIB, large send, and DHCPv6 functionality, plus other changes.
- Servicecontrol Manager: Contains only minor updates. All functionality remains the same. Product has been deprecated.
- Software Distributor (SD): Updated to a new version to support this new release of HP-UX 11i v2.
- Software Package Builder A.02.00: Updated to incorporate defect fixes.
- System Administration Manager (SAM): Includes new tools, HP-UX Kernel Configuration tool and HP-UX Peripheral Devices tool.
- System V Shared Memory: Incorporates the functionality of the now-obsoleted `ShmemExtensions` product. Maximum for the `shmmni` tunable parameter increased.
- Update-UX: Updated to incorporate defect fixes.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 6: "Disk and File Management"

- 16 Terabyte (TB) File System Support: VxFS 3.5 file systems of up to 16 TB now certified.
- AutoFS 2.3: Upgraded to include the features of the SUN ONC AutoFS version 2.3 product, as well as performance enhancements, including on-demand mounting.
- DeviceIDS: Provides a significant performance improvement for AutoFS at unmount time.
- File Systems Backup and Recovery Commands: The commands `fbackup(1M)`, `frecover(1M)`, and `ftio(1)` deprecated.
- Hierarchical File System (HFS): Deprecated. Will be removed in a future release.

- HP CIFS Client A.01.09.02: Provides 64-bit PAM-NTLM libraries support and defect fixes.
- HP CIFS Server 2.2i (A.01.11.01): Provides new LDAP support functionality, as well as other new features and defect fixes.
- Logical Volume Manager (LVM) and MirrorDisk/UX: Performance improved. LVM no longer performs software bad block relocation. Defects fixed.
- Network File System (NFS): New option added to the `umount` command. Compatibility exception noted.
- Network Information Service Plus (NIS+): Deprecated and planned for future obsolescence. Valid modification requests to update NIS+ tables will now fail if the size of the request is larger than 9000 bytes.
- Portable File System (PFS): Obsolete.
- VERITAS File System (VxFS/HP OnlineJFS/JFS) 3.5: Contains new and changed features, including new and/or enhanced tunable parameters, enhanced VxFS commands, new I/O error handling policy, new default intent log mode, new default system block size, VxFS system activity reporter, forced unmounts, and more. Enables creation of file systems up to 32 TB (16 TB has been certified).
- VERITAS Volume Manager (VxVM) 3.5 for HP-UX (Base): Includes new versions of VEA and SIG Licensing, as well as defect fixes.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 7: "Internet and Networking"

- HP Data Link Provider Interface (DLPI): Includes enhancements to the Streams interface; new third-party driver interface for non-native Streams drivers; consolidation of `.h` files; obsolescence of the dump read capability of the `lanscan(1M)` command; support for TCP Segmentation Offload (TSO or Large Send), InfiniBand technology, and 64-bit MIB.
- HP Openview Emanate Agent 15.3: Agents are now SNMPv3 compatible. IPv6 agent added.
- HP-UX LAN Provider: New with this release of HP-UX 11i v2. Client applications can use this Provider to determine 100bt and Gigabit links available on the system and collect information about them.
- HP-UX Mobile IPv6 A.01.01: Offers the same functionality as A.01.00, but delivery method has changed.
- HP-UX Web Server Suite:
 - HP-UX Apache-based Web Server 2.0.50.01: Primarily a security, bug fix release with enhancements.
 - HP-UX Webmin-based Admin A.1.070.01: Primarily a security, bug fix release.
- Internet Services:
 - BIND 9.2.0: Includes incremental zone transfer, DNSSEC, dynamic DNS update, TSIG-based security, lightweight resolver library and daemon, improved logging mechanism, and other features.
 - BOOTP and DHCP: Both implement a new tag to configure the IP address of the `tftp` server. Two new options included in the `/etc/dhcptab` file.
 - DHCPv6: New product with HP-UX 11i v2.
 - The `inetd` daemon: New variable and new command-line option added.
 - IPv4 Address Display: The IPv4-mapped-IPv6 address display is now changed to display an IPv4 address.
 - IPv6-enabled Internet Services products: Several products, including `inetd`, `telnet`, and R-commands, are IPv6 enabled.
 - Logging User Accounting Information: The `telnetd`, `rlogind`, `remshd`, `rexecd` and `ftpd` utilities now use the new scalable `utmps/wtmps/btmps` interfaces to log user accounting information.

- Multimedia Streaming Protocols (MSP): Upon upgrade to HP-UX 11i v2, MSP will be removed. MSP will be available later as a Web upgrade. Customers who have not installed MSP on HP-UX 11i v1 will be unaffected.
- The `rbootd` remote boot server for RMP clients: Obsolete. Clients using the RMP protocol no longer supported; you must move from RMP to BOOTP.
- The `remsh/rexec` command and remote execution server: The `remshd` function has been changed to display an error message under certain circumstances. The `remsh/rexec` process may appear hung when a user executes certain remote commands.
- The `rexecd` remote execution server: New option added to prevent a user from logging in as superuser. The `[use_psd]` option cannot be specified in the `/etc/pam.conf` file for `rexecd`.
- Route Administration Manager for IPv6 Routing Protocols (RAMIPv6): Upon upgrade to HP-UX 11i v2, RAMIPv6 will be removed. RAMIPv6 will be available later as a Web upgrade. Customers who have not installed RAMIPv6 on HP-UX 11i v1 will be unaffected.
- The `rwhod` server: Updated to use the `utmps` interfaces to read the user accounting information. Now supports valid hostname characters as per RFC 952 only.
- Secure Internet Services: New options added. IPv6 enabled for R-commands. Kerberos supported in an IPv6 environment for `ftp`, r-commands, and `telnet`.
- Sendmail 8.11.1: Offers several new features, including multiple queue directories, enhanced status codes as defined by RFC 2034, client port options, daemon port options, IPv6 support, and more.
- SLP 0.8: New with HP-UX 11i v2. Includes dynamic service tracking, ease of administration, and ease of development.
- TCP Wrappers 7.6: Includes features such as monitoring incoming requests for Internet Services, controlling access to services spawned by `inetd`, and enforcing access control in stand-alone daemon programs, among others.
- The `telnetd` function: Contains two new options.
- WU-FTPD 2.6.1: Offers several new features, including virtual hosts support, the `privatexpw` utility, IPv6 support, and new command-line options, as well as other changes.
- LAN Administration Commands: Include support for IPoIB, 64-bit MIB, and Native and Non-Native DLPI drivers developed by IHVs, plus new command-line options for `lanadmin`.
- Mozilla Application Suite 1.4.0.01: Contains full Japanese localization as well as other defect fixes and enhancements. Security bulletin posted.
- Netscape Directory Server 6.11: Includes enhancements to Multi-Master replication, login enhancements, virtual attribute search, new plug-ins support, and a data interoperability feature.
- Network Tracing and Logging (NetTL): Changes include formatting support for IPoIB and new CLI option to support configurable trace buffer timer value.
- Network Transport (ARPA): Changes include support for enhancements of HP-UX DLPI; enhancements to CKO interfaces between HP-UX transport and DLPI; removed support for dump reading by `netstat` and `arp`; IPv6 transport supported, and other changes. Problem and work-around noted: HP-UX sends TCP packets with incorrect window size.
- Point-to-Point Protocol (PPP): Available on HP-UX 11i v2. Includes changes to Point-to-Point Protocol over Ethernet (PPPoE) and Point-to-Point Protocol for IPv6 (PPPo6).
- STREAMS/UX: The *HP-UX 11i v2 September 2004 Release Notes* contains an error and should instead read as follows: For non-blocking writes, during flow control conditions, STREAMS now returns **success (0 return value)** in the case of partial writes on STREAMS-based pipes.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 8: "Security"

- Boot Authentication: Now available on all Standard Systems. Standard Mode Boot Authentication feature can be configured by two parameters.
- Generic Security Service Application Programming Interface (GSS-API): IPv6 enabled.
- HP-UX Bastille 2.1: New product for customers migrating from HP-UX 11i v1.
- HP-UX IPFilter A.03.05.10.02: Includes additional defect fixes.
- HP-UX Secure Shell A.03.71.000: Contains several new features, including enhanced `ssh_prng_cmds` file for random number generation, new escape character for requesting a pseudo terminal, and support for generating KEX-GEX groups in the `ssh-keygen` file.
- HP-UX Strong Random Number Generator: New product with HP-UX 11i v2.
- HP-UX Host Intrusion Detection System 2.3: Product bundle renamed and restructured to improve product installation and maintenance.
- Install-Time Security B.01. x . x: New product for customers migrating from HP-UX 11i v1.
- Kerberos Client (KRB5-Client): Changes include support for `appdefaults` section in the `/etc/krb5.conf`; multidomain support; IPv6 support.
- OpenSSL A.00.09.07-d: A self-signed host certificate is automatically generated while installing OpenSSL.
- PAM: 64-bit framework now supported on both PA-RISC and Itanium®-based systems. New PAM module introduced. Defect fixes included.
- PAM-Kerberos v1.23: Supports both Itanium®-based and PA-RISC applications in 32-bit mode and 64-bit mode. The `pam_sm_acct_mgmt` function returns `PAM_USER_UNKNOWN` instead of `PAM_SUCCESS` when the user is not present in the kerberos database.
- Security Patch Check 2.0: New product for customers migrating from HP-UX 11i v1.
- Shadow Passwords: New feature enhances system security by hiding user-encrypted passwords in a shadow password file. Now supported by SAM.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 9: "Commands and System Calls"

- The `execve[*]` system calls: Beginning with HP-UX 11i v1.6, the kernel ignores `setuid` and `setgid` bits on scripts for security reasons. In addition, buffer overflow protection is now enabled.
- The `fuser` Command: Performance improved.
- The `insf`, `lssf`, and `mksf` Commands: Now support IHV drivers.
- The `mmap` Function: Now possible to perform mappings between a process's address space and I/O device registers or memory.
- The `olrad` Command: The `rad(1M)` command replaced by the more robust `olrad(1M)` command.
- Post/Wait: New. Provides a fast, lightweight synchronization facility for user applications.
- The `ps` command: The default width is now set to 128 characters and a default file has been provided to define the length of the command field, which can be between 64-1020.
- The `rc` Shell Script: When a system needs reboot for some reason, messages in the file `/etc/rc.bootmsg` will be displayed before the system is rebooted.
- The `scsimgr` and `scsiscan` Commands: Deprecated. Planned for obsolescence in HP-UX 11i v3.
- The `settune` and `settune_txn` System Calls: Post HP-UX 11i v2, tunables set using these kernel system calls will not be persistent across reboots.

- The `sfd` Daemon: Deprecated. Planned for obsolescence in HP-UX 11i v3.
- The `sysdef` command: Deprecated. Reports incorrect values for some tunable parameters such as `msgmap`, `sema`, and `shmem`.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 10: "Libraries and Programming"

- Absolute Debugger (`adb`): Improved program includes support shared library, threads, multiprocessor dump reading, 64-bit DLKM dump reading, among others. Also includes improved command-line syntax, enhanced capabilities in expressions and format strings, and better file searching and writing capability, among others.
- HP aC++ Compiler for PA-RISC A.03.55.02: Includes numerous new features for customers migrating from HP-UX 11i v1.
- HP C Compiler for PA-RISC: Includes numerous changes to version B.11.11.02 in each subsequent release (B.11.11.04, B.11.11.06, B.11.11.08, B.11.11.10).
- HP Fortran for HP-UX 2.8.2: Includes performance tuning enhancements.
- HP MLIB 8.6: FFT routines support data sizes of any positive length.
- HP MPI 2.0.1: InfiniBand interconnect on PA-RISC supported.
- HP-UX Buffer Cache Tunable Parameters: All tunables associated to the sizing of the buffer cache (`nbuf`, `bufpages`, `bufcache_max_pct`, `dbc_min_pct`, and `dbc_max_pct`) have been deprecated and will be obsolete in HP-UX 11i v3.
- Java 2 Standard Edition Platform:
 - HP 3D Technology for the Java 2 Standard Edition Platform: Only for Itanium®-based systems. PA-RISC-based systems not supported.
 - Java for HP-UX PA-RISC Add-On C++ Libraries for SDK and RTE: Now included in HP-UX 11i v2.
- Math Library (`libm`): Although the C Math Library's API for PA-RISC is unchanged from HP-UX 11i v1, differences between it and the API for Itanium®-based systems should be noted.
- POSIX Threads: Augmented for PA-RISC systems to support two modes of scheduling, system scope (1x1) and process scope (MxN).
- The Software Transition Kit (STK): Available on the Web or Application Release media is a collection of tools and documents designed to help transition HP-UX applications from earlier versions of HP-UX to the latest version of HP-UX on the PA-RISC or the Itanium®-based platform.
- Transition Links: Deprecated. Will become obsolete in post-HP-UX 11i v2 releases.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 11: "Internationalization"

- Internationalization Features: Changes include Unicode 3.0 support, GB18030 standard, simplified Chinese input methods, mainframe `iconv` converters for Japanese characters, system support for Latin and South American locales, new locale binaries and `iconv` converters, Hong Kong supplementary character set (HKSCS), TrueType fonts for Asian languages, and other changes.
- Deprecated Functionality: Several commands, library routines, and `lp` model files deprecated. Will be removed in next major release of HP-UX.

What is New in September 2004 for Customers Migrating from HP-UX 11i v1

September 2004 Release Notes, Chapter 12: "Other Functionality"

- ccNUMA: Changes include: greater performance for some work loads; ability to configure systems for optimal performance with regard to interleaved versus cell local memory; ability

to give guidance to OS for most appropriate memory allocation according to an application's usage model; ability to control how processes are distributed among localities.

- Common Desktop Environment (CDE): Changes include IPv6 support; greater accessibility for physically challenged users; `dtlogin` does not start X server when the mouse is not connected; large file (greater than 2GB) support provided by `dtfile`; and other changes. In addition, CDE requires a number of services and resources; if these are disabled either manually or with Bastille, there are several impacts on CDE.
- Distributed Computing Environment (DCE) Client and Integrated Login: Has new filesets and new product, Integrated Login. Now IPv6 enabled.

What is New in September 2004 for Existing Customers of HP-UX 11i v2?

In the following summaries, you can obtain a general picture of how the current release of HP-UX 11i v2 differs from the March 2004 release of HP-UX 11i v2. For further details, see the indicated chapters in the *HP-UX 11i Version 2 September 2004 Release Notes*, available in its most current version at <http://www.docs.hp.com/hpux/os/11iV2/>.

For a general picture of how this release differs from the June 2004 release of HP-UX 11i v1, you should review the list "What is New in September 2004 for Customers Migrating from HP-UX 11i v1?" (page 64).

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 4: "Workstation- and Server-Specific Information"

- HP Instant Support Enterprise Edition: New with this release of HP-UX 11i v2.
- HP StorageWorks Secure Path V3.0E for HP-UX: Provides EVA Boot and Dump support on HP-UX 11i v2 September 2004 and later releases.
- Networking and Mass Storage Drivers
 - Always-Installed Networking Drivers:
 - Gigabit Ethernet and Fast Ethernet: Includes TCP Segmentation Offload (TSO) support for `iether` and `igelan` drivers; 64-bit MIB statistics support; HP-UX LAN provider support; Virtual LAN (VLAN) support.
 - Selectable Networking Drivers:
 - HyperFabric: Now supports a transparent local failover feature.
 - PCI ATM: Support for A5513A (155 Mbps ATM adapter over MMF) available on I/O expander slots of rp8400 platform.
 - PCI Token Ring: Deprecated and planned for future obsolescence.
 - Always-Installed Mass Storage Drivers:
 - `disc3` Driver: Obsolete.
 - `FibrChnl-00`: Online diagnostic tool changed to support A6826A.
 - `FibrChnl-01`: An option has been added to the `fcmsutil` utility that updates the EFI driver stored in the flash ROM of an A6826A HBA port.
 - HP-UX Ultra320 SCSI Driver: Updated with quality and diagnostic improvements for Ultra320 SCSI solutions, including core and add-on HP adapters.
 - RAID-01: Delivers the driver `ciss`, which supports A7143A, A9890A, and A9891A cards.
 - SCSI Drivers: Cards A4800A, A5159A, and A5159B obsoleted.
 - Selectable Mass Storage Drivers:
 - HP-UX iSCSI Software Initiator: Now available on HP-UX 11i v2.
- Online Addition and Replacement (OL* or OLAR): Now available for both PA-RISC and Itanium®-based systems.

- On Demand Solutions:
 - Instant Capacity on Demand (iCOD) 6.03: Incremented from version 6.01 to incorporate defect fixes.
 - Pay Per Use B.07.00: Updated so that either pricing model can be used as the metric and so that a processor cap can be specified, as well as other changes.
- Secure Path V3.0E for HP-UX: Provides EVA Boot and Dump support on HP-UX 11i v2 September 2004 and later releases.
- Supported Servers and Workstations: Many 64-bit PA-RISC servers are supported on this release. No 32-bit servers are supported. PA-RISC workstations are not supported.
- Technical System Configuration (TechSysConf): Now supported on PA-RISC servers that run HP-UX 11i v2.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 5: General System Administration

- Enterprise Cluster Master Toolkit B.02.11: New scripts added: HP Apache, HP Tomcat, HP CIFS.
- Event Monitoring Services: Framework and GUI available as 32-bit native applications on PA-RISC and Intel® Itanium®. 64-bit EMS Itanium®-based native libraries also available. Deprecated. Will be replaced post HP-UX 11i v3 with WBEM.
- GlancePlus Pak C.03.85: Contains enhancements to OVPA and GlancePlus, including new parm file parameters and new process-level metrics, as well as updated default adviser symptoms and alarms.
- High Availability Monitors: Available as 32-bit native binaries on PA-RISC and Itanium®-based platforms. Deprecated. Will be obsoleted post HP-UX 11i v3.
- HP Partitioning:
 - HP Process Resource Manager C.02.03: Installing this or later versions of PRM will not result in a reboot. Installing PHKL patches will.
 - HP-UX nPartition Configuration Commands: Includes changes to the `parmodify`, `parcreate`, and `parstatus` commands, as well as notes regarding the side effects of using WBEM's Trust Store file.
 - HP-UX Virtual Partitions (vPars) A.04.01: Will not release simultaneously with the September 2004 HP-UX 11i v2 release. Targeted to release in the middle of 2005.
 - HP-UX Workload Manager A.02.03: In most cases, installing this version (or later) will not result in a reboot. Installing PHKL patches will.
 - HP-UX Workload Manager Toolkits A.01.07: The `utilitydc` command, part of the Pay Per Use Toolkit, has been modified.
 - nPartition Provider B.01.03.00. x: Now supported on both PA-RISC and Itanium®-based systems. Now supports WBEM 2.0.
 - Partition Manager 2.0: Supported on both PA-RISC and Itanium®-based systems. Now interacts with nPartition Provider using WBEM 2.0.
- HP Serviceguard A.11.16: Updated with new functionality, defect repairs, and support for future new hardware configurations.
- HP ServiceGuard Manager A.04.00: Allows administrators to create/configure clusters and packages, as well as monitor and manage clusters.
- HP Serviceguard Quorum Server: Supported on both PA-RISC and Itanium®-based systems.
- HP-UX 11i v2 Required Patch Bundle (BUNDLE11i): Delivered with this release. Consists of patches for HP-UX 11i v2 that are required to install and update the operating system (OS).

- HP-UX Kernel Configuration tool: TUI changed from earlier version. The `/stand/system/` file enhanced.
- The Peripheral Device Tool (`pdweb`) B11.23.02: TUI introduced.
- Ignite-UX, version B.6.0. x: Includes ability to install and recover 11.0, B.11.11, B.11.22, B.11.23 PA-RISC, and B.11.23 Itanium®-based clients from a single Ignite-UX server. Also includes booting of both PA-RISC and Itanium®-based, known as dual boot, from a single media source; and installing one unified PA-RISC/Itanium®-based core HP-UX operating system bundle.
- Improved Database Startup and Shutdown Times: Database startup and shutdown times have been drastically reduced.
- MySQL: Updated with tightened security. Product has been deprecated.
- Obsolescence Product: New product, used in an update when obsolete software on the system needs to be removed.
- OnlineDiag: Includes various bug fixes and enhancements. Support added for new devices.
- Quality Pack Patch Bundle: All patches that were in the March 2004 HP-UX 11i v2 Quality Pack will be superseded by dual-architecture patches, which will be placed in `BUNDLE11.i`.
- SAM-NNC: Added support for VLAN, IPoIB, and large send functionality, plus defect fixes.
- Servicecontrol Manager: Contains only minor updates. All functionality remains the same. Product has been deprecated.
- Software Distributor: Updated to a new version to support this new release of HP-UX 11i v2.
- Software Package Builder A.02.00: Updated to incorporate defect fixes, as well as support new features, including the ability to edit multiple PSFs at the same time.
- System Administration Manager (SAM): Updated TUIs in the kernel configuration functional area and the Cards and Devices subarea. Will support shadow mode only for password aging.
- System V Shared Memory: Maximum for the `shmmni` tunable parameter increased.
- Update-UX: Updated to incorporate defect fixes.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 6: "Disk and File Management"

- 16 Terabyte (TB) File System Support: VxFS 3.5 file systems of up to 16 TB now certified.
- Hierarchical File System (HFS): Deprecated. Will be removed in a future release.
- HP CIFS Client A.01.09.02: Provides 64-bit PAM-NTLM libraries support and defect fixes.
- HP CIFS Server 2.2i (A.01.11.01): Provides new LDAP support functionality, as well as other new features and defect fixes.
- Logical Volume Manager (LVM) and MirrorDisk/UX: Performance improved. LVM no longer performs software bad block relocation. Defects fixed.
- Network File System (NFS): New option added to the `umount` command. Compatibility exception noted.
- Network Information Service Plus (NIS+): Deprecated and planned for future obsolescence. Valid modification requests to update NIS+ tables will now fail if the size of the request is larger than 9000 bytes.
- Portable File System (PFS): Obsolete.
- VERITAS File System (VxFS/HP OnlineJFS/JFS) 3.5: File systems of up to 16 TB now certified.
- VERITAS Volume Manager 3.5 for HP-UX (Base): Includes new versions of VEA and SIG Licensing, as well as defect fixes.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 7: "Internet and Networking"

- HP Data Link Provider Interface (DLPI): Includes support for VLAN functionality, TCP Segmentation Offload (TSO or Large Send), InfiniBand technology, and 64-bit MIB, as well as other changes.
- HP Openview Emanate Agent 15.3: Incorporates a defect fix.
- HP-UX LAN Provider: New with this release of HP-UX 11i v2. Client applications can use this Provider to determine 100bt and Gigabit links available on the system and collect information about them.
- HP-UX Mobile IPv6 A.01.01: Offers the same functionality as A.01.00, but delivery method has changed.
- HP-UX Web Server Suite:
 - HP-UX Apache-based Web Server 2.0.50.01: Updated as a security, bug fix, and feature release which contains support for Microsoft® FrontPage 2002, more pHP extensions, and numerous version upgrades.
 - HP-UX Tomcat-based Servlet Engine 4.1.29.03: Updated with Tomcat version upgraded to 4.1.29; mod_jk and related configuration files shipped with HP-UX Apache-based Web Server; and defect fix to the Tomcat Admin application.
 - HP-UX Webmin-based Admin 1.070.00.01: Updated as security, bug fix, and full-feature release that contains the numerous enhancements.
 - HP-UX XML Web Server Tools 2.00: Updated as primarily a version upgrade release, with upgrades to Xerces-J, Xalan-J, Cocoon, and FOP.
- Internet Services:
 - BIND 9.2.0: Option to enable or disable the Extended DNS (EDNS) option provided.
 - BOOTP and DHCP: Both implement a new tag to configure the IP address of the tftp server.
 - IPv4 Address Display: The IPv4-mapped-IPv6 address display is now changed to display an IPv4 address.
- LAN Administration Commands: Includes support for IPoIB and VLAN interfaces, along with new command-line options.
- Mozilla Application Suite 1.4.0.01: Contains full Japanese localization as well as other defect fixes and enhancements. Security bulletin posted.
- Netscape Directory Server 6.11: New product for customers of HP-UX 11i v2.
- Network Tracing and Logging (NetTL): Changes include formatting support for IPoIB, Mobile IPv4 extension headers, tunneled IPv6 packets, and Mobile IPv6 packets, as well as new CLI option to support configurable trace buffer timer value.
- Network Transport (ARPA): Changes include Limited Transmit (IPv4 only); support for TCP Segmentation Offload and for IPoIB links; IPv6 router advertisement daemon; Multicast Listener Discovery support for IPv6 (host only); and other changes. Problem and work-around noted: HP-UX sends TCP packets with incorrect window size.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 8: "Security"

- HP-UX Host Intrusion Detection System 2.3: Product bundle renamed and restructured to improve product installation and maintenance.
- HP-UX IPFilter A.03.05.10.02: Includes defect fixes and performance enhancements.
- HP-UX Secure Shell A.03.71.000: Contains several new features, including enhanced `ssh_prng_cmds` file for random number generation, new escape character for requesting a pseudo terminal, and support for generating KEX-GEX groups in the `ssh-keygen` file.
- OpenSSL A.00.09.07-d: New to HP-UX 11i v2.
- PAM: 64-bit framework now supported on both PA-RISC and Itanium®-based systems. New PAM module introduced. Defect fixes included.

- PAM-Kerberos v1.23: Supports both Itanium®-based and PA-RISC applications in 32-bit mode and 64-bit mode. The `pam_sm_acct_mgmt` function returns `PAM_USER_UNKNOWN` instead of `PAM_SUCCESS` when the user is not present in the Kerberos database.
- Security Patch Check 2.0: Now provides update and manual action analysis, whereas prior releases only analyzed patches.
- Shadow Passwords: Now supported by SAM.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 9: "Commands and System Calls"

- The `fuser` Command: Performance improved.
- `Post/Wait`: New. Provides a fast, lightweight synchronization facility for user applications.
- The `ps` command: The default width now set to 128 characters and a default file provided to define the length of the command field.
- The `rc` Shell Script: When a system needs reboot for some reason, messages in the file `/etc/rc.bootmsg` will be displayed before the system is rebooted.
- The `scsimgr` and `scsiscan` Commands: Deprecated. Planned for obsolescence in HP-UX 11i v3.
- The `setttune` and `setttune_txn` System Calls: Post HP-UX 11i v2, tunables set using these kernel system calls will not be persistent across reboots.
- The `sfd` Daemon: Deprecated. Planned for obsolescence in HP-UX 11i v3.
- The `sysdef` command: Deprecated. Reports incorrect values for some tunable parameters such as `msgmap`, `sema`, and `shmem`.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 10: "Libraries and Programming"

- HP aC++ Compiler for Itanium®-Based Systems: No changes except for defect fixes.
- HP aC++ Compiler for PA-RISC Systems: The new `placement delete` feature now supported.
- HP Fortran for HP-UX 2.8.2: Includes performance tuning enhancements.
- HP MLIB 8.6: FFT routines support data sizes of any positive length.
- HP MPI 2.0.1: InfiniBand interconnect on Intel® Itanium® supported.
- HP-UX Buffer Cache Tunable Parameters: All tunables associated to the sizing of the buffer cache (`nbuf`, `bufpages`, `bufcache_max_pct`, `dbc_min_pct`, and `dbc_max_pct`) have been deprecated and will be obsolete in HP-UX 11i v3.
- Java 2 Standard Edition Platform:
 - HP 3D Technology for the Java 2 Standard Edition Platform: Only for Itanium®-based systems. PA-RISC-based systems not supported.
 - HP-UX Software Development Kit and Runtime Environment for the Java 2 Platform Standard Edition: For this release of HP-UX 11i v2, the full SDK as well as the RTE for versions 1.3 and 1.4 are being delivered.
 - Java for HP-UX PA-RISC Add-On C++ Libraries for SDK and RTE: Now included in HP-UX 11i v2 for Java developers on PA-RISC.
 - Java Out-of-Box 2.03: Includes defect fixes.
- Math Library (`libm`): Current release includes Math Library Cumulative Patch, which contains new functions, performance and accuracy enhancements, and minor defects.
- POSIX Threads: Defect correction applied to Itanium®-based systems to make the thread library, source and relocatable compatible with release HP-UX 11i v1.
- The Software Transition Kit (STK): Available on the Web or Application Release media is a collection of tools and documents designed to help transition HP-UX applications from

earlier versions of HP-UX to the latest version of HP-UX on the PA-RISC or the Itanium®-based platform.

- Transition Links: Deprecated. Will become obsolete in post-HP-UX 11i v2 releases.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 11: "Internationalization"

- Internationalization Features: Includes defect fixes. No new features beyond those supplied in the initial (October 2003) release of HP-UX 11i v2.
- Deprecated Functionality: Several commands, library routines, and 1p model files deprecated. Will be removed in next major release of HP-UX.

What is New in September 2004 for Existing Customers of HP-UX 11i v2

September 2004 Release Notes, Chapter 12: "Other Functionality"

- ccNUMA: Additional platforms supported.
- Common Desktop Environment (CDE): X11R6-based Xfree86 `xterm` is now the supported `xterm` and is delivered under `/usr/bin/x11`. The X11R5-based `xterm` is no longer supported and has been moved to `/usr/contrib/bin/X11R5/`.
- Distributed Computing Environment (DCE) Client and Integrated Login: New PA-RISC filesets added. Integrated Login, a new product, added.

What is New in the March 2004 Release?



NOTE: This release is supported on Itanium®-based systems. It is not supported on PA-RISC systems.

The following summaries pertain to the March 2004 HP-UX 11i v2 release. For further information, see the indicated chapters in the *HP-UX 11i Version 2 March 2004 Release Notes*, available in its most current version at <http://www.docs.hp.com>.

The following is not an exhaustive list, so HP strongly recommends that you consult the *HP-UX 11i Version 2 March 2004 Release Notes* for information that is not included here.

March 2004 Release Notes, Chapter 4: "Workstation- and Server-Specific Information"

- Hardware Enablement Program added to support new systems, processors, and I/O adapters. Support for optical devices updated.
- Networking and Mass Storage Drivers:
 - `FibrChanl-00` driver bundle updated to incorporate defect fixes.
 - `FibrChanl-01` driver bundle now supports the A6826A card.
 - `FibrChanl-01` and `GigEther-01` driver bundles now support the A9782A and A9784A cards.
 - `GigEther-01` driver bundle now supports the A7109A card.
 - `IEther-00` driver bundle now supports the A7011A and A7012A cards.
 - `RAID-01` driver bundle now supports the A9890A card.
 - The `scsiU320-00` driver bundle added to pre-enable cards to be released in the future.
- On Demand Solutions:
 - Instant Capacity on Demand (iCOD) updated to version 6.01 to incorporate defect fixes.
 - Pay Per Use (PPU) updated to version 6.04 to incorporate defect fixes.
- Xserver updated to version B.11.23.01 with support for multiple graphics cards.

March 2004 Release Notes, Chapter 5: "General System Administration"

- HP Partitioning:
 - HP Process Resource Manager updated to version C.02.02 with support of a version option, support of SSL encryption of login/password data, more consistent syslog messaging, and other changes.
 - HP-UX Workload Manager updated to version A.02.02 with a new GUI that allows local and remote management of WLM systems; automatic resizing of nPartitions (nPars) that use iCOD software; support for more WLM configuration options by the Configuration Wizard; and other changes.
 - HP-UX Workload Manager Toolkits updated to version A.01.05. Utilities now use /opt/perl/bin/perl; ApacheTK begins supporting Apache 2.x; the cntl_smooth configuration file keyword now offered; utilitydc modified; and other changes.
 - The nPartition Provider updated to version B.01.02.00.02 to incorporate several minor defect fixes to improve the overall quality of the product.
 - Partition Manager updated to version B.11.23.02.00.02 to incorporate several minor defect fixes, as well as changes to functionality, including checking of the complex for configuration problems, and validation of SSL certificates sent from the CIM server.
- HP WBEM Services for HP-UX updated to version A.01.05.08 to use OpenSSL 0.9.6k.
- Ignite-UX updated to version B.5.2 with several enhancements, including updating the make_*_recovery tools.
- MC/ServiceGuard NFS Toolkit updated to version A.11.23.02 to deliver the File Lock Migration enhancement.
- Online Diagnostics (OnlineDiag):
 - EMS Hardware Monitor added to monitor the operation of the iSCSI Software Initiator.
 - IPMI Event Viewer Web Interface Tool added.
- The Quality Pack Patch Bundle now delivered on the Core OE media as well as the Web.
- Servicecontrol Manager updated to version 3.05 to incorporate defect fixes.
- Software Distributor updated to incorporate defect fixes.
- Software Package Builder updated to version A.01.04 to allow the setting of corequisites and prerequisites attributes using the OR relationship. SPB also now able to detect ambiguous objects.
- Update-UX updated to provide the flexibility to “deselect” bundles through an alternate to the default selections file. Update-UX will also create two backup kernel configurations from the update process.

March 2004 Release Notes, Chapter 6: “Disk and File Management”

- HP CIFS Client updated to version A.01.09.01 to incorporate a defect fix.
- HP CIFS Server 2.2g updated to version A.01.10 to incorporate fixes and minor enhancements developed since Samba version 2.2.5.
- VERITAS File System 3.5 (HP OnlineJFS 3.5) now enables creation of file systems of up to 8 TB.

March 2004 Release Notes, Chapter 7: “Internet and Networking”

- HP-UX Apache-based Web Server updated to version v.1.0.10.03 as primarily a security and bug fix release which addresses vulnerabilities and problems.
- HP-UX Tomcat-based Servlet Engine updated to version 1.0.10.01 to correspond with the HP-UX Apache-based Web Server v.1.0.10.03 with Apache 2.0.48. Upgraded mod_jk to v1.2.5.

- LAN Commands:
 - The `lanadmin` command's hard link, `/usr/bin/landiag`, deprecated.
 - The file `/etc/lanscan` deprecated.
 - The file `/etc/linkloop` deprecated.
- Mozilla updated to version 1.4.00.01 with full Japanese localization as well as other defect fixes and enhancements. Netscape is no longer included, but can be downloaded at <http://www.hp.com/go/netscape>.

March 2004 Release Notes, Chapter 8: "Security"

- HP-UX Host Intrusion Detection System v2.2 updated to include a defect fix for the detection of logins.

March 2004 Release Notes, Chapter 9: "Commands and System Calls"

- Topics in this chapter are unchanged for March 2004.

March 2004 Release Notes, Chapter 10: "Libraries and Programming"

- GTK+ Libraries updated to version 1.4.gm.46.4 to support changes to the Operating Environments. No new functionality added.
- HP Message Passing Interface (MPI) updated to version 2.0 with full MPI-2 Standard functionality and other enhancements.
- Perl updated to version 5.8.0 build 806 with several bug fixes and other improvements.

March 2004 Release Notes, Chapter 11: "Internationalization"

- ATOK 8 Japanese input method now deprecated.

March 2004 Release Notes, Chapter 12: "Other Functionality"

- HP-UX OpenGL Run Time Environment and Developer's Kit updated to version B.11.23.02.01 to incorporate defect fixes.

What is New in the Initial (October 2003) HP-UX 11i v2 Release?



NOTE: This release is supported on Itanium®-based systems. It is not supported on PA-RISC systems.

The following summaries pertain to the initial HP-UX 11i v2 release (October 2003). For further information, see the indicated chapters in the initial *HP-UX 11i Version 2 Release Notes*, available in its most current version at <http://www.docs.hp.com>.

The following is not an exhaustive list, so HP strongly recommends that you consult the initial *HP-UX 11i Version 2 Release Notes* for information that is not included here.

Initial Release Notes, Chapter 3: "Workstation/Server Specific Information"

- Always-installed Network Drivers:
 - 100Base-T Driver, `bt1an`: Updated to support interrupt migration and OLAR on Itanium®-based platforms.
 - 1000Base-T (Gigabit Ethernet): GigEther-01 supported and IEther-00 introduced. 1024-9000 MTU supported.
 - PCI FDDI: Enhanced to provide FDDI network connectivity for Itanium®-based platforms.
- Mass Storage Drivers:
 - Fibre Channel Tachlite Driver: Updated to support interrupt migration and OLAR.
 - SCSI Drivers: Support limited to PCI cards. New cards A5149A and A5838A supported, with limitations. HVD cards A4800A, A5159A, and A5159B not supported. OLAR of A6828A and A6869A cards supported. Interrupt migration supported.

- Selectable Network Drivers:
 - ATM Networking Solution: Now available on Itanium®-based platforms. Only ATM adapter A5513A supported.
 - HyperFabric: The `/opt/clic/bin/clic_probe` has superseded the `/opt/clic/bin/clic_ping` utility.
 - INTL100: Required for HP Integrity rx2600 server, as well as HP zx6000 workstation. A6792A add-on card not supported on HP-UX 11i v2.
 - Online Addition and Replacement (OLAR): New `olrad` command provides critical resource analysis routines. New `hotplugd` daemon provides Doorbells capability. The `rad` command deprecated.
 - PCI Mux Networking Solution, TermIO-00: Now available on Itanium®-based platforms.
 - PCI Token Ring Networking Solution: Now available Itanium®-based platforms.
- ATI FireGL X1 and ATI FireGL Z1: Provide compatibility with, and performance increase from, ATI FireGL4 card. Appropriate drivers shipped with the products.
- Instant Capacity on Demand (iCOD) 6.0: Now always-installed and supported on HP Integrity Superdome, HP Integrity rx7620 and rx8620.
- Pay Per Use 6.0: Available as a selectable product. Supports HP Integrity Superdome, HP Integrity rx7620 and rx8620.
- Technical System Configuration (TechSysConf): TC-OpenSource tools removed. Remaining TC-SysSetup alters kernel configurable parameters, as well as selected system configuration files, for improved system performance.

Initial Release Notes, Chapter 4: “General System Administration”

- Compressed Dump: New feature. Speeds up memory dumps.
- Diagnostics:
 - Offline Diagnostic Environment: Supports new hardware platforms, including HP Integrity Superdome, HP Integrity rx2600, rx4640, rx5670, rx8620, rx7620, zx2000.
 - Online Diagnostics (EMS Hardware Monitors and Support Tools Manager): Modified to support current systems releasing on HP-UX 11i v2. I/O tools and monitors modified to support new cards and peripherals.
- Enterprise Cluster Master Toolkit version B.01.08: Supports the Oracle 9i database in MC/ServiceGuard clusters.
- Event Monitoring Service A.04.00: Framework and GUI available as 32-bit native applications on Itanium®-based platforms. HA Monitors available as 32-bit native binaries on Itanium®-based platforms. New command line utility, EMS CLI, available to configure and manage persistent monitoring requests for EMS monitors.
- File Systems Tunable Parameters: HP-UX File Systems now has 13 dynamic tunable parameters available in HP-UX 11i v2. In addition, the `MAXSYMLINKS` literal traditionally included in the `<sys/param.h>` header is being deprecated in HP-UX 11i v2 and should not be used by applications. `MAXSYMLINKS` was defined as the maximum number of symbolic links that may be expanded in a path name. This limit is now a tunable parameter: `fs_symlinks`.
- GlancePlus Pak C.03.71.23: Incorporates defect repairs and enhancements, including enhancements to OVPA and GlancePlus.
- HP Caliper 3.0: Incorporates enhancements, including full multi-process support, ability to attach to a running process, new report and info modes, and usability improvements.
- HP Partitioning:
 - HP Process Resource Manager version C.02.01.01: Now supports VxVM. Various PRM utilities have wide-column option for better display of group names.
 - HP-UX nPartition Configuration Commands: Management scope of commands extended to remote partitions and complexes. Additional enhancements added.

- HP-UX Processor Sets: The `psrset` command enhanced to display Locality Domain information. Kernel now supports Real Time Extension (RTE) to processor sets.
 - HP-UX Workload Manager version A.02.01.01: Offers greater functionality and ease of use.
 - HP-UX Workload Manager Toolkits version A.01.04.01: Now has a toolkit for BEA WebLogic Server.
 - nPartition Provider: New product with HP-UX 11i v2, used by Partition Manager and partition commands to configure and manage both local and remote HP systems that support nPartitions.
 - Partition Manager version B.11.23.01.00: Incorporates major enhancements to the user interface, as well as support for Cell Local Memory (CLM).
- HP WBEM Services for HP-UX version A.01.05.05: Supports strong SSL encryption; simultaneous support of both SSL and non-SSL connections; local connections enhanced to use UNIX Domain Sockets; four additional providers added.
 - HP-UX Kernel Configuration: The `kcweb` application incorporates changes and new features. The `maxusers` tunable obsoleted. Kernel Configuration (KC) commands replaced by a new set of commands. Changes made in kernel location, boot-time selection, and automatic backup creation.
 - HP-UX Peripheral Devices: New tool; replaces the peripheral devices functionality of SAM and introduces two new commands, `pdweb` and `waconf`.
 - Ignite-UX version B.5.0: Supports the new HP-UX Service Partition, incorporates enhanced support for dual media recovery, and incorporates enhancements to support new `/stand/system` syntax.
 - Interrupt Migration: New feature; can be used to view and modify the interrupt configuration of the system.
 - MC/ServiceGuard version A.11.15.00: Updated with new features, including support for VxVM 3.5, Quorum Server 2.0, ServiceGuard Manager 3.0, and IPv6 (with restrictions). Operation with IPFilter requires specific IPFilter rules to ensure proper operation of ServiceGuard clusters.
 - MC/ServiceGuard Extension for SAP R/3 version B.03.09: Provides same functionality as B.03.08 for PA-RISC. B.03.09 also provides means to use Secure Shell as a communication method between nodes running mySAP components.
 - MC/ServiceGuard NFS Toolkit version A.11.23.01: Enhanced for better performance and easier troubleshooting. NFS-related control functions and variables now in separate NFS-specific control script. Supports VxVM 3.5 and NFS high availability over NFS TCP and NFS UDP.
 - MC/ServiceGuard Quorum Server version A.2.0: Runs on both HP-UX and Linux. Supports multiple HP-UX and/or Linux clusters. Can be configured in a package in a cluster.
 - MySQL version 3.23: Used instead of NDS by Servicecontrol Manager 3.0 for the repository.
 - SAM - Nodal Network Communication: Supports DHCPv6.
 - Scalable Boot: Reduces boot time by 5 to 95%, depending on the I/O configuration.
 - Servicecontrol Manager version 3.0: Provides new features, including Linux-based central management server, certified HP ProLiant Linux agents, XML file format, and improved user interface and ease-of-use.
 - ServiceGuard Extension for RAC version A.11.15.00: Provides new features, including fast detection of Oracle instance crash and rolling upgrade. ServiceGuard Manager will show RAC instances in property sheet.
 - ServiceGuard Manager version A.03.00: Provides new features, including availability in five languages, support for clusters on different subnets, ability to display several sessions, and Alerts icon to show the most critical problem.

- Software Distributor: Runs in Intel® Itanium® as a native application. Supports DLKM software packaging.
- Software Package Builder: New product; provides a visual method to create and edit software packages using the HP-UX Software Distributor package format.
- System Administration Manager: Introduces the HP-UX Kernel Configuration and HP-UX Peripheral Devices tools. SAM is available as PA-RISC binaries on HP-UX 11i v2 and requires the Aries translator.
- System-V IPC Kernel Tunable Parameter (`semmap`)(Obsolete): The memory allocation of semaphore sets previously controlled by `semmap` is now done dynamically by the kernel. The `semmap` kernel parameter is no longer tunable.
- System-V IPC Kernel Tunable Parameter (`semmsl`): Minimum value now 1; default value 2048; upper limit remains 10240.
- The `update-ux` Command: New with HP-UX 11i v2. Allows update of the HP-UX operating system from HP-UX 11i v1.6 (11.22) to HP-UX 11i v2 (11.23).

Initial Release Notes, Chapter 5: “Disk and File Management”

- AutoFS: Upgraded to include the features of the SUN ONC AutoFS version 2.3 product, as well as performance enhancements, including on-demand mounting. The system C library, `libc`, changed to improve AutoFS performance.
- Automounter: Obsolete. AutoFS is the recommended replacement.
- HP CIFS Client version A.01.09: Provides defect fixes and new features, including Kerberos authentication, integration with the system Kerberos cache, and improved interoperability with third-party CIFS servers that do not support older SMB infolevels.
- HP CIFS Server version 2.2e: Based on Samba version 2.2.5. Incorporates new tools and new configuration parameters.
- Logical Volume Manager (LVM): Supports SLVM in configurations of up to 16 nodes. LVM powerfail message changed.
- VERITAS File System (VxFS/HP OnlineJFS/JFS) 3.5: New version contains new and changed features, including new and/or enhanced tunable parameters, enhanced VxFS commands, new I/O error handling policy, new default intent log mode, new default system block size, VxFS system activity reporter, forced unmounts, and more. Enables creation of file systems up to 4 TB (maximum file size is 2 TB).
- VERITAS Volume Manager (VxVM) 3.5: New features include VERITAS Cluster Volume Manager 3.5 for HP-UX (purchased separately); Device Discovery Layer; SIG Licensing Product; and VERITAS Enterprise Administrator. VxVM 3.5 offers significant enhancements over the previous VxVM 3.1, which speed transactions, reduce processing time, and improve bandwidth usage.

Initial Release Notes, Chapter 6: “Internet and Networking”

- HP OSI Transport Services/9000 version C.12.00: Provides `otsshowsaps`(lists NSAPs configured on OTS/9000) and expedited data transfer on RFC1006 subnet.
- HP-UX Data Link Provider Interface (DLPI): Includes enhancements to the Streams interface; new third-party interface for non-native Streams drivers; updates to the native Stream driver models; obsolescence of the dump read capability of `lanscan`; status logging for DLPI through `nettl`; and other changes.
- HP-UX Web Server Suite: Includes HP-UX Apache-based Web Server, HP-UX Webmin-based Admin, HP-UX Tomcat-based Servlet Engine, and HP-UX XML Web Server Tools. Each component includes fixes and/or enhancements. Installation changes have been made.

- Internet Services:
 - BIND 9.2.0: New options added. New commands added in `rndc` remote name daemon control program. Supports IXFR and all DNS security features.
 - Dynamic Host Configuration Protocol (DHCP) v6: New features include new message types, multiple IP address request, configuration parameters from a DHCPv6 server, and reconfiguration messages.
 - The `gated` Routing Daemon: `ospfagt` available to obtain OSPF routing information from the `gated` product.
 - The `inetd` Daemon: New option added for use by `inetd` to identify a UDP service as broken or in-loop. New variable added to enable or disable `inetd` during system startup.
 - IPv6 Support for Internet Service Products: BIND 9.2, DHCPv6, `inetd`, `name` and address resolution resolver routines, R-commands, `telnet`, WU-FTPD 2.6.1, and Secure Internet Services are IPv6 enabled.
 - Logging User Accounting Information: `telnetd`, `remshd`, `rexecd`, and `ftpd` now use new scalable `utmps/wtmps/btmps` interfaces to log user accounting information.
 - The `named-xfer` Ancillary Program: Obsolete; replaced by the `dig` utility.
 - The `rbootd` remote boot server for RMP clients: Obsolete; clients using the RMP protocol no longer supported. You must move from RMP to BOOTP.
 - The `rexecd` utility: New option added. Now uses `utmps/wtmps/btmps` interfaces to log user accounting information.
 - The `rwhod` sever: Updated to use `utmps` interfaces to read user accounting information.
 - Secure Internet Services: New options added. IPv6 enabled for R-commands. Kerberos supported in an IPv6 environment for `ftp`, R-commands, and `telnet`.
 - Sendmail 8.11.1: New options added.
 - SLP 0.8: New with HP-UX 11i v2. Includes dynamic service tracking, ease of administration, and ease of development.
 - TCP Wrappers 7.6: Includes features such as monitoring incoming requests for Internet Services, controlling access to services spawned by `inetd`, and enforcing access control in stand-alone daemon programs, among others.
 - WU-FTPD 2.6.1: The `ftp` daemon audits all login activities irrespective of success/failure login. Logs bad login attempts in `/var/adm/btmps` file. New options added.
- IPv6 Support: IPv6 support by Transport, Internet Services, DCE, DLPI, FDDI, SAM-NNC, `libc`, HP-UX commands, Desktop (CDE), X11R6-based applications, C2 Audit, EMS, Online Diagnostics, SNMP, NetTL, IPSec, Kerberos Client, ServiceGuard, GlancePlus Pak, HP-UX Secure Shell, HP-UX Web Server Suite, and the Runtime Environment (RTE) for the Java. 2 platform.
- IPv6 Network Transport Software: Features include IPv4/IPv6 dual stack support; enablement of IPv4/IPv6 host and router connections over existing IPv4 network; Ethernet and FDDI links; IPv6 stateless address auto configuration; IPv6 Neighbor Discovery; network configuration and troubleshooting utilities; name service switch, and more.
- IPv6 Support by Common Desktop Environment (CDE): CDE 2.1 supports IPv6, in addition to IPv4.
- IPv6 Support by HP Openview Emanate Agent: Relevant MIB support with the IPv6 subagent, `ipv6agt`. RFCs supported as part of the IPv6 stack.
- IPv6 Support by HP-UX `libc` and HP-UX Commands: While providing support for IPv6, new solution addresses previous performance and feature scalability problems. New daemon and library introduced to manage user accounting. Various commands modified and options added to support IPv6. Solution speeds response time for users to log in to large server systems which support a large number of users/login sessions.
- Kernel Logging: Deprecated. Will not be supported post-HP-UX 11i v2.

- LAN Commands
 - Local Area Network Administration Program (`lanadmin`): New options added. Now supports third-party LAN drivers.
 - The `linkloop` Command: Now works correctly with Ethernet interfaces set for an MTU size other than 1500. Now supports third-party LAN drivers.
 - The `lanscan` Command: New option added. Can no longer be used to read from crash dumps.
- Network Information Service Plus (NIS+): Deprecated. HP-UX 11i v2 is the last release to support NIS+. HP will introduce a migration strategy to facilitate move from NIS+ to LDAP.
- Network Tracing and Logging (NetTL): Supports tracing and formatting of IPv6 packets. Improved performance. GUI `nettladm` added. Options added.
- Network Transport (ARPA): Support for enhancements of HP-UX DLPI. Enhancements to CKO interfaces between HP-UX transport and DLPI. Removed support for dump reading by `netstat` and `arp`. IPv6 transport supported.
- Networking `libc` APIs `getaddrinfo` and `getnameinfo`: Both functions have additional lookup.
- Networking `libc` APIs `getipnodebyname` and `getipnodebyaddr`: Deprecated. Both functions not supported post-HP-UX 11i v2. In applications, the APIs `getaddrinfo` and `getnameinfo` functions should be used instead.
- The `nslookup` Program: Extended to follow the configured host name resolution algorithm and to query NIS, DNS, and host tables.
- Router Discovery Protocol Daemon (`rddpd`): Obsolete. Functionality has been subsumed in `gated`.
- Web Browsing:
 - Mozilla Application Suite 1.2.1: Added as default browser for HP-UX 11i v2.
 - Netscape 7: Replaces Netscape Communicator 4.79.

Initial Release Notes, Chapter 7: "Security"

- Boot Authentication: Now available on all Standard Systems. Standard Mode Boot Authentication feature can be configured by two parameters.
- Generic Security Service Application Programming Interface (GSS-API): Now delivered as part of HP-UX 11i v2. IPv6 enabled.
- HP-UX Auditing System: Several system call options and event type options are accepted, but will be obsoleted in the next release.
- HP-UX Bastille 2.1: Now included in HP-UX 11i v2. New version adds finer granularity of configuration, improved question flow, better input validation, and new lockdown features.
- HP-UX Host Intrusion Detection System (HIDS) 2.2: Maintenance release with defect fixes and a few enhancements. No new functionality in this version.
- HP-UX IPFilter A.03.05.06: Supports HP-UX 11i v2 on Itanium®-based platforms. Automatically installed with all OEs. Using IPFilter and ServiceGuard requires specific IPFilter rules to ensure proper operation of ServiceGuard clusters.
- HP-UX Secure Shell A.03.10: New product. Based on OpenSSH 3.1p1, provides a secure channel for remote communication by transparently encrypting network traffic. Uses hashing to ensure data integrity and supports several authentication methods.
- Install-Time Security 1.0. x: Adds a security step to the install/update process that allows you to configure the Bastille security lockdown engine during system installation.
- Kerberos Client (KRB5-Client): Now delivered as part of HP-UX 11i v2. Changes include support for `appdefaults` section in the `/etc/krb5.conf`; multidomain support; IPv6 support.
- PAM Kerberos: Supports both Itanium®-based and PA-RISC applications in 32-bit mode. Now prevents a user from changing another user's password.

- Security Patch Check 1.3: Now included in HP-UX 11i v2 OEs. Simplifies the process of determining whether you have all the relevant security patches on your system. This version does better corner-case handling; incorporates a number of defect fixes and clearer wording.
- Shadow Passwords: New feature enhances system security by hiding user-encrypted passwords in a shadow password file.
- Strong Random Number Generator: New feature provides a secure, non-reproducible source of binary sequences for applications that generate encryption keys and other cryptographic quantities.

Initial Release Notes, Chapter 8: “Commands and System Calls”

- The `envd` Environment Daemon: Now supported.
- The `groupadd`, `groupdel`, `groupmod`, `useradd`, `userdel`, `usermod` commands: In trusted mode, the commands now write audit records into the audit subsystem’s audit trail. New option added to set or unset `useradd` behavior of changing ownership of an existing home directory.
- The `psrset` Command: Enhanced with new options to manage the RTE processor set.
- The `setboot` Command: Support for setting the HA Alternate boot path now added. SpeedyBoot option for next reboot now available.
- I/O Commands:
 - The `insf`, `lssf`, and `mksf` Commands: Now support IHV drivers, provided the IHV provides a shared library.
 - The `ioscan` command: New options added to allow display of the date and time at which the system hardware was last scanned and to allow display of the EFI device paths for certain devices.
- The `mmap` Function: Now possible to perform mappings between a process's address space and I/O device registers or memory.
- The `pstat_getfile` Interface: Obsolete. The interface `pstat_getfile2` should be used in its place.
- Transition Links Commands: Deprecated. The `tlinstall`, `tlldist`, and `tlremove` commands will become obsolete in post-HP-UX 11i v2 releases.
- Usage of Capacity-related `ioctl`s `DIOC_CAPACITY`, `DIOC_DESCRIBE`, and `SIOC_CAPACITY`: Applications that use the `DIOC_CAPACITY` or `DIOC_DESCRIBE` `ioctl` calls should be rebuilt because `capacity_type` and `disk_describe_type` now better represent the size of newer, larger devices. Applications that use the `SIOC_CAPACITY` `ioctl` for devices that may become large at some point should now use the new `SIOC_STORAGE_CAPACITY` `ioctl`.
- Usage of `ustat`, `statfs`, and `statvfs`: When old binaries that still use `ustat`, the various forms of `statfs`, and the various forms of the 32-bit flavor of `statvfs`, are exposed to a truly large file system, these calls will return an `E_OVERFLOW` error that the binaries have never seen before, resulting in misinterpretations.

Initial Release Notes, Chapter 9: “Libraries and Programming”

- 400K File Descriptors: The maximum supported number of file descriptors per process raised from 60000 (60K) to 400,000 (400K). Precautions apply to this new functionality.
- Adaptive Address Space (AAS) 1.0: Allows you to create binaries that provide you with a large address space and more control over it.
- Aries Binary Translator: Changes include support for MxN threads, support for Itanium®2-based processor, and an optional, experimental implementation of a new dynamic translator with improved performance.
- C99 Support for HP-UX System C Library (`libc`): A set of 8 new APIs introduced, making it easier to convert strings to the “long long” data type.

- Debugging:
 - Absolute Debugger (Adb): New features include support for Lazyfp, Dual pdir, debugging MxN threads in a process/core, debugging INIT and MCA crash dumps, and debugging a shared library for an attached process.
 - HP Kernel Debugger (KWDB): Included in HP-UX 11i v2, but not supported.
 - HP Wildebeest Debugger (WDB) 4.0: Features include performance improvements and support for Runtime Memory Checking, for enabling/disabling threads for better DDE compatibility, for unwinding through corrupted PC, for stack traces in Java/C/C++ programs, and enhanced support for C++ templates. New command: `dumpcore`. Info threads command output has changed.



NOTE: The HP Wildebeest Debugger (WDB) has been updated since the initial release of HP-UX 11i v2. For the most current information, visit <http://www.hp.com/go/wdb>.

- Dynamic Loader (`dld.so`) B.12.20: Changes include support for applications built with `+ [no] lazyload` and `-B [direct | lazydirect | nodirect]`, lazy loading of shared library, and direct binding.
- File Descriptor Allocation: The behavior of the file descriptor allocation changed to prevent security problems such as unauthorized modification of root-owned files.
- GTK+ Libraries 1.2.10.2: Added; required for Netscape 7 and Mozilla. Consists of the component libraries GLib, GDK, and GTK.
- HP aC++ Compiler: The functionality of Tools.h++ now available with the Standard C++ runtime (`-AA`). Transition Links product deprecated.
- HP C Compiler: The `legacy_hpc/` subdirectory no longer provided. C-Analysis-Tools product obsoleted. The tools `cb`, `cflow`, `cxref`, `endif`, `lint`, `protogen` no longer shipped. Transition Links product deprecated.
- HP Fortran v2.7: A new feature is binary I/O conversion. New or revised directives/options include `optimize openmp[on|off]`, `+Oautopar` (revised), `+Ofast` (changed implied options), `+DOosname`, `+O[no]rotating_fpregs`, `+O[no]preserved_fpregs`, and `+O[no]no_return`.
- HP Math Library (`libm`): Changes to `libm`, `math.h`, `complex.h`, `tgmath.h`, `fenv.h`, `cmath`, and `complex` components, including new and changed functions. Major performance upgrade for power functions: `pow[fwlq]`, `pown[fwlq]`, and `powlln[fwlq]`. Switch introduced into `math.h` to support a strict C99 namespace.
- HP Message Passing Interface (MPI) 1.8.3: New features include additional launch utility `mpirun.all`, HyperFabric/HyperMessaging Protocol (HMP) functionality, `stdio` not processed by default, argument error checking turned off by default.
- HP MLIB 8.4: Major enhancement is performance tuning. Incorporates algorithmic improvements. Several tunable parameters adjusted for improved execution performance.
- Itanium®-based Unwind Library (`libunwind.so`): Changes include a new set of “Unwind Express” APIs that perform stack unwinding considerably faster, and new header files `<uwx.h>` and `<uwx_self.h>`.
- Java 2 Standard Edition Platform:
 - HP 3D Technology for the Java 2 Standard Edition Platform 1.3: Two new, identical Java 3D products now install: one into Java RTE 1.3 and the other into Java RTE 1.4.
 - Runtime Environment (RTE) for the Java 2 Platform 1.4: New features include nonblocking I/O APIs, IPv6 support, new garbage collectors (parallel, and concurrent mark and sweep), Java Web Start application deployment technology now bundled with the RTE. RTE for Java 1.3 still included as well.
 - Runtime Plug-in (JPI) for Netscape/Mozilla for the Java 2 Platform 1.4: Now added, providing the latest Java technology. JPI 1.3 still included as well.
- Link Editor (`ld`): New functionality includes lazy loading of shared libraries (`+ [no] lazyload`) and direct binding support.

- Micro Focus OO COBOL 4.2 Run-Time Libraries: Deprecated. Will not be included in future HP-UX 11i releases for Itanium®-based platforms.
- Object File Tools (`elfdump`): Option introduced to print out the version string of the symbol when printing the symbol table.
- Perl: Corresponds to Perl 5.8.0 source code release. Changes include better Unicode support, new IO implementation, new thread implementation, better numeric accuracy, safe signals, and many new modules.
- Source Code Transition from HP-UX 11i v1.6 to HP-UX 11i v2: Software Transition Kit 1.9 updated to support source code transition from HP-UX 11i v1.6 to v2.
- Thread Context: Changes include: Protection Key Registers saved/restored on context switch; lazy FP implementation; new scratch registers supported; `save_state`, `pcb`, and label structures changed.

Initial Release Notes, Chapter 10: “Internationalization”

- Simplified Chinese Input Methods: Intelligent ABC now available to support characters defined by the GB18030 standard. T-C and T-C Rapid input methods obsoleted and removed.
- Mainframe `iconv` Converters for Japanese Characters: Changes include numerous fixes for mapping errors for JIS standard characters, as well as a fix to handle an incomplete shift sequence at the end of an input buffer.
- Printing Using Asian TrueType Fonts for HP PCL5 Printers: Larger set of Asian characters available for printing using Asian UTF-8 locales.
- System Support for Latin and South American Locales: Total of 51 new locales provided to enable system-level support for Latin/South American geographies. Includes support for the input, storage, retrieval, display, and printing of characters encoded in ISO-88591, ISO-885915, or UTF-8 character sets.
- Unicode 3.0 Support: Now included.
- Deprecated Functionality: Several commands, library routines, and lp model files deprecated. Will be removed in next major release of HP-UX.

Initial Release Notes, Chapter 11: “Other Functionality”

- ccNUMA: Changes include: greater performance for some work loads; ability to configure systems for optimal performance with regard to interleaved versus cell local memory; ability to give guidance to OS for most appropriate memory allocation according to an application’s usage model; ability to control how processes are distributed among localities.
- Common Desktop Environment (CDE): Changes include: IPv6 support; greater accessibility for physically challenged users; `dtlogin` does not start X server when the mouse is not connected; large file (greater than 2GB) support provided by `dtfile`; and other changes. In addition, CDE requires a number of services and resources; if these are disabled either manually or with Bastille, there are several impacts on CDE.

4 Hardware-Specific Information

What is in This Chapter?

This chapter provides hardware-specific information, including the following:

- “CommonIO” (page 90)
- “Hardware Enablement Patch Bundle for HP-UX 11i v2 (11.23)” (page 90)
- “HP Instant Support Enterprise Edition” (page 91)
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CommonIO

The CommonIO bundle packages multiple products, and is always installed.

Summary of Change

The CommonIO bundle has been updated with quality improvements.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information on specific changes in this release, see the *HP CommonIO Release Notes*. For further information on supported cards, see the *SAS Host Bus Adapters Support Matrix* and the *HP Fibre Channel Host Bus Adapter Support Matrix*. These documents are available at <http://docs.hp.com/en/netcom.html>.

Obsolescence

Not applicable.

Hardware Enablement Patch Bundle for HP-UX 11i v2 (11.23)

Hardware Enablement (HWE) Patch Bundle, `HWEenable11i`, for HP-UX 11i v2 provides patches required for new systems and for add-on hardware supported on HP-UX 11i v2, including I/O adapters and devices.

The HWE bundle supports current hardware products (for HP Integrity Servers and HP PA-RISC servers) shipped after the September 2004 release of HP-UX 11i v2 Operating Environments (OEs). HP Integrity workstations and PA-RISC workstations are not supported with the latest HP-UX 11i v2 OE releases.

Summary of Change

The `HWEenable11i` bundle includes patches for support with Intel® Integrity® Family 9100 Processors and PCIe SAS I/O adapters in HP Integrity Servers, and Mezzanine I/O adapters for HP Integrity Server Blades. Minimal HP-UX support requires other HWE components from this OE Update release that includes diagnostics, I/O driver bundles, along with the Ignite-UX product. HP recommends a full update to the desired OE option from the latest 11i v2 OE Update release for full HP-UX support with the updated versions of the manageability and configuration tools.

Impact

HP updates this bundle with required patches for new hardware. This bundle is updated for each release of the 11i v2 OE media. In addition to delivery on the HP-UX 11i v2 OE media, it is also available on the ITRC website: <http://itrc.hp.com>

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

The “bundle readme” document can be found on the OE media under the /DOCS/PATCH directory, or on the IT Resource Center website at <http://itrc.hp.com>.

For further information, refer to the following websites:

- <http://itrc.hp.com>
- <http://hp.com/go/softwaredepot>

Also refer to the latest documents, available at <http://www.docs.hp.com/hpux/os/11iV2>:

- *HP-UX 11i v2 Installation and Update Guide*
- *Read Before Installing or Updating to HP-UX 11i v2*
- *Patch Management User Guide for HP-UX 11.x*

Obsolescence

Not applicable.

HP Instant Support Enterprise Edition

Hewlett-Packard Instant Support Enterprise Edition (ISEE) is a secure remote support platform for business servers and storage devices. The HP ISEE client software is installed on each supported device covered by an HP Support Agreement. ISEE Monitored Clients communicate directly with the HP Support Center through the firewall and/or Web proxy server to deliver hardware incident information to the HP support center for reactive support. Additionally, system information is collected and can be used for proactive support.

Summary of Change

This new version (A.03.95.510.46.03) of ISEE Client has defect fixes.

Impact

There is no impact.

Compatibility

Before enabling or configuring Instant Support Enterprise Edition, verify that you have collected the necessary information and met all of the requirements outlined in Chapter One and Appendix A of the *HP Instant Support Enterprise Edition Client Installation and Upgrade Guide*. Please note that HP Instant Support Enterprise Edition is only supported on servers, not HP-UX workstations.

Enabling ISEE ISEE is installed in a disabled state. To enable the client complete the following steps:

1. In the file `/etc/rc.config.d/hpservices.conf` change the value of `START_TUNER` from 0 to 1.
2. In the file `/etc/rc.config.d/rstemsListener` change the value of `RST_LISTENER` from 0 to 1.
3. Execute `/sbin/init.d/hpservices start`
4. Execute `/sbin/init.d/rstemsListener start`
5. Execute `/sbin/init.d/runner start`

Configuring ISEE The ISEE configuration process is documented in the section titled “Configuring ISEE after an Individual Installation” in the *HP Instant Support Enterprise Edition*

Client Installation and Upgrade Guide. Additional information about ISEE and HP-UX servers can be found in Appendix A.

Performance

There is no performance improvement or degradation.

Documentation

Information about ISEE, including the *HP Instant Support Enterprise Edition Client Installation and Upgrade Guide*, is available at <http://www.hp.com/learn/isee>.

For a complete list of ISEE-supported operating systems and hardware devices, please view the ISEE supported products web page at http://www.hp.com/hps/hardware/hw_products.html

Obsolescence

Not applicable.

Networking and Mass Storage Drivers

HP-UX 11i v2 includes drivers for networking and mass storage adapter cards. The drivers are described in the following sections:

- “Always-Installed Networking Drivers” (page 92)
- “Selectable Networking Drivers” (page 94)
- “Always-Installed Mass Storage Drivers” (page 95)
- “Default-Installed Mass Storage Drivers” (page 99)

For the most current information on supported I/O cards, see the set of Support Matrixes available on the **I/O Cards and Networking Software** Web page at <http://www.docs.hp.com/en/netcom.html>. At the top of the page, click the link for the card technology you are interested in, then scroll down to the **Support Matrixes** heading. If a support matrix for your card technology is unavailable, check the card’s user guide or release notes.

Always-Installed Networking Drivers

This release includes changes to the following always-installed networking drivers. “Always-installed” means that the driver is automatically installed during HP-UX installation.



NOTE: The FEATURE11i bundle, which is normally installed by default on the 11i OE media, provides the patches that are required for the installation of these networking bundles. When updating an existing 11i system, you can install the FEATURE11i bundle *and* the desired networking bundle from the OE media in the same install session to meet software dependencies.

In addition to currently supported cards, the `swlist` report may contain the product numbers of cards that have been “pre-enabled,” but have not been released yet.

GigEther-01 (Gigabit Ethernet Networking Driver Bundle)

The Gigabit Ethernet networking driver bundle GigEther-01 (version B.11.23.0712) delivers the `igelan` driver.

Summary of Change

In December 2007, HP-UX 11i v2 updates the `GigEther-01` bundle to:

- support Accelerated Virtual I/O (AVIO) to significantly improve HP Integrity Virtual Machines (HPVM) I/O performance.

Impact

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

For information about Accelerated Virtual I/O (AVIO), see “Accelerated Virtual I/O” (page 111).

Compatibility

See “Accelerated Virtual I/O” (page 111).

Performance

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

Also see “Accelerated Virtual I/O” (page 111).

Documentation

- For related `GigEther-01` documents on the HP website, please see <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).
- To see what’s changed from one release to the next, see the `GigEther-01` driver’s release history. It is located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).
- A list of systems that use the currently supported Gigabit Ethernet drivers is located in the *HP-UX Ethernet Driver Support Matrix, Edition 2* (for releases of September 2004 and later). It is located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).

Obsolescence

Not applicable.

IEther-00 (Gigabit Ethernet Networking Driver Bundle)

The `IEther-00` bundle delivers the `iether` driver which supports selected Gigabit Networking Cards.

Summary of Change

In December 2007, HP-UX 11i v2 updates the `IEther-00` bundle to:

- support Accelerated Virtual I/O (AVIO) to significantly improve HP Integrity Virtual Machines (HPVM) I/O performance.
- support PCIe 4-Port Gigabit Ethernet Mezzanine Card (product #: 447883-B21) on HP Integrity BladeSystem c3000 and c7000 enclosures and BL870c Server Blade.

The support for this card is already pre-enabled in September 2007 Operating Environments Update Release (OEUR), but this hardware enablement release adds boot support and Virtual Connect support.

Impact

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

For information about Accelerated Virtual I/O (AVIO), see “Accelerated Virtual I/O” (page 111).

Compatibility

See “Accelerated Virtual I/O” (page 111).

Performance

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

Also see “Accelerated Virtual I/O” (page 111).

Documentation

- For related `IEther-00` documents on the HP website, please see <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).
- To see what’s changed from one release to the next, see the `IEther-00` driver’s release history. It is located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).
- A list of systems that use the currently supported Gigabit Ethernet drivers is located in the *HP-UX Ethernet Driver Support Matrix, Edition 2* (for releases of September 2004 and later). It is located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **1000Base-T and 1000Base-SX**).
- For the online manual page, see `nwmgr_iether(1M)`.

Obsolescence

Not applicable.

Selectable Networking Drivers

This release includes changes to the following selectable networking drivers. “Selectable” means that the drivers are not automatically installed, but can be selected during installation.

For the most current information on supported I/O cards, see the set of Support Matrixes available on the **I/O Cards and Networking Software** Web page at

<http://www.docs.hp.com/en/netcom.html>. At the top of the page, click the link for the card technology you are interested in, then scroll down to the **Support Matrixes** heading. If a support matrix for your card technology is unavailable, check the card’s user guide or release notes.

10GigEthr-00 (10 Gigabit Ethernet)

The `10GigEthr-00` bundle supplies the `ixgbe` driver.

Summary of Change

In December 2007, HP-UX 11i v2 updates the `10GigEthr-00` bundle to:

- support a new PCI-X 266Mhz 10 Gigabit Ethernet network card AD385A.
- support Accelerated Virtual I/O (AVIO) to significantly improve HP Integrity Virtual Machines (HPVM) I/O performance.

Impact

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

For information about Accelerated Virtual I/O (AVIO), see “Accelerated Virtual I/O” (page 111).

Compatibility

See “Accelerated Virtual I/O” (page 111).

Performance

The AVIO lan driver will support the following Ethernet drivers: `ixgbe` (10GbE), `igelan` (1GbE), and `iether` (1GbE).

Also see “Accelerated Virtual I/O” (page 111).

Documentation

- For related 10 Gigabit Ethernet documents on the HP website, please see <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **10 Gigabit Ethernet**).
- To see what’s changed from one release to the next, see the 10GigEther-00 driver’s release history. It is located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **10 Gigabit Ethernet**).
- For the list of supported systems, please see the *HP-UX Ethernet Driver Support Matrix* located on <http://docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **10 Gigabit Ethernet**).
- For the online manual page, see `nwmgr_ixgbe(1M)`.

Obsolescence

Not applicable.

Always-Installed Mass Storage Drivers

This release includes changes to the following always-installed mass storage drivers.

“Always-installed” means that the drivers are automatically installed during HP-UX installation.



NOTE: The `FEATURE11i` bundle, which is normally installed by default on the 11i OE media, provides the patches that are required for the installation of these mass storage bundles. When updating an existing 11i system, you can install the `FEATURE11i` bundle and the desired mass storage bundle from the OE media in the same install session to meet software dependencies.

In addition to currently supported cards, the `swlist` report may contain the product numbers of cards that have been “pre-enabled,” but have not been released yet.

For the most current information on supported I/O cards, see the set of Support Matrixes available on the **I/O Cards and Networking Software** Web page at

<http://www.docs.hp.com/en/netcom.html>. At the top of the page, click the link for the card technology you are interested in, then scroll down to the **Support Matrixes** heading. If a support matrix for your card technology is unavailable, check the card’s user guide or release notes.

FibrChanl-00 (HP PCI Tachyon TL/TS/XL2 Fibre Channel Driver)

The HP PCI Tachyon TL/TS/XL2 Fibre Channel (`td`) driver manages the A6795A and A5158A PCI single-port host bus adapters (HBAs) that utilize the Tachyon TL/TS and XL2 chips respectively.

Summary of Change

The B.11.23.0712 version of `FibrChan1-00` (`td`) driver includes a defect fix.

Impact

A Data Protector backup initiated in a SAN environment can cause the system to crash with an HPMC in the Fibre Channel (`td`) driver. This has been fixed in the `td` driver in the December 2007 release.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete Fibre Channel documentation is available on <http://www.docs.hp.com> (navigate to **Networking and Communications**, then to **Fibre Channel**) or directly at <http://www.docs.hp.com/hpux/netcom/index.html#Fibre%20Channel>.

- Support Guide: The *HP Fibre Channel Support Guide* includes an adapter overview, installation details, adapter configuration, troubleshooting and maintenance information, additional features, and regulatory information.
- Installation Guide: Software and hardware installation information for specific HBAs.
- Support Matrix: The Support Matrix includes a matrix of Fibre Channel adapters, supported hardware platforms, Operating Systems, Driver Bundle Versions, and minimum PDC/Firmware requirements
- White Paper: White Papers can also be found in this section.

Obsolescence

Not applicable.

FibrChan1-01 (Fibre Channel Mass Storage Driver for HP-UX 11i v2)

`FibrChan1-01` (Fibre Channel Mass Storage Driver for HP-UX 11i v2) is the Fibre Channel product containing the `fc` driver, used by the Fibre Channel HBAs.

Summary of Change

`FibrChan1-01` has been updated to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following documents, available at <http://docs.hp.com/en/netcom.html#Fibre%20Channel>:

- *FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v2 Release Notes*
- *HP Fibre Channel Mass Storage Adapters Support Guide FibrChanl-1 (fcd) Driver*

For information about supported cards, see the following document at <http://docs.hp.com/en/netcom.html#Fibre%20Channel> (scroll down to the **Support Matrixes** section):

- *HP-UX Fibre Channel (fcd and fclp) Host Bus Adapter Support Matrix*

Obsolescence

Not applicable.

RAID-01

The RAID-01 bundle delivers the driver `ciss` for the A7143A, A9890A, A9891A and P400 controllers.

Summary of Change

The RAID-01 bundle has been updated with quality improvements.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known compatibility issues.

Documentation

For further information on specific changes in this release, see the *RAID-01 (ciss) B.11.23.0712 Mass Storage Driver Release Notes*. For further information on supported cards, see the *HP Smart Array RAID Controllers Support Matrix*. These documents are available at <http://docs.hp.com/en/netcom.html> (navigate to **Smart Array (RAID)**).

Obsolescence

Not applicable.

scsiU320-00

The `scsiU320-00` bundle delivers the driver `mpt`, for the A7173A and AB290A controllers.

Summary of Change

The `scsiU320-00` bundle has been updated with quality improvements.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information on specific changes in this release, see the *scsiU320-00 (mpt) B.11.23.0712 Mass Storage Driver Release Notes*. For further information on supported cards, see the *HP Ultra320 SCSI Host Bus Adapter Support Matrix*. These documents are available at <http://docs.hp.com/en/netcom.html> (navigate to **SCSI Host Bus Adapters**).

Obsolescence

Not applicable.

SerialSCSI-00

The `SerialSCSI-00` bundle delivers the driver `sasd` for the factory-integrated internal SAS controller on certain servers. The `CommonIO` bundle is also required to support these controllers. For information on the `CommonIO` bundle, see “`CommonIO`” (page 90).

Summary of Change

The `SerialSCSI-00` driver bundle has been updated with quality improvements.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information on specific changes in this release, see the latest *SerialSCSI-00 (sasd) Mass Storage Driver Release Notes*. For further information on supported cards, see the *SAS Host Bus Adapters Support Matrix*. These documents are available at <http://docs.hp.com/en/netcom.html> (navigate to **SAS Host Bus Adapters**).

Obsolescence

Not applicable.

USB-00

The `USB-00` product (C.01.04.07) delivers the USB subsystem and device drivers.

Summary of Change

The install kernel for the December 2007 release of HP-UX 11i v2 contains an EHCI driver (USB 2.0 hi-speed capability) which significantly decreases the time necessary for the operating system install from local USB devices. This enhancement does not affect the speed of installs from

iLO/vMedia devices nor is it available in the runtime kernel once the system has been installed from media.



IMPORTANT: Starting with this release, the USB Bulk-Only Mass Storage driver will be installed and configured by default on any system which has a USB host controller present at the time of install—whether or not there is a USB mass storage device present. Previously, the Mass Storage driver was only configured if a USB mass storage device was present at install time. This led to confusion for customers who did not have such a device present at install time but later added one (e.g., a supported keychain device). Now, such a supported device added later will work immediately without further administrative action. The USB mass storage capability can be disabled if desired for security or other reasons by deconfiguring it from the kernel using the `kcmodule` command.

Additionally, several defects have been fixed.

Impact

The USB experience should be of higher quality - with less problems. The operating system install from local USB devices will be faster.

Compatibility

This USB product is not compatible with any application that accesses human interface devices (HID) through the legacy HID device special files in `/dev/hid`. Instead, applications should use the mouse and keyboard device special files provided in `/dev/deviceFileSystem` (`/dev/deviceFileSystem/keyboardMux` for keyboards attached to the USB and `/dev/deviceFileSystem/mouseMux` for mice attached to the USB).

Performance

Installs from local USB devices will be faster.

Documentation

For further information about the USB product, see the USB READMEs in `/var/adm/sw/products`.

Obsolescence

Not applicable.

Default-Installed Mass Storage Drivers

This release includes changes to the following default-installed mass storage driver.

“Default-installed” means that drivers are automatically selected for installation, but can be de-selected during installation.

For the most current information on supported I/O cards, see the set of Support Matrixes available on the **I/O Cards and Networking Software** Web page at <http://www.docs.hp.com/en/netcom.html>. At the top of the page, click the link for the card technology you are interested in, then scroll down to the **Support Matrixes** heading. If a support matrix for your card technology is unavailable, check the card’s user guide or release notes.

FibrChanl-02 (Fibre Channel Mass Storage Driver for HP-UX 11i v2)

FibrChanl-02 (Fibre Channel Mass Storage Driver for HP-UX 11i v2) is the Fibre Channel product that contains the `fc1p` driver, which is used by the Fibre Channel HBAs.

Summary of Change

FibrChanl-02 has been updated to incorporate defect fixes.



IMPORTANT: IssueID: SR 8606488089

Fixed a critical issue which occurs when using the `fclp` driver to perform I/O to sequential blocks of one LUN from multiple virtual memory address spaces, such as I/O to a swap device. The issue caused incorrect data to be swapped in and out which may result in application core dumps or kernel panics. The issue is present in `FibrChanl-02` software (`fclp` driver) versions B.11.23.0706 and B.11.23.0709; version B.11.23.0712 or later incorporates the fix. HP strongly recommends all users of fibre channel HBAs claimed by the `fclp` driver (AD299A or AD355A) should upgrade to version B.11.23.0712 or later.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following documents, available at <http://docs.hp.com/en/netcom.html#Fibre%20Channel>:

- *HP Fibre Channel Mass Storage Adapters Support Guide FibrChanl-02 (fclp) Driver*
- *FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v2 Release Notes*

For information about supported cards, see the following document at

<http://docs.hp.com/en/netcom.html#Fibre%20Channel> (scroll down to the **Support Matrixes** section):

- *HP-UX Fibre Channel (fcd and fclp) Host Bus Adapter Support Matrix*

Obsolescence

Not applicable.

PCI Error Handling

The PCI Error Handling feature allows an HP-UX 11i v2 system to avoid a Machine Check Abort (MCA), or a High Priority Machine Check (HPMC), if a PCI error occurs (for example, a parity error).

Without the PCI Error Handling feature installed, PCI slots are set in hardfail mode. If a PCI error occurs when a slot is in hardfail mode, an MCA or HPMC will occur, then the system will crash. When the PCI Error Handling feature is installed, the PCI slots containing I/O cards that support PCI Error Handling will be set in softfail mode. If a PCI error occurs when a slot is in softfail mode, the slot will be isolated from further I/O, the corresponding device driver will report the error, and the driver will be suspended. The `olrad` command, and the Attention Button, can be used to recover, restoring the slot, card, and driver to a usable state.

PCI Error Handling is supported on the following platforms:

- rp7420
- rp7440

- rp8420
- rp8440
- rx3600 with PCI/PCI-X IO backplane
- rx6600 with PCI/PCI-X IO backplane
- rx7620
- rx7640
- rx8620
- rx8640
- HP Superdome PA 8800/PA 8900
- HP 9000 Superdome sx2000
- Integrity Superdome sx1000
- Integrity Superdome sx2000



NOTE: PCI Error Handling is a Software Pack (SPK) product available on the web and on the December 2007 Application Release (AR) media. It is not available on the HP-UX 11i v2 Operating Environments (OEs) media. For more information, see “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34).

Summary of Change

This new version of the PCI Error Handling product has added support for PCI slots available on rx3600 and rx6600 and the PCIe slots available with the upgraded I/O backplanes and extenders for rx7640, rx8640, and Integrity Superdome sx2000.

Impact

This feature allows your systems to continue running when a PCI error occurs.

Compatibility

This feature is optional. You must be aware that with this feature, a PCI error may not cause the system to fail. There may be instances when a system failure is desirable, in order to force a failover to another system.

Performance

This feature has no measurable performance impact.

Documentation

For further information, see the *PCI Error Handling Product Note, Edition 4*, located at <http://docs.hp.com> (navigate to **High Availability**, then to **PCI Error Handling**).

Obsolescence

There are no current obsolescence plans.

Supported Systems

HP-UX 11i v2 supports only the 64-bit version of the HP-UX kernel. This release of HP-UX 11i v2 release fully supports the following HP 9000 servers and HP Integrity servers, as well as the new PA-8900 processor.



NOTE: HP-UX 11i v2 is not supported on PA-RISC Workstations. HP recommends that PA-RISC Workstation customers use HP-UX 11i v1.

The HP-UX 11i v2 May 2005 release was the last release supported on the Itanium®-based zx2000 and zx6000 workstations. These workstations have been discontinued as of September 2004.

Additional information regarding HP servers and workstations can be found at the following Web sites:

- HP Servers and Enterprise Systems
<http://hp.com/go/servers>
- HP Workstations
<http://hp.com/go/workstations>
- Enterprise Servers, Workstations and Systems Hardware Documentation
<http://docs.hp.com/hpux/hw/>

PA-RISC Servers

- HP 9000 rp24x0 and rp34x0 series
- HP 9000 rp44x0 and rp54x0 series
- HP 9000 rp74x0 and rp84x0 series
- HP 9000 rp7440 server (8 sockets) with PA8900 processors and sx2000 chipset
- HP 9000 rp8440 server (16 sockets) with PA8900 processors and sx2000 chipset
- HP 9000 Superdome server
- 64-bit A-Class, L-Class, and N-Class servers

Itanium®-based Servers

- HP Integrity cx2600 server
- HP Integrity rx16x0 server
- HP Integrity rx26x0 server
- HP Integrity rx3600 server
- HP Integrity rx4640 server
- HP Integrity rx5670 server
- HP Integrity rx6600 server
- HP Integrity rx76x0/rx86x0 servers



IMPORTANT: For information about a known problem involving the rx7640 and rx8640 servers and the automated management of nPartitions and virtual partitions on HP-UX 11i v2, see the *Read Before Installing or Updating HP-UX 11i v2 September 2006* at <http://docs.hp.com/hpux/os/11i/index.html>.

- HP Integrity Superdome server
- HP Integrity BL60p Server Blade
- HP Integrity BL860c Server Blade with zx2 chipset and C-class enclosure
- HP Integrity BL870c Server Blade
- HP servers with “Dual-Core Intel® Itanium (2) processor 9000 sequence”
 - HP Integrity rx2620 server (2 sockets) with zx1 chipset
 - HP Integrity rx4640 server (4 sockets) with zx1 chipset
 - HP Integrity rx7640 server (8 sockets) with sx2000 chipset
 - HP Integrity rx8640 server (16 sockets) with sx2000 chipset
 - HP Superdome server (16 sockets) with sx2000 chipset

- HP Superdome server (32 sockets) with sx2000 chipset
- HP Superdome server (64 sockets) with sx2000 chipset
- HP Integrity servers with new mixed PCI-X and PCI-express I/O backplane
 - HP Integrity rx2660 server (2 single-core processors) with zx2 chipset
 - HP Integrity rx3600 server (2 dual-core processors) with zx2 chipset
 - HP Integrity rx6600 server (4 dual-core processors) with zx2 chipset

Finding Firmware Information

Firmware changes frequently. Make sure your system has the latest firmware installed to support, for example, the latest versions of I/O adapters, mass storage devices, and devices used when you install from media or a network depot.

- For a matrix of system firmware for PCI I/O adapters and HP-UX 11i boot support, as well as the minimum firmware requirements for HP-UX 11i v2, refer to the documents at <http://docs.hp.com/en/hw.html#System%20Firmware>
- For the latest HP-UX 11i firmware updates, go to the IT Resource Center (ITRC) Web site at <http://itrc.hp.com>.

Log in to your appropriate region. Click **maintenance and support for hp products**, then **patch/firmware database**.

If you have to patch your firmware, the ITRC provides a patch database to search, as well as patch documentation that provides information on how to patch the firmware.

- HP also provides the Subscriber's Choice, which enables you to sign up to receive email notices for firmware updates. At the ITRC Web site, click **maintenance and support for hp products**, then **support information digests**.

Utility Pricing Solutions

The HP Instant Capacity (iCAP) and HP Pay per use (PPU) software products are a part of the HP Utility Pricing Solutions program. iCAP is a purchase model in which capacity can be instantly increased to accommodate increasing demands. PPU is a lease model in which customers are charged only for actual processor usage.

PPU is unchanged for the December 2007 update release.

HP Instant Capacity

The HP Instant Capacity (iCAP) version B.11.23.08.03.00 software (product number B9073BA) provides the ability to instantly increase or decrease processing capacity on specified HP Enterprise servers.

Summary of Change

- iCAP version B.11.23.08.03.00 includes the following new features and changes:
 - Support for vPars version A.03.05 integration on HP-UX 11.11 systems allows users to manage 11.11 and 11.23 vPars with the same `vparmonitor`.
 - The format of the date displayed by the `icapstatus` command has been changed to facilitate translation. Also, the format of the iCAP version number has been changed to provide more information.
 - Several defect fixes have been incorporated
- iCAP version B.11.23.08.02.01 includes the following new features and changes:
 - GiCAP Disaster Recovery
 - Several defect fixes have been incorporated
- iCAP version B.11.23.08.02.00 includes the following new features and changes:
 - Improvements in GiCAP logging.
 - Changes in asset reporting; it is now turned off by default on new installations
 - Changes to TiCAP transfer and consumption.
 - A negative TiCAP balance is no longer cleared when applying an RTU codeword.
 - Changes to `icapstatus` command output.
 - Changes to the GiCAP database.
 - Several defect fixes have been incorporated.

For further information, see the *HP Instant Capacity (iCAP) Release Notes* at <http://docs.hp.com> (navigate to **Network and Systems Management**, then to **Utility Pricing Solutions**).

Impact

GiCAP Disaster Recovery allows customers to transfer usage rights to other group members when a member is unavailable. The Group Manager must be running iCAP version 8.02.01 or later, and all group members must run version iCAP 8.02 or later to use this feature.

iCAP version 8.02 GiCAP Group Managers store more information about the members of a group. This information must be fetched from the various group members when converting an earlier version of the GiCAP database to the current version. This information cannot be fetched if all hosts of a GiCAP Group member cannot be contacted. Therefore, HP recommends updating a GiCAP Group Manager system to iCAP version 8.02 or later only when every GiCAP Group Member has at least one host which can be contacted by the GiCAP Group Manager.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- Manpages:
 - `icap(5)`
 - `icapmanage(1M)`
 - `icapmodify(1M)`

- *icapnotify*(1M)
- *icapstatus*(1M)
- Web Sites:
 - HP Software Depot: <http://hp.com/go/softwaredepot>
 - Technical Documentation: <http://docs.hp.com>
- Documents:
 - For details on the HP Instant Capacity software product, see the Instant Capacity User's Guide and Release Notes located on the HP Technical Documentation web site <http://docs.hp.com> (navigate to **Network and Systems Management**, then to **Utility Pricing Solutions**).

Obsolescence

Not applicable.

5 General System Administration

What is in This Chapter?

This chapter presents information of particular interest to system administrators, including the following:

- “Distributed Systems Administration Utilities” (page 108)
- “Dynamic Root Disk” (page 108)
- “Feature Enablement Patch Bundle - Feature11i” (page 109)
- “HP OpenView GlancePlus Pak” (page 110)
- “HP Partitioning and Virtual Server Environment” (page 111)
 - “Accelerated Virtual I/O” (page 111)
 - “HP Application Discovery” (page 112)
 - “HP Global Workload Manager” (page 113)
 - “HP Integrity Virtual Machines Provider (VM Provider)” (page 115)
 - “HP Integrity Virtual Machines (VMGuestLib)” (page 115)
 - “HP-UX Virtual Partitions” (page 116)
 - “HP-UX Workload Manager (AR Media Release)” (page 117)
 - “nPartition Provider” (page 118)
 - “Utilization Provider” (page 119)
- “HP System Management Homepage” (page 120)
- “HP-UX Accounts for Users and Groups” (page 120)
- “HP-UX Kernel Configuration” (page 121)
- “HP-UX Peripheral Device Tool” (page 122)
- “Ignite-UX” (page 123)
- “Online Diagnostics” (page 124)
- “Quality Pack Patch Bundles” (page 125)
- “Software Distributor” (page 125)
- “Software Package Builder” (page 126)
- “System Fault Management ” (page 127)
- “Update-UX” (page 128)
- Wbem Services and Providers
 - “HP Wbem Services for HP-UX” (page 128)
 - “HP-UX Wbem Fibre Channel Provider” (page 129)
 - “HP-UX Wbem IOtree Indication Provider” (page 130)
 - “HP-UX Wbem Kernel Providers” (page 131)
 - “HP-UX Wbem LAN Provider” (page 132)
 - “HP-UX Wbem LVM Provider” (page 133)
 - “HP-UX Wbem RAIDSA Provider” (page 133)
 - “HP-UX Wbem SAS Provider” (page 134)
 - “HP-UX Wbem SCSI Provider” (page 135)

Distributed Systems Administration Utilities

Distributed Systems Administration Utilities (DSAU) v1.7 for HP-UX 11i v2 provides several tools to simplify managing groups of systems and Serviceguard clusters. DSAU has three components that operate across groups of systems and Serviceguard clusters:

- configuration synchronization tools for policy-based configuration management
- consolidated logging for centralized logging and log filtering
- command fanout for executing shell commands and distributing files

Summary of Change

DSAU has been updated to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following documents, located at <http://www.docs.hp.com/hpux/os/11iV2> (navigate to **System Administration**):

- *Distributed Systems Administration Utilities Release Notes*
- *Distributed Systems Administration Utilities User's Guide*

Obsolescence

Not applicable.

Dynamic Root Disk

Dynamic Root Disk (DRD) is an HP-UX system administration toolset used to clone an HP-UX system image to an inactive disk for software maintenance and recovery.

System administrators use DRD to manage system images on HP PA-RISC and Itanium®-based systems.

DRD complements other parts of your total HP solution by reducing system downtime while installing and updating patches and other software.

DRD is supported on systems running HP-UX 11i v2 September 2004, or a more recent release of HP-UX 11i v2 or HP-UX 11i v3, with a root volume managed by Logical Volume Manager (LVM) or VERITAS Volume Manager (VxVM) Release 4.1.

Summary of Change

The DRD product for the December 2007 delivery introduces support for root volumes managed by VxVM Release 4.1.

See the Dynamic Root Disk website, <http://docs.hp.com/en/DRD>, for information about patches needed for VxVM to enable DRD for various root group volume configurations.

Impact

There are no known impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known compatibility issues.

Documentation

Manpages are delivered as part of the product. Information, including the product overview, FAQ, Administrator's Guide, and white papers, is available at the product website at <http://docs.hp.com/en/DRD>.

Obsolescence

Not applicable.

Feature Enablement Patch Bundle - Feature 11 i

The Feature Enablement Patch Bundle (FEATURE11i) consists of required patches that meet dependencies for new or updated software products. This patch bundle gets updated with new patches as-needed for support of software products.

Summary of Change

For the December 2007 release, the FEATURE11i bundle consists of all its previous patches plus new enablement patches for HPVM, PCIe error handling, Audio Development Kit, PCI Mux, Trusted Computing Services, and vPars.

Impact

The patches in this bundle have undergone more testing and have received greater exposure than most patches downloaded individually from the HP Patch Hub. All dependencies for patches in this bundle have been resolved.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance changes.

Documentation

- The "bundle readme" document can be found on the Operating Environment (OE) media under the /DOCS/PATCH directory, or on the IT Resource Center Web site at <http://itrc.hp.com>.
- For further information, refer to the following Web sites:

- <http://itrc.hp.com>
- <http://hp.com/go/softwaredepot>
- Also refer to the latest editions of the following documents, available at <http://www.docs.hp.com/hpux/os/11iV2>:
 - *HP-UX 11i v2 Installation and Update Guide*
 - *Read Before Installing or Updating to HP-UX 11i v2*
 - *Patch Management User Guide for HP-UX 11.x Systems*

Obsolescence

Not applicable.

HP OpenView GlancePlus Pak

HP OpenView GlancePlus Pak, version 4.70, integrates the HP OpenView GlancePlus and HP OpenView Performance Agent for HP-UX (OVPA) products into a single tool to help you better manage the performance and availability of their servers.

Summary of Change

This release of HP Performance Agent has the following features:

A set of new metrics are added. For a list of enhancements and new metrics added in this release, refer to the Release Notes of each product (HP GlancePlus/HP Performance Agent) in `/opt/perf/ReleaseNotes/`, or at the following website:

http://ovweb.external.hp.com/lpe/doc_serv/

This release of HP GlancePlus has the following features:

- Supported on HP-UX 11i v1, 11i v2, and 11i v3
- `gpm` has been renamed as `xglance`. `gpm` is retained for backward compatibility.

In this version the name *HP OpenView Performance Agent* is changed to *HP Performance Agent* and the name *HP OpenView Operations* is changed to *HP Operations Manager*.



NOTE: The new product name change is applicable to version 4.70 and later. Any references to earlier versions of HP Performance Manager will still have the name *HP OpenView Performance Manager*.

Impact

Refer to the Release Notes of each product (GlancePlus and Performance Agent) in `/opt/perf/ReleaseNotes/`, or at the following website:

http://ovweb.external.hp.com/lpe/doc_serv/

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

See the documentation of each product (GlancePlus, Performance Agent) at the following site:

http://ovweb.external.hp.com/lpe/doc_serv/

Obsolescence

Not applicable.

HP Partitioning and Virtual Server Environment

HP offers a full line of hardware and software partitioning capabilities, including nPartitions, virtual partitions, and HP Integrity Virtual Machines. The HP Virtual Server Environment (VSE) builds on HP partitioning products and the VSE Management Software to help you maximize the use of your server resources in response to changing business needs.

The HP-UX Operating Environments include WBEM providers and agent software that enable your systems to operate in the VSE. The VSE Management Software is not included in the Operating Environments, but is available for download from the following Web site:

<http://docs.hp.com/en/vsegmt/>

Accelerated Virtual I/O

The HP Integrity Virtual Machines (HPVM) 3.5 release supports two new Accelerated Virtual I/O device drivers that significantly improve HPVM I/O performance. The HPVM 3.5 product is shipped via HP Independent Media and is not included with the December 2007 Operating Environment Update Release (OEUR) of HP-UX 11i v2.

The Accelerated Virtual I/O (AVIO) solution is composed of four new products: GuestAvioLan, HostAvioLan, GuestAvioStor, and HostAvioStor. The initial version for these products is B.11.23.0712 for all and, as stated above, all are supported with the HPVM release 3.5.

The configuration process for the new AVIO devices is basically the same as the existing VIO devices. The only difference is the device names used in the `hpvmcreate/hpvmmodify` commands. The names of the AVIO devices are `aviolan` (or `avio_lan`) and `aviostor` (or `avio_stor`).

Summary of Change

The new AVIO storage and lan devices deliver a new re-architected I/O path for HPVM. These products are shipping for the first time on the HP-UX 11i v2 December 2007 Operating Environments.

All four AVIO products are Default-Installed on the December 2007 Foundation Operating Environment.

Impact

The new AVIO storage and lan products provide significant performance improvements over the existing VIO products.

These new HPVM AVIO devices provide significant performance improvement (up to 60% decrease in Service Demand and up to 2X increase in throughput) over the existing (fully emulated) Virtual I/O (VIO) devices.

Compatibility

The new AVIO products can coexist with the existing VIO products. In order to select the new AVIO products as your guest driver, use `aviolan` (or `avio_lan`) and `aviostor` (or `avio_stor`).

Performance

This new HPVM AVIO devices provide significant performance improvement (up to 60% decrease in Service Demand and up to 2X increase in throughput) over the existing (fully emulated) Virtual I/O (VIO) devices.

Documentation

For further information, see the AVIO-specific additions to the following HPVM documents, all available at <http://docs.hp.com/en/vse.html#HP%20Integrity%20Virtual%20Machines>:

- Release Notes:
 - *HP Integrity Virtual Machines Release Notes: Version A.03.50*
- User's Guide:
 - *HP Integrity Virtual Machines Installation, Configuration, and Administration: Version A.03.50*
- White Paper:
 - “HPVM: Accelerated Virtual I/O (AVIO)”

In addition, see the AVIO-specific additions to the manpages of the following commands:

- `hpvmnet`
- `hpvmcreate`
- `hpvmmodify`
- `hpvmresources`
- `hpvmstatus`

Obsolescence

Not applicable.

HP Application Discovery

HP Application Discovery (`amgr`) 3.1.00 provides system administrators and operators with a convenient graphical user interface for browsing an inventory of applications and processes running within a computing network. Screens show the data by host and by application, and you can monitor resource usage at the level of individual processes within an application. In addition, Application Discovery provides automatic detection of several types of application events. It also provides a template editor so that you can define applications for discovery and for addition to monitored and managed workloads in VSE Virtualization Manager.

Summary of Change

Version 3.1.00 of Application Discovery is integrated into the Virtual Server Environment, which is available from HP Software Depot: <http://software.hp.com/>. The Application Discovery agent (`AppDiscAgent`) is available with the software and here on the Operating Environment (OE) media.

AppDiscAgent 3.1.00.01 Defect fixes have been incorporated into this release. See the *VSE Management Software Release Notes Version A.03.00.01* available at <http://docs.hp.com/en/vse.html> for more information.

The Application Discovery agent is default-installed on the OE media, and is also available from the AR media.

Install `AppDiscAgent` on each managed system where you have applications and installed software that you want to inventory and monitor. The agent securely supplies data to Application Discovery server at intervals that can be set by a system administrator.

Impact

You will obtain more reliable behavior from Application Discovery agent.

Compatibility

Using `AppDiscAgent 3.1.00.01` with previous versions of Application Discovery server is not supported.

AppDiscAgent 3.1.00.01 requires the presence of Web-Based Enterprise Management (WBEM) services, Secure Shell (SSH), and OpenSSL for correct operation and secure data transmission. Consult the *VSE Management Software Installation and Update Guide Version A.3.00.01* for details (with the software or online at <http://docs.hp.com/en/vse.html>).

Performance

Application Discovery requires a “warmup period,” during which the agent collects the initial set of data for a managed node. The degree to which “warmup” affects memory usage by Application Discovery server on the central management system depends on the number of managed nodes that are inventoried at the same time.

Documentation

- Access the online help through the context-sensitive help button [?] in the Application Discovery user interface. A subset of this content is available in the *HP Application Discovery Getting Started Guide*, which is available with the software and online at <http://docs.hp.com/en/vse.html>.
- The following manpages are included for installation with the product:
 - *agent_config*(1M) for controlling Application Discovery certificates from the managed node.
 - *amgr_remote_config*(1M) for configuring Application Discovery certificates from the CMS.
 - *amgrd*(1M) for controlling or modifying the operation of Application Discovery agent.
- Only English versions of the manpages and other documentation are included at this time.

Obsolescence

Not applicable.

HP Global Workload Manager

HP Global Workload Manager (gWLM), a component of the HP Virtual Server Environment (VSE) Suite, allows you to centrally define resource-sharing policies that you can use across multiple HP servers. These policies increase system utilization and facilitate controlled sharing of system resources. In addition, gWLM provides both real-time and historical monitoring of the resource allocation.

gWLM has three components:

- VSE Central Management Server, or CMS (VSEMgmt)

You can obtain the VSEMgmt bundle from <http://hp.com/go/softwaredepot>. It is not available on the Operating Environments (OE) or Application Release (AR) media.

You configure gWLM and monitor your workloads on the system where the CMS software is installed. This system must also have HP Systems Insight Manager installed. (For the versions of SIM supported, see the *VSE Management Software Installation and Update Guide*.)
- Trial Agent (T2743AA)

The gWLM agent is default-installed on the OE media and is also available from the AR media.

Install the gWLM agent software on each system where you have workloads you want gWLM to manage. These systems are known as managed nodes.

On HP-UX managed nodes, you place each workload in an nPartition (npar), a virtual partition (vpar), a virtual machine (created using HP Integrity Virtual Machines), a processor set (pset), or an fss group.

gWLM manages your workloads by controlling the resource allocations to the npars, vpars, virtual machines, psets, or fss groups.

- License to Use, or LTU (T2762AA)

You can obtain the CMS and the agent free of charge. The A.03.00.01.x agent works for a period of 120 days. After the 120 days, the agent:

- Cannot be restarted once it is stopped
- Refuses changes to deployed SRD configurations
- Refuses to deploy new SRD configurations

To continue using gWLM agents after a free-use period has ended, you must install a license on each managed node. It is also available as part of the VSE LTU (T2786AC), which enables you to use gWLM and all the other components of the VSE suite.

Summary of Change

gWLM A.03.00.01.x includes the following changes:

- Conditional policies that take effect based on Serviceguard events
- Enablement of use of Temporary Instant Capacity (TiCAP) resources on the policy level
- Support for Hyper-Threading
- New `gwlmsstatus` command
- Usability and performance enhancements
- Integration with GlancePlus
- Integration with the Application Discovery and Process Maps features of HP Integrity Essentials Virtualization Manager
- Support for Linux virtual machine guests
- Support for Linux managed nodes has been removed

Impact

gWLM A.03.00.01.x provides more flexibility in managing your systems.

Linux managed nodes are no longer supported.

Compatibility

There are no known compatibility issues.

Performance

gWLM A.03.00.01.x improves performance system utilization when properly configured.

Documentation

For further information, see the following:

- Manpages:
 - The `gwlms(5)` manpage provides an overview of gWLM and points to all the other manpages.
- Web site:
 - <http://www.hp.com/go/gwlm>
- Documents (at <http://docs.hp.com/en/netsys.html#HP%20Global%20Workload%20Manager>):
 - *HP Integrity Essentials Global Workload Manager User's Guide*
 - *VSE Management Software Installation and Update Guide*
 - *VSE Management Software Quick Start Guide*

Obsolescence

Not applicable.

HP Integrity Virtual Machines Provider (VM Provider)

The HP Integrity Virtual Machines Provider (VM Provider), version A.03.50, is the HP-UX WBEM Services provider for Virtual Machines-related information on VM Host and guests. This product is used by HP Systems Insight Manager (HP SIM) to display information about HP systems that support HP Integrity Virtual Machines. It is also used by HP Integrity Virtual Machines Manager to visualize, configure and manage HP systems that support HP Integrity Virtual Machines. The VM Provider is only used through a WBEM interface. It is not invoked directly by the user.

Summary of Change

HP Integrity Virtual Machines Provider has been upgraded from A.03.00 to A.03.50 to provide support for new features in HP Integrity Virtual Machines.

Impact

This product allows HP Systems Insight Manager (SIM) to display information about HP systems that support HP Integrity Virtual Machines.

Compatibility

If VMProvider, VMGuestLib, and HP Integrity Virtual Machines are already currently installed, upgrades of any of these three products require upgrades of the others such that all versions are compatible and all products function correctly.

Performance

There are no known performance issues.

Documentation

Complete information is in the following documents, which are both available on <http://docs.hp.com> under the **HP Virtual Server Environment (VSE)** collection:

- *HP Integrity Virtual Machines Installation, Configuration, and Administration*
- *HP Integrity Virtual Machines Release Notes*

Obsolescence

Not applicable.

HP Integrity Virtual Machines (VMGuestLib)

HP Integrity Virtual Machines (VMGuestLib) is a subset of the HP Integrity Virtual Machines API Library used by WBEM Provider.

Summary of Change

HP Integrity Virtual Machines (VMGuestLib) upgrade from version A.03.00 includes support for the new features of HP Integrity Virtual Machines A.03.50.

Impact

This product allows HP Systems Insight Manager (SIM) to display information about HP systems that support HP Integrity Virtual Machines.

Compatibility

If VMProvider, VMGuestLib, and HP Integrity Virtual Machines are already currently installed, upgrades of any of these three products require upgrades of the others such that all versions are compatible and all products function correctly.

Performance

There are no known performance issues.

Documentation

Complete information is in the following documents, which are both available on <http://docs.hp.com> under the **HP Virtual Server Environment (VSE)** collection:

- *HP Integrity Virtual Machines Installation, Configuration, and Administration*
- *HP Integrity Virtual Machines Release Notes*

Obsolescence

Not applicable.

HP-UX Virtual Partitions

HP-UX Virtual Partitions (vPars) A.04.05 enables multiple instances of the HP-UX 11i version 2 Operating Environment (OE) to run simultaneously on one server or within one nPartition, with each OE instance hosting its own set of applications in an isolated environment.

When vPars A.04.05 is available, it can be purchased at the HP-UX Virtual Partitions (T1335BC) website at Software Depot:

<http://software.hp.com/portal/swdepot/displayProductInfo.do?productNumber=T1335BC>

Summary of Change

vPars A.04.05 provides support for mixed HP-UX 11i v1/v2 vPars environments, which enable virtual partitions running HP-UX 11i v1 (B.11.11) and HP-UX 11i v2 (B.11.23) to exist in the same nPartition. Only the vPars A.04.05 and vPars A.03.05 releases are supported in a mixed HP-UX 11i v1/v2 vPars environment.



CAUTION: To upgrade to a mixed HP-UX 11i v1/v2 vPars environment you must read and follow the procedure documented in the *HP-UX Virtual Partitions Administrator's Guide*. New command options and changed update procedures support upgrading from existing vPars environments with minimal downtime.

For detailed information, please see the *HP-UX Virtual Partitions Release Notes for A.04.05* and the *HP-UX Virtual Partitions Administrator's Guide*, both available at <http://docs.hp.com/en/hpux11iv2.html#Virtual%20Partitions>

Impact

There are no impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following websites:

- Software Depot:
<http://software.hp.com/portal/swdepot/displayProductInfo.do?productNumber=T1335BC>
- Documents:
<http://docs.hp.com/en/hpux11iv2.html#Virtual%20Partitions>

Obsolescence

Not applicable.

HP-UX Workload Manager (AR Media Release)

HP-UX Workload Manager (WLM) A.03.02 provides goal-based workload management. This management enables automatic resource allocation and application performance management through the use of prioritized service-level objectives (SLOs). It provides this functionality by automating features of HP-UX Virtual Partitions, nPartitions, Processor Sets, and HP Process Resource Manager (PRM).

Summary of Change

In December 2007, WLM has not changed on the Operating Environments (OE) media. However, WLM is available for separate purchase on the Application Release (AR) media.



NOTE: As of version A.03.01, WLM on the AR media no longer includes PRM in the bundle. However, with your purchase of WLM, you are entitled to a PRM license. For information on receiving the PRM license, contact your regional licensing service organization.

For further information, see the “Compatibility with PRM” section in *HP-UX Workload Manager A.03.02.xx Release Notes for HP-UX 11i v1, HP-UX 11i v2, and HP-UX 11i v3*, available at <http://docs.hp.com/hpux/netsys/index.html#HP-UX%20Workload%20Manager>

Impact

Regarding WLM on the AR media: As of version A.03.01, WLM no longer includes PRM in the bundle. However, with your purchase of WLM, you are entitled to a PRM license. For information on receiving the PRM license, contact your regional licensing service organization.

Compatibility

There are no known compatibility issues.

Performance

Performance is improved when WLM is used properly, but can degrade when WLM is not configured appropriately.

Documentation

For additional information about WLM, see the following:

- The *wlm(5)* manpage, which provides a list of all the manpages in its SEE ALSO section
- The WLM website at <http://www.hp.com/go/wlm> (the “Information library” page provides white papers)
- The following documents, available at <http://docs.hp.com/hpux/netsys/index.html#HP-UX%20Workload%20Manager>
 - *HP-UX Workload Manager User's Guide*
 - *HP-UX Workload Manager A.03.02.xx Release Notes for HP-UX 11i v1, HP-UX 11i v2, and HP-UX 11i v3*

Obsolescence

Not applicable.

nPartition Provider

The nPartition Provider version B.01.07 is the HP-UX WBEM Services provider for nPartition-related information on partitionable systems. This product is used by Partition Manager and the partition commands to configure and manage HP systems that support nPartitions. With this component, partitionable systems can be managed both locally and remotely. The nPartition Provider product is only used through a WBEM interface. It is not invoked directly by the user.

Summary of Change

nPartition Provider has been updated to version B.01.07 to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

You should be aware of the following items that may affect performance:

- When managing a remote partitionable complex, the performance degrades when the connection traverses long network distances, e.g., managing a partitionable complex in California from a system in New York. Furthermore, when managing a remote system, performance can be improved by connecting to an nPartition Provider on the remote system, rather than connecting directly to the system's service processor.
- The nPartition provider maintains a cache of information about systems being managed. This cache is cleared when the nPartition Provider is unloaded by the CIM server. Performance may be reduced when managing a system for the first time, or immediately after the CIM server has been restarted. Subsequent management sessions of the same system will be faster.

Documentation

Complete information is in the nPartition provider product data sheet, installed as `/opt/nparprovider/doc/nParProviderDataSheet.html`

Obsolescence

Not applicable.

Utilization Provider

The Utilization Provider version A.01.06.03.01 is a lightweight daemon (`utild`) that records system-utilization data on a 5-minute interval. System-utilization data includes: CPU, memory, disk, & network. This product also includes a WBEM provider for access to the utilization data.

Summary of Change

The Utilization Provider for HP-UX 11i v2 (11.23) has been updated to a new version number to correct errors in the previous release (version A.01.06.02.xx), which does not operate correctly under HP-UX 11i v2. This update does not apply to HP-UX 11i v1 (11.11) or HP-UX 11i v3 (11.31). For those versions of HP-UX, Utilization Provider version A.01.06.02.xx should continue to be used.

The latest updates to the VSE Management Software agents and providers, including the Utilization Provider, can be downloaded from the HP VSE Managed Node Software Update website at

<http://vsemgmt.external.hp.com/>

Impact

When Utilization Provider is installed, it launches the `utild` daemon, which consumes minimal CPU, memory, and disk resources. Up to 30 days of utilization data are kept in data files in `/var/adm/util`. The total disk space used by these files should not exceed 20MB in the default `utild` installation.

The Virtual Server Environment (VSE) Management Software, running on an HP Systems Insight Manager Central Management Server, requires the Utilization Provider to be running on all managed systems. If the Utilization Provider is removed, the system cannot be managed by the VSE Management Software.

Compatibility

This version of the Utilization Provider depends on HP WBEM Services for HP-UX version A.02.00.11 or later. Patch PHKL_33752 is required on Dual Core Intel® Itanium® processor systems being monitored with Capacity Advisor.

Performance

The `utild` process wakes up every 5 minutes and discovers and records the four metrics (CPU, memory, disk, and network). This discovery has minimal impact on system performance.

Documentation

The `utild` daemon is described in the `utild(1M)` manpage. WBEM schema (MOF files) are installed in

`/opt/util/mof`

For more information about the VSE Management Software and Utilization Provider, see the VSE Management Software website at

<http://docs.hp.com/en/vsemgmt/>

Obsolescence

Not applicable.

HP System Management Homepage

HP System Management Homepage (HP SMH) is a web-based interface that consolidates and simplifies single system management for HP servers on HP-UX, Linux, and Windows operating systems.

Summary of Change

HP System Management Homepage for HP-UX has been updated to version A.2.2.7 to incorporate defect fixes. For more information, see the *HP System Management Homepage Release Notes*, available at <http://www.docs.hp.com/en/netsys.html>.

Impact

There are no known impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For additional information, see the following:

- HP System Management Homepage manpages included with product:
 - *hpsmh(1M)*
 - *smhstartconfig(1M)*
- HP System Management Homepage Online Help included with the product.
- The following documents available at <http://www.docs.hp.com/en/netsys.html> (navigate to **System Administration**):
 - *HP System Management Homepage Installation Guide*
 - *HP System Management Homepage Release Notes*
 - “Next generation single-system management on HP-UX 11i v2 (B.11.23)”

Obsolescence

Not applicable.

HP-UX Accounts for Users and Groups

The HP-UX Accounts for Users and Groups tool (*ugweb*) allows you to manage the local user accounts, NIS user accounts and group accounts. You can manage the users and group accounts on HP-UX from the web-based user interface (*ugweb*).

You can use the HP-UX Accounts for Users and Groups tool for

- Managing local user accounts
- Managing NIS user accounts
- Managing group accounts
- Managing user templates and task customization
- Viewing and modifying security attributes of local users and NIS users as the tool is tightly integrated with the HP-UX Security Attributes Configuration tool (*secweb*).

The HP-UX Accounts for Users and Groups tool (*ugweb*) can be launched from SAM, from the HP System Management Homepage (HP SMH), or from the HP Systems Insight Manager (HP SIM).

Summary of Change

This release supports SHA 512-based password hashing in HP-UX.

Impact

SHA-based password hashing is now supported.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- Product online help
- *sam*(1M) and *smh*(1M) manpages
- *ugweb*(1M) manpage

Obsolescence

Not applicable.

HP-UX Kernel Configuration

The HP-UX Kernel Configuration tool allows the user to configure an HP-UX kernel, and to monitor consumption of kernel resources controlled by parameters. The user can configure the kernel using the web-based user interface (*kcweb*), the text user interface, or the command-line interface.

The HP-UX Kernel Configuration tool can be used for:

- tuning the kernel tunables
- loading and unloading kernel modules
- configuring alarms
- viewing change logs
- viewing pending changes

The HP-UX Kernel Configuration tool (*kcweb*) can be launched from HP System Management Homepage (HP SMH).

Summary of Change

The HP-UX Kernel Configuration tool has been updated to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- Product online help
- Manpages:
 - *kcweb*(1M)
 - *kcalarm*(1M)
 - *kcmoud*(1M)
 - *kconfig*(5)
 - *kconfig*(1M)
 - *kcmoud*(1M)
 - *kctune*(1M)
 - *kclou*(1M)
 - *kcpath*(1M)
 - *kusage*(1M)
 - *system*(4)
- *Managing Systems and Workgroups* manual for this release, available at <http://www.docs.hp.com> (navigate to **11i v2**, then to **System Administration**).

Obsolescence

Not applicable.

HP-UX Peripheral Device Tool

The HP-UX Peripheral Devices Manager tool (*pdweb*) enables the system administrator to manage the OLRAD-capable PCI slots reported by *olrad* command and peripheral devices reported by *ioscan* command.

The software allows a user to add/replace/delete an OLRAD-capable card online. The tool allows the user to view the devices reported by *ioscan* command and allows to re-install the Device Special Files where possible.

Summary of Change

The HP-UX Peripheral Devices Manager tool has been updated to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- Peripheral Devices Manager Online Help
- *pdweb*(1M) manpage
- *sam*(1M) and *smh*(1M) manpages

Obsolescence

Not applicable.

Ignite-UX

Ignite-UX version C.7.4 is an HP-UX administration toolset that allows you to:

- Monitor and manage the simultaneous installation of HP-UX 11i v1 (B.11.11), 11i v2 (B.11.23), and 11i v3 (B.11.31) on multiple PA-RISC and Itanium-based clients on your network.
- Create custom installation configurations (golden images) for multiple installations on clients.
- Recover HP-UX clients both locally and remotely.
- Create recovery media.

Summary of Change

Ignite-UX version C.7.4 contains the following new features:

- Support for USB 2.0 I/O protocol.
- Enhanced search/sort capabilities for large numbers of disks.
- Supports new hardware enabled by the HP-UX release.
- This release also includes defect fixes.

Impact

There are no impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

The Ignite-UX product website, <http://www.docs.hp.com/en/IUX/>, contains information, links to download the product, and documentation.

The following documents are available on the Ignite-UX Information Library web page, <http://www.docs.hp.com/en/IUX/infolib.html>:

- *Ignite-UX Administration Guide*
- *Ignite-UX Quick Start Guide*
- *Ignite-UX Custom Configuration Files*
- *Ignite-UX Release Notes*
- *Ignite-UX Reference*
- *Ignite-UX Frequently Asked Questions*

The following white papers are available on the Ignite-UX Information Library web page, <http://www.docs.hp.com/en/IUX/infolib.html>:

- “Ignite-UX and SAS Devices”
- “Ignite-UX and MirrorDisk/UX”
- “Successful System Cloning using Ignite-UX”
- “Configuring Bastille to Operate with Ignite-UX”
- “Successful System Recovery using Ignite-UX”
- “Installing and Updating Ignite-UX”
- “Ignite-UX Installation Booting”

Ignite-UX manpages are documented in the *Ignite-UX Reference* and are available with the Ignite-UX product in `/opt/ignite/share/man`.

Obsolescence

Not applicable.

Online Diagnostics

The Online Diagnostics product delivers the following tools:

EMS Hardware Monitors - The EMS Hardware Monitors enable you to monitor the operation of a wide variety of hardware products and be alerted of failure or any unusual activities.

STM - The Support Tools Manager (STM) provides a set of online support tools, enabling you to verify and troubleshoot system hardware, and to examine system logs.

Summary of Change

- Online Diagnostics now supports the HP Integrity BL870c Server Blade.
- Online Diagnostics is enabled to handle PCIe errors on the following Integrity systems:
 - rx7640
 - rx8640
 - SD-16B
 - SD-32B
 - SD-64B
- Online Diagnostics supports the following cards:
 - 447881-001 – 4-port 1000Mb/s Mezzanine Adapter
 - 435506-003 – PCIe 4-port 1000Base-T Adapter
- Online Diagnostics supports the following storage units:
 - HP MSA50 enclosure with up to 10 SAS drives
 - HP MSA60 enclosure with up to 12 SAS drives
 - HP MSA70 enclosure with up to 25 SAS drives

Impact

There are no impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following Online Diagnostics documents, available at <http://docs.hp.com/en/diag>:

- *Diagnostics Documentation Read This First*
- *Diagnostics Overview Guide*
- *Administrator's and User's Guide for OnlineDiag (EMS, STM)*
- *STM, EMS Table of Versions*
- *STM Patch Descriptions*
- *STM Release Notes*
- *EMS Release Notes*

Obsolescence

Not applicable.

Quality Pack Patch Bundles

The Quality Pack consists of two patch bundles: the Base Quality Pack bundle and the Applications Quality Pack bundle. The Base Quality Pack bundle includes all stable, defect-fix patches for the Core OS, graphics, and key networking drivers. The Applications Quality Pack bundle includes all stable, defect-fix patches for HP-UX Operating Environment (OE) applications.

Summary of Change

The Quality Pack Bundles for HP-UX 11i v2 (B.11.23) are updated in the December 2007 release.

Impact

The stable, defect-fix patches in these bundles are now available.

Compatibility

If you choose only to load the December 2007 version of the Quality Pack without doing a complete update to the December 2007 version of HP-UX 11i v2, you must first load the September 2004 or later version of HP-UX 11i v2.

Performance

There are no known performance issues.

Documentation

The Quality Pack readme can be found on the OE media under the /DOCS/PATCH directory, or on the IT Resource Center web site <http://itrc.hp.com>.

Obsolescence

Not applicable.

Software Distributor

Software Distributor (SD) is the standard tool suite for working with HP-UX software packages. SD is a group of software for packaging, installing, copying, listing, removing and verifying software.

Summary of Change

Software Distributor has been updated to incorporate defect fixes.

Impact

You can continue to reliably perform software deployment operations.

Compatibility

SD remains compatible across all supported releases

Performance

Performance is the same as previous releases.

Documentation

For further information, see the following:

- Website: <http://docs.hp.com/en/SD>
- Primary manpage: *sd(5)*

Obsolescence

Not applicable.

Software Package Builder

Software Package Builder (SPB) provides a visual method to create and edit software packages using the HP-UX Software Distributor (SD) package format. Once software is packaged, it can easily be transferred to a distribution medium, mass produced, and installed by administrators.

The SPB graphical user interface (GUI) provides a window into the software package structure, showing attributes that can be set for each package element. SPB dynamically loads packaging policies and validates software package attributes against these policies. The SPB command line interface (CLI) can also perform validation of software package attributes against policies and supports automated edits to the software package specification.

Whether you are new to packaging or experienced, SPB can help you. Features of SPB include:

- Create a product specification file (PSF) to organize files into products, filesets, and optionally, into bundles and subproducts.
- Set attribute values to define the software package characteristics such as revision, architecture, file permissions, and dependencies.
- Control scripts can further customize how the software is handled when installing or removing it on the destination system.
- Validate the PSF against packaging policies to ensure successful depot creation with the `swpackage` command and subsequent software installation.
- Edit and validate the PSF automatically as part of the nightly build process using SPB's CLI.
- Validate an existing depot against packaging policies to ensure successful software installation.

With SPB, developers and administrators can easily package software in SD format, making management of software with standard SD tools (such as `swinstall`, `swlist`, `swremove`) possible. For example, SPB makes it easy to put an SD wrapper around open source software. As a result, software inventory management and system administration get easier.

Summary of Change

SPB now supports the Java Runtime Environment (JRE) version 1.5 in addition to the Java Runtime Environment (JRE) version 1.4.

Impact

There is no impact.

Compatibility

You can now use the Java Runtime Environment (JRE) version 1.5 to run SPB without any compatibility issue.

Performance

Java Swing behavior may cause navigational inconsistencies when running SPB through an X emulator. If your mouse click behavior setting is too slow, it can prevent SPB from buffering all mouse clicks. This could potentially lead to data loss. The SPB product release notes contain a detailed procedure for correcting this performance issue. It is highly recommended that you complete the procedure prior to using SPB.

For this and other troubleshooting topics, refer to the SPB Help system.

Documentation

For further information on Software Package Builder, see the following:

- The `spb` manpage, *spb(1M)*
- The SPB Web site at <http://www.docs.hp.com/en/SPB/>
- The *Software Package Builder 2.0 User's Guide* at <http://www.docs.hp.com>

Obsolescence

Not applicable.

System Fault Management

System Fault Management (SFM) is a collection of tools used to monitor the health of HP servers and receive information about hardware such as memory, CPU, power supplies, and cooling devices. SFM operates in the Web-Based Enterprise Management (WBEM) environment.

Summary of Change

- SFM now supports the HP Integrity BL870c Server Blade.
- SFM supports the PCI Express interface events on the following systems:
 - rx7640
 - rx8640
 - SD16B
 - SD32B
 - SD64B

SFM depends on PCIEHEnable version B.11.23.0712.xx to support the PCI Express events. PCIEHEnable is available in the December 2007 Application Release.

- Defect fixes have been incorporated.

Impact

There are no impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following documents, available at <http://docs.hp.com/en/diag>:

- *System Fault Management Administrator's Guide*
- *SFM Release Notes*
- *SFM Frequently Asked Questions (FAQs)*
- *SFM Provider Data Sheets*
- *SFM Patch Descriptions*
- *SFM Tables of Versions*

Obsolescence

Not applicable.

Update-UX

The `update-ux` command updates the HP-UX operating system to a newer version.

Summary of Change

There are no new features or functionality in `update-ux`. Update-UX has been updated to reflect defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues

Performance

There are no known performance issues.

Documentation

For further information see the following:

- The latest *HP-UX 11i v2 Installation and Update Guide*, available at <http://docs.hp.com/en/oshpux11iv2.html#Installing%20and%20Updating>.
- The `update-ux`(1M) manpage.

Obsolescence

Not applicable.

HP WBEM Services for HP-UX

Web-Based Enterprise Management (WBEM) (<http://www.dmtf.org/>) is a platform and resource independent Distributed Management Task Force (DMTF) standard that defines both a common model (i.e., description) and protocol (i.e., interface) for monitoring and controlling a diverse set of resources.

The HP WBEM Services for HP-UX product is the HP-UX implementation of the DMTF WBEM standard.

This product is based on The Open Group (TOG) Pegasus Open Source Software (OSS) project (<http://www.openpegasus.org/>).

Summary of Change

HP WBEM Services for HP-UX has been updated to version A.02.05.08 to incorporate defect fixes. For more information, see the *HP WBEM Services for HP-UX Release Notes*, available at <http://www.docs.hp.com/en/netsys.html>.

Impact

There are no known impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For additional information, see the following:

- HP WBEM Services for HP-UX manpages included with product:
 - *cimmof(1)*
 - *cimprovider(1)*
 - *osinfo(1)*
 - *wbemexec(1)*
 - *cimauth(1M)*
 - *cimconfig(1M)*
 - *cimserver(1M)*
 - *cimtrust(1M)*
 - *ssltrustmgr(1M)*
 - *cimserverd(8)*
- The following documents, available at <http://docs.hp.com> (navigate to **Network and Systems Management**, then to **HP WBEM Services**):
 - *HP WBEM Services for HP-UX Release Notes*
 - *HP WBEM Services Software Developer's Kit Release Notes*
 - *HP WBEM Services for HP-UX System Administrator's Guide*
 - *HP WBEM Services Software Developer's Kit for HP-UX Provider and Client Developer's Guide*

Obsolescence

Not applicable.

HP-UX WBEM Fibre Channel Provider

The HP-UX WBEM Fibre Channel Provider (FC Provider) is an HP-UX WBEM provider. It enables WBEM client applications to retrieve information about Fibre Channel HBAs on the system. This component makes available various attributes related to HBA such as port properties, HBA parameters, and others.

This product requires WBEM services version number A.02.05 to be installed on HP-UX 11i v2 system.

The following features are supported by the FC Provider:

- Supports Consolidated Status Provider (CSP) feature
This feature reports the overall health status of the FC-HBA subsystem in the managed node.
- Supports Indication Provider (FC-IP) feature
This feature generates indications whenever the events of interest occur in the Fibre Channel subsystems.

Summary of Change

The provider version has changed to 11.23.0712 from 11.23.0706.

Feature Changes:

- The provider is supported by the System Management Homepage (SMH) application.
- New classes are added to provide the following information for WBEM Clients:
 - Data traffic statistics
 - Slot number details of the cards
 - Firmware version number of the cards installed on the system

Impact

You can obtain Fibre Channel Host Bus Adapter (HBA) properties from SMH application.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information is in the Fibre Channel provider product data sheet, installed at the following location:

<http://www.docs.hp.com/en/netsys.html#HP%20WBEM%20Services>

For more information about the SMH application, see the following documents, available at <http://docs.hp.com> (navigate to **Network and Systems Management**, then to **System Administration**):

- *HP System Management Homepage Release Notes*
- *HP System Management Homepage Installation Guide*
- “Next generation single-system management on HP-UX 11i v2 (B.11.23)” (white paper)

Obsolescence

Not applicable

HP-UX WBEM IOTree Indication Provider

The HP-UX WBEM IOTree Indication Provider is a CIM Indication provider, which enables management clients to subscribe to WBEM indications. Indication consumers can receive indications whenever there is a state change in the hot swappable slots of the PCI-IO sub-system.

Summary of Change

HP-UX WBEM IOTree Indication Provider has been updated to version 11.23.0712 to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information is in the IOTreeIndication provider product data sheet, available at the following location:

<http://www.docs.hp.com/en/netsys.html#HP%20WBEM%20Services>

Obsolescence

Not applicable.

HP-UX WBEM Kernel Providers

Web-Based Enterprise Management (WBEM) is an industry wide initiative to unify the management of system, networks, and applications across multiple and diverse vendor environments.

The HP-UX WBEM Kernel Providers product supports the following providers:

- `kcmodule` Provider
- `kctunables` Provider
- `Swap` Provider

The `kcmodule` command is used to manage kernel modules and subsystems. The `kcmodule` provider works in the WBEM environment and enables you to obtain information related to the `kcmodule` parameters .

The `kctune` command is used to manage kernel tunable parameters. The `kctune` provider works in the WBEM environment and enables you to obtain information related to the kernel tunable parameters.

The `Swap` Provider works in the WBEM environment and enables you to obtain information related to the swap space available on the system.

The WBEM Clients can use HP-UX WBEM Kernel Providers to obtain information related to kernel parameters and swap space available on the system. For more information about writing WBEM Clients, see The Open Group website, OpenPegasus at <http://www.opengroup.org/pegasus>

Summary of Change

The HP-UX WBEM Kernel Providers product is newly introduced on the HP-UX 11i v2 Operating Environments at the December 2007 release.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

The following documents are available at <http://docs.hp.com/en/netsys.html#HP%20WBEM%20Services>:

- *HP-UX WBEM kcmodule Provider Datasheet*
- *HP-UX WBEM kctunable Provider Datasheet*
- *HP-UX WBEM Kernel Provider Release Notes*
- *HP-UX WBEM Swap Provider Datasheet*

Obsolescence

Not applicable.

HP-UX WBEM LAN Provider

HP-UX WBEM LAN Provider (WBEMP-LAN-00) is a CIM Provider for Ethernet-based LAN technologies on HP-UX operating system. It consists of three providers: LAN Instance Provider, LAN Indication Provider, and LAN Consolidated Status Provider.

- The Instance Provider provides information on LAN interfaces in the system. Client applications can use the LAN Instance Provider to determine all Ethernet LAN links available on the system (registered and known to HP-UX DLPI) and collect information about them.
- The HP-UX LAN Indication Provider delivers indications for events that occur on Ethernet interfaces. Client applications can receive indications based on events generated by Ethernet interfaces.
- The LAN Consolidated Status Provider reports the consolidated health status of the Ethernet subsystem. Client applications can query the collection class and obtain the consolidated health status.



IMPORTANT: Installation of DLPI patch PHNE_36839 (supersedes the patch PHNE_35545) is recommended. Installation of this patch will allow the LAN Indication provider to run without impacting the results of Critical Resource Analysis (CRA). CRA is executed before doing PCI online card replacement through SAM, `olrad`, or the PCI attention button.

Without installing the patch PHNE_36839, the exact state of the card installed on the system will not be displayed.

The patch PHNE_36839 is available on the ITRC website at <http://itrc.hp.com>.

Summary of Change

The LAN Provider is supported by the System Management Homepage (SMH) application during the December 2007 release.

Impact

There are no impacts other than that previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For more information about the LAN Provider modules, see the following documents installed on your system:

- /opt/lanprovider/doc/HPUX_LANProvider.pdf
- /opt/lanprovider/doc/HPUX_LANIndProvider.pdf
- /opt/lanprovider/doc/HPUX_LANCSPProvider.pdf

Obsolescence

Not applicable.

HP-UX WBEM LVM Provider

The HP-UX WBEM LVM Provider is an HP-UX WBEM provider. It enables WBEM client applications to retrieve information about the HP-UX LVM subsystem on the HP-UX server. This product requires WBEM services version number A.02.05 to be installed on HP-UX 11i v2 system.

Summary of Change

The provider version number has changed to R11.23.009 from R11.23.008.

The provider has been enhanced to support the following:

- Provides association between a VolumeGroup and the LogicalVolumes created within the group.
- Provides association between a PhysicalVolume and the VolumeGroup for a spare physical volume.
- Provides information about all the LogicalVolumes that are mirrored.

Impact

There are no impacts other than those previously listed.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information is in the LVM provider product data sheet, available at <http://www.docs.hp.com/en/netsys.html#HP%20WBEM%20Services>

Obsolescence

Not applicable.

HP-UX WBEM RAIDSA Provider

HP-UX WBEM RAIDSA Provider (RAIDSA-PROVIDER) is used by client applications to determine information about Smart Array HBAs present on the system. Using this provider, you can retrieve details about various attributes of Smart Array HBA.

The RAIDSA Provider is only used through a WBEM interface. It is not invoked directly by the user. It is a read-only provider.

Summary of Change

RAIDSA-PROVIDER has been updated with quality improvements and with a defect fix.

Impact

The configure script / unconfigure script exits without registering with the provider if the cimserver is not running or starting on the target system.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information of the RAIDSA provider is in the *RAIDSA Provider Data Sheet*, installed at `/opt/raidsaprovider/doc/RAIDSA_Inst_DataSheet.pdf`.

This datasheet is also available at the following location:

<http://docs.hp.com/en/netcom.html>

Obsolescence

Not applicable.

HP-UX WBEM SAS Provider

HP-UX WBEM SAS Provider is used by client applications to determine information about SAS HBAs present on the system. With this component, you can retrieve details about various attributes of SAS HBAs.

Summary of Change

SAS-PROVIDER has been updated with quality improvements and with a defect fix.

Impact

The configure script / unconfigure script exits without registering with the provider if the cimserver is not running or starting on the target system.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information of the SASprovider is in the *SAS Provider Data Sheet*, installed at `/opt/sas/provider/doc/SAS_Inst_DataSheet.pdf`.

This datasheet is also available at the following location:

<http://docs.hp.com/en/netcom.html>

Obsolescence

Not applicable.

HP-UX WBEM SCSI Provider

The HP-UX WBEM SCSI Provider is an HP-UX WBEM provider for SCSI host-bus adapters (HBAs). The WBEM clients use the SCSI Provider to retrieve SCSI host-bus adapter attributes, such as port properties and host-bus adapter parameters. This product requires WBEM services version number A.02.05 to be installed on HP-UX 11i v2 system.

The SCSI Provider supports Consolidated Status Provider (CSP) feature. This feature reports the overall health status of the SCSI subsystem in the managed node.

Summary of Change

The provider version number is changed to 11.23.0712 from 11.23.0706.

The provider is supported by the System Management Homepage (SMH) application.

Impact

You can get the SCSI HBA properties from the SMH application.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

Complete information about the SCSI Provider is in the SCSI provider product data sheet, available at the following location:

<http://www.docs.hp.com/en/netsys.html#HP%20WBEM%20Services>

For more information about the SMH application, see the following documents, available at <http://docs.hp.com> (navigate to **Network and Systems Management**, then to **System Administration**):

- *HP System Management Homepage Release Notes*
- *HP System Management Homepage Installation Guide*
- “Next generation single-system management on HP-UX 11i v2 (B.11.23)” (white paper)

Obsolescence

Not applicable.

6 Disk and File Management

What is in This Chapter?

This chapter covers directory, file system, and disk management, including the following:

- “HP CIFS Server” (page 138)
- “HP-UX Memory File System” (page 138)
- “HP-UX Parallel Umounts” (page 139)

HP CIFS Server

The HP CIFS Server product implements many Windows Server features on HP-UX. The Microsoft Common Internet File System (CIFS) protocol, sometimes called Server Message Block (SMB), is a Windows network protocol for remote file access. Because the HP CIFS Server gives HP-UX access to the CIFS protocol, it enables HP-UX systems to interoperate with PC clients running Microsoft Windows NT, XP, 2000/2003 and HP-UX machines running HP CIFS Client software. The HP CIFS Server provides file sharing, printer access and authentication services to CIFS clients.

Summary of Change

HP CIFS Server 3.0h version A.02.03.02 is delivered in the HP-UX 11i v2 December 2007 release. The product version A.02.03.02 is based on Samba 3.0.22 with 3.0.25 selected fixes; it mainly delivers two security fixes for CVE-2007-2447 (SSRT071424) and CVE-2007-2446 (SSRT071424), and the following enhancement:

- Enhance the `wbinfo` tool with two new options, `-c` and `-C`, which can be used to display the total number of users or groups for a domain.

For detailed information on changes and defect fixes, refer to the *HP CIFS Server Administrator's Guide and Release Notes*, available at <http://docs.hp.com/en/netcom.html> (navigate to **CIFS**).

Impact

This release of HP CIFS Server provides security fixes and an enhancement.

Compatibility

There are no known compatibility issues.

Performance

The implementation of HP CIFS Server A.02.03.02 does not degrade performance.

Documentation

For more information, refer to the following documentation:

- The following Samba books, which are provided with the HP CIFS Server product and are accessible through the Samba Web Administration Tool (SWAT) home page, or can be accessed directly at `/opt/samba/docs/Samba-HOWTO-Collection.pdf` and `/opt/samba/swat/help` from an HP CIFS Server system:
 - Samba book, *The Official Samba-3 HOWTO and Reference Guide*
 - Samba book, *Samba-3 by Example*
- The following HP CIFS Server documents, which can be found at <http://docs.hp.com/en/netcom.html> (navigate to **CIFS**):
 - *HP CIFS Server 3.0g Administrator's Guide version A.02.03.01*
 - *HP CIFS Server 3.0h Release Note version A.02.03.02*

Obsolescence

Not applicable.

HP-UX Memory File System

Memory Filesystem provides users with a filesystem that is memory-based. The filesystem offers great performance boost as the disk updations of data and metadata are avoided (unless there is high memory pressure). In the case of heavy memory pressure, data is paged to the system swap device.



NOTE: MemFS is a Software Pack (SPK) product available on the web. It is not available on the HP-UX 11i v2 Operating Environments (OEs) media. For more information, see “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34).

Summary of Change

MemFS v2 on HP-UX 11iv2 differs from MemFS v1 on HP-UX 11iv2 in the following ways:

- It does not require a separate swap device. It will implicitly use the system swap device for swapping.
- It uses user process anonymous memory and buffer cache to store MemFS pages.
- Ignite-UX supports MemFS.
- MemFS filesystems can be recreated through `/etc/fstab` entries without preserving content.
- Provides information of resource usage through `sar` and `GlancePlus`.
- Contains bug fixes.

Impact

MemFS v2 will allow the customer to mount a MemFS instance without the need of a separate swap device (unlike MemFS v1).

Compatibility

MemFS v1 needs to be uninstalled before MemFS v2 is installed.

Performance

MemFS v2 performance is similar to MemFS v1 performance in non-swapping conditions.

Documentation

For further information, see the following:

- White paper: “MemFS v2 – A Memory-based File System on HP-UX 11i v2,” available at <http://docs.hp.com/en/11885/MemFSv2forHP-UX11iv2.pdf>
- Administrator's Guide: *HP-UX Memory File System (MemFS) 2.0 Administrator's Guide Second Edition*, available at <http://www.docs.hp.com/en/5992-2360/5992-2360.pdf>

Obsolescence

Not applicable.

HP-UX Parallel Umounts

HP-UX Parallel Umounts (`UmountallCmdEnh`) implements parallel unmounts.



NOTE: HP-UX Parallel Umounts is a Software Pack (SPK) product available on the web. It is not available on the HP-UX 11i v2 Operating Environments (OEs) media. For more information, see “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34).

Summary of Change

This new product implements parallel unmounts. This will make *umountall(1M)* work quickly. The mounted file systems will get unmounted in parallel, waiting only for dependent mount points. All the independent mount points will get unmounted concurrently.

Impact

This new product, if installed, will make shutdown faster. The shutdown command unmounts all the mounted file systems. With this product installed, this phase will complete quickly, bringing down the overall shutdown time.

Compatibility

There are no known compatibility issues

Performance

The performance of shutdown will increase with this product. The shutdown command unmounts all the mounted file systems. With this product installed, this phase will complete quickly, bringing down the overall shutdown time.

Documentation

Further information about HP-UX Parallel Umounts (*UmountallCmdEnh*) can be found on its download page at

<http://h20293.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=UmountallEnh>

Obsolescence

Not applicable.

7 Internet and Networking

What is in This Chapter?

This chapter describes new and changed Internet and networking functionality supported by the HP-UX 11i v2 release, including the following:

- “Browsers” (page 142)
- “HP-UX Mobile IPv4” (page 143)
- “HP-UX Web Server Suite” (page 143)
 - “HP-UX Apache-based Web Server” (page 144)
 - “HP-UX Tomcat-based Servlet Engine” (page 145)
 - “HP-UX Webmin-based Admin” (page 145)
- “Internet Services” (page 146)
 - “BIND” (page 146)
- “LDAP-UX Integration” (page 146)
- “Red Hat Directory Server for HP-UX” (page 148)

Browsers

Mozilla is an open source web and email applications suite.

The Firefox browser sets a new standard for internet browsing by providing an easier and more personal way to use the Internet.

The Thunderbird email application provides convenient, customizable, rich-featured email access.

Firefox/Thunderbird uses the new open-source windowing toolkit Gnome 2.6 GTK+ libraries for HP-UX on HP PA-RISC 11i v1 (11.11) and 11i v2 (11.23), and HP Integrity 11i v2 (11.23). You must install the windowing toolkit before installing Firefox/Thunderbird.

Products are:

- Mozilla, MozillaSrc 1.7.13.01
- Firefox, FirefoxSrc 2.0.0.4
- Thunderbird, ThunderbirdSrc 2.0.0.6
- GTK, GTKSrc 2.6.8.00

Summary of Change

The Firefox version has been updated to 2.0.0.4; this version includes Firefox 2.0.0.4 changes from the Mozilla Foundation.

The Thunderbird version has been updated to 2.0.0.6; this version includes Thunderbird 2.0.0.6 changes from the Mozilla Foundation.

Impact

The Firefox 2.0.0.4 open source web browser includes Firefox 2.0.0.4 changes from the Mozilla Foundation. This version fixes several security vulnerabilities reported by the Mozilla Foundation.

Thunderbird version 2.0.0.6 is a full-featured email application which supports IMAP and POP mail protocols as well as HTML mail formatting. This version fixes several security vulnerabilities reported by the Mozilla Foundation.

Compatibility

The Mozilla release will install on top of previous releases. It will not interfere with Netscape installations. For information on interactions with browser plug-ins, please see <http://www.hp.com/go/mozilla>.

Firefox and Thunderbird use the GTK open-source windowing toolkit on both PA-RISC and Integrity. You must install the windowing toolkit before installing Firefox or Thunderbird.

Performance

Mozilla may be slow the first time it is started because it is creating a profile.

Documentation

See the Release Notes and <http://www.hp.com/go/mozilla> for more information on using Mozilla.

For more information on Firefox/Thunderbird on HP-UX 11i, refer to <http://www.hp.com/go/firefox>.

Obsolescence

The Mozilla application suite will not be updated with any new security fixes. If you are currently using Mozilla or Netscape, we encourage you to upgrade to Firefox 2.0, or later version, to avoid security vulnerabilities.

HP-UX Mobile IPv4

HP-UX Mobile IPv4, version A.03.01, provides mobility support for mobile devices to migrate from their home network to other networks, either within the same administrative domain or to other administrative domains on the Internet.

Summary of Change

Mobile IPv4 A.03.01 is now available as an optional product in the HP-UX 11i v2 Operating Environments. To install Mobile IPv4 A.03.01, you must select the Mobile IPv4 A.03.01 product while installing the HP-UX 11i v2 Operating Environments.

Impact

There are no changes in terms of functionality

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

- The following manpages are available for Mobile IPv4 A.03.01:
 - *mipd*(1M)
 - *mipd.conf*(4)
 - *miprod*(1M)
 - *miprod.conf*(4)
 - *mipconfig*(1M)
 - *miproconfig*(1M)
 - *mipadmin*(1M)
 - *AAAKeyTypes.conf*(4)
- The following documents are available at <http://www.docs.hp.com> (navigate to **I/O Cards and Networking Software**, then to **Mobile IP**):
 - *HP-UX Mobile IPv4 Release Notes A.03.01*
 - *HP-UX Mobile IPv4 Administrator's Guide A.03.01*

Obsolescence

Not applicable.

HP-UX Web Server Suite

The HP-UX Web Server Suite v2.18 is a free product available for the HP-UX platform. It contains key software products necessary to deploy, manage, and implement a mission critical web server. The following components can be separately installed:

- “HP-UX Apache-based Web Server” (page 144)
- “HP-UX Tomcat-based Servlet Engine” (page 145)
- “HP-UX Webmin-based Admin” (page 145)
- HP-UX XML Web Server Tools (not updated for December 2007)

Installation Requirements

The following requirements must be fulfilled before certain components/features will work. See the following documentation section for the location of further information.

- Building Apache DSOs using `apxs` depends on Perl installed at `/opt/perl/bin/perl`.
- Fast Perl scripts and Apache modules written in Perl require `mod_perl` to be configured and Perl 5.8.8 (available with the Operating Environment) to be installed.
- HP-UX Tomcat-based Servlet Engine requires Java 1.4 or later. You are not required to have the entire HP-UX Software Development Kit (SDK) for compiling JSPs; only JRE needs to be installed. HP-UX XML Web Server Tools require SDK for Java 1.3 or later.
- HP-UX Webmin-based Admin depends on Perl 5 or later.

Documentation

Bundled documentation (Release Notes, Admin Guides, User Guides, Migration Guides and FAQs) now install into `/opt/hpws/hp_docs`. These documents can be accessed through HP-UX Apache-based Web Server, HP-UX Tomcat-based Servlet Engine, and HP-UX Webmin-based Admin by browsing to http://yourserver.com/hp_docs on the appropriate port (i.e., for Webmin on port 10000, the URL should be: http://yourserver.com:10000/hp_docs).



NOTE: Shared documentation, such as Migration Guides and FAQs, are located at `/opt/hpws/hp_docs` and are included in the HP-UX Webmin-based Admin product.

The latest information can also be found on the product Web site:

<http://www.hp.com/go/webserver>

HP-UX Apache-based Web Server

HP-UX Apache-based Web Server combines Apache with numerous popular modules from other Open Source projects and provides HP value-added features for the HP-UX platform:

- Scripting capabilities: PHP, `mod_perl`, CGI
- Content management: WebDAV, FrontPage Server Extensions 2002
- Security: authentication through an LDAP server, Webproxy, Chrooted environment, SSL and TLS support

Summary of Change

HP-UX Apache-based Web Server v.2.0.59.01: This release of HP-UX Apache-based Web Server is primarily a security and defect-fix release:

- Apache upgraded to 2.0.59
- PHP upgraded to 5.2.2
- `mod_jk` upgraded to 1.2.23

For more details, refer to the product release notes. See “Documentation” (page 144).

Impact

This is primarily a security and defect-fix release.

Compatibility

This release is binary-compatible with Apache 2.0.50 and greater. All the modules compiled with Apache 2.0.50 or greater will continue to work with this version since the Apache API has not changed.

Performance

Performance is similar to previous HP-UX Apache-based Web Server releases.

Documentation

See "Documentation" (page 144).

Obsolescence

Not applicable.

HP-UX Tomcat-based Servlet Engine

HP-UX Tomcat-based Servlet Engine provides you with Java-based extensions for dynamic content generation via Servlets and JavaServer Pages (JSPs).

Summary of Change

Tomcat has been upgraded to version 5.5.23 as primarily a security release and defect fix release.

Impact

This is primarily a security and defect-fix release.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

See "Documentation" (page 144).

Obsolescence

Not applicable.

HP-UX Webmin-based Admin

HP-UX Webmin-based Admin is a Configuration and Administration GUI with extensive enhancements for the HP-UX Apache-based Web Server.

Summary of Change

HP-UX Webmin-based Admin has been updated to version 1.070.10 as primarily a defect fix release.

Impact

This is primarily a defect fix release.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

See "Documentation" (page 144).

Obsolescence

Not applicable.

Internet Services

Internet Services delivers and supports the networking services considered essential to HP-UX system administrators interoperating in a network based on the TCP/IP framework. These networking services include:

- FTP
- r-commands (such as rcp, rlogin, remsh)
- mailers (such as mailx, elm, sendmail)
- DNS/BIND
- routing services (gated, mrouted and ramD)

BIND

BIND is a Berkeley implementation of the Domain Name System (DNS). It is a distributed network information lookup service that maps host names to Internet addresses, and Internet addresses to host names. It also facilitates Internet mail routing by providing a list of hosts that accept mail for other hosts.



NOTE: BIND is a Software Pack (SPK) product available on the web. It is not available on the HP-UX 11i v2 Operating Environments. For more information, see “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34).

Summary of Change

BIND has been updated to version 9.3.2 to incorporate a fix to one security defect (JAGag45362/SR 8606493191).

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For additional information, see the following document, available at <http://docs.hp.com/en/B2355-91063/index.html>:

- *HP-UX IP Address and Client Management Administrator's Guide*

Obsolescence

Not applicable.

LDAP-UX Integration

The LDAP-UX Integration product uses the Lightweight Directory Access Protocol (LDAP) to centralize user, group and network information management in an LDAP directory. LDAP-UX integration enables the LDAP directory to be used as a single source repository for HP-UX

authentication, authorization, user data and account management. The LDAP-UX Integration product includes the following subcomponents:

- LDAP-UX Client Services
- LDAP-UX Client Administration Tools and Migration Scripts
- NIS/LDAP Gateway Server

LDAP-UX Client Services contains `pam_authz` and the Mozilla LDAP C Software Development Kit (SDK) two subcomponents. LDAP-UX Client Services simplifies HP-UX system administration by consolidating account, group and other configuration information into a central LDAP directory server. The LDAP-UX Client Services software works with a variety of LDAP v3 capable directory servers and is fully tested with Red Hat Directory Server and the Microsoft Windows 2000/2003/2003 R2 Active Directory Server.

The LDAP-UX Client administration tools can help you to manage data in an LDAP directory server. Migration scripts can be used to convert NIS, NIS+ maps or corresponding `/etc` files into LDIF files and import them into an LDAP directory server.

NIS/LDAP Gateway is a Network Information Service (NIS) that allows an NIS client to use an LDAP directory as its repository for NIS maps. This product provides an NIS to LDAP Gateway which converts NIS `rpc` requests into LDAP operations.

Summary of Change

The LDAP-UX Integration product B.04.15 is available on the HP-UX 11i v2 December 2007 release. The product version B.04.15 supports the new set of non-interactive LDAP command line tools that allow you to list, add, modify or delete user accounts and groups in an LDAP directory server. These new tools are `ldapuglist`, `ldapugadd`, `ldapugmod`, `ldapugdel` and `ldapcfinfo`.

For detailed information about new LDAP command-line tools, refer to the *LDAP-UX Client Services Administrator's Guide* or the following manpages for the new tools:

- `ldapuglist(1M)`
- `ldapugadd(1M)`
- `ldapugmod(1M)`
- `ldapugdel(1M)`
- `ldapcfinfo(1M)`

Impact

LDAP-UX Integration B.04.15 provides new LDAP user/group command-line tools as described above.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For more information, refer to the following documentation available at <http://docs.hp.com/en/internet.html> (navigate to **LDAP-UX Integration**):

- *LDAP-UX Client Services B.04.15 Administrator's Guide*
- *LDAP-UX Client Services B.04.15 with Microsoft Windows Active Directory Server Administrator's Guide*
- *LDAP-UX Integration B.04.15 Release Notes*

Also refer to the following new manpages:

- *ldapuglist*(1M)
- *ldapugadd*(1M)
- *ldapugmod*(1M)
- *ldapugdel*(1M)
- *ldapcfinfo*(1M)

Obsolescence

Not applicable.

Red Hat Directory Server for HP-UX

HP provides an industry-standard centralized directory service to build your intranet or extranet on. Your Red Hat servers and other directory-enabled applications use the directory service as a common, network-accessible location for storing shared data, such as user and group identification, server identification, and access control information. In addition, the Red Hat Directory Server can be extended to support your entire enterprise with a global directory service that provides centralized management of your enterprise's resource information

Summary of Change

Red Hat Directory Server B.07.10.30 is included in the HP-UX 11i v2 December 2007 release. This release mainly contains defect fixes.

For detailed information about defect fixes and changes, refer to the *Red Hat Directory Server B.07.10.30 for HP-UX Release Notes and Supplemental Instructions* available at <http://www.docs.hp.com/en/internet.html>

Impact

Red Hat Directory Server B.07.10.30 for HP-UX mainly provides defect fixes.

Compatibility

There are no known compatibility issues.

Performance

The implementation of Red Hat Directory Server B.07.10.30 does not degrade performance.

Documentation

For more information, refer to the following documents available at <http://www.docs.hp.com/en/internet.html>:

- *Red Hat Directory Server B.07.10.30 for HP-UX Release Notes and Supplemental Instructions*
- *Red Hat Directory Server 7.1 Installation Guide*
- *Red Hat Directory Server 7.1 Configuration, Command, and File Reference*
- *Red Hat Directory Server 7.1 Deployment Guide*
- *Red Hat Directory Server 7.1 Administrator's Guide*
- *Red Hat Directory Server 7.1 Schema Reference*
- *Red Hat Directory Server 7.1 Plug-In Programmer's Guide*
- *Red Hat Directory Server 7.1 Gateway Customization Guide*

Obsolescence

Not applicable.

8 Security

What is in This Chapter?

This chapter covers changes and enhancements to security services, including the following:

- “HP-UX Bastille and Install Time Security” (page 150)
- “HP-UX IPFilter” (page 151)
- “HP-UX Secure Shell” (page 152)
- “HP-UX Security Attributes Configuration ” (page 152)
- “HP-UX Software Assistant” (page 153)
- “Kerberos Client” (page 154)
- “OpenSSL” (page 155)

HP-UX Bastille and Install Time Security

HP-UX Bastille A tool that configures a system to be more secure based on functionality/security trade-offs

Install Time Security Install Time Security (ITS) leverages the product above to secure a system at installation time. It does so by presenting four customer-selectable bundles to bring the system to one of four levels:

- DMZ – Suitable for deployment in a DMZ
- Managed DMZ – allows select authenticated management protocols in through the IPFilter-based firewall
- Host – Locks down without setting up a firewall like DMZ and Managed DMZ,
- SecTools – a “tools-only choice,” makes no configuration changes but loads all the tools and infrastructure to pre-enable easy lockdown at OS runtime

Summary of Change

For the December 2007 release of HP-UX 11i v2, HP-UX Bastille version 3.0.xx includes the following changes:

- HP-UX Software Assistant (SWA) integration has been added. (SWA integration was initially delivered on the September 2007 Application Release [AR] media. It has now been carried forward onto the December 2007 Operating Environments Update Release [OEUR] media.)
- Defect fixes have been incorporated.
- Security configuration reporting.
- Configuration drift detection from saved baseline.

Impact

HP-UX Software Assistant (SWA) creates much more robust and useful reports on the patch status of the system. Bastille can now schedule SWA. In addition, defect fixes have been incorporated.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- The HP-UX Bastille website at <http://hp.com/go/bastille>
- The *HP-UX Bastille User's Guide* (available with the product)
- The *bastille(1M)* and *bastille_drift(1M)* manpages

Obsolescence

In HP-UX 11i v3 initial release and in the June 2007 release of HP-UX 11i v2, HP-UX Bastille's bundle, B6849AA, was replaced by HP-UX Bastille. It contains the same products.

HP-UX Bastille version 3.0 does not support HP-UX 11.00. For customers using HP-UX 11.00, Bastille version 2.1 is available on the web at <http://hp.com/go/bastille>.

HP-UX IPFilter

HP-UX IPFilter, product number 15.01 (A.11.23.15.01 for HP-UX 11.23), is a TCP/IP packet filter suitable for use as a system firewall to protect application servers.

Summary of Change

- The Dynamic Connection Allocation (DCA) feature now supports IPv6 rules.
- The `ipftest` utility now supports IPv6 rules.
- The kernel tunable parameter, `icmp6_passthru`. The default setting of this parameter allows all ICMPv6 Router Discovery and Neighbor Discovery packets to bypass normal IPFilter rule processing and always pass through the system.
- Administrators can now distinguish between IPv4 rule sets and IPv6 rule sets when switching active and inactive rule sets with the `ipf -s` command. The `ipf -s` command now supports the `-6` option to specify the IPv6 rule sets. In previous releases, the `ipf -s` command switched active and inactive rule sets for both IPv4 rule sets and IPv6 rule sets.

Impact

You will be able to use the new features.

Compatibility

Existing configuration files will continue to work as before.

Customers who selectively filtered ICMPv6 Router Discovery and Neighbor Discovery packets will need to modify the kernel tunable parameter `icmp6_passthru`. Customers who want to allow all Router Discovery and Neighbor Discovery packets do not have to modify any settings or configuration files.

Customers who used the `ipf -s` command to switch active and inactive rules for both IPv4 and IPv6 rulesets must also execute the command `ipf -6 -s`.

Performance

There is no change.

Documentation

Manpages:

<code>ipf(4)</code>	packet filtering kernel interface
<code>ipf(5)</code>	IP packet filter rule syntax
<code>ipf(8)</code>	alters packet filtering kernel's internal lists
<code>ipl(4)</code>	data structure for IP packet log device
<code>ipmon(8)</code>	monitors <code>/dev/ipl</code> for logged packets
<code>ipstat(8)</code>	reports on packet filter statistics and filter list
<code>iptest(1)</code>	test packet rules with arbitrary input

Documents:

- *HP-UX IPFilter Version 15.01 Administrator's Guide* (B9901-90042)
- *HP-UX IPFilter Version 15.01 Release Notes* (B9901-90041)

Obsolescence

Not applicable.

HP-UX Secure Shell

HP-UX Secure Shell A.04.50.20, A.04.50.21, and A.04.50.22, based on OpenSSH 4.5p1, offers transparent encrypted security for HP-UX 11i v1, HP-UX 11i v2, and HP-UX 11i v3. The client/server architecture supports the SSH-1 and SSH-2 protocols and provides secured remote login, file transfer, and remote command execution.

Following lists the availability of HP-UX Secure Shell products on HP-UX 11i v1, 11i v2, and 11i v3:

- A.04.50.20 - HP-UX 11i v1
- A.04.50.21 - HP-UX 11i v2
- A.04.50.22 - HP-UX 11i v3

Summary of Change

HP-UX Secure Shell versions A.04.50.20, A.04.50.21, and A.04.50.22 are defect fix releases. No new features have been included.

HP-UX Secure Shell A.04.50.21 is supported on the HP-UX 11i v2 Operating Environments.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

The following documents are available on <http://docs.hp.com> in the **Internet and Security Solutions** section:

- *HP-UX Secure Shell Getting Started Guide*
- *HP-UX Secure Shell A.04.50.20, A .04.50.21, and A.04.50.22 Release Notes*

Manpages:

- *sshd_config(5)*
- *ssh_config(5)*
- *ssh(1)*

Obsolescence

HP-UX Secure Shell is no longer available on HP-UX 11.0. Support for the last HP-UX Secure Shell version (A.04.30) on HP-UX 11.0 will continue under the extended support contract.

HP-UX Security Attributes Configuration

HP-UX Security Attributes Configuration is an easy-to-use web-based tool for configuring system-wide and per-user values of security attributes of local and Network Information Service (NIS) users. This application requires the TrustedMigration product to be installed.

The features of the HP-UX Security Attributes Configuration tool are as follows:

- Configure system-wide values of security attributes from the System Defaults tab.
- Configure per-user values of security attributes of local users from the Local Users tab.

- Configure per-user values of security attributes of NIS users from the NIS Users tab.
- Preview commands that support the GUI actions, prior to execution.

You can launch the tool from HP System Management Homepage (SMH), HP Systems Insight Manager (SIM), or by running the *secweb(1M)* command.

Summary of Change

The Security Attributes Configuration text user interface (TUI) now supports form-based inputs. That is, unlike earlier, the user can view and enter all the data fields in a single form.

HP-UX Security Attributes Configuration has been updated to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For further information, see the following:

- product online help
- *sam(1m)* and *secweb(1m)* manpages

Obsolescence

Not applicable.

HP-UX Software Assistant

HP-UX Software Assistant (SWA) C.01.02 is a command-line based tool that consolidates and simplifies patch management and security bulletin management on HP-UX systems.

Summary of Change

SWA has been updated to version C.01.02 to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

The performance of SWA is strongly characterized by the network connectivity/performance to get catalogs and get software.

Documentation

For more information, see the following:

The HP-UX Software Assistant Web site at <https://www.hp.com/go/swa> provides the product overview, download links, and installation instructions.

The SWA manpages describe the commands and provide examples. For HP-UX releases, the manpages are available from the command line using the `man swa` command:

- `swa(1M)`
- `swa-report(1M)`
- `swa-get(1M)`
- `swa-step(1M)`
- `swa-clean(1M)`

The *HP-UX Software Assistant Release Notes* provides the features and functionality of the latest release, and known problems.

The *HP-UX Software Assistant System Administration Guide* provides an introduction to the tool, how to use it, integration with other HP products, how to use the reporting, and troubleshooting.

The documents are available on the HP Technical Documentation Web site at <http://docs.hp.com> (navigate to **11i v3**, then to **Patch Management**).

Obsolescence

Not applicable.

Kerberos Client

Kerberos Client version D.1.3.5.07 helps to provide Kerberos authentication and strong cryptography for secure communication over the network.



NOTE: Kerberos Client is a Software Pack (SPK) product available on the web. It is not available on the HP-UX 11i v2 Operating Environments (OEs) media. For more information, see “Software Pack (Optional HP-UX 11i v2 Core Enhancements)” (page 34).

Summary of Change

Kerberos Client D.1.3.5.07 is a defect-fix release and does not contain any new features.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

The following Kerberos Client documents are available on <http://docs.hp.com> (navigate to **Internet and Security Solutions**, then to **Kerberos**):

- *Kerberos Client D.1.3.5.07 Release Notes* (MPN 5992-1915)
- *Configuration Guide for Kerberos Client Products* (MPN 5991-6632)

The following manpages are also available with Kerberos Client D.1.3.5.07:

- `kerberos(5)`
- `libkrb5(3)`
- `krb5.conf(4)`
- `kdestroy(1)`
- `kinit(1)`

- *klist*(1)
- *kpasswd*(1)
- *kvno*(1)
- *ktutil*(1)

Obsolescence

Not applicable.

OpenSSL

OpenSSL versions A.00.09.071.006 supporting HP-UX 11i v1, A.00.09.071.007 supporting HP-UX 11i v2, and A.00.09.08d.003 supporting HP-UX 11i v3 are based on the open source OpenSSL 0.9.7l and OpenSSL 0.9.8d products. OpenSSL offers a general-purpose cryptography library and implements the Secure Sockets Layer (SSL v2/v3) and Transport Layer Security (TLS v1) protocols.

The OpenSSL bundle contains the following:

- OpenSSL A.00.09.08d in the `/opt/openssl/0.9.8` directory
- OpenSSL A.00.09.071 in the `/opt/openssl/0.9.7` directory

The default version of OpenSSL that is enabled on HP-UX 11i v2 is OpenSSL A.00.09.071.007. You can use the `/opt/openssl/switchversion.sh` script to switch between OpenSSL A.00.09.071 and OpenSSL A.00.09.08d. You can also use this script to swap the `openssl.cnf` file depending on the version of OpenSSL. However, this is an optional step.

Summary of Change

This release of OpenSSL is a defect-fix release and does not have any new features.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For more information, refer to the *OpenSSL A.00.09.071.006/A.00.09.071.007/A.00.09.08d.003 Release Notes* at <http://www.docs.hp.com/en/internet.html#OpenSSL>.

Obsolescence

Not applicable.

9 Commands and System Calls

What is in This Chapter?

This chapter usually includes information about new and changed commands and system calls. Topics in this chapter are unchanged for the December 2007 release of HP-UX 11i v2.

For a summary of changes in previous releases of HP-UX 11i v2, see Chapter 3: “What is New at a Glance” (page 39).

10 Libraries and Programming

What is in This Chapter?

This chapter covers a variety of changes of particular interest to programmers, such as changes to compilers, editors, and libraries, including the following:

- “Java 2 Standard Edition Platform” (page 160)
 - “JDK, JRE, and Plug-In for HP-UX for the Java Platform” (page 160)
 - “Java Out-of-Box” (page 161)

Java 2 Standard Edition Platform

Java™ 2 Standard Edition (J2SE™) products for HP-UX provide solutions to develop or deploy Java applications with the best performance on HP-UX systems.

JDK, JRE, and Plug-In for HP-UX for the Java Platform

HP-UX Software Development Kit and Runtime Environment for the Java™ 2 Standard Edition Platform (SDK/RTE) provides the Java 2 programming tools and runtime environment which allow you to deploy Java technology with the best performance on systems running HP-UX 11i. As of version 5.0, the names of the products have changed to HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java™ 2 Platform Standard Edition (JDK/JRE) 5.0. Version 5.0 is the equivalent of what would otherwise be known as v1.5.

The Runtime Plug-in (JPI) for HP-UX, Java™ edition, allows you to use the most up-to-date version of the HP-UX Java Runtime Environment (RTE) with Netscape and Mozilla.

Also installed are the Java for HP-UX Add-on Standard C++ Runtime libraries for the SDK (product T1456AAaddon), for the RTE (product T1457AAaddon), for the JDK (product Java15JDKadd), and for the JRE (product Java15JRE). Java developers on PA-RISC will need these C++ libraries if they are using the ANSI Standard C++ runtime (-AA) option in an application that loads Java.

The ObsJava12 (Obsolescence for Java 1.2) and ObsJava13 (Obsolescence for Java 1.3) bundles remove SDK/RTE 1.2 and 1.3, respectively, upon installation of the HP-UX 11i v2 Operating Environments.

The JDK, JRE, and Plug-in bundles are as follows:

- T1456AA - Java 1.4 SDK
- T1456AAaddon - Java 1.4 SDK Addon
- T1457AA - Java 1.4 RTE
- T1457AAaddon - Java 1.4 RTE Addon
- T1458AA - Java 1.4 Plugin
- Java15JDK - Java 5.0 JDK
- Java15JDKadd - Java 5.0 JDK Addon
- Java15JRE - Java 5.0 JRE
- Java15JREadd - Java 5.0 JRE Addon
- ObsJava12 - Obsolescence for Java 1.2 (1.0.02)
- ObsJava13 - Obsolescence for Java 1.3 (1.0.03)

Summary of Change

JDK/JRE version 5.0 and SDK/RTE 1.4.2 have been updated to incorporate defect fixes.

Impact

You will have the most current Java technology.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For the latest documentation, refer to the Java Technology for HP-UX 11i Web site at <http://hp.com/go/java> and select **information library** in the left navigation bar.

Obsolescence

Upon installation of the HP-UX 11i v2 Operating Environments, SDK/RTE 1.2 and 1.3 are obsolete and are removed by ObsJava12 (Obsolescence for Java 1.2 [1.0.02]) and ObsJava13 (Obsolescence for Java 1.3 [1.0.03]), respectively.

Java Out-of-Box

Java Out-of-Box (JAVAOOB) is a stand-alone bundle that upon installation will install startup (RC) scripts, modify kernel parameters, rebuild the kernel, and reboot the system. During startup the startup scripts will modify system tunables, thus providing better “Out of The Box” behavior for Java.

Product is:

JAVAOOB 2.04.00 — Java Out-of-Box

Summary of Change

JAVAOOB has been updated to version 2.04.00 to incorporate defect fixes.

Impact

There is no impact.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

For the latest documentation, refer to the Java Technology for HP-UX 11i Web site at <http://www.hp.com/go/java> and select **Information library** in the left navigation bar.

Obsolescence

Not applicable.

11 Internationalization

What is in This Chapter?

This chapter usually describes internationalization functionality. Topics in this chapter are unchanged for the December 2007 release of HP-UX 11i v2.

For a summary of changes in previous releases of HP-UX 11i v2, see Chapter 3: “What is New at a Glance” (page 39).

12 Other Functionality

What is in This Chapter?

This chapter usually describes other new and changed operating-system software functionality. Topics in this chapter are unchanged for the December 2007 release of HP-UX 11i v2.

For a summary of changes in previous releases of HP-UX 11i v2, see Chapter 3: “What is New at a Glance” (page 39).