Abstract
This document provides an overview of what is new, changed, deprecated, or obsoleted in the HP-UX 11i v3 Operating Environments since the previous update release of HP-UX 11i v3. It also provides an overview of the changes in previous releases. Administrators are expected to have knowledge of operating system concepts, commands, and configuration.
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Revision 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 the HP-UX 11i v3 Operating Environments. (In the case of the initial release HP-UX 11i v3 release in February 2007, the HP-UX 11i Version 3 Release Notes describes what has changed since the September 2005 release of HP-UX 11i v1 and the June 2006 release of HP-UX 11i v2.)

For the most recent documents in this series, including the most recent version of this document, see the HP-UX 11i v3 documentation at http://www.hpe.com/info/hpux-core-docs-11iv3. Documents in this series are also available on the Instant Information media, but may be superseded by new editions on the web.

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

Table 1: Current document in this series

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Document manufacturing part number</th>
<th>Supported operating systems</th>
<th>Edition</th>
<th>Publication date</th>
</tr>
</thead>
</table>
### Table 2: Previous documents in this series

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Document manufacturing part number</th>
<th>Supported operating systems</th>
<th>Edition</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-UX 11i Version 3 September 2010 Release Notes</td>
<td>BA927-90033</td>
<td>HP-UX 11i v3</td>
<td>Edition 1</td>
<td>September 2010</td>
</tr>
</tbody>
</table>

*Table Continued*
<table>
<thead>
<tr>
<th>Document Title</th>
<th>Document manufacturing part number</th>
<th>Supported operating systems</th>
<th>Edition</th>
<th>Publication date</th>
</tr>
</thead>
</table>
Hewlett Packard Enterprise secure development lifecycle

Starting with HP-UX 11i v3 March 2013 update release, Hewlett Packard Enterprise secure development lifecycle provides the ability to authenticate HP-UX software. Software delivered through this release has been digitally signed using Hewlett Packard Enterprise private key. You can now verify the authenticity of the software before installing the products, delivered through this release.

To verify the software signatures in signed depot, the following products must be installed on your system:

- B.11.31.1303 or later version of SD (Software Distributor)
- A.01.02.00 or later version of HP-UX Whitelisting (WhiteListInf)

To verify the signatures, run: /usr/sbin/swsign -v -s <depot_path>

For more information, see Software Distributor documentation at: http://www.hpe.com/info/sd-docs.

NOTE:

Ignite-UX software delivered with HP-UX 11i v3 March 2014 release or later supports verification of the software signatures in signed depot or media, during cold installation. For more information, see Ignite-UX documentation at: http://www.hpe.com/info/ignite-ux-docs.
The purpose of the HP-UX 11i version 3 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 the HP-UX 11i v3 Operating Environments. (In the case of the initial release HP-UX 11i v3 release in February 2007, the HP-UX 11i Version 3 Release Notes describes what has changed since the September 2005 release of HP-UX 11i v1 and the June 2006 release of HP-UX 11i v2.)

The HP-UX 11i Version 3 Release Notes does not completely document all the features of an Operating Environment. Instead, it contains high-level information and pointers to more detailed product-specific documentation. The most current version of this document can be found at http://www.hpe.com/info/hpux-core-docs-11iv3.

Between Operating Environments Update Releases (OEURs), some products might be updated and released on the web. Check Software Depot at http://www.hpe.com/support/softwaredepot. In addition, HPE recommends you register your product with Subscriber’s Choice at http://www.hpe.com/contact. (Under “Self Help,” select Subscription services.) After registering, you will receive email notification with driver, support, and security alerts, plus software updates customized to your HPE products.

Where you should begin

This document is organized in such a way that you need only read What is new on page 13 for a quick overview of what is new, has changed, and has been deprecated or obsoleted in the current and previous HP-UX 11i v3 OEURs.
Introduction to HP-UX 11i version 3

HP-UX 11i v3 is an enterprise release designed to deliver an available, efficient and proven infrastructure demanded for mission-critical computing. It integrates proven UNIX® functionality with advances in high availability, security, virtualization, workload management and instant-capacity-on-demand. HP-UX 11i v3 maximizes uptime and flexibility while reducing business risk and delivering compelling value.

An overview of the HP-UX 11i v3 Operating Environments can be found in this Release Notes document at HP-UX 11i v3 Operating Environments on page 9.

Abundant information about the HP-UX 11i v3 release is available. See Support and other resources.

HP-UX 11i release names and release identifiers

Table 3: HP-UX 11i Releases

<table>
<thead>
<tr>
<th>Release Name</th>
<th>Release Identifier</th>
<th>Supported Processor Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-UX 11i v1</td>
<td>B.11.11</td>
<td>PA-RISC</td>
</tr>
<tr>
<td>HP-UX 11i v1.5</td>
<td>B.11.20</td>
<td>Intel Itanium</td>
</tr>
<tr>
<td>HP-UX 11i v1.6</td>
<td>B.11.22</td>
<td>Intel Itanium</td>
</tr>
<tr>
<td>HP-UX 11i v2</td>
<td>B.11.23</td>
<td>Intel Itanium PA-RISC²</td>
</tr>
<tr>
<td>HP-UX 11i v3</td>
<td>B.11.31</td>
<td>Intel Itanium PA-RISC</td>
</tr>
</tbody>
</table>

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

² PA-RISC is supported on HP-UX 11i v2 starting with the September 2004 release.

To determine the update release date and the Operating Environment, enter the following:

```
# swlist | grep HPUX11i
```

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

```
HPUX11i-BOE B.11.31.1705 HP-UX Base Operating Environment
```

The above revision string signifies the following:

- `B.11.31` = HP-UX 11i v3
- `1705` = May 2017 Operating Environments Update Release (OEUR)

HP-UX 11i v3 Operating Environments

HP-UX 11i v3 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 OEs allow you to purchase, install, and maintain a package of up to 160 or more software components as one. This built-in
integration means you reduce risks, time and costs through faster deployment and simpler lifecycle management. For more detailed information on the HP-UX 11i v3 Operating Environments, see [http://www.hpe.com/info/hpux11iv3](http://www.hpe.com/info/hpux11iv3).

For lists of software bundled in each of the following OEs, see the HP-UX 11i v3 Installation and Update Guide at [http://www.hpe.com/info/hpux-core-docs-11iv3](http://www.hpe.com/info/hpux-core-docs-11iv3). Ensure to choose the document applicable to the date of your release.

### Table 4: HP-UX 11i v3 OE descriptions

<table>
<thead>
<tr>
<th>HP-UX 11i v3 Operating Environment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HP-UX 11i v3 Base OE (BOE)</strong></td>
<td>Provides integrated HP-UX functionality for customers requiring less complex installations. The BOE contains all the applications included in the Foundation OE, and improves the bundle set by adding much-requested products such as HP Process Resource Manager (PRM) and APA. This OE is bundled as HPUX11i-BOE.</td>
</tr>
<tr>
<td><strong>HP-UX 11i v3 Virtual Server OE (VSE-OE)</strong></td>
<td>Designed for customers seeking higher resource utilization or embarking on consolidation projects and need virtualization for a flexible UNIX environment. The VSE-OE contains all the products included in the BOE (and the original EOE) and adds a host of other products including HP Matrix Operating Environment for HP-UX. The VSE-OE is bundled as HPUX11i-VSE-OE.</td>
</tr>
<tr>
<td><strong>HP-UX 11i v3 High Availability OE (HA-OE)</strong></td>
<td>For customers requiring high availability for large mission critical applications, this OE contains all the products included in the BOE (and the original EOE), plus applications such as HP Serviceguard and HA toolkits required to enable a mission-critical server. This OE is bundled as HPUX11i-HA-OE.</td>
</tr>
<tr>
<td><strong>HP-UX 11i v3 Data Center OE (DC-OE)</strong></td>
<td>For customers who need both flexibility and high availability, the Data Center OE provides mission critical virtualization by combining the robust product selection in the VSE-OE and HA-OE in one integrated and tested bundle. This OE contains all the products included in the BOE, VSE-OE, HA-OE (and the original MCOE) and is bundled as HPUX11i-DC-OE.</td>
</tr>
</tbody>
</table>

**NOTE:**

For more information about Operating Environments, see [http://www.hpe.com/info/hpux11iv3](http://www.hpe.com/info/hpux11iv3).

### HP-UX 11i v3 Operating Environment install/update structure

The HP-UX 11i v3 Operating Environment (OE) Install/Update structure provides more flexibility in managing the products you wish to install and update on your system. The OE structure for HP-UX 11i v3 separates
software components into several product categories, making it easier and more reliable for you to incrementally update your system.

**HP-UX 11i v3 software installation types**

Each of the software product categories contain software bundles that are further separated into the following installation types. For more information about installation with the HP-UX 11i v3 OE structure, see the *HP-UX 11i v3 Installation and Update Guide* ([http://www.hpe.com/info/hpux-core-docs-11iv3](http://www.hpe.com/info/hpux-core-docs-11iv3)).

### Table 5: HP-UX 11i v3 software installation types

<table>
<thead>
<tr>
<th>Installation Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required</strong> (always-installed)</td>
<td>Software and administration tools needed to create a minimally bootable and maintainable system. Only the drivers for basic hardware are included in this category. You might need to install additional drivers to use all hardware components. Software in this category <strong>cannot</strong> be deselected.</td>
</tr>
<tr>
<td><strong>Recommended</strong> (default-installed)</td>
<td>Software bundles that HPE recommends you install because they fulfill software dependencies, if any exist. You can, however, manually deselect the bundles before you install or update your system.</td>
</tr>
<tr>
<td></td>
<td>To install a minimal operating system configuration (base OS) you can deselect the recommended bundles. Only the minimal core OS will be installed on your system when you deselect the recommended bundles.</td>
</tr>
<tr>
<td><strong>CAUTION:</strong></td>
<td>HPE recommends that you do <strong>not</strong> deselect recommended software bundles or remove them from your system unless you know for certain that the software contained in these bundles is not required for your operating environment. Software might have unstated dependencies. Deselecting software might prevent products with dependencies on the software you deselected from functioning correctly.</td>
</tr>
<tr>
<td><strong>Optional</strong> (selectable)</td>
<td>Software bundles that are not installed or updated by default. You must manually select these bundles before you install or update your system.</td>
</tr>
</tbody>
</table>

**Electronic delivery**

The HP-UX 11i v3 electronic software delivery model includes Americas, Europe, Middle East, Asia, China, and Japan. The download consists of ISO images of each OE. Each ISO image is burned to DVD at the customer’s site and then installed in the same manner as the physical DVDs. Electronic licenses and media are quoted and ordered from the price list in the same manner as the physical licenses and media.

**HP-UX technical documentation delivery**

Beginning in August 2011, the web is the primary source of technical documentation for the HP-UX Operating Environments and HP-UX Application Software. Web delivery supports HPE’s Green Business Technology Initiative to reduce packaging and also supports HPE’s goal to keep HP-UX technical documentation up-to-date and easily accessible.

**HP-UX 11i compatibility for HPE Integrity and HP 9000 Servers**

HPE 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, the HP-UX operating system provides the most comprehensive investment protection in the industry.

For more information about HP-UX compatibility, see the white paper at [http://www.hpe.com/info/hpux-support-matrix](http://www.hpe.com/info/hpux-support-matrix).
What is new

This chapter provides a quick overview of what is new, changed, deprecated, or obsoleted in each HP-UX 11i v3 release.

NOTE:

About defect fixes and patches

The detailed information about the defect fixes is not provided in this document. For more information, see the product’s release notes.

The HP-UX 11i v3 Quality Pack Patch Bundles (QPK) deliver highly qualified defect-fix patches and are included with each Operating Environment Update Release (OEUR). For more information, including the location of QPK documentation, see HP-UX 11i v3 Quality Pack Patch Bundles on page 119.

Patches might be released between OEURs. HPE recommends you register your product with Subscriber’s Choice at http://www.hpe.com/contact. (Under “Self Help,” select Subscription services.) After registering, you will receive email notification with driver, support, and security alerts, plus software updates customized to your HPE products.

About known problems

For information about known problems related to the installation and update of HP-UX 11i v3, see “Harmless messages and known problems” in the HP-UX 11i v3 Installation and Update Guide at http://www.hpe.com/info/hpux-core-docs-11iv3. Ensure to select the appropriate version for your release.

For information about product-specific known problems, see the product’s release notes.

About manpages

The most current HP-UX manpages are installed with the product or patch and can be viewed using the man command. In addition, starting with the HP-UX September 2010 release, most manpages are available on the HPESC in the following location:


What is new in the HP-UX 11i v3 May 2017 release

A complete list of enhancements for HP-UX 11i v3 May 2017 release is available in the following sections and in the release notes of the respective products.

As a brief overview, this release adds support for the new HPE Integrity i6 systems based on the Intel Itanium 9700 series processor, with up to 8TB physical memory per single instance and support for the latest storage and interconnects. Some of the other enhancements integrated into this release are:

• Online migration of virtual partitions (vPars) on HPE Integrity i4 and i6 systems
• ServiceGuard updates such as the Smart Quorum feature (previously available with ServiceGuard for Linux)
• Support for the use of Integrity servers and HP-UX in private cloud environments with HPE Helion Openstack
• Ignite-UX boot support for LTO-7 tape drives
• Updated versions of open source products

The following summaries provide a general overview of how May 2017 release of HP-UX 11i v3 differs from March 2016 release of HP-UX 11i v3. For more information, see the documents made available in May 2017 in the indicated location or the sections in the remainder of this document.

May 2017 Release Notes, Hardware-specific information
• **HPE Insight Control power management** — Version 7.6 includes support for new iLO/OA software, additional managed nodes and hypervisor. See **HPE Insight Control Release Notes** at [http://www.hpe.com/info/insightcontrol/docs](http://www.hpe.com/info/insightcontrol/docs).

• **Networking and Mass Storage Drivers**
  
  ◦ **10GigEthr-02**: Contains the `iexgbe` driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality and performance improvements. See **10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes** at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).
  
  ◦ **10GigEthr-03**: Introduces automatic recovery of the 10GigEthr-03 (`iocxgbe`) adapters in DEAD state. The automatic adapter recovery is a method to regain a DEAD network I/O card back to normal working state without any user intervention and rebooting of the server. You need to install the following on the server:
    
    - Latest version of the NIC (`iocxgbe`) driver (AR1705)
  
  ◦ **Table 6: Patches**

<table>
<thead>
<tr>
<th>Patch Name</th>
<th>Patch Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHNE_44540</td>
<td>LAN cumulative patch</td>
</tr>
<tr>
<td>PHNE_44564</td>
<td>11.31 Networking commands cumulative patch</td>
</tr>
</tbody>
</table>

For more information on the automatic adapter recovery feature and specific installation instructions, see **10GigEthr-03 (iocxgbe) Ethernet Driver Release Notes HP-UX 11i v3** or **White Paper** at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).


  ◦ **FibrChanl-01**: Delivers the driver `fcd` for use with Qlogic Fibre Channel HBAs. Updated with quality improvements and enhancements. See **FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).

  ◦ **FibrChanl-03**: Delivers the driver `fcoc` for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See **FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).

  ◦ **IEther-00**: Contains the `iether` driver, which supports a variety of PCIe and PCI-X Ethernet cards. Updated with quality and performance improvements. See **IEther-00 (iether) Ethernet Driver Release Notes for HP-UX 11i v3**. For information about supported cards, see **HP-UX Ethernet Card Support Matrix**. Both documents are located at [http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs](http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs).


• **Utility Pricing Solutions**
  
  ◦ **iCAP Manager**: Delivers defect fixes. See **HPE Matrix Operating Environment 7.6 Release Notes** at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Select HPE Matrix Operating Environment for Integrity Servers).


May 2017 Release Notes, General system administration

• **HPE Insight managed system setup wizard:** Supports new hardware and supports HPE Matrix Operating Environment v7.6. See *HPE Matrix Operating Environment 7.6 Release Notes* at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Select HPE Matrix Operating Environment for Integrity Servers).


• **HPE Systems Insight Manager:** HPE Systems Insight Manager 7.6 provides the latest hardware and software support and defect fixes. See *HPE Systems Insight Manager 7.6 Release Notes* at [http://www.hpe.com/info/insightmanagement/sim/docs](http://www.hpe.com/info/insightmanagement/sim/docs).


  NOTE: The support for HP Operations Agent (OA) 11.20 will end by 31 May 2017.

• **HPE System Management Homepage:** Delivers defect fixes. See *HPE System Management Homepage 3.2.11.03 Release Notes* at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs) (Under “HP-UX Operating Systems”, select HP-UX System Administration.).

• **Ignite-UX:** Provides support for VxFS/VxVM 6.1 and VxFS/VxVM version 6.0.1/6.0.3/6.0.5 and superseding patches from Veritas. See *Ignite-UX Release Notes* at [http://www.hpe.com/info/ignite-ux-docs](http://www.hpe.com/info/ignite-ux-docs).

• **Online Diagnostics:** Delivers defect fixes. See *EMS Release Notes for HP-UX 11i v3 and STM Release Notes for HP-UX 11i v3* at [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).

• **System Fault Management (SFM):** Version C.07.17.03.01 can detect and monitor 8TB of memory on HPE servers. See *HP-UX SysFaultMgmt (System Fault Management) (SFM) Release Notes* at [http://www.hpe.com/info/hpux-diagnostics-sfm-docs](http://www.hpe.com/info/hpux-diagnostics-sfm-docs).

• **Virtualization continuum**
  - **Application Discovery Agent:** Updated to v7.6 to support HPE Matrix Operating Environment v7.6. See *Matrix Operating Environment 7.6 Release Notes* at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Select HPE Matrix Operating Environment for Integrity Servers).
  - **HPE Global Workload (gWLM) Agent:** Updated to v7.6 to support HPE Matrix Operating Environment v7.6. See *Global Workload Manager 7.6 User Guide and HP Matrix Operating Environment 7.6 Release Notes* at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Select HPE Matrix Operating Environment for Integrity Servers).
  - **HP-UX vPars and Integrity VM** (bundles BB068AA, T8718AC, and VirtualBase): Version 6.5 supports Intel Itanium 9700 processor series, enablement of online vPar migration, compliance to OpenSSL 1.0.2. See *HP-UX vPars and Integrity VM v6.5 Release Notes* at [http://www.hpe.com/info/hpux-hpvm-docs](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Utilization Provider for HP-UX 11i v3:** Updated to version A.01.08.12.00 to support the latest release of the HPE Matrix Operating Environment.
  - **HP Virtual Server Environment (VSE) Management Software:** Delivers defect fixes. The following components are updated:
    - HPE Application Discovery Server
    - HPE Capacity Advisor
- HPE Integrity Virtual Server Manager
- HPE Virtualization Manager
- HPE Instant Capacity Manager
- HPE Partition Manager
- HPE Global Workload Manager
- HPE Application Discovery Agent
- HPE Utilization Provider
- HPE Insight Managed System Setup Wizard
- Virtual Server Environment Configuration Assistant (VseAssist) : Changes to support Chinese localization.

NOTE:
HP Capacity Advisor 7.5 adds support for HP-UX vPars and Integrity VM Version 6.3. For more information, see HP Capacity Advisor 7.5 User Guide available at http://www.hpe.com/info/matrixoe/docs.

• **HP WBEM Services and Providers**
  
  Documents for the following WBEM products are located at http://www.hpe.com/info/hpux-wbem-docs.
  
  ◦ **WBEM Services for HP-UX**: Delivers defect fixes and enhancements. See HP-UX WBEM Services Release Notes.
  ◦ **HP-UX WBEM DAS (Direct Attached Storage) Provider (DASProvider)**: Delivers defect fixes. See HP-UX WBEM DAS (Direct Attached Storage) Provider Release Notes and the product data sheet.
  ◦ **HP-UX WBEM FC (Fibre-Channel) Provider**: Delivers defect fixes. See HP-UX WBEM FC (Fibre-Channel) Provider Release Note and the product data sheet.
  ◦ **HP-UX WBEM RAIDSA Provider**: Delivers defect fixes. See HP-UX WBEM RAIDSA Provider Release Notes and the product data sheet.
  ◦ **HP-UX WBEM SAS Provider**: Delivers defect fixes. See HP-UX WBEM SAS Provider Release Notes and the product data sheet.
  ◦ **WBEMP-LAN Provider**: Delivers defect fixes. See HP-UX WBEM LAN Provider Release Notes.
  ◦ **ProviderSvcsBase**: Delivers defect fixes. See HP-UX ProviderSvcsBase (PSB) (Provider Services Base) Release Notes.

May 2017 Release Notes, Disk and file management

• **BaseLVM or Logical Volume Manager**: Delivers defect fixes. See HP-UX Logical Volume Manager and MirrorDisk/UX Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs.

• **HPE CIFS Server**: Version B.04.05.03.00 is a major version upgrade based on Samba 4.5.3. See HPE CIFS Server Release Notes version B.04.05.03.00 at http://www.hpe.com/info/hpux-CIFS-docs.

NOTE:
The HPE CIFS Server A.03.02.x and A.03.01.x will reach end of support by 31 August 2017. It is recommended to upgrade to CIFS Server B.04.05.03.x at the earliest.

• **HPE CIFS Client**: HPE CIFS Client is obsolete and not available in 2017 OEUR or later. Existing CIFS Client product gets removed from system during update to 2017 OEUR or later.

• **Symantec Products: OnlineJFS, VxFS, and VxVM (also known as Veritas)**: For information on the following Symantec products, see Veritas File System 5.1 SP1 Release Notes and Veritas Volume Manager 5.1 SP1 Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs. For information about delivery of the products in the OEs and the implications for installation, see “Installing VxFS, OnlineJFS, LVM, and VxVM” in the HP-UX 11i v3 Installation and Update Guide, May 2017 at http://www.hpe.com/info/hpux-core-docs-11iv3.

May 2017 Release Notes, Internet and Networking

What is new


• HP-UX Web Server Suite
  ◦ HP-UX Apache-based Web Server
  ◦ HP-UX Tomcat-based Servlet Engine
    – HP-UX Tomcat-based Servlet Engine 7.0.68.x: Version 7.0.68.01 is primarily a defect fix and security release. It is based on ASF tomcat 7.0.68. See HP-UX Tomcat-based Servlet Engine v7.0.68.01 release notes at https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXWSST706801.
    – HP-UX Tomcat-based Servlet Engine 7.0.70.x: Version 7.0.70.01 is primarily a defect fix and security release. It is based on ASF tomcat 7.0.70. See HP-UX Tomcat-based Servlet Engine v7.0.70.01 release notes at https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXWSST707001.

Also, see related products listed under “May 2017 Release Notes, Security.”

May 2017 Release Notes, Security

Unless otherwise noted, documents for the following security products are located at http://www.hpe.com/info/hpux-security-docs. Select the link appropriate for the product.

• HP-UX Whitelisting: HP-UX Whitelisting A.01.03.01 is linked with OpenSSL version 1.0.2 to utilize the latest security updates. See HP-UX Whitelisting Version A.01.03.01 Release Notes at http://www.hpe.com/support/hpesc (enter the search term HP-UX Whitelisting).

• HP-UX Secure Shell: Version A.06.20.024 for HP-UX 11.31 Integrity architecture includes enhancements to support FIPS capable Secure Shell and GCM mode AES ciphers. See Secure Shell A.06.20.024 Release Notes at http://www.hpe.com/info/hpux-secure-shell-docs (Select View All).

• HP-UX Role-Based Access Control: HP-UX RBAC B.11.31.05.02.01 is linked with OpenSSL version 1.0.2 to utilize the latest security updates. See HP-UX Role-Based Access Control B.11.31.05.02.01 Release Notes.

• HP-UX OpenSSL: Version A.01.00.02h for HP-UX 11i v3 is mainly a defect-fix release. See OpenSSL A.01.00.02h Release Notes for HP-UX 11i v3.

Also, see related products listed under “May 2017 Release Notes, Internet and Networking.”
May 2017 Release Notes, Libraries and programming

- **HP Wildebeest Debugger (WDB)**: supports leak or heap memory reporting of a running process without making it mandatory for the users to preload the librtc library before invoking the application. HP WDB is enhanced to support the following C++11 features:
  - `char16_t` and `char32_t` types
  - Variadic template functions
  - Enum class
  - Rvalue


- **Java products**

  Documents for the following Java products are located at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).
  - JDK/JRE version 8.0.x: Version 8.0.08 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) are updated to include Oracle Java SE 8 Update 112 functionality and to incorporate defect and security fixes. See *JDK/JRE 8.0.08 Release Notes*.
  - JDK/JRE version 7.0.x: Version 7.0.19 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) are updated to include Oracle 7u121 functionality and to incorporate defect and security fixes. See *JDK/JRE 7.0.19 Release Notes*.
  - JDK/JRE version 6.0.x: Version 6.0.32 of the HP-UX 11i Java™ Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include Oracle 6u131 functionality and to incorporate defect and security fixes. See *JDK/JRE 6.0.32 Release Notes*.

What is new in the HP-UX 11i v3 March 2016 release

The following summaries provide a general overview of how March 2016 release of HP-UX 11i v3 differs from March 2015 release of HP-UX 11i v3. For more information, see the documents made available in March 2016 in the indicated location or the sections in the remainder of this document.

**March 2016 Release Notes, Hardware-specific information**

- **Insight Control power management** — Version 7.5 includes support for latest hardware, iLO/OA software, additional managed nodes, and hypervisor. See *HP Insight Control Release Notes* at [http://www.hpe.com/info/insightcontrol/docs](http://www.hpe.com/info/insightcontrol/docs).

- **Networking and Mass Storage Drivers**
  - 10GigEthr-02: Contains the iexgbe driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality and performance improvements. See *10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes* at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).

- **FibrChanl-01**: Delivers the driver fcd for use with Qlogic Fibre Channel HBAs. Updated with quality improvements and enhancements. See *FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes*. For information on supported cards, see the *HP Fibre Channel Host Bus Adapter Support Matrix*. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).

- **FibrChanl-02**: Contains the fclp driver for use with Fibre Channel HBAs. Updated with quality improvements. See *FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes*.
Notes For information on supported cards, see the HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).

- **FibrChanl-03**: Delivers the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See [FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes](http://www.hpe.com/info/fibre-channel-HBA-docs). For information on supported cards, see the HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).


**Utility Pricing Solutions**

- **iCAP Manager**: Delivers defect fixes. See [HP Matrix Operating Environment 7.5 Release Notes](http://www.hpe.com/info/matrixoe/docs) at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Select HP Matrix Operating Environment for Integrity Servers and click HP Matrix Operating Environment for Integrity Servers documents on the HPE Support Center).


**March 2016 Release Notes, General system administration**

- **HP Insight managed system setup wizard**: Supports new hardware and Matrix Operating Environment v7.5. See [HP Matrix Operating Environment 7.5 Release Notes](http://www.hpe.com/info/matrixoe/docs) at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Click HP Matrix Operating Environment for Integrity Servers).


- **HP Operations Agent**: Version 12.00 enables to monitor a system by collecting metrics that indicate the condition, performance, and availability of the system. This release includes significant enhancements in installer program. New features such as Agent Health View, Metric Datastore, and SNMP Trap Interceptor are introduced. You can use HP Operations Agent in an environment managed by the HP Operations Manager, and the HP Operations Manager with additional licenses. See [HP Operations Agent Release Notes](http://www.hpe.com/support/HP-OA) at [http://www.hpe.com/support/HP-OA](http://www.hpe.com/support/HP-OA). (Requires HP Passport. After logging in, search for “Operations Agent”.)

**NOTE:**

The support for HP Operations Agent (OA) 11.20 will end by 31 March 2017.

- **HP System Management Homepage**: Version 3.2.10 delivers defect fixes. See [HP System Management Homepage 3.2.10 Release Notes](http://www.hpe.com/info/hpux-systemadmin-docs).

- **HP-UX 11i v3 Feature Enablement Patch Bundle (FEATURE11i)**: Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. See [HP-UX 11i v3 Feature Enablement Patch Bundle](http://www.hpe.com/info/hpux-systemadmin-docs) on page 119.


- **Ignite-UX**: Version C.7.20 provides pre-enablement support for future release of VxFS/VxVM 6.1 software and delivers defect fixes. See [Ignite-UX Release Notes](http://www.hpe.com/info/ignite-ux-docs).


- **Virtualization continuum**
• **Application Discovery Agent**: Updated to v7.5 to support HP Matrix Operating Environment v7.5. See *HP Matrix Operating Environment 7.5 Release Notes* at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Click *HP Matrix Operating Environment for Integrity Servers*).

• **HP Global Workload (gWLM) Agent**: Updated to v7.5 to support HP Matrix Operating Environment v7.5. See *HP Global Workload Manager 7.5 User Guide* and *HP Matrix Operating Environment 7.5 Release Notes* at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs) (Click *HP Matrix Operating Environment for Integrity Servers*).


• **HP-UX vPars and Integrity VM** (bundles BB068AA, T8718AC, and VirtualBase): Version 6.4 delivers support for coexistence of DIO devices with Dynamic memory operations, offline migration of vPars and VM Guests across disjoint fabrics and pre-enablement for online migration of vPars. See *HP-UX vPars and Integrity VM v6.4 Release Notes* at [http://www.hpe.com/info/hpux-hpvm-docs](http://www.hpe.com/info/hpux-hpvm-docs).

• **Utilization Provider for HP-UX 11i v3**: Updated to version A.01.08.10.00 to support the latest release of the HP Matrix Operating Environment.


• **HP Virtual Server Environment (VSE) Management Software**: Delivers defect fixes. The following components are updated:
  - HP Application Discovery Server
  - HP Capacity Advisor
  - HP Integrity Virtual Server Manager
  - HP Virtualization Manager
  - HP Instant Capacity Manager
  - HP Partition Manager
  - HP Global Workload Manager
  - HP Application Discovery Agent
  - HP Utilization Provider
  - HP Insight Managed System Setup Wizard
  - Virtual Server Environment Configuration Assistant (VseAssist)

**NOTE:**

HP Capacity Advisor 7.5 adds support for HP-UX vPars and Integrity VM Version 6.3. For more information, see *HP Capacity Advisor 7.5 User Guide* available at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs).

• **HP WBEM Services and Providers**

  Documents for the following WBEM products are located at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

  • **WBEM Services for HP-UX**: Delivers defect fixes and enhancements. See *HP-UX WBEM Services Release Notes*.

  • **HP-UX WBEM DAS (Direct Attached Storage) Provider (DASProvider)**: Delivers defect fixes. See *HP-UX WBEM DAS (Direct Attached Storage) Provider Release Notes* and the product data sheet.

  • **HP-UX WBEM FC (Fibre-Channel) Provider**: Delivers defect fixes. See *HP-UX WBEM FC (Fibre-Channel) Provider Release Note* and the product data sheet.

  • **HP-UX WBEM RAIDSA Provider**: Delivers defect fixes. See *HP-UX WBEM RAIDSA Provider Release Notes* and the product data sheet.
- **HP-UX WBEM SAS Provider**: Delivers defect fixes. See *HP-UX WBEM SAS Provider Release Notes* and the product data sheet.
- **WBEMP-LAN Provider**: Delivers defect fixes. See *HP-UX WBEM LAN Provider Release Notes*.
- **ProviderSvcsBase**: Delivers defect fixes. See *HP-UX ProviderSvcsBase (PSB) (Provider Services Base) Release Notes*.

**March 2016 Release Notes, Disk and file management**

- **HP CIFS Server**: Version A.03.02.04 is a defect fix release based on Samba 3.6.6. See *HP CIFS Server Release Notes version A.03.02.04* at [http://www.hpe.com/info/hpux-CIFS-docs](http://www.hpe.com/info/hpux-CIFS-docs).

**March 2016 Release Notes, Internet and Networking**

- **HP-UX Web Server Suite**
- **LDAP-UX Integration**: Version B.05.02 includes the new enhancements and defect fixes. See the *LDAP-UX Integration B.05.02 Release Notes* at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). (Click **HP-UX LDAP-UX Integration Software**).
- **Red Hat Directory Server for HP-UX**: RHDS 8.0 on HP-UX 11i v2 and 11i v3 is no longer supported after July 2014.

Also, see related products listed under “March 2016 Release Notes, Security.”

**March 2016 Release Notes, Security**

Unless otherwise noted, documents for the following security products are located at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). Select the link appropriate for the product.

- **HP-UX Role-Based Access Control**: Version B.11.31.05.02 includes defect fixes, keystroke logging enhancements, and two new manpages. See *HP-UX Role-Based Access Control B.11.31.05.02 Release Notes*.
- **HP-UX OpenSSL**: Version A.01.00.01p for HP-UX 11i v3 for Integrity architecture is based on OpenSSL 1.0.1p. It is mainly a defect fix release. See *OpenSSL A.01.00.01p Release Notes for HP-UX 11i v3*.
On HP-UX 11i v3 for PA architecture, though the bundle or product is installed as version A.01.00.01p.001, the shipped version on the system is A.00.09.08zf. OpenSSL A.01.00.01p.001 version is not shipped or supported on PA machine architecture.

**NOTE:**

Since OpenSSL 1.0.1p libraries are not backward compatible with OpenSSL A.00.09.08 libraries, application linked with OpenSSL A.00.09.08 might not function properly, and a rebuild of the application might be required. See the Frequently Asked Questions (FAQs) in the OpenSSL A.01.00.01p Release Notes.

- **Kerberos Client**: Version E.1.6.2.10 is interoperable with Microsoft Windows 2012 R2. See Kerberos Client E.1.6.2.10 Release Notes.

Also, see related products listed under “March 2016 Release Notes, Internet and Networking.”

**March 2015 Release Notes, Commands and system calls**

*scsimgrvolume(1M)* Command: Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. See .

**March 2016 Release Notes, Libraries and programming**

- **Java products**
  
  Documents for the following Java products are located at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

  - **JDK/JRE version 8.0.03**: Version 8.0.03 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) are updated to include Oracle Java SE 8 Update 51 functionality and to incorporate defect and security fixes. See *JDK/JRE 8.0.03 Release Notes*.
  
  - **JDK/JRE version 7.0.14**: Version 7.0.14 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) are updated to include Oracle 7u85 functionality and to incorporate defect and security fixes. See *JDK/JRE 7.0.14 Release Notes*.
  
  - **JDK/JRE version 6.0.27**: Version 6.0.27 of the HP-UX 11i Java™ Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include Oracle 6u101 functionality and to incorporate defect and security fixes. See *JDK/JRE 6.0.27 Release Notes*.

**What is new in the HP-UX 11i v3 March 2015 release**

The following summaries provide a general picture of how March 2015 release of HP-UX 11i v3 differs from March 2014 release of HP-UX 11i v3. For more information, see the documents made available in March 2015 in the indicated location or the sections in the remainder of this document.

**NOTE:**

On October 14, 2014, a vulnerability in the SSLv3 protocol was released. An exploitation of this vulnerability can allow an attacker to decrypt portions of encrypted traffic via a POODLE (Padding Oracle on Downgraded Legacy Encryption) attack. For more information about POODLE, see [POODLE](#).

**March 2015 Release Notes, Hardware-specific information**

  
  - **Insight Control power management**: Version 7.4 includes support for new iLO/OA software, additional managed nodes, and hypervisor. See *HP Insight Control Release Notes* at [http://www.hpe.com/info/insightcontrol/docs](http://www.hpe.com/info/insightcontrol/docs).

  - **Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i)**: There is no change in HWE bundle. See *Hardware Enablement Patch Bundle for HP-UX 11i v3* on page 117.
  
  - **Networking and Mass Storage Drivers**
• 10GigEthr-02: Contains the iexgbe driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality and performance improvements. See 10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes at http://www.hpe.com/info/10-gigabit-ethernet-docs.


• FibrChanl-01: Delivers the driver fcd for use with Qlogic Fibre Channel HBAs. Updated with quality improvements and enhancements. See FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/fibre-channel-HBA-docs.

• FibrChanl-02: Contains the driver fclp for use with Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/fibre-channel-HBA-docs.

• FibrChanl-03: Delivers the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/fibre-channel-HBA-docs.

• IB4X-00: Delivers the driver ib4x-00, a low latency, high bandwidth RDMA based, industry standard cluster interconnect product. Updated with defect fixes. See IB4X-00 HP Fabric Clustering System for InfiniBand Driver Release Notes at http://www.hpe.com/info/fabric-clustering-infiniband-docs.

• IEther-00: Contains the iether driver, which supports a variety of PCIe and PCI-X Ethernet cards. Updated with quality and performance improvements. See IEther-00 (iether) Ethernet Driver Release Notes for HP-UX 11i v3. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs.


• Utility Pricing Solutions

NOTE:
For previous versions of the HP Matrix Operating Environment Release Notes, see http://www.hpe.com/info/matrixoe/docs. (Select HP Matrix Operating Environment for Integrity Servers and click HP Matrix Operating Environment for Integrity Servers documents on the HPE Support Center.)


March 2015 Release Notes, General system administration


• **HP Operations Agent**: Version 11.40 helps you to monitor a system by collecting metrics that indicate the health, performance, and availability of essential elements of the system. The version of HP-UX PA is 11.14 and version of HP-UX IA is 11.20, which is a 64-bit version of HP Operations Agent. See HP Operations Agent 11.14 release notes at [http://www.hpe.com/support/HP-OA](http://www.hpe.com/support/HP-OA). (Requires HP Passport. After logging in, search for “Operations Agent.”).

  **NOTE:**
  The support for HP Operations Agent (OA) 11.20 will end by 31 March 2017.

• **HP System Management Homepage**: Version 3.2.9 is updated to provide the fix for POODLE vulnerability for HP-UX 11.31. See HP System Management Homepage 3.2.9 Release Notes at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

• **HP-UX 11i v3 Feature Enablement Patch Bundle** (**FEATURE11i**): Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. See HP-UX 11i v3 Feature Enablement Patch Bundle on page 119.

• **HP-UX 11i v3 Quality Pack Patch Bundles** (**QPKBASE** and **QPKAPPS**): Updated with additional defect fix patches for March 2015 release. See HP-UX 11i v3 Quality Pack Patch Bundles on page 119.


• **Online Diagnostics**: Delivers defect fixes. This is in support mode and is not supported on newer platforms. See EMS Release Notes for HP-UX 11i v3 March 2015 Release and STM Release Notes for HP-UX 11i v3 March 2015 Release at [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).


• **Virtual Server Environment Configuration Assistant** (**VseAssist**): Extended with support to Chinese localization.

• **Virtualization continuum**
  • **Application Discovery Agent**: Updated to v7.4 to support Matrix Operating Environment v7.4. See HP Matrix Operating Environment 7.4 Release Notes at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs). (Select HP Matrix Operating Environment for Integrity Servers).
  • **HP Global Workload (gWLM) Agent**: Updated to v7.4 to support Matrix Operating Environment v7.4. It adds support for HP-UX vPars and Integrity VM v6.3. See HP Global Workload Manager 7.4 User Guide and HP Matrix Operating Environment 7.4 Release Notes at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs). (Select HP Matrix Operating Environment for Integrity Servers).
  • **HP Integrity Virtual Machines Online Migration Software** (**OVMM**): Updated to support HP vPars and Integrity VM v6.3.5. See HP vPars and Integrity VM v6.3.5 Release Notes at [http://www.hpe.com/info/hpux-hpvm-docs](http://www.hpe.com/info/hpux-hpvm-docs).
  • **HP Integrity Virtual Server Manager** (formerly HP Integrity Virtual Machines Manager): Version 6.3.0.92320 supports dynamic I/O deletion from vPars and VM guests. See HP Integrity Virtual Server

- **HP-UX Containers (SRP):** Version A.03.01.007 is mainly a defect fix release. See HP-UX Containers (SRP) A.03.01.007 Release Notes at http://www.hpe.com/info/hpux-srp-docs.


- **HP-UX vPars and Integrity VM (bundles BB068AA and VirtualBase):** Version 6.3.5 delivers enhancements for reduction of overhead memory, dynamic deletion of AVIO and DIO interfaces, NPIV resource labels to maintain SAN isolation across guest migration and support for up to 32 NPIV vHBAs per physical port on Emulex HBAs. See HP-UX vPars and Integrity VM v6.3.5 Release Notes at http://www.hpe.com/info/hpux-hpvm-docs.

- **Matrix Operating Environment:** Delivers defect fixes. Also, the following components are updated:
  - HP Virtualization Manager
  - HP Capacity Advisor
  - HP Global Workload Manager, and so on.


- **Utilization Provider for HP-UX 11i v3:** Updated to version A.01.08.09.00 to support the latest release of the Matrix Operating Environment. It also supports data collection of VSP hosts (running HP-UX vPars and Integrity VM versions 6.1.x and 6.2).

- **Partition Manager (parmgr):** Updated to provide the fix for POODLE vulnerability.

- **HP WBEM Services and Providers**

  Documents for the following WBEM products are located at http://www.hpe.com/info/hpux-wbem-docs

  - **WBEM Services for HP-UX:** Delivers defect fixes. See HP WBEM Services Release Notes.
  - **HP-UX WBEM FC (Fibre-Channel) Provider:** Delivers defect fixes. See HP-UX WBEM FC (Fibre-Channel) Provider Release Notes and the product data sheet.
  - **HP-UX WBEM RAIDSA Provider:** Delivers defect fixes. See HP-UX WBEM RAIDSA Provider Release Notes and the product data sheet.
  - **HP-UX WBEM SAS Provider:** Delivers defect fixes. See HP-UX WBEM SAS Provider Release Notes and the product data sheet.
  - **HP-UX WBEM SCSI Provider:** Delivers defect fixes. See HP-UX WBEM SCSI Provider Release Notes and the product data sheet.
  - **WBEMP-LAN Provider:** Delivers defect fixes. See HP-UX WBEM LAN Provider Release Notes.
  - **ProviderSvcsBase:** Delivers defect fixes. See HP-UX ProviderSvcsBase Release Notes and HP-UX ProviderSvcsBase Administrator Guide.

March 2015 Release Notes, Disk and file management


- **Logical Volume Manager:** Delivers defect fixes. See HP-UX Logical Volume Manager and MirrorDisk/UX Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs.


- **HP CIFS Server:** Version A.03.01.06 is a defect fix release based on Samba 3.4.3. See HP CIFS Server Release Notes version A.03.01.06 at http://www.hpe.com/info/hpux-CIFS-docs.
NOTE:
HP CIFS Client reached End of Support on July 31, 2015. HP NFS Client can be used as an alternative. For more information about comparison between CIFS Client and NFS Client, see Comparison of HP-UX CIFS Client and HP-UX NFS Client white paper available at http://www.hpe.com/info/hpux-CIFS-docs.

• Veritas products
For information on the following Veritas products, see Veritas File System 5.1 SP1 Release Notes and Veritas Volume Manager 5.1 SP1 Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs. For information about delivery of the products in the OEs and the implications for installation, see Appendix B: “Installing VxFS, OnlineJFS, LVM, and VxVM” in the HP-UX 11i v3 Installation and Update Guide, March 2015 at http://www.hpe.com/info/hpux-core-docs-11iv3.

◦ VxVM (Base-VxVM-51 and Base-VxTools-51): Version B.05.10.05 delivers defect fixes.

March 2015 Release Notes, Internet and Networking

NOTE:
BIND (HPUX-NameServer) 9.7.3 on HP-UX 11i v3 reached End of Support on August 31, 2015. HPE recommends to migrate to the latest BIND (HPUX-NameServer) Version 9.9.4.

• HP-UX Web Server Suite


PHP 5.4.11.05 delivers security fixes and enhancements.

Also, see related products listed under “March 2015 Release Notes, Security.”

March 2015 Release Notes, Security
Unless otherwise noted, documents for the following security products are located at http://www.hpe.com/info/hpux-security-docs. Select the link appropriate for the product.

• HP-UX Whitelisting: Delivers defect fixes. See HP-UX Whitelisting Version A.01.03.00 Administrator Guide and Release Notes at http://www.hpe.com/support/hpesc (enter the search term HP-UX Whitelisting).
• HP-UX Secure Shell: Version A.06.20.030 for HP-UX 11.31 Integrity architecture includes enhancements to support FIPS capable Secure Shell and GCM mode AES ciphers. Secure Shell requires OpenSSL 1.0.1j or later to be installed on the system. See Secure Shell A.06.20.030 Release Notes at http://www.hpe.com/info/hpux-secure-shell-docs.
**HP-UX OpenSSL**: Version A.01.00.01j for HP-UX 11i v3 for Integrity architecture is based on OpenSSL 1.0.1j. It includes the enhancements to support TLS 1.1 and 1.2 protocol, FIPS 2.0.5 modules and FIPS capable OpenSSL 1.0.1j version, new ciphers (Camellia, SEED), Digests (whirlpool), and features that are supported by the OpenSSL 1.0.1j. See [OpenSSL A.01.00.01j Release Notes for HP-UX 11i v3](http://www.hpe.com/info/hpuxopenssl-docs).

On HP-UX 11i v3 for PA architecture, though the Bundle or Product is installed as A.01.00.01j.001 version, the shipped version on the system is A.00.09.08zc. OpenSSL A.01.00.01j.001 version, is not shipped or supported on PA machine architecture.

**NOTE:**
Since OpenSSL 1.0.1j libraries are not backward compatible with the OpenSSL A.00.09.08 libraries, application linked with OpenSSL A.00.09.08 might not function properly and a rebuild of the application might be required. See the Frequently Asked Questions (FAQs) in the OpenSSL A.01.00.01j Release Notes.


**HP-UX IPSec**: Version A.03.02.02 adheres with RFC4868 to support HMAC-SHA256, HMAC-SHA-384, and HMAC-SHA-512 for both IKE and ESP (Encapsulating Security Payload). It also supports the new encryption algorithms AES-CBC-192 and AES-CBC-256. See [HP-UX IPSec A.03.02.02 Release Notes](http://www.hpe.com/info/hpux-ipsec-docs).

Also, see related products listed under “March 2015 Release Notes, Internet and Networking.”

**March 2015 Release Notes, Commands and system calls**
There are no updates to the commands and system calls for AR1503.

**March 2015 Release Notes, Libraries and programming**

**Java products**
Documents for the following Java products are located at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

- **JDK/JRE version 8.0.00**: Version 8.0.00 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 8u11 functionality and to incorporate defect and security fixes. See [JDK/JRE 8.0.00 Release Notes](http://www.hpe.com/info/hpux-java-docs).
- **JDK/JRE version 7.0.x**: Version 7.0.11 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 7u66, 7u67, 7u71, and 7u72 functionality and to incorporate defect and security fixes. See [JDK/JRE 7.0.11 Release Notes](http://www.hpe.com/info/hpux-java-docs).
- **JDK/JRE version 6.0.x**: Version 6.0.23 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 6u75 functionality and to incorporate defect and security fixes. See [JDK/JRE 6.0.23 Release Notes](http://www.hpe.com/info/hpux-java-docs).

**What is new in the HP-UX 11i v3 March 2014 release**

The following summaries provide a general picture of how March 2014 release of HP-UX 11i v3 differs from March 2013 release of HP-UX 11i v3. For further information, see the documents made available in March 2014 in the indicated location or the sections in the remainder of this document.

**March 2014 Release Notes, Hardware-specific information**

- **CommonIO**: Packages multiple products which support SAS and Fibre Channel adapters and is always installed. Updated with quality and performance improvements. See [HPCommonIO B.11.31.1403 Release Notes](http://www.hpe.com/info/common-io-docs).
- **HP Insight Control power management**: Version 7.3 includes support for JRE 1.7. See [HPInsight Control Release Notes](http://www.hpe.com/info/insightcontrol/docs).

What is new in the HP-UX 11i v3 March 2014 release
• **Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i)**: Includes new HP-UX 11i v3 (11.31) patches for support of the current Integrity systems with the latest I/O adapters, networking, and storage products. New patches are added for `olrad volume(1M)` to support Online Device Replacement Operation (OLR) in the vPars and Integrity VM V6.3 environment. See **Hardware Enablement Patch Bundle for HP-UX 11i v3** on page 117.

• **Networking and Mass Storage Drivers**
  - **10GigEthr-02**: Contains the `iexgbe` driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality and performance improvements. See **10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes** at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).
  - **FibrChanl-01**: Delivers the driver `fcd` for use with Qlogic Fibre Channel HBAs. Updated with quality improvements. See **FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).
  - **FibrChanl-02**: Contains the driver `fclp` for use with Fibre Channel HBAs. Updated with quality improvements. See **FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).
  - **FibrChanl-03**: Delivers the driver `fcoc` for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See **FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/fibre-channel-HBA-docs](http://www.hpe.com/info/fibre-channel-HBA-docs).

• **Utility Pricing Solutions**
  - **iCAP Manager**: Delivers defect fixes. See **HP Matrix Operating Environment 7.3 Release Notes** at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs). (Select **HP Matrix Operating Environment for Integrity Servers**).

March 2014 Release Notes, General system administration


• **HP Insight managed system setup wizard**: Supports new hardware and supports Matrix Operating Environment v7.3. See **HP Matrix Operating Environment 7.3 Release Notes** at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs). (Select **Matrix Operating Environment for Integrity Servers**).
• **HP Systems Insight Manager**: Version 7.3 provides IPv6 support, SNMPv3 support, latest hardware and software support, other enhancements, and improvements. See [HP Systems Insight Manager 7.3 Release Notes](http://www.hpe.com/info/insightmanagement/sim/docs).

• **HP Operations Agent**: Version 11.13.000 helps you to monitor the health and performance of the system. With additional licenses, you can use the HP Operations Agent version 11.13.007 in an environment managed by HP Operations Manager (HPOM). See [HP Operations Agent release notes](http://www.hpe.com/support/HP-QA). (Requires HP Passport. After logging in, search for "Operations Agent.")

• **HP System Management Homepage**: Delivers defect fixes. See [HP System Management Homepage 3.2.7 Release Notes](http://www.hpe.com/info/hpux-systemadmin-docs).

• **HP-UX 11i v3 Feature Enablement Patch Bundle** (*FEATURE11i*): Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. See [HP-UX 11i v3 Feature Enablement Patch Bundle](http://www.hpe.com/info/hpux-core-docs-11iv3) on page 119.

• **HP-UX 11i v3 Quality Pack Patch Bundles** (*QPKBASE* and *QPKAPPS*): Updated with additional defect-fix patches for March 2014 release. See [HP-UX 11i v3 Quality Pack Patch Bundles](http://www.hpe.com/info/hpux-diagnostics-online-docs) on page 119.


• **Ignite-UX**: Delivers Veritas 5.1 SP1 integration, Ignite-UX Golden Image automation, SATA DVD support, support for code signing and defect fixes. See [Ignite-UX Release Notes](http://www.hpe.com/info/ignite-ux-docs).

  **Note**: The HP-UX 11i Version 3 March 2013 Release Notes incorrectly stated that Ignite-UX supported code signing in March 2013 release. The document has since been corrected.

• **Online Diagnostics**: This is in support mode and is not supported on newer platforms. See [EMS Release Notes for HP-UX 11i v3 March 2014 Release](http://www.hpe.com/info/hpux-diagnostics-online-docs) and [STM Release Notes for HP-UX 11i v3 March 2014 Release](http://www.hpe.com/info/hpux-diagnostics-online-docs).


• **SoftRebootEnh**: Updated to add support for BL8x0c i2/i4 blades. See [SoftReboot White Paper](http://www.hpe.com/info/hpux-core-docs-11iv3) and [DRD Release Notes](http://www.hpe.com/info/drd-docs).

• **Software Distributor** (*SD*): Delivers defect fixes. See [http://www.hpe.com/info/sd-docs](http://www.hpe.com/info/sd-docs).

• **Software Package Builder**: Updated to incorporate defect fixes. Now requires Java™ 1.6 or higher version to be installed.

• **System Fault Management**: Support for managing SFM configuration and log files from the common location, /var/opt/psb/diags, has been provided by ProviderServicesBase for easier management of diagnostic provider configuration and log files. See [SFM Release Notes](http://www.hpe.com/info/hpux-diagnostics-sfm-docs).

• **Update-UX**: Updated to detect and support physical memory of size greater than 2TB (up to 4TB).

• **Virtual Server Environment Configuration Assistant** (*VseAssist*): Extended with support to Chinese localization.

• **Virtualization continuum**
  - **Application Discovery Agent**: Updated to v7.3 to support Matrix Operating Environment v7.3. See [HP Matrix Operating Environment 7.3 Release Notes](http://www.hpe.com/info/matrixoe/docs) (Select Matrix Operating Environment for Integrity Servers).
  - **Global Workload Manager Agent**: Updated to v7.3 to support Matrix Operating Environment v7.3. See [HP Global Workload Manager 7.3 and 7.3 Update 1 User Guide](http://www.hpe.com/info/matrixoe/docs) and [HP Matrix Operating Environment 7.3 Release Notes](http://www.hpe.com/info/matrixoe/docs) (Select Matrix Operating Environment for Integrity Servers).
  - **Integrity Virtual Machines Online Migration Software** (*OVMM*): Updated to support HP vPars and Integrity VM v6.3. See [HP vPars and Integrity VM V6.3 Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Integrity Virtual Server Manager** (formerly Integrity Virtual Machines Manager): Version 6.3 supports guest type conversion (VM —> vPar), offline vPar migration, online migration of VM guests between servers running Intel Itanium 9300 processors and Intel Itanium 9500 processors, and dynamic I/O

- **HP-UX Containers (SRP):** Version A.03.01.006 is mainly a defect fix release. See [HP-UX Containers (SRP) A.03.01.006 Release Notes](http://www.hpe.com/info/hpux-srp-docs).

- **HP-UX vPars and Integrity VM (bundles BB068AA and VirtualBase):** Version 6.3 provides support for Online Guest Migration of VM guests between servers running Intel Itanium 9300 processors and Intel Itanium 9500 processors, Increased VM limits to support 32 vCPUs and 256GB memory, PCI Online Add and Replace (OLAR) of I/O cards on Superdome 2 (SD2) systems configured as VSP, Dynamic I/O addition to vPar and VM guest, Online cleanup of NPIV targets, Multi-queue support in AVIO networking for VM guests, CPU scalability with AVIO Storage. See [HP-UX vPars and Integrity VM v6.3 Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).

- **HP Virtual Server Environment (VSE) Management Software:** Delivers defect fixes. Also, the following components are updated:
  - HP Virtualization Manager
  - HP Capacity Advisor
  - HP Integrity Virtual Machines Manager
  - PRMSIMTools, and so on

- **WBEM Services and Providers**

  Documents for the following WBEM products are located at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

  - **WBEM Services for HP-UX:** Version A.02.11.00 is based on a new version of OpenPegasus: 2.11.1. Also delivers defect fixes. See [HP WBEM Services Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

  - **HP-UX WBEM Direct Attached Storage Provider (DASProvider):** The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See [HP-UX WBEM Direct Attached Storage Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and the product data sheet.

  - **HP-UX WBEM Fibre Channel Provider:** Configuration files and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See [HP-UX WBEM Fibre-Channel Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and the product data sheet.

  - **HP-UX WBEM IOTree Indication Provider:** The output of the IOTreeIndication provider in `/var/adm/syslog/syslog.log` will be logged in the following format: ProviderName = XXX, PerceivedSeverity = XXX, EventID = XXX. Configuration files and log files have been moved to different directories. See [HP-UX WBEM IOTree Indication Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

  - **HP-UX WBEM RAIDSA Provider:** The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See [HP-UX WBEM RAIDSA Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and the product data sheet.

  - **HP-UX WBEM SAS Provider:** The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See [HP-UX WBEM SAS Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and the product data sheet.

  - **HP-UX WBEM SCSI Provider:** Delivers defect fixes. See [HP-UX WBEM SCSI Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and the product data sheet.

  - **WBEMP-LAN Provider:** Enhanced to ensure that instance requests (`enumerateInstance/getInstance/enumearateInstanceNames`) are now more likely to succeed on the first attempt after LANProviderModule start. In addition, configuration files and log files have been moved to different directories. See [HP-UX WBEM LAN Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

  - **ProviderSvcsBase:** Common location, `/var/opt/psb/diags`, provided for easier management of configuration and log files of diagnostics providers DASProvider, FCProvider, IOTreeProvider, LANProvider, RAIDSAProvider, SASProvider, and SFMProvider. Also delivers defect fixes. See [HP-UX ProviderSvcsBase Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and [HP-UX ProviderSvcsBase Administrator Guide](http://www.hpe.com/info/hpux-wbem-docs).

March 2014 Release Notes, Disk and file management


**Note**: The HP-UX 11i Version 3 March 2013 Release Notes incorrectly stated the version number. The document has since been corrected.

**Veritas products**

For information on the following Veritas products, see Veritas File System 5.1 SP1 Release Notes and Veritas Volume Manager 5.1 SP1 Release Notes at [http://www.hpe.com/info/hpux-LVM-VxVM-docs](http://www.hpe.com/info/hpux-LVM-VxVM-docs).


- **OnlineJFS**: Version 5.1 SP1 ([B3929HB]) replaces version 5.0.1 ([B3929GB]). OnlineJFS 5.1 SP1 enables enhanced features including File Snaps, Partition Directory, Concurrent I/O, 256 TB Filesystem support, Direct I/O, and so on. Licenses for version 5.0 and 5.0.1 are no longer shipped and only 5.1 SP1 licenses are shipped as part of the DC-OE, VSE-OE, and HA-OE. OnlineJFS is a recommended (default-installed) product in those OEs.

- **VxFS**: VxFS 5.1 SP1 ([Base-VxFS-51]) replaces VxFS 5.0.1 ([Base-VxFS-501]). VxFS 5.1 SP1 is a new release of VxFS, with new licenses and features. Provides new commands and features for managing sizes of increased sizes and better optimization of storage resources. Delivered as a required (default-installed) product in all OEs. VxFS 5.0 and 5.0.1 are no longer shipped as part of the OEs.

- **VxVM**: Version 5.1 SP1 ([Base-VxVM-51]) replaces VxVM 5.0.1 ([Base-VxVM-501]) and provides enhanced volume management features, improved cluster and node functionality, and additional multipathing capabilities. Delivered as an optional (selectable) product in all OEs. VxVM 5.0 and 5.0.1 are no longer shipped as part of the OEs.

**March 2014 Release Notes, Internet and Networking**


- **HP-UX Web Server Suite**

- **IPv6Upgrade**: The enhancements in the IPv6 Upgrade bundle are now delivered in the patch PHNE_43412, which is delivered in the Operating Environments through Quality Pack (QPK). For more information about IPv6Upgrade and IPv6, see [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (use the search term HP-UX 11i IPv6). This product is obsolete in AR1403.


Also see related products listed under “March 2014 Release Notes, Security.”

**March 2014 Release Notes, Security**

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What is new
Unless otherwise noted, documents for the following security products are located at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). Select the link appropriate for the product.

- **HP-UX Auditing and Security Attributes Configuration (secweb)**: Delivers defect fixes. See [HP System Management Homepage 3.2.7 Release Notes](http://www.hpe.com/info/hpux-systemadmin-docs).
- **HP-UX Whitelisting**: Version A.01.02.00 includes the directory depth fix and support for SHA2 keys. See [HP-UX Whitelisting Version A.01.02.00 Administrator Guide and Release Notes](http://www.hpe.com/info/hpux-security-docs).
- **HP-UX OpenSSL**: Version A.00.09.08y for HP-UX 11i v3 is based on OpenSSL 0.9.8y and is mainly a defect-fix release. See [OpenSSL A.00.09.08y Release Notes for HP-UX 11i v3](http://www.hpe.com/info/hpux-openssl-docs).
- **security(4) manpage**: Updated security(4) manpage for cases when LOGIN_POLICY_STRICT attribute is set to 1.

Also see related products listed under “March 2014 Release Notes, Internet and Networking.”

### March 2014 Release Notes, Commands and system calls

- **sarvolume(1M) Command**: Included in the FEATURE11i patch bundle, it is enhanced to display file cache metrics. The –U option is added to display file cache metrics.
- **vmstatvolume(1) Command**: Included in the FEATURE11i patch bundle, it is enhanced to display file cache metrics. The two options –U and –u are added to display file cache metrics.
- **HKSCS-2008 enhancement**: The HongKong government has announced 68 new additional characters with HKSCS-2008 from the previous standards of HKSCS-2004.

### March 2014 Release Notes, Libraries and programming

- **HP Wildebeest Debugger (WDB)**: Version 6.5 supports leak or heap memory reporting of a running process without making it mandatory for the users to preload the librtc library before invoking the application. It also supports `char16_t` and `char32_t` HP WDB 6.5 Release Notes types, variadic template functions, enum class and rvalue. Also includes defect fixes. See at [http://www.hpe.com/info/hpux-debugtools-docs](http://www.hpe.com/info/hpux-debugtools-docs).
- **Java products**
  - JDK/JRE version 7.0.x: Version 7.0.07 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 7u25 functionality and to incorporate defect and security fixes. See JDK/JRE 7.0.07 Release Notes.
  - JDK/JRE version 6.0.x: Version 6.0.20 of the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 6u51 functionality and to incorporate defect and security fixes. See JDK/JRE 6.0.20 Release Notes.
  - JDK/JRE version 5.0.x: Version 5.0.29 the HP-UX 11i Java™ Development Kit (JDK) and Java™ Runtime Environment (JRE) have been updated to include Oracle 5u51 functionality and to incorporate defect and security fixes. See JDK/JRE 5.0.29 Release Notes.
NOTE:
Version 5.0 reached End of Support on March 18, 2014. In March 2014, version 5.0.29 of the HP-UX 11i Java™ Software Development Kit (SDK) and Java™ Runtime Environment (JRE) have been included on the AR only. Starting in March 2015, version 5.0 is no longer be included on the AR.


What is new in the HP-UX 11i v3 March 2013 release

The following summaries provide a general picture of how March 2013 release of HP-UX 11i v3 differs from the September 2012 release of HP-UX 11i v3. For further information, see the indicated documents or the sections in the remainder of this document.

March 2013 Release Notes, Hardware-specific information


- Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i): Includes new HP-UX 11i v3 (11.31) patches for support of the current Integrity systems with the latest I/O adapters, networking, and storage products. New patches were also added for support of larger than 2 TB disks by bootloader, crashdump, swapinfo, swapon and efi_utils, and other performance improvements. See Hardware Enablement Patch Bundle for HP-UX 11i v3 on page 117.


- Networking and Mass Storage Drivers
  - 10GigEthr-02: Contains the iexgbe driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality and performance improvements. See 10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/10-gigabit-ethernet-docs.
  - 10GigEthr-03: Contains the iocxgbe driver, which supports stand-up, mezzanine, combo card, and Converged Network Adapter technologies. Updated with quality and performance improvements. See 10GigEthr-03 (iocxgbe) Ethernet Driver Release Notes for HP-UX 11i v3. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/10-gigabit-ethernet-docs.
  - FibrChanl-01: Delivers the driver fcd for use with Qlogic Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.
  - FibrChanl-02: Contains the driver fclp for use with Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.
  - FibrChanl-03: Delivers the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.
  - IB4X-00: Delivers the driver ib4x-00, a low latency, high bandwidth RDMA based, industry standard cluster interconnect product. Updated with defect fixes. See IB4X-00 Driver for InfiniBand Release Notes at http://www.hpe.com/info/fabric-clustering-infiniband-docs.
◦ **IEther-00**: Contains the `iether` driver, which supports a variety of PCIe and PCI-X Ethernet cards. Updated with quality and performance improvements. See *IEther-00 (iether) Ethernet Driver Release Notes for HP-UX 11i v3* for information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at [http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs](http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs).


◦ **SerialSCSI-00**: Contains the `sasd` driver, which supports the factory-integrated internal SAS controller on certain servers and the AH303A PCIe SC44Ge Host Bus Adapter. The CommonIO bundle is also required to support these controllers. Updated with quality and performance improvements. See *SerialSCSI-00 (sasd) B.11.31.1303 Mass Storage Driver Release Notes* at [http://www.hpe.com/info/sas-hba-docs](http://www.hpe.com/info/sas-hba-docs).

March 2013 Release Notes, General system administration


- **New: Enhanced boot capability**: Starting with March 2013 release of HP-UX 11i v3, maximum boot disk size supported with Logical Volume Manager (LVM) is increased from 2 TB to 16 TB.


- **HP System Management Homepage**: Starting with version A.3.2.5, SMH supports Java™ 7.0. Also includes defect fixes. See *HP System Management Homepage 3.2.5 Release Notes* at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

- **HP-UX 11i v3 Feature Enablement Patch Bundle** (**FEATURE11i**): Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. New patches were added for support for the Intel Itanium 9500 Processor Series; for support of larger than 2 TB disks by bootloader, crashdump, swapinfo, swapon and ef_i_utils support; support of Unicode 6.1; performance enhancements to locking mechanisms, memory management modules, virtualization and the audit subsystem. See *HP-UX 11i v3 Feature Enablement Patch Bundle* on page 119.


- **Ignite-UX**: Version C.7.16 provides support for boot disks up to 16 TB and delivers support for 1 TB swap/dump volume, and cluster DSF, enabling the creation and recovery of archives for volume groups that have cluster DSFs configured on them. Version C.7.16 (or later) is required for cold installation/recovery of the HP-UX 11i v3 March 2013 OEUR on >2 TB boot disks. Also delivers defect fixes and supports the deprecation of old VxFS Disk Layout Versions (DLVs) for future releases of VxFS. For changes to Ignite-UX, see *Ignite-UX Release Notes* at [http://www.hpe.com/info/ignite-ux-docs](http://www.hpe.com/info/ignite-ux-docs). For more information about DLVs in VxFS, see *Veritas File System 5.0.1 Release Notes* at [http://www.hpe.com/info/hpux-LVM-VxVM-docs](http://www.hpe.com/info/hpux-LVM-VxVM-docs).


What is new

• **Software Distributor (SD)**: Updated to support code signing and to deliver defect fixes. See [http://www.hpe.com/info/sd-docs](http://www.hpe.com/info/sd-docs).

• **System Fault Management**: Support for managing SFM configuration and log files from the common location, /var/opt/psb/diags, has been provided by ProviderServicesBase for easier management of diagnostic provider configuration and log files. Also provides new slview manpage and GUI help page for the IPMI Event Viewer. See SFM Release Notes at [http://www.hpe.com/info/hpux-diagnostics-sfm-docs](http://www.hpe.com/info/hpux-diagnostics-sfm-docs).

• **Virtualization continuum**
  - **9000 Containers**: Version A.03.01.04 provides support for trusted mode and auditing with 9000 system type containers and compatibility with HP-UX-SRP A.03.01.004. Also delivers defect fixes. See HP 9000 Containers A.03.01.04 Release Notes at [http://www.hpe.com/info/hpux-srp-docs](http://www.hpe.com/info/hpux-srp-docs).
  - **Integrity Virtual Server Manager** (formerly Integrity Virtual Machines Manager): Version 6.2 enables online memory operations on active virtual partitions. Also supports co-existence of VMs and vPars. See HP Integrity Virtual Server Manager Online Help bundled with the product.
  - **HP-UX Containers**: Version A.03.01.004 is mainly a defect fix release. See HP-UX Containers A.03.01.004 Release Notes for HP-UX 11i v3 at [http://www.hpe.com/info/hpux-srp-docs](http://www.hpe.com/info/hpux-srp-docs).

• **WBEM Services and Providers**

  Documents for the following WBEM products are located at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).
  - **WBEM Services for HP-UX**: Version A.02.11.00 is based on a new version of OpenPegasus: 2.11.1. Also delivers defect fixes. See HP WBEM Services Release Notes.
  - **HP-UX WBEM Direct Attached Storage Provider** (DASProvider): The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See HP-UX WBEM Direct Attached Storage Provider Release Notes and the product data sheet.
  - **HP-UX WBEM Fibre Channel Provider**: Configuration files and log files have been moved to different directories. The Severity, Summary, Description and Action fields of most events have been changed. See HP-UX WBEM Fibre-Channel Provider Release Notes and the product data sheet.
  - **HP-UX WBEM IOTree Indication Provider**: The output of the IOTreeIndication provider in /var/adm/syslog/syslog.log will be logged in the following format: ProviderName = XXX, PerceivedSeverity = XXX, EventID = XXX. Configuration files and log files have been moved to different directories. See HP-UX WBEM IOTree Indication Provider Release Notes.
  - **HP-UX WBEM RAIDXSA Provider**: The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action fields of most events have been changed. See HP-UX WBEM RAIDXSA Provider Release Notes and the product data sheet.
  - **HP-UX WBEM SAS Provider**: The loggerconfig file, DB connection config files, configuration files, and log files have been moved to different directories. The Severity, Summary, Description, and Action
fields of most events have been changed. See *HP-UX WBEM SAS Provider Release Notes* and the product data sheet.

- **WBEMP-LAN Provider**: Enhanced to ensure that instance requests (*enumerateInstance*, *getInstance*, *enumerateInstanceNames*) are now more likely to succeed on the first attempt after *LANProviderModule* start. In addition, configuration files and log files have been moved to different directories. See *HP-UX WBEM LAN Provider Release Notes*.

- **ProviderSvcsBase**: Common location, `/var/opt/psb/diags`, provided for easier management of configuration and log files of diagnostics providers (`DASProvider`, `FCProvider`, `IOTreeProvider`, `LANProvider`, `RAIDSAProvider`, `SASProvider`, and `SFMPProvider`). Also delivers defect fixes. See *HP-UX ProviderSvcsBase Release Notes* and *HP-UX ProviderSvcsBase Administrator Guide*.

**March 2013 Release Notes, Disk and file management**


- **HP CIFS Client**: Delivers a new configuration parameter, `useStrictUnicode`, which ensures unicode is used in all the communication and in sync with the `useUnicode` parameter. Also delivers defect fixes. See *HP CIFS Client A.02.02.03 Release Notes HP-UX 11i v3 and v2* at [http://www.hpe.com/info/hpux-CIFS-docs](http://www.hpe.com/info/hpux-CIFS-docs).


- **Logical Volume Manager**: Enhanced to support boot on larger disks up to 16 TB in size. Also delivers several defect fixes. See *Logical Volume Manager and MirrorDisk/UX Release Notes* at [http://www.hpe.com/info/hpux-LVM-VxVM-docs](http://www.hpe.com/info/hpux-LVM-VxVM-docs).


**March 2013 Release Notes, Internet and networking**


- **HP-UX Directory Server** (*HPDS*): Version B.08.10.04 contains an open source refresh to the stable Fedora source. Includes new features such as Subtree rename and entry move; Syntax Validation check for an attribute type; Strict DN syntax enforcement and a new thread-aware library to improve the throughput of complex regex search. Also delivers defect fixes. See *HP-UX Directory Server 8.1.04 Release Notes* at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs) (Select HP-UX Directory Server.).


- **HP-UX Web Server Suite**
  - **HP-UX Apache-based Web Server**: Updated to version 2.2.15.14 primarily to deliver defect and security fixes.
  - **HP-UX Tomcat-based Servlet Engine**: HP-UX Tomcat 5.5.x bundled with Apache-based Web Server 3.x is no longer supported by HPE on HP-UX 11i v3 and is now replaced by the newer HP-UX Tomcat 6.x, which is based on ASF Tomcat 6.x. See *HP-UX Tomcat-based Servlet Engine v.6.0.35.01 release notes* at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (use the search term HP-UX Tomcat).

- **Network Interfaces Configuration and Network Services Configuration**: Delivers defect fixes. See *HP System Management Homepage 3.2.5 Release Notes* at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

Also see related products listed under “March 2013 Release Notes, Security.”

**March 2013 Release Notes, Security**
Unless otherwise noted, documents for the following security products are located at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). Select the link appropriate for the product.

- **New: HP Secure Development Lifecycle**: Starting with March 2013 release, the Secure Development Lifecycle provides the ability to authenticate HP-UX software. Software delivered through an Operating Environment (OE) or the AR media is now digitally signed using HPE's private key. You can now verify the authenticity of the software before installation of an OE or products delivered through the OE or AR media. For more information, see the Software Distributor documentation at [http://www.hpe.com/info/sd-docs](http://www.hpe.com/info/sd-docs) and the Ignite-UX documentation at [http://www.hpe.com/info/ignite-ux-docs](http://www.hpe.com/info/ignite-ux-docs).

- **New: HP-UX Whitelisting**: Version 1.1 provides a key functionality for Software Distributor (SD) to support authentication of HP-UX software. Newly added to all OEs as a required (always-installed) product. See the [HP-UX Whitelisting Version A.01.01 Release Notes](http://www.hpe.com/support/hpesc) (enter the search term HP-UX Whitelisting), and the SD documentation website at [http://www.hpe.com/info/sd-docs](http://www.hpe.com/info/sd-docs).


- **HP-UX OpenSSL**: Version A.00.09.08x for HP-UX 11i v3 is based on OpenSSL 0.9.8x and is mainly a defect-fix release. See [OpenSSL A.00.09.08x Release Notes for HP-UX 11i v3](http://www.hpe.com/info/hpux-security-docs). (Select HP-UX OpenSSL Software).


- **Kerberos Client**: Version E.1.6.2.10 delivers two defect fixes and an enhancement. See [Kerberos Client E.1.6.2.10 Release Notes](http://www.hpe.com/info/hpux-security-docs).

Also see related products listed under "March 2013 Release Notes, Internet and Networking."

**March 2013 Release Notes, Commands and system calls**


**March 2013 Release Notes, Libraries and programming**

- **Java products**

  Documents for the following Java products are located at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

  - **JDK/JRE version 7.0.x**: Version 7.0.03 of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include Oracle 7u6 and 7u7 functionality and to incorporate defect and security fixes. See [JDK/JRE 7.0.03 Release Notes](http://www.hpe.com/info/hpux-security-docs).

  - **JDK/JRE version 6.0.x**: Version 6.0.16 of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include Oracle 6u34 and 6u35 functionality and to incorporate defect and security fixes. See [JDK/JRE 6.0.16 Release Notes](http://www.hpe.com/info/hpux-security-docs).

  - **JDK/JRE version 5.0.x**: Version 5.0.26 the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include Oracle 5u35 and 5u36 functionality and to incorporate defect and security fixes. See [JDK/JRE 5.0.26 Release Notes](http://www.hpe.com/info/hpux-security-docs).

  - **SDK/RTE version 1.4.x**: Version 1.4.2 reached End of Life (EOL) on May 1, 2012. Version 1.4.2.28 of the HP-UX 11i Java Software Development Kit (SDK) and Java Runtime Environment (RTE) was the last update for SDK/RTE version 1.4.2. In September 2012, version 1.4.2.28 was included on the AR only. Starting in March 2013, version 1.4.2 is no longer included on the AR.

- **libIOvolume(3X) library**: Provides a new API for converting a persistent dev_t to a corresponding cluster-wide device special file.
March 2013 Release Notes, Internationalization

- Unicode 6.1 support by locale: Provides a fundamental level of support for Unicode 6.1 by the localevolume(1) interface.

March 2013 Release Notes, Other functionality

- New: VFS-SHWRSPL-ENH: Delivers the product VfsShwrsplEnh, which uses new lock interfaces from the SyncShwrspl product to enhance the pathname traversal component of the HP-UX kernel to reduce vnode spinlock contention on Superdome servers.

What is new in the HP-UX 11i v3 September 2012 release

The following summaries provide a general picture of how the September 2012 release of HP-UX 11i v3 differs from March 2012 release of HP-UX 11i v3. For further information, see the indicated documents or the chapters in the HP-UX 11i Version 3 September 2012 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3.

September 2012 Release Notes, Hardware-specific information


- Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i): Includes new HP-UX 11i v3 (11.31) patches for support of the current Integrity systems with the latest I/O adapters, networking, and storage products. New patches were also added for improved multi-threaded environment support, improved performance, and support for the Intel Itanium 9500 Processor Series.

- Networking and Mass Storage Drivers
  - 10GigEthr-01: Contains the icxgbe driver, which supports certain 10 Gigabit Ethernet cards. Updated with quality improvements. See 10GigEthr-01 (icxgbe) Ethernet Driver Release Notes for HP-UX 11i v3. For more information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are available at http://www.hpe.com/info/10-gigabit-ethernet-docs.
  - 10GigEthr-02: Contains the iexgbe driver, which supports stand-up, mezzanine, and LAN on motherboard (LOM) technologies for a variety of platforms. Updated with quality improvements. See 10GigEthr-02 (iexgbe) B.11.31 Ethernet Driver Release Notes. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/10-gigabit-ethernet-docs.
  - 10GigEthr-03: Contains the icxgbe driver, which supports stand-up, mezzanine, combo card, and Converged Network Adapter technologies. Updated with quality improvements. See 10GigEthr-03 (icxgbe) Ethernet Driver Release Notes for HP-UX 11i v3. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/10-gigabit-ethernet-docs.
  - FibrChanl-01: Delivers the driver fcd for use with Qlogic Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.
  - FibrChanl-02: Contains the fc1p driver for use with Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-02 (fc1p) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.
  - FibrChanl-03: Delivers the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. See FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix.

- IEther-00: Contains the iether driver, which supports PCIe and PCI-X Ethernet cards. Updated with quality improvements. See IEther-00 (iether) Ethernet Driver Release Notes for HP-UX 11i v3. For information about supported cards, see HP-UX Ethernet Card Support Matrix. Both documents are located at http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs.


- SerialSCSI-00: Contains the sasd driver, which supports the factory-integrated internal SAS controller on certain servers and the AH303A PCIe SC44Ge Host Bus Adapter. The CommonIO bundle is also required to support these controllers. Updated with quality and performance improvements. See SerialSCSI-00 (sasd) B.11.31.1209 Mass Storage Driver Release Notest at http://www.hpe.com/info/sas-hba-docs.

- New: USB UHCI controller enhancement: Packet transfer and scheduling implementation has been revised to improve controller performance.

- Utility Pricing Solutions


  - Pay per use (T2351AA): Now obsolete. If you currently have Pay per use on your system, it will be removed by ObsT2351AA upon update to the September 2012 (or later) OEUR.

September 2012 Release Notes, General system administration


- System Management Homepage: Enhanced to support the newer versions of Tomcat. Improved hpsmh HP System Management Homepage 3.2.4 Release Notes script to stop SMH during an OE upgrade. Also includes defect fixes. See at http://www.hpe.com/info/hpux-systemadmin-docs.

- HP-UX 11i v3 Feature Enablement Patch Bundle (FEATURE11i): Updated with patches that enhance or provide new or improved core features. Improvements include performance improvements, enhancements in the scheduler, memory management modules and virtualization, and support for the Intel Itanium 9500 Processor Series.


• **Software Distributor (SD)**: Delivers defect fixes.

• **System Fault Management (SFM)**: Enhanced to support the Intel Itanium 9500 Processor Series. The database for error and event repository is upgraded to Postgres 8.4.8 for 9000 and Integrity servers. See SFM Release Notes at [http://www.hpe.com/info/hpux-diagnostics-sfm-docs](http://www.hpe.com/info/hpux-diagnostics-sfm-docs).

• **Virtualization continuum**
  - **9000 Containers**: Version A.03.01.03 provides support for CDE login, option to enable DDFA, and automatic restoration of native files post patching inside 9000 system containers. Also delivers defect fixes. See HP 9000 Containers A.03.01.03 Release Notes at [http://www.hpe.com/info/hpux-srp-docs](http://www.hpe.com/info/hpux-srp-docs).
  - **Integrity Virtual Machines Online Migration Software** (OVMM): Updated to support vPars and Integrity VM v6.1.5. See HP vPars and Integrity VM v6.1.5 Release Notes at [http://www.hpe.com/info/hpux-vpars-docs](http://www.hpe.com/info/hpux-vpars-docs).

To learn how the Matrix Operating Environment for HP-UX can be used for advanced lifecycle management of your Integrity servers, visit the CloudSystem Matrix with HP-UX website at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs).


• **Utilization Provider for HP-UX 11i v3**: Updated to version A.01.08.07.00 to support the latest release of the Matrix Operating Environment.

• **WBEM Services and Providers**

  Documents for the following WBEM products are located at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

**What is new**
WBEM Services for HP-UX: In version A.02.09.14, OpenSSL is updated to 0.9.8r to support strong ciphers in WBEM Services. Also includes defect fixes. The wbemassist command is enhanced to enable/disable cimserver traces. See HP WBEM Services Release Notes.


HP-UX WBEM Fibre Channel Provider: Delivers defect fixes. See HP-UX WBEM Fibre-Channel Provider Release Notes.

HP-UX WBEM LAN Provider Release Notes: LANIndicationProvider is enhanced to generate new test event 103. For more information see the LAN_Provider_Test manpage. See HP-UX WBEM LAN Provider Release Notes.


HP-UX WBEM RAIDSA Provider: Delivers defect fixes. See HP-UX WBEM RAIDSA Provider Release Notes.


ProviderSvcsBase: The database for error and event repository is upgraded to Postgres 8.4.8 for 9000 and Integrity servers. Also delivers defect fixes. See HP-UX ProviderSvcsBase Release Notes and HP-UX ProviderSvcsBase Administrator Guide.

September 2012 Release Notes, Disk and file management

- FileSystem-SRP: Delivers a defect fix. See the product website at HPE Software Depot (enter the search term FileSystem-SRP).
- CIFS Server: Version A.03.01.05 is a defect fix release based on Samba 3.4.3. See HP CIFS Server Release Notes version A.03.01.05 at http://www.hpe.com/info/hpux-CIFS-docs.
- Logical Volume Manager: Delivers defect fixes and an enhancement to the pvcreate command that now detects OCR and Vote signatures on Oracle disks apart from the ASM. See Logical Volume Manager and MirrorDisk/UX Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs.
- Veritas products


- VxFS and VxVM support the following:
  - Intel Itanium 9500 Processor Series-based systems (Hosts) with VxFS/VxVM version 5.0.1 and later.
  - Intel Itanium 9500 Processor Series-based Integrity Virtual Machines (Guests) with VxFS/VxVM:
    - Versions 4.1 and 5.0 (for HP-UX 11i v2)
    - Versions 5.0, 5.0.1, 5.1SP1, and later (for HP-UX 11i v3)

September 2012 Release Notes, Internet and networking

What is new

• **HPUX-Nameserver (BIND):** Delivers defect and security fixes. See *BIND 9.3.2.11.0 Release Notes* at [http://www.hpe.com/info/hpux-networking-docs-11iv3](http://www.hpe.com/info/hpux-networking-docs-11iv3).

• **HP-UX Web Server Suite**


  - **HP-UX Apache-based Web Server:** Primarily a defect fix and security release.
  - **HP-UX Tomcat-based Servlet Engine:** Primarily a defect fix and security release. Note: This product has been deprecated. It is planned for future obsolescence, but is currently shipped and supported.

• **Network Interfaces Configuration and Network Services Configuration:** Delivers defect fixes. See *HP System Management Homepage 3.2.4 Release Notes* at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

Also see related products listed under “September 2012 Release Notes, Security.”

**September 2012 Release Notes, Security**

Unless otherwise noted, documents for the following security products are located at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). Select the link appropriate for the product.

• **HP-UX IPFilter:** Version 18.10 delivers improved performance, support for the IPFilter accounting feature, updated *ippool volume(4)* and *ipfstatvolume(1)* manpages (more information and examples), and several defect fixes. See *HP-UX IPFilter V18.10 Release Notes for HP-UX 11i v3*.

• **HP-UX IPSec:** Version A.03.01.01 introduces support for Diffie-Hellman (D-H) group 24, which is used with the IKE protocol to provide security for Internet communications. Includes enhancements to the *ipsec_config* command to allow configuration of D-H group 24. Now requires OpenSSL version A.00.09.08q or later. See *HP-UX IPSec A.03.01.01 Release Notes*.

• **HP-UX OpenSSL:** Version A.00.09.08w is based on OpenSSL 0.9.8w and is mainly a defect fix release. See *OpenSSL A.00.09.08w Release Notes for HP-UX 11i v3*.

• **HP-UX Secure Shell:** Version A.05.90 for HP-UX 11i v3 is based on OpenSSH version 5.9. Delivers defect fixes. See *HP-UX Secure Shell A.05.90 Release Notes*.

Also see related products listed under “September 2012 Release Notes, Internet and Networking.”

**September 2012 Release Notes, Commands and system calls**

• **diskownervolume(1M) Command:** Enhanced to recognize paths that have “OCR” or “Vote” as their owners.

• **sarvolume(1M) Command:** Enhanced to support platforms with more than 256 processors.

**September 2012 Release Notes, Libraries and programming**

• **HP Wildebeest Debugger (WDB):** Version 6.3 includes a rotating bar that displays when executing “info leaks” or “info dangling” commands; more intuitive leak reports in interactive mode; *rtcconfig* file support for attach mode; global *rtcconfig* file support. Also includes defect fixes. See *HP WDB 6.3 Release Notes* at [http://www.hpe.com/info/hpux-debugtools-docs](http://www.hpe.com/info/hpux-debugtools-docs).

• **Java products**

  Documents for the following Java products are located at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

  - **JDK/JRE version 7.0.x:** Version 7.0.01 of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) has been updated to include the Oracle 7u2 and 7u3 releases’ functionality and to incorporate defect and security fixes. See *JDK/JRE 7.0.01 Release Notes*.

  - **JDK/JRE version 6.0.x:** Version 6.0.14 of JDK/JRE has been updated to include the Oracle 6u30 and 6u31 releases’ functionality and to incorporate defect and security fixes. See *JDK/JRE 6.0.14 Release Notes*.
- **JDK/JRE version 5.0.x**: Version 5.0.25 of JDK/JRE has been updated to include the Oracle 5u31 - 5u34 releases' functionality and to incorporate defect and security fixes. See **JDK/JRE 5.0.25 Release Notes**.
- **SDK/RTE version 1.4.x**: Version 1.4.2.28 of the HP-UX 11i Java Software Development Kit (SDK) and Java Runtime Environment (RTE) has been updated to include the Oracle 1.4.2u29 - 1.4.2u36 releases' functionality and to incorporate defect and security fixes. See **SDK/RTE 1.4.2.28 Release Notes**. Note: SDK/RTE 1.4.2.28 is the last update for SDK/RTE version 1.4.x and is delivered with the AR release only. It reached End of Life (EOL) on May 1, 2012. See **HP-UX Java - End of Life Policy & Release Naming Terminology**.
  - **MallocNextGen**: Updates include the release of large blocks to system under environment variable `_MALLOCNG_LBC_OPTS` and better memory management for certain multi-threaded applications under environment variable `_MALLOCNG_GLOBAL_OPTS`.

### September 2012 Release Notes, Internationalization
- There are no changes in September 2012 for the products or features that are normally documented in this section.

### September 2012 Release Notes, Other functionality
- **New: AioEnh**: Delivers the POSIX AIO functionality by modifying the `aio_reap volume(2)` system call so it waits for the outstanding AIO requests to become equal to the specified number of AIO requests. Added to all OEs as an optional (selectable) product.
- **New: PCIInfo-00**: Added to all OEs as a recommended (default-installed) product to support HP Smart Update Manager (HP SUM).

### What is new in the HP-UX 11i v3 March 2012 release

The following summaries provide a general picture of how March 2012 release of HP-UX 11i v3 differs from the September 2011 release of HP-UX 11i v3. For further information, see the indicated documents or the chapters in the **HP-UX 11i Version 3 March 2012 Release Notes**, available in its most current version at [http://www.hpe.com/info/hpux-core-docs-11iv3](http://www.hpe.com/info/hpux-core-docs-11iv3).

#### March 2012 Release Notes, Hardware-specific information
- **Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i)**: Includes new HP-UX 11i v3 (11.31) patches for support of current Integrity systems with the latest I/O adapters, networking, and storage products. New patches were also added for improved debugging, better event handling, error records persistence, enhanced machine information reports, soft reboot feature enablement, improved performance, and support on the latest Intel Itanium processors in currently-shipping Integrity systems.
- **Networking and Mass Storage Drivers**
  - **10GigEthr-02**: Contains the `iexgbe` driver. Updated with quality improvements. For further information, including the products supported by this bundle, see **10GigEthr-02 (iexgbe) B.11.31.1203 Ethernet Driver Release Notes** at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).
  - **10GigEthr-03**: Contains the `iocxgbe` driver. Updated with quality improvements. For further information, including the products supported by this bundle, see **10GigEthr-03 (iocxgbe) B.11.31.1203 Ethernet Driver Release Notes** at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).
  - **FibrChanl-01**: Contains the driver `fcd` for use with Qlogic Fibre Channel HBAs. Updated with quality improvements. For further information, see **FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes**. For information on supported cards, see the respective **HP Fibre Channel Host Bus Adapter Support Matrix**. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
- **FibrChanl-02**: Contains the driver `fclp` for use with Fibre Channel HBAs. Updated with quality improvements. For more information, see *FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes*. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

- **FibrChanl-03**: Contains the driver `fcoc` for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. For more information, see *FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes*. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).


- **IEther-00**: Contains the `iether` driver. Updated with quality improvements and defect fixes. For further information, including the products supported by this bundle, see *IEther-00 (iether) B.11.31.1203 Ethernet Driver Release Notes* at [http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs](http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs).


- **RAID-01**: Contains the `ciss` driver, which supports Smart Array controllers. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see *RAID-01 (ciss) B.11.31.1203 Mass Storage Driver Release Notes* at [http://www.hpe.com/info/smart-array-raid-docs](http://www.hpe.com/info/smart-array-raid-docs).


- **SerialSCSI-00**: Contains the `sasd` driver, which supports the factory-integrated internal SAS controller on certain servers and the AH303A PCIe SC44Ge Host Bus Adapter. Updated with quality and performance improvements. See *SerialSCSI-00 (sasd) B.11.31.1203 Mass Storage Driver Release Notes* at [http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs](http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs).

- **USB-02**: Patch delivered to enable ANSI v2 compliance for USB.

- **Utility Pricing Solutions**


March 2012 Release Notes, General system administration


- **High Availability Monitors (HA Monitors)**: Version upgraded to A.04.20.31.08 to support the update of EMS A.04.20.31.08. HA Monitors has been deprecated. Post HP-UX 11i v3 release, HA Monitors will be replaced with Web-based Enterprise Management (WBEM) based providers. See *High Availability Monitors Version A.04.20.31.08 Release Notes* at [http://www.hpe.com/info/hpux-ha-monitoring-docs](http://www.hpe.com/info/hpux-ha-monitoring-docs).

- **Insight managed system setup wizard**: For the latest updates to MSSW, check the Software Depot site for Insight Dynamics - VSE for Integrity at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term Matrix Operating Environment).
• **Portable Image**: A key component of the Integrity VM and HP-UX cross-technology logical server feature of the Matrix OE 7.0 Solution. Provides the necessary OS support to ensure network configuration information is properly maintained across cross-technology logical server move operations. Available in all OEs in March 2011 OEUR and later. In March 2011 and September 2011, delivered as an optional (selectable) product. In March 2012 and later, delivered as a recommended (default-installed) product. Note: If you plan to manage data center servers with Matrix OE 7.0 logical servers, you must install this product as part of your HP-UX installation. See **HP Insight Virtualization Manager 7.0 Software with Logical Server Management User Guide** at [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs).

• **HP Process Resource Manager (PRM)**: Updated to version C.03.06 to deliver defect fixes. **PRMKernelSW** and **PRMLibraries** updated to support PRM. See **HP Process Resource Manager Release Notes** at [http://www.hpe.com/info/hpux-PRM-docs](http://www.hpe.com/info/hpux-PRM-docs).

• **New: HP Serviceguard Toolkit for Integrity Virtual Servers (SG IVS Toolkit)**: Facilitates seamless integration of Integrity Virtual Machines with Serviceguard. Has a set of shell scripts that aid in creating Serviceguard packages for VM and helps to start, stop, and monitor VM on VM Hosts. Enables you to configure a VM as a package and provides high availability to virtual machines configured in HP-UX servers. New features for March 2012 release include support for Online VM migration for VM-as-SG-node, support for vPar, and support for Direct I/O (DIO) LAN and NPIV disk monitoring on the VM/vPar guest. Added as a recommended (default-installed) product in the DC-OE, HA-OE, and VSE-OE. See **HP Serviceguard Toolkit for Integrity Virtual Servers Release Notes** at [http://www.hpe.com/info/hpux-serviceguard-docs](http://www.hpe.com/info/hpux-serviceguard-docs). (Select **HP Serviceguard Toolkit for Integrity Virtual Servers**).

• **System Management Homepage**: Delivers defect and security fixes. See **HP System Management Homepage 3.2.3 Release Notes** at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

• **HP-UX 11i v3 Feature Enablement (FEATURE11i)**: Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. Includes performance improvements in the kernel, support for the latest Intel Itanium processors in currently shipping Integrity systems, and features like SoftReboot and new virtualization.

• **HP-UX 11i v3 Quality Pack Patch Bundles (QPKBASE and QPKAPPS)**: Updated with additional defect-fix patches for March 2012 release.

• **New: HP-UX GUID (globally unique identifier) Manager (GUIDMgr)**: Is a client-server based product that allocates and manages unique World-Wide Names (WWNs) for N_Port ID Virtualization (NPIV) Host Bus Adapters (HBAs), so you do not have to perform these tasks manually. Integrated with the HP-UX vPars and Integrity VM v6.1 product to support NPIV. Also integrated with Integrity Virtual Server Manager to support managing the database. Added as an optional (selectable) product to all OEs. See **HP-UX GUID Manager Administrator Guide** at [http://www.hpe.com/info/hpux-vpars-docs](http://www.hpe.com/info/hpux-vpars-docs).


• **HP-UX Software Assistant**: Version C.02.90 includes updates to support the migration of the HP IT Resource Center to the HPE Support Center ([http://www.hpe.com/support/hpesc](http://www.hpe.com/support/hpesc)). Minimum Java revisions updated to 1.5.0.20.00 for JRE1.5 (5.0) and 1.6.0.07.00 for JRE 6.0. See **HP-UX Software Assistant Release Notes** at [http://www.hpe.com/info/swa-docs](http://www.hpe.com/info/swa-docs).

• **Ignite-UX**: Version C.7.14.264 provides support for HPVM Direct I/O, HP-UX vPars and Integrity VM v6.1, PAX block size enhancement, Oracle ASM Disk, Queen's card, and parallel ignition through `setboot` changes. Ensures VxFS 5.0.1 components are always installed. Also includes defect fixes. See **Ignite-UX Release Notes** at [http://www.hpe.com/info/ignite-ux-docs](http://www.hpe.com/info/ignite-ux-docs).


• **New: SoftRebootEnh**: Reduces OS reboot time experienced during routine system maintenance. Achieves downtime reduction by skipping the platform hardware reset and booting the next kernel directly.
from the current OS instance. Available on SD32B/64B nPar systems only. Added as an optional (selectable) product in all OEs. See the SoftReboot documentation at http://www.hpe.com/info/hpux-core-docs-11iv3.

- **Software Distributor (SD):** Provides support for SoftReboot during the software installation and removal (available on SD32B/64B nPar systems only). Also provides support for parallel installation/removal/configuration on local containers (applicable only on HP-UX Containers [SRP] enabled systems).


- **Virtualization continuum**
  - **New: 9000 Containers:** Provides a mechanism to re-host the complete 9000 user space environment without the need to re-compile and re-install individual applications, and with minimal re-configuration and application inventory preparation effort. Hosts the transitioned 9000 environment inside a `chroot` directory. Uses HP-UX Containers (SRP) for isolated execution environments (containers) and HP ARIES dynamic binary translator as underlying execution layer. Provides two types of containers: 9000 system (file system isolation, multiple containers on same kernel); and 9000 classic (shared file system, trusted mode support). Added as an optional (selectable) product in all OEs. See HP 9000 Containers A.03.01 Release Notes at http://www.hpe.com/downloads/hp9000-containers.
  - **Virtual Server Manager (formerly Virtual Machines Manager):** Version 6.1 supports features provided by the HP-UX vPars and Integrity VM v6.1 product. Modified to include Virtual Partitions Manager GUI functionality for managing virtual machines and virtual partitions. Depending on the version of Integrity VM installed, Virtual Server Manager can manage either virtual machines or virtual partitions. Supports DIO features. See HP Integrity Virtual Server Manager 6.1 Release Notes and HP Integrity Virtual Server Manager 6.1 User Guide at http://www.hpe.com/info/matrixoe/docs.
  - **HP-UX Containers** (formerly HP-UX Secure Resource Partitions [SRP]): Version A.03.01.003 offers new features and enhancements to support multiple 9000 containers, create a new container by copying an existing one, configuring multiple IP addresses for a container using Container Manager, and support the `update-ux` command. See HP-UX Containers (SRP) A.03.01.001 Release Notes at http://www.hpe.com/info/hpux-srp-docs.
  - **HP-UX Virtual Partitions v5:** vPars manpages are updated to include content about changes in the Superdome 2 servers. Also delivers defect fixes for software and documentation. See HP-UX Virtual Partitions Release Notes A.05.09 at http://www.hpe.com/info/hpux-vpars-docs.
  - **New: HP-UX vPars and Integrity VM v6.1** (bundles BB068AA and VirtualBase): Brings together vPars and Integrity VM functionality in a single, common, easy-to-use management environment. Newly delivered in the VSE-OE and DC-OE.

**NOTE:**

The bundles T2767CC, T8718AC, VMGuestSW, VMKernelSW, HostAVIOStor, and HostAvioLan have been moved to BB068AA. The bundles VMSguestLib, VMProvider, GuestAVIOStor, and GuestAvioLan have been moved to VirtualBase.

- **Partition Manager:** Delivers defect fixes. See HP System Management Homepage 3.2.3 Release Notes at http://www.hpe.com/info/hpux-systemadmin-docs.

- **Utilization Provider for HP-UX 11i v3:** Updated to version A.01.08.06.02 to support the latest release of the Matrix Operating Environment (formerly Insight Dynamics - VSE for Integrity).

- **WBEM Services and Providers**

Documents for the following WBEM products are located at http://www.hpe.com/info/hpux-wbem-docs.
• WBEM Services for HP-UX: Version A.02.09.12 is a minor update that includes defect fixes. See HP WBEM Services Version A.02.09.12 Release Notes.
• HP-UX WBEM Fibre Channel Provider: FCPProvider now generates an indication when an HBA is removed and an fclp or fcoc driver instance is deleted. See HP-UX WBEM Fibre-Channel Provider Release Notes (5900-2053, March 2012).
• HP-UX WBEM IOTree Indication Provider: Delivers defect fixes. See HP-UX WBEM IOTree Indication Provider Release Notes.
• HP-UX WBEMP LAN Provider: Provides support for DIO with Broadcom 10-Gigabit Ethernet and Emulex CNA on the HP-UX vPars and Integrity VM v6.1 (and later) product. Enables events generated on the guest's DIO-configured functions to also be seen on the host. See HP-UX WBEMP LAN Provider Release Notes.
• HP-UX WBEM RAIDSA Provider: Starting with March 2012 release, I/O Providers except WBEMP-LAN provider, WBEMP-FCP Instance, and CSP will not run on guests of the HP-UX vPars and Integrity VM v6.1 product. See HP-UX WBEM RAIDSA Provider Release Notes.
• HP-UX WBEM SAS Provider: Delivers defect fixes. See HP-UX WBEM SAS Provider Release Notes.
• HP-UX WBEM SCSI Provider: Delivers defect fixes. See HP-UX WBEM SCSI Provider Release Notes.

March 2012 Release Notes, Disk and file management
- FileSystem-SRP: Updated to make fsdaemonvolume(1M) available inside System Container. Enhanced to support the deployment of Rational® Clearcase® on a system with HP-UX Containers enabled. See the product website at HPE Software Depot (enter the search term FileSystem-SRP).
- HP-UX Disks and File Systems (fsweb): Enhanced to ensure that the same minor number %s exists across all nodes while creating or distributing cluster VG. See HP System Management Homepage 3.2.3 Release Notes at http://www.hpe.com/info/hpux-systemadmin-docs.
- Veritas products


What is new
OnlineJFS (B3929GB): Version B.05.01.03 delivers defect fixes.

VxFS (Base-VxFS-501): Version B.05.01.03 delivers defect fixes. Now delivered as a required (always-installed) product.

VxVM (Base-VxVM-501 and Base-VxTools-501): Version B.05.01.04 delivers defect fixes. 

• New: VFS-LOCKF-ENH: Delivers an enhanced file segment lock kernel module, vfs_lock_enh, in the Virtual File System (VFS) layer to provide the 64-bit file segment lock feature and other enhancements. Added as an optional (selectable) product in all OEs. See HPE Software Depot (enter the search term VFS-LOCKF-ENH).

March 2012 Release Notes, Internet and networking


• HP-UX Web Server Suite


• HP-UX Apache-based Web Server: Primarily a defect fix and security release.

• HP-UX Tomcat-based Servlet Engine: Primarily a defect fix and security release.

• Network Interfaces Configuration and Network Services Configuration: Delivers defect fixes. See HP System Management Homepage 3.2.3 Release Notes at http://www.hpe.com/info/hpux-systemadmin-docs.

Also see related products listed under “March 2012 Release Notes, Security.”

March 2012 Release Notes, Security

Unless otherwise noted, documents for the following security products are located at http://www.hpe.com/info/hpux-security-docs. Select the link appropriate for the product.

• New: Restricted Root: Provides new security options that extend password and login policies to the root account. This shadow mode enhancement allows implementation of stricter security policies that were previously only available on trusted mode systems.

• HP-UX Role-Based Access Control: Version B.11.31.05.01 includes keystroke logging enhancements and fixes, 2 new manpages, and various other minor defect fixes. See HP-UX Role-Based Access Control B.11.31.05.01 Release Notes.

• HP-UX OpenSSL: Version A.00.09.08r for HP-UX 11i v3 is based on OpenSSL 0.9.8r and is mainly a defect-fix release. See OpenSSL A.00.09.08r Release Notes for HP-UX 11i v3.

Also see related products listed under “March 2012 Release Notes, Internet and Networking.”

March 2012 Release Notes, Commands and system calls

• insfvolume(1M) command: Enhanced to support device special files for the isoc and isq drivers. Will create device special files corresponding to these drivers under /dev, when appropriate device and driver combinations are found on the system.

• machinfovolume(1) command: Updated to list the minimum and maximum number of cores currently active from each socket, if those numbers are different across sockets. Will also report how many cores have threading enabled, if the multithreading setting differs across cores.

• PAX-ENH: Updated to version 11.31.13 to deliver defect fixes. See the product website at http://www.hpe.com/support/softwaredepot (use the search term PAX-Enh).

March 2012 Release Notes, Libraries and programming

• Java products

Documents for the following Java products are located at http://www.hpe.com/info/hpux-java-docs.

• JDK/JRE version 7.0.00: A new major version of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE), equivalent to the Oracle Java SE 7.0 release’s new features and
functionality, including Oracle Java SE 7 update 1, which incorporates defect and security fixes. See JDK/JRE 7.0.00 Release Notes. Note: JDK/JRE version 7.0.00 is delivered with the AR release only and is not currently included in the OEs.

- **JDK/JRE version 6.0.x**: Version 6.0.12 of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) have been updated to include the Oracle 6.0u25 and 6.0u26 releases' functionality and to incorporate defect and security fixes. See JDK/JRE 6.0.12 Release Notes.

- **JDK/JRE version 5.0.x**: Version 5.0.24 of the HP-UX 11i Java Development Kit (JDK) and Java Runtime Environment (JRE) have been updated to include the Oracle 5.0u29 and 5.0u30 releases' functionality and incorporate defect and security fixes. See JDK/JRE 5.0.24 Release Notes.

- **ObsB6848BA**: Removes the previous version of GTK+Libraries (B6848BA). The bundle B6848BA supported the Mozilla product, which is no longer supported by HP-UX 11i v3. The latest GTK Library (GTK) continues to support Firefox and Thunderbird, both of which are currently delivered in the HP-UX 11i v3 OEs.

- **Perl**: Equivalent to Open source 5.8.8 release functionality, including an enhancement and defect fixes. See Perl Release Notes at [http://www.hpe.com/info/perl](http://www.hpe.com/info/perl).

### March 2012 Release Notes, Internationalization

- There are no changes in March 2012 for the products or features that are normally documented in this section.

### March 2012 Release Notes, Other functionality

- There are no changes in March 2012 for the products or features that are normally documented in this section.

### What is new in the HP-UX 11i v3 September 2011 release

The following summaries provide a general picture of how the September 2011 release of HP-UX 11i v3 differs from March 2011 release of HP-UX 11i v3. For further information, see the indicated documents or the chapters in the HP-UX 11i Version 3 September 2011 Release Notes, available in its most current version at [http://www.hpe.com/info/hpux-core-docs-11iv3](http://www.hpe.com/info/hpux-core-docs-11iv3).

### September 2011 Release Notes, Hardware-specific information


- **Hardware Enablement Bundle for HP-UX 11i v3 (HWEnable11i)**: Includes new HP-UX 11i v3 patches for support of the latest Integrity systems with new Core I/O and chipsets. New patches were also added to support future hardware.


- **Networking and Mass Storage Drivers**
  - **10GigEthr-02**: Contains the iexgbe driver. Updated with quality improvements. For further information, including the products supported by this bundle, see 10GigEthr-02 (iexgbe) B.11.31.1109 Ethernet Driver Release Notes at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).
  - **10GigEthr-03**: Contains the icoxgbe driver. Updated with quality improvements. For further information, including the products supported by this bundle, see 10GigEthr-03 (icoxgbe) B.11.31.1109 Ethernet Driver Release Notes at [http://www.hpe.com/info/10-gigabit-ethernet-docs](http://www.hpe.com/info/10-gigabit-ethernet-docs).

What is new in the HP-UX 11i v3 September 2011 release
FibrChanl-01: Contains the driver fcd for use with Qlogic Fibre Channel HBAs. Updated with quality improvements. See FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.

FibrChanl-02: Contains the driver fclp for use with Fibre Channel HBAs. Updated with quality improvements. Note: HPE strongly recommends you update to the newest release of this product (currently available on the web), as it delivers an important fix. For more information, see FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.

FibrChanl-03: Contains the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Updated with quality improvements. Note: HPE strongly recommends you update to the newest release of this product (currently available on the web), as it delivers an important fix. For more information, see FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at http://www.hpe.com/info/hpux-iocards-docs.


IEther-00: Contains the iether driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see IEther-00 (iether) B.11.31.1109 Ethernet Driver Release Notes at http://www.hpe.com/info/gigabit-ethernet-100bt-cards-docs.

RAID-01: Contains the ciss driver, which supports HP Smart Array controllers. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see RAID-01 (ciss) B.11.31.1109 Mass Storage Driver Release Notes at http://www.hpe.com/info/smart-array-raid-docs.

SATADVD-00: Supports SATA DVD drives on Integrity servers. Updated to deliver performance improvements and to support new products.

scsiU320-00: Contains the mpt driver, which supports the HP A7173A PCI-X Dual Channel Ultra320 SCSI Host Bus Adapter and the HP AB290A PCI-X 2-Port U320 SCSI and 2-Port Gigabit Ethernet Combination Card. Updated with quality and performance improvements. See scsiU320-00 (mpt) B.11.31.1109 Mass Storage Driver Release Notes at http://www.hpe.com/info/scsi-hba-docs.

Utility Pricing Solutions

iCAP Manager: Updated to v6.3 to support HP Insight Dynamics - VSE for Integrity v6.3. See HP Insight Dynamics 6.3 Release Notes at http://www.hpe.com/info/insightdynamics-manuals. (Select HP Insight Dynamics Software.)

Instant Capacity: Updated to support future software.

September 2011 Release Notes, General system administration

Dynamic Root Disk (DRD): A DRD clone operation can now copy the AUTO file so that customizations are retained on the clone. This release also includes defect fixes and improved quality. See DRD Release Notes at http://www.hpe.com/info/drd-docs.


Insight managed system setup wizard: Supports new hardware and supports upgrading from previous releases of the wizard. See Insight Managed System Setup Wizard 7.0 Getting Started Guide at http://www.hpe.com/info/insightssoftware/docs.

New: HP Serviceguard Extension for RAC (formerly known as Serviceguard OPS Edition or MC/LockManager): Provides the framework for using Oracle Real Application Cluster (RAC) software with Serviceguard on 9000 and Integrity servers. Significantly improves the availability and simplifies the
management of Oracle Real Application Cluster (RAC). Allows you to integrate Oracle RAC into a Serviceguard cluster while also easily managing the dependency between Oracle Clusterware and Oracle RAC with a full range of storage management options, including the SG SMS Cluster File System. Newly delivered as an optional (selectable) product on the DC and HA OEs. For more information, see Using Serviceguard Extension for RAC, Serviceguard Extension for RAC Version A.11.20 Release Notes, HP Serviceguard/SGeRAC/SMS/ServiceguardMgr Plug-in Compatibility and Feature Matrix, and related SGeRAC white papers at http://www.hpe.com/info/hpux-serviceguard-docs. (Select HP Serviceguard Extension for RAC.)

• Serviceguard Storage Management Suite: For version A.04.00, two new patches, PHSS_41628 and PHSS_41674, have been released independently of the September 2011 OEUR and deliver new enhancements and critical defect fixes. See HP Serviceguard Storage Management Suite Version A.04.00 for HP-UX 11i v3 Release Notes at http://www.hpe.com/info/hpux-serviceguard-docs. (Select HP Serviceguard Storage Management Suite A.04.xx (with 5.1 SP1 Veritas).)

• Systems Insight Manager: Version 7.0 supports offline firmware upgrades, delivers new support for managing software and firmware versions using baselines, enhanced reporting, and support for HP Integrated Lights-Out version 4 (iLO4) and G8 servers, as well as other enhancements and improvements. See HP Systems Insight Manager 7.0 Release Notes at http://www.hpe.com/info/insightmanagement/sim/docs.

• HP-UX 11i v3 Feature Enablement (FEATURE11i): Updated with patches that enhance or provide new or improved core features. Improvements include performance improvements in the kernel, filesystem improvements, and support for new virtualization and security features.

• HP-UX 11i v3 Quality Pack Patch Bundles: Updated with additional defect-fix patches. In addition, patches for product versions that are older and do not exist in the September 2011 OE media have been removed.

• HP-UX Kernel Configuration (kcweb): The kcusage command now provides correct system-wide reporting of the maximum number of shared memory segments attached to a process.

• HP-UX Peripheral Devices Manager (pdweb): Delivers fixes for internally found issues.


• Ignite-UX: Version C.7.13 supports VxVM and VxFS 5.0.1; greater than 8 TB memory; and APA with LAN recovery on HP-UX 11i v2. Also delivers defect fixes. See Ignite-UX Release Notes at http://www.hpe.com/info/ignite-ux-docs.


• Software Distributor (SD): Updated to support HP-UX Containers (SRP). Two new options are introduced.

• System Fault Management (SFM): Enhanced to provide common error messages for sfmconfig command. Evweb is enhanced to include slot-id for IOTreeIndicationProvider in event details and to support effective UIDs with root access for sudo-based systems. See at http://www.hpe.com/info/hpux-diagnostics-sfm-docs SFM Release Notes.

1 IMPORTANT:
Starting from the HP-UX 11i v3 September 2011 release, HPE recommends you install all of the following products together to maintain compatibility among the diagnostic products: ProviderSvcsBase and System Fault Management, as well as the I/O Providers HP-UX WBEM RAIDSA Provider, HP-UX WBEM SAS Provider, HP-UX WBEM Fibre Channel Provider, and HP-UX WBEM Direct Attached Storage Provider (DASProvider).

• Virtualization continuum
• **Accelerated Virtual I/O (AVIO):** Delivers defect repairs. Note: HPE strongly recommends you update to the newest release of the AVIO-Storage product (HostAVIOStor/GuestAVIOStor), as it delivers important fixes. The release can be found on the web at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term Integrity VM AVIO).

• **Application Discovery Agent:** Updated to v6.3 to support HP Insight Dynamics - VSE for Integrity v6.3. See [HP Insight Dynamics 6.3 Release Notes](http://www.hpe.com/info/insightdynamics-manuals) at [http://www.hpe.com/info/insightdynamics-manuals](http://www.hpe.com/info/insightdynamics-manuals). (Select HP Insight Dynamics Software.)

• **Insight Dynamics - VSE for Integrity:** Version A.6.3.0 provides expanded hardware support and defect fixes. See at [http://www.hpe.com/info/insightdynamics-manuals](http://www.hpe.com/info/insightdynamics-manuals) HP Insight Dynamics 6.3 Release Notes. (Select HP Insight Dynamics - VSE (Matrix OE) for Integrity Servers.) For support information, see [HP Insight Software Support Matrix](http://www.hpe.com/info/insightdynamics-manuals). To check for a newer release of this product, see [HPE Software Depot](http://www.hpe.com/support/softwaredepot) (enter the search term Matrix Operating Environment). Insight Dynamics - VSE for Integrity delivers the Matrix Operating Environment for HP-UX. To learn how the Matrix Operating Environment for HP-UX can be used for advanced lifecycle management of your Integrity servers, see [http://www.hpe.com/info/matrixoe/docs](http://www.hpe.com/info/matrixoe/docs).

• **Integrity Virtual Machines Manager:** Version A.4.1.1.84593 release delivers defect fixes. See [HP Integrity Virtual Machines Manager 4.1.1 Release Notes](http://www.hpe.com/info/insightdynamics-manuals) at [http://www.hpe.com/info/insightdynamics-manuals](http://www.hpe.com/info/insightdynamics-manuals). (Select HP Insight Dynamics - VSE (Matrix OE) for Integrity Servers.)

• **Global Workload Manager:** Updated to v6.3 to support Insight Dynamics - VSE for Integrity v6.3. See [HP Insight Global Workload Manager 6.3 User Guide](http://www.hpe.com/info/insightdynamics-manuals) and [HP Insight Dynamics 6.3 Release Notes](http://www.hpe.com/info/insightdynamics-manuals). (Select HP Insight Dynamics Software.)

• **HP-UX Containers (formerly HP-UX Secure Resource Partitions [SRP]):** Version A.03.00 offers a new type of container: system container. It also offers Force-to-Wire networking. See [HP-UX Containers (SRP) A.03.00 Release Notes](http://www.hpe.com/info/hpux-srp-docs).

• **HP-UX nPartition Configuration Commands:** Includes Japanese localized manpages.

• **Utilization Provider for HP-UX 11i v3:** Updated to version A.01.08.06.01 to support the latest release of the Matrix Operating Environment (formerly Insight Dynamics - VSE for Integrity).

• **WBEM Services and Providers**

Documents for the following WBEM products are located at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

• **WBEM Services for HP-UX:** Version A.02.09.10 is a minor update that includes IRS support for WBEM Services and defect fixes. See [HP WBEM Services Version A.02.09.10 Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM Direct Attached Storage Provider (DASProvider):** Enhanced to support indications for errors logged by the drivers esct1 (generated by [HPUXESCSIIndicationProvider](http://www.hpe.com/info/hpux-wbem-docs)) and esdisk (generated by [HPUXESDISKIndicationProvider](http://www.hpe.com/info/hpux-wbem-docs)). See [HP-UX WBEM Direct Attached Storage Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM Fibre Channel Provider:** Delivers defect fixes. See [HP-UX WBEM Fibre Channel Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM IOTree Indication Provider:** Delivers defect fixes. See [HP-UX WBEM IOTree Indication Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM Kernel Providers:** Delivers defect fixes. See [HP-UX WBEM Kernel Providers Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEMP LAN Provider:** Delivers defect fixes. See [HP-UX WBEMP LAN Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM RAIDSA-PROVIDER:** Delivers defect fixes. See [HP-UX WBEM RAIDSA Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM SAS-PROVIDER:** Delivers defect fixes. See [HP-UX WBEM SAS Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **HP-UX WBEM SCSI Provider:** Delivers defect fixes. See [HP-UX WBEM SCSI Provider Release Notes](http://www.hpe.com/info/hpux-wbem-docs).

• **ProviderSvcsBase:** Updated with quality improvements. See [HP-UX ProviderSvcsBase Release Notes](http://www.hpe.com/info/hpux-wbem-docs) and [HP-UX ProviderSvcsBase Administrator Guide](http://www.hpe.com/info/hpux-wbem-docs).
September 2011 Release Notes, Disk and file management

- **New: FileSystem-SRP**: Delivers file system enhancements in the user and kernel space, which are required to support the HP-UX Containers (SRP) version A.03.00. Features include the following: VFS layer support for SRP; container-aware /etc/mttab driver; container-aware fuservolume(1M) and bdf volume(1M) utilities. Newly delivered as an **optional** (selectable) product on all OEs. See the product website at [HPE Software Depot](http://www.hpe.com/softwaredepot) (enter the search term FileSystem-SRP).

- **HP CIFS Server**: Version A.03.01.02, which is based on Samba 3.4.3, delivers defect and security fixes. Version A.03.01.02 supports the Microsoft Windows Server 2008 and 2008R2, Windows Vista, and Windows 7 operating systems. See [HP CIFS Server Release Notes version A.03.01.02](http://www.hpe.com/info/hpux-cifs-docs) at [http://www.hpe.com/info/hpux-cifs-docs](http://www.hpe.com/info/hpux-cifs-docs).

- **HP-UX Disks and File Systems (fsweb)**: Delivers fixes for customer-reported issues, as well as fixes for internally found issues.


- **Veritas products**
  

  - **New: OnlineJFS**: Version 5.0.1 (B3929GB) replaces version 5.0 (B3929FB). OnlineJFS 5.0.1 enables enhanced features including Concurrent I/O, 256 TB Filesystem support, Direct I/O, and more. Licenses for version 5.0 are no longer shipped and only 5.0.1 licenses are shipped as part of the DC-OE, VSE-OE, and HA-OE. OnlineJFS is a recommended (default-installed) product in those OEs.
  
  - **New: VxFS**: VxFS 5.0.1 (Base-VxFS-501) replaces VxFS 5.0 (Base-VxFS-50). VxFS 5.0.1 is a new release of VxFS, with new licenses and features. Provides new commands and features for managing files of increased sizes, and better optimization of storage resources. Delivered as a recommended (default-installed) product in all OEs. VxFS 5.0 is no longer shipped as part of the OEs.
  
  - **New: VxVM**: Version 5.0.1 (Base-VxVM-501) replaces VxVM 5.0 (Base-VxVM-50) and provides enhanced volume management features, improved cluster and node functionality, and additional multipathing capabilities. Delivered as an optional (selectable) product in all OEs. VxVM 5.0 is no longer shipped as part of the OEs.

September 2011 Release Notes, Internet and networking

- **BIND**: Version 9.3.2 delivers defect fixes. See the [BIND 9.3.2 Release Notes](http://www.hpe.com/info/hpux-networking-docs-11iv3).


- **HP-UX FTP Server (WU-FTPD)**: Delivers one defect fix. See [WU-FTPD 2.6.1 Release Notes](http://www.hpe.com/info/hpux-networking-docs-11iv3).

- **New: HPUX-Streams-SRP**: Delivers a kernel module to support new networking features of the HP-UX ContainmentPlus bundle (ContainmentExt B.11.31.03) and HP-UX Containers (SRP) version A.03.00. Newly delivered as an optional (selectable) product on all OEs. See the product website at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term HP-UX Streams SRP).

- **New: HPUX-Transport-SRP**: Delivers a kernel module to support new networking features of HP-UX ContainmentPlus bundle (ContainmentExt B.11.31.03) and HP-UX Containers (SRP) version A.03.00. Newly delivered as an optional (selectable) product on all OEs. See the product website at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term HP-UX Transport SRP).

- **HP-UX Web Server Suite**

- **HP-UX Apache-based Web Server**: Primarily a defect fix and security release.
- **HP-UX Tomcat-based Servlet Engine**: Primarily a defect fix and security release.
- **HP-UX Webmin-based Admin**: Primarily a defect fix release.
- **Network Interfaces Configuration and Network Services Configuration**: Delivers defect fixes.

Also see related products listed under “September 2011 Release Notes, Security.”

### September 2011 Release Notes, Security

Unless otherwise noted, documents for the following security products can be found at http://www.hpe.com/info/hpux-security-docs. Once there, select the link appropriate for the product.

- **HP-UX 11i Security Containment Extensions**: Version B.11.31.03 includes enhancements to support HP-UX Containers (SRP) A.02.00 and later. It also offers new syntax rules for the compartment configuration file, a new kernel parameter that defines the restrictions for the inter-compartment communications through Streams Local Transport drivers, more granularity on some of the fine-grained privileges, and fixes for known issues. See HP-UX Security Containment Extensions B.11.31.03 Release Notes.

- **HP-UX Auditing and Security Attributes Configuration (secweb)**: Delivers a defect fix.
- **HP-UX Auditing System Extensions**: Version B.11.31.04 (AuditExt V4.0) includes support for HP-UX Containers (HP-UX SRP) and enhanced auditdp command functionality. See HP-UX Auditing System Extensions V.11.31.04 Release Notes.
- **HP-UX Bastille**: Updated to version B.3.3.01 to support for HP-UX Containers (SRP) version A.03.00. See HP-UX Bastille Version B.3.3.01 Release Notes.
- **HP-UX IPFilter**: Version 18.0 for 11i v3 delivers defect fixes. See HP-UX IPFilter V18.0 Release Notes for HP-UX 11i v3.
- **HP-UX Secure Shell**: Version A.05.80 for HP-UX 11i v3 is based on OpenSSH 5.8p1 and is mainly a defect fix release. See HP-UX Secure Shell A.05.80 Release Notes for HP-UX 11i v3.
- **HP-UX OpenSSL**: Version A.00.09.08q for HP-UX 11i v3, based on OpenSSL 0.9.8q, mainly delivers defect fixes. See OpenSSL A.00.09.08q Release Notes for HP-UX 11i v3.
- **Kerberos Client (KRB5CLIENT)**: Version 1.6.2.09 delivers defect fixes. See Kerberos Client 1.6.2.09 Release Notes.

Also see related products listed under “September 2011 Release Notes, Internet and Networking.”

### September 2011 Release Notes, Commands and system calls

- **PAX-ENH**: Updated to version 11.31.11 to deliver defect fixes. See the product website at http://www.hpe.com/support/softwaredepot (use the search term PAX-Enh).

### September 2011 Release Notes, Libraries and programming

- **Dynamic System V Semaphore Tunables**: Version B.11.31.02 provides virtualization support for HP-UX Containers (SRP) A.03.00. See the product website at http://www.hpe.com/support/softwaredepot (enter the search term DynSysVSem).
- **Wildebeest Debugger (WDB)**: Version 6.2 includes the following new features: reporting of files open by an application; improved understanding of scope resolution operator in gdb expressions; smarter printing of function pointers; more intuitive leak reports; debugging with debug information available in the side debug file; support for mmapfile command See HP WDB 6.2 Release Notes at http://www.hpe.com/info/hpux-debugtools-docs.
- **HP-UX Linker and Libraries**: Provides the following enhancements: improved performance in Linker during procedure elimination; new feature in Linker to create distributed debug information; new feature in Linker to create separate debug information file; 64-bit pstack tool with new options and improvements to

- **JDK/JRE version 6.0.x**: Version 6.0.10 of the HP-UX 11i Java Development Kit (JDK) has been updated to include the Oracle 6.0u23 and 6.0u24 release's functionality and to incorporate defect and security fixes. See the JDK 6.0.10 Release Notes at http://www.hpe.com/info/hpux-java-docs.

- **JDK/JRE version 5.0.x**: Version 5.0.23 of the HP-UX 11i Java Development Kit (JDK) has been updated to include the Oracle 5.0u27 and 5.0u28 releases' functionality and incorporate defect and security fixes. See JDK 5.0.23 Release Notes at http://www.hpe.com/info/hpux-java-docs.

- **SDK/RTE version 1.4.x**: Version 1.4.2.27 of the HP-UX 11i Java Software Development Kit (SDK) has been updated to remove a known security risk. For more information about the fix, see http://www.oracle.com/technetwork/topics/security/alert-cve-2010-4476-305811.html. Note: SDK/RTE version 1.4.x is delivered with the AR release only and is not included in the OEs. SDK/RTE v 1.4.x is planned for future obsolescence. See HP-UX Java - End of Life Policy & Release Naming Terminology at http://www.hpe.com/info/hpux-java-docs.

### September 2011 Release Notes, Internationalization

- There are no changes in September 2011 for the products or features that are normally documented in this section.

### September 2011 Release Notes, Other functionality

- There are no changes in September 2011 for the products or features that are normally documented in this section.

### What is new in the HP-UX 11i v3 March 2011 release

The following summaries provide a general picture of how March 2011 release of HP-UX 11i v3 differs from the September 2010 release of HP-UX 11i v3. For further information, see the indicated documents or the chapters in the HP-UX 11i Version 3 March 2011 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3

#### March 2011 Release Notes, Hardware-specific information


- **Hardware Enablement Bundle for HP-UX 11i v3 (HWEnable11i)**: Provides support for new Integrity Server Blades, along with HP-UX support for older HPE servers using PA8900 processors or Intel Itanium processors. Includes new HP-UX 11i v3 patches for support of the latest Integrity systems with new Core I/O and chipsets. New patches were also added for >1TB LUN boot support, graphics monitors, and future I/O adapters. See HP Insight Control Release Notes at http://www.hpe.com/info/insightcontrol/docs. (Note: The HP-UX 11i Version 3 March 2011 Release Notes, Edition 2 incorrectly stated that version 6.3 of this product was delivered in March 2011 OEUR. The correct statement is that version 6.2 was delivered in March 2011 OEUR.)

- **Insight Control power management**: Version 6.2 includes support for discovery, monitoring, and control of HP Intelligent Power Distribution Unit (iPDU), discovery and power monitoring support from the Eaton Power Xpert Meters, and support for Integrity Superdome 2. See HP Insight Control Release Notes at http://www.hpe.com/info/insightcontrol/docs. (Note: The HP-UX 11i Version 3 March 2011 Release Notes, Edition 2 incorrectly stated that version 6.3 of this product was delivered in March 2011 OEUR. The correct statement is that version 6.2 was delivered in March 2011 OEUR.)

- **Networking and Mass Storage Drivers**
• **10GigEthr-02**: Contains the iexgbe driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see 10GigEthr-02 (iexgbe) B.11.31.1103 Ethernet Driver Release Notes at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs). Note: The latest version of the 10GigEthr-02 bundle contains critical updates to the iexgbe driver. To download this bundle, go to [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot). Search for 10GigEthr-02.

• **New: 10GigEthr-03**: Contains the iocxgbe driver. Added to all OEs as a recommended (default-installed) product. For further information, including the products supported by this bundle, see 10GigEthr-03 (iocxgbe) B.11.31.1103 Ethernet Driver Release Notes at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **FibrChanl-01**: Delivers the driver fcd for use with Fibre Channel HBAs. For information on specific changes in this release, see FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **FibrChanl-02**: Delivers the driver fclp for use with Fibre Channel HBAs. Note: HPE strongly recommends you update to the newest release of this product (currently available on the web), as it delivers an important fix. For more information, see FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **New: FibrChanl-03**: Delivers the driver fcoc for use with Fibre Channel Over Ethernet HBAs. Added to all OEs as a recommended (default-installed) product. Note: HPE strongly recommends you update to the newest release of this product (currently available on the web), as it delivers an important fix. For more information, see FibrChanl-03 (fcoc) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes. For information on supported cards, see the respective HP Fibre Channel Host Bus Adapter Support Matrix. Both documents are available at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).


• **RAID-01**: Contains the ciss driver, which supports Smart Array controllers. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see RAID-01 (ciss) B.11.31.1012 Mass Storage Driver Release Notes at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **SerialSCSI-00**: Contains the sasd driver, which supports the factory-integrated internal SAS controller on certain servers and the AH303A PCIe SC44Ge Host Bus Adapter. The CommonIO bundle is also required to support these controllers. Updated with quality and performance improvements. See SerialSCSI-00 (sasd) B.11.31.1103 Mass Storage Driver Release Notes at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **Mass Storage Stack**: Enhanced so that default hardware path aliases are automatically created. Update also delivers defect fixes. Two new white papers, “Hardware Path Aliasing in the Mass Storage Stack” and “The Effect of Device Replacement on Agile Device Files,” are available.

• Utility Pricing Solutions

March 2011 Release Notes, General system administration


- **Dynamic Root Disk (DRD):** Update includes the following: enhancement to drd sync to allow users to exclude files and directories, in addition to those described in `drd-syncvolume(1M)`, from the sync operation; ability to sync file system and volume group information; new FAQ entry in using DRD in a vPars environment. See Dynamic Root Disk A.3.8.* Release Notes at [http://www.hpe.com/info/drd-docs](http://www.hpe.com/info/drd-docs).

- **EMSWeb:** Delivers fixes for internally found defects.


- **Feature Enablement Patch Bundle (FEATURE11i):** Updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features. Includes performance improvements in the kernel, filesystem improvements, Internationalization improvements, and early support for new virtualization and security features.

- **High Availability Monitors (HA Monitors):** Version upgraded to A.04.20.31.07 to support the update of EMS A.04.20.31.07. HA Monitors has been deprecated. Post HP-UX 11i v3 release, HA Monitors will be replaced with Web-based Enterprise Management (WBEM) based providers. See High Availability Monitors Version A.04.20.31.07 Release Notes at [http://www.hpe.com/info/hpux-ha-monitoring-docs](http://www.hpe.com/info/hpux-ha-monitoring-docs).

- **Insight managed system setup wizard:** Supports new hardware and supports upgrading from previous releases of the wizard.

- **New: HP Operations Agent:** Version 11.00 helps you monitor the performance of systems in your environment by collecting system performance metrics. With its integration with HP Operations Manager (HPOM), the HP Operations Agent enables you to create a centralized monitoring environment that can be managed from the HPOM console. HP Operations Agent 11.00 includes the features of HP Performance Agent and HP GlancePlus. These products were formerly delivered in the GlancePlus Pak bundle, which is no longer included in the OEs and which will be removed upon update to March 2011. HP Operations Agent has been added as recommended (defaulted-installed) product on the HA-OE, DC-OE, and VSE-OE. See the HP Operations Agent release notes at [http://www.hpe.com/support/HP-OA](http://www.hpe.com/support/HP-OA).

- **HP Partitioning and Virtual Server Environment**
  - **Accelerated Virtual I/O (AVIO):** AVIO LAN provides support for AVIO local net (with HP-UX guest) and multiple local net. AVIO Storage provides support for 16 virtual CPUs (on Integrity Virtual Machines v4.3). AVIO LAN and Storage also deliver defect fixes. See HP Integrity Virtual Machines 4.3: Release Notes at [http://www.hpe.com/info/hpux-hpvm-docs](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Insight Dynamics - VSE for Integrity:** Version A.6.2.0 provides expanded hardware support, software enhancements, and defect fixes. See HP Insight Dynamics 6.2 Release Notes at [http://www.hpe.com/info/insightdynamics-manuals](http://www.hpe.com/info/insightdynamics-manuals). (Select HP Insight Dynamics Software.) To check for a newer release of this product, see HPE Software Depot (enter the search term Matrix Operating Environment).
  - **Virtual Machines:** Version 4.3 includes addition of support for HP-UX 11i v3 March 2011 VM Host and guest support, new Remote Console functionality, NVRAM edit utility, `hpvmhostgdev` script utility, and full support for ID-VSE Logical Server Management 6.2. Also includes a roll-up of patches released after the HP-UX 11i v3 September 2010 release. See HP Integrity Virtual Machines 4.3: Release Notes at [http://www.hpe.com/info/hpux-hpvm-docs](http://www.hpe.com/info/hpux-hpvm-docs).
  - **: Version 4.1.1 includes support for OpenVMS as a guest OS and use of JDK 6.0 for better performance. (Earlier versions of VM Manager used JDK 1.5. With this release, VM Manager requires what is new


- **HP-UX nPartition Configuration Commands:** Includes a new verbose option for the `parstatus` command (applicable only for Superdome 2 servers).

- **New:** **HP-UX Secure Resource Partitions (SRP):** Provides an environment for securely consolidating multiple application environments within a single image of the HP-UX 11i OS. SRP is a component of the Partitioning Continuum for HP-UX and offers high efficiency in resource utilization along with maximum flexibility and performance for customers seeking the benefits of workload consolidation. HP-UX SRP A.02.02 offers various new features including SRP Manager, a GUI that configures and manages HP-UX SRPs. Added to all OEs as an optional (selectable) product. See HP-UX Secure Resource Partitions A.02.02 Release Notes at [http://www.hpe.com/info/hpux-srp-docs](http://www.hpe.com/info/hpux-srp-docs).

- **HP-UX Virtual Partitions:** New features include support to update the vPars product from HP-UX 11i v2 and HP-UX 11i v3 to a mixed minor environment (Mixed Minor Version support), and the ability to set High Availability and alternate boot paths for vPars monitor from the MON prompt. See HP-UX Virtual Partitions Release Notes A.05.08 at [http://www.hpe.com/info/hpux-vpars-docs](http://www.hpe.com/info/hpux-vpars-docs).

- **Partition Manager (parmgr):** Delivers fixes for internally found defects.

- **Serviceguard Extension for Oracle E-Business Suite (T2260AA):** For March 2011 release, this product has been removed from the OEs. In September 2010, it was added to the OEs in error. See HP Serviceguard Extension for Oracle E-business Suite B.01.00 Release Notes at [http://www.hpe.com/info/hpux-serviceguard-docs](http://www.hpe.com/info/hpux-serviceguard-docs).


- **HP Serviceguard Toolkit for Oracle Data Guard (T2259AA):** For March 2011 release, this product has been removed from the OEs. In September 2010, it was added to the OEs in error. See HP Serviceguard Toolkit for Oracle Data Guard B.01.00 Release Notes at [http://www.hpe.com/info/hpux-serviceguard-docs](http://www.hpe.com/info/hpux-serviceguard-docs).

- **System Management Homepage:** Version 3.2.2 works with both Apache 2.0 and Apache 2.2, and provides a CLI-based option to configure the SSL Cipher Suite. Includes fixes for customer-reported problems and internally found issues. See HP System Management Homepage 3.2.2 Release Notes at [http://www.hpe.com/info/hpux-systemadmin-docs](http://www.hpe.com/info/hpux-systemadmin-docs).

- **Systems Insight Manager (HP SIM):** Version 6.0 introduces a series of exciting enhancements, including scalability which allows manageability up to 10,000 systems (up to 5,000 servers, with additional 5,000 management processors, VMS, and so on) when using Windows 64-bit. In addition, SIM provides enhanced reporting, including tables and graphs for easier access to SIM data; migration tool to transfer settings from a SIM 5.3x CMS to a SIM 6.0 CMS; a firmware update that integrates with HP SUM and provides agentless firmware upgrade for management processor and Onboard Administrator. See HP Systems Insight Manager Readme at [http://www.hpe.com/info/insightmanagement/sim/docs](http://www.hpe.com/info/insightmanagement/sim/docs).

- **HP-UX Accounts for Users and Groups (ugweb):** Includes a fix related to display of last login time. Also includes fixes for internally found defects.

- **HP-UX Kernel Configuration (kcweb):** A memory leak in kcmd is resolved, and internally found issues are fixed.

- **HP-UX Software Assistant:** When running SWA from the HP-UX command line, you will be prompted for your HPESC User ID and password if they have not been specified. The SWA manpages and
documentation have been updated. Also includes defect fixes. See HP-UX Software Assistant Release Notes at [http://www.hpe.com/info/swa-docs](http://www.hpe.com/info/swa-docs).


Starting with HP-UX 11i v3 March 2009, OnlineDiag (including STM) is in support mode and is not supported on newer platforms. SysFaultMgmt is the default monitoring mode on both older and newer platforms. For more information, see [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).

- **PropPlus (SysMgmtPlus)**: Enhanced to provide a way to support Memory Info Tool Functionality observed in the system. See SysMgmtPlus Release Notes at [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).

- **ProviderSvcsBase**: In version C.05.00, the -timer option is enhanced to indicate duration of a test even if the routine time is less than the value specified in the option. See HP-UX ProviderSvcsBase Release Notes and HP-UX ProviderSvcsBase Administrator Guide at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

- **Quality Pack Patch Bundles**: Updated for March 2011 release.

- **Software Distributor**: Updated to support Secure Resource Partitions (SRP) v3. Delivers defect fixes.

- **System Fault Management**: Updated to revision C.07.03.xx.yy. Enhanced to support memory info tool, improved processor cache error handling, DPR event per core, enhanced event details with decoded physical location, and information of all fans on rx2660 system. Enhanced eventviewer, logviewer of evweb, and emtui. See SFM Release Notes at [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).

- **WBEM Services and Providers**
  - WBEM Services for HP-UX: Version A.02.09.06 delivers defect fixes, and wbemassist command is enhanced to provide WBEM Providers and WBEM Services compatibility information. See HP WBEM Services Version A.02.09 Release Notes at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

March 2011 Release Notes, Disk and file management


- **HP-UX Disks and File Systems (fsweb)**: A few internally found issues are fixed.

• **Network Interfaces Configuration and Network Services Configuration**: Delivers fixes for internally found issues.

**March 2011 Release Notes, Internet and networking**

• **HP-UX Web Server Suite**
  ▪ **HP-UX Apache-based Web Server**: `hpuxwsapache` has been replaced by `hpuxws22apache` (Apache 2.2.15.04), which combines Apache with numerous popular modules from other Open Source projects and provides HPE value-added features for the HP-UX platform. See HP-UX Apache-based Web Server v.3.14 release notes at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term HP-UX Apache).
  ▪ **HP-UX Tomcat-based Servlet Engine**: `hpuxwsTomcat` has been replaced by `hpuxws22Tomcat`, which provides Java-based extensions for dynamic content generation via Servlets and JavaServer Pages (JSPs). See HP-UX Apache-based Web Server v.3.14 release notes at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term HP-UX Apache).
• **LDAP-UX Integration**: Version B.05.01 offers the following new features introduced with B.05.00, plus enhancements and bug fixes: SSH host key management, guided installation mode (for simplified, automated configuration), host management tools, IPv6 support, and local-only configuration. In addition, the LDAP-UX Client Services B.05.01 Administrator Guide consolidates into one source information for integrating LDAP-UX with both HP directory servers and Windows ADS. See the LDAP-UX Integration B.05.01 Release Notes at [http://www.hpe.com/info/hpux-LDAP-docs](http://www.hpe.com/info/hpux-LDAP-docs).

Also see related products listed under “Security.”

**March 2011 Release Notes, Security**

• **HP-UX Auditing System Extensions**: Version B.11.31.03.01 provides improved performance, improved quality of audit data, a fine-tuned set of auditible events, cost reduction to manage the audit log data, ability to extract useful data through CLI, and the ability to generate web-based audit reports. Also includes several problem fixes. See HP-UX Auditing System Extensions B.11.31.03.01 Release Notes at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs). (Select HP-UX Security Products and Features Software.)
• **HP-UX IPFilter**: Version 17.05 is a TCP/IP packet filter suitable for use as a system firewall to protect application servers. See HP-UX IPFilter v17.05 Release Notes at [http://www.hpe.com/info/hpux-security-docs](http://www.hpe.com/info/hpux-security-docs).
• **HP-UX IPSec**: Version A.03.00.01 enhances the `ipsec_config add csr` command to accept multiple values for each type of alternative name specified in the `subjectAlternativeName` field of a certificate. Without this enhancement, if IPSec is being used with the Secure Resource Partitions (SRP) product, then each SRP would have to use the same ID when authenticating. See HP-UX IPSec A.03.00.01 Release Notes at [http://www.hpe.com/info/hpux-ipssec-docs](http://www.hpe.com/info/hpux-ipssec-docs).
• OpenSSL: Version 0.9.8o delivers defect fixes. See OpenSSL 0.9.8o Release Notes at http://www.hpe.com/info/hpux-openssl-docs.

Also see related products listed under "Internet and Networking."

March 2011 Release Notes, Commands and system calls

- efi_rmvolume(1M) command: Enhanced to recover free space in the EFI volume of the EFI file system.
- fcntlvolume(2) system call: Enhanced to close multiple file descriptors at one time.
- pollvolume(2) system call: Updated so that, if there is no writer at the other end of pipe or fifo, pipe and fifo file descriptors wait in the pollvolume(2) system call. Upon detecting the termination of a writer, POLLHUP conditions are set in the return condition of the pollvolume(2) system call.
- pstat_getpathnamevolume(2) system call: Enhanced to increase the possibility of returning the pathname of a file.
- renamevolume(2) and unlinkvolume(2) system calls: Enhanced so they no longer return an ETXTBSY error when invoked on an executing file. To maintain compatibility with existing applications, the kernel variable mvrm_txtbsy_off can be set to 0 by using adb volume(1) to return ETXTBSY.
- selectvolume(2) system call: Enhanced to make use of the high resolution timer when the nfds argument for the command is greater than 0. Enabled through the tunable hires_timeout_enable.

March 2011 Release Notes, Libraries and programming

- JDK/JRE version 6.0.09: Is a new version of the HP-UX 11i Java Development Kit (JDK) 6.0.x that has been updated to include the Oracle 6.0u22 release’s functionality and incorporate defect and security fixes. Additionally, an experimental version of G1 is provided (initially supported in our 6.0.08 release). JDK 6.0.09 Release Notes at http://www.hpe.com/info/hpux-java-docs or http://www.hpe.com/info/hpux-java-docs.x.
- JDK/JRE version 5.0.21: Is a new version of the HP-UX 11i Java Development Kit (JDK) 5.0.x that has been updated to include the Oracle 5.0u25 and 5.0u26 releases’ functionality and incorporate defect and security fixes. See JDK 5.0.21 Release Notes at http://www.hpe.com/info/hpux-java-docs or http://www.hpe.com/info/hpux-java-docs.
- SDK/RTE version 1.4.2.x: Not included on the OE media. It is available on the AR media and for download from http://www.hpe.com/info/Java.
- SDK/RTE 1.3: Has reached end-of-life and is not included in this release.

March 2011 Release Notes, Internationalization

- Chinese GB18030 Locale Method: Provides conversion support between multibyte file code and internal wide character process code for the Chinese zh_CN.gb18030 locale.
- Iconv codeset conversion: New iconv converters are added to support the conversion of the eucJP2004 character set encoding to and from the SJIS2004 character set encoding, both of which are encodings that support the Japanese JIS X 0213:2004 character set standard.

Other functionality

- There are no changes in March 2011 for the products or features that are normally documented in this section.

What is new in the HP-UX 11i v3 September 2010 release

The following summaries provide a general picture of how the September 2010 release of HP-UX 11i v3 differs from March 2010 release of HP-UX 11i v3. For further information, see the indicated documents or chapters in the HP-UX 11i Version 3 September 2010 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3

September 2010 Release Notes, Hardware-specific information
• **CommonIO**: Packages multiple products which support SAS and Fibre Channel adapters, and is always installed. Updated with quality and performance improvements. See the *HP CommonIO B.11.31.1009 Release Notes* at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i)**: Provides support for new Integrity Server Blades, along with HP-UX support for older HPE servers using PA8900 processors or Intel Itanium processors. New HP-UX 11i v3 patches for support of the latest Integrity systems with new Core I/O and chipsets, as well as for support of the AMD/ATI FireMV 2250 graphics adapter and future I/O adapters.

• **Mass Storage Stack**: Storage manageability is enhanced with the Storage Enclosure Framework feature. Also included are defect fixes.

• **Networking and mass storage drivers**
  - **FibrChanl-01**: Contains the `fcd` driver. Updated with quality improvements. For further information, see *FibrChanl-01 (fcd) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes* (p/n 5991-0460). For information on supported cards, see *HP Fibre Channel (fcd and fclp) Host Bus Adapter Support Matrix*. Both documents are at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
  - **FibrChanl-02**: Contains the `fclp` driver. Updated with quality improvements. For further information, see *FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes* (p/n 5991-0462). For information on supported cards, see *HP Fibre Channel (fcd and fclp) Host Bus Adapter Support Matrix*. Both documents are at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
  - **10GigEthr-02**: Contains the `iexgbe` driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see *10GigEthr-02 (iexgbe) B.11.31.1003 Ethernet Driver Release Notes* at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
  - **IEther-00**: Contains the `iether` driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see *IEther-00 (iether) B.11.31.1009 Ethernet Driver Release Notes* at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
  - **RAID-01**: Contains the `ciss` driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see *RAID-01 (ciss) B.11.31.1009 Mass Storage Driver Release Notes* at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).
  - **SerialSCSI-00**: Contains the `sasd` driver. Updated with quality and performance improvements. For further information, including the products supported by this bundle, see *SerialSCSI-00 (sasd) B.11.31.1009 Mass Storage Driver Release Notes* at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **Utility Pricing Solutions**
  - **iCAP Manager**: Version 6.0.1 contains defect fixes. See *HP Insight Dynamics 6.0.1 Release Notes* at [http://www.hpe.com/info/insightdynamics-manuals](http://www.hpe.com/info/insightdynamics-manuals). (Click *HP Insight Dynamics Software*.)

September 2010 Release Notes, General system administration

• **Dynamic Root Disk (DRD)**: Improvements to DRD synchronization, support for LVM 2.2 root volume groups, support in `drd runcmd` for `kmodule`, `kconfig`, and `mk_kernel`. Plus a new white paper to help with migration to the new Integrity server family. See *Dynamic Root Disk A.3.6.* Release Notes at [http://www.hpe.com/info/drd-docs](http://www.hpe.com/info/drd-docs).

• **Enterprise Cluster Master Toolkit**: Version B.06.00 includes support for Serviceguard A.11.19 and A.11.20, Apache 2.2, Virtual Machines 4.1 and 4.2, Oracle 11g R2, IPv6, Dynamic Root Disk (safe and useful) environments, multiple listeners in the Oracle toolkit, and alert notification. See *Enterprise Cluster Master Toolkit B.06.00 Release Notes* at [http://www.hpe.com/info/hpux-serviceguard-docs](http://www.hpe.com/info/hpux-serviceguard-docs).

• **Event Monitoring Services (EMS)**: Includes fixes for internally found issues. EMS has been deprecated. Post HP-UX 11i v3 release, EMS will be replaced with Web-based Enterprise Management (WBEM) based solutions. See *Event Monitoring Service Version A.04.20.31.06 Release Notes* at [http://www.hpe.com/info/hpux-ha-monitoring-docs](http://www.hpe.com/info/hpux-ha-monitoring-docs).
- **Feature Enablement Patch Bundle (Feature11i)**: Includes performance improvements in scheduling and boot time, filesystem improvements, Internationalization improvements, and support for HP-UX.

- **High Availability Monitors (HA Monitors)**: Upgraded to A.04.20.31.06 to support the update of Event Monitoring Service (EMS) A.04.20.31.06. HA Monitors has been deprecated. Post HP-UX 11i v3 release, HA Monitors will be replaced with Web-based Enterprise Management (WBEM) based providers. See [High Availability Monitors Version A.04.20.31.06 Release Notes](http://www.hpe.com/info/hpux-ha-monitoring-docs).

- **GlancePlus Pak**: Performance Agent version 5.00 includes the RC enhancement feature and supports only http(s) data communication. GlancePlus version 5.00 introduces a daemon (`perfd`) and a set of clients (`cpsh`, `padv`, and `mpadv`) to access data locally and remotely. See the [HP GlancePlus 5.00 Release Notes](http://www.hpe.com/support/HP-OA) and [HP Performance Agent 5.00 Release Notes](http://www.hpe.com/support/HP-OA). (These documents are no longer available in `/opt/perf/ReleaseNotes/`.)

- **HP Partitioning and Virtual Server Environment**
  - **Accelerated Virtual I/O (AVIO)**: AVIO LAN and AVIO storage support Suspend/Resume (on Integrity Virtual Machines v4.2.5) and deliver defect fixes. AVIO LAN supports VLAN backed vSwitch in the HostAVioLAN driver (on Integrity Virtual Machines v4.2.5), and AVIO storage supports Mass Storage Critical Resource Analysis in the HostAvioStor driver. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Insight Dynamics - VSE for Integrity (A.6.0.1)**: Provides defect fixes for the components Application Discovery, Capacity Advisor, Integrity VM Manager, and Logical server management. All other components updated only to incorporate packaging changes. See [HP Insight Dynamics 6.0 Release Notes](http://www.hpe.com/info/insightdynamics-manuals), February 2010, Edition 2. (Click HP Insight Dynamics Software.) You are encouraged to check for a newer release of this product at the [HPE Software Depot](http://www.hpe.com/) (enter the search term Matrix Operating Environment). Note that newer servers require the latest version of Insight Dynamics from the web.
  - **Virtual Machines v4.2.5**: Addition of OpenVMS guest support, HP-UX 11i v3 September 2010 VM Host and guest support, and new suspend and resume functionality. Support for the latest Integrity systems based on the Intel Itanium 9300 Processor. Also includes a roll-up of patches released after the HP-UX 11i v3 March 2010 release. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Virtual Machines OVMM**: Updated to include defect fixes. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Virtual Machines VMGuestLib**: Subset of the Virtual Machines API Library used by WBEM Provider. Updated to incorporate defect fixes. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Virtual Machines VMGuestSW**: Updated to incorporate defect fixes. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **Virtual Machines VMPProvider**: Updated to include defect fixes. See [HP Integrity Virtual Machines 4.2.5: Release Notes](http://www.hpe.com/info/hpux-hpvm-docs).
  - **HP-UX nPartition Configuration Commands**: Extends support to newer servers. See [HP Superdome 2 Partitioning Release Notes](http://www.hpe.com/info/hpux-npars-docs). (Click HP-UX 11i v3 and go to the Getting Started category.) To obtain PHCO 41171 11.31 nPartition Japanese manpages cumulative patch, go to the HPE Support Center ([hpesc](http://www.hpe.com/support/hpesc)).
  - **Partition Manager**: Extends support to newer servers. See [HP Superdome 2 Partitioning Release Notes](http://www.hpe.com/info/hpux-npars-docs). (Click HP-UX 11i v3 and go to the Getting Started category.)
  - **Utilization Provider**: Updated to version A.01.08.05.02 to support HP Insight Dynamics version 6.0.1.
  - **Serviceguard**: Updated to version A.11.20. Ease-of-use improvements include the following: easy configuration from the command line or Serviceguard Manager; new cluster verification capabilities; cluster...
or node maintenance while the applications remain up and running; cluster-wide device special files
(required A.11.20 plus patch). Support for NFS-imported file systems as package storage. See HP

- **New: Serviceguard Extension for Oracle E-business Suite B.01.00**: Provides high availability to Oracle
  E-business Suite in a Serviceguard cluster. Newly added to the High Availability and Data Center OEs.
  Includes support for Serviceguard A.11.19 and A.11.20, Oracle 11g R2, and high availability for databases
  and the application tier. See HP Serviceguard Extension for Oracle E-business Suite B.01.00 Release

- **Serviceguard NFS Toolkit**: IPv6 support is enabled. Also includes defect fixes. See Serviceguard NFS

- **New: Serviceguard Toolkit for Oracle Data Guard B.01.00**: Ensures high availability for Data Guard
  processes, provides disaster protection and recovery for Oracle databases and the applications that use
  these databases. Newly added to the High Availability and Data Center OEs. Includes support for
  Serviceguard A.11.19 and A.11.20, Single instance and Oracle RAC databases, Data Guard in
  Continentalclusters and Metrocluster environments, and Oracle 11g R2. See HP Serviceguard Toolkit for
  Oracle Data Guard B.01.00 Release Notes at http://www.hpe.com/info/hpux-serviceguard-docs.

- **System Management Homepage**: Version 3.2.1 works with both Apache 2.0 and Apache 2.2. Includes
  fixes for customer-reported problems and internally found issues. See HP System Management

- **Systems Insight Manager**: Version 6.0 introduces a series of exciting enhancements. Scalability which
  allows manageability up to 10,000 systems (up to 5,000 servers, with additional 5,000 management
  processors, VMS, and so on) when using Windows 64-bit. Enhanced reporting including tables and graphs
  for easier access to Systems Insight Manager data; migration tool to transfers settings from a SIM 5.3x
  CMS to a SIM 6.0 CMS; a firmware update that integrates with HP Smart Update Manager and provides
  agentless firmware upgrade for management processor and Onboard Administrator. For the complete list
  of what is new, see the HP Systems Insight Manager Readme at the HP SIM 6.x Information library: http://

- **HP-UX Accounts for Users and Groups (ugweb)**: Includes fixes for internally found defects.
- **HP-UX Kernel Configuration (kcweb)**: Includes fixes for a customer-reported problem and internally
  found issues.
- **HP-UX Peripheral Devices Manager tool (pdweb)**: Includes fixes for internally found issues.
- **HP-UX Software Assistant**: Version C.02.50 has performance improvements and defect fixes. See HP-

**Ignite-UX**: Includes pre-enablement for future VxVM versions and support for new HP-UX hardware and

- **Insight managed system setup wizard**: Version A.6.0.1 supports new hardware and supports upgrading
  from previous releases of the wizard.

- **Network Interfaces Configuration and Network Services Configuration**: Includes fixes for internally
  found issues.

- **Online Diagnostics**: Several monitors will be replaced by corresponding native providers, which will be
  available on newer servers. Starting with HP-UX 11i v3 March 2009 release, OnlineDiag (including STM) is
  in support mode. OnlineDiag is not supported on newer platforms, and SysFaultMgmt is the default
  monitoring mode on both older and newer platforms. See EMS Release Notes for HP-UX 11i v3
  www.hpe.com/info/hpux-diagnostics-online-docs.

- **PropPlus (SysMgmtPlus)**: Displays HP Systems Insight Manager (HP SIM) compatible overall systems
  status on HP SMH. Enhanced support for the following new and updated property pages in HP SMH (see
  hpsmh volume(1M)): Blade; Memory; Cell Blade. See SysMgmtPlus Release Notes at http://
  www.hpe.com/info/hpux-diagnostics-online-docs.

- **ProviderSvcsBase**: Health test command line enables -runtest and -runtest -a commands to
  support configurable options -loop, -timer, -log, -error and -stress. Similar functionality offered by
diaglogd daemon (in the OnlineDiag bundle), will be obsoleted and provided by the oserrorlogd daemon
info/hpux-wbem-docs.
• **Quality Pack Patch Bundles**: Updated for the September 2010 release.

• **Software Distributor (SD)**: Includes defect fixes. See [http://www.hpe.com/info/sd-docs](http://www.hpe.com/info/sd-docs).

• **System Fault Management (SFM)**: Updated to revision C.07.01.xx.yy with additional support for more robust inventory and error handling on newer platforms. Switching between SFM and EMS modes is not available on newer platforms. Enhanced to support the following new and updated property pages in HP SMH (see hpsmhvolume(1M)): Blade; Memory; Cell Blade. See SFM Release Notes at [http://www.hpe.com/info/hpux-diagnostics-online-docs](http://www.hpe.com/info/hpux-diagnostics-online-docs).

• **New: Tunable for aggressive kernel memory caching**: Provides tunable `kmem_aggressive_caching` to give you control over the caching and pre-allocation of kernel memory pages.

• **Update-UX and SW-GETTOOLS**: Delivers defect fixes.

• **WBEM Services and providers**
  - **WBEM Services for HP-UX**: Version A.02.09.04 is a minor update to the WBEM Services version A.02.09 that was released with HP-UX 11i v2 and 11i v3 in September 2009. Includes defect fixes. Starting with September 2009, WBEM Services version A.02.09 is not available on HP-UX 11i v1. Only defects that are critical in nature will be addressed on HP-UX 11i v1 systems. See HP WBEM Services Version A.02.09 Release Notes at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).
  - **HP-UX WBEM Fibre Channel Provider**: Not supported on HPVM guest OS. Indication provider supports System GUID and Network address properties. Includes defect fixes. As OnlineDiag is not supported on newer platforms, the `dm_fclp_adapter` and `dm_ql_adapter` monitors used by Fibre Channel Indication provider will be replaced by HPUXFCNativeIndicationProviderModule on newer servers. See HP-UX WBEM Fibre Channel Provider Release Notes at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).
  - **HP-UX WBEM SAS Provider**: Not supported on HPVM guest OS. Indication provider supports System GUID and Network address properties. Includes defect fixes. As OnlineDiag is not supported on newer platforms, the `dm_sas_adapter` monitor used by SAS Indication provider on newer servers will be replaced by HPUXSASNativeIndicationProviderModule. See HP-UX WBEM SAS Provider Release Notes at [http://www.hpe.com/info/hpux-wbem-docs](http://www.hpe.com/info/hpux-wbem-docs).

September 2010 Release Notes, Disk and file management

• **HP-UX Disks and File Systems (`fsweb`)**: `disklist` command is now fixed to display a disk as “Used” if the volume group configured on it is deactivated. A few internally found issues are fixed.

• **Logical Volume Manager (LVM)**: Provides the automatic increase of pre-allocated extents when the threshold value is reached for space-efficient snapshots; enables you to change the size and mirror count...
of an original logical volume on a snapshot tree; optimizes resynchronization I/Os of snapshot mirrors by resynchronizing only the unshared units of the extents. See HP-UX Logical Volume Manager and MirrorDisk/UX Release Notes at http://www.hpe.com/info/hpux-LVM-VxVM-docs.

- **Veritas Products (VxFS and VxVM)**: All new Integrity systems based on the Intel® Itanium® 9300 Processor are supported with VxFS and VxVM version 5.0 (and later) on HP-UX 11i v3. These systems are not supported with VxFS and VxVM version 4.1.

**September 2010 Release Notes, Internet and networking**

- **HP-UX Web Server Suite**
  - New: **HP-UX Apache-based Web Server**: hpuxwsApache has been replaced by hpuxws22Apache (Apache 2.2.8.09), which combines Apache with numerous popular modules from other Open Source projects and provides HPE value-added features for HP-UX. See HP-UX Apache-based Web Server v. 3.09 Release Notes at http://www.hpe.com/support/softwaredepot (enter the search term HP-UX Apache).
  - New: **HP-UX Tomcat-based Servlet Engine**: hpuxwsTomcat has been replaced by hpuxws22Tomcat, which provides Java-based extensions for dynamic content generation through Servlets and JavaServer Pages (JSPs). See HP-UX Apache-based Web Server v.3.08 Release Notes at the preceding website.
  - New: **HP-UX Webmin-based Admin**: hpuxwsWebmin has been replaced by hpuxws22Webmin (A. 1.070.11), which is a Configuration and Administration GUI with extensive enhancements for the HP-UX Apache-based Web Server. See HP-UX Apache-based Web Server v.3.08 Release Notes at the preceding website.
- **Service Location Protocol (SLP)**: Packaging updated.

**September 2010 Release Notes, Security**

- **HP-UX Auditing and Security Attributes Configuration (secweb)**: Includes fixes for internally found defects.
- **OpenSSL**: Versions A.00.09.07m and A.00.09.08n contain defect fixes. See OpenSSL A.00.09.08n.001, A.00.09.08n.002, and A.00.09.08n.003 Release Notes at http://www.hpe.com/info/hpux-openssl-docs.

**September 2010 Release Notes, Commands and system calls**
• **New: io_cdsf_config volume(1M) command and iocdsfdvolume(1M) daemon**: Together with HP Serviceguard A.11.20, this set supports the ability to create cluster-wide device-special files across a Serviceguard cluster.

• **New: Cluster Device Special Files (cDSF)**: Included in the FEATURE11i patch bundle, the introvolume(7) manpage patch (PHCO_41169) describes the cluster DSF feature provided by the new io_cdsf_configvolume(1M) patch (PHCO_40899).

• **ioscanvolume(1M)**: The -m option has been enhanced to accept new keywords resourcepath and cluster_dsf.

### September 2010 Release Notes, Libraries and programming

• **JDK/JRE version 6.0.06**: New version of the HP-UX 11i Java Development Kit (JDK) 6.0.x that has been updated to include the Sun 6.0u17 release's functionality and incorporate defect and security fixes. NUMA Collector enhancements, ThreadDumpPath support, and a fix for the Transport Layer Security renegotiation issue are also provided. See JDK 6.0.06 Release Notes at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

• **JDK/JRE version 5.0.19**: New version of the HP-UX 11i Java Development Kit (JDK) 5.0.x that has been updated to include the Sun 5.0u21 and 5.0u22 releases' functionality and incorporate defect and security fixes. ThreadDumpPath support is also provided. See JDK 5.0.19 Release Notes at [http://www.hpe.com/info/hpux-java-docs](http://www.hpe.com/info/hpux-java-docs).

• **SDK/RTE version 1.4.2.x**: Not included on the OE media. Available on the AR media and for download from [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term Java 1.4.2).

### September 2010 Release Notes, Internationalization

• There are no changes in September 2010 for the products or features that are normally documented in this chapter.

### September 2010 Release Notes, Other functionality

• **HP-UX Parallel Umounts (UmountallEnh)**: Updated to incorporate a defect fix. See the UmountallEnh webpage at [http://www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot) (enter the search term HP-UX Parallel Umounts).

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### What is new in the HP-UX 11i v3 March 2010 release


**March 2010 Release Notes, Chapter 2: “Introduction to HP-UX 11i version 3”**

• **New**: Software Pack (Optional HP-UX 11i v3 Core Enhancements): New products (HP-UX LongPassword for HP-UX 11i v3 and trufgrep volume(1) command) are available in the Operating Environments as optional (selectable) features.

**March 2010 Release Notes, Chapter 4: “Hardware-specific information”**

• **CommonIO**: Updated with quality improvements.

• **Hardware Enablement Bundle for HP-UX 11i v3 (HWEnablelli)**: Provides support for new PCI-Express I/O adapters in Integrity Servers, and HP-UX support for HPE servers using PA8900 processors or latest Intel Itanium processors. Also includes new HP-UX 11i v3 patches for support of newer Integrity systems with new Core I/O and chipsets, as well as new patches for newer I/O adapters and improvements for newer platforms.

• **New**: Insight Control power management: A component of Insight Control, it is an HP Systems Insight Manager (HP SIM) plug-in application that provides centralized monitoring and control of server power consumption and thermal output, sets power regulation policies for groups of servers, and optimizes and controls usage of data center power and cooling facilities. Newly added as an optional product.
• **New:** Mass Storage Stack: Storage manageability is enhanced with the new hardware path aliasing feature.

• Networking and storage drivers
  - 10GigEth-00: Updated with quality improvements.
  - 10GigEth-01: Updated with quality improvements.
  - 10GigEth-02: Updated with quality improvements.
  - FibreChan-00: Delivers defect fixes.
  - FibreChan-01: Updated with quality improvements.
  - FibreChan-02: Updated with quality improvements.
  - GigEther-00: As part of the performance improvements in RC scripts for improved reboot time, the igelan RC script has been enhanced for reducing the time it takes in startup path.
  - IB4X-00: Delivers defect fixes.
  - IEther-00: Updated with quality improvements.
  - RAID-01: Updated with quality improvements.
  - SerialSCSI-00: Updated with quality improvements.

• Instant Capacity: Version B.11.31.09.03.00 delivers defect fixes.

• The iCAP Manager: Version A.6.0.0. provides additional detail in the core-activation wizard messages, in addition to fixes for internally found defects.

March 2010 Release Notes, Chapter 5: “General system administration”

• Boot time improvement (RCEnhancement): Supported by new patches in the FEATURE11i bundle, as well enhancement of several OE products.

• Dynamic Root Disk: Version B.11.31.A.3.5.x introduces the ability to synchronize the clone with the running system.

• Electronic delivery of HP-UX 11i v3: In March 2010, electronic delivery of HP-UX 11i v3 includes Americas, Europe, Middle East, and Asia.

• EMSWeb: Delivers defect fixes.

• Event Monitoring Services: Delivers defect fixes.

• Feature Enablement Patch Bundle (FEATURE11i): Updated with patches that enhance or provide new core features (including performance improvements) and enable support for improved boot time. Includes performance improvements in scheduling, long password enhancement, Internationalization improvements, and many other enhancements.

• High Availability Monitors: Upgraded to A.04.20.31.05 to support the update of Event Monitoring Services (EMS).

• Caliper performance analyzer: Version 5.2 delivers several enhancements, including PMU services library (hpmlib) enhancements to support JVM and SAX requirements; pstack-like functionality from caliper cstack; cstack usability improvements - selective kernel stack unwinding; and more.

• Caliper (HP ktracer): Includes improved system reliability while running ktracer; support for kernel tracing on new Integrity platforms; easier selection of functions; trace reports that can show more parameters, providing greater insight to system activity.

• GlancePlus Pak: Version 4.70 is unchanged on OE media. Version 5.00 is available on the Application Software media and includes the following: RCEnhancement feature, which can improve boot time; clients to access data locally and remotely using new perf daemon; changes to support of other products and modes of data communication.

• HP Partitioning and Virtual Server Environment
  - Accelerated Virtual I/O (AVIO): AVIO LAN – Includes defect fixes and added support for Guest VLANs (on Integrity VM 4.2 systems). HostAvioLan bundle now delivered only in the VSE-OE and DC-OE. AVIO Storage – Includes defect fixes. HostAvioStor bundle now delivered only in the VSE-OE and DC-OE.
  - AppDiscAgent: Version A.6.0.0 incorporates defect fixes.
Global Workload Manager (gWLM) and HP-UX Workload Manager Toolkits (WLM-TK): Updated to support newer Integrity servers.

Insight Dynamics - VSE for Integrity: The following components have been updated.
- Application Discovery
- HP Insight Capacity Advisor
- HP Insight Global Workload Manager (gWLM)
- HP Instant Capacity (iCAP) Manager
- HP Integrity Virtual Machines Manager (VM Manager)
- HP Insight Virtualization Manager
- HP Virtual Server Environment Configuration Assistant (vseassist)
- HP Global Workload Manager Agent LTU
- HP Virtualization Manager for HP-UX LTU
- HP Capacity Advisor for HP-UX LTU
- HP VSE Suite for HP-UX 11i LTU

Integrity Virtual Machines (Integrity VM): Version 4.2 includes several features, including the ability to automatically start virtual machines with the start type "Auto"; Online VM migration with shared LVM backing stores; support for additional guests; expanded AVIO support; ability to migrate an Integrity Virtual Machine from a source VM Host to a target VM Host without service interruption; and much more.

Integrity Virtual Machines (VMGuestLib): Version 4.2 includes support for the new features of Integrity Virtual Machines V4.2, which supports HP-UX 11i v3 as a VM Host.

Integrity Virtual Machines (VMGuestSW): Updated to include in the V4.2 versions of VMProvider and VMGuestLib.

Integrity Virtual Machines (VMKernelSW): No longer sets the base_pagesize on the VM host.

Integrity Virtual Machines Manager: Extends management capabilities to include migration of virtual machines from one host to another, enhanced support for virtual machines configured as Serviceguard packages, creating a file as a virtual storage device that backs a disk, and removing I/O devices from a virtual machine.

Integrity Virtual Machines Provider (VMProvider): Upgrade to V4.2 supports the new features of Integrity Virtual Machines V4.2, including support for Online VM Migration.

HP-UX nPartition Configuration Commands: Delivers fixes for internally found defects.

HP-UX Virtual Partitions: You can now put the monitor bootpath at the beginning of the EFI Boot Manager menu so that, on the next boot, you will be able to do an unattended boot from the changed bootpath. You will also be able to see from the monitor prompt the default boot path from which the monitor has booted. Bundle changed from T1335CC to T1335DC.

New: Integrity VM Online Migration Software (OVMM): Provides support for online migration of Integrity Virtual Machines from one VM Host to another VM Host without service interruption. Newly added as optional software in VSE-OE and DC-OE. Bundle T8718AC.

Partition Manager: Delivers fixes for internally found defects.

Utilization Provider for HP-UX 11i v3: Updated to version A.01.08.04.01 to support Insight Dynamics version 6.0.

vPar: Provides a defect fix and a new property that obtains the virtual partition ID.


System Management Homepage: Provides information about the actions performed on HP SMH. CLI now available.

Systems Insight Manager: Version 6.0 provides enhancements in all functionality areas, including Scalability, Reporting, Firmware Updates, License Manager, Heterogeneous support, and other changes.

HP-UX Accounts for Users and Groups (ugweb): Delivers defect fixes.

HP-UX Peripheral Devices Manager (pdweb): Delivers defect fixes.

HP-UX Software Assistant: HTML report identifies patches included as dependencies. Improved integration with HP SIM.
• Ignite-UX: Update includes cold install and recovery support for LVM 2.2 data and boot disks; ability to deploy HP-UX clients from HP Insight Orchestration; improved instance number remapping for IO devices; and more.

• New: Insight managed system setup wizard: Configures systems to enable them to be managed by HP Systems Insight Manager software (HP SIM) and its plug-in applications. Newly added as optional (selectable) software for all OEs. Bundle MgdSysSetupWzrd.

• Network Interfaces Configuration and Network Services Configuration: Delivers defect fixes.

• Numeric User Group Name: Includes further enhancements to support user/group names that begin with numeric characters or that are entirely numeric.

• Obsolescence Bundle: Now also includes MLIB, MPI, and Mozilla.

• Online Diagnostics: Will not be supported on newer platforms. SysFaultMgmt will be the default monitoring mode.

• Printer Management (web-based): Delivers defect fixes.

• PropPlus (SysMgmtPlus): Supports new and updated property pages in HP SMH.

• ProviderSvcsBase: CIM_RegisteredProfile class and CIM_ElementConformsToProfile class moved to WBEM Services for HP-UX.

• Quality Pack Patch Bundles: Updated for March 2010.

• Software Distributor (SD): Delivers defect fixes.

• Software Package Builder: New policy rules are enforced for attributes while validating software package. Now requires Java 1.5 or higher version to be installed.

• System Fault Management: Common Error Repository (CER) database, delivered in SFM, will be available in ProviderSvcsBase. Updated content of HP SMH property pages.

• Update-UX: Updated to support changes to Software Distributor.

• WBEM services and providers
  ◦ WBEM Services for HP-UX: The output of wbemassist tool available in Japanese locale. Also delivers defect fixes.
  ◦ HP-UX WBEM Direct Attached Storage Provider (DASProvider): A new provider fetches information regarding error records logged in the DISKPROVDB database. A new health test functionality supports diagnosing the health of hard disks available on newer Integrity systems.
  ◦ HP-UX WBEM Fibre Channel Provider: A new provider fetches information regarding error records logged in the FCPROVDB database. Also delivers a defect fix.
  ◦ HP-UX WBEM IOTree Indication Provider: Delivers defect fixes. A new configuration file allows tuning of the polling interval.
  ◦ HP-UX WBEM Kernel Providers: Delivers defect fixes.
  ◦ HP-UX WBEM RAIDSA PROVIDER: A new provider fetches information regarding error records logged in the RAIDSAPROVDB database.
  ◦ HP-UX WBEM SAS PROVIDER: A new provider fetches information regarding error records logged in the SASPROVDB database.

March 2010 Release Notes, Chapter 6: “Disk and file management”

• HP-UX Disks and File Systems (fsweb): Delivers defect fixes and new features: the ability to create a root VG of disk layout version 2.2, as well as the ability to rebalance allocated extents for free space.

• Logical Volume Manager: Updated to version 2.2. Introduces the logical volume snapshot, the lvmove command, boot support for new LVM layout, and more.

• MemFS: Delivers defect fixes.

• ONCplus: Delivers defect fixes and new features: The NFS mount structure nfs_args is made public and asynchronous NFS Direct I/O performance is improved.

• OnlineJFS: Delivers fixes for internally found defects.

• Veritas File System (VxFS): Delivers fixes for internally found defects.

• Veritas Volume Manager (VxVM): Delivers fixes for internally found defects.

March 2010 Release Notes, Chapter 7: “Internet and networking”
• Firefox and Thunderbird: Firefox is unchanged in March 2010 OEUR. Thunderbird 2.0.0.19.02 includes changes from the Mozilla Foundation, as well as fixes for several security vulnerabilities reported by the Mozilla Foundation. FIREFOXsrc has been removed from the OE. Mozilla is no longer supported by HP-UX 11i v3.

• CIFS Server: Supports Windows Server 2008 and Windows Vista operating systems. Dynamic DNS update option is available. Defect fixes are made.


• HP-UX Mail Server (Sendmail): Delivers defect fixes.

• HP-UX Web Server Suite
  - HP-UX Apache-based Web Server: Updated to v.2.0.59.12 as primarily a security/bug fix release.
  - HP-UX Tomcat-based Servlet Engine: Upgraded to 5.5.27.03. Implements the Servlet 2.4 and JavaServer Pages 2.0 specifications. Designed to run on JDK 1.5 (5.0) and later versions.

• IPv6 Upgrade for HP-UX 11i v3: Version B.11.31.0907 provides Advanced Sockets API for IPv6, Configurable Policy Table support, and Anycast Address support.

March 2010 Release Notes, Chapter 8: “Security”

• HP-UX Auditing and Security Attributes Configuration (secweb): Delivers defect fixes.

• HP-UX Bastille and Install-Time Security: Provides improved usability through assessment reporting that evaluates the security status of the system.

• HP-UX IPFilter: Version 17 provides Rate Based Filtering, Address Pooling, State Aging, Rule Tags, Sticky NAT Sessions, Checking Connection Health with l4check, and more.

• New: HP-UX LongPassword for HP-UX 11i v3: Increases the maximum password length to 255 characters. Only available on HP-UX 11i v3 systems with shadowed passwords. Newly added as optional (selectable) software.

• HP-UX Role-Based Access Control (RBAC): Version B.11.31.05 enhances logging capability with keystroke and alternate logging.

• HP-UX Secure Shell: Version A.05.30 includes new option to ensure logs are directed to syslog instead of stderr; acceptance of command-line arguments for the internal-sftp server by the sshd_config volume(5) ForceCommand directive; support of command-line runtime creation of the dynamic (-D) port; support for the SOCKS4A protocol; support of remote port-forwarding with a listen port 0; and more.

• HP-UX Software Assistant: Improved integration with HP SIM.

• OpenSSL: Delivers defect fixes.

• Kerberos Client: Version E.1.6.2.05 provides thread safety for Kerberos libraries; new client commands for copying and deleting service tickets; new functions that are needed for NFSv4; ability to load extension modules at run-time; and more.

March 2010 Release Notes, Chapter 9: “Commands and system calls”

• machinfo volume(1) command: New option in machinfovolume(1) provides an easy way to verify the operating system's view of the amount of interleaved memory configured.

• New: MountallEnh: Enables machines with a large number of mounted filesystems to boot-up faster.

• PAX-ENH: Version 11.31.09 delivers defect fixes.

• New:SAR-MEMFS-ENH: Enables you to obtain MemFS data with the sarvolume(1M) command. Added as optional (selectable) software in all OEs.

• New: trufigpervolume(1) command performs better then fgrepvolume(1) command with a more efficient algorithm. FGREPMULTPAT bundle is optional (selectable) software in all OEs.

March 2010 Release Notes, Chapter 10: “Libraries and programming”

• Wildebeest Debugger: Version 6.1 includes new command for searching a pattern in the memory address space; new command to unwind beyond 10000 frames; updated procedure to process the initialization file; support for automatic debugging of shared libraries; support for core file debugging of HP MITR
application; support for memory debugging feature on applications using libmallocng library for heap allocation management; enhanced info shared command; and much more.

• HP-UX Linker and HP Dynamic Loader: Improved usability and performance of HP-UX Linker, Dynamic Loader, and particular tools from the Linker tool chain.

• Java JDK/JRE for HP-UX 11i: Besides the defect and security bulletin fixes in JDK/JRE 6.0.05, GC log-rotation support is provided. JDK/JRE 5.0.18 contains defect fixes. SDK/RTE 1.4.2.x version is no longer included on the OE media.

• MLIB and MPI are no longer included in the HP-UX 11i v3 Operating Environments.

• New: Mostly Private Address Space (MPAS) application model: With this enhancement, performance of MPAS applications is increased dramatically, severalfold in some cases.

• Unwind Library (libunwind): Delivers defect fixes, a new API that can be used to improve the performance of self-unwinding, and more.

March 2010 Release Notes, Chapter 11: “Internationalization”

• There are no changes in March 2010 for the products or features that are normally documented in this chapter.

March 2010 Release Notes, Chapter 12: “Other functionality”

• There are no changes in March 2010 for the products or features that are normally documented in this chapter.

What is new in the HP-UX 11i v3 September 2009 release

The following summaries provide a general picture of how the September 2009 release of HP-UX 11i v3 differs from March 2009 release of HP-UX 11i v3. For further information, see the indicated chapters in the HP-UX 11i Version 3 September 2009 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3

September 2009 Release Notes, Chapter 2: “Introduction to HP-UX 11i version 3”

• Software Pack (Optional HP-UX 11i v3 Core Enhancements): New products (ISOIMAGE-ENH and RCEEnhancement)
  ) are available in the Operating Environments as optional products.

• HPE’s Green Business Technology Initiative: Previously printed books will now be delivered electronically. Additionally, product documentation and support information is available at: http://www.hpe.com/support/hpesc

September 2009 Release Notes, Chapter 4: “Hardware-specific information”

• CommonIO: Updated with quality improvements.

• Hardware Enablement Bundle for HP-UX 11i v3: Provides support for new PCI-Express I/O adapters in Integrity Servers, and HP-UX support for HPE servers using PA8900 processors or latest Intel Itanium processors. Includes new HP-UX 11i v3 patches for support of new tape devices using the LTO5 format. New patches were also added for future graphics adapters, along with PCIe Error Recovery, and improved support for USB devices.

• Instant Capacity: Updated to version B.11.31.09.02.00. Performance of GiCAP enhanced. Group Manager can now accept members with longer passwords.

• iCAP Manager: Complex names containing special characters are now displayed correctly.

• Networking and mass storage drivers
  ◦ 10GigEthr-01 Updated with quality improvements.
  ◦ 10GigEthr-02: Supports future products. As a result, there are no changes that affect customer systems.

What is new in the HP-UX 11i v3 September 2009 release
- FibrChanl-00: Updated to version B.11.31.0909 to incorporate defect fixes.
- FibrChanl-01: Updated with quality improvements.
- FibrChanl-02: Updated with quality improvements.
- GigEther-01: Updated to incorporate defect fixes.
- IB4X-00: Driver for InfiniBand: Supports the Reliable Datagram Sockets (RDS) protocol for Oracle RAC environments. Only on AH304A and 448262-B21.
- IEther-00: Updated with quality improvements.
- PCIMUX-00: Updated to version B.11.31.0909 to incorporate defect fixes.
- RAID-01: Updated with quality improvements.
- New: SATADVD-00: Newly added to the OEs as a recommended (default-installed) product. Supports future products.
- scsiU320-00: Updated with quality improvements.
- SerialSCSI-00: Updated with quality improvements.
- USB-00: Version D.11.31.0909 enables the enhanced legacy USB driver stack, with quality improvements, and added functionality which includes support for USB 2.0 high speed devices and DVD write capability.

**September 2009 Release Notes, Chapter 5: “General system administration”**

- Dynamic Root Disk: Includes enhancements to improve performance and provide a more robust experience.
- EMSWeb: Includes defect fixes.
- FEATURE11i: Includes support for improved dump time and dump analysis tools, file system enhancements including MemoryFS, performance improvements for multithreaded applications, Locality-Optimized Resource Alignment (LORA), allowing vPars users improved performance, power minimization and management enhancements, Internationalization improvements, and many other enhancements. Japanese manpage patches added.
- HP Partitioning and Virtual Server Environment
  - Accelerated Virtual I/O (AVIO): Updated to incorporate defect fixes.
  - Application Discovery agent (AppDiscAgent): Updated to incorporate defect fixes.
  - Virtual Server Environment (VSE): Application Discovery, Global Workload Manager (gWLM), Instant Capacity (ICAP) Manager updated to incorporate defect fixes.
  - HP-UX nPartition Configuration Commands: Introduces two new commands (pardefault and pardbmgr) on the latest Integrity Superdome systems.
  - nPartition Provider: Updated to support the latest Integrity systems.
  - Utilization Provider: Updated to version A.01.08.02.01 to support VSE Management Software and Insight Dynamics - VSE version 4.1 Update 1.
  - vPar Provider: Now supported on Integrity Superdome systems. Also incorporates defect fixes.
- Serviceguard NFS Toolkit: Enhanced to provide Modular Package support.
- System Management Homepage: Now supports IPv6, Internet Explorer v8, and long-length passwords in shadow password mode. Also incorporates defect fixes.
- Systems Insight Manager: Includes new hardware support and enhanced providers support.
- HP-UX Accounts for Users and Groups (ugweb): Supports long passwords up to 255 characters when in shadow password mode.
- HP-UX Disks and File Systems (fsweb): With the enhancements in this version, you can now take advantage of the improvements being done in the higher versions of volume groups. Also incorporates defect fixes.
- HP-UX Peripheral Devices Manager (pdweb): Offers the capability to enable and disable SAS (Serial Attached SCSI) adapters.
HP-UX Software Assistant: Includes improvements in the integration with HP-SIM.

Ignite-UX: Allows NFS to replace TFTP when downloading files from the Ignite-UX server. **Guided Installation User Interface Option** has been removed.

**New:** ISOMAGE-ENH: Provided in a new DLKM module. Required to mount, read and umount the ISO Image file. Software Pack product.

Network Interfaces Configuration and Network Services Configuration: Two additional attributes are included for modifying IP attributes in the NIC area.

Online Diagnostics: Starting from September 2009, OnlineDiag will not be supported on newer platforms. System Fault Management (SysFaultMgmt) will be the default monitoring mode on both older and newer platforms. This release includes defect fixes.

Printer Management (web-based): Updated with defect fixes.

PropPlus (SysMgmtPlus): New command line tool, cprop, provides equivalent information of GUI. New "Health Test" feature is supported when ProviderSvcsBase is installed.

ProviderSvcsBase: Provides an infrastructure for running health tests as a functionality support for WBEM Providers. Also enables the providers to update, retrieve, and archive events from postgress database.


**New:** RC Enhancement (boot time improvement in HP-UX commands and rc scripts): By installing specific products, you may see improved boot time.

Software Distributor: IPv6 support is enabled along with defect fixes.


System Fault Management: Introduces new providers, includes Logviewer enhancement, new property pages, health test, and more.

Tune-N-Tools: Added another tunable maxssiz to the list of kernel parameters. Added new prebindvolume(1M) tool, which can be used to improve the startup time of frequently used shared executables.

Update-UX: Updated to incorporate defect fixes. No new features or functionality in update-ux.

**WBEM services and providers**

- WBEM Services for HP-UX: Now based on OpenPegasus 2.9 source base and CIM Schema 2.17.1; a command-based troubleshooting utility, wbemassist, is introduced; CIM repository is now a database.
- Direct Attached Storage Provider (DAS Provider): Requires ProviderSvcsBase product. Incorporates defect fixes.
- HP-UX WBEM Fibre Channel Provider: Updated to incorporate a defect fix.
- HP-UX WBEM Online Operations Service Provider: Updated to incorporate defect fixes.
- HP-UX WBEM RAIDSA Provider: Requires ProviderSvcsBase product to be installed on Integrity systems to obtain Smart Array HBA attribute details.
- HP-UX WBEM SAS Provider: A native indication provider is supported on the latest Integrity system.
- HP-UX WBEMP-LAN Provider: Enhanced to provide additional information through HP SMH. Also incorporates defect fixes.

**September 2009 Release Notes, Chapter 6: “Disk and file management”**

- Logical Volume Manager: Includes new command (vgmove), enhancements to pvmove, and command enhancements for shared volume groups, plus support for forced deactivation.
- MemFS: New mount options added to modify the permissions and ownership of root of the file system during mount. Will eliminate the need to modify the permissions/ownership of root after every mount.
- Updated to version B.11.31.07.01 to incorporate defect fixes.
- VERITAS File System (VxFS): VxFS 5.0 is delivered as a recommended (default-installed) product. VxFS 4.1 is delivered as a required (always-installed) product.

**September 2009 Release Notes, Chapter 7: “Internet and networking”**

- HP-UX Web Server Suite
- HP-UX Apache-based Web Server: v.2.0.59.11 is primarily a security/bug fix release.
- HP-UX Tomcat-based Servlet Engine: version upgrade to 5.5.27.02: Implements the Servlet 2.4 and JavaServer Pages 2.0 specifications. Designed to run on JDK 1.5 (5.0) and later versions.

- Firefox, FirefoxSrc: Updated to version 2.0.0.19. Fixes several security vulnerabilities reported by the Mozilla Foundation.

**September 2009 Release Notes, Chapter 8: “Security”**

- HP-UX Auditing and Security Attributes Configuration (secweb): Provides capability to modify and delete custom events that are set for auditing.
- HP-UX Host Intrusion Detection System: Version 4.3 includes only defect fixes.
- HP-UX IPSec: Version A.03.00 includes changes to the areas of IKE Policy, Authentication Record, Host and Tunnel Policy, and much more. Mobile IPv6 support and Gateway Policies are obsolete.
- HP-UX Secure Shell: Version A.05.20 is linked with OpenSSL A.00.09.8k instead of OpenSSL A.00.09.8j. Incorporates new features introduced in OpenSSH5.2p1.
- HP-UX Software Assistant: Includes improvements in the integration with HP-SIM.
- OpenSSL: Updated to incorporate defect fixes.
- PAM Kerberos: Incorporates defect fixes.

**September 2009 Release Notes, Chapter 9: “Commands and system calls”**

- `ioscan volume(1M)`: The `-P` option enhanced to accept two properties: `ms_scan_time` and `physical_location`.
- `mediainit volume(1)`: Enhanced to provide a new option, `-V`, which makes the command validate the scrub operation.
- **New**: `mincorevolume(2)` system call: Reports on the core residency of memory pages. Will enable Independent Software Vendors (ISVs) to provide memory capacity planning tools.

**September 2009 Release Notes, Chapter 10: “Libraries and programming”**

- Java 2 Standard Edition Platform
  - JDK/JRE version 6.0.04: Update includes the Sun 6.0u12 and 6.0u13 releases functionality. Incorporates defect and security bulletin fixes. IPv6 support is improved and new flags have been added.
  - JDK/JRE version 5.0.16: Update includes the Sun 5.0u18 release functionality. Incorporates defect and security bulletin fixes. IPv6 support is improved.
  - SDK/RTE version 1.4.2.22: Update includes the Sun 1.4.2_20 release functionality. Incorporates defect and security bulletin fixes.
  - `libc`: With the new APIs added in September 2009, 32-bit applications can compute time beyond 2038.

**September 2009 Release Notes, Chapter 11: “Internationalization”**

- **New**: Devanagari (Indic) TrueType Fonts: You can now print and display text written in Devanagari script.
- `iconv` codeset conversion: Command and APIs for the Integrity platform are updated to check the `/usr/lib/nls/iconv/config.iconv` configuration file for user or third-party application added codeset converters.
- Internationalized PostScript Printing: Supports the printing and proper shaping of Arabic, Hebrew, Thai, and Devanagari (Indic) characters.
What is new in the HP-UX 11i v3 March 2009 release


• Software Pack (Optional HP-UX 11i v3 Core Enhancements): Several new and updated Software Pack products are available in the Operating Environments as optional products.

March 2009 Release Notes, Chapter 4: “Hardware-Specific Information”

• CommonIO: Updated with quality improvements.
• New: Dynamic P-States Feature: Adds the ability to control processor performance from within HP-UX, allowing systems to conserve power when not fully loaded. Requires Intel Itanium 9100 series or later processors.
• Hardware Enablement Bundle for HP-UX 11i v3 (HWEnable11i): Includes support for new PCI-Express I/O adapters in Integrity Servers, and HP-UX support for HPE servers with PA8900 processors and the sx2000 chipset. Also includes new HP-UX 11i v3 patches that improve PCIe Error Recovery (ER) and support of new PCIe devices. New patches were also added for CPU and memory On-Line Addition/Deletion (OLAD) for future HP platforms.
• Mass Storage Stack: Enhancements include congestion control, server manageability, ease-of-use, and I/O performance.
• Networking and Mass Storage Drivers
  ◦ FibrChanl-00: Updated to version B.11.31.0903 for a defect fix.
  ◦ FibrChanl-01: Updated with quality improvements.
  ◦ FibrChanl-02: Updated with quality improvements.
  ◦ GigEther-00: Updated to incorporate defect fixes.
  ◦ GigEther-01: Updated to incorporate defect fixes.
  ◦ IB4X-00 Driver for InfiniBand: Supports the Reliable Datagram Sockets (RDS) protocol for Oracle RAC environments and for connectivity to the HP/Oracle Exadata intelligent storage cell.
  ◦ IEther-00: Updated with quality improvements.
  ◦ RAID-01: Updated with quality improvements.
  ◦ scsiU320-00: Updated with quality improvements.
  ◦ SerialSCSI-00: Updated with quality improvements.
  ◦ USB-00: Version D.11.31.0903 bundle enables the new USB 2.0 support.
• Utility Pricing Solutions
  ◦ Instant Capacity: Updated to version B.11.31.09.01.00. Provides more versatility in configuring GiCAP groups (with IPV6) and more functionality with gWLM and iCAP Manager; and defect fixes.

March 2009 Release Notes, Chapter 5: “General System Administration”

• Distributed Systems Administration Utilities: You can benefit from the ease-of-use that the web-based interface provides for configuration synchronization and consolidated logging.
• Dynamic Root Disk: You will be able to update your OE level on the clone while your original system remains up and running. Once the update on the clone is done, you can boot the clone and keep your original image as backup. Defect fixes and packaging changes involving run time checks and dependencies are also being introduced.

What is new in the HP-UX 11i v3 March 2009 release
• Enterprise Cluster Master Toolkit: Version B.05.00 includes support for Modular Packages, Oracle 11g R1, Oracle 10g R2 ASM on Itanium servers, and more.
• Event Monitoring Service: Updated to incorporate defect fixes.
• Feature Enablement Patch Bundle (FEATURE11i): Updated for HP-UX 11i v3 with patches that enhance or provide new core features (including performance improvements) and enable support for improved dump time and dump analysis tools, file system enhancements including MemFS, performance improvements for multithreaded applications, power minimization and management enhancements, Internationalization improvements, and many other enhancements.
• FirstBoot: Updated to support Dynamic Root Disk (DRD).
• High Availability Monitors: Updated to incorporate defect fixes.

HP Partitioning and Virtual Server Environment
  ◦ Accelerated Virtual I/O (AVIO) (includes GuestAvioLan, HostAvioLan, GuestAVIOStor, and HostAvioStor): Provide significant performance improvements over the existing VIO products and support Integrity VM Online Guest Migration with Integrity VM V4.1.
  ◦ HP Application Discovery (AppDiscAgent): You will obtain more reliable behavior and data from Application Discovery agent. You no longer need to configure the agent on installation.
  ◦ Integrity Virtual Machines (Integrity VM): Updated to version 4.1. Includes support for online VM migration, SSH 3rd-party alternative for secure communications, and more.
  ◦ Integrity VM Guest Support Libraries (VMGuestLib): Upgrade to Version 4.1 includes support for the new features of Integrity Virtual Machines V4.1.
  ◦ New: Integrity Virtual Machines (VMGuestSW): A repackaging of the software on the Integrity VM virtual machines that was contained in the T2767BC bundle to the VMGuestSW bundle.
  ◦ Integrity Virtual Machines (VMKernelSW): Updated in support of the Integrity VM V4.1.
  ◦ New: Integrity Virtual Machines Manager: Enables managers to view and manipulate Integrity VM resources on VM Hosts running HP-UX 11.31. VM Manager supports Integrity Virtual Machines V4.0, including support of HP-UX 11.31 agile storage device addressing and other features. Newly added as optional software on the VSE-OE and DC-OE.
  ◦ Integrity Virtual Machines Provider (VM Provider): Upgrade to V4.1 supports the new features of Integrity Virtual Machines V4.1, including support for Online VM Migration.
  ◦ HP Process Resource Manager: With version C.03.05, you can now have PRM use the real user ID for placing processes based on user records.
  ◦ HP Virtual Server Environment (VSE) Management Software: In version 4.1 (A.04.01.00), the following components were added or updated:
    – HP Virtualization Manager
    – Logical Server Management
    – Integrity Virtual Machines Manager
    – HP Application Discovery
    – HP Capacity Advisor
    – HP Partition Manager
    – Virtual Server Environment Configuration Assistant
    – HP Process Resource Manager
  For information about the above components and about licensing requirements, see the VSE section.
  ◦ New: HP-UX nPartition Configuration Commands: New command parconfig volume(1M) runs a set of the Locality-Optimized Resource Alignment (LORA) rules and provides recommended configuration of the nPartition that is LORA compliant. (LORA will be released in the future.)
  ◦ HP-UX Virtual Partitions: Includes defect fixes and will support LORA when the feature is released.
  ◦ Partition Manager: Includes a defect fix.
  ◦ Utilization Provider: Updated to version A.01.08.01.02 to support VSE Management Software and HP Insight Dynamics - VSE version 4.1. Supports dynamic nPartition systems and is now available for both 32-bit and 64-bit HP ProLiant Linux systems.
  ◦ PRMLibraries: Version number has changed to stay in-sync with the B3835DA (HP PRM) bundle.

What is new
• **PRMKernelSW**: Version number has changed to stay in-sync with the B3835DA (HP PRM) bundle.
• **PRMSIMTools**: Updated to support the new features of HP PRM.

- **HP Serviceguard**: Version A.11.19 provides faster failover, improved cluster and package uptime, more robust network monitoring, greater scope and flexibility in network configuration, and more.
- **HP Serviceguard NFS Toolkit**: Updated to incorporate a set of defect fixes.
- **HP System Management Homepage**: Provides better user experience by offering custom views - icon and list, and controls to determine settings such as session timeout and login page display. Additionally, you can now determine software dependency using the new `smhassist` command.
- **HP Systems Insight Manager**: Version 5.3 includes support for display of IPv6 addresses, improved Linux identification, improved discovery and identification of ESX hosts, and more. For HP Systems Insight Manager V5.3 or later, Insight Control power management is a separately installed component.
- **HP-UX Disks and File Systems (fsweb)**: You can now perform backup and recovery tasks using a web-based interface, and can resize VxFS 5.0 without unmounting the file system. Reporting and auditing of changes to Veritas file systems is improved. With the newly available file system consistency check feature, you are better equipped to diagnose and manage corrupted file systems.
- **HP-UX Kernel Configuration (kcweb)**: Updated to incorporate defect fixes.
- **HP-UX Peripheral Devices Manager (pdweb)**: Offers additional diagnostics features for Fibre Channel (FC) adapters.
- **HP-UX Software Assistant**: Updated to version C.02.11. Now allows you to select the analyzers to be used when generating reports within HP SIM and now supports Java SE6. And more.
- **iCAP Manager**: Updated to provide configuration capabilities for Instant Capacity on a single system. Provides capability to apply an Instant Capacity codeword, modify Instant Capacity properties, and change the number of active cores on the system.
- **Ignite-UX**: Updated to version C.7.8. Includes improved Ignite and vPars interaction on 11i v3, ability to avoid use of TFTP networking, ability to use Ignite on a network that has IPv6 enabled, and more.
- **Network Interfaces Configuration and Network Services Configuration**: You can now use the HP SMH web interface for managing IPv6 neighbor discovery cache.
- **Obsolescence Bundle**: Used during an update when obsolete software on the system needs to be removed. Is automatically selected for updates. During the update process selected obsolete or incompatible products and/or drivers are removed.
- **Online Diagnostics**: Updated to support new and future devices, and to incorporate defect fixes. Has new pre-requisite.
- **Printer Management (web-based)**: Includes defect fixes.
- **New**: **PropPlus (SysMgmtPlus)**: Enhances the property pages of HP SMH by adding additional details and introducing dynamic capability to the web page. Newly added as a required (always-installed) product in all OEs.
- **New**: **ProviderSvcsBase**: Provides a new logging daemon that reads error log records from the HP-UX kernel and stores them in the circular log files, which can be read by user space processes. Upon storing the error records in log files, the daemon sends EVM notification to the clients that are interested in reading the error logs.
- **Quality Pack Patch Bundles**: Updated for March 2009 OEUR.
- **Software Distributor (SD)**: Updated to incorporate defect fixes. Now delivered in the `SysMgmtMin` bundle instead of the `SwMgmtMin` bundle.
- **Software Package Builder**: Updated to incorporate defect fixes.
- **System Fault Management**: With new `CIMUtil` command, one can enumerate instances related to various devices and create filters, handlers, and subscriptions that SFM supports. No longer supports storage disks; instead, they are supported by DAS Provider. Has new pre-requisite.
- **Update-UX and SW-GETTOOLS**: Updated to reflect defect fixes. There are no new features or functionality in `update-ux`.
- **WBEM Services and Providers**
° WBEM Services for HP-UX: Updated to version A.02.07.04, which is a minor update to WBEM Services A.02.07 that is already released with HP-UX 11i v1, 11i v2 and 11i v3.
° New: Direct Attached Storage Provider (DAS Provider): Contains Indication and Instance providers which deliver information about the direct attached storage devices on a HP-UX 11.31 server. Delivered as a recommended (default-installed) product on all OEs.
° HP-UX WBEM Fibre Channel Provider: System Management Homepage (HP SMH) web page display is enhanced to provide detailed information about the FC adapter installed on the system. And more.
° HP-UX WBEM IOTree Indication Provider: System Management Homepage (HP SMH) web page display is enhanced to provide detailed information about PCI I/O subsystem installed on the system.
° HP-UX WBEM Kernel Providers: Boot provider supports Modify Instance feature, which enables the user to modify boot instance parameter values.
° HP-UX WBEM Online Operations Service Provider: Updated to incorporate a defect fix.
° HP-UX WBEM RAIDSA Provider: System Management Homepage (HP SMH) web page display is enhanced to provide detailed information about Smart Array HBAs installed on the system. And more.
° HP-UX WBEM SAS Provider: System Management Homepage (HP SMH) web page display is enhanced to provide detailed information about SAS HBAs installed on the system. And more.
° HP-UX WBEM SCSI Provider: System Management Homepage (HP SMH) web page display is enhanced to provide detailed information about SCSI HBAs installed on the system. And more.
° HP-UX WBEMP-LAN Provider: You can obtain detailed Ethernet-based LAN card properties information from the HP SMH application. And more.


° Logical Volume Manager: Includes vgmodify command enhancements that enable you to handle the physical volume size changes and modify configuration parameters of an existing LVM volume group belonging on all supported volume group versions. Also includes new command, vgversion, which enables you to take advantage of the improvements in volume group Version 2.0 and higher, and to get higher limits, in-place volume group migration from 1.0 to 2.0 and higher. Plus much more.
° New: MemFS: A memory-based filesystem that provides fast access to temporary files by storing them in main memory. Software Pack product.
° ONCplus: Updated to version B.11.31.06.01. Delivers IPv6 support for the rpc.rquotad, rpc.rstatd, rpc.sprayd, rup, and spray commands and daemons. Also delivers ONC 2.5 functionality for the NFSv2 and NFSv3 Client.

March 2009 Release Notes, Chapter 7: “Internet and Networking”

° Firefox, FirefoxSrc: Updated to version 2.0.0.16. Fixes several security vulnerabilities reported by the Mozilla Foundation.
° Thunderbird, ThunderbirdSrc: Updated to version 2.0.0.16. Fixes several security vulnerabilities reported by the Mozilla Foundation.
° CIFS Server: Updated to 3.0j version A.02.03.04. Contains the security fix for CVE-2008-1105 and defect fixes.
° HP-UX Auto Port Aggregation: Supports the use of Internet Protocol over InfiniBand (IPoIB) interfaces to create failover groups (LAN_MONITOR mode).
° HP-UX Web Server Suite
  ° HP-UX Apache-based Web Server: Updated to v.2.0.59.08 as primarily a security/bug fix release.
  ° HP-UX Tomcat-based Servlet Engine: Updated to v.5.5.27.02. Implements the Servlet 2.4 and JavaServer Pages 2.0 specifications.
° Internet Services
  ° HP-UX Mail Server (Sendmail): Updated to incorporate defect fixes.
° LDAP-UX Integration: Provides several fixes, plus NGROUP support and Windows 2008 Support.
° Red Hat Directory Server for HP-UX: Updated to version B.08.00 with several enhancements, including stronger Hashed Password Storage support, improved SASL support for Kerberos Authentication, file hierarchy system support, and more.
March 2009 Release Notes, Chapter 8: “Security”

- **HP-UX Auditing and Security Attributes Configuration** *(secweb)*: Updated to incorporate defect fixes.
- **HP-UX Bastille**: Updated to version B.3.1.01. Expanded security hardening choices in this major revision of Bastille allow you to further lockdown your systems in order to align with the latest CIS Benchmark for HP-UX (or other similar security hardening standards).
- **HP-UX IPFilter**: Updated to version A.11.31.16. Includes performance improvements, new command option for `ipfstat`, and defect fixes.
- **New**: **HP-UX Password Hash Infrastructure for HP-UX 11i v3**: Enhances the security on HP-UX 11i v3. Provides a new, SHA512-based algorithm for user password hashes as an alternative to the traditional, DES-based password hash algorithm. Only available on systems with shadowed passwords. Software Pack product.
- **HP-UX Secure Shell**: Updated to version A.05.00.026. Based on OpenSSH5.1p1 and includes several new features and defect fixes.
- **New**: **HP-UX Security Containment Extensions**: Simplifies the configuration of application containment and enables compartment login restrictions for enhanced application stacking and workload consolidation.
- **HP-UX Software Assistant**: Updated to version C.02.11. Now allows you to select the analyzers to be used when generating reports within HP SIM and now supports Java SE6. And more.
- **New**: **Kerberos Client** *(KRB5CLIENT)*: Helps to provide Kerberos authentication and strong cryptography for secure communication over the network. Software Pack product.
- **OpenSSL**: Provides enhanced security features, additional public-key encryptions, additional hardware ENGINES. Includes defect fixes.

March 2009 Release Notes, Chapter 9: “Commands and System Calls”

- **New**: **CpioCmdEnh**: Can archive and extract files with UID and GID > 60K. Software Pack product.
- **diskowner volume(1M)** Command: Enhanced to identify the Extensible Firmware Interface (EFI) partitions present on the disk. Enhanced to list all subsystem names that are all using the specified path.
- **ioscan volume(1M)**: New option can produce a compact listing which includes alias_path property.
- **mediainit volume(1)** Command: New option, `-S`, scrubs the disk media content with a set of patterns so that retrieval of its content becomes more difficult.
- **New**: **PAX-ENH**: With this enhancement, the `pax volume(1)` command supports backup of ACLs and usage of graph files. Software Pack product.


- **Java 2 Standard Edition Platform**
  - JDK/JRE 6.0 (including add-on) updated to version 6.0.02 for defect and security bulletin fixes. Allocation Site Statistics and Zero Preparation Verbosegc features are implemented.
  - JDK/JRE 5.0 (including add-on) updated to version 5.0.14 to include the Sun 1.5.0_16 drop and incorporate defect and security bulletin fixes. Allocation Site Statistics and Zero Preparation Verbosegc features are implemented.
  - SDK/RTE 4.0 (including add-on and plug-in) updated to version 1.4.2.21 to include the Sun 1.4.2_18 drop and incorporate defect and security bulletin fixes. SDK 1.4.2.21 designed to take advantage of more efficient memory management algorithms being implemented in HP-UX.
- **New**: **Libc Enhancement**: Contains new APIs to get instantaneous thread time consumption statistics for bound threads.
- **Perl**: Has moved from ActivePerl to OpenSource Perl on HP-UX.
- **pthread Library**: New API, `pthread_yieldvolume(3T)` , is provided. Enables the unbound thread to yield in user space (yielding between user threads).
- **MallocNextGen**: Applications that allocate many large blocks of size greater than 128 KB may see improved memory utilization.

March 2009 Release Notes, Chapter 11: “Internationalization”

- `iconv`
March 2009 Release Notes, Chapter 12: “Other Functionality”

• **New:** HP-UX Parallel Umounts (**UmountallEnh**): A multi-threaded umountall feature that unmounts all or selected filesystems in parallel. Software Pack product.

• Locality-Optimized Resource Alignment (LORA): Patches have been delivered in March 2009 **FEATURE11i** patch bundle to enable future support of the Locality-Optimized Resource Alignment (LORA) feature. Some patches also include changes for other features and defect fixes.

What is new in the HP-UX 11i v3 September 2008 release


• Original HP-UX 11i v3 Operating Environments (OEs): The March 2008 release of HP-UX 11i v3 was the last full Operating Environments Update Release (OEUR) release provided for the original HP-UX 11i OEs.

• New HP-UX 11i v3 Operating Environments: With March 2008 release, HPE first presented a set of **new** Operating Environments for HP-UX 11i v3. These new OEs provide a richer set of products and improved choices over the original set of HP-UX 11i OEs. In the September 2008 OEUR, several new products and features have been added. See the remainder of this section for summaries of the new products and features.

• Software Pack (Optional HP-UX 11i v3 Core Enhancements): Several new and updated Software Pack products are available in the Operating Environments as optional products.

September 2008 Release Notes, Chapter 4: “Hardware-Specific Information”

• **Hardware Enablement Patch Bundle for HP-UX 11i v3 (**HWEnable11i**): Provides support for new PCI-Express I/O adapters in Integrity Servers, and HP-UX support for HPE servers with PA8900 processors and the sx2000 chipset. Supports the AMD/ATI Radeon 7000 graphics adapter and improved kernel debugger support for HPE LAN cards. Also supports the optional HP-UX Dynamic nPartitions feature for servers without System Bus Adapter devices.


• **New:** HP-UX Scheduler Enhancements for Power Management: A new dynamic tunable is provided to dynamically enable or disable the mechanism to put processors in low power consumption state when idle.

• **New:** HP-UX Swapoff: Provides the ability to remove swap devices without rebooting the system. This feature is enabled by a new command and an enhanced system call. The command is a Software Pack feature and is optional on all OEs.

• Networking and Mass Storage Drivers
  • 10GigEth-00: Updated to include accelerated virtual I/O (AVIO).
  • 10GigEth-01: Newly added as an optional product to the Operating Environments and includes accelerated virtual I/O (AVIO).
  • CommonIO: Updated with quality improvements.
  • FibrChan1-00: Updated to incorporate defect fixes.
  • FibrChan1-01: To see what's changed from one release to the next, see the driver's release history.
  • FibrChan1-02: Updated to incorporate defect fixes.
  • GigEther-01: The gigabit interface to be configured to connect at ONLY speed 1000FD and fail if there is a fallback in the speed (100FD/100HD or 10FD/10HD). Supports accelerated virtual I/O (AVIO) to significantly improve Integrity VM (HPVM) I/O performance.
• IB4X-00: Includes defect fixes and enhancements.
• IEther-00: To see what's changed from one release to the next, see the IEther-00 driver's release history.
• PCIMUX-00: Diagnostic utility pmux_diag for AD278A/AD279A now supports several new functionalities. Includes defect fixes.
• RAID-01: Updated with quality improvements.
• scsiU320-00: Updated with quality improvements.
• SerialSCSI-00: Updated with quality improvements.
• I/O Subsystem: Includes defect fixes and usability enhancements to enhance the system's availability, performance, and ease-of-use.
• Mass Storage Stack: Includes defect fixes and usability enhancements to enhance the system's availability and ease-of-use.
• Utility Pricing Solutions
  • Instant Capacity: Includes the ability to create a standby Group Manager to be available for use as an active Group Manager if the current Group Manager is unavailable. Improvements in iCAP and GiCAP logging. And more.

September 2008 Release Notes, Chapter 5: “General System Administration”

• Boot Loader: Includes several enhancements, including, in the Itanium-based Boot Loader, warning that more than one console output devices are configured.
• Distributed Systems Administration Utilities: Upgrade to new versions of open source components has the latest features and defect fixes, and further minimizes any complexities. Now that DSAU supports the UPCC-style Serviceguard packages, you can experience better ease-of-use.
• Dynamic Root Disk: Supports rehosting, the ability to create a clone on one system, then boot the clone on another system by providing personality information about the new system. The September 2008 release supports this capability for rehosting from blade to blade using Virtual Connect, and from VM to VM.
• Event Monitoring Service: Updated to incorporate defect fixes.
• Feature Enablement Patch Bundle (FEATURE11i): Updated for HP-UX 11i v3 with new patches that enhance or provide new core features (including performance improvements) and enable support for base page sizes larger than 4 KB on Itanium, Numeric User Group Name, Integrity VM (HPVM) support, FIFO performance improvements, Internationalization improvements, and many other enhancements.
• New: FIFOENH: Provides high and low thresholds on buffered data in the pipe. As a result, major performance improvement can be seen on a multiprocessor environment when multiple threads are operating on the same fifo. Software Pack feature, optional on all OEs.
• High Availability Monitors: Updated to incorporate defect fixes.
• HP Caliper: Features and changes include support for thread contention analysis and visualization; data-centric cache profiling; scaling of the system-wide performance view to larger cell-based systems; and many others.
• HP GlancePlus Pak: New metrics are included.
• HP Partitioning and Virtual Server Environment
  • New: Accelerated Virtual I/O (AVIO): Added are three new Accelerated Virtual I/O device drivers. Provide significant performance improvements over the existing VIO products.
  • HP Application Discovery Agent: Updated to version A.04.00.07.33 to incorporate defect fixes.
  • HP Global Workload (gWLM) Agent: The bundle name has changed from T2743AA to gWLMAgent.
  • New: Instant Capacity Manager: A web-based interface that can be used to monitor your Instant Capacity (iCAP) environment. Newly added as a component of the VSE Management Software (VSEMgmt). Delivered as an optional product in VSE-OE and DC-OE.
  • New: Integrity Virtual Machines: A soft partitioning and virtualization technology that provides operating system isolation, with sub-CPU allocation granularity and shared I/O. Version 4.0 added to the VSE-OE and DC-OE.
  • Integrity VM Guest Support Libraries (VMGuestLib): Includes support for the new features of Integrity Virtual Machines V4.0, which supports the HP-UX 11i v3 operating system as a VM Host.
What is new

- Integrity Virtual Machines Provider (VMProvider): Supports the new features of Integrity Virtual Machines V4.0, including support for the HP-UX 11i v3 operating system as a VM Host.
- HP Process Resource Manager: The `prmconfig` command now has a `-c` option, which performs a subset of the `prmconfig -s` checks. Also includes other changes.
- HP Virtual Server Environment (VSE) Management Software (VSEMgmt): Updates to components such as HP Virtualization Manager, HP Capacity Advisor, Integrity Virtual Machines Manager, PRMSIMTools, and more. VSEMgmt includes a defect fix.
- HP-UX nPartition Configuration Commands: Updated to incorporate defect fixes.
- HP-UX Virtual Partitions: Updated to version A.05.04. Includes defect fixes, support for directed LAN boot, support for tunable base page size, and NUMA advisor support.
- HP-UX Workload Manager: Supports IPv6. Changes in `wlmd -p` behavior and more usernames allowed. Java 1.5 or later required for GUI and wizard.
- nPartition Provider: Updated to version B.31.01.10.05 to incorporate defect fixes.
- Partition Manager: v2.0, version B.31.02.04.01. Updated to incorporate defect fixes.
- PRMKernelSW: Version number has changed in support of the update to HP PRM.
- PRMLibraries: Version number has changed in support of the update to HP PRM.
- Utilization Provider for HP-UX 11i v3: Updated to version A.01.07.14.01 to support VSE Management Software version 4.0.
- **New**: VMKernelSW: One of the software bundles that is used with Integrity Virtual Machines (HPVM) V4.0.
- HP Serviceguard NFS Toolkit: Now supports highly available NFSv4 servers and now supports SecureNFS with Kerberos environment.
- HP System Management Homepage: Updated to version A.2.2.9 to incorporate defect fixes and support for virtual IDs.
- HP-UX Accounts for Users and Groups: Supports use of numeric login names for local and NIS user names and group names.
- HP-UX Kernel Configuration: Allows you to obtain separate graphically represented reports for usage of kernel resources for time intervals of Five Minutes, Hourly, Daily, and Weekly.
- HP-UX Peripheral Devices Manager: Supports FC (Fibre Channel) adapters.
- Ignite-UX: Updated to version C.7.7. Supports new hardware enabled by the HP-UX release. Includes defect fixes.
- **New**: Kernel Tracing on HP-UX (ktracer): Provides the ability to analyze and troubleshoot HP-UX operating system behavior. Captures information on kernel procedure calls, parameters and timing across all processes and processors, and reports it on demand.
- Network Interfaces Configuration and Network Services Configuration: Updated to incorporate defect fixes.
- NGROUPS Expansion: Allows users and processes to have group-level permissions based on a larger number of groups than the previous fixed limit.
- Obsolescence Bundle: Used during an update when obsolete software on the system needs to be removed. Is automatically selected for updates. During the update process selected obsolete or incompatible products and/or drivers are removed.
- Online Diagnostics: Supports updated to support new and future HBAs.
- Printer Management (web-based): Provides support in the TUI for adding remote printer and for adding printer to a TSM terminal.
- Quality Pack Patch Bundles (**QPKAPPS** and **QPKBASE**): Third release for HP-UX 11i v3 with a sizable increase in the number of defect fix patches included.
- Software Distributor: Updated to incorporate defect fixes.
- Software Package Builder: Updated to incorporate defect fixes. Now supports detection of possible installation errors in addition to the packaging errors.
- System Fault Management: Several changes including the introduction of MCA Indication Provider and ComputerSystem Chassis Provider, and support for MCA logs and Agile information.
• **New**: Tunable Base Page Size: Enhancement makes it possible to tune the size of the system base page, which was formerly fixed at 4 KB. Now the additional sizes 8 KB, 16 KB, and 64 KB are available. The larger system base page size reduces the kernel's memory footprint and makes certain memory management operations more efficient.

• **New**: Tune-N-Tools: Delivers the tool `tunesserver volume(1m)`. When executed, sets kernel tunables to values appropriate for major customer business application workloads.

• Update-UX and SW-GETTOOLS: Updated to incorporate defect fixes.

• Virtual Server Environment Configuration Assistant (`VseAssist`): Extended with additional checks supporting new features of VSE Management Software version 4.0, including updated licensing checks and a new iCAP status check.

• **WBEM Services and Providers**
  - WBEM Services for HP-UX: Updated to incorporate defect fixes and support for virtual IDs.
  - HP-UX WBEM Fibre Channel Provider: Updated to incorporate defect fixes.
  - HP-UX WBEM IOTree Provider: Supports consolidated status (CSP) feature.
  - HP-UX WBEM Kernel Providers: Support new features.
  - HP-UX WBEM RAIDSA Provider: Updated to incorporate a defect fix.
  - HP-UX WBEM SAS Provider: Updated to incorporate a defect fix.
  - HP-UX WBEM SCSI Provider: Updated to incorporate defect fixes.
  - HP-UX WBEMP-LAN Provider: Supports new 1000fd data transfer speed setting. New operational status for LAN cards are available. LAN Indication Provider is supported with DLPI patch PHNE_37799.

**September 2008 Release Notes, Chapter 6: “Disk and File Management”**

• **New**: Base-VxTools-50: Contains a set of enablers and infrastructure tools for VxVM.

• HP CIFS Client: Updated to version A.02.02.02. Maintenance release that mainly contains defect fixes and a few minor enhancements.

• HP CIFS Server: Updated to 3.0i version A.02.03.03. Provides security fixes and several defect fixes. Supports new configuration parameters in `smb.conf`.

• HP-UX Disks and File Systems: Additional LVM functions are possible, a paging device can be deleted without having to reboot the system, and the NFS automounter and AutoFS functions can be performed.

• Logical Volume Manager: Increased limits of Version 2.1 volume groups enable much larger and more flexible LVM configurations. Other features improve the availability and usability of the server.

• ONCplus: Updated to version B.11.31.04. Delivers full NFSv4 functionality. Also delivers IPv6 support for the `on`, `rpc.rexd`, `rpc.rwalld`, `rpc.rusersd`, `rusers`, and `rwall` commands and daemons. In addition, performance has been optimized in several areas of NFS.

• **New**: OnlineJFS 5.0: Available as an optional product in DC-OE, VSE-OE, and HA-OE.

• **New**: VxFS 5.0: Provides you with new commands and features for managing files of increased sizes, and better optimization of storage resources.

• **New**: VxVM 5.0: Provides enhanced volume management features, improved cluster and node functionality and additional multipathing capabilities.

**September 2008 Release Notes, Chapter 7: “Internet and Networking”**

• HP-UX Auto Port Aggregation: Supports improved Integrity Virtual Machine support.

• HP-UX Web Server Suite
  - HP-UX Tomcat-based Servlet Engine: Tomcat version upgraded to 5.5.23.02. Tomcat version 5 implements the Servlet 2.4 and JavaServer Pages 2.0 specifications. Tomcat 5.5.x is designed to run on JDK 1.5 and later versions.

• Firefox, FirefoxSrc: Updated to version 2.0.0.12. Includes Firefox 2.0.0.12 changes from the Mozilla Foundation. This version fixes several security vulnerabilities reported by the Mozilla Foundation.

• Thunderbird, ThunderbirdSrc: Updated to version 2.0.0.12. Fixes several security vulnerabilities reported by the Mozilla Foundation.

• Internet Services
What is new

- HP-UX FTP Server (WU-FTPD): New audit reporting APIs are enabled in ftproot volume(1M).
  ftpdvolume(1M) supports more than 20 user groups (NGROUPS). Includes defect fixes.
- HP-UX Mail Server (Sendmail): Sendmailvolume(1M) supports user groups (NGROUPS) more than 20. Includes defect fixes.
- HP-UX Nameserver (BIND): namedvolume(1M) now supports 64-bit addresses. Includes defect fixes.

- **New**: IPv6 Upgrade for HP-UX 11i v3: Privacy extension to IPv6 auto-configuration feature is available in the IPv6 Upgrade bundle. Software Pack product. Optional on all OEs.
- LDAP-UX Integration: Updated to version B.04.17. Maintenance release that provides several fixes.

**September 2008 Release Notes, Chapter 8: “Security”**

- HP-UX Secure Shell: Updated to version A.05.00.023. Added several defect fixes and enhancements.
- HP-UX Software Assistant: Updated to version C.01.05. Includes integration with HP SIM, improved HTML report, and improved administration guide.
- OpenSSL: Updated to version A.00.09.08g.031. Federal Information Processing Standard (FIPS) 140-2 OpenSSL is now added to the OpenSSL product.

**September 2008 Release Notes, Chapter 9: “Commands and System Calls”**

- **getaddrinfo volume(3N) Function**: Modified to support Destination Address Selection algorithm defined in RFC 3484.
- **ioinit volume(1M) Command**: New option –A invokes Critical Resource Analysis and generates usage report, before modifying existing instance number of an IO node.
- **ioscan volume(1M) Command**: –P option of the command has been enhanced to accept new properties.
- **mpsched volume(1) Command**: Enhanced to provide the system topology information at Proximity, Socket and Core level. You can use this information to create processor sets by choosing SPUs with appropriate locality.
- **scsimgr volume(1M) Command**: More user-friendly identifiers enhance the usability of the mass storage stack.


- **New**: Decimal Floating-Point Arithmetic: Includes support for decimal floating-point (decimal FP) arithmetic for C on HP-UX 11i v3 (11.31) September 2008 Update for Integrity servers, following the current draft revision of the IEEE 754 floating-point standard and ISO/IEC Technical Report 24732.
- **New**: Dynamic System V Semaphore Tunables: Allows the system administrator to change the system V semaphore tunable(s) value(s) dynamically without requiring a reboot of the system. Software Pack product. Optional on all OEs.
- WildeBeest Debugger: Provides decimal floating point debugging support, improved memory debugging capabilities, improved Core file debugging support, and more.
- **Java 2 Standard Edition Platform**
  - **New**: Java JDK/JRE for HP-UX: JDK/JRE version 6.0 is a new version of the HP-UX Java Development Kit (JDK) for the Java 2 Platform Standard Edition. JDK/JRE version 5.0 and SDK/RTE 1.4.2 have been updated to incorporate defect and security bulletin fixes.
  - Libc Enhancement: The printfvolume(3S) and scanfvolume(3S) family of functions have been enhanced to recognize decimal floating point conversion specifiers. Software Pack product. Optional on all OEs.
  - **libIO.so Shared Library**: Provides APIs for accessing the kernel I/O system data structures maintained by the HP-UX I/O subsystem. Delivers new shared libraries which are thread safe.
  - **New**: MallocNextGen: Provides a totally new implementation of the user space memory allocator. This new allocator may show better performance for multi-threaded applications or applications with small block allocations. Software Pack product. Optional on all OEs.
• **New:** Numeric User Group Name: With this feature it is possible to create user/group names that begin with a numeric character and in turn be entirely numeric. Software Pack product. Optional on all OEs.

• Perl: Updated to version 5.8.8 build 822.2 to incorporate defect fixes. Includes performance improvements.

**September 2008 Release Notes, Chapter 11: “Internationalization”**

• European TrueType Fonts Extension - Arabic, Hebrew, Thai, and Vietnamese: You can now print Arabic, Hebrew, Thai, and Vietnamese characters using the PostScript print filter.

• Internationalized PostScript Printing Enhancements: Includes support for the printing and proper shaping of Arabic, Hebrew and Thai characters with enhanced bidirectional printing support; new PostScript Printer Description (PPD) files to support additional HP PostScript printers; illegal command line options will now be listed in the banner page; and more.

• New and Updated Asian Iconv Converters: Several Asian character sets now have `iconv` conversion support added to convert data directly from these character sets to and from various transformation formats of Unicode such as UTF-8, UTF-16 and UTF-32.

**September 2008 Release Notes, Chapter 12: “Other Functionality”**

• There are no changes in September 2008 for the products or features that are normally documented in this chapter.

**What is new in the HP-UX 11i v3 March 2008 release**

The following summaries provide a general picture of how March 2008 release of HP-UX 11i v3 differs from the September 2007 release of HP-UX 11i v3. For further information, see the indicated chapters in the *HP-UX 11i Version 3 March 2008 Release Notes*, available in its most current version at


**March 2008 Release Notes, Chapter 2: “Introduction to HP-UX 11i Version 3”**

• Original HP-UX 11i v3 Operating Environments (OEs): The March 2008 release of HP-UX 11i v3 is the last full Operating Environments Update Release (OEUR) release provided for the original HP-UX 11i OEs.

• **New:** HP-UX 11i v3 Operating Environments: With March 2008 release, HPE presents a set of new Operating Environments for HP-UX 11i v3. These new OEs provide a richer set of products and improved choices over the original set of HP-UX 11i OEs.

• Software Pack (Optional HP-UX 11i v3 Core Enhancements): Several Software Pack products are available in the Operating Environments as optional products.

**March 2008 Release Notes, Chapter 4: “Hardware-Specific Information”**

• **New:** Graphics: Newly delivered as an optional product in the HP-UX 11i v3 BOE, VSE-OE, HA-OE, and DC-OE.

• Hardware Enablement Patch Bundle (`HWEnable11i`) for HP-UX 11i v3: Provides support for new PCI-Express I/O adapters in Integrity Servers, and HP-UX support for HPE servers with PA8900 processors and the sx2000 chipset. Includes new patches that enable Insight Control power management for supported systems with Intel Itanium processors 9100 series. Also includes patches that enable the PCI-express Error Recovery (PCle-ER) functionality on Integrity servers with the sx2000 chipset.

• HP Instant Support Enterprise Edition: Updated to version A.03.95.520.22.05. Provides minor defect fixes. HP Runner is no longer bundled with HP ISEE installations.

• I/O Subsystem: The `rmsf` command supports the `–h` option with the `–x` option to remove stale device special files associated with a specific hardware path. Adding or deleting CPUs redistributes I/O interrupts more equitably across the CPUs. And more.

• Mass Storage Stack: Offers new performance and usability options to manage multi-pathed disks and disk arrays, and more.

• Networking and Mass Storage Drivers
  - 10GigEther-00: Supports the new AD385A 266Mhz PCI-X 10 Gigabit Ethernet cards as well as the AB287A cards.
  - CommonIO: Updated with quality improvements.
• **FibrChanl-00:** Updated to add support for users to update the EFI driver for the Tachyon XL2 (A6795A) Fibre Channel HBAs using the FC Mass Storage utility `/opt/fcms/bin/fcmsutil`.

• **FibrChanl-01:** Updated to incorporate defect fixes.

• **New:** **FibrChanl-02:** First release on HP-UX 11i v3: recommended product on all OEs. Driver for the Fibre Channel HBAs.

• **GigEther-01:** Change history is located at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **IB4X-00:** Updated to incorporate defect fixes.

• **IEther-00:** Change history is located at [http://www.hpe.com/info/hpux-iocards-docs](http://www.hpe.com/info/hpux-iocards-docs).

• **RAID-01:** Updated with quality improvements.

• **scsiU320-00:** Updated with quality improvements.

• **SerialSCSI-00:** Updated with quality improvements.

• **USB-00:** Updated to version C.01.05.08. Install kernel for the HP-UX 11i March 2008 release contains an EHCI driver (USB 2.0 hi-speed capability) which significantly decreases the time necessary for installs from local USB devices. Includes defect fixes.

• **New:** Proximity Topology: Provides a mechanism to programmatically determine a system’s proximity topology in order to make informed decisions to minimize cache-to-cache latency.

• **Utility Pricing Solutions**

  • Instant Capacity: Updated with defect fixes and several enhancements, including GiCAP Disaster Recovery, which allows customers to transfer usage rights to other group members when a member is unavailable.

**March 2008 Release Notes, Chapter 5: “General System Administration”**

• **Distributed Systems Administration Utilities:** Supports cross subnet Serviceguard configurations.

• **Dynamic Root Disk (DRD):** Supports cloning of a VxVM root on HP-UX 11i v3. Introduces the `drd status` command, which allows the user to easily view clone information on the system.

• **New:** EMSWeb: Event Monitoring Service (on SAM) is now available as EMSWeb tool on the HP System Management Homepage (HP SMH). Provides both web-based GUI and TUI.

• **Enterprise Cluster Master Toolkit:** Newly added as a recommended product to the HA-OE and DC-OE. Supports HP Serviceguard Storage Management Suite Version A.02.00 on HP-UX 11i v3.

• **Feature Enablement Patch Bundle (**FEATURE11i**):** Updated for HP-UX 11i v3 with new patches that enhance core features (including performance) and enable the support of the vPars, Version 2.0 LVM volume groups, Integrity VM (HPVM), and new core products.

• **New:** HP Caliper: A general-purpose performance analysis tool for applications, processes, and systems. Allows you to understand the performance and execution of an application and to identify ways to improve its run-time performance. Newly added as a recommended product to the BOE, HA-OE, VSE-OE, DC-OE.

• **HP GlancePlus Pak:** Updated to version 4.70. A set of new metrics have been added in HP Performance Agent.

• **HP Partitioning and Virtual Server Environment**

  • **New:** Accelerated Virtual I/O (**GuestAvioLan**): Delivers a new re-architected I/O path for Integrity VM (HPVM). Newly delivered as a recommended product on the HP-UX 11i v3 BOE, HA-OE, VSE-OE, DC-OE, and the FOE, EOE, MCOE, TCOE.

  • HP Integrity VM Guest Support Libraries (**VMGuestLib**): Upgrade to version A.03.50 includes support for the new features of Integrity Virtual Machines A.03.50.

  • Integrity Virtual Machines Provider (**VMProvider**): Upgrade to A.03.50 supports the new features of Integrity Virtual Machines A.03.50.

  • **New:** HP Process Resource Manager: Newly delivered as a recommended product in the BOE, VSE-OE, HA-OE, and DC-OE.

  • **New:** HP Virtual Server Environment: Integrates with HP SIM to provide intelligent control of your virtualized environment from one location. Components assist in planning and automating system and application management tasks, and allow you to optimize server utilization in real time by creating virtual servers that can automatically grow and shrink based on business priorities and service-level

What is new
objectives. Several individual VSE products/components are delivered as optional or recommended products on the new OEs, providing you with a variety of options.

- **HP-UX nPartition Configuration Commands:** Updated to incorporate defect fixes.
- **New:** HP-UX Virtual Partitions: Version A.05.03 enables multiple instances of the HP-UX 11i v3 OE to run simultaneously on one server or within one nPartition, with each OE instance hosting its own set of applications in a isolated environment. Newly added as an optional product to the HP-UX 11i v3 VSE-OE and DC-OE.
- **New:** HP-UX Workload Manager: Newly delivered as a recommended product in the VSE-OE and DC-OE. Updated to incorporate defect fixes.
- **New:** Workload Manager Toolkits: Newly delivered as a recommended product in the VSE-OE and DC-OE.
- **nPartition Provider:** Updated to version B.31.01.10.03 to incorporate defect fixes.
- **Utilization Provider:** Updated to version A.01.06.03.03 to incorporate defect fixes.
- **vPar Provider:** Updated to incorporate defect fixes.
- **HP Serviceguard:** Now delivered as a recommended product in the HA-OE and DC-OE. Other updates available independent of the OEs.
- **HP Serviceguard NFS Toolkit:** Documentation updated to include information about support for Veritas Cluster File System (CFS).
- **HP System Management Homepage for HP-UX:** Updated to version A.2.2.8 to incorporate defect fixes.
- **HP Systems Insight Manager:** Updated to version 5.2. Provides ability to discover all nPars in a complex, including those not currently active, from information gathered in one nPar and the ability to discover all vPars in a vparmonitor, including those not currently active, from information gathered in one vPar. New Manage Communications feature enables you to troubleshoot communication problems between the CMS and the managed systems. Includes much more.
- **HP-UX Disks and File Systems:** LVM operations are more scalable now because of the enhanced limits on VGs, LVs, and PVs. Includes other changes.
- **HP-UX Kernel Configuration:** Provides two new features: manage kernel configuration and restore the kernel configuration values of tunables and modules from the previous boot.
- **Ignite-UX:** Version C.7.5 includes recovery support for Agile SAS addressing, improved small memory install performance, support for new hardware.
- **Network Interfaces Configuration and Network Services Configuration:** Updated to incorporate defect fixes.
- **New:** NUMA policy is a tunable and a set of related kernel enhancements that exploit the localities within platforms having a Non-Uniform Memory Architecture. This contrasts with the default symmetric policy that treats all platform resources equally.
- **Obsolescence Bundle:** Used during an update when obsolete software on the system needs to be removed; automatically selected for updates. Will remove several obsolete or incompatible products and/or drivers, including TechSysConf.
- **Online Diagnostics:** Supports new I/O cards, added support for handling PCI-express errors, provides support for hot pluggable disks, and more.
- **Printer Management tool:** Now provides the Text User Interface in addition to the existing Graphical User Interface.
- **Quality Pack Patch Bundles:** Stable, defect-fix patch bundles for the OS and applications. In this release, both the Base Quality Pack bundle and the Applications Quality Pack bundle are provided.
- **Software Distributor:** Updated to incorporate defect fixes.
- **Software Package Builder:** Updated to incorporate defect fixes.
- **System Fault Management:** Now the default monitoring mode. Supports PCI Express interface events on selected systems. New providers are introduced; MP Provider is enhanced. More enhancements are included, as well as defect fixes.
- **Update-UX:** Supports the new OEs: BOE, VSE-OE, HA-OE, DC-OE. No new features or functionality in update-ux.
- **WBEM Services and Providers**

- Logical Volume Manager: This release of LVM supports two versions of volume groups. Version 2.0, which is new in March 2008 release of HP-UX 11i v3, enables the configuration of larger volume groups, logical volumes, physical volumes, and other parameters.
- New: MirrorDisk/UX: Is the mirroring component of Logical Volume Manager, and prevents data loss due to disk failures by maintaining multiple copies of data on separate disks. Newly delivered as an recommended product in the VSE-OE, HA-OE, and DC-OE.

March 2008 Release Notes, Chapter 7: “Internet and Networking”

- Firefox, FirefoxSrc: Updated to version 2.0.0.4. Fixes several security vulnerabilities reported by the Mozilla Foundation.
- New: HP Auto Port Aggregation: Added to as an recommended product to the BOE, HA-OE, VSE-OE, DC-OE. Is a software product that creates link aggregates, often called "trunks," which provide a logical grouping of two or more physical ports into a single "fat pipe."

This port arrangement provides more data bandwidth than would otherwise be available. In addition, HP APA provides automatic link failure detection and recovery, and optional support for load balancing of network traffic across all of the links in the link aggregate.

HP-UX Web Server Suite
- HP-UX Apache-based Web Server: Updated as primarily a security/defect-fix release.
- HP-UX Tomcat-based Servlet Engine: Updated to version 5.5.23.00. Implements the Servlet 2.4 and JavaServer Pages 2.0 specifications.

Internet Services: Select Internet Services now updated through OEURs.
- HP-UX FTP Server (WU-FTPD): Updated to version 2.6.1 to incorporate defect fixes.
- HPUX-Nameserver (BIND): Updated to version 9.3.2 to incorporate defect fixes.
- LDAP-UX Integration: Version B.04.15 provides new LDAP user/group command-line tools.
- Red Hat Directory Server for HP-UX: Version B.07.10.30.01 mainly provides a SD defect fix.
- Thunderbird, ThunderbirdSrc: Updated to version 2.0.0.6. Fixes several security vulnerabilities reported by the Mozilla Foundation.
March 2008 Release Notes, Chapter 8: “Security”

- **HP-UX Auditing and Security Attributes Configuration:** You will have access to both the Audit Configuration functional area of legacy SAM and the auditing functionality in the HP-UX Auditing and Security Attributes Configuration tool in HP SMH. Includes defect fixes.

- **New:**
  
  HP-UX Auditing System Extensions: Provides enhancements to the existing HP-UX auditing system, `auditvolume(5)`.
  
  Offers tools to configure and enforce the data filtering policy for auditable file operations on your system. Policy is rule-based and can be customized for different file system partitions. Delivered as an optional product on all OEs.

- **HP-UX Bastille:** Updated to version B.3.0.31 incorporate defect fixes.

- **HP-UX IPFilter:** Updated to version 15.01 (A.11.31.15.01). Support for IPv6 interfaces; Dynamic Connection Allocation (DCA) feature and `ipftest` utility now support IPv6 rules; and more.

- **New:**
  
  HP-UX Role-based Access Control Extension: Introduces a set of privilege shells, allowing a non-root user to automatically invoke `privrun` when needed by simply configuring a privilege shell as their default shell. Includes integration with System Management Homepage and integration of access control logic directly into select commands. Delivered as an optional product in all OEs.

- **HP-UX Secure Shell:** Updated to version A.04.70.023. The `sshd` daemon defaults to SSH Protocol 2 in new installations; SSH channel window size has been increased; `ssh` command and `sshd` daemon now preserve MAC contexts between packets; new MAC algorithm has been added; and more.

- **HP-UX Software Assistant:** Has replaced Security Patch Check. Messages indicating the deprecation of Security Patch Check will be displayed when the Security Patch Check tool is invoked. Support for Security Patch Check will be terminated on November 1, 2008.

- **OpenSSL:** Contains some important defect fixes.

March 2008 Release Notes, Chapter 9: “Commands and System Calls”

- **New:**
  
  `intctl volume(1M)` and `intrbalvolume(1M)` Commands: Enhanced to allow manual and automatic interrupt balancing based on user configuration files, with a choice of balancing algorithms.

- **New:**
  
  `ioscan volume(1M)` Command: Enhanced to show a new driver property that indicates if the driver supports online instance number replacement.

- **New:**
  
  `mpsched volume(1)` Command: Enhanced so you can now change the affinity of a thread/light weight process to a particular SPU or locality domain. You can also query the binding of a light-weight process or unbind the same.

- **New:**
  
  `rmsf volume(1M)` Command: Enhanced to support Critical Resource Analysis (CRA) on a node or special file before deleting it, and to support specifying a stale I/O node by hardware path.

- **New:**
  
  `rtsched volume(1)` Command: Enhanced to allow the change of the real time priority and/or scheduling policy of a thread/light weight process with the `-G` option.


- **New:**
  
  `aC++` Linker Driver (`aCC_link`): Invokes the HP-UX linker. Command is made available for linking `aC++` objects for deployment on end-user systems. Explicitly disallows certain `accvolume(1)` options used to compile. Newly delivered as a recommended product on the BOE, HA-OE, VSE-OE, and DC-OE.

- **New:**
  
  Copy-On-Write Functionality for Private Memory Objects: Provides copy-on-write functionality for privately mapped files, private segments of child process after `forkvolume(2)` and private segments locked by `mlockvolume(2)`.
What is new in the HP-UX 11i v3 September 2007 release

The following summaries provide a general picture of how the September 2007 release of HP-UX 11i v3 differs from the initial (February 2007) release of HP-UX 11i v3. For further information, see the indicated chapters in the HP-UX 11i Version 3 September 2007 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3.


- Software Pack (SPK): No SPK content delivered on media in the HP-UX 11i v3 September 2007 release. However, a couple of core enhancements, AccessControl and AtomicAPI, have been delivered on the HPE Software Depot at http://www.hpe.com/support/softwaredepot.

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

What is new in the HP-UX 11i v3 September 2007 release
• **New:** Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnable11i): Provides patches required for new systems and the latest Intel Itanium 2 processors, and for add-on hardware supported on HP-UX 11i v3, including I/O adapters and devices.

• **New:** HP Instant Support Enterprise Edition: Updated to version A.03.95.510.42.07 to incorporate defect fixes.

• Mass Storage Stack: New options to manage multi-pathed disks and disk arrays.

• I/O Subsystem: More networking & I/O drivers are DLKM-enabled, which means they can be dynamically loaded and unloaded from the HP-UX kernel without manually rebuilding the kernel or rebooting the system.

• Networking and Mass Storage Drivers
  - **Required Networking Drivers**
    - 10GigEthr-00: Updated to support UDP traffic over the destination port-based multi-queues and to display vital product data (vpd) by using the nwmgr command. DLKM-enabled.
    - GigEther-00: DLKM-enabled and defect fixes.
    - GigEther01: DLKM-enabled.
    - IEther-00 and Gigabit Ethernet: AD337A and AD338A PCI-Express is now supported; iether is DLKM-enabled.
    - 100BT (btlan): DLKM-enabled.
    - Ultra160 SCSI (c8xx): Driver is DLKM-enabled, but not all modules in patch are DLKM compliant.
  - **Optional Networking Drivers**
    - InfiniBand Clustering System: Supports additional PCIe cards; DLKM-enabled.
  - **Required Mass Storage Drivers**
    - CommonIO bundle: Support for additional FC HBAs; delivers SAS-COMMON, which contains utilities for managing specific SAS HBAs; delivers FC-COMMON, which contains utilities for managing specific FC HBAs.
    - FibrChanl-00: DLKM-enabled.
    - FibrChanl-01: DLKM-enabled. Defect fixes.
    - RAID-01: DLKM-enabled.
    - scsiU320–00: DLKM-enabled.
    - SerialSCSI-00: DLKM-enabled.
    - USB-00: Updated to version C.01.05.02 to incorporate defect fixes.

• Utility Pricing Solutions
  - iCAP (Instant Capacity): GiCAP disaster recovery, changes to TiCAP transfer and consumption; changes to icapstatus output; defect fixes.

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

• **New:** Feature Enablement Patch Bundle (FEATURE11i): Contains required patches for new or updated software products.

• **New:** Quality Pack Patch Bundles: Stable, defect-fix patch bundles for the OS and applications. This first release will deliver the Base Quality Pack bundle only. The Applications Quality Pack bundle will be delivered in later releases as patches qualify.

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

• Enterprise Cluster Master Toolkit: Updated to version B.04.01; support for HP-UX Apache on HP-UX Tomcat for CVM/CFS 5.0; support for CIFS/900 on CVM/CFS 5.0; support for CVM/CFS 5.0; enhanced Oracle toolkit; support for Serviceguard A.11.18.

• Event Monitoring Service: Updated to incorporate defect fixes.

• High Availability Monitors: Updated to incorporate defect fixes.
• OpenView GlancePlus Pak: Support for Integrity VM (HPVM) 2.0; configurable logging intervals and flush intervals; gpm renamed to xglance.

• HP-UX IPQoS: HP-UX IPQoS for earlier HP-UX releases (HP-UX 11i v1 and v2) is incompatible with HP-UX 11i v3 and so is removed by ObsIPQoS. However, a new, HP-UX v3-compatible version of HP-UX IPQoS is now available on the Application Release (AR) media for September 2007, as well as on Software Depot at http://www.hpe.com/support/softwaredepot

• LVM and MirrorDisk/UX: Parallel re-sync; parallel opens; alternate link behavior; defect fixes.

• EMS and STM: Supports Dynamic nPartitions, additional systems, and additional cards; monitors generates new events.

• System Fault Management: New WBEM providers; enhancements to the SFMIndication Provider; new Event Subscription Administration.

• Serviceguard: New package-creation process and enhanced support for package dependencies and multi-node packages; additional support for cluster parameters, APA and VLAN, Integrity VM (HPVM), and more.

• Ignite-UX: Supports new hardware for 11i v3, plus other changes.

• Update-UX and SW-GETTOOLS: Updated to incorporate defect fixes.

• Software Utilities:
  - Software Distributor: Updated to incorporate defect fixes.
  - Software Package Builder: Updated to incorporate defect fixes.

• Partitioning and VSE:
  - New: Dynamic nPartitions: cell online activation.
  - New: Dynamic nPartitions: cell online de-activation.
  - nPartition Provider: Interpretation of Dynamic nPartitions capability bit is changed.
  - Partition Manager (parmgr): Support for Dynamic nPartitions.
  - Virtual Partitions (vPars): Support for PA systems running sx2000 chipset, pre-enablement for SCSI tape boot and recovery for Integrity systems. Purchased separately.
  - 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.
  - Global Workload Manager: Includes conditional policies related to Serviceguard events, usage of TiCAP resources based on policy level, support for Hyper-Threading, and further integration with other VSE products.
  - Process Resource Manager: Provides an interface within HP SIM (System Insight Manager).
  - PRMKernelSW (formerly known as PRM Libraries): Changes in fileset.
  - PRMLibraries: Changes in product and fileset encapsulation. Now contains the PRM API.
  - Virtual Machines Provider (VMProvider): Supports the new features of VM A.03.00.
  - VM Guest Support Libraries (VMGuestLib): Supports the new features of VM A.03.00.

• Utilization Provider: Updated to version A.01.06.02.xx to incorporate defect fixes.

• System Management GUIs
  - System Management Homepage (SMH): Defect fixes.
  - Systems Insight Manager (SIM): Supports VSE 3.0 products.
  - Distributed Systems Administration Utilities (DSAU): Usability enhancements.
  - Network Interfaces Configuration and Network Services Configuration: Support for IPv6; support for specifying additional modules to be pushed amongst IPv6, IPv4, and DLPI; more information for tunnels.
  - Disks and File Systems: Support for Volume Group creation for Serviceguard clusters and automatic distribution of LVM changes to all cluster nodes.
  - HP-UX Accounts for Users and Groups: Supports managing POSIX users and groups from LDAP database.
  - HP-UX Kernel Configuration: Defect fixes.
- HP-UX Peripheral Devices Manager: Defect fixes.
- **New:** Printer Management tool: A new Web-based printer management tool available on the HP System Management Homepage (HP SMH).

**WBEM Services and Providers:**
- WBEM Services for HP-UX: Defect fixes.
- HP-UX WBEM Fibre Channel Provider: Supports Consolidated Status Provider and Indication Provider features.
- **New:** HP-UX WBEM IOTree Indication Provider: Supports Indication Provider for hot-swappable PCI slots.
- **New:** The HP-UX KC Provider: Supports kcmodule provider and kctunables provider. Both work in the WBEM environment.
- HP-UX WBEM LAN Provider for Ethernet Interfaces (WBEMP-LAN-00): New provider, LAN Consolidated Status Provider, delivered in this release.
- HP-UX WBEM Online Operations Service Provider (OLOS): Supports cell online activation and deactivation.
- **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. With this component you can retrieve details about the various attributes of SAS HBAs.
- HP-UX WBEM SCSI Provider: Supports Consolidated Status Provider feature and defect fixes.

**September 2007 Release Notes, Chapter 6: “Disk and File Management”**

- CIFS Server: Updated to 3.0g version A.02.03.02 to incorporate defect fixes and enhancements. No longer maintains the LDAP management scripts, *smbldap-tools*.

**September 2007 Release Notes, Chapter 7: “Internet and Networking”**

- **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.
- Internet Services
  - **New:** Multimedia Streaming Protocols: Enables you to stream audio and video files. Delivered on the OEs as an optional feature.
  - LDAP-UX Integration: Updated to version B.04.15 with dynamic group support, PAM_AUTHZ, TLS support, schema extension utility, and more.
  - Red Hat Directory Server: Updated to version B.07.10.30 to incorporate defect fixes.
- Web Browsers
  - **New:** Firefox and Firefox Source: Web browser sets a new standard for internet browsing by providing an easier and more personal way to use the Internet.
  - **New:** GTK and GTK Source: Open-source windowing toolkit used by Firefox and Thunderbird.
  - **New:** Thunderbird and Thunderbird Source: Email application provides convenient, customizable, rich-featured email access.
- Web Servers:
  - **New:** HP-UX NSA HTTP: Updated to version B.11.31.01.02; enables NSA (Network Server Accelerator).
  - HP-UX Apache-based Web Server: Includes additional modules, including scripting, content management, and security.
  - HP-UX Tomcat-based Servlet Engine: Implements Java Servlet 2.4 and Java Server Pages 2.0 specifications.
  - HP-UX Webmin-based Admin: Defect fixes.
  - HP-UX XML Web Server Tools: Upgraded to version 2.03; Xerces upgraded to version 2.8.0.

What is new
September 2007 Release Notes, Chapter 8: “Security”

- HP-UX Auditing and Security Attributes Configuration: Supports new GUI as part of the security attributes tool in HP SMH (System Management Homepage).
- HP-UX Host Intrusion Detection System: Updated to version 4.1. Includes alert volume reduction feature, generation of customized and consolidated alert reports, and a tuning tool that reduces the time and effort to deploy and maintain Surveillance Schedules.
- HP-UX IPFilter: Changes in versioning.
- HP-UX Secure Shell: Updated to incorporate defect fixes.
- New: HP-UX Software Assistant (SWA): includes Security Patch Check (SPC) and is the HPE-recommended utility to use to maintain currency with HPE-published security bulletins for HP-UX software.
- OpenSSL: Updated to version A.00.09.08d.002.

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

- ioscan Command: The -l option of ioscan has been deprecated and will be obsoleted in a future HP-UX release.


- HP-UX Java Development Kit and HP-UX Java Runtime Environment for the Java 2 Platform Standard Edition (JDK/JRE): Updated to versions Java 1.4.2.13 and Java 5.0.8 to incorporate defect fixes.
- Perl: Updated to version 5.8.8 build 817.1 to incorporate defect fixes.

September 2007 Release Notes, Chapter 11: “Internationalization”

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

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

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

What is new in the initial (February 2007) HP-UX 11i v3 release

The following summaries pertain to the initial (February 2007) HP-UX 11i v3 release. For further information, see the indicated chapters in the HP-UX 11i Version 3 Release Notes (February 2007), available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3.

This section provides two overviews of what is new, has changed, and has been deprecated or obsoleted since two previous releases: the HP-UX 11i v1 September 2005 release and the HP-UX 11i v2 June 2006 release:

- What is New for Customers Migrating from HP-UX 11i v1 September 2005 on page 96
- What is New for Customers Migrating from HP-UX 11i v2 June 2006 on page 106

NOTE:


The following are not exhaustive lists, so HPE strongly recommends that you consult the HP-UX 11i Version 3 Release Notes (February 2007) for information that is not included here.
What is New for Customers Migrating from HP-UX 11i v1 September 2005

In the following summaries, you can obtain a general picture of how the initial (February 2007) release of HP-UX 11i v3 differs from the September 2005 release of HP-UX 11i v1. For further details, see the indicated chapters in the HP-UX 11i Version 3 Release Notes, available in its most current version at http://www.hpe.com/info/hpux-core-docs-11iv3.

In addition, you may want to review the list What is New for Customers Migrating from HP-UX 11i v2 June 2006 on page 106 for a general picture of how the initial (February 2007) release of HP-UX 11i v3 differs from the June 2006 release of HP-UX 11i v2.

Initial (February 2007) Release Notes, Chapter 4: “Hardware-Specific Information”

- Enhancements to IO Forwarding: The IO forwarding interrupt comes under the purview of Detect & Strobe and is enhanced.
- **New:** estape Tape and eschgr Autochanger Drivers: New with HP-UX 11i v3. ssrfc driver no longer available.
- Graphics: HP-UX 11i v3 is not supported on workstations, and the PEX graphics API is not supported on HP-UX 11i v3.
- HP-UX 11i v3 Driver Development Kit (DDK): Enhanced for HP-UX 11i v3. Provides documentation, sample code, build environment and development tools for 3rd-party developers, ISVs and IHVs to develop and test drivers on HP-UX 11i v3 PA-RISC and Itanium-based platforms.
- Enterprise Virtual Array (EVA): There is an issue with LUN WWIDs and HP-UX 11i v3.
- HP StorageWorks Secure Path: Obsolete.
- I/O Subsystem: Several new I/O commands help manage the I/O subsystem, and existing commands have new options and functionality to support the next generation mass storage stack.
- **New:** The Next Generation Mass Storage Stack manages I/O devices, such as SCSI logical units (LUNs). In this release, the mass storage stack delivers functionality designed to enhance server scalability, adaptability, and performance while retaining backward compatibility. New features include agile addressing, native multi-pathing, and increased parallelization.
- Networking and Mass Storage Drivers
  - Gigabit Ethernet: The igelan, gelan and btlan products are enhanced with new features, including online deletion (OLD) and module packaging.
  - HyprFabrc-00: Supports only Peripheral Component Interconnect (PCI) HF2 cards. HF1 Cards will not be supported.
  - **New:** InfiniBand: Now provides support for Network Interfaces and Network Services Configuration.
  - PCIMUX-00: The PCIMUX-00 bundle delivers the pci-mux1 driver, which supports the AD278A and AD279A PCI MUX adapters.
  - TermIO-00: The TermIO-00 driver bundle delivers the pci_mux0 driver, which supports the A6748A and A6749A PCI MUX adapters.
  - FibrChanl-01 Fibre Channel Mass Storage Driver for HP-UX 11i v3: Supports new mass storage stack, Agile addressing, Soft Zoning, PCI Online deletion, and PCI error detection and recovery.
  - HP PCI Ultra160 SCSI (c8xx): Supports new mass storage stack, PCI Online Deletion (OLD), PCI error detection and recovery, HBA Device Special Files (DSF). Termination of support for Ultra2 HBAs.
  - USB-00: The USB stack and drivers delivered in USB-00 replace the legacy USB stack delivered in drivers hcd, hub, hid, and usbd, with additional functionality.
- **New:** PCI Error Recovery: Provides the ability to detect, isolate, and automatically recover from a PCI error, avoiding a system crash.
- **New:** PCI Card Online Deletion (OLD): The PCI OL* feature has been enhanced to allow HP-UX 11i v3 administrators to delete PCI cards and their associated drivers online without requiring a system reboot.
- Utility Pricing Solutions
- Instant Capacity: Updated to version B.11.31.08.01 to include modifications to the installation procedure; support for Global Instant Capacity (GiCAP) and hyperthreading; changes to GiCAP grouping rules and icapstatus command output; and more.
- HP Pay per use: Updated to version B.11.31.08.01.00 with support for hyperthreading features included in HP-UX 11i v3. Includes error fixes.
- Xserver: Radeon 7500 is supported on rp34x0 and rp44x0 servers in HP-UX 11i v3.

Initial (February 2007) Release Notes, Chapter 5: “General System Administration”

- asyncdsk Driver Kernel Tunable max_async_ports: max_async_ports is now a dynamic tunable; default value changed to 4096 and maximum value is 4194304.
- New: Concurrent Dump: You can now configure your machine to perform a distributed parallel dump, thereby improving the dump throughput and reducing dump time.
- New: Detect and Strobe: Core-kernel functionality used to limit the amount of time spent in servicing interrupts to a user-defined maximum. Note: Detect and Strobe was previously delivered as patch for HP-UX 11i v1.
- New: Distributed Systems Administration Utilities: Provides tools that simplify managing groups of systems and Serviceguard clusters.
- New: Enhanced User Core File Naming: New command, coreadm introduced to uniquely name application core files created by abnormally terminating user processes.
- Enterprise Cluster Master Toolkit: Includes scripts for Oracle, enhancements to the Oracle Toolkit, support for VERITAS Cluster File System (CFS) in a Serviceguard A.11.17 environment, support for Serviceguard 11.17.01 (non-CFS) for Tomcat, Apache, Oracle 10g, and more.
- New: Event Manager: A comprehensive mechanism for posting, distributing, storing, and reviewing event information. Composed of a kernel component, user libraries (libevm.so) and a set of commands.
- Event Monitoring Service: Now enhanced to send WBEM indications, which can be viewed from the EVWEB tool.
- New: High Resolution Timer Support: Enhances select timer-related system calls and APIs to provide a resolution finer than the default 10 millisecond resolution.
- OpenView GlancePlus Pak: Updated to version C.04.55 with support for large process IDs; enhancement to record the Logical Volume (LV) metrics for VERITAS Volume Manager, versions VxVM 4.1 and VxVM 5.0; new metrics for monitoring the UFC; and other changes.
- Partitioning and Virtual Server Environment
  - New: Dynamic LCPU: Provides the ability to enable and disable Logical Processors (LCPUs) dynamically at the processor set boundary. Supported only on systems with the Hyper-Threading feature available and enabled.
  - Global Workload Manager: Updated to version A.02.50.00.x with support for Linux managed nodes, support for Windows virtual machine guests, nested partitions, and many other changes.
  - Process Resource Manager: Updated with features including ability to manage shared memory, integration with Integrity Virtual Machines, integration with System Management Homepage, ability to map UNIX groups to PRM groups, and several other features.
  - HP-UX 11i v3 Patch Bundles and Software Pack: The initial release of HP-UX 11i v3 will not include the standard Quality Pack (QPK) and Hardware Enablement (HWE) patch bundles or the Software Pack that delivers optional new core enhancements. The delivery of these patch bundles and the Software Pack is planned for the first update release of HP-UX 11i v3.
  - HP-UX Virtual Partitions: Updated to version A.05.01 with online memory migration, mixing A.04.02 and A.05.01 virtual partitions in the same vPars environment, and hyperthreading. Purchased separately.
  - Integrity VM Note: The host for Integrity VM is not supported on 11i v3. However, the virtual machines of the host can run 11i v3.
  - HP-UX Workload Manager: Updated to version A.03.02.02. Changes include Process Resource Manager no longer included in bundle; supports Integrity Virtual Machines; communications now...
secure by default; supports finer granularity for minimum allocations to FSS groups; supports a maximum of 256 FSS groups; and several other changes.

- **HP-UX Workload Manager Toolkits**: Updated to version A.01.10.01. Provides the new HP-UX WLM SAP Toolkit, which identifies SAP processes based on user-defined criteria and uses WLM's process maps feature to place the SAP processes in specific workload groups. PPUTK obsoleted; SASTK and DMTK deprecated.
- **Partition Manager**: Updated to v2.0 (version B.31.02.03.01) with the ability to enable and disable Hyper-Threading for nPartitions whose cells have processors that are Hyper-Threading capable.
- **nPartition Provider**: Updated to version B.31.01.07.01 with support for WBEM Services version 2.5 and support for systems based on the HP sx2000 chipset.
- **New**: Utilization Provider: Lightweight daemon (*utild*) that records system-utilization data on a 5-minute interval; data recorded includes CPU, memory, disk, and network utilization; also includes a WBEM provider for access to the data.
- **vPar Provider**: WBEM provider displays information about virtual partitions. Read-only; clients cannot modify virtual partition configurations with it.

- **Serviceguard**: Updated to version A.11.17.01 with support for persistent DSF naming and dynamic multipathing, large PID, identification of networking interfaces (NICs) that are part of the Serviceguard cluster configuration, and other features. VERITAS Cluster File System (CFS) and Cluster Volume Manager (CVM) not supported in initial release of HP-UX 11i v3. RS232 serial line as cluster heartbeat is obsolete.
- **Serviceguard Network File System (NFS) Toolkit**: Updated to version A.11.31.02 with new control script template and a defect fix. Can work with Serviceguard A.11.17.01, but does not support some Serviceguard A.11.17.01 and NFS HP-UX 11i v3 features. Customers who need VERITAS Cluster File System (CFS) should not upgrade to HP-UX 11i v3 until CFS is available on that platform.
- **System Management Homepage**: Updated to version A.2.2.5 to incorporate defect fixes. In addition, many more system management tools are integrated in HP SMH for HP-UX 11i v3 then HP-UX 11i v1 September 2005.
- **Systems Insight Manager**: Updated to “HP SIM 5.0 with Update 2 - HP-UX” with support for HPE BladeSystem c-Class blade and enclosure, and onboard administrator; BladeSystem Integrated Manager 2.1 with updated functionality; minimum system memory configuration to run HP SIM on HP-UX 11i v3 is now 3GB, and defect fixes.
- **WBEM Services for HP-UX**: Updated to version A.02.05 with association providers, internationalization support for CIM operations, CIM schema upgrade, and other major changes.
- **HP-UX Accounts for Users and Groups**: New TUI in place of the legacy SAM interface; new Web-based GUI; improved performance with the new TUI; supports long username and groups.
- **HP-UX Kernel Configuration**: New TUI in place of the legacy SAM interface; New Web-based GUI; Error Management Technology support; critical defect fixes.
- **New**: HP-UX Large NPROC: The HP-UX 11i v3 system can support more processes running concurrently than previous releases, changing from 30,000 to 60,000.
- **New**: HP-UX Large PID: The range of Process Identifiers (PID) the kernel can generate in a stand-alone HP-UX system has been expanded from 0 ~ 30,000 to 0 ~ 2^30-1 (1,073,741,823).
- **HP-UX Peripheral Devices Manager**: Enhanced to support the Agile Hardware Path Addressing and Persistent Device Special Files; enhanced to allow for Online deletion of OLRAD cards; now reads the detailed CRA report from the log file in which the report is logged after the change in the CRA behavior; and more.
- **HP-UX System V IPC Message Queues**: Enhanced with dynamic tuning capabilities. Tunables *msgmax*, *msgssz*, *msgsegmsgmap* are obsolete. Added new dynamic tunable *msgmbs*; indicates maximum kernel memory to be used for messages waiting to be received. Tunables *msgmni*, *msgtql* are made dynamic.
- **New**: HP-UX WBEM Fibre Channel Provider: Client applications can use this provider to get information about HP-UX Fibre Channel HBAs on the system.
- **New**: HP-UX WBEM File System Provider: Makes available file system information; instruments the HPUX_HFS, HP_LOFS, HP_CDIFS, HP_VxFS, HP_NFS, HP_MountPoint, and HPUX_Mount classes.
- **New**: HP-UX WBEM IOTree Provider: Client applications can use HP-UX WBEM IOTree provider to get information about HP-UX IOTree host-bus adapters (HBAs) on the system.
• **New:** HP-UX WBEM LAN Provider for Ethernet Interfaces (**WBEMP-LAN-00**): Is a CIM Provider for Ethernet-based LAN technologies on HP-UX. Client applications can use this provider to determine all Ethernet LAN links available on the system (registered and known to HP-UX DLPI) and collect information about them.

• **New:** HP-UX WBEM Online Operations Service Provider: Not currently supported; intended to support features in future releases of HP-UX 11i v3.

• **New:** HP-UX WBEM SCSI Provider: Client Applications can use this provider to get information about HP-UX SCSI host-bus adapters (HBAs) on the system.

• **Ignite-UX:** Updated to version C.7.0.x with multipath-awareness, new approach for addressing I/O, automatic management of the system boot path for multiple path configurations, user-selectable format for recovery archives and golden archives, and other changes.

• **New:** Kernel Tunable Values Reset From Boot Prompt: HP-UX 11i v3 release provides a new feature in which kernel tunable values can be reset from the boot prompt.

• **New:** Livedump: Provides the ability to take a crashdump on a live system without a forced shutdown or panic of that system. Implemented for Itanium-based platforms only.

• **New:** Long Username / Groupname: Current limit enhanced from 8 to 255 bytes. By default 8 is still the limit. With an enabler this limit can be enhanced to 255. Once enabled, cannot be disabled in the future. Not supported for trusted systems.

• **New:** Node and Host Name Expansion: Provides the ability to set node and host names up to 255 bytes.

• **Obsolescence Bundle:** Used during an update when obsolete software on the system needs to be removed; automatically selected for updates. Will remove several obsolete or incompatible products and/or drivers.

• **Online Diagnostics product:** Introduced for the `map` command, is a new option, `page`, which displays a paginated output of the system `map`.

• **SCSI Kernel Tunables:** `scsi_maxphys`, `scsi_max_qdepth` and `default_disk_ir` kernel tunables are obsolete.

• **Software Distributor:** Updated to version 11.31 with support for HP-UX 11i v3-unique features including large pid, long usernames and group names; and improved support for high level software deployment tools such as Software Manager, `update-ux`, and future tools. Includes defect fixes.

• **Software Package Builder:** Added new policy files that include the expansion of the acceptable category tags, the addition of the `is_oe` attribute, and changes to the architecture and `os_release` attribute rules.

• **System Administration Manager (SAM):** Deprecated. The `smh` command is recommended, but `sam` command will continue to be available. Some functional areas previously available are obsoleted.

• **System Administration Manager (SAM) Auditing and Security Functional Area:** System Security Policies subarea of SAM is replaced with the HP--UX Security Attributes Configuration tool; Audited NIS+ Users subarea is obsolete.

• **System Administration Manager (SAM) Printers and Plotters Functional Area:** Launch point in X/ObAM-based GUI mode is now via the HP System Management Homepage.

• **System Administration Management Tool Changes:** SAM and HP System Management Homepage: System Administration Manager (SAM) is deprecated in HP-UX 11i v3. HP System Management Homepage (HP SMH) is the system administration tool for managing HP-UX 11i. HP SMH provides Web-based systems management functionality, at-a-glance monitoring of system component health, and consolidated log viewing. HP SMH also provides Terminal User Interfaces (TUIs).

• **New:** System Fault Management: Collection of tools used to monitor the health of HPE servers and receive information about hardware such as memory, CPU, power supplies, and cooling devices. Operates in the WBEM environment.

• **Update-UX and SW-GETTOOLS:** The `update-ux` command now uses Software Manager, a new application that provides features including support for preview; interactive TUI; better support for multiple media, including more accurate disk space analysis, dependency selection across media; and improved logging capabilities.

• **Virtual Memory Kernel Tunables:** The `eqmem_limit` (only on PA-RISC systems) has been added. Several tunables have been removed.

- HFS (also known as UFS) File System Type: Now deprecated. Will be removed from the OS in a future release, to be determined.
- HFS file system and backup commands: To work on file sizes larger than 2 TB.
- CIFS Client: Updated to version A.02.02.01 with support for MS Distributed File System (DFS) and DLKM feature and other changes.
- CIFS Server: Updated to 3.0f version A.02.03: Redesign of Winbind code; File Locking Interoperation Functionality; support for long user and group names; support for TDB Memory Map; and other changes.
- HP-UX File Systems Architecture Enhancements: Numerous enhancements include VFS stacking capabilities; fsdaemon user level daemon; large file supports; improved file systems syncer; performance improvement of aio_reap volume(2); support of larger files and long link names in backup utility; and several other enhancements.
- Logical Volume Manager and MirrorDisk/UX: Delivers significant scalability and availability enhancements. Supports the next generation mass storage stack, and is integrated with the mass storage stack’s load balancing and dynamic LUN expansion features; enhanced to support larger logical volumes, temporary suspension of volume groups, striping with mirroring, and dynamic LUN expansion; enables online modification of a volume group, as well as a new script to simplify the replacement of a failing disk.
- Open Network Computing (ONC)
  - AutoFS/Automounter: Updated with support for LDAP name service to store AutoFS maps; the ability to browse the list of potential mount points in an indirect AutoFS map without mounting the filesystems; the ability to configure AutoFS through the /etc/default/autofs file; and other features.
  - Cache File System (CacheFS): New features include long file name support, cachefspack, and support for large files and large file system.
  - Library RPC: Library routines support several new datatypes, add support for IPv6, and more.
  - Network File System (NFS) Services: Provides numerous enhancements, including pcnfsd daemon, which is multithreaded and supports shadow password and Secure RPC; new user mode daemon generates and validates API security tokens, and maps the GSSAPI principal names to the local user and group IDs; additional security mechanisms, such as Secure NFS that supports Kerberos through GSSAPI; NFS access using a firewall; and many other features.
  - Network Information Service (NIS): Provides several new features including support for shadow mode; support for enabling DNS forwarding mode; support for long \texttt{\texttt{uname}}, \texttt{\texttt{hostname}}, and \texttt{\texttt{username}}; and other features.
  - \texttt{\texttt{NIS+}}: Obsoleted.
  - \texttt{\texttt{PCNFSD}}: \texttt{\texttt{pcnfsd}} daemon is multithreaded. Support for shadow password and secure RPC; \texttt{wtmp} entries can hold usernames up to the PCNFSD protocol limitation of 32 characters and client hostnames up to the PCNFSD protocol limitation of 64; support for printer names up to the PCNFSD protocol limitation of 64 characters.
- **New:** Unified File Cache: Integrates the page cache and buffer cache to provide coherency for file access. Serves as a key enabler for VxFS 4.1 and ONC+2.3. Improves source compatibility with Solaris, Tru64, and Linux applications that depend on coherency of page and buffer cache. Potential performance improvement of applications that depend on coherency of page and buffer cache.
- VERITAS File System (VxFS): Features in version 4.1 include support for 1024 ACLs; support for large filesystem (up to 32 TB) and large file size (up to 16 TB); VxFS filesystem as a DLKM; multi-device filesystems; and other features. Cluster File System (CFS) is not supported in the initial release of HP-UX 11i v3.
- VERITAS Volume Manager (VxVM): Features in version 4.1 include support for Volume Sets and VxFS MDS; Cross-Platform Data Sharing; Device Discovery Layer Phase 2; Serial Split Brain; and other features. Cluster Volume Manager (CVM), a part of VxVM that is enabled by a separate license, is not being provided with the current 4.1 HP-UX 11i v3 release.
• **New:** ARPA Transport: Many enhancements to ARPA Transport include Security Containment, sendfile/ UFC, UNIX 2003 Conformance, large hostname support, and Tru64 Application migration to HP-UX/ Itanium-based.

• Browsers: Mozilla is updated with defect fixes. Includes improved Asian font support on HP-UX and the Japanese Language Pack.

• **New:** HP Data Link Provider Interface (DLPI): Enhancements include NOSYNC STREAMS synchronization level for improved performance and scalability for high speed links, online deletion (OLD) of I/O card instances, and dynamic loading and unloading of LAN drivers without reboot.

• HP-UX PPPv6: Incorporates defect fixes.

• HP-UX VLAN: New features include support for HP-UX VLANS over APA aggregates and LAN-monitor failover groups, SMH-Network Interface Configuration support for Web-based VLAN configuration, and nwmgr support for HP-UX VLAN.

• **New:** HP-UX Web Server Suite
  - HP-UX Apache-based Web Server: Updated to version 2.0.58.00 as primarily a bug fix release.
  - HP-UX Tomcat-based Servlet Engine: Upgraded to 5.5.9.04. Implements the Servlet 2.4 and JavaServer Pages 2.0 specifications. Designed to run on JDK 1.5 and later versions.
  - HP-UX Webmin-based Admin: Upgraded to 1.070.08 as primarily a defect fix release.

• Internet Services: You can now deselect individual Internet Services during installation or remove filesets later.

• **New:** DHCPv6: Now available in the core operating system.

• **New:** TFTP: tftpd (server) and tftp (client) now support IPv6 addresses. New command line options specify upper and lower port range limits for data transfer.

• LAN Administration Commands: lanadmin now supports an IPoIB interface, 64-bit MIB, and native and non-native drivers developed by independent hardware vendors; lanscan and linkloop now support IPoIB interfaces.

• LDAP-UX Integration Product: This release includes the new LDAP-UX version B.04.00.10.

• **New:** Mobile IPv6: Uses a fixed IP address for extended periods to allow mobile nodes to change network access points while remaining accessible with no disruption of network continuity. Supports IPv6 addresses.

• **New:** Network Interface Management Command Line Interface: The nwmgr command is used to manage LAN-based and IB-based network interfaces; a single tool for performing all network interface-related tasks.

• **New:** Network Interfaces Configuration and Network Services Configuration: These tools in the HP System Management Homepage replace the Networking and Communications functions of the System Administration Manager (SAM), which are no longer available.

• **New:** Red Hat Directory Server for HP-UX: 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.

- STREAMS: NOSYNC feature allows multiple instances of a put procedure for a queue and the service
  routine for that queue to run concurrently. All references to the global variable uniprocessor have been
  removed.

- NetTL - Network Tracing and Logging: The nettl command is enhanced with formatting support for IPoIB
  the header, command-line option to configure trace buffer value, pre-capture trace values, and new
  options to manage trace filters.

Initial (February 2007) Release Notes, Chapter 8: “Security”

- New: HP-UX 11i Security Containment: Provides compartments, which isolate unrelated resources on a
  system to prevent catastrophic system damage if one compartment is penetrated. When configured in a
  compartment, an application (processes, binaries, data files and communication channels used) has
  restricted access to resources outside its compartment. Also provides fine-grained privileges, which allow
  you to grant privileges to processes needed for the task and, optionally, only for the time needed to
  complete the task.

- HP-UX Auditing System: Enhanced in several ways, including: auditing subsystem is now working without
  converting the system to trusted mode; standard mode audit user selection information is stored in a per-
  user configuration user database; userdbset command specifies which users are to be audited in
  standard mode; and several other enhancements.

- New: HP-UX Bastille: Although Bastille has been available on the Web (and on the HP-UX 11i v2 OEs) for
  some time, it is now available, at version B.3.0.20, on the HP-UX 11i v3 OEs for the first time for
  customers migrating from HP-UX 11i v1 and includes several enhancements.

- HP-UX Host Intrusion Detection System: Updated to release 4.0 with features including reducing alert
  volume by aggregation; reducing alert volume by monitoring only critical files; configuring critical users;
  supporting specification of usernames and user IDs; and measuring the event rate.

- HP-UX IPFilter: Updated to version A.03.05.13 with defect fixes and enhancements including filtering on X.
  25 interfaces, filtering on 10GigE interfaces; IPFilter not plumbed into the networking stack by default; no
  reboot required to enable IPFilter.

- New: HP-UX IPSec: Previously only available on the AR media. Now delivered on the HP-UX 11i v3
  Operating Environments. Provides an infrastructure to allow secure communications (authentication,
  integrity, confidentiality) over IP networks between systems and devices that implement the IPsec protocol
  suite.

- HP-UX Secure Shell: Updated to version A.04.40.005 with many new features including high performance
  enabled SSH/SCP patch; configuration directives in the server; auth selection patch; increase in the
  default size of RSA and DSA keys; delayed compression; and many other features, as well as defect fixes.

- HP-UX Security Attributes Configuration tool (secweb): Updated to support long user name.

- New: HP-UX Standard Mode Security Extensions: Enhances the security of systems running in standard
  mode by providing security features that were previously available only on systems that had been
  converted to trusted mode.

- Install-Time Security: Adds a security step to the install/update process that allows you to run the Bastille
  security lockdown engine during system installation with one of four configurations ranging from default
  security to “DMZ.”

- Kerberos Client: Updated to version 1.3.5.03 with new features including support for powerful
  cryptographic algorithms like 3DES, RC4, and AES; support for IPv6; support for TCP; and defect fixes.

- OpenSSL: Updated to version A.00.09.08d.001 with support (in default version) for several hardware
  ENGINES (see section for specifics); support for elliptic curve cryptography; and EVP, the library of which
  provides a high-level interface to cryptographic functions. Other provided versions include other features.

- PAM Kerberos: Enhanced to issue a warning if rc_host_0 is owned by anyone other than root when a
  user rlogin tries to into a system; will also issue a warning if the keytable entry is not found for the host
  service principal on the client but present at the KDC.

- New: Security Patch Check: Analyzes the currency of a system with respect to security bulletins.
  Recommends actions for security vulnerabilities that have not been fixed by patches, updates, or logged
  manual actions currently applied to the system.
Initial (February 2007) Release Notes, Chapter 9: “Commands and System Calls”

- `/etc/skel/.profile` shell script: `(current path) in $PATH is deprecated.
- 32-bit `pstat` System Call (Deprecated): When compiling a 32-bit application that uses the `pstat` system call, the compiler option `-D_PSTAT64` must now be specified. This causes `pstat` to use 64-bit fields rather than 32-bit fields. The application still remains a 32-bit application.
- `at`, `cron`, and `batch` Commands: New features include support for queueing multiple jobs at the same time, support for queueing of more than 100 jobs, and ability to schedule jobs up to the `njob` limit specified for every queue in `queuedefs volume(4)`.
- `core` Format Implementation Change: The true version string has replaced the `utsname` struct in the `CORE_KERNEL` segment. A workaround has been provided for applications which reversed-engineered the `core` file format and depend on `utsname` being in it. This new `core` file format is the default format.
- `csh` Command Line Interpreter: The non-interactive invocation of `csh` will not source the `~/.history` file by default.
- `fbackup` File Systems Backup and Recovery Commands, `frecover`, and `ftio`: Deprecated; will be obsolete in a future HP-UX release. You should prepare by migrating to the favorable replacement `pax`. Support will be continued for archive retrieval.
- New: `gcore` Command: creates a core image of each specified process.
- `getgroups`, `setgroups`: no longer limited by the `NGROUPS_MAX`.
- `getty` Command: Enhanced to configure the default setting for special control characters (erase, kill, etc.) by the user.
- HP-UX Kernel Configuration Commands: HP-UX 11i v1 kernel configuration commands has been removed in favor of new commands for HP-UX 11i v3. In addition, there are changes to the location of kernels and related files on disk; to the manner in which a kernel configuration is chosen at boot time; and to the manner in which the system automatically maintains a backup kernel configuration.
- `iostat`: Enhanced to report activity for each active lunpath to the LUNs. Also, the new option `-L` has been added, which lists active lunpath statistics.
- Long `hostname`, `uname`, and `setuname` Commands: The limits of these commands can now be expanded to 255 bytes.
- New: Long Username Support by HFS `ff`, VxFS 4.1 `ff`, `repquota`, `quotacheck`: Enhanced to support the username up to 255 bytes.
- `lp`, `lpadmin`, `lpfence`, `lpmove`, and `lpsched` Commands: Printers can now be added/removed/modified without bringing down the `lp` scheduler; line printer spooler enhanced to support printer/class names up to 250 characters from the previous limit of 14 characters; support also extended to remote destination names.
- `mmap` System Call: Enhanced to support mapping file with read-only permission with `PROT_EXEC` and implicit `mmap` with `MAP_FIXED`.
- `pax` Command: Enhanced to conform to the UNIX 2003 Standard. You will now be able to use `pax` to archive files having a size greater than or equal to 8GB; long user name/group name; large UID/GID greater than 2097151; long pathname or link name.
- `PFS` Commands: Obsolete.
- `pipcs` Command: Enhanced to provide details regarding processes using the various POSIX Message Queues, as well as creation time and last modification time of the POSIX Message Queues.
- `ps` Command: Enhanced to display maximum of 1020 characters in the COMMAND field.
- New: `pselect` System Call: Added to meet the UNIX 2003 Standard. Provides additional parameter options to users of the `select` system call. Timeout granularity may be specified in seconds and nanoseconds. A new signal mask parameter is also available to be used for the duration of system call.
- `psrset` Command: Enhanced to manage the Real Time Extension processor set; enhanced to support one more PSET attribute type called `LCPU`.
- `pstat_getstatic` System Call: Information returned by

```
pstat_getstatic
```
may now change between reboots due to manually or automatically generated administrative changes in the associated kernel tunables, online addition/deletion of resources, or other events. Likelihood of it changing is infrequent.

- **New:** Ptools Process Management Tools: New set of process management tools that support easy process tracking and debugging. Consists of the following commands: `pmap`, `pfiles`, `pgrep`, `pkill`, `ptree`.

- **ptrace** System Call: Obsolete in HP-UX 11i v3.

- **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.

- **sar Command:** Enhanced to report activity for each HBA and Tape device.

- **setboot Command:** Enhanced to provide support for setting the High Availability (HA) Alternate boot path; supports the setting of a firmware test for the next boot on the Itanium-based platform; modified to take a persistent DSF or a lunpath hardware path as valid input to set the bootpath for next boot; enhanced to enable or disable hyperthreading environment for the next boot on a Dual-Core Intel Itanium 2 platform.

- **sigblock volume(2), sigsetmaskvolume(2), sigstackvolume(2), sigvector volume(2), and bsd_signalvolume(3C):** Manpages are obsolete.

- **spray Command:** Provides two new options: `-d`, which specifies how many microseconds to pause between sending each packet, and `-t`, which specifies class of transports.

- **New:** `swapctl` System Call: Allows you to configure primary swap to take effect on the next boot. Previously this could only be done via the commands `lvlnboot` and `vxvmboot`. `swapon` system call is deprecated.

- **swapon and swapinfo Commands:** `swapon` command enhanced to support setting/unsetting of primary swap device for next boot; `swapinfo` command supports new `-s` option to display settings of primary swap for next boot.

- **sysdef Command:** Deprecated. Reports incorrect values for some tunable parameters such as `msgmap`, `sema`, and `shmem`.

- **syslogd Command:** Enhanced to continue logging to log files even after the size of the log file grows beyond 2GB; enhanced to log multibyte message strings correctly.

- **usermod** has been modified to selectively prevent the movement of home directories with `-m` option.

- **UNIX 2003 Compliance:** All commands are modified/enhanced to conform to UNIX 2003 Standards. The UNIX 2003 changes which do not affect HP-UX compatibility are available by default. Otherwise, in order to get UNIX 2003 behavior, the variable `UNIX_STD` has to be defined in the environment.

  The `cp(1)` command is an exception to the above UNIX 2003 Compliance rule. The default behavior of "cp -if" was changed for the initial release of 11.31 to conform to UNIX 2003 Standards.

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What is new


- **Bundled C Compiler:** Updated to version A.06.12 on Itanium-based servers and B.11.11.16 on PA-RISC. Highly compatible with previous versions; diagnostic messages have changed; more erroneous and suspicious source constructs are diagnosed.

- **aC++ Run Time Library:** Includes the `-AA -D_HP_NONSTD_FAST_IOSTREAM` performance improvement macro, C++ Standard Library TC1 compliance change, and USA 2007 Daylight Savings Time legislation support.

- **Dynamic Loader (dld.so):** Since patch PHSS_32864, September 2005, `dld.so` has enabled large kernel page size, support for loading unaligned shared libraries and executables, and other changes.

- **FirstBoot:** As part of Transition links (a.k.a. Upgrade), HPE used to create a symbolic link `/etc/ set_parms` —> `/sbin/set_parms`. Transition links are obsoleted in HP-UX 11i v3 and `set_parms` is available to the user as `/sbin/set_parms`. So HP-UX 11i v3 will not support the symbolic link `/etc/ set_parms`.

- **HP MLIB:** Updated to version 9.5 with the addition of two new libraries, VECLIBSC8 and LAPACKSC8, which are 64-bit address libraries with 64-bit integer values that use calling conventions similar to those found in Cray's SCILIB math library.
• HP MPI: Updated to version 2.2 with several new features, including C++ bindings, new `mpirun` command line launch options, MPI-2 supported ROMIO, and other new features.

• HP-UX C Library (libc)
  ◦ HP-UX C library (libc) - UNIX 2003 Standard Compliance: libc library enhanced to comply with UNIX 2003 standards. A number of APIs have been added, while some APIs have been modified.
  ◦ HP-UX C library (libc) - Other Changes: New features include support for large PID, large `uname` and `hostname`, Tru64 API migration, `malloc volume(3C)` thread local cache enhancements, long username and groupname.
  ◦ `libc.1` Library: Deprecated. Is a HP-UX 10.20 compatibility “C” library available in HP-UX 11i. No immediate impact in HP-UX 11i v3. When the `libc.1` library is obsoleted, all programs linking to this library will not work. Hence you are encouraged to start migrating your programs from `libc.1` to `libc.2` library.
  ◦ Networking libc APIs: Networking APIs `getnameinfo` and `getaddrinfo` now look into the repositories specified with the hosts directive of the `/etc/nsswitch.conf` file, as well as those specified in the `inodes` directive, to resolve an IPv4 address. Includes additional changes.

• HP-UX Color-Curses: `libcur_colr` Library and Commands: Obsolete. Were declared deprecated in HP-UX 10.30 and are not available in HP-UX 11i v3 PA-RISC.

• Java 2 Platform
  ◦ Java JDK/JRE for HP-UX: HP-UX 11i v3 does not include Java 1.3 and Java 3D (J3D 1.4). SDK/RTE version 5.0 has been updated to incorporate defect fixes.
  ◦ Java Out-of-Box: Updated to incorporate defect fixes.

• New: libIO Library: `libIO.so` (for Itanium-based systems) or `libIO.sl` (for PA-RISC systems) is a shared library, which provides APIs for accessing the HP-UX I/O subsystem information. The library will reduce the dependency on other HP-UX commands for I/O information.

• New: `libpthread` Library: Added new API, `pthread_setschedprio`, to set scheduling priority of target thread.

• New: `ld` Link Editor: Additional options and other changes since patch PHSS_32864, September 2005.

• Software Transition Kit (STK): Designed to help transition HP-UX applications from earlier versions of HP-UX to the latest version of HP-UX. Will not be available for HP-UX 11i v3.

• Threads Renice facility: Two new `pthread` APIs to change `nice` value of a thread in a multi-threaded process.

• UNIX 2003 Standard Profile Conformance: New functions and compiler conformance as defined in Single UNIX Specification version 3. The Precision Architecture (PA) systems will have most of the UNIX 2003 features available for applications. Since the C99 compiler will not be available on PA, full UNIX 2003 branding is not supported. Itanium-based systems will fully conform and will be branded to UNIX 2003.

Initial (February 2007) Release Notes, Chapter 11: “Internationalization”

• Unicode 5.0: Now supported. Unicode 5.0 is an extension to the previously supported Unicode 3.0 character set standard.

• New: JISX0213 Standard: Now supported.

• New: KS X 1001 Standard: Now supported.

• New: Big5-2003 and CNS11643 Standards: Now supported.

• New: HKSCS-2004 (Hong Kong Supplementary Character Set): Now supported.

• New: Locales - Baltic/Russia/Ukraine/Latin America: Now supported.

• New: Locale Versioning: `localedef libc` UNIX 2003-related I18N changes. New locale version "locales.3" has been generated for all system supported locale binaries. This has been provided to protect older PA-RISC-based archived applications from unexpected systems behavior in order to fully support the UNIX 2003 standard.

• UNIX 2003 Support: The `localedef`, `locale` and `iconv` commands and the associated C library APIs, locale databases and `iconv` converters have been updated to align with the UNIX 2003 standard.
• Alternate Width Properties for Unicode Codesets: Now supported for Asian locales.

• **New:** Messaging Commands: mkcatdefs, dspmsg, and dspcat. Added to HP-UX for compatibility with Tru64 UNIX.

• **New:** Iconv Codeset Converter Config File Changes: system.config.iconv. New system.config.iconv file provided to separate the HP-UX core OS iconv mapping table information from the layered third-party and user-specific iconv mapping table information.

• Japanese Mainframe Character Set: iconv now supports an extended area of Japanese mainframe character sets.

• **New:** Internationalized PostScript Printing Support: psfontpf. New PostScript printer filter psfontpf enables printing of non-English international characters in text files and web pages.

• Asian Printing: Asian lp model files and filters have been enhanced to support important Asian national standards and ISO 10646.

• TrueType Fonts for European Codesets: Provides additional TrueType fonts support to cover the glyph patterns for ASCII, Latin-1 Supplement, Latin Extended-A, Latin-Extended-B, Greek, Cyrillic, and currency symbols.

• Asian TrueType Fonts: Enhanced to support the latest national standards and ISO10646. New typefaces are provided for Japanese, Simplified Chinese, and Traditional Chinese fonts.

• Asian Bitmap Fonts: Enhanced to support the latest national standards and ISO 10646.

• Fallback Font Support: For text-based GUI applications, in the event there are no glyphs, the application will display “?” or “::” characters.

• Asian Functionality (Obsoleted and Deprecated): Several legacy functions are obsolete and have been removed. Also, certain Asian printer lp models, utility/library routines, and dot bitmap fonts have been deprecated.

**Initial (February 2007) Release Notes, Chapter 12: “Other Functionality”**

• Common Desktop Environment: Updated to version 2.1. Now includes native Itanium-based 32-bit and 64-bit X/Motif libraries; delivers 64-bit PA-RISC and Itanium-based libraries for the first time in HP-UX 11i v3; supports Node and Host Name Expansion feature and expanded username feature; and includes many other changes.

• Distributed Computing Environment (DCE) Client and Integrated Login: Default permissions of 3 files have changed; several new filesets are available on PA-RISC and Itanium-based systems; several products are not available with DCE Client; Integrated Login has 2 new filesets.

**What is New for Customers Migrating from HP-UX 11i v2 June 2006**

In the following summaries, you can obtain a general picture of how the initial (February 2007) release of HP-UX 11i v3 differs from the June 2006 release of HP-UX 11i v2. For further details, see the indicated chapters in the **HP-UX 11i Version 3 Release Notes**, available in its most current version at [http://www.hpe.com/info/hpux-core-docs-11iv3](http://www.hpe.com/info/hpux-core-docs-11iv3).

The following are not exhaustive lists, so HPE strongly recommends that you consult the **HP-UX 11i Version 3 Release Notes** (February 2007) for information that is not included here.

In addition, you may want to review the list **What is New for Customers Migrating from HP-UX 11i v1 September 2005** on page 96 for a general picture of how the initial (February 2007) release of HP-UX 11i v3 differs from the September 2005 release of HP-UX 11i v1.

**Initial (February 2007) Release Notes, Chapter 4: “Hardware-Specific Information”**

• Enhancements to IO Forwarding: The IO forwarding interrupt comes under the purview of Detect & Strobe and is enhanced.

• **New:** estape Tape and eschgr Autochanger Drivers: New with HP-UX 11i v3. ssrfc driver no longer available.

• HP-UX 11i v3 Driver Development Kit (DDK): Enhanced for HP-UX 11i v3. Provides documentation, sample code, build environment and development tools for third-party developers, ISVs and IHVs to develop and test drivers on HP-UX 11i v3 PA-RISC and Itanium-based platforms.
• Enterprise Virtual Array (EVA): There is an issue with LUN WWIDs and HP-UX 11i v3.
• StorageWorks Secure Path: Obsolete.
• I/O Subsystem: Several new I/O commands help manage the I/O subsystem, and existing commands have new options and functionality to support the next generation mass storage stack.

**New:** The Next Generation Mass Storage Stack manages I/O devices, such as SCSI logical units (LUNs). In this release, the mass storage stack delivers functionality designed to enhance server scalability, adaptability, and performance while retaining backward compatibility. New features include agile addressing, native multi-pathing, and increased parallelization.

• Networking and Mass Storage Drivers
  ◦ Gigabit Ethernet: The igelan, gelan and btlan products are enhanced with new features, including online deletion (OLD) and module packaging.
  ◦ HyprFabrc-00: Supports only Peripheral Component Interconnect (PCI) HF2 cards. HF1 Cards will not be supported.
  ◦ **New:** InfiniBand: An industry-standard high-speed, packet-based interconnect for node-to-node communications, provides higher speed and lower network latency and uses less CPU than other industry standard protocols.
  ◦ PCIMUX-00: The PCIMUX-00 bundle delivers the pci-mux1 driver, which supports the AD278A and AD279A PCI MUX adapters.
  ◦ TermIO-00: The TermIO-00 driver bundle delivers the pci_mux0 driver, which supports the A6748A and A6749A PCI MUX adapters.
  ◦ FibrChanl-01 Fibre Channel Mass Storage Driver for HP-UX 11i v3: Supports new mass storage stack, Agile addressing, Soft Zoning, PCI Online deletion, and PCI error detection and recovery.
  ◦ HP PCI Ultra160 SCSI (c8xx): Supports new mass storage stack, PCI Online Deletion (OLD), PCI error detection and recovery, HBA Device Special Files (DSF). Termination of support for Ultra2 HBAs.
  ◦ USB-00: Includes various quality improvements from previous releases, a dynamically managed device file system enabled by default, multi-layered USB mass storage encryption support, and device tracking.

**New:** PCI Error Recovery: Provides the ability to detect, isolate, and automatically recover from a PCI error, avoiding a system crash.

**New:** PCI Card Online Deletion (OLD): The PCI OL* feature has been enhanced to allow HP-UX 11i v3 administrators to delete PCI cards and their associated drivers online without requiring a system reboot.

• Utility Pricing Solutions
  ◦ Instant Capacity: Updated to version B.11.31.08.01 to include modifications to the installation procedure; support for Global Instant Capacity (GiCAP) and hyperthreading; changes to GiCAP grouping rules and icapstatus command output; and more.
  ◦ Pay per use: Updated to version B.11.31.08.01.00 with support for hyperthreading features included in HP-UX 11i v3.

• Xserver: The Xserver's configuration tool is available via the HP SMH interface.

**Initial (February 2007) Release Notes, Chapter 5: “General System Administration”**

• asyncdsk Driver Kernel Tunable max_async_ports: max_async_ports is now a dynamic tunable; default value changed to 4096 and maximum value is 4194304.

**New:** Concurrent Dump: You can now configure your machine to perform a distributed parallel dump, thereby improving the dump throughput and reducing dump time.

• Daylight Savings Time (DST). Changes for US DST rules.
• Detect and Strobe: Disabled when any system configuration altering activity is in progress. Functionality enabled by default (value set at 80%).
New: Distributed Systems Administration Utilities: Includes an interface expansion, providing long username and long hostnames.

New: Enhanced User Core File Naming: New command, coreadm, introduced to uniquely name application core files created by abnormally terminating user processes.

Enterprise Cluster Master Toolkit: Includes support for VERITAS Cluster File System (CFS) in a Serviceguard A.11.17 environment, support for Serviceguard 11.17.01 (non-CFS) for CIFS, Tomcat, Apache, Oracle 10g, and more.

New: Event Manager: A comprehensive mechanism for posting, distributing, storing, and reviewing event information. Composed of a kernel component, user libraries (libevm.so) and a set of commands.

Event Monitoring Service: Now enhanced to send WBEM indications, which can be viewed from the EVWEB tool.

New: High Resolution Timer Support: Enhances select timer-related system calls and APIs to provide a resolution finer than the default 10 millisecond resolution.

HP OpenView GlancePlus Pak: Updated to version C.04.55 with support for large process IDs; enhancement to record the Logical Volume (LV) metrics for Veritas Volume Manager, versions VxVM 4.1 and VxVM 5.0; new metrics for monitoring the UFC; and other changes.

HP Partitioning and Virtual Server Environment

- New: Dynamic LCPU: Provides the ability to enable and disable Logical Processors (LCPUs) dynamically at the processor set boundary. Supported only on systems with the Hyper-Threading feature available and enabled.
- Global Workload Manager: Updated to version A.02.50.00.x with support for Linux managed nodes, support for Windows virtual machine guests, nested partitions, and many other changes.
- Process Resource Manager: Updated with features including integration with System Management Homepage, ability to map UNIX groups to PRM groups, ability to cap PRM group CPU consumption on a per-group basis. support for Hyper-Threading in PSET PRM groups, and other features.
- HP-UX 11i v3 Patch Bundles and Software Pack: The initial release of HP-UX 11i v3 will not include the standard Quality Pack (QPK), Hardware Enablement (HWE) and FEATURE11i patch bundles or the Software Pack that delivers optional new core enhancements. The delivery of these patch bundles and the Software Pack is planned for the first update release of HP-UX 11i v3.
- HP-UX Virtual Partitions: Updated to version A.05.01 with online memory migration, mixing A.04.02 and A.05.01 virtual partitions in the same vPars environment, and hyperthreading. Purchased separately.
- Integrity Virtual Machines (VM) Note: The host for Integrity VM is not supported on 11i v3. However, the virtual machines of the host can run 11i v3.
- HP-UX Workload Manager: Updated to version A.03.02.02. Changes include ability to map UNIX groups to workload groups; extended regular expressions in alternate names for application records; enhancements to wlminfo output; and other changes.
- HP-UX Workload Manager Toolkits: Updated to version A.01.10.01. Product label changed from T1302AA to WLMToolkits. PPUTK obsoleted; SASTK and DMTK deprecated.
- Partition Manager: Updated to v2.0 (version B.31.02.03.01) with the ability to enable and disable Hyper-Threading for nPartitions whose cells have processors that are Hyper-Threading capable.
- nPartition Provider: Updated to version B.31.01.07.01 with support for WBEM Services version 2.5.
- New: Utilization Provider: Lightweight daemon (utild) that records system-utilization data on a 5-minute interval; data recorded includes CPU, memory, disk, and network utilization; also includes a WBEM provider for access to the data.
- vPar Provider: WBEM provider displays information about virtual partitions. Read-only; clients cannot modify virtual partition configurations with it.
- Serviceguard: Updated to version A.11.17.01 with support for persistent DSF naming and dynamic multipathing, large PID, identification of networking interfaces (NICs) that are part of the Serviceguard cluster configuration, and other features. VERITAS Cluster File System (CFS) and Cluster Volume Manager (CVM) not supported in initial release of HP-UX 11i v3. RS232 serial line as cluster heartbeat is obsolete.
- Serviceguard Network File System (NFS) Toolkit: Updated to version A.11.31.02 with new control script template and a defect fix. Can work with Serviceguard A.11.17.01, but does not support some
Serviceguard A.11.17.01 and NFS HP-UX 11i v3 features. Users who need VERITAS Cluster File System (CFS) should not upgrade to HP-UX 11i v3 until CFS is available on that platform.

- **System Management Homepage**: Updated to version A.2.2.5 to incorporate defect fixes. In addition, is the addition of the new Web-based solutions for Networking and Communications (nCWEB), and Serviceguard complex management (sgmgr) being introduced for HP-UX 11i v3.

- **Systems Insight Manager**: Updated to "HP SIM 5.0 with Update 2 - HP-UX" with support for HPE BladeSystem c-Class blade and enclosure, and onboard administrator; BladeSystem Integrated Manager 2.1 with updated functionality; minimum system memory configuration to run HP SIM on HP-UX 11i v3 is now 3GB, and defect fixes.

- **WBEM Services for HP-UX**: Updated to version A.02.05 with association providers, internationalization support for CIM operations, CIM schema upgrade, and other major changes.

- **HP-UX Accounts for Users and Groups**: New TUI in place of the legacy SAM interface; long user names and group names; NIS + Shadow mode can co-exist.

- **HP-UX Kernel Configuration**: Command preview support in TUI; TUI supports form-based inputs; supports Error Management Technology; includes critical defect fixes.

- **New**: HP-UX Large NPROC: The HP-UX 11i v3 system can support more processes running concurrently than previous releases, changing from 30,000 to 60,000.

- **New**: HP-UX Large PID: The range of Process Identifiers (PID) the kernel can generate in a stand-alone HP-UX system has been expanded from 0 ~ 30,000 to 0 ~ 2^30-1 (1,073,741,823).

- **HP-UX Peripheral Devices Manager**: Enhanced to support the Agile Hardware Path Addressing and Persistent Device Special Files; enhanced to allow for Online deletion of OLRAD cards; now reads the detailed CRA report from the log file in which the report is logged after the change in the CRA behavior; and more.

- **HP-UX System V IPC Message Queues**: Enhanced with dynamic tuning capabilities. Tunables msgmax, msgssz, msgmap, msgseg are obsolete. Added new dynamic tunable msgmbs; indicates maximum kernel memory to be used for messages waiting to be received. Tunables msgmni, msgtql are made dynamic.

- **HP-UX WBEM Fibre Channel Provider**: Updated to version 11.31.01. All functionalities for association classes are now implemented.

- **New**: HP-UX WBEM File System Provider: Makes available file system information; instruments the HPUX_HFS, HP_LOFS, HP_CDFS, HP_VxFS, HP_NFS, HP_MountPoint and HPUX_Mount classes.

- **HP-UX WBEM IOTree Provider**: Now displays information about all slots on HP-UX 11i v3 system.

- **New**: HP-UX WBEM Online Operations Service Provider: Not currently supported; intended to support features in future releases of HP-UX 11i v3.

- **HP-UX WBEM SCSI Provider**: Updated to version 11.31.01, but no new feature changes.

- **Ignite-UX**: Updated to version C.7.0.x with multipath-awareness, new approach for addressing I/O, automatic management of the system boot path for multiple path configurations, user-selectable format for recovery archives and golden archives, and other changes.

- **New**: Kernel Tunable Values Reset From Boot Prompt: HP-UX 11i v3 release provides a new feature in which kernel tunable values can be reset from the boot prompt.

- **New**: Livedump: Provides the ability to take a crashdump on a live system without a forced shutdown or panic of that system. Implemented for Itanium-based platforms only.

- **New**: Long Username / Groupname: Current limit enhanced from 8 to 255 bytes. By default 8 is still the limit. With an enabler this limit can be enhanced to 255. Once enabled, cannot be disabled in the future. Not supported for trusted systems.

- **New**: Node and Host Name Expansion: Provides the ability to set node and host names up to 255 bytes.

- **Obsolescence Bundle**: Used during an update when obsolete software on the system needs to be removed; automatically selected for updates. Will remove several obsolete or incompatible products and/or drivers.

- **Online Diagnostics product**: Includes several enhancements and features, including support for the Interface Expansion Program (IEP) for large username, groupname, PIDs, and nproc; support of additional features of HP-UX Virtual Partitions (vPars), such as support for notification of events due to dynamic CPU migration; support for agile view of devices, for reporting extended hardware path of devices, for reporting recovered Machine Check Aborts; and other features and changes.

- **SCSI Kernel Tunables**: scsi_maxphys, scsi_max_qdepth and default_disk_ir kernel tunables are obsolete.
What is new

- Software Distributor: Updated to version 11.31 with support for HP-UX 11i v3-unique features including large pid, long usernames and group names; and improved support for high level software deployment tools such as Software Manager, update-ux, and future tools. Includes defect fixes.
- Software Package Builder: Added new policy files that include the expansion of the acceptable category tags, the addition of the is_oe attribute, and changes to the architecture and os_release attribute rules.
- System Administration Manager (SAM): Deprecated. The smh command is recommended, but sam command will continue to be available. Some functional areas previously available are obsoleted.
- System Administration Manager (SAM) Auditing and Security Functional Area: System Security Policies subarea of SAM is replaced with the HP--UX Security Attributes Configuration tool; Audited NIS+ Users subarea is obsolete.
- System Administration Manager (SAM) Printers and Plotters Functional Area: Launch point in X/ObAM-based GUI mode is now via the HP System Management Homepage.
- System Administration Management Tool Changes: SAM and HP System Management Homepage: System Administration Manager (SAM) is deprecated in HP-UX 11i v3. HP System Management Homepage (HP SMH) is the system administration tool for managing HP-UX 11i. HP SMH provides web-based systems management functionality, at-a-glance monitoring of system component health, and consolidated log viewing. HP SMH also provides Terminal User Interfaces (TUIs).
- System Fault Management: Features include Event Manager-Common Information Model Provider and Error Management Technology. SFMIndicationProvider and Log Viewer not available; other changes included.
- Update-UX and SW-GETTOOLS: The update-ux command now uses Software Manager, a new application that provides features including support for preview; interactive TUI; better support for multiple media, including more accurate disk space analysis, dependency selection across media; and improved logging capabilities.
- Virtual Memory Kernel Tunable physical io_buffers: Now obsolete. Was used in HP-UX 11i v1.6 and v2 to size a shared buffer pool for physical I/O operations in the kernel. As of HP-UX 11i v3 and later, the kernel automatically manages the pool size.
- Virtual Memory Kernel Tunables: The eqmem_limit (only on PA-RISC systems) has been added. Several tunables has been removed. See the HP-UX 11i Version 3 Release Notes for details.


- HFS (also known as UFS) File System Type: Now deprecated. Will be removed from the OS in a future release, to be determined.
- HFS file system and backup commands: To work on file sizes larger than 2 TB.
- CIFS Client: Updated to version A.02.02.01 with support for MS Distributed File System (DFS) and DLKM feature and other changes.
- CIFS Server: Updated to 3.0f version A.02.03: Redesign of Winbind code; File Locking Interoperation Functionality; support for long user and group names; support for TDB Memory Map.
- HP-UX File Systems Architecture Enhancements: Numerous enhancements include VFS stacking capabilities; fsdaemon user level daemon; large file systems and large files support; improved file systems syncer; performance improvement of aio_reap volume(2); support of larger files and long link names in backup utility; and several other enhancements.
- Logical Volume Manager and MirrorDisk/UX: Delivers significant scalability and availability enhancements. Supports the next generation mass storage stack, and is integrated with the mass storage stack’s load balancing and dynamic LUN expansion features; enhanced to support larger logical volumes, temporary suspension of volume groups, striping with mirroring, and dynamic LUN expansion; enables online modification of a volume group, as well as a new script to simplify the replacement of a failing disk.
- Open Network Computing (ONC)
  - AutoFS/Automounter: Updated with the ability to configure AutoFS through the /etc/default/autofs file; a new startup/shutdown script for product (no longer controlled by the NFS client startup/shutdown script); support for NFSv4, SecureNFS, and IPv6.
  - Cache File System (CacheFS): New features include long file name support, cachefspack, and support for large files and large file system.
Library RPC: Library routines support several new datatypes, add support for IPv6, and more.

Network File System (NFS) Services: Provides numerous enhancements, including pcnfsd daemon, which is multithreaded and supports shadow password and Secure RPC; new user mode daemon generates and validates API security tokens, and maps the GSSAPI principal names to the local user and group IDs; additional security mechanisms, such as Secure NFS that supports Kerberos through GSSAPI; NFS access using a firewall; and many other features.

Network Information Service (NIS): Provides several new features including support for shadow mode; support for enabling DNS forwarding mode; support for long uname, hostname, and username; and other features.

NIS+: Obsoleted.

PCNFSD: pcnfsd daemon is multithreaded. Support for shadow password and secure RPC; support for printer names up to the PCNFSD protocol limitation of 64 characters.

New: Unified File Cache: Integrates the page cache and buffer cache to provide coherency for file access. Serves as a key enabler for VxFS 4.1 and ONC+2.3. Improves source compatibility with Solaris, Tru64, and Linux applications that depend on coherency of page and buffer cache. Potential performance improvement of applications that depend on coherency of page and buffer cache.

VERITAS File System (VxFS): Features in version 4.1 include VxFS filesystem as a DLKM; multi-device filesystems; checkpoint enhancements; portable data enhancements; and other features. Cluster File System (CFS) is not supported in the initial release of HP-UX 11i v3.

VERITAS Volume Manager (VxVM): Features in version 4.1 include support for Volume Sets and VxFS MDS; Cross-Platform Data Sharing; Device Discovery Layer Phase 2; Serial Split Brain; and other features. Cluster Volume Manager (CVM), a part of VxVM that is enabled by a separate license, is not being provided with the current 4.1 HP-UX 11i v3 release.

Initial (February 2007) Release Notes, Chapter 7: “Internet and Networking”

ARPA Transport: Many enhancements to ARPA Transport include Security Containment, sendfile/UFC, UNIX 2003 Conformance, large hostname support, and Tru64 Application migration to HP-UX/Itanium-based.

Browsers: Mozilla is updated with defect fixes. Includes improved Asian font support on HP-UX and the Japanese Language Pack.

Data Link Provider Interface (DLPI): Enhancements include NOSYNC STREAMS synchronization level for improved performance and scalability for high speed links, online deletion (OLD) of I/O card instances, and dynamic loading and unloading of LAN drivers without reboot.

HP-UX PPPv6: Incorporates defect fixes.

HP-UX VLAN: New features include support for HP-UX VLANs over APA aggregates and LAN-monitor failover groups, SMH-Network Interface Configuration support for Web-based VLAN configuration, and nwmgr support for HP-UX VLANs.

HP-UX Web Server Suite

HP-UX Apache-based Web Server: Updated to version 2.0.58.00 as primarily a bug fix release.

HP-UX Webmin-based Admin: Upgraded to 1.070.08 as primarily a defect fix release.

Internet Services: You can now deselect individual Internet Services during installation or remove filesets later.

BIND: BIND 9.3 includes many new features, including transition support for IPv4 and IPv6. With HP-UX 11i v3, NAMED and NAMED ARGS variables are moved to /etc/rc.config.d/namesvrs.

DHCPCv4 (bootpd): New option sa configures the tftp server, providing control of the siaddr field of the dhcp packet. New configuration option for the subnet selection option in the /etc/dhcptab file allows bootpd to assign a network address even if bootpd is not part of that network Support for PXE clients is added.

DHCPCv6: Now available in the core operating system.

inetd volume(1): Two new command line options, -p ((limit number of processes invoked by inetd) and -a (enable user level auditing pf processes). Support for large hostnames and large PIDs.

libc: Numerous changes in APIs.

Mailx, Elm, and Talk: elmvolume(1M) and mailxvolume(1M) are long-user-name compliant.
• R-commands: long username is supported.

• **Sendmail:** Version 8.13.3 has numerous new features.

• TFTP: tftpd (server) and tftp (client) now support IPv6 addresses. New command line options specify upper and lower port range limits for data transfer.

• WU-FTPD: Version 2.6.1 supports long usernames. This release introduces a new feature, *ascii count* in the *ftpaccess volume(4)* file by which *ftpf* can be made to reset the timeout alarm of the data connection.

• LAN Administration Commands: *lanadmin* now supports an IPoIB interface, 64-bit MIB, and native and non-native drivers developed by independent hardware vendors; *lanscan* and *linkloop* now support IPoIB interfaces.

• LDAP-UX Integration Product: This release includes the new LDAP-UX version B.04.00.10.

• **New:** Network Interface Management Command Line Interface: The *nwmgr* command is used to manage LAN-based and IB-based network interfaces; a single tool for performing all network interface-related tasks.

• **New:** Network Interfaces Configuration and Network Services Configuration: These tools in the HP System Management Homepage replace the Networking and Communications functions of the System Administration Manager (SAM), which are no longer available.

• Red Hat Directory Server for HP-UX: Updated to version B.07.10.20 to incorporate defect fixes.

• STREAMS: *NOSYNC* feature allows multiple instances of a *put* procedure for a queue and the service routine for that queue to run concurrently. All references to the global variable *uniprocessor* have been removed.

• NetTL - Network Tracing and Logging: The *nettl* command is enhanced with formatting support for IPoIB header, new command-line option to configure trace buffer timer value, support for pre-capture trace filters, and new command-line options to manage trace filters.

**Initial (February 2007) Release Notes, Chapter 8: “Security”**

• HP-UX 11i Security Containment: Fine-grained privileges and compartments are now part of the core.

• HP-UX Auditing System: Enhanced in several ways, including: Standard Mode Auditing now part of core products; multi-threaded kernel audit daemon is now dedicated in logging the data into configurable number of files for better performance; collected audit data are more comprehensive; and several other enhancements.

• HP-UX Bastille: With version B.3.0.20, 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 against a security baseline or report on the security-configuration state of a system.

• HP-UX IPFilter: Updated to version A.03.05.13 with defect fixes and enhancements including filtering on X.25 interfaces, filtering on 10GigE interfaces; IPFilter not plumbed into the networking stack by default; no reboot required to enable IPFilter.

• **New:** HP-UX IPSec: Previously only available on the AR media. Now delivered on the HP-UX 11i v3 Operating Environments. Provides an infrastructure to allow secure communications (authentication, integrity, confidentiality) over IP networks between systems and devices that implement the IPsec protocol suite.

• HP-UX Secure Shell: Updated to version A.04.40.005 with new features including an *sftp* only solution in a *chroot* environment; TCP wrappers support for IPv6; Standard Mode Security Extensions (SMSE) enhanced to provide the “Audit all users and events” feature; and other features, as well as defect fixes.

• HP-UX Security Attributes Configuration tool (*secweb*): Updated to support long user name.

• **New:** HP-UX Standard Mode Security Extensions: Now part of the core OS; provides a new command and new library functions. Shadow passwords are now also supported with NIS.

• Install-Time Security: Updated to version 1.0.4 with new questions/configuration, diagnostic daemon configure to local-only use (not network), and *syslog* local-only.

• Kerberos Client: Updated to version 1.3.5.03 with new features including support for powerful cryptographic algorithms like 3DES, RC4, and AES; support for IPv6; support for TCP; and defect fixes.
• OpenSSL: Updated to version A.00.09.08b.09.07j with support (in default version) for several hardware ENGINES (see section for specifics); support for elliptic curve cryptography; and EVP, the library of which provides a high-level interface to cryptographic functions. Other provided versions include other features.
• PAM Kerberos: Enhanced to issue a warning if rc_host_0 is owned by anyone other than root when a user tries to rlogin into a system; will also issue a warning if the keytable entry is not found for the host service principal on the client but present at the KDC.
• Security Patch Check: Updated to incorporate defect fixes.

Initial (February 2007) Release Notes, Chapter 9: “Commands and System Calls”
• /etc/skel/.profile shell script: (current path) in $PATH is deprecated.
• 32-bit pstat System Call (Deprecated): When compiling a 32-bit application that uses the pstat system call, the compiler option -D_PSTAT64 must now be specified. This causes pstat to use 64-bit fields rather than 32-bit fields. The application still remains a 32-bit application.
• at, cron, and batch Commands: New features include support for queueing multiple jobs at the same time, support for queueing of more than 100 jobs, and ability to schedule jobs up to the njob limit specified for every queue in queuedefs volume(4).
• core Format Implementation Change: The true version string has replaced the utsmame struct in the CORE_KERNEL segment. A workaround has been provided for applications which reversed-engineered the core file format and depend on utsmame being in it. This new core file format is now the default format.
• csh Command Line Interpreter: The non-interactive invocation of csh will not source the ~/.history file by default.
• File Systems Backup and Recovery Commands fbackup, frecover, and ftio: Depreciated; will be obsolete in a future HP-UX release. You should prepare by migrating to the favorable replacement pax. Support will be continued for archive retrieval.
• New: gcore Command: creates a core image of each specified process.
• getgroups, setgroups: no longer limited by the NGROUPS_MAX.
• getty Command: Enhanced to configure the default setting for special control characters (erase, kill, etc.) by the user.
• HP-UX Kernel Configuration Commands: Includes several significant changes including revision of error, warning, and note messages for clarity; new options for kconfig, kcmodule, and kctune for control of automatic configuration backups; 2 new options for kctune command; kctune now allows some tunable values to be specified in terms of the percentage of some system resource; changes have been made to the kernel configuration commands to improve resiliency and performance; tunable parameter values may now be overridden on the boot loader command line; and several other changes, including some obsolescences.
• iostat Command: Enhanced to report activity for each active lunpath to the LUNs. Also, the new option -L has been added, which lists active lunpath statistics.
• Long hostname, uname, and setuname: The limits of these commands can now be expanded to 255 bytes.
• New: Long Username Support by HFS ff, VxFS 4.1 ff, repquota, quotacheck: Enhanced to support the username up to 255 bytes.
• lp, lpadmin, lpfence, lpmove, and lpsched Commands: Printers can now be added/removed/modified without bringing down the lp scheduler; line printer spooler enhanced to support printer/class names up to 250 characters from the previous limit of 14 characters; support also extended to remote destination names.
• mmap System Call: Enhanced to support mapping file with read only permission with PROT_EXEC and implicit mmap with MAP_FIXED.
• pax Command: Enhanced to conform to the UNIX 2003 Standard. You will now be able to use pax to archive files having a size greater than or equal to 8GB; long user name/group name; large UID/GID greater than 2097151; long pathname or link name.
• **PFS Commands**: Obsolete.
• **pipcs** Command: Enhanced to provide details regarding processes using the various POSIX Message Queues, as well as creation time and last modification time of the POSIX Message Queues.
• **ps** Command: Enhanced to display maximum of 1020 characters in the **COMMAND** field.
• **New**: **pselect** System Call: Added to meet the UNIX 2003 Standard. Provides additional parameter options to users of the **select** system call. Timeout granularity may be specified in seconds and nanoseconds. A new signal mask parameter is also available to be used for the duration of system call.
• **psrset** Command: Enhanced to support one more PSET attribute type called LCPU.
• **pstat_getstatic** System Call: Information returned by **pstat_getstatic** may now change between reboots due to manually or automatically generated administrative changes in the associated kernel tunables, online addition/deletion of resources, or other events. Likelihood of it changing is infrequent.
• **New**: Ptools Process Management Tools: New set of process management tools that support easy process tracking and debugging. Consists of the following commands: **pmap**, **pfiles**, **pgrep**, **pkill**, **ptree**.
• **ptrace** System Call: Obsolete in HP-UX 11i v3.
• **sar** Command: Enhanced to report activity for each HBA and Tape device.
• **setboot** Command: modified to take a persistent DSF or a lunpath hardware path as valid input to set the bootpath for next boot; enhanced to enable or disable hyperthreading environment for the next boot on a Dual-Core Intel Itanium 2 platform.
• **sigblock(2)**, **sigsetmask(2)**, **sigstack(2)**, **sigvector(2)**, **bsd_signal(3C)**: Manpages are obsolete.
• **spray** Command: Provides two new options: **-d**, which specifies how many microseconds to pause between sending each packet, and **-t**, which specifies class of transports.
• **New**: **swapctl** System Call: Allows you to configure primary swap to take effect on the next boot. Previously this could only be done via the commands **lvlnboot** and **vxvmboot**. **swapon** system call is deprecated.
• **swapon** and **swapinfo** Commands: **swapon** command enhanced to support setting/unsetting of primary swap device for next boot; **swapinfo** command supports new **-s** option to display settings of the primary swap for next boot.
• **sysdef** Command: Deprecated. Reports incorrect values for some tunable parameters such as **msgmap**, **sema**, and **shmem**
• **syslogd** Command: Enhanced to log multibyte message strings correctly.
• **usermod** has been modified to selectively prevent the movement of home directories with **-m** option.
• **UNIX 2003 Compliance**: All commands are modified/enhanced to conform to UNIX 2003 Standards. The UNIX 2003 changes which do not affect HP-UX compatibility are available by default. Otherwise, in order to get UNIX 2003 behavior, the variable **UNIX_STD** has to be defined in the environment.


• **Bundled C Compiler**: Updated to version A.06.12 on Integrity Servers and B.11.11.16 on PA-RISC. Highly compatible with previous versions; diagnostic messages have changed; more erroneous and suspicious source constructs are diagnosed.
• **aC++ Run Time Library**: Includes the **-D_HP_NONSTD_FAST_IOSTREAM** performance improvement macro, **C++ Standard Library TC1 compliance change**, and **USA 2007 Daylight Savings Time legislation support**.
• **FirstBoot**: As part of Transition links (a.k.a. Upgrade), HPE used to create a symbolic link **/etc/set_parms** ➔ **/sbin/set_parms**. Transition links are obsoleted in HP-UX 11i v3 and **set_parms** is available to the user as **/sbin/set_parms**. So HP-UX 11i v3 will not support the symbolic link **/etc/set_parms**.
• **HP MLIB**: Updated to version 9.5 with the addition of two new libraries, **VECLIBSC8** and **LAPACKSC8**, which are 64-bit address libraries with 64-bit integer values that use calling conventions similar to those found in Cray's **SCILIB** math library.
• **HP-UX C Library (libc)**
HP-UX C library (libc) - UNIX 2003 Standard Compliance: libc library enhanced to comply with UNIX 2003 standards. A number of APIs have been added, while some APIs have been modified.

- HP-UX C library (libc) - Other Changes: New features include Tru64 API migration, mallocvolume(3C) thread local cache enhancements, long username and groupname.
- libc volume(1) Library: Deprecated. Is a HP-UX 10.20 compatibility “C” library available in HP-UX 11i. No immediate impact in HP-UX 11i v3. When the libcvolume(1) library is obsoleted, all programs linking to this library will not work. Hence you are encouraged to start migrating your programs from libc volume(1) to libcvolume(2) library.
- Networking libc APIs: The return value of the gai_strerror volume(3N) API has changed from char to const char. Includes other changes as well.

- HP-UX Color-Curses:libcur_colr Library and Commands: Obsolete. Were declared deprecated in HP-UX 10.30 and are not available in HP-UX 11i v3 PA-RISC.

- Java 2 Platform
  - Java JDK/JRE for HP-UX: HP-UX 11i v3 does not include Java 1.3 and Java 3D (J3D 1.4). SDK/RTE version 5.0 has been updated to incorporate defect fixes.
  - Java Out-of-Box: Updated to incorporate defect fixes.
  - New: libIO Library: libIO.so (for Itanium-based systems) or libIO.so1 (for PA-RISC systems) is a shared library, which provides APIs for accessing the HP-UX I/O subsystem information. The library will reduce the dependency on other HP-UX commands for I/O information.
  - libpthread Library: Added new API, pthread_setschedprio, to set scheduling priority of target thread.
  - Link Editor (ld): Additional linker options introduced since patch PHSS_34440, June 2006, and other changes.
  - Mercury Library (libhg): Provides high performance interfaces between the user programs and the kernel making it possible to transfer key pieces of information back and forth at high speeds.
  - Software Transition Kit (STK): Designed to help transition HP-UX applications from earlier versions of HP-UX to the latest version of HP-UX. Will not be available for HP-UX 11i v3.
  - Threads Renice facility: Two new pthread APIs to change nice value of a thread in a multi-threaded process.
  - UNIX 2003 Standard Profile Conformance: New functions and compiler conformance as defined in Single UNIX Specification version 3. The Precision Architecture (PA) systems have most of the UNIX 2003 features available for applications. Since the C99 compiler will not be available on PA, full UNIX 2003 branding is not supported. Itanium-based systems fully conform and are branded to UNIX 2003.
  - Unwind Library (libunwind): Updated to version 1.48. Performance of the unwind express APIs has been improved substantially; U_STACK_TRACE volume(3X) and _UNW_STACK_TRACEvolume(3X) APIs have been enhanced; new APIs have been added to the unwind express portion of the library.

Initial (February 2007) Release Notes, Chapter 11: “Internationalization”

- Unicode 5.0: Now supported. Unicode 5.0 is an extension to the previously supported Unicode 3.0 character set standard.
- New: JISX0213 Standard: Now supported.
- New: Big5-2003 and CNS11643 Standards: Now supported.
- New: HKSCS-2004 (Hong Kong Supplementary Character Set): Now supported.
- New: Locales - Baltic/Russia/Ukraine/Latin America: Now supported.
- New: Locale Versioning: localedef/libc UNIX 2003-related I18N changes. New locale version “locales.3” has been generated for all system supported locale binaries. This has been provided to protect older PA-RISC-based archived applications from unexpected systems behavior in order to fully support the UNIX 2003 standard.
- UNIX 2003 Support: The localedef, locale and iconv commands and the associated C library APIs, locale databases and iconv converters have been updated to align with the UNIX 2003 standard.
- Alternate Width Properties for Unicode Codesets: Now supported for Asian locales.
• **New:** Messaging Commands: `mkcatdefs`, `dspmsg`, and `dspcat`. Added to HP-UX for compatibility with Tru64 UNIX.

• **New:** Iconv Codeset Converter Config File Changes: `system.config.iconv`. New `system.config.iconv` file provided to separate the HP-UX core OS `iconv` mapping table information from the layered third-party and user-specific `iconv` mapping table information.

• Japanese Mainframe Character Set: `iconv` now supports an extended area of Japanese mainframe character sets.

• **New:** Internationalized PostScript Printing Support: `psfontpf`: New PostScript printer filter `psfontpf` enables printing of non-English international characters in text files and web pages.

• Asian Printing: Asian `lp` model files and filters have been enhanced to support important Asian national standards and ISO 10646.

• TrueType Fonts for European Codesets: Provides additional TrueType fonts support to cover the glyph patterns for ASCII, Latin-1 Supplement, Latin Extended-A, Latin-Extended-B, Greek, Cyrillic, and currency symbols.

• Asian TrueType Fonts: Enhanced to support the latest national standards and ISO10646. New typefaces are provided for Japanese, Simplified Chinese, and Traditional Chinese fonts.

• Asian Bitmap Fonts: Enhanced to support the latest national standards and ISO 10646.

• Fallback Font Support: For text-based GUI applications, in the event there are no glyphs, the application will display “?” or “::” characters.

• Asian Functionality (Obsoleted): Several legacy functions are obsolete and have been removed. Also, certain Asian printer `lp` models, utility/library routines, and dot bitmap fonts have been deprecated.

**Initial (February 2007) Release Notes, Chapter 12: “Other Functionality”**

• Common Desktop Environment: Updated to version 2.1. now includes native Itanium-based 32-bit CDE binaries, 32-bit Xclients, and other features; delivers 64-bit PA-RISC and Itanium-based libraries for the first time in HP-UX 11i v3; supports Node and Host Name Expansion feature and expanded username feature; and includes several other changes.

• Distributed Computing Environment (DCE) Client and Integrated Login: Several filesets have been removed; several products are not available with DCE Client; Integrated Login has introduced a new library.

**NOTE:**

Hardware-specific information

NOTE:
For other changes to products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.

Hardware Enablement Patch Bundle for HP-UX 11i v3

The Hardware Enablement Patch Bundle for HP-UX 11i v3 (HWEnableelli) provides patches required for new systems and for add-on hardware supported on HP-UX 11i v3, including I/O adapters and devices.

Summary of change

The HWEnableelli bundle adds support for the new HPE Integrity i6 servers based on Intel's Itanium 9700 processor series. For a complete list of server platforms supported, see Supported systems. Minimal HP-UX support requires other HWE components from this OE Update release (OEUR) that include the diagnostic products, WBEM Providers, and I/O driver bundles, along with the Ignite-UX product. HPE recommends a full update to the desired OE option from the latest HP-UX 11i v3 OEUR for full HP-UX support with the updated versions of the manageability and configuration tools.

This hardware enablement bundle includes new HP-UX 11i v3 (11.31) patches for support of the current Integrity systems with the latest I/O adapters, networking, and storage products.

Compatibility

There are no known compatibility issues.

Performance

There are no known performance issues.

Documentation

- Websites
  
  You can find the latest patch status information on the Hewlett Packard Enterprise Support Center website. To access the HPESC, you will require an HP Passport Login. See the FAQs at http://www.hpe.com/support/HPESC-sitehelp.

- Documents
  
  

- Others
  
  ◦ The patch bundle readme document can be found on the OE media under the root directory (/HWEnablelli.readme and /HWEnablelli.readme.html) or at the HPESC (http://www.hpe.com/support/hpesc).

Obsolescence

Not applicable.
**Supported systems**

For a list of HP 9000 and Integrity systems that this release of HP-UX 11i v3 fully supports, see the HP-UX Server Support Matrix at the following website:

[http://www.hpe.com/info/hpuxservermatrix](http://www.hpe.com/info/hpuxservermatrix)

**NOTE:**

HP-UX 11i v3 is not supported on workstations. Further information about HP workstations can be found at the following website:

[http://www.hpe.com/info/workstations](http://www.hpe.com/info/workstations) (Click PA-RISC Workstations or RISC-based Workstations).

Additional information regarding HPE servers can be found at the following websites:

- HPE Integrity Server Family: [http://www.hpe.com/info/integrity](http://www.hpe.com/info/integrity)

**Firmware updating**

Make sure your system meets the minimum firmware requirements for HP-UX 11i v3 (B.11.31). New I/O adapters and certain virtualization applications may require updated firmware. Check the product documentation for further information.

For information on your options for updating firmware, see *HPE Integrity Servers and HP 9000 Servers Firmware Update Options*, which is included with the document collection provided for each HPE server. To access one of those collections, select one of the following links and navigate to your server.

- HP 9000 Servers [http://www.hpe.com/info/hp9000_servers-docs](http://www.hpe.com/info/hp9000_servers-docs)
- HPE Carrier-Grade cc2300/cc33xx Servers [http://www.hpe.com/info/carrier_grade_cc_servers-docs](http://www.hpe.com/info/carrier_grade_cc_servers-docs)
- HPE Integrity cx26xx Servers [http://www.hpe.com/info/integrity_cx2620_servers-docs](http://www.hpe.com/info/integrity_cx2620_servers-docs)
- HPE Integrity Servers [http://www.hpe.com/info/Integrity_Servers-docs](http://www.hpe.com/info/Integrity_Servers-docs)

**Receiving firmware alerts**

To automatically receive email notices for the latest firmware updates, sign up for Driver, Patch, Security, and Support alerts:

2. Follow the instructions to register each of your products.
NOTE:
For other changes to products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.

HP-UX 11i v3 Feature Enablement Patch Bundle

The HP-UX 11i v3 Feature Enablement (FEATURE11i) patch bundle consists of patches that enhance core features or are required to meet dependencies for new or updated software products. This patch bundle gets updated with new patches as needed for the support of software products.

Summary of change
For May 2017 (1705) release, the FEATURE11i bundle is updated for HP-UX 11i v3 with patches that enhance or provide new or improved core features.

Compatibility
There are no known compatibility issues.

Performance
The patches include recommended and optional performance improvements.

Documentation
• Websites
You can find the latest patch status information on the Hewlett Packard Enterprise Support Center website. To access the HPESC, you will require an HP Passport Login. See the FAQs at http://www.hpe.com/support/HPESC-sitehelp.
• Documents
• Others
  ◦ The patch bundle readme document can be found on the OE media under the root directory (/FEATURE11i.readme and /FEATURE11i.readme.html) or at the HPESC (http://www.hpe.com/support/hpesc).

Obsolescence
Not applicable.

HP-UX 11i v3 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 (QPKBASE) includes all stable, defect-fix patches for the core OS, graphics, and key networking drivers. The Applications Quality Pack bundle (QPKAPPS) includes all stable, defect-fix patches for HP-UX Operating Environment (OE) applications.
Summary of change

The Quality Pack bundles are released in every six months for HP-UX 11i v3 (B.11.31) with a sizable increase in the number of defect-fix patches. Once the defect-fix patch completes the comprehensive internal testing and achieves 300 customer downloads, only then it is included in the Quality Pack.

Compatibility

There are no known compatibility issues.

Performance

The Quality Pack has the potential to improve system performance, depending on the new and updated patches contained in each release.

Documentation

- Websites
  You can find the latest patch status information on the Hewlett Packard Enterprise Support Center website. To access the HPESC, you will require an HP Passport Login. See FAQ at [http://www.hpe.com/support/hpesc-sitehelp](http://www.hpe.com/support/hpesc-sitehelp).

- Documents

- Others
  - The patch bundle readme document can be found on the OE media under the root directory (`/QPK1131.readme` and `/QPK1131.readme.html`) or at the HPESC ([http://www.hpe.com/support/hpesc](http://www.hpe.com/support/hpesc)).

Obsolescence

Not applicable.
NOTE:
For changes to products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.
Internet and networking

NOTE:
For changes to products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.
NOTE:
For changes to products and features related to this chapter, see *What is new in the HP-UX 11i v3 May 2017 release*. 
Commands and system calls

NOTE:
For changes to products and features related to this chapter, see *What is new in the HP-UX 11i v3 May 2017 release.*
NOTE:
For changes to other products and features related to this chapter, see *What is new in the HP-UX 11i v3 May 2017 release.*
Internationalization

NOTE:
For changes to other products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.
Other functionality

NOTE:
For changes to other products and features related to this chapter, see What is new in the HP-UX 11i v3 May 2017 release.
Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:
  
  Hewlett Packard Enterprise Support Center
  www.hpe.com/support/hpesc
  
  Hewlett Packard Enterprise Support Center: Software downloads
  www.hpe.com/support/downloads
  
  Software Depot
  www.hpe.com/support/softwaredepot
- To subscribe to eNewsletters and alerts:
  www.hpe.com/support/e-updates
- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center More Information on Access to Support Materials page:
  www.hpe.com/support/AccessToSupportMaterials

**IMPORTANT:**
Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:
  http://www.hpe.com/assistance
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:
  http://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components
Websites

<table>
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<tr>
<th>Website</th>
<th>Link</th>
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<tr>
<td>Hewlett Packard Enterprise Information Library</td>
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<tr>
<td>Storage white papers and analyst reports</td>
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Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

http://www.hpe.com/support/selfrepair

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information

- HPE Get Connected
  - www.hpe.com/services/getconnected

- HPE Proactive Care services
  - www.hpe.com/services/proactivecare

- HPE Proactive Care service: Supported products list
  - www.hpe.com/services/proactivecaresupportedproducts
HPE Proactive Care advanced service: Supported products list
www.hpe.com/services/proactivecareadvancedsupportedproducts

Proactive Care customer information
Proactive Care central
www.hpe.com/services/proactivecarecentral
Proactive Care service activation
www.hpe.com/services/proactivecarecentralgetstarted

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hpe.com). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.