

HP-UX Internet Express A.09.00 Product Overview Guide

HP-UX 11i v1, 11i v2, 11i v3

HP Part Number: 5992-1717
Published: June 2007
Edition: Edition 1



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1 HP-UX Internet Express Overview

This chapter provides an overview of HP-UX Internet Express and the open source components provided in HP-UX Internet Express.

Introduction

HP-UX Internet Express A.09.00 is a collection of popular open source Internet Services, Web Services, Grid Toolkits, and Security Services that are tested and qualified on HP-UX. HP-UX Internet Express enables for a low cost of software ownership and application deployment. HP-UX Internet Express is easily installed, configured, and administered.

Many of the open source components are configured through the Web-based Webmin graphical administration utility. Webmin is a standard tool provided as a part of the HP-UX Apache offering. For more information, see “Configuring HP-UX Internet Express Components with Webmin” (page 24).

HP-UX Internet Express Components

The following section describes the open source products available in HP-UX Internet Express version A.09.00. For links to the documentation available for each component, see “HP-UX Internet Express Component Documentation Resources” (page 27).

Ant

Apache Ant is a Java™-based build tool that uses XML-based configuration files.

Axis

Apache Axis is a follow-on to Apache SOAP. Axis is designed around a streaming model (using SAX instead of DOM) and expands the flexibility and performance of Apache SOAP.

Calamaris

Calamaris is a log file analysis tool that parses log files and creates a report. Some servers that can use this tool are Squid, NetCache, and Netscape/iPlanet Web Proxy Server.

Chkrootkit

Chkrootkit is a tool used to check for evidence that a rootkit—a program to create or exploit security holes—has been run on your system.

ClamAV

ClamAV is an antivirus toolkit for UNIX®. It is primarily used on mail servers for scanning email attachments.

Condor

Condor is a specialized workload management system for compute-intensive jobs. Condor provides a job queueing mechanism, scheduling policy, priority scheme, resource monitoring, and resource management.

Curl

Curl is a command line tool that transfers files with URL syntax.

CyrusIMAP

The CyrusIMAP server uses a private mailbox database design, which is stored in parts of the file system that are private to the CyrusIMAP system. All user access to mail is through the IMAP, POP3, or KPOP protocols.

CyrusSASL

CyrusSASL is an SASL library that adds authentication support to connection-based protocols.

DanteSOCKS

DanteSOCKS server is a circuit-level firewall/proxy used to provide secure network connectivity to a wide range of hosts, while requiring only the Dante server to connect to the external network.

Eclipse

Eclipse is a software development platform for developing integrated tools.

Fetchmail

Fetchmail is a full-featured email retrieval and forwarding utility used over on-demand TCP/IP links, (such as SLIP or PPP connections).

Fetchmail retrieves email from remote email servers and forwards it using SMTP, so it can then be read by normal email user agents. Fetchmail enables all the system MTAs filtering, forwarding, and aliasing facilities to work just as they would on normal email.

FSH

FSH is a collection of utilities that enables users to establish a secure tunnel to a remote system and reuse the tunnel to start new `ssh` or `rsh` sessions. FSH resolves the

performance issues that are associated with starting secure sessions while maintaining the security provided by `ssh`.

Globus

Globus is a software toolkit used to build grids that enable people to share computing power, databases, and other tools online.

GnuPG

GnuPG is a tool used for secure communication and data storage. It can be used to encrypt data and to create digital signatures.

Horde

The Horde Application Framework is used by Horde applications, such as the Internet Messaging Program (IMP). The shared code provides commonality in handling such functionality as preferences, permissions, browser detection, and user help.

Hsqldb

Hsqldb is a Java SQL database. Hsqldb offers a fast database engine that contains both in-memory and disk-based tables, a Web server, and management tools.

Hypermail

Hypermail takes emails in UNIX mailbox format and generates a set of cross-referenced HTML documents.

IMP

IMP is a Horde application that provides webmail access to any IMAP or POP3 mailbox, as well as handling Internet standard MIME attachments, user-defined filters, and preferences.

Jabber

Jabber is an open XML protocol for the realtime exchange of messages and presence between any two points on the Internet.

Jython

Jython is an implementation of the Python object-oriented language integrated with the Java platform.

Libpcap

Libpcap is a packet capture library.

Libxml2

Libxml2 is the XML C parser and toolkit.

Majordomo

Majordomo manages Internet mailing lists.

ModSecurity

ModSecurity is an embeddable web application firewall that protects web applications from a range of attacks. It also enables HTTP traffic monitoring and real-time analysis without modifying the existing infrastructure.



IMPORTANT: The ModSecurity product is available only for the HP-UX 11i v2 and HP-UX 11i v3 operating systems.

MySQL

The MySQL database server is an open source SQL database.

Nagios

Nagios is a service and network monitoring program.

Nessus

Nessus is a remote security scanner tool used to automate the testing and discovery of known security problems.

Nikto

Nikto is a web server scanner that checks for dangerous files.

Net-SNMP

The Net-SNMP toolkit is a group of tools related to SNMP. Net-SNMP includes tools to request or set information from SNMP agents, tools to generate and handle SNMP traps, and an SNMP library.

OpenJMS

OpenJMS is an open source implementation of the Java Message Service APIs. OpenJMS supports point-to-point and publish-subscribe messaging models, supports synchronous and asynchronous message delivery, and provides message filtering and authentication.

OpenLDAP

OpenLDAP is an open source implementation of Lightweight Directory Access Protocol (LDAP).

OpenSAML

OpenSAML contains open source Java and C++ libraries used to build, transport, and parse Security Assertion Markup Language (SAML) messages.

OpenSC

OpenSC is a large smart card toolkit that provides a set of libraries and utilities to access smart cards.

PAM_mkhome

PAM_mkhome enables the root user to create a home directory for another user.

PAM_passwdqc

PAM_passwdqc is a password strength checking module for PAM-aware password changing programs, such as `passwd(1)`. PAM_passwdqc checks regular passwords, offers support for passphrases, and can provide randomly generated passwords.

Perl-LDAP

Perl LDAP is a collection of Perl modules that provides an object-oriented interface to LDAP servers.

Pine

Pine is a program designed for sending, receiving, and filing email messages.

Postfix

Postfix is an alternative to the sendmail program

PostgreSQL

PostgreSQL is an object-relational database management system (DBMS).

ProcMail

ProcMail is a mail processing and filtering utility. Incoming mail can be sorted by sender, subject line, length of message, and keywords in the message.

ProFTPD

ProFTPD is a secure and configurable FTP server.

Python

Python is an interpreted, interactive, object-oriented programming and rapid application development language.

Qpopper

Qualcomm Popper (Qpopper) is a Qualcomm-derived POP server that enables access to email using any POP3 client. Qpopper is normally used with standard UNIX mail transfer and delivery agents, such as `sendmail` or `mail`.

Rsync

Rsync is a file transfer program that keeps remote files in sync.

SmartFrog

SmartFrog describes distributed software systems as collections of cooperating components, then activates and manages them.

Snort

Snort is an open source program used as a packet sniffer, packet logger, or network intrusion detection system.

SOAP

The Apache SOAP project is an implementation of the draft W3C protocol by the same name. It is based on, and supersedes, the IBM SOAP4J implementation.

SourceIDSAMLJ

SourceIDSAMLJ is the Java SAML open source toolkit from SourceID. SourceIDSAMLJ is a federated identity management gateway that enables you to exchange identity information.

Squid

Squid is a Web proxy caching server for Web clients. It supports FTP, gopher, and HTTP data objects.

SSLDUMP

SSLDUMP is a Secure Sockets Layer version 3/Transport Layer Security (SSLv3/TLS) network protocol analyzer. SSLDUMP identifies SSLv3/TLS traffic, decodes the traffic, and displays the traffic in text format.

Struts

Struts provides an open source framework for building Java Web applications. The framework is based on Java servlets, JavaBeans, XML, and some Jakarta Commons packages.

Stunnel

Stunnel is a Universal SSL Wrapper, encrypting arbitrary TCP connections inside SSL. Stunnel secures non-SSL aware daemons and protocols (like POP, IMAP, and LDAP) by providing the encryption, requiring no changes to the daemon code.

Sudo

Sudo is a program that provides limited root privileges to specified users, and logs the root activity.

Tcpdump

Tcpdump is a network monitoring tool.

Tripwire

Tripwire software is a security and data integrity tool used to monitor and alert administrators of specific file changes on a range of systems.

UDDI4J

UDDI4J is a Java class library that provides an API to interact with a Universal Description, Discovery and Integration (UDDI) registry.

UW-IMAP

UW-IMAP is the University of Washington IMAP server.

Wireshark

The Ethereal network protocol analyzer has changed its name to Wireshark.

Xalan-C

Xalan-C is an XSLT processor that transforms XML documents into HTML, text, or other XML document types.

XDoclet

XDoclet is an extended Javadoc Doclet engine and an open source code generation engine.

Xerces-C

Xerces-C provides XML parsing and generation.

Xinetd

Xinetd is a replacement for the Internet services daemon `inetd`. Xinetd offers access control on all services and prevents Denial of Service (DoS) attacks, IPv6 support, and support for offloading services to a remote host.

zlib

zlib is a general purpose data compression library.

HP-UX Internet Express Versions Shipped on the HP-UX Internet Express Media

Table 1-1 lists all the HP-UX Internet Express components shipped on the HP-UX Internet Express media and their versions for HP-UX 11i version 1, HP-UX 11i version 2, and HP-UX 11i version 3. Updated versions of the components are available for download from the Software Depot at:

<http://h20293.www2.hp.com/>

HP-UX Internet Express components for HP-UX 11i v1 are delivered in the following software bundles:

- internet A.09.00-009
- security A.09.00-006
- gridtoolkits A.09.00-000
- web1 A.09.00-000
- web2 A.09.00-000

HP-UX Internet Express components for HP-UX 11i v2 are delivered in the following software bundles:

- internet A.09.00-010
- security A.09.00-007
- gridtoolkits A.09.00-001
- web1 A.09.00-001
- web2 A.09.00-001

HP-UX Internet Express components for HP-UX 11i v3 are delivered in the following software bundles:

- internet A.09.00-011
- security A.09.00-008
- gridtoolkits A.09.00-002
- web1 A.09.00-002
- web2 A.09.00-002

You can download and install the bundles, or download and install individual components from a bundle.

Many components in Table 1-1 can be configured using Webmin. For more information, see “Configuring HP-UX Internet Express Components with Webmin” (page 24).

Table 1-1 HP-UX Internet Express Component Versions

Component Name	HP-UX 11i version 1	HP-UX 11i version 2	HP-UX 11i version 3
Super Bundles of HP-UX Internet Express Components			
internet	A.09.00-009	A.09.00-010	A.09.00-011
security	A.09.00-006	A.09.00-007	A.09.00-008
gridtoolkits	A.09.00-000	A.09.00-001	A.09.00-002
web1	A.09.00-000	A.09.00-001	A.09.00-002
web2	A.09.00-000	A.09.00-001	A.09.00-002
HP-UX Internet Express Components			
Ant	A.09.00-1.7.0	A.09.00-1.7.0.001	A.09.00-1.7.0.002
Axis	A.09.00-1.4	A.09.00-1.4.001	A.09.00-1.4.002
Calamaris	A.09.00-2.59	A.09.00-2.59.001	A.09.00-2.59.002
Chkrootkit	A.09.00-0.47	A.09.00-0.47.001	A.09.00-0.47.002
ClamAV	A.09.00-0.90.3	A.09.00-0.90.3.001	A.09.00-0.90.3.002
Condor	A.09.00-6.8.4	A.09.00-6.8.4.001	A.09.00-6.8.4.002
Curl	A.09.00-7.16.2	A.09.00-7.16.2.001	A.09.00-7.16.2.002
CyrusIMAP*	A.09.00-2.2.12	A.09.00-2.2.12.001	A.09.00-2.2.12.002
CyrusSASL	A.09.00-2.1.22	A.09.00-2.1.22.001	A.09.00-2.1.22.002
DanteSOCKS*	A.09.00-1.1.19	A.09.00-1.1.19.001	A.09.00-1.1.19.002
Eclipse	A.09.00-3.3M3	A.09.00-3.3M3.001	A.09.00-3.3M3.002
Fetchmail*	A.09.00-6.3.8	A.09.00-6.3.8.001	A.09.00-6.3.8.002
FSH	A.09.00-1.2	A.09.00-1.2.001	A.09.00-1.2.002
Globus	A.09.00-4.0.4	A.09.00-4.0.4.001	A.09.00-4.0.4.002
GnuPG	A.09.00-1.4.7	A.09.00-1.4.7.001	A.09.00-1.4.7.002
Horde	A.09.00-3.1.4	A.09.00-3.1.4.001	A.09.00-3.1.4.002
Hsqldb	A.09.00-1.8.0.7	A.09.00-1.8.0.7.001	A.09.00-1.8.0.7.002
Hypermail	A.09.00-2.2.0	A.09.00-2.2.0.001	A.09.00-2.2.0.002
IMP	A.09.00-4.1.4	A.09.00-4.1.4.001	A.09.00-4.1.4.002

Table 1-1 HP-UX Internet Express Component Versions *(continued)*

Component Name	HP-UX 11i version 1	HP-UX 11i version 2	HP-UX 11i version 3
Jabber*	A.09.00-1.4.4	A.09.00-1.4.4.001	A.09.00-1.4.4.002
Jython	A.09.00-2.1	A.09.00-2.1.001	A.09.00-2.1.002
Libpcap	A.09.00-0.9.5	A.09.00-0.9.5.001	A.09.00-0.9.5.002
Libxml2	A.09.00-2.6.28	A.09.00-2.6.28.001	A.09.00-2.6.28.002
ModSecurity	Not Available	A.09.00-2.1.1.001	A.09.00-2.1.1.002
Majordomo*	A.09.00-1.94.5	A.09.00-1.94.5.001	A.09.00-1.94.5.002
MySQL*	A.09.00-5.0.41	A.09.00-5.0.41.001	A.09.00-5.0.41.002
Nagios	A.09.00-2.9	A.09.00-2.9.001	A.09.00-2.9.002
Nessus	A.09.00-2.2.9	A.09.00-2.2.9.001	A.09.00-2.2.9.002
Net-SNMP	A.09.00-5.4.009	A.09.00-5.4.010	A.09.00-5.4.011
Nikto	A.09.00-1.36	A.09.00-1.36.001	A.09.00-1.36.002
OpenJMS	A.09.00-0.7.6.1	A.09.00-0.7.6.1.001	A.09.00-0.7.6.1.002
OpenLDAP*	A.09.00-2.3.35	A.09.00-2.3.35.001	A.09.00-2.3.35.002
OpenSAML	A.09.00-1.1b	A.09.00-1.1b.001	A.09.00-1.1b.002
OpenSC	A.09.00-0.11.1	A.09.00-0.11.1.001	A.09.00-0.11.1.002
PAM_mkhomeDir	A.09.00-1.0	A.09.00-1.0.001	A.09.00-1.0.002
PAM_passwdqc	A.09.00-1.0.2	A.09.00-1.0.2.001	A.09.00-1.0.2.002
Perl-LDAP	A.09.00-0.33	A.09.00-0.33.001	A.09.00-0.33.002
Pine	A.09.00-4.64	A.09.00-4.64.001	A.09.00-4.64.002
Postfix	A.09.00-2.4.1	A.09.00-2.4.1.001	A.09.00-2.4.1.002
PostgreSQL*	A.09.00-8.2.4	A.09.00-8.2.4.001	A.09.00-8.2.4.002
ProcMail*	A.09.00-3.22	A.09.00-3.22.001	A.09.00-3.22.002
ProFTPD*	A.09.00-1.3.0a	A.09.00-1.3.0a.001	A.09.00-1.3.0a.002
Python	A.09.00-2.5.1	A.09.00-2.5.1.001	A.09.00-2.5.1.002
Qpopper*	A.09.00-4.0.9	A.09.00-4.0.9.001	A.09.00-4.0.9.002
Rsync	A.09.00-2.6.9	A.09.00-2.6.9.001	A.09.00-2.6.9.002
SmartFrog	A.09.00-3.10.016	A.09.00-3.10.016.001	A.09.00-3.10.016.002
Snort*	A.09.00-2.6.1.4	A.09.00-2.6.1.4.001	A.09.00-2.6.1.4.002

Table 1-1 HP-UX Internet Express Component Versions *(continued)*

Component Name	HP-UX 11i version 1	HP-UX 11i version 2	HP-UX 11i version 3
SOAP	A.09.00-2.3.1	A.09.00-2.3.1.001	A.09.00-2.3.1.002
SourceIDSAMLJ	A.09.00-2.0	A.09.00-2.0.001	A.09.00-2.0.002
Squid*	A.09.00-2.6s12	A.09.00-2.6s12.001	A.09.00-2.6s12.002
SSLDUMP	A.09.00-0.9b3	A.09.00-0.9b3.001	A.09.00-0.9b3.002
Struts	A.09.00-1.3.8	A.09.00-1.3.8.001	A.09.00-1.3.8.002
Stunnel*	A.09.00-4.20	A.09.00-4.20.001	A.09.00-4.20.002
Sudo	A.09.00-1.6.8p12	A.09.00-1.6.8p12.001	A.09.00-1.6.8p12.002
Tcpdump	A.09.00-3.9.5	A.09.00-3.9.5.001	A.09.00-3.9.5.002
Tripwire	A.09.00-2.4.1.2	A.09.00-2.4.1.2.001	A.09.00-2.4.1.2.002
UDDI4J	A.09.00-2.0.5	A.09.00-2.0.5.001	A.09.00-2.0.5.002
UW-IMAP	A.09.00-2006h	A.09.00-2006h.001	A.09.00-2006h.002
Wireshark	A.09.00-0.99.5.003	A.09.00-0.99.5.004	A.09.00-0.99.5.005
Xalan-C	A.09.00-1.10	A.09.00-1.10.001	A.09.00-1.10.002
XDoclet	A.09.00-1.2.3	A.09.00-1.2.3.001	A.09.00-1.2.3.002
Xerces-C	A.09.00-2.7.0	A.09.00-2.7.0.001	A.09.00-2.7.0.002
Xinetd*	A.09.00-2.3.14	A.09.00-2.3.14.001	A.09.00-2.3.14.002
Zlib	A.09.00-1.2.3	A.09.00-1.2.3.001	A.09.00-1.2.3.002
*These components can be configured using the Webmin administration utility.			

2 Installing HP-UX Internet Express

This chapter describes the installation process for HP-UX Internet Express and provides a brief overview of the Webmin web-based administration tool, which can be used to configure select Internet Express components.

Prerequisites

Prior to installing HP-UX Internet Express, note the following recommendations and requirements.

- If you are installing an HP-UX Internet Express product for the first time, HP recommends uninstalling any previously loaded versions of the open source products.
- If you use the latest version of MySQL (A.09.00-5.0.41) on HP-UX 11i version 1, you must have the PHSS_22535 *ld(1)* and linker tools cumulative patch installed on your system. If these are not installed, any attempts to connect to MySQL from a client will fail.
- If you have installed the latest version of the following components on HP-UX 11i version 1, you must install the PHCO_24400 *libc* cumulative patch (IPv6) on your system.
 - Condor
 - Curl
 - CyrusIMAP
 - DanteSOCKS
 - Globus
 - GnuPG
 - Libpcap
 - Net-SNMP
 - OpenLDAP
 - PostgreSQL
 - Snort
 - SSLDump
 - Stunnel
 - Tcpdump
 - Wireshark
 - Xinetd
- If you want to install Tripwire A.09.00-2.4.1.2, ensure that PHSS_28871 is installed in your system.

- If you want to install Wireshark A.09.00-0.99.5.003 on a HP-UX 11i version 1 system, ensure that PHSS_33035 *ld(1)* and linker tools cumulative patch are installed in your system.
- If you want to install Condor A.09.00-6.8.4, ensure that the following patches are installed on your system:
 - PHCO_25568: s700_800 11.11 libnss_files cumulative patch. This patch is required for resolving hostnames from files.
 - PHNE_27796: s700_800 11.11 libnss_dbs DNS backend patch. This patch is required for resolving hostnames from DNS.

Installing HP-UX Internet Express

Follow these steps to install HP-UX Internet Express:

1. If you are installing HP-UX Internet Express components from the HP-UX Internet Express CD/DVD:
 - a. If you are installing HP-UX Internet Express components on systems currently running HP-UX 11i v1, follow these steps:
 - i. Install the patches PHKL_26269, PHKL_28025, and PHCO_25841 to enable long filename support. You can download these patches from any of the following locations:
 - The GOLDBase11i bundle on the Support Plus CD (June 2003 or later) for HP-UX 11i v1
 - The IT Resource Center Web site:
<http://itrc.hp.com>
 - The anonymous IT Resource Center FTP site:
<ftp://ftp.itrc.hp.com>
 - b. Insert the HP-UX Internet Express CD/DVD into the CD drive.



NOTE: While mounting the HP-UX Internet Express CD/DVD, you must invoke the `mount` command using the `-orr` option to recognize and read long filenames.

- c. Mount the Internet Express CD/DVD on your system. The parameters for mounting your CD/DVD may vary. An example command for mounting the HP-UX Internet Express CD/DVD is as follows:

```
$ mount -orr /dev/dsk/c0t0d0 <depot-path>
```

The `<depot-path>` must be an empty directory.

2. If you are installing HP-UX Internet Express components from HP Software Depot, see <http://www.hp.com/go/softwaredepot> and download the `<component-name>.depot` files to install.

3. View the list of bundles on the CD/DVD by entering the following command:

```
$ swlist -l bundle -s<depot-path>
```

This command shows each bundle tag, version number, and a brief description of the product contained in the bundle.



NOTE: HP-UX Internet Express version A.09.00 contains all the components in five bundles for HP-UX Internet Express for HP-UX 11i version 1, HP-UX 11i version 2, and HP-UX 11i version 3.

4. To install HP-UX Internet Express components:
 - a. Enter the following `swinstall` command:

```
$swinstall -s<depot-path>
```

The `swinstall` GUI is displayed.
 - b. On the `swinstall` GUI, select the component or components you want to install from the list.
 - c. On the Actions menu, select **Install**. The `swinstall` program checks your system to be sure the components will install successfully.
 - d. Click **OK** after the check is complete.
 - e. Click **Done** when the Status field reads Complete.
 - f. On the File menu, choose **Exit** to exit the `swinstall` GUI.
-



NOTE: The Xalan-C component has a dependency on Xerces-C. Before you install Xalan-C, you must install Xerces-C or the Xalan-C installation terminates.

If installing from a CD or a superbundle, this dependency is automatically resolved. If installing individual bundles, you must install Xerces-C before Xalan-C.

The FSH component has a dependency on Python. Before you install FSH, you must install Python or the FSH installation terminates. If installing from a CD or a superbundle this dependency is automatically resolved. If you are installing individual bundles, you must install Python before FSH.

The Globus component has a dependency on Ant. If Ant is not installed previously, then the following error message is displayed:

```
WARNING: could not find /opt/iexpress/ant needed for GTK 4.0.3, please install Ant and run
/opt/iexpress/globus/sbin/gpt-postinstall-force
```

5. If you have a previous version of HP-UX Internet Express OpenLDAP installed, you must manually uninstall it prior to installing the latest version. If you do not have a previous version of HP-UX Internet Express OpenLDAP, continue to Step 6.



NOTE: The data storage for the most recent version of OpenLDAP (2.3.35) is incompatible with previous OpenLDAP versions. You cannot directly upgrade an existing OpenLDAP installation.

To upgrade to the new OpenLDAP version from a previous version:

- a. Unload the data from your current OpenLDAP environment using the `slapcat` utility. This creates a set of `.ldif` files containing the unloaded data.
- b. Back up your current OpenLDAP environment, including the `.ldif` files.
- c. Remove OpenLDAP using `swremove`.
- d. Install the latest version of Internet Express OpenLDAP. See Step 4 for instructions on installing the Internet Express OpenLDAP component using the `swinstall` command.
- e. Load data into the new OpenLDAP directory from the previously unloaded `.ldif` files using the `slapadd` utility.

For more information on `slapcat` and `slapadd`, see the OpenLDAP manpages.

6. If you have a previous version of HP-UX Internet Express MySQL installed, you must manually uninstall it prior to installing the latest version. If you do not have a previous version of MySQL, continue to Step 7.

To upgrade to the new MySQL version from a previous version, follow these steps:

- a. Back up your MySQL databases.
- b. Follow these steps for each database directory to be migrated:
 - i. Use the `mysqldump` utility to create a dump of all the databases in the database directory. For more information, see the `mysqldump` manpage.
 - ii. Remove or relocate the database directory. If your previous database directory was created using an HP-UX Internet Express MySQL version, and you only worked with the default database, then your database directory is `/var/opt/iexpress/mysql`. Remove default directory even if you do not use it.
- c. Remove the current HP-UX Internet Express MySQL installation using `swremove`.
- d. Install the HP-UX Internet Express MySQL 5.0.41 depot. See Step 4 for instructions on installing the Internet Express MySQL 5.0.41 component using the `swinstall` command.
- e. Initialize all your individual database directories using the `mysql_install_db` script. The depot installation automatically creates a default database directory under `/var/opt/iexpress/mysql`. If this is the only database directory of interest to you, then you need not execute `mysql_install_db` any more.

- f. Restore each individual database directory using the `mysql` command. Details are available in the MySQL manpages.

Information regarding migration to MySQL 5.0.41 is also available at <http://dev.mysql.com/doc/refman/5.0/en/upgrading-from-4-1.html>

7. If you have any previous version of the Internet Express PostgreSQL product installed, you must first manually uninstall the component prior to installing the latest version. If you do not have a previous version of Internet Express PostgreSQL, continue to Step 8.

To upgrade to this new Internet Express version from a previous version:

- a. Back up your PostgreSQL databases using the standard backup method.
- b. Complete the following steps for each database cluster to be migrated:
 - i. Use the `pg_dumpall` utility to create a dump of all the databases in the database cluster. For more information, see the `pg_dumpall` manpage.
 - ii. Remove or relocate this database directory. If your previous database directory was created using HP-UX Internet Express PostgreSQL, and you used worked the default database only, then your database directory is `/var/opt/iexpress/postgresql`. The default directory must be removed even if you do not use it.
- c. Remove the current HP-UX Internet Express PostgreSQL installation using `swremove`.
- d. Install HP-UX Internet Express PostgreSQL depot as described in Step 4.
- e. Initialize all individual database clusters using the `initdb` script. The depot installation automatically creates a default database directory in `/var/opt/iexpress/postgresql`. If this is the only database directory you need, then you need not execute `initdb` again.
- f. Restore each individual database directory using the `psql` command. For more information, see the `psql` manpages.

Information regarding migration to PostgreSQL 8.2.4 is also available at: <http://www.postgresql.org/docs/8.0/static/install-upgrading.html>

8. To validate the installation of the HP-UX Internet Express components, enter the following command:

```
$ swverify <component -name>
```

A `<component -name>` is the name of the component displayed on the `swinstall` GUI, for example, `ixMySQL`. If the installation was successful, the output of `swverify` includes `Verification Succeeded`. If this message does not appear, remove the component and reinstall it as described in Step 4.

9. To complete the installation, log out of your system and log back in. After logging back in, you can read the HP-UX Internet Express component manpages.

Configuring HP-UX Internet Express Components with Webmin

HP-UX Webmin-based Admin (Webmin) is a Web-based tool for system administration for UNIX and is part of the HP Web Server Suite. Many of the HP-UX Internet Express open source components can be configured and administered using Webmin. These components are as follows:

- CyrusIMAP
- DanteSOCKS
- Fetchmail
- Jabber
- Majordomo
- MySQL
- OpenLDAP
- PostgreSQL
- ProcMail
- ProFTPD
- Qpopper
- Snort
- Squid
- Stunnel
- Xinetd

Webmin consists of a miniserver and a number of CGI programs that directly update system files, such as `/etc/inetd.conf` and `/etc/passwd`. The Web server and all CGI programs are written in Perl version 5, and use no external modules. You only need a Perl binary to run Webmin.

After installing and starting up Webmin, the *HP Admin Guide* is available through the default home page that provides links to the documentation. It is also available at `/opt/hpws/hp_docs/webmin/webmin.admin.guide`.

More information is available at:

<http://www.webmin.com>

The Webmin user guide is available at:

<http://www.swelltech.com/support/webminguide/index.html>

3 License and Support

This chapter provides a brief overview of the HP licensing agreement and support for HP-UX Internet Express.

Licensing Agreement

The full text of the HP-UX Internet Express License Agreement is available in the `licenses.txt` file located in `/opt/iexpress/<product-name>`, where `<product-name>` is the name of the component in all lowercase letters.

The HP-UX Internet Express License Agreement can also be found in the TCOpenSource component files that are available as the `licenses.txt` file located in `/usr/local/doc/<product-name>`, where `<product-name>` is the name of the component in all lowercase letters.

You must read and agree with the full text of the HP-UX Internet Express License Agreement before installing the HP-UX Internet Express product. The support provision for HP-UX Internet Express is contained within the license agreement.

Use of the HP software including, without limitation, any documentation and any third party products bundled with, or embedded in, the software is subject to the license terms set forth and the applicable “as-is warranty statement” provided as a separate document. Read all the terms of the agreement carefully. Use of the software shall be considered assent to the terms.

Requesting Support

HP does not provide support for components listed in Table 1-1 that are delivered through HP-UX Internet Express either through Web download or through the HP-UX 11i media kits. However, you can notify the HP Internet Express team if you find defects. HP will report defects to the related open source communities and incorporate the appropriate fixes in each new release. To provide feedback or report a defect, email the HP-UX Internet Express Team at:

<http://h20338.www2.hp.com/hpux11i/cache/329138-0-0-225-121.html>

4 Documentation Resources

This chapter provides links to Web sites and documentation for the HP-UX Internet Express components, HP-UX Internet Express components included in the HP-UX OEs, and TCOpenSource components.

HP-UX Internet Express Component Documentation Resources

Table 4-1 lists links to available documentation for each component shipped on the HP-UX Internet Express media.

Table 4-1 HP-UX Internet Express Documentation Links

Component Name	Product Documentation Links
Ant	http://ant.apache.org
Axis	http://ws.apache.org/axis/java/index.html
Calamaris	The Calamaris manpage is included with the software.
Chkrootkit	http://www.chkrootkit.org
Clam AntiVirus	http://www.clamav.net/doc http://www.clamav.net/faq.html#pagestart
Condor	http://www.cs.wisc.edu/condor/manual
Curl	http://curl.haxx.se/docs
CyrusIMAP	http://asg.web.cmu.edu/cyrus/imapd
CyrusSASL	http://asg.web.cmu.edu/sasl
DanteSOCKS	http://www.inet.no/dante/doc
Eclipse	http://www.eclipse.org
Fetchmail	http://fetchmail.berlios.de/fetchmail-man.html http://fetchmail.berlios.de/fetchmail-FAQ.html
FSH	http://www.lysator.liu.se/fsh/fsh.html
Globus	http://www.globus.org/about/faq.html http://www-unix.globus.org/toolkit/documentation.html
GnuPG	http://www.gnupg.org/(en)/documentation/index.html
Horde	http://www.horde.org/faq/user http://www.horde.org/faq/admin/print.php

Table 4-1 HP-UX Internet Express Documentation Links *(continued)*

Component Name	Product Documentation Links
HSQldb	http://hsqldb.sourceforge.net/web/hsqqlFAQ.html http://hsqldb.sourceforge.net/web/hsqqlDocsFrame.html
Hypermail	http://www.hypermail.org
IMP	IMP is a Horde application. IMP documentation is included within the Horde documentation. http://www.horde.org/faq/user http://www.horde.org/faq/admin/print.php
Jabber	http://www.jabber.org/user
Jython	http://www.jython.org/docs/index.html
Libpcap	http://www.tcpdump.org
Libxml2	http://xmlsoft.org/
ModSecurity	
Majordomo	http://www.greatcircle.com/majordomo/majordomo-faq.html
MySQL	http://dev.mysql.com/doc
Nagios	http://nagios.org/
Nessus	http://www.nessus.org/documentation/
Net-SNMP	http://www.net-snmp.org/FAQ.html http://www.net-snmp.org/docs/readmefiles.html
Nikto	http://www.cirt.net/code/nikto.shtml
OpenJMS	http://openjms.sourceforge.net
OpenLDAP	http://www.openldap.org/doc/admin21
OpenSAML	http://www.opensaml.org
OpenSC	http://www.opensc.org/docs.php
PAM_mkhome	No documentation link available.
PAM_passwdqc	http://www.openwall.com/passwdqc/README.shtml
Perl-LDAP	http://ldap.perl.org
Pine	http://www.washington.edu/pine/getpine/non-UW.html#Documentation
Postfix	http://www.postfix.org/
PostgreSQL	http://techdocs.postgresql.org

Table 4-1 HP-UX Internet Express Documentation Links *(continued)*

Component Name	Product Documentation Links
ProcMail	http://pm-doc.sourceforge.net
ProFTPD	http://www.proftpd.org/docs
Python	http://www.python.org/doc
Qpopper	http://www.eudora.com/products/unsupported/qpopper/documentation.html
Rsync	http://samba.anu.edu.au/rsync/documentation.html
SmartFrog	http://www.hpl.hp.com/research/smartfrog/papers.htm http://www.hpl.hp.com/research/smartfrog/faq.htm
Snort	http://www.snort.org/docs
SOAP	http://ws.apache.org/soap/docs/index.html
SourceIDSAMLJ	http://www.sourceid.org/docs/SAML_Toolkit.pdf
Squid	http://squid-docs.sourceforge.net http://squid.visolve.com/squid/index.htm http://www.squid-cache.org/Doc/FAQ/FAQ.html
SSLDUMP	http://www.rtfm.com/ssldump
Struts	http://struts.apache.org
Stunnel	http://www.stunnel.org/faq
Sudo	http://www.gratisoft.us/sudo
Tcpdump	http://www.tcpdump.org
UDDI4J	http://uddi4j.sourceforge.net/doc.html
UW-IMAP	http://www.washington.edu/imap
Wireshark	http://www.wireshark.org/
Xalan-C	http://xml.apache.org/xalan-c/faq.html http://xml.apache.org/xalan-c/overview.html
XDoclet	http://xdoclet.sourceforge.net/xdoclet/bp.html http://www.jguru.com/faq/printablefaq.jsp?topic=XDoclet
Xerces-C	http://xml.apache.org/xerces-c/faqs.html http://xml.apache.org/xerces-c/pdf.html

Table 4-1 HP-UX Internet Express Documentation Links *(continued)*

Component Name	Product Documentation Links
Xinetd	http://www.xinetd.org/faq.html
zlib	http://www.zlib.net/

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