

### Overview

#### Introduction

HP Internet Express for Tru64 UNIX® is a collection of popular Internet software and administration software developed by Hewlett-Packard Company (HP). Internet Express ships with all Tru64 UNIX AlphaServer systems. You can also purchase it separately.

Features and benefits:

- A collection of open source Internet software (binaries and sources), tested and qualified on the Tru64 UNIX operating system
- Automatic installation and configuration of Internet software
- All services configured to run on a TruCluster Server, providing a true high-availability environment
- A Web-based Administration utility (including online help) to manage Internet services and tune kernel attributes for Internet service performance
- IPv6 support in some components: UW-IMAP, Pine (IMAP client), POP3, procmail, sendmail, TCP Wrapper, IRC (chat client and server), BIND Domain Name System, Firefox, and Apache 2.0

Internet software packaged with Internet Express:

- OpenLDAP Directory Server and Mozilla LDAP Software Developer's Kit (SDK) Version 5.0 for C for developing LDAP applications
- An LDAP browser that allows browsing and editing of Directory Server contents
- The LDAP Module for System Authentication, which allows user identification and authentication information stored in an LDAP server to be used for all applications
- Internet Monitor, a Quality of Service (QoS) tool developed by HP. System administrators can use the Internet Monitor to monitor the performance of Internet servers
- Secure Web Server (powered by Apache) (both Apache 1.3 and 2.0)
- BIND V9 Domain Name System
- Tools for providing dynamic Web content (Perl, Python, PHP, Jakarta Tomcat, and XML tools)
- XML and Web Services Tools (Xerces, Xalan, Axis, UDDI4J, Cocoon, FOP, Batik)
- Web indexing and search system (ht://Dig)
- Samba File and Print Server for Windows
- Security (TCP Wrapper) and intrusion detection (Snort)
- Mail servers (sendmail, IMAP, POP) and clients (Thunderbird, Pine)
- Mailing list management (Majordomo and Mailman)
- Mail filtering (procmail, bogofilter, Clam AV)
- Web-based mail reader (Horde IMP)
- News server (InterNetNews) and client (TIN)
- Chat server (Internet Relay Chat)
- Proxy/caching server (Squid) and log file analyzer (calamaris)
- FTP Server (PureFTPd)
- SOCKS proxy server (Dante)
- Service Location Protocol server (OpenSLP)
- Database Management Systems (PostgreSQL, MySQL)
- Web browsers (Mozilla Firefox, Lynx)
- FireScreen, a basic firewall
- FreeRADIUS Server GnuPG, GNU Privacy Guard
- Apache Struts

Administration software included with Internet Express:

- Internet Express installation procedures using a terminal command-line or Web browser interface
- Internet Express Administration utility (installed on port 8081), a Web-based utility that allows you to perform the following tasks
  - Register Internet Express on line.

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- Configure and control open source Internet software packaged with Internet Express, including adding and removing components.
- Configure and control the Secure Web Server.
- Configure and control the Internet Monitor.
- Add captive and system user accounts, and assign users' mail delivery.
- Configure the LDAP Module for System Authentication.
- Tune kernel attributes to improve performance of Internet services.
- Configure your system as a firewall. (A command-line script is also provided.)

Evaluation software included with Internet Express:

- Mozilla Seamonkey
- SendmailX
- Webmin-based Admin (Webmin 1.070)

## Standard Features

### Administrative Functions

You can access the Internet Express Administration utility through a graphical Web browser. (**NOTE:** [Certain features of the Administration utility and the installation procedure require your browser to be JavaScript enabled.](#)) Links to the Internet Express for Tru64 UNIX Administration Guide (in HTML format) provide online help. The guide contains links to Web sites for each open source software component packaged with Internet Express, and Web sites at HP that might interest Internet server administrators.

The Internet Express Administration utility allows a system administrator to easily perform the following component and system management tasks using a Web browser.

### Manage Users

- Add or remove user accounts, individually or based on group assignment.
- Modify the attributes of existing user accounts, including mail delivery.
- Display information for all users or a specific set of users.
- Change the password for a user or automatically generate passwords for a user or group of users.
- Enable and configure User Self-Administration (Delegated Administration).

### Manage Components

- Configure, manage, and test security for Internet components.
- Add or remove Internet components from your system.
- Install and configure FireScreen.
- Configure the Secure Web Server.
- Configure the ht://Dig Web search and indexing system.
- Configure the Apache/XML SOAP server and Cocoon Web Publishing Framework.
- Configure the OpenLDAP Directory Server.
- Configure and manage Worldwide Web (WWW) and administration servers.
- Configure and manage the Internet Monitor.
- Configure and control mail servers.
- Establish an anonymous FTP account, and configure the FTP server.
- Configure the Samba File and Print Server for Windows.
- Manage the Squid Proxy/Caching Server.
- Configure and manage the InterNetNews (INN) server.
- Create and delete Majordomo mailing lists on a local system, and modify list parameters.
- Configure the LDAP Module for system authentication.
- Manage the PostgreSQL and MySQL database servers.
- Tune the kernel for Internet services.

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### End-User Functions

Internet Express captive accounts created with the Internet Express Administration utility provide access to a menu that offers several common applications, including the ability to:

- Use the Pine mail client.
  - Access the INN newsgroups
  - Use the Lynx Web browser for character-cell terminals.
  - Define or change passwords for captive accounts.
  - Access the online Internet Services User's Guide, which describes these captive account capabilities.
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### Standard Features

#### Installation

The Internet Express installation procedure simplifies the steps required to install and start the Internet Express Administration utility and other Internet services on Tru64 UNIX systems. You can install Internet Express using a command-line script interface or a Web browser interface. When you run the installation procedure using a Web browser, links to the Internet Express for Tru64 UNIX Installation Guide (in HTML format) provide online help.

The Internet Express installation procedure prompts the installer for site-specific information, allows the installer to tune kernel subsystem attributes to improve performance, configures the system, and installs requested subsets. All subsets are optional, although some subsets depend on others. All the selected open source Internet and administration software components included with Internet Express are configured and available for use when the installation is complete. The installation procedure updates previous versions of Internet Express, preserving configurations and user data. Update installation from Internet Express Version 6.5 or Version 6.6 to Internet Express Version 6.7 is supported.

Please read the online Internet Express for Tru64 UNIX Read This First and Release Notes documents before installing the software. You can access these documents from the [index.htm](#) file on the Internet Express for Tru64 UNIX Installation and Documentation CD-ROM.

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#### Internet Monitor

The Internet Express Internet Monitor is a Quality of Service (QoS) tool developed by HP. System administrators can use the Internet Monitor to monitor the performance of Internet servers. They can use the information collected by the Internet Monitor to make changes to their system and network configurations to improve performance of a particular Internet server. Administrators and end users can use the historical information collected by the Internet Monitor to check conformance of Service Level Agreements (SLAs).

The Internet Monitor can monitor the following Internet services:

- HTTP and HTTPS
- FTP
- NNTP
- SMTP
- POP
- IMAP
- LDAP
- DNS
- RADIUS
- Network connections to arbitrary ports

The Internet Monitor provides the following features:

- Allows administrators to monitor the performance of Internet services running anywhere on the network
  - Allows data collection agents to be placed anywhere on the network to poll Internet services and report performance data to the data collection server
  - Graphically monitors the performance of Internet services from the perspective of an actual user of those services
  - Allows alerts to be generated or causes other automated actions to be performed when administrator-defined performance thresholds are crossed
  - Collects and archives performance data, and generates historical performance reports and graphs
  - Can be used as the basis for ensuring conformance to Service Level Agreements (SLAs)
  - Provides a Web-based administration utility for configuring the Internet Monitor
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### Standard Features

#### Directory Servers

The OpenLDAP Directory Server is packaged with Internet Express. The Lightweight Directory Access Protocol (LDAP) is an Internet standard directory service protocol that runs over TCP/IP. It can be used to provide a standalone directory service or to provide lightweight access to an X.500 directory.

An LDAP browser application is also included. It can run on any system with a Java™ Runtime Environment and allows browsing and editing of a Directory Server's data.

The Mozilla LDAP Software Developer's Kit (SDK) Version 5.0 for C for developing LDAP applications is also included.

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#### LDAP Module for System Authentication

The LDAP Module for System Authentication, developed by HP, allows user identification and authentication information stored in an LDAP server to be used for all applications, including the following:

- Login authentication (rlogin, ftp, and telnet)
- POP and IMAP authentication
- Transparent LDAP database access for the `getpw*()` and `getgr*()` routines in the `libc` library

The OpenLDAP Directory Server provided with Internet Express is automatically configured for use with the LDAP Module for System Authentication. The LDAP Module for System Authentication subset includes tools designed to query the LDAP server for user and group information based on a standard POSIX schema. You can choose the LDAP Module for System Authentication as an option during installation.

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#### Web Server

Internet Express includes the Secure Web Server (powered by Apache) developed by the Apache Software Foundation (<http://www.apache.org/>). The Secure Web Server lets you create and manage a Web site on the Internet or Intranet. The Secure Web Server includes SSL (Secure Sockets Layer) capability that allows secure encrypted connections to Web browsers.

The Secure Web Server also includes:

- PHP Hypertext Preprocessor module, a server-side, cross-platform, HTML embedded scripting language that allows you to design dynamic Web pages
- Jakarta Tomcat servlet module that allows the Web server to execute Java Servlets and Java Server Pages (JSP) in response to browser requests. Tomcat may also be configured as a standalone Web server, independent of the Secure Web Server
- Fast CGI, an open extension to CGI that provides high performance without the limitations of server-specific APIs
- `auth_ldap` LDAP authentication module
- `analog`, a tool for analyzing log files
- An option to install Apache 2.0 as an alternative or in addition to Apache 1.3

A Web-based administration utility developed by HP for managing the Secure Web Server is also included.

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#### Security

TCP Wrapper provides enhanced Internet security by letting the system administrator control access to certain Internet services, including Telnet, FTP, remote shell, rlogin, remote execute, fingerd, talk, POP, IMAP, or any other service started by the `inetd` daemon.

Tools to configure network ingress and egress filtering are included.

GnuPG allows the encryption and signature of data and communication.

**NOTE:** Publicly accessible media like the Internet present a security risk if suitable precautions are not taken to ensure and enforce security.

### Standard Features

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#### News Service

The InterNetNews Server (INN) and TIN news reader provide tools to manage newsfeed services, including connections to external newsfeeds, newsfeed configurations, and control of client access to newsgroups.

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#### Proxy Servers

The Squid Proxy/Caching Server allows the user's system to intelligently cache Web pages in a central location for quick and easy retrieval. The calamaris log file analyzer for Squid is included.

The Dante SOCKS Proxy Server is also included.

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#### Mail Servers

Internet Express provides the following mail components:

- UW-IMAP, Cyrus IMAP, Qualcomm Popper (POP), and sendmail servers offer secure, standards-based e-mail capability.
  - Majordomo automates the creation and maintenance of mailing lists.
  - Mailman manages e-mail discussion and e-newsletter lists.
  - Procmal allows users or administrators to create customized mail filters.
  - Bogofilter allows users to identify and filter spam.
  - Clam AV allows users to detect and eliminate viruses on a mail server.
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#### Mail Clients

The Horde IMP (Internet Mail Program), a Web-based IMAP mail client, allows users to access their IMAP mail folders using any graphical Web browser.

Thunderbird is a full-featured email application.

The Pine mail client is also provided.

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#### Chat Server and Client

The Internet Relay Chat Server allows users to communicate with each other in real time, across a network of Internet servers.

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#### FTP Server

PureFTPd is provided with Internet Express.

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#### File and Print Server

The Samba File and Print Server is an open source software suite that provides seamless file and print services to SMB/CIFS (for example, Microsoft Windows®) clients.

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#### Database Management System

The PostgreSQL Relational Database Management System, and the MySQL database server, are both included with Internet Express.

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### Standard Features

#### Web Services Tools

The following tools for providing Web Services and dynamic Web content are provided with Internet Express:

- ht://Dig Web indexing and search system
  - Perl
  - Python
  - PHP
  - Struts
  - Tomcat Java Servlet engine from the Apache Jakarta Project
  - XML and Web Services Tools
    - Axis Server
    - UDDI4J (UDDI Client Libraries in Java)
    - Xerces XML parsers for C++ and Java
    - Xalan Stylesheet processors for C++ and Java
    - Cocoon Web Publishing Framework
    - FOP Print Formatter
    - Batik scalable vector graphics
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#### Service Location Protocol

The Service Location Protocol (SLP) provides client/server applications with the means to discover and select system services on the network. Internet Express provides the OpenSLP server and Application Program Interfaces (APIs) based on the SLP Version 2 standard.

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#### BIND Domain Name System

The Berkeley Internet Name Domain (BIND) Version 9.3.2-P1 from the Internet Software Consortium implements a domain name server for Tru64 UNIX.

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#### Mozilla Firefox

Firefox is an Open Source web browser that is based on the Mozilla code base. It is small, fast, and easy to use.

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#### Source Code Information

Source code is included for all the Internet Express open source software on the binary kit.

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### Standard Features

#### Hardware Requirements

Internet Express can run on any valid Tru64 UNIX AlphaServer system having the minimum system configuration as described in the Tru64 UNIX Operating System QuickSpecs. The actual amount of work supported at one time, with good performance, depends on the types of processing performed as well as on the physical memory and secondary storage available.

#### Platforms and Processors Not Supported

Internet Express does not support OpenVMS, Microsoft Windows, Linux®, HP-UX, or any hardware configurations other than the Tru64 UNIX hardware configurations.

#### Other Hardware Required

You need a network card to access the Internet.

#### Video Display Support

Internet Express supports a wide variety of display devices, including character-cell terminals and X Window System display devices, Microsoft Windows client desktops, and Macintosh client desktops.

#### Memory Requirements

Internet Express requires a minimum of 256 MB of memory. Additional memory might also be required based on system loading.

#### Disk Space Requirements

Maximum required /usr file system disk space is approximately 1200 MB for a full installation of all components.

**NOTE:** This value refers to the disk space required on the system disk. The sizes are approximate; actual sizes will vary depending on the user's system environment, configuration, and software options. Additional disk space on other file systems will be required to create or expand component databases or create user files as components are used. A typical installation will include only selected components.

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#### Software Requirements

Internet Express requires Tru64 UNIX Version 5.1B or higher.

The Java™ Development Kit (JDK) Version 1.3.1 or higher is required for Cocoon, the LDAP Browser, Internet Monitor, Axis Server, and Axis/UDDI4J Clients. Tomcat requires Java™ Version 1.4.x.

Some Internet Express components require the use of other Internet Express components.

For more information, see the installation guide, which is available on line in HTML and PDF formats.

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#### Network Support

Internet Express supports a variety of network protocols, topologies, and hardware interconnects, including TCP/IP as specified by the Tru64 UNIX QuickSpecs.

For additional information about supported features, hardware models and revision levels, and required or optional software, see the Software Product Description or QuickSpecs for the product in question.

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### Standard Features

#### Software Licensing

Only the Internet Express Administration utility, FireScreen, LDAP Module for System Authentication, and the Internet Monitor are furnished under a license from HP. Tru64 UNIX is licensed separately by HP.

All open source software included with Internet Express is licensed by the developers of the individual products. For more information about the licenses for these open source third-party products, see the Software Description and Licensing Terms document included on the Internet Express Installation and Documentation CD-ROM.

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#### Growth Considerations

The minimum hardware and software requirements for any future version of this product might be different from the requirements for the current version.

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#### Distribution Media and Documentation

Distribution media and documentation for Internet Express are distributed on two CD-ROMs. You can print the electronic documentation accompanying the software as reasonably necessary to exercise your license to use the software.

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#### Software Product Services

A wide variety of service options are available from HP. For more information, contact your local HP account representative or distributor. Information is also available on <http://h20219.www2.hp.com/services/cache/10909-0-0-225-121.aspx>.

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### Standard Features

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