

## OVERVIEW

HP Internet Express for Tru64 UNIX® is a collection of popular Internet software and administration software developed by Hewlett-Packard Company (HP). Internet Express is shipped with all Tru64 UNIX AlphaServer systems, or it can be purchased 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 (includes 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, 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 Tru64 UNIX Engineering. 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, PHP, Jakarta Tomcat, and XML tools)
- XML and Web Services Tools (Xerces, Xalan, SOAP, UDDI4J, Cocoon, FOP, Batik)
- Web indexing and search system ([ht://Dig](http://Dig))
- Samba File and Print Server for Windows
- Security (TCP Wrapper) and authentication (Interlink Networks AAA Basic RADIUS Server — binaries only), and tools to help keep your system from being attacked or exploited in a denial of service attack
- Mail servers (sendmail, IMAP, POP) and clients (Pine)
- Mailing list management (Majordomo)
- Mail filtering (procmail)
- Web-based mail reader (Horde IMP)
- News server (InterNetNews) and client (TIN)
- Chat server (Internet Relay Chat)
- Proxy/caching server (Squid) with SmartFilter capability and log file analyzer (calamaris)
- FTP Server (wu-ftp)
- SOCKS proxy server (Dante)
- Streaming Media Server (Darwin)
- Service Location Protocol (SLP) server (OpenSLP)
- Database Management System (PostgreSQL)
- Web browser for character-cell terminals (Lynx)
- FireScreen, a basic firewall

## OVERVIEW *(continued)*

Administration software included with Internet Express Version 6.0:

- 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
  - 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 Version 6.0:

- Instant ASP (iASP) from Stryon, Inc.
- RAD-Series AAA RADIUS Server from Interlink Networks, Inc.
- Tripwire for Servers
- Communicate Pro messaging server software from Stalker, Inc.
- Mozilla 1.1 Web Client for Tru64 UNIX
- Netscape 6.2.3 Web Client for Tru64 UNIX

## 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

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- 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

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- 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 ht://Dig Web search and indexing system
- Configure the Apache/XML SOAP server and Cocoon Web Publishing Framework
- Configure the OpenLDAP Directory Server
- Configure the Darwin Streaming Media Server
- Configure and manage World Wide Web (WWW) and administration servers
- Configure and manage the Internet Monitor
- Configure and control mail servers and the IMP Web-based mail reader
- Establish an anonymous FTP account, and configure the FTP server
- Configure the Samba File and Print Server for Windows
- Configure the Microsoft FrontPage 2000 Server Extensions
- 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 database server
- Tune the kernel for Internet services

## 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

## INSTALLATION

The Internet Express installation procedure simplifies the steps required to install and start up 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 the product are configured and available for use when the installation is complete. The installation procedure will update previous versions of Internet Express, preserving configurations and user data. Update installation from Internet Express Version 5.8 or Version 5.9 to Internet Express Version 6.0 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.

## INTERNET MONITOR

The Internet Express Internet Monitor is a Quality of Service (QoS) tool developed by Tru64 UNIX Engineering. 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
- Data collection agents can 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
- Can generate alerts or cause 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

## 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 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.

## LDAP MODULE FOR SYSTEM AUTHENTICATION

The LDAP Module for System Authentication, developed by Tru64 UNIX Engineering, 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.

## WEB SERVER

Internet Express includes the Secure Web Server powered by Apache software developed by the Apache Software Foundation (<http://www.apache.org/>)†. The Secure Web Server lets users create and manage a Web site on the Internet or Intranet.

The Secure Web Server includes SSL (Secure Socket 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 stand-alone 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
- Optional Microsoft® FrontPage2000 Server Extensions
- 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 Tru64 UNIX Engineering for managing the Secure Web Server is also included.

## NETWORK 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.

The Interlink Networks AAA Basic RADIUS Server supports standard Remote Authentication Dial In User Service (RADIUS) authorization. This server extends standard RADIUS authentication to a distributed authentication and authorization scheme. This server also functions as a proxy server that relays authentication and authorization requests to other RADIUS servers and receives and relays the responses.

Tools to configure network ingress and egress filtering are included, as well as tools to help prevent your system from being attacked or exploited in certain denial of service (DoS) attacks.

The Security and Network Analyzer Tool (SATAN) is also provided in the `source-tar/` directory.

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

## NEWS SERVICE

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

## 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 also included.

Secure Computing's SmartFilter plug-in for Squid Proxy Server is included. SmartFilter is specialized URL (Universal Resource Locator) filtering software that administrators can configure inside their network to control access to external Internet resources. SmartFilter allows administrators to restrict access to World Wide Web pages, newsgroups, and FTP sites. For more information about SmartFilter and how to obtain a subscription for the SmartFilter Control List, see [www.smartfilter.com](http://www.smartfilter.com)†.

The Dante SOCKS Proxy Server is included.

## MAIL SERVERS

UW-IMAP, Qualcomm popper (POP), Cyrus IMAP, and sendmail servers offer secure, standards-based e-mail capability.

Majordomo automates the creation and maintenance of mailing lists.

Procmail allows users or administrators to create customized mail filters.

## 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. The Internet Express Administration utility can be used to configure IMP. The Pine mail client is also provided.

## 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.

## FTP SERVER

Washington University File Transfer Protocol (FTP) Server (wu-ftp) is provided with Internet Express.

## 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.

## DATABASE MANAGEMENT SYSTEM

PostgreSQL Relational Database Management System is included.

## STREAMING MEDIA SERVER

The Darwin Streaming Server is included.

## 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
- PHP
- Tomcat Java Servlet engine from the Apache Jakarta Project
- XML and Web Services Tools
  - SOAP 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

## 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.

## BIND DOMAIN NAME SYSTEM

The Berkeley Internet Name Domain (BIND) Version 9.2.0 from the Internet Software Consortium implements a domain name server for Tru64 UNIX.

## SOURCE CODE INFORMATION

Source code is included for all the Internet Express open source software on the binary kit except for OpenSSL and Apache mod\_ssl sources, which are not included due to export restrictions.

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## 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 the physical memory and secondary storage available.

### Platforms and Processors Not Supported

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Internet Express does not support OpenVMS, Microsoft Windows, or any other hardware configurations outside of the Tru64 UNIX hardware configurations.

### Other Hardware Required

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You need a network card to access the Internet.

### Video Display Support

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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

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Internet Express requires a minimum of 128 MB of memory. Additional memory might also be required based on system loading.

### Disk Space Requirements

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Maximum required /usr file system disk space is approximately 500 MB for a full installation of all components.

**Note:** This count 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.

## SOFTWARE REQUIREMENTS

Internet Express requires Tru64 UNIX Version 5.0A or higher.

The Java Development Kit (JDK) V1.2.2 or higher is required for Tomcat, SOAP, and UDDI4J.

The Java Development Kit (JDK) V1.3.1 or higher is required for the LDAP Browser and the Internet Monitor.

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

For more information, see the *Installation Guide*, available on line in HTML, PDF, and PostScript formats.

## 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.

## SOFTWARE LICENSING

Only the Internet Express Administration utility, FireScreen, LDAP Module for System Authentication, and the Internet Monitor are furnished under a license from Compaq Computer Corporation, a subsidiary of Hewlett-Packard Company. Tru64 UNIX is licensed by Compaq Computer Corporation.

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## GROWTH CONSIDERATIONS

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

## DISTRIBUTION MEDIA AND DOCUMENTATION

Distribution media and documentation for Internet Express is 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.

## ORDERING INFORMATION

Internet Express is included with all AlphaServer systems that ship with the Tru64 UNIX operating system. Internet Express can also be purchased separately by ordering the following:

Software License/Media/Documentation: QB-3NCAA-SA

QB-3NCAA-SA contains the Internet Express License and Internet Express CD-ROMs, which contain the Internet Express software, sources, online documentation, and evaluation software.

## SOFTWARE PRODUCT SERVICES

The following services are available for Internet Express for Tru64 UNIX:

QT-3NCAA-XA – Package Services. (Includes new versions of the licensed software and an updated software license agreement for the new versions.)

QT-3NCAA-TA – New Version License Subscription Service. (Includes only an updated software license agreement for the new versions; however, this service does not include media and documentation.)

For more information on these services and how to obtain them, customers within the United States should call 1-800-COMPAQ. All others should contact their local Hewlett-Packard Sales Representative.

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