Secure Web Server

Secure Web Server Installation Guide

June 2004

Product Version:	Secure Web Server, Version 6.3
Operating System and Version:	Tru64 UNIXVersion 5.1A and later

This document installation information for the Secure Web Server (*Powered by Apache*).

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Installation Instructions

The Secure Web Server (SWS) is the primary infrastructure component for the World Wide Web on HP Tru64 UNIX operating system. Based on the popular open source Apache Web server software from the Apache Software Foundation, it provides all the software necessary to deploy and serve Web pages securely from your AlphaServer system on to a corporate intranet or the Internet.

This document provides installation instructions for the Secure Web Server software distributed on the Tru64 UNIX Associated Products CD–ROM. This chapter describes:

- Mounting the CD–ROM
- Locating the software subsets on the media
- Installing the Web server software and documentation from the CD–ROM
- The software subsets that make up SWS along with their installation dependencies
- The minimum hardware and software requirements for the installation
- Where to get additional information about using and administrating the Secure Web Server
- How to tune your Tru64 UNIX operating system to improve SWS performance

1.1 Installation Procedure Using setld

The Secure Web Server software is divided into software subsets installable on Tru64 UNIX using the software subset management utility `setld`. You can follow this `setld` installation procedure to install the software or use the `dusetup` installation tool provided on the Tru64 UNIX Associated Products CD–ROM to install the software.

Before installing the subsets using `setld`, you must determine if your AlphaServer system meets the minimum hardware and software requirements necessary to complete the install successfully. Table 1-1 lists the minimum requirements to verify on your system before proceeding with the installation.

Table 1-1: Minimum System Requirements

Name	Requirement
System Type	Alpha
Disk Space	88 MB for all subsets
Main Memory	128 MB recommended (or greater, depending on system load)
Swap Space	It is generally recommended that you create swap space equal to twice the size of physical memory
Operating System	Tru64 UNIX Version 5.1A or later
Network Transport Protocol	IPv4 (or IPv6 with Secure Web Server 2.0)

To proceed with the installation of the Secure Web Server, follow these steps:

_____ **Note** _____

If you obtained the kit by downloading it from the Internet, skip to step 4.

_____

1. Place the Tru64 UNIX Associated Products CD–ROM into your system's CD–ROM drive.

2. Log in as root at the console device or from a terminal emulator.

3. Mount the CD–ROM on the file system using the following command:

   ```
   $ /sbin/mount /dev/disk/cdrom0c  mount point [Associated
   Products CD-ROM]
   ```

   The Secure Web Server software is located in the *mount point*/Secure_Web_Server directory on the CD–ROM. To choose which subsets to install, refer to Section 1.2, which describes each subset in detail and their dependencies.

4. Once you have chosen the subsets you would like to install, use the setld command to display the installation menu by specifying the directory containing the SWS software on the CD–ROM on the command line:

   ```
   $ setld -l mount point/Secure_Web_Server/kit [Associated Products CD-ROM]
   ```

   ```
   $ setld -l kit [Internet Download Kit]
   ```

   The setld installation menu will display all the options available for installing the SWS software:

   ```
       The subsets listed below are optional:

           There may be more optional subsets than can be presented on a single
           screen. If this is the case, you can choose subsets screen by screen
   ```

```
                  or all at once on the last screen. All of the choices you make will
                  be collected for your confirmation before any subsets are installed.

       - Web Services :
                  1) Secure Web Server 1.3 powered by Apache 1.3
                  2) Secure Web Server 2.0 powered by Apache 2.0
                  3) Secure Web Server Administration Utility
                  4) Secure Web Server Documentation
                  5) Tomcat Java Servlet and JSP Engine v4.0.5

          Or you may choose one of the following options:

                  6) ALL of the above
                  7) CANCEL selections and redisplay menus
                  8) EXIT without installing any subsets

          Choices (for example, 1 2 4-6):
```

5. Choose from the options displayed in the menu to install the SWS
    software subsets you have selected from Section 1.2. After the `setld`
    installation has completed, you can access the SWS Public server
    instance using a Web browser by entering the following URL including
    the port number for the desired server:

    http://*hostname:port*

6. If you chose to install the SWS Administration server subset
    (`IAEADMxxx`), you can log on to the server using the password you
    entered during the subset installation by entering the following URL
    in a Web browser running on the local system:

    $ **http://*hostname*:8081**

    Note that for security reasons, initial access to this server is restricted
    to connections from Web browsers running on the same server as the
    administration server. Consult the *Secure Web Server Administration
    Guide* for information on changing the access controls.

For addition information on installing software using the `setld` command,
refer to `setld`(8).

1.2 Contents of the Subsets

On the Tru64 UNIX Associated Products CD–ROM, the contents of the
Secure Web Server software is organized as follows:

Directory	Contents
./kit	Contains subsets
./doc/html	Contains online copy of this document

Directory	Contents
`./doc/ps`	Contains a PostScript copy of this document and the *Secure Web Server Administration Guide*
`./doc/pdf`	Contains a PDF copy of this document and the *Secure Web Server Administration Guide*

The Secure Web Server software consists of the subsets described in Table 1-2.

Table 1-2: Subsets

Name	Description
IAEAPCH	Contains the core Secure Web Server 1.3 (powered by Apache 1.3) software. In addition to the Web Server binaries for the public and administration instances, this subset contains support for securing the transactions with these servers using OpenSSL. It also includes the Web server modules required for using PHP, FastCGI, and XML.
IAEHTTPD	Contains the core Secure Web Server 2.0 (powered by Apache 2.0) software. This subset contains support for securing the transactions with these servers using OpenSSL.Includes Web server modules required for using PHP and FastCGI.
IAETOMCAT	Contains the Tomcat Java Servlet and JavaServer Pages (JSP) engine from the Apache Jakarta Project. Tomcat requires that a Java Delevlopment enironment (Java JDK/SDK) 1.3.1 or later be installed.
IAEAPDOC	Installation of this subset is optional unless you choose to install the IAEAPAD subset. It contains the standard Apache 1.3 project documentation, as well as the *Secure Web Server Administration Guide*. This guide is provided in HTML and PostScript format. The HTML version can be accessed as a separate document or from the SWS Administration server Web pages as online help. This includes the standard mod_ssl documentation.
IAEAPAD	Installation of this subset is optional. It contains the Secure Web Server Administration server software. This software is supported by and allows you to administer the SWS public and administration server instances using a Web-based user interface. Installation of this subset is recommended, but not required.

The SWS software is installed under the directory `/usr/opt/IAEnnn/usr/internet` on the file system (where *nnn* represents the SWS software version number). Links to the installed software are placed in a directory hierarchy under the `/usr/internet` directory. The exceptions to this rule are the SWS public and administration Web server startup files and configuration files and the Secure Web Server 2.0. The Secure Web Server 2.0 is installed under `/usr/opt/hpapache2/`.

Startup files are installed in `/sbin/init.d` with links in `/sbin/rc3.d` to support boot time startup. The startup files and configuration files can be found in Table 1-3.

Table 1-3: Startup and Configuration Files

Software	Startup File	Configuration Directories
Secure Web Server 1.3	`httpd_public`	`/usr/internet/httpd/conf`
Secure Web Server 2.0	`hpapache2`	`/usr/opt/hpapache2/conf`
Administration Server	`httpd_admin`	`/usr/internet/httpd/ad-min/conf`
Tomcat	`tomcat`	`/usr/internet/httpd/tom-cat/conf`

The startup files listed in Table 1-3 are installed in `/sbin/init.d` with links in `/sbin/rc3.d` to support boot-time startup.

Customizations to the SWS 1.3 public servers `httpd.conf` are preserved during an update installation of the SWS software. The `httpd.conf` file in the conf subdirectory of the SWS 1.3 server root directory is retained and a link to the new `httpd.conf` file is created as `.httpd.conf.dist` in the same directory.

Customizations to the SWS 2.0 public servers `httpd.conf` file are also preserved during an update installation. The servers current `httpd.conf` file is retained and the new `httpd.conf` file is created as `httpd.conf.dist` in the same directory.

1.3 For Additional Information

If you chose to install the IAEAPAD*nnn* subset, the same documentation is accessible as online help from the SWS Administration Server Web pages.

The *Secure Web Server Administration Guide* and *Secure Web Server Installation Guide* can be found in the Tru64 UNIX Associated Products CD–ROM are in PostScript format under the `/Secure_Web_Server/doc/ps` directory and in PDF format under the `/Secure_Web_Server/doc/pdf` directory.

The Apache 1.3 documentation is installed under the directory `/usr/internet/httpd/apdocs`. The Apache 2.0 documentation is installed under the directory `/usr/opt/hpapache2/manual`. The Secure Web Server documentation is installed under the directory `/usr/internet/docs/IASS/swsadmin`.

You can also visit the Apache Software Foundation Web site, at the following URL:

```
http://httpd.apache.org/
```

For more information on the Tomcat servlet engine, see the following URL:

```
http://java.apache.org/
```

1.4 Tuning

Proper system tuning can have a significant impact on the performance of a system. For the latest Internet tuning recommendations, refer to *Tuning Tru64 UNIX for Internet Services* document, available at the following URL:

```
http://h30097.www3.hp.com/docs/internet/TITLE.HTM
```

1.4.1 Using the kerneltuner Script

A shell script called `kerneltuner` is installed in the bin subdirectory under the server root directory of the Secure Web Server. Run this utility as root to set the system tuning recommendations for Internet server performance. For example:

```
# su root
# cd /usr/opt/hpapache2/bin
# ./kerneltuner
```

Proper system tuning can have a significant impact on the performance of the Secure Web Server. The `kerneltuner` utility sets the primary tuning recommendations for Internet server performance as described in the *Tuning Tru64 UNIX for Internet Services* document.

Additional system performance tuning settings are also described in this document. Because Internet server configurations differ, a recommended setting may not provide optimal performance for all configurations. You should be careful when configuring system performance tuning settings.

It is not necessary to run the `kerneltuner` utility for each Secure Web Server you have installed. Run it once on each system, or TruCluster member, where the Secure Web Server software is installed.

It is necessary to reboot the system for all of the recommended primary tuning settings to take effect. You can reboot the system after running the kerneltuner utility, or you can wait for a more conveient time.

1.5 Internet Express

The Secure Web Server is also provided as part of the Internet Express product. Internet Express is a complete suite of popular Internet and

administration software that includes security products, mail servers, news and chat servers, an LDAP directory server, a choice of Web servers, and a variety of tools for providing dynamic Web content. The Internet Express product is updated frequently, and is available for an update subscription (part number QT-3NCAA-XA) to help administrators keep up with the rapidly changing Web technologies.

Later versions of the Secure Web Server may be available. Check the version supplied on the latest version of the Internet Express CD–ROM to determine if you have the latest software.