



# BEA WebLogic Enterprise Security™®

## Java Installation

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# Contents

## 1. Overview

About this Document . . . . .	1-2
Audience for This Guide. . . . .	1-2
Prerequisites for This Guide . . . . .	1-2
Product Documentation on the dev2dev Web Site . . . . .	1-3
Related Information . . . . .	1-3
Product Overview . . . . .	1-4
Security Environment . . . . .	1-4
Security Architecture Functional Description . . . . .	1-6
Security Service APIs . . . . .	1-7
Security Framework. . . . .	1-8
Security Providers . . . . .	1-8

## 2. Preparing to Install

Installation and Distribution. . . . .	2-1
Web Distribution. . . . .	2-2
CD-ROM Distribution . . . . .	2-2
Installation Prerequisites . . . . .	2-3
System Requirements . . . . .	2-3
Licensing . . . . .	2-4
Requirements for Reinstalling the SSM . . . . .	2-4
Selecting Directories for the Installation . . . . .	2-4

BEA Home Directory. . . . .	2-5
Product Installation Directory . . . . .	2-5

### 3. Installing

Before you Begin . . . . .	3-1
Generating a Verbose Installation Log. . . . .	3-2
Starting the Installation Program. . . . .	3-2
Starting the Installation Program on a Windows Platform . . . . .	3-4
Starting the Installation Program on a Sun Solaris Platform . . . . .	3-5
Starting the Installation Program on a Linux Platform . . . . .	3-7
Running the Installation Program . . . . .	3-8
What's Next. . . . .	3-11

### 4. Post Installation Tasks

Enrolling the Service Control Manager . . . . .	4-1
Configuring a Service Control Manager. . . . .	4-3
Configuring and Binding a Java Security Service Module. . . . .	4-3
Creating an Instance of the Java Security Service Module. . . . .	4-4
Enrolling the Instance of the Security Service Module. . . . .	4-5
Starting and Stopping Processes . . . . .	4-5
What's Next. . . . .	4-6

### 5. Uninstalling

Uninstalling the Java SSM on Windows. . . . .	5-2
Uninstalling the Java SSM on Solaris or Linux . . . . .	5-3
Uninstalling the SCM on Windows . . . . .	5-4
Additional Steps for Uninstalling the SCM on Windows . . . . .	5-5
Uninstalling the SCM on Solaris or Linux . . . . .	5-6

# Overview

This document provides security administrators with the information needed to install and configure the Java Security Service Module.

The document is organized as follows:

- Chapter 1 (this chapter) provides an introduction to the WebLogic Enterprise Security architecture.
- [Chapter 2, “Preparing to Install,”](#) discusses system requirements (software and hardware) that you need to ensure are met before installing the Java Security Service Module.
- [Chapter 3, “Installing,”](#) describes how to install and uninstall the Java Security Service Module.
- [Chapter 4, “Post Installation Tasks,”](#) describes the tasks that must be performed after you install the Java Security Service Module.
- [Chapter 5, “Uninstalling,”](#) describes how to uninstall the Java Security Service Module software.

This section covers the following topics:

- [“About this Document” on page 1-2](#)
- [“Product Overview” on page 1-4](#)

## About this Document

This document provides security administrators with the information needed to install the BEA® WebLogic® Enterprise Security Java Security Service Module.

This section covers the following topics:

- [“Audience for This Guide” on page 1-2](#)
- [“Prerequisites for This Guide” on page 1-2](#)
- [“Product Documentation on the dev2dev Web Site” on page 1-3](#)
- [“Related Information” on page 1-3](#)

## Audience for This Guide

It is assumed that readers understand web technologies and have a general understanding of the Microsoft Windows or UNIX operating systems being used. The general audience for this installation guide includes:

- **Security Administrators**—Administrators who are responsible for installing and configuring the Java Security Service Module and designing policy, and who work with other administrators to implement and maintain security configurations, authentication and authorization schemes, and to set up and maintain access to deployed application resources. Application Administrators have a general knowledge of security concepts and the Java security architecture. They understand Java, XML, deployment descriptors, and can identify security events in server and audit logs
- **Application Developers**—Developers who focus on designing applications and work with other engineers, quality assurance (QA) technicians, and database teams to implement applications.

## Prerequisites for This Guide

Prior to reading this guide, you should read the [Introduction to BEA WebLogic Enterprise Security](#). This document describes how the product works and provides conceptual information that is helpful to understanding the necessary installation components.

Additionally, BEA WebLogic Enterprise Security includes many unique terms and concepts that you need to understand. These terms and concepts—which you will encounter throughout the documentation—are defined in the [Glossary](#).

## Product Documentation on the dev2dev Web Site

BEA product documentation, along with other information about BEA software, is available from the BEA dev2dev web site:

<http://dev2dev.bea.com>

To view the documentation for a particular product, select that product from the Product Centers menu on the left side of the screen on the dev2dev page. Select More Product Centers. From the BEA Products list, choose WebLogic Enterprise Security 4.2. The home page for this product is displayed. From the Resources menu, choose Documentation 4.2. The home page for the complete documentation set for the product and release you have selected is displayed.

## Related Information

The BEA corporate web site provides all documentation for BEA WebLogic Enterprise Security. Other BEA WebLogic Enterprise Security documents that may be of interest to the reader include:

- *[Introduction to BEA WebLogic Enterprise Security](#)*—This document provides overview, conceptual, and architectural information for the Java Security Service Module products.
- *[BEA WebLogic Enterprise Security Administration Guide](#)*—This document provides a complete overview of the product and includes step-by-step instructions on how to perform various administrative tasks.
- *[BEA WebLogic Enterprise Security Policy Managers Guide](#)*—This document defines the policy model used by BEA WebLogic Enterprise Security, and describes how to generate, import and export policy data.
- *[Programming Security for Java Applications](#)*—This document describes how to implement security in Java applications. It includes descriptions of the security service Application Programming Interfaces and programming instructions.
- *[Developing Security Providers for BEA WebLogic Enterprise Security](#)*—This document provides security vendors and security and application developers with the information needed to develop custom security providers.
- *[Javadocs for Java API](#)*—This document provides reference documentation for the Java Application Programming Interfaces that are provided with and supported by this release of BEA WebLogic Enterprise Security.

- *Javadocs for Security Service Provider Interfaces*—This document provides reference documentation for the Security Service Provider Interfaces that are provided with and supported by this release of BEA WebLogic Enterprise Security.

## Product Overview

The Java Security Service Module provides an application programming interface (API) that allows security developers to insert security into their applications. These interfaces support the most commonly required security functions and are organized into services that are logically grouped by functionality. After you use the Java Security Service Module interfaces to implement security functions in your Java application, you can deploy and run your application on any instance of a Java Security Service Module that supports the configuration requirements of your application.

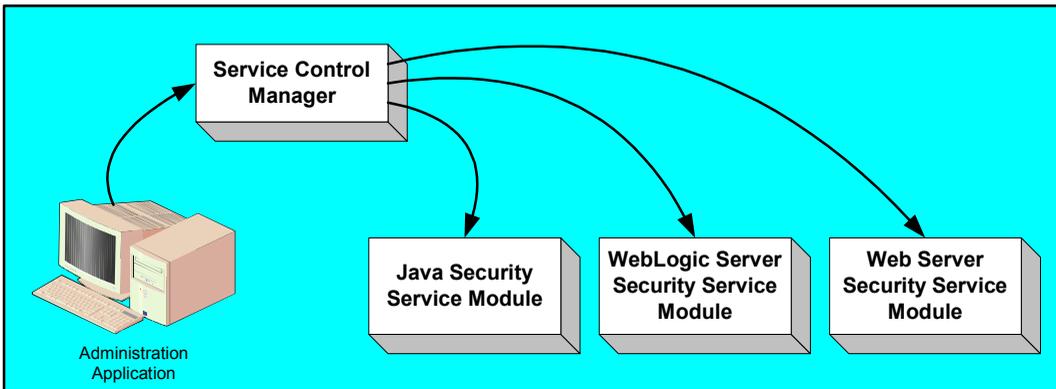
This section provides the following topics:

- “Security Environment” on page 1-4
- “Security Architecture Functional Description” on page 1-6

## Security Environment

Figure 1-1 shows the major components that make up the BEA WebLogic Enterprise Security environment.

**Figure 1-1 WebLogic Enterprise Security Environment**



- Administration Application

The Administration Application allows you to manage and configure multiple Security Service Modules. While Security Service Modules specify and consume configuration data and then services security requests accordingly, the Administration Application allows you to configure and display the security providers that are deployed in the Security Service Modules, and to modify the configuration data for those providers.

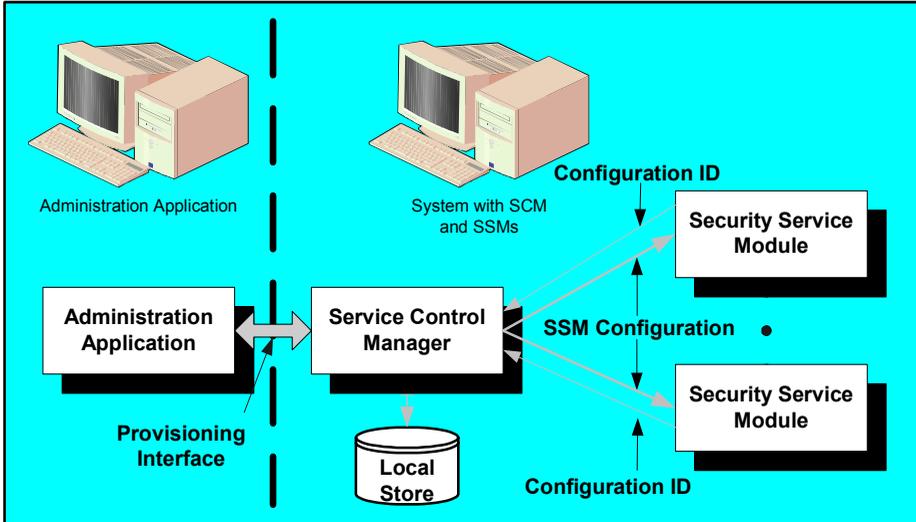
- Service Control Manager

The Service Control Manager is an essential component of the BEA WebLogic Enterprise Security configuration provisioning mechanism and a key component of a fully-distributed security enforcement architecture. A Service Control Manager is a machine agent that exposes a provisioning interface to the administration application to facilitate the management of a potentially large number of distributed Security Service Modules. A Service Control Manager can receive and store meta-data updates, both full and incremental, initiated by the Administration Application.

The Administration Application uses the provisioning mechanism to distribute configuration and policy data to each Security Service Module where it is consumed locally (see [Figure 1-2](#)). Security Service Modules (which can be distributed throughout an enterprise) can be embedded in Java applications, application servers, and web servers.

After you use the Administration Application to configure an instance of a Security Service Module with configuration and policy data, the Security Service Module does not require any additional communication with the Service Control Manager to perform security functions. However, the Service Control Manager maintains communication with the Security Service Module to distribute full and incremental updates.

Figure 1-2 Deploying Configuration and Policy Data



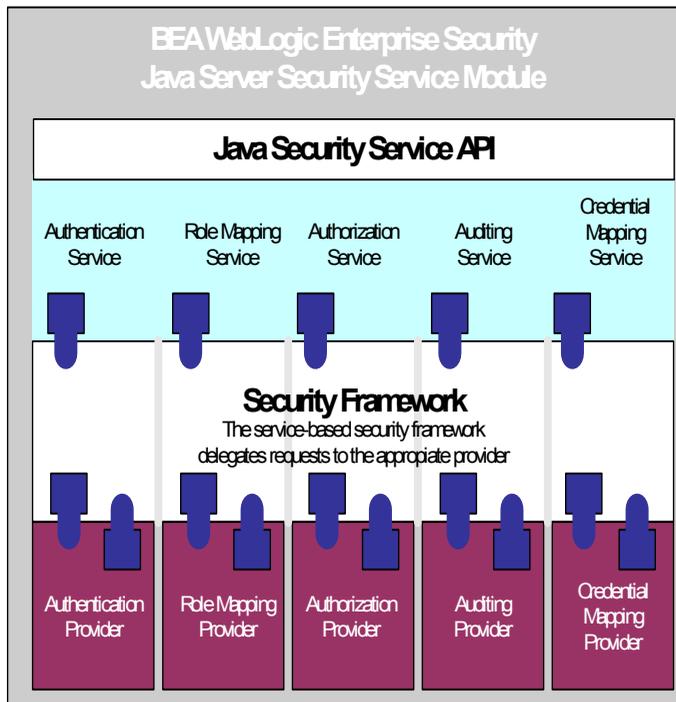
## Security Architecture Functional Description

Figure 1-3 shows the major components of the BEA WebLogic Enterprise security architecture. The Java Security Service Module comprises the Security Services APIs, the security framework, and the security providers.

The following topics describe these components:

- “Security Service APIs” on page 1-7
- “Security Framework” on page 1-8
- “Security Providers” on page 1-8

Figure 1-3 Architectural Components



## Security Service APIs

The Java Security Service Module supports the following security service application programming interfaces (APIs):

- Authentication Service API
- Role Mapping Service API
- Authorization Service API
- Auditing Service API
- Credential Mapping Service API

For descriptions of these APIs, see [Java Security Service Module APIs](#) in *Programming Security for Java Applications*. For Javadoc for these APIs, see *Javadocs for Java Applications*.

## Security Framework

The primary function of the Security Framework is to provide an application programming interface (API) that security and application developers can use to implement security functions in Java applications. Within that context, the Security Framework also acts as an intermediary between security functions that you implement using the configuration tools and the security providers that are configured into the Security Service Module.

## Security Providers

When you install the Administration Application or a Security Service Module, a JAR file is deployed that contains all the security providers that ship with the product. However, before any of the security providers can be used, you must configure them through the Administration Application. You have the option of configuring either the security providers that ship with the product or custom security providers, that you develop or purchase from third-party security vendors.

**Note:** To use custom security providers with a Security Service Module, you must deploy the security providers MBean JAR file (MJF) to both the providers directory on the machine on which you install the Security Service Module product and on the Administration Server.

The Administration Application supports the following types of security providers:

- Authentication provider
- Identity Assertion provider
- Principal Validation provider
- Credential Mapping provider
- Role Mapping provider
- Authorization provider
- Auditing provider

For more information on security providers, see [Introduction to BEA WebLogic Enterprise Security](#).

For more information on how to develop custom security providers, see [Developing Security Providers for BEA WebLogic Enterprise Security](#).

# Preparing to Install

This section provides the information needed to install the BEA WebLogic Enterprise Security Java Security Service Module, including system requirements and prerequisite software and hardware. It does not include information for installing the BEA WebLogic Enterprise Security Administration Application or other Security Service Modules.

This section covers the following topics:

- [“Installation and Distribution” on page 2-1](#)
- [“Installation Prerequisites” on page 2-3](#)
- [“Selecting Directories for the Installation” on page 2-4](#)

## Installation and Distribution

BEA WebLogic Enterprise Security products are distributed and installed using the BEA Installation and Distribution System, which provides a complete framework for the following:

- Distribution of BEA products by download from the BEA web site
- Installation and uninstallation of the Java Security Service Module including documentation

BEA WebLogic Enterprise Security is distributed on both the BEA web site and on CD-ROM.

## Web Distribution

If you want to install the product by downloading it from the BEA web site, contact BEA Sales at <http://www.bea.com/framework.jsp?CNT=sales1.htm&FP=/content/about/contact/> and request a download.

The package installer downloads a stand-alone version of the installation program that contains the complete Java Security Service Module. The package installer is approximately 55 MB.

Documentation is available from the product documentation home page. Be sure to download the most up-to-date information from the BEA web site at:

<http://e-docs.bea.com/wles/docs42/download.html>.

## CD-ROM Distribution

If you purchased BEA WebLogic Enterprise Security from your local sales representative, you will find the following items in the product box:

Four CD-ROMs:

- Disk 1 of 4 contains the following BEA WebLogic Enterprise Security products:
  - Administration Application software for Microsoft Windows platforms
  - Security Service Modules software for Microsoft Windows platforms
  - Documentation in both PDF and HTML format
- Disk 2 of 4 contains the following BEA WebLogic Enterprise Security products:
  - Administration Application software for Linux and Sun Solaris
  - Security Service Modules software for Linux and Sun Solaris
- Disk 3 of 4 contains the BEA WebLogic Enterprise Security metadirectory software for Microsoft Windows platforms. This product is used with the Administration Application to integrate user repositories.
- Disk 4 of 4 contains the BEA WebLogic Enterprise Security metadirectory software for Linux and Sun Solaris platforms.

## Installation Prerequisites

The Java Security Service Module requires certain software components to operate properly. Review these requirements before installing the product. For additional information on the BEA WebLogic Enterprise Security products, see: <http://www.bea.com/wles>.

- “System Requirements” on page 2-3
- “Licensing” on page 2-4
- “Requirements for Reinstalling the SSM” on page 2-4

## System Requirements

Table 2-1 lists the system requirements for the machine on which you install the Java Security Service Module.

**Note:** The machine on which you install the Java Security Service Module must have a static IP address. The IP address is used by the Security Service Module and Service Control Manager for connectivity. Also, on a Windows platform, the file system used must be NTFS, not FAT. To check the file system format, open Windows Explorer and right-click the hard drive on which you intend to do the installation and select *Properties*.

**Table 2-1 System Requirements**

Use	Component and Version
Platforms supported	<p>The Java Security Service Module runs on any of the following platforms:</p> <ul style="list-style-type: none"> <li>• Intel Pentium compatible with Microsoft Windows NT 4.0</li> <li>• Intel Pentium compatible with Microsoft Windows 2000 Professional</li> <li>• Intel Pentium compatible with Microsoft Windows 2000 Server/Advanced Server</li> <li>• SUN Microsystems Sparc with Solaris, versions 8 and 9</li> <li>• Linux Red Hat Advanced Server 3.0 (Update 4)</li> </ul>
BEA WebLogic Enterprise Security Administration Application	You must install the Administration Application before you install the Java Security Service Module software.

**Table 2-1 System Requirements (Continued)**

Use	Component and Version
Memory	With the Sun Java SDK—64 MB of RAM minimum per Security Service Module instance; 256 MB or more is recommended for each instance.
Hard Disk Space	For installation on Windows systems—About 100 MB of free storage space is required for the installed product and about 100 MB of temporary storage space is required by the installer.  For installation on Unix systems—About 100 MB of free storage space is required for the installed product and about 100 MB of temporary storage space is required by the installer.

## Licensing

The product software cannot be used without a valid license. When you install the Java Security Service Module product, the installation program creates an evaluation license. The evaluation license expires in 90 days.

To use the Java Security Service Module product in a production environment, you must purchase a license. For information about purchasing a license, contact your BEA Sales Representative.

## Requirements for Reinstalling the SSM

If you are installing the security Service Module on a computer on which a WebLogic Enterprise Security SSM was previously installed, refer to [“Uninstalling” on page 5-1](#) and make sure all of the uninstall steps were completed; otherwise the installation may fail.

## Selecting Directories for the Installation

During installation, you need to specify locations for the following directories:

- [“BEA Home Directory” on page 2-5](#)
- [“Product Installation Directory” on page 2-5](#)

## BEA Home Directory

During installation, you are prompted to choose an existing BEA Home (`BEA_HOME`) directory. The BEA Home directory is a repository for common files that are used by multiple BEA products installed on the same machine. For this reason, the BEA Home directory can be considered a "central support directory" for the BEA products installed on your system.

The files in the BEA Home directory are essential to ensuring that BEA software operates correctly on your system. They perform the following types of functions:

- Ensure that licensing works correctly for the installed BEA products
- Facilitate checking of cross-product dependencies during installation

The files and directories in the BEA Home (`BEA_HOME`) directory are described in your WebLogic documentation. Although it is possible to create more than one BEA Home directory, BEA recommends that you avoid doing so. In almost all situations, a single BEA Home directory is sufficient. There may be circumstances, however, in which you prefer to maintain separate development and production environments on a single machine, each containing a separate product stack. With two directories, you can update your development environment (in a BEA Home directory) without modifying the production environment until you are ready to do so.

## Product Installation Directory

The product installation directory contains all the software components used to administer BEA WebLogic Enterprise Security. During installation, you are prompted to choose a product installation directory. If you accept the default, the software is installed in the following directory:

```
c:\bea\wles42-ssm\java-ssm (Windows)
```

```
/opt/bea/wles42-ssm/java-ssm (Sun Solaris and Linux)
```

where `c:\bea` is the `BEA_HOME` directory and `wles42-ssm\java-ssm` is the product installation directory. You can specify any name and location on your system for your product installation directory and there is no requirement that you name the directory `wles42-ssm\java-ssm` or create it under the BEA Home directory.

## Preparing to Install

# Installing

The following sections provide the information you need to install and uninstall the Java Security Service Module:

**Note:** For installation information on other security service modules, see the associated installation guides.

- “Before you Begin” on page 3-1
- “Starting the Installation Program” on page 3-2
- “Running the Installation Program” on page 3-8
- “What’s Next” on page 3-11

## Before you Begin

Before you begin this installation procedure, make sure you have done the following:

**Note:** If you start the installation process from the command line or from a script, you can specify the `-log` option to generate a verbose installation log. For instructions on how to generate a verbose log file during installation, see “[Generating a Verbose Installation Log](#)” on page 3-2.

- Download and read the Release Notes:  
<http://e-docs.bea.com/wles/docs42/relnotes/download.html>
- Install the Administration Application and related components.
- Ensure the system requirements are met as described in “[Preparing to Install](#)” on page 2-1.

## Generating a Verbose Installation Log

If you start the installation process from the command line or from a script, you can specify the `-log` option to generate a verbose installation log. The installation log lists messages about events during the installation process, including informational, warning, error, and fatal messages. This can be especially useful for silent installations.

**Note:** You may see some warning messages during in the installation log. However, unless there is a fatal error, the installation program will complete the installation successfully. The installation user interface will indicate the success or failure of the installation, and the installation log file will include an entry indicating that the installation was successful.

To create a verbose log file during installation, include the `-log=/full_path_to_log_file` option in the command line or script. For example:

For Windows:

```
wles422ssm_win32.exe -log=D:\logs\wles_install.log
```

For Sun Solaris:

```
wles422ssm_solaris32.bin -log=/opt/logs/wles_install.log
```

For Linux:

```
wles422ssm_linux32.bin -log=/opt/logs/wles_install.log
```

The path must be the full path to a file name. If the file does not exist, all folders in the path must exist before you execute the command or the installation program will not create the log file.

## Starting the Installation Program

The procedure for starting the installation program varies depending the platform on which install BEA WebLogic Enterprise Security. Therefore, separate instructions are provide for each supported platform.

**Note:** In a production environment, BEA recommends that you install the Security Service Modules on machines other than the machine on which the Administration Server is installed.

To start the installation program, refer to the appropriate section listed below:

- [“Starting the Installation Program on a Windows Platform” on page 3-4](#)
- [“Starting the Installation Program on a Sun Solaris Platform” on page 3-5](#)

- [“Starting the Installation Program on a Linux Platform”](#) on page 3-7

## Starting the Installation Program on a Windows Platform

**Note:** Do *not* install the software from a network drive. Download the software distribution to a local drive on your machine and install it from there. Also, on a Windows platform, the file system used must be NTFS, not FAT. To check the file system format, open Windows Explorer and right-click the hard drive on which you intend to do the installation and select `Properties`.

To install the application in a Microsoft Windows environment:

1. Shut down any programs that are running.
2. Log in to the local Administrators group.
3. If you are installing from a CD-ROM, go to step 4. If you want to install the product by downloading it from the BEA web site:
  - a. Contact BEA Sales at <http://www.bea.com/framework.jsp?CNT=sales1.htm&FP=/content/about/contact/> and request a download.
  - b. Go to the directory where you downloaded the installation file and double-click `wles422ssm_win32.exe`.  
The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).
  - c. Proceed to “[Running the Installation Program](#)” on page 3-8
4. If you are installing from a CD-ROM:
  - a. Insert Disk 1 into the CD-ROM drive.  
If the installation program does not start automatically, open Windows Explorer and double-click the CD-ROM icon.
  - b. From the installation CD, double-click `wles422ssm_win32.exe`.  
The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).
  - c. Proceed to “[Running the Installation Program](#)” on page 3-8.

**Figure 3-1 WebLogic Enterprise Security Java Security Service Module Installer**



## Starting the Installation Program on a Sun Solaris Platform

To run graphical-mode installation, your console must support a Java-based GUI. If the installation program determines that your system cannot support a Java-based GUI, the installation program automatically starts in console-mode.

To install the application in a Sun Solaris environment:

1. Shut down any programs that are running.
2. Log in to the machine as root (or su root).
3. Open a command-line shell.
4. If you are installing from a CD-ROM, go to step 5. If you want to install the product by downloading it from the BEA web site:

## Installing

- a. Contact BEA Sales at <http://www.bea.com/framework.jsp?CNT=sales1.htm&FP=/content/about/contact/> and request a download.
- b. Go to the directory where you downloaded the file and change the protection on the install file:

```
chmod u+x wles422ssm_solaris32.bin
```

- c. Start the installation: `wles422ssm_solaris32.bin`

The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).

- d. Proceed to [“Running the Installation Program” on page 3-8](#).

5. If you are installing from a CD-ROM:

- a. Insert the Disk 1 into the CD-ROM drive.
- b. Start the installation: `wles422ssm_solaris32.bin`

The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).

- c. Proceed to [“Running the Installation Program” on page 3-8](#).

## Starting the Installation Program on a Linux Platform

To run graphical-mode installation, your console must support a Java-based GUI. If the installation program determines that your system cannot support a Java-based GUI, the installation program automatically starts in console-mode.

To install the application in a Linux environment:

1. Shut down any programs that are running.
2. Log in to the machine as root (or su root).
3. Set your `DISPLAY` variable if needed.
4. Open a command-line shell.
5. If you are installing from a CD-ROM, go to step 6. If you want to install the product by downloading it from the BEA web site:
  - a. Contact BEA Sales at <http://www.bea.com/framework.jsp?CNT=sales1.htm&FP=/content/about/contact/> and request a download.
  - b. Go to the directory where you downloaded the file and change the protection on the install file:

```
chmod u+x wles422ssm_linux32.bin
```
  - c. Start the installation: `wles422ssm_linux32.bin`

The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).
  - d. Proceed to [“Running the Installation Program” on page 3-8](#).
6. If you are installing from a CD-ROM:
  - a. Insert the Disk 1 into the CD-ROM drive.
  - b. Start the installation: `wles422ssm_linux32.bin`

The BEA Installer - Security Service Module for Java window appears (see [Figure 3-1](#)).
  - c. Proceed to [“Running the Installation Program” on page 3-8](#).

## Running the Installation Program

The installation program prompts you to enter specific information about your system and configuration, as described in [Table 3-1](#). To complete this procedure you need the following information:

- Name of the `BEA_HOME` directory
- Name of the product directory

**Note:** If this is the first WebLogic Enterprise Security product you have installed on this machine, the Service Control Manager is also installed (which requires additional inputs such as the Service Control Manager directory).

**Table 3-1** Running the Installation Program

In this Window:	Perform this Action:
Welcome	Click Next to proceed or cancel the installation at any time by clicking Exit.
BEA License Agreement	Read the BEA Software License Agreement, and then select Yes to indicate your acceptance of the terms of the agreement. To continue with the installation, you must accept the terms of the license agreement, click Yes, and then click Next.
Choose BEA Home Directory	Specify the BEA Home directory that serves as the central support directory for all BEA products installed on the target system. If you already have a BEA Home directory on your system, you can select that directory (recommended) or create a new BEA Home directory. If you choose to create a new directory, the installer program automatically creates the directory for you. For details about the BEA Home directory, see <a href="#">“BEA Home Directory” on page 2-5</a> .
Choose product to install	Select the Java SSM product and click Next.

**Table 3-1 Running the Installation Program (Continued)**

<b>In this Window:</b>	<b>Perform this Action:</b>
Choose Product Directory	<p data-bbox="462 388 1174 505">Specify the directory in which you want to install the product software, and then click Next. You can accept the default product directory (C:\bea\w1es42-ssm\java-ssm) or you can create a new product directory.</p> <p data-bbox="462 527 1174 670"><b>Note:</b> You only need to install the JAVA Security Service Module once per machine. Many Java instances can be created using the same Java Security Service Module install. Refer to the Java Instance Wizard information on how to create a Java Security Service Module instance.</p> <p data-bbox="462 687 1174 743">For additional information and a description of the resulting directory structure, see <a href="#">“Product Installation Directory”</a> on page 2-5.</p> <p data-bbox="462 756 1174 812">If you choose to create a new directory, the installation program automatically creates the directory for you.</p>
Choose Service Control Manager Directory	<p data-bbox="462 835 1174 921">Specify the directory in which to install the Service Control Manager. You can accept the default directory (w1es42-ssm) or you can create a new one.</p> <p data-bbox="462 939 686 965">Click Next to continue.</p> <p data-bbox="462 982 1174 1038"><b>Note:</b> This step is required only if you are installing on a machine that does not already have an Security Control Manager installed.</p>

**Table 3-1 Running the Installation Program (Continued)**

In this Window:	Perform this Action:
Select Users and Groups	<p>Specify the user names and group names to use for the Service Control Manager and Administration Application. You can accept the default settings or create a new ones.</p> <p><b>Note:</b> When installing this product for use in a production environment, BEA recommends that you set these passwords to known values; otherwise you will not be able to modify them later. For example, you may want to modify these passwords to comply with organizational requirements.</p> <p><b>Admin User</b> (<i>asiadmin</i>)—A local user account used to start the Administration Application components.</p> <p><b>Admin Group</b> (<i>asiadgrp</i>)—Administration Application group. Members of this group have full access to the Administration Application and log files; they can start and stop the Administration Application components.</p> <p><b>SCM User</b> (<i>scmuser</i>)—A local user account used to start the Service Control Manager.</p> <p><b>Security Group</b> (<i>asiusers</i>)—Service Control Manager Group. Members of this group are allowed to use the WebLogic Enterprise Security products.</p> <p>Click Next to continue.</p>
Confirm User Selection	<p>If the name of the user and group do not exist, they are created for you. Verify the values you entered are correct, and then click Next to continue.</p>
User Passwords (Windows only)	<p>Specify the password for the Administration Application User and Service Control Manager User. You can also choose the default passwords that are randomly generated.</p> <p><b>Note:</b> If any of the users exist you must enter their passwords; the passwords are not generated randomly. Passwords are case sensitive. If you are installing the Administration Application in a production environment, BEA recommends using secure user names and passwords, and not the user names that are randomly generated.</p> <p>Click Next to continue.</p>

**Table 3-1 Running the Installation Program (Continued)**

<b>In this Window:</b>	<b>Perform this Action:</b>
Choose Network Interfaces	<p>Select the network interfaces to which to bind the Service Control Manager. This is the IP Address used to listen for requests to provision policy and configuration data.</p> <p><b>Note:</b> If you are installing the product in a production environment with more than one network card, you want to select a protected (internal) interface; you do not want to expose the Service Control Manager through a public address.</p> <p>Click Next to continue.</p>
Configure Enterprise Domain for Service Control Manager (This step is required only if you are installing on a machine that does not already have an Security Control Manager installed.)	<p><b>Enterprise Domain Name</b>—The enterprise domain name is used to link all of the WebLogic Enterprise Security components.</p> <p><b>Note:</b> This is same enterprise domain name that you entered when you installed the BEA WebLogic Enterprise Security Administration Application.</p> <p><b>SCM Logical Name</b>—The name you assign to the Service Control Manager during this installation.</p> <p><b>SCM Port</b>—Port used by the Service Control Manager to receive configuration and policy data from the Administration Application; this port may not be used by any other server.</p> <p><b>Primary Server URL</b>—The address used by your Administration Application.</p> <p><b>Backup Server URL</b>—If you have a second Administration Application installed for the purpose of failover or backup, enter its address here. This is optional and may be left blank.</p>
Installation Complete	Indicates that the installation completed successfully. Click Done to finish the installation.

## What's Next

Now that you have installed the necessary software, you must enroll and configure the Service Control Manager, create an instance of the Security Service Module and enroll the instance, and start the services. For additional instructions, see [“Post Installation Tasks” on page 4-1](#).

## Installing

# Post Installation Tasks

This section covers tasks that you must perform after completing the installation.

**Note:** Some of the procedures described here require basic knowledge of WebLogic Enterprise Security products. If you need assistance with any task, see the Administration Console online help or the *Administration Application Guide* for more details. It is assumed that you know the location of the products you have installed, including the Security Service Module and the Administration Server.

- [“Enrolling the Service Control Manager” on page 4-1](#)
- [“Configuring a Service Control Manager” on page 4-3](#)
- [“Configuring and Binding a Java Security Service Module” on page 4-3](#)
- [“Creating an Instance of the Java Security Service Module” on page 4-4](#)
- [“Enrolling the Instance of the Security Service Module” on page 4-5](#)
- [“Starting and Stopping Processes” on page 4-5](#)
- [“What’s Next” on page 4-6](#)

## Enrolling the Service Control Manager

This section describes how to enroll the Service Control Manager. Each machine on which you install a Security Service Module must have one (and only one) enrolled Service Control Manager. You only need to follow this procedure if you installed the Security Service Module on a machine other than the one that contains the Administration Application.

**Note:** While you can use the demonstration digital certificate in a development environment, you should never use it in a production environment.

To configure enrollment in demo mode, perform the following steps:

1. Open a command window and go to `BEA_HOME/wles42-scm/bin`.

2. Run the following script:

```
enrolltool demo
```

The Enrollment menu appears.

3. Type: 5 and press <ENTER>, and do one of the following:

- If the domain you to which you want to enroll the SSM is listed, go to step 4.
- If the domain you want to use is not listed, type: 3, press <ENTER> to register the domain, enter the following information, Type: 5 and press <ENTER> again:

```
Enter Enterprise Domain Name :> (For example: asi)
Enter Primary Admin URL :> (For example:
https://adminmachine:7010/asi)
Secondary Admin URL :> (This value is optional. Same format as primary
URL)
SCM name :> (For example: ssmmachinename_ssm)
SCM port :> (Default: 7010)
```

4. Select the domain you want to use and press <ENTER>.

5. Enter the admin username and password. This is the username and password of the security administrator that is enrolling the SCM.

6. Enter and confirm the following passwords:

- **Private key password**—Protects the identity of the Service Control Manager you are creating
- **identity.jks password**—Protects the `ssl\identity.jks` keystore. This keystore contains the identities for all the components you are enrolling.
- **peer.jks password**—Protects the `ssl\peer.jks` keystore. This keystore contains the certificates of components with which this Security Service Module can communicate.
- **trust.jks password**—Protects the `ssl\trust.jks` keystore. This keystore contains the WebLogic Enterprise Security CA certificate used for enrollment.

## Configuring a Service Control Manager

You configure a Service Control Manager (SCM) for each of the machines on which you have installed one or more Security Service Modules (SSM). Each machine must have one (and only one) configured Service Control Manager. For example, if you install an SSM on the same machine as the Administration Application, you must use the `adminconfig` SCM, which was configured for you when you installed the Administration Application.

**Note:** When you use the Instance Wizard to create an instance of a SSM on a machine, you link the instance to a SCM by name. When you install multiple SSMs of different types (Web Server or Web Services, WebLogic Server 8.1, and Java) on the same machine, they all must use the same SCM.

To configure a SCM, see the Administration Application Console Help and use the WebLogic Enterprise Security Administration Console.

The instructions for performing this task are also available in "[Configuring a Service Control Manager](#)" in the *BEA WebLogic Enterprise Administration Application Guide*.

## Configuring and Binding a Java Security Service Module

Configure a SSM with the security providers that you require for the Java SSM and bind it to the SCM. You have the option of configuring either the default security providers that ship with the product or custom security providers, which you develop or purchase from third-party security vendors. The Java Security Service Module supports the following types of security providers:

- Authentication provider
- Authorization provider
- Auditing provider
- Credential mapping provider
- Identity asserter
- Principal validator
- Role mapping provider

To configure these providers and bind the configuration to the SCM, perform the following steps:

1. In the Administration Console, expand the Security Configuration node in the left pane, and click Unbound Configurations. The Unbound Security Service Module Configurations page displays.

2. Click Create a New Security Service Module Configuration. The Edit Security Service Module Configuration page displays.
3. In the Configuration ID text box, enter an identity for the SSM (for example, `java_ssm`) and click Create.  
**Note:** Later, when you use the Instance Wizard to create an instance of the SSM to which this security configuration will be applied, you will use the Configuration ID to link the SSM instance to this security configuration.
4. Click the Providers tab and create the desired providers.
5. Click on the SCM that you previously configured for this SSM. The Edit a Service Control Manager Configuration page displays.
6. Click on the Binding tab and bind the Java SSM configuration to the SCM.

## Creating an Instance of the Java Security Service Module

Before starting a Java Security Service Module (SSM), you must create a named instance of the SSM using the Instance Wizard.

To create an instance of the Java Security Service Module:

1. Start the Java Instance Wizard:
  - On Windows, click Start>Programs>BEA WebLogic Enterprise Security>Java Security Service Module>Create New Instance.
  - On Unix: If you are using X-windows enter: `instancewizard.sh`  
**Note:** If you are not using X-windows, use a console based installer.
2. In the Instance Name text box, enter the name to assign to this instance. The name must be unique for SSMs on this machine.
3. In the Authorization Engine Port text box, enter the port number for the Authorization and Role Mapping engine to use.
4. In the Configuration ID text box, enter the configuration identifier to use with this SSM instance.
5. From the Enterprise Domain drop-down box, select the domain to which the instance belongs.
6. Click Next.
7. In the Location of the Instance text box, enter the location for this instance. The default instance is located within the installation directory of the Security Service Module.

8. Click Next.
9. Click Done when the instance wizard completes.

## Enrolling the Instance of the Security Service Module

You must have the Administration Application services running prior to enrolling the Security Service Module.

**Note:** While you can use the demonstration digital certificate in a development environment, you should never use it in a production environment.

To enroll the Security Service Module:

1. Open a command window and go to the Security Service Module instance `/adm` directory: `BEA_HOME/wles42-ssm/java-ssm/instance/instancename/adm`, where *instancename* is the name you assigned to the instance when you created it.
2. Run the following script:
 

```
enroll demo
```
3. Enter the `admin` username and password. This is the username and password of the Security Administrator doing the enrollment.
4. Enter and confirm the following passwords:
  - **Private key password**—This password protects the identity of the Security Service Module that you are creating.
  - **identity.jks password**—This password protects the `ssl\identity.jks` keystore. This keystore contains the identities for all the components you are enrolling.
  - **peer.jks password**—This password protects the `ssl\peer.jks` keystore. This keystore contains the certificates of components with which this Security Service Module can communicate.
  - **trust.jks password**—This password protects the `ssl\trust.jks` keystore. This keystore contains the WebLogic Enterprise Security CA certificate used for enrollment.

## Starting and Stopping Processes

After you install the Security Service Module, create the instance, and enroll it, you must start the necessary processes by running the appropriate batch or shell scripts. Before you start these processes, make sure that the Administration Server and all of its services are running.

For each machine, you must start the following processes:

- One Service Control Manager
- One Authorization and Role Mapping Engine (ARME) for each Security Service Module instance.

For instructions on how to start and stop the required processes, see "[Starting and Stopping Processes for Security Service Modules](#)" in the *Administration Application Guide*.

## What's Next

You have completed the installation and configuration of the Java Security Service Module. Your Security Administrator can now configure your security services using the security providers for your Security Service Module, through the Administration Console.

Before you begin to configure security services, you should read the information on security configuration and administration in the Administration Console online help or in the *Administration Application Guide*. Descriptions of how to configure the Service Control Manager, the Security Service Module, and the providers, and then deploy your changes are provided there.

# Uninstalling

The following sections describe how to uninstall the Java Security Service Module (SSM) and the Service Control Manager (SCM):

- [“Uninstalling the Java SSM on Windows”](#) on page 5-2
- [“Uninstalling the Java SSM on Solaris or Linux”](#) on page 5-3
- [“Uninstalling the SCM on Windows”](#) on page 5-4
- [“Uninstalling the SCM on Solaris or Linux”](#) on page 5-6

## Uninstalling the Java SSM on Windows

To uninstall the Security Service Module from a Windows platform, do the following:

1. Log in to the machine as Administrator.
2. Stop the Authorization and Role Mapping Engine (ARME) for the Security Service Module that you are uninstalling: `ARME.admin.hostname`.
3. Stop the Service Control Manager (SCM).
4. Click Start, select Programs>BEA WebLogic Enterprise Security>Security Service Module>Uninstall Combo Security Service Manager.

The Uninstall Welcome window appears.

5. Click Next.

The Choose Components window appears.

6. Select the WLES SSMs to uninstall and click Next.

The BEA Uninstaller window appears and the uninstall process begins.

**Note:** When you uninstall a Security Service Module, if it is the only remaining WebLogic Enterprise Security product on the machine, you are given the option of uninstalling the SCM. If you want to uninstall the Service Control Manager, check the Uninstall SCM box and click Next.

As the uninstall process runs, a checklist is displayed, listing the uninstallation tasks as they complete. After the product is removed, the "uninstall complete" message appears.

7. Click Done.
8. Open Windows Explorer and delete the directory for Java SSM. If you uninstalled all SSMs, delete the top-level SSM directory. The default top-level directory is

`BEA_HOME\wles42-ssm`.

**Note:** If you checked the Uninstall SCM box during the uninstall, you also uninstalled the Service Control Manager, so delete the SCM directory as well. The default SCM directory is `BEA_HOME\wles42-scm`.

9. To delete shortcuts for each SSM that you uninstalled from the Start>Programs>WebLogic Enterprise Security menu, right click on each shortcut you want to delete, and then choose delete.

**Note:** If you do not delete the menu shortcuts and you reinstall the Java Security Service Module, duplicate product names appear in the Programs menu.

10. If you have uninstalled all of the WebLogic Enterprise Security product software from your computer, and you do not know the passwords for the related asi users and groups, you must delete those users and groups. To delete the asi users and groups, perform the following steps:
  - a. Select Start>Settings>Control Panel, click on Administrative Tools, click on Computer Management, and expand Local Users and Groups.
  - b. Select Users and delete the Administration Application user (asiadmin by default) and the Service Control Manager user (scmuser by default)
  - c. Select Groups and delete the WLES administrators group (asiadgrp) and the WLES users group (asiusers)
11. You have successfully removed the SSM product software from your computer.

## Uninstalling the Java SSM on Solaris or Linux

To run the graphical mode uninstallation program, your console must support a Java-based GUI. If the uninstallation program determines that your system cannot support a Java-based GUI, the uninstallation program automatically starts in console mode.

To uninstall the Security Service Module from a Solaris platform:

1. Log in to the machine as root (or su root).
2. Stop the Authorization and Role Mapping Engine (ARME) for the Security Service Module that you are uninstalling: `ARME.admin.hostname`.
3. Stop the Service Control Manager (SCM).
4. Open a command shell and go to the directory where you installed the product, for example:

```
BEA_HOME/wles42-ssm/java-ssm/uninstall
```

where:

*BEA\_HOME*/wles42-ssm/java-ssm represents the directory in which you installed the product.

5. At the command prompt, type `uninstall.sh`.

The BEA Uninstaller window appears and the uninstall process begins.

**Note:** If your system supports a graphical user interface, the uninstallation program starts in graphical mode. If your system does not support a graphical user interface, the uninstallation program starts in console mode.

6. Respond to the prompts to uninstall the product.

**Note:** When you uninstall a SSM, if it is the only remaining WebLogic Enterprise Security product on the machine, you are given the option of uninstalling the SCM. If you want to uninstall the Service Control Manager, check the Uninstall SCM box and click Next.

As the uninstall process runs, a checklist is displayed, listing the uninstallation tasks as they complete. After the product is removed, the "uninstall complete" message appears.

7. If your system supports a graphical user interface, click Done.

You have successfully removed Security Service Module from your computer.

**Note:** If you elected to uninstall the SCM, it is also uninstalled.

## Uninstalling the SCM on Windows

**Note:** If you elected to uninstall the Service Control Manager (SCM) when you uninstalled the Security Service Module (SSM), this task is not necessary.

To uninstall the Service Control Manager from a Windows platform, do the following:

**Note:** Before uninstalling the Service Control Manager, you must remove all Security Service Modules from your machine. If a Security Service Module is still installed on your machine, the uninstall program does not allow you to uninstall the Service Control Manager.

1. Log in to the machine as Administrator.
2. Stop the Service Control Manager (SCM): WLES Service Control Manager.
3. Click Start, select Programs>BEA WebLogic Enterprise Security>Service Control Manager>Uninstall Service Control Manager.

The Uninstall Welcome window appears.

4. Click Next.

The BEA Uninstaller window appears and the uninstall process begins.

As the uninstall process runs, a checklist is displayed, listing the uninstallation tasks as they complete. After the product is removed, the "uninstall complete" message appears.

5. Click Done.

You have successfully removed the Service Control Manager from your computer.

**Note:** The Uninstall program does not completely remove the WebLogic Enterprise Security software from your machine. Remnants of the software installation remain, such as

product directories, log files, asi users and groups, and program menu shortcuts from your system. You can remove these manually. For removal instructions, see [“Additional Steps for Uninstalling the SCM on Windows”](#) on page 5-5

## Additional Steps for Uninstalling the SCM on Windows

After the uninstall completes, you may notice that the product directory and various log files remain in the product directory, as well as program menu shortcuts and asi users and groups. You may remove these manually or you may want to keep them.

To remove these items, perform the following steps:

1. Delete the product directories for each product that you uninstalled. Doing this removes all instance files that remain, unless you created them outside of the product directory. In this case, you need to go to the directory where you installed the instance and delete the instance directory.
2. To delete shortcuts for each product that you uninstalled from the Start>Programs>WebLogic Enterprise Security menu, right click on each shortcut you want to delete, and then choose delete.

**Note:** If you do not delete the menu shortcuts and you reinstall the product, duplicate product names appear in the Programs menu.

3. To delete asi users and groups, open the Control Panel>Administrative Tools>Computer Management>Local Users and Groups window and delete the following users and groups:
  - The Administration Application user (asiadmin by default)
  - The Service Control Manager user (scmuser by default)
  - The WLES administrators group (asiadgrp)
  - The WLES users group (asiusers)

If you know the passwords of asiadmin and scmuser (passwords typed in during a previous install, rather than accepting the defaults), then you may leave these users in place and enter those passwords when you reinstall the product.

## Uninstalling the SCM on Solaris or Linux

**Note:** If you elected to uninstall the Service Control Manager when you uninstalled the Security Service Module, this task is not necessary.

To run the graphical mode uninstallation program, your console must support a Java-based GUI. If the uninstallation program determines that your system cannot support a Java-based GUI, the uninstallation program automatically starts in console mode.

To uninstall the Service Control Manager from a Unix platform:

**Note:** Before uninstalling the Service Control Manager, you must remove all Security Service Modules from your machine. If a Security Service Module is still installed on your machine, the uninstall program does not permit you to uninstall the Service Control Manager.

1. Log in to the machine as root (or su root).
2. Stop the Service Control Manager (SCM): `WLES Service Control Manager`.
3. Open a command shell and go to the directory where you installed the Service Control Manager, then go to the uninstall directory. For example:

```
BEA_HOME/wles42-scm/uninstall
```

where:

*BEA\_HOME*/wles42-scm/ represents the directory in which you installed Service Control Manager component.

4. At the command prompt, type `uninstall.sh`.

The BEA Uninstaller window appears and the uninstall process begins.

**Note:** If your system supports a graphical user interface, the uninstallation program starts in graphical mode. If your system does not support a graphical user interface, the uninstallation program starts in console mode.

5. Respond to the prompts to uninstall the product.
6. If your system supports a graphical user interface, click Done.  
You have successfully removed the Security Service Module from your computer.

## Uninstalling

# Index

## D

- distribution 2-1
  - CR-ROM 2-2
  - web 2-2

## E

- enroll
  - Service Control Manager 4-1

## I

- install 3-1
- installation 2-1

## P

- prerequisites
  - installation 2-3

## R

- requirements
  - system 2-3

## S

- security providers 4-3
- Service Control Manager
  - enroll 4-1
  - uninstall, from Unix 5-6
  - uninstall, from Windows 5-4
- system requirements 2-1

## U

- uninstall 3-1





