

Sun Java Enterprise System 5 Installer Tutorial for UNIX

August 2007

This tutorial introduces the Sun Java™ Enterprise System (Java ES) installer, the Java ES components, and the key tasks involved with installing Java ES.

Java ES is a collection of server-side product components and shared components that work together to support distributed enterprise applications across a network. All Java ES components are installed using the Java ES installer. Installation happens one host at a time. After you have completed installation on one host, you then install the software on another host if desired.

This tutorial walks you through the basics of installation and assumes you have already downloaded and expanded the software and are ready to run the installer. See the Java ES 5 Installation FAQs for information about getting to this point.

The tutorial does not show all pages in the Java ES installer nor provide all details necessary to perform a successful installation. The goal of this tutorial is to help you become familiar with the installer and the choices you will make during installation. For detailed installation instructions, see the Java ES 5 Installation Guide.

When you install Java ES you perform the following general steps, which correspond to sections in this tutorial:

1. [Start the installer](#)
2. [Choose components for installation](#)
3. [Choose when to configure components](#)
4. [Configure components during installation](#)
5. [Install the software](#)
6. [Complete the installation](#)

This tutorial also contains a [Troubleshooting and Resources](#) section.

Start the Installer

Java ES has three installation modes as follows:

- Graphical mode provides an interactive graphical wizard that walks you through the installation.
- Text-based mode provides the same functionality as graphical mode but prompts you for responses line by line in a terminal window.
- Silent mode is a repeatable method used to install Java ES on multiple hosts that share similar configurations. You first run an interactive installation and capture responses to the installer in a state file. You then run the installer on other hosts using the state file as input.

This tutorial uses the graphical mode. For more information about the other modes, see the Installation Guide.

To Start the Installer in Graphical Mode

The following procedure uses the `./installer -no` command, which enables you to practice with the installer before you perform an actual installation. The `-no` option runs the installer but does not install the software and is available in all installation modes.

1. As superuser, navigate to the directory in which you downloaded and expanded the software. For example:

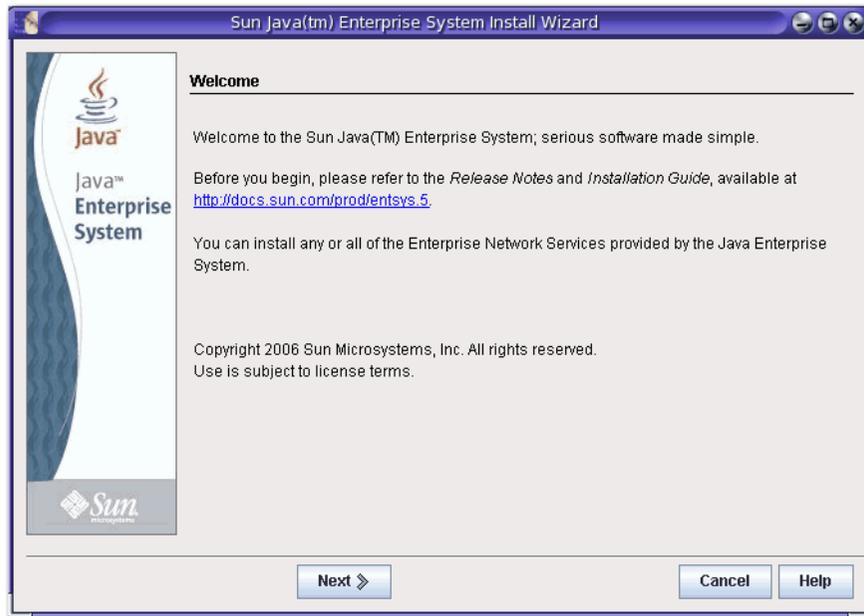
```
cd /java_es_5/Solaris_sparc
```

2. Run the installer with the following command:

```
./installer -no
```

Tip – To perform an actual installation, use `./installer` for the command in step 2.

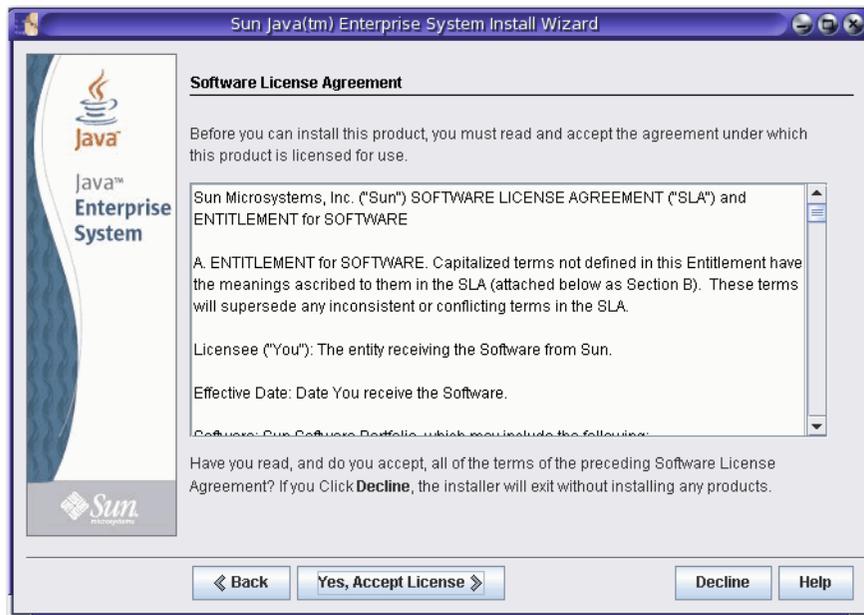
After you start the installer the Welcome page is displayed and provides the URL for Java ES system documentation. Click the link and bookmark the page for future reference (requires an Internet connection).



Buttons on pages in the installer are used as follows:

- To move to the next page, click Next.
- To exit the installer without performing any installation, click Cancel.
- To display documentation for the page currently displayed, click Help.
- To review or change your input on a previous page, click Back.

Click Next on the Welcome page to display the Software License Agreement.



Take the desired action:

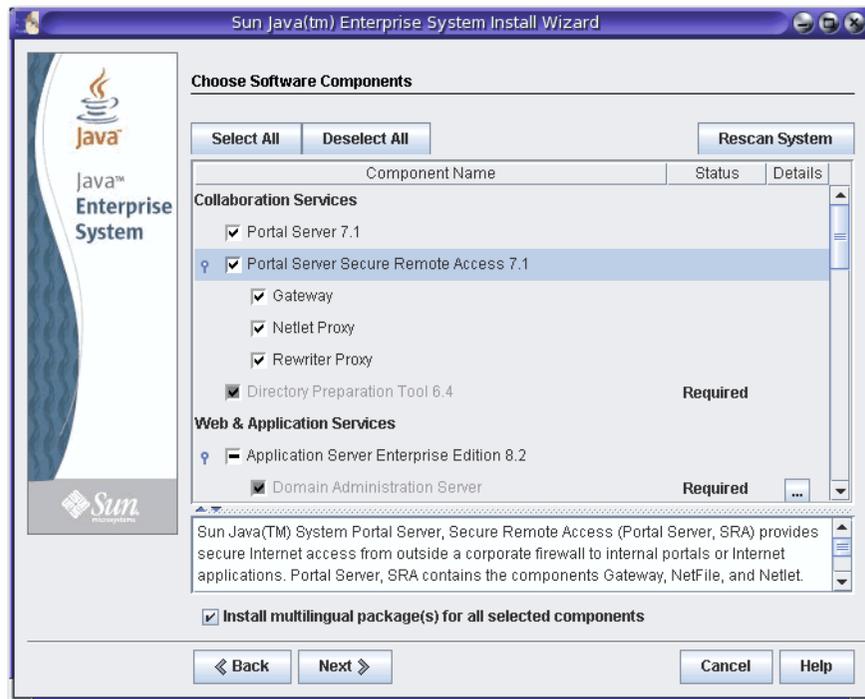
- To accept the agreement and proceed with the installation, click Yes, Accept License.
- To exit the installer without performing any installation, click Decline.

After you accept the agreement the Java ES installer surveys the software on your host and displays the Choose Software Components page (this process can take a few seconds).

Choose Components for Installation

Java ES consists of product components (with subcomponents) and shared components. Product components and their subcomponents can be selected for installation in the Java ES installer. Shared components support product components and are selected automatically when a product component that depends on them is selected. Product components are also selected automatically if another product component requires their services. To better understand component dependencies, see [Are There Component Interdependencies that I Need to Know About?](#)

The Choose Software Components page lists the product components and subcomponents you can select to install. To see subcomponents, click the symbol to the left of a product component check box, as shown for Portal Server Secure Remote Access in the following screen capture.



The marks in the check boxes on the Choose Software Components page indicate the following:

- A checkmark in an unshaded box indicates a component or subcomponent is selected for installation.
- A dash (as shown for Application Server) indicates a component's subcomponents are in a mixed state. For example, some subcomponents are already installed, some will be installed through the new installation, and some have been deselected.
- A checkmark in a shaded, unselectable box next to a dimmed name (shown for Domain Administration Server) indicates that a correct version of the component is already installed on the host.

Use the buttons and other interface elements on the page to do the following:

- To select all components and subcomponents, click Select All. If you want to install many components but not all, click Select All and then deselect the components or subcomponents you do not want.
- To deselect all components and subcomponents, click Deselect All.
- To rescan your system for existing components and update the Status and Details information, click Rescan System.
- To select components and subcomponents for installation, select component check boxes. Click the symbol to the left of the check box to see a component's subcomponents. When you select a component that has subcomponents, the subcomponents are selected automatically.

- To upgrade all shared components to the current Java ES release, select All Shared Components listed under Shared Services. If you do not select this check box, the installer installs or upgrades only shared components for the product components you select.

The Monitoring Console and Java DB are also listed under Shared Services. Monitoring is a new feature in Java ES 5 and includes the Monitoring Console. For more information about monitoring, see the Java ES 5 Monitoring Guide. Java DB is Sun's supported distribution of the open source Apache Derby 100% Java database and was formerly called Derby Database.

- To see information about the installation status of components and subcomponents, review the Status and Details columns. These columns are usually empty, indicating that the component or subcomponent is not installed on the system. Other values for Status include the following:
 - Installed: The current version is already installed.
 - Required: Another selected component requires this one.
 - Upgradable: A previous version is installed and the installer can upgrade that version to the current one.
 - Nonupgradable: A previous version is installed but the installer cannot upgrade that version to the current one. For information about upgrade issues, see the Java ES 5 Upgrade Guide.

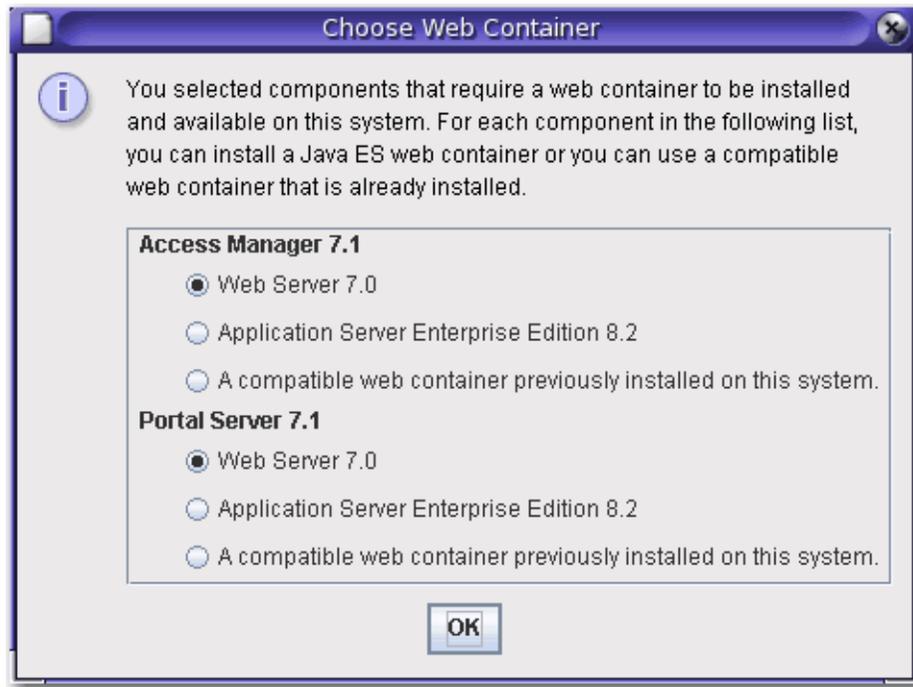
For information about items listed in the Status column, click the corresponding icon in the Details column as shown in the following screen capture.



- If you do not want to install multilingual packages for the selected components, deselect the multilingual packages check box at the bottom of the Choose Software Components page. If you deselect this option, multilingual packages are not installed and cannot be added later using the Java ES installer. You must add them manually. For more information about languages and the installer, see How Language Selection Works.

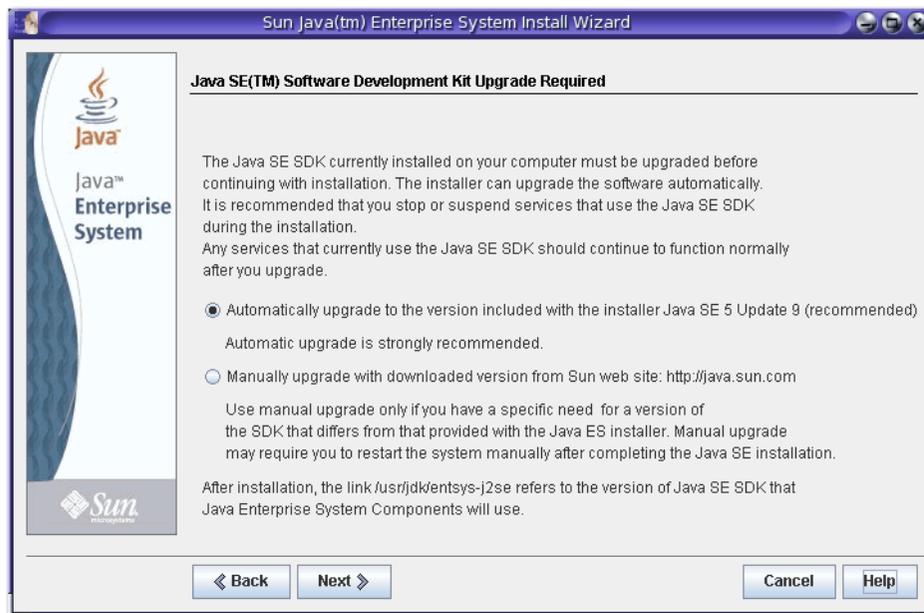
For information about dependencies and remote hosts, see Does the Installer Check Dependencies on Remote Components?

When you click Next on the Choose Software Components page and component dependencies have not yet been met, messages tell you what you need to do. Take the appropriate action and then proceed with the installation. Typical issues include such items as a web container is required but is not selected, or required components or subcomponents are not selected. An example advisory message is shown in the following screen capture. For information about third-party web containers supported in Java ES, see How Do I Use a Third-Party Web Container?



Upgrading the J2SE SDK

On the Solaris™ Operating System (Solaris OS), after clicking Next on the Choose Software Components page you might see the following page regarding the Java 2 Software Development Kit, Standard Edition (J2SE SDK).



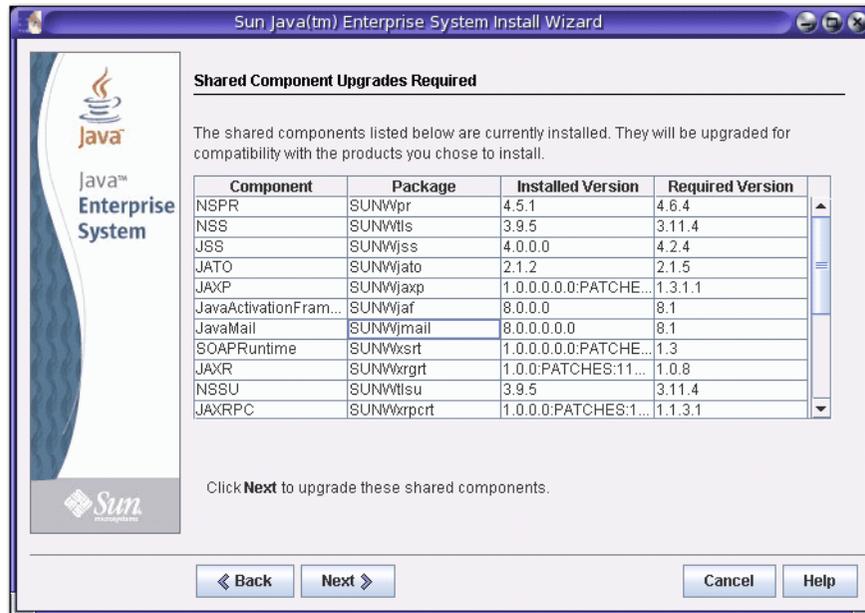
This page is displayed if the installer detects an incompatible system-wide version of the J2SE SDK. Keep the default selection of an automatic upgrade, which brings the version up to date.

Note – If the installer encounters a higher version of the JDK and one or more JDK packages are missing (for example, the 64-bit JVM™ software), the installer treats this version as incompatible. In that case, when you keep the automatic upgrade option the JDK is downgraded to the version of the JDK required by Java ES.

Component Version Compatibility

If incompatible versions of product components exist on the host on which you are installing the software, you must remove the incompatible components. Product components generally cannot be upgraded by the installer, but there are some exceptions. For detailed information about version compatibility issues, see [Does it Matter if Other Java ES Components are Already on My Host?](#)

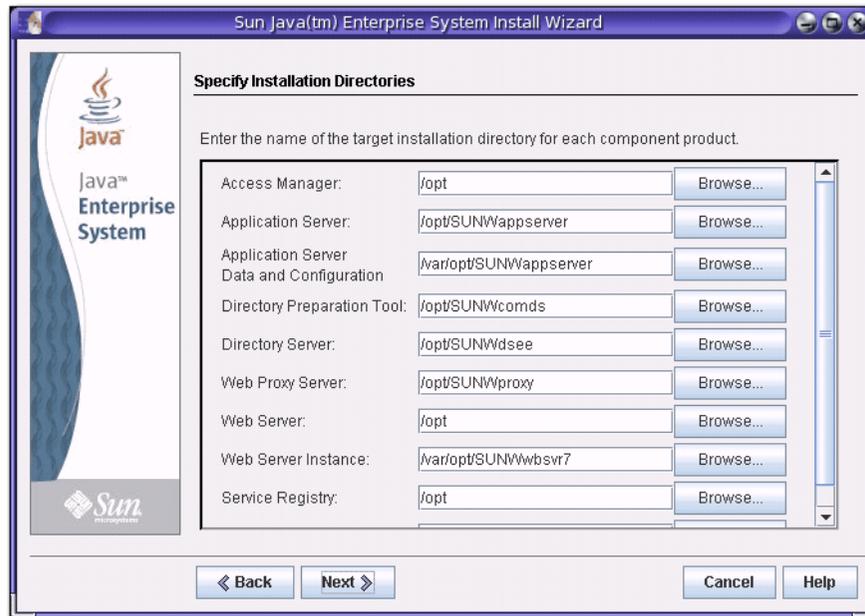
During installation, the installer automatically installs the required shared components if they are not already installed on the host. If some shared components are already on the host but the versions do not match the Java ES release requirements, the Shared Component Upgrades Required page is displayed, listing the incompatibilities. You cannot proceed in the installer until compatibility issues are resolved.



Take the desired action:

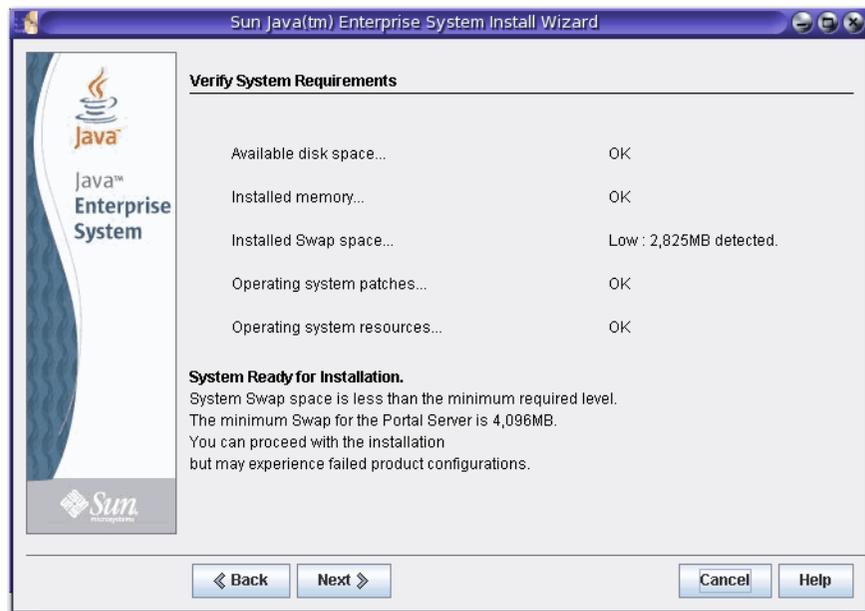
- To direct the installer to automatically upgrade the shared components to the correct versions, click Next.
- To specify you do not want the installer to automatically upgrade the shared components, click Cancel to exit the installer. Upgrade the incompatible shared components and then run the installer again.
- To proceed without exiting the installer, click Back and modify the selection of components you want to install, removing those for which there are compatibility issues.

After you click Next on the shared components page, the Specify Installation Directories page displays the default installation directories for the selected components.



If the default directories are not acceptable, browse for alternate paths and change as needed. Make note of these alternate path names because you must specify the information whenever path names are requested by the installer or a configurator. To see a complete list of default directories and ports, see Default Installation Directories and Ports.

When you click Next, the installer runs a system check to verify that all system requirements are met. This process checks system resources such as disk space, memory, swap space, and patches based on the components you selected. When the installer completes the check, the Verify System Requirements page is displayed and lists the results.



If requirements are not met, messages tell you what you need to do. Take the desired action based on the system check:

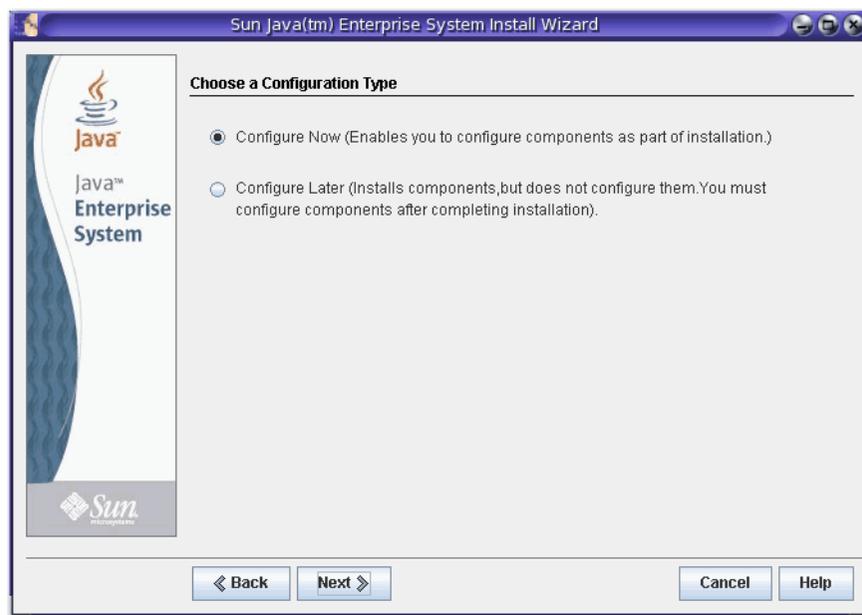
- If your system meets requirements, System Ready for Installation appears on the page without any qualifications. Click Next to proceed with the installation.

- If your system does not meet the minimum memory or swap space recommendation, System Ready for Installation appears on the page with qualifications (as shown in the previous screen capture). Click Next to continue, but add memory or swap space when installation is complete or you might encounter degraded performance and other serious problems.
- If your system does not meet the requirements to proceed with the installation, System Not Ready for Installation appears on the page and you must take action before you can proceed. Click View Report to identify the problems, then fix the specified errors and click Check Again to recheck the system (if the problems can be fixed without stopping the installer). If your system continues to fail to meet the requirements, click Cancel to exit the installer, troubleshoot and resolve the problems, and then run the installer again.

When the system check is complete and you are satisfied with the state of the system, click Next.

Choose When to Configure Components

The Choose a Configuration Type page specifies whether you want to configure certain components through the installer during installation or run their configurators at a later time.



You have two choices on this page: Configure Now or Configure Later.

Configure Now

Configure Now is selected by default and enables you to configure certain components in the installer during installation. Components that can be configured during installation are as follows:

- Access Manager
- Application Server
- Directory Server
- HADB
- Portal Server
- Portal Server Secure Remote Access
- Proxy Server
- Web Server

Components that cannot be configured during installation and must be configured later are as follows:

- Directory Proxy Server
- Java DB

- Monitoring Console
- Service Registry
- Sun Cluster
- Sun Cluster Agents
- Sun Cluster Geographic Edition

Note – Although Sun Cluster software cannot be configured during installation, if you select Configure Now for these components the installer offers you the option of enabling remote support to simplify postinstallation configuration.

When you select Configure Now for components that can be configured during installation, the installer prompts you for configuration information and walks you through several configuration pages for each component. Runnable instances are created and components configured during installation can be started and verified after the installation is complete.

When you select Configure Now for components that cannot be configured during installation, you will be advised as such by a page in the installer. You later create runnable instances by providing configuration values in the configuration wizards or configuration files of the individual components.

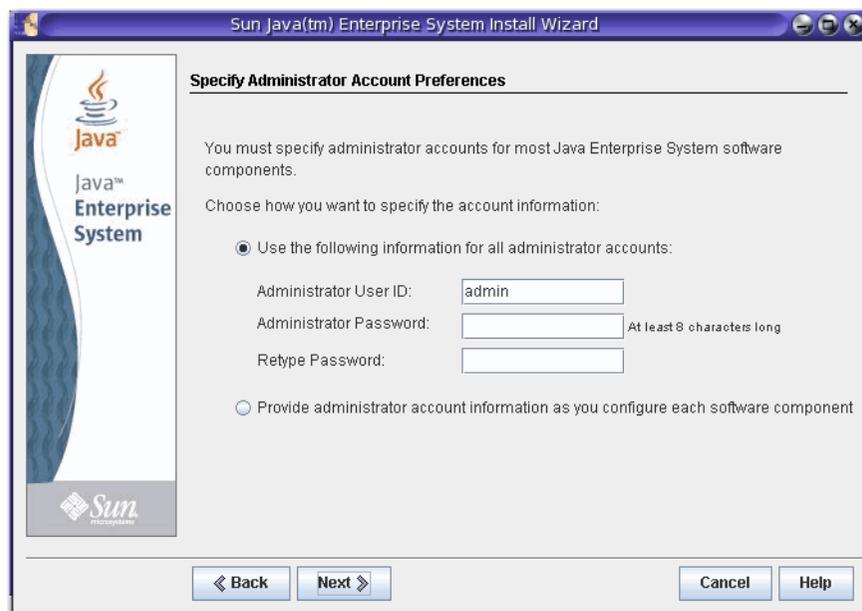
Configure Later

If you select Configure Later the installer copies component software files to the host but no configuration is performed. The installer proceeds without further configuration, and no runnable instances are created. You create runnable instances by providing configuration values in the configuration wizards or configuration files of the individual components. All components can be configured after installation.

If you select Configure Later, you proceed to the [Ready to Install](#) page. If you select Configure Now, you proceed through configuration pages.

Configure Components During Installation

If you selected more than one component to Configure Now, you first specify administrator information on the Specify Administrator Account Preferences page. If you selected just one component, you skip this page and specify the administrator user ID and password on the Specify Common Server Settings page.



The screenshot shows a window titled "Sun Java(tm) Enterprise System Install Wizard". The main content area is titled "Specify Administrator Account Preferences". It contains the following text and controls:

- Logo for Java and Java™ Enterprise System on the left.
- Text: "You must specify administrator accounts for most Java Enterprise System software components."
- Text: "Choose how you want to specify the account information:"
- Two radio button options:
 - Use the following information for all administrator accounts:
 - Administrator User ID:
 - Administrator Password: At least 8 characters long
 - Retype Password:
 - Provide administrator account information as you configure each software component
- Navigation buttons at the bottom: "Back", "Next", "Cancel", and "Help".

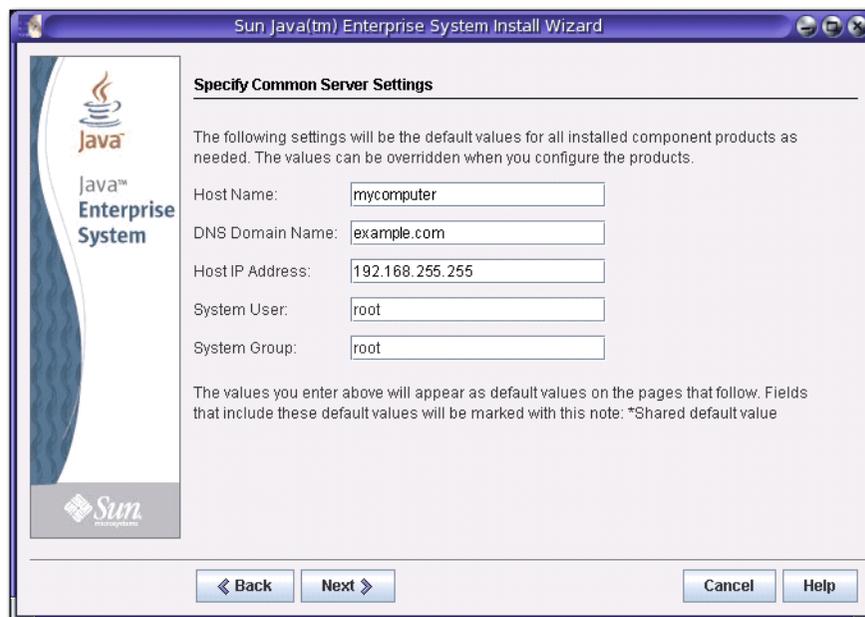
The account preferences page specifies whether you want to use the same administrator account for all product components or provide account information component by component. The result of each choice is as follows:

- If you use the same administrator information for all product components, the installer does not prompt you for this information on subsequent pages in the installer but uses the values that you provide on this page.
- If you provide administrator information for each product component, the installer prompts you for this information during installation as you configure each component.

Note – Do not use white space or the following symbols for administrator passwords in Java ES: ; & () ! | < > ' " \$ ^ \ # / , @ %

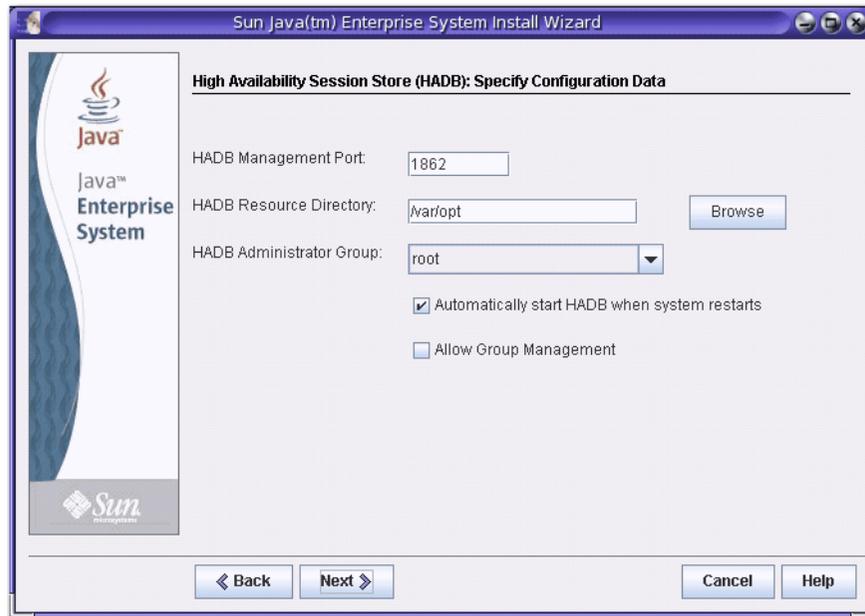
When you click Next, the Specify Common Server Settings page is displayed.

In the following screen capture, fields associated with the administrator user ID and administrator password are not displayed because a choice was made on the previous account preferences page to use a single administrator account and password for all components.



Common server settings are parameters used by multiple components. Accept the defaults or use alternate data to answer the installer questions regarding these global fields. Values that you enter on this page appear as default values on subsequent product component configuration pages. Refer to online help or to Common Settings for information about these fields.

Click Next to proceed to the configuration pages for components selected for Configure Now installation. The configuration pages are displayed one by one. The following screen capture shows a typical component configuration page.



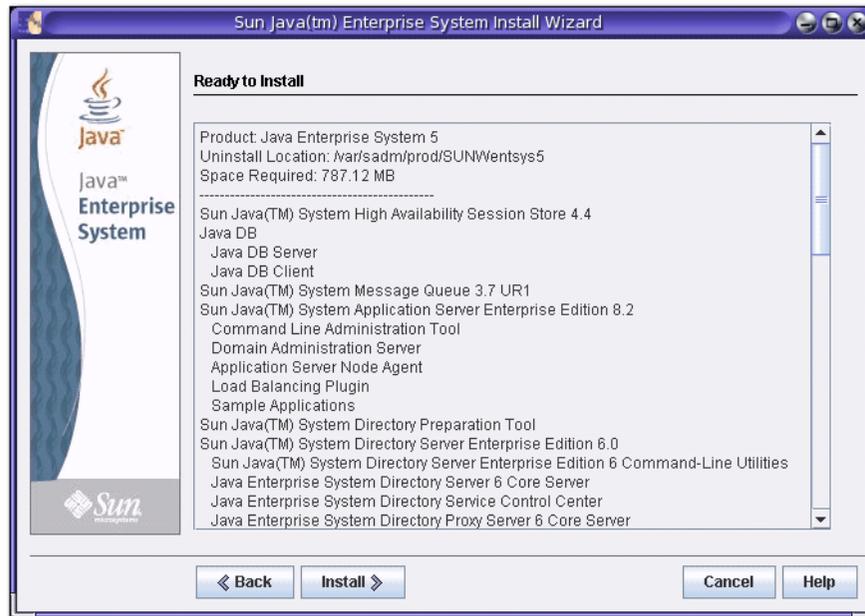
Some fields on configuration pages display default values from the Specify Common Server Settings page. If you choose to enter alternate values on the configuration pages instead of accepting the defaults, you must specify the chosen alternate values whenever the item is requested by the installer or a configurator.

Note – Click the Help button for detailed descriptions of the information requested. This field-specific information is not provided in the instructions in the Installation Guide. Descriptions of all configuration fields are also provided in Configuration Information. Use this information to complete the configuration worksheets before starting an actual installation.

When you click Next on the last configuration page, the Ready to Install page is displayed. If issues exist that prevent you from installing the software, messages tell you what you need to do.

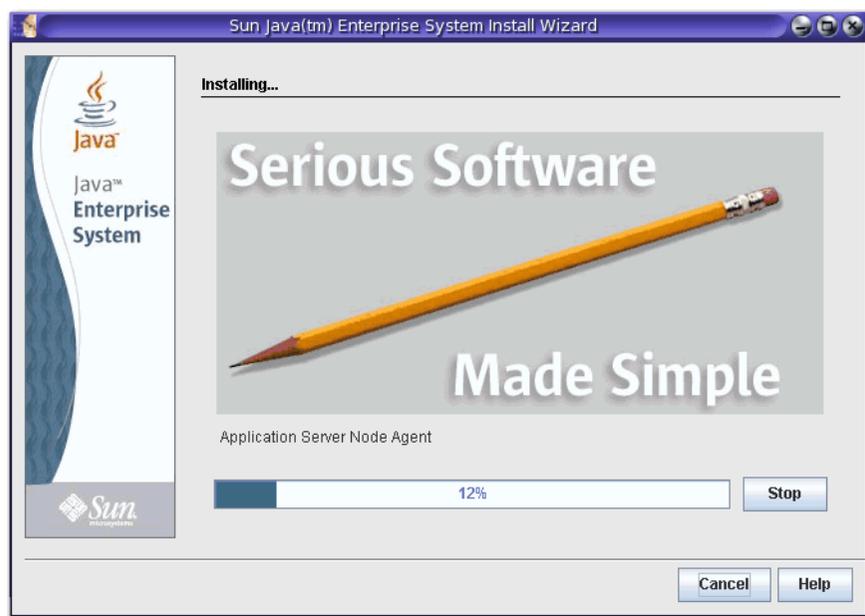
Install the Software

The Ready to Install page lists the components you selected for installation. Although shared components are not explicitly listed, they have already been verified and are installed if they are needed.



Review the information and proceed as desired:

- To change the selected components, click Back until you reach the Choose Software Components page. Make changes, then click Next to move forward through the installer and return to the Ready to Install page. The installer retains previously entered values so you do not need to reenter them. Dependencies are rechecked and the system check is repeated.
- To change information about a particular component's configuration, click Back until you reach the desired configuration page, make the changes, and then click Next to move forward through the installer. You do not need to reenter any previously entered values.
- To exit the installer without installing any software, click Cancel.
- To proceed with the installation, click Install to start installing the component packages. The Installing page displays and the installer starts installing the software.



The Installing page displays a progress bar and the names of packages as they are installed. Take action if desired:

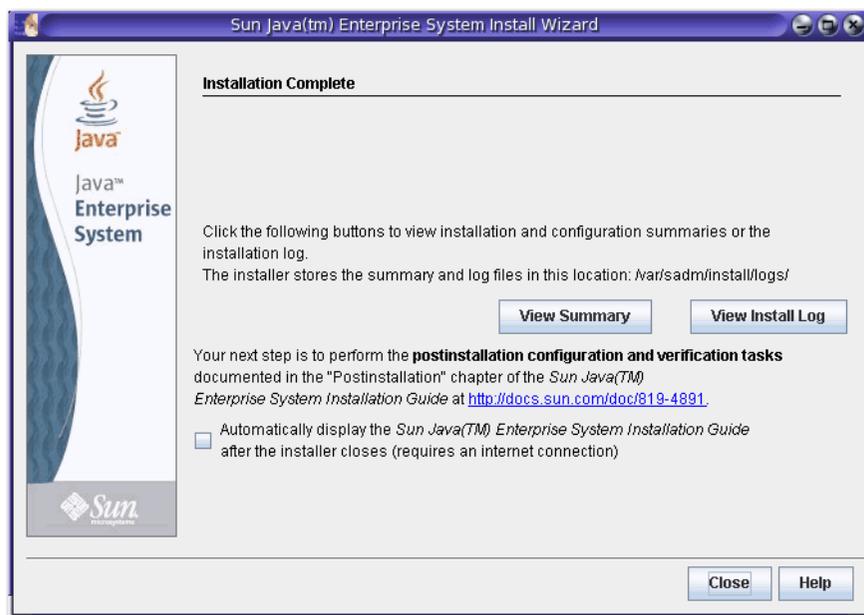
- To stop the installation and uninstall any component packages that have already been installed, click Stop.
- To cancel the installation without uninstalling any component packages that have already been installed, click Cancel. This action is useful if you want to retain some component packages that have been installed, but cancel the installation of others.

If the installation is allowed to proceed without stopping or canceling, the installer installs or upgrades shared components and then does the same for product components. The amount of time an installation takes depends on the size and complexities of your installation.

Complete the Installation

If installation is successful, the Installation Complete page is displayed. If installation is unsuccessful, the “Installation Failed” on page 15 page is displayed.

Installation Complete



Take action as desired:

- To examine information about each component installed and the settings you specified, click View Summary. If you chose Configure Now, this summary lists all configuration values.
- To examine the installer's log messages for the components, click View Install Log. You can also access this information any time from the following locations:
Solaris OS: `/var/sadm/install/logs`
Linux and HP-UX: `/var/opt/sun/install/logs`
For more information about Java ES logs, see Examining Installation Log Files.
- To access postinstallation instructions and continue with the final steps of installation, select the check box to automatically display the Installation Guide. Even if you performed extensive configuration during installation, most product components still require additional configuration. At least some manual configuration is required after every installation. For instructions, see Completing Postinstallation Configuration. Also see the postinstallation configuration questions in the Installation FAQs.
- To exit the installer, click Close. Your installation session is done. Product components that were installed must be started after you have completed postinstallation configuration (the packages are installed but nothing is started, including the configured components). For more information about starting product components, see Verifying After Postinstallation Configuration.

- To begin using Java ES components after they have been installed and started, see the documentation for a particular Java ES component. If you are a new user, look for introductory or getting started material, which is often found in a document called Technical Overview.
- To start over if the resulting installation does not meet your needs, run the uninstaller to uninstall all product components and then perform a new installation. For more information, see Uninstalling.

Java ES Reporter

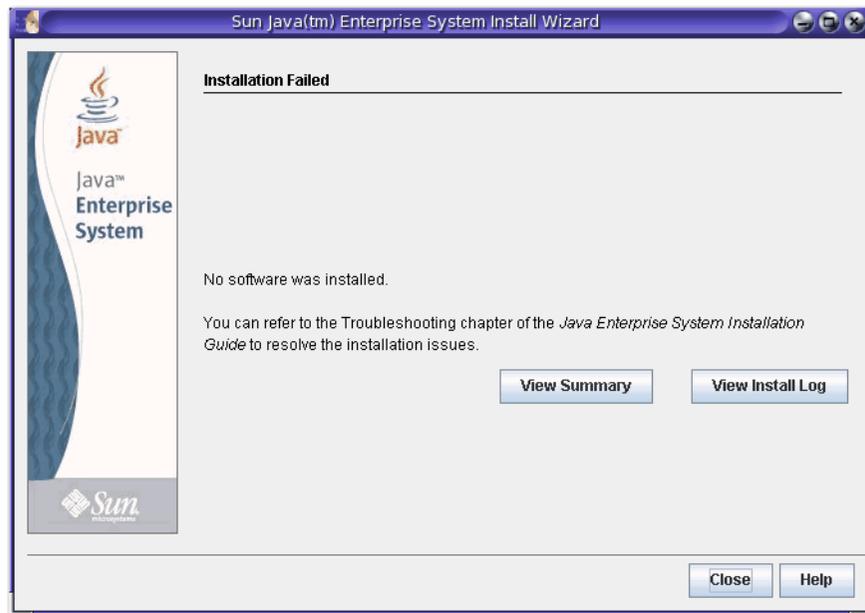
Java ES Reporter is a command-line utility that performs product registration after a successful Java ES installation. The utility starts automatically in the console or terminal window in which you started the installer. You are asked if you want to install Java ES Reporter, and if so, to provide the URL or IP address of a proxy Java ES Reporter will use to access Sun through the Internet. For more information, see How Java ES Reporter Works.

Adding Components After Installation

To install additional components after installation is complete, run the installer again to add them. The installer detects installed components and uses them to satisfy dependencies of components you are adding. Installed product components are shown as shaded and dimmed on the Choose Software Components page. For example, if you installed Access Manager and its required components during one installation session and later decide you want to install Portal Server, the existing instance of Access Manager is used to meet the Portal Server dependency on Access Manager. You are not asked to reinstall Access Manager.

Installation Failed

If installation was unsuccessful, the Installation Failed page is displayed.



Click View Summary or View Install Log to access information that will help to diagnose the problems. For more information about using Java ES logs for troubleshooting, see Examining Installation Log Files.

Troubleshooting and Resources

For problems specific to installation, see the troubleshooting questions in the Installation FAQs and Troubleshooting in the Installation Guide.

For troubleshooting information that covers a range of Java ES issues and product components, visit the [troubleshooting page](#) on the Java ES 5 [Big Admin hub](#).

Other resources will also be helpful as you install Java ES and work with its components. These resources include the following:

- For a list of Java ES components, see Java ES Components for This Release. For component descriptions, see Java ES Components.
- For release notes, see system release notes and [component release notes](#).
- For the complete Java ES documentation set, see [system and component documentation](#).
- For installation reference information (including descriptions of configuration fields in the installer), see the Java ES 5 Installation Reference.
- For an overview of Java ES, see the Java ES 5 Technical Overview.
- For general product information, see the Java ES 5 [product site](#).

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