Sun Java Enterprise System 5 Update 1 Installation FAQs for UNIX

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Sun Java Enterprise System (Java ES) provides a single installer for installing Java ES components in various combinations. Due to the interrelationships of these components, Java ES installation requires more preinstallation and postinstallation effort than simpler installations. This document contains some of the most frequently asked questions (FAQs) about Java ES installation.

> **Note –** An update release offers additional installation choices beyond those offered by a standard release. To understand if these options are appropriate for your installation, please review the release model section in Chapter 1 of the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*.

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Learning About Java ES Installation

This section contains questions that deal with learning about Java ES and the contents of the particular release.

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Q1: How should I start?

Answer: If you are new to Java ES installation, the following materials can help you become familiar with the installation process. In fact, you should not attempt to install Java ES software until you understand the process and have developed an installation plan.

> **Note –** If you are upgrading from another release of Java ES, refer to the Planning chapter in the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*.

1. Read about how the installer works. See "How the Java ES Installer Works" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

2. View the Sun Java Enterprise System 5 Update 1 Installer Tutorial for UNIX.

3. Review your deployment plan and create an installation plan. Refer to the *Sun Java Enterprise System 5 Installation Planning Guide*.

4. Determine if any of the examples in apply to your installation. See Chapter 2, "Example Installation Sequences," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

5. Review the known issues for installation. Refer to the "Installation Issues" in *Sun Java Enterprise System 5 Update 1 Release Notes*.

6. Perform an evaluation installation on a single host. See "Q2: Is there an installation tutorial or demo available? " on page 2 Additional information is available in the Evaluate page of the Java ES hub (`http://www.sun.com/bigadmin/hubs/javaes/tasks/evaluate.jsp`).

7. Plan your production deployment. Refer to the *Sun Java Enterprise System Deployment Planning Guide*.

Q2: Is there an installation tutorial or demo available?

Answer: Yes, a free installer tutorial is available on UNIX platforms. See Sun Java Enterprise System 5 Update 1 Installer Tutorial for UNIX. In approximately 15 minutes, you walk through the pages of the installer, learn how the installer works, and gain some insight into what you need to consider before you begin your Java ES installation.

Q3: How can I find Java ES documentation?

Answer: Java ES 5 Update 1 documentation is stored in the docs.sun.com repository as follows:

- The Java ES system collection (`http://docs.sun.com/app/docs/coll/1286.3`) provides links to the manuals associated with the system-level Java ES tasks, including installation. You can view these manuals in either HTML or PDF format.

- The Install task page on the Java ES hub provides links to the information needed to do Java ES installation. See Install tasks (`http://www.sun.com/bigadmin/hubs/javaes/tasks/install.jsp`).

- The Java ES component collection (`http://docs.sun.com/app/docs/prod/entsys.5#hic`) provides links to the documentation for the Java ES product components that can be selected by the Java ES installer. This listing also includes links to specialized collections, such as the Release Notes Collection (`http://docs.sun.com/app/docs/coll/1315.2`) and the Deployment Examples and Technical Notes Collection (`http://docs.sun.com/app/docs/coll/1480.2`).

Q4: What components are included in this Java ES release?

Answer: The Java ES software consists of a collection of Sun server-side products and their supporting components that work together to support distributed applications across a network.

Product components These are the Java ES components that can be selected for installation by the Java ES installer. For a list of product components, see "Java ES Components Used in This Release" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. For brief descriptions of these components, refer to Appendix A, "Java ES Components," in *Sun Java Enterprise System 5 Update 1 Technical Overview*.

Shared components These components support the product components and are selected automatically by the installer. For a list of shared components, see "Shared Components" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Java ES components are combined into different suites that provide particular sets of services. Depending on your deployment, you might be interested in downloading a suite rather than the entire Java ES distribution. See "Q17: What downloads are available?" on page 8

- Sun Java Application Platform Suite
  (`http://www.sun.com/software/javaenterprisesystem/application_platform_suite/index.xml`)
- Sun Java Composite Application Platform Suite (Java CAPS)
  (`http://docs.sun.com/app/docs/prod/sj.caps#hic`)
- Sun Java Communications Suite (`http://docs.sun.com/app/docs/prod/sj.comm.suite#hic`)
- Sun Java Identity Management Suite (`http://www.sun.com/software/products/identity/index.jsp`)
- Sun Java Web Infrastructure Suite
  (`http://www.sun.com/software/javaenterprisesystem/web_infrastructure_suite/index.xml`)
- Sun Java Availability Suite (Solaris Cluster)
  (`http://www.sun.com/software/solaris/cluster/index.xml`)

Q5: Is there a quick installation for evaluating Java ES software?

Answer: Refer to the information on evaluating Java ES is contained on the Evaluate page of the Java ES hub (`http://www.sun.com/bigadmin/hubs/javaes/tasks/evaluate.jsp`).

Tip – Doing an evaluation installation on a single host is a good way to learn how the installer works.

Preparing to Install Java ES Software

This section contains questions that are often asked about what needs to be done before running the installer.

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- "Q7: Are there examples that I can use to plan my installation?" on page 5
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Q6: How much planning do I need to do before I install Java ES?

Answer: If you are installing for evaluation only, the best preparation is to install on a host that contains only the operating system. You select all components except Monitoring Console and Sun Cluster software, and accept most defaults offered by the installer.

However, for a production deployment across multiple hosts, the following planning activities are important for ensuring a successful installation:

1. **Developing a deployment architecture** In general, the deployment architecture and deployment design indicate what needs to be done, the implementation specifications indicate how to implement the design, and the installation plan indicates how to perform installation tasks to meet the technical requirements. Refer to the instructions for creating a deployment architecture and deployment design in the *Sun Java Enterprise System Deployment Planning Guide*. For additional specifics, refer to the Planning page on the Java ES hub: Planning tasks (`http://www.sun.com/bigadmin/hubs/javaes/tasks/plan.jsp`).

2. **Developing an installation plan** Based on the deployment architecture, the installation plan determines how to implement Java ES to meet the technical requirements for the deployment. The installation sequence examples can be helpful in determining the sequence of events for installation. See Chapter 2, "Example Installation Sequences," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Instructions for creating an installation plan are contained in the *Sun Java Enterprise System 5 Installation Planning Guide*.

3. **Surveying your hosts** By surveying the software that is already on your hosts, you can take steps to bring hosts to the optimum state before installation. See "Surveying Existing Hosts" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Activities might include upgrading or removing some installed components. Instructions for upgrading are contained in the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*.

4. **Determining your configuration values** Some product components can be configured during installation, so you must determine the configuration values that you are asked to supply during installation. See Chapter 3, "Configuration Information," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*.

5. Additional tasks for specific deployment needs

   - **Single sign-on** This type of configuration is done after postinstallation configuration is complete. Example instructions on how to implement single sign-on for your components are contained in the evaluation deployment example. Substitute your configuration specifics in these Chapter 8, "Configuring and Using Single Sign-On," in *Sun Java Enterprise System 2005Q1 Deployment Example Series: Evaluation Scenario*.

   - **Redundancy** Most production deployments include a redundancy requirement, such as load balancing, clustering, or multimaster replication. These methods help to increase throughput or to protect against downtime or data loss. Java ES redundancy strategies are discussed in "Installation Planning Issues" in *Sun Java Enterprise System 5 Installation Planning Guide*. Additional material is contained in "Availability" in *Sun Java Enterprise System Deployment Planning Guide*. Also refer to "Q14: What do I have to do if my Java ES installation will include Sun Cluster software?" on page 7 (for Solaris OS only).

   - **User management** This type of configuring is done after postinstallation configuration is complete. Example instructions on how to implement user management for your components are contained in the evaluation deployment example. See Chapter 7, "User Management for the Evaluation Solution," in *Sun Java Enterprise System 2005Q1 Deployment Example Series: Evaluation Scenario*. Substitute your configuration specifics in these example user management instructions. To plan your schema,

see "Q15: What is the significance of LDAP Schema 1 and LDAP Schema 2 for Java ES?" on page 7. For extensive schema instructions, see the Directory Server documentation (`http://docs.sun.com/app/docs/coll/1224.2`).

Q7: Are there examples that I can use to plan my installation?

Answer: Yes, there are several type of examples associated with Java ES.

- The Java ES deployment examples describe how to implement a production deployment architecture. High availability, scalability, and serviceability are addressed.

    - *Sun Java Enterprise System 2005Q1 Deployment Example Series: Evaluation Scenario*

    - *Deployment Example: Sun Java Communications Suite 5 on a Single Host*

    - *Sun Java Enterprise System 2005Q4 Deployment Example: Telecommunications Provider Scenario*

- To understand the task order for common installations, see Chapter 2, "Example Installation Sequences," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. These examples list the high-level tasks for installing, configuring, and starting the components in the examples.

- A view into Sun's use of Java ES is provided in the *Reference Configuration Series: Portal Server on Web Server*.

Q8: What are the system requirements for installation?

Answer: Before running the installer, verify that the hosts on which you will be installing are set up correctly. System requirements are listed in the following release notes:

- *Sun Java Enterprise System 5 Update 1 Release Notes*
- Java ES Component Release Notes Collection (`http://docs.sun.com/app/docs/coll/1315.3`)

Operating system patches might be missing from your host, in which case the installer will not be able to proceed. For information on what to do about missing patches, see "Q26: How do I get patches that the installer indicates are missing?" on page 12

Solaris OS Patch Clusters Refer to the Sunsolve patch cluster page (`http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access`) to see the recommended Java ES patch clusters. Information on patch clusters is provided in "System Requirements" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Because the patch cluster installs all patches required for any of the Java ES components, you might want to install the Java ES required OS patch cluster before installation. However, if you prefer to install only the patches required for the specific components you select, you can let the Java ES installer tell you exactly which patches are needed.

A number of situations exist that might require preinstallation tasks for your particular combination of components. Be sure that relevant installation prerequisites are met before starting your installation. See "Verifying Installation Prerequisites" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q9: Does it matter if other Java ES components are already on my host?

Answer: Yes, if the versions of those components are incompatible with Java ES 5 Update 1.

An initial Java ES installation goes most smoothly if you are installing on a computer that has only the operating system installed, but this is not always possible. You can install Java ES on a host that already contains Java ES components. However, your installation might be interrupted if the installer finds incompatible versions of those components on the host. In this case, the installer cannot proceed until you either remove or upgrade to supported versions of the Java ES components. See "Java ES Components Used in This Release" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Full instructions for upgrading individual components are in the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*. Additional information on upgrading is contained on the Upgrade page of the Java ES hub (`http://www.sun.com/bigadmin/hubs/javaes/tasks/upgrade.jsp`).

- **Upgrading product components** Generally, the installer cannot upgrade the product components.

> **Note –** If the installer finds upgradable versions of Application Server, HADB, Java DB, or Message Queue on the host, it marks them as upgradable in the Choose Software Components page and will upgrade them if you select them. Upgradable versions can mean earlier versions of Java ES, or Solaris-bundled versions of Application Server and Message Queue. However, if you want to upgrade Application Server from Java ES 2 (2004Q2) on Solaris OS, you must first manually remove the Solaris-bundled version of Application Server.

- **Upgrading shared components** The installer upgrades shared component components automatically during installation.
- **Removing components** For product components that were installed using the Java ES installer, remove them using the Java ES `uninstall` utility that was put in place during the original installation. See "Running the Uninstaller" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. If no uninstaller is present, the components were probably installed by another method, or an uninstallation has already been done. If you cannot use the uninstaller, you can remove the packages for the components manually. For a list of packages, see Chapter 5, "List of Installable Packages," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*. Use the following UNIX commands to remove packages manually:
  - Solaris OS: `pkgrm`
  - Linux: `rpm -e`

Q10: How can I find out which Java ES components are installed on my host?

Answer: One way to identify what Java ES components are on the host is to perform a test installation using the `installer -no` command. The installer indicates the incompatible and upgradable components that are on the host. For guidelines on how to survey your hosts before doing an installation, refer to instructions for identifying incompatible components in "When Incompatible Components Are Installed" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Another way to survey the software on a host is to examine the product registry. See

You can also view the installed packages using the following UNIX package display commands to see if any Java ES component packages are present. For a list of packages, see Chapter 5, "List of Installable Packages," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*. Use the following commands to view packages:

- Solaris OS: `pkginfo`
- Linux: `rpm -qa`

Q11: How do I upgrade from another version of Java ES?

Answer: Full instructions for upgrading Java ES software are in the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*.

Q12: Are there component interdependencies that I need to know about?

Answer: The Java ES installer checks component dependencies for the components you select. If your selected components require additional components, the installer automatically selects the additional components. To understand how this works, refer to the information in "Component Dependencies" in *Sun Java Enterprise System 5 Installation Planning Guide*. Table 3-1 shows the interdependency matrix. To satisfy interdependencies, installation sessions must be run in a particular order, with some components being installed, configured, and started before other components are installed. You might be able to model your deployment on suggested installation sequences. See Chapter 2, "Example Installation Sequences," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

After installation, follow the preferred startup sequence for Java ES components. Refer to Table 7–1 in "Verifying After Postinstallation Configuration" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q13: What do I need to know about Solaris 10 zones for Java ES?

Answer: If you want to install Java ES into Solaris 10 zones, you must keep in mind some Solaris 10 zones guidelines and limitations for Java ES. See "Solaris 10 Zones Examples" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. The guidelines in this section are extracted from a general description of how to use Java ES with Solaris 10 zones in Appendix A, "Java ES and Solaris 10 Zones," in *Sun Java Enterprise System 5 Installation Planning Guide*.

Q14: What do I have to do if my Java ES installation will include Sun Cluster software?

Answer: Sun Cluster software is supported only on Solaris OS. Installing, configuring, and starting the components in the correct order is crucial for a successful Sun Cluster implementation. At least two installation sessions are performed on each node in the cluster. The following are the general tasks:

1. Install the Java ES Sun Cluster component.
2. Configure the Sun Cluster framework.
3. Install the additional Java ES components that are required for a component (agent) to operate in the cluster.
4. Configure the Sun Cluster data services using the agents for the relevant Java ES components.

To see the high-level installation tasks, refer to the installation sequence example in "Sun Cluster Software Example" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

See Also

Java ES installation guidelines in the Sun Cluster documentation:

- Sun Cluster 3.1 8/05 guidelines: "How to Install Sun Cluster Framework and Data-Service Software Packages (Java ES installer)" in *Sun Cluster Software Installation Guide for Solaris OS*
- Sun Cluster 3.2 guidelines: "How to Install Sun Cluster Framework and Data-Service Software Packages (Java ES installer)" in *Sun Cluster Software Installation Guide for Solaris OS*
- "Sun Cluster Postinstallation Configuration" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

Q15: What is the significance of LDAP Schema 1 and LDAP Schema 2 for Java ES?

Answer: Java ES solutions that use Directory Server can use either of two versions of a standard LDAP schema: Schema 1 or Schema 2. An explanation of the schema issues for Java ES is contained in "Developing Your User Management Specifications" in *Sun Java Enterprise System 5 Installation Planning Guide*. More extensive schema instructions are contained in the Directory Server documentation "Designing a Directory Schema" in *Sun Java System Directory Server Enterprise Edition 6.2 Deployment Planning Guide* and the Access Manager documentation "To Add Indexes to Directory Server" in *Sun Java System Access Manager 7.1 Postinstallation Guide*.

The installation process configures the directory for the specified schema as follows:

- To establish a Schema 1 directory, install Directory Server. Schema 1 is the default schema version.
- To establish a Schema 2 directory, install Directory Server and Access Manager. Installing Access Manager modifies the directory and converts a Schema 1 directory to a Schema 2 directory. Schema 2 supports the Access Manager single sign-on feature. If your solution includes Access Manager, you must use Schema 2.

Getting the Java ES Software

This section contains questions about the various ways of getting the Java ES software, including how to make it available within your workplace.

Q16: How do I get the Java ES software?

Answer: Java ES 5 software was available as a download, on DVDs, and preloaded on your Sun system. Java ES 5 Update 1 software is only available as a download. Go to "Q17: What downloads are available?" on page 8.

For existing Java ES 5 customers who want to update their current installations, discrete patches as well as accumulated patch clusters are available here (search on keyword `java_es-5` to locate patches for Java ES 5): http://sunsolve.sun.com/show.do?target=patches/patch-access

Q17: What downloads are available?

Answer: There are a number of Java ES distribution bundles that can be downloaded from the Web. These are available by platform. You can also choose suite downloads. ISO images are not available for download. The Download FAQ (http://www.sun.com/download/faq.xml) answers questions you might have, such as how long a download will take or how to resolve download problems.

To access the Java ES download files, do the following:

1. At the main Sun page (http://www.sun.com/), click the Downloads tab.

2. Under Enterprise Computing, click Java Enterprise System.

3. In the Java ES table, click Download.

4. Scroll to the software list and put a checkmark in the box next to Java Enterprise System.

5. Scroll to the bottom of the page and click Get Downloads & Media.

6. Click the link called Multiplatform.

7. After you register and accept the license agreement, scroll the Downloads page to select the download you want.

8. Click the link called Download selected with Sun Download Manager.

Some or all of the following platform downloads are available:

Distribution File Name	Description

`java_es-5u1-ga-solaris-sparc.zip`
 	
`java_es-5u1-ga-solaris-x86.zip`
 	
`java_es-5u1-ga-linux-x86.zip`
	Integrated Java ES installer, full distribution. Uses native OS packaging. For full component list, see "Java ES Components Used in This Release" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

`sjsasee8_2.zip`	Application Server EE 8.2 zip distribution. An alternate distribution for Application Server 8.2 that does not use native OS packaging. Can be installed by non-root users. Support for all platforms is included in the single zip file.

Distribution File Name	Description
DSEE.6.2.Solaris-Sparc-full.tar.gz DSEE.6.2.Solaris9-X86-full.tar.gz DSEE.6.2.Solaris10-X86_AMD64-full.tar.gz DSEE.6.2.Redhat-X86-full.tar.gz	Directory Server EE 6.2 zip distributions. Alternate distributions for Directory Server 6.2 that do not use native OS packaging. Can be installed by non-root users. Include Directory Server components not available in the integrated Java ES installer, specifically: ■ Directory Editor 6 ■ Directory Server Resource Kit 6 ■ Identity Synchronization for Windows
iWay55sp1.zip	iWay Adapters 5.5 zip distribution. iWay Adapters are not included in the integrated Java ES installer.

For Solaris OS, the full Java ES distribution contains Sun Cluster 3.1 8/05 and Sun Cluster Geographic Edition 2006Q4 software. The individual Sun Java Availability Suite download contains Sun Cluster 3.2 and Sun Cluster Geographic Edition 3.2 software.

For existing Java ES 5 customers who want to update their current installations, accumulated patch clusters are available here: http://sunsolve.sun.com/show.do?target=patches/patch-access

The following suite downloads are available (Availability Suite is same as Java ES 5):

Distribution File Name	Description
java_es-5u1-appsuite-ga-*-*.zip java_es-5-availsuite-ga-*-*.zip java_es-5u1-identsuite-ga-*-*.zip java_es-5u1-websuite-ga-*-*.zip	Integrated Java ES installer suite distributions use native OS packaging and contain suite subsets of the Java ES components. (http://www.sun.com/software/javaenterprisesystem/compare.xml).

Q18: How do I put the software in a shared location?

Answer: After you expand the distribution bundle, you can put the software in a shared location for others to access by following the instructions in "Making an Installation Image on Your Network" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q19. What is in the Java ES 5 Update 1 media distribution kit?

Answer: There is no formal media distribution kit for Java ES 5 Update 1. Zip files are available for download, but no DVDs or CDs are provided. See "Q17: What downloads are available?" on page 8

Running the Installer

This section contains questions about running the Java ES installer.

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Q20: How do I run the Java ES installer?

Answer: To run the Java ES installer, you must be superuser on a host. You can install Java ES interactively using the graphical or text-based interface, or silently by means of a reusable script called a state file. The Java ES product documentation contains syntax and examples for using the installation commands in Appendix B, "Installation Commands," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

- **Graphical mode** This interactive mode provides a wizard that leads you through the process of installing Java ES software on a graphical workstation. Instructions for using the graphical installer are contained in Chapter 3, "Installing With the Graphical Interface," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. The installer tutorial provides a walkthrough of the graphical installer. See Sun Java Enterprise System 5 Update 1 Installer Tutorial for UNIX.

  To run the graphical installer, type the following at the command line: `./installer`

- **Text-based mode** This interactive mode provides the same functionality as graphical mode, but you are prompted for responses on a line-by-line basis in a terminal window. Instructions for using the text-based installer are contained in Chapter 4, "Installing With the Text-Based Interface," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

  To run the text-based installer, type the following at the command line: `./installer -nodisplay`

- **Silent mode** Silent mode is a non-interactive method used for installing Java ES software on multiple hosts that share similar configurations. To create the installation script, you first perform an interactive session during which your responses to the installer are captured as a set of name-value pairs in a state file. You edit the state file for host specifics, then use the state file as input to run the installer on other hosts. This process allows you to propagate one configuration across multiple hosts in your enterprise. Instructions for using silent mode are contained in Chapter 5, "Installing in Silent Mode," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*, including Appendix C, "Example State File," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

At the end of a successful interactive installation session, you are given an option of registering your installation with Sun by using the Java ES Reporter utility. For a description of Java ES Reporter, refer to "How Java ES Reporter Works" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Tip – To practice using the installer, type the following command which runs the graphical installer without installing software: `./installer -no`

Q21: Can the installer upgrade components that are already on my host?

Answer: Yes and no, depending on the type of component you want to upgrade.

- **Product components** In general, product components cannot be upgraded by the installer. If the installer detects incompatible versions of product components on the host, you must remove or upgrade these components before installation can proceed.

  Note – If the installer finds upgradable versions of Application Server, HADB, Java DB, or Message Queue on the host, it marks them as upgradable in the Choose Software Components page and will upgrade them if you select them. Upgradable versions can mean earlier versions of Java ES or Solaris-bundled versions of Application Server and Message Queue.

- **Shared components** Shared components are automatically upgraded whenever the Java ES installer installs or upgrades a product component. In addition, for certain upgrades or Solaris 10 zones scenarios, you can manually install or upgrade all shared components to Java ES 5 Update 1 by selecting the All Shared Components item on the Choose Software Components page. These scenarios are described in the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*. For a general understanding of zones in relation to Java ES, see Appendix A, "Java ES and Solaris 10 Zones," in *Sun Java Enterprise System 5 Installation Planning Guide*.

Q22: What is the difference between the Configure Now and Configure Later configuration types?

Answer: The installer gives you the option of performing initial configuration for many of the Java ES components during installation.

- **Configure Now** This configuration type prompts you to enter the initial configuration values during the installation session. Configure Now can be selected for only some components. If you select components for Configure Now that cannot be configured during installation, the installer indicates that it will not configure them. You will configure them after installation.
  - Components that can be configured during installation include Access Manager, Application Server, Directory Server, HADB, Portal Server, Portal Server Secure Remote Access, Web Server, and Web Proxy Server.
  - Components that cannot be configured during installation include Directory Proxy Server, Java DB, Monitoring Console, Service Registry, and Sun Cluster software .
- **Configure Later** This configuration type instructs the installer to copy component software packages to the host. You might be asked to enter a few values that are necessary for copying the packages. The installer proceeds without doing further configuration, and no runnable instances are created. You create runnable instances after installation by supplying configuration values when prompted by component configuration wizards or in configuration files. You can select Configure Later for all components.

The configuration type that you selected (Configure Now or Configure Later) applies to an entire installation session.

Regardless of whether you perform the initial configuration in the installer (Configure Now) or manually after installation, there is usually some additional postinstallation configuration required. See "Q28: What postinstallation configuration is required?" on page 13

Q23: How can I reproduce the same installation on another host?

Answer: You can propagate one configuration across multiple hosts in your enterprise by using silent mode of the Java ES installer. For instructions, see Chapter 5, "Installing in Silent Mode," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q24: Does the installer check dependencies on remote components?

Answer: In general, the installer checks dependencies and versions on the local host only. However, one situation exists where the installer interacts with a remote host: if you select the Configure Now configuration type and are using a remote component (such as Directory Server or Access Manager) to satisfy a dependency. In this case, the installer tries to connect with the remote component during the installation session. If the remote component is not available, installation stops, and you receive an error message. To avoid this situation, install, configure, and start any remote components before starting an installation session.

In a Configure Later installation, the installer runs as though the remote component is available and does no checking. Installation succeeds, and you can proceed to postinstallation configuration. However, if the remote component is not available, you receive errors when you try to run any component that depends on that remote component.

Tip – To indicate to the installer that you will be using a remote component, select all the components that you will install locally and then deselect any dependency that will be fulfilled by a remote component. When you attempt to proceed, the installer prompts you to fulfill any requirements for the component that you deselected. At this point, you indicate to the installer that you are using a remote component to fulfill a dependency.

Q25: How do I use a third-party web container?

Answer: On Solaris OS, Access Manager and Portal Server can use the third-party web containers BEA WebLogic Server or IBM WebSphere Application Server. On Linux, both are supported for Configure Later, but only BEA WebLogic is supported for Configure Now.

To indicate a third-party web container to the installer, select all of your components, then deselect Sun Java Application Server or Sun Java Web Server. When you click Next, the installer displays the Web Container Selection page telling you that a web container is needed. Select Use Third-Party Web Container.

Tip – Install, configure, and start any third-party web container in your deployment before installing Java ES. For installation, configuration, and startup instructions, refer to the BEA or IBM product documentation.

Q26: How do I get patches that the installer indicates are missing?

Answer: When the installer performs a system check, the installer might identify missing patches. In most cases, the installer cannot proceed until you install the patches. On Solaris OS, patch clusters offer all the needed Java ES patches. Information on Java ES 5 Update 1 software and patches is contained in the following:

- "Getting the Java Enterprise System 5 Update 1 Software" in *Sun Java Enterprise System 5 Update 1 Release Notes*
- "Patch Information" in *Sun Java Enterprise System 5 Update 1 Release Notes*
- "Q8: What are the system requirements for installation?" on page 5

In some situations, you need to cancel the installation, but in others you can leave the installer running while you apply the patch. The Sun Java Enterprise System Installation Guide contains an example procedure for installing a patch.

For a Kernel Patch Any patch which is kernel-related will not be able to be applied with the installer running. For such patches, such as patches on libc, do the following:

1. Exit the installer.
2. In a browser, go to the patch site for your operating system and find the patch you need:
   - Sun OS: http://sunsolve.sun.com
   - Linux: http://www.redhat.com
3. Download the patch to the local host.
4. Bring the host to single user mode.
5. Apply the patch.
6. Reboot the host.
7. Restart the installer.

For a Non-Kernel Patch For required patches that are not kernel-related, do the following:

1. Leave the installer running and open a separate terminal window.
2. In a browser, go to the patch site for your operating system and find the patch you need:
   - Sun OS: http://sunsolve.sun.com
   - Linux: http://www.redhat.com
3. Download the patch to the local host.
4. In the new terminal window, apply the patch.
5. Tell the installer to recheck the host and continue with installation.

Q27: How do I know if my Java ES installation succeeded?

Answer: After the installer indicates that installation is complete, you can view directories or the product registry, or perform some component exercises to verify that the software packages have been successfully copied to your host. See "Verifying After Installation" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Performing Postinstallation Configuration and Verification

This section contains questions about completing postinstallation configuration and then verifying that the Java ES components work.

Q28: What postinstallation configuration is required?

Answer: When the Java ES installer finishes, most product components require additional configuration to work together. The extent of the configuration tasks varies depending on the configuration type you selected during installation (Configure Now or Configure Later), whether you installed Sun Cluster software or Monitoring Console, and how much extended configuration is needed to build your deployment.

For product components that require postinstallation configuration, refer to Chapter 6, "Completing Postinstallation Configuration," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. (If components are not included in this listing, postinstallation configuration is not required.)

- **Configure Now or Configure Later configuration type**
    - If you selected Configure Now, the installer prompted you for configuration values for the components being configured. Very little additional configuration is required for the components you configured, but there might be some.
    - If you selected Configure Later, the installer placed the component packages in their respective directories, parameter setting was not done, and most components are not yet operational. In most cases, you will use the component configuration tools and files to complete a Configure Later installation.
- **Sun Cluster software** Sun Cluster configurations are supported only on Solaris OS, using the Configure Later configuration type. If you installed Sun Cluster software, you need to perform postinstallation configuration as described in "Sun Cluster Postinstallation Configuration" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Understanding the high-level Sun Cluster installation tasks might help with configuration. See "Sun Cluster Software Example" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.
- **Monitoring Console** To perform monitoring, you must enable and sometimes configure the monitoring service with each component you have installed. For instructions, see Chapter 3, "Installing and Using Monitoring Console," in *Sun Java Enterprise System 5 Update 1 Monitoring Guide*. You can see the basic installation sequence in "Monitoring Console Only Example" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.
- **Man pages** If the product components you installed have man pages, some configuration might be required. See "Verifying Man Pages " in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Table 6-1 lists the Java ES components that have man pages.

After any type of Java ES deployment, you can use the component configuration tools to make additional changes or enhancements to your configuration.

Q29: How do I know if the postinstallation configuration succeeded?

Answer: After you complete postinstallation configuration, follow the postinstallation verification procedure to verify that your Java ES components have basic functionality. See "Verifying After Postinstallation Configuration" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. The installer does not start the Java ES components, so starting the components is part of verifying success of the installation and the initial configuration.

The verification procedure determines only whether the basic installed Java ES is working, not whether you installed the components correctly according to your deployment plan. If the resulting installation does not meet your needs, you can run the uninstaller to uninstall all of the product components, and then perform a new installation.

Q30: How do I start and stop Java ES components?

Answer: You activate Java ES by starting the components in a specific sequence, beginning with the basic services provided by Directory Server and your web container (Web Server or an application server). When you start the web container, the components that run in that web container, such as Portal Server and Access Manager, are automatically started. The preferred startup sequence is described in Table 7–1 in "Verifying After Postinstallation Configuration" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. To stop Java ES, stop the components in the reverse order. Instructions for starting and stopping individual product components are contained in Chapter 7, "Verifying Installed Product Components," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

What to Do After Installation

This section contains questions about how to proceed after installation is verified.

- "Q31: How do I install more components on a host after I've already done an installation?" on page 14
- "Q32: How do I start using the Java ES components after installation?" on page 14
- "Q33: If I did an evaluation installation, can I reconfigure the evaluation installation to create a production environment?" on page 14

Q31: How do I install more components on a host after I've already done an installation?

Answer: To install additional components, run the installer again. The installer surveys the host to find any installed Java ES components. If the installed component versions are correct, the installer uses the installed components to satisfy the dependencies and requirements for the additional components you are adding to the host. Any version-compatible components that are already installed are not available on the selection page of the installer. For example, you have installed Access Manager and its required components. In a later installation session you decide to install Portal Server. The installed instance of Access Manager is the correct Java ES version, and so is used to meet the Portal Server dependency on Access Manager. You are not asked to install Access Manager again.

Note – When adding components to a host where a Java ES installation has already been done, you will need to specify the correct paths and passwords if the new component depends on a component that is already installed and configured. If you do not remember the paths or passwords, refer to the Installation Summary for the original installation before you add any components to the host. Default installation directories and ports are listed in Chapter 2, "Default Installation Directories and Ports," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*.

Q32: How do I start using the Java ES components after installation?

Answer: After you have installed and verified the Java ES components, you can refer to the documentation for a particular Java ES 5 component (http://docs.sun.com/app/docs/prod/entsys.5#hic). If you are a new user, look for introductory or getting started material for the product component. This information is often in a document called technical overview.

Q33: If I did an evaluation installation, can I reconfigure the evaluation installation to create a production environment?

Answer: No, reconfiguring your evaluation installation does not usually result in a viable production deployment. Instead, do the following:

1. Remove your evaluation installation of Java ES using the uninstaller. See Chapter 8, "Uninstalling," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

2. Examine the product registry to verify that all of the Java ES files from the previous release have been removed. See "Q40: What is the product registry and why should I care about it?" on page 17

3. Examine your host files to verify that no Java ES packages are present.

4. Install your production deployment on multiple hosts based on your formal deployment and installation plans. See

Running the Uninstaller

This section contains questions about running the Java ES uninstaller.

Q34: Where can I find the uninstaller?

Answer: When you expand the Java ES distribution bundle, you will not find the `uninstall` utility because it does not yet exist on your host. During installation, the Java ES installer places the uninstaller in the following location:

- Solaris OS: `/var/sadm/prod/SUNWentsys5u1`
- Linux: `/var/sadm/prod/sun-entsys5u1`

If you do not see the uninstaller at this location, two possibilities exist:

- Java ES software has not been installed on the host.
- All Java ES software has been uninstalled. (After all product components are uninstalled, the uninstaller removes itself from the host.)

Before performing an uninstallation, you must understand component uninstallation behavior. See "Reviewing Uninstallation Behavior for Java ES Product Components" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Not all product components behave in the same way during uninstallation.

To perform uninstallation, see Chapter 8, "Uninstalling," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Tip – To run the uninstaller without uninstalling any software, use the `uninstall -no` command. The `-no` option is useful for familiarizing yourself with the uninstaller or for creating a state file for a subsequent silent uninstallation.

Q35: What can be uninstalled with the Java ES uninstaller?

Answer: The Java ES uninstaller removes only product components that were installed by the Java ES installer. You must use the version of the uninstaller that was placed on your host during initial Java ES installation.

You cannot use the uninstaller to remove shared components. When you install a new version of Java ES, the shared components are automatically upgraded to correct versions by the installer. If you need to manually uninstall shared components, refer to the *Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX*.

You cannot use the uninstaller to remove Sun Cluster software unless the Sun Cluster software has never been configured.

To remove components that were not installed by the Java ES installer, follow instructions in the documentation for that component.

Before uninstalling, you must be familiar with the following information in the product documentation:

- Impact of uninstaller limitations. See "How the Uninstaller Works" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.
- Uninstaller behavior as it affects the product components. See "Reviewing Uninstallation Behavior for Java ES Product Components" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

- The overall process for performing uninstallation. See Chapter 8, "Uninstalling," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q36: How do I know if my Java ES uninstallation succeeded?

Answer: One way to determine if the uninstallation succeeded is to compare the packages listed in the installation log with the packages listed in the uninstallation log. You can also check the product registry to verify that Java ES components have been removed. See "Q40: What is the product registry and why should I care about it?" on page 17

In some cases, the uninstaller does not remove all of the packages or directories. You might not discover this situation until you try to do a new Java ES installation. If this occurs, check the appropriate troubleshooting write ups for guidance on removing files or components that are left behind. See "Resolving Uninstallation Problems" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Troubleshooting Java ES Installation Problems

This section contains questions about troubleshooting problems with Java ES installation or uninstallation.

- "Q37: What do I do if I have trouble during installation?" on page 16
- "Q38: What logs are available and how will they help me?" on page 17
- "Q39: What are the known Java ES installation issues?" on page 17
- "Q40: What is the product registry and why should I care about it?" on page 17
- "Q41: What troubleshooting topics are addressed in the Java ES Installation Guide?" on page 18
- "Q42: If I made a mistake and want to erase everything and start over, what do I do?" on page 19
- "Q43: What packages are installed for Java ES 5 Update 1?" on page 19
- "Q44: Where do I get troubleshooting information for individual components?" on page 19

Q37: What do I do if I have trouble during installation?

Answer: When troubleshooting, try to identify the first problem you encountered. The first problem often leads to subsequent problems, so solving the first problem could resolve other problems.

Tip – Sun Forums can be very helpful in identifying problems that have already come up for discussion and also for screening solutions that might apply to your installation. See
http://www.sun.com/bigadmin/hubs/javaes/community/index.jsp

The general process for troubleshooting Java ES installation includes the following activities:

1. Examine the logs to see if errors exist that indicate what is wrong. See "Q38: What logs are available and how will they help me?" on page 17

2. Verify that you met all of the installation prerequisites for the components you installed. See "Verifying Installation Prerequisites" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

3. Check to see if your resources fulfill Java ES system requirements. See "System Requirements" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

   - Adequate disk space
   - Adequate memory
   - Correct patches applied
   - Correct ports specified
   - Correct IP addresses specified

4. Check the media for dirt or damage.

5. Verify that you have installed correctly with regard to the interdependencies of the Java ES components you installed. See "Q12: Are there component interdependencies that I need to know about?" on page 6

6. Verify that you have configured the Java ES components correctly according to the postinstallation configuration instructions. See Chapter 6, "Completing Postinstallation Configuration," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

7. Check your Directory Server connectivity.

8. Verify that the Java ES packages that should be installed are installed. See Chapter 5, "List of Installable Packages," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*.

9. Verify that the passwords you are using are correct.

Note – In the Java ES installer, neither white space nor the following symbols can be used in administrator passwords: ; & ( ) ! | < > ' ? $ \ ^ \ # / , @ %

For additional material on these activities, see "How to Troubleshoot Problems" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q38: What logs are available and how will they help me?

Answer: Information on all installation events is captured in the installation logs described in "Examining Installation Log Files" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. Always start any troubleshooting by scanning the log events to see what errors occurred. The logs usually give you an idea of what to do next. Two types of tracking files are available after Java ES installation:

- **Installation summary** The installation summary lists each component installed and the settings you specified. If you chose Configure Now, this summary includes all of the configuration values except passwords.

- **Installation log** Installation logs display the installer log messages. The `JavaES_Install_log.`*timestamp* is one of the most critical logs to examine in the event of a configuration issue. This log contains the output of the configuration tools for each product component that was installed in a Configure Now installation.

The graphical Log Viewer is a utility that can be used to view Unified Logging Format (ULF) messages from the Java ES installation log. See "Using the Log Viewer" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Links to the installation logs and summary are on the last page of the installer. Log files are located here:

- Solaris OS: `/var/sadm/install/logs`
- Linux: `/var/opt/sun/install/logs`

If a problem occurs when starting a particular component, examine the troubleshooting tips tables to find the location of log files for the individual Java ES components. See "Product Component Troubleshooting Tips" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

Q39: What are the known Java ES installation issues?

Answer: Known issues (bugs) are problems in the Java ES software or documentation. Some of these issues might impact installation. You should be aware of all known installation issues before doing an installation. Known issues are discussed in the following Java ES release notes:

- *Sun Java Enterprise System 5 Update 1 Release Notes*
- Java ES 5 Update 1 Release Notes Collection for product components (`http://docs.sun.com/app/docs/coll/1315.3`)

Q40: What is the product registry and why should I care about it?

Answer: The product registry is a repository where all packages are registered when they are installed. The registry contains information such as installation location, product version, and component dependencies. All installed packages have entries in the product registry. The Solaris product registry provides a graphical interface.

Note – Before installation, make a copy of your product registry so that you can restore it if installation fails. The product registry is located here:

- Solaris OS: `/var/sadm/install/productregistry`
- Linux: `/var/opt/sun/install/productregistry`

When packages are removed by the uninstaller or the package remove commands (Solaris `pkgrm` or Linux `rpm -e`), those package entries are deleted from the product registry. However, you might encounter a situation where your product registry has not been fully updated. This situation causes a subsequent installation to fail because those components are still considered to be on the host (they are still in the product registry). In this case, update the product registry to correctly reflect the packages that are actually installed on your host.

In rare cases, the installer allows installation to proceed but only installs and registers some of the packages. You might not discover this fact until you try to start the components. In this case, run the uninstaller allowing it to update the registry. If the registry is still not correct after uninstalling the Java ES components, the registry might be corrupted. In this case, restore the original product registry and perform a new Java ES installation.

Q41: What troubleshooting topics are addressed in the Java ES Installation Guide?

Answer: The following topics are addressed in the Chapter 9, "Troubleshooting," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*:

- "Installation Fails Due to Files Left Behind During an Uninstallation" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Installation Fails Due to Removed Shared Components in Product Registry After Uninstallation" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Cannot Configure IBM WebSphere as the Portal Server Web Container" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Unexpected External Error Occurs" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Graphical Installer Seems Unresponsive" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Silent Installation Fails: "State File is Incompatible or Corrupted"" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Silent Installation Fails After Editing the State File" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Man Pages Do Not Display" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Cannot Find Uninstaller" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Uninstallation Fails, Leaving Behind Files" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Product Registry Is Corrupted" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Port Number Conflicts" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Compromised Security Around the Root Password" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Monitoring Rules Stop Working (status Unknown)" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

- "Portal Database Not Found After Java DB Restart" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*

Q42: If I made a mistake and want to erase everything and start over, what do I do?

Answer: You can cancel an installation up to the point where the installer has begun copying the software to the host. If you have gone past the point where you can cancel the installation, you need to complete the installation, and then run the uninstaller. The high-level steps for this process are as follows:

1. Complete the installation, even if it is wrong. You need the uninstaller, which is not available until the installation is complete.

2. Run the uninstaller and uninstall everything. The uninstaller will also uninstall itself. See Chapter 8, "Uninstalling," in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*.

3. Examine the product registry to see what is recognized on the host. The Java ES components should be removed. See "Q40: What is the product registry and why should I care about it?" on page 17

4. Check to see if any Java ES directories or packages are present. See Chapter 5, "List of Installable Packages," in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*. If any packages are present, remove them manually using the UNIX remove commands:

   - Solaris OS: `pkgrm`
   - Linux: `rpm -e`

5. Recheck the product registry to verify that any Java ES components you removed are no longer present.

6. Start a new installation.

Note – If you cannot resolve issues that are preventing a new installation, you might have to reinstall the operating system on the host. Be sure to back up any important data before reinstalling the operating system.

Q43: What packages are installed for Java ES 5 Update 1?

Answer: The Java ES Update 1 packages are listed here:

- "Solaris Packages" in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*
- "Linux Packages" in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*

See Also

"Default Installation Directories" in *Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX*

Q44: Where do I get troubleshooting information for individual components?

Answer: The Java ES documentation contains various troubleshooting tools and tips for the product components. See "Product Component Troubleshooting Tips" in *Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX*. In addition, the Java ES Troubleshooting task page contains links to more specific troubleshooting solutions for the product components. See the Troubleshooting page (http://www.sun.com/bigadmin/hubs/javaes/tasks/troubleshoot.jsp).