Sun Java Enterprise System 5 Update 1 Upgrade Guide for Microsoft Windows

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Part No: 820–2506–10
September 2007

070910@18741

Contents

Preface

The *Sun™ Java™ Enterprise System 5 Update 1 Upgrade Guide for Microsoft Windows* contains the information you need to upgrade Sun Java Enterprise System (Java ES) software in a Windows Operating System. The Guide covers upgrade from Java ES 5 (Release 5) to Java ES 5U1 (Release 5U1).

This preface contains the following sections:

Who Should Use This Book

This book is intended for system administrators, or software technicians who wants to upgrade Java ES software. This guide assumes you are familiar with the following:

- Installation of enterprise-level software products
- Java ES components currently deployed in your environment
- System administration and networking on your supported Java ES platform

How This Book Is Organized

This guide includes the following chapters:

- Chapter 1, "Planning for Upgrades" provides information for planning the upgrade of the Java ES software to Java ES 5U1.
- Chapter 2, "Upgrading Java ES Shared Components" provides information on upgrading Java ES shared components to Java ES 5 (Release 5U1).
- Chapter 3, "Directory Server" provides information for upgrading Directory Server.
- Chapter 4, "Directory Proxy Server" provides information for upgrading Directory Proxy Server.

- Chapter 5, “Web Server” provides information for upgrading Web Server.
- Chapter 6, “Java DB” provides information for upgrading Java DB.
- Chapter 7, “High Availability Session Store”
- Chapter 8, “Message Queue” provides information for upgrading Message Queue.
- Chapter 9, “Application Server” provides information for upgrading Application Server.
- Chapter 10, “Service Registry” provides information for upgrading Service Registry.
- Chapter 11, “Web Proxy Server” provides information for upgrading Web Proxy Server.
- Chapter 12, “Access Manager” provides information for upgrading Access Manager
- Chapter 13, “Monitoring Console” provides information for upgrading Access Manager.
- Chapter 14, “Portal Server” provides information for upgrading Portal Server.

Related Books

The `http://docs.sun.com` web site enables you to access the Sun technical documentation online. You can browse the archive or search for a specific book title or subject.

Books in This Documentation Set

The Sun Java Enterprise System manuals are available as online files in Portable Document Format (PDF) and Hypertext Markup Language (HTML) formats. Both formats are readable by assistive technologies for users with disabilities.

The Sun Java Enterprise System documentation includes information about the system as a whole and information about its components. This documentation can be accessed at `http://docs.sun.com/coll/1286.3`.

The following table lists the system-level manuals in the Sun Java Enterprise System documentation set. The left column provides the name and part number location of each document and the right column describes the general contents of the document.

TABLE P–1 Java ES Documentation

Document Title	Contents
Sun Java Enterprise System 5 Update 1 Release Notes	Contains the latest information about Java ES, including known problems. In addition, components have their own release notes listed in the Release Notes Collection (`http://docs.sun.com/coll/1315.2`)

TABLE P–1 Java ES Documentation *(Continued)*

Document Title	Contents
Sun Java Enterprise System 5 Technical Overview	Introduces the technical and conceptual foundations of Java ES. Describes components, the architecture, processes, and features.
Sun Java Enterprise System Deployment Planning Guide	Provides an introduction to planning and designing enterprise deployment solutions based on Java ES. Presents basic concepts and principles of deployment planning and design, discusses the solution life cycle, and provides high-level examples and strategies to use when planning solutions based on Java ES.
Sun Java Enterprise System 5 Installation Planning Guide	Helps you develop the implementation specifications for the hardware, operating system, and network aspects of your Java ES deployment. Describes issues such as component dependencies to address in your installation and configuration plan.
Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX	Guides you through the process of installing Java ES. Also shows how to configure components after installation, and verify that they function properly.
Sun Java Enterprise System 5 Update 1 Installation Reference for UNIX	Gives additional information about configuration parameters, provides worksheets to use in your configuration planning, and lists reference material such as default directories and port numbers.
Sun Java Enterprise System 5 Update 1 Upgrade Guide for UNIX *Sun Java Enterprise System 5 Update 1 Upgrade Guide for Microsoft Windows*	Provides instructions for upgrading to Java ES 5 Update 1 from previously installed versions.
Sun Java Enterprise System 5 Update 1 Monitoring Guide	Provides instructions for setting up the Monitoring Framework for each product component and using the Monitoring Console to view real-time data and create monitoring rules.
Sun Java Enterprise System Glossary	Defines terms that are used in Java ES documentation.

Accessing Sun Documentation

For product downloads, professional services, service packs and support, and additional developer information, refer to the following online resources:

- Download Center (`http://www.sun.com/software/download/`)
- Professional Services (`http://www.sun.com/service/sunps/sunone/index.html`)
- Sun Enterprise Services, Windows Service Packs, and Support (`http://sunsolve.sun.com/`)

- Developer Information (`http://developers.sun.com/prodtech/index.html`)

The following location contains information about Sun Java Enterprise System and its components:

`http://www.sun.com/software/learnabout/enterprisesystem/`

You can view, print, or purchase a broad selection of Sun documentation, including localized versions, at `http://www.sun.com/documentation`.

Related Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Searching Sun Product Documentation

Besides searching Sun product documentation from the docs.sun.com℠ web site, you can use a search engine by typing the following syntax in the search field:

search-term `site:docs.sun.com`

For example, to search for "broker," type the following:

```
broker site:docs.sun.com
```

To include other Sun web sites in your search (for example, java.sun.com, www.sun.com, and developers.sun.com), use `sun.com` in place of `docs.sun.com` in the search field.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–2 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is `rm` *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*. A *cache* is a copy that is stored locally. Do *not* save the file. **Note:** Some emphasized items appear bold online.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. To share your comments, go to `http://docs.sun.com` and click Send Comments. In the online form, provide the full document title and part number. The part number is a seven digit or nine digit number that can be found on the title page of the guide or at the top of the document. For example, the part number of this book is **820–2506**.

◆ ◆ ◆ CHAPTER 1

Planning for Upgrades

This chapter provides information used for planning the upgrade of Sun Java™ Enterprise System (Java ES) software from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1) in a Windows operating system. This chapter contains the following sections:

Java ES 5 Update 1 Components

As an introduction to planning the upgrade of Java ES software, this section reviews the components included in Java ES 5 Update 1. Depending on your upgrade scenario, you might need to upgrade one or more of these components to their Release 5U1 version.

Java ES components are grouped into different types, as described in the *Java Enterprise System Technical Overview*:

- **Product Components.** Java ES product components consist of:
  - System service components, which provide the main Java ES infrastructure services
  - Service quality components, which enhance system services

  Product components are upgraded from Release 5 to Release 5U1 by applying the required patches. See "Java ES Upgrade Through Application of Patches" on page 26.
- **Shared Components.** Java ES shared components are locally shared libraries upon which Java ES product components depend. Shared components are also upgraded by the application of patches.

Release 5U1 Product Components

Release 5U1 product components are listed alphabetically in the following table, along with abbreviations used in subsequent tables. For the service quality components among them, the table includes the type of service enhancement they provide.

TABLE 1–1 Release 5U1 Product Components

Product Component	Abbreviation	Version	Type
Access Manager	AM	7.1[1]	System service component
Application Server	AS	8.2 EE Patch 2	System service component
Directory Proxy Server	DPS	6.2	Service quality: access component
Directory Server	DS	6.2	System service component
High Availability Session Store	HADB	4.4.3[1]	Service quality: availability component
Java DB	JavaDB	10.2.2.1	System Service Component
Message Queue	MQ	3.7 UR2	System service component
Monitoring Console	MC	1.0 Update 1	Service quality: administrative component
Portal Server	PS	7.1[1]	System service component
Portal Server Secure Remote Access	PSRA	7.1[1]	Service quality: access component
Service Registry	SR	3.1 Update 1	System service component
Web Proxy Server	WPS	4.0.5	Service quality: access component
Web Server	WS	7.0 Update 1	System service component

[1] This is the same version delivered with Java ES 5 and has not been updated at the time of the release of Java ES 5 Update 1.

Release 5U1 Shared Components

Release 5U1 shared components are listed in the following table:

TABLE 1–2 Release 5U1 Shared Components

Shared Component	Version	Abbreviation
Apache Common Logging	1.0.3[1]	ACL
Jakarta ANT Java/XML-based build tool	1.6.5[1]	ANT
Berkeley Database	4.2.52[1]	BDB
Common Agent Container	1.1 and 2.1	CAC
FastInfoSet	1.0.2[1]	FIS
International Components for Unicode	3.2 Patch 1	ICU
Instant Messenger SDK	6.2.9[1]	IM-SDK
Java Platform, Standard Edition	5.0 Update 12	Java SE
JavaBeans™ Activation Framework	1.0.3[1]	JAF
Java Studio Web Application Framework	2.1.5[1]	JATO
JavaHelp™ runtime	2.0[1]	JHELP
JavaMail ™ runtime	1.3.2[1]	JMAIL
Java Architecture for XML Binding runtime	2.0.3[1]	JAXB
Java API for XML Processing	1.3.1[1]	JAXP
Java API for XML Registries runtime	1.0.8[1]	JAXR
Java APIs for XML-based Remote Procedure Call runtime	1.1.3_01[1]	JAX-RPC
Java API for Web Services runtime	2.0[1]	JAXWS
Java Dynamic Management™ Kit runtime	5.1_03	JDMK
Java Security Services (Network Security Services for Java)	4.2.5 and 3.1.11	JSS and JSS3

[1] This is the same version delivered with Java ES 5 and has not been updated at the time of the release of Java ES 5 Update 1.

TABLE 1–2 Release 5U1 Shared Components *(Continued)*

Shared Component	Version	Abbreviation
JavaServerPages™ Standard Tag Library	1.0.6[1]	JSTL
KT Search Engine	1.3.4[1]	KTSE
LDAP C SDK	6.0[1]	LDAP C SDK
LDAP Java SDK	4.19[1]	LDAP J SDK
Mobile Access Core	6.2[1]	MA Core
Netscape Portable Runtime	4.6.7	NSPR
Network Security Services	3.11.7	NSS
SOAP Runtime with Attachments API for Java	1.3[1]	SAAJ
Simple Authentication and Security Layer	2.19	SASL
Sun Java Monitoring Framework	2.0 Update 1[1]	MFWK
Sun Java Web Console	3.0.3	SJWC
Web services Common Library	2.0[1]	WSCL
XML Web Services Security	2.0[1]	XWSS

[1] This is the same version delivered with Java ES 5 and has not been updated at the time of the release of Java ES 5 Update 1.

Upgrade Plan Considerations

An upgrade plan is the essential starting point for performing an upgrade to Java ES 5 Update 1 (Release 5U1). In an upgrade plan you specify the Java ES components you will upgrade to Release 5U1 and the sequence by which you will upgrade those components on the different computers or operating system instances in your Java ES deployment.

Your upgrade plan depends on a number of factors, each of which should be given careful consideration in preparing for upgrade to Release 5U1:

- "Upgrade Objectives and Priorities" on page 19
- "The Java ES Release Model" on page 19
- "Upgrade Dependencies" on page 24
- "Selective Upgrade or Upgrade All" on page 25

Upgrade Objectives and Priorities

An upgrade plan reflects your upgrade objectives and priorities, which often depend on the scope and complexity of your existing deployment architecture.

For example, your Java ES deployment architecture might consist of a single Java ES component running on a single computer, and your upgrade objective is to fix some bug in the previous software release. On the other hand, your Java ES deployment architecture might consist of a number of interdependent Java ES components deployed across a number of different computers, and your upgrade objective is to achieve some new functionality by upgrading the minimum number of components required to achieve that end with minimal downtime.

In general, the greater the number of Java ES components and the greater the number of computers in your deployment architecture, the more complex your upgrade plan will be.

The Java ES Release Model

A key consideration in planning an upgrade is whether the objective of the upgrade is to achieve major functional enhancements or to apply bug fixes (or minor functional updates) to existing software.

The Java ES release model is a categorization scheme for Java ES releases that clarifies the nature of the releases, their relationships to one another, and the risks and planning required to upgrade from one to another.

Component Release Levels

The Java ES release model is based on a set of release levels that define the characteristics of individual Java ES component releases:

- **Major release.** The purpose of a major release is to introduce or change significant software functionality and architectural features. As such, it can introduce incompatibilities with previous versions, and operating system support may be dropped. As a result, users may be required to take specific actions in order for their applications to integrate with a major release. As part of upgrading to a new major release, users might have to perform migrations, redeployments, and possibly redesign their solutions to utilize new features or respond to the removal of old features.
- **Minor release.** The purpose of a minor release is to introduce new, non-interfering features without introducing incompatibilities. New prerequisites or dependencies can be established and previous features can be deprecated in a minor release. As compared to upgrading to a major release, users might have to perform migrations and redeployments, but a redesign of their existing solution should not be necessary.

- **Update release.** The purpose of an update release is to provide fixes to an existing component implementation so that it more accurately implements a prior release's functional specification. The update release provides for the delivery of bug fixes and a constrained set of feature enhancements such that the release remains suitable for adoption by the majority of existing users. When compared to a major or minor release an update release contains fewer, smaller and/or lower risk features. Other than in rare exceptions, an update release is 100% backwardly compatible with the prior release. Upgrading to an update release from the prior release should require minimal planning and investment.
- **Point-fix release.** The purpose of a point-fix release is to address critical customer issues quickly. Like an update release, it supports existing users, but is generally more limited or focused, typically containing only a few bug fixes. Feature enhancements or new feature additions are not allowed in a point-fix release. Upgrading to a point-fix release from the prior release should be simple an low risk.

Java ES System Release Types

A Java ES release is a consolidation of individual Java ES component releases that are synchronized and collected in a single distribution that can be used for initial installation and upgrade.

The Java ES release model specifies two general types of Java ES releases: feature releases, which can include all levels of component releases, including major and minor releases, and maintenance releases, which can include only update and point-fix releases.

The two types of Java ES releases have the characteristics described below:

Feature Release

The primary purpose of a feature release is to deliver new features and functional capabilities. While specific components within a Java ES feature release might be only update or point-fix releases, the purpose of the release is to deliver major or minor component releases. A Java ES feature release has the following general characteristics:

- The release can introduce significant interface changes, new dependencies, and/or incompatibilities with respect to Java ES components
- The release requires a longer planning cycle prior to adoption
- Upgrade to the release generally requires reconfiguration and/or migration of component data
- The release can involve significant impact or risk

Maintenance Release

The primary purpose of a maintenance release is to fix bugs in the software, so that components work as originally documented. New features are limited in number and highly constrained. A

Java ES maintenance release cannot include major or minor component releases, only update and point-fix releases. A Java ES maintenance release has the following general characteristics:

- The release cannot introduce significant interface changes, new dependencies, or incompatibilities with respect to Java ES components
- The release allows for quick adoption
- Upgrade to the release requires no reconfiguration or migration of component data
- The release involves minimal impact or risk

Java ES Release Families

A Java ES release family consists of a feature release and its associated maintenance release as illustrated in the following figure.

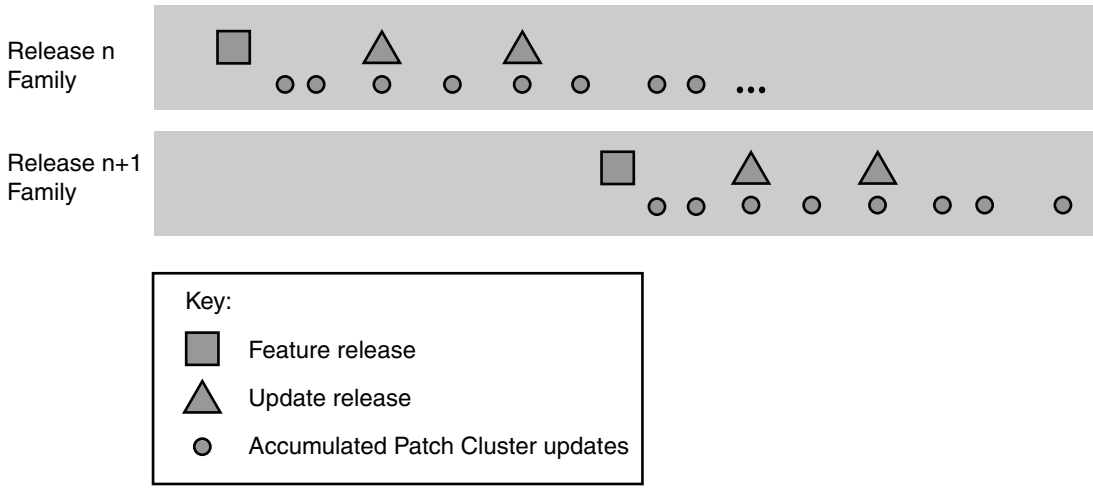

FIGURE 1–1 Java ES Release Family

A Java ES feature release initiates a release family, and a number of subsequent maintenance releases (called Java ES update releases) provide distributions that periodically consolidate intervening component update and point-fix releases. These individual component maintenance releases are independently collected in a Java ES accumulated patch cluster.

The maintenance aspect of the Java ES release model is represented by both the Java ES update release and the Java ES accumulated patch cluster, described as follows:

- **Java ES Update release.** The maintenance aspect of the Java ES release model is represented by both the Java ES update release and the Java ES accumulated patch cluster, described as follows:

As compared to a feature release, an update release contains fewer, smaller, and/or lower risk features. Other than in rare exceptions, an update release is 100% backwardly compatible with the release family with which it is associated.

Note – Java ES 5 Update 1 is a Java ES update release.

- **Accumulated patch cluster.** The accumulated patch cluster contains the latest set of individual component point-fix and update releases for the components in a release family. It facilitates upgrade to the most recent versions of all Java ES components.

  The accumulated patch cluster is established at the onset of a release family and has a life cycle corresponding to the support life of the release family. It is updated whenever a new component point fix or update release is made available. Other than in rare exceptions, the accumulated patch cluster is 100% backwardly compatible with earlier releases in its release family.

The significance of the Java ES release model, from an upgrade point of view, is that an upgrade from one Java ES release family to another (a feature upgrade) involves significant impact and risk, and requires a more complex upgrade plan, as compared to an upgrade within a release family (a maintenance upgrade).

Release Delivery Formats

The following table shows the delivery formats of the releases within the Java ES release model shown in Figure 1–1.

TABLE 1–3 Characteristics of Java ES Release Types

Release Type	Delivery Format	Suitable For
Feature Release	Available as a full distribution that contains new component packages that are generally installed using the Java ES installer.	Installation by new Java ES users and feature upgrades from previous release families.
Update Release	Available as a full distribution and also as a corresponding accumulated patch cluster. (The accumulated patch cluster supports in-place maintenance upgrades within the current release family.)	Installation by new Java ES users, feature upgrades from previous release families, and maintenance upgrades from within the current release family.

TABLE 1–3 Characteristics of Java ES Release Types *(Continued)*

Release Type	Delivery Format	Suitable For
Accumulated Patch Cluster	Available as a set of individual component patches, each of which accumulates previous sustaining patches. Patches can be applied in-place without requiring reconfiguration or migration of component data.	Maintenance upgrades from a feature release, update release, or previous individual component release within the current release family.

Supported Upgrade Paths and Strategies

Your upgrade plan depends on the Java ES release you wish to upgrade to Release 5U1. The following table describes the different upgrade paths to Release 5U1, their characteristics, and the upgrade strategies to be used in performing the upgrade.

TABLE 1–4 Upgrade Paths and Strategies

Release	Java ES Release	System Characteristics	Upgrade Strategies
Java ES 5	Release 5	Java ES 5 Update 1 (Release 5U1) supports a mixture of Release 5 and Release 5U1 product components on a single computer. Interoperability between Release 5 and Release 5U1 components is guaranteed.	The coexistence of Release 5 and Release 5U1 product components provides for the possibility of selectively upgrading Release 5 product components to Release 5U1 on a single computer within a deployment architecture consisting of multiple computers. If any Release 5U1 product component requires support of a Release 5U1 shared component, all shared components on the computer are best synchronized to Release 5U1.

TABLE 1–4 Upgrade Paths and Strategies *(Continued)*

Release	Java ES Release	System Characteristics	Upgrade Strategies
2005Q4	Release 4		Direct upgrade from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 to Release 5 and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows*.

Upgrade Dependencies

One of the main issues in planning the upgrade of any given Java ES component is that component's dependencies on other Java ES components. You should evaluate whether such other components also need to be upgraded to support the upgrade of the dependent component.

The two types of upgrade dependencies are:

- **Hard upgrade dependency**. An upgrade of a product component requires you to upgrade a component upon which it depends. This requirement can be due to new functionality, new interfaces, or bug fixes needed by the dependent component. With a hard upgrade dependency, you cannot successfully upgrade and use the dependent component without first upgrading the component upon which it depends.
- **Soft upgrade dependency**. An upgrade of a product component does not require you to upgrade the component upon which it depends. With a soft upgrade dependency, you can successfully upgrade and use the dependent component without upgrading the component upon which it depends.

Upgrading a Java ES product component requires you to upgrade all the components upon which it has *hard* upgrade dependencies, but, with some exceptions noted in this book, allows you to not upgrade components upon which it has *soft* upgrade dependencies. When multiple interdependent components are involved in an upgrade, you have to upgrade a component if only one of the Java ES components being upgraded has a hard upgrade dependency on that particular component.

In a few special cases, due to incompatibilities that are introduced, upgrade of a component requires you to also upgrade a component that it supports. These special cases are noted in this book.

Selective Upgrade or Upgrade All

The distinction between hard and soft upgrade dependencies allows for the possibility in your upgrade plan of selectively upgrading Java ES product components within a deployed system.

- **Selective Upgrade**. In this approach you start with the Java ES product components you wish to upgrade to Release 5U1. You determine the hard upgrade dependencies for that component; those components also need to be upgraded. Repeat this process for each successive hard upgrade dependency until no further components need to be upgraded. This exercise specifies all Java ES product components that need to be upgraded.
- **Upgrade All**. In this approach you upgrade all deployed Java ES product components to Release 5U1. In some cases, due to the complexity of a deployment, upgrading an entire system at one time is not feasible for business reasons.

  The two approaches to performing upgrades are compared in the following table:

TABLE 1–5 Upgrade All

Upgrade Approach	Advantages	Disadvantages
Selective upgrade	Minimizes number of components to upgrade	Results in inconsistent versions for all components in your deployed system
Upgrade All	Maintains a consistent version for all components in your deployed system	Maximizes the number of components to upgrade

The choice between Selective Upgrade and Upgrade All is not rigid. For example, you might choose to selectively upgrade the product components on a particular computer, but wish to upgrade all shared components needed to support the selected product components.

Upgrade Process

The Java ES upgrade process involves a number of phases, which are normally carried out first in a staging environment, before being executed in a production environment. The use of a staging environment allows you to test each phase as well as write scripts to be used by IT personnel for upgrading complex Java ES deployments.

When you have tested the upgrade process in a staging environment, and have confidence that the upgrade is working properly, you can reproduce the process in your production

environment. The process involves the phases shown in the following table and documented in this Upgrade Guide. The phases apply to individual component upgrades as well as to your Java ES deployment as a whole.

TABLE 1–6 Phases in the Upgrade Process

Upgrade Phase	Description
Plan	You develop an upgrade plan. In the development plan, you specify the Java ES components to be upgraded and the sequence by which you need to upgrade those components on the different computers or operating system instances in your deployment.
Pre-upgrade preparation	You back up configuration and application data, perform any patching of the operating system, upgrade any required dependencies, and perform other tasks in preparation for upgrading any individual component.
Upgrade	You obtain all the necessary packages, patches, and tools needed for the upgrade. You install upgraded software and reconfigure each component as prescribed, including the migration of data to the upgraded system.
Verification	You verify that the upgrade has been successful using prescribed verification tests, including starting the upgraded software components and testing various usage scenarios.
Rollback and restoration	Roll back the upgrade and verify that the rollback is successful. Testing the rollback of the upgrade is important in case you have to restore the production environment to its previous state for some reason.

Java ES Upgrade Through Application of Patches

Maintenance upgrades of Java ES product components from Release 5 to Release 5U1 are performed component-by-component through the application of Java ES 5 Update 1 patches. Because of dependencies between Java ES components, the nature of a component upgrade can impact whether other components need to be upgraded as well.

The following sections provide information about upgrading Java ES through application of patches:

- "Accessing Java ES Patches" on page 27
- "Upgrade Prerequisite-Java ES Windows Installer Patch" on page 27
- "Shared Component Upgrades" on page 27

Accessing Java ES Patches

Java ES 5 Update 1 patches can be accessed either as individual patches or as a patch cluster. You can access these patches in either of these two ways from the SunSolve web site: (`http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access`)

- As a patch cluster named Java Enterprise System 5 Accumulated Patch Cluster Windows.
- As discrete upgrade patches, using the `java_es-5` keyword to search for Java ES release 5 family patches.

Note – This document captures only the information related to the patches and the patch cluster available at the time of Java ES 5 Update 1 release. New revisions of these patches might be made available in the future.

Upgrade Prerequisite-Java ES Windows Installer Patch

Before applying Java ES 5 Update 1 patches, be sure that the following Java ES Windows Installer patch has been installed:

126910–02[1]

Shared Component Upgrades

Java ES shared component upgrades are a necessary part of upgrading the product components that depend on them.

The upgrading of shared components does not require reconfiguration of the components, nor pre- or post-upgrade procedures. Shared component upgrades can be rolled back to their previous versions only after Java ES components depending on them are rolled back.

1 Revision number indicated for the Java ES Windows Installer patch is the minimum required for upgrade to Release 5U1. If newer revision becomes available, use the newer one.

Identifying and Stopping Processes to Avoid System Restart

The Java ES 5 Update 1 Windows patching system requires a system restart if any of the delivered and updated shared component DLLs are in use by another application. There are various tools that can be used to find if any files related to Java ES are in use by other processes. You can stop those processes before applying the patch so that the patch installation can be completed without a system restart.

The following sections describe some of the tools.

`ListDLLs` and Process Explorer

`ListDLLs` is a command line tool . `ListDLLs` provides a list of DLLs that are in use and also their path. The list indicates which DLLs have a version different from their original version on the disk (such DLLs are flagged in the list). The path column in the list shows which DLLs are relocated.

`ListDLLs` can be downloaded from:
`http://www.microsoft.com/technet/sysinternals/ProcessesAndThreads/ListDlls.mspx`

Process Explorer is the GUI version of the `ListDLLs` program.

Process Explorer can be downloaded from:
`http://www.microsoft.com/technet/sysinternals/utilities/processexplorer.mspx`

Checking the version of DLLs

To get the basic version information of DLLs, use the tool `GetVers.exe` .

You can download `GetVers.exe` from:
`http://support.microsoft.com/kb/167597`

To get a more informative version information of DLLs, use the tool `ShowVer.exe`.

You can download `ShowVer.exe` from:
`http://www.codeproject.com/dll/showver.asp`.

Identifying Installed Java ES Patches

You can execute the utility `ListJavaESPatches.exe` to identify the installed Java ES patches in the system. This utility is available as part of Java ES 5 installation and its default location is <*JavaES5InstallDir*>`\utils\patch`.

The utility `ListJavaESPatches.exe` is also made available through the newer versions of the Java ES 5 Update 1 patches.

Default Installation Paths

Java ES software is built for 32–bits Windows systems. However, it can be installed on both 32–bit and 64–bit Windows systems.

The installation with the Java ES 5 installer takes place on the following default location for 32–bit programs.

TABLE 1–7 Default Installation Paths

	Default location	Short equivalent
32–bit	C:\Program Files\Sun\...	c:\progra~1\sun
64–bit	C:\Program Files (x86)\Sun\...	c:\progra~2\sun

Short path formats are commonly used in logs.

In this guide, 32–bit long path format is used in definitions, examples and so on.

Java ES Component Dependencies

One of the most important considerations in an upgrade plan is the dependencies between the various Java ES components in your deployed system. The sequence in which you perform the component upgrades is affected by the nature of the dependencies between them.

- “Dependencies on Shared Components” on page 29
- “Dependencies On Product Components” on page 31

Each of these factors is discussed briefly in the following sections.

Dependencies on Shared Components

Table 1–8 shows the dependencies of Release 5U1 product components on Java ES shared components. The abbreviations for product components in the table are taken from Table 1–1. The abbreviations for shared components are spelled out in Table 1–2. The hard upgrade dependencies for Release 5 to Release 5U1 upgrades are marked “H,” and soft upgrade dependencies are marked “S.”

Within the matrix of the following table

TABLE 1–8 Shared Component Dependencies of Release 5U1 Product Components

Shared Component	AM	AS	DPS	DS	DS Console	HADB	JAVADB	MQ	MC	PS	PSRA	SR	WPS	WS
ANT		S							S	H	H	H		
ACL	S											H		
BDB	S													
C AC	H	S	H	H	H				S					
FIS														
ICU		S	H	H						S			S	S
IM-SDK										S				
Java SE	S	S	H	H	H	S	H	S	S	H	S	H	S	S
JAF	S	S								S	S	H		
JATO	S	S							S	S				
JavaHelp™	S	S						S	S					S
JavaMail™	S	S								S	S	H	S	
JAXB	S	S												S
JAXP	S	S								S	S	H		S
JAXR	S	S										H		S
JAX-RPC	S	S										H		S
JAXWS														S
JCAPI														
JDMK	H	S	H	H	H				S					S
JSS	S									S	S		S	S
JSTL														
KTSE										S			S	S
LDAP C SDK	H		H	H									S	S
LDAP J SDK	S													
MA Core	S													

TABLE 1–8 Shared Component Dependencies of Release 5U1 Product Components *(Continued)*

Shared Component	AM	AS	DPS	DS	DS Console	HADB	JAVADB	MQ	MC	PS	PSRA	SR	WPS	WS
MFWK	H			H					H					
NSPR	S	S	H	H				H	S	S	S		S	H
NSS	S	S	H	H				H	S	S	S		S	H
SAAJ	S	S								S	S	H		
SASL				H									S	S
SJWC	S	S			H				H					
WSCL	S	S										H		S
XWSS												H		

Dependencies On Product Components

Dependencies on product components fall into two general categories: runtime dependencies and configuration dependencies.

- **Runtime Dependencies.** The functioning of a software system is based on the interactions between its deployed components. The infrastructure dependencies between Java ES components are discussed in the *Java Enterprise System 5 Technical Overview*. If a Release 5U1 product component has a hard upgrade dependency on another product component, the dependent component can only be successfully upgraded and used as intended if the component upon which it depends is also upgraded.
- **Configuration Dependencies**. In some cases a Java ES component must be installed, configured, and running in order for another component to be configured. For example, a Directory Server user directory must be running for an Access Manager service to be registered. Component upgrade procedures often involve reconfiguration of upgraded components or migration of configuration data. Configuration dependencies can impact the sequence of upgrade procedures.

For runtime dependencies, the relationship between product components can be of the following three types:

- **Mandatory.** The component cannot operate without the supporting component.
- **Optional.** The component can operate without the supporting component, but a subset of its functionality requires the supporting component.
- **Co-dependency.** Both components can operate without the support of the other, but the components used together can provide certain enhanced functionality or performance.

The following table shows the dependencies between the Java ES product components listed in Table 1–1. The information can be used to determine the hard upgrade dependencies that impact your upgrade plan.

The first column alphabetically lists Release 5U1 product components, the second column shows other Java ES components upon which a Release 5U1 component has a dependency relationship, the third column provides the Java ES release versions that support the Release 5U1 dependency, the fourth column characterizes the dependency relationship, and the last column indicates special characteristics of the dependency, such as whether the supporting component must be local or whether other third-party products can support the dependency.

If a product component you are upgrading to Release 5U1 has a dependency on Release 5U1 of a supporting component, then the supporting component represents a hard upgrade dependency: the supporting component must also be upgraded to Release 5U1.

TABLE 1–9 Java ES Product Component Dependencies

Product Components	Dependency[1]	Java ES Release	Nature of Dependency	Characteristics
Access Manager	Directory Server	4–5 & 5U1	Mandatory: Stores configuration data and enable lookup of user data	
	Java 2 Enterprise Edition (J2EE™) web container:		Mandatory: Provides web container runtime services	Local only Also supported: -Weblogic[2] -WebSphere[3]
	■ Web Server	4–5 & 5U1		
	■ Application Server	4–5 & 5U1		
Access Manager SDK	Access Manager	4–5	Mandatory: Provides Access Manager services	
	J2EE web container:		Mandatory: Provides web container runtime services	Local only Also supported: –Weblogic[2] -WebSphere[3]
	■ Application Server	4–5 & 5U1		
	■ Web Server	4–5 & 5U1		

[1] For each product component, dependencies are listed in the order that they would normally be upgraded.

[2] BEA Weblogic Server

[3] IBM WebSphere Application Server

TABLE 1–9 Java ES Product Component Dependencies *(Continued)*

Product Components	Dependency[1]	Java ES Release	Nature of Dependency	Characteristics
Access Manager Distributed Authentication	Access Manager	4–5	Mandatory: Provides Access Manager services	
	J2EE web container: ■ Application Server	4–5 & 5U1	Mandatory: Provides web container runtime services	Local only Also supported: -Weblogic[2]
	■ Web Server	4–5 & 5U1		-WebSphere[3]
Access Manager Session Failover	Access Manager	5	Mandatory: Provides Access Manager services	
	J2EE web container: ■ Application Server	4–5 & 5U1	Mandatory: Provides web container runtime services	Local only Also supported: -Weblogic[2]
	■ Web Server	4–5 & 5U1		-WebSphere[3]
	Message Queue	4–5 & 5U1	Mandatory:Provides reliable asynchronous messaging	
Application Server	Message Queue	5 & 5U1	Mandatory: Provides reliable asynchronous messaging	Local only
	High Availability Session Store	5	Mandatory: Stores session state needed to support failover between instances	Local only
	Java DB	5 & 5U1	Mandatory: Stores session state needed to support failover between instances	Local only
	Web Server	4–5 & 5U1	Optional: Provides load balancing between instances	Yes

[1] For each product component, dependencies are listed in the order that they would normally be upgraded.

[2] BEA Weblogic Server

[3] IBM WebSphere Application Server

TABLE 1–9 Java ES Product Component Dependencies *(Continued)*

Product Components	Dependency[1]	Java ES Release	Nature of Dependency	Characteristics
Directory Proxy Server	Directory Server	4–5 & 5U1	Co-dependency: Results in improved security and performance for directory requests. Supplies data to Directory Proxy Server	
Directory Server	Directory Proxy Server	4–5 & 5U1	Co-dependency: Results in improved security and performance for directory requests. Distributes load and caches data to Directory Server	
High Availability Session Store (HADB)	None			
Java DB	None			
Message Queue	Directory Server	4–5 & 5U1	Optional: Stores administered objects and user data	
	J2EE web container:		Optional: Supports HTTP transport between client and Message Queue broker	
	■ Application Server	4–5 & 5U1		
	■ Web Server	4–5 & 5U1		
	Java DB	5 & 5U1	Optional: Stores persistent messages.	Local only
Monitoring Console	None			

[1] For each product component, dependencies are listed in the order that they would normally be upgraded.

TABLE 1–9 Java ES Product Component Dependencies *(Continued)*

Product Components	Dependency[1]	Java ES Release	Nature of Dependency	Characteristics
Portal Server	Directory Server	4–5 & 5U1	Mandatory: Stores and enables lookup of user profiles	
	J2EE Web Container:		Mandatory: Provides web container runtime services	Local only
	■ Application Server	4–5 & 5U1		
	■ Web Server	4–5 & 5U1		
	Access Manager or Access Manager SDK	4–5	Mandatory: Provides authentication and authorization services, single sign-on	Local only (If Access Manager is remote, Access Manager SDK must be used locally
	Portal Server Secure Remote Access	5	Optional: Provides secure remote access through the Gateway, Rewriter Proxy, and Netlet Proxy components	
	Server Registry Client	5 & 5U1	Mandatory: Provides libraries needed for compilation	
	Java DB	5 & 5U1	Optional: Provides support for several portlet applications	
Portal Server Secure Remote Access Gateway	Portal Server	5	Mandatory: Supports Gateway functionality	
	Access Manager or Access Manager SDK	4–5	Mandatory: Provides authentication and authorization services, single sign-on	Local only (If Access Manager is remote, Access Manager SDK must be used locally)
	Directory Server	4–5 & 5U1	Mandatory: Stores and enables lookup of user data	
Rewriter Proxy	Portal Server	5	Mandatory: Supports Rewriter Proxy functionality	

[1] For each product component, dependencies are listed in the order that they would normally be upgraded.

TABLE 1–9 Java ES Product Component Dependencies *(Continued)*

Product Components	Dependency[1]	Java ES Release	Nature of Dependency	Characteristics
Netlet Proxy	Portal Server	5	Mandatory: Supports Netlet Proxy functionality	
Service Registry Deployment	Application Server	5 & 5U1	Mandatory: Provides container runtime services	Local only
	Java DB	5 & 5U1	Mandatory: Provides default database for storing services and related meta data	Local only
	Service Registry Client	5U1	Mandatory: Provides required client libraries	Local only
Web Proxy Server	Directory Server	4–5 & 5U1	Optional: Provides LDAP-based authentication	
	Web Server	4–5 & 5U1	Co-dependency: Results in improved security and performance for HTTP requests. Supplies data to Web Proxy Server	Also supported: -Weblogic[2] –WebSphere[3]
Web Server	Directory Server	4–5 & 5U1	Optional: Provides LDAP-based authentication	
	Web Proxy Server	4–5 & 5U1	Co-dependency: Results in improved security and performance for HTTP requests. Distributes load and caches data from Web Server	

[1] For each product component, dependencies are listed in the order that they would normally be upgraded.

[2] BEA Weblogic Server

[3] IBM WebSphere Application Server

Upgrade Sequencing Guidelines

The following listing provides the order in which Java ES components can be successfully upgraded on a single computer or in a deployed system. When you plan your upgrade, you can omit those components that are not part of your deployment architecture.

The chapters in this guide are arranged according to the order in which components appear in the following listing.

Note – Before applying Java ES 5 Update 1 patches, be sure that the following Java ES Windows Installer patch has been installed:

126910–02[2]

---

1. **Shared Components** (Chapter 2, "Upgrading Java ES Shared Components")

   Shared components should be upgraded before the components which depend on them.

2. **Directory Server** (Chapter 3, "Directory Server")

   Many components store user data or configuration data in Directory Server, so upgrades to Directory Server should generally be performed before upgrading the components that have runtime or configuration dependencies on Directory Server.

3. **Directory Proxy Server** (Chapter 4, "Directory Proxy Server")

   Directory Proxy Server has a soft upgrade dependency on Directory Server and can be upgraded at any time. Some components might access Directory Server through Directory Proxy Server, however, so if Directory Proxy Server is upgraded, it should be upgraded right after Directory Server.

4. **Web Server** (Chapter 5, "Web Server")

   A number of Java ES components require the support of a web container, which, if upgraded, should be upgraded before the components requiring web container services. Normally web container services are provided by Web Server or Application Server, but if your architecture contains both, upgrade Web Server first, before upgrading Application Server.

5. **Java DB** (Chapter 6, "Java DB")

   Java DB must be upgraded before Application Server, which requires Java DB as a default database.

6. **High Availability Session Store** (Chapter 7, "High Availability Session Store")

   Upgrade is not supported for High Availability Session Store to Java ES 5 U1 (Release 5U1) on Windows.

7. **Message Queue** (Chapter 8, "Message Queue")

2 Revision number indicated for the Java ES Windows Installer patch is the minimum required for upgrade to Release 5U1. If newer revision becomes available, use the newer one.

Message Queue must be upgraded before Application Server, which requires Message Queue to be Java 2 Enterprise Edition (J2EE) compliant.

8. **Application Server** (Chapter 9, "Application Server")

   Application Server depends on Web Server for its load balancing plug in, so if you are using that capability, Application Server should be upgraded after Web Server.

9. **Service Registry** (Chapter 10, "Service Registry")

   Service Registry can be upgraded any time after Application Server is upgraded because it depends upon Application Server for runtime container services.

10. **Web Proxy Server** (Chapter 11, "Web Proxy Server")

    Web Proxy Server can be upgraded any time, though generally it would be upgraded after the Web Server or Application Server component for which it provides a proxy service. Web Proxy Server is a new Java ES Release 5U1 component that can be upgraded from its previous non-Java ES release.

11. **Access Manager** (Chapter 12, "Access Manager")

    Upgrade is not supported for Access Manager to Java ES 5 U1 (Release 5U1) on Windows.

12. **Monitoring Console** (Chapter 13, "Monitoring Console")

    Monitoring Console has dependencies on a number of Java ES shared components (see Table 1–8), two of which are hard upgrade dependencies and need to be upgraded when you perform a maintenance upgrade of MFWK and SJWC.

13. **Portal Server** (Chapter 14, "Portal Server")

    Upgrade is not supported for Sun Java System Portal Server 7.1 to Java ES 5 U1 (Release 5U1) on Windows.

◆ ◆ ◆ CHAPTER 2

Upgrading Java ES Shared Components

This chapter provides information on upgrading Java ES shared components from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1).

Each Java ES product component depends on one or more locally shared libraries known as Java ES *shared* components. These shared components are upgraded from Release 5 to Release 5U1 by applying the appropriate patches to the Release 5 versions.

The chapter contains the following sections:

Shared Component Upgrade Overview

Upgrading shared components to Java ES 5 Update 1 should be done as part of a larger upgrade plan, as discussed in Chapter 1, "Planning for Upgrades." To ensure that you have a successful upgrade, prepare an upgrade plan that meets your needs.

Performing Shared Component Upgrades

The procedure for upgrading shared components can depend upon whether you are performing a feature upgrade or a maintenance upgrade of Java ES product components, as described in the following sections.

Feature Upgrades of Shared Components

The general approach for upgrading the shared components needed when performing a feature upgrade is described in the following section.

General Approach

The approach for upgrading the shared components needed when performing a feature upgrade of a particular Java ES product component is to determine all the shared components required and manually install or upgrade these to their Release 5 versions.

Maintenance Upgrades

The general approach and specific procedure for upgrading shared components when performing a maintenance upgrade are described in the following sections.

General Approach

In the case of maintenance upgrades of product components within a Java ES release family, shared components do not have to be synchronized to the same release version. If you perform a maintenance upgrade of a product component, you only need to upgrade those shared components upon which that product component has hard upgrade dependencies.

You can patch the selected shared components to satisfy Release 5U1 hard upgrade dependencies. See Table 1–8.

Following are the shared components which have Java ES 5 Update 1 versions:

TABLE 2–1 Patches to Upgrade Shared Components on Windows

Description	Patch ID[1]
MFWK (Sun Java Monitoring Framework)	125449–09
JDMK (Java Dynamic Management Kit)	126822–03
NSS, JSS, NSPR (Network Security Services, Java Security Services, Netscape Portable Runtime)	125923–03
SJWC (Sun Java Web Console)	125955–05
CAC runtime (Common Agent Container)	126183–04
CAC webserver	126183–04
CAC monitoring	126183–04

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrading Shared Components Providing Libraries (MFWK, JDMK, and NSS)

This section provides the maintenance upgrade procedure for shared components that provide libraries.

Note – For information about how to check the versions of the library files currently installed, see "Checking the version of DLLs" on page 28.

Shared components providing libraries include MFWK, JDMK, and NSS.

▼ To Upgrade Shared Components Providing Libraries

1. **Log in as administrator.**

2. **Obtain the latest upgrade patches for the shared component, as shown in Table 2–1.**

   Patches can be downloaded to *workingDirectory*.

   See "Accessing Java ES Patches" on page 27.

3. **Stop any processes that are using the shared component.**

   Note – Some components like NSS are widely used by Java ES components. It is recommended to stop all installed Java ES 5 components before updating.

   Stop Monitoring Console and CAC before updating MFWK.

   ---

4. **Make sure you have applied Windows Installer patch.**

   Patches for the shared components providing libraries require that Windows Installer patch (126910–02) is already applied.

5. **Install the patch.**

   Installation is generally performed by running *patch-id*.exe, however, be sure to consult the `README`.*patch-id* file in the patch directory for installation instructions.

   Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

   ---

6 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

7 **Start the processes that use the shared component.**

Start the components stopped in step 3.

Upgrading Shared Components Providing Services

This section provides the maintenance upgrade procedure for shared components that provide services.

Shared components providing services include:

- SJWC
- CAC

▼ To Upgrade Sun Java Web Console (SJWC)

1 **Log in as administrator.**

2 **Obtain the latest upgrade patches for SJWC, as shown in Table 2–1. Patches can be downloaded to** *\workingDirectory*

See "Accessing Java ES Patches" on page 27.

3 **Stop SJWC.**

For example,

```
C:\Program Files\Sun\Java ES5\share\webconsole\bin\smcwebserver.bat stop
```

4 **Make sure you have upgraded any hard upgrade dependencies.**

SJWC patch requires that Windows Installer patch (126910–02) is already applied.

5 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 **Verify the patch installation with the utility** `ListJavaESPatches.exe`**.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

7 **Start SJWC.**

For example,

```
C:\Program Files\Sun\JavaES5\share\webconsole\bin\smcwebserver.bat start
```

8 **Check the version from command line.**

For example,

```
C:\Program Files\Sun\JavaES5\share\webconsole\bin\smcwebserver.bat --version
```

The messages that indicates the SJWC release version are:

Release 5U1	Sun Java Web Console 3.0.3
Release 5	Sun Java Web Console 3.0.2

▼ To Roll-back the SJWC Upgrade

1 **Stop SJWC.**

```
C:\Program Files\Sun\Java ES5\share\webconsole\bin\smcwebserver.bat stop
```

2 **Double-click** `Uninstall_`*patch-id*`.bat`**.**

This will restore the SJWC to its previous version.

▼ To Upgrade Common Agent Container (CAC)

1 **Log in as administrator.**

2 **Obtain the latest upgrade patches for the shared component, as shown in Table 2–1. Patches can be downloaded to** *\workingDirectory*

See "Accessing Java ES Patches" on page 27.

3 **Stop any component that is using CAC services.**

For example,

Stop Monitoring Console by stopping SJWC.

JavaES5InstallDir`\share\webconsole\bin\smcwebserver.bat stop`

4 **Shut down CAC and prepare it for upgrade.**

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm.bat prepare-uninstall`

5 **Make sure you have upgraded any hard upgrade dependencies.**

CAC patch requires that Windows Installer patch (126910–02) is already applied.

The following software dependencies are required to be present in the host before starting the container: JDK (1.4.2_03 or higher), JDMK 5.1.

NSS 3.11 is the optional dependency, required for using the command stream feature.

Note – JDK, JDMK, and NSS are not hard dependencies. The minimal versions specified here are sufficient for upgrading CAC to 2.1.

---

6 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

7 **Verify the patch installation with the utility** `ListJavaESPatches.exe`**.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 6. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Post-configure the CAC by running the following two commands:**

JavaES5InstallDir`\share\cacao_2\configure.bat`

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm.bat rebuild-dependencies`

Be sure to consult the `README.`*patch-id* file for additional patch installation instructions.

Note – The CAC dependencies are JDK, JDMK, and NSS. The location of Java is automatically retrieved from the registry.

The location of JDMK is set to default installation value. To modify it, execute the following command:

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm set-param jdmk-home=`*path to-jdmk-home*

The location of NSS is unknown as it is delivered as an optional zip file. If you require the command stream feature of the CAC, then NSS is required. You can provide the paths to the NSS tools and libraries by executing the following commands:

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm set-param nss-lib-home=`*path-to-nss-lib-home*

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm set-param nss-tools-home=`*path-to-nss-tools-home*

9 Start CAC.

JavaES5InstallDir`\share\cacao_2\cacaoadm.bat start`

10 Check that all the CAC agents are loaded correctly.

JavaES5InstallDir`\share\cacao_2\cacaoadm.bat list-modules`

List of modules registered:

com.sun.cacao.agent_logging 1.0

com.sun.cacao.command_stream_adaptor 1.0

com.sun.cacao.efd 2.0

com.sun.cacao.instrum 1.0

com.sun.cacao.invoker 1.0

com.sun.cacao.mib2simple 1.0

com.sun.cacao.rmi 1.0

com.sun.cacao.snmpv3_adaptor 1.0

com.sun.cacao.webserver 2.1

com.sun.cmm.am 1.0

com.sun.cmm.as 1.0

com.sun.cmm.ds 1.0

com.sun.cmm.ps 1.0

com.sun.cmm.ws 1.0

com.sun.directory.nquick 1.0

com.sun.mfwk 2.0

com.sun.portal.admin.server.module 1.1

11 Start components using CAC.

Check the CAC version.

JavaES5InstallDir`\share\cacao_2\cacaoadm.bat –version`

The messages that indicate the CAC release versions are:

Release 5U1 2.1.0

Release 5 2.0, REV=13

▼ To Roll-back the Common Agent Container Upgrade

1 Stop and remove the configuration for CAC.

JavaES5InstallDir`\share\cacao_2\bin\cacaoadm.bat prepare-uninstall`

2 Double-click `Uninstall_`*patch-id*`.bat`**.**

This will restore the CAC version 2.0. To use this version, configure again.

Java SE Upgrade

Java ES 5 Update 1 continues to support the same versions of Java SE 5 that were supported by Java ES 5. Namely Java SE 5.0 Update 9 or later and any Java SE 6 release. Java SE is not distributed with this release. Java SE can be downloaded from `http://java.sun.com`.

Note – HADB does not currently support Java SE 6.

◆ ◆ ◆ CHAPTER 3

Directory Server

This chapter describes how to upgrade Directory Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Sun Java System Directory Server 6.2.

The chapter provides an overview of upgrade issues and procedures for the upgrade path supported by Release 5U1. This chapter covers the following topics:

Note – File locations in this chapter are specified with respect to a directory path referred to as *DSEE-base*. At least part of this path might have been specified as an installation directory when Directory Server was initially installed. If not, the Java ES installer assigns a default value.

The default value of *DSEE-base* is `C:\Program Files\Sun\JavaES5\DSEE`.

The default value of *instancePath* is `C:\Program Files\Sun\JavaES5\DSEE\var\DSInstance`

About Directory Server Enterprise Edition

Directory Server, Directory Proxy Server, and Directory Services Control Center (DSCC) are three components of Directory Server Enterprise Edition (DSEE). The three components can be installed together on the same system or separately on different systems.

In a deployment scenario in which Directory Server, Directory Proxy Server and Directory Server Control Center are installed on the same system, you cannot upgrade any one component without upgrading the other two. When you apply the DSEE patch to upgrade any of the components, all three are automatically upgraded.

In a deployment scenario in which the three components are installed separately on different systems, you must apply the patch individually on each of the systems to upgrade the components.

On the system running DSCC, DSCC is using a specific Directory Server instance also named DSCC Registry. This instance of Directory Server stores the DSCC configuration data. When upgrading DSCC you must stop this instance. The command to identify the instance is:

DSEE-base`\dscc6\bin\dsccsetup.exe status`

The output will contain the path of the DSCC Registry. During the upgrade procedure described in this chapter, when you are asked to stop the running instances, you must stop the DSCC registry too.

Execute the command *DSEE-base*`\dscc6\bin\dsccsetup.exe stop` *instancePath* to stop the instance.

Overview of Directory Server Upgrade

This section describes the following general aspects of Directory Server that affect upgrading to Java ES 5 Update 1 :

About Release 5U1

Release 5U1 Directory Server is a maintenance release that fixes bugs in Release 5 Directory Server. For more information, see the *Sun Java System Directory Server Enterprise Edition 6.2 Release Notes*.

Java ES Release 5U1 Upgrade Roadmap

The following table shows the supported Directory Server upgrade paths to Release 5U1:

TABLE 3–1 Upgrade Paths to Java ES 5 Update 1: Directory Server 6.2

Java ES Release	Directory Server Release	General Approach	Reconfiguration Required as Part of Upgrade
Release 5	Sun Java System Directory Server 6.0	Maintenance upgrade. Apply patches.	None
Release 4		Direct upgrade of Directory Server from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 Directory Server to Release 5 Directory Server and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows.*	

Directory Server Data

Directory Server 6.x configuration is performed using the Directory Service Control Center or the Directory Server Enterprise Edition command-line utilities.

The following table shows the type of data that can be impacted by an upgrade of Directory Server software to Release 5U1.

TABLE 3–2 Directory Server Data Usage

Type of Data	Location	Usage
Directory Server configuration data	Directory Server 6.x: accessed through Directory Service Control Center and Directory Server EE command-line utilities	Configuration of Directory Server
Directory Server schema		Define structure and semantics of data in the directory
Security data	Directory Server 6.x: SSL configured through Directory Service Control Center and Directory Server Enterprise Edition command-line utilities	Server certificates
User data	Directory Server	Server certificates

Directory Server Compatibility Issues

Release 5U1 Directory Server does not introduce any interface changes and is therefore backwardly compatible with Release 5 Directory Server.

Directory Server Dependencies

Dependencies on other Java ES components can, in general, impact the procedure for upgrading Directory Server software. Directory Server has dependencies on the following Java ES components:

- **Shared Components.** Directory Server has dependencies on specific Java ES shared components (see Table 1–8. Directory Server upgrades might depend upon upgraded versions of these shared components.
- **Directory Proxy Server.** Directory Server has a co-dependency on Directory Proxy Server for providing improved security and performance for LDAP requests.

Upgrading Directory Server from Java ES Release 5

This section includes information about upgrading Directory Server from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

Introduction

When upgrading Release 5 Directory Server to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Directory Server.
- **Upgrade Dependencies**. Directory Server has dependencies on a number of Java ES shared components, (see Table 1–8), of which CAC, MFWK, SJWC, and Security components (NSS,JSS,NSPR) need to be upgraded when you perform a maintenance upgrade of Directory Server.
- **Backward Compatibility**. Release 5U1 Directory Server is backwardly compatible with the Release 5 version.
- **Upgrade Rollback.** You can do a rollback of the Release 5 upgrade by reverting to the previous version, which is left intact by the upgrade.

Release 5 Directory Server Upgrade

This section describes how to perform an upgrade of Directory Server from Java ES 5 to Java ES 5 Update 1. The section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Directory Server, perform the following tasks.

Verify Current Version Information

Verify the current version of Directory Server before you upgrade.

▼ To Verify Current Version Information

1. **Log in as administrator.**

2. **Check the current version of Directory Server instance.**

   DSEE-base`\ds6\bin\dsadm.exe -V`

   ```
   [dsadm]
   dsadm               : 6.0                [Build information]
   ```

Upgrade Directory Server Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Before upgrading Directory Server, you need to upgrade CAC, MFWK, SJWC, and Security components (NSS,JSS,NSPR). Also, Directory Server requires that Windows Installer patch (126910–02) is already applied.

Upgrading Release 5 Directory Server

This section discusses considerations that impact the upgrade procedure for Directory Server, followed by a description of the procedure itself.

Upgrade Considerations

This upgrade of Directory Server software to Release 5U1 takes into account the following considerations:

- Any Java ES components or applications using a Directory Server instance should be shut down if performing LDAP queries during the Directory Server upgrade or if using a library that is being patched.
- In a deployment architecture in which there are multiple instances of Directory Server running on a single computer (all corresponding to the same installed Directory Server image), you only have to upgrade the Directory Server image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security and user data.
- The Release 5U1 Directory Server upgrade patches for Windows OS are shown in the following table:

TABLE 3–3 Patches to Upgrade Directory Server on Windows

Description	Patch ID[1]
Directory Server Enterprise Edition core (includes Directory Server)	125311–05
Directory Server localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Directory Server instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Directory Server to Release 5U1

1 Log in as administrator.

2 Stop any Java ES components which use the Directory Server.

Stop the service using persistent connections like Access Manager. You can stop Access Manager by stopping its web container.

3 Shut down the Directory Server.

Also shut down Directory Proxy Server and Directory Registry if they are on the same system.

DSEE-base`\ds6\bin\dsadm.exe stop` *instancePath*

DSEE-base\dps6\bin\dpadm.exe stop *instancePath*

DSEE-base\dscc6\bin\dsccsetup.exe stop *instancePath*

4 **Make sure you have upgraded any Java ES components upon which Directory Server has hard upgrade dependencies (see "Upgrade Directory Server Dependencies" on page 51.**

5 **Obtain the required Directory Server Release 5U1 upgrade patches, based on Table 3–3.**

To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *workingDirectory*.

6 **Install the patch.**

Installation is generally performed by running *patch-id*.exe, however, be sure to consult the README.*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

7 **Verify the patch log file.**

The log file is found at: %TEMP%\SUNJAVAES_<*patch-id*>.log

8 **Verify the patch installation with the utility ListJavaESPatches.exe.**

Run ListJavaESPatches.exe and check that the output includes the patch id of the patch that you have installed in Step 6. For more information, see "Identifying Installed Java ES Patches" on page 28.

9 **Refresh DSCC application into SJWC.**

Note – This step should be performed on the system where DSCC is installed.

DSEE-base\dscc\bin\dsccsetup console-unreg

DSEE-base\dscc\bin\dsccsetup console-reg

10 **Start the Directory Server.**

Also start Directory Proxy Server and Directory Registry if they are on the same system.

DSEE-base\ds6\bin\dsadm.exe start *instancePath*

DSEE-base\dps6\bin\dpadm.exe start *instancePath*

DSEE-base\dscc6\bin\dsccsetup.exe start *instancePath*

11 **Restart CAC.**

12 Start any Java ES components that use Directory Server.

Verifying the Upgrade

You can verify successful upgrade of Directory Server as follows:

1. Log in as administrator.
2. Check the new Directory Server instance.
   DSEE-base`\ds6\bin\dsadm.exe -V`

```
[dsadm]
dsadm               : 6.2                [Build information]
```

Post-Upgrade Tasks

There are no post-upgrade tasks beyond the steps described in "Upgrade Procedure" on page 52.

Rolling Back the Upgrade

1. Log in as administrator.
2. Shut down the Directory Server instances.

   DSEE-base`\ds6\bin\dsadm stop` *instancePath*
3. Double-click `Uninstall_`*patch-id*`.bat` to uninstall the patch.
4. Restart the Directory Server instances that were shut down in step 2.
   DSEE-base`\ds6\bin\dsadm.exe start` *instancePath*
5. Check the version of the Directory Server instance.

   DSEE-base`\ds6\bin\dsadm.exe -V`

```
[dsadm]
dsadm               : 6.0                [Build information]
```

◆ ◆ ◆ CHAPTER 4

Directory Proxy Server

This chapter describes how to upgrade Directory Proxy Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Sun Java System Directory Proxy Server 6.2.

The chapter provides a general overview of upgrade issues and procedures for the upgrade path supported by Release 5U1. This chapter covers the following topics:

Note – File locations in this chapter are specified with respect to directory paths referred to as *DSEE-base*. At least part of these paths might have been specified as installation directories when Directory Proxy Server was installed.

The default value of *DSEE-base* is `C:\Program Files\Sun\JavaES5\DSEE`.

The default value of *instancePath* is `C:\Program Files\Sun\JavaES5\DSEE\var\DPSInstance`

About Directory Server Enterprise Edition

Directory Server, Directory Proxy Server, and Directory Services Control Center (DSCC) are three components of Directory Server Enterprise Edition (DSEE). The three components can be installed together on the same system or separately on different systems.

In a deployment scenario in which Directory Server, Directory Proxy Server and Directory Server Control Center are installed on the same system, you cannot upgrade any one component without upgrading the other two. When you apply the DSEE patch to upgrade any of the components, all the three are automatically upgraded.

In a deployment scenario in which the three components are installed separately on different systems, you must apply the patch individually on each of the systems to upgrade the components.

On the system running DSCC, DSCC is using a specific Directory Server instance also named DSCC registry. This instance of Directory Server stores the DSCC configuration data. When upgrading DSCC you must stop this instance. The command to identify the instance is:

DSEE-base`\dscc6\bin\dsccsetup.exe status`

The output will contain the path of the DSCC Registry. During the upgrade procedure described in this chapter, when you are asked to stop the running instances, you must stop the DSCC Registry too.

Execute the command *DSEE-base*`\dscc6\bin\dsccsetup.exe stop` *instance-path* to stop the instance.

Overview of Directory Proxy Server Upgrades

The section describes the following general aspects of Directory Proxy Server that affect upgrading to Release 5U1:

About Release 5U1

Release 5U1 is a maintenance release that fixes bugs in Release 5 Directory Proxy Server . Release 5U1 Directory Proxy Server is still an LDAP proxy, but with new, extensible routing capabilities. Release 5 also enables the Virtual Directory feature, the ability to aggregate multiple data views in a single view. These data views can represent LDAP or SQL accessible data stores.

For more information, see the *Sun Java System Directory Server Enterprise Edition 6.2 Release Notes*.

Java ES Release 5U1 Upgrade Roadmap

Table 4–1 shows the supported Directory Proxy Server upgrade paths to Release 5:

TABLE 4–1 Upgrade Paths to Java ES 5 Update 1: Directory Proxy Server 6.2

Java ES Release	Directory Proxy Server Release	General Approach	Reconfiguration Required
Release 5	Sun Java System Directory Proxy Server 6.0	Maintenance upgrade. Apply patches.	None
Release 4		Direct upgrade of Directory Proxy Server from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 Directory Proxy Server to Release 5 Directory Proxy Server and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows*.	

Directory Proxy Server Data

Directory Proxy Server no longer uses Directory Server for storing configuration data. Configuration is performed using the new Directory Service Control Center or Directory Server EE command-line utilities.

The following table shows the type of data that could be impacted by an upgrade of Directory Proxy Server software.

TABLE 4–2 Directory Proxy Server Data Usage

Type of Data	Location	Usage
Directory Proxy Server configuration data	Directory Proxy Server 6.*x*: Accessed through Directory Service Control Center and Directory Server Enterprise Edition command-line utilities	Configuration of Directory Proxy Server
Security data	Directory Proxy Server 6.*x*: SSL configured through Directory Service Control Center and Directory Server Enterprise Edition command-line utilities	Server certificates

Directory Proxy Server Compatibility Issues

Release 5U1 Directory Proxy Server does not introduce any interface changes and is therefore backwardly compatible with Java ES Release 5 Directory Proxy Server.

Directory Proxy Server Dependencies

Dependencies on other Java ES components can impact the procedure for upgrading and reconfiguring Directory Proxy Server software. Directory Proxy Server has dependencies on the following Java ES components: specific Java ES shared components, as listed in Table 1–8. Directory Proxy Server provides front-end access to Directory Server but has no dependency on Directory Server beyond this functional relationship.

Upgrading Directory Proxy Server from Java ES 5

This section includes information about upgrading Directory Proxy Server from Release 5 to Release 5U1. The section covers the following topics:

- Introduction
- Release 5 Directory Proxy Server Upgrade

Introduction

When upgrading Release 5 Directory Proxy Server to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Directory Proxy Server.
- **Upgrade Dependencies**. Directory Proxy Server has dependencies on a number of Java ES shared components, (see Table 1–8), of which CAC, MFWK, SJWC, and Security components (NSS,JSS,NSPR) need to be upgraded when you perform a maintenance upgrade of Directory Server.
- **Backward Compatibility**. Release 5U1 Directory Proxy Server is backwardly compatible with the Release 5 version.
- **Upgrade Rollback.** You can do a rollback of the Release 5U1 upgrade by reverting to the previous version, which is left intact by the upgrade.

Release 5 Directory Proxy Server Upgrade

This section describes how to perform an upgrade of Directory Proxy Server from Release 5 to Release 5U1. The section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Directory Proxy Server, perform the tasks described below.

Verify Current Version Information

Verify the current version of Directory Proxy Server before you upgrade.

▼ To Verify Current Version Information

1 Log in as administrator.

2 Check the current version of Directory Proxy Server instance.

DSEE-base`\dps6\bin\dpadm.exe -V`

3 Start the new Directory Server Proxy Server instance.

DSEE-base`\dps6\bin\dpadm.exe start` *instance-path*

```
[dpadm]
dpadm               : 6.0                [Build information]
```

Upgrade Directory Proxy Server Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Before upgrading Directory Proxy Server, you need to upgrade CAC, MFWK, SJWC, and Security components (NSS,JSS,NSPR). Also, Directory Proxy Server requires that Windows Installer patch (126910–02) is already applied.

Upgrading Release 5 Directory Proxy Server

This section discusses considerations that impact the upgrade procedure for Directory Proxy Server, followed by a description of the procedure itself.

Upgrade Considerations

This upgrade of Directory Proxy Server software to Release 5U1 takes into account the following considerations:

- Any Java ES components or applications using a Directory Proxy Server instance should be shut down if performing LDAP queries during the Directory Proxy Server upgrade or if using a library that is being patched.
- In a deployment architecture in which there are multiple instances of Directory Proxy Server running on a single computer (all corresponding to the same installed Directory Proxy Server image), you only have to upgrade the Directory Proxy Server image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security and user data.
- The Release 5U1 Directory Proxy Server upgrade patches for Windows OS are shown in the following table:

TABLE 4–3 Patches to Upgrade Directory Proxy Server on Windows

Description	Patch ID[1]
Directory Server Enterprise Edition core (includes Directory Proxy Server)	125311–05
Directory Proxy Server localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Directory Proxy Server instances residing locally on the computer where the upgrade is taking place.

Note – Directory Server and Directory Proxy Server share the same patch. You require to follow the upgrade procedure listed here only if the Directory Proxy Server is on a separate host. You are not required to execute the Directory Server related stop-commands if the Directory Server is not installed on the same host. However, you can execute the Directory Server stop-command to be sure that the Directory Server process is stopped.

▼ To Upgrade Directory Proxy Server to Release 5U1

1 **Log in as administrator.**

2 **Stop any Java ES components which use the Directory Server.**

Stop the service using persistent connections like Access Manager. You can stop Access Manager by stopping its web container.

3 **Shut down the Directory Server.**

Also shut down Directory Server and Directory Registry if they are on the same system.

DSEE-base`\ds6\bin\dsadm.exe stop` *instancePath*

DSEE-base`\dps6\bin\dpadm.exe stop` *instancePath*

DSEE-base`\dscc6\bin\dsccsetup.exe stop` *instancePath*

4 **Make sure you have upgraded any Java ES components upon which Directory Proxy Server has hard upgrade dependencies (see "Upgrade Directory Proxy Server Dependencies" on page 59.**

5 **Obtain the required Directory Proxy Server Release 5U1 upgrade patches, based on Table 4–3.**

To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

6 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

7 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_`<*patch-id*>`.log`

8 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 6. For more information, see "Identifying Installed Java ES Patches" on page 28.

9 **Start the Directory Proxy Server.**

Also start Directory Server and Directory Registry if they are on the same system.

DSEE-base`\ds6\bin\dsadm.exe start` *instancePath*

DSEE-base\dps6\bin\dpadm.exe start *instancePath*

DSEE-base\dscc6\bin\dsccsetup.exe start *instancePath*

10 Restart CAC.

11 Start any Java ES components that use Directory Server.

Verifying the Upgrade

You can verify successful upgrade of Directory Proxy Server as follows:

1. Log in as administrator.
2. Check the new version of Directory Proxy Server instance:
   DSEE-base\dps6\bin\dsadm.exe -V

```
[dsadm]
dsadm               : 6.2               [Build information]
```

Post-Upgrade Tasks

There are no post-upgrade tasks beyond the steps described in "Upgrade Procedure" on page 52.

Rolling Back the Upgrade

1. Log in as administrator.
2. Shut down the Directory Proxy Server instances.

   DSEE-base\ds6\bin\dpadm.exe stop *instancePath*
3. Double-click Uninstall_*patch-id*.bat to uninstall the patch.
4. Restart the Directory Proxy Server instances that were shut down in step 2.
   DSEE-base\ds6\bin\dpadm.exe start *instancePath*
5. Start the Directory Server Proxy Server instance.

   DSEE-base\dps6\bin\dpadm.exe start *instancePath*

```
[dpadm]
dpadm               : 6.0               [Build information]
```

◆ ◆ ◆ CHAPTER 5

Web Server

This chapter describes how to upgrade Web Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Sun Java System Web Server 7.0 Update 1.

The chapter provides a general overview of upgrade issues and procedures for the different upgrade paths supported by Release 5U1. This chapter covers the following sections:

Note – File locations in this chapter are specified with respect to a directory path referred to as *WebServer-base*. At least part of this path might have been specified as an installation directory when Web Server was initially installed. If not, the Java ES installer assigned a default value.

The default values of these directory paths are:

WebServer6-base	`C:\Sun\WebServer`
WebServer7-base	`C:\Program Files\Sun\JavaES5\webserver7`
WebServer7Config-base	`C:\Program Files\Sun\JavaES5\webserver7`

Overview of Web Server Upgrades

The following sections describe general aspects of Web Server that impact upgrading to Release 5U1:

About Release 5U1 Web Server

Release 5U1 Web Server is a maintenance release that fixes bugs in Release 5 Web Server. Release 5 Web Server was a feature release with respect to Release 4. It has a number of new features and interface enhancements.

Release 5 Web Server introduced a new administrative infrastructure with new administrative tools. The administrative infrastructure includes an Administration Server instance which hosts configuration information for any number of Web Server instances. A new command line interface (`wadm`) and a new graphical user interface are used to create Web Server instances, either locally or on remote computers, and to configure and manage these instances. The new administrative tools require an administrator user name and password.

For more information about the new administrative infrastructure introduced in Release 5 Web Server, see *Web Server 7.0 Administrator's Guide*.

These changes in the Web Server administrative interface have a significant impact on upgrade.

Web Server Upgrade Roadmap

The following table shows the supported Web Server upgrade paths to Release 5U1.

TABLE 5–1 Upgrade Paths to Java ES 5 Update 1 Web Server 7.0

Java ES Release	Web Server Release	General Approach	Reconfiguration Required
Release 5	Sun Java System Web Server 7.0	Maintenance upgrade. Apply patches.	None
Release 4		Direct upgrade of Web Server from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 Web Server to Release 5 Web Server and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows*.	

Web Server Data

The following table shows the type of Web Server data.

TABLE 5–2 Web Server Data Usage

Type of Data	Location	Usage
Configuration data	Web Server 6.x (Java ES 4): *WebServer6-base*\https-*instanceName*\config Web Server 7.0 (Java ES Release 5 and 5U1): *WebServer7Config-base*\https-*configName*\config Central Configuration Store. This is not a public interface that is managed by the admin-server instance.	Configuration of Web Server instance

Web Server Compatibility Issues

The new administrative interfaces introduced in Release 5 Web Server are not backwardly compatible with earlier administrative interfaces. This impacts the upgrade and redeployment of web applications (including, for example, Java ES components).

Caution – Web Server 7.0 Update 1 has compatibility issues with Portal Server. On a Java ES 5 setup that has Portal Server on Web Server, upgrading Web Server to Java ES 5 Update 1 level renders Portal Server as unusable. Release 5U1 Web Server uses JSF 1.2. But JSF-Portlet bridge in Release 5 Portal Server does not support JSF 1.2. So Portal Server will not work. Do not upgrade Web Server to Release 5U1 in case you want to continue using Release 5 Portal Server.

If you have deployed Web Server 7.0 and Portal Server on Windows, contact Sun Support for more information on how to upgrade to Web Server 7.0 Update 1.

http://www.sun.com/support

In particular, Release 5 and Release 5U1 Web Server use defaults for instance directories and virtual server names different from earlier releases, as shown in the following table.

TABLE 5–3 Web Server Instance Directories and Virtual Server Names

Item	Java ES 4 Web Server 6.*x* Default	Java ES 5 Web Server 7.0 Default
Configuration name		*hostName.domainName*

TABLE 5–3 Web Server Instance Directories and Virtual Server Names *(Continued)*

Item	Java ES 4 Web Server 6.*x* Default	Java ES 5 Web Server 7.0 Default
Instance directory path	*WebServer6-base*\ `https-`*hostName.domainName*	*WebServer7-base*\ `https-`*hostName.domainName*
Virtual server name	https-*hostName.domainName*	*hostName.domainName*

Web Server Dependencies

Web Server has dependencies on the following Java ES components:

- **Shared Components.** Web Server has dependencies on specific Java ES shared components (see Table 1–8). Web Server upgrades might depend upon upgraded versions of these shared components.
- **Directory Server.** Web Server has an optional dependency on Directory Server for providing LDAP-based authentication.

Upgrading Web Server from Java ES 5

This section includes information about upgrading Web Server from Java ES 5 to Java ES 5 Update 1. The section covers the following topics:

Introduction

When upgrading Release 5 Web Server to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Web Server.
- **Upgrade Dependencies.** Web Server has dependencies on a number of Java ES shared components (see Table 1–8), none of which need to be upgraded when you perform a maintenance upgrade of Web Server.
- **Backward Compatibility.** Release 5UI Web Server is backwardly compatible with the Release 5 version.

Release 5 Web Server Upgrade

This section describes how to perform an upgrade of Web Server from Java ES 5 to Java ES 5 Update 1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Web Server, perform the tasks described below.

Verify Current Version Information

Verify the current version of Web Server before you upgrade.

▼ To Verify Current Version Information

- **Examine the subcomponent error log at:**

  WebServer-base`\admin-server\logs\error`

  WebServer-base`\https-hostname.domain\logs\error`

  The Web Server version information is as follows.

Release 5U1	Sun Java System Web Server 7.0 U1
Release 5	Sun Java System Web Server 7.0

Upgrade Web Server Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Web Server has no hard upgrade dependencies, but upgrade is only certified when shared components have also been upgraded. The upgrade from Release 5 to Release 5U1 requires that Windows Installer patch (126910–02) is already applied.

Backing Up Web Server Data

The Web Server upgrade from Release 5 to Release 5U1 does not modify the Release 5 configuration data. You do not need to back up current data.

Upgrading Release 5 Web Server

This section discusses considerations that impact the upgrade procedure for Web Server, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Web Server software to Java ES Release 5U1 takes into account the following considerations:

- In a deployment architecture in which there are multiple instances of Web Server running on a single computer (all corresponding to the same installed Web Server image), you only have to upgrade the Web Server image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security or user data.
- The Release 5U1 Web Server upgrade patches for Windows are shown in the following table:

TABLE 5–4 Patches to Upgrade Web Server on Windows

Description	Patch ID[1]
Web Server core	125441–10
Web Server localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Web Server instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Web Server to Java ES 5 Update 1

1. **Log in as administrator.**
2. **Shut down the Release 5 Web Server instances and the administration server.**
   a. **Choose Start > Sun Java Enterprise System 5 > Web Server 7.0 > Administration Console.**
      The Web Server 7.0 Administration Server Login page appears.
   b. **Type the User Name and Password, then click OK.**
      The Web Server 7.0 Administration Server page appears.
   c. **Select a Server from the drop down list, and click Manage.**
      The Server Manager page appears.

d. Click Server Off.

Using the Command-Line Interface:

- **Change to** *WebServer-base*`\admin-server\bin`**.**
- **Run the** `stopserv.bat` **command to stop the Web Server processes.**

  The Web Server stops and a confirmation dialog box appears.

e. To stop the Web Server instance, change to *WebServer-base*`\https-`*hostName.domainName*`\bin`**.**

f. Run the `stopserv.bat` **command.**

3 Make sure you have upgraded any Java ES components upon which Web Server has hard upgrade dependencies (see "Upgrade Web Server Dependencies" on page 67.

4 Obtain the required Web Server Release 5U1 upgrade patches, based on Table 5–4.

To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

5 Install the patch.

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 Verify the patch log file.

The log file is found at: `%TEMP%\SUNJAVAES_`*<patch-id>*`.log`

7 Verify the patch installation with the utility `ListJavaESPatches.exe`**.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 Start the Release 5U1 Web Server instances and the administration server.

WebServer-base`\admin-server\bin\startserv.bat`

WebServer-base`\https-`*hostName.domainName*`\bin\startserv.bat`

Verifying the Upgrade

You can verify successful upgrade of Web Server by examining the subcomponent error logs at:

WebServer-base`\admin-server\logs\error`

WebServer-base`\https-hostname.domain\logs\error`

The messages that indicate the Java ES release version are:

Release 5U1	Sun Java System Web Server 7.0 U1 (Build Date Time)
Release 5	Sun Java System Web Server 7.0 (Build Date Time)

Post-Upgrade Tasks

There are no post-upgrade tasks beyond the steps described in "Upgrade Considerations" on page 68.

Rolling Back the Upgrade

1. Log in as administrator.
2. Shut down the Web Server instances and the administration server.
3. Double-click `Uninstall_`*patch-id*`.bat` to uninstall the patch.
4. Restart the administration server and the Web Server instances that were shut down in step 2.

◆ ◆ ◆ CHAPTER 6

Java DB

This chapter describes how to upgrade Java DB from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Java DB 10.2.2.

The chapter provides an overview of upgrade considerations for the different upgrade paths supported by Release 5U1. This chapter covers the following topics:

- "Overview of Java DB Upgrades" on page 71
- "Upgrading Java DB from Java ES 5" on page 73

Note – File locations in this chapter are specified with respect to a directory path referred to as *JavaDB-base*. This path was set by the Java ES installer when Java DB was installed.

The values of this directory path is :

JavaDB-base `C:\Program Files\Sun\JavaES5\JavaDB`

Overview of Java DB Upgrades

The following sections describe general aspects of Java DB that impact upgrading to Java ES 5 Update 1 (Release 5U1):

- "About Release 5U1 Java DB" on page 72
- "Java DB Upgrade Roadmap" on page 72
- "Java DB Data" on page 72
- "Java DB Compatibility Issues" on page 72
- "Java DB Dependencies" on page 72

About Release 5U1 Java DB

Release 5U1 Java DB is a maintenance release that fixes bugs in Release 5 Java DB and provides some minor enhancements.

Java DB Upgrade Roadmap

The following table shows the supported Java DB upgrade paths to Java ES Release 5U1.

TABLE 6–1 Upgrade Paths to Java ES 5 Update 1: Java DB 10.2.2

Java ES Release	Java DB Release	General Approach	Reconfiguration Required
Release 5	Java DB 10.1.3.1	Maintenance upgrade. Apply patches.	None

Java DB Data

The following table shows the type of data that could be impacted by an upgrade of Java DB software.

TABLE 6–2 Java DB Data Usage

Type of Data	Location	Usage
Configuration data	Instance configuration is application-specific and is stored in the Java DB database.	Configuration of Java DB instance
Persistent data	Database directories and their contents are application-specific. Their location is specified by the database connection URL, `jdbc:derby:`*full path to database*.	Database and user certificates

Java DB Compatibility Issues

Release 5U1 Java DB is backwardly compatible with the Release 5 version.

Java DB Dependencies

Java DB has dependency only on the J2SE shared component (see Table 1–8)

Upgrading Java DB from Java ES 5

This section includes information about upgrading Java DB from Java ES 5 to Java ES 5 Update 1. The section covers the following topics:

Introduction

When upgrading Release 5 Java DB to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Java DB.
- **Upgrade Dependencies.** Java DB has dependencies on a number of Java ES shared components (see Table 1–8), none of which need to be upgraded when you perform a maintenance upgrade of Java DB.
- **Backward Compatibility.** Release 5UI Java DB is backwardly compatible with the Release 5 version.

Release 5 Java DB Upgrade

This section describes how to perform an upgrade of Java DB from Java ES 5 to Java ES 5 Update 1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Java DB, perform the tasks described below.

Verify Current Version Information

Verify the current version of Java DB before you upgrade.

▼ To Verify Current Version Information

- **Type the following command:**

  ```
  java -cp JavaDB-base\lib\derby.jar org.apache.derby.tools.sysinfo
  ```

  This command returns the Java DB version information.

  Release 5U1 Java DB 10.2.2.1

  Release 5 Java DB 10.1.3.1

Upgrade Java DB Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Java DB has no hard upgrade dependencies, so upgrade of shared components is optional. However, the upgrade of Java DB to Release 5U1 requires that Windows Installer patch (126910–02) is already applied.

Backing Up Java DB Data

The Java DB upgrade from Release 5 to Release 5U1 does not modify the Release 5 configuration data. However, for the sake of security, you should back up your entire Java DB installation and your data.

Upgrading Release 5 Java DB

This section discusses considerations that impact the upgrade procedure for Java DB, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Java DB software to Java ES Release 5U1 takes into account the following considerations:

- In a deployment architecture in which there are multiple instances of Java DB running on a single computer (all corresponding to the same installed Java DB image), you only have to upgrade the Java DB image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security or user data.
- The Release 5U1 Java DB upgrade patches for Windows are shown in the following table:

TABLE 6–3 Patches to Upgrade Java DB on Windows

Description	Patch ID[1]
Java DB	125272–02

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Java DB instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Java DB to Java ES 5 Update 1

1. **Log in as administrator.**

2. **Stop any Java DB instances.**

   If you have a network server running, use the following command:

   ```
   java -cp JavaDB-base\lib\derby.jar:JavaDB-base\lib\derbynet.jar/
   org.apache.derby.drda.NetworkServerControl shutdown
   ```

   Otherwise, simply stop all applications using Java DB.

3. **Make sure you have upgraded any Java ES components upon which Java DB has hard upgrade dependencies (see "Upgrade Java DB Dependencies" on page 74).**

4. **Obtain the required Java DB Release 5U1 upgrade patches, based on Table 6–3.**

   To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

5. **Install the patch.**

   Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

   Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

6. **Verify the patch log file.**

   The log file is found at: `%TEMP%\SUNJAVAES_`*<patch-id>*`.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Start the Release 5 Java DB instances.**

For example, start Java DB instance for Portal Server with ANT from the command line.

JavaES5-Install-Dir`\share\ant\bin\ant.bat -DPS_CONFIG=`*PortalServer-base*`\config\PSConfig.properties -f` *PortalServer-base*`\lib\derby.xml start-instance`

9 **Start any Java DB clients.**

Verifying the Upgrade

You can verify successful upgrade of Java DB by starting the Java DB instance as follows:

```
java -cp JavaDB-base\lib\derby.jar org.apache.derby.tools.sysinfo
```

The messages that indicate the Java ES release version are:

Release 5U1	Java DB 10.2.2.1
Release 5	Java DB 10.1.3.1

Post-Upgrade Tasks

When upgrading Java DB from Release 5 to Release 5 Update 1, you must convert data from the Java DB 10.1 disk format to the 10.2 format if you want to take full advantage of the enhanced functionality of Release 5U1.

To perform this conversion, connect to the database with `upgrade=true` appended to the JDBC URL. For example:

```
java -cp JavaDB-base\lib\derbytools.java:JavaDB-base\lib\derby.jar
org.apache.derby.tools.ij

ij version 10.2

ij> connect 'jdbc:derby:\databasePath;upgrade=true';

ij> exit;
```

For more information, see the *Getting Started Guide* in the docs directory of your Java DB installation.

Rolling Back the Upgrade

A rollback of the Release 5U1 upgrade cannot be achieved except by reverting to a backup Release 5 installation and its data.

◆ ◆ ◆ CHAPTER 7

High Availability Session Store

This chapter describes how to upgrade High Availability Session Store from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1).

Upgrading High Availability Session Store

The version of High Availability Session Store included in Java ES Update 1 is the same as that included in Java ES 5 and so no upgrade patches are provided for upgrading High Availability Session Store from Release 5 to Release 5U1.

◆ ◆ ◆ CHAPTER 8

Message Queue

This chapter describes how to upgrade Message Queue software from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Sun Java System Message Queue 3.7 UR 2.

The chapter provides a general overview of Message Queue upgrade issues and procedures for the different upgrade paths supported by Java ES 5 Update 1. This chapter covers the following topics:

Note – File locations in this chapter are specified with respect to a fixed directory path referred to as *MessageQueue-base*. The default value of *MessageQueue-base* is `C:\Program Files\Sun\JavaES5\mq`.

Overview of Message Queue Upgrades

This section describes the following general aspects of Message Queue that impact upgrading to Java ES 5 Update 1 :

About Java ES 5 Update 1 Message Queue

Release 5U1 Message Queue is a maintenance release that fixes bugs in Release 5 Message Queue. Release 5 Message Queue was a feature release that represented a minor upgrade with respect to Release 4.

Message Queue software has historically included two editions, a Platform Edition and an Enterprise Edition, each corresponding to a different feature set and licensed capacity. Enterprise Edition was for deploying and running messaging applications in an enterprise production environment. Platform Edition was mainly for developing, and debugging messaging applications and components. With Release 5 Message Queue, the Platform Edition was deprecated and Message Queue includes all Enterprise Edition features. An upgrade from an earlier Java ES version to Java ES 5 converts any installed Platform Edition to full Message Queue enterprise-level features.

Message Queue Upgrade Roadmap

The following table shows the supported Message Queue upgrade paths to Release 5U1.

TABLE 8–1 Upgrade Paths to Java ES Update 1Message Queue 3.7 UR2

Java ES Release	Message Queue Release	General Approach	Reconfiguration Required
Release 5	Sun Java System Message Queue 3.7 UR1	Maintenance Upgrade. Apply patches.	None

Message Queue Data

Message Queue, like other Java ES components, makes use of various kinds of data that for any specific upgrade might need to be migrated to an upgraded version. Table 8–2 shows the type of data that could be impacted by an upgrade of Message Queue software.

In the table, *Instance-Name* identifies the name of the Message Queue broker instance with which the data is associated and *MessageQueue-base* is the installation directory for Message Queue.

For Java ES 5 Update 1, `C:\Program Files\Sun\JavaES5\mq` is the default installation location for Message Queue . For Java ES 4, `C:\Sun\MessageQueue` is the default installation location.

TABLE 8–2 Message Queue Data Usage

Data Category	Location	Usage
Broker instance configuration properties	*MessageQueue-base*`\var\instances\`*Instance-Name*`\config.properties`	Broker and related services configurations

TABLE 8–2 Message Queue Data Usage *(Continued)*

Data Category	Location	Usage
Persistent store for dynamic application data	Release 4: *MessageQueue-base*\var\instances*Instance-Name*\fs350 Release 5: *MessageQueue-base*\var\instances*Instance-Name*\fs370 or accessible through the Java Database Connectivity (JDBC™) API	Stores messages, destinations, durable subscriptions, transactions, and other dynamic data
Administered objects (object store)	Local directory of your choice or an LDAP Directory Server	Objects used to configure client/broker connections
Security: user repository	*MessageQueue-base*\var\instances*Instance-Name*\etc\passwd	Stores user data used for authentication and authorization
Security: access control file (default location)	*MessageQueue-base*\var\instances*Instance-Name*\etc\accesscontrol.properties	Sets the rules that authorize user access to destinations and related capabilities
Security: passfile directory (default location)	*MessageQueue-base*\var\instances*Instance-Name*\etc\	Stores encrypted password information.
Security: broker's keystore file location	*MessageQueue-base*\etc	Stores encrypted certificate information for secure messaging.

Message Queue Dependencies

Message Queue dependencies on other Java ES components can impact the procedure for upgrading and reconfiguring Message Queue software. Changes in Message Queue interfaces or functions, for example, could require upgraded version of components upon which Message Queue depends. The need to upgrade such components depends upon the specific upgrade path.

Message Queue has dependencies on the following Java ES components:

- **Shared components**. Message Queue has dependencies on specific Java ES shared components, as listed in Table 1–8.
- **Directory Server (optional)**. If you want to configure Message Queue to store administered objects and/or user data in an LDAP directory rather than locally, you can use Directory Server for that purpose.

- **Web Container (optional)**. If you need HTTP messaging between client and broker, then Message Queue requires web container support from Java ES Web Server or from Java ES Application Server.
- **Databases (optional)**. You can configure Java DB or a third-party database as a data store for the Message Queue persistence layer.

Upgrading Message Queue from Java ES 5

This section includes information about upgrading Message Queue from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

Introduction

When upgrading Release 5 Message Queue to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Message Queue.
- **Upgrade Dependencies**. Message Queue has dependencies on a number of Java ES shared components, (see Table 1–8), none of which need to be upgraded when you perform a maintenance upgrade of Message Queue. However, Message Queue requires that Windows Installer patch (126910–02) is already applied.
- **Backward Compatibility**. Release 5U1 Message Queue is backwardly compatible with the Release 5 version.
- **Upgrade Rollback.** You can do a rollback of the Release 5 upgrade by reverting to the previous version, which is left intact by the upgrade.

Release 5 Message Queue Upgrade

This section describes how to perform an upgrade of Message Queue from Java ES 5 to Java ES 5 Update 1. The section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Message Queue, perform the tasks described below.

- "Verify Current Version Information" on page 85
- "Upgrade Message Queue Dependencies" on page 85
- "Back Up Message Queue Data" on page 85

Verify Current Version Information

Verify the current version of Message Queue before you upgrade.

▼ To Verify Current Version Information

1 **Start the Message Queue broker with `-version` option.**

```
imqbrokerd -version
```

The outputs that indicate the Message Queue version are:

2 **The outputs that indicate the Message Queue version are:**

Release 5U1	Sun Java System Message Queue 3.7 UR2
Release 5	Sun Java System Message Queue 3.7 UR1

Upgrade Message Queue Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Message Queue has no hard upgrade dependencies, so upgrade of shared components is optional.

Back Up Message Queue Data

It is always a good practice to back up application data in a production environment before performing an upgrade. Note the location of the persistent store for the dynamic application data indicated in Table 8–2.

Upgrading Release 5 Message Queue

This section discusses considerations that impact the upgrade procedure for Message Queue, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Message Queue software to Java ES 5 Update 1 takes into account the following considerations:

- In a deployment architecture in which there are multiple instances of Message Queue running on a single computer (all corresponding to the same installed Message Queue image), you only have to upgrade the Message Queue image once.
- In a maintenance upgrade, you do not have to migrate configuration, security and user data.
- The Release 5U1 Message Queue upgrade patches for Windows OS are shown in the following table:

TABLE 8–3 Patches to Upgrade Message Queue on Windows

Description	Patch ID[1]
Message Queue core and C-API	125066–03

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Message Queue instances residing locally on the computer where the upgrade is taking place. Back up application data in a production environment before performing an upgrade. For Message Queue data locations, refer Table 8–2.

▼ To Upgrade Message Queue to Java ES 5 Update 1

1. **Stop any Message Queue client applications that are running.**

   In default Java ES 5 installation these are the Application Server instances.

2. **Stop any Message Queue brokers that are running.**

   a. **Choose Start > Settings > Control Panel.**

   b. **Select Administrative Tools.**

   c. **Select Services.**

   d. **Select Message Queue Broker from the Services list.**

   You can use one of the following methods to stop the service:

   - Right-click and select Stop.
   - Click the Stop Service icon.
   - Select Stop from the Action Menu.

   - **Enter the following command.**

     ```
     imqcmd shutdown bkr [ -b hostName:port ]
     ```

The system prompts you to provide the user name and the password. The default user name is set to `admin` and the default password is also set to `admin`.

3 **Make sure you have upgraded any Java ES components upon which Message Queue has hard upgrade dependencies (see "Upgrade Message Queue Dependencies" on page 85.**

4 **Obtain the required Message Queue Release 5U1 upgrade patches, based on Table 8–3.**

To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

5 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions and for limitations when updating the Windows 2000 service registry.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_`*<patch-id>*`.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Start the Message Broker or Service from Service Control Panel.**

Alternatively, you can start the Message Broker from the command line:

```
net start MQ3.7UR1_Broker
```

Note – Due to a limitation of the Windows Patching System, the service name MQ3.7UR1_Broker does not get updated during the application of the patch.

Verifying the Upgrade

You can verify successful upgrade of Message Queue as follows:

1. Start the Message Queue broker with `-version` option.

   MessageQueue-base`\bin\imqbrokerd.exe -version`

The messages that indicate the Java ES release version are:

Release 5U1	Sun Java System Message Queue 3.7 UR2
Release 5	Sun Java System Message Queue 3.7 UR1

Post-Upgrade Tasks

If you have upgraded the web container and are using the Message Queue HTTP tunneling servlet, you may need to redeploy the servlet in the new web container. Otherwise, you do not need to redeploy the servlet after upgrading Message Queue. For more information about HTTP support, see the *Sun Java System Message Queue 3.7 UR1 Administration Guide*.

Rolling Back the Upgrade

1. Stop any running Release 5U1 Message Queue brokers and Message Queue service from Service Control Panel.
2. Execute `Uninstall_`*`patch-id`*`.bat`
3. Start the Message Queue broker or service from Service Control Panel.
4. Start the Release 5 Message Queue.
5. Verify the Message Queue version with the following command.
   ```
   imqbrokerd -version
   ```

◆ ◆ ◆ CHAPTER 9

Application Server

This chapter describes how to upgrade Application Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Sun Java System Application Server Enterprise Edition 8.2 Patch2.

The chapter provides a general overview of upgrade issues and procedures for the different upgrade paths supported by Release 5U1. The chapter covers the following topics:

Note – File locations in this chapter are specified with respect to a directory path referred to as *ApplicationServer-base*. At least part of this path might have been specified as an installation directory when Application Server was initially installed. If not, the Java ES installer assigned a default value.

The default value of *ApplicationServer-base* is `C:\Program Files\Sun\JavaES5\appserver`

Overview of Application Server Upgrades

The following sections describe general aspects of Application Server that affect upgrading to Java ES 5 Update 1:

About Java ES 5 Update 1 Application Server

Release 5U1 Application Server is a maintenance release that fixes bugs in Release 5 Application Server. Release 5 Application Server (Application Server 8.2) was a maintenance release with respect to Release 4 (Application Server 8.1 UR2), including only selected bug fixes. Release 5U1 Application Server is functionally the same as Release 4.

Application Server Upgrade Roadmap

The following table shows the supported Application Server upgrade paths to Java ES 5 Update 1.

TABLE 9–1 Upgrade Paths to Java ES 5 Update 1: Sun Java System Application Server Enterprise Edition 8.2 Patch2

Java ES Release	Application Server Release	General Approach	Reconfiguration Required
Release 5	Sun Java System Application Server Enterprise Edition 8.2	Maintenance Upgrade. Apply patches.	None
Release 4		Direct upgrade of Application Server from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 Application Server to Release 5 Application Server and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows*.	

Application Server Data

The following table shows the type of data that could be affected by an upgrade of Application Server software.

TABLE 9–2 Application Server Data Usage

Type of Data	Location	Usage
Environment variables	*ApplicationServer-base*\config\asenv.bat	Global variables
Configuration data	*ApplicationServer-base*\domains\domainName\config	Configuration of Application Server instances
Deployment data	*ApplicationServer-base*\domains\domainName\applications	Configuration of J2EE container for specific J2EE components and applications

Application Server Compatibility Issues

Java ES 5 Update 1 Application Server does not introduce any interface changes with respect to Java ES 5.

Application Server Dependencies

Application Server dependencies on other Java ES components can affect the procedure for upgrading and reconfiguring Application Server software. Changes in Application Server interfaces or functions, for example, could require upgraded versions of components upon which Application Server depends. The need to upgrade such components depends upon the specific upgrade path.

Application Server has dependencies on the following Java ES components:

- **Shared components**. Application Server has dependencies on specific Java ES shared components, as listed in Table 1–8.
- **Message Queue.** Application Server depends on Message Queue to provide J2EE Java Message Service-compliant asynchronous messaging support.
- **HADB.** Application Server depends on High Availability Database (HADB) for high availability storage of HTTP session. HADB is designed to support up to 99.999% service and data availability with load balancing, failover, and state recovery.
- **NSS.** Application Server depends on Network Security Service (NSS) for managing security.
- **Web Container (optional)**. Application Server depends upon web container services for its optional load balancing plug-in. This support can be provided by Java ES Web Server.

Upgrading Application Server from Java ES 5

This section includes information about upgrading Application Server from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

Introduction

When upgrading Release 5 Application Server to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Application Server.
- **Upgrade Dependencies.** Application Server has dependencies on a number of Java ES shared components (see Table 1–8).
- **Backward Compatibility.** Release 5UI Application Server is backwardly compatible with the Release 5 version.

Release 5 Application Server Upgrade

This section describes how to perform an upgrade of Application Server from Java ES Release 5 to Release 5U1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Application Server, perform the tasks described below.

Verify Current Version Information

Verify the current version of Application Server before you upgrade.

▼ To Verify Current Version Information

- **Type the following command:**

  WebServer-base`\asadmin version --verbose`

  This command returns the Application Server version information.

  Release 5U1 Sun Java Enterprise System Application Server Enterprise Edition 8.2

  Release 5 Sun Java Enterprise System Application Server Enterprise Edition 8.2

Upgrade Application Server Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Application Server has hard upgrade dependencies on Message Queue and on the NSS shared component, so these should be upgraded before upgrading Application Server. Upgrading Application Server to Release 5U1 requires that Windows Installer patch (126910–02) is already applied.

Backing Up Application Server Data

The Application Server upgrade from Release 5 to Release 5U1 does not modify the Release 5 configuration data. You do not need to back up current data.

Upgrading Release 5 Application Server

This section discusses considerations that impact the upgrade procedure for Application Server, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Application Server software to Java ES Release 5U1 takes into account the following considerations:

- In a deployment architecture in which there are multiple instances of Application Server running on a single computer (all corresponding to the same installed Application Server image), you only have to upgrade the Application Server image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security or user data.
- The Release 5U1 Application Server upgrade patches for Windows are shown in the following table:

TABLE 9–3 Patches to Upgrade Application Server on Windows

Description	Patch ID[1]
Application Server core	124684–04
Application Server Localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Application Server instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Application Server to Java ES 5 Update 1

1. **Log in as administrator.**
2. **Shut down all Application Server instances.**
   a. **Stop the Domain Administration Server.**
      ApplicationServer-base`\bin\asadmin.bat stop-domain` *domainName*
   b. **Stop the Node Agent.**
      ApplicationServer-base`\bin\asadmin.bat stop-node-agent` *nodeagentName*
3. **Make sure you have upgraded any Java ES components upon which Application Server has hard upgrade dependencies (see "Upgrade Web Server Dependencies" on page 67.**
4. **Obtain the required Application Server Release 5U1 upgrade patches, based on Table 9–3.**
   To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.
5. **Install the patch.**
   Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_<patch-id>.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Start the Release 5U1 Application Server domains and node-agents of all the instances.**

ApplicationServer-base`\bin\asadmin.bat start-domain --user` *admin-user-ID*`/--passwordfile` *passwordFileName domain-name*

ApplicationServer-base`\bin\asadmin.bat start-node-agent --port` *admin-Port* `--user/` *admin-user-ID* `--password` *admin-password node-agent--name*

Verifying the Upgrade

You can verify successful upgrade of Application Server by starting the Application Server instance as follows:

AppServer-base`\bin\asadmin version --verbose`

The messages that indicate the Java ES release version are:

Release 5U1	Sun Java Enterprise System Application Server 8.2 (build b30–p02)
Release 5	Sun Java Enterprise System Application Server 8.2 (build b25–fcs)

Post-Upgrade Tasks

The upgrade will not update version numbers.

To update the version string, do the following:

▼ To Update the Version String

1 **Copy** *unzipped installable binary*`\scripts\PostPatch.class` **to** *ApplicationServer-base*`\lib`

2 **Execute** `java PostPatch` **from the directory** *ApplicationServer-base*`\lib`**.**

Rolling Back the Upgrade

1. Log in as administrator.
2. Shut down the Application Server instances.
3. Double-click `Uninstall_`*patch-id*`.bat` to uninstall the patch.

4. Execute `java PostPatch` from the directory *ApplicationServer-base*`\lib`.
5. Restart the administration server and the Application Server instances that were shut down in step 2.

◆ ◆ ◆ CHAPTER 10

Service Registry

This chapter describes how to upgrade Service Registry from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1): Service Registry 3.1 Update 1.

This chapter covers the following topics

Note – File locations in this chapter are specified with respect to directory paths referred to as *ServiceRegistryR4-base* and *RegistryDomainR4-base* (Java ES Release 4 Service Registry), and *ServiceRegistryR5-base* and `RegistryDomainR5-base` (Release 5 and 5U1 Service Registry). At least part of these paths might have been specified as installation directories when Service Registry was installed. If not, the Java ES installer assigned a default value. The default values of these directory paths are:

ServiceRegistryR4-base	`C:\Sun\ServiceRegistry`
DomainRegistryR4-base	`C:\Sun\ServiceRegistry`
ServiceRegistryR5-base	`C:\Program Files\Sun\JavaES5\srvc-registry`
DomainRegistryR5-base	`C:\Program Files\Sun\JavaES5\srvc-registry`

Overview of Service Registry Upgrade

This section describes the following general aspects of Service Registry that impact upgrading to Java ES 5 Update 1 :

- "Service Registry Compatibility Issues" on page 99
- "Service Registry Dependencies" on page 99

About Java ES 5 Update 1 Service Registry

Release 5U1 Service Registry represents a maintenance release that fixes bugs in Release 5 Service Registry. Release 5 Service Registry was a minor feature release with respect to Release 4 Service Registry. It included some improved functionality, updated interfaces, and selected bug fixes.

Service Registry Upgrade Roadmap

The following table shows the supported Service Registry upgrade paths to Java ES 5.

TABLE 10–1 Upgrade Paths to Java ES 5 Update 1: Sun Java System Service Registry 3.1u1

Java ES Release	Service Registry Release	General Approach	Reconfiguration
Release 5	Sun Java System Service Registry 3.1	Maintenance upgrade. Apply patches.	None
Release 4		Direct upgrade of Service Registry from Release 4 to Release 5U1 is not supported. This upgrade path is supported by first upgrading Release 4 Service Registry to Release 5 Service Registry and then upgrading Release 5 to Release 5U1. The information about upgrading Release 4 to Release 5 is documented in *Sun Java ES 5 Upgrade Guide for Microsoft Windows*.	

Service Registry Data

The following table shows the type of Service Registry data.

TABLE 10–2 Service Registry Data Usage

Type of Data	Location	Usage
Installation Parameters	*ServiceRegistryR-base*\install\install.properties	Configuration of Service Registry
Trusted certificates	*ServiceRegistryR-base*\install\cacerts	Certificates trusted by Service Registry that are not part of the Application Server installation
Configuration data	*RegistryDomainR-base*\domains\registry\applications\j2ee-modules\soar\WEB-INF\classes*.properties	Configuration of Service Registry instance
Registry/repository data	*RegistryDomainR-base**3.1*\data	Database and user certificates
Web interface configuration	*RegistryDomainR-base*\3.1\jaxr-ebxml	Configuration of web interface

Service Registry Compatibility Issues

Release 5U1 Service Registry is backwardly compatible with Release 5 Service Registry.

Service Registry Dependencies

Service Registry dependencies on other Java ES components can impact the procedure for upgrading and reconfiguring Service Registry software. Changes in Service Registry interfaces or functions, for example, could require upgraded version of components upon which Service Registry depends. The need to upgrade such components depends upon the specific upgrade path.

Service Registry has dependencies on the following Java ES components:

- **Shared Components.** Service Registry has dependencies on specific Java ES shared components, as listed in Table 1–8.
- **Application Server.** Service Registry depends on Application Server to provide a container for the Service Registry application and, in Release 5 and 5U1, to manage connections to the networked registry and repository database.
- **Java DB.** Service Registry has a mandatory dependency on Java DB as the default database for storing services and the meta data describing them.

Upgrading Service Registry from Java ES 5

This section includes information about upgrading Service Registry from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

Introduction

When upgrading Release 5 Service Registry to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Service Registry.
- **Upgrade Dependencies.** Service Registry has dependencies on a number of Java ES shared components (see Table 1–8), none of which need to be upgraded when you perform a maintenance upgrade of Service Registry.
- **Backward Compatibility.** Release 5UI Service Registry is backwardly compatible with the Release 5 version.

Release 5 Service Registry Upgrade

This section describes how to perform an upgrade of Service Registry from Java ES Release 5 to Release 5U1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Web Server, perform the tasks described below.

Upgrade Service Registry Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Service Registry has hard upgrade dependencies on Application Server and Java DB, so these should be upgraded before upgrading Service Registry. Service Registry also requires that Windows Installer patch (126910–02) is already applied.

Backing Up Service Registry Data

The Service Registry upgrade from Release 5 to Release 5U1 does not modify the Release 5 configuration data. You do not need to back up current data.

Upgrading Release 5 Service Registry

This section discusses considerations that impact the upgrade procedure for Web Server, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Service Registry software to Java ES Release 5U1 takes into account the following considerations:

- In a deployment architecture in which there are multiple instances of Service Registry running on a single computer (all corresponding to the same installed Service Registry image), you only have to upgrade the Service Registry image once.
- In a maintenance upgrade, you do not have to migrate schema, configuration, security or user data.
- The Release 5U1 Service Registry upgrade patches for Windows are shown in the following table:

TABLE 10–3 Patches[1] to Upgrade Service Registry on Windows

Description	Patch ID[1]
Service Registry core	125443–09
Service Registry Localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Service Registry instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Service Registry to Java ES 5 Update 1

1 Log in as administrator.

2 Stop the Service Registry (Application Server) domain.

ServiceRegistryR5–base`\install\ant -f build-install.xml appserver.domain.stop`

3 **Make sure you have upgraded any Java ES components upon which Service Registry has hard upgrade dependencies (see "Upgrade Service Registry Dependencies" on page 100).**

4 **Obtain the required Service Registry Release 5U1 upgrade patches, based on Table 10–3.**

5 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_<`*patch-id*`>.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Upgrade and configure the Release 5U1 Service Registry instance.**

ServiceRegistryR5–base`/install`

```
ant -f build-install.xml upgrade.jes5.to.jes5u1
```

9 **Start the Release 5U1 Service Registry (Application Server) domain.**

```
ant-f build-install.xml appserver.domain.start appserver.deploy.test
```

Verifying the Upgrade

You can verify successful upgrade of Service Registry with the help of the utility `ListJavaESPatches.exe` as described in the procedure to upgrade Service Registry. See "Upgrade Procedure" on page 101.

Post-Upgrade Tasks

There are no post-upgrade tasks beyond the steps described in "Upgrade Procedure" on page 101 and "Upgrade Considerations" on page 101.

Rolling Back the Upgrade

1. Log in as administrator.
2. Stop the Service Registry (Application Server) domain.

   ServiceRegistryR5–base`/install`

   ```
   ant -f build-install.xml appserver.domain.stop
   ```
3. Double-click `uniinstall_`*patch-id*`.bat` to uninstall the patch.
4. Execute the following command.

   ```
   ant -f build-install.xml appserver.domain.start appserver.undeploy
   appserver.deploy appserver.deploy.fix install.l10n appserver.domain.stop
   appserver.domain.start appserver.deploy.test
   ```

◆ ◆ ◆ CHAPTER 11

Web Proxy Server

This chapter describes how to upgrade Web Proxy Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5): Sun Java System Web Proxy Server 4.0.5.

The chapter provides an overview of upgrade considerations for the different upgrade paths supported by Release 5U1.

Note – File locations in this chapter are specified with respect to a directory path referred to as *WebProxyServer-base*. At least part of this path might have been specified as an installation directory when Web Proxy Server was initially installed. If not, the Java ES installer assigned a default value.

The default value of *WebProxyServer-base* is `C:\Program Files\Sun\JavaES5\webproxyserver`.

Overview of Web Proxy Server Upgrade

The following sections describe general aspects of Web Proxy Server that affect upgrading to Java ES 5 Update 1 :

About Java ES 5 Web Proxy Server

Release 5U1 Web Proxy Server is a maintenance release that fixes bugs in Release 5 Web Proxy Server. Release 5 Web Proxy Server, in turn , was a bug-fix release with respect to Release 4.

However, Release 5 Web Proxy Server includes better performance, more scalable architecture, better standards compliance, and a new administration interface as compared to Sun ONE Web Proxy Server 3.6 before its inclusion in the Java Enterprise System software.

Web Proxy Server Upgrade Roadmap

The following table shows the supported Web Proxy Server upgrade paths to Java ES Release 5.

TABLE 11–1 Upgrade Paths to Java ES Release 5 Update 1: Sun Java System Web Proxy Server 4.0.5

Java ES Release	Web Proxy Server Relase	General Approach	Reconfiguration Required
Release 5	Sun Java System Web Proxy Server 4.0.4	Maintenance upgrade. Apply patches.	None
Release 4	Sun Java System Web Proxy Server 4.0.1	Upgrade of Web Proxy Server from Release 4 to Release 5U1 is not supported.	

Web Proxy Server Data

The following table shows the type of data that could be impacted by an upgrade of Web Proxy Server software.

TABLE 11–2 Web Proxy Server Data Usage

Type of Data	Location	Usage
Configuration data	*WebProxyServer-base*\`proxy-serverid\config` This directory contains files, such as `server,xml`, `magnus.conf`, and `obj.conf`	Stores configuration information for the server, cache, filters, routing, and other functional aspects of Web Proxy Server

Web Proxy Server Compatibility Issues

Release 5U1 Web Proxy Server does not introduce any new public interfaces and is backwardly compatible with Release 4 and Release 51 Web Proxy Server. Release 5U1 Web Proxy Server is

also compatible with release 3.6, except that plug-ins developed using the NSAPI interface supported by release 3.6 must be recompiled with the NSAPI interface supported by Release 5U1.

Web Proxy Server Dependencies

Web Proxy Server has dependencies on the following Java ES components:

- **Shared Components.** Web Proxy Server has dependencies on specific Java ES shared components (see Table 1–8. Web Proxy Server upgrades might depend upon upgraded versions of these shared components.
- **Directory Server.** Web Proxy Server has an optional dependency on Directory Server for providing LDAP-based authentication.
- **Web Server.**Web Proxy Server has a co-dependency on Web Server for providing improved security and performance for HTTP requests.

Upgrading Web Proxy Server from Java ES 5

This section includes information about upgrading Web Proxy Server from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

- "Introduction" on page 107
- "Release 5 Web Proxy Server Upgrade" on page 108

Introduction

When upgrading Release 5 Web Proxy Server to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is performed using patches. There is no additional reconfiguration required.
- **Upgrade Dependencies.** Web Proxy Server has dependencies on a number of Java ES shared components (see Table 1–8).
- **Backward Compatibility.** Release 5UI Web Proxy Server is backwardly compatible with the Release 5 version.
- **Upgrade Rollback.** Rollback of the Release 5U1 upgrade of Web Proxy Server is achieved by removing the upgrade patches.

Release 5 Web Proxy Server Upgrade

This section describes how to perform an upgrade of Web Proxy Server from Java ES 5 to Java ES 5 Update 1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Web Proxy Server, perform the tasks described below.

Verify Current Version Information

Verify the current version of Web Proxy Server before you upgrade.

▼ To Verify Current Version Information

- **Examine the subcomponent error log at:**

  WebProxyServer-base`\proxy-admserv\logs\error`

  The Web Proxy Server version information is as follows.

Release 5U1	Sun Java System Web Proxy Server 4.0.5 (Build Date)
Release 5	Sun Java System Web Proxy Server 4.0.4 (Build Date)

Upgrade Web Proxy Server Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. However, the upgrade of Web Proxy Server to Release 5U1 only requires that Windows Installer patch (126910–02) is already applied.

Backing Up Web Proxy Server Data

The Web Proxy Server upgrade to Release 5U1 does not modify the Release 5 configuration data. There is no need to back up current data.

Upgrading Release 5 Web Proxy Server

This section discusses considerations that impact the upgrade procedure for Web Proxy Server, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Web Proxy Server software to Java ES Release 5U1 takes into account the following considerations:

- All Web Proxy Server instances corresponding to the same installed Web Proxy Server image are upgraded at the same time. All such instances should be shut down when patches are being applied to the installed image.
- The Release 5U1 Web Proxy Server upgrade patches for Windows are shown in the following table:

TABLE 11–3 Patches[1] to Upgrade Web Proxy Server on Windows

Description	Patch ID[1]
Web Proxy Server core	126325–02
Web Proxy Server localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Web Proxy Server instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Web Proxy Server to Java ES 5U1

1. **Log in as administrator.**
2. **Shut down the Release 5 Web Proxy Server instances and the administration server.**

   ```
   C:\Program Files\Sun\JavaES5\webproxyserver\proxy-admserv\stopsockd.bat
   C:\Program Files\Sun\JavaES5\webproxyserver\proxy-server1\stopsvr.bat
   C:\Program Files\Sun\JavaES5\webproxyserver\proxy-server1\stopsockd.bat
   ```

3. **Make sure you have upgraded any Java ES components upon which Web Proxy Server has hard upgrade dependencies (see "Upgrade Web Proxy Server Dependencies" on page 108.**

4 **Obtain the required Web Proxy Server Release 5U1 upgrade patches, based on Table 11–3.**

To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

5 **Install the patch.**

Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

---

6 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_<`*patch-id*`>.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Start the Release 5U1 Web Proxy Server instances and the administration server.**

```
C:\Program Files\Sun\JavaES5\webproxyserver\proxy-admserv\startsvr.bat

C:\Program Files\Sun\JavaES5\webproxyserver\proxy-server1\startsvr.bat

C:\Program Files\Sun\JavaES5\webproxyserver\proxy-server1\startsockd.bat
```

Verifying the Upgrade

You can verify successful upgrade of Web Proxy Server by examining the subcomponent error logs at :

WebProxyServer-base`\proxy-admserv\logs\error`

WebProxyServer-base`\proxy-server1\logs\error`

The messages that indicate the Java ES release version are:

Release 5U1	Sun Java System Web Proxy Server 4.0.5
Release 5	Sun Java System Web Proxy Server 4.0.4

Post-Upgrade Tasks

There are no post-upgrade tasks beyond the steps described in "Upgrade Considerations" on page 68.

Rolling Back the Upgrade

1. Log in as administrator.
2. Shut down the Proxy Server instances and the administration server.
3. Double-click `uninstall_`*patch-id*`.bat` to uninstall the patch.
4. Restart the administration server and the Proxy Server instances that were shut down in step 2.

◆ ◆ ◆ CHAPTER 12

Access Manager

This chapter describes how to upgrade Access Manager from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1).

Upgrading Access Manager

The version of Access Manager included in Java ES Update 1 is the same as that included in Java ES 5 and so no upgrade patches are provided for upgrading Access Manager from Release 5 to Release 5U1.

◆ ◆ ◆ CHAPTER 13

Monitoring Console

This chapter describes how to upgrade Monitoring Console to Java ES 5 Update 1 (Release 5U1): Monitoring Console 1.0 u1.

The chapter provides a general overview of upgrade issues and procedures for the different upgrade paths supported by Release 5U1. This chapter covers the following sections:

Note – File locations in this chapter are specified with respect to a directory path referred to as *MonitoringConsole-base*. This path was set by the Java ES installer when Monitoring Console was installed.

The default value of these directory paths are:

MonitoringConsole-base	`C:\Program Files\Sun\JavaES5\jesmc\jesmc`
MonitoringConsoleConfig-base	`C:\Program Files\Sun\JavaES5\share\mfwk\config`
MonitoringConsoleData-base	`C:\Program Files\Sun\JavaES5\share\mfwk`

Overview of Monitoring Console Upgrades

The following sections describe general aspects of Monitoring Console that impact upgrading to Java ES 5 Update 1 :

About Release 5U1 Monitoring Console

Monitoring Console Web GUI is an application in SJWC. Release 5U1 Monitoring Console is a maintenance release that fixes bugs in Java ES 5 (Release 5) Monitoring Console and adds a few new features. See the *Monitoring Console Release Notes* for details. Monitoring Console was first introduced into Java ES with Release 5.

Release 5U1 Upgrade Roadmap

The following table shows the supported Monitoring Console upgrade paths to Java ES 5 Update 1.

TABLE 13–1 Upgrade Paths to Java ES 5 Monitoring Console 1.0 u1

Java ES Release	Monitoring Console Release	General Approach	Reconfiguration Required
Release 5	Monitoring Console 1.0	Maintenance upgrade. Apply patches.	None

Monitoring Console Data

The following table shows the type of data that could be impacted by an upgrade of Monitoring Console software.

TABLE 13–2 Monitoring Console Data Usage

Type of Data	Location	Usage
Master Agent configuration data	*MonitoringConsoleConfig-base* `\masteragent.properties`	Configuration of Monitoring Framework Master Agent.
Console node list	*MonitoringConsoleConfig-base* `\nodelist`	List of the hosts displayed in the console.
Console user preferences	*MonitoringConsoleData-base* `\userPrefs/master_agent`	User preferences
Monitoring rules	*MonitoringConsoleData-base* `\persistence/threshold/ma`	Monitoring rules

Monitoring Console Compatibility Issues

Java ES 5 Update 1 Monitoring Console is backward compatible with the Release 5 version.

Monitoring Console Dependencies

Monitoring Console has dependency on a number of shared components Java ES components (see Table 1–8).

Upgrading Monitoring Console from Java ES 5

This section includes information about upgrading Monitoring Console from Java ES 5 to Java ES 5 Update 1 . The section covers the following topics:

Introduction

When upgrading Release 5 Monitoring Console to Release 5U1, consider the following aspects of the upgrade process:

- **General Upgrade Approach.** The upgrade is achieved by patching Release 5 Monitoring Console.
- **Upgrade Dependencies.** Monitoring Console has dependencies on a number of Java ES shared components (see Table 1–8), two of are hard upgrade dependencies and need to be upgraded when you perform a maintenance upgrade of Monitoring Console: MFWK and SJWC.
- **Backward Compatibility.** Release 5UI Monitoring Console is backwardly compatible with the Release 5 version.

Release 5 Monitoring Console Upgrade

This section describes how to perform an upgrade of Monitoring Console from Java ES 5 to Java ES 5 Update 1. This section covers the following topics:

Pre-Upgrade Tasks

Before you upgrade Monitoring Console, perform the tasks described below.

- "Backing Up Monitoring Console Data" on page 118

Verify Current Version Information

Verify the current version of Monitoring Console before you upgrade.

▼ To Verify Current Version Information

1. **Open the Monitoring Console URL in a web browser:**
   `https:`*MonitoringConsole_Host*`:6789`
2. **Log in as the Administrator.**
3. **Click the Sun Java System Monitoring Console link.**
4. **Click the Version button.**
5. **The Monitoring Console version information is displayed.**

Release 5U1	Monitoring Console 1.0 u1
Release 5	Monitoring Console 1.0

Upgrade Monitoring Console Dependencies

It is generally recommended that all Java ES components on a computer system (and in a computing environment) be upgraded to Release 5U1. Release 5U1 Monitoring Console has hard upgrade dependencies on MFWK and SJWC shared components, which therefore need to be upgraded before upgrading Monitoring Console. Monitoring Console also requires that Windows Installer patch (126910–02) is already applied.

Backing Up Monitoring Console Data

Upgrade of Monitoring Console to Release 5U1 does not require the reconfiguration of Monitoring Console software. Therefore backup of Monitoring Console data is optional.

Upgrading Release 5 Monitoring Console

This section discusses considerations that impact the upgrade procedure for Monitoring Console, followed by a description of the procedure itself.

Upgrade Considerations

The upgrade of Monitoring Console software to Java ES 5 Update 1 takes into account the following considerations:

- In a maintenance upgrade, you do not have to migrate schema, configuration, security or user data.
- The Release 5U1 Monitoring Console upgrade patches for Windows are shown in the following table:

TABLE 13–3 Patches to Upgrade Monitoring Console on Windows

Description	Patch ID[1]
Monitoring Console core	125454–07
Monitoring Console localization	The localized patch files are delivered within the core patch.

[1] Patch revision numbers are the minimum required for upgrade to Release 5U1. If newer revisions become available, use the newer ones instead of those shown in the table.

Upgrade Procedure

The procedure documented below applies to Monitoring Console instances residing locally on the computer where the upgrade is taking place.

▼ To Upgrade Monitoring Console to Java ES 5 Update 1

1. **Log in as Administrator.**

2. **Shut down the Release 5 Monitoring Console instances by stopping SJWC.**

   You can stop Monitoring Console by stopping SJWC.

   For example, you can stop the default SJWC instance from the command line.

   ```
   C:\Program Files\Sun\JavaES5\share\webconsole\bin\smcwebserver.bat stop
   ```

3. **Make sure you have upgraded any Java ES components upon which Monitoring Console has hard upgrade dependencies (see "Upgrade Monitoring Console Dependencies" on page 118.**

4. **Obtain the required Monitoring Console Release 5U1 upgrade patches, based on Table 13–3.**

   To obtain the patch, see "Accessing Java ES Patches" on page 27. Patches can be downloaded to *\workingDirectory*.

5. **Install the patch.**

   Installation is generally performed by running *patch-id*`.exe`, however, be sure to consult the `README.`*patch-id* file in the patch directory for installation instructions.

Note – If you are prompted to restart the system, select No. Wait till the patch installation process is completed and then restart and re-login as the same user to complete the patch installation.

6 **Verify the patch log file.**

The log file is found at: `%TEMP%\SUNJAVAES_<patch-id>.log`

7 **Verify the patch installation with the utility `ListJavaESPatches.exe`.**

Run `ListJavaESPatches.exe` and check that the output includes the patch id of the patch that you have installed in Step 5. For more information, see "Identifying Installed Java ES Patches" on page 28.

8 **Start SJWC.**

For example, start the default SJWC instance.

```
C:\Program Files\Sun\JavaES\share\webconsole\bin\smcwebserver.bat start
```

9 **Undeploy the Release 5 Monitoring Console web application.**

```
C:\Program Files\Sun\JavaES5\share\webconsole\bin\wcadmin.bat undeploy -a
jesmc/ -x \jesmc
```

10 **Deploy the Release 5U1 Monitoring Console web application.**

`C:\Program Files\Sun\JavaES5\share\webconsole\bin\wcadmin.bat deploy -a jesmc/ -x \jesmc` *MonitoringConsole-base*

11 **Load the Release 5U1 Monitoring Console by restarting SJWC.**

```
C:\Program Files\Sun\JavaES5\share\webconsole\bin\smcwebserver.bat restart
```

Verifying the Upgrade

1. Open the Monitoring Console URL in a web browser:

   `https:`*MonitoringConsole_Host*`:6789`
2. Log in as the Administrator.
3. Click the Sun Java System Monitoring Console link.
4. Click the Version button.

   Monitoring Console 1.0u1 indicates that the upgrade to Release 5 is successful.

Post-Upgrade Tasks

No post-upgrade tasks are required when upgrading Release 5 Monitoring Console to Release 5U1.

Rolling Back the Upgrade

This section describes the Release 5U1 upgrade rollback procedure for Monitoring Console.

1. Log in as Administrator.
2. Stop the Monitoring Console.
3. Double-click `uniinstall_`*patch-id*`.bat` to uninstall the patch.
4. Undeploy the Release 5U1 Monitoring Console web application.

   ```
   C:\Program Files\Sun\JavaES5\share\webconsole\bin\wcadmin undeploy -a jesmc
   -x \jesmc
   ```

5. Deploy the Release 5 Monitoring Console web application.

   ```
   C:\Program Files\Sun\JavaES5\share\webconsole\bin\wcadmin deploy -a jesmc -x
   \jesmc MonitoringConsole-base
   ```

6. Restart Release 5 Monitoring Console.

   ```
   C:\Program Files\Sun\JavaES5\share\webconsole\bin\smcwebserver restart
   ```

◆ ◆ ◆ CHAPTER 14

Portal Server

This chapter describes how to upgrade Portal Server from Java ES 5 (Release 5) to Java ES 5 Update 1 (Release 5U1).

Upgrading Portal Server

The version of Portal Server included in Java ES Update 1 is the same as that included in Java ES 5 and so no upgrade patches are provided for upgrading Portal Server from Release 5 to Release 5U1.

Impact of Upgrading Web Server to Java ES 5 Update 1 on Portal Server

On a Java ES 5 setup that has Portal Server on Web Server, upgrading Web Server to Java ES 5 Update 1 level renders Portal Server as unusable. Release 5U1 Web Server uses JSF 1.2. But JSF-Portlet bridge in Release 5 Portal Server does not support JSF 1.2. So Portal Server will not work. Do not upgrade Web Server to Release 5 Update 1 in case you want to continue using Release 5 Portal Server.

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