

Oracle® Identity Manager

Upgrade Guide

Release 9.1.0 (9.0.3.2 Upgrade)

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Oracle Identity Manager Upgrade Guide Release 9.1.0 (9.0.3.2 Upgrade)

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Preface

This guide explains how to upgrade from Oracle Identity Manager release 9.0.3.2 to Oracle Identity Manager release 9.1.0.

This guide also describes how to upgrade to the Oracle Identity Manager Audit and Compliance Module from release 9.0.3.2 to release 9.1.0. If you did not install the Oracle Identity Manager Audit and Compliance Module in your release 9.0.3.2 deployment, then you can use these instructions to install the module when you upgrade to release 9.1.0.

Audience

This guide is intended for system administrators of Oracle Identity Manager.

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Related Documents

For more information, refer to the following documents in the Oracle Identity Manager documentation set:

- *Oracle Identity Manager Release Notes*
- *Oracle Identity Manager Installation and Configuration Guide for JBoss Application Server*
- *Oracle Identity Manager Installation and Configuration Guide for BEA WebLogic Server*
- *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server*
- *Oracle Identity Manager Installation and Configuration Guide for Oracle Application Server*
- *Oracle Identity Manager Best Practices Guide*
- *Oracle Identity Manager Globalization Guide*
- *Oracle Identity Manager Design Console Guide*
- *Oracle Identity Manager Administrative and User Console Guide*
- *Oracle Identity Manager Administrative and User Console Customization Guide*
- *Oracle Identity Manager Tools Reference*
- *Oracle Identity Manager Audit Report Developer's Guide*
- *Oracle Identity Manager Integration Guide for Crystal Reports*
- *Oracle Identity Manager API Usage Guide*
- *Oracle Identity Manager Concepts*
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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen (or text that you enter), and names of files, directories, attributes, and parameters.
*_HOME	<p>The directory in which an application is installed. The directory in which you install Oracle Identity Manager is referred to as <i>OIM_HOME</i>. Each Oracle Identity Manager component includes its own abbreviation, for example: <i>OIM_DC_HOME</i> for the Design Console and <i>OIM_RM_HOME</i> for the Remote Manager.</p> <p><i>JBOSS_HOME</i> represents the location where JBoss Application Server is installed. <i>WEBSphere_HOME</i> represents the location where IBM WebSphere Application Server is installed. <i>BEA_HOME</i> represents the location where BEA WebLogic Server is installed. <i>OAS_HOME</i> represents the location where Oracle Application Server is installed.</p>
Release 9.1.0	Refers specifically to Oracle Identity Manager release 9.1.0.
Release 9.0.3.2	Refers specifically to Oracle Identity Manager release 9.0.3.2.

Overview of Upgrade Process

This chapter provides an overview of the Oracle Identity Manager upgrade process. It also explains how the upgrade information is organized in the subsequent chapters of this guide.

This chapter contains the following topics:

- [Upgrading to Release 9.1.0 \(9.0.3.2 Upgrade\)](#)
- [Supported Release of Application Servers](#)
- [Supported Release of Databases](#)
- [Overview of the Upgrade Procedure](#)
- [Organization of This Guide](#)

1.1 Upgrading to Release 9.1.0 (9.0.3.2 Upgrade)

This guide deals with upgrading to Oracle Identity Manager release 9.1.0 from Oracle Identity Manager release 9.0.3.2.

This guide refers to the Oracle Identity Manager releases as follows:

- Oracle Identity Manager release 9.1.0 is referred to as **release 9.1.0**.
- Oracle Identity Manager release 9.0.3.2 is referred to as **release 9.0.3.2**.

Note: You can upgrade to release 9.1.0 from release 9.0.3.2. Do not attempt to upgrade to release 9.1.0 from any other previous Oracle Identity Manager release.

If you currently run a release of Oracle Identity Manager earlier than release 9.0.3.2, then contact Oracle Technical Support for the appropriate upgrade instructions.

To get started, you must extract the contents of the release 9.1.0 upgrade package to a temporary directory on your existing release 9.0.3.2 host computer. In this guide, the temporary directory is referred to as *PATCH*.

[Table 1–1](#) provides details of the supported upgrade scenarios.

Table 1–1 Supported Upgrade Scenarios

Application Server	Supported Upgrade Scenarios for Release 9.0.3.2
Oracle Application Server	Existing database and Oracle Identity Manager installation

Table 1–1 (Cont.) Supported Upgrade Scenarios

Application Server	Supported Upgrade Scenarios for Release 9.0.3.2
JBoss Application Server	Existing database and Oracle Identity Manager installation
BEA WebLogic Server	Existing database and Oracle Identity Manager installation
IBM WebSphere Application Server	New Oracle Identity Manager installation after upgrading the existing database

1.2 Supported Release of Application Servers

Oracle Identity Manager release 9.1.0 is certified for the following application servers:

- BEA WebLogic Server 8.1 with SP6
- IBM WebSphere Application Server 6.1.0.9
- JBoss Application Server 4.0.3 with SP1
- Oracle Application Server 10g 10.1.3.3

1.3 Supported Release of Databases

Oracle Identity Manager release 9.1.0 is certified for the following databases:

- Oracle9i Database Enterprise Edition release 9.2.0.7 and later patch sets
- Oracle 10g Enterprise Edition Releases:
 - 10.1.0.5
 - 10.2.0.1
 - 10.2.0.2
 - 10.2.0.3
 - 10.2.0.3 with RAC
- Oracle 10g Standard Edition Release:
 - 10.2.0.3

Note: Microsoft SQL Server support will be available in the 9.1 Porting releases at a later time. Oracle Identity Manager release 9.1.0 does not support Microsoft SQL Server.

1.4 Overview of the Upgrade Procedure

To upgrade to release 9.1.0 from release 9.0.3.2, you must complete the following tasks:

Note: Depending on the application server you use and the release from which you upgrade, there may be variations in the tasks.

- Extracting the contents of the release 9.1.0 upgrade package to a temporary directory on your existing release 9.0.3.2 system.
- Upgrading the database for Oracle Identity Manager
- Preparing Oracle Identity Manager for upgrade

- Preparing the Administrative and User Console for upgrade
- Preparing the Design Console for upgrade
- Preparing the Remote Manager for upgrade
- Performing the upgrade
- Migrating custom Java code
- Upgrading the Diagnostic Dashboard
- Postupgrade configuration

1.5 Organization of This Guide

The upgrade process is explained in detail in the chapters listed in this section. You can refer to the relevant chapters based on the application server on which you have installed Oracle Identity Manager:

- [Chapter 2, "Upgrading to Release 9.1.0 on JBoss Application Server"](#) explains how to upgrade to release 9.1.0 from release 9.0.3.2 on JBoss Application Server.
- [Chapter 3, "Upgrading to Release 9.1.0 on BEA WebLogic Server"](#) explains how to upgrade to release 9.1.0 from release 9.0.3.2 on BEA WebLogic Application Server.
- [Chapter 4, "Upgrading to Release 9.1.0 on IBM WebSphere Application Server"](#) how to upgrade to release 9.1.0 from release 9.0.3.2 on IBM WebSphere Application Server.
- [Chapter 5, "Upgrading to Release 9.1.0 on Oracle Application Server"](#) explains how to upgrade to release 9.1.0 from release 9.0.3.2 on Oracle Application Server.

Upgrading to Release 9.1.0 on JBoss Application Server

This chapter explains how to upgrade to release 9.1.0 from release 9.0.3.2 on JBoss Application Server. Do not attempt to upgrade to release 9.1.0 from any other previous release of Oracle Identity Manager.

Extract the contents of the release 9.1.0 upgrade package to a temporary directory on your existing release 9.0.3.2 system.

Note: This guide refers to this temporary directory as *PATCH*.

The following steps (detailed in this chapter) explain how to upgrade from release 9.0.3.2 to release 9.1.0 on JBoss Application Server:

1. [Creating a Backup of the Existing Deployment](#)
2. [Upgrading the Oracle Identity Manager Database](#)
3. [Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0](#)
 - [Preparing Oracle Identity Manager for Upgrade](#)
 - [Preparing and Upgrading the Design Console](#)
 - [Preparing and Upgrading the Remote Manager](#)
4. [Performing the Upgrade from Release 9.0.3.2 to Release 9.1.0](#)
5. [Migrating Custom Java Code](#)
6. [Postupgrade Configuration](#)
7. [Upgrading the Diagnostic Dashboard](#)

2.1 Creating a Backup of the Existing Deployment

The first step for upgrading to release 9.1.0 is to create a backup of your existing Oracle Identity Manager installation. If the upgrade fails, you can use this backup to restore the existing Oracle Identity Manager installation to its original state.

Create a backup of the following:

- Oracle Identity Manager
 - Create a back up of the *OIM_HOME* directory in which you have installed Oracle Identity Manager.
- Oracle Identity Manager Design Console

- Create a back up of the *OIM_DC_HOME* directory in which you have installed the Oracle Identity Manager Design Console.
- JBoss Application Server
 - Create a back up of the directory in which JBoss Application Server is installed.
- Oracle Identity Manager Remote Manager
 - Create a back up of the *OIM_RM_HOME* directory in which you have installed the Oracle Identity Manager Remote Manager.
- Database used for release 9.0.3.2
 - Follow the standard backup procedure for the database.

2.2 Upgrading the Oracle Identity Manager Database

For details about upgrading the Oracle Identity Manager Database, see [Chapter 6, "Upgrading the Oracle Identity Manager Database"](#).

2.3 Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0

Before you upgrade to Oracle Identity Manager release 9.1.0, you must prepare for the upgrade by performing preupgrade configuration tasks on the following components:

- Oracle Identity Manager
- Design Console
- Remote Manager

2.3.1 Preparing Oracle Identity Manager for Upgrade

To prepare Oracle Identity Manager for upgrade to release 9.1.0, you must update the release 9.0.3.2 libraries, scripts, and configuration files by performing the following steps:

1. Extract the contents of the Oracle Identity Manager release 9.1.0 upgrade package to a temporary directory in the computer on which Oracle Identity Manager release 9.0.3.2 is installed. This document refers to this temporary directory as *PATCH*.
2. Create a backup of the *OIM_HOME* directory.
3. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 2–1](#). Overwrite the existing files in the **To** location if necessary.

Table 2–1 Oracle Identity Manager Preupgrade Files to Copy

Copy From	To
<i>PATCH</i> /documentation/	<i>OIM_HOME</i> /documentation/
<i>PATCH</i> /readme.html	<i>OIM_HOME</i> /
<i>PATCH</i> /xellerate/bin/	<i>OIM_HOME</i> /xellerate/bin/
<i>PATCH</i> /xellerate/config/	<i>OIM_HOME</i> /xellerate/config/
<i>PATCH</i> /xellerate/ConnectorDefaultDirectory/	<i>OIM_HOME</i> /xellerate/ConnectorDefaultDirectory/
<i>PATCH</i> /xellerate/DDTemplates/	<i>OIM_HOME</i> /xellerate/DDTemplates/

Table 2–1 (Cont.) Oracle Identity Manager Preupgrade Files to Copy

Copy From	To
<i>PATCH</i> /xellerate/ext/	<i>OIM_HOME</i> /xellerate/ext/
<i>PATCH</i> /xellerate/GTC/	<i>OIM_HOME</i> /xellerate/GTC/
<i>PATCH</i> /xellerate/JavaTasks/	<i>OIM_HOME</i> /xellerate/JavaTasks/
<i>PATCH</i> /xellerate/lib/	<i>OIM_HOME</i> /xellerate/lib/
<i>PATCH</i> /xellerate/SPMLWS/	<i>OIM_HOME</i> /xellerate/SPMLWS/
<i>PATCH</i> /xellerate/webapp/	<i>OIM_HOME</i> /xellerate/webapp/
<i>PATCH</i> /xellerate/connectorResources/ /	<i>OIM_HOME</i> /xellerate/connectorResources/ /
<i>PATCH</i> /xellerate/customResources/	<i>OIM_HOME</i> /xellerate/customResources/

Note: While copying the *PATCH*/xellerate/lib directory, do not copy the xlUpgradeAttestation.jar file. Copy it only before running the UpgradeAttestation script.

4. Copy the following files from the *PATCH*/xellerate/setup/ directory to the *OIM_HOME*/xellerate/setup/ directory:
 - setup.xml
 - patch_jboss.cmd
 - patch_jboss.sh
 - jboss-setup.xml
 - spml_jboss.cmd
 - spml_jboss.sh
 - UpgradeAttestation.sh
 - UpgradeAttestation.bat
5. Copy the *OIM_HOME*/xellerate/config/xl-jms-service.xml file to the *JBOSS_HOME*/server/default/deploy/jms/ directory. For information about multiple JMS queues, see ["Multiple JMS Queues"](#) on page 2-6.
6. Edit the scripts specific to your operating system in the *OIM_HOME*/xellerate/setup/ directory as listed in [Table 2–2](#).

Table 2–2 JBoss Upgrade Patch Scripts and Parameters to Edit

Operating System	Script to Edit	Parameter to Edit
Microsoft Windows	patch_jboss.cmd	<ul style="list-style-type: none"> ■ Replace @java_loc with the path to the Java installation directory. ■ Replace @loc with the path to the Oracle Identity Manager installation directory.
	spml_jboss.cmd	<ul style="list-style-type: none"> ■ Replace @java_loc with the path to the Java installation directory. ■ Replace @loc with the path to the Oracle Identity Manager installation directory.

Table 2–2 (Cont.) JBoss Upgrade Patch Scripts and Parameters to Edit

Operating System	Script to Edit	Parameter to Edit
UNIX	UpgradeAttestation.bat	Replace @java_home with the path to the Java installation directory.
	patch_jboss.sh	<ul style="list-style-type: none"> Replace @java_loc with the path to the Java installation directory. Replace @loc with the path to the Oracle Identity Manager installation directory.
	spml_jboss.sh	<ul style="list-style-type: none"> Replace @java_loc with the path to the Java installation directory. Replace @loc with the path to the Oracle Identity Manager installation directory.
	UpgradeAttestation.sh	Replace @java_home with the path to the Java installation directory.

7. Migrate any customizations you made to the release 9.0.3.2 Web application, for example JSP customizations. To do so, apply the 9.0.3.2 customizations to the new release 9.1.0 xlWebApp.war Web application file located in the *OIM_HOME*/xellerate/webapp/ directory.

See Also: ["Migrating Custom Java Code"](#) on page 2-9 for more information about migrating customizations

8. Update your existing release 9.0.3.2 xlconfig.xml configuration file in the *OIM_HOME*/xellerate/config/ directory with the new cache-related setting for release 9.1.0. To do so:

- a. Open the *OIM_HOME*/xellerate/config/xlconfig.xml file and locate the <xl-configuration><Cache> parameter.
- b. After </ColumnMetaData>, add the following:

```
<!-- API Data -->
<API>
    <Enable>false</Enable>
    <ExpireTime>14400</ExpireTime>
</API>
```

- c. After </AttestationTaskMessage>, add the following:

```
<AttestationTaskDetailMessage>com.thortech.xl.schedule.jms
.attestation.processOfflinedAttestationTaskDetails</AttestationTaskDetailMessage>
```

Note: The aforementioned code must be added as a single line without any line breaks.

- d. Inside:

```
<recon_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlReconQueue</queueName>
```

e. Inside:

```
<auditor_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAuditQueue</queueName>
```

f. Inside:

```
<attestation_request_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

g. Inside:

```
<attestation_task_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

h. Inside:

```
<attestation_workflow_task_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

i. Inside:

```
<process_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

j. Inside:

```
<process_task_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

k. After </attestation_task_queue>, add the following:

```
<attestation_task_detail_queue>
  <queueName>queue/xlAttestationQueue</queueName>
  <autoAcknowledge>true</autoAcknowledge>
  <replyTo></replyTo>
  <persistentFlag>true</persistentFlag>
  <disableMessageId>true</disableMessageId>
  <disableTimeStamp>false</disableTimeStamp>
  <messageEncrypt>false</messageEncrypt>
</attestation_task_detail_queue>
```

Redeploying SPML Web Service

If you are using SPML Web service in the existing Oracle Identity Manager setup, then you must redeploy the SPML Web service for that setup whenever the setup is upgraded.

See Also: Chapter12: "SPML Web Service" in *Oracle Identity Manager Tools Reference*

Multiple JMS Queues

Previously, Oracle Identity Manager used a single JMS queue (named xlQueue) for all asynchronous operations including requests, reconciliation, attestation, and offline tasks. In release 9.1.0, by default, Oracle Identity Manager uses separate JMS queues for specific operations to optimize JMS queue processing. The following is a list of the default JMS queue configuration and their related operations:

- xlQueue for request operations
- xlReconQueue for reconciliation operations
- xlAuditQueue for auditing operations
- xlAttestationQueue for attestation operations
- xlProcessQueue for future usage

Additional JMS queues are created in step 7 in ["Preparing Oracle Identity Manager for Upgrade"](#) on page 2-2.

2.3.2 Preparing and Upgrading the Design Console

To prepare the Oracle Identity Manager Design Console for upgrade to release 9.1.0, you must update your release 9.0.3.2 Design Console libraries, scripts, and configuration files by performing the following steps:

1. Create a backup of the *OIM_DC_HOME* directory.

2. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 2-3](#). Overwrite the existing files in the **To** location if necessary.

Note: Delete the release 9.0.3.2 files in the *OIM_DC_HOME*/documentation/ directory before copying the release 9.1.0 files from the *PATCH*/documentation/ directory.

Table 2-3 Oracle Identity Manager Design Console Preupgrade Files to Copy

Copy From	To
<i>PATCH</i> /xlclient/XLDesktopClient.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /readme.html	<i>OIM_DC_HOME</i> /xlclient
<i>PATCH</i> /xlclient/CustomClient.zip	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/xlFvcUtil.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/lib/	<i>OIM_DC_HOME</i> /xlclient/lib/
<i>PATCH</i> /documentation/	<i>OIM_DC_HOME</i> /documentation/
<i>PATCH</i> /xellerate/ext/	<i>OIM_DC_HOME</i> /ext/

3. Edit the *OIM_DC_HOME*/xlclient/classpath.bat file and add the following string to the end of CLASSPATH:

```
" ; .\ext\oscache.jar ; .\ext\commons-logging.jar ; .\ext\javagroups-all.jar "
```

4. Specify the multicast address in the xlconfig.xml file of the Design Console as follows:

- a. Open the *OIM_DC_HOME*/xlclient/Config/xlconfig.xml file in a text editor.
- b. Add the following lines before the </xl-configuration> tag:

```
<!-- Value of MultiCastAddress must be the same as that of Oracle Identity
Manager -->
<Cache>
  <XLCacheProvider>
    <MultiCastAddress>MULTICASTADDRESS_VALUE</MultiCastAddress>
  </XLCacheProvider>
</Cache>
```

- c. Replace *MULTICASTADDRESS_VALUE* with the value of the multicast address for Oracle Identity Manager.

Note: After Oracle Identity Manager and the Design Console are upgraded, go to Adapter Manager on the Design Console and recompile all the adapters.

2.3.3 Preparing and Upgrading the Remote Manager

To prepare the Oracle Identity Manager Remote Manager for upgrade to release 9.1.0, update your existing release 9.0.3.2 Remote Manager libraries, scripts, and configuration files by performing the following steps:

1. Create a backup of the *OIM_RM_HOME*/xlremote/lib/ directory.

2. Copy the contents of the *PATCH/xlremote/lib/* directory to the *OIM_RM_HOME/xlremote/lib/* directory by overwriting files if required.

2.4 Performing the Upgrade from Release 9.0.3.2 to Release 9.1.0

Perform the following steps to perform the upgrade to Release 9.1.0 (9.0.3.2 upgrade) on a single installation of JBoss Application Server:

1. Ensure that the JBoss Application Server is **not** running.

Note: If JBoss Application Server is running, then you can stop it by running one of the following commands, as appropriate for the operating system on the Oracle Identity Manager host computer:

For Microsoft Windows:

```
JBOSS_HOME\bin\shutdown.bat -S
```

For UNIX:

```
JBOSS_HOME/bin/shutdown.sh -S
```

2. For upgrading attestation, see [Appendix H, "Upgrade Attestation Utility"](#). This is a mandatory step.
3. Delete the *OIM_HOME/xellerate/webapp/precompiled/* directory.
4. Run the *patch_jboss* script:

For Microsoft Windows:

Run *OIM_HOME\xellerate\setup\patch_jboss.cmd OIM_DB_USER_PASSWORD*

For UNIX:

Run *OIM_HOME/xellerate/setup/patch_jboss.sh OIM_DB_USER_PASSWORD*

Where *OIM_DB_USER_PASSWORD* is the database password for Oracle Identity Manager installation.

5. Copy the *PATCH/xellerate/ext/ojdbc14.jar* file to the *JBOSS_HOME/server/default/lib/* directory. If this JAR file already exists in the destination directory, then overwrite the existing file..
6. Edit the *login-config.xml* file in the *JBOSS_HOME/server/default/conf/* directory. To do so:
 - a. In the *login-config.xml* file, search for:

```
<login-module code="com.thortech.xl.security.jboss.XLClientLoginModule"
flag="required">
```
 - b. Change to:

```
<login-module code="org.jboss.security.ClientLoginModule" flag="required">
```
 - c. Save the changes in the file.
7. Restart JBoss Application Server.

8. Run the Re-Issue Audit Message Task scheduled task to ensure that all the pending audit messages in the `aud_jms` table are processed.

Note: While running the Re-Issue Audit Message Task scheduled task, ensure that the database and Oracle Identity Manager have been upgraded. If you are running the scheduled task through the Design Console, then ensure that the Design Console has also been upgraded.

2.5 Migrating Custom Java Code

You can migrate the custom Java code from the release 9.0.3.2 environment into the new release 9.1.0 environment. Before you migrate the custom Java code from the release 9.0.3.2 environment, you must first recompile it by using the release 9.1.0 libraries located in the `OIM_HOME/xellerate/lib/` directory.

Using the integrated development environment that originally compiled the release 9.0.3.2 custom Java code, which are Eclipse, JDeveloper, WASD or command-line `javac`, recompile all custom Java code by using the release 9.1.0 libraries.

The following is a list of the custom items you can migrate from release 9.0.3.2 and reuse in release 9.1.0 after recompiling:

Note: For clustered environments, after recompiling the following items by using the release 9.1.0 libraries, copy them to each participant node of the cluster.

- Custom Java libraries bound to functional Oracle Identity Manager release 9.0.3.2 adapters recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom Java libraries in the `OIM_HOME/xellerate/JavaTasks/` directory for release 9.0.3.2 to the same directory in release 9.1.0. In addition, you must copy the recompiled custom Java libraries in the `OIM_RM_HOME/xellerate/JavaTasks/` directory for release 9.0.3.2 to the `OIM_RM_HOME/xellerate/JavaTasks/` directory for release 9.1.0.

- Custom scheduled tasks recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom scheduled tasks to the `OIM_HOME/xellerate/ScheduleTask/` directory for release 9.1.0.

Note: If you want to display the built-in scheduled task on the Administrative and User Console, then copy the `xlScheduler.jar` file from the `OIM_HOME/lib/` directory to the `OIM_HOME/xellerate/ScheduledTask` directory. If the `ScheduledTask` directory does not exist, then create it.

- Custom event handlers recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom event handlers to the `OIM_HOME/xellerate/EventHandlers/` directory in release 9.1.0.

- Connector resource bundles by copying the `OIM_HOME/xellerate/connectorResources/` directory in release 9.0.3.2 to the `OIM_HOME/xellerate/connectorResources/` directory in release 9.1.0.

- Custom resources by copying the *OIM_HOME*/xellerate/customResources/ directory in release 9.0.3.2 to the *OIM_HOME*/xellerate/customResources/ directory in release 9.1.0.
- Custom Administrative and User Console deployments.

Several Administrative and User Console files are modified in release 9.1.0. If you customized your release 9.0.3.2 Administrative and User Console, that is, you made changes to the default Administrative and User Console that shipped with release 9.0.3.2, then you must add your customizations into the new release 9.1.0 Administrative and User Console files.

2.6 Postupgrade Configuration

You must perform the following postupgrade configuration procedures:

- [Setting the User Profile Audit Level](#)
- [Generating User Snapshots](#)
- [Generating GPA Snapshots](#)
- [Loading Data for Exception-Based Reporting](#)

2.6.1 Setting the User Profile Audit Level

To set the user profile audit level:

1. Define a secondary data source for reporting, if necessary.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for information about defining a secondary data source
2. Start the application server on which the Oracle Identity Manager installation is running.
3. Set the audit level. The permissible values are in descending order:
 - Process Task
 - Resource Form
 - Resource
 - Membership
 - Core
 - None
4. To specify an audit level, perform the following steps:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate `XL.UserProfileAuditDataCollection` and set its value to `Resource Form` or the appropriate audit level as listed in step 3 of this procedure.
5. To collect user profile audit data in the secondary reporting data store, perform the following steps:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.

- c. Locate `XL.UserProfileAuditInSecondaryDS` and set its value to `TRUE`.

2.6.2 Generating User Snapshots

For detailed information about generating user snapshots, see [Appendix E, "Generating User Snapshots"](#).

2.6.3 Generating GPA Snapshots

For detailed information about generating GPA snapshots, see [Appendix G, "Generating GPA Snapshots"](#).

2.6.4 Loading Data for Exception-Based Reporting

To load data for exception-based reporting, run the UPA Form Data Upgrade utility. For information about the UPA Form Data Upgrade utility, see [Appendix F, "UPA Form Data Upgrade Utility"](#).

2.7 Upgrading the Diagnostic Dashboard

To upgrade to the release 9.1.0 Diagnostic Dashboard XIMDD application on JBoss Application Server, install a new instance of the XIMDD application by copying the release 9.1.0 XIMDD.war file from the `PATCH/DiagnosticDashboard/` directory to the `JBOSS_HOME/server/default/deploy/` directory.

Note:

- You need not remove the existing version of release 9.0.3.2 Diagnostic Dashboard XIMDD application to upgrade to the 9.1.0 Diagnostic Dashboard on JBoss Application Server.
 - For clustered installations, copy the application (XIMDD.war) to the `JBOSS_HOME/server/all/deploy/` directory.
-
-

See Also: The "Working with the Diagnostic Dashboard" chapter in the *Oracle Identity Manager Administrative and User Console Guide* for information about the Diagnostic Dashboard

Upgrading to Release 9.1.0 on BEA WebLogic Server

This chapter explains how to upgrade to release 9.1.0 from release 9.0.3.2 on BEA WebLogic Server. Do not attempt to upgrade to release 9.1.0 from any other previous Oracle Identity Manager release.

The following steps (detailed in this chapter) explain how to upgrade from release 9.0.3.2 to release 9.1.0 on BEA WebLogic Server:

1. [Creating a Backup of the Existing Deployment](#)
2. [Upgrading the Oracle Identity Manager Database](#)
3. [Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0](#)
 - a. [Preparing Oracle Identity Manager for Upgrade](#)
 - b. [Preparing and Upgrading the Design Console](#)
 - c. [Preparing and Upgrading the Remote Manager](#)
4. [Performing the Upgrade from Release 9.0.3.2 to Release 9.1.0](#)
5. [Migrating Custom Java Code](#)
6. [Postupgrade Configuration](#)
7. [Upgrading the Diagnostic Dashboard](#)

3.1 Creating a Backup of the Existing Deployment

The first step for upgrading to release 9.1.0 is to create a backup of your existing release 9.0.3.2 deployment to ensure that no data is lost during the upgrade process. If the upgrade fails, then you can use this backup to restore the release 9.0.3.2 deployment to its original state.

You must create a backup of the following:

- Oracle Identity Manager
Create a backup of the *OIM_HOME* directory in which you have installed Oracle Identity Manager.
- Oracle Identity Manager Design Console
Create a backup of the *OIM_DC_HOME* directory in which you have installed the Oracle Identity Manager Design Console.
- BEA WebLogic Server

Create a backup of the BEA WebLogic Server domain directory, for example, the C:\bea\user_projects\domains\mydomain directory. Also create a backup of the *BEA_HOME*/weblogic81/server/lib/ directory.

Note: For a clustered installation, repeat this step on each node of the cluster.

- Oracle Identity Manager Remote Manager

Create a backup of the *OIM_RM_HOME* directory in which you have installed the Oracle Identity Manager Remote Manager.

- Database used for release 9.0.3.2

Follow the standard backup procedure for the database.

3.2 Upgrading the Oracle Identity Manager Database

For details about upgrading the Oracle Identity Manager Database, refer to [Chapter 6, "Upgrading the Oracle Identity Manager Database"](#).

3.3 Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0

Before you upgrade to Oracle Identity Manager release 9.1.0, you must prepare for the upgrade by performing preupgrade configuration tasks on the following components:

- Oracle Identity Manager
- Design Console
- Remote Manager

3.3.1 Preparing Oracle Identity Manager for Upgrade

Prepare Oracle Identity Manager for upgrade to release 9.1.0 by updating the release 9.0.3.2 libraries, scripts, and configuration files. To do so:

Note: If you are upgrading to release 9.1.0 in a WebLogic cluster, then perform the steps in this section on the WebLogic Admin Server computer.

1. Extract the contents of the Oracle Identity Manager release 9.1.0 upgrade package to a temporary directory on the computer on which release 9.0.3.2 is installed.

Note: This guide refers to this temporary directory as *PATCH*.

2. Create a backup of the *OIM_HOME* directory.
3. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 3–1](#).

Overwrite the existing files in the **To** location if necessary.

Note: Delete the release 9.0.3.2 files in the *OIM_HOME*/documentation/ directory before copying the release 9.1.0 files from *PATCH*/documentation/ directory.

Table 3–1 Oracle Identity Manager Preupgrade Files to Copy

From	To
<i>PATCH</i> /documentation/	<i>OIM_HOME</i> /documentation/
<i>PATCH</i> /readme.html	<i>OIM_HOME</i>
<i>PATCH</i> /xellerate/bin/	<i>OIM_HOME</i> /xellerate/bin/
<i>PATCH</i> /xellerate/config/	<i>OIM_HOME</i> /xellerate/config/
<i>PATCH</i> /xellerate/ConnectorDefaultDirectory/	<i>OIM_HOME</i> /xellerate/ConnectorDefaultDirectory/
<i>PATCH</i> /xellerate/connectorResources/	<i>OIM_HOME</i> /xellerate/connectorResources/
<i>PATCH</i> /xellerate/customResources/	<i>OIM_HOME</i> /xellerate/customResources/
<i>PATCH</i> /xellerate/DDTemplates/	<i>OIM_HOME</i> /xellerate/DDTemplates/
<i>PATCH</i> /xellerate/ext/	<i>OIM_HOME</i> /xellerate/ext/
<i>PATCH</i> /xellerate/GTC/	<i>OIM_HOME</i> /xellerate/GTC/
<i>PATCH</i> /xellerate/JavaTasks/	<i>OIM_HOME</i> /xellerate/JavaTasks/
<i>PATCH</i> /xellerate/lib/	<i>OIM_HOME</i> /xellerate/lib/
<i>PATCH</i> /xellerate/SPMLWS/	<i>OIM_HOME</i> /xellerate/SPMLWS/
<i>PATCH</i> /xellerate/webapp/	<i>OIM_HOME</i> /xellerate/webapp/

Note: While copying the *PATCH*/xellerate/lib directory, do not copy the *xlUpgradeAttestation.jar* file. Copy it only before running the Upgrade Attestation script.

4. Copy the following files from the *PATCH*/xellerate/setup/ directory to the *OIM_HOME*/xellerate/setup/ directory according to the Oracle Identity Manager installation:
 - setup.xml
 - patch_weblogic.cmd
 - patch_weblogic.sh
 - weblogic-setup.xml
 - setup_wl_server.xml
 - spml_weblogic.sh
 - spml_weblogic.cmd
 - UpgradeAttestation.sh
 - UpgradeAttestation.bat

5. Update your existing release 9.0.3.2 xlconfig.xml configuration file in the *OIM_HOME*/xellerate/config/ directory with the new cache-related setting for release 9.1.0. To do so:

- a. Open the *OIM_HOME*/xellerate/config/xlconfig.xml file and locate the `<xl-configuration>< Cache>` parameter.
- b. After `</ColumnMetaData>`, add the following:

```
<!-- API Data -->
<API>
    <Enable>false</Enable>
    <ExpireTime>14400</ExpireTime>
</API>
```

- c. After `</AttestationTaskMessage>`, add the following:

```
<AttestationTaskDetailMessage>com.thortech.xl.schedule.jms.attestation.proc
essOfflinedAttestationTaskDetails</AttestationTaskDetailMessage>
```

Note: The aforementioned line of code must be entered as a single line without any line breaks.

- d. Inside:

```
<recon_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlReconQueue</queueName>
```

- e. Inside:

```
<auditor_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAuditQueue</queueName>
```

- f. Inside:

```
<attestation_request_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

- g. Inside:

```
<attestation_task_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

h. Inside:

```
<attestation_workflow_task_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

i. Inside:

```
<process_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

j. Inside:

```
<process_task_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

k. After </attestation_task_queue>, add the following:

```
<attestation_task_detail_queue>
  <queueName>queue/xlAttestationQueue</queueName>
  <autoAcknowledge>true</autoAcknowledge>
  <replyTo></replyTo>
  <persistentFlag>true</persistentFlag>
  <disableMessageId>true</disableMessageId>
  <disableTimeStamp>false</disableTimeStamp>
  <messageEncrypt>false</messageEncrypt>
</attestation_task_detail_queue>
```

3.3.2 Preparing and Upgrading the Design Console

Prepare the Oracle Identity Manager Design Console for upgrade to release 9.1.0 by updating your release 9.0.3.2 Design Console libraries, scripts, and configuration files. To do so:

1. Create a backup of the *OIM_DC_HOME* directory.
2. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 3–2](#).
Overwrite the existing files in the **To** location if necessary.

Note: Delete the release 9.0.3.2 files in the *OIM_DC_HOME*/documentation/ directory before copying the release 9.1.0 files from *PATCH*/documentation/.

Table 3–2 Oracle Identity Manager Design Console Preupgrade Files to Copy

From	To
<i>PATCH</i> /xlclient/XLDesktopClient.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /readme.html	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/CustomClient.zip	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/xlFvcUtil.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/lib/	<i>OIM_DC_HOME</i> /xlclient/lib/
<i>PATCH</i> /documentation/	<i>OIM_DC_HOME</i> /documentation/
<i>PATCH</i> /xellertate/ext/	<i>OIM_DC_HOME</i> /ext/

3. Edit the *OIM_DC_HOME*/xlclient/classpath.bat file and add the following string to the end of CLASSPATH:

```
";.\ext\oscache.jar;.\ext\commons-logging.jar;.\ext\javagroups-all.jar"
```
4. Specify the multicast address in the xlconfig.xml file of the Design Console as follows:
 - a. Open the *OIM_DC_HOME*/xlclient/Config/xlconfig.xml file in a text editor.
 - b. Add the following lines before the </xl-configuration> tag:

```
<!-- Value of MultiCastAddress must be the same as that of Oracle Identity
Manager -->
<Cache>
  <XLCacheProvider>
    <MultiCastAddress>MULTICASTADDRESS_VALUE</MultiCastAddress>
  </XLCacheProvider>
</Cache>
```
 - c. Replace *MULTICASTADDRESS_VALUE* with the value of the multicast address for Oracle Identity Manager.

Note: After Oracle Identity Manager and the Design Console are upgraded, go to Adapter Manager on the Design Console and recompile all the adapters.

3.3.3 Preparing and Upgrading the Remote Manager

Prepare the Oracle Identity Manager Remote Manager for upgrade to release 9.1.0 by updating your release 9.0.3.2 Remote Manager libraries, scripts, and configuration files. To do so:

1. Create a backup of the *OIM_RM_HOME*/xlremote/lib/ directory.
2. Copy the contents of the *PATCH*/xlremote/lib/ directory to the *OIM_RM_HOME*/xlremote/lib/ directory by overwriting the files if necessary.

3.3.4 Undeploy Applications

You must manually undeploy the applications running on BEA WebLogic Server before upgrading Oracle Identity Manager. To do so:

1. Login to the WebLogic Administrative Console.
2. In the left pane, go to **Deployments, Applications**, and then to **Nexaweb**.
3. In the right pane, click the **Deploy** tab, and then click **Stop Application**.
4. In the left pane, go to **Deployments, Applications**, and then to **Xellerate**.
5. In the right pane, click the **Deploy** tab, and then click **Stop Application**.
6. In the left pane, navigate to **Deployment**, and then to **Applications**.
7. Click **Delete** to delete the Nexaweb application. Click **Yes** to confirm the deletion.
8. In the left pane, navigate to **Deployments**, and then to **Applications**.
9. Click **Delete** to delete the Xellerate application. Click **Yes** to confirm the deletion.
10. Restart BEA WebLogic Server.

Note: For cluster installation, restart all the application servers including the Admin server after deleting the applications from the Admin console.

3.3.5 Multiple JMS Queues

Previously, Oracle Identity Manager used a single JMS queue (named xlQueue) for all asynchronous operations including requests, reconciliation, attestation, and offline tasks. In release 9.1.0, by default, Oracle Identity Manager uses separate JMS queues for specific operations to optimize JMS queue processing. The following is a list of the default JMS queue configuration and their related operations:

- xlQueue for request operations
- xlReconQueue for reconciliation operations
- xlAuditQueue for auditing operations
- xlAttestationQueue for attestation operations
- xlProcessQueue for usage in future Oracle Identity Manager releases

This section provides details that help to create the additional JMS Queues.

For nonclustered installation, implement only the changes mentioned in ["Creating JMS Queues for JMS Server \(For Noncluster Installation Only\)"](#) on page 3-8.

For clustered installation, implement only the changes mentioned in the following sections:

- [Creating JMS Queues for JMS Servers \(For Clustered Installation Only\)](#)
- [Creating JMS Distributed Queues \(For Clustered Installation Only\)](#)

3.3.5.1 Creating JMS Queues for JMS Server (For Noncluster Installation Only)

To create JMS queues for JMS server:

1. Login to the WebLogic Administrative Console.
2. Navigate to **Services, JMS**, and then to **Servers**.
3. Expand the tree for the **xlJMSServer**.
4. Click **Destinations**.
5. Click the **Clone** icon for **xlQueue**.
6. Enter the values for name and JNDI name as follows:
 - Name: `xlReconQueue`
 - JNDI Name: `queue/xlReconQueue`
7. Click **Clone**, and then click the **Redelivery** tab.
8. Select the Error Destination that starts with `queue/xlErrorQueue`.
9. Repeat steps 4 through 8 with the following Name and JNDI Name values:
 - Name: `xlAuditQueue`
 - JNDI Name: `queue/xlAuditQueue`
 - Name: `xlAttestationQueue`
 - JNDI Name: `queue/xlAttestationQueue`
 - Name: `xlProcessQueue`
 - JNDI Name: `queue/xlProcessQueue`

3.3.5.2 Creating JMS Queues for JMS Servers (For Clustered Installation Only)

To create JMS queues for JMS servers:

1. Log in to the WebLogic Administrative Console.
2. Navigate to **Services, JMS**, and then **Servers**.
3. Expand the tree for the **xlJMSServer** JMS server that starts with `xlJMSServer SERVER_NAME`.
4. Click **Destinations**.
5. Click the **Clone** icon for **xlQueue SERVER_NAME**.
6. Enter name and JNDI name as follows:
 - **Name:** `xlReconQueue SERVER_NAME`
 - **JNDI Name:** `queue/xlReconQueue SERVER_NAME`
7. Click the **Clone** icon, and then click the **Redelivery** tab.
8. Select the Error Destination that starts with `queue/xlErrorQueue SERVER_NAME`.
9. Repeat steps 4 through 8 with the following name and JNDI Name values:
 - Name: `xlAuditQueue SERVER_NAME`
 - JNDI Name: `queue/xlAuditQueue SERVER_NAME`
 - Name: `xlAttestationQueue SERVER_NAME`
 - JNDI Name: `queue/xlAttestationQueue SERVER_NAME`

- Name: `xlProcessQueue SERVER_NAME`
 - JNDI Name: `queue/xlProcessQueue SERVER_NAME`
10. Repeat steps 3 through 9 for all available JMS servers starting with `XIJMSSERVER_NAME`.

3.3.5.3 Creating JMS Distributed Queues (For Clustered Installation Only)

To create JMS distributed queues only for clustered installation:

1. Login to the WebLogic Administrative Console.
2. Navigate to **Services, JMS**, and then to **Distributed Destination**.
3. Click **Configure a new Distributed Queue...**
4. Enter the values for name and JNDI name as follows:
 - Name: `xlReconQueue`
 - JNDI Name: `queue/xlReconQueue`
5. Click **Create** at the bottom of the page.
6. Click the **Members** tab, then click the **Configure a new Distributed Queue Member** link.
7. Provide the following details:
 - Name: Specify the name as `SERVER_NAME_queue_member`
 - JMS Queue: Select `xlReconQueue SERVER_NAME`
8. Repeat steps 6 and 7 for the available servers. For example, for two managed servers (`XL_SERVER1`, `XL_SERVER2`) in the cluster, create the distributed queue members as listed in the following table:

Name	JMS Queue Name
<code>XL_SERVER1_queue_member</code>	<code>xlReconQueueXL_SERVER1</code>
<code>XL_SERVER2_queue_member</code>	<code>xlReconQueueXL_SERVER2</code>

9. Click **Configure a new Distributed Queue...**
10. Enter the values for name and JNDI name as follows:
 - Name: `xlAuditQueue`
 - JNDI Name: `queue/xlAuditQueue`
11. Click **Create** at the bottom of the page.
12. Click the **Members** tab, and then click the **Configure a new Distributed Queue Member** link.
13. Provide the following details:
 - Name: Specify the name as `SERVER_NAME_queue_member`
 - JMS Queue: Select `xlAuditQueue SERVER_NAME`
14. Repeat steps 12 and 13 for the available servers. For example, for two managed servers (`XL_SERVER1`, `XL_SERVER2`) in the cluster, create the distributed queue members as listed in the following table:

Name	JMS Queue Name
XL_SERVER1_queue_member	xlAuditQueueXL_SERVER1
XL_SERVER2_queue_member	xlAuditQueueXL_SERVER2

15. Click **Configure a new Distributed Queue...**

16. Enter the values for name and JNDI name as follows:

- Name: xlAttestationQueue
- JNDI Name: queue/xlAttestationQueue

17. Click **Create** at the bottom of the page.

18. Click the **Members** tab, and then click the **Configure a new Distributed Queue Member** link.

19. Provide the following details:

- Name: Specify the name as *SERVER_NAME_queue_member*
- JMS Queue: Select xlAttestationQueue *SERVER_NAME*

20. Repeat steps 18 and 19 for the available servers. For example, for two managed servers (XL_SERVER1, XL_SERVER2) in the cluster, create the distributed queue members as listed in the following table:

Name	JMS Queue Name
XL_SERVER1_queue_member	xlAttestationQueueXL_SERVER1
XL_SERVER2_queue_member	xlAttestationQueueXL_SERVER2

21. Click **Configure a new Distributed Queue...**

22. Enter the values for name and JNDI name as follows:

- Name: xlProcessQueue
- JNDI Name: queue/xlProcessQueue

23. Click **Create** at the bottom of the page.

24. Click the **Members** tab, and then click the **Configure a new Distributed Queue Member** link.

25. Provide the following details:

- Name: Specify the name as *SERVER_NAME_queue_member*
- JMS Queue: Select xlProcessQueue *SERVER_NAME*

26. Repeat steps 24 and 25 for the available servers. For example, for two managed servers (XL_SERVER1, XL_SERVER2) in the cluster, create the distributed queue members as listed in the following table:

Name	JMS Queue Name
XL_SERVER1_queue_member	xlProcessQueueXL_SERVER1
XL_SERVER2_queue_member	xlProcessQueueXL_SERVER2

3.4 Performing the Upgrade from Release 9.0.3.2 to Release 9.1.0

Upgrading from an existing Oracle Identity Manager release 9.0.3.2 deployment to Oracle Identity Manager release 9.1.0 involves assembling a new enterprise application archive (EAR) file from the latest libraries, and then redeploying the EAR.

Perform the following steps to upgrade to release 9.1.0 on a single BEA WebLogic Server installation and WebLogic cluster.

To upgrade from release 9.0.3.2:

1. Install the JDK version that is supported with Oracle Identity Manager 9.1.0 for BEA WebLogic Server.

See Also: *Oracle Identity Manager Installation and Configuration Guide for BEA Weblogic Server* for more information about installing JDK for BEA WebLogic Server

2. Stop BEA WebLogic Server.
3. Navigate to `BEA_HOME\user_projects\domains\NAME_OF_DOMAIN_DIRECTORY`. For example, `C:\bea\user_projects\domains\mydomain`.
4. In a text editor, open the WebLogic start script file. The start script is:
 - For Microsoft Windows:


```
startWebLogic.cmd
```
 - For UNIX:


```
startWebLogic.sh
```
5. JVM memory settings must be changed for production environments and when processing a large volume of data in nonproduction environments. Edit the script to specify memory options as follows:

For Microsoft Windows, locate the line that starts with the following:

```
%JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS%
```

Add either of the following lines just before it:

- If Sun JVM is used:


```
set MEM_ARGS=-Xms1280m -Xmx1280m -XX:PermSize=128m -XX:MaxPermSize=256m
```
- If BEA JRockit JVM is used:


```
set MEM_ARGS=-Xms1280m -Xmx1280m
```

For UNIX, locate the line that starts with the following:

```
$JAVA_HOME/bin/java ${JAVA_VM} ${MEM_ARGS} ${JAVA_OPTIONS}
```

Add either of the following lines just before it:

- If Sun JVM is used:


```
MEM_ARGS="-Xms1280m -Xmx1280m -XX:PermSize=128m -XX:MaxPermSize=256m"
export MEM_ARGS
```
- If BEA JRockit JVM is used:

```
MEM_ARGS="-Xms1280m -Xmx1280m"
export MEM_ARGS
```

6. If BEA JRockit JVM is being used, add the `-XnoOpt` option to the existing `JAVA_OPTIONS`. This option turns off adaptive optimization and is required for stable Oracle Identity Manager operation.

For Microsoft Windows, locate the line that starts with the following:

```
%JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS%
```

Add the following line just before it:

```
set JAVA_OPTIONS=%JAVA_OPTIONS% -XnoOpt
```

For UNIX, locate the line that starts with the following:

```
$JAVA_HOME/bin/java ${JAVA_VM} ${MEM_ARGS} ${JAVA_OPTIONS}
```

Add the following line just before it:

```
JAVA_OPTIONS="$JAVA_OPTIONS -XnoOpt"
export JAVA_OPTIONS
```

7. Save and close the file.
8. In a text editor, open the following files and change the `JAVA_HOME` variable to point to the newly installed JDK directory:
 - `BEA_HOME/weblogic81/common/bin/commEnv.cmd` or `commEnv.sh`
 - `BEA_HOME/weblogic81/server/bin/ant.bat` or `ant.sh`
 - `BEA_HOME/user_projects/domains/NAME_OF_DOMAIN_DIRECTORY/setEnv.cmd` or `setEnv.sh`
 - `BEA_HOME/user_projects/domains/NAME_OF_DOMAIN_DIRECTORY/startWebLogic.cmd` or `startWebLogic.sh`

Rename the `jdk1.4.2_11` directory used for release 9.0.3.2 to `OLD_jdk1.4.2_11` or `LEGACY_jdk1.4.2_11` to avoid confusion when running and troubleshooting the upgrade scripts.

9. Edit the scripts specific to your operating system in the `OIM_HOME/xellerate/setup/` directory as listed in [Table 3–3](#).

Table 3–3 WebLogic Upgrade Patch Scripts and Parameters to Edit

Operating System	Script to Edit	Parameter to Edit
Microsoft Windows	<code>patch_weblogic.cmd</code>	<ul style="list-style-type: none"> ■ Replace <code>@loc</code> with the path to the Oracle Identity Manager installation directory. ■ Replace <code>@bea_home</code> with the path to the WebLogic installation directory. ■ Replace <code>@java_loc</code> with the path to the Java installation directory.
	<code>UpgradeAttestation.bat</code>	Replace <code>@java_home</code> with the path to the Java installation directory.

Table 3–3 (Cont.) WebLogic Upgrade Patch Scripts and Parameters to Edit

Operating System	Script to Edit	Parameter to Edit
UNIX	spml_weblogic.cmd	<ul style="list-style-type: none"> Replace @java_loc with the path to the Java installation directory. Replace @bea_home with the path to the weblogic installation directory. Replace @loc with the path to the Oracle Identity Manager installation directory
	patch_weblogic.sh	<ul style="list-style-type: none"> Replace @loc with the path to the Oracle Identity Manager installation directory. Replace @bea_home with the path to the WebLogic installation directory Replace @java_loc with the path to the Java installation directory.
	UpgradeAttestation.sh	Replace @java_home with the path to the Java installation directory.
	spml_weblogic.sh	<ul style="list-style-type: none"> Replace @java_loc with the path to the Java installation directory Replace @bea_home with the path to the weblogic installation directory Replace @loc with the path to the Oracle Identity Manager installation directory

10. Delete the *OIM_HOME*/xellerate/webapp/precompiled/ directory.

11. Start BEA WebLogic Server.

Note: For a clustered installation, before proceeding, ensure that the following fields and values are set on the Remote Start tab for all Managed Servers:

- Java Home
- BEA Home

Ensure that the Listen Address field on the Configuration tab for all Managed Servers contains the Host Address.

12. Copy the *PATCH*/xellerate/ext/ojdbc14.jar file to the *BEA_HOME*/weblogic81/server/lib/ directory. If the file already exists, then overwrite it.

Note: For a clustered installation, copy the ojdbc14.jar file to the *BEA_HOME*/weblogic81/server/lib/ directory on all cluster participants including the Admin Server, and overwrite the existing files if necessary.

13. For upgrading attestation, see [Appendix H, "Upgrade Attestation Utility"](#).

14. Run one of the following patch_weblogic scripts on the application server:

Note: Before running the patch scripts, ensure that the application server is in running state.

For Microsoft Windows:

Run `OIM_HOME\xellerate\setup\patch_weblogic.cmd` by using the WebLogic administrator password and the Oracle Identity Manager database user password as command arguments, for example:

```
OIM_HOME\xellerate\setup\patch_weblogic.cmd WEBLOGIC_ADMIN_PASSWORD OIM
DATABASE_USER_PASSWORD
```

For UNIX:

Run `OIM_HOME/xellerate/setup/patch_weblogic.sh` by using the WebLogic administrator password and the Oracle Identity Manager database user password as command arguments, for example:

```
OIM_HOME/xellerate/setup/patch_weblogic.sh -WEBLOGIC_ADMIN_PASSWORD -OIM
DATABASE_USER_PASSWORD
```

15. Shut down BEA WebLogic Server gracefully.

Note: For a clustered installation, stop the cluster by right-clicking the name of the cluster, and then selecting the **Start/Stop this cluster** option. Shut down all Managed Servers by selecting the **Graceful Shutdown of all Managed Servers** option in the right pane.

16. Copy `OIM_HOME/xellerate/lib/wlXLSecurityProviders.jar` to the `BEA_HOME/weblogic81/server/lib/mbeantypes/` directory.
17. Start BEA WebLogic Server.
18. Run the Re-Issue Audit Message Task scheduled task to ensure that all the pending audit messages in the `aud_jms` table are processed.

Note: While running the Re-Issue Audit Message Task scheduled task, ensure that the database and the server are upgraded. If you are running the scheduled task by using the Design Console, then make sure that the Design Console has also been upgraded.

3.4.1 Redeploying SPML Web Service

If you are using SPML Web service in the existing Oracle Identity Manager setup, then you must redeploy the SPML Web service whenever the setup is upgraded.

See Also: The "SPML Web Service" section in *Oracle Identity Manager Tools Reference*

3.5 Migrating Custom Java Code

You can migrate the custom Java code from release 9.0.3.2 environment into the new release 9.1.0 environment. Before you migrate the custom Java code from the release 9.0.3.2 environment, you must first recompile the custom code by using the release 9.1.0 libraries located in the `OIM_HOME/xellerate/lib/` directory.

Using the integrated development environment that was originally used to compile the release 9.0.3.2 custom Java code, which are Eclipse, JDeveloper, WASD or command-line javac, recompile all custom Java code by using the release 9.1.0 libraries.

The following is a list of the custom items you can migrate from release 9.0.3.2 and reuse in release 9.1.0 after recompiling.

Note: For clustered environments, after recompiling the following items using the release 9.1.0 libraries, copy them to each participant node in the cluster.

- Custom Java libraries bound to functional Oracle Identity Manager release 9.0.3.2 adapters recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom Java libraries in the *OIM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the *OIM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2. In addition, you must copy the recompiled custom Java libraries in the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.1.0.

- Custom scheduled tasks recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom scheduled tasks to the *OIM_HOME/xellerate/ScheduleTask/* directory of release 9.1.0.

Note: If you want to display the built-in scheduled task on the Administrative and User Console, then copy the *xlScheduler.jar* file from the *OIM_HOME/lib/* directory to the *OIM_HOME/xellerate/ScheduledTask* directory. If the *ScheduledTask* folder does not exist, then create it.

- Custom event handlers recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom event handlers to the *OIM_HOME/xellerate/EventHandlers/* directory of release 9.1.0.

- Connector resource bundles by copying the *OIM_HOME/xellerate/connectorResources/* directory of release 9.0.3.2 to the *OIM_HOME/xellerate/connectorResources/* directory of release 9.1.0.

- Custom resources by copying the *OIM_HOME/xellerate/customResources/* directory of release 9.0.3.2 to the *OIM_HOME/xellerate/customResources/* directory of release 9.1.0.

- Custom Administrative and User Console deployments. Several Administrative and User Console files are modified in release 9.1.0. If you customized your release 9.0.3.2 Administrative and User Console, that is, you made changes to the default Administrative and User Console that shipped with release 9.0.3.2, then you must add your customizations to the new release 9.1.0 Administrative and User Console files.

3.6 Postupgrade Configuration

You must perform the following postupgrade configuration procedures:

- [Setting the User Profile Audit Level](#)
- [Generating User Snapshots](#)
- [Generating GPA Snapshots](#)
- [Loading Data for Exception-Based Reporting](#)

3.6.1 Setting the User Profile Audit Level

To set the user profile audit level:

1. Define a secondary data source for reporting, if necessary.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for more information about defining a secondary data source

2. Start the application server on which Oracle Identity Manager is running.
3. Set the audit level. The permissible values are (in descending order):
 - Process Task
 - Resource Form
 - Resource
 - Membership
 - Core
 - None
4. To specify an audit level:
 - a. Log on to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate XL.UserProfileAuditDataCollection and set its value to Resource Form or the appropriate audit level as listed in step 3 of this procedure.
5. To collect user profile audit data in the secondary reporting data store:
 - a. Log on to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate XL.UserProfileAuditInSecondaryDS and set its value to TRUE.

3.6.2 Generating User Snapshots

For detailed information about generating user snapshots, see [Appendix E, "Generating User Snapshots"](#).

3.6.3 Generating GPA Snapshots

For detailed information about generating GPA snapshots, see [Appendix G, "Generating GPA Snapshots"](#).

3.6.4 Loading Data for Exception-Based Reporting

To load data for exception-based reporting, run the UPA Form Data Upgrade utility. For information about the UPA Form Data Upgrade utility, see [Appendix F, "UPA Form Data Upgrade Utility"](#).

3.7 Upgrading the Diagnostic Dashboard

To upgrade the existing release 9.0.3.2 Diagnostic Dashboard XIMDD application to the release 9.1.0 Diagnostic Dashboard on BEA WebLogic Server:

1. Remove the existing XIMDD application by using the WebLogic Admin Console.
2. Install a new instance of the XIMDD application by using the Release 9.1.0 (9.0.3.2 Upgrade) XIMDD.war file in the *PATCH/DiagnosticDashboard/* directory.

See Also: The "Installing the Diagnostic Dashboard" section in the "Working with the Diagnostic Dashboard" chapter in the *Oracle Identity Manager Administrative and User Console Guide* for complete steps on how to install the Diagnostic Dashboard on the application server

Upgrading to Release 9.1.0 on IBM WebSphere Application Server

This chapter explains how to upgrade to release 9.1.0 from release 9.0.3.2 on IBM WebSphere Application Server. Do not attempt to upgrade to release 9.1.0 from any other previous Oracle Identity Manager release.

Note: You can only upgrade the existing database and then perform a new installation of Oracle Identity Manager.

For information about installing Oracle Identity Manager, refer to *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server*.

Extract the contents of the release 9.1.0 upgrade package to a temporary directory on your existing release 9.0.3.2 system.

The following steps (detailed in this chapter) explain how to upgrade from release 9.0.3.2 to release 9.1.0 on IBM WebSphere Application Server:

1. [Creating a Backup of the Existing Deployment](#)
2. [Upgrading the Oracle Identity Manager Database](#)
3. [Installing and Upgrading to WebSphere 6.1.0.9](#)
4. [Installing Release 9.1.0 By Using the Oracle Identity Manager Installer](#)
5. [Running the Re-Issue Audit Message Task Scheduled Task](#)
6. [Postupgrade Configuration](#)
7. [Migrating Custom Code](#)
8. [Upgrading the Diagnostic Dashboard](#)

4.1 Creating a Backup of the Existing Deployment

The first step for upgrading to release 9.1.0 is to create a backup of your existing release 9.0.3.2 deployment to ensure that no data is lost during the upgrade process. If the upgrade fails, then you can use this backup to restore the release 9.0.3.2 deployment to its original state.

Create a backup of the following:

- Oracle Identity Manager

Create a backup of the *OIM_HOME* directory in which you have installed Oracle Identity Manager.

- Oracle Identity Manager Design Console

Create a backup of the *OIM_DC_HOME* directory in which you have installed the Oracle Identity Manager Design Console.

- Oracle Identity Manager Remote Manager

Create a backup of the *OIM_RM_HOME* directory in which you have installed the Oracle Identity Manager Remote Manager.

- Database used for release 9.0.3.2

Follow the procedures in this section to install release 9.1.0 if you are upgrading WebSphere to IBM WebSphere Application Server v6.1.0.9.

4.2 Upgrading the Oracle Identity Manager Database

For details about upgrading the Oracle Identity Manager Database, refer to [Chapter 6, "Upgrading the Oracle Identity Manager Database"](#).

4.3 Installing and Upgrading to WebSphere 6.1.0.9

Release 9.1.0 is certified on IBM WebSphere Application Server v6.1.0.9. Install or upgrade to IBM WebSphere Application Server v6.1.0.9 before upgrading to release 9.1.0.

Ensure that you upgrade the WebSphere client also to 6.1.0.9 for the release 9.1.0 Design Console.

Note: For a clustered installation of IBM WebSphere Application Server, you must upgrade the Network Deployment Manager and all Node Managers to IBM WebSphere Application Server v6.1.0.9.

Refer to the WebSphere application server documentation for details on upgrading to WebSphere 6.1.0.9. For setting up WebSphere, refer to the *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server*.

Do not install Oracle Identity Manager before upgrading the database as mentioned in the following pages.

Note: When upgrading to IBM WebSphere Application Server v6.1.0.9, review the information about IBM WebSphere Application Server Daylight Savings Time Changes for the United States. Also ensure that you install the JDK upgrade as appropriate for the 6.1.0.9 release. Note that this is different from the WebSphere 6.1.0.0 to WebSphere 6.1.0.9 upgrade.

Go to the IBM Support and downloads Web site at the following URL:

<http://www.ibm.com/support/us/>

To install release 9.1.0:

1. Install IBM WebSphere Application Server and upgrade it to release 6.1.0.9.

2. Install release 9.1.0.
3. Copy UpgradeAttestation.bat from *PATCH/xellerate/setup/* to *OIM_HOME/xellerate/setup/*.
4. For upgrading attestation, see [Appendix H, "Upgrade Attestation Utility"](#).

4.4 Installing Release 9.1.0 By Using the Oracle Identity Manager Installer

This section discusses the steps involved in installing or upgrading Oracle Identity Manager components. It consists of the following topics:

- [Installing the Oracle Identity Manager](#)
- [Installing the Design Console](#)
- [Installing the Remote Manager](#)

4.4.1 Installing the Oracle Identity Manager

For details on installing Oracle Identity Manager, refer to the *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server*.

Note: When installing release 9.1.0, ensure that you point to the existing database you upgraded to release 9.1.0 on the Database Server Selection screen in the installer program. Enter the information for the existing database that you upgraded to release 9.1.0 in the following fields on the Database Server Selection screen:

- Host
- Port
- Database SID
- User Name
- Password

When Oracle Identity Manager is installed against an existing database, the .xldatabasekey file from the existing Oracle Identity Manager installation must be copied to the new *OIM_HOME/xellerate/config/* directory. Create the */config* directory in the new *OIM_HOME/xellerate/* path if it does not already exist.

4.4.1.1 Multiple JMS Queues

Previously, Oracle Identity Manager used a single JMS queue (named xlQueue) for all asynchronous operations including requests, reconciliation, attestation, and offline tasks. In release 9.1.0, by default, Oracle Identity Manager uses separate JMS queues for specific operations to optimize JMS queue processing. The following is a list of the default JMS queue configuration and their related operations:

- xlQueue for request operations
- xlReconQueue for reconciliation operations
- xlAuditQueue for auditing operations
- xlAttestationQueue for Attestation operations
- xlProcessQueue for future usage

By default, multiple JMS queues are configured in Oracle Identity Manager release 9.1.0.

4.4.2 Installing the Design Console

Refer to the "Installing and Configuring the Oracle Identity Manager Design Console" section in the *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server* for complete steps on how to install the Design Console on the application server.

4.4.3 Installing the Remote Manager

Refer to the "Installing and Configuring the Oracle Identity Manager Remote Manager" section of the *Oracle Identity Manager Administrative and User Console Guide* for complete steps on how to install the Remote Manager on the application server.

4.5 Running the Re-Issue Audit Message Task Scheduled Task

Start the server and run the Re-Issue Audit Message Task scheduled task to ensure that all the pending audit messages in the aud_jms table are processed.

Note: While running the Re-Issue Audit Message Task scheduled task, ensure that the database and server is upgraded. If you are running the scheduled task by using the Design Console, then make sure that the Design Console has also been upgraded.

4.6 Postupgrade Configuration

You must perform the following postupgrade configuration procedures:

- [Setting the User Profile Audit Level](#)
- [Generating User Snapshots](#)
- [Generating GPA Snapshots](#)
- [Loading Data for Exception-Based Reporting](#)

4.6.1 Setting the User Profile Audit Level

To set the user profile audit level:

1. Define a secondary data source for reporting, if required.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for information about defining a secondary data source

2. Start the application server on which the Oracle Identity Manager installation is running.
3. Set the audit level. The permissible values are (in descending order):
 - Process Task
 - Resource Form
 - Resource
 - Membership

- Core
 - None
4. To specify an audit level:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate `XL.UserProfileAuditDataCollection` and set its value to `Resource Form` or the appropriate audit level as listed in step 3 of this procedure.
 5. To collect user profile audit data in the secondary reporting data store:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate `XL.UserProfileAuditInSecondaryDS` and set its value to `TRUE`.

4.6.2 Generating User Snapshots

For detailed information about generating user snapshots, see [Appendix E, "Generating User Snapshots"](#).

4.6.3 Generating GPA Snapshots

For detailed information about generating GPA snapshots, see [Appendix G, "Generating GPA Snapshots"](#).

4.6.4 Loading Data for Exception-Based Reporting

To load data for exception-based reporting, run the UPA Form Data Upgrade utility. For information about the UPA Form Data Upgrade utility, see [Appendix F, "UPA Form Data Upgrade Utility"](#).

4.7 Migrating Custom Code

You can migrate the custom Java code from the release 9.0.3.2 environment into the new release 9.1.0 environment. Before you migrate the custom Java code from the release 9.0.3.2 environment, you must first recompile it by using the release 9.1.0 libraries located in the `OIM_HOME/xellerate/lib/` directory.

Using the integrated development environment that was originally used compile the release 9.0.3.2 custom Java code, which are Eclipse, JDeveloper, WASD or command-line `javac`, recompile all custom Java code by using the release 9.1.0 libraries.

The following is a list of the custom items you can migrate from release 9.0.3.2 and reuse in release 9.1.0 after recompiling by using the release 9.1.0 libraries.

Note: For clustered environments, after recompiling the following items by using the release 9.1.0 libraries, copy them to each participant node of the cluster.

- Custom Java libraries bound to functional Oracle Identity Manager release 9.0.3.2 adapters recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom Java libraries in the *OIM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the same directory of release 9.1.0. In addition, you must copy the recompiled custom Java libraries in the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.1.0.

- Custom scheduled tasks recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom scheduled tasks to the *OIM_HOME/xellerate/ScheduleTask/* directory of release 9.1.0.

Note: If you want to display the built-in scheduled task on the Administrative and User Console, then copy the *xlScheduler.jar* file from the *OIM_HOME/lib/* directory to the *OIM_HOME/xellerate/ScheduledTask* directory. If the *ScheduledTask* directory does not exist, then create it.

- Custom event handlers recompiled by using release 9.1.0 libraries.
You must copy the recompiled custom event handlers to the *OIM_HOME/xellerate/EventHandlers/* directory of release 9.1.0.
- Connector resource bundles by copying the *OIM_HOME/xellerate/connectorResources/* directory of release 9.0.3.2 to the *OIM_HOME/xellerate/connectorResources/* directory of release 9.1.0.
- Custom resources by copying the *OIM_HOME/xellerate/customResources/* directory of release 9.0.3.2 to the *OIM_HOME/xellerate/customResources/* directory of release 9.1.0.
- Custom Administrative and User Console deployments. Several Administrative and User Console files are modified in release 9.1.0. If you customized your release 9.0.3.2 Administrative and User Console, that is, you made changes to the default Administrative and User Console that shipped with release 9.0.3.2, then you must add your customizations into the new release 9.1.0 Administrative and User Console files.

4.8 Upgrading the Diagnostic Dashboard

Refer to the "Installing the Diagnostic Dashboard" section in the *Oracle Identity Manager Installation and Configuration Guide for IBM WebSphere Application Server* for complete steps on how to install the Diagnostic Dashboard on the application server.

Upgrading to Release 9.1.0 on Oracle Application Server

This chapter explains how to upgrade to release 9.1.0 from release 9.0.3.2 on Oracle Application Server. Do not attempt to upgrade to release 9.1.0 from any other previous Oracle Identity Manager release of Oracle Identity Manager.

Extract the contents of the release 9.1.0 upgrade package to a temporary directory on your existing release 9.0.3.2 system.

The following steps (detailed in this chapter) explain how to upgrade from release 9.0.3.2 to release 9.1.0 on Oracle Application Server:

1. [Creating a Backup of the Existing Deployment](#)
2. [Upgrading the Oracle Identity Manager Database](#)
3. [Applying Oracle Application Server Patches](#)
4. [Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0](#)
 - a. [Preparing Oracle Identity Manager for Upgrade](#)
 - b. [Preparing and Upgrading the Design Console](#)
 - c. [Preparing and Upgrading the Remote Manager for Upgrade](#)
5. [Performing the Upgrade From Release 9.0.3.2 to Release 9.1.0](#)
6. [Migrating Custom Code](#)
7. [Postupgrade Configuration](#)
8. [Upgrading the Diagnostic Dashboard](#)

5.1 Creating a Backup of the Existing Deployment

The first step for upgrading to release 9.1.0 is to create a backup of your existing Oracle Identity Manager installation. If the upgrade fails, then you can use this backup to restore the existing Oracle Identity Manager installation to its original state.

Create a backup of the following:

- Oracle Identity Manager
Create a backup of the *OIM_HOME* directory in which you have installed Oracle Identity Manager.
- Oracle Identity Manager Design Console

Create a backup of the *OIM_DC_HOME* directory in which you have installed the Oracle Identity Manager Design Console.

- Oracle Application Server

Create a backup of the directory in which Oracle Application Server is installed.

- Oracle Identity Manager Remote Manager

Create a backup of the *OIM_RM_HOME* directory in which you have installed the Oracle Identity Manager Remote Manager.

- Database used for release 9.0.3.2

Follow the standard backup procedure for the database.

5.2 Upgrading the Oracle Identity Manager Database

For details about upgrading the Oracle Identity Manager database, refer to [Chapter 6, "Upgrading the Oracle Identity Manager Database"](#).

5.3 Applying Oracle Application Server Patches

You must run the following patches on Oracle Application Server before installing Oracle Identity Manager release 9.1.0 on it:

Note:

- Patches and instructions on how to apply those patches can be downloaded from the Oracle MetaLink Web site at:
<http://metalink.oracle.com>
 - If you are installing Oracle Identity Manager on Microsoft Windows Vista, then you must set the environment variable `OPATCH_PLATFORM_ID` to 207.
-
-

1. Install OPatch patch 2617419.
2. Install Oracle Application Server patch 6685235.
3. Install Oracle Application Server patch 5389650.
4. Install Oracle Application Server patch 6454278.
5. Open the *ORACLE_HOME/j2ee/OAS_INSTANCE/config/rmi.xml* file. Add `max-server-sockets="200"` as shown:

```
<rmi-server  
...  
max-server-sockets="200">
```

5.4 Preparing for the Upgrade from Release 9.0.3.2 to Release 9.1.0

Before you upgrade to Oracle Identity Manager release 9.1.0, you must prepare for the upgrade by performing preupgrade configuration tasks on the following components:

- Oracle Identity Manager
- Design Console

- Remote Manager

5.4.1 Preparing Oracle Identity Manager for Upgrade

To prepare the Oracle Identity Manager deployment for upgrade to release 9.1.0, you must update the release 9.0.3.2 libraries, scripts, and configuration files by performing the following steps:

1. Extract the contents of the Oracle Identity Manager release 9.1.0 upgrade package to a temporary directory on the computer on which Oracle Identity Manager release 9.0.3.2 is installed.
2. Create a backup of the *OIM_HOME* directory.
3. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 5–1](#).

Overwrite the existing files in the **To** location if necessary.

Table 5–1 Oracle Identity Manager Preupgrade Files to Copy

From	To
<i>PATCH</i> /documentation/	<i>OIM_HOME</i> /documentation/
<i>PATCH</i> /readme.html	<i>OIM_HOME</i> /
<i>PATCH</i> /xellerate/bin/	<i>OIM_HOME</i> /xellerate/bin/
<i>PATCH</i> /xellerate/config/	<i>OIM_HOME</i> /xellerate/config/
<i>PATCH</i> /xellerate/ConnectorDefaultDirectory/	<i>OIM_HOME</i> /xellerate/ConnectorDefaultDirectory/
<i>PATCH</i> /xellerate/DDTemplates/	<i>OIM_HOME</i> /xellerate/DDTemplates/
<i>PATCH</i> /xellerate/ext/	<i>OIM_HOME</i> /xellerate/ext/
<i>PATCH</i> /xellerate/GTC/	<i>OIM_HOME</i> /xellerate/GTC/
<i>PATCH</i> /xellerate/JavaTasks/	<i>OIM_HOME</i> /xellerate/JavaTasks/
<i>PATCH</i> /xellerate/lib/	<i>OIM_HOME</i> /xellerate/lib/
<i>PATCH</i> /xellerate/SPMLWS/	<i>OIM_HOME</i> /xellerate/SPMLWS/
<i>PATCH</i> /xellerate/webapp/	<i>OIM_HOME</i> /xellerate/webapp/
<i>PATCH</i> /xellerate/connectorResources/	<i>OIM_HOME</i> /xellerate/connectorResources/
<i>PATCH</i> /xellerate/customResources/	<i>OIM_HOME</i> /xellerate/customResources/

Note: While copying the *PATCH*/xellerate/lib/ directory, do not copy *xlUpgradeAttestation.jar*. Copy it only when you run the *UpgradeAttestation* script.

4. Copy the following files from the *PATCH*/xellerate/setup/ directory to the *OIM_HOME*/xellerate/setup/ directory:
 - setup.xml
 - patch_oc4j.cmd
 - patch_oc4j.sh
 - oc4j-setup.xml

- spml_oc4j.cmd
 - spml_oc4j.sh
 - UpgradeAttestation.sh
 - UpgradeAttestation.bat
5. Edit the scripts specific to your operating system in the *OIM_HOME/xellerate/setup/* directory as listed in [Table 5–2](#).

Table 5–2 Oracle Application Server Upgrade Patch Scripts and Parameters to Edit

Operating System	Script to Edit	Parameter to Edit
Microsoft Windows	patch_oc4j.cmd	<ul style="list-style-type: none"> ■ Replace @loc with the path to the Oracle Identity Manager installation directory. ■ Replace @java_loc with the path to the Oracle Application Server Java directory. ■ Replace @oracle_home with the path to the Oracle Application Server directory.
	spml_oc4j.cmd	<ul style="list-style-type: none"> ■ Replace @loc with the path to the Oracle Identity Manager installation directory. ■ Replace @java_loc with the path to the Oracle Application Server Java directory. ■ Replace @oracle_home with the path to the Oracle Application Server directory.
	UpgradeAttestation.bat	Replace @java_home with the path to the Java installation directory.
UNIX	patch_oc4j.sh	<ul style="list-style-type: none"> ■ Replace @loc with the path to the Oracle Identity Manager installation directory. ■ Replace @java_loc with the path to the Oracle Application server Java directory. ■ Replace @oracle_home with the path to the Oracle Application Server directory.
	spml_oc4j.sh	<ul style="list-style-type: none"> ■ Replace @loc with the path to the Oracle Identity Manager installation directory. ■ Replace @java_loc with the path to the Oracle Application Server Java directory. ■ Replace @oracle_home with the path to the Oracle Application Server directory.
	UpgradeAttestation.sh	Replace @java_home with the path to the Java installation directory.

6. Migrate any customizations you made to the release 9.0.3.2 Web application, for example JSP customizations.

Apply the 9.0.3.2 customizations to the new release 9.1.0 xlWebApp.war Web application file located in the *OIM_HOME/xellerate/webapp/* directory.

See Also: ["Migrating Custom Code"](#) on page 5-10 for more information about migrating customizations

7. Update your existing release 9.0.3.2 xlconfig.xml configuration file in the *OIM_HOME/xellerate/config/* directory with the new cache-related setting for release 9.1.0. Perform the following steps:

- a. Open the *OIM_HOME*/xellerate/config/xlconfig.xml file and locate the <xl-configuration>< Cache> parameter.

- b. After </ColumnMetaData>, add the following:

```
<!-- API Data -->
<API>
    <Enable>false</Enable>
    <ExpireTime>14400</ExpireTime>
</API>
```

- c. After </AttestationTaskMessage>, add the following:

```
<AttestationTaskDetailMessage>com.thortech.xl.schedule.jms.attestation.processOfflinedAttestationTaskDetails</AttestationTaskDetailMessage>
```

Note: The aforementioned line of code must be added as a single line without any line breaks.

- d. Inside:

```
<recon_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlReconQueue</queueName>
```

- e. Inside:

```
<auditor_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAuditQueue</queueName>
```

- f. Inside:

```
<attestation_request_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

- g. Inside:

```
<attestation_task_queue>
```

Replace

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

h. Inside:

```
<attestation_workflow_task_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlAttestationQueue</queueName>
```

i. Inside:

```
<process_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

j. Inside:

```
<process_task_offline_queue>
```

Replace:

```
<queueName>queue/xlQueue</queueName>
```

With:

```
<queueName>queue/xlProcessQueue</queueName>
```

k. After </attestation_task_queue>, add the following:

```
<attestation_task_detail_queue>
<queueName>queue/xlAttestationQueue</queueName>
<autoAcknowledge>true</autoAcknowledge>
<replyTo></replyTo>
<persistentFlag>true</persistentFlag>
<disableMessageId>true</disableMessageId>
<disableTimeStamp>false</disableTimeStamp>
<messageEncrypt>false</messageEncrypt>
</attestation_task_detail_queue>
```

Redeploying SPML Web Service

If you are using SPML Web service in the existing Oracle Identity Manager setup, then you must redeploy the SPML Web service for that setup whenever the setup is upgraded.

See Also: Chapter 12: "SPML Web Service" in *Oracle Identity Manager Tools Reference*

5.4.2 Preparing and Upgrading the Design Console

Prepare the Oracle Identity Manager Design Console for upgrade to release 9.1.0 by updating your release 9.0.3.2 Design Console libraries, scripts, and configuration files by using the following steps.

1. Create a backup of the *OIM_DC_HOME* directory.
2. Copy the directories and files listed in the location of the **From** column to the location listed in the **To** column in [Table 5–3](#).

Overwrite the existing files in the **To** location if necessary.

Note: Delete the release 9.0.3.2 files in the *OIM_DC_HOME*/documentation/ directory before copying the release 9.1.0 files from the *PATCH*/documentation/ directory.

Table 5–3 Oracle Identity Manager Design Console Preupgrade Files to Copy

From	To
<i>PATCH</i> /xlclient/XLDesktopClient.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xellerate/readme.htm	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/CustomClient.zip	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/xlFvcUtil.ear	<i>OIM_DC_HOME</i> /xlclient/
<i>PATCH</i> /xlclient/lib/	<i>OIM_DC_HOME</i> /xlclient/lib/
<i>PATCH</i> /documentation/	<i>OIM_DC_HOME</i> /documentation/
<i>PATCH</i> /xellerate/ext/	<i>OIM_DC_HOME</i> /ext/

3. Edit the *OIM_DC_HOME*/xlclient/classpath.bat file and add the following string to the end of CLASSPATH:
";.\ext\oscache.jar;.\ext\commons-logging.jar;.\ext\javagroup
s-all.jar"
4. Specify the multicast address in the xlconfig.xml file of the Design Console as follows:
 - a. In a text editor, open the *OIM_DC_HOME*/xlclient/Config/xlconfig.xml file.
 - b. Add the following lines before the </xl-configuration> tag:


```
<!-- Value of MultiCastAddress must be the same as that of Oracle Identity
Manager -->
<Cache>
  <XLCacheProvider>
    <MultiCastAddress>MULTICASTADDRESS_VALUE</MultiCastAddress>
  </XLCacheProvider>
</Cache>
```
 - c. Change *MULTICASTADDRESS_VALUE* to the value of the multicast address for Oracle Identity Manager.

Note: After Oracle Identity Manager and the Design Console are upgraded, go to Adapter Manager on the Design Console and recompile all the adapters.

5.4.3 Preparing and Upgrading the Remote Manager for Upgrade

Prepare the Oracle Identity Manager Remote Manager for upgrade to release 9.1.0 by updating your release 9.0.3.2 Remote Manager libraries, scripts, and configuration files. To do so:

1. Create a backup of the *OIM_RM_HOME*/xlremote/lib/ directory.
2. Copy the contents of the *PATCH*/xlremote/lib/ directory to the *OIM_RM_HOME*/xlremote/lib/ directory, by overwriting files if required.

5.4.4 Multiple JMS Queues

Previously, Oracle Identity Manager used a single JMS queue (named xlQueue) for all asynchronous operations including requests, reconciliation, attestation, and offline tasks. In release 9.1.0, by default, Oracle Identity Manager uses separate JMS queues for specific operations to optimize JMS queue processing. The following is a list of the default JMS queue configuration and their related operations:

- xlQueue for request operations
- xlReconQueue for reconciliation operations
- xlAuditQueue for auditing operations
- xlAttestationQueue for attestation operations
- xlProcessQueue for usage in future Oracle Identity Manager releases

This section provides details that help to create the additional JMS queues.

Creating JMS Queues for JMS Server

To create JMS queues for JMS server:

1. Log in to the Oracle Enterprise Manager.
2. Under the **Groups** tab on the home page, click the group name to which the Oracle Identity Manager instance belongs (default_group by default).
3. Click the **Administration** tab.
4. Expand **Administrative tasks, Services, Enterprise Messaging Service**, and then click **JMS Destinations**. Two Oracle Identity Manager Queues, **xlQueue** and **xlErrorQueue** that were present in 9.0.3.2 are displayed.
5. To create the new queues, click **Create New**.
6. From the Destination Type list, select **Queue**, and enter **xlReconQueue** as the value for Destination Name.
7. From the File Based Persistence list, select Persistence and enter the following values:
 - JNDI Location: **queue/xlReconQueue**
 - Persistence File: **xlReconQueueJMSStore**
8. Click **OK** to create the queue.
9. Repeat steps 5 through 8 with the following values for Destination Name, JNDI Location and Persistence File:
 - Destination Name: **xlAuditQueue**
JNDI Location: **queue/xlAuditQueue**

Persistence File Name: **xlAuditQueueJMSStore**

- Destination Name: **xlAttestationQueue**

JNDI Location: **queue/xlAttestationQueue**

Persistence File Name: **xlAttestationQueueJMSStore**

- Destination Name: **xlProcessQueue**

JNDI Location: **queue/xlProcessQueue**

Persistence File Name: **xlProcessQueueJMSStore**

Note: For a clustered installation of Oracle Identity Manager, create all the four queues for each server present in the cluster.

5.5 Performing the Upgrade From Release 9.0.3.2 to Release 9.1.0

Perform the following steps to upgrade to release 9.1.0 from release 9.0.3.2 on a single installation of Oracle Application Server:

1. Ensure that Oracle Application Server is *not* running.

Note: If Oracle Application Server is running, then you can stop it by running the following command from the `ORACLE_HOME/opmn/bin` directory on the computer hosting the Oracle Identity Manager deployment:

```
./opmnctl stopall
```

2. Delete the `OIM_HOME/xellerate/webapp/precompiled/` directory.

3. Start the Oracle Application Server as follows:

- a. Go to the `ORACLE_HOME/opmn/bin` directory.
- b. Run the following command:

```
./opmnctl startall
```

4. For upgrading attestation, see [Appendix H, "Upgrade Attestation Utility"](#). This is a mandatory step.

5. In the `OIM_HOME/xellerate/Profiles/oc4j.profile` file, after the line:

```
# database type is either oracle or sqlserver
database.type=oracle
```

Add the following:

```
# Reporting data source
datasource.report=jdbc/xlXADS
```

6. Run the `patch_oc4j` script:

For Microsoft Windows, run:

```
OIM_HOME\xellerate\setup\patch_oc4j.cmd OAS_ADMIN_PASSWORD DATASOURCE_PASSWORD
```

For UNIX, run:

```
OIM_HOME/xellerate/setup/patch_oc4j.sh OAS_ADMIN_PASSWORD DATASOURCE_PASSWORD
```

The patch_oc4j script parameters are:

- *OAS_ADMIN_PASSWORD* is the Oracle Application Server administrator password.
 - *DATASOURCE_PASSWORD* is the database password for Oracle Identity Manager installation.
7. Copy the *PATCH/xellerate/ext/ojdbc14.jar* file to the *OAS_HOME/jlib/* directory by overwriting the existing files, if required.
 8. Restart Oracle Application Server.
 9. Run the Re-Issue Audit Message Task scheduled task to ensure that all the pending audit messages in the *aud_jms* table are processed.

Note: While running the Re-Issue Audit Message Task scheduled task, ensure that the database and Oracle Identity Manager are upgraded. If you are running the scheduled task by using the Design Console, then make sure that the Design Console has also been upgraded.

5.6 Migrating Custom Code

You can migrate the custom Java code from the release 9.0.3.2 environment into the new release 9.1.0 environment. Before you migrate the custom Java code from the release 9.0.3.2 environment, you must first recompile it by using the release 9.1.0 libraries located in the *OIM_HOME/xellerate/lib/* directory.

Using the integrated development environment that originally compiled the release 9.0.3.2 custom Java code, which are Eclipse, JDeveloper, WASD or command-line *javac*, recompile all custom Java code by using the release 9.1.0 libraries.

The following is a list of the custom items that you can migrate from release 9.0.3.2 and reuse in release 9.1.0 after recompiling.

Note: For clustered environments, after recompiling the following customized items by using the release 9.1.0 libraries, copy the recompiled code to each participant node in the cluster.

- Custom Java libraries bound to functional Oracle Identity Manager release 9.0.3.2 adapters recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom Java libraries in the *OIM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the same directory in release 9.0.3.2. In addition, you must copy the recompiled custom Java libraries in the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.0.3.2 to the *OIM_RM_HOME/xellerate/JavaTasks/* directory of release 9.1.0.

- Custom scheduled tasks recompiled by using release 9.1.0 libraries.

You must copy the recompiled custom scheduled tasks to the *OIM_HOME/xellerate/ScheduleTask/* directory of release 9.1.0.

Note: If you want to display the built-in scheduled task on the Administrative and User Console, then copy the `xlScheduler.jar` file from the `OIM_HOME/lib` directory to the `OIM_HOME/xellerate/ScheduledTask` directory. If the `ScheduledTask` directory does not exist, then create it.

- Custom event handlers recompiled by using release 9.1.0 libraries.
You must copy the recompiled custom event handlers to the `OIM_HOME/xellerate/EventHandlers/` directory of release 9.1.0.
- Connector resource bundles by copying the `OIM_HOME/xellerate/connectorResources/` directory of release 9.0.3.2 to the `OIM_HOME/xellerate/connectorResources/` directory of release 9.1.0.
- Custom resources by copying the `OIM_HOME/xellerate/customResources/` directory of release 9.0.3.2 to the `OIM_HOME/xellerate/customResources/` directory of release 9.1.0.

- Custom Administrative and User Console deployments.

Several Administrative and User Console files are modified in release 9.1.0. If you customized your release 9.0.3.2 Administrative and User Console, that is, you made changes to the default Administrative and User Console that shipped with release 9.0.3.2, then you must add your customizations into the new release 9.1.0 Administrative and User Console files.

5.7 Postupgrade Configuration

You must perform the following postupgrade configuration procedures:

- [Setting the User Profile Audit Level](#)
- [Generating User Snapshots](#)
- [Generating GPA Snapshots](#)
- [Loading Data for Exception-Based Reporting](#)

5.7.1 Setting the User Profile Audit Level

If you want to change the audit level, perform the following steps:

1. Define a secondary data source for reporting, if required.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for information about defining a secondary data source

2. Start the application server on which the Oracle Identity Manager installation is running.
3. Set the audit level. The permissible values are in descending order:
 - Process Task
 - Resource Form
 - Resource
 - Membership

- Core
 - None
4. To specify an audit level:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate `XL.UserProfileAuditDataCollection` and set its value to `Resource Form` or the appropriate audit level as listed in step 3 of this procedure.
 5. To collect user profile audit data in the secondary reporting data store:
 - a. Log in to the Design Console as an administrator.
 - b. Navigate to the System Configuration form.
 - c. Locate `XL.UserProfileAuditInSecondaryDS` and set its value to `TRUE`.

5.7.2 Generating User Snapshots

For detailed information about generating user snapshots, see [Appendix E, "Generating User Snapshots"](#).

5.7.3 Generating GPA Snapshots

For detailed information about generating GPA snapshots, see [Appendix G, "Generating GPA Snapshots"](#).

5.7.4 Loading Data for Exception-Based Reporting

To load data for exception-based reporting, run the UPA Form Data Upgrade utility. For information about the UPA Form Data Upgrade utility, see [Appendix F, "UPA Form Data Upgrade Utility"](#).

5.8 Upgrading the Diagnostic Dashboard

To upgrade the existing release 9.0.3.2 Diagnostic Dashboard XIMDD application to the release 9.1.0 Diagnostic Dashboard on Oracle Application Server:

1. Remove the existing XIMDD application by using the Oracle Application Server Admin Console.
2. Install a new instance of the XIMDD application by using the Release 9.1.0 XIMDD.war file in the `PATCH/DiagnosticDashboard/` directory.

See Also: The "Working with the Diagnostic Dashboard" chapter in the *Oracle Identity Manager Administrative and User Console Guide* for more information about the Diagnostic Dashboard

Upgrading the Oracle Identity Manager Database

Before you upgrade your database, perform the following steps:

1. Extract the contents of the Oracle Identity Manager release 9.1.0 upgrade package to the *PATCH* directory, which is a temporary directory on the computer on which the database is installed.
2. Enable execute permissions on the scripts in the *PATCH* directory.
3. Choose one of the following approaches to upgrade the database used by the Oracle Identity Manager release 9.0.3.2 deployment:

- Perform an in-place upgrade of the existing database configured for release 9.0.3.2.

For details, refer to the ["Upgrading an Existing Database Instance In-Place"](#) section on page 6-1.

- Create a new instance of the database for release 9.1.0, and then import the data used by your release 9.0.3.2 deployment into the new database and perform the upgrade.

For details, refer to the ["Creating a New Database Instance for the Upgrade"](#) section on page 6-4.

6.1 Upgrading an Existing Database Instance In-Place

Perform the following steps to upgrade your existing release 9.0.3.2 database instance to release 9.1.0:

1. Create a backup of your existing database.

Use the export/backup utilities provided with the database to perform a complete backup of your production database.

Production database backup includes, but is not limited to, complete export or backup of the Oracle Identity Manager release 9.0.3.2 database instance to ensure that the database can be restored to its original state, if required.

2. Upgrade your database schema from release 9.0.3.2 to release 9.1.0 by using one of the following scripts appropriate for your database and operating system. Run the script on the computer on which the database is installed.

Oracle Database on UNIX:

To upgrade the database schema, run the `PATCH/db/oracle/Scripts/oim_db_upg_9032_to_9100.sh` script on the computer

on which the database for release 9.0.3.2 is installed. The command-line usage for the Oracle oim_db_upg_9032_to_9100.sh script is as shown:

```
oim_db_upg_9032_to_9100.sh ORACLE_SID ORACLE_HOME OIM_DB_USER_NAME  
OIM_USER_PASSWORD  
DIRECTORY_IN_WHICH_ORACLE_IDENTITY_MANAGER_DB_UPGRADE_ZIP_FILE_IS_EXTRACTED
```

Oracle Database on Microsoft Windows:

To upgrade the database schema, run the *PATCH\db\oracle\Scripts\oim_db_upg_9032_to_9100.bat* script on the computer on which the release 9.0.3.2 database is installed. The command-line usage for the Oracle oim_db_upg_9032_to_9100.bat script is as shown:

```
oim_db_upg_9032_to_9100.bat ORACLE_SID ORACLE_HOME OIM_DB_USER_NAME  
OIM_USER_PASSWORD  
DIRECTORY_IN_WHICH_ORACLE_IDENTITY_MANAGER_DB_UPGRADE_ZIP_FILE_IS_EXTRACTED
```

Note: The upgrade script also upgrades the required stored procedures for Oracle.

3. To upgrade the Oracle Identity Manager Audit and Compliance module, perform the following steps as appropriate for your database:

For Oracle Database:

- a. Log in to SQL *Plus with the credentials of the Oracle Identity Manager release 9.0.3.2 database schema owner.
 - b. Run the *PATCH/db/oracle/Scripts/Oracle_Enable_XACM.sql* script.
4. The user profile auditing feature and the reports feature require that certain metadata be loaded into the database. As appropriate for the operating system on the Oracle Identity Manager host computer, load Oracle Identity Manager metadata into your database by running one of the following commands:

- If Oracle Identity Manager is installed without the Audit and Compliance module, then:

On Microsoft Windows, run the following file:

```
PATCH\db\Utilities\LoadXML.bat
```

On UNIX, run the following script:

```
PATCH/db/Utilities/LoadXML.sh
```

- If Oracle Identity Manager is installed with the Audit and Compliance module:

On Microsoft Windows, run the following file:

```
PATCH\db\Utilities\LoadXML_XACM.bat
```

On UNIX, run the following script:

```
PATCH/db/Utilities/LoadXML_XACM.sh
```


See Also: [Appendix A, "Loading Report Metadata Into the Database"](#) for more information about running the LoadXML and LoadXML_XACM scripts

5. The e-mail definition templates must be loaded into the database. As appropriate for the operating system on the Oracle Identity Manager host computer, load Oracle Identity Manager e-mail templates into your database by running one of the following commands:

For Microsoft Windows:

Run `PATCH\db\Utilities\LoadXLIF.bat`

For UNIX:

Run `PATCH/db/Utilities/LoadXLIF.sh`

Note: Running LoadXLIF.bat or LoadXLIF.sh only inserts the newly added e-mail templates, and does not update the existing e-mail templates. Therefore, if you want to update the existing templates, then delete all the entries from the EMD table and run LoadXLIF.bat or LoadXLIF.sh.

See Also: The ["Loading E-Mail Templates into the Database"](#) on page 6-6 for more information about running the LoadXLIF script

6.1.1 Using Oracle Identity Manager Database Validator

While performing an upgrade, you can use the Oracle Identity Manager Database Validator, a utility to compare database objects. The Database Validator is a command-line interface (CLI) utility that compares objects of two databases. The utility generates a report of the missing and mismatched objects in the destination database. You can also use this utility to verify an upgrade that you might install.

See Also: [Appendix B, "Oracle Identity Manager Database Validator"](#) for more information about the Database Validator

6.1.2 Using Reconciliation Archival

The purpose of the Reconciliation Archival utility is to archive data from active reconciliation tables to archival reconciliation tables and to delete data from active and archival reconciliation tables.

See Also:

- [Appendix C, "Reconciliation Archival"](#) for information about running the Reconciliation Archival utility
- *Oracle Identity Manager Best Practices Guide* for more information about the Reconciliation Archival utility

6.1.3 Using Task Archival

The purpose of the Task Archival utility is to archive data from active task tables to archival task tables and to delete data from active task tables.

See Also:

- [Appendix D, "Task Archival"](#) for information about running the Task Archival utility
- *Oracle Identity Manager Best Practices Guide* for more information about the Task Archival utility

6.2 Creating a New Database Instance for the Upgrade

You can create a new database instance, and then upgrade it to the database schema for Oracle Identity Manager release 9.1.0. This method ensures that your current working database remains available if a rollback is required. Perform the following steps for creating a new, upgraded database instance:

1. Use the export/backup utilities provided with the database to perform a complete backup of your production database.

Production database backup includes, but is not limited to, complete export or backup of the Oracle Identity Manager release 9.0.3.2 database instance. If the upgrade fails, then this backup can be used to restore the database to its original state.

2. Create a new database by referring to the database vendor's documentation and Oracle Identity Manager Installation and Configuration Guide specific to your application server.

Note: If you create a new database, then you must specify the same login credentials for the new database as used for the original database instance.

3. Using the import utility provided by the particular database, import the data you exported from the original database into the newly created release 4.5.2 database. This creates an exact copy of the original database instance.
4. Upgrade the database schema from Oracle Identity Manager release 9.0.3.2 to release 9.1.0 by using one of the following scripts appropriate for your database and operating system. Ensure that you run the script on the computer on which the database is stored.

For Oracle Database on UNIX:

Run the following script on the new release 9.1.0 database system and enter the appropriate information when prompted to upgrade the database schema:

For upgrade from release 9.0.3.2:

```
PATCH/db/oracle/Scripts/oim_db_upg_9032_to_9100.sh
```

Note: The script also upgrades the required stored procedures for Oracle.

For Oracle Database on Microsoft Windows:

Run the following batch script on the new release 9.1.0 database system to upgrade the database schema:

For upgrade from release 9.0.3.2:

PATCH/db/oracle/Scripts/oim_db_upg_9032_to_9100.bat

The command-line usage for the Oracle *oim_db_upg_9032_to_9100.bat* and *oim_db_upg_9032_to_9100.sh* scripts are:

```
oim_db_upg_9032_to_9100.bat ORACLE_SID ORACLE_HOME OIM_DB_USER_NAME
OIM_DB_USER_PASSWORD
DIRECTORY_IN_WHICH_ORACLE_IDENTITY_MANAGER_DB_UPGRADE_ZIP_FILE_IS_EXTRACTED
```

```
oim_db_upg_9032_to_9100.sh ORACLE_SID ORACLE_HOME OIM_DB_USER_NAME
OIM_DB_USER_PASSWORD
DIRECTORY_IN_WHICH_ORACLE_IDENTITY_MANAGER_DB_UPGRADE_ZIP_FILE_IS_EXTRACTED
```

5. Perform the following steps appropriate for the database to upgrade the Oracle Identity Manager Audit and Compliance module:

For Oracle:

- a. Log in to SQL *Plus with the credentials of the Oracle Identity Manager release 9.0.3.2 database schema owner.
- b. For upgrade from release 9.0.3.2, run the following script:

PATCH/db/oracle/Scripts/Oracle_Enable_XACM.sql

6. The user profile auditing feature and the reports feature require that certain metadata be loaded into the database. As appropriate for the operating system on the Oracle Identity Manager host computer, load Oracle Identity Manager metadata into the database by running one of the following commands:

If Oracle Identity Manager is installed without the Audit and Compliance module:

- On Microsoft Windows, run the following file:

PATCH\db\Utilities\LoadXML.bat

- On UNIX, run the following script:

PATCH/db/Utilities/LoadXML.sh

If Oracle Identity Manager is installed with the Audit and Compliance module:

- On Microsoft Windows, run the following file:

PATCH\db\Utilities\LoadXML_XACM.bat

- On UNIX, run the following script:

PATCH/db/Utilities/LoadXML_XACM.sh

See Also: [Appendix A, "Loading Report Metadata Into the Database"](#) for more information about running the LoadXML and LoadXML_XACM scripts

7. The e-mail definition templates must be loaded into the database. As appropriate for the operating system on the Oracle Identity Manager host computer, load Oracle Identity Manager e-mail templates into the database by running one of the following commands:

For Microsoft Windows:

Run *PATCH\db\Utilities\LoadXLIF.bat*

For UNIX:

Run `PATCH/db/Utilities/LoadXLIF.sh`

See Also: ["Loading E-Mail Templates into the Database"](#) on page 6-6 for more information about running the LoadXLIF script

6.3 Loading E-Mail Templates into the Database

You must load certain e-mail templates into your database. To do so:

1. As appropriate for the operating system on the Oracle Identity Manager host computer, edit either `LoadXLIF.bat` or `LoadXLIF.sh` located in the `PATCH/db/Utilities/` directory, and update the `JAVA_HOME` variable.

Note:

- For upgrade from release 9.0.3.2 to release 9.1.0, the location is `PATCH/db/Utilities/`.
 - The `xlUtils.jar` file is in the `PATCH/db/Utilities/` directory. Do not copy this JAR to the `OIM_HOME/lib/` directory.
-

2. Run `LoadXLIF` to populate the e-mail template for Default English Email Templates.

Note: If your database supports languages other than English according to globalization support guidelines of Oracle Identity Manager release 9.1.0, then edit the `XLIFsequence.properties` file located at `PATCH/db/Utilities/xliff/` to include e-mail templates for that language. You must refer to the XML file corresponding to your locale. The XML file name is `xlif_locale.xml`. For example, for French, you include `xlif_fr.xml`.

3. As appropriate for the database and operating system on the Oracle Identity Manager host computer, perform the following steps:

- a. **For Oracle Database on Microsoft Windows:**

In a text editor, open `LoadXLIF.bat`, and uncomment the following line:

```
REM SET ORACLE_DRIVER_DIR=
```

Assign the path to the Oracle driver directory containing the Oracle JDBC drivers:

```
SET ORACLE_DRIVER_DIR=PATH_TO_ORACLE_DRIVER
```

- For Oracle Database on UNIX:**

In a text editor, open `LoadXLIF.sh` and remove the comment tag from the following lines:

```
#ORACLE_DRIVER_DIR=
#export ORACLE_DRIVER_DIR
```

Assign the path to the JDBC driver for Oracle, so that the line resembles the following:

```
ORACLE_DRIVER_DIR=PATH_TO_ORACLE_DRIVER
export ORACLE_DRIVER_DIR
```

- b. Open a command prompt or console and run the *PATCH/db/Utilities/LoadXLIF.bat* or *LoadXLIF.sh* script.

Note: For upgrade from release 9.0.3.2 to release 9.1.0, this path is *PATCH/db/Utilities/LoadXLIF.bat* or *LoadXLIF.sh*.

When you run the LoadXLIF command:

- Replace *JDBC_URL* with the JDBC URL, for example, *jdbc:oracle:thin:@DB_HOST_IP:PORT:SID*.
- Replace *DB_USERNAME* with the database user name.
- Replace *DB_PASSWORD* with the database password.
- Replace *AUDIT_ON_OFF* with `True` if Oracle Identity Manager is installed with the Audit and Compliance Module. Otherwise, specify `False`.

Loading Report Metadata Into the Database

You must load the metadata into the database by running the LoadXML or LoadXML_XACM utilities. The utility must be run after running oim_db_upg_9032_to_9100.bat or oim_db_upg_9032_to_9100.sh.

To load metadata into the database:

1. As appropriate for the operating system on the Oracle Identity Manager host computer, edit either LoadXML.bat or LoadXML.sh (LoadXML_XACM.bat or LoadXML_XACM.sh) located in the *PATCH/db/Utilities/* directory, and set the JAVA_HOME variable to the directory on which Java is installed.

Note: Run the LoadXML script if Oracle Identity Manager is installed without the Audit and Compliance module, and run the LoadXML_XACM script if Oracle Identity Manager is installed with the Audit and Compliance module.

2. As appropriate for the database and operating system of the computer hosting Oracle Identity Manager, perform the following steps:

For Oracle Database on Microsoft Windows:

- a. In a text editor, open LoadXML.bat (or LoadXML_XACM.bat), and uncomment the following line:

```
REM SET ORACLE_DRIVER_DIR=
```

- b. Assign the path to the Oracle driver directory containing the Oracle JDBC drivers:

```
SET ORACLE_DRIVER_DIR=PATH_TO_ORACLE_DRIVER
```

For Oracle Database on UNIX:

- a. In a text editor, open LoadXML.sh (or LoadXML_XACM.sh), and uncomment the following lines:

```
#ORACLE_DRIVER_DIR=
#export ORACLE_DRIVER_DIR
```

- b. Assign the path to the JDBC driver for Oracle, as shown:

```
ORACLE_DRIVER_DIR=PATH_TO_ORACLE_DRIVER
export ORACLE_DRIVER_DIR
```

-
3. From a command prompt, run the *PATCH/db/Utilities/LoadXML.bat* or *LoadXML.sh* script (*LoadXML_XACM.bat* or *LoadXML_XACM.sh* if you are using Oracle Identity Manager with the Audit and Compliance module).

The command-line usage of the *LoadXML* and *LoadXML_XACM* scripts for Oracle Database are as shown:

```
LoadXML JDBC_URL DB_USERNAME DB_PASSWORD
LoadXML_XACM JDBC_URL DB_USERNAME DB_PASSWORD
```

When you run the *LoadXML* or *LoadXML_XACM* command:

- Replace *JDBC_URL* with the JDBC URL, for example, *jdbc:oracle:thin:@DB_HOST_IP:PORT:SID*.
- Replace *DB_USERNAME* with the database user name.
- Replace *DB_PASSWORD* with the database password.

Oracle Identity Manager Database Validator

The Oracle Identity Manager Database Validator is a command-line interface (CLI) utility that compares objects of two databases and generates a report of the missing and mismatched objects in the destination database.

You can also use this utility to verify an upgrade that you perform.

B.1 Introduction

The Oracle Identity Manager Database Validator compares objects of a standard Oracle Identity Manager schema or a customized Oracle Identity Manager database (source) with a destination database that you specify.

The utility gathers source database details in a table. This information is the standard for comparison. For Oracle Database, the information is saved in a file that is created by the database export utility.

In upgrade scenarios, you can use this utility to verify an upgrade that you perform. You can compare the upgraded Oracle Identity Manager database with the provided standard dump (as source dump). This is to verify the success of Oracle Identity Manager database upgrade after the upgrade patch is applied.

Scenario: You upgrade your Oracle Identity Manager installation from release x.x.1 to release x.x.2 by using a standard upgrade package. Oracle Identity Manager Database Validator identifies the missing and mismatched objects, if any, after the upgrade has been completed.

B.2 Location and Components

The Oracle Identity Manager Database Validator files are at the following location:

Oracle Database

PATCH\db\oracle\Utilities\OIMDBValidator

All Oracle Identity Manager Database Validator files are located in the OIMDBValidator folder.

[Table B-1](#) provides details of the files that are part of the Oracle Identity Manager Database Validator.

Table B–1 Files of the Oracle Identity Manager Database Validator

File	Description
oim_ddl_create_oim_src_db.sql	Creates the oim_src_db table.
oim_dml_populate_oim_src_db.sql	Populates the oim_src_db table with metadata details.
oim_dml_src_do_counts.sql	Takes the row count of Oracle Identity Manager standard tables. This file is optional and is based on your inputs.
If Source is a standard database, then: oim_std_src_db.dmp	If Source is a standard/vanilla database, then the standard dump files is named oim_std_src_db.dmp. For a successful standard vanilla installation, a standard dump accompanies the utility. This standard file for Oracle Database is available at the following location: <i>PATCH\db\oracle\Utilities\OIMDBValidator\SrcInfo</i>
If Source is a customized database, then: oim_src_db.dmp	You can opt to generate the dump file on your own. This file is created when you want to create a dump file from a source Oracle Identity Manager database of your choice. It is named oim_src_db.dmp, and for Oracle Database, it is available at the following location: For Oracle: <i>PATCH\db\oracle\Utilities\OIMDBValidator\SrcInfo</i>
oim_dml_check_oim_version.sql	Selects the version from the oim_src_db table and compares it with the version of the XSD table of the Destination Oracle Identity Manager schema.
oim_ddl_create_oim_dest_db.sql	Creates the oim_dest_db table in the destination Oracle Identity Manager database. This file is used to store the data dictionary information of Oracle Identity Manager.
oim_dml_populate_oim_dest_db.sql	Populates the oim_dest_db table with metadata details.
oim_dml_dest_do_counts.sql	Counts the number of records in the Oracle Identity Manager standard tables. This file is optional and is based on your input.
oim_db_compare.sql	This main comparison script creates a comparison report named <i>COMPARISON_SUMMARY_YYYY_MM_DD_HH_MM.log</i> that lists details of the missing or mismatched objects and the row count difference if any.
oim_ddl_drop_oim_src_dest_db.sql	Drops the tables that are created at the destination. This file is optional and is based on your input.
oim_db_validator.bat (Microsoft Windows) oim_db_validator.sh (UNIX)	Runs the utility.
oim_db_input.bat (Microsoft Windows) oim_db_input.sh (UNIX)	The oim_db_validator.bat file calls the oim_db_input.bat file to get the user input and validate the provided information. The oim_db_validator.sh file calls the oim_db_input.sh file to get the user input and validate the provided information.

B.3 Oracle Identity Manager Database Validator Functionality

To use the Database Validator utility, run the following script:

- On Microsoft Windows: oim_db_validator.bat
- On UNIX: oim_db_validator.sh

After you run the script, a log file is generated with the following name:

For Microsoft Windows:

- If the utility runs without error:
oim_db_validator_YYYY_MM_DD_HH_MM.log
- In case of error: oim_db_validator_err_YYYY_MM_DD_HH_MM.log

For UNIX:

- If the utility runs without error:
oim_db_validator_YYYY_MM_DD_HH_MM.log
- In case of error: oim_db_validator_err_YYYY_MM_DD_HH_MM.log

Authentication

When you run the script, you are prompted to enter the following information:

- Oracle Home name
- Database Name
- Database User name
- Database Password

The utility permits only three connection attempts.

Functionality

The following options are available:

- **Collect Details about the Source Oracle Identity Manager Database:**

Enter 1 to select this option.

Select this option to collect details of a specific source.

The utility generates a .dmp file that is named based on your input of whether or not the source is a standard Oracle Identity Manager installation.

- **For standard Oracle Identity Manager installation:** The file is named oim_std_src_db.dmp.

This file is shipped along with the utility and is available in the following directory:

PATCH\db\oracle\Utilities\OIMDBValidator\SrcInfo

You can use this file for comparison or upgrade verification.

- **For nonstandard Oracle Identity Manager installation:** The file is named oim_src_db.dmp.

- **Compare Source Oracle Identity Manager Database with a Destination Oracle Identity Manager Database:**

Enter 2 to select this option.

Choose either to compare against a standard dump or a user-created dump for a specific source:

- To compare against a standard dump, copy oim_std_src_db.dmp from SoureMetadataDump910 to SrcInfo. If SrcInfo is not already available, then create a new directory. The oim_std_src_db.dmp file is a dump of OIM 910 Vanilla installation.

Note: If the comparison with the standard dump indicates any difference, then contact Oracle support.

- To compare against a user-created dump, copy your dump file to SrcInfo. The name of the dump file must be oim_src_db.dmp.

Note: For Microsoft SQL Server, the dump file extension is .bcp instead of .dmp.

You have options for choosing the source for comparison, whether to calculate the number of rows in the destination Oracle Identity Manager database tables, or to drop the comparison tables.

- **Exit:** Enter 3 to select this option.

Choose this option to close the utility.

B.4 Sample Comparison Summary Report

The following is a sample summary report of the Database Validator utility:

```
#####
#####              R E P O R T              #####
#####
Start Time (hh:mi:ss:mmm) : 15:09:39:370
=====
----- S U M M A R Y -----
=====
OIM OBJECT TYPE SOURCE      DESTINATION    COMPARE STATUS
-----
TABLE                6              5 1 TABLE MISSING
COLUMN               26             23 3 COLUMNS MISSING
PK                   6              5 1 PKS MISSING
PK COL               7              6 1 PK COLS MISSING
FK                   1              0 1 FKS MISSING
FK COL               1              0 1 FK COLS MISSING
U INDEX              2              2 SUCCESSFUL
UIDX COL             5              5 SUCCESSFUL
NU INDEX             1              1 SUCCESSFUL
NUIDX COL            1              1 SUCCESSFUL
VIEW                 1              1 SUCCESSFUL
PROCEDURE            1              1 SUCCESSFUL
FUNCTION             1              1 SUCCESSFUL
TRIGGER              1              1 SUCCESSFUL

===== DETAILS OF
DIFFERENCES =====
##### MISSING OBJECTS #####

MISSING OBJECT'S NAME      MISSING OBJECT'S TYPE
-----
AAP                        TABLE
PK_AAP                     PK
FK_AAD_FK_AAD_AC_ACT       FK

#####MIS-MATCHEDOBJECTS #####
```

MISSING TABLE COLUMNS

OBJECT NAME	OBJECT TYPE	PARENT OBJECT	PARENT OBJECT TYPE	DATATYPE
-------------	-------------	---------------	--------------------	----------

COLUMN	LENGTH	ISNULL
--------	--------	--------

AAP_KEY	9	NO	COLUMN	AAP	TABLE	numeric
ACT_KEY	9	NO	COLUMN	AAP	TABLE	numeric
AAP_VALUE	200	YES	COLUMN	AAP	TABLE	varchar

COLUMN DETAILS OF PRIMARY KEYS, FOREIGN KEYS & INDEXES

OBJECT NAME	OBJECT TYPE	PARENT OBJECT	PARENT OBJECT TYPE	COLUMN
-------------	-------------	---------------	--------------------	--------

POSITION	CHILD TABLE	CHILD TABLE	COLUMN
----------	-------------	-------------	--------

AAP_KEY	1	PK COL	PK_AAP	PK
ACT_KEY	1	FK COL	FK_AAD_FK_AAD_AC_ACT	FK
			ACT_KEY	

===== SEED METADATA

COMPARISON =====

NO DIFFERENCES FOUND.

End Time (hh:mi:ss:mmm) : 15:09:39:387

Reconciliation Archival

The Reconciliation Archival utility archives data from active reconciliation tables to archival reconciliation tables and to delete data from the active and archival reconciliation tables.

This utility is added to increase performance. Run this utility only if you want to archive the reconciliation data. Data is transferred from the active reconciliation tables to the new archival tables. As a result, extracting active reconciliation data takes less time, and the performance improves.

This appendix discusses the following topics:

- [Location and Components](#)
- [Oracle Identity Manager Reconciliation Archival Functionality](#)

C.1 Location and Components

All Oracle Identity Manager database reconciliation archival files are located in the *PATCH/db/oracle/Utilities/ReconArchival* directory when you are using Oracle Database. [Table C–1](#) provides details of the files that are part of the Oracle Identity Manager Reconciliation Archival utility:

Table C–1 *Reconciliation Archival Files*

File	Description
cr_recon_ddl_table.sql	Creates the OIM_RECON_DDL table. This table is used by the Reconciliation Archival utility, which calls the OIM_SP_ReconArchival stored procedure to store the DDL statements that are generated when the tool archives or deletes the reconciliation data.
Create_recon_arch_tables.sql	Creates arch_rc* tables with the same structure as the active reconciliation tables. In addition, a primary key is added by the script to the tables.
OIM_SP_ReconArchival.sql	Archives reconciliation data into the reconciliation archival tables and deletes the archived data from active reconciliation tables. It also allows you to clean up the data in archival and active reconciliation tables.

C.2 Oracle Identity Manager Reconciliation Archival Functionality

To use the Reconciliation Archival utility, run the following script:

For Microsoft Windows, run OIM_ReconArch.bat.

For UNIX, run OIM_ReconArch.sh.

After you run the script, a log file is generated with the following name:

For Microsoft Windows:

- If the utility runs without error:
`Arch_Recon_YYYY_MM_DD_HH_MM.log`
- If running the utility generates an error:
`Err_Arch_Recon_YYYY_MM_DD_HH_MM.log`

For UNIX:

- If the utility runs without error:
`Arch_Recon_YYYY_MM_DD_HH_MM.log`
- If the running the utility generates an error:
`Err_Arch_Recon_YYYY_MM_DD_HH_MM.log`

C.2.1 Authentication

When you run the Reconciliation Archival utility, you are prompted to enter the following information:

- Name of the Oracle home directory
- Database name
- Database user name
- Database password

The utility permits only three connection attempts.

C.2.2 Functionality

The following options are present in the Reconciliation Archival utility main menu:

- Archive data from active reconciliation tables: Provides options to archive selective data or all the data
- Delete all data from archival reconciliation tables: Provides options to delete all the data from the reconciliation archival tables
- Delete all data from active reconciliation tables: Provides the options to delete all the data from the active reconciliation tables
- Exit: Exits the Archival Utility

Task Archival

You run this utility to archive the task data. When you run this utility, data is transferred from the active task tables to the new archival tables. As a result, extracting active task data takes less time and the performance improves.

This appendix discusses the following topics:

- [Location and Components](#)
- [Oracle Identity Manager Task Archival Functionality](#)

D.1 Location and Components

All Oracle Identity Manager Task Archival files are located in the *PATCH/db/oracle/Utilities/TaskArchival* directory when you are using Oracle Database. [Table D–1](#) provides details of the files that are part of the Oracle Identity Manager Task Archival utility:

Table D–1 Task Archival Files

File	Description
cr_taskarchival_ddl_table.sql	Creates the OIM_TASK_ARCH_DDL table. This table is used by the Task Archival utility, which calls the OIM_SP_TASKS_ARCHIVAL stored procedure to store the DDL statements that are generated when the tool archives or deletes the tasks data.
Create_TasksArch_Tables.sql	Creates the arch_* tables that have the same structure as the active tasks tables. In addition, this script adds a primary key to tables.
OIM_SP_TASKS_ARCHIVAL.sql	Archives task data into the task archival tables and deletes the archived data from the active task tables.

D.2 Oracle Identity Manager Task Archival Functionality

To use the Task Archival utility, run the following script:

For Microsoft Windows: OIM_TasksArch.bat

For UNIX: OIM_TasksArch.sh

After you run the script, a log file is generated with the following name:

For Microsoft Windows:

- If the utility runs without error:
Arch_Tasks_YYYY_MM_DD_HH_MM.log

- If running the utility generates an error:

`Err_Arch_Tasks_YYYY_MM_DD_HH_MM.log`

For UNIX:

- If the utility runs without error:

`Arch_Tasks_YYYY_MM_DD_HH_MM.log`

- If running the utility generates an error:

`Err_Arch_Tasks_YYYY_MM_DD_HH_MM.log`

D.2.1 Authentication

When you run the script, you are prompted to enter the following information:

- Name of the Oracle home directory
- Database name
- User name
- Database password

The utility permits only three connection attempts.

D.2.2 Functionality

The following options are present in the Task Archival utility main menu:

- Archive all the provisioning tasks on resource instances, which have been revoked for disabled/deleted users
- Archive all the provisioning tasks on resource instances, which have been revoked
- Archive all the approval tasks in which the request status is Request Complete/Request Cancelled/Object Approval Complete
- Exit

Generating User Snapshots

User snapshots must be generated if you are upgrading an Oracle Identity Manager release 9.0.3.2 installation without the Audit and Compliance module to an Oracle Identity Manager release 9.1.0 installation with the Audit and Compliance module.

If release 9.0.3.2 installation was with the Audit and Compliance module, then you do not need to generate new snapshots.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for detailed information about generating user snapshots

To generate new snapshots:

1. In a text editor, open the GenerateSnapshot script located in the `OIM_HOME/xellerate/bin/` directory. For Microsoft Windows, open `GenerateSnapshot.bat`. For UNIX, open `GenerateSnapshot.sh`.
2. Edit the following variables in the GenerateSnapshot script:
 - a. Modify the set `XEL_HOME` variable to point to the directory in which you installed Oracle Identity Manager, which is `OIM_HOME/xellerate`.
 - b. Modify the set `APP_SERVER=@appserver` variable as follows:

For JBoss Application Server:

```
set APP_SERVER=jboss
```

For BEA WebLogic Server:

```
set APP_SERVER=weblogic
```

For IBM WebSphere Application Server:

```
set APP_SERVER=websphere
```

Oracle Application Server:

```
set APP_SERVER=oracle
```
 - c. Modify the set `APP_SERVER_HOME=@app_server_home` variable to point to the directory in which you installed the application server.
 - d. Modify the set `JAVA_HOME=@jdk_loc` variable to point to the directory containing the JDK.
3. Run one of the following GenerateSnapshot scripts as appropriate for the operating system on the Oracle Identity Manager host computer:

For Microsoft Windows, run:

`OIM_HOME\xellerate\bin\GenerateSnapshot.bat`

For UNIX, run:

`OIM_HOME/xellerate/bin/GenerateSnapshot.sh`

Note: Do not run the GenerateSnapshot script if release 9.0.3.2 deployment is already with the Audit and Compliance module.

UPA Form Data Upgrade Utility

This appendix provides information about the UPA Form Data Upgrade Utility. This utility is mandatory facilitates exception-based reporting. You must run this utility after running the GenerateSnapshot utility.

F.1 Introduction

Oracle Identity Manager release 9.1.0 features exception-based reporting for resource access and fine-grained attributes related to the resource instance. The form data and changes to it on which these exception reports work are available in the two newly introduced tables in release 9.1.0: UPA_UD_FORMS and UPA_UD_FORMFIELDS. These two tables are populated only if the value of the XL.EnableExceptionReports system configuration property is set to TRUE.

Suppose the exception reports feature is disabled and you plan to enable the feature by changing the value of the XL.EnableExceptionReports property to TRUE. While the exception reports feature is disabled, there is no baseline process form data in the newly introduced UPA_UD_FORMS and UPA_UD_FORMFIELDS tables. As a result, the exception reports will fail.

The UPA Form Data Upgrade utility helps you solve this problem. To run this utility, the exception reporting feature is enabled. The utility runs through all the entitlements. For provisioning instances that have a resource with either a process or an object form attached, the utility reads the data on the form and stores them in the two database tables.

Subsequent changes to the form is automatically captured after the upgrade. With the baseline available, the exception reports start reporting on exceptions. The utility creates a log file named UPA_Form_Data_Upgrade_TIMESTAMP.log after the process is complete.

Note: In this release, provisioning is initiated from Oracle Identity Manager. As a result, the two database tables contain the baseline for the process form data. Any successive updates through reconciliation are captured and reported as an exception if the values differ.

F.2 Generating Process/Object Form Data by Using the UPA Form Data Upgrade Utility

If you have installed Oracle Identity Manager Audit and Compliance module, then you must generate the process or object form data only if the following conditions apply together:

Note: Use this utility only after enabling the exception reporting feature. If some previous runs resulted in some kind of error, then the utility could be run multiple times at the time of enabling the exception reporting feature. The utility should not be used at any other time when the environment is functional.

- You have enabled the exception reporting feature.
- Audit level for an existing Oracle Identity Manager Audit and Compliance module environment is at the Resource Form or Process Task level.

In case of audit-related failures in a functional environment, use the Generate Snapshot utility. Do not use this utility if the Generate Snapshot utility is being used as part of the upgrade process because the Generate Snapshot utility will perform the task of this utility also.

See Also: [Appendix G, "Generating GPA Snapshots"](#) for more information about the Generate Snapshot utility

F.2.1 Working with UPA Form Data Upgrade Utility

To use the UPA Form Data Upgrade utility, perform the following steps:

- [Copying the UPA Form Data Upgrade Utility Files](#)
- [Configuring the Scripts](#)
- [Compiling the Stored Procedure](#)
- [Running the Utility](#)

Copying the UPA Form Data Upgrade Utility Files

Copy the UPA Form Data Upgrade utility files to your local computer. Before using the utility, copy the UPAFormDataUpgradeUtility directory from the `PATCH/db/oracle/Utilities` directory on the installation media to your local computer.

Configuring the Scripts

Following are the settings for the Oracle Database Batch/Shell file:

- **For Microsoft Windows:** Edit the following file:
`PATCH\db\oracle\Utilities\UPAFormDataUpgradeUtility\UPAFormDataUpgrade.bat`
- **For UNIX:** Edit the following file:
`PATCH/db/oracle/Utilities/UPAFormDataUpgradeUtility/UPAFormDataUpgrade.sh`

[Table F–1](#) shows the values of the variables that must be set before you run the utility:

Table F–1 Variables of the UPA Form Data Upgrade Utility

Variables	Description
ORACLE_HOME	Oracle home directory.
OIM_DB_USERNAME	Username for the Oracle Identity Manager database user
OIM_DB_USER_PASSWORD	Password for the Oracle Identity Manager database user

Table F–1 (Cont.) Variables of the UPA Form Data Upgrade Utility

Variables	Description
OIM_DB_REMOTE	Describes if the database is running on a remote computer. Set a value for this parameter if OIM_DB_REMOTE = Y or OIM_DB_REMOTE = N. .
OIM_DB_ORACLE_SID	SID of the database. Set a value for this parameter only if OIM_DB_REMOTE = N.
OIM_DB_SERVICE_NAME	TNS service name that points to the remote database. Set a value for this parameter only if OIM_DB_REMOTE = Y.

Compiling the Stored Procedure

For Oracle, perform the following steps:

1. Log in to SQL *Plus with the credentials of the Oracle Identity Manager release database schema owner.
2. Run the following script:

```
PATCH/db/oracle/Utilities/UPAFormDataUpgradeUtility/compile_all_XL_SP_UPA.sql
```

Running the Utility**Oracle Database****On Microsoft Windows:**

Run the batch file UPAFormDataUpgrade.bat from the following location:

```
PATCH\db\oracle\Utilities\UPAFormDataUpgradeUtility\
```

On UNIX:

Run the shell file UPAFormDataUpgrade.sh from the following location:

```
PATCH/db/oracle/Utilities/UPAFormDataUpgradeUtility/
```

Generating GPA Snapshots

Group snapshots must be generated in either of the following scenarios:

- If you are upgrading an Oracle Identity Manager release 9.0.3.2 installation without the Audit and Compliance module to an Oracle Identity Manager release 9.1.0 installation with the Audit and Compliance module.
- If Oracle Identity Manager release 9.0.3.2 installation is already with the Audit and Compliance module.

The group snapshots must be generated only after user snapshots have been generated.

See Also: *Oracle Identity Manager Audit Report Developer's Guide* for detailed information about generating group snapshots

To generate new snapshots:

1. In a text editor, open the GenerateGPASnapshot script located in the `OIM_HOME/xellerate/bin/` directory. For Microsoft Windows, open `GenerateGPASnapshot.bat`. For UNIX, open `GenerateGPASnapshot.sh`.
2. Edit the following variables in the GenerateGPASnapshot script:
 - a. Modify the set `APP_SERVER=@appserver` variable as follows:

JBoss Application Server:

```
set APP_SERVER=jboss
```

For BEA WebLogic Server:

```
set APP_SERVER=weblogic
```

For IBM WebSphere Application Server:

```
set APP_SERVER=websphere
```

Oracle Application Server:

```
set APP_SERVER=oracle
```
 - b. Modify the set `APP_SERVER_HOME=@app_server_home` variable to point to the directory in which you installed the application server. Modify the set `JAVA_HOME=@jdk_loc` variable to point to the directory containing the JDK.
3. Run one of the following GenerateGPASnapshot scripts as appropriate for the operating system on the Oracle Identity Manager host computer:

For Microsoft Windows, run:

`OIM_HOME\xellerate\bin\GenerateGPASnapshot.bat`

For UNIX, run:

`OIM_HOME/xellerate/bin/GenerateGPASnapshot.sh`

Upgrade Attestation Utility

In Oracle Identity Manager release 9.1.0, attestation design has been modified to merge few columns and put the data in a newly added column in XML format as a CLOB data. After upgrading to release 9.1.0, old attestation does not work because of this change. Therefore, the Upgrade Attestation utility must be run to perform data conversion.

To upgrade attestations:

1. Create a backup of the APD table because the Upgrade Attestation utility deletes some columns from this table.
2. Copy the *PATCH/xellerate/lib/xlAttestationUpgrade.jar* file to the *OIM_HOME/lib/* directory.
3. Run the Upgrade Attestation script. Run the following file located at *OIM_HOME/setup/* directory as appropriate for the operating system:

For Microsoft Windows:

```
UpgradeAttestation.bat JDBC_DRIVER DB_URL OIM_DB_USERNAME OIM_DB_PASSWORD
```

For UNIX:

```
UpgradeAttestation.sh JDBC_DRIVER DB_URL OIM_DB_USERNAME OIM_DB_PASSWORD
```

The UpgradeAttestation script parameters are:

- *JDBC_DRIVER*: JDBC driver
- *DB_URL*: URL for the database
- *OIM_DB_USERNAME*: User name for the database
- *OIM_DB_PASSWORD*: Password for the database

Note: If the host on which the UpgradeAttestation script is run cannot allocate 1 GB RAM for the process, then the following error is thrown:

```
java.lang.NullPointerException at
com.thortech.xl.attestation.AttestationUpgrade.main<Unknown Source
```

If this occurs, then you must reduce the Java option for maximum memory allocation in the UpgradeAttestation script file. For example, if the memory allocation is similar to the following:

```
"%JAVA_HOME%/bin/java" -Xmx1024m -cp %CLASS_PATH%
com.thortech.xl.attestation.AttestationUpgrade %1 %2 %3 %4
```

You can change it to the following:

```
"%JAVA_HOME%/bin/java" -Xmx512m -cp %CLASS_PATH%
com.thortech.xl.attestation.AttestationUpgrade %1 %2 %3 %4
```

4. Delete the xlAttestationUpgrade.jar from the *OIM_HOME\lib* directory.

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