

## **Oracle® Fusion Middleware**

Upgrading Oracle Data Integrator

12c (12.1.2)

**E35257-01**

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Documentation for installers and system administrators that describes how to upgrade Oracle Data Integrator from an 11g release to 12c.

Oracle Fusion Middleware Upgrading Oracle Data Integrator 12c (12.1.2)

E35257-01

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# Preface

This document describes how to upgrade an existing 11g Oracle Data Integrator environment to 12c.

## Audience

This guide is intended for Oracle Fusion Middleware system administrators who are responsible for installing, maintaining, and upgrading Oracle Data Integrator. It is assumed that readers of this manual have knowledge of the following:

- Oracle Fusion Middleware system administration and configuration
- Configuration parameters and expected behavior of the system being upgraded

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## Related Documents

For important information about Oracle Fusion Middleware products, see the following manuals:

- *Understanding Oracle Fusion Middleware*  
This book contains important concepts and describes new features in 12c that may be important to understand prior to beginning your upgrade.
- *Planning an Upgrade of Oracle Fusion Middleware*  
This book contains important information to help you plan your upgrade.
- *Planning an Installation of Oracle Fusion Middleware*  
This book contains important information about preparing your system for the latest release of Oracle Fusion Middleware software.

## Conventions

The following text conventions are used in this document:

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

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# Preparing for your Oracle Data Integrator Upgrade

This chapter provides a summary of items you should read and understand before performing your Oracle Data Integrator upgrade.

The following topics are covered:

- [Section 1.1, "Understanding the Starting Points for Your Oracle Data Integrator Upgrade"](#)
- [Section 1.2, "Key Differences Between Oracle Data Integrator 11g and Oracle Data Integrator 12c"](#)
- [Section 1.3, "Understanding the Oracle Data Integrator Standard Upgrade Topologies"](#)

## 1.1 Understanding the Starting Points for Your Oracle Data Integrator Upgrade

You can upgrade to Oracle data Integrator 12c (12.1.2) from the following supported starting points:

- Oracle Data Integrator 11g Release 1 (11.1.1.6.0)
- Oracle Data Integrator 11g Release 1 (11.1.1.7.0)

The upgrade procedures in this guide explain how to upgrade an existing Oracle Data Integrator 11g domain to Oracle Fusion Middleware 12c (12.1.2). If your domain contains other components that also need to be upgraded, links to supporting documentation are provided.

If your existing version of Oracle Data Integrator is earlier than 11g Release 1 (11.1.1.6.0), you must first upgrade your software to one of the two supported versions before you can upgrade to 12c (12.1.2):

- To upgrade to 11g Release 1 (11.1.1.6.0), see the *Oracle Fusion Middleware Upgrade Guide for Oracle Data Integrator* in the 11g Release 1 (11.1.1.6.0) documentation library.
- To upgrade to 11g Release 1 (11.1.1.7.0), see the *Oracle Fusion Middleware Upgrade Guide for Oracle Data Integrator* in the 11g Release 1 (11.1.1.7.0) documentation library.

## 1.2 Key Differences Between Oracle Data Integrator 11g and Oracle Data Integrator 12c

The following key differences exist between Oracle Data Integrator 11g and Oracle Data Integrator 12c:

- [Section 1.2.1, "Standalone Agents are Managed by the WebLogic Management Framework"](#)
- [Section 1.2.2, "Standalone Agents are Installed in Their Own Directories"](#)

To understand what's new in general in 12c (12.1.2), see "New and Changed Features for 12c (12.1.2)" in *Understanding Oracle Fusion Middleware*.

If your environment includes Oracle WebLogic Server with Oracle ADF, see "Key Differences Between Application Developer 11g and Infrastructure 12c" in *Upgrading to the Oracle Fusion Middleware Infrastructure*.

### 1.2.1 Standalone Agents are Managed by the WebLogic Management Framework

In 12c, system components, like the Oracle Data Integrator standalone agent, are managed by the WebLogic Management Framework.

For more information, see "What is the WebLogic Management Framework?" in *Understanding Oracle Fusion Middleware*.

### 1.2.2 Standalone Agents are Installed in Their Own Directories

In 12c, standalone agents are installed in a separate directory from other ODI components.

For more information, see "Understanding the Standard Installation Topology for the Standalone Agent" in *Installing and Configuring Oracle Data Integrator*.

## 1.3 Understanding the Oracle Data Integrator Standard Upgrade Topologies

Using the Oracle Fusion Middleware Oracle Data Integrator 11g software, you can create a variety of production topologies to suit the needs of your applications, your organization, and your application users.

As a result, it is difficult to provide exact upgrade instructions for every possible Oracle Data Integrator 11g installation. To solve this problem, this upgrade documentation provides detailed instructions for upgrading several typical Oracle Data Integrator configurations. These typical topologies are referred to as 12c standard upgrade topologies.

Your actual topology may vary, but the topologies described here provide an example that can be used as a guide to upgrade other similar Oracle Data Integrator topologies.

This guide explains step-by-step how to upgrade the following specific upgrade topologies:

- [Oracle Data Integrator Standard Upgrade Topology for Java EE Agents](#)
- [Oracle Data Integrator Standard Upgrade Topology for Standalone Agents not Registered with a WebLogic Domain](#)
- [Oracle Data Integrator Standard Upgrade Topology for Standalone Agents Registered with a WebLogic Domain](#)

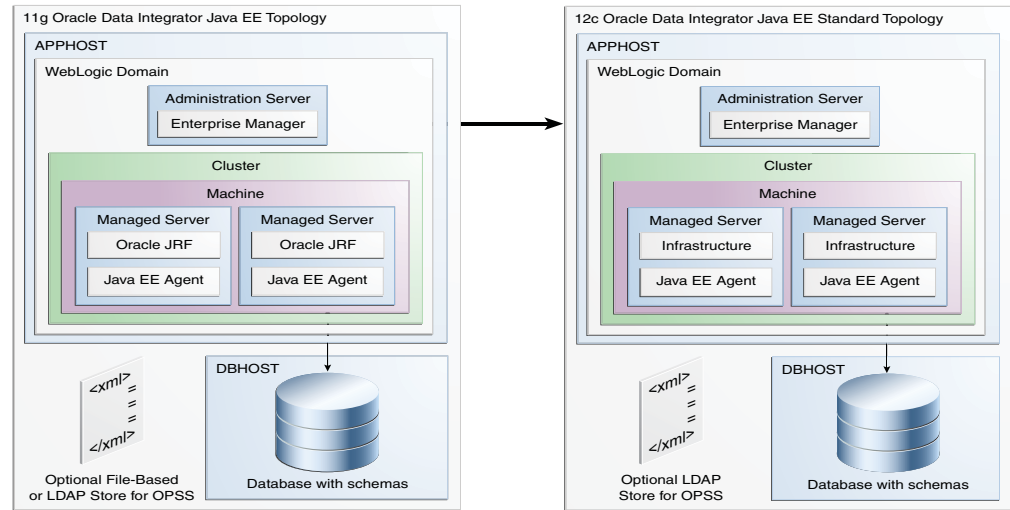


### 1.3.1 Oracle Data Integrator Standard Upgrade Topology for Java EE Agents

Figure 1–1 shows the Oracle Fusion Middleware 11g Oracle Data Integrator Java EE standard upgrade topology and the resulting Oracle Fusion Middleware 12c Oracle Data Integrator Java EE topology as it appears after you complete the upgrade procedures in this guide.

The upgrade roadmap and procedures for this topology are in [Chapter 2](#).

**Figure 1–1 Oracle Data Integrator Java EE Agent Upgrade Topology**



All elements in this topology illustration are described in [Table 1–1](#).

**Table 1–1 Description of the Elements in the Oracle Data Integrator Java EE Standard Upgrade Topology**

Element	Description and Links to Additional Documentation
11g Oracle Data Integrator Java EE Topology	<p>This is the label for the left side of the figure. It shows a typical single-host topology created using the Oracle Fusion Middleware 11g Oracle Data Integrator installer.</p> <p>It consists of a single domain that contains a cluster of two managed servers, a Java EE agent, and the Administration Server. The domain also requires a relational database for the Master and Work Repository schema, and either an LDAP-based or file store for Oracle Platform Security Services (OPSS).</p> <p>This document describes, step-by-step, how to upgrade this topology to an equivalent topology in 12c.</p>
12c Oracle Data Integrator Java EE Standard Installation Topology	<p>This is the label for the right side of the figure. It shows a typical single-host topology created using the Oracle Fusion Middleware 12c Oracle Data Integrator distribution.</p> <p>Like the 11g topology, it also consists of a single domain that contains a cluster of two managed servers, a Java EE agent, the Administration Server, and a database for the Master and Work Repository schema.</p> <p>Unlike the 11g topology, only an LDAP based store can be used for OPSS; file-based stores are not allowed in 12c.</p>
APPHOST	Standard term used in Oracle documentation referring to the machine that is hosting the application tier.

**Table 1–1 (Cont.) Description of the Elements in the Oracle Data Integrator Java EE Standard Upgrade Topology**

Element	Description and Links to Additional Documentation
DBHOST	Standard term used in Oracle documentation referring to the machine that is hosting the database.
Database with Schemas	Represents a supported database, where the Oracle Fusion Middleware schemas have been created using the Repository Creation Utility.
WebLogic Domain	<p>A logically related group of Java components (in this case, the Administration Server, Managed Servers, Java EE agent, and other related software components).</p> <p>For more information, see "What is an Oracle WebLogic Server Domain" in <i>Understanding Oracle Fusion Middleware</i>.</p>
Administration Server	<p>The central control entity of a domain which maintains the domain's configuration objects and distributes configuration changes to Managed Servers.</p> <p>For more information, see "What is the Administration Server" in <i>Understanding Oracle Fusion Middleware</i>.</p>
Enterprise Manager	<p>Oracle Enterprise Manager Fusion Middleware Control. This is the main tool that can be used to manage your domain.</p> <p>For more information, see "Oracle Enterprise Manager Fusion Middleware Control" in <i>Understanding Oracle Fusion Middleware</i>.</p>
Cluster	<p>A collection of multiple WebLogic Server instances running simultaneously and working together.</p> <p>For more information, see "Understanding Managed Servers and Managed Server Clusters" in <i>Understanding Oracle Fusion Middleware</i>.</p>
Machine	Logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between WebLogic Managed Servers and the Node Manager; in order to start or stop a Managed Server with Node Manager, the Managed Server must be associated with a machine.
Managed Server	<p>Host for your applications, application components, Web services, and their associated resources.</p> <p>For more information, see "Understanding Managed Servers and Managed Server Clusters" in <i>Understanding Oracle Fusion Middleware</i>.</p>
Java EE Agent	<p>A Java EE agent is a JEE application that is deployed and runs on a Managed Server configured in a WebLogic domain.</p> <p>For more information about these agents and how they fit into the overall Oracle Data Integrator topology, see "Introduction to the Oracle Data Integrator Topology" in <i>Developer's Guide for Oracle Data Integrator</i>.</p>
Oracle JRF	<p>Oracle JRF (Java Required Files) consists of those components not included in the Oracle WebLogic Server installation and that provide common functionality for Oracle business applications and application frameworks.</p> <p>JRF consists of several independently developed libraries and applications that are deployed into a common location. The components that are considered part of Java Required Files include Oracle Application Development Framework shared libraries and ODL logging handlers.</p>

**Table 1–1 (Cont.) Description of the Elements in the Oracle Data Integrator Java EE Standard Upgrade Topology**

Element	Description and Links to Additional Documentation
Infrastructure	<p>Oracle Fusion Middleware 12c term (similar to Oracle JRF) that refers to the collection of services that include the following:</p> <ul style="list-style-type: none"> <li>▪ Metadata repository (MDS) <p>This contains metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework.</p> <p>For more information, see "What is the Metadata Repository" in <i>Understanding Oracle Fusion Middleware</i>.</p> </li> <li>▪ Oracle Application Developer Framework (ADF)</li> <li>▪ Oracle Web Services Manager (OWSM)</li> </ul>

### 1.3.2 Oracle Data Integrator Standard Upgrade Topology for Standalone Agents not Registered with a WebLogic Domain

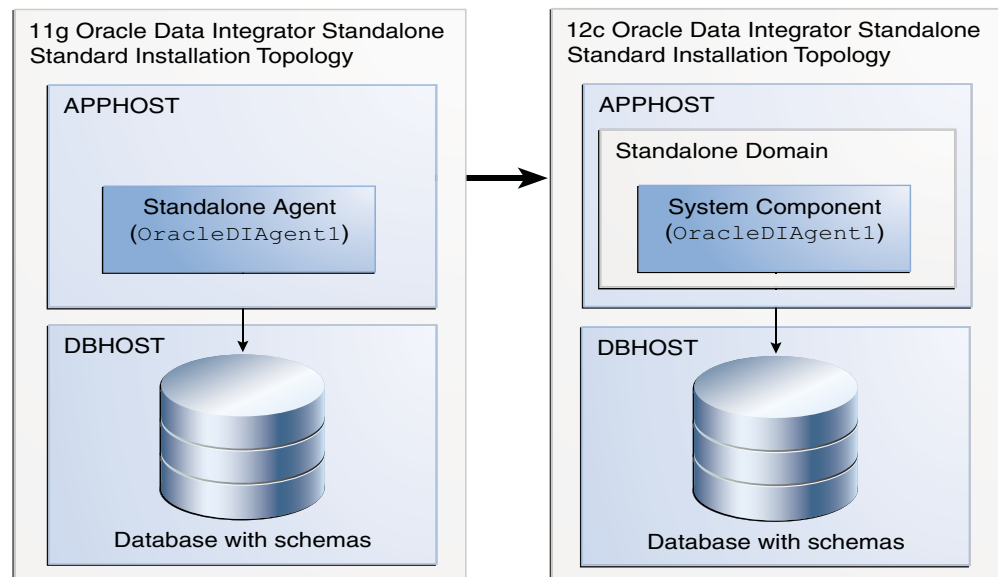
In 11g Release 1 (11.1.1.6.0) and 11g Release 1 (11.1.1.7.0), the following standalone agent configurations (not registered with a WebLogic domain) were possible:

- Standalone agent as a standalone Oracle instance
- Standalone agent managed by OPMN

Figure 1–2 shows the 11g Oracle Data Integrator standard upgrade topology for standalone agents (not registered with a WebLogic domain) and the resulting Oracle Fusion Middleware 12c topology as it appears after you complete the upgrade procedures in this guide.

The upgrade roadmap and procedures for this topology are in Chapter 3.

**Figure 1–2 Oracle Data Integrator Standard Upgrade Topology for Standalone Agents not Registered to a WebLogic Domain**



Most of the elements in this topology illustration are described in Table 1–1.

Additional elements and those that are different from the ones in [Figure 1–1](#) are described below in [Table 1–2](#).

**Table 1–2 Description of the Elements in the Standalone Agent Standard Upgrade Topology**

Element	Description and Links to Additional Documentation
11g Oracle Data Integrator Standalone Topology	<p>This is the label for the left side of the figure. It shows a typical single-host topology created using the Oracle Fusion Middleware 11g Oracle Data Integrator installer.</p> <p>It consists of a single standalone agent (<code>OracleDIAgent1</code>) on a single machine. The standalone agent may or may not be managed by OPMN; the upgrade procedures will vary slightly depending on whether or not your 11g standalone agent is managed by OPMN.</p> <p>A relational database for the Master and Work Repository is also required and is shown in the figure.</p> <p>This document describes, step-by-step, how to upgrade this topology to an equivalent topology in 12c.</p>
12c Oracle Data Integrator Standalone Standard Installation Topology	<p>This is the label for the right side of the figure. It shows a typical single-host topology created using the Oracle Fusion Middleware 12c Oracle Data Integrator distribution.</p> <p>It consists of a single standalone agent (<code>OracleDIAgent1</code>) configured in a standalone domain, along with a relational database for the Master and Work Repository.</p>
Standalone Agent	<p>A standalone agent is an Oracle Data Integrator agent that runs in a separate Java Virtual Machine (JVM) process.</p> <p>In 11g, the standalone agent is created directly as part of the installation.</p>
System Component	<p>In 12c, a standalone domain must be created before a standalone agent can be created. A system component corresponds to a standalone agent managed with the WebLogic Management Framework.</p>
Standalone Domain	<p>For more information, see "Standalone Domain" in <i>Administering Oracle HTTP Server</i>.</p>

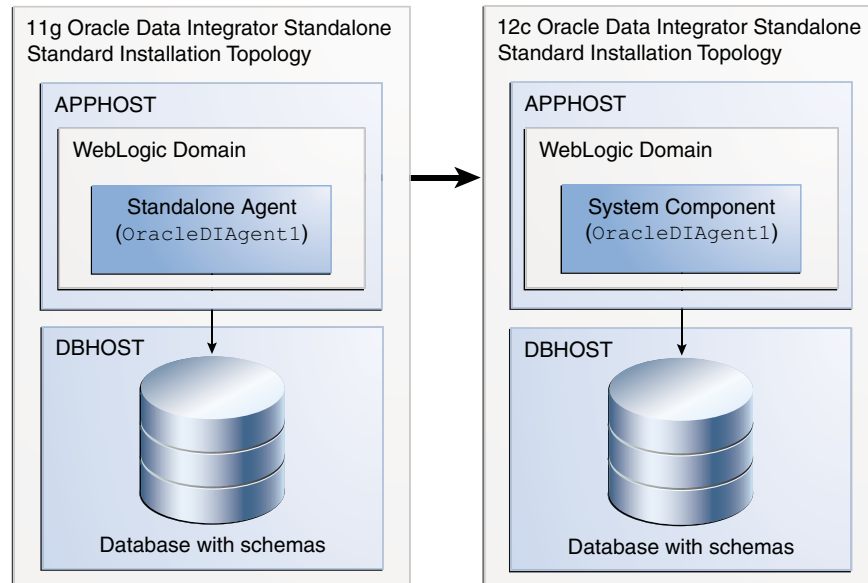
### 1.3.3 Oracle Data Integrator Standard Upgrade Topology for Standalone Agents Registered with a WebLogic Domain

In 11g Release 1 (11.1.1.7.0), it was possible to configure a colocated standalone agent managed by OPMN inside a WebLogic domain.

[Figure 1–3](#) shows the 11g Oracle Data Integrator standard upgrade topology for standalone agents (not registered with a WebLogic domain) and the resulting Oracle Fusion Middleware 12c topology as it appears after you complete the upgrade procedures in this guide.

The upgrade roadmap and procedures for this topology are in [Chapter 3](#).

**Figure 1–3 Oracle Data Integrator Standard Upgrade Topology for Standalone Agents Registered with a WebLogic Domain**



Most of the elements in this topology illustration are described in [Table 1–1](#) and [Table 1–2](#).

Additional elements and those that are different from the ones in the preceding figures are described below in [Table 1–2](#).

**Table 1–3 Description of the Elements in the Standard Upgrade Topology for Standalone Agents Registered to a WebLogic Domain**

Element	Description and Links to Additional Documentation
11g Oracle Data Integrator Standalone Topology	<p>This is the label for the left side of the figure. It shows a typical single-host topology created using the Oracle Data Integrator 11g Oracle Data Integrator installer.</p> <p>It consists of a single standalone agent (<code>OracleDIAgent1</code>) on a single machine. The standalone agent is managed by OPMN and is registered to the WebLogic domain in which it resides.</p> <p>A relational database for the Master and Work Repository is also required and is shown in the figure.</p> <p>This document describes, step-by-step, how to upgrade this topology to an equivalent topology in 12c.</p>
12c Oracle Data Integrator Standalone Standard Installation Topology	<p>This is the label for the right side of the figure. It shows a typical single-host topology created using the Oracle Fusion Middleware 12c Oracle Data Integrator distribution.</p> <p>It consists of a single standalone agent (<code>OracleDIAgent1</code>) configured in a WebLogic domain, along with a relational database for the Master and Work Repository.</p>



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# Upgrading Your Oracle Data Integrator Java EE Agent Environment

This chapter describes the tasks required to upgrade your 11g Oracle Data Integrator Java EE agent environment to Oracle Fusion Middleware 12c (see [Section 1.1](#) for valid 11g starting points).

The following topics are covered in this chapter:

- [Section 2.1, "Understanding the Java EE Agent Environment Upgrade Roadmap"](#)
- [Section 2.2, "Completing and Verifying Your Upgrade"](#)

## 2.1 Understanding the Java EE Agent Environment Upgrade Roadmap

[Figure 2-1](#) provides an overview of the upgrade process for the Java EE agent topology.

**Figure 2–1 Java EE Agent Upgrade Process Flow**

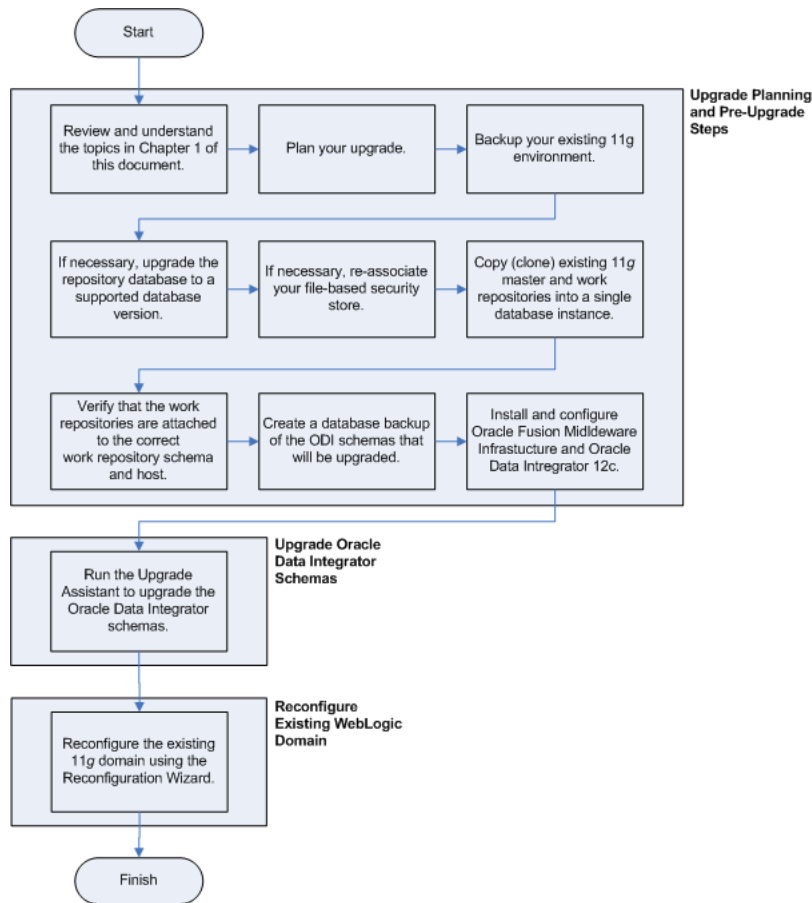


Table 2–1 describes each of the steps in the upgrade process flowchart which is shown in Figure 2–1. The table also provides information on where to go to get more information on each step in the process.

**Table 2–1 Oracle Data Integrator Upgrade Procedure**

Task	Description	More Information
Review and understand the topics in Chapter 1 of this document.	This chapter provides important information you should read and understand before beginning your upgrade process.	<a href="#">Chapter 1</a>
Plan your upgrade.	Understand important concepts and tasks when planning your upgrade.	<a href="#">Section 5.1.1</a>
Backup your existing 11g environment.	Before you begin your upgrade, make a complete backup of your existing 11g environment.	<a href="#">Section 5.1.2</a>
If necessary, upgrade the repository database to a supported database version	The Oracle Data Integrator Repositories are stored into database schemas. Before you can upgrade these schemas, you must make sure the database is a supported version.	<a href="#">Section 5.1.3</a>
Copy (clone) existing Master and Work Repositories before running the Upgrade Assistant	Oracle recommends that you perform repository upgrades on cloned repository schemas.	<a href="#">Section 5.1.5</a>



**Table 2–1 (Cont.) Oracle Data Integrator Upgrade Procedure**

<b>Task</b>	<b>Description</b>	<b>More Information</b>
Verify that the work repositories are attached to the correct master repository schema and host	The Upgrade Assistant upgrades all work repositories attached to master repository. Each work repository must be attached to the correct master repository schema and host before performing the upgrade.	<a href="#">Section 5.1.6</a>
Create a database backup of the ODI schema that will be upgraded.	Creating a backup is mandatory if the repository schemas have not been cloned and you are attempting to upgrade a non-cloned schema. Performing a backup of the ODI schemas is particularly important if the upgrade fails and corrupts the content. With a backup, you can delete the corrupted schemas and re-clone the originals to complete the upgrade.	<a href="#">Section 5.1.7</a>
Install and Configure the necessary Oracle Fusion Middleware 12c products	Install Oracle Fusion Middleware Infrastructure and Oracle Data Integrator 12c.  As part of the product installation, you should also follow the instructions to run RCU and create any new 12c schemas (for example, Service Table).  The Upgrade Assistant is available as part of the 12c product installation.	<a href="#">Section 5.2</a>
Run Upgrade Assistant to Upgrade the Oracle Data Integrator Master Repository and Work Repository schema.	The Upgrade Assistant upgrades the Oracle Data Integrator 11g repository schemas to Oracle Data Integrator 12c.	<a href="#">Section 5.3</a>
Upgrade your Java EE environment.	After upgrading the 11g schemas, run the reconfiguration wizard to reconfigure your 11g domain.  Running the reconfiguration wizard concludes the upgrade process for the Java EE agent environment.	<a href="#">Section 5.4</a>

## 2.2 Completing and Verifying Your Upgrade

To complete and verify your upgrade, perform the tasks in this section.

- [Section 2.2.1, "Configuring and Starting the Node Manager"](#)
- [Section 2.2.2, "Restarting the Administration Server"](#)
- [Section 2.2.3, "Starting the Managed Servers"](#)

### 2.2.1 Configuring and Starting the Node Manager

Refer to the following to configure and start the Node Manager:

- For more information about configuring the Node Manager, see "Completing the Node Manager Configuration" in *Upgrading Oracle WebLogic Server*.
- For information about starting the Node Manager, see "Starting and Stopping Node Manager" in *Administering Oracle Fusion Middleware*.

### 2.2.2 Restarting the Administration Server

Stop and restart the Administration Server.

For more information, see "Starting and Stopping Administration Servers" in *Administering Oracle Fusion Middleware*.

- Administration Console URL:

`http://administration_server_host:administration_server_port/console`

- Fusion Middleware Control:

`http://administration_server_host:administration_server_port/em`

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**Note:** After upgrade, you must run your administration tools from the new 12c Oracle home and not from the 11g Oracle home.

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### 2.2.3 Starting the Managed Servers

Refer to "Starting the Managed Server" in *Installing and Configuring Oracle Data Integrator* for instructions on how to start the Managed Server in the domain.

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## Upgrading Your Oracle Data Integrator Standalone Agent Environment (no WebLogic Domain)

This chapter describes the tasks required to upgrade your 11g Oracle Data Integrator standalone agent environment to Oracle Fusion Middleware 12c (see [Section 1.1](#) for valid 11g starting points).

The following upgrade scenarios are covered:

- Upgrading an 11g Release 1 (11.1.1.6.0) or 11g Release 1 (11.1.1.7.0) standalone agent not managed by OPMN to 12c.
- Upgrading an 11g Release 1 (11.1.1.6.0) or 11g Release 1 (11.1.1.7.0) standalone agent managed by OPMN to 12c.

The following topics are covered in this chapter:

- [Section 3.1, "Understanding the Standalone Agent Upgrade Process"](#)
- [Section 3.2, "Verifying Your Upgrade"](#)

### 3.1 Understanding the Standalone Agent Upgrade Process

[Figure 3-1](#) provides an overview of the upgrade process for the standalone agent topology.

**Figure 3–1 Upgrade Process Flowchart for Standalone Agents (no WebLogic Domain)**

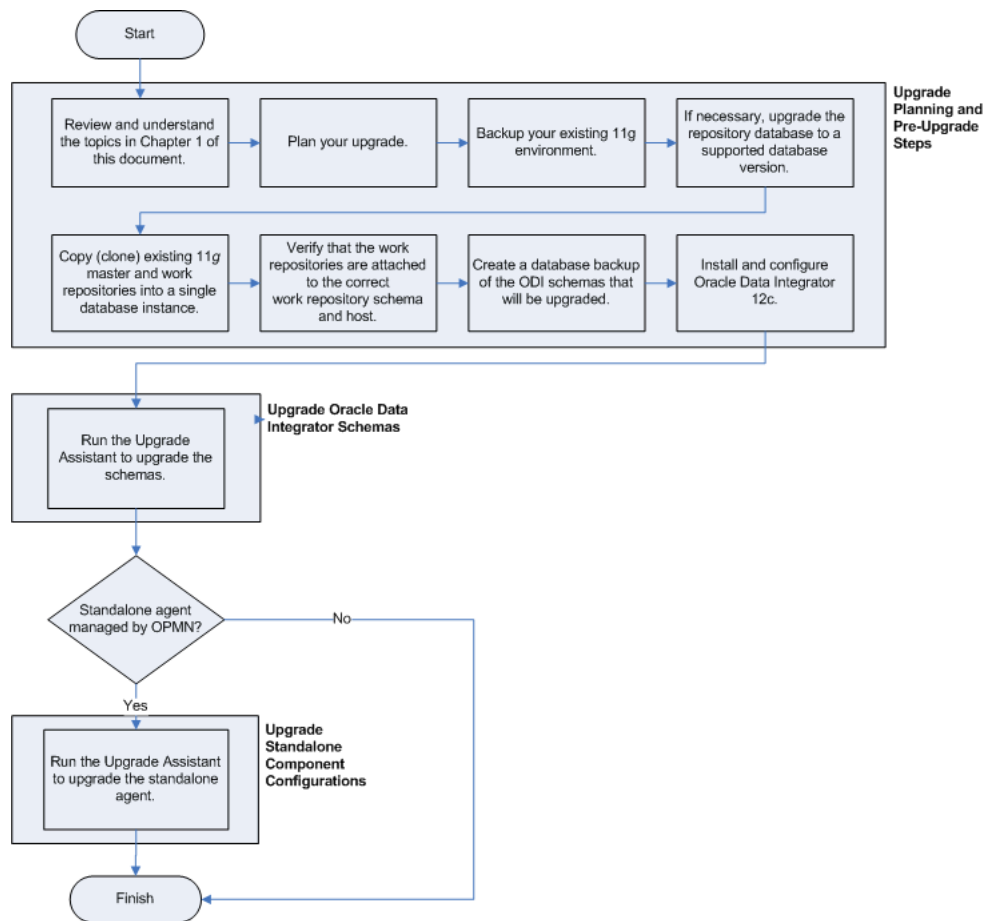


Table 3–1 describes each of the steps in the upgrade process flowchart which is shown in Figure 3–1. The table also provides information on where to go to get more information on each step in the process.

**Table 3–1 Oracle Data Integrator Standalone Agent Upgrade Procedure**

Task	Description	More Information
Review and understand the topics in Chapter 1 of this document.	This chapter provides important information you should read and understand before beginning your upgrade process.	<a href="#">Chapter 1</a>
Plan your upgrade.	Understand important concepts and tasks when planning your upgrade.	<a href="#">Section 5.1.1</a>
Backup your existing 11g environment.	Before you begin your upgrade, make a complete backup of your existing 11g environment.	<a href="#">Section 5.1.2</a>
If necessary, upgrade the repository database to a supported database version	The Oracle Data Integrator Repositories are stored into database schemas. Before you can upgrade these schemas, you must make sure the database is a supported version.	<a href="#">Section 5.1.3</a>
Copy (clone) existing Master and Work Repositories before running the Upgrade Assistant	Oracle recommends that you perform repository upgrades on cloned repository schemas.	<a href="#">Section 5.1.5</a>

**Table 3–1 (Cont.) Oracle Data Integrator Standalone Agent Upgrade Procedure**

Task	Description	More Information
Verify that the work repositories are attached to the correct work repository schema and host	The Upgrade Assistant upgrades all work repositories attached to master repository. Each work repository must be attached to the correct work repository schema and host before performing the upgrade.	<a href="#">Section 5.1.6</a>
Create a database backup of the ODI schema that will be upgraded.	Creating a backup is mandatory if the repository schemas have not been cloned and you are attempting to upgrade a non-cloned schema. Performing a backup of the ODI schemas is particularly important if the upgrade fails and corrupts the content. With a backup, you can delete the corrupted schemas and re-clone the originals to complete the upgrade.	<a href="#">Section 5.1.7</a>
Install and Configure Oracle Data Integrator 12c.	Install Oracle Data Integrator 12c. This procedure includes creating the necessary database schemas.  The Upgrade Assistant is available as part of the ODI product installation.	<a href="#">Section 5.2</a>
Run Upgrade Assistant to Upgrade the Oracle Data Integrator Master Repository and Work Repository schema.	The Upgrade Assistant upgrades the Oracle Data Integrator 11g repository schemas to Oracle Data Integrator 12c.	<a href="#">Section 5.3</a>
If your standalone agent is managed by OPMN, run the Upgrade Assistant again to upgrade the Oracle Data Integrator standalone agent.	This step configures the 11g standalone agent infrastructure to 12c.	<a href="#">Section 5.5</a>

## 3.2 Verifying Your Upgrade

Perform the tasks in this section to verify that your upgrade was successful.

- [Section 3.2.1, "Starting the Node Manager"](#)
- [Section 3.2.2, "Starting the Standalone Agent"](#)

### 3.2.1 Starting the Node Manager

Follow the instructions in this section to start the Node Manager:

On UNIX operating systems, go to the `DOMAIN_HOME/bin` directory and run the following command:

```
./startNodeManager.sh
```

On Windows operating systems, go to the `ORACLE_HOME\bin` directory, and run the following command:

```
startNodeManager.cmd
```

### 3.2.2 Starting the Standalone Agent

Follow the instructions below to start your standalone agent:

1. Go to the `ORACLE_HOME/oracle_common/common/bin` (on UNIX operating systems) or `ORACLE_HOME\oracle_common\common\bin` (on Windows operating systems) directory.

2. Invoke the WebLogic Scripting Tool (WLST).

On UNIX operating systems:

```
./wlst.sh
```

On Windows operating systems:

```
wlst.cmd
```

3. Connect to the Node Manager using the following command (replace the example values with your own values):

```
nmConnect(username="example_nm_user", password="example_password",  
port="example_port", domainName="example_domain");
```

4. Start the agent (replace the example agent name with your actual agent name).

```
nmStart(serverName="example_agent", serverType="ODI");
```

---

---

# Upgrading Your Oracle Data Integrator Standalone Agent Environment (with WebLogic Domain)

This chapter describes the tasks required to upgrade your 11g Oracle Data Integrator standalone agent environment to Oracle Fusion Middleware 12c (see [Section 1.1](#) for valid 11g starting points).

The following specific upgrade scenario is covered:

- Upgrading an 11g Release 1 (11.1.1.7.0) standalone agent managed by OPMN and registered to a WebLogic domain to 12c.

The following topics are covered in this chapter:

- [Section 4.1, "Understanding the Standalone Agent Upgrade Process"](#)
- [Section 4.2, "Verifying Your Upgrade"](#)

## 4.1 Understanding the Standalone Agent Upgrade Process

[Figure 4–1](#) provides a roadmap of the tasks required to upgrade your standalone agent that is managed by OPMN and registered to a WebLogic domain.

**Figure 4–1 Upgrade Process for a Standalone Agent Managed by OPMN and Registered to a WebLogic Domain**

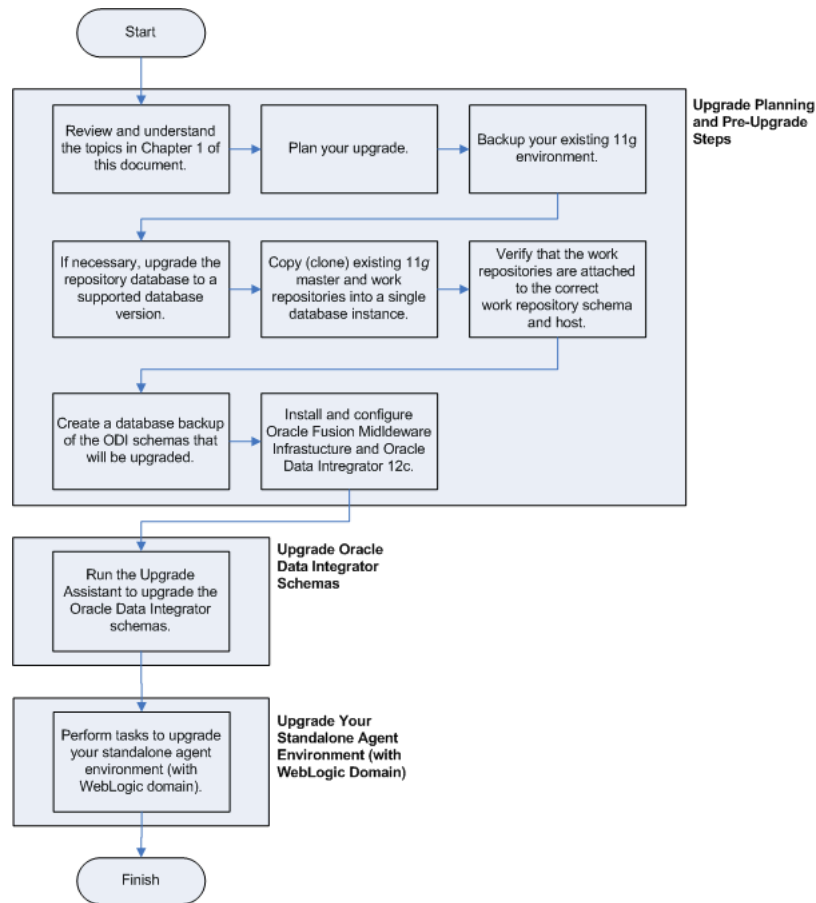


Table 4–1 describes each of the steps in the upgrade process flowchart which is shown in Figure 4–1. The table also provides information on where to go to get more information on each step in the process.

**Table 4–1 Oracle Data Integrator Upgrade Procedure**

Task	Description	More Information
Review and understand the topics in Chapter 1 of this document.	This chapter provides important information you should read and understand before beginning your upgrade process.	<a href="#">Chapter 1</a>
Plan your upgrade.	Understand important concepts and tasks when planning your upgrade.	<a href="#">Section 5.1.1</a>
Backup your existing 11g environment.	Before you begin your upgrade, make a complete backup of your existing 11g environment.	<a href="#">Section 5.1.2</a>
If necessary, upgrade the repository database to a supported database version	The Oracle Data Integrator Repositories are stored into database schemas. Before you can upgrade these schemas, you must make sure the database is a supported version.	<a href="#">Section 5.1.3</a>
Copy (clone) existing Master and Work Repositories before running the Upgrade Assistant	Oracle recommends that you perform repository upgrades on cloned repository schemas.	<a href="#">Section 5.1.5</a>



**Table 4–1 (Cont.) Oracle Data Integrator Upgrade Procedure**

<b>Task</b>	<b>Description</b>	<b>More Information</b>
Verify that the work repositories are attached to the correct master repository schema and host	The Upgrade Assistant upgrades all work repositories attached to master repository. Each work repository must be attached to the correct master repository schema and host before performing the upgrade.	<a href="#">Section 5.1.6</a>
Create a database backup of the ODI schema that will be upgraded.	Creating a backup is mandatory if the repository schemas have not been cloned and you are attempting to upgrade a non-cloned schema. Performing a backup of the ODI schemas is particularly important if the upgrade fails and corrupts the content. With a backup, you can delete the corrupted schemas and re-clone the originals to complete the upgrade.	<a href="#">Section 5.1.7</a>
Install and Configure the necessary Oracle Fusion Middleware 12c products	Install Oracle Fusion Middleware Infrastructure and Oracle Data Integrator 12c.  The Upgrade Assistant is available as part of the 12c product installation.	<a href="#">Section 5.2</a>
Run Upgrade Assistant to Upgrade the Oracle Data Integrator Master Repository and Work Repository schema.	The Upgrade Assistant upgrades the Oracle Data Integrator 11g repository schemas to Oracle Data Integrator 12c.	<a href="#">Section 5.3</a>
Upgrade your standalone agent environment (with WebLogic domain).	After upgrading the 11g schemas, you can upgrade your standalone agent environment (with WebLogic domain).  Tasks to do so include: <ul style="list-style-type: none"> <li>■ Reconfiguring the domain with the reconfiguration wizard.</li> <li>■ Starting the Administration Server.</li> <li>■ Running the Upgrade Assistant to upgrade your component configurations for a managed WebLogic domain.</li> </ul>	<a href="#">Section 5.6</a>

## 4.2 Verifying Your Upgrade

To complete and verify your upgrade, perform the following tasks:

- [Section 4.2.1, "Configuring and Starting the Node Manager"](#)
- [Section 4.2.2, "Restarting the Administration Server"](#)

### 4.2.1 Configuring and Starting the Node Manager

Refer to the following to configure and start the Node Manager:

- For more information about configuring the Node Manager, see "Completing the Node Manager Configuration" in *Upgrading Oracle WebLogic Server*.
- For information about starting the Node Manager, see "Starting and Stopping Node Manager" in *Administering Oracle Fusion Middleware*.

### 4.2.2 Restarting the Administration Server

Stop and restart the Administration Server.

For more information, see "Starting and Stopping Administration Servers" in *Administering Oracle Fusion Middleware*.

- Administration Console URL:

`http://administration_server_host:administration_server_port/console`

- Fusion Middleware Control:

`http://administration_server_host:administration_server_port/em`

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**Note:** After upgrade, you must run your administration tools from the new 12c Oracle home and not from the 11g Oracle home.

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# Upgrading Your Oracle Data Integrator Environment

This chapter provides specific instructions for the tasks involved in upgrading your existing Oracle Data Integrator 11g environment to Oracle Data Integrator 12c (see [Section 1.1](#) for valid 11g starting points).

If you are upgrading an existing 11g environment to a newer 11g version of Oracle Data Integrator, see the *Oracle Fusion Middleware Patching Guide* in the 11g documentation library.

This chapter contains the following sections:

- [Section 5.1, "Preparing to Upgrade Oracle Data Integrator"](#)
- [Section 5.2, "Installing Oracle Fusion Middleware 12c Products"](#)
- [Section 5.3, "Upgrading Your Master and Work Repository Schema"](#)
- [Section 5.4, "Upgrading Your Java EE Agent Environment"](#)
- [Section 5.5, "Upgrading Your Standalone Agent Environment \(no WebLogic Domain\)"](#)
- [Section 5.6, "Upgrading Your Standalone Agent Environment \(with WebLogic Domain\)"](#)
- [Section 5.7, "Troubleshooting Your Upgrade"](#)

## 5.1 Preparing to Upgrade Oracle Data Integrator

This section contains important tasks that should be performed before you begin your upgrade to Oracle Data Integrator 12c (12.1.2).

- [Section 5.1.1, "Planning Your Upgrade"](#)
- [Section 5.1.2, "Backing Up Your Existing 11g Environment"](#)
- [Section 5.1.3, "Upgrading the Database Containing the ODI Repository"](#)
- [Section 5.1.4, "Re-Associating a File-Based Security Store"](#)
- [Section 5.1.5, "Cloning Existing Master and Work Repositories"](#)
- [Section 5.1.6, "Verifying that Work Repositories are Attached to the Correct Schemas"](#)
- [Section 5.1.7, "Creating a Backup of the ODI Repositories to be Upgraded"](#)

### 5.1.1 Planning Your Upgrade

Before you begin, you should read *Planning an Upgrade of Oracle Fusion Middleware*, which provides a high-level overview of how to plan and prepare for your upgrade to Oracle Fusion Middleware 12c (12.1.2).

### 5.1.2 Backing Up Your Existing 11g Environment

Before you begin, you should make a complete backup of your 11g environment. For details, see "Backup and Recovery Strategies for Upgrade" in the *Planning an Upgrade of Oracle Fusion Middleware*.

### 5.1.3 Upgrading the Database Containing the ODI Repository

The database that contains the Oracle Data Integrator repositories must be supported by Oracle Fusion Middleware 12c. For the latest list of certified databases, see *System Requirements and Supported Platforms for Oracle Fusion Middleware 12c (12.1.2)* on the Oracle Fusion Middleware Supported System Configurations page.

For instructions on verifying that your database meets the requirements of Oracle Fusion Middleware 11g, see "Upgrading and Preparing Your Oracle Databases for 12c (12.1.2)" in *Planning an Upgrade of Oracle Fusion Middleware*. Oracle recommends that you refer to your database-specific upgrade documentation for additional information.

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**Note:** If your database was supported in Oracle Data Integrator 11g but is no longer supported in Oracle Data Integrator 12c, use the ODI 11g version to do the following before you upgrade:

1. Export the ODI 11g repositories from the unsupported database systems/versions.
2. Import Master and Work Repositories into new repositories created with the 11g version into supported database systems/versions.

For additional information, see "Repository-Level Export/Import" in the *Developer's Guide for Oracle Data Integrator*.

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### 5.1.4 Re-Associating a File-Based Security Store

If you are using a file-based security store in your existing 11g environment, you must perform the following tasks before you begin the upgrade process.

Refer to the following tasks for more information:

#### **Task 1 Creating 11g OPSS and IAU Schemas**

Create new 11g Oracle Platform Security Services (OPSS) and Audit Schemas (IAU) schemas in a supported Database using the 11g Repository Creation Utility.

For more information about creating 11g schemas, see "Obtaining and Running Repository Creation Utility" in the *Oracle Fusion Middleware Repository Creation Utility User's Guide* for 11g Release 1 (11.1.1.7.0).

#### **Task 2 Reassociating the 11g Security Store with the Database-Based Security Store and OPSS Schema**

If you are using a file-based security store in your 11g environment, then reassociate the file-based store with the database-based repository and OPSS schema.

For information about reassociating OPSS schema with Database-based repository, see "Reassociating the OPSS Security Store" in the *Oracle Fusion Middleware Application Security Guide* in the 11g Release 1 (11.1.1.7.0) documentation library.

### Task 3 Configuring the Audit Data Store

If the audit data store is file based, then you must enable audit loading on the database to change from storing audit records in a file to using a database audit data store.

For information about enabling audit loading, see "Configure the Audit Data Store and Bus-Stop Storage" in *Securing Applications with Oracle Platform Security Services*.

## 5.1.5 Cloning Existing Master and Work Repositories

Oracle recommends that you clone (copy) each original ODI Master and Work repository before beginning the upgrade process. During the Master Repository upgrade process, the Upgrade Assistant will prompt you for the location and credentials of the cloned Master Repository and Work Repositories.

The following sections provide basic schema cloning procedures for databases that are supported to host ODI repositories. For detailed information, refer to your database-specific documentation.

- [Schema Cloning Process for Oracle Database](#)
- [Schema Cloning Process for MySQL Database](#)
- [Schema Cloning Process for Microsoft SQL Server Database](#)
- [Schema Cloning Process for IBM DB2 Universal Database](#)

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**Note:** The goal of this section is to stress the importance of creating a clone (or copy) of each of the 11g repositories before you begin the upgrade process. The cloning procedures documented in this section are sample procedures for each of the 11g supported databases. You are not restricted to using these procedures. Always use the cloning procedures that suit your specific needs.

---



---

### 5.1.5.1 Schema Cloning Process for Oracle Database

The following steps can be used to clone Oracle Database schemas for ODI:

1. Export ODI 11g Master and Work schemas using the Oracle Export Utility (`exp`). For example:

```
exp userid=odi_master_11g/odi_master_11g file=/tmp/odi_master_11g.dmp
exp userid=odi_work_11g/odi_work_11g file=/tmp/odi_work_11g.dmp
exp userid=odi_work1_11g/odi_work1_11g file=/tmp/odi_work1_11g.dmp
```

Export ODI 11g Master and Work schemas using the Datapump Utilities (`expdp`). For example:

```
expdp odi_tmp/odi_tmppwd schemas=odiw11117 dumpfile=odiw11117.dmp
```

2. Using SQL\*Plus, create Master and Work clone schemas and grant connect/resource privileges. For example:

```
create user odi_master_11g_cp identified by odi_master_11g_cp;
create user odi_work_11g_cp identified by odi_work_11g_cp;
create user odi_work1_11g_cp identified by odi_work1_11g_cp;
grant connect,resource to odi_master_11g_cp, odi_work_11g_cp, odi_work1_11g_cp;
```

- Using Oracle Import (`imp`), import the ODI 11g Master and Work schema dump into the cloned Master and Work schemas. For example:

```
imp userid='system/manager' touser=odi_master_11g_cp fromuser=odi_master_11g
file=/tmp/odi_master_11g.dmp
imp userid='system/manager' touser=odi_work_11g_cp fromuser=odi_work_11g
file=/tmp/odi_work_11g.dmp
imp userid='system/manager' touser=odi_work1_11g_cp fromuser=odi_work1_11g
file=/tmp/odi_work1_11g.dmp
```

Import ODI 11g Master and Work schemas using the Datapump Utilities (`impdp`). For example:

```
impdp ODI_TMP/ODI_TMPPWD dumpfile=odim11117 remap_tablespace=repo11117:odi11g
remap_schema=odim11117:odim1113
```

Note that with `impdp` it is also possible to modify the schema name and tablespace for data storage. The `remap_xx` parameters are optional.

### 5.1.5.2 Schema Cloning Process for MySQL Database

The following steps can be used to clone MySQL database schemas:

- Export the ODI 11g Master and Work schemas using `mysqldump`. For example:

```
mysqldump -h localhost -u root -p DEV_ODI_REPO > /scratch/dump.sql
```

- Restore the ODI schema into a new schema using `mysql`. For example:

First, create a cloned schema:

```
mysql -h localhost -u root -p
create schema NEW_ODI_REPO default character set=utf8 default collate=utf8_bin;
```

Then, import the ODI schema into the cloned schema.

```
mysql -h localhost -u root -p NEW_ODI_REPO < /scratch/dump.sql
```

- Create a login for the cloned schema using `mysql`. For example:

```
mysql -h localhost -u root -p
grant all on NEW_ODI_REPO.* to NEW_ODI_REPO01@'localhost' identified by
'password';
grant process on *.* to NEW_ODI_REPO01@'localhost'
```

### 5.1.5.3 Schema Cloning Process for Microsoft SQL Server Database

The following steps can be used to clone Microsoft SQL 2005/2008 database schemas:

- Export the ODI 11g Master and Work schemas using SQL Management Studio.

Example:

```
BACKUP DATABASE [odi_11g] TO DISK = N'C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Backup\odi_11g.bak' WITH INIT, NOSKIP;
```

- Restore Master and Work schemas into the new database using SQL Management Studio.

Using SQL Management Studio Express perform the following:

- Restore the Master and Work schemas.
- Print logical names of files used to store the database.

### 3. Move the files used to store database.

#### Example:

```
RESTORE DATABASE [odi_11g_cp] FROM DISK = N'C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Backup\odi_11g.bak'
WITH FILE = 1, MOVE N'odi_11g' TO N'C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\odi_11g_cp.mdf',
MOVE N'odi_11g_log' TO N'C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\odi_11g_cp_log.ldf', NOUNLOAD;
go
```

### 3. Create login and user for cloned Master and Work schemas using SQL Management Studio.

Using SQL Management Studio Express, create logins and users to access cloned Master and Work schemas. Be sure to select the correct database instance in SQL Management Studio Express, as these commands are applied to the selected database instance.

#### Example:

```
create login odi_11g_cp with password=N'odi_11g_cp',
default_database=odi_11g_cp, check_expiration = off, check_policy = off;
go
USE odi_11g_cp
go
create user odi_11g_cp for login odi_11g_cp;
go
USE odi_11g_cp
go
```

### 4. To move the old schema to the new schema location, run the following SQL script:

**NOTE:** In the example below, the old schema name is `odi_11g` and the new schema name is `odi_11g_cp`.

```
CREATE SCHEMA [odi_11g_cp] AUTHORIZATION odi_11g_cp
go
.
DECLARE @OldSchema AS varchar(255)
DECLARE @NewSchema AS varchar(255)
.
SET @OldSchema = 'odi_11g'
SET @NewSchema = 'odi_11g_cp'
.
DECLARE @sql AS varchar(MAX)
SET @sql = CHAR(13) + CHAR(10)
.
SELECT @sql = @sql + 'ALTER SCHEMA [' + @NewSchema + '] TRANSFER [' +
TABLE_SCHEMA + '].[' + TABLE_NAME + ']' + CHAR(13) + CHAR(10)
FROM INFORMATION_SCHEMA.TABLES
WHERE TABLE_SCHEMA = @OldSchema
.
EXEC (@sql)
go
```

### 5. To finalize the schema move, run the following SQL query:

```
DROP SCHEMA [odi_11g]
go
drop user odi_11g;
go
```

```
alter user odi_11g_cp with default_schema = odi_11g_cp;
go
grant create table, create view, create procedure,create function to
odi_11g_cp;
go
```

#### 5.1.5.4 Schema Cloning Process for IBM DB2 Universal Database

Chose one of the following procedures to clone IBM's DB2 Universal Database schemas:

- [Same Host Cloning Process for ODI 11g Master and Work Schemas](#)
- [Different Host Cloning Process for ODI 11g Master and Work Schemas](#)

---

**Note:** The Page size for database has to be 32768 (32k) and operating system users ODI\_MASTER\_11G\_CP and ODI\_WORK\_11G\_CP have to be created manually.

---

**5.1.5.4.1 Same Host Cloning Process for ODI 11g Master and Work Schemas** Use the following steps to clone IBM DB2 schemas on the same host or platform:

1. Create DB2 Database using Command Line Processor.

Example:

```
db2 CREATE DATABASE ODI12 AUTOMATIC STORAGE YES ON 'C:\' DBPATH ON 'C:\' USING
CODESET IBM-1252 TERRITORY US COLLATE USING SYSTEM PAGESIZE 32768
```

2. Copy ODI 11g Master and Work schemas using DB2 Database Movement Tool to new schema.

Master Schema Example:

```
db2move ODI11G COPY -sn odi_master_11g -co TARGET_DB ODI11GCP USER db2admin
USING welcome SCHEMA_MAP ((odi_master_11g,odi_master_11g_cp)) TABLESPACE_MAP
((USERSPACE1,USERSPACE1),SYS_ANY) owner odi_master_11g_cp
```

Work Schema Example:

```
db2move ODI11G COPY -sn odi_work_11g -co TARGET_DB ODI11GCP USER db2admin USING
welcome SCHEMA_MAP ((odi_work_11g,odi_work_11g_cp)) TABLESPACE_MAP
((USERSPACE1,USERSPACE1),SYS_ANY) owner odi_work_11g_cp
```

**5.1.5.4.2 Different Host Cloning Process for ODI 11g Master and Work Schemas** Use the following steps to clone IBM DB2 schemas on different hosts or platforms:

1. Export DDL and Data from Master and Work schemas using DB2 Database Movement Tool and DDL Extracting Tool.

DB2 Database Movement Tool produces PC/IXF files with data and db2move.lst file with list of tables, Files are produced in the folder where the tool was called. The DDL Extracting Tool produces db2master.sql and db2work.sql with SQL queries to recreate database structure.

Example:

```
db2move ODI11G export -sn odi_master_11g,odi_work_11g
db2look -d ODI11G -z odi_master_11g -e -o c:/db2master.sql
db2look -d ODI11G -z odi_work_11g -e -o c:/db2work.sql
```

2. Transfer exported files to new location.



1. Ensure that the PC/IXF files were transferred in binary mode, and that the `db2move.lst` file and the `db2master.sql` and `db2work.sql` files were transferred in ASCII mode.
2. Place the PC/IXF files where the DB2 Database Movement Tools is located.
3. Create DB2 database using Command Line Processor.

Example:

```
db2 CREATE DATABASE ODI11G AUTOMATIC STORAGE YES ON 'C:\' DBPATH ON 'C:\'
USING CODESET IBM-1252 TERRITORY US COLLATE USING SYSTEM PAGESIZE 32768
```

4. Import the exported DDL to the new database using the Command Line Processor.

Example:

```
db2 -tvf c:/db2backup/db2master.sql
db2 -tvf c:/db2backup/db2work.sql
```

5. Import exported data to new database using DB2 Database Movement Tool.

Example:

```
db2move ODI11G load
```

6. Verify that cloned schemas are intact; some tables may be in "check pending" state (because of check constraint).

Use command `set integrity` to move to the normal state.

Example:

```
db2 set integrity for table_name immediate checked
```

### 5.1.6 Verifying that Work Repositories are Attached to the Correct Schemas

After cloning the repositories, you should check the repository connections to see verify that the cloned master repository points to the correct cloned work repository schema. The upgrade process retrieves the work repository information from its master repository; in order to have a successful upgrade of the work repositories, you must ensure that the repositories are attached to the correct schema and host before you upgrade.

To verify this:

---



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**Note:** The documentation links in this section refer to 11g Release 1 (11.1.1.7.0) documentation.

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1. Connect to the ODI master repository using your existing ODI client (pre-upgraded version).

For information, see "Connecting to the Master Repository" in the *Developer's Guide for Oracle Data Integrator*.

2. Validate that the work repositories are attached to the correct work repository schema and host.

For more information, see: "Connecting to a Work Repository" and "Attaching and Deleting a Work Repository" in the *Developer's Guide for Oracle Data Integrator*.

### 5.1.7 Creating a Backup of the ODI Repositories to be Upgraded

Oracle recommends that you create a backup for each ODI Master and Work repository. The backup enables you to restore to a pre-upgrade state if necessary. For more information, see "Backup Strategies for Upgrade," in *Planning an Upgrade of Oracle Fusion Middleware*.

If an upgrade fails you also need to restore the contents of `schema_version_registry` table back to its pre-upgrade state; therefore, the `SYSTEM.SCHEMA_VERSION_REGISTRY$` table must be included as part of any backup.

The Upgrade Assistant Prerequisite screen prompts you to indicate whether the backup of the ODI repositories has been completed. It is important to note, however, that the Upgrade Assistant will not validate that a backup has been created.

---

---

**Caution:** This is a critical step of the upgrade process; especially if the repositories were not cloned. In the event that upgrade results are unsatisfactory, the repository locked and unable to be used.

Having a backup copy of the ODI repositories not only ensures that you will not lose important data, but it is the only way to restore after a failed upgrade; there is no capability to restart the upgrade from a failed state.

For more information on creating a backup, refer to your database backup and recovery documentation.

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## 5.2 Installing Oracle Fusion Middleware 12c Products

Before beginning your upgrade, use the Oracle Universal Installer to install the 12c version of your Oracle Fusion Middleware products. Follow the instructions in the following section in *Installing and Configuring Oracle Data Integrator*:

1. "Planning Your Oracle Data Integrator Installation" to understand important information about the 12c Java EE agent installation topology.

This chapter introduces some important 12c concepts and also provides information for where to obtain the necessary product distributions. Note that for Java EE agent environment, Oracle Fusion Middleware Infrastructure is also required as a prerequisite for installing Oracle Data Integrator.

2. "Installing Oracle Data Integrator" to install Oracle Data Integrator for your environment.

Be sure to follow the installation instructions for your particular environment.

3. "Creating the Oracle Data Integrator Master and Work Repository Schema" to run RCU and create the schemas that are new in 12c (for example, the Service Table schema).

You do not need to run the configuration wizard to configure a new domain; the Upgrade Assistant will take care of this for you in an upgrade scenario.

## 5.3 Upgrading Your Master and Work Repository Schema

Follow the instructions in this section to use the Upgrade Assistant to upgrade your Master and Work Repository schema.

- [Section 5.3.1, "Stopping Servers and Processes"](#)

- [Section 5.3.2, "Starting the Upgrade Assistant"](#)
- [Section 5.3.3, "Navigating the Upgrade Assistant Screens"](#)

### 5.3.1 Stopping Servers and Processes

Before running the Upgrade Assistant to upgrade your schemas, make sure all servers and processes in the domain are stopped.

For more information, see "Starting and Stopping Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.

### 5.3.2 Starting the Upgrade Assistant

To start the Upgrade Assistant, go to the `ORACLE_HOME/oracle_common/upgrade/bin` directory, and enter the following command:

On UNIX operating systems:

```
./ua
```

On Windows operating systems:

```
ua.bat
```

### 5.3.3 Navigating the Upgrade Assistant Screens

After the Upgrade Assistant is started ([Section 5.3.2](#)), follow the instructions in this section to navigate through the screens in the Upgrade Assistant to upgrade your product schemas.

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**Note:** The Upgrade Assistant uses the data and structure of the ODI Master repository to determine if a repository has already been upgraded. The Upgrade Assistant will return a message stating that the repository has already been upgraded if the following conditions exist:

- The schema version registry has valid state and version for the repository
- The repository is 12c
- The version of the repository is equal to or greater than the version of ODI SDK used by the Upgrade Assistant

To debug or view the repository catalog information, use the following query on the `schema_version_registry` table, which is stored in the Admin user (not in the ODI schema/repository).

In Oracle databases, the name of this table is `SYSTEM.SCHEMA_VERSION_REGISTRY$` and it is stored in the `SYSTEM` schema. There is also a view named `SYSTEM.SCHEMA_VERSION_REGISTRY` and a public synonym `SCHEMA_VERSION_REGISTRY` that points to the view:

```
SELECT COMP_ID,COMP_NAME,MRC_NAME,OWNER,VERSION,STATUS,UPGRADED
FROM schema_version_registry;
```

On DB2/400 operating systems, the Admin user is `QSECOFR`, and the `schema_version_registry` table is located in the schema `'NULLID'`.

Rows with the component "ODI" are used to track ODI repositories.

---

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- [Task 1, "Introducing the Upgrade Assistant"](#)
- [Task 2, "Selecting an Upgrade Operation"](#)
- [Task 3, "Selecting Component Schemas"](#)
- [Task 4, "Verifying Prerequisites"](#)
- [Task 5, "Specifying Database and Schema Credentials"](#)
- [Task 6, "Selecting the ODI Upgrade Option"](#)
- [Task 7, "Specifying Supervisor Account Credentials"](#)
- [Task 8, "Selecting the ODI Upgrade Key"](#)
- [Task 9, "Completing the Upgrade Validation"](#)
- [Task 10, "Beginning and Completing the Upgrade"](#)
- [Task 11, "Verifying the Schema Version"](#)

### **Task 1 Introducing the Upgrade Assistant**

The Welcome screen contains important reminders to consider before proceeding with your upgrade. Make sure you read these and verify that you are ready to proceed.

## Task 2 Selecting an Upgrade Operation

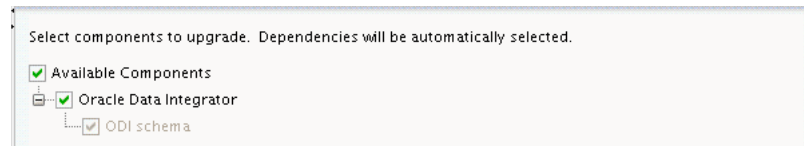
Select **Schemas**. The Upgrade Assistant will list the schemas available for upgrade on the next screen.

The title of the screen will change to "Schemas" when you select **Schemas**.

## Task 3 Selecting Component Schemas

The Available Components screen lists the schemas that are available for upgrade.

Select Oracle Data Integrator to upgrade the Master and Work Repository schema.



**Tip:** More information about this screen can be found in Available Components in *Upgrading with the Upgrade Assistant*.

## Task 4 Verifying Prerequisites

The Prerequisites screen lists items that you must check and verify before you can proceed.

You must check the boxes before you can continue. The Upgrade Assistant will not verify that the prerequisites have been met.

## Task 5 Specifying Database and Schema Credentials

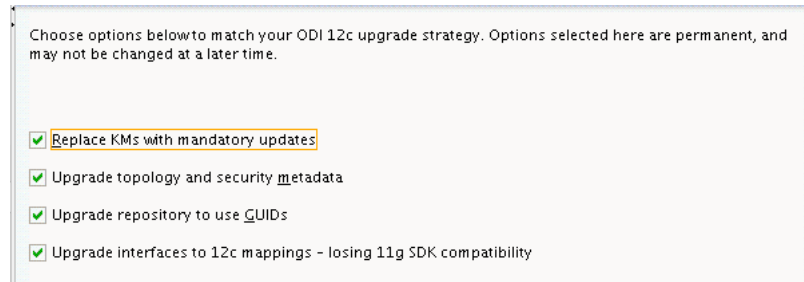
On the Select Schemas screen, enter the connection credentials for the database containing the schema you want to upgrade. Click **Connect** to connect to your database.

Then, specify the schema user name and password for the Master and Work Repository.

**Tip:** More information about this screen can be found in Select Schemas in *Upgrading with the Upgrade Assistant*.

## Task 6 Selecting the ODI Upgrade Option

On the ODI Options screen, select all of the options on this screen.



Each option is described in the following table.

Option	Description
<b>Replace KMs with mandatory updates</b>	This selection replaces standard KMs with the newest version. Any customizations to standard KMs will be lost.
<b>Upgrade topology and security metadata</b>	This selection replaces topology and security artifacts such as Technologies, Datatypes, Security Profiles and others with the newest version. Any customizations will be lost.
<b>Upgrade repository to use GUIDs</b>	<p>This selection sets the repository to 12c full mode. All objects will be referenced using 12c GUID rather than the internal ID.</p> <p>You should leave this option checked in order to take advantage of the truly universally unique identification scheme in Oracle data Integrator 12c.</p> <p>If you have custom KMs and procedures that use <code>odiRef</code> substitution APIs, which take internal identifiers as parameters, you may choose to not select this option, leaving your repository in "11g compatibility mode." Scenarios generated from objects using such KMs and procedures continue to work in "11g compatibility mode" but will not work in 12c full mode. "11g compatibility mode" can be used to smoothly transition the custom KMs and procedures to use the new <code>odiRef</code> substitution APIs (the ones that take GUIDs as parameters). After all custom KMs and procedures have been modified to use the new <code>odiRef</code> substitution APIs, the repository can be switched to 12c full mode.</p>

Option	Description
<b>Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility</b>	<p>This selection converts all 11g interfaces are converted to 12c mappings. Once converted to 12c mappings, all of the existing scenarios must be regenerated before use. There is no ability to use existing 11g SDK applications; they must be upgraded to use the 12c SDK.</p> <p>Some conversion is performed, but the resulting mappings are left in 11g compatible mode, which allows them to be modified using 11g Java SDK. But they can only be modified using 11g SDK; in Studio UI they are read-only.</p> <p>If this option is not selected, some conversion to 12c mappings are performed but the resulting mappings are left in "11g compatibility mode." The interfaces can be only modified by the 11g SDK; in the ODI Studio user interface they are read-only. After these interfaces are modified using the 11g SDK, they can then be converted to 12c mappings using the ODI Studio graphical interface or the 12c SDK.</p> <p>Oracle recommends leaving this option checked, unless you have significant amount of Java code that uses the 11g SDK to read or update existing interfaces.</p> <p>NOTE: In order for this migration to work properly, all interfaces in 11g repository must be valid (for example, they should not return any errors when validating from 11g Studio, for example). If an 11g interface is not valid, the Upgrade Assistant will try to migrate it into a 12c mapping, but there are no guarantees about the result: the migration of that interface may fail, or exceptions may printed out the in log file. In any case the resulting mapping will be invalid. The best way to ensure a smooth upgrade is to make sure all interfaces in 11g repository as valid to start with.</p> <p>The upgrade process does not stop even if some 11g interfaces fail during the migration; the upgrade will continue until all interfaces are processed.</p>

**Tip:** For more information about this screen, see "ODI Options" in *Upgrading with the Upgrade Assistant*.

Below are descriptions of the combinations of options that may or may not be selected on this screen.

---

**Note:** The **Upgrade topology and security metadata** option can be selected or not selected independently of all the other options and has no affect on the other options.

---

- If **Replace KMs with mandatory updates** is selected, then any combination of the remaining options can be selected:
  - Both **Upgrade repository to use GUIDs** and **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility** are both selected.
 

This is the most common case and is the configuration with which the new 12c repositories are created. It means that all objects use the new GUID identification and all interfaces are converted into full 12c mappings, which can be modified in ODI Studio editors.
  - Select **Upgrade repository to use GUIDs** but do not select **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility**.
 

In this case, the 11g interfaces are converted to 11g compatible mappings, which can be accessed and modified through 11g interface SDK, but are

read-only in ODI Studio editors. Use this combination if you have significant investment in programs/scripts that use the 11g interface SDK.

- Do not select **Upgrade repository to use GUIDs** but select **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility**.

In this case, the repository will stay in ID compatibility mode, which means that `odiRef` APIs that use legacy numeric identifiers will continue to work. Use this combination if you have significant number of custom KMs or procedures that use `odiRef` APIs with numeric IDs as arguments.

- Neither **Upgrade repository to use GUIDs** nor **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility** are selected.

In this case, the repository will stay in ID compatibility mode, which means that `odiRef` APIs that use legacy numeric identifiers continue to work. Also, the 11g interfaces are converted to 11g compatible mappings, which can be accessed and modified through the 11g SDK, but are read-only in ODI Studio editors. Use this combination if you have significant number of custom KMs or procedures that use `odiRef` APIs with numeric IDs as arguments, and you have significant investment in programs/scripts that use 11g interface SDK.

- If **Replace KMs with mandatory updates** is not selected, then neither **Upgrade repository to use GUIDs** nor **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility** may be selected.

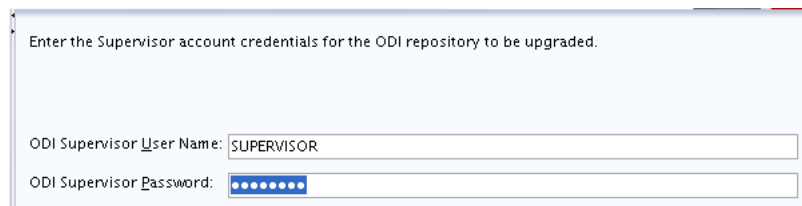
In this case, the KMs existent in the repository are going to be preserved and not overwritten with the new 12c updates. Use this combination if you have modified Oracle supplied KMs for your own purpose, and would like to prevent them from being overwritten during the upgrade. You should still plan on manually importing the new 12c KMs at your earliest convenience and migrate your customizations, preferably to your own copies of the KMs.

- If **Replace KMs with mandatory updates** is not selected and **Upgrade repository to use GUIDs** is selected, most KMs will not function correctly since they will be using deprecated `odiRef` APIs, which use legacy numeric IDs.
- If **Replace KMs with mandatory updates** is not selected and **Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility** is selected, your mappings may not function correctly because they need the new 12c KMs.

### Task 7 Specifying Supervisor Account Credentials

On the ODI Supervisor screen, enter the Supervisor account credentials for the ODI repository to be upgraded.

The Supervisor user should be SUPERVISOR (all CAPS).



The screenshot shows a dialog box titled "Enter the Supervisor account credentials for the ODI repository to be upgraded." It contains two input fields: "ODI Supervisor User Name:" with the text "SUPERVISOR" entered, and "ODI Supervisor Password:" with a masked password represented by blue dots.

**Tip:** For more information about this screen, see "ODI Supervisor" in *Upgrading with the Upgrade Assistant*.



### Task 8 Selecting the ODI Upgrade Key

The upgrade key is used to convert 11g IDs for repository objects into unique GUIDs.

ODI objects exist in ODI repositories and also in XML files exported from such repositories, which can be used, for example, in metadata exchanges between repositories. As such, there may be multiple copies of the same object, in different repositories and XML files.

In 12c, ODI uses GUIDs instead of internal numeric IDs for object identification. In order to make sure the object identity is preserved after upgrade, a deterministic algorithm is applied to calculate GUIDs from the internal IDs for existing objects (note that for new objects, ODI will generate random GUIDs).

Because of the fact that the internal numeric IDs were not really universally unique, and were dependent on the repository ID to achieve a "pseudo-uniqueness," ODI allows the user to specify the upgrade key in order to reduce the likelihood of generating duplicated GUIDs. The upgrade key is fed into the GUID generation algorithm together with the internal numeric ID, to calculate the GUID.

Thus, choosing different upgrade keys protects from getting duplicated GUIDs for objects that accidentally have the same internal numeric IDs. However, when multiple copies of the same object exists (in a repository or exported in XML files), the same GUID should be produced for all copies of the object. For this reason, the same upgrade key must be used for all upgrade operations involving the copies of that particular object.

For example, suppose you have a product with 1001 as the ID in the 11g repository, and you also have a file exported from the same repository, which contains the same project (ID = 1001). In this case, the upgrade key used to upgrade the repository should be the same as the upgrade key used to import the XML file into the upgraded 12c repository. This ensures that the project object in the import file will be properly matched with the project object in the repository (when using one of `SYNONYM` import modes). However, if there is an 11g XML export file provided from a source containing objects created in another repository of which you have no information, there is a chance that it may contain a project that accidentally has the same internal ID (1001). In this case, to protect from erroneous object matching, which may corrupt the metadata, a different, custom upgrade key should be used when importing that file into the repository.

**Tip:** For more information, see "ODI Upgrade Key" in *Upgrading with the Upgrade Assistant*.

### Task 9 Completing the Upgrade Validation

On the Examine screen, the Upgrade Assistant performs a series of validations before upgrading the selected components. Ensure that all validations have succeeded.

**Tip:** More information about the options on this screen can be found in Examine in *Upgrading with the Upgrade Assistant*.

### Task 10 Beginning and Completing the Upgrade

Click **Upgrade** on the Upgrade Summary screen to begin the upgrade. The Upgrade Progress screens shows information about the progress of the upgrade, and the Upgrade Success screen summarizes the upgrade.

### Task 11 Verifying the Schema Version

To verify that the schema has been upgraded, run SQL\*Plus from the database host and use the following command:

```
select owner, version, status from schema_version_registry where owner = 'prefix_
ODI_REPO';
```

Replace *prefix* with the custom prefix of your repository schema created in RCU. Below is an example:

```
select owner, version, status from schema_version_registry where owner = DEV1212_
ODI_REPO
OWNER                                VERSION                                STATUS
-----                                -
DEV1212_ODI_REPO                      12.1.2.0.0                            VALID
```

In the output, verify that the schema version number is "12.1.2.0.0" in the "VERSION" column.

## 5.4 Upgrading Your Java EE Agent Environment

After your repository schemas are upgraded, run the reconfiguration wizard to complete the upgrade of your Java EE agent environment.

- [Section 5.4.1, "Starting the Reconfiguration Wizard"](#)
- [Section 5.4.2, "Navigating the Reconfiguration Wizard Screens to Reconfigure the Domain"](#)

### 5.4.1 Starting the Reconfiguration Wizard

To start the reconfiguration wizard:

1. Log in to the system where the 12c Oracle Data Integrator software was installed.
2. Go to the following directory location:

On UNIX operating systems:

```
ORACLE_HOME/oracle_common/common/bin
```

On Windows operating systems:

```
ORACLE_HOME\oracle_common\common\bin
```

where *ORACLE\_HOME* is the location where Oracle Data Integrator is installed.

3. Start the reconfiguration wizard.

On UNIX operating systems:

```
./reconfig.sh -log=log_file
```

On Windows operating systems:

```
reconfig.cmd -log=log_file
```

Specify the full path and file name in place of *log\_file*; creating this log file can be very helpful if you need to troubleshoot the reconfiguration process.

---



---

**Note:** When you run the reconfiguration wizard, the following error message might be displayed to indicate that the default cache directory is not valid:

```
*sys-package-mgr*: can't create package cache dir
```

You can change the cache directory by setting the environment variable `CONFIG_JVM_ARGS`. For example:

```
CONFIG_JVM_ARGS=-Dpython.cachedir=valid_directory
```

---



---

## 5.4.2 Navigating the Reconfiguration Wizard Screens to Reconfigure the Domain

Follow the instructions in this section to navigate through the screens in the reconfiguration wizard.

- [Task 1, "Selecting the 11g Domain"](#)
- [Task 2, "Viewing the Reconfiguration Setup Progress"](#)
- [Task 3, "Selecting the Domain Mode and JDK"](#)
- [Task 4, "Selecting the Database Configuration Type"](#)
- [Task 5, "Configuring JDBC Data Sources"](#)
- [Task 6, "Testing the JDBC Data Sources"](#)
- [Task 7, "Configuring JDBC Component Schema"](#)
- [Task 8, "Selecting Advanced Configuration"](#)
- [Task 9, "Targeting Deployments"](#)
- [Task 10, "Targeting Services"](#)
- [Task 11, "Completing Domain Reconfiguration"](#)

### Task 1 Selecting the 11g Domain

Use the Select Domain screen to specify the full path to the domain location of your 11g Oracle Data Integrator domain. You can also click **Browse** and use the file manager window to help you select the domain location.

### Task 2 Viewing the Reconfiguration Setup Progress

The Reconfiguration Setup Progress screen shows you the progress of the application of reconfiguration templates.

### Task 3 Selecting the Domain Mode and JDK

Domain mode cannot be changed.

Select the JDK to use in the domain or click **Browse** to navigate to the JDK you want to use.

---



---

**Note:** Oracle Fusion Middleware 12c requires Java SE 7. For more information, see "Verifying Certification and System Requirements" in *Planning an Installation of Oracle Fusion Middleware*.

---



---

### Task 4 Selecting the Database Configuration Type

Select **Manual Configuration**, and click **Next**.

Note that if you are not upgrading any schemas from 11g, then you can use the **RCU Data** option to connect to the Server Table (STB) schema. The Repository Creation Utility will automatically use service table to load the other 12c schema credentials automatically.

However, in many cases, during domain reconfiguration, you must select a combination of new 12c and upgraded 11g schemas, so Oracle recommends that you use the Manual Configuration option, and that you enter the data source information manually to be sure you are connecting to the correct schemas.

For more information, click **Help**, or refer to "Database Configuration Type" in *Upgrading Oracle WebLogic Server*.

### **Task 5 Configuring JDBC Data Sources**

The JDBC Data Sources screen is displayed if you created custom data sources for a database-based OPSS security store or Audit Data store in 11g.

Use this screen to configure the JDBC data sources defined in your domain source.

For information about the fields on this page, click **Help**, or refer to "JDBC Data Sources" in *Upgrading Oracle WebLogic Server*.

### **Task 6 Testing the JDBC Data Sources**

Use the JDBC Data Sources Test screen to test the data source connections you configured.

For information about the fields on this page, click **Help**, or refer to "JDBC Data Sources Test" in *Upgrading Oracle WebLogic Server*.

### **Task 7 Configuring JDBC Component Schema**

Specify the data source settings for each of the schemas listed on the JDBC Component Schema screen by selecting the check box adjacent to each schema name.

---

---

**Note:** You must specify the 11g schema details for those schemas that you upgraded in [Section 5.3](#). For the others, specify the 12c schema details.

---

---

For information about the fields on this page, click **Help**, or refer to "JDBC Component Schema" in *Upgrading Oracle WebLogic Server*.

### **Task 8 Selecting Advanced Configuration**

Select **Deployments and Services** on the Advanced Configuration page.

This is required as part of the OPSS and IAU schema migration to 12c.

### **Task 9 Targeting Deployments**

If you are using Oracle Web Services Manager, then target the `owsm-pm` application deployment to the Administration Server:

1. Locate and select **wsm-pm** in the Deployments list box.
2. Select **AdminServer** in the Targets list box.
3. Click the blue right arrow icon to target **wsm-pm** to the Administration Server.

**Task 10 Targeting Services**

If you have created OPSS and IAU 12c schemas as part of the upgrade process, then select **opss-audit-DBDS**, **opss-audit-viewDS**, and **opss-data-source** in the Services list box and target them to the Managed Servers in the domain, which are listed in the Targets list box.

Otherwise, no action is required on this screen when you are upgrading or reconfiguring the domain.

**Task 11 Completing Domain Reconfiguration**

Review the configuration summary on the Configuration Summary screen, then click **Reconfig** to reconfigure the domain.

When reconfiguration is finished, click **Finish** to dismiss the reconfiguration wizard.

## 5.5 Upgrading Your Standalone Agent Environment (no WebLogic Domain)

After your repository schemas are upgraded, follow the instructions in this section to upgrade your standalone agent (no WebLogic domain) environment.

- [Section 5.5.1, "Starting the Upgrade Assistant"](#)
- [Section 5.5.2, "Upgrading the Standalone System Component Configurations"](#)

### 5.5.1 Starting the Upgrade Assistant

To start the Upgrade Assistant, go to the `ORACLE_HOME/oracle_common/upgrade/bin` directory, and enter the following command:

On UNIX operating systems:

```
./ua
```

On Windows operating systems:

```
ua.bat
```

### 5.5.2 Upgrading the Standalone System Component Configurations

After the Upgrade Assistant is started ([Section 5.5.1](#)), follow the instructions in this section to navigate through the Upgrade Assistant screens and upgrade your standalone system component configurations.

- [Task 1, "Introducing the Upgrade Assistant"](#)
- [Task 2, "Selecting an Upgrade Operation"](#)
- [Task 3, "Viewing Components to be Upgraded"](#)
- [Task 4, "Verifying Prerequisites"](#)
- [Task 5, "Specifying 11g Instance Directories"](#)
- [Task 6, "Creating a Node Manager"](#)
- [Task 7, "Completing the Upgrade Validation"](#)
- [Task 8, "Beginning and Completing the Upgrade"](#)

**Task 1 Introducing the Upgrade Assistant**

The Welcome screen contains important reminders to consider before proceeding with your upgrade. Make sure you read these and verify that you are ready to proceed.

**Task 2 Selecting an Upgrade Operation**

Beginning with 12c (12.1.2), standalone system components will have their own standalone domain. When you are upgrading your 11g standalone system components (which had no previous domain associations), you must first create a new standalone domain for your system components.

On the Standalone Components screen, select **Standalone System Component Configurations**, then select **Create a New Domain**.

In the Domain Directory field, specify the full path of the Domain you are creating. It is recommended that you locate your Domain home in accordance with the directory structure summarized in "Understanding the Recommended Directory Structure" in *Planning an Installation of Oracle Fusion Middleware*, where the Domain home is located outside the Oracle home directory. This directory structure will help you avoid issues when you need to upgrade or reinstall your software.

Select which type of upgrade you wish to perform.

Schemas

Standalone System Component Configurations

Create a New Domain

Update an Existing Domain

Enter the domain directory to be created for the upgrade of system components.

Domain Directory:

**Tip:** The **Update an Existing Domain** option might be used in a situation where an upgrade was already performed and the domain created, either from another system component upgrade, or from a partial previous Oracle Data Integrator upgrade. These are examples of a situation where you would not need to create a new domain.

More information about this screen can be found in Standalone Components in *Upgrading with the Upgrade Assistant*.

**Task 3 Viewing Components to be Upgraded**

The Component List screen lists the components that will be upgraded:

- System Components Infrastructure
- Oracle Data Integrator

**Task 4 Verifying Prerequisites**

The Prerequisites screen lists items that you must check and verify before you can proceed.

You must check the boxes before you can continue. The Upgrade Assistant will not verify that the prerequisites have been met.

**Task 5 Specifying 11g Instance Directories**

On the Instance Directories screen, specify the location of one or more 11g Oracle instance directories to be upgraded.

Enter the location of one or more 11g Oracle instance directories to be upgraded.

/home/Oracle/Middleware/Oracle\_WT1/instances/instance1

Enter another instance directory

**Task 6 Creating a Node Manager**

On the Node Manager screen, specify the credentials of the Node Manager that will be used to create a domain during the upgrade of standalone system components.

**Tip:** More information about the options on this screen can be found in Node Manager in *Upgrading with the Upgrade Assistant*.

**Task 7 Completing the Upgrade Validation**

On the Examine screen, the Upgrade Assistant performs a series of validations before upgrading the selected components. Ensure that all validations have succeeded.

**Tip:** More information about the options on this screen can be found in Examine in *Upgrading with the Upgrade Assistant*.

**Task 8 Beginning and Completing the Upgrade**

Click **Upgrade** on the Upgrade Summary screen to begin the upgrade. The Upgrade Progress screens show information about the progress of the upgrade, and the Upgrade Success screen summarizes the upgrade.

## 5.6 Upgrading Your Standalone Agent Environment (with WebLogic Domain)

After your repository schemas are upgraded, follow the instructions in this section to upgrade your standalone agent (with WebLogic domain) environment.

- [Section 5.6.1, "Reconfiguring the Domain Using the Reconfiguration Wizard"](#)
- [Section 5.6.2, "Starting the Administration Server"](#)
- [Section 5.6.3, "Starting the Upgrade Assistant"](#)
- [Section 5.6.4, "Upgrading Your WebLogic Domain Component Configurations"](#)

### 5.6.1 Reconfiguring the Domain Using the Reconfiguration Wizard

Follow the instructions in [Section 5.4](#) to reconfigure your 11g domain using the reconfiguration wizard.

### 5.6.2 Starting the Administration Server

Before you can upgrade your WebLogic domain components, you must start the Administration Server in that domain.

To start the Administration Server, go to the `DOMAIN_HOME/bin` directory and run the following command:

On UNIX operating systems:

```
./startWebLogic
```

On Windows operating systems:

```
startWebLogic.cmd
```

If prompted, provide the Administration user login credentials to start the server.

### 5.6.3 Starting the Upgrade Assistant

To start the Upgrade Assistant, go to the `ORACLE_HOME/oracle_common/upgrade/bin` directory, and enter the following command:

On UNIX operating systems:

```
./ua
```

On Windows operating systems:

```
ua.bat
```

### 5.6.4 Upgrading Your WebLogic Domain Component Configurations

After the upgrade assistant is started (Section 5.6.3), follow the instructions in this section to navigate through the Upgrade Assistant screens and upgrade your WebLogic domain component configurations.

- [Task 1, "Introducing the Upgrade Assistant"](#)
- [Task 2, "Selecting an Upgrade Operation"](#)
- [Task 3, "Viewing Components to be Upgraded"](#)
- [Task 4, "Verifying Prerequisites"](#)
- [Task 5, "Completing the Upgrade Validation"](#)
- [Task 6, "Beginning and Completing the Upgrade"](#)

#### Task 1 Introducing the Upgrade Assistant

The Welcome screen contains important reminders to consider before proceeding with your upgrade. Make sure you read these and verify that you are ready to proceed.

#### Task 2 Selecting an Upgrade Operation

Select the **WebLogic Component Configurations** option to upgrade component configurations for your managed WebLogic Server domain. You will be prompted to supply the connection details required to connect to the WebLogic Administration Server that is managing the domain.



Select which type of upgrade you wish to perform.

Schemas

WebLogic Component Configurations

Enter the WebLogic Administration Server credentials for the domain you want to upgrade.

Host:

Port:

User Name:

Password:

**Tip:** More information about this screen can be found in WebLogic Component Configurations in *Upgrading with the Upgrade Assistant*.

### Task 3 Viewing Components to be Upgraded

The Component List screen lists the components that will be upgraded.

### Task 4 Verifying Prerequisites

The Prerequisites screen lists items that you must check and verify before you can proceed.

You must check the boxes before you can continue. The Upgrade Assistant will not verify that the prerequisites have been met.

### Task 5 Completing the Upgrade Validation

On the Examine screen, the Upgrade Assistant performs a series of validations before upgrading the selected components. Ensure that all validations have succeeded.

**Tip:** More information about the options on this screen can be found in Examine in *Upgrading with the Upgrade Assistant*.

### Task 6 Beginning and Completing the Upgrade

Click **Upgrade** on the Upgrade Summary screen to begin the upgrade. The Upgrade Progress screens show information about the progress of the upgrade, and the Upgrade Success screen summarizes the upgrade.

## 5.7 Troubleshooting Your Upgrade

If the upgrade process fails, you must close the Upgrade Assistant, correct the issue, and then restart the Upgrade Assistant.

If the upgrade process fails *after* the upgrade process has started, you must drop the cloned repository and start from a freshly cloned repository in addition to correcting the underlying issue. There is no way to restart the failed upgrade process.

For more troubleshooting information, see "Troubleshooting Your Upgrade" in *Upgrading with the Upgrade Assistant*.

