Oracle® Fusion Middleware

Upgrade Guide for Oracle Enterprise Repository

12*c* Release 1 (12.1.3)

E55663-03

April 2015

Provides information and instructions for upgrading Oracle Enterprise Repository.

ORACLE®

Oracle Fusion Middleware Upgrade Guide for Oracle Enterprise Repository, 12*c* Release 1 (12.1.3)

E55663-03

Contents

Preface

Welcome to *Oracle Fusion Middleware Upgrade Guide for Oracle Enterprise Repository*. This document provides information and instructions for upgrading and troubleshooting the upgrade process for Oracle Enterprise Repository.

Audience

This document is intended for Oracle Enterprise Repository system administrators who are responsible for installing, maintaining, and upgrading Oracle Enterprise Repository instances.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

For more information, see the following documents in the Oracle Enterprise Repository 11g Release 1 documentation set:

- Oracle Enterprise Repository on OTN - The home page for Oracle Enterprise Repository on Oracle Technology Network (OTN) is:

  http://www.oracle.com/technetwork/middleware/repository/overview/index-100687.html

- SOA Blog - Keep on top of the latest SOA blogs at:

  http://blogs.oracle.com/governance

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.
italic	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.

What's New in This Guide

This preface introduces the new and changed features of Oracle Enterprise Repository and other significant changes that are described in this guide, and provides pointers to additional information.

For a list of known issues (release notes), see the "Known Issues for Oracle SOA Products and Oracle BPM Products for 12c Release 1 (12.1.3.0.0)" at http://www.oracle.com/technetwork/middleware/soasuite/documentation/releasenotes121300-2124738.html.

New and Changed Features for 12*c* Release 1 (12.1.3)

Oracle Fusion Middleware Upgrade Guide for Oracle Enterprise Repository has been updated to reflect the streamlined upgrade process when upgrading from Oracle Enterprise Repository 11*g* to 12*c*:

- Chapter 1, "Upgrading Oracle Enterprise Repository" describes pre-upgrade tasks, Installing OER 12c, and upgrading database schemas using the Upgrade Assistant plug-in.

- Chapter 2, "Optional Post Installation Tasks" describes optional post upgrade tasks that you may perform if you wish to migrate custom reports or other Oracle Enterprise Repository customizations from OER 11*g* to 12*c*.

Other Significant Changes in this Document for 12*c* Release 1 (12.1.3)

This guide contains no other significant changes for 12*c* Release 1 (12.1.3).

1

Upgrading Oracle Enterprise Repository

This chapter describes the upgrade process when upgrading to Oracle Enterprise Repository 12*c*.

This chapter contains the following sections:

-
-

1.1 Performing the Upgrade Tasks

These instructions enable you to upgrade from Oracle Enterprise Repository 11*g* on WebLogic Server using the Oracle Enterprise Repository 12*c* installation program.

This section contains the following topics:

-
-
-
-
-
-
-
-

1.1.1 Prerequisites

To upgrade from Oracle Enterprise Repository 11*g* to 12*c* on WebLogic Server, you must ensure you have the following prerequisites:

- Oracle Enterprise Repository 12*c* requires WebLogic Server 12*c*. If the currently installed Oracle Enterprise Repository application is not running on the required version, upgrade or install the supported version of WebLogic Server into a separate Oracle Home directory. For more information about installing WebLogic Server, see *Installing and Configuring WebLogic Server and Coherence*.
- The Oracle Enterprise Repository domain should be installed within the default location of `<FMW_HOME>/user_projects/domains/oer`. If the Oracle Enterprise Repository domain is installed in a different location, you must make the appropriate adjustments to the location.

- Refer to the password encryption requirements section before performing upgrade steps. For more information, see Section 2.3.4, "Creating Encrypted Passwords".

- Stop the WebLogic server before performing these upgrade steps.

- If BPM is in use, ensure that you back up the BPM Database.

- Back up the existing Oracle Enterprise Repository database.

1.1.2 Performing Pre-Upgrade Tasks

The following tasks must be performed before continuing the upgrade process:

- Task 1, "Back Up Custom or Edited Files"

- Task 2, "Remove the Current Oracle Enterprise Repository Installation Files"

- Task 3, "Uninstall Oracle Enterprise Repository 11g"

- Task 4, "(Optional) Run the Repository Creation Utility on Your Database"

Task 1 Back Up Custom or Edited Files

Review your current OER implementation to see if there is anything you will need to recreate, such as artifact stores, custom files, properties files, and customizations, once you have upgraded to the most recent release. Document how these were created so you can restore the same functionality after you have completed the upgrade.

> **Tip:** Section 1.1.8 of this guide requires that you modify several properties in the course of the installation. It may be helpful to record these values form your current OER implementation as a guide to populate these values during the upgrade.

> **Note:** The installer provides an application template to create a domain with the Oracle Enterprise Repository 12*c* application. Therefore, the existing domain is no longer used.

Task 2 Remove the Current Oracle Enterprise Repository Installation Files

> **Caution:** Perform this step only after backing up files you may want to keep, as described in Task 1, "Back Up Custom or Edited Files".

If you wish to use the same domain name, then rename /remove the current Oracle Enterprise Repository domain. For example, `<FMW_HOME>/user_projects/domains/<domain_name>` to `<FMW_HOME>/user_projects/domains/old_<domain_name>`.

Task 3 Uninstall Oracle Enterprise Repository 11*g*

Oracle Enterprise Repository 11*g* Uninstall process to remove all components of the previous release. For more information about uninstalling the previous version of OER, see the *Oracle Fusion Middleware Developer's Guide for Oracle Enterprise Repository* for the 11*g* Release.

Task 4 (Optional) Run the Repository Creation Utility on Your Database

The Upgrade Assistant Plugin requires some components to already exist in the database. If you have never run the Repository Creation Utility (RCU) on your

database before, you must do this before upgrading the OER Schemas using the Upgrade Assistant, as described in Section 1.1.4.

To install the components required by the Upgrade Assistant:

1. Run the `rcu.sh` or `rcu.bat` utility from this directory in your WebLogic Server installation:

   `<FMW_HOME>/oracle_common/bin/rcu.sh or rcu.bat`

2. Click **Next** from the Welcome screen.

3. Ensure that **Create Repository** is selected, and then select **System Load and Product Load** on the Create Repository screen. The procedure in this document assumes that you have the necessary privileges to perform DBA activities. Click **Next**.

4. On the Database Connection Details screen, provide the database connection details for RCU to connect to your database.

   Click **Next** to proceed, then click **OK** on the dialog window confirming that connection to the database was successful.

5. Expand **AS Common Schemas**. Ensure that only **Common Infrastructure Services** is selected, as shown in the following figure.
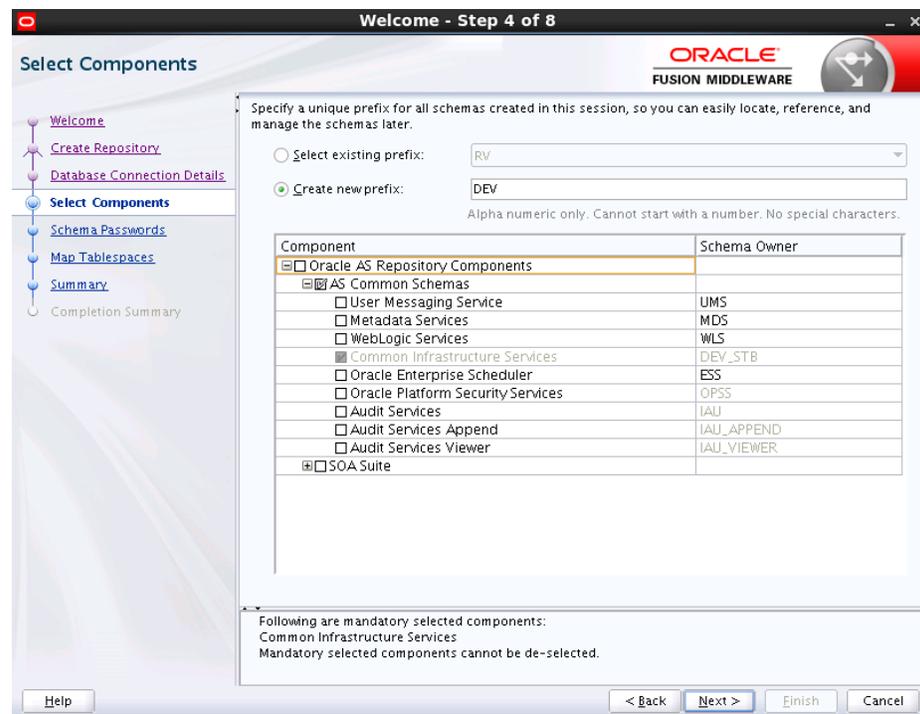
   Leave the default value of `DEV` in the **Create new prefix** field. Click **Next** to proceed, then click **OK** on the dialog window confirming that prerequisite checking for schema creation was successful.

6. Specify how you want to set the schema passwords on your database, then specify and confirm your passwords.

7. Navigate through the remainder of the RCU screens to complete schema creation. When you reach the Completion Summary screen, click **Close** to dismiss RCU.

1.1.3 Run the Oracle Enterprise Repository Installation Program

Before you can upgrade your existing Oracle Enterprise Repository (OER) 11g components, you must first install the OER 12c distribution. Follow the instructions described in the "Installing the Oracle Enterprise Repository Software" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Repository*.

1.1.4 Upgrading OER Schemas Using the Upgrade Assistant

Follow the instructions in this section to upgrade OER schemas and instances using the Upgrade Assistant.

> **Caution:**   Do not start the Upgrade Assistant if purge scripts or scheduled database jobs are running.
>
> Wait until the purge or upgrade is complete before starting the upgrade process. The upgrade will fail if the purge scripts or instance upgrade jobs are running while using the Upgrade Assistant to upgrade your schemas.
>
> If you must start the Upgrade Assistant, stop the purge and be sure to disable any scheduled jobs.

- Task 1, "Start the Upgrade Assistant"
- Task 2, "Upgrade the Schemas"

Task 1 Start the Upgrade Assistant

Complete the following steps to start the Upgrade Assistant:

1. Change directory to `ORACLE_HOME`/oracle_common/upgrade/bin (on UNIX operating systems) or `ORACLE_HOME`\oracle_common\upgrade\bin (on Windows operating systems).

2. Enter the following command to start the Upgrade Assistant.

   (UNIX) `./ua`

   (Windows) `ua.bat`

Oracle recommends that you run the Upgrade Assistant with logging enabled as shown in the example below.

```
./ua [-logLevel <log_level>] [-logDir <log_directory>]
```

Task 2 Upgrade the Schemas

The Upgrade Assistant displays a sequence of screens listed in Table 1–1 when upgrading schemas. Perform the respective action(s) for each of the screens. When Oracle Enterprise Repository is selected, the `OER` schema will be included in the upgrade.

Table 1–1   Upgrade Assistant Screens: Upgrading Schemas

Screen	Description and Action Required
Welcome	This screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks.
Schemas	Select **Schemas**.
Available Components	This screen provides a list of installed Oracle Fusion Middleware components that have schemas that can be upgraded. When you select a component, the schemas and any dependencies are automatically selected. For example, when Oracle Enterprise Repository is selected, the OER schema will be included in the upgrade. **NOTE:** By default, the Oracle Platform Security Services (OPSS) and Audit Services schemas may be selected. OER does not require these schemas. Ensure that these options are not selected before proceeding.
Prerequisites	Check that the prerequisites for schema upgrade are met. You must select each prerequisite before you click **Next**. **CAUTION**: Upgrade Assistant will NOT verify that these prerequisites have been met.
Schema Credentials	Use this screen to enter database connection details for each of the schemas you are upgrading. **1.** Select a the database type from the **Database Type** drop-down menu. **2.** Enter the database connection details, and click **Connect**. **3.** Enter the user name and password for the schema. **4.** Click **Next**. **Notes:** ■ For information on the fields required to connect to the database, click **Help**, or refer to "Schema Credentials" in Upgrading with the Upgrade Assistant.
Examine	Review the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade. Verify that the Source Version displayed for each schema is listing the correct version number for the schema to be upgraded.
Upgrade Summary	Review the summary of the options that you have selected for schema upgrade. Verify that the correct Source and Target versions are listed for each schema you intend to upgrade. Click **Upgrade** to upgrade the schemas, or click **Back** if you wish to change the configurations.
Upgrade Progress	Review the status of the current upgrade process. **NOTE**: The progress bar on this screen displays the progress of the current upgrade procedure. It does not indicate the time remaining for the upgrade. Click **Next** when the upgrade is complete.
Upgrade Success	Click **Close** if the Upgrade was successful. If the upgrade failed or if you canceled the upgrade before it completed successfully, you should review the log files, restore the backed up environment, and restart the Upgrade Assistant.

1.1.5 Configuring the Domain Using the Configuration Wizard

Follow the instructions in the "Configuring Your WebLogic Domain" section in the *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Repository* to configure the WebLogic Server domain.

1.1.6 Start WebLogic Server

See "Starting the Servers" in the Oracle Fusion Middleware Installation Guide for Oracle Enterprise Repository for information about starting the required servers for Oracle Enterprise Repository.

1.1.7 Restore Backed-up Properties Files

If you backed up properties files in Task 1 of Section 1.1.2, "Performing Pre-Upgrade Tasks", paste those files into the `<FMW_HOME>`/user_projects/domains/`oer_domain`/oer-config directory, which is created with the new OER domain.

> **Note:** You do not need to paste the `database.properties` file into the new directory.
>
> Also note that the database connections for OER are not handled using the standard datasource mechanism built into WebLogic Server.

1.1.8 Configure the Application

Configure Oracle Enterprise Repository properties by logging into the application as an administrative user, and then using the System Settings section of the Admin page:

1. Update the following Oracle Enterprise Repository properties that reference the application server file system paths:

   `cmee.asset.xml.paths.export-destination`

   `cmee.asset.xml.paths.xsl-source`

   `cmee.asset.xml.paths.out-destination`

   `cmee.server.paths.upload`

   `cmee.extframework.export.tempfile`

   Additional properties that are affected by the deployment of Oracle Enterprise Repository are:

   `cmee.server.paths.upload-registrar`

   The application server based FTP, HTTP, HTTPS and SMB/CIFS artifact store definitions are also affected by the change in paths based on the WLS application template configuration process.

   Ensure you take a special note of these types of artifact stores and update the configurations appropriately.

2. If you are unable to access the Oracle Enterprise Repository login page or application, or if you see an error message of some kind, it may be possible that the `db.password` property in the `database.properties` file was not encrypted. Check the `cmee.log` file for any messages that explains this behavior.

For more information about enabling the Oracle Enterprise Repository diagnostics tools, see Section 2.3.1, "Enable the Oracle Enterprise Repository Diagnostics Tool".

1.2 Performing Post-Upgrade Tasks

After completing the upgrade process, you may want to migrate assets, reports, or other data into the new Oracle Enterprise Repository installation. This is necessary only if you wish to migrate custom reports or other customizations to OER 12*c*. See

Chapter 2, "Optional Post Installation Tasks" for more information about these post-upgrade tasks.

2

Optional Post Installation Tasks

This chapter describes optional post upgrade tasks when upgrading from Oracle Enterprise Repository 11*g* to 12*c*.

This chapter contains the following sections:

2.1 Configuring Oracle Enterprise Repository Reports

This section provides an overview of the Business Intelligence (BI) Publisher and the process of installing it.

You must install and configure Oracle Business Intelligence Publisher to use reports in OER, which are available on the Oracle Enterprise Repository reports page.

If BI Publisher is used only with Oracle Enterprise Repository, then the Oracle Enterprise Repository pre-configured BI Publisher content is used. The Basic type of BI Publisher installation is recommended.

Oracle Enterprise Repository includes a collection of pre-configured BI Publisher content. This content needs to be deployed and configured before running any Oracle Enterprise Repository reports.

For more information about deploying Oracle Enterprise Repository pre-configured BI Publisher content, see "Configuring BI Publisher Enterprise Server" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Repository*.

2.1.1 Migrating Custom Reports

You must edit the `CustomReports.xml` file, as mentioned in the steps below:

1. Navigate to the `/WEB-INF/config/reports/` directory in the OER domain.

2. Open the **customreports.xml** file in a text editor.

3. Edit the meta-tags for report name, display name, description, and external to reference a custom report.

2.2 Customizations

An installation of Oracle Enterprise Repository 11*g* may have several customizations that are unique to that installation. These are not limited to, but may include:

- Open API programs written against the REX interface

- Endpoint Event Subscriptions

- Application Properties Moved to Database

2.2.1 General Instructions

For all of the customizations mentioned in the Overview section, the customizations should be repeated on Oracle Enterprise Repository 12*c* following the successful upgrade.

2.3 Using the Diagnostic Testing Tool

The Diagnostics tool allows testing and troubleshooting of certain aspects of Oracle Enterprise Repository application. This section contains the following topics:

- Section 2.3.1, "Enable the Oracle Enterprise Repository Diagnostics Tool"

- Section 2.3.2, "Launching the Diagnostic Tool"

- Section 2.3.3, "Navigating the Diagnostics Tool"

- Section 2.3.4, "Creating Encrypted Passwords"

- Section 2.3.5, "Checking Product Version Information"

- Section 2.3.6, "Test Servlet Functionality"

- Section 2.3.7, "Test Required Libraries"

- Section 2.3.8, "Test Database Connectivity"

- Section 2.3.9, "List System Paths"

- Section 2.3.10, "Run Pre-Compile Servlet"

- Section 2.3.11, "Additional Functionalities"

2.3.1 Enable the Oracle Enterprise Repository Diagnostics Tool

In Oracle Enterprise Repository, the Diagnostics page is disabled, by default. Navigate to *http://host_name:port/application_name/diag/index.jsp* (replace *host_name* with the appropriate location).

When you open the Diagnostics page in the default mode, the following message is displayed:

Diag pages are currently disabled. Please contact your Oracle Enterprise Repository Administrator.

To enable the Diagnostics page, perform the following steps:

1. Navigate to *FMW_HOME*/user_projects/domains/*DOMAIN_NAME*/bin/.

2. Edit `setStartupEnv.sh` or `setStartupEnv.cmd` before starting the Oracle Enterprise Repository server.

3. Set the `-DdiagPagesEnabled` JVM property to `true` in the `EXTRA_JAVA_PROPERITES="${EXTRA_JAVA_PROPERTIES}` line in this file.

4. Restart the Oracle Enterprise Repository server.

It is recommended to only enable when necessary and disable once the system is running without any issues.

2.3.2 Launching the Diagnostic Tool

Oracle Enterprise Repository 12*c* is now deployed. It is recommended that you test the installation using the Oracle Enterprise Repository Diagnostics page. The recommended tests are:

- Product Version Information
- Test Required Libraries
- Test Database

To launch the Oracle Enterprise Repository Diagnostics tool, navigate to

```
http://host_name:port_number/application_name/diag/index.jsp
```

2.3.3 Navigating the Diagnostics Tool

In addition to the Diagnostics Home and Oracle Enterprise Repository links, the left sidebar of the Diagnostics tool includes links to several tests that can be run to check your installation of Oracle Enterprise Repository. Click any of these links to display the available tests in the main pane of the Diagnostics tool.

- Generic Web App
  - Installation Tests
    * Product Version Information

      Provides information on the installed version of the Oracle Enterprise Repository, the version of the installed Oracle Enterprise Repository database, upgrade dates, and the maintenance mode setting for the database.

    * Snoop Servlet

      Provides an output listing of all cookies, headers, CGI-Variables, Servlet Context Attributes, Session information and Session values set as a part of the request to the application server.

    * Test Required Libraries

      Provides information about the application server's configuration regarding required JAR library files, installed XML parsers, and the presence of the minimally required Oracle Enterprise Repository properties files.

    * Run Active Diagnostic Test

      Runs a JUnit test against the installed Oracle Enterprise Repository application. Many of these tests are required to allow Oracle Enterprise Repository to build and parse XML data.

    * Test Database

      Provides insight into the JDBC driver functionality, including the number of database side functions that are expected to be supported. Also tests the connection string set in the database.properties file, provides additional information regarding the version of the JDBC driver, and may also indicate deficiencies within the database tables.

    * List System Paths

Lists the pathways (local and absolute URLs) configured within the `cmee.properties` file and, also those stored within the database. Also helps to indicate why some parts of the application deployment function while others do not (such as images not loading).

- Tools

    * JSP Precompiler

        Forces the application server to perform an immediate JIT compile of JSP pages within the Oracle Enterprise Repository application. This process greatly improves the performance of page loads if performed after each application server restart

    * Encrypt Strings for Passwords

        Performs a Hash on a clear-text password string supplied in the text field. This feature is used for encrypting passwords to be stored within application properties files. This tool should not be used to encrypt user passwords. Contact Oracle Support for the proper procedure to update a password in the database.

- Oracle Enterprise Repository Tests

    - Runtime - Configuration

        * List Enabled System Settings

            Lists all values set in the Oracle Enterprise Repository database and, also those set in properties files.

        * Edit System Paths

            Allows an administrator to make permanent changes to the `cmee.properties` file on the application server.

    - Runtime - Assets

        * List Types

            Produces XML output that describes all Asset Types stored within the Oracle Enterprise Repository database.

        * Edit Asset Custom Data

            Allows a registrar to modify XML data contained within an asset in the event that an asset's metadata is otherwise uneditable. Do not use this tool unless specifically directed by Oracle Support personnel.

        * Get XML: Show Type ID

            Produces the XML description of a specific Asset Type based on the unique ID of the Asset Type record.

        * Get XML: Type ID As String

            Produces the XML description of a specific Asset Type based on the unique ID of the Asset Type record as one continuous string.

        * Get XML: Type XML Schema

            This tool produces the XML schema of a specific Asset Type based on the unique ID of the Asset Type record.

        * Get XML: Type XML Schema as String

This tool produces the XML schema of a specific Asset Type based on the unique ID of the Asset Type record as one continuous string.

* Get XML: Asset ID

- Produces the XML data of an Asset based on the unique ID of the Asset.

- The include extended metadata option produces additional information related to Policies and other data.

* Get XML: Asset ID as String

Produces the XML data of an Asset based on the unique ID of the Asset as one continuous string.

– Runtime - Security

- Optional Tests
    - SOAP Services

    Test the SOAP URL for Rex API service using

    http://server:port/oer_app_name/service/FlashlineRegistry?wsdl

    This process produces the Oracle Enterprise Repository Web Service WSDL file.

    – Logging Options

- To access the Oracle Enterprise Repository login page, click the **Oracle Enterprise Repository** link in the sidebar of the Diagnostics page.

- To activate the debugging mode for the current session, click the turning logging on link in the main pane.

2.3.4 Creating Encrypted Passwords

Oracle Enterprise Repository 12*c* requires that all cleartext passwords are encrypted.

See "Password Encryption" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Repository* for information about generating encrypted passwords.

2.3.5 Checking Product Version Information

To check the product version information, perform the following steps:

1. Click **Installation Tests** under Generic Web App.

2. Click **Product Version Information** in the main pane.

   A new browser window opens to display information on the internal product version, database schema version, and information about the most recent upgrade/install.

2.3.6 Test Servlet Functionality

To test the servlet functionality in Oracle Enterprise Repository, perform the following steps:

1. Click **Installation Tests** under Generic Web App.

2. Click **Snoop Servlet** in the main pane.

   A new browser window opens to display information on the parameters passed from the Web client to server.

2.3.7 Test Required Libraries

To test the required libraries, perform the following steps:

1. Click **Installation Tests** under Generic Web App.

2. Click **Test Required Libraries** in the main pane.

   A new browser window opens to display information on the property files and system properties essential to proper functionality.

2.3.8 Test Database Connectivity

To test the database connectivity in Oracle Enterprise Repository, perform the following steps:

1. Click **Installation Tests** under Generic Web App.

2. Click **Test Database** in the main pane.

   A new browser window opens to display information on container access, the availability of JDBC drivers and the presence of important Oracle Enterprise Repository data tables.

2.3.9 List System Paths

To list the system paths in Oracle Enterprise Repository, perform the following steps:

1. Click **Installation Tests** under Generic Web App.

2. Click **List System Paths** in the main pane.

   A new browser window opens to display all Oracle Enterprise Repository paths.

2.3.10 Run Pre-Compile Servlet

To run the pre-compiler servlet, perform the following steps:

1. Click **Tools** under Generic Web App.

2. Click **JSP Precompiler** in the main pane.

   A new browser window opens to display a list of system JSPs that have been pre-compiled for speedier first time access.

   > **Note:** This servlet produces errors within the error log; reset logs before starting the application server.

2.3.11 Additional Functionalities

The additional Diagnostics testing tool functionality includes:

- Testing browser redirection compatibility to both a standard URL or local file.
- Listing all enabled Oracle Enterprise Repository Settings.
- Listing all Types in the system.
- Displaying XML for a specific Type (both editor and viewer).
- Displaying xml for a specific asset.
- Clustering Status shows a list of all nodes in the cluster.

Ensure that client browser and JRE installations have appropriately supported versions for Oracle Enterprise Repository.

2.4 Upgrade Oracle Enterprise Repository Workflows

The Oracle Enterprise Repository 12*c* contains new and updated express workflows that require an installed instance of Oracle SOA Suite and Oracle BPM Suite, both version 11.1.1.7 or higher. Workflows created in older versions of OER may not be compatible with this release.

See "Configuring Oracle Enterprise Repository Express Workflows" in *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Repository* for more information.