

## **Oracle® Identity Manager**

Connector Guide for Oracle e-Business User Management

Release 9.0.4

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# Preface

*Oracle Identity Manager Connector Guide for Oracle e-Business User Management* provides information about integrating Oracle Identity Manager with Oracle e-Business User Management.

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**Note:** Some parts of the product and documentation still refer to the original Thor company name and Xellerate product name and will be rebranded in future releases.

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## Audience

This guide is intended for users who want to deploy the Oracle Identity Manager connector for Oracle e-Business User Management.

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

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## Related Documents

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

- *Oracle Identity Manager Release Notes*
- *Oracle Identity Manager Installation Guide for JBoss*
- *Oracle Identity Manager Installation Guide for Oracle Containers for J2EE*
- *Oracle Identity Manager Installation Guide for WebLogic*
- *Oracle Identity Manager Installation Guide for WebSphere*
- *Oracle Identity Manager Administrative and User Console Guide*
- *Oracle Identity Manager Administrative and User Console Customization Guide*
- *Oracle Identity Manager Design Console Guide*
- *Oracle Identity Manager Tools Reference Guide*
- *Oracle Identity Manager Audit Report Developer Guide*
- *Oracle Identity Manager Best Practices Guide*
- *Oracle Identity Manager Globalization Guide*
- *Oracle Identity Manager Glossary of Terms*

The following document is available in the Oracle Identity Manager Connector Pack documentation library:

- *Oracle Identity Manager Connector Framework Guide*

## Documentation Updates

Oracle is committed to delivering the best and most recent information available. For information about updates to the Oracle Identity Manager Connector Pack Release 9.0.4 documentation library, visit Oracle Technology Network at

<http://www.oracle.com/technology/documentation/index.html>

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<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.
<code>monospace</code>	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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# What's New in the Oracle Identity Manager Connector for Oracle e-Business User Management?

This chapter provides an overview of the updates made to the software and documentation for the Oracle e-Business User Management connector in release 9.0.4 of the Oracle Identity Manager connector pack.

**See Also:** The 9.0.3 release of this guide for information about updates that were new for the 9.0.3 release

The updates discussed in this chapter are divided into the following categories:

- [Software Updates](#)

These include updates made to the connector software.

- [Documentation-Specific Updates](#)

These include major changes made to the connector documentation. These changes are not related to software updates.

**See Also:** *Oracle Identity Manager Release Notes*

## Software Updates

This section discusses updates made to this release of the connector software.

### Changes in the List of Supported Target Systems

In the "[Step 1: Verifying Deployment Requirements](#)" section on page 2-1, the list of supported target systems has been modified. This release of the connector also supports Oracle e-Business Suite 12.0.1.

### Separate Scheduled Tasks for Trusted and Nontrusted Source Reconciliation

In this release of the connector, there are separate user reconciliation scheduled tasks for trusted and nontrusted source reconciliation. In the "[Specifying Values for the Scheduled Task Attributes](#)" section on page 3-4, the attributes of these scheduled tasks are described.

### **Reconciliation by User Type**

In this release, you can configure reconciliation by user type. To do this, you use the `User_Type` scheduled task attribute. The "[User Reconciliation Scheduled Tasks](#)" section on page 3-5 describes this attribute.

### **Partial Reconciliation**

You can customize the reconciliation process by specifying the subset of added or modified target system records that must be reconciled. This feature is discussed in the following section:

- [Partial Reconciliation](#) on page 3-1

### **Batched Reconciliation**

In this release of the connector, the `BatchSize` and `NumOfBatches` attributes have been added to the reconciliation scheduled task definition. By specifying values for these attributes, you can reconcile users in various batches. The scheduled task attributes are discussed in the following section:

- [Batched Reconciliation](#) on page 3-2

### **Enabling Logging**

By following the instructions in the "[Enabling Logging](#)" section on page 2-3, you can configure the generation of log information that is specific to the target system.

### **Testing Utility**

The testing utility has been introduced in this release of the connector. The required information has been added at the appropriate places in the guide.

### **Adding Custom Attributes**

This release of the connector supports the adding of custom attributes for reconciliation and provisioning. This feature is described in the "[Adding Custom Attributes for Reconciliation](#)" section on page 3-7 and the "[Adding Custom Attributes for Provisioning](#)" section on page 3-9.

## **Documentation-Specific Updates**

The following documentation-specific updates have been made in this release of the guide.

- Instructions in the "[Files and Directories That Comprise the Connector](#)" section on page 1-4 have been revised.
- Instructions to enable logging for this connector are given in the "[Enabling Logging](#)" section on page 2-3.
- Some of the sections that were in Chapter 2 in earlier releases of this guide have been moved to [Chapter 3, "Configuring the Connector"](#).



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# About the Connector

Oracle Identity Manager automates access rights management, security, and provisioning of IT resources. Oracle Identity Manager connectors are used to integrate Oracle Identity Manager with third-party applications. The connector for Oracle e-Business User Management is used to integrate Oracle Identity Manager with Oracle e-Business User Management.

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**Note:** Oracle Identity Manager connectors were referred to as *resource adapters* prior to the acquisition of Thor Technologies by Oracle.

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This chapter contains the following sections:

- [Reconciliation Module](#)
- [Provisioning Module](#)
- [Supported Functionality](#)
- [Multilanguage Support](#)
- [Files and Directories That Comprise the Connector](#)
- [Determining the Release Number of the Connector](#)

## Reconciliation Module

**Reconciliation** involves duplicating in Oracle Identity Manager additions of and modifications to user accounts on the target system. It is an automated process initiated by a scheduled task that you configure.

**See Also:** The "Deployment Configurations of Oracle Identity Manager" section in *Oracle Identity Manager Connector Framework Guide* for conceptual information about reconciliation configurations

Based on the type of data reconciled from the target system, reconciliation can be divided into the following types:

- [Lookup Fields Reconciliation](#)
- [User Reconciliation](#)

## Lookup Fields Reconciliation

Lookup fields reconciliation involves reconciling the Responsibility lookup field.

## User Reconciliation

User reconciliation involves reconciling the following fields:

### Reconciled Resource Object Fields

The following target system fields are reconciled:

- username
- E-mail
- Desc
- lifeSpanType
- lifeSpanValue
- startDate
- endDate
- employeeId
- respName
- respStartDate
- respEndDate

### Reconciled Xellerate User Fields

The following target system fields are reconciled only if trusted source reconciliation is implemented:

- User ID
- First Name
- Last Name
- Organization
- User Type
- Employee Type

## Provisioning Module

**Provisioning** involves creating or modifying a user's account information on the target system through Oracle Identity Manager. You use the Administrative and User Console to perform provisioning operations.

**See Also:** The "Deployment Configurations of Oracle Identity Manager" section in *Oracle Identity Manager Connector Framework Guide* for conceptual information about provisioning

For this target system, the following fields are provisioned:

- userName
- password
- confPassword
- lifeSpanType

- lifeSpanValue
- startDate
- endDate
- email
- employeeId
- description
- respName
- respStartDate
- respEndDate

---

**Note:** During provisioning, if you want to link a newly created user account with an employee account, then you must ensure that the `OracleHR.Employees` lookup field is populated. For this, you must install the Oracle e-Business Employee Reconciliation connector and reconcile employee data.

If you do not want to link a newly created user account with an employee account, then the `OracleHR.Employees` lookup field is not required.

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## Supported Functionality

The following table lists the functions that are available with this connector.

Function	Type	Description
Create User	Provisioning	Creates a user
Disable User	Provisioning	Disables a user  When this function is run, the end date assigned to the user account is changed to the current date.
Email Updated	Provisioning	Updates the e-mail address of a user
Password Updated	Provisioning	Updates the password of a user
Description Updated	Provisioning	Updates the description of a user
Start Date Updated	Provisioning	Updates the start date of a user's account validity period
End Date Updated	Provisioning	Updates the end date of a user's account validity period
LifeSpan Type Updated	Provisioning	Updates the Life Span type of a user
LifeSpan Updated	Provisioning	Updates the Life Span value of a user
Enable User	Provisioning	Enables a user so that the user is able to log in to Oracle e-Business User Management  When this function is run on a disabled user account, the end date of the user account is changed to a null value.
Add Responsibility	Provisioning	Adds a responsibility to a user

Function	Type	Description
Remove Responsibility	Provisioning	Removes a responsibility from a user  When this function is run, the end date of the responsibility allocation is changed to the current date.
Employee Id Updated	Provisioning	Updates the employee ID of a user
Update Xellerate user	Reconciliation	Updates an Oracle Identity Manager user with data received from Oracle e-Business User Management
Update Apps Resource	Reconciliation	Updates an Oracle Identity Manager resource with data received from Oracle e-Business User Management
Create Link with Oracle HR Employee	Reconciliation	Sets the employee ID of an Xellerate User to the corresponding Oracle e-Business User Management user

**See Also:** [Appendix A](#) for information about attribute mappings between Oracle Identity Manager and Oracle e-Business User Management

## Multilanguage Support

The connector supports the following languages:

- Chinese Simplified
- Chinese Traditional
- English
- French
- German
- Italian
- Korean
- Portuguese (Brazilian)
- Spanish

**See Also:** *Oracle Identity Manager Globalization Guide* for information about supported special characters

## Files and Directories That Comprise the Connector

The files and directories that comprise this connector are in the following directory on the installation media:

Enterprise Applications/Oracle e-Business/Oracle e-Business User Management

These files and directories are listed in the following table.

File in the Installation Media Directory	Description
lib/JavaTask/xlHostAccess.jar	This file contains the class files that are required for provisioning.

File in the Installation Media Directory	Description
lib/ScheduleTask/xlReconOracleApps.jar	This file contains the class files that are required for reconciliation.
Files in the resources directory	Each of these resource bundle files contains language-specific information that is used by the connector.  <b>Note:</b> A <b>resource bundle</b> is a file containing localized versions of the text strings that are displayed on the user interface of Oracle Identity Manager. These text strings include GUI element labels and messages displayed on the Administrative and User Console.
test/config/attributemapping_prov.properties	This file contains the dynamic attributes required for provisioning.
test/config/attributemapping_recon.properties	This file contains the dynamic attributes required for reconciliation.
test/config/config.properties	This file contains the parameters required to connect to and perform provisioning on the target system.
test/config/log.properties	This file is used for storing log information.
test/scripts/OracleEbiz.bat test/scripts/OracleEbiz.sh	This file is used to start the testing utility.
xml/oracleAppsResAdp.xml	This file contains definitions for the following components of the connector: <ul style="list-style-type: none"> <li>■ IT resource type</li> <li>■ IT resource</li> <li>■ Custom process form</li> <li>■ Process tasks and adapters (along with their mappings)</li> <li>■ Resource object</li> <li>■ Provisioning process</li> </ul>
xml/XellUserOraApps.xml	This XML file contains the configuration for the Xellerate User. You must import this file only if you plan to use the connector in trusted source reconciliation mode.

The "[Step 3: Copying the Connector Files and External Code Files](#)" section on page 2-2 provides instructions to copy these files into the required directories.

## Determining the Release Number of the Connector

You can use any one of the following methods to determine the release number of the connector.

### Before Deployment

To determine the release number of a connector:

1. Extract the contents of the xlReconOracleApps.jar file. This file is in the following directory on the installation media:

Enterprise Applications/Oracle e-Business/Oracle e-Business User  
Management/lib/ScheduleTask

2. Open the `manifest.mf` file in a text editor. The `manifest.mf` file is one of the files bundled inside the `xlReconOracleApps.jar` file.

In the `manifest.mf` file, the release number of the connector is displayed as the value of the `Version` property.

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**Note:** If you maintain a copy of the `xlReconOracleApps.jar` file after deployment, you can use this method to determine the release number of the connector at any stage. After you deploy the connector, it is recommended that you use the "After Deployment" method, which is described in the following section.

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## After Deployment

To determine the release number of a connector that has already been deployed:

**See Also:** *Oracle Identity Manager Design Console Guide*

1. Open the Oracle Identity Manager Design Console.
2. In the Form Designer, open the process form. The release number of the connector is the value of the **Version** field.

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## Deploying the Connector

Deploying the connector involves the following steps:

- [Step 1: Verifying Deployment Requirements](#)
- [Step 2: Configuring the Target System](#)
- [Step 3: Copying the Connector Files and External Code Files](#)
- [Step 4: Configuring the Oracle Identity Manager Server](#)
- [Step 5: Importing the Connector XML File](#)

### Step 1: Verifying Deployment Requirements

The following table lists the deployment requirements for the connector.

Item	Requirement
Oracle Identity Manager	Oracle Identity Manager release 8.5.3 or later
Target system	Oracle e-Business Suite 11.5.10, 12.0.1
External code	JDBC class library (classes12.jar)  Refer to the <a href="#">"Step 3: Copying the Connector Files and External Code Files"</a> section on page 2-2 for information about the location of this file.
Target system user account	APPS user with full privileges  You provide the credentials of this user account while performing the procedure in the <a href="#">"Defining IT Resources"</a> section on page 2-6.  If this user account is not assigned the specified privileges, then one of the following error messages is displayed when Oracle Identity Manager tries to exchange data with the target system:  table or view does not exist  insufficient privileges

### Step 2: Configuring the Target System

For this connector, you do not need to perform any configuration steps on the target system.

## Step 3: Copying the Connector Files and External Code Files

The connector files to be copied and the directories to which you must copy them are given in the following table.

**Note:** The directory paths given in the first column of this table correspond to the location of the connector files in the following directory on the installation media:

Enterprise Applications/Oracle e-Business/Oracle e-Business User Management

Refer to the ["Files and Directories That Comprise the Connector"](#) section on page 1-4 for more information about these files.

File in the Installation Media Directory	Destination Directory
lib/JavaTask/xlHostAccess.jar	OIM_home/xellerate/JavaTasks
lib/ScheduleTask/xlReconOracleApps.jar	OIM_home/xellerate/ScheduleTask
Files in the resources directory	OIM_home/xellerate/connectorResources
Files in the xml directory	OIM_home/xlclient
Files in the test/config directory	OIM_home/xellerate/XLIntegrations/Oracle EBiz/config
Files in the test/scripts directory	OIM_home/xellerate/XLIntegrations/Oracle EBiz/scripts

Copy the JDBC class library (classes12.jar) from the *oracle\_home/ora92/jdbc/lib/* directory to the *OIM\_home/xellerate/ThirdParty* directory.

In this directory path, *oracle\_home* is the directory in which Oracle9i Database is installed. For example, C:\Oracle.

Add this file along with its path in the value of the CLASSPATH environment variable.

**Note:** While installing Oracle Identity Manager in a clustered environment, you copy the contents of the installation directory to each node of the cluster. Similarly, you must copy the connectorResources directory and the JAR files to the corresponding directories on each node of the cluster.

## Step 4: Configuring the Oracle Identity Manager Server

Configuring the Oracle Identity Manager server involves the following procedures:

**Note:** In a clustered environment, you must perform this step on each node of the cluster.

- [Changing to the Required Input Locale](#)
- [Clearing Content Related to Connector Resource Bundles from the Server Cache](#)



- [Enabling Logging](#)

## Changing to the Required Input Locale

Changing to the required input locale (language and country setting) involves installing the required fonts and setting the required input locale.

You may require the assistance of the system administrator to change to the required input locale.

## Clearing Content Related to Connector Resource Bundles from the Server Cache

While performing the instructions described in the "[Step 3: Copying the Connector Files and External Code Files](#)" section on page 2-2, you copy files from the `resources` directory on the installation media into the `OIM_home/xellerate/connectorResources` directory. Whenever you add a new resource bundle in the `connectorResources` directory or make a change in an existing resource bundle, you must clear content related to connector resource bundles from the server cache.

To clear content related to connector resource bundles from the server cache:

1. In a command window, change to the `OIM_home/xellerate/bin` directory.

---

**Note:** You must perform Step 1 before you perform Step 2. If you run the command described in Step 2 as follows, then an exception is thrown:

---

```
OIM_home\xellerate\bin\batch_file_name
```

---

2. Enter one of the following commands:

- On Microsoft Windows:

```
PurgeCache.bat ConnectorResourceBundle
```

- On UNIX:

```
PurgeCache.sh ConnectorResourceBundle
```

---

**Note:** You can ignore the exception that is thrown when you perform Step 2.

---

In this command, `ConnectorResourceBundle` is one of the content categories that you can remove from the server cache. Refer to the following file for information about the other content categories:

```
OIM_home/xellerate/config/xlConfig.xml
```

## Enabling Logging

When you enable logging, Oracle Identity Manager automatically stores in a log file information about events that occur during the course of provisioning and reconciliation operations. To specify the type of event for which you want logging to take place, you can set the log level to one of the following:

- ALL

This level enables logging for all events.

- **DEBUG**

This level enables logging of information about fine-grained events that are useful for debugging.

- **INFO**

This level enables logging of informational messages that highlight the progress of the application at coarse-grained level.

- **WARN**

This level enables logging of information about potentially harmful situations.

- **ERROR**

This level enables logging of information about error events that may still allow the application to continue running.

- **FATAL**

This level enables logging of information about very severe error events that could cause the application to stop functioning.

- **OFF**

This level disables logging for all events.

The file in which you set the log level depends on the application server that you use:

- **BEA WebLogic**

To enable logging:

1. Add the following line in the *OIM\_home/xellerate/config/log.properties* file:  
`log4j.logger.Adapter.Oracle-eBizUM=log_level`
2. In this line, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.Adapter.Oracle-eBizUM=INFO
```

After you enable logging, log information is written to the following file:

*WebLogic\_home/user\_projects/domains/domain\_name/server\_name/server\_name.log*

- **IBM WebSphere**

To enable logging:

1. Add the following line in the *OIM\_home/xellerate/config/log.properties* file:  
`log4j.logger.Adapter.Oracle-eBizUM=log_level`
2. In this line, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.Adapter.Oracle-eBizUM=INFO
```

After you enable logging, log information is written to the following file:

*WebSphere\_home/AppServer/logs/server\_name/startServer.log*

### ■ JBoss Application Server

To enable logging:

1. In the *JBoss\_home/server/default/conf/log4j.xml* file, locate the following lines:

```
<category name="Adapter.Oracle-eBizUM">
  <priority value="log_level"/>
</category>
```

2. In the second XML code line, replace *log\_level* with the log level that you want to set. For example:

```
<category name="Adapter.Oracle-eBizUM">
  <priority value="INFO"/>
</category>
```

After you enable logging, log information is written to the following file:

*JBoss\_home/server/default/log/server.log*

### ■ OC4J

To enable logging:

1. Add the following line in the *OIM\_home/xellerate/config/log.properties* file:

```
log4j.logger.Adapter.Oracle-eBizUM=log_level
```

2. In this line, replace *log\_level* with the log level that you want to set.

For example:

```
log4j.logger.Adapter.Oracle-eBizUM=INFO
```

After you enable logging, log information is written to the following file:

*OC4J\_home/opmn/logs/default\_group~home~default\_group~1.log*

## Step 5: Importing the Connector XML File

To import the connector XML file into Oracle Identity Manager:

1. Open the Oracle Identity Manager Administrative and User Console.
2. Click the **Deployment Management** link on the left navigation bar.
3. Click the **Import** link under Deployment Management. A dialog box for locating files is displayed.
4. Locate and open the *OracleAppsResAdp.xml* file, which is in the *OIM\_home/xlclient* directory. Details of this XML file are shown on the File Preview page.
5. Click **Add File**. The Substitutions page is displayed.
6. Click **Next**. The Confirmation page is displayed.
7. Click **Next**. The Provide IT Resource Instance Data page for the Oracle Apps Server IT resource is displayed.

8. Specify values for the parameters of the Oracle Apps Server IT resource. Refer to the table in the ["Defining IT Resources"](#) section on page 2-6 for information about the values to be specified.
9. Click **Next**. The Provide IT Resource Instance Data page for a new instance of the ORACLE IT resource type is displayed.
10. Click **Skip** to specify that you do not want to define another IT resource. The Confirmation page is displayed.

**See Also:** If you want to define another IT resource, then refer to *Oracle Identity Manager Tools Reference Guide* for instructions.

11. Click **View Selections**.

The contents of the XML file are displayed on the Import page. You *may* see a cross-shaped icon along with some nodes. These nodes represent Oracle Identity Manager entities that are redundant. Before you import the connector XML file, you must remove these entities by right-clicking each node and then selecting **Remove**.

12. Click **Import**. The connector XML file is imported into Oracle Identity Manager. After you import the connector XML file, proceed to the next chapter.

## Defining IT Resources

You must specify values for the Oracle Apps Server IT resource parameters listed in the following table.

Parameter	Description
Admin	User ID to connect to the Oracle e-Business User Management database The default value is Apps .
AdminCredentials	Password of the administrator
Host	Host name or IP address of the Oracle e-Business User Management server
Port	TCP/IP port at which the Oracle e-Business User Management server is listening. The default value is 1521 .
SID	SID for the Oracle e-Business User Management server

Parameter	Description
TrustedTimeStamp	<p>This parameter is used for trusted source reconciliation.</p> <p>Starting with the first reconciliation run, this parameter stores the time-stamp value at which the reconciliation run ends.</p> <p>The default value is 0 .</p> <p>The time-stamp value that this parameter accepts is of the LONG data type, which stores the date and time value in milliseconds. You can determine the LONG data type equivalent of the required time-stamp value by using a SQL query. For example, to determine the TimeStamp parameter value for the date 31-Jan-2006, run the following SQL query:</p> <pre>SELECT ROUND((TO_DATE('31012006', 'ddmmyyyy') - TO_DATE('01011970', 'ddmmyyyy')) * 1440 * 60 * 1000) FROM dual;</pre> <p>When you specify the output of this query as the value of the TimeStamp parameter, all records that are created or updated after 31-Jan-2006 are reconciled during the next reconciliation run.</p>
NonTrustedTimeSt amp	<p>This parameter is used for nontrusted source reconciliation.</p> <p>Starting with the first reconciliation run, this parameter stores the time-stamp value at which the reconciliation run ends.</p> <p>The default value is 0 .</p> <p>The time-stamp value that this parameter accepts is of the LONG data type, which stores the date and time value in milliseconds. You can determine the LONG data type equivalent of the required time-stamp value by using a SQL query. For example, to determine the TimeStamp parameter value for the date 31-Jan-2006, run the following SQL query:</p> <pre>SELECT ROUND((TO_DATE('31012006', 'ddmmyyyy') - TO_DATE('01011970', 'ddmmyyyy')) * 1440 * 60 * 1000) FROM dual;</pre> <p>When you specify the output of this query as the value of the TimeStamp parameter, all records that are created or updated after 31-Jan-2006 are reconciled during the next reconciliation run.</p>
ResetPswdOnFirst Logon	<p>Specifies whether or not users are to be prompted to change their passwords at first logon</p> <p>The value can be Yes or No . The default value is Yes .</p>
isSecure	<p>This parameter is meant for use in a future release of the connector. Do not change the default value.</p>

After you specify values for these IT resource parameters, proceed to Step 9 of the procedure to import connector XML files.

---

**Note:** You must use the existing standard APPS User to connect to the Oracle e-Business User Management database because only this user has the rights required to update the database.

---



---

## Configuring the Connector

After you deploy the connector, you must configure it to meet your requirements. This chapter discusses the following connector configuration procedures:

---

**Note:** These sections provide both conceptual and procedural information about configuring the connector. It is recommended that you read the conceptual information before you perform the procedures.

---

- [Configuring Reconciliation](#)
- [Configuring Provisioning](#)
- [Configuring the Connector for Multiple Installations of the Target System](#)

### Configuring Reconciliation

As mentioned earlier in this guide, reconciliation involves duplicating in Oracle Identity Manager additions of and modifications to user accounts on the target system. This section discusses the following topics related to configuring reconciliation:

- [Partial Reconciliation](#)
- [Batched Reconciliation](#)
- [Configuring Trusted Source Reconciliation](#)
- [Configuring the Reconciliation Scheduled Tasks](#)
- [Adding Custom Attributes for Reconciliation](#)

### Partial Reconciliation

By default, all target system records that are added or modified after the last reconciliation run are reconciled during the current reconciliation run. You can customize this process by specifying the subset of added or modified target system records that must be reconciled. You do this by creating filters for the reconciliation module.

Creating a filter involves specifying a value for a target system attribute, which will be used in the query SELECT criteria to retrieve the records to be reconciled. You can specify values for any one or a combination of the following target system attributes:

- `UserName`
- `EmployeeID`

- **StartDate**

If you want to use multiple target system attributes to filter records, then you must also specify the logical operator (AND or OR) that you want to apply to the combination of target system attributes that you select.

Suppose you specify the following values for these attributes:

- **UserName:** jdoe
- **EmployeeID:** 1524
- **StartDate:** 2006/10/19
- **Operator:** OR

Because you are using the OR operator, during reconciliation, user records for which *any one* of these criteria is met are reconciled. If you were to use the AND operator, then only user records for which *all* of these criteria are met are reconciled.

You can also use a combination of the following operators in the query condition:

- Greater than symbol (>)
- Less than symbol (<)
- Equal sign (=)
- Percent sign (%) as a wildcard character in the UserName attribute value

Suppose you specify the following values for the attributes:

- **UserName:** =jdoe
- **StartDate:** <2006/10/19
- **Operator:** OR

The query condition that is created when you submit these attribute values is as follows:

```
UserName =jdoe OR StartDate <2006/10/19
```

While deploying the connector, follow the instructions in the ["Specifying Values for the Scheduled Task Attributes"](#) section on page 3-4 to specify values for these attributes and the logical operator that you want to apply.

## Batched Reconciliation

During a reconciliation run, all changes in the target system records are reconciled into Oracle Identity Manager. Depending on the number of records to be reconciled, this process may require a large amount of time. In addition, if the connection breaks during reconciliation, then the process would take longer to complete.

You can configure batched reconciliation to avoid these problems.

To configure batched reconciliation, you must specify values for the following user reconciliation scheduled task attributes:

- **BatchSize:** Use this attribute to specify the number of records that must be included in each batch. The default value is 1000.
- **NumOfBatches:** Use this attribute to specify the total number of batches that must be reconciled. The default value is ALL.



If you specify a value other than `All`, then some of the newly added or modified user records may not get reconciled during the current reconciliation run. The following example illustrates this:

Suppose you specify the following values while configuring the scheduled tasks:

- `BatchSize`: 20
- `NumOfBatches`: 10

Suppose that 314 user records were created or modified after the last reconciliation run. Of these 314 records, only 200 records would be reconciled during the current reconciliation run. The remaining 114 records would be reconciled during the next reconciliation run.

You specify values for the `BatchSize` and `NumOfBatches` attributes by following the instructions described in the ["Specifying Values for the Scheduled Task Attributes"](#) section on page 3-4.

## Configuring Trusted Source Reconciliation

While configuring the connector, the target system can be designated as a trusted source or a target resource. If you designate the target system as a **trusted source**, then both newly created and modified user accounts are reconciled in Oracle Identity Manager. If you designate the target system as a **target resource**, then only modified user accounts are reconciled in Oracle Identity Manager.

---

**Note:** You can skip this section if you do not want to designate the target system as a trusted source for reconciliation.

---

1. Import the XML file for trusted source reconciliation, `XellUserOraApps.xml`, by using the Deployment Manager. This section describes the procedure to import the XML file.

---

**Note:** Only one target system can be designated as a trusted source. If you import the `XellUserOraApps.xml` file while you have another trusted source configured, then both connector reconciliations would stop working.

---

2. Specify values for the attributes of the `Oracle Apps Trusted User RecNew` scheduled task. This procedure is described later in this guide.

To configure trusted source reconciliation:

1. Open the Oracle Identity Manager Administrative and User Console.
2. Click the **Deployment Management** link on the left navigation bar.
3. Click the **Import** link under Deployment Management. A dialog box for locating files is displayed.
4. Locate and open the `XellUserOraApps.xml` file, which is in the `OIM_home/xlclient` directory. Details of this XML file are shown on the File Preview page.
5. Click **Add File**. The Substitutions page is displayed.
6. Click **Next**. The Confirmation page is displayed.

7. Click **Import**.
8. In the message that is displayed, click **Import** to confirm that you want to import the XML file and then click **OK**.

## Configuring the Reconciliation Scheduled Tasks

When you perform the procedure described in the ["Step 5: Importing the Connector XML File"](#) section on page 2-5, the scheduled tasks for lookup fields, trusted source user, and nontrusted user reconciliations are automatically created in Oracle Identity Manager. To configure these scheduled tasks:

1. Open the Oracle Identity Manager Design Console.
2. Expand the **Xellerate Administration** folder.
3. Select **Task Scheduler**.
4. Click **Find**. The details of the predefined scheduled tasks are displayed on two different tabs.
5. For the first scheduled task, enter a number in the **Max Retries** field. This number represents the number of times Oracle Identity Manager should attempt to complete the task before assigning the `ERROR` status to the task.
6. Ensure that the **Disabled** and **Stop Execution** check boxes are not selected.
7. In the Start region, double-click the **Start Time** field. From the date-time editor that is displayed, select the date and time at which you want the task to run.
8. In the Interval region, set the following schedule parameters:
  - To set the task to run on a recurring basis, select the **Daily, Weekly, Recurring Intervals, Monthly, or Yearly** option.  
  
If you select the **Recurring Intervals** option, then you must also specify the time interval at which you want the task to run on a recurring basis.
  - To set the task to run only once, select the **Once** option.
9. Provide values for the attributes of the scheduled task. Refer to the ["Specifying Values for the Scheduled Task Attributes"](#) section on page 3-4 for information about the values to be specified.

**See Also:** *Oracle Identity Manager Design Console Guide* for information about adding and removing task attributes

10. Click **Save**. The scheduled task is created. The `INACTIVE` status is displayed in the **Status** field, because the task is not currently running. The task is run at the date and time that you set in Step 7.
11. Repeat Steps 5 through 10 to create the second scheduled task.

After you create both scheduled tasks, proceed to the ["Adding Custom Attributes for Reconciliation"](#) section on page 3-7.

### Specifying Values for the Scheduled Task Attributes

This section provides information about the values to be specified for the following scheduled tasks:

- [Lookup Fields Reconciliation Scheduled Task](#)
- [User Reconciliation Scheduled Tasks](#)

**Lookup Fields Reconciliation Scheduled Task** You must specify values for the following attributes of the Oracle Apps Lookup Reconciliation lookup fields reconciliation scheduled task.

---

**Note:**

- Attribute values are predefined in the connector XML file that you import. Specify values only for those attributes that you want to change.
  - Values (either default or user-defined) must be assigned to all the attributes. If even a single attribute value were left empty, then reconciliation would not be performed.
- 

Attribute	Description	Default/Sample Value
Server	Name of the IT resource instance for Oracle e-Business User Management	Oracle Apps Server
LookupField Name	Lookup field to be reconciled	Oracle.Responsibility.Name

After you specify values for these task attributes, proceed to Step 10 of the procedure to create scheduled tasks.

**User Reconciliation Scheduled Tasks** Depending on whether you want to implement trusted or nontrusted sourced reconciliation, you must specify values for the attributes of one of the following user reconciliation scheduled tasks:

- Oracle Apps Trusted User RecNew (Scheduled task for trusted source reconciliation)
- OracleApps NonTrusted (Scheduled task for nontrusted source reconciliation)

The following table describes the attributes of both scheduled tasks.

---

**Note:**

- Attribute values are predefined in the connector XML file that you import. Specify values only for those attributes that you want to change.
  - Values (either default or user-defined) must be assigned to all the attributes. If even a single attribute value were left empty, then reconciliation would not be performed.
- 

Attribute	Description	Default/Sample Value
Target System	Name of the resource object	OracleAppsServer
Server	Name of the IT resource instance for Oracle e-Business User Management	Oracle Apps Server

Attribute	Description	Default/Sample Value
IsTrusted	Specifies whether or not reconciliation is to be performed in trusted mode	For trusted source reconciliation, set the value of this attribute to Yes.  For nontrusted source reconciliation, set the value of this attribute to No.
LinkKey	Key to decide the linking condition to link an APPS user to an employee	EMAIL or USERNAME
LinkField	Name of the employee ID field used in the Oracle e-Business Employee Reconciliation connector	USR_UDF_EMPLOYEE_ID
BatchSize	Number of records in each batch that is reconciled You must specify an integer value greater than zero. <b>See Also:</b> The <a href="#">"Batched Reconciliation"</a> section on page 3-2	The default value is 1000.
NumOfBatches	Number of batches to be reconciled  The number of records in each batch is specified by the BatchSize attribute. <b>See Also:</b> The <a href="#">"Batched Reconciliation"</a> section on page 3-2	Specify All if you want to reconcile all the batches. This is the default value.  Specify an integer value if you want to reconcile only a fixed number of batches
UserName	This is a filter attribute. Use this attribute to specify the user name of the user whose records you want to reconcile.  If you do not want to use this filter attribute, then specify Nodata. <b>See Also:</b> The <a href="#">"Partial Reconciliation"</a> section on page 3-1	The value can be either the user name or Nodata.  The default value is Nodata.
EmployeeID	This is a filter attribute. Use this attribute to specify the employee ID of the user whose records you want to reconcile.  If you do not want to use this filter attribute, then specify Nodata. <b>See Also:</b> The <a href="#">"Partial Reconciliation"</a> section on page 3-1	The value can be either the employee ID or Nodata.  The default value is Nodata.
StartDate	This is a filter attribute. Use this attribute to specify the date of joining the company of the user whose records you want to reconcile.  If you do not want to use this filter attribute, then specify Nodata. <b>See Also:</b> The <a href="#">"Partial Reconciliation"</a> section on page 3-1	The value can be either the start date or Nodata.  The default value is Nodata.
Operator	Specifies the logical operator to be applied to the filter attribute If you do not want to use this filter attribute, then specify None. <b>See Also:</b> The <a href="#">"Partial Reconciliation"</a> section on page 3-1	The value can be one of the following: <ul style="list-style-type: none"> <li>■ AND</li> <li>■ OR</li> </ul> The default value is AND.
User_Type	This is a filter attribute. Use this attribute to specify the user type for which you want to reconcile records.  If you do not want to use this attribute, then specify Nodata . <b>Note:</b> This attribute is specific to the scheduled task for trusted source reconciliation.	Customer, Person, Supplier, Nodata

After you specify values for these task attributes, proceed to Step 10 of the procedure to create scheduled tasks.

## Adding Custom Attributes for Reconciliation

---

**Note:** In this section, the term "attribute" refers to the identity data fields that store user data.

---

By default, the attributes listed in the "[Reconciliation Module](#)" section on page 1-1 are mapped for reconciliation between Oracle Identity Manager and the target system. If required, you can map additional attributes for reconciliation as follows:

---

**Note:** You need not perform this procedure if you do not want to add custom attributes for reconciliation.

---

**See Also:** *Oracle Identity Manager Design Console* for detailed instructions on performing the following steps

1. Modify the `attributemapping_recon.properties` file, which is in the `OIM_home/xellerate/XLIntegrations/OracleEBiz/config` directory.

At the end of this file, some of the attribute definitions are preceded by comment characters. You can uncomment the definition of an attribute to make it a part of the list of reconciliation attributes. If required, you can also add new attributes in this file. The format that you must use is as follows:

```
OimAttributeName=TargetAttributeName
```

For example:

```
Users.Fax=FAX
```

In this example, `Fax` is the reconciliation field and `FAX` is the equivalent target system attribute. As a standard, the prefix `"Users."` is added at the start of all reconciliation field names.

2. In the resource object definition, add a reconciliation field corresponding to the new attribute as follows:
  - a. Open the Resource Objects form. This form is in the Resource Management folder.
  - b. Click **Query for Records**.
  - c. On the Resource Objects Table tab, double-click the `OracleAppsServer` resource object to open it for editing.
  - d. On the Object Reconciliation tab, click **Add Field** to open the Add Reconciliation Field dialog box.
  - e. Specify a value for the field name.

You must specify the name that is to the left of the equal sign in the line that you uncomment or add while performing Step 2.

For example, if you uncomment the `Users.Fax=FAX` line in Step 2, then you must specify `Users.Fax` as the attribute name.

- f. From the **Field Type** list, select a data type for the field.

For example: `String`

- g. Save the values that you enter, and then close the dialog box.
    - h. If required, repeat Steps d through g to map more fields.
3. Modify the process definition to include the mapping between the newly added attribute and the corresponding reconciliation field as follows:
  - a. Open the Process Definition form. This form is in the Process Management folder.
  - b. On the Reconciliation Field Mappings tab, click **Add Field Map** to open the Add Reconciliation Field Mapping dialog box.
  - c. Enter the required values, save the values that you enter, and then close the dialog box.
  - d. If required, repeat Steps b and c to map more fields.

## Configuring Provisioning

As mentioned earlier in this guide, provisioning involves creating or modifying a user's account information on the target system through Oracle Identity Manager. Refer to the ["Supported Functionality"](#) section on page 1-3 for a listing of the provisioning functions that are available with this connector.

This section discusses the following topics related to configuring provisioning:

- Compiling Adapters
- Adding Custom Attributes for Provisioning

## Compiling Adapters

**Note:** You must perform this procedure if you want to use the provisioning features of the connector.

Adapters are used to implement provisioning functions. The following adapters are imported into Oracle Identity Manager when you import the connector XML file:

**See Also:** The "Supported Functionality" section on page 1-3 for a listing of the provisioning functions that are available with this connector

- `adpORACLEAPPSCREATEUSER`
- `adpORACLEAPPSRESETPASSWORD`
- `adpORACLEAPPSUPDATEUSER`
- `adpORACLEAPPSUPDATEUSERDATE`
- `adpORACLEAPPSENABLEUSER`
- `adpORACLEAPPSADDRESPONSIBILITY`
- `adpORACLEAPPSREMOVERESPONSIBILITY`
- `adpUPDATEORACLEAPPSLIFESPAN`
- `adpORACLEAPPSDISABLEUSER`

You must compile these adapters before they can be used in provisioning operations.

To compile adapters by using the Adapter Manager form:

1. Open the Adapter Manager form.
2. To compile all the adapters that you import into the current database, select **Compile All**.

To compile multiple (but not all) adapters, select the adapters you want to compile. Then, select **Compile Selected**.

---

**Note:** Click **Compile Previously Failed** to recompile only those adapters that were not compiled successfully. Such adapters do not have an OK compilation status.

---

3. Click **Start**. Oracle Identity Manager compiles the selected adapters.
4. If Oracle Identity Manager is installed in a clustered environment, then copy the compiled adapters from the `OIM_home/xellerate/Adapter` directory to the same directory on each of the other nodes of the cluster. If required, overwrite the adapter files on the other nodes.

If you want to compile one adapter at a time, then use the Adapter Factory form.

**See Also:** *Oracle Identity Manager Tools Reference Guide* for information about using the Adapter Factory and Adapter Manager forms

To view detailed information about an adapter:

1. Highlight the adapter in the Adapter Manager form.
2. Double-click the row header of the adapter, or right-click the adapter.
3. Select **Launch Adapter** from the shortcut menu that is displayed. Details of the adapter are displayed.

## Adding Custom Attributes for Provisioning

---

**Note:** In this section, the term "attribute" refers to the identity data fields that store user data.

---

By default, the attributes listed in the "[Provisioning Module](#)" section on page 1-2 are mapped for provisioning between Oracle Identity Manager and the target system. If required, you can map additional attributes for provisioning as follows:

**See Also:** *Oracle Identity Manager Design Console Guide*

1. Modify the `attributemapping_prov.properties` file, which is in the `OIM_home/xellerate/XLIntegrations/OracleEBiz/config` directory.

At the end of this file, some of the attribute definitions are preceded by comment characters. You can uncomment the definition of an attribute to make it a part of the list of reconciliation attributes. If required, you can also add new attributes in this file. The format that you must use is as follows:

```
OimAttributeName=TargetAttribute_API_Field_Index
```

For example:

```
Users.fax=15
```

In this example, `fax` is the provisioning field and 15 is the index of the parameter (corresponding to the `fax` field) used in the stored procedure.

2. Add a new column in the process form.
  - a. Open the process form. This form is in the Development Tools folder of the Oracle Identity Manager Design Console.
  - b. Click **Create New Version**.
  - c. In the Create a New Version dialog box, specify the version name in the **Label** field, save the changes, and then close the dialog box.
  - d. From the **Current Version** list, select the newly created version.
  - e. On the Additional Columns tab, click **Add**.
  - f. Specify the new field name and other values.
3. Add a new variable in the variable list.
  - a. Open the Adapter Factory form. This form is in the Development Tools folder of the Oracle Identity Manager Design Console.
  - b. Click the **Query for Records** icon.
  - c. On the Adapter Factory Table tab, double-click the **adpORACLEAPPSCREATEUSER** adapter from the list.
  - d. On the Variable List tab, click **Add**.
  - e. In the Add a Variable dialog box, specify the required values and then save and close the dialog box.
4. Define an additional adapter task for the newly added variable in the **adpORACLEAPPSCREATEUSER** adapter.
  - a. On the Adapter Tasks tab of the Adapter Factory form, click **Add**.
  - b. In the Adapter Task Selection dialog box, select **Functional Task**, select **Java** from the list of functional task types, and then click **Continue**.
  - c. In the Object Instance Selection dialog box, select **Persistent Instance** and then click **Continue**.
  - d. In the Add an Adapter Factory Task dialog box, specify the task name, select the **setProperty** method from the **Method** list, and then click **Save**.
  - e. Map the application method parameters, and then save and close the dialog box. To map the application method parameters:

For the "Output: String Return variable (Adapter Variable)" parameter:

    - i. From the **Map to** list, select **Literal**.
    - ii. From the **Name** list, select **Return variable**.

For the "Input: String input (Adapter Variable)" parameter:

    - i. From the **Map to** list, select **Adapter Variables**.
    - ii. From the **Name** list, select **Input**.

For the "Input: String Status (Literal)" parameter:



- i. From the **Map to** list, select **Literal**.
  - ii. From the **Name** list, select **String**.
  - iii. In the **Value** field, enter **Status**.
- For the "Input: String Status (Adapter Variable)" parameter:
  - i. From the **Map to** list, select **Adapter Variables**.
  - ii. From the **Name** list, select **Status**.
- f. Repeat Steps b through g to create more adapter tasks.
5. Create an additional adapter task to set the input variable.
  - a. Open the Adapter Factory form. This form is in the Development Tools folder in the Oracle Identity Manager Design Console.
  - b. On the Adapter Tasks tab, click **Add**.
  - c. In the Adapter Task Selection dialog box, select **Logic Task**, select **SET VARIABLE** from the list, and then click **Continue**.
  - d. In the Edit Set Variable Task Parameters dialog box, select **input** from the **Variable Name** list, select **Adapter Task** from the **Operand Type** list, and the Operand Qualifier as the Adapter Task that you have created in the previous step. Then, click **Save**.
6. Map the process form columns and adapter variables for the Create User process task as follows:
  - a. Open the Process Definition form. This form is in the Process Management folder of the Design Console.
  - b. Click the **Query for Records** icon.
  - c. On the Process Definition Table tab, double-click the **OracleAppsUser** process.
  - d. On the Tasks tab, double-click the **Create User** task.
  - e. In the Closing Form dialog box, click **Yes**.
  - f. On the Integration tab of the Editing Task Columns Create User dialog box, map the unmapped variables, and then save and close the dialog box. To map an unmapped variable:
    - i. Double-click the row in which N is displayed in the Status column. The value N signifies that the variable is not mapped.
    - ii. From the **Map to** list in the Edit Data Mapping for Variables dialog box, select **Process Data**.
    - iii. From the **Qualifier** list, select the name of the variable.

Repeat Steps i through iii for all unmapped variables.

Repeat Steps 1 through 6 if you want to add more attributes.

## Configuring the Connector for Multiple Installations of the Target System

---

**Note:** Perform this procedure only if you want to configure the connector for multiple installations of Oracle e-Business User Management.

---

You may want to configure the connector for multiple installations of Oracle e-Business User Management. The following example illustrates this requirement:

The Tokyo, London, and New York offices of Acme Multinational Inc. have their own installations of Oracle e-Business User Management. The company has recently installed Oracle Identity Manager, and they want to configure Oracle Identity Manager to link all the installations of Oracle e-Business User Management.

To meet the requirement posed by such a scenario, you must configure the connector for multiple installations of Oracle e-Business User Management.

To configure the connector for multiple installations of the target system:

**See Also:** *Oracle Identity Manager Design Console Guide* for detailed instructions on performing each step of this procedure

1. Create and configure one resource object for each target system installation.

The Resource Objects form is in the Resource Management folder. The `OracleAppsServer` resource object is created when you import the connector XML file. You can use this resource object as the template for creating the remaining resource objects.

2. Create and configure one IT resource for each resource object.

The IT Resources form is in the Resource Management folder. The `Oracle Apps Server` IT resource is created when you import the connector XML file. You can use this IT resource as the template for creating the remaining IT resources, of the same resource type.

3. Design one process form for each resource object.

The Form Designer form is in the Development Tools folder. The following process forms are created when you import the connector XML file:

- `UD_ORACLE_A` (main form)
- `UD_RESPONS` (child form)

You can use these process forms as templates for creating the remaining process forms.

4. Create and configure one process definition for each resource object.

The Process Definition form is in the Process Management folder. The `OracleAppsUser` process definition is created when you import the connector XML file. You can use this process definition as the template for creating the remaining process definitions.

While creating process definitions for each target system installation, the following steps that you must perform are specific to the creation of each process definition:

- From the **Object Name** lookup field, select the resource object that you create in Step 1.
  - From the **Table Name** lookup field, select the process form that you create in Step 3.
  - While mapping the adapter variables for the IT Resource data type, ensure that you select the IT resource that you create in Step 2 from the **Qualifier** list.
5. Configure reconciliation for each target system installation. Refer to the ["Configuring Reconciliation"](#) section on page 3-1 for instructions. Note that only

the values of the following attributes are to be changed for each reconciliation scheduled task:

- Target System
- Server
- IsTrusted

Set the `IsTrusted` attribute to `Yes` for the Oracle e-Business User Management installation that you want to designate as a trusted source.

6. If required, modify the fields to be reconciled for the Xellerate User resource object.

When you use the Administrative and User Console to perform provisioning, you can specify the IT resource corresponding to the Oracle e-Business User Management installation to which you want to provision the user.



---

## Testing and Troubleshooting

After you deploy the connector, you must test it to ensure that it functions as expected. This chapter discusses the following topics related to connector testing:

- [Running Test Cases](#)
- [Troubleshooting](#)

### Running Test Cases

You can use the testing utility to identify the cause of problems associated with connecting to the target system and performing basic operations on the target system.

To use the testing utility:

1. Open the following file:

*OIM\_home/xellerate/XLIntegrations/OracleEBiz/config/config.properties*

2. Specify values for the attributes in this file. These attributes are described in the following table.

Attribute	Description	Sample Value
Action	Specifies the provisioning action to be performed by the testing utility	The required action can be any one of the following: CONNECT CREATE UPDATEUSER UPDATEUSER_LIFESPAN UPDATEPASSWORD DISABLEUSER ENABLEUSER ADD_RESPONSIBILITY REMOVE_RESPONSIBILITY
serverName	Specifies the IP address or computer name of the Oracle e-Business User Management server	172.21.136.200
serverPort	Port at which the Oracle e-Business User Management server is listening	1521
admin	User ID of the Oracle e-Business User Management server administrator	apps
userName	User login ID	ORATEST

Attribute	Description	Sample Value
description	Description of the user	ORATEST
lifeSpanType	LifeSpan type of the User	LifeSpan Days, LifeSpan Accesses, None
lifeSpanValue	LifeSpan value of the User	This value depends on the value assigned to the lifeSpanType attribute.
password	Password of the user	password
emailAddress	E-mail address of the user	test@acme.com
startDate	Start date of employment of the user	2006-11-11
endDate	End date of employment of the user	2007-4-12
employeeId	Employee ID of the user	1452
resetPswdOnFirstLog on	Specifies whether or not the password of the user must be reset at first login	Yes, No
respName	Responsibility name	@Engineering
respStartDate	Start date of responsibility	2006-11-11
respEndDate	End date of responsibility	2006-11-12
attrName	Attribute to be updated	Email, Employee Id, End Date, Life Span Type, Life Span, Password, Start Date
attrValue	Value of the attribute to be updated	

**See Also:** The `config.properties` file for more information about these attributes

**3.** Run the testing utility file.

- For Microsoft Windows, run the following file:

`OIM_home\xellerate\XLIntegrations\OracleEBiz\scripts\OracleEBiz.bat`

- For UNIX, run the following file:

`OIM_home\xellerate\XLIntegrations\OracleEBiz\scripts\OracleEBiz.sh`

**4.** If the script runs without any error, then verify that the required provisioning action has been carried out on the target system.

## Troubleshooting

The following table lists solutions to some commonly encountered errors associated with the connector.

Problem Description	Solution
Oracle Identity Manager cannot establish a connection with the Oracle e-Business User Management server.	<ul style="list-style-type: none"> <li>■ Ensure that the Oracle e-Business User Management server is running.</li> <li>■ Check if the user exists in Oracle e-Business User Management.</li> <li>■ Ensure that Oracle Identity Manager is running.</li> <li>■ Ensure that all the adapters have been compiled.</li> <li>■ Use the IT Resources form to examine the Oracle Identity Manager record. Ensure that the IP address, administrator ID, and administrator password are correct.</li> </ul>
The Operation Failed message is displayed on the Oracle Identity Manager Administrative and User Console	<ul style="list-style-type: none"> <li>■ Ensure that the values for the attributes do not contain delimiter characters (white space).</li> <li>■ Ensure that the attribute values do not exceed the specified length.</li> </ul>





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## Known Issues

The following are known issues associated with this release of the connector:

- While reconciling a date field from Oracle e-Business User Management to Oracle Identity Manager, the Oracle Identity Manager API does not accept a blank or null value for the date. Oracle e-Business User Management accepts a null value for the date. Therefore, the value provided in the case of null date is 0000/00/00.
- SSL functionality is not available with this release of the connector.
- Some Asian languages use multibyte character sets. If the character limit for the fields in the target system is specified in bytes, then the number of Asian-language characters that you can enter in a particular field may be less than the number of English-language characters that you can enter in the same field. The following example illustrates this limitation:

Suppose you can enter 50 characters of English in the User Last Name field of the target system. If you were using the Traditional Chinese language and if the character limit for the target system fields were specified in bytes, then you would not be able to enter more than 25 characters in the same field.

- This release of the connector does not support the Japanese language.



## Attribute Mappings Between Oracle Identity Manager and Oracle e-Business User Management

The following table discusses attribute mappings between Oracle Identity Manager and Oracle e-Business User Management.

Oracle Identity Manager Attribute	Oracle e-Business User Management Attribute	Description
username	FND_USER.USER_NAME	User name
E-mail	FND_USER.EMAIL_ADDRESS	E-mail address
Desc	FND_USER.DESCRPTION	User description
lifeSpanValue	FND_USER.PASSWORD LIFESPAN DAYS,FND_USER.PASSWORD LIFESPAN ACCESSES	One of the values is stored based on the values of Life Span type
startDate	FND_USER.START_DATE	Effective Dates From
endDate	FND_USER.END_DATE	Effective Dates To
employeeId	FND_USER.EMPLOYEE_ID	Employee ID
respName	FND_RESPONSIBILITY_VL.RESPO NSIBILITY_NAME	Responsibility
respStartDate	FND_USER_RESP_GROUPS_DIRECT.START_DATE	Responsibility start date
respEndDate	FND_USER_RESP_GROUPS_DIRECT.END_DATE	Responsibility end date



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