

Oracle® Identity Manager

Connector Guide for PeopleSoft User Management

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Preface

Oracle Identity Manager Connector Guide for PeopleSoft User Management provides information about integrating Oracle Identity Manager with PeopleSoft User Management.

Note: This is a transitional release following Oracle's acquisition of Thor Technologies. 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.

Audience

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

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

- *Oracle Identity Manager Release Notes*
- *Oracle Identity Manager Installation and Upgrade Guide for JBoss*
- *Oracle Identity Manager Installation and Upgrade Guide for WebLogic*
- *Oracle Identity Manager Installation and Upgrade 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 Connector Framework Guide*
- Connector guides for various third-party applications

Documentation Updates

Oracle is committed to delivering the best and most recent information available. For information about updates to the Oracle Identity Manager 9.0.0 connector documentation set, visit Oracle Technology Network at

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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 PeopleSoft User Management is used to integrate Oracle Identity Manager with PeopleSoft User Management.

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

This chapter contains the following sections:

- [Supported Functionality](#)
- [Reconciliation Module](#)
- [Files and Directories That Comprise the Connector](#)

Supported Functionality

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

Functionality	Type	Description
Add User	Provisioning	Creates a user account
Password Updated	Provisioning	Updates the password of a user
User Description Updated	Provisioning	Updates the description of a user
Multi Language Code Updated	Provisioning	Updates the multilanguage code of a user
Primary Email Address Updated	Provisioning	Updates the e-mail address of a user
Primary Email Type Updated	Provisioning	Updates the e-mail address type of a user
Language Code Updated	Provisioning	Updates the language code of a user
Currency Code Updated	Provisioning	Updates the currency code of a user
Employee Id Updated	Provisioning	Updates the employee ID of a user
Primary Permission List Updated	Provisioning	Updates the Primary Permission list of a user

Functionality	Type	Description
Process Profile Permission List Updated	Provisioning	Updates the Process Profile Permission list of a user
Navigator Home Permission List Updated	Provisioning	Updates the Navigator Home Permission list of a user
Row Security Permission List Updated	Provisioning	Updates the Row Security Permission list of a user
User Id Alias Updated	Provisioning	Updates the user ID alias of a user
Add RoleName	Provisioning	Adds a role name to a user account
Delete RoleName	Provisioning	Deletes a role name from a user account
Add EmailAddress	Provisioning	Adds an e-mail address to a user account
Delete EmailAddress	Provisioning	Deletes the e-mail address of a user
Enables a User	Provisioning	Enables a PeopleSoft user
Disables a User	Provisioning	Disables a PeopleSoft user
Reconcile Lookup Field	Reconciliation	Reconciles the lookup fields
Reconcile User Data	Reconciliation	Trusted mode: Reconciles user data from PeopleSoft User Management to Oracle Identity Manager. A corresponding user is created in Oracle Identity Manager. If the user already exists in Oracle Identity Manager, then this user is updated. Nontrusted mode: Reconciles user data from PeopleSoft User Management to Oracle Identity Manager. A user is not created in Oracle Identity Manager.

Reconciliation Module

This section describes the elements that the reconciliation module extracts from the target system to construct reconciliation event records.

Reconciliation can be divided into the following topics:

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

Lookup Fields Reconciliation

Lookup fields reconciliation involves reconciling the following lookup fields:

- LanguageCode
- EmployeeId
- CurrencyCode
- PermissionList
- EmailType
- UserRoles

User Reconciliation

User reconciliation involves reconciling the following fields of PeopleSoft User Management:

- UserId
- UserDescription
- EmployeeId
- PrimaryEmailId
- PrimaryEmailType
- MultiLanguageCode
- LanguageCD
- CurrencyCode
- Alias
- RowSecurityPermission
- ProcessProfilePermission
- NavigatorHomePagePermission
- PrimaryPermission
- EmailAddress
- EmailType
- Role

The connector supports user data reconciliation in two different ways.

- Bulk Reconciliation (First-Time Reconciliation)

This type of reconciliation is performed to reconcile existing users using a flat file. The flat file is generated using an Application Engine program written in PeopleCode. This program is run using PeopleSoft Application Designer.

- Change-Based Reconciliation

This type of reconciliation is performed using PeopleSoft Application Messaging Architecture. In change-based reconciliation, data for any newly created or updated user is reconciled at predefined intervals.

The changed-based reconciliation mechanism reconciles user data by using the following components:

- A PeopleCode trigger, which generates an XML message containing updated information
- Attribute definitions (usually resource parameters) to be synchronized
- A Web service that acts as a passive listener for XML feeds from PeopleSoft
- An XML file, `USR_MGMT_MSG.xml`, that defines the schema of the XML message received from PeopleSoft.

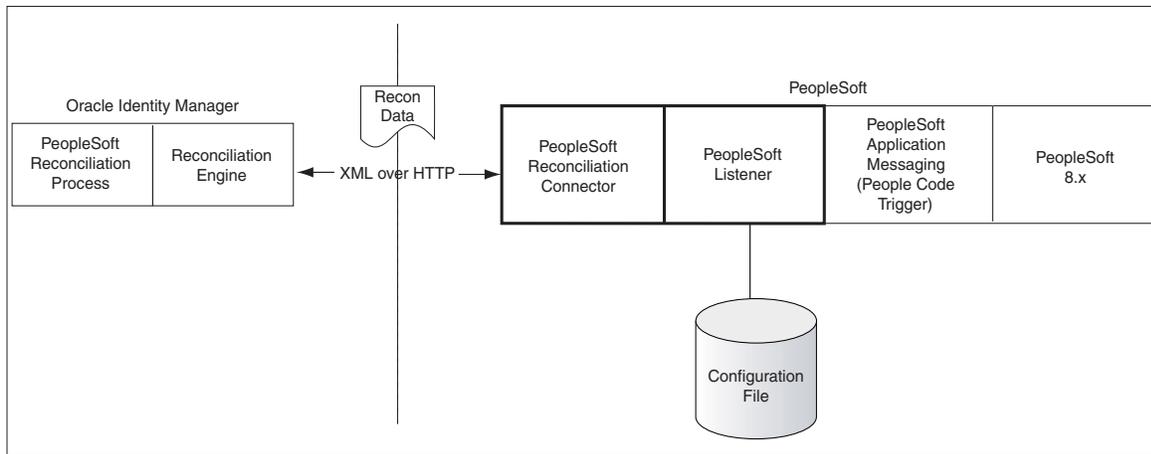
The steps involved in the synchronization process from PeopleSoft to Oracle Identity Manager are as follows:

1. User information is updated in PeopleSoft, activating a PeopleCode trigger.

2. The PeopleCode trigger generates an XML message containing the updated user information and sends it to the listener for the PeopleSoft User Management connector.
3. The listener forwards the XML message to the PeopleSoft User Management connector.
4. The PeopleSoft User Management connector uses HTTP to send the XML message to Oracle Identity Manager.
5. Oracle Identity Manager receives the XML message and creates a reconciliation event.

Figure 1–1 illustrates the synchronization process from PeopleSoft User Management Reconciliation to Oracle Identity Manager.

Figure 1–1 Synchronization Process from PeopleSoft User Management Reconciliation to Oracle Identity Manager



Files and Directories That Comprise the Connector

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

Enterprise Applications\PeopleSoft Enterprise Applications\PeopleSoft User Management Rev 1.0.0.zip

These files and directories are listed in the following table.

File Name with Path	Description
xml\PSFTBaseConnector.xml	<p>This XML file contains the following components of the connector:</p> <ul style="list-style-type: none"> ■ IT resource type ■ IT resource ■ Resource object ■ Process definition ■ Process tasks ■ Adapters ■ Custom Process Form

File Name with Path	Description
xml\PSFTBaseXellerateUser.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.
lib\JavaTask\PSFTBaseProvisioning.jar	This JAR file contains the class files that are required for provisioning.
lib\ScheduleTask\PSFTBaseReconciliation.jar	This JAR file contains the class files that are required for reconciliation.
lib\peopleSoftUserMgmt.war	This WAR file contains the PeopleSoft listener Web application. It contains all the classes and configuration files required for the Web application to run.
PeopleSoft\test\psft-xel-test.vbs	This VBScript file is used to test the PeopleSoft listener Web service by creating XML feeds similar to the ones created by PeopleSoft User Management Reconciliation.
PeopleSoft\test\pingRequest.xml PeopleSoft\test\pingResponse.xml PeopleSoft\test\publishRequest.xml PeopleSoft\test\publishResponse.xml	These XML files are required by the <code>psft-xel-test.vbs</code> file for communicating with the PeopleSoft listener Web service using XML over HTTP.
PeopleSoft\test\USR_MGMT_MSG.xml	This XML file is used by the <code>psft-xel-test.vbs</code> file to define the schema of the XML message that is received from PeopleSoft.
The following files in the <code>lib\ThirdParty</code> directory: <ul style="list-style-type: none"> ■ <code>csv.jar</code> ■ <code>peoplesoft.jar</code> ■ <code>pshttp.jar</code> ■ <code>psjoa.jar</code> ■ <code>pstools.properties</code> 	The <code>csv.jar</code> file is the list of utility files, which are used to read Comma Separated values. The <code>peoplesoft.jar</code> file is the set of class files.
The following files in the base directory: <ul style="list-style-type: none"> ■ <code>AddEmp.txt</code> ■ <code>CurrencyCode.txt</code> ■ <code>EmailType.txt</code> ■ <code>EmployeeId.txt</code> ■ <code>LanguageCode.txt</code> ■ <code>PermissionList.txt</code> ■ <code>Populate.txt</code> ■ <code>UserRoles.txt</code> 	These files contain the PeopleCode for the steps that you define for the Application Engine program. Refer to "Creating the Application Engine Program" on page 2-7 for details.
The following file in the base directory: <code>UserMgmtCBRecon.txt</code>	This file contain the PeopleCode for the SavePostChange event while performing the "Publish the Message" procedure.
<code>docs\B31131_01.pdf</code> <code>docs\html</code>	These are PDF and HTML versions of this guide, which provides instructions on deploying the connector.

The ["Step 2: Copying the Connector Files and External Code"](#) section on page 2-1 provides instructions to copy these files into the required directories.

Deploying the Connector

Deploying the connector involves the following steps:

- [Step 1: Verifying Deployment Requirements](#)
- [Step 2: Copying the Connector Files and External Code](#)
- [Step 3: Configuring the Target System](#)
- [Step 4: Configuring the PeopleSoft Listener](#)
- [Step 5: Importing the Connector Files](#)
- [Step 6: Configuring Reconciliation](#)
- [Step 7: Compiling Adapters](#)

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 systems	PSFTBase
Target systems host platforms	Microsoft Windows

Step 2: Copying the Connector Files and External Code

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 ZIP file on the installation media:

Enterprise Applications\PeopleSoft Enterprise Applications\
PeopleSoft User Management Rev 1.0.0.zip

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

File in the Installation Media Directory	Destination Directory
xml\PSFTBaseConnector.xml	<i>xellerate_home\xlclient\</i> You may have to create the <i>xlclient</i> directory in the Oracle Identity Manager installation directory.
xml\PSFTBaseXellerateUser.xml	<i>xellerate_home\xlclient\</i>
lib\JavaTasks\PSFTBaseProvisioning.jar	<i>xellerate_home\xellerate\JavaTasks</i>
lib\ScheduleTask\PSFTBaseReconciliation.jar	<i>xellerate_home\xellerate\ScheduleTask</i>
The following files in the <i>lib\ThirdParty</i> directory:	<i>xellerate_home\xellerate\ThirdParty</i>
<ul style="list-style-type: none"> ■ <i>csv.jar</i> ■ <i>peoplesoft.jar</i> ■ <i>pshttp.jar</i> ■ <i>psjoa.jar</i> ■ <i>pstools.properties</i> 	
The following files in the base directory:	<i>xellerate_home\xellerate\scripts\</i> You may have to create the <i>scripts</i> directory in the Oracle Identity Manager installation directory.
<ul style="list-style-type: none"> ■ <i>AddEmp.txt</i> ■ <i>CurrencyCode.txt</i> ■ <i>EmailType.txt</i> ■ <i>EmployeeId.txt</i> ■ <i>LanguageCode.txt</i> ■ <i>PermissionList.txt</i> ■ <i>Populate.txt</i> ■ <i>UserRoles.txt</i> ■ <i>UserMgmtCBRecon.txt</i> 	
docs\B31131_01.pdf docs\html	<i>xellerate_home\xellerate\docs</i>

Step 3: Configuring the Target System

Configuring the target system involves performing the following procedures:

- [Creating the APIs for the Component Interface](#)
- [Creating the Java Template for the Component Interface](#)
- [Creating the Application Engine Program](#)

Creating and Publishing the Message

Perform the following procedures to create and publish the message:

- [Create the Message Channel](#)
- [Create the Message](#)
- [Publish the Message](#)

Create the Message Channel

To create the message channel, perform the following steps:

1. Click **Start, Programs, and Application Designer**. The PeopleSoft Application Designer window is displayed.

2. Select **New** from the File menu. The New Definition dialog box is displayed.
3. Select **Message Channel**, and then click **OK**.
4. Save the new message channel as `USR_MGMT_MSGCH`.
5. Select **Definition Properties** from the File menu. The Message Channel Properties dialog box is displayed.
6. Select the **Run** option, and then select **Archive Messages**.

Create the Message

After creating the message channel, create the message as follows:

1. In the PeopleSoft Application Designer, select **New** from the File menu. The New Definition dialog box is displayed.
2. Select **Message** from the list.
3. Select **Definition Properties** from the File menu. The Message Properties dialog box is displayed.
4. Select the **Use** tab.
5. On the Use tab, select the `USR_MGMT_MSGCH` message channel and the version of the message that you just created.
6. Select **Active** to make the message an active message.
7. Save the message as `USR_MGMT_MSG`.
8. Right-click **VERSION_1** and select the **Insert Child Record** property. A new window Insert Record will appear, to choose the records to be added to the Message.
9. Enter **PSOPRDEFN** in the Name field, and click the **Insert** button. The PSOPRDEFN record will be added to the message.
10. Repeat steps 8 to 9 for `PSUSEREMAIL`, `PSOPRALIAS`, and `PSROLEUSER_VW` records.
11. Clicking on each record will display all the fields pertaining to that record in the adjacent window on the right. Select only those fields which are required in the XML Message. Refer `USR_MGMT_MSG.xml` to find out the required fields.
12. Save the message again.

Publish the Message

To publish the message, perform the following steps:

1. Select **Open** from the File menu. The Open Definition dialog box is displayed.
2. Select **Component** from the Definition list, enter `USERMAINT` in the Name Selection Criteria field, and then press **Enter**. All component names starting with the text `USERMAINT` are displayed.
3. Select `USERMAINT` from the list, and then click **Open**. The details of the `USERMAINT` component are displayed.
4. Click the **Structure** tab, right-click `USERMAINT`, and then select **View PeopleCode**. The PeopleCode for the `USERMAINT` component is displayed.
5. Select the **SavePostChange** event from the list in the upper-left corner of the window. The PeopleCode for this event is displayed.

6. Copy the code given from the following file immediately after the import definitions in the PeopleCode for the SavePostChange event:

```
xellerate_home\xellerate\Scripts\UserMgmtCBRecon.txt
```

7. Add the following function call at the end of the PeopleCode for the SavePostChange event:

```
If Len(%CompIntfcName) = 0 Then
  Local string &OPID;
  &OPID = PSOPRDEFN.OPRID;
  GENERATEUSR(&OPID);
End-If;
```

8. Select **Save** from the File menu to save the changes to the USERMAINT component.

Configuring PeopleSoft Enterprise Portal

PeopleSoft Enterprise Portal provides a single gateway to critical information in PeopleSoft User Management Reconciliation and other applications and systems. In order to use the PeopleSoft User Management Reconciliation connector, you must perform the following tasks:

- [Configure the Gateway](#)
- [Create the USR_MGMT_NODE Remote Node](#)
- [Secure the USR_MGMT_MSG_CH Message Channel](#)

Configure the Gateway

To configure the gateway, you have to set up the gateway, local node, remote node in the PORTAL. To do this, perform the following steps:

1. Open a Web browser and enter the URL for PeopleSoft Enterprise Portal. The URL for PeopleSoft Enterprise Portal is in the following format:

```
http://servername/psp/Databasename/?cmd=login
```

For example:

```
http://psftserver.acme.com/TestDB/?cmd=login
```

2. Expand **PeopleTools**, **Integration Broker**, and then **Gateways** in the list on the portal page. The Gateway component details are displayed.
3. Enter LOCAL in the Integration Gateway ID, and then click Search. The LOCAL gateway is a default gateway that is created when you install PeopleSoft Enterprise Portal.
4. Ensure that the IP Address in the URL of the PeopleSoft listening connector is the IP address of the Web server where PeopleSoft is installed. The URL of the PeopleSoft listening connector is in the following format:

```
http://computer_name/PSIGW/PeopleSoftListeningConnector
```

For example:

```
http://172.19.151.53/PSIGW/PeopleSoftListeningConnector
```

5. Click **Load Gateway Connectors** to load all target connectors that are registered with the LOCAL gateway.
6. Click **Save**.

Note: Local gateway will be already defined when we install the PeopleSoft. You need to provide the url and load the Target connectors.

Create the **USR_MGMT_NODE** Remote Node

To create the **USR_MGMT_NODE** remote node, perform the following steps:

1. Click **PeopleTools, Integration Broker, Node Definitions** on the left hand menu in PeopleSoft Enterprise Portal.
2. Click the **Add a New Value** tab. On the Add a New Value tab, enter the Node Name as **USR_MGMT_NODE** and click on Add button. The Node Definition page is displayed.
3. Enter description in the Description field. Make this node a remote node by deselecting the Local Node check box and selecting the Active Node check box.
4. Click the **Connectors** tab, and enter the following information:
Gateway ID: LOCAL
Connector ID: PSFT81TARGET
5. Perform a lookup.
6. In the Properties section, and enter the following information:
Property ID: PSFT81TARGET
Property Name: URL
Required value: Enter the URL of the PeopleSoft servlet that will receive the XML message. This URL is in the following format:

`http://computer_name:port/peopleSoftUserMgmt/do/peopleSoftAction`

For example:

`http://172.21.109.75:8080/peopleSoftUserMgmt/do/peopleSoftAction`
7. Click **Save**.
8. Click the **Transactions** tab, and then click **Add Transaction**. The Add Transaction page is displayed.
9. Enter the following details to define the new transaction:
Transaction Type: Outbound Asynchronous
Request Message: USR_MGMT_MSG
Request Message Version: VERSION_1
10. Click **Add**.
11. To keep the status as active, select **Active**.
12. Click **Save** to save the changes.

Secure the **USR_MGMT_MSG_CH** Message Channel

After finishing the node configuration, you must provide security for the **USR_MGMT_MSG_CH** message channel. To do this:

1. Navigate to **PeopleTools, Security, Permission & Roles, and Permission Lists**.
2. Select **AEAE1000**. The AEAE1000 permission list is displayed.
3. Select the **Message Monitor** Tab, and then click the '+' Button to add a channel name.
4. Enter the channel name as **USR_MGMT_MSG_CH**.
5. Select Full Access from the list, and Click **Save**.
6. Navigate to **PeopleTools, Integration Broker, Monitor, Monitor Message**, and then **Channel Status** to check the status of the message channel.

Check if the status of the **USR_MGMT_MSG_CH** message channel is running. If the status is **Pause**, then click the **Run** button to activate it.

Creating the APIs for the Component Interface

To create the APIs for the Component interface:

1. Open the Application Designer by clicking **Start** and then selecting **Programs, Peoplesoft8.9hcm, and Application Designer**. The Application Designer window is displayed.
2. In the Application Designer window, select **Open** from the **File** menu. The Open Definition dialog box is displayed.
3. In the Open Definition dialog box, select **Component Interface** from the **Definition** list.
4. Enter **USER_PROFILE** in the **Name** field, and then press **Enter**.
All the Component interfaces with names that start with **USER_PROFILE** are displayed in the Open Definition dialog box.
5. Select the **USER_PROFILE** entry, and then click **Open**.
6. Click **Yes** in the message that is displayed. The properties of the **USER_PROFILE** Component interface are displayed.
7. In the window for the **USER_PROFILE** Component interface, select **PeopleSoft APIs** from the **Build** menu. The Build PeopleSoft API Bindings dialog box is displayed.
8. In the Java Classes area of the Build PeopleSoft API Bindings dialog box, select the **Build** check box.
9. In the **Target Directory** field, specify the path of the directory in which you want the APIs to be created and then click **OK**.

Creating the Java Template for the Component Interface

To create the Java template:

1. On the right pane of the window for the **USER_PROFILE** Component interface, right-click **USER_PROFILE**.
2. Select **Generate Java Template** from the shortcut menu. A message showing the name and path of the Java template is displayed.
3. Click **OK** to close the message.

Creating the Application Engine Program

The reconciliation process requires the Application Engine program to be run in 2-Tier mode. You can run the application designer in this mode by selecting Connection Type as the database on the PeopleSoft sign-on screen. In addition, the database client must also be installed on the server used for accessing the application designer.

To create the Application Engine Program, perform the following steps:

1. Click **Start, Programs, Peoplesoft8.9hcm**, and then **Application Designer**. The Application Designer window is displayed.
2. Select **New** from the File menu. The New Definition dialog box is displayed.
3. Select **Application Engine** from the Definition list. The App Engine Program window is displayed.
4. Select **Action** from the Insert menu.
5. Add a step named `currency`.
6. In the App Engine Program window, select **Action** from the Insert menu.
7. From the list, select **PeopleCode**.
8. Click **Save** from the File menu to save the PeopleCode action.
9. Double-click the **PeopleCode** action.
10. Copy the code from the `CurrencyCode.txt` file, which is in the `xellerate_home\xellerate\scripts` directory. The code has a default value for the output reconciliation file where the reconciled data is stored.
11. Change the value to an appropriate location on the PeopleSoft server.
12. Save the **PeopleCode** action.
13. Repeat Steps 5 through 11 to create the steps listed in the following table.

Step Name	File Containing the PeopleCode
<code>currency</code>	<code>CurrencyCode.txt</code>
<code>language</code>	<code>LanguageCode.txt</code>
<code>emplid</code>	<code>EmployeeId.txt</code>
<code>userrole</code>	<code>UserRoles.txt</code>
<code>permis</code>	<code>PermissionList.txt</code>
<code>EmailType</code>	<code>EmailType.txt</code>

14. Save the Application Engine Program with the name `BLKPRCS_USER`.

Running the Application Engine Program

To run the Application Engine Program, perform the following steps:

1. Open the application designer in 2-Tier mode.
2. Provide the correct connection type, user ID, and password.
3. Click the **File** menu, and open the application engine program, which you just created.
4. Click the **RUN PROGRAM** control that exists on the bar just below the Menu bar, on the extreme right. The code written on the peoplecode action will get executed.

The comma separated files will get created on the specified location mentioned in the code.

Step 4: Configuring the PeopleSoft Listener

This section describes how to configure the listener for the PeopleSoft User Management connector. In the following instructions, *xellerate_home* refers to the local Oracle Identity Manager Server installation directory.

To configure the PeopleSoft Listener:

1. Copy the `peopleSoftUserMgmt.war` file from the `lib` directory into a temporary directory.

2. Enter the following command to extract the WAR file in the temporary directory:

```
jar -xvf peopleSoftUserMgmt.war
```

3. Edit the `attributemap.properties` file in the top-level directory. This file contains the mapping between the PeopleSoft attributes that the XML feed will contain and the corresponding Oracle Identity Manager attribute. You must modify this file on the basis of the local configuration. Apply the following guidelines when you modify this file:
 - a. Obtain the XML schema of the PeopleSoft XML feed from the PeopleSoft administrator.
 - b. Obtain the `xpath` of all the PeopleSoft attributes. This is the complete path of the attribute from the root node in the XML file.
 - c. Modify the `attributemap.properties` file by entering name-value pairs. Here, `name` is the Oracle Identity Manager field name and `value` is the PeopleSoft attribute `xpath` from the XML feed.
4. Edit the `deployment.properties` file in the top-level directory. This file contains the `message` property, which corresponds to the name of the XML message from the PeopleSoft feed. The default value of this attribute is `USR_MGMT_MSG`. Obtain the correct value for this attribute from the PeopleSoft administrator.
5. Edit the `xlsession.properties` file in the top-level directory. This file contains the following Oracle Identity Manager connection parameters.
 - **ObjectName:** This is the name of the resource object in Oracle Identity Manager against which the reconciliation event is created. The default value is `PSFTBase`. However, for nontrusted reconciliation, you can change it to any other resource object.
 - **Username:** This is the user name for logging in to Oracle Identity Manager. The default value is `xelsysadm`.
 - **Password:** This is the password for logging in to Oracle Identity Manager. The default value is `xelsysadm`.
6. Edit the `xlclient.properties` file in the top-level directory. This file contains the following system properties that enable an API client to communicate with Oracle Identity Manager:
 - **xl.homedir:** This property identifies the Oracle Identity Manager Client directory. Typically, the Oracle Identity Manager client directory is `xellerate_home\xlclient`.

- **java.security.policy:** This property identifies the path of the security policy file. Typically, this file is located in the `xellerate_home\xlclient\config\` directory.
- **java.security.auth.login.config:** This property identifies the path of the authentication configuration file. Typically, this file is located in the `xellerate_home\xlclient\config\` directory.

Each application server uses a different authentication configuration file:

IBM WebSphere Application Server: `authws.conf`

BEA WebLogic Application Server: `authwl.conf`

JBoss Application Server: `auth.conf`

- **java.naming.provider.url:** This property identifies the JNP URL of the application server. This value is in the `<Discovery><CoreServer><java.naming.provider.url>` tag of the `xellerate_home\xlclient\config\xlconfig.xml` file.
7. Edit the following properties in the `configureReconciliation.properties` file from the top-level directory:
- **reconciliationMode:** This property can accept one of two possible values:
 - If reconciliation is to be performed in a trusted mode, then set the `reconciliationMode` property to `trusted`.
 - If reconciliation is to be performed in a nontrusted mode, then set the `reconciliationMode` property to `nontrusted`.
 - **Serverdateformat:** This property contains the date format that is used for the PeopleSoft server. You can select one of the following date formats:
 - `dd-mmm-yy`
 - `ddmmyy`
 - `yyddmm`
 - `yymmdd`
 - **xellerateOrganization:** This property contains the name of the organization. The default value of this parameter is `Xellerate Users`. The value that you assign to this property must exist in Oracle Identity Manager.
 - **nullDate:** This property contains the default value for a date field. The value is `2200/01/01 00:00:00 PST`. This value is used if the date field is left empty.
 - **PeoplesoftstartingYEAR:** The year is specified in two digits. If the number represented by these two digits (`xx`):
 - Is greater than or equal to 50, then it is assumed that the year is 19xx.
 - Is less than 50, then it is assumed that the year is 20xx.

This specifies a range of 1950 to 2049 for the year.
8. Copy the following files from the `xellerate_home\xellerate\lib` directory to the `WEB-INF\lib` directory:
- `wlXLSecurityProviders.jar`
 - `xlAPI.jar`
 - `xlAuthentication.jar`

- xlBackOfficeBeans.jar
- xlBackofficeClient.jar
- xlCache.jar
- xlCrypto.jar
- xlDataObjectBeans.jar
- xlDataObjects.jar
- xlLogger.jar
- xlUtils.jar
- xlVO.jar

Copy the following files from the *xellerate_home*\xellerate\ext directory to the WEB-INF\lib directory:

- oscache.jar
- javagroups-all.jar

9. Delete the peopleSoftUserMgmt.war file from the temporary directory where you extracted it, and then use the following command to re-create the file:

```
jar -cvf peopleSoftUserMgmt.war
```

10. You must restart the Oracle Identity Manager server and client before deploying the re-created WAR file. In addition, before you start the Oracle Identity Manager server and client, ensure that the peopleSoftApp.war file does not exist in the application server (JBoss, WebSphere, or WebLogic) deployment directory and in the *xellerate_home*\xellerate\webapp directory. If it does, then it must be deleted.

If you use JBoss and log4j, then logs are produced and archived on a daily basis in the *jboss_server_home_dir*/log/server.log directory, where *jboss_server_home_dir* is the parent directory in which JBoss is installed. For the other application servers, the log file is created and saved in the corresponding log directories.

Step 5: Importing the Connector Files

To import the connector files 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. The Deployment Manager - Import page is displayed, along with a dialog box for locating files.
4. Locate and open the PSFTBaseConnector.xml file, which is in the *xellerate_home*\xlclient directory. The Deployment Manager page is displayed.
5. In the Deployment Manager page, click **Add File**. The File Preview window showing the details of the selected file is displayed.
6. Click **Next**. The Substitution page is displayed.
7. Click **Next**. The Confirmation page is displayed.

8. Click **Next**. The Provide IT Resource Instance Data page for the PSFT Base Server IT resource is displayed.
9. Specify values for the parameters of the PSFT Base Server. Refer to the table in the "[Defining IT Resources](#)" section for information about the values to be specified.
10. Click **Next**. The Provide IT Resource Instance Data page for a new instance of the PSFT Base Server is displayed.
11. Click **Skip** to specify that you do not want to define another IT resource. The Confirmation page is displayed.
12. Click **View Selections**.
The contents of the XML file are displayed in the Deployment Manager - Import page. You may see a cross-shaped icon along with some nodes. You must remove these nodes. To do this, right-click each such node and then select Remove.
13. Click **Import**. The connector file is imported into Oracle Identity Manager.
14. If you plan to use the connector in trusted source reconciliation mode, then perform the same procedure to import the PSFTBaseXellerateUser.xml file. This file is in the `xellerate_home\xlclient\` directory.

Caution: Only one connector can be configured as a trusted source. If you import the PSFTBaseXellerateUser.xml file while you have another trusted source configured, then both connector reconciliations would stop working.

After you import the connector XML file, proceed to the "[Step 6: Configuring Reconciliation](#)" section on page 2-12.

Defining IT Resources

You must specify values for the PSFT Base Server IT resource parameters listed in the following table.

IT resource type : PSFTBase

IT resource : PSFT Base Server

Parameter Name	Description
Admin	User Id of PeopleSoft User Management Server Administrator Default value: PS
AdminCredentials	Password of Administrator
ComponentInterface Name	Component interface used to load user data in PeopleSoft User Management Default value: USER_PROFILE
ServerName	IP address or computer name of the PeopleSoft User Management server Sample Value:172.21.100.197
ServerPort	Port number at which the PeopleSoft User Management Server is listening Default values:9000

Parameter Name	Description
IsDebug	Debug feature The value can be YES or NO. The default value is NO.
IsSecure	Specify whether or not SSL feature is enabled The value can be YES or NO. The default value is NO.
SymbolicId	SymbolicId is used to find out the AccessId associated with the user profile. This AccessId tells whether the user has sufficient privileges on the PeopleSoft database or not. PS89

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

Step 6: Configuring Reconciliation

Configuring reconciliation involves creating scheduled tasks for Lookup Fields and User reconciliations. To create the schedule 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. 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 cleared.
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 appropriate table in the "[Specifying Values for the Scheduled Task Attributes](#)" section for information about the values to be specified.
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 Step 5 through 10 to create the second scheduled task.

Specifying Values for the Scheduled Task Attributes

This section provides information about the values to be specified for the following Scheduled Task.

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

User Reconciliation Scheduled Task

You must specify values for the following attributes of the user 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.

Attribute Name	Attribute Value
MultiValueSeperator	## is the multivalue seperator in the flat file(Reconciliation file)
ServerName	Name of the IT resource instance Default Value: PSFTBase
IsTrusted	Specifies the mode of reconciliation, trusted or nontrusted The value can be Yes or No. The default value is No.
XellerateOrganization	Default value for the Oracle Identity Manager Organization name This value is used to create the Xellerate User in trusted mode.
FolderPath	Folder path of the flat file(.txt file) from where reconciliation will take place. The Scheduled task will reconcile all the files present in this folder.
TargetSystem	Name of the resource object. Default Value: PSFTBase

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

Lookup Fields Reconciliation Scheduled Task

You must specify values for the following attributes of the Lookup Fields reconciliation scheduled task.

Attribute Name	Attribute Value
ServerName	Name of the IT resource instance Default Value: PSFTBase Server

Attribute Name	Attribute Value
LookupType	<p>The type of data that is being looked up in the target system.</p> <p>The value can be one of the following:</p> <ul style="list-style-type: none"> ■ EmployeeId ■ LanguageCode ■ EmailType ■ CurrencyCode ■ PermissionList ■ UserRoles
FilePath	<p>File Path is the Path where the Reconciliation lookup txt file will reside.</p> <p>It will reside on the OIM Server. The Administrator can give any path here.</p> <p>Sample Value: C:\PSFTBase\LookupRecon\EmployeeIds.txt</p>
LookupName	<p>The name of the lookup definition configured in OIM.</p> <p>The value can be one of the following:</p> <ul style="list-style-type: none"> ■ Lookup.PSFTBase.EmployeeId ■ Lookup.PSFTBase.LanguageCode ■ Lookup.PSFTBase.EmailType ■ Lookup.PSFTBase.CurrencyCode ■ Lookup.PSFTBase.PermissionList ■ Lookup.PSFTBase.Roles
TargetSystem	<p>Name of the resource object</p> <p>Default Value: PSFTBase</p>

Step 7: Compiling Adapters

The following adapters are imported into Oracle Identity Manager when you import the connector XML file. You must compile these adapters before you can use them to provision accounts on the target system.

- adpPSFTCREATEUSER
- adpPSFTUPDATEUSER
- adpPSFTRESETPASSWORD
- adpPSFTUNLOCKUSER
- adpPSFTLOCKUSER
- adpPSFTUPDATEUSEREMPID
- adpPSFTADDORDELETEROLE
- adpPSFTADDORDELETEEMAIL

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 the **Compile All** option.

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

3. Click **Start**. Oracle Identity Manager compiles the adapters that you specify.

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.

Note: To compile multiple adapters simultaneously, use the Adapter Manager form. To compile one adapter at a time, use the Adapter Factory form. Refer to *Oracle Identity Manager Tools Reference Guide* for information about how to use these forms.

Testing the Connector

After you deploy the connector, you must test it to ensure that it functions as expected.

Note: In earlier releases of this guide, the connector was also referred to as the *integration*.

This chapter contains the following sections:

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

Running Test Cases

This section discusses test cases that you can perform by using the troubleshooting utility.

You can use the troubleshooting utility to identify the cause of problems associated with connecting to and performing basic operations on the PeopleSoft User Management server. The following are sample test cases that you can run by using the troubleshooting utility.

From the `JavaTasks` directory in which the `PSFTBaseProvisioning.jar` file is present, perform the following tests:

- Create a PeopleSoft User Management user as follows:

```
java -jar PSFTBaseProvisioning.jar Create serverName serverPort admin
adminCredentials ciName symbId userId userDescription empId recordname
```

For example:

```
java -jar PSFTBaseProvisioning.jar Create 172.19.151.53 9000 PS PS2005
USER_PROFILE PS89 PSft0101 PSFT0101 KS0001 PERSONAL
```

- Update a PeopleSoft User Management user as follows:

```
java -jar PSFTBaseProvisioning.jar update serverName serverPort admin
adminCredentials ciName symbId userId attrName attrValue
```

In this command, the values for the `attrName` field can be one of the following:

- `USER_DESCRIPTION`
- `EMAIL_ADDRESS`
- `EMAILTYPE`

- MULTI_LANGUAGE_CODE
- LANGUAGE_CODE
- CURRENCY_CODE

For example:

```
java -jar PSFTBaseProvisioning.jar Update 172.19.101.13 9000 PS PS2005
USER_PROFILE PS89 bb USER_DESCRIPTION TCSDelhi
```

- Update the employee ID of a PeopleSoft User Management user as follows:

```
java -jar PSFTBaseProvisioning.jar UpdateUserEmployeeId serverName serverPort
admin adminCredentials ciName symbId userId newEmpId oldEmpId recordname
```

For example:

```
java -jar PSFTBaseProvisioning.jar UpdateUserEmployeeId 172.19.101.13 9000 PS
PS2005 USER_PROFILE PS89 bb KS0002 KS0001 PERSONAL_DATA
```

- Update password of a PeopleSoft User Management user as follows:

```
java -jar PSFTBaseProvisioning.jar UpdatePassword serverName serverPort admin
adminCredentials ciName symbId userId password
```

For example:

```
java -jar PSFTBaseProvisioning.jar UpdatePassword 172.19.101.13 9000 PS PS2005
USER_PROFILE PS89 bb PERSONAL001
```

Troubleshooting

The following table lists solutions to some commonly encountered issues associated with the PeopleSoft User Management connector.

Problem Description	Solution
Oracle Identity Manager cannot establish a connection to the PeopleSoft User Management server.	<ul style="list-style-type: none"> ■ Ensure that the PeopleSoft User Management server is running. ■ Ensure that Oracle Identity Manager is running (that is, the database is running). ■ Ensure that all adapters have been compiled. ■ Examine the Oracle Identity Manager record (from the IT Resources form)
The Operation Fail message is displayed on the Administrative of Oracle Identity Manager	<ul style="list-style-type: none"> ■ Ensure that the values for the attributes do not contain delimiter characters (white space). ■ Ensure that the attribute values do not exceed allowable length.
The Create User adapter is triggered even when the pre-populate adapter is run successfully.	Set the property associated with the user ID attribute in the process form as required.

Known Issues

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

SSL (Secure Socket connections) is not supported.

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