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PeopleSoft FSCM 9.2 In-Memory Project Discovery Installation (through Update Image 11)

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

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About This Documentation

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Understanding This Documentation

This documentation is designed to direct you through your PeopleSoft installation. It is not a substitute for the database administration documentation provided by your relational database management system (RDBMS) vendor, the network administration documentation provided by your network vendor, or the installation and configuration documentation for additional software components that are used with PeopleSoft products.

Required updates to this installation documentation are provided in the form of "Required at Install" incidents, which are available on My Oracle Support.

Instructions for installing Oracle's PeopleSoft PeopleTools are provided in PeopleSoft PeopleTools installation guides. Application-specific installation instructions are provided in a separate document for the PeopleSoft application. For instance, if you are installing Oracle's PeopleSoft Customer Relationship Management (CRM), you need both the PeopleSoft PeopleTools installation guide and the additional instructions provided for installing PeopleSoft CRM.

To find the installation documentation for PeopleSoft PeopleTools or for your PeopleSoft application, go to My Oracle Support and search for the installation guide for your product and release.

Note. Before proceeding with your installation, check My Oracle Support to ensure that you have the latest version of this installation guide for the correct release of the PeopleSoft product that you are installing.

Audience

This documentation is written for the individuals responsible for installing and administering the PeopleSoft environment. This documentation assumes that you have a basic understanding of the PeopleSoft system. One of the most important components in the installation and maintenance of your PeopleSoft system is your on-site expertise.

You should be familiar with your operating environment and RDBMS and have the necessary skills to support that environment. You should also have a working knowledge of:

- SQL and SQL command syntax.
- PeopleSoft system navigation.
- PeopleSoft windows, menus, and pages, and how to modify them.
- Microsoft Windows.

Oracle recommends that you complete training, particularly the PeopleSoft Server Administration and Installation course, before performing an installation.

See Oracle University, http://education.oracle.com.

Typographical Conventions

To help you locate and understand information easily, the following conventions are used in this documentation:

Convention	Description
`Monospace`	Indicates a PeopleCode program or other code, such as scripts that you run during the install. Monospace is also used for messages that you may receive during the install process.
Italics	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example: Enter the letter *O*.
Initial Caps	Field names, commands, and processes are represented as they appear on the window, menu, or page.
lower case	File or directory names are represented in lower case, unless they appear otherwise on the interface.
Menu, Page	A comma (,) between menu and page references indicates that the page exists on the menu. For example, "Select Use, Process Definitions" indicates that you can select the Process Definitions page from the Use menu.
Cross-references	Cross-references that begin with *See* refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading *See Also* refer you to additional documentation that has more information regarding the subject.
" " (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.
⇒ (line-continuation arrow)	A line-continuation arrow inserted at the end of a line of code indicates that the line of code has been wrapped at the page margin. The code should be viewed or entered as a continuous line of code, without the line-continuation arrow.
Note. Note text.	Text that begins with *Note.* indicates information that you should pay particular attention to as you work with your PeopleSoft system.

Convention	Description
Important! Important note text.	A note that begins with *Important!* is crucial and includes information about what you need to do for the system to function properly.
Warning! Warning text.	A note that begins with *Warning!* contains critical configuration information or implementation considerations; for example, if there is a chance of losing or corrupting data. Pay close attention to warning messages.

Products

This documentation may refer to these products and product families:

- Oracle® BPEL Process Manager
- Oracle® Enterprise Manager
- Oracle® Tuxedo
- Oracle® WebLogic Server
- Oracle's PeopleSoft Application Designer
- Oracle's PeopleSoft Change Assistant
- Oracle's PeopleSoft Change Impact Analyzer
- Oracle's PeopleSoft Data Mover
- Oracle's PeopleSoft Process Scheduler
- Oracle's PeopleSoft Pure Internet Architecture
- Oracle's PeopleSoft Customer Relationship Management
- Oracle's PeopleSoft Financial Management
- Oracle's PeopleSoft Human Capital Management
- Oracle's PeopleSoft Enterprise Learning Management
- Oracle's PeopleSoft Pay/Bill Management
- Oracle's PeopleSoft PeopleTools
- Oracle's PeopleSoft Enterprise Performance Management
- Oracle's PeopleSoft Portal Solutions
- Oracle's PeopleSoft Staffing Front Office
- Oracle's PeopleSoft Supply Chain Management

Note. This documentation may refer to both Oracle's PeopleSoft Portal Solutions and to PeopleSoft PeopleTools portal or portal technologies. PeopleSoft Portal Solutions is a separate application product. The PeopleSoft PeopleTools portal technologies consist of PeopleSoft Pure Internet Architecture and the PeopleSoft PeopleTools portal technology used for creating and managing portals.

See http://www.oracle.com/us/products/applications/peoplesoft-enterprise/index.html for a list of PeopleSoft Enterprise products.

Related Information

Oracle provides reference information about PeopleSoft PeopleTools and your particular PeopleSoft application. The following documentation is available on My Oracle Support:

- PeopleTools: Getting Started with PeopleTools PeopleBook for your release. This documentation provides a high-level introduction to PeopleSoft PeopleTools technology and usage.

- PeopleSoft Application Fundamentals PeopleBook for your PeopleSoft application and release. This documentation provides essential information about the setup, design, and implementation of your PeopleSoft application.

To access PeopleSoft PeopleBooks for your application and release, go to the PeopleSoft Online Help website:

http://docs.oracle.com/cd/E17566_01/epm91pbr0/eng/psbooks/psft_homepage.htm

To install additional component software products for use with PeopleSoft products, including those products that are packaged with your PeopleSoft products, you should refer to the documentation provided with those products, as well as this documentation.

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like changed about our documentation, PeopleSoft PeopleBooks, and other Oracle reference and training materials. Please send your suggestions to:

PSOFT-Infodev_US@oracle.com

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions. We are always improving our product communications for you.

Chapter 1

Installing PeopleSoft Project Discovery and Endeca Information Discovery

This chapter discusses:

- Understanding PeopleSoft Project Discovery and Endeca Information Discovery Installation
- Installing PeopleSoft Project Discovery
- Installing Endeca Information Discovery
- Optimizing Dgraphs for Exalytics
- Implementing Project Discovery Applications
- Setting Up PeopleSoft for Using Endeca Studio
- Extracting, Transforming, and Loading Data and Defining Data Sources
- Importing Endeca Studio Applications and Setting Up Security
- Scheduling ETL Processes

Understanding PeopleSoft Project Discovery and Endeca Information Discovery Installation

This document is a technical guide for installers and system administrators who will implement and maintain Oracle's PeopleSoft Financials/Supply Chain Management 9.2 Project Discovery product. Oracle Endeca Information Discovery 3.1 must be installed with PeopleSoft Project Discovery 9.2. This technical guide provides the steps necessary for installing Endeca Information Discovery 3.1 and PeopleSoft Project Discovery 9.2.

PeopleSoft Project Discovery 9.2 is intended to run on Oracle Exalytics In-Memory hardware and has been certified on the Oracle, DB2 LUW, DB2 z/OS, and Microsoft SQL Server platforms.

Task 1-1: Installing PeopleSoft Project Discovery

This section discusses:

- Prerequisites
- Taking the Project Discovery Update from the FSCM Image
- Extracting the Archive Files
- Verifying That PeopleSoft Integration Broker Service Operations Are Activated
- Setting Permissions for Integration with Endeca
- Verifying the Target Location

• Providing Web Service

Prerequisites

Before you install PeopleSoft Project Discovery, ensure that the following PeopleSoft releases and updates are installed:

• PeopleSoft Financials/Supply Chain Management 9.2

• PeopleSoft FSCM Image 9.2.002 or higher

Note. If SSL or WS-Security Username Token is required for your installation, refer to chapter 3, "Setting Up a Secure Integration Environment," for additional installation instructions.

Task 1-1-1: Taking the Project Discovery Update from the FSCM Image

To take the PeopleSoft Project Discovery update from PeopleSoft FSCM Image 9.2.002 or higher, you first must define a custom change package in the Define Change Package wizard in Oracle's PeopleSoft Update Manager. Then you will create the change package in PeopleSoft Change Assistant and apply it to your target database.

For detailed instructions for taking updates from an image, see the PeopleSoft PeopleTools: Change Assistant and Update Manager Online Help (PeopleBooks).

To take the PeopleSoft Project Discovery update from the PeopleSoft FSCM Image:

1. Sign on to your PeopleSoft FSCM Image database and select PeopleTools, Lifecycle Tools, Update Manager, Define Change Package.

2. In the Package Name field of the Define Change Package wizard, enter a project name for the custom change package, and then click Next.

   In the following example, the project name is *PRJDISCOVERY* and the target database is *E92DISC6*. The target database name will be different for each customer.

Define Change Package wizard: Step 2

3. Select the Specific Updates search option, and then click Next.

The following example shows the Define Change Package wizard with Specific Updates selected:
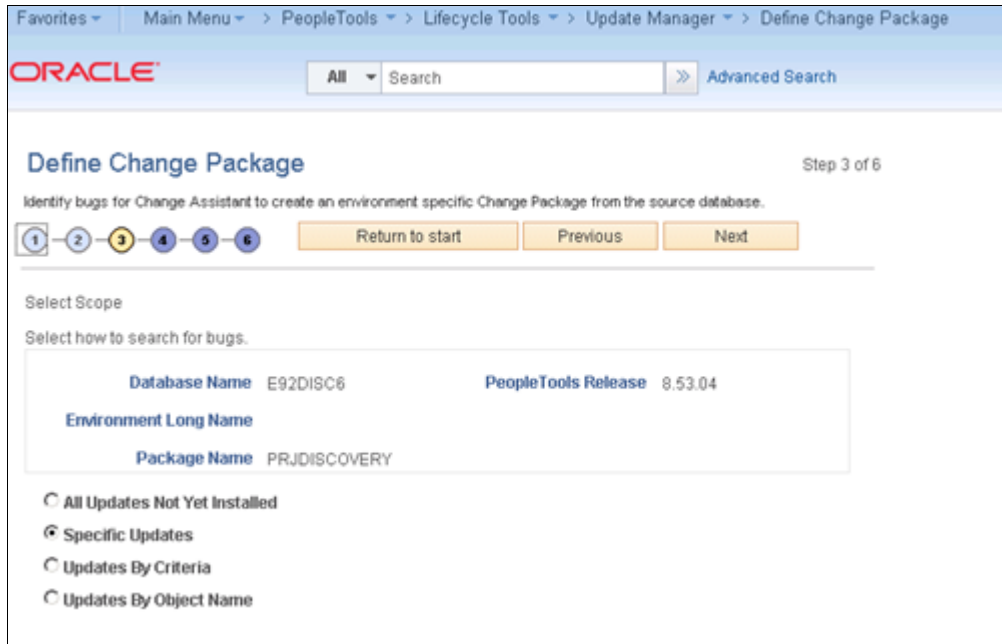
Define Change Package wizard: Step 3

4. Use the lookup icon in the Bug Number column to select the PeopleSoft Project Discovery bug number *17069374,* and then click Next.

The following example shows the bug number selected:
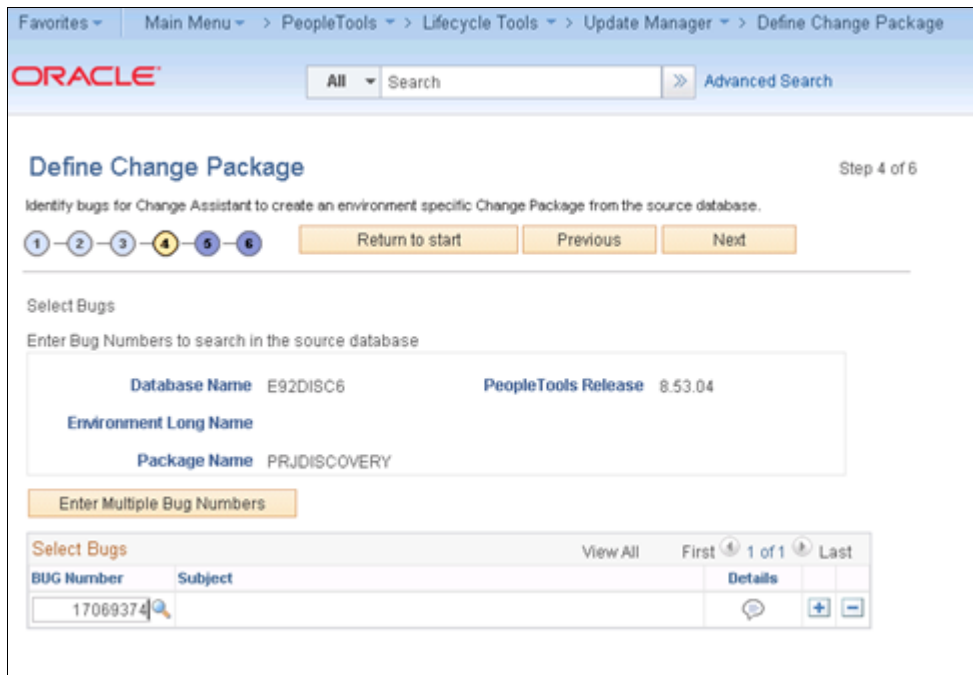
Define Change Package wizard: Step 4

5. Review the list of bugs that will be included in the change package.

This list includes all of the dependent bugs for bug number 17069374, as shown in the following example:

Identify bugs for Change Assistant to create an environment specific Change Package from the source database.

| ① | ② | ③ | ④ | ⑤ | ⑥ | Return to start | Previous | Next |

Review Bugs

Review bugs to be included in the package. Click on Next to create Change Package.

Database Name	E92DISC6	**PeopleTools Release** 8.53.04
Environment Long Name		
Package Name	PRJDISCOVERY	

☐ Show Already Applied Updates

Review Bugs   Find | View All | 🎞   First ◀ 1-10 of 18 ▶ Last

BUG Number	Product	Subject	User Selected	Applied	Tools Impact	True Post Req	Image Number	Details
17194416	PC	PC_BI_PC ABENDS AT STEP PC_BI_TO_PC.SYNC1.STEP03					2	💬
17073956	PRD	9.21 PEOPLESOFT IN-MEMORY PROJECT DISCOVERY (ENDECA) - PHASE 1					2	💬
16765184	BI	DUPLICATE INVOICES ARE GETTING CREATED FOR A TEMPORARY INVOICE					2	💬
17069374	PRD	9.21 PEOPLESOFT IN-MEMORY PROJECT DISCOVERY (PSFT) - PHASE 1	🚩				2	💬
16856362	GL	ADD NEW PRODUCT CODE PRD (PROJECT DISCOVERY) TO INSTALLATION PRODUCT PAGE					2	💬
16734557	BI	BILLING - ADJ INVOICES DOES NOT RETAIN THE BI_HDR.ORIGINAL_INVOICE AFTER BILLING					2	💬
16784663	CA	PSA_ACCTGGL ABENDS AT STEP PSA_ACCTGGL.SYNC1.STEP08					1	💬
16534490	PC	PC_AM INTEGRATION - SEND RESOURCE TYPE, CATEGORY, AND SUBCATEGORY TO AM					1	💬
16632091	PC	PERFORMANCE AT PC_BI_TO_PC.UPDATE.BILROW AND UPDATE.PAYROW					1	💬
16398544	GM	ENDECA: GM SUPPORT PC INCREMENTAL LOADS FOR REPORTING					1	💬

Define Change Package wizard: Step 5

6. Click Next.

The project definition PRJDISCOVERY is created in the source image, as shown in the following example. This project definition contains PeopleSoft Project Discovery, installation changes, and impacted product changes.
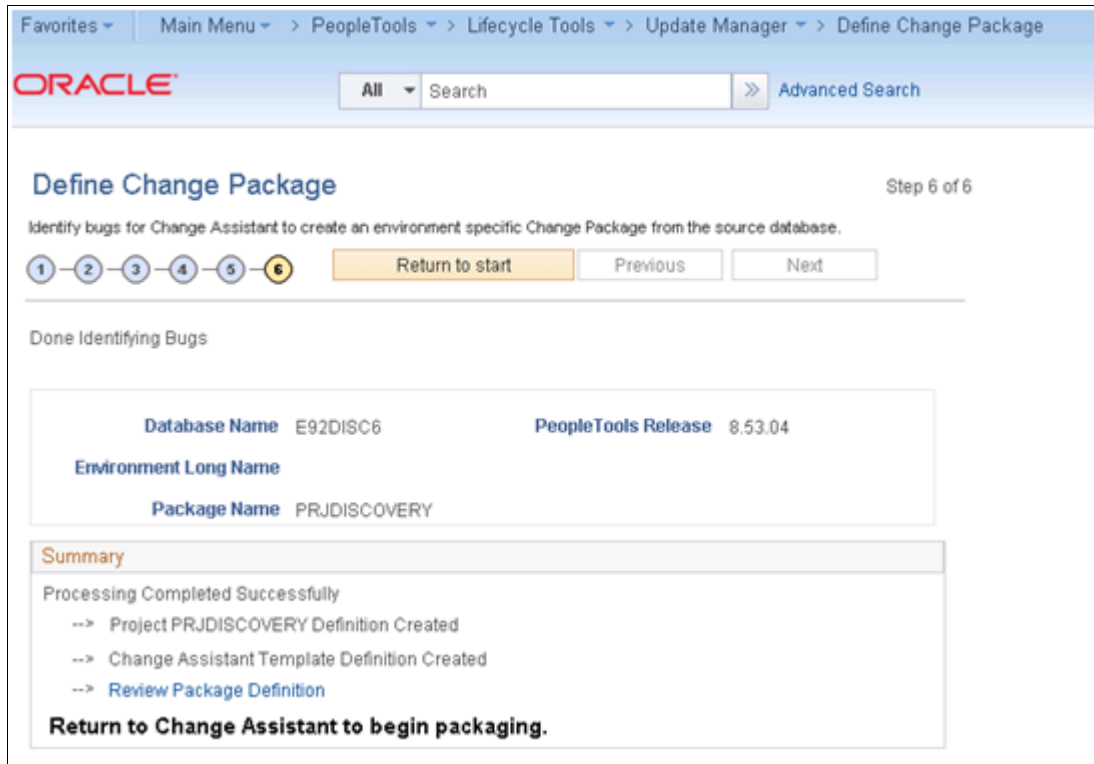
Define Change Package wizard: Step 6

7. After you have finalized the change package definition, create the change package in PeopleSoft Change Assistant and apply it to your target database.

Task 1-1-2: Extracting the Archive Files

To install PeopleSoft Project Discovery, you must first extract the archive files.

To extract the archive files:

1. After applying the PeopleSoft FSCM Image updates, verify that the following two archive files are under the *PS_APP_HOME/*Setup/Endeca folder:

   • PRD_EID31_APPS.zip—This file contains the Project Discovery Endeca applications.

   You will use this file to complete the section "Implementing Project Discovery Applications."

   • PRD_EID31_COMMON.zip—This file contains the common setup files that you will need for installing Endeca Information Discovery Studio in the next section, "Installing Endeca Information Discovery."

2. Extract both files to separate folders.

Task 1-1-3: Verifying That PeopleSoft Integration Broker Service Operations Are Activated

In this task, you verify that the new PeopleSoft Integration Broker service operations are activated. This task is required for authentication and security.

To verify that PeopleSoft Integration Broker service operations are activated:

1. Select PeopleTools, Integration Broker, Integration Setup, Service Operations.

2. In the search criteria Service field, enter *EID* and click Search.

   You should see two service operations: EID_AUTH and EID_SEC.

3. Select EID_AUTH.

4. Verify that the Active check box is selected.

   If not, select the Active check box and click Save, as shown in the following example:

Service Operations page

5. Go to the Handlers and Routings tabs, and make sure the handlers and routings are also activated.

6. Select Return to Service at the bottom of the page.

7. Repeat steps 1 through 5, selecting the EID_SEC service operation in step 3.

Task 1-1-4: Setting Permissions for Integration with Endeca

Oracle delivers three new PeopleSoft permission lists with different levels of access. You need to update the appropriate roles or add new roles to include these new permission lists. This task is required for integration with Endeca and needs to be performed only once.

Note. A new web service, EID, is provided for Endeca to authenticate the user and authorize access to the Endeca applications and data sources. If the peoplesoft.username value is specified in the portal-ext.properties file, that user ID should be granted access with permission list EPEID3000. Otherwise, the default user ID of the ANONYMOUS node should be assigned with permission list EPEID3000.

To set permissions for integration with Endeca:

1. Select PeopleTools, Security, Permissions and Roles, Roles.

2. Add the permission lists to the appropriate roles.

   The PeopleSoft permission lists provided by Oracle are listed in the following table:

Permission List	Description
EPEID1000	Endeca Administration—Gives the user access to the EID_CM and EID_DS components.
EPEID2000	Endeca User Runtime—Allows the AJAX call from Endeca pages to PeopleSoft to extend the PeopleSoft session. Any user who has access to Project Discovery should be granted access with this permission list.
EPEID3000	Endeca Web Service—Allows PeopleSoft to verify authentication requests from Endeca.

See the product documentation for PeopleSoft PeopleTools: Security Administration for information about setting up roles.

Task 1-1-5: Verifying the Target Location

In this task, you verify that the PeopleSoft Integration Broker target location is set correctly.

To verify the target location:

1. Select PeopleTools, Integration Broker, Configuration, Service Configuration.

2. Click the Set Up Target Locations link.

3. Verify that the target location has the correct machine, port, and node values.

   If not, set the values appropriately.

Task 1-1-6: Providing Web Service

In this task, you perform a one-time setup to provide web service to the WSDL repository. This task is required for integrating with Endeca.

To provide web service:

1. Select PeopleTools, Integration Broker, Web Services, Provide Web Service.

2. Select the check box for the service name EID and click Next.

The following example shows the Provide Web Service Wizard, Select Services page:

Provide Web Service Wizard: Select Services page

3. Select the check boxes for both service operations, EID_AUTH and EID_SEC, and click Next.

   The new web service, EID, contains two service operations, as shown:

Web Service Name	Operation Name
EID	EID_AUTH
EID	EID_SEC

The following example shows the Select Service Operations page:

Select Service Operations page

4. Click Next and then Finish.

5. Print the last page of the wizard, Confirm Results.

   The following example of the Confirm Results page shows the generated WSDL URL:

Provide Web Service Wizard: Confirm Results page

6. Copy the WSDL URL and open it in a browser window.

   You should see XML text.

7. Search for the string "soap:address" and print or make a note of the location attribute value associated with the soap:address.

You will use this soap:address for the peoplesoft.endpoint_address when you install Endeca Studio and set up the data sources in Endeca Studio.

See the product documentation for PeopleSoft PeopleTools: PeopleSoft Integration Broker for more information about providing services.

Task 1-2: Installing Endeca Information Discovery

This section discusses:

- Understanding Information Discovery Installation
- Installing Endeca Studio with the PeopleSoft Extension
- Disabling Password Changes on Endeca Studio
- Configuring MDEX Security Manager
- Configuring PeopleSoft as a Proxy for Endeca Studio

Understanding Information Discovery Installation

To install Oracle Endeca Information Discovery, you will use the Oracle Endeca Information Discovery 3.1 installation guides, available at the following link:

http://docs.oracle.com/cd/E40518_01/index.htm

Use the documents listed below, following the instructions for Oracle WebLogic (not Tomcat):

- Oracle Endeca Server 7.6.x Documentation, *Endeca Server Installation Guide.*
- Oracle Endeca Information Discovery Integrator 3.1.x Documentation, *Integrator ETL Installation Guide.*

  You will also need to install Integrator ETL Server in order to schedule ETL processes.

- Oracle Endeca Information Discovery Integrator 3.1.x Documentation, *Integrator Acquisition System Installation Guide.*
- Oracle Endeca Information Discovery Studio 3.1.0 Documentation, *Studio Installation Guide.*

  For special instructions, see the next section, Installing Endeca Studio with the PeopleSoft Extension.

Task 1-2-1: Installing Endeca Studio with the PeopleSoft Extension

You can only install Endeca Studio with the PeopleSoft extension as a standalone application on Oracle WebLogic Server 11g. This task is required for PeopleSoft authentication and security.

Important! After you have installed Endeca Studio 3.1 using the PeopleSoft extension, Oracle does not recommend applying patches for Endeca Studio 3.1 because that might overwrite the PeopleSoft extension.

Before completing this task, ensure that the PRD_EID31_COMMON.zip archive file has been extracted.

Once the PRD_EID31_COMMON.zip archive file has been extracted, you should find the following three files:

- endeca-portal-weblogic-3.1.14220-psft.ear
- portal-ext.properties
- web-xml-eid-section.txt: This file is only used if you configure PeopleSoft as a proxy. For details, see the later task Configuring PeopleSoft as a Proxy for Endeca Studio.

To install Endeca Studio with the PeopleSoft extension:

1. Download Oracle Endeca Information Discovery Studio (3.1) for Linux x86-64 and WebLogic from Oracle Software Delivery Cloud (http://edelivery.oracle.com).

2. Follow the instructions in the Endeca *Studio Installation Guide,* replacing the .ear and .properties files from the download with the PeopleSoft files delivered by Oracle that you have already extracted.

   The following steps will guide you through the procedure in the chapter "Installing Studio on Oracle WebLogic Server 11gR1 (10.3.6)" in the Endeca *Studio Installation Guide* with some additional instructions, as noted.

   Note. References in this document to titles and step numbers in the Endeca *Studio Installation Guide* are based on the current guide from Endeca at the time this document was published. If the Endeca guide changes, the titles or step numbers referenced in this document may be slightly different. In that case, use the description of the task to follow the Endeca instructions.

3. Follow the instructions, as written, in the following sections of the chapter "Installing Studio on Oracle WebLogic Server 11gR1 (10.3.6)":

   • "About installing Studio on WebLogic Server"

   • "Downloading and installing the Sun JDK"

   • "Downloading and installing WebLogic Server"

4. Follow the instructions in the section "Creating and configuring a WebLogic domain for Studio," except in step 11, append the following JAVA_OPTIONS argument:

   ```
   -Djavax.xml.soap.MessageFactory=com.sun.xml.internal.messaging.saaj.soap⇒
   .ver1_1.SOAPMessageFactory1_1Impl
   ```

   Note. Throughout this document where code is specified, a line-continuation arrow (⇒) is used at the end of a line to indicate that the line of code continues. If you copy and paste the lines of code, be sure to delete any line-continuation arrows.

5. Follow the instructions in the section "Deploying Studio to the WebLogic domain," except after step 1b, perform the following additional steps (6 through 10).

6. Update the portal-ext.properties file in the Studio Home directory by entering the following PeopleSoft URLs:

   • peoplesoft.endpoint_address=http://*<machine_name>*:*<port>*/ PSIGW/PeopleSoftServiceListeningConnector

   Note. This should be the peoplesoft.endpoint_address that was retrieved in the task Providing Web Service.

   • peoplesoft.ping_address=http://*<machine_name>*:*<port>*/psc/*<instance_name>*/ EMPLOYEE/ERP/s/WEBLIB_EID.ISCRIPT1.FieldFormula.IScript_Ping

   • peoplesoft.expire_address=http://*<machine_name>*:*<port>*/psp/*<instance_name>*/ EMPLOYEE/ERP/h/?cmd=expire

   • peoplesoft.signout_address=http://*<machine_name>*:*<port>*/psp/ps/EMPLOYEE/ERP/?cmd=logout

   Note. You can switch to https protocol if SSL is required.

7. Optionally, set Endeca's cookie domain in the portal-ext.properties file:

   session.cookie.domain=

8. Update Endeca's session timeout and warning values in the portal-ext.properties file to be consistent with the following PeopleSoft values:

- session.timeout=*20*
- session.timeout.warning=*2*

9. Continue with steps 1c through 5 in the section "Deploying Studio to the WebLogic domain."

10. To verify that Endeca Studio has deployed successfully, in a web browser, go to http://*<hostName>*:*<portNumber>/*eid, where *<hostName>* is the Endeca Studio name, and *<portNumber>* is the port number.

    For a non-SSL implementation, the Endeca Studio port number is 8101.

    For example:

    http://host.us.oracle.com:8101/eid

    Use the following default login and password:

    - Login: admin@oracle.com
    - Password: Welcome123. (You are immediately asked to change the password.)

11. Optionally, follow the instructions in the section "Creating a Windows service for your Studio WebLogic domain."

12. Optionally, follow the instructions in the section "Changing the Studio home directory on WebLogic Server."

13. The instructions in the section "Changing the context path for Studio on WebLogic Server" are not necessary with the PeopleSoft customized version. By default, Endeca Studio uses the nonroot/eid context path.

Task 1-2-2: Disabling Password Changes on Endeca Studio

Since the Endeca applications will be accessed through PeopleSoft sign-in, Oracle highly recommends that you disable password changes on Endeca Studio for password security. Before completing this task, ensure that Endeca Studio is installed.

To disable password changes:

1. In Endeca Studio, sign in as administrator and select Control Panel, Portal, Password Policies.

2. On the Default Password Policy page, click Actions, and then select Edit from the Actions list.

3. Deselect the Changeable check box and click Save.

The following example shows the Default Password Policies page:

Default Password Policies page

Task 1-2-3: Configuring MDEX Security Manager

MDEX Security Manager configuration is required for PeopleSoft authentication and security.

To configure MDEX Security Manager:

1. In Endeca Studio, sign in as administrator and select Control Panel, Information Discovery, Framework
   Settings.

2. In the df.mdexSecurityManager field, enter the following:

   com.endeca.portal.extensions.PeoplesoftMDEXSecurityManager

Task 1-2-4: Configuring PeopleSoft as a Proxy for Endeca Studio

Configuring PeopleSoft as a proxy for Endeca Studio is required only if the PeopleSoft and Endeca applications
are installed in different authentication token domains. Otherwise, you may skip this task.

See the product documentation for PeopleSoft PeopleTools: System and Server Administration for instructions for
setting the cookie domain.

To configure PeopleSoft as a proxy for Endeca Studio:

1. Locate the PeopleSoft Pure Internet Architecture (PIA) web.xml file found under the following PeopleSoft
   configuration home directory:

   {*PS_CFG_HOME*}\webserv\peoplesoft\applications\peoplesoft\PORTAL.war\WEB-INF

   The path may be different, depending on how PeopleSoft has been installed.

2. Update the PeopleSoft proxy code section and insert it into the web.xml file, as follows:

   a. In any text editor, open the file named web-eid-section.txt, which you extracted from the

PRD_EID31_COMMON.zip archive file in the earlier task Extracting the Archive Files.

b. Replace all occurrences of *endeca_studio_url* with your Endeca Studio URL, http://*<hostName>*:
<portNumber> (use https if Endeca Studio is running in secure mode), where *<hostName>* is the Endeca
Studio name and *<portNumber>* is the port number.

For example:

```
<!-- endeca begin -->
<servlet>
  <servlet-name>endeca</servlet-name>
  <servlet-class>weblogic.servlet.proxy.HttpProxyServlet</servlet-⇒
class>
  <init-param>
    <param-name>redirectURL</param-name>
    <param-value>
       http://slc02kol.us.oracle.com:8101
    </param-value>
  </init-param>
</servlet>

<servlet-mapping>
  <servlet-name>endeca</servlet-name>
  <url-pattern>/eid/*</url-pattern>
</servlet-mapping>
<!-- end endeca -->
```

c. Copy and paste the updated code section into the web.xml file between the <servlet> and the <servlet-mapping> sections.

You should now have two ways to access Endeca Studio: the original Endeca Studio URL and the
PeopleSoft Proxy URL.

3. Verify that the proxy setup is configured successfully, as follows:

a. Restart the WebLogic Pure Internet Architecture (PIA) server.

b. In a web browser, go to http://*<hostname>*:*<portNumber>*/eid, where *<hostname>* is the name of the
PIA server and *<portnumber>* is the PIA port number.

You should see the Endeca logon page.

Task 1-3: Optimizing Dgraphs for Exalytics

The default Dgraph settings are configured with only two compute threads. Since Exalytics possesses 40 cores,
these Dgraphs will severely underperform. Oracle highly recommends that you modify the Dgraph settings to
maximize performance. As a standard rule, you should set the thread count to the number of CPU cores.

To modify the Dgraph parameters, you must use the endeca-cmd utility that is deployed along with the Endeca
Server. The endeca-cmd utility is located in the following directory:

{MiddlewareHome}/EndecaServer7.6/endeca-cmd/

The default data domain profile is configured for only 2 cores. In this task, you create a new data domain profile
for 40 cores (or the number of CPU cores of your system) and increased memory usage.

To create a new data domain profile:

1. Access the endeca-cmd utility from the following directory:

{MiddlewareHome}/EndecaServer7.6/endeca-cmd/

2. Use this utility to review the default data domain profile by using the `get-dd-profile` command.

In the following example of the default data domain profile, note that the NumComputeThreads default value is 2 and the ComputerCacheSizeMB default value is 0 (which indicates 10% of available memory):

```
cd $MW_HOME/EndecaServer7.6/endeca-cmd

# Check default
./endeca-cmd get-dd-profile default
default
Description:
AllowQueriesOnLeader: true
AllowOverSubscribe: true
NumFollowers: 0
ReadOnly: false
NumComputeThreads: 2
ComputeCacheSizeMB: 0
StartupTimeoutSeconds: 600
ShutdownTimeoutSeconds: 30
SessionIdType: HEADER
SessionIdKey: X-Endeca-Session-ID
```

3. Use the `put-dd-profile` command to create a new data domain profile named EXAProfile with 40 cores and 131072 MB of memory (recommended).

You may use a different name, but be sure to make a note of the name for a later task. This example shows the newly created data domain profile:

```
# Create EXAProfile
./endeca-cmd put-dd-profile EXAProfile --num-compute-threads 40 --⇒
compute-cache-size 131072
```

4. Use the `get-dd-profile` command again to review the new EXAProfile data domain profile.

This example shows the description of the new data domain profile:

```
# Check EXAProfile
./endeca-cmd get-dd-profile EXAProfile
EXAProfile
Description:
AllowQueriesOnLeader: true
AllowOverSubscribe: true
NumFollowers: 0
ReadOnly: false
NumComputeThreads: 40
ComputeCacheSizeMB: 131072
StartupTimeoutSeconds: 600
ShutdownTimeoutSeconds: 30
SessionIdType: HEADER
SessionIdKey: X-Endeca-Session-ID
Args: []
```

5. Verify that the NumComputeThreads and ComputeCacheSizeMB settings are correct.

Task 1-4: Implementing Project Discovery Applications

This section discusses:

- Understanding Project Discovery Application Implementation
- Importing Integrator Projects
- Updating the Crawl Configuration Files

Understanding Project Discovery Application Implementation

In the task Extracting the Archive Files, you extracted the PRD_EID31_APPS.zip archive file. You will need these files for the tasks in this section.

Note. The files that you will need to use and the steps that you will need to perform depend on which projects you choose to implement. You must follow all of the instructions to implement PeopleSoft Project Costing, which is required for PeopleSoft Project Discovery. If you want to additionally implement any of the optional projects, PeopleSoft Program Management, PeopleSoft Resource Management, PeopleSoft Expenses, and PeopleSoft Assets, you will need to follow the instructions in the remainder of this installation guide that are applicable for the optional projects that you choose to implement. You can skip any steps that only apply to projects that you do not want to implement.

The files that you will need are located in the directory structure as shown:

- PC_EID31 folder

  - Integrator folder—Contains the CloverETL project for PeopleSoft Project Costing.

  - Studio folder—Contains the Studio application for PeopleSoft Project Costing.

- PGM_EID31 folder

  - Integrator folder—Contains the CloverETL project for PeopleSoft Program Management.

  - Studio folder—Contains the Studio application for PeopleSoft Program Management.

- RS_EID31 folder

  - Integrator folder—Contains the CloverETL project for PeopleSoft Resource Management.

  - Studio folder—Contains the Studio application for PeopleSoft Resource Management.

- EX_EID31 folder

  - Integrator folder—Contains the CloverETL project for PeopleSoft Expenses.

  - Studio folder—Contains the Studio application for PeopleSoft Expenses.

- AM_EID31 folder

  - Integrator folder—Contains the CloverETL project for PeopleSoft Assets.

  - Studio folder—Contains the Studio application for PeopleSoft Assets.

Task 1-4-1: Importing Integrator Projects

In Endeca Integrator ETL, you import the delivered CloverETL projects for PeopleSoft Project Costing, PeopleSoft Program Management, PeopleSoft Resource Management, PeopleSoft Expenses, and PeopleSoft Assets. This task is required for implementing PeopleSoft Project Discovery.

Before you begin this task, ensure that all tasks in the section Installing Endeca Information Discovery have been completed and that Endeca Server is running.

To import the Endeca Integrator ETL projects:

1. In Endeca Integrator ETL, select File, New, CloverETL Project.

The New CloverETL Project page appears.

2. Enter the new project name PC_EID31 and click Finish.

The following example shows the New CloverETL Project page:
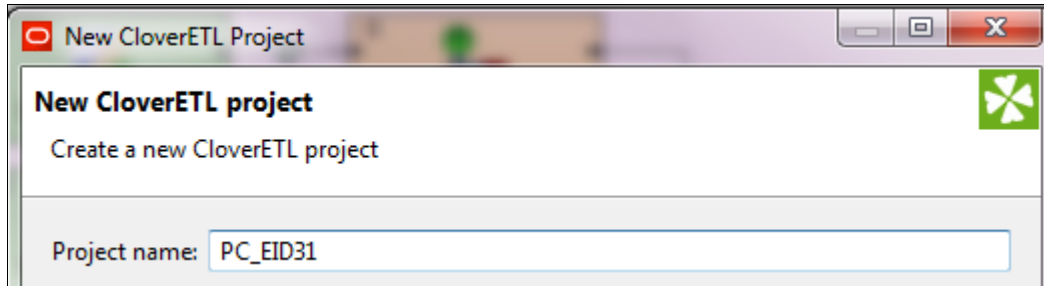
New CloverETL Project page

3. After the project has been created, right-click the project name and select Import.

The Import page appears.

4. Under the General folder, select the File System folder as the import resource and click Next.

The following example shows the Select page with the File System folder selected:
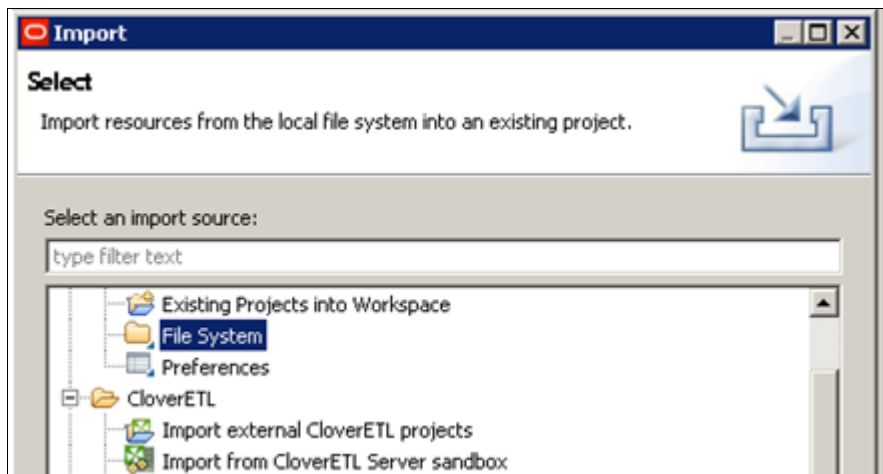
Select page

5. Click the Browse button to select the "From directory."

6. Select the Integrator folder under the PC_EID31 folder from the extracted archive file, making sure that all the sub-folders are also selected.

7. Click Finish.

   The following example shows the File system page with the Integrator folder selected:
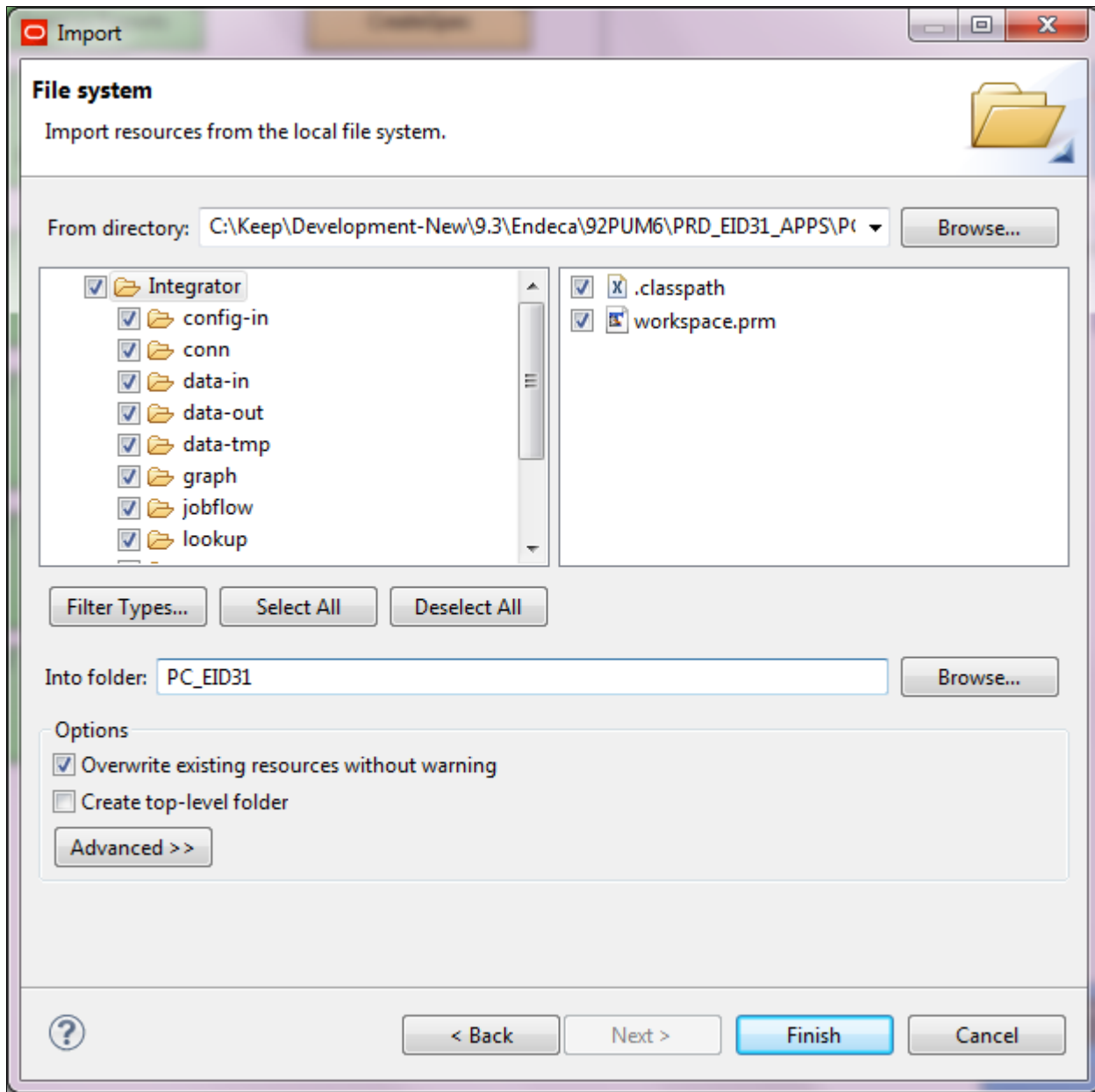
File System page

8. After the CloverETL project has been imported, open the workspace.prm file located in the left pane of the
   Data Profiling page in Endeca Integrator ETL, and update it as follows:

   a. Update the ENDECA_SERVER_HOST variable, replacing *localhost* with your server name.

   b. Update the PSFT_HOST_NAME value with your PeopleSoft host name.

c. Update the DATA_DOMAIN_PROFILE value with "EXAProfile" or the data domain profile name that you used in the task Optimizing Dgraphs for Exalytics.

The following example shows where to make the updates in the workspace.prm file:
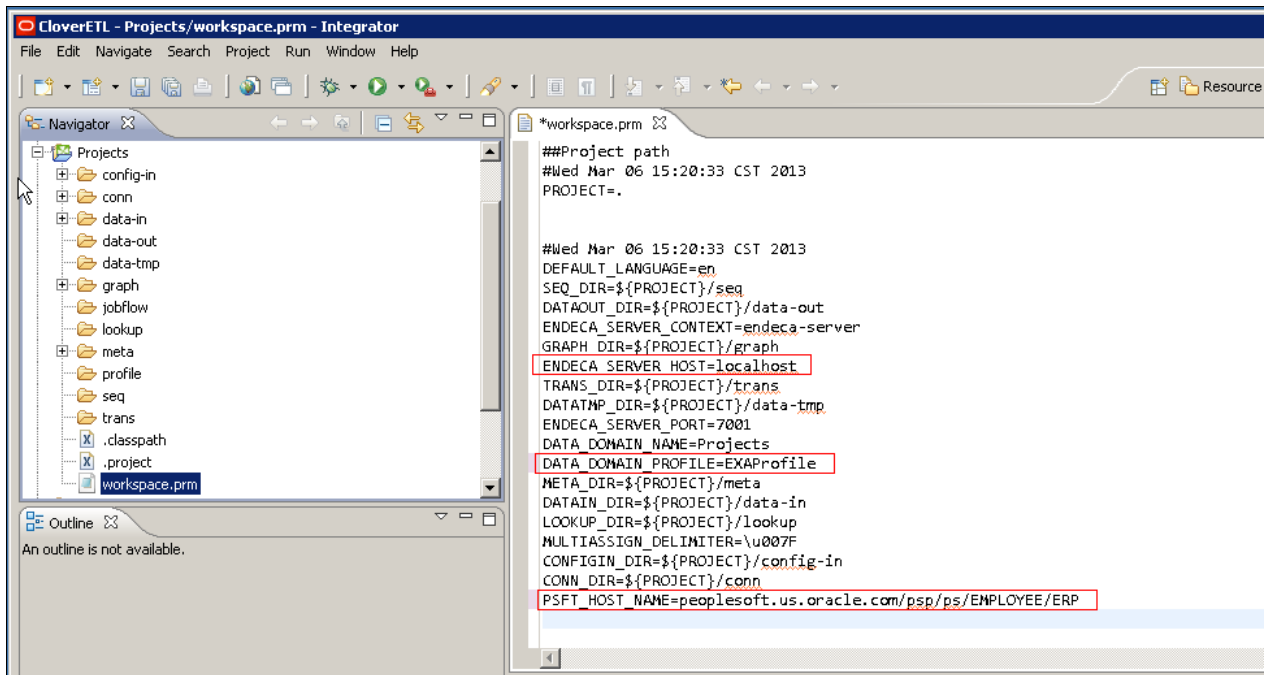
workspace_prm file example

9. Open the LoadData.grf graph located under the graph folder in the left pane of the Data Profiling page in Endeca Integrator ETL.

10. In the Outline pane, locate the Connections folder and update the connection information for your PeopleSoft database from which data will be loaded into Endeca.

On the Database connection page, enter values for the Name, User, Password, and URL fields.

11. If you are on Oracle, select an Oracle driver from the list of available drivers.

The following example shows the Database connection page for Oracle:
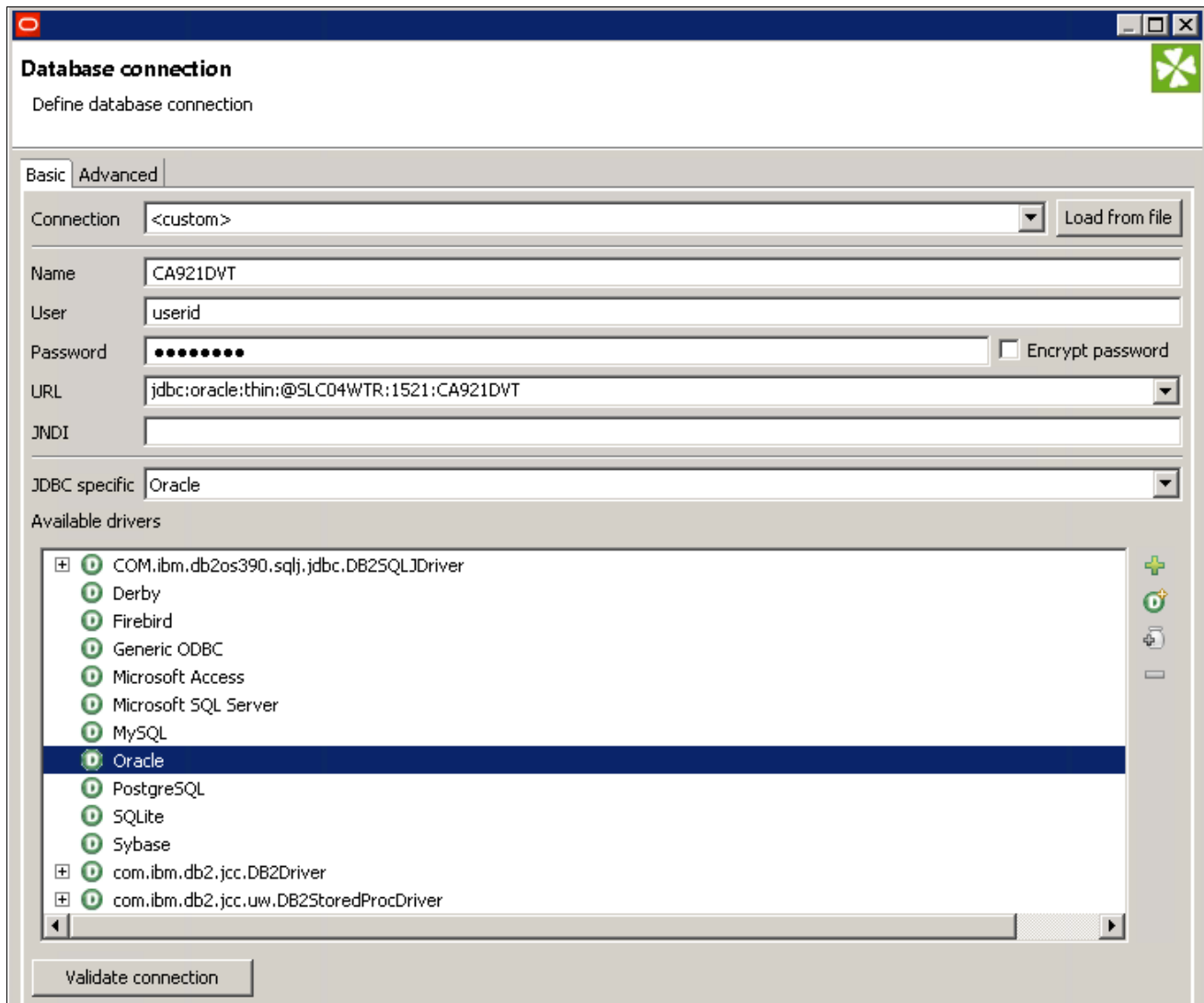
Database connection page for Oracle

Go to step 16.

12. If you are on DB2, since Endeca does not deliver an available JDBC driver for DB2, manually add a DB2 driver as follows:

a. In the available drivers section, select the "Load Driver from JAR" (plus) icon.

b. When you are prompted for the location of the db2jcc.jar file, select the file.

    c. Click Save.

       The following example shows the Database connection page for DB2:
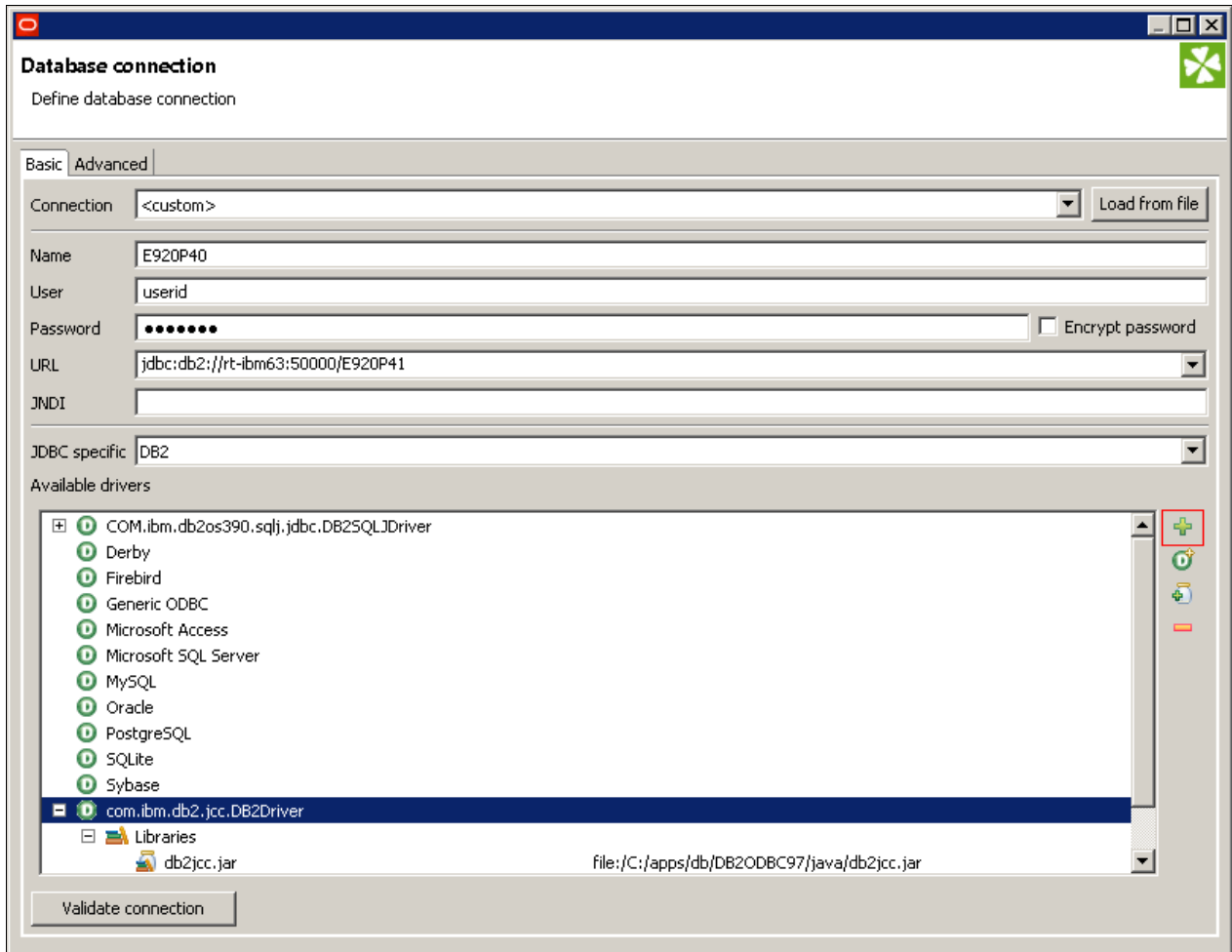
Database connection page for DB2

13. If you are on DB2 OS/390 (DB2 z/OS), after adding the DB2 JDBC driver, identify the DB2 license JAR file as follows:

    a. Select the "Add JAR to Driver Classpath" icon.

    b. When you are prompted for the location of the db2jcc_license_cisuz.jar file, select the file.

c. Click Save.

The following example shows the Database connection page for DB2 OS/390:
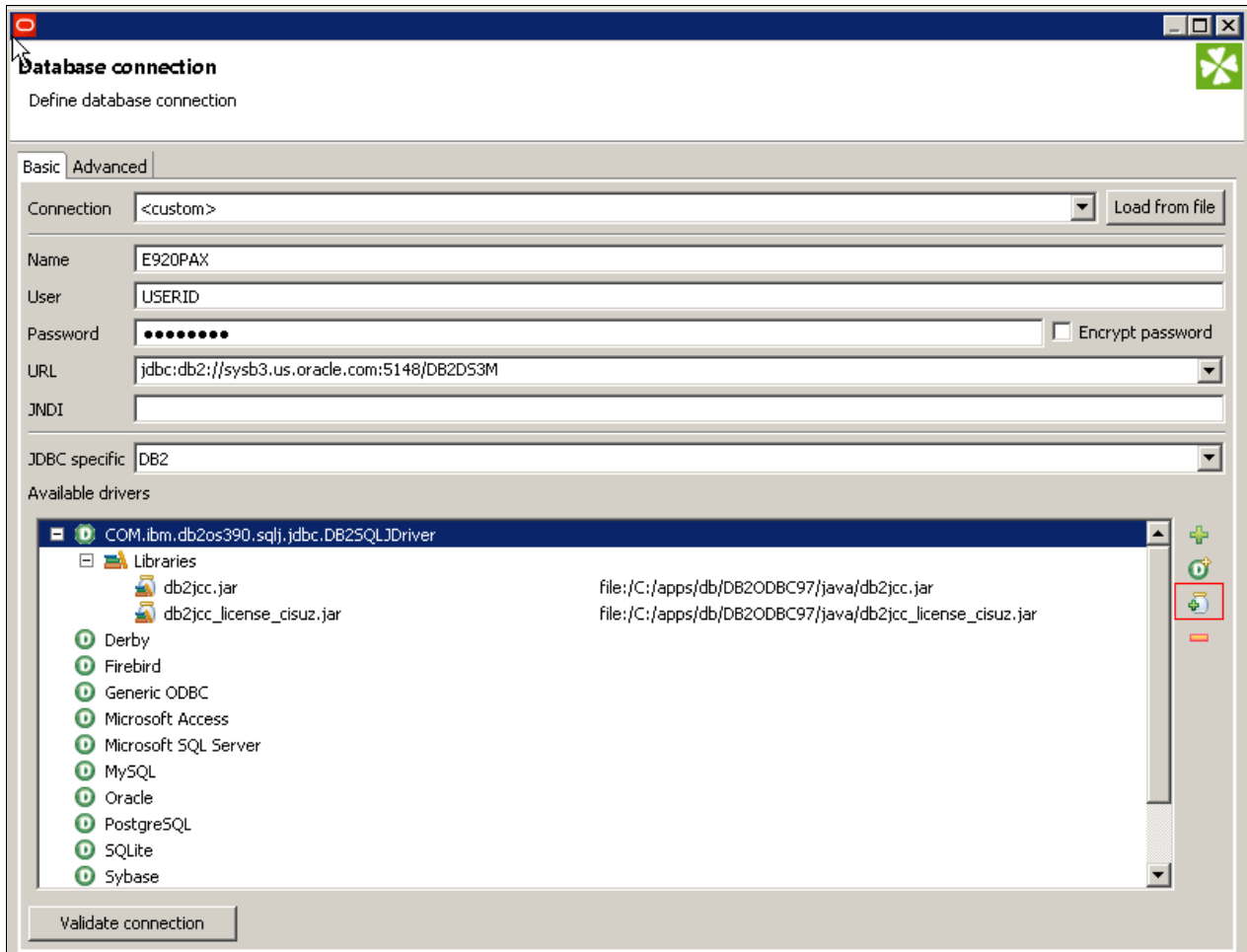
Database connection page for DB2 OS/390

14. If you are on DB2 OS/390, to meet the requirement for fully qualified table names, set the current SQLID to the database name as follows:

a. Select the Advanced tab.

b. Keep the Thread-safe connection check box selected by default.

c. Click the plus (+) button to add a custom JDBC property.

d. In the Name column, enter *currentSQLID*.

e. In the Value column, enter the database name.

The following example shows the Advanced tab of the Database connection page:

Database connection page: Advanced tab

f. Click OK.

Go to step 16.

15. If you are on Microsoft SQL Server, select the JDBC driver for Microsoft SQL Server from the list of available drivers.

If your MS SQL database is set up as an unnamed instance, there is no special configuration. However, if your MS SQL database is set up with named instances, you will need to identify the instance name by setting up a custom JDBC property as follows:

a. Select the Advanced tab.

b. Keep the Thread-safe connection check box selected by default.

c. Click the plus (+) button to add a custom JDBC property.

d. In the Name field, enter *INSTANCE.*

    e. In the Value field, enter the instance name.

       The following example shows the Advanced tab of the Database connection page:

Database connection page: Advanced tab

    f. Click OK.

16. After all the connection information has been entered on the Database connection page, click the Validate
Connection button to make sure connectivity is validated.

17. Click OK and then Save.

    You have now finished importing the PeopleSoft Project Costing CloverETL project.

18. Repeat steps 1 through 17 to import the PeopleSoft Resource Management CloverETL project, with the
following exceptions and additional instructions:

- In step 2, create a project called RS_EID31.
- In step 6, import the PeopleSoft Resource Management CloverETL project from the Integrator folder
under the RS_EID31 folder from the delivered applications archive file.

- After step 8c, for crawling resumes using IAS you also need to update additional parameters in the workspace.prm file, as described in the following table:

Parameter	Description
IAS_BIN_DIR	Replace this value with the directory where the IAS Bin is installed.
IAS_CRAWLRESUME_SCRIPTS	Replace the {project-path} variable with the path of your project.
IAS_CRAWLRESUME_CONFIG	Replace the {project-path} variable with the path of your project.
IAS_SERVER_HOST	Replace this variable with the name of the host server where IAS is installed.
IAS_SERVER_HOST_PORT	Replace this value with the IAS port.

In the following example, the parameters that you need to update are highlighted in bold type:

```
IAS_BIN_DIR=/u01/app/oracle/endeca/IAS/3.1.0/bin
IAS_CRAWLRESUME_SCRIPTS={project-path}/config-in/ResumeCrawl.sh
IAS_CRAWLRESUME_CONFIG={project-path}/config-in/CrawlConfig_Resume.xml
IAS_CRAWLRESUME_ID=rs_rescrawl
IAS_SERVER_HOST=IAShostname
IAS_SERVER_HOST_PORT=8401
IAS_SERVER_CONTEXT=ias-server
IAS_RECORD_STORE=rs_resumes
```

Replace *{project-path}* with the entire workspace file path for your project. The workspace directory path will be different, but may be similar to the following example:

/ds1/home/oracle/workspace/RS_EID31

19. Repeat steps 1 through 17 to import the PeopleSoft Program Management CloverETL project, with the following exceptions and additional instructions:

- In step 2, create a project called PGM_EID31.

- In step 6, import the PeopleSoft Program Management CloverETL project from the Integrator folder under the PGM_EID31 folder from the delivered applications archive file.

- After step 8c, for crawling file attachments using IAS you also need to update additional parameters in the workspace.prm file, as described in the following table:

Parameter	Description
IAS_BIN_DIR	Replace this value with the directory where the IAS Bin is installed.
IAS_CRAWLPGM_SCRIPTS	Replace the {project-path} variable with the path of your project.
IAS_CRAWLPGM_CONFIG	Replace the {project-path} variable with the path of your project.
IAS_SERVER_HOST	Replace this variable with the name of the host server where IAS is installed.
IAS_SERVER_HOST_PORT	Replace this value with the IAS port.

In the following example, the parameters that you need to update are highlighted in bold type:

```
IAS_BIN_DIR=/ds1/products/oracle/endeca/IAS/3.1.0/bin
IAS_CRAWLPGM_SCRIPTS={project-path}/config-in/PGMCreateCrawl.sh
IAS_CRAWLPGM_CONFIG={project-path}/config-in/PGMCrawlConfig.xml
IAS_CRAWLPGM_ID=pgm_attachments
IAS_SERVER_HOST=IAShostname
IAS_SERVER_HOST_PORT=8401
IAS_SERVER_CONTEXT=ias-server
IAS_RECORD_STORE=pgm_attachments
```

Replace {project-path} with the entire workspace file path for your project. The workspace directory path will be different, but may be similar to the following example:

/ds1/home/oracle/workspace/PGM_EID31

20. Repeat steps 1 through 17 to import the PeopleSoft Expenses CloverETL project, with the following exceptions and additional instructions:

- In step 2, create a project called EX_EID31.

- In step 6, import the PeopleSoft Expenses CloverETL project from the Integrator folder under the EX_EID31 folder from the delivered applications archive file.

- After step 8c, for crawling file attachments using IAS you also need to update additional parameters in the workspace.prm file, as described in the following table:

Parameter	Description
IAS_BIN_DIR	Replace this value with the directory where the IAS Bin is installed.
IAS_CRAWLEX_SCRIPTS	Replace the {project-path} variable with the path of your project.
IAS_CRAWLEX_CONFIG	Replace the {project-path} variable with the path of your project.
IAS_SERVER_HOST	Replace this variable with the name of the host server where IAS is installed.
IAS_SERVER_HOST_PORT	Replace this value with the IAS port.

In the following example, the parameters that you need to update are highlighted in bold type:

```
IAS_BIN_DIR=/ds1/products/oracle/endeca/IAS/3.1.0/bin
IAS_CRAWLEX_SCRIPTS={project-path}/config-in/EXCreateCrawl.sh
IAS_CRAWLEX_CONFIG={project-path}/config-in/EXCrawlConfig.xml
IAS_CRAWLEX_ID=ex_attachments
IAS_SERVER_HOST=IAShostname
IAS_SERVER_HOST_PORT=8401
IAS_SERVER_CONTEXT=ias-server
IAS_RECORD_STORE=ex_attachments
```

Replace {project-path} with the entire workspace file path for your project. The workspace directory path will be different, but may be similar to the following example:

/ds1/home/oracle/workspace/EX_EID31

21. Repeat steps 1 through 17 to import the PeopleSoft Assets CloverETL project, with the following exceptions and additional instructions:

- In step 2, create a project called AM_EID31.

- In step 6, import the PeopleSoft Assets CloverETL project from the Integrator folder under the AM_EID31 folder from the delivered applications archive file.

- After step 8c, for crawling file attachments using IAS you also need to update additional parameters in the workspace.prm file, as described in the following table:

Parameter	Description
IAS_BIN_DIR	Replace this value with the directory where the IAS Bin is installed.
IAS_CRAWLAM_SCRIPTS	Replace the {project-path} variable with the path of your project.
IAS_CRAWLAM_CONFIG	Replace the {project-path} variable with the path of your project.
IAS_SERVER_HOST	Replace this variable with the name of the host server where IAS is installed.
IAS_SERVER_HOST	Replace this value with the IAS port.

In the following example, the parameters that you need to update are highlighted in bold type:

```
IAS_BIN_DIR=/ds1/products/oracle/endeca/IAS/3.1.0/bin
IAS_CRAWLAM_SCRIPTS={project-path}/config-in/AMCreateCrawl.sh
IAS_CRAWLAM_CONFIG={project-path}/config-in/AMCrawlConfig.xml
IAS_CRAWLAM_ID=am_attachments
IAS_SERVER_HOST=IAShostname
IAS_SERVER_HOST_PORT=8401
IAS_SERVER_CONTEXT=ias-server
IAS_RECORD_STORE=am_attachments
```

Replace {project-path} with the entire workspace file path for your project. The workspace directory path will be different, but may be similar to the following example:

/ds1/home/oracle/workspace/AM_EID31

Task 1-4-2: Updating the Crawl Configuration Files

In Endeca Integrator ETL, you update the crawl configuration files that are delivered in the RS_EID31, PGM_EID31, EX_EID31, and AM_EID31 CloverETL projects. This task is required for performing unstructured searches of file attachments. Before you begin this task, ensure that the previous task to import the RS_EID31, PGM_EID31, EX_EID31, and AM_EID31 CloverETL projects has been completed.

Note. This task is not necessary if you are only installing the Projects application.

To update the crawl configuration files:

1. To update the CrawlConfig_Resume file, in Endeca Integrator ETL, open the Config-in folder within the RS_EID31 project.

2. Locate the CrawlConfig_Resume.xml file, open it, and update the file by replacing the following values, as indicated:

   a. Replace *{ftpdirectory}* with the directory that contains the resume files.

      For Linux, it may look similar to the following:

      /ds1/home/oracle/resumes/

b. Replace *IAShostname* with the IAS server hostname.

c. Replace *8401* with the IAS server port.

In the following example of the file, the values that you need to replace are highlighted in bold type:

```xml
<?xml version="1.0" encoding="UTF-8"?>
 <configurations xmlns="http://endeca.com/eidi/ias/2011-12">
 <crawlConfig>
    <crawlId>
        <id>rs_rescrawl</id>
    </crawlId>
    <crawlThreads>3</crawlThreads>
    <sourceConfig>
        <moduleId>
            <id>File System</id>
        </moduleId>
        <moduleProperties>
            <moduleProperty>
                <key>expandArchives</key>
                <value>true</value>
            </moduleProperty>
            <moduleProperty>
                <key>gatherNativeFileProperties</key>
                <value>true</value>
            </moduleProperty>
            <moduleProperty>
                <key>seeds</key>
                <value>{ftpdirectory}</value>
              </moduleProperty>
            </moduleProperties>
                <excludeFilters/>
                <includeFilters/>
    </sourceConfig>
    <textExtractionConfig>
                <enabled>true</enabled>
                <makeLocalCopy>false</makeLocalCopy>
                <timeout>90</timeout>
    </textExtractionConfig>
    <manipulatorConfigs/>
    <outputConfig>
                <moduleId>
                    <id>Record Store</id>
                </moduleId>
                <moduleProperties>
                    <moduleProperty>
                        <key>isPortSsl</key>
                        <value>false</value>
                    </moduleProperty>
                    <moduleProperty>
                        <key>host</key>
                        <value>IAShostname</value>
                    </moduleProperty>
                    <moduleProperty>
                        <key>port</key>
                        <value>8401</value>
                    </moduleProperty>
                    <moduleProperty>
```

```
                                <key>contextPath</key>
                                <value>ias-server</value>
                            </moduleProperty>
                            <moduleProperty>
                                <key>instanceName</key>
                                <value>rs_resumes</value>
                            </moduleProperty>
                            <moduleProperty>
                                <key>isManaged</key>
                                <value>true</value>
                            </moduleProperty>
                        </moduleProperties>
                    </outputConfig>
                </crawlConfig>
                </configurations>
```

3. To update the PGMCrawlConfig.xml file, in Endeca Integrator ETL, open the Config-in folder within the PGM_EID31 project.

4. Locate the PGMCrawlConfig.xml file, open it, and update the file by replacing the following values, as indicated:

    a. Replace *{ftpdirectory}* with the directory that contains the Projects and Program Management file attachments.

    For Linux, it may look similar to the following:

    /ds1/home/oracle/pgmattach/

    b. Replace *IAShostname* with the IAS server hostname.

    c. Replace *8401* with the IAS Server port.

5. To update the EXCrawlConfig.xml file, in Endeca Integrator ETL, open the Config-in folder within the EX_EID31 project.

6. Locate the EXCrawlConfig.xml file, open it, and update the file by replacing the following values, as indicated:

    a. Replace *{ftpdirectory}* with the directory that contains the Expenses file attachments.

    For Linux, it may look similar to the following:

    /ds1/home/oracle/expenses/

    b. Replace *IAShostname* with the IAS server hostname.

    c. Replace *8401* with the IAS Server port.

7. To update the AMCrawlConfig.xml file, in Endeca Integrator ETL, open the Config-in folder within the AM_EID31 project.

8. Locate the AMCrawlConfig.xml file, open it, and update the file by replacing the following values, as indicated:

    a. Replace *{ftpdirectory}* with the directory that contains the Assets file attachments.

    For Linux, it may look similar to the following:

    /ds1/home/oracle/assets/

    b. Replace *IAShostname* with the IAS server hostname.

    c. Replace *8401* with the IAS Server port.

Task 1-5: Setting Up PeopleSoft for Using Endeca Studio

This section discusses:

- Understanding PeopleSoft Setup for Using Endeca Studio
- Setting Project Discovery as Installed
- Setting the URL for Endeca Studio
- Setting Permissions for New Components
- Loading Geocodes
- Setting Up a Weekly Calendar

Understanding PeopleSoft Setup for Using Endeca Studio

In this section, you will perform the necessary setup in your PeopleSoft database for using Endeca Studio features.

Task 1-5-1: Setting Project Discovery as Installed

You must select the Project Discovery product option on the Products page to indicate that PeopleSoft Project Discovery is installed.

To set Project Discovery as installed:

1. Select Set Up Financials/Supply Chain, Install, Installation Options, Products.

2. On the Products page, select the Project Discovery check box.

The following example shows the Products page:

Products page

3. Click Save.

Task 1-5-2: Setting the URL for Endeca Studio

You must set the Endeca Studio URL in PeopleSoft PeopleTools for connecting to Endeca Studio.

To set the Endeca Studio URL:

1. Select PeopleTools, Utilities, Administration, URLs.

The URL Maintenance page appears.

2. From the URL Maintenance page, open the delivered URL named EID_STUDIO.

3. Update the URLID field with your Endeca Studio URL.

   If PeopleSoft is not configured as a proxy for Endeca Studio, use the Endeca Studio URL from the task Installing Endeca Studio with the PeopleSoft Extension, in the section Installing Endeca Information Discovery. Otherwise, use the Endeca Studio URL from the task Configuring PeopleSoft as a Proxy for Endeca Studio.

   The following example shows the updated URL Maintenance page:

URL Maintenance page

4. Click Save.

Task 1-5-3: Setting Permissions for New Components

Several new components and pages were delivered with PeopleSoft Project Discovery. To access these new components and pages, you must add these components and pages to the appropriate permission lists. This task is required for accessing PeopleSoft Project Discovery.

To set permissions for new components:

1. Select PeopleTools, Security, Permissions and Roles, Permission Lists.

2. On the Pages tab, add the new components and pages listed in the following table to the appropriate permission lists:

Menu	Component	Page
PROJECTS_UTILITIES	PC_GEOCODE	PC_GEOCODE
PROJECT_DISCOVERY	PC_PROJ_DISCOVERY	PC_PROJ_DISCOVERY
PROJECT_DISCOVERY	RS_PROJ_DISCOVERY	RS_PROJ_DISCOVERY
PROJECT_DISCOVERY	PGM_PROJ_DISCOVERY	PGM_PROJ_DISCOVERY
PROJECT_DISCOVERY	EX_PROJ_DISCOVERY	EX_PROJ_DISCOVERY
PROJECT_DISCOVERY	AM_PROJ_DISCOVERY	AM_PROJ_DISCOVERY

Task 1-5-4: Loading Geocodes

You must load geocodes, longitude and latitude values, for all countries with which your organization operates in order to use the Endeca mapping features for project and resource locations.

You will need to have a file containing geocodes for project and resource locations in your system. This geocodes file is not delivered with your PeopleSoft application. This file should contain postal codes, cities, states, latitude, and longitude values for the countries with which your organization operates. Many web sites offer these files for free or for a small fee. You can also subscribe to a geocoder web service and create your own geocoded files. The key is to create an Excel CSV file containing the following values, in this order: postal code, city, state, country, latitude, and longitude.

Following is an example of a geocodes file:

15721	BURNSIDE	PA	US	41.05438	-78.411
15722	CARROLLTOWN	PA	US	40.58303	-78.7285
15723	CHAMBERSVILLE	PA	US	40.70564	-79.1615

Geocodes file example

To load geocodes:

1. Set Up Financials/Supply Chain, Common Definitions, Endeca, Load Geocodes.

2. Use the Select File button to access the .CSV file containing geocoded addresses.

3. Click Upload.

4. Once the file has been uploaded, click Load.

   The following example shows the Load Geocodes page:

Load Geocodes page

Task 1-5-5: Setting Up a Weekly Calendar

Verify that a weekly calendar has been set up on the Projects Installation Options page. If not, then you must set up a weekly calendar for resource weekly availability.

To verify or set up a weekly calendar:

1. Select Set Up Financials/Supply Chain, Install, Installation Options, Project Costing.

2. Review the Projects Installation Options page and verify that a weekly calendar has been set up.

   The following example shows the Projects Installation Options page:

Installation Options page

3. Select Set Up Financials/Supply Chain, Common Definitions, Calendars/Schedules, Detail Calendar.

4. On the Detail Calendar page, verify that the weekly calendar is set up with 6 months in the past and at least 24 months in the future.

   If so, you can skip the remaining steps. If not, continue with the following steps.

5. If no weekly calendar has been set up, on the Detail Calendar page, create a weekly calendar with 6 months in the past and at least 24 months in the future.

   The following example shows the Detail Calendar page:

Detail Calendar page

6. Go back to the Projects Installation Options page and enter the newly created weekly calendar ID in the

Weekly Calendar field.

Task 1-6: Extracting, Transforming, and Loading Data and Defining Data Sources

This section discusses:

- Understanding ETL and Defining Data Sources
- Executing Graphs for PeopleSoft Project Costing
- Executing Graphs for PeopleSoft Resource Management
- Executing Graphs for PeopleSoft Program Management
- Executing Graphs for PeopleSoft Expenses
- Executing Graphs for PeopleSoft Assets
- Defining Data Sources

Understanding ETL and Defining Data Sources

In this section, you execute the CloverETL graphs to extract data from the PeopleSoft database and load it into the Endeca MDEX engine.

The first five tasks in this section, Executing Graphs for PeopleSoft Project Costing, Executing Graphs for PeopleSoft Resource Management, Executing Graphs for PeopleSoft Program Management, Executing Graphs for PeopleSoft Expenses, and Executing Graphs for PeopleSoft Assets assume that you are an installer with direct access to the Endeca Integrator ETL application. However, if you do not have direct access to the Endeca Integrator ETL application, you can use Endeca Integrator ETL Server to execute the Baseline.grf graphs.

See the section Scheduling ETL Processes for instructions on scheduling baseline ETL processes instead of running them directly in the Endeca Integrator ETL application. You can choose the *one-time* execution instead of *periodic* execution for this task.

Note. You must execute the graphs and define the data sources for PeopleSoft Project Costing. Optionally, you can also execute the graphs and define the data sources for PeopleSoft Resource Management, PeopleSoft Program Management, PeopleSoft Expenses, and PeopleSoft Assets if you want to use these applications.

Task 1-6-1: Executing Graphs for PeopleSoft Project Costing

In the Endeca Integrator ETL application, you run the graphs for PeopleSoft Project Costing to import data from PeopleSoft into the Endeca MDEX engine. This task is required for data extraction.

To execute the graphs for PeopleSoft Project Costing:

1. In Endeca Integrator ETL, open the PC_EID31 project.
2. Open the Graphs folder, and open the Baseline.grf graph.

3. Execute the graph by clicking the Run icon in the toolbar or by selecting Run, Run from the menu.

The following example shows the Baseline.grf (PC_EID31) page:

Baseline.grf (PC_EID31) page

Task 1-6-2: Executing Graphs for PeopleSoft Resource Management

In the Endeca Integrator ETL application, you run the graphs to import PeopleSoft Resource Management data from PeopleSoft into the Endeca MDEX engine.

To execute the graphs for PeopleSoft Resource Management:

1. In Endeca Integrator ETL, open the RS_EID31 project.

2. Open the Graphs folder, and open the Baseline.grf graph.

3. Execute the graph by clicking the Run icon in the toolbar or by selecting Run, Run from the menu.

   The following example shows the Baseline.grf (RS_EID31) page:

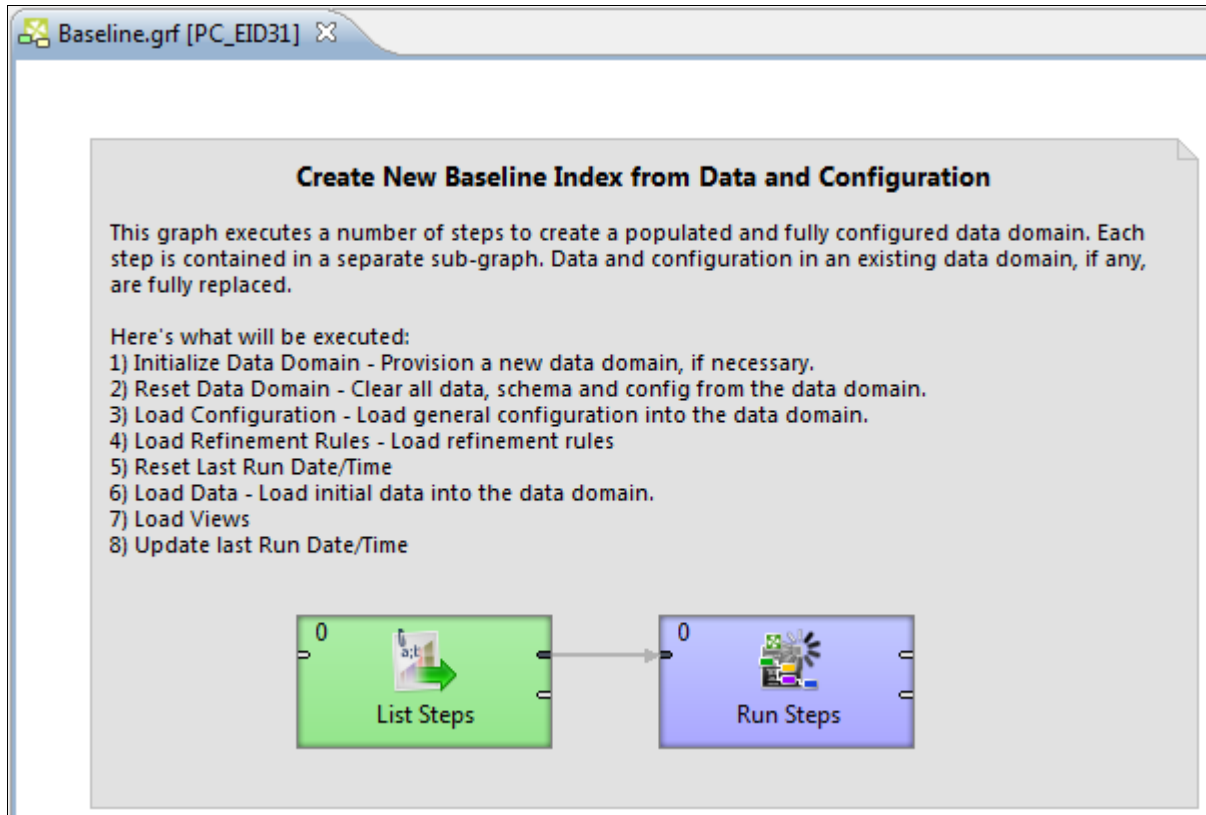Baseline.grf (RS_EID31) page

Task 1-6-3: Executing Graphs for PeopleSoft Program Management

In the Endeca Integrator ETL application, you run the graphs to import PeopleSoft Program Management data from PeopleSoft into the Endeca MDEX engine.

To execute the graphs for PeopleSoft Program Management:

1. In Endeca Integrator ETL, open the PGM_EID31 project.

2. Open the Graphs folder, and open the Baseline.grf graph.

3. Execute the graph by clicking the Run icon in the toolbar or by selecting Run, Run from the menu.

    The following example shows the Baseline.grf (PGM_EID31) page:

Baseline.grf (PGM_EID31) page

Task 1-6-4: Executing Graphs for PeopleSoft Expenses

In the Endeca Integrator ETL application, you run the graphs to import PeopleSoft Expenses data from PeopleSoft into the Endeca MDEX engine.

To execute the graphs for PeopleSoft Expenses:

1. In Endeca Integrator ETL, open the EX_EID31 project.

2. Open the Graphs folder, and open the Baseline.grf graph.

3. Execute the graph by clicking the Run icon in the toolbar or by selecting Run, Run from the menu.

   The following example shows the Baseline.grf (EX_EID31) page:
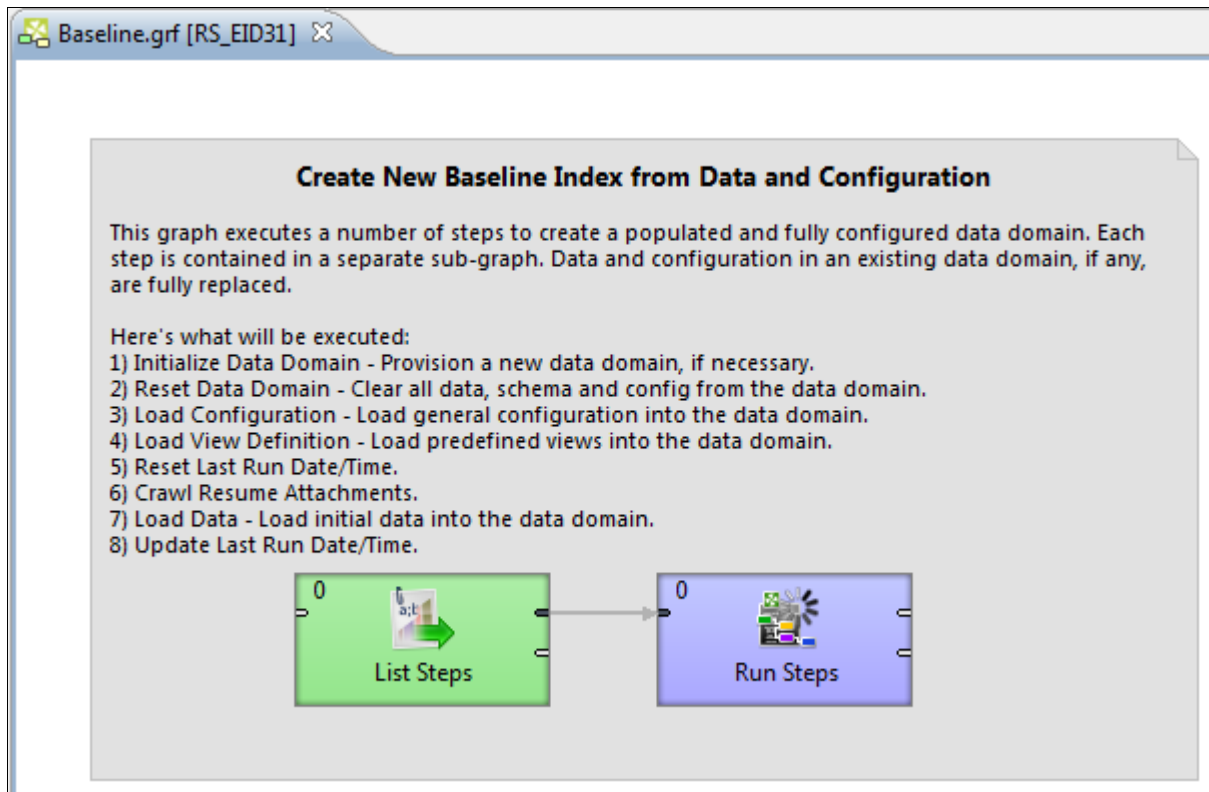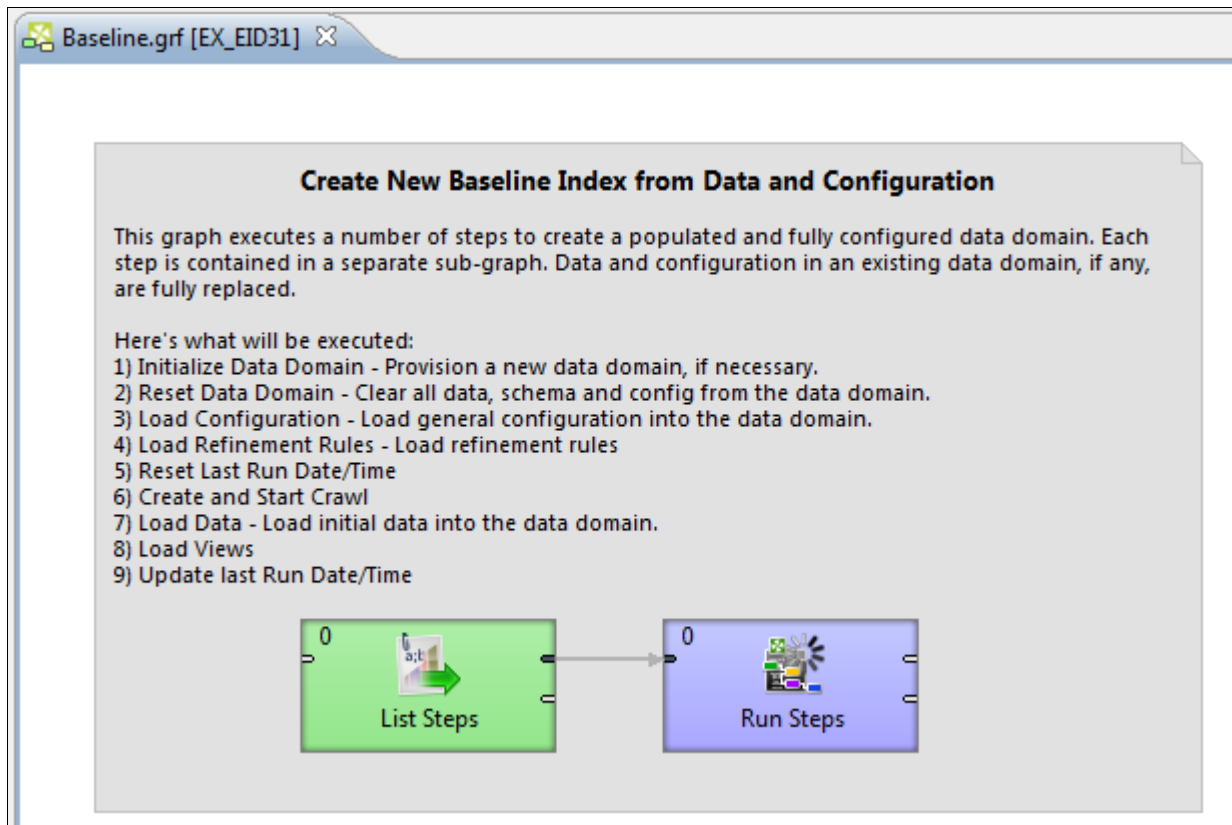

Baseline.grf (EX_EID31) page

Task 1-6-5: Executing Graphs for PeopleSoft Assets

In the Endeca Integrator ETL application, you run the graphs to import PeopleSoft Assets data from PeopleSoft into the Endeca MDEX engine.
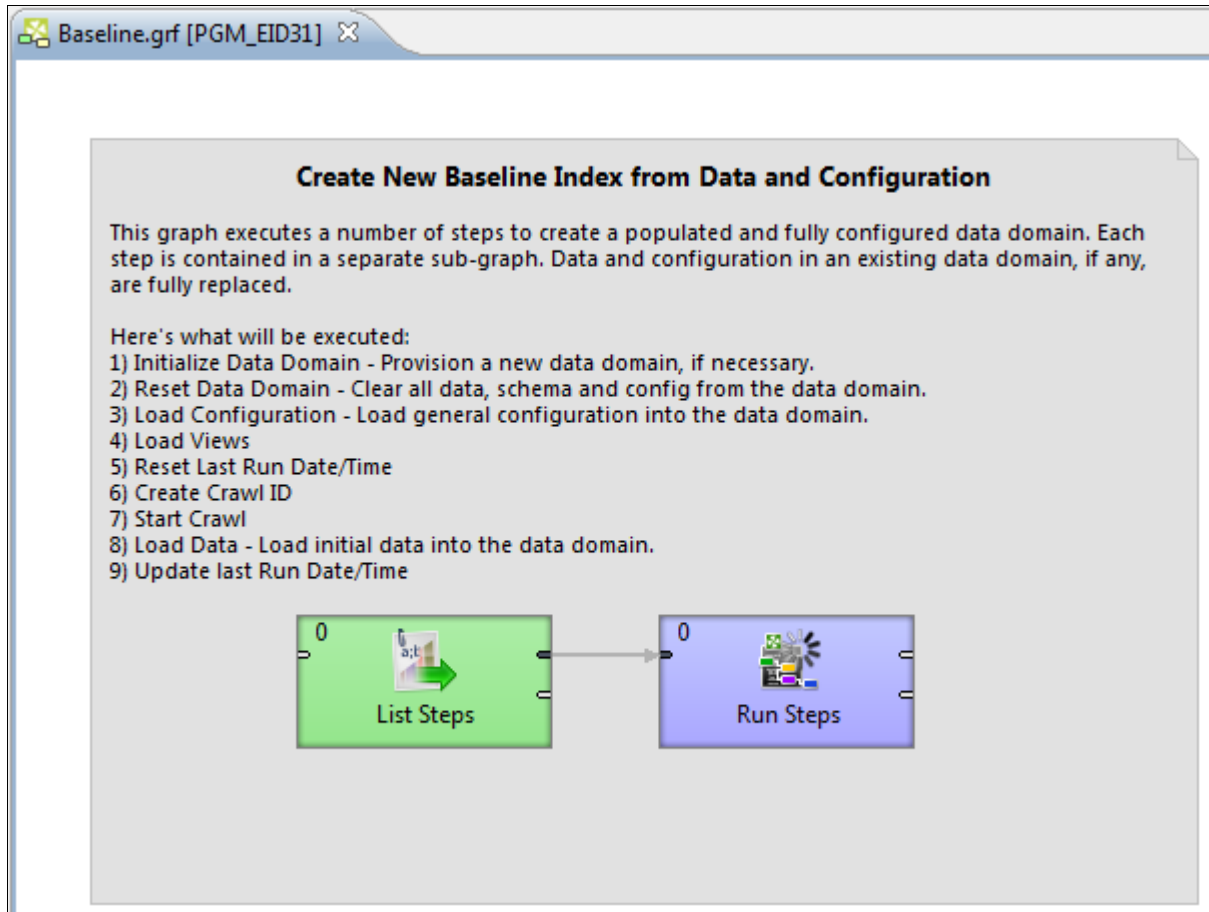
To execute the graphs for PeopleSoft Assets:

1. In Endeca Integrator ETL, open the AM_EID31 project.

2. Open the Graphs folder, and open the Baseline.grf graph.

3. Execute the graph by clicking the Run icon in the toolbar or by selecting Run, Run from the menu.

   The following example shows the Baseline.grf (AM_EID31) page:
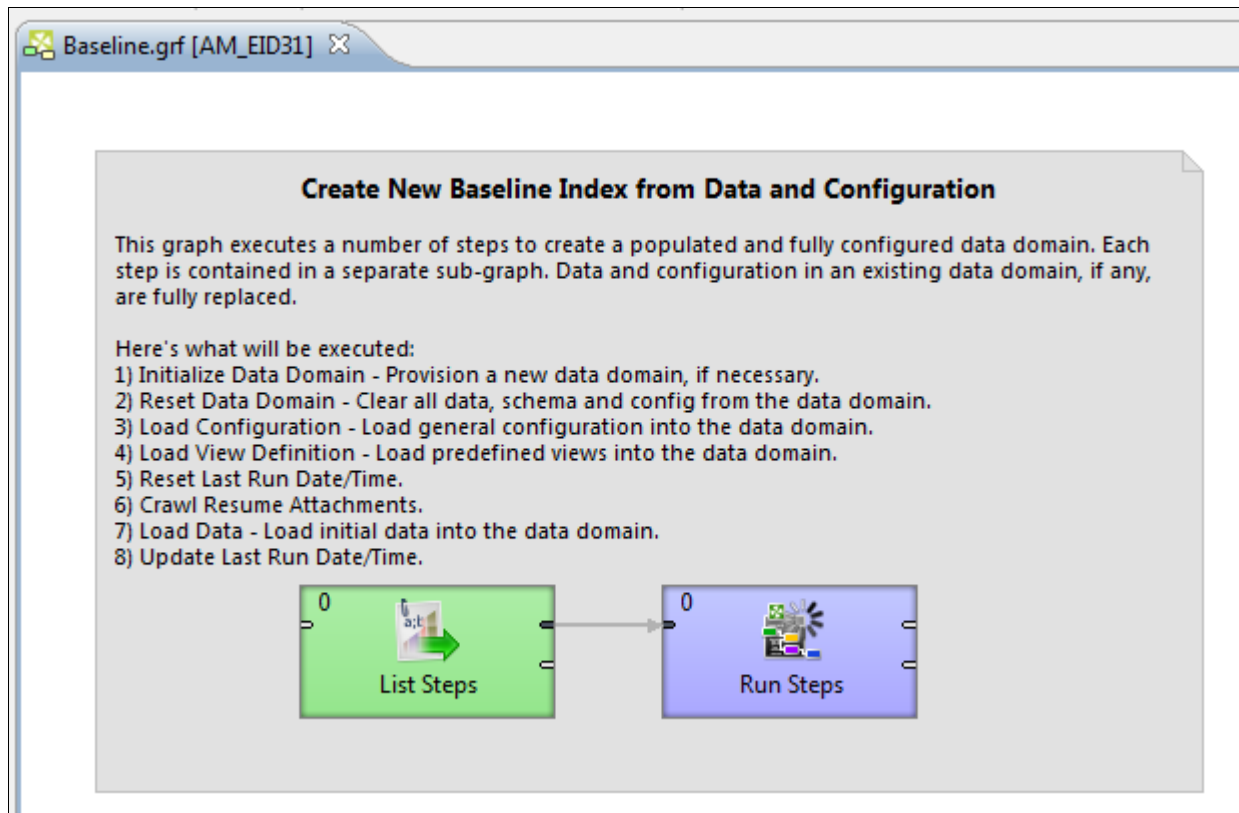
Baseline.grf (AM_EID31) page

Task 1-6-6: Defining Data Sources

In Endeca Studio, you create the necessary Endeca servers for the delivered Endeca pages.

You will need to create the following Endeca servers:

- Projects
- PGMProjectPlans
- Resources
- Expenses
- Assets

To define data sources:

1. In Endeca Studio, select Control Panel at the top right corner, then under Information Discovery, select Endeca Servers.

2. To create an Endeca server definition, click the New Connection button, then copy and paste the appropriate
   JSON file definition from the definitions provided below to the Server Connection Definition page.

   This example for the Projects Endeca server definition shows the Endeca Server Connection Definition page
   with the JSON file content for Projects:

Endeca Server Connection Definition page

Following is a list of the Endeca servers and the JSON file content that you need to copy for each Endeca
server:

Note. The peoplesoft.endpoint_address shown in the JSON file content below is only an example. The actual
address that you should use is the peoplesoft.endpoint_address that was retrieved in the task Providing Web
Service, in the section Installing PeopleSoft Project Discovery.

- Endeca Server ID: Projects

```
{
   "dataDomainName": "Projects",
   "name": "Projects",
   "peoplesoft.endpoint_address": "http://xxxxxxxx:8080/PSIGW/People⇒
SoftServiceListeningConnector",
   "port": "7001",
   "restrictedToRoles": ["Administrator"],
   "server": "yyyyyyyy"
}
```

- Endeca Server ID: PGMProjectPlans

```
{
"dataDomainName": "PGMProjectPlans",
"name": "PGMProjectPlans",
"peoplesoft.endpoint_address": "http://xxxxxxxx:8080/PSIGW/PeopleSoft⇒
ServiceListeningConnector",
"port": "7001",
"restrictedToRoles": ["Administrator"],
"server": "yyyyyyyy"
}
```

- Endeca Server ID: Resources

```
{
   "dataDomainName": "Resources",
```

```
    "name": "Resources",
    "peoplesoft.endpoint_address": "http://xxxxxxxx:8080/PSIGW/People⇒
SoftServiceListeningConnector",
    "port": "7001",
    "restrictedToRoles": ["Administrator"],
    "server": "yyyyyyyy"
}
```

- Endeca Server ID: Expenses

```
{
"dataDomainName": "Expenses",
"name": "Expenses",
"peoplesoft.endpoint_address": "http://xxxxxxxx:8080/PSIGW/PeopleSoft⇒
ServiceListeningConnector",
"port": "7001",
"restrictedToRoles": ["Administrator"],
"server": "yyyyyyyy"
}
```

- Endeca Server ID: Assets

```
{
"dataDomainName": "Assets",
"name": "Assets",
"peoplesoft.endpoint_address": "http://xxxxxxxx:8080/PSIGW/PeopleSoft⇒
ServiceListeningConnector",
"port": "7001",
"restrictedToRoles": ["Administrator"],
"server": "yyyyyyyy"
}
```

3. On the Endeca Server Connection Definition page, update the JSON file as follows:

   a. Replace *xxxxxxxx* with the correct PeopleSoft server name and *yyyyyyyy* with the correct Endeca server name.

   b. Add any additional roles that will have access.

   c. Review the port and update it if necessary.

4. Repeat steps 1 through 3 for each Endeca server listed at the beginning of this task.

Task 1-7: Importing Endeca Studio Applications and Setting Up Security

This section discusses:

- Understanding Importing Studio Applications and Security Setup
- Importing Endeca Studio Applications
- Setting Up Endeca Application Security

Understanding Importing Studio Applications and Security Setup

In this section, you will import the Endeca Studio applications and set up security. This section is required for implementing PeopleSoft Project Discovery.

Note. You must import the Projects application and set up security. You can also optionally import the Resources, Program Management, Expenses, and Assets applications and set up security if you want to use these applications.

Before you begin this section, ensure that all previous tasks in this document have been completed, including the section Installing Endeca Information Discovery, and that the Endeca Server is running.

Task 1-7-1: Importing Endeca Studio Applications

You must import the delivered application for PeopleSoft Project Costing into Endeca Studio. You can additionally import the delivered applications for PeopleSoft Resource Management, PeopleSoft Program Management, PeopleSoft Expenses, and PeopleSoft Asset Management, as needed.

To import the Endeca Studio applications:

1. In Endeca Studio, select Control Panel at the top right corner, under Portal select Applications, then click Add.

   The following example shows the Applications page.
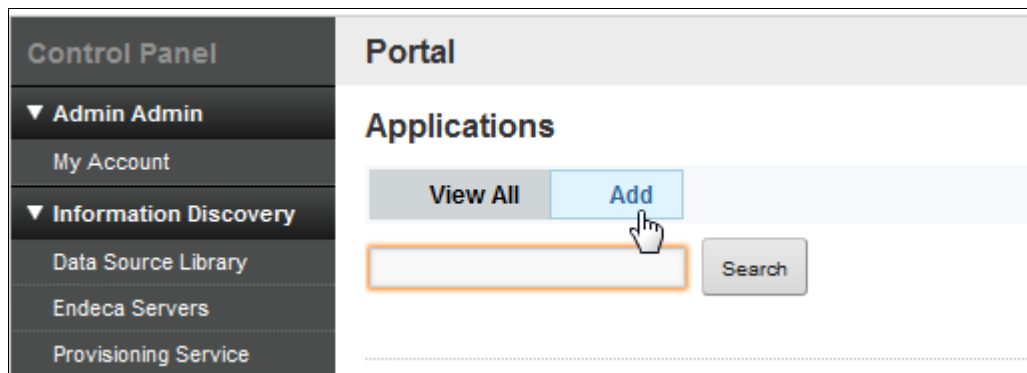
Applications page

2. Name the new application *Projects* and select the *Projects* data source.
3. Click the Save button to save the application.

4. Click Actions next to the new application that you just created, and then select Edit from the Actions list.

The following example shows the Applications page, edit view:
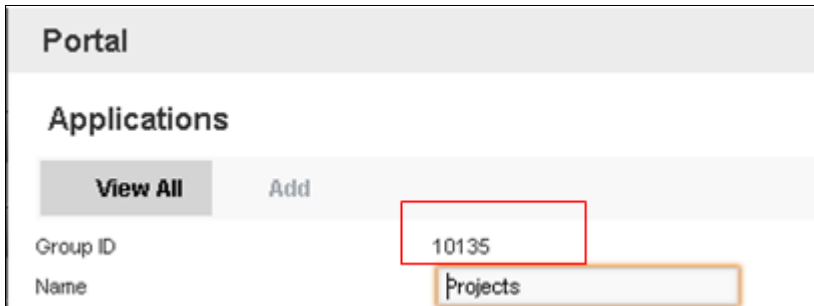
Applications page: edit view

5. Make a note of the Group ID assigned for the application that you just created, for use in a later task, and then click Cancel.

6. Click Actions, and then select Manage Pages from the Actions list.

The following example shows the Applications page, with Manage Pages selected.
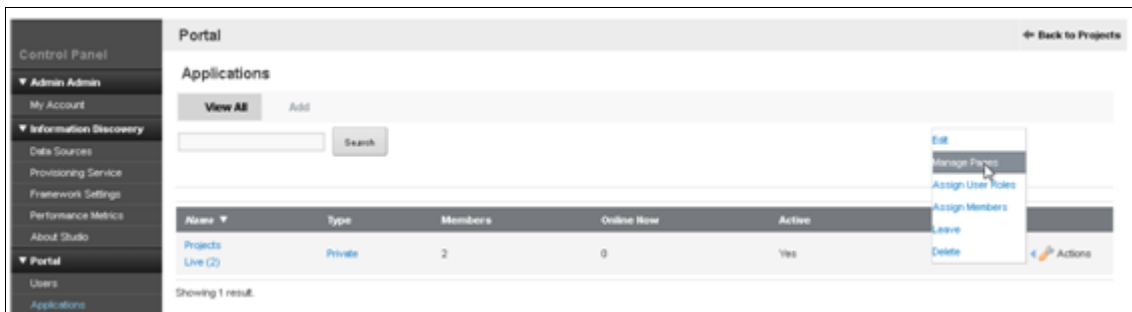
Applications page: Manage Pages selected

7. Select the Export/Import tab, then select the Import tab.

8. Using the Browse button, select the Projects .lar file from the PC_EID31/Studio/ folder from the extracted
    archive file.

    Leave all the default selections for the check boxes as they are, except make sure that the Delete Missing
    Pages and the User Preferences check boxes are selected.

    The following example shows the Applications page for the Projects application:
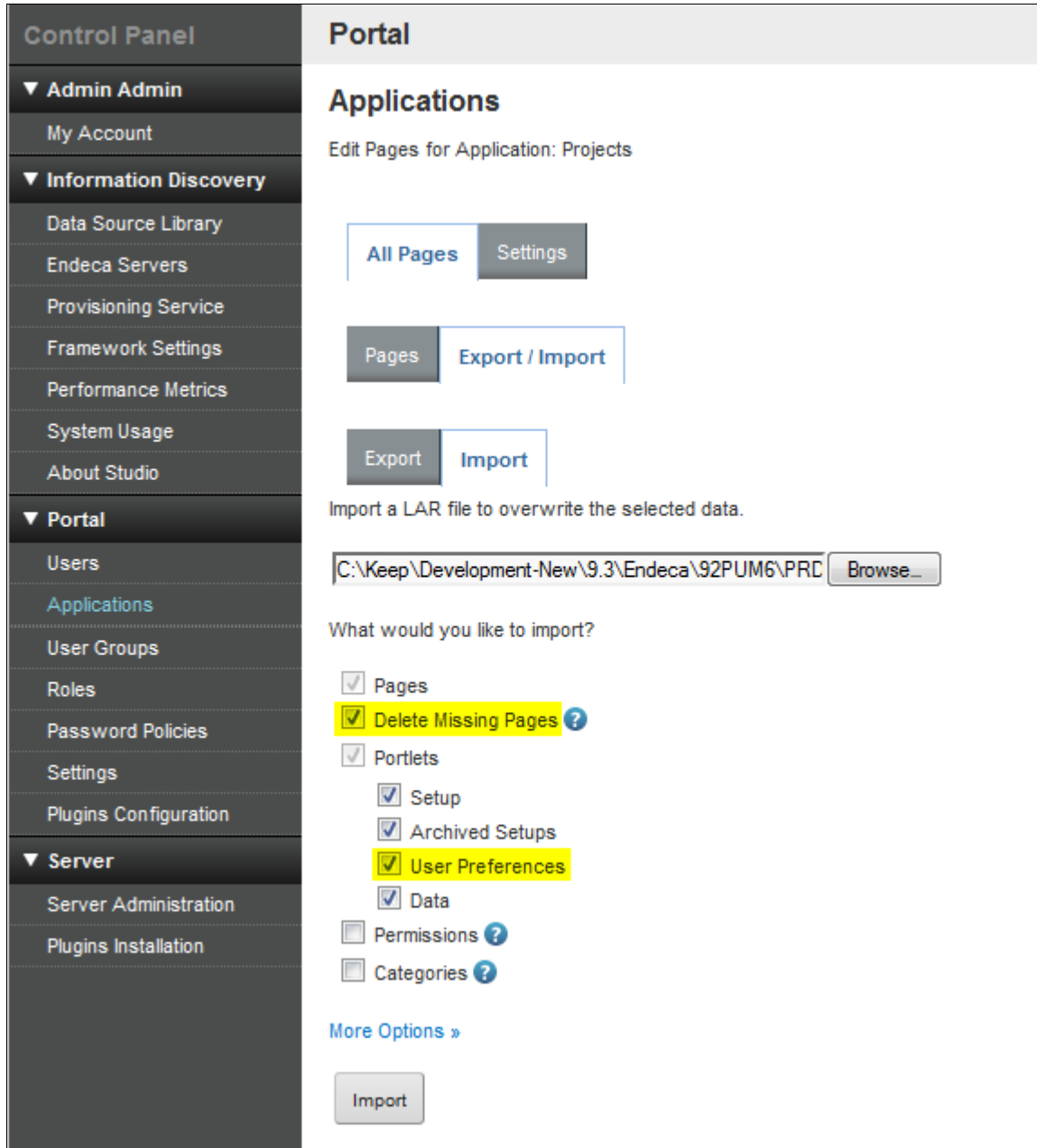
Applications page: Import tab

9. Click the Import button.

10. Repeat steps 1 through 9 to create another new application for Resources, with the following exceptions:

    •   In step 2, name the new application *Resources* and select the *Resources* data source.

    •   In step 8, select the Resources .lar file from the RS_EID31/Studio/ folder from the extracted archive file.

11. Repeat steps 1 through 9 to create another new application for Project Management, with the following exceptions:

   • In step 2, name the new application *ProjectManagement* and select the *PGMProjectPlans* data source.

   • In step 8, select the ProjectManagement .lar file from the PGM_EID31/Studio/ folder from the extracted archive file.

12. Repeat steps 1 through 9 to create another new application for Expenses, with the following exceptions:

   • In step 2, name the new application *Expenses* and select the *Expenses* data source.

   • In step 8, select the Expenses .lar file from the EX_EID31/Studio/ folder from the extracted archive file.

13. Repeat steps 1 through 9 to create another new application for Assets, with the following exceptions:

   • In step 2, name the new application *Assets* and select the *Assets* data source.

   • In step 8, select the Assets .lar file from the AM_EID31/Studio/ folder from the extracted archive file.

Task 1-7-2: Setting Up Endeca Application Security

In this task you set up Endeca security for the Projects, Resources, ProjectManagement, Expenses, and Assets applications.

To set up Endeca application security:

1. In your PeopleSoft database, select Set Up Financials/Supply Chain Management, Common Definitions, Endeca, Endeca Application.

2. Add a new Endeca application using the group ID for the Projects application that you made note of in the previous task, Importing Endeca Studio Applications.

3. Enter the application name and the appropriate permission lists and click Save.

   The following example shows the Endeca Application Permission List page:

Endeca Application Permission List page

4. Repeat steps 1 through 3 to add the following new Endeca applications, using the appropriate group ID in step 2 for each application:

   • Resources

   • ProjectManagement

   • Expenses

   • Assets

Task 1-8: Scheduling ETL Processes

This section discusses:

- Understanding ETL Scheduling
- Creating Sandboxes
- Scheduling Baseline ETL Processes
- Scheduling Incremental Load ETL Processes

Understanding ETL Scheduling

For the Projects, Resources, Project Management, Expenses, and Assets applications, there are two ways of running the ETL processes: full load or incremental load. The full load will load all rows from PeopleSoft to the Endeca data sources. The incremental load will only load new and updated rows in PeopleSoft since the last time the ETL process ran.

Some changes in PeopleSoft are not captured in the incremental load. For example, if the currency conversion rate changes and the Resources bill rates are impacted by the rate change, this will not be captured with the incremental load. Also, some effective-dated control data, such as status changes or location changes, are not captured with the incremental load. Oracle recommends scheduling full loads once a week to update all the weekly availability, utilization data, and effective-dated control data. Schedule the incremental loads as often as needed to refresh the data.

For Project Management, metrics that are calculated against the current date, such as Budget To Date and Days Late, are not updated with the incremental load. If it is important to have these metrics updated to the current date, Oracle recommends scheduling the full load process to run once a day. The incremental load may be scheduled to capture changes to projects, activities, and resources as often as needed.

Task 1-8-1: Creating Sandboxes

To schedule ETL processes, you need to use the Endeca Integrator ETL Server scheduling tool and create a new schedule. You need to create sandboxes for the PC_EID31, RS_EID31, PGM_EID31, EX_EID31, and AM_EID31 projects in Endeca Integrator ETL Server before you can create the schedules. For more information, see the Endeca *Integrator ETL Server Guide*.

To create the sandboxes:

1. Locate the workspace directory where you saved the PC_EID31, RS_EID31, PGM_EID31, EX_EID31, and AM_EID31 projects, which you imported in the earlier task Importing Integrator Projects using Endeca Integrator ETL.

   Your workspace directory path will be different, but may be similar to the following examples:

   /ds1/home/oracle/workspace/PC_EID31

   /ds1/home/oracle/workspace/RS_EID31

   /ds1/home/oracle/workspace/PGM_EID31

   /ds1/home/oracle/workspace/EX_EID31

   /ds1/home/oracle/workspace/AM_EID31

2. From Endeca Integrator ETL Server, click the Sandboxes link, then click the "New sandbox" button.

3. Create a new sandbox as follows:

   a. In both the ID and Name fields, enter *PC_EID31*.

   b. For the root file system path, enter the workspace directory path identified in step 1.

   c. Deselect the "Create sandbox root path and sub directories" check box.

   d. Click the Create button.

       This example shows the Create new sandbox page:
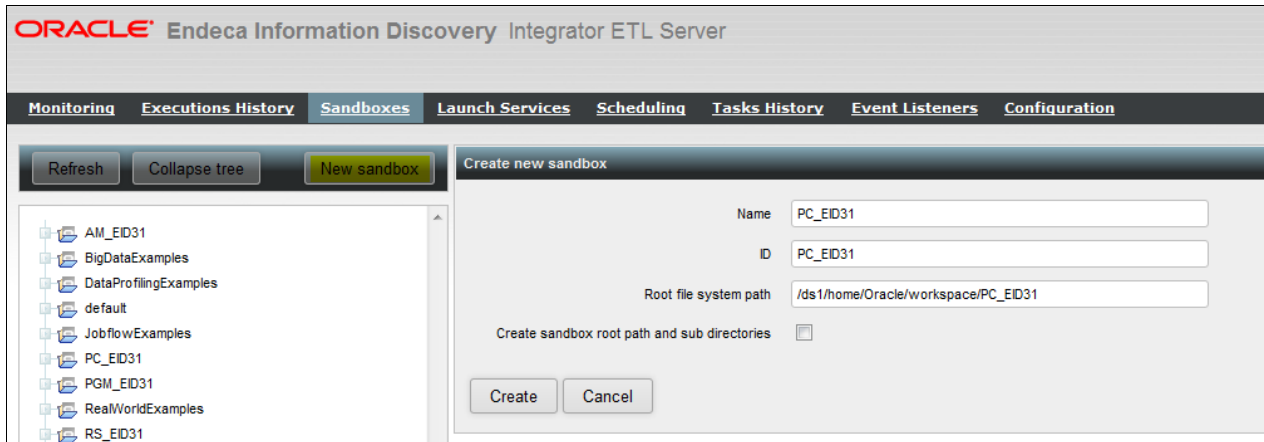
   Integrator ETL Server: Create new sandbox page

4. Repeat steps 1 to 3d to create the RS_EID31 sandbox, with the following exceptions:

    •   In step 3a, enter *RS_EID31* for the ID and Name fields.

    •   In step 3b, enter the workspace directory path for the RS_EID31 project.

5. Repeat steps 1 to 3d to create the PGM_EID31 sandbox, with the following exceptions:

    •   In step 3a, enter *PGM_EID31* for the ID and Name fields.

    •   In step 3b, enter the workspace directory path for the PGM_EID31 project.

6. Repeat steps 1 to 3d to create the EX_EID31 sandbox, with the following exceptions:

    •   In step 3a, enter *EX_EID31* for the ID and Name fields.

    •   In step 3b, enter the workspace directory path for the EX_EID31 project.

7. Repeat steps 1 to 3d to create the AM_EID31 sandbox, with the following exceptions:

    •   In step 3a, enter *AM_EID31* for the ID and Name fields.

    •   In step 3b, enter the workspace directory path for the AM_EID31 project.

Task 1-8-2: Scheduling Baseline ETL Processes

You must create a schedule for the baseline (full load) ETLs if you need to have the baseline ETLs run on a
regular basis for Projects, Resources, Project Management, Expenses, or Assets.

The following example shows the Endeca Information Discovery Integrator ETL Server scheduling page:

Integrator ETL Server: Scheduling page

To schedule baseline ETL processes:

1. From Endeca Integrator ETL Server, click the Scheduling link to access the scheduling tool and then click the "New schedule" button to create a new schedule.

2. Enter the schedule information as follows:

    a. Select the Enabled check box.

    b. Enter a description.

    c. In the Type field, select either the "onetime" or "periodic" option for the execution schedule.

    d. In the Periodicity field, select either the "by interval" or "by timetable" option.

    e. Select a date and time for the "Not active before date/time" and "Not active after date/time" fields.

    f. In the Interval field, enter an interval in minutes.

    g. Select the "Fire misfired event as soon as possible" check box.

    h. In the "Choose task type" field, select *Start a graph*.

    i. In the Sandbox field, select a sandbox name.

    j. In the Graph field, select *graph/Baseline.grf*.

The following example shows the New schedule page with a baseline schedule:

New schedule page: baseline schedule

Task 1-8-3: Scheduling Incremental Load ETL Processes

You must create a schedule for the incremental load ETLs if you need to have the incremental load ETLs run on a regular basis for Projects, Resources, Project Management, Expenses, or Assets.

To schedule incremental load ETL processes:

1. From Endeca Integrator ETL Server, click the Scheduling link to access the scheduling tool and then click the New schedule button to create a new schedule.

2. Enter the schedule information as follows:

   a. Select the Enabled check box.

b. Enter a description.

c. In the Type field, select either the "onetime" or "periodic" option for the execution schedule.

d. In the Periodicity field, select either the "by interval" or "by timetable" option.

e. Select a date and time for the "Not active before date/time" and "Not active after date/time" fields.

f. In the Interval field, enter an interval in minutes.

g. Select the "Fire misfired event as soon as possible" check box.

h. In the "Choose task type" field, select *Start a graph*.

i. In the Sandbox field, select a sandbox name.

j. In the Graph field, select *graph/IncrementalLoad.grf*.

The following example shows the New schedule page with an incremental load schedule:

New schedule page: incremental load schedule

Chapter 2

Verifying Your Installation

This chapter discusses:

- Understanding Installation Verification
- Verifying Your Endeca Studio Installation
- Verifying the URL for Endeca Studio
- Verifying Automatic Sign-In from PeopleSoft to Endeca

Understanding Installation Verification

After you have completed all of the installation steps in chapter 1, "Installing PeopleSoft Project Discovery and Endeca Information Discovery," Oracle highly recommends that you run the Installation Verification Test script in this chapter to ensure that your installation is working properly. If any of these test steps fail, you should review the installation steps and correct the problem.

This verification script tests the installation of the Projects application. If you have installed any of the other optional application projects (Resources, Program Management, Expenses, and Assets), you should repeat these test steps for the other installed projects as well.

Task 2-1: Verifying Your Endeca Studio Installation

In this task you will verify your Endeca Studio installation and installed application projects.

To verify your Endeca Studio installation:

1. Sign in to Endeca Studio as administrator.

2. Select Control Panel at the top right corner of the page, then select Endeca Servers.

You should see an Endeca Server for each application project that you installed, as shown in this example:
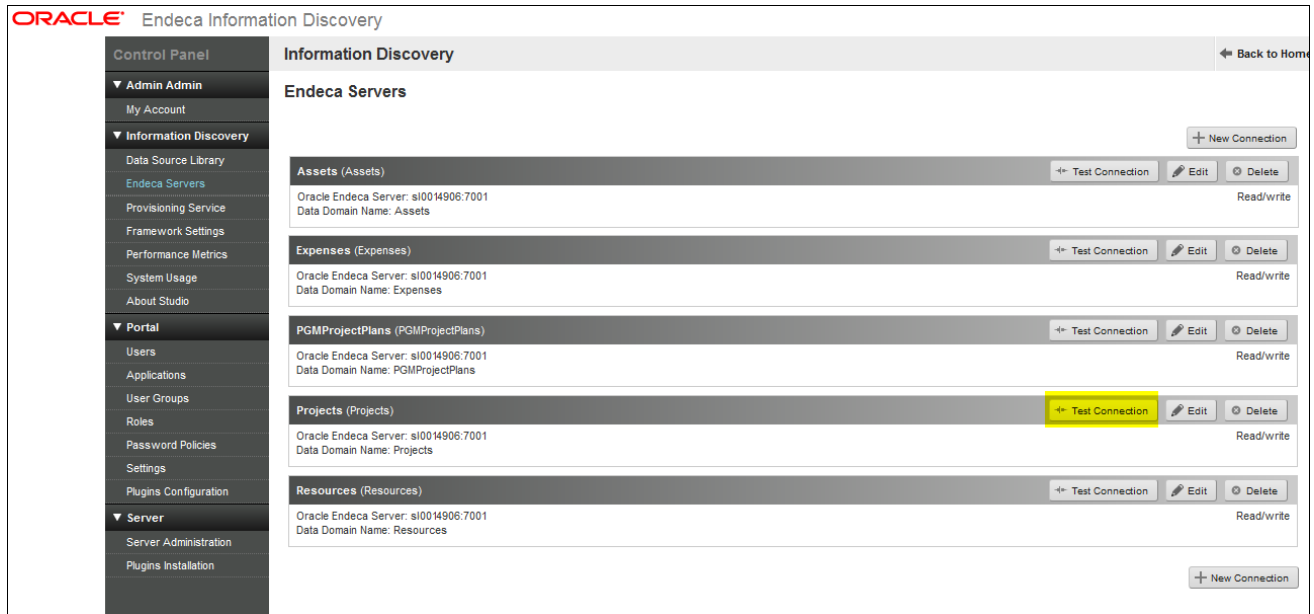
Endeca Servers page

3. Click the Test Connection button for the Projects Endeca Server.

You should see a message indicating that the connection is successful, as shown:
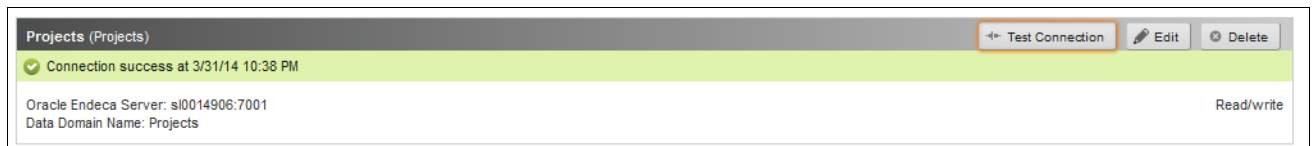
Projects Test Connection page

4. From the Admin drop-down list at the top right corner of the page, select Home.
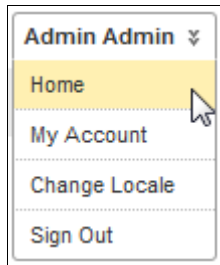
Admin drop-down list

On the Home page, you should see all of the applications that you installed. Following is an example of the Home page:
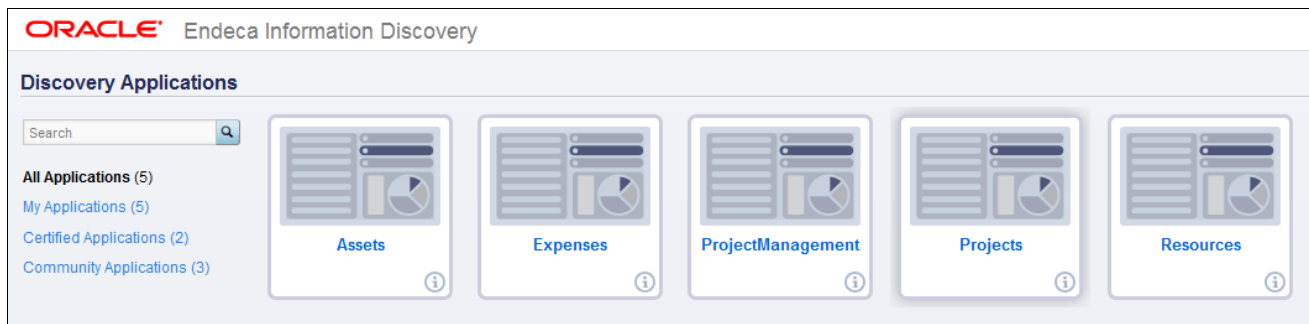
Discovery Applications Home page

5. Select the Projects application.

    You should see the Project Financials application with all the graphs and charts displayed successfully, as shown:
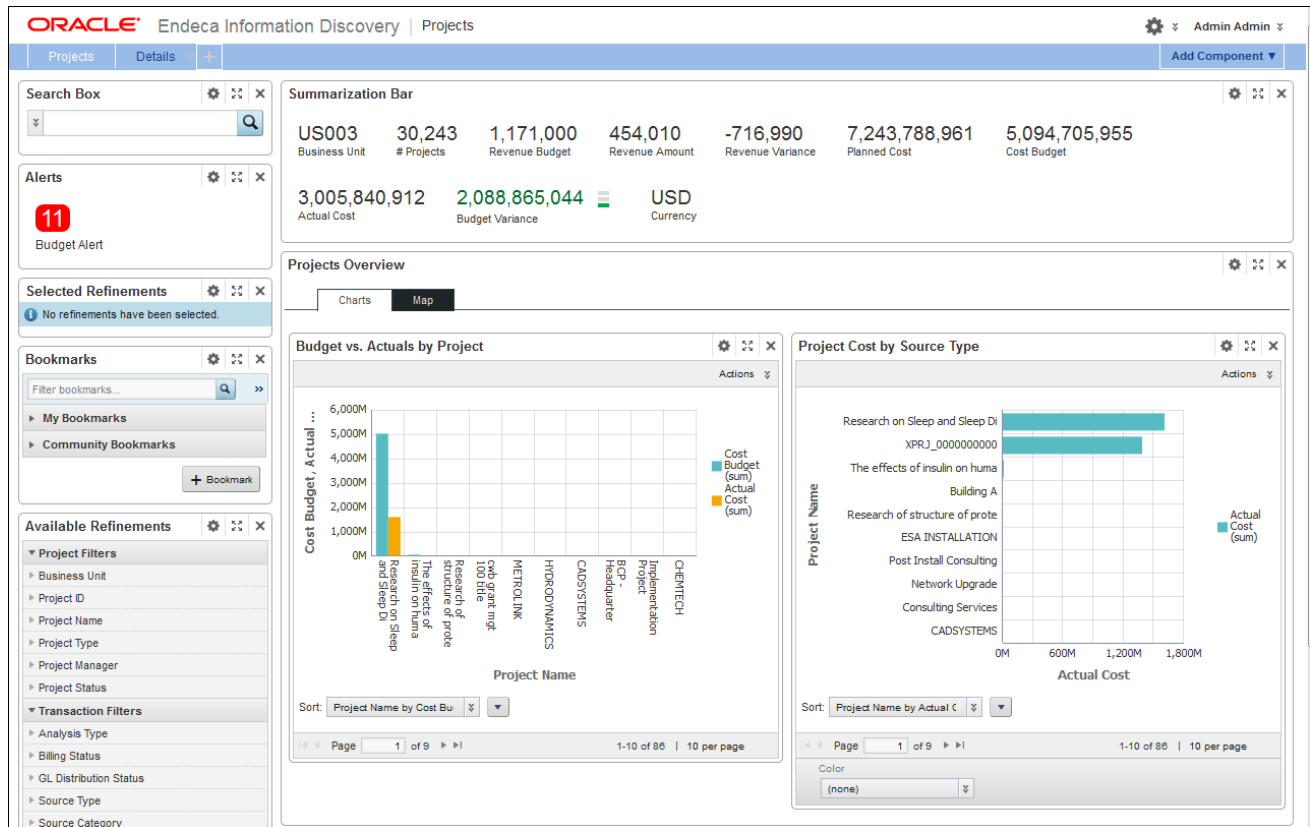
Projects page

6. Sign out of Endeca Studio.

    This concludes the verification of your Endeca Studio installation.

Task 2-2: Verifying the URL for Endeca Studio

In this task you verify that the URL for Endeca Studio is working properly.

To verify the URL for Endeca Studio:

1. Sign out of PeopleSoft PIA and Endeca Studio.

2. Open a new browser window and paste into the new window the URL that you entered on the PeopleSoft URL Maintenance page, in the task Setting the URL for Endeca Studio.

3. Press Enter.

   You should see the Endeca Studio Sign In page:

Endeca Studio Sign In page

4. If you see the Endeca Studio Sign In page, you can close the browser window. This concludes the verification of the Endeca URL.

   If you do not see the Endeca Studio Sign In page, continue to the next step.

5. If you receive an HTTP error in the browser window, check that the URL is correct.

   The following table describes some other possible issues that could be causing the error and solutions that you can try:

Issue	Solution
The peoplesoft.endpoint_address is incorrect on the portal-ext.properties file.	Review the task Installing Endeca Studio with the PeopleSoft Extension, at the step where you updated the portal-ext.properties file. If the setting is correct, try recycling the Endeca Studio server.
The PeopleSoft proxy setup is incorrect.	Review the task Configuring PeopleSoft as a Proxy for Endeca Studio.

   When you see the Endeca Studio Sign In page displayed successfully, close the browser window. This concludes the verification of the Endeca URL.

Task 2-3: Verifying Automatic Sign-In from PeopleSoft to Endeca

In this task you verify that you can successfully sign in automatically from PeopleSoft to Endeca.

To verify automatic sign-in from PeopleSoft to Endeca:

1. Sign in to Endeca Studio through PeopleSoft PIA and select Project Discovery, Project Financials.

2. Select a Projects business unit.

    You should see the Endeca Project Financials page with graphs and charts displayed successfully, as shown in this example:
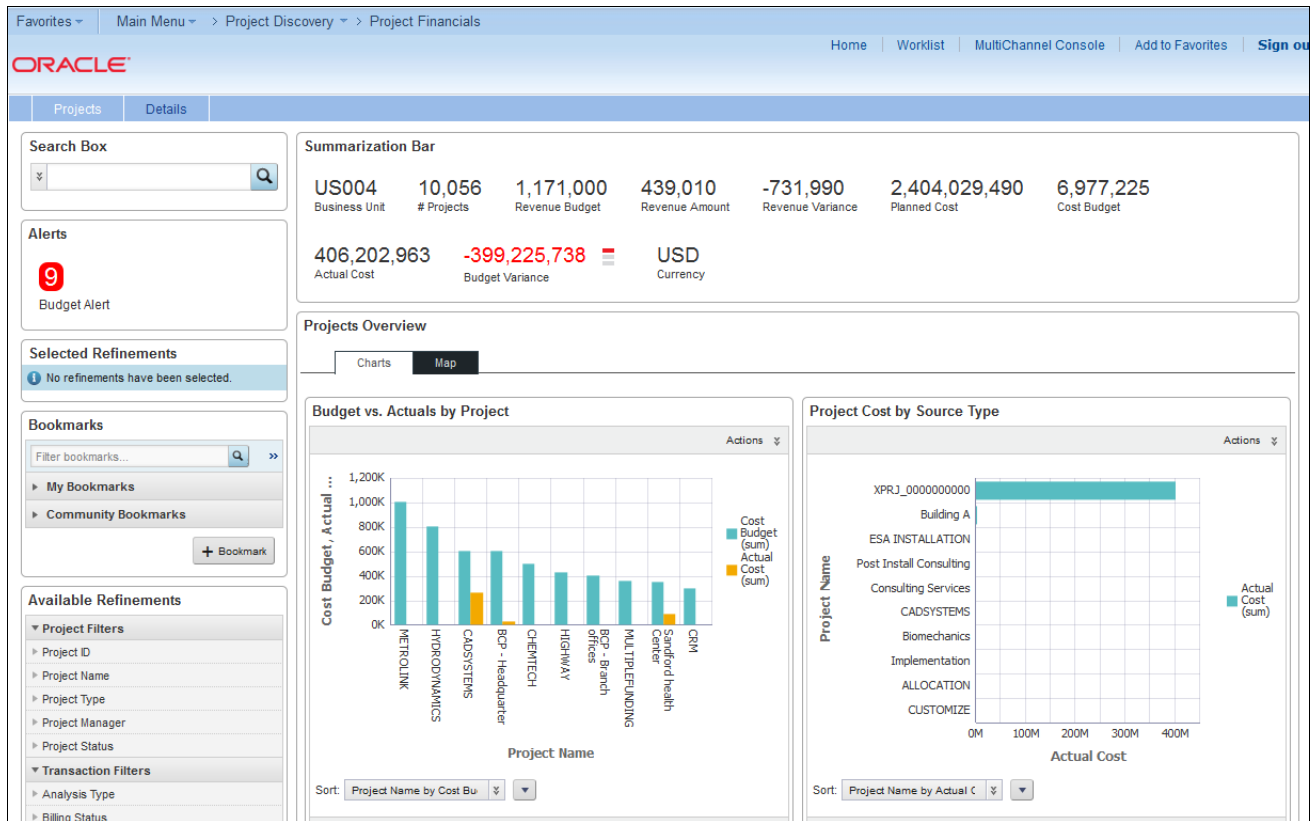
Project Financials page

If you see the Project Financials page, your installation is successful. This concludes the verification of automatic sign-in from PeopleSoft to Endeca, and it concludes the Installation Verification Test. If you do not see the Project Financials page, continue to the next step.

3. If you see the Endeca Studio Sign In page instead, then there is an error in your installation.

   The system should have automatically signed you in to Endeca Studio, so you should not see the Endeca Studio Sign In page.

   The following table describes some possible issues that could be causing the error and solutions that you can try:

Issue	Solution
The peoplesoft.endpoint_address is incorrect on the portal-ext.properties file.	Review the task Installing Endeca Studio with the PeopleSoft Extension, at the step where you updated the portal-ext.properties file. If the setting is correct, try recycling the Endeca Studio server.
The peoplesoft.endpoint_address is incorrect on the Endeca Server Connection Definition.	Review the task Defining Data Sources.
The user does not have access to the Endeca Project Financials page.	Review the task Setting Up Endeca Application Security.

Chapter 3

Setting Up a Secure Integration Environment

This chapter discusses:

• Understanding Secure Integration Environment Setup

• Configuring PeopleSoft and Endeca for SSL

• Configuring PeopleSoft and Endeca for WS-Security Username Token

Understanding Secure Integration Environment Setup

A Secure Socket Layer (SSL) protocol is used to ensure secure transactions between web servers and browsers. The protocol uses a Certificate Authority (CA) to identify one end or both ends of the transactions. The primary reason why SSL is used is to keep sensitive information sent across the Internet encrypted so that only the intended recipient can understand it.

A WS-Security Username Token enables an end-user's identity to be passed over multiple hops before reaching the destination web service. The user identity is inserted into the message and is available for processing at each hop on its path.

If your organization has sensitive data that requires SSL or WS-Security Username Token to be enabled, you will need to perform the additional setup described in this chapter for securing the integration between PeopleSoft Project Discovery and Endeca Information Discovery.

Note. You only need to complete the instructions in this chapter if you require SSL or WS-Security Username Token to be enabled.

See the product documentation for PeopleSoft PeopleTools: PeopleSoft Integration Broker Administration for more information about setting up secure integration environments.

Task 3-1: Configuring PeopleSoft and Endeca for SSL

This section discusses:

• Configuring PeopleSoft Service Operations for SSL

• Exporting the PeopleSoft Encryption and Root Certificates

• Copying the PeopleSoft Encryption and Root Certificates to Endeca Server

• Configuring Endeca Studio for SSL

• Configuring Endeca Data Sources for SSL

Task 3-1-1: Configuring PeopleSoft Service Operations for SSL

In this task, you configure PeopleSoft service operations for SSL.

To configure PeopleSoft service operations:

1. Select PeopleTools, Integration Broker, Integration Setup, Services.
2. Search for the EID web service and select the operation EID_AUTH.
3. From the Req Verification (security verification) drop-down list, select *SSL*.

    The following example shows the Service Operations page:

Service Operations page

4. Repeat steps 1 through 3, selecting EID_SEC in step 2.

See the product documentation for PeopleSoft PeopleTools: PeopleSoft Integration Broker Administration for details about setting up secure integration environments.

Task 3-1-2: Exporting the PeopleSoft Encryption and Root Certificates

In this task, you export the PeopleSoft encryption and root certificates.

To export the PeopleSoft certificates:

1. Go to webserv\[domain-name]\piabin in the PIA home directory.

2. Run the following commands:

```
pskeymanager -export -v -alias rootca -keystorepassword [password] -⇒
file rootca.cer

pskeymanager -export -v -alias [default local node name] -⇒
keystorepassword [password] -file [default local node].cer
```

   You will need the exported certificate files for the next task.

Task 3-1-3: Copying the PeopleSoft Encryption and Root Certificates to Endeca Server

In this task, you copy the PeopleSoft encryption and root certificate files to Endeca Server.

To copy the PeopleSoft certificates to Endeca Server:

1. Go to the /config/ssl directory under the Studio domain.

2. Copy the two certificate files retrieved in the previous task to this folder.

3. Run the following commands:

```
keytool -import -alias rootca -file rootca.cer -keystore ⇒
[eidkeystore].jks -storepass [password]
```

   Trust this certificate: Yes

```
Keytool -import -alias [default local node name] -file [default local⇒
 node name].cer -keystore [eidkeystore].jks -storepass [password]
```

   Trust this certificate: Yes

Task 3-1-4: Configuring Endeca Studio for SSL

In this task, you configure Endeca Studio for SSL.

To configure Endeca Studio:

1. Stop Endeca Server.

2. Update the peoplesoft.endpoint_address in the portal-ext.properties file to use the https protocol.

3. Update the following in the portal-ext.properties file:

```
javax.net.ssl.trustStore=<TRUST_KEY_STORE_PATH>

javax.net.ssl.trustStorePassword=<TRUST_KEY_STORE_PASSWORD>

javax.net.ssl.trustStoreType=JKS
```

Note. Enter the value for *<TRUST_KEY_STORE_PASSWORD>* in the encrypted format. For instructions, see the task Encrypting Passwords in the section Configuring PeopleSoft and Endeca for WS-Security Username Token.

4.   Restart Endeca Server.

Task 3-1-5: Configuring Endeca Data Sources for SSL

In this task, you configure Endeca data sources for SSL.

To configure Endeca data sources:

1.   Sign in to Endeca Studio as administrator.

2.   Update the peoplesoft.endpoint_address in each data source to use the https protocol.

3.   Update each of the data sources to include the following information:

```
,"javax.net.ssl.trustStore":"<TRUST_KEY_STORE_PATH>"

,"javax.net.ssl.trustStorePassword":"<TRUST_KEY_STORE_PASSWORD>"

,"javax.net.ssl.trustStoreType":"JKS"
```

Note. Enter the value for *<TRUST_KEY_STORE_PASSWORD>* in the encrypted format. For instructions, see the task Encrypting Passwords in the section Configuring PeopleSoft and Endeca for WS-Security Username Token.

Task 3-2: Configuring PeopleSoft and Endeca for WS-Security Username Token

This section discusses:

•   Configuring PeopleSoft Web Service Operations for SSL and WS-Security Username Token

•   Configuring Endeca Studio for WS-Security Username Token

•   Configuring Endeca Data Sources for WS-Security Username Token

•   Encrypting Passwords

Task 3-2-1: Configuring PeopleSoft Web Service Operations for SSL and WS-Security Username Token

In this task, you configure web service operations for SSL and WS-Security Username Token. When WS-Security UsernameToken is used, SSL needs to be enforced as well.

To configure web service operations:

1.   Select PeopleTools, Integration Broker, Integration Setup, Services.

2.   Search for the EID web service and select the operation EID_AUTH.

3.   Verify that *SSL* is selected from the Req Verification (security verification) drop-down list.

4. Select the User/Password Required check box to require a user ID and password for inbound service operations.

Service Operations page

5. Repeat steps 1 through 4, selecting EID_SEC in step 2.

Task 3-2-2: Configuring Endeca Studio for WS-Security Username Token

When WS-Security Username Token is required, you must complete this additional step for installing Endeca Studio with the PeopleSoft extension.

To configure Endeca Studio for WS-Security Username Token:

1. Stop Endeca Server.

2. Update the following in the portal-ext.properties file:

```
peoplesoft.username=<PEOPLESOFT_USER_ID>
```

Note. You need to assign a system user ID value to *<PEOPLESOFT_USER_ID>*. If you try to log on to the PeopleSoft PIA user interface using the user ID value for *<PEOPLESOFT_USER_ID>*, the authentication and auto-login will not succeed.

```
peoplesoft.password=<PEOPLESOFT_ USER_PASSWORD>
```

Note. Enter the value for *< PEOPLESOFT_ USER_PASSWORD >* in the encrypted format. For instructions, see the task Encrypting Passwords. Make sure that the specified user has permissions for the EID web service (permission list EPEID3000) described in the task Setting Permissions for Integration with Endeca.

3. Restart Endeca Server.

Task 3-2-3: Configuring Endeca Data Sources for WS-Security Username Token

In this task, you configure Endeca data sources for WS-Security Username Token.

To configure Endeca data sources for WS-Security Username Token:

1. Sign in to Endeca Studio as administrator.
2. Update each of the data sources to include the following information:

    ```
    ,"peoplesoft.username":"<PEOPLESOFT_USER_ID>"
    ```

    ```
    ,"peoplesoft.password":"<PEOPLESOFT_USER_PASSWORD>"
    ```

Note. Enter the value for *< PEOPLESOFT_ USER_PASSWORD >* in the encrypted format. See the task Encrypting Passwords for instructions. Make sure that the specified user has permissions for the EID web service (permission list EPEID3000) described in the task Setting Permissions for Integration with Endeca in the section Installing PeopleSoft Project Discovery.

Task 3-2-4: Encrypting Passwords

When SSL or WS-Security Username Token is enabled, all passwords should be encrypted.

To encrypt a password:

1. Access the Endeca Studio domain's bin folder.
2. Execute `source ./setDomainEnv.sh`.
3. Execute `java weblogic.security.Encrypt`.

    You are prompted for the password to encrypt.
4. The encrypted password is displayed in the stdout window.