Oracle® Fusion Middleware

Application Adapter for PeopleSoft User's Guide for Oracle WebLogic Server

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Preface

Oracle Fusion Middleware Application Adapter for PeopleSoft User's Guide for Oracle WebLogic Server describes how to provide connectivity and integrate with PeopleSoft systems.

Audience

Oracle Fusion Middleware Application Adapter for PeopleSoft User's Guide for Oracle WebLogic Server is intended for those who integrate with PeopleSoft systems and develop applications.

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For more information, see the following documents in the Oracle Enterprise Repository 11*g* Release 1 (11.1.1.4.0) documentation set:

- Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server
- Oracle Fusion Middleware Application Adapter Upgrade Guide for Oracle WebLogic Server
- Oracle Fusion Middleware Application Adapter Best Practices Guide for Oracle WebLogic Server
- Oracle's Unified Method (OUM)

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For more information about OUM, see the OUM FAQ at

http://my.oracle.com/portal/page/myo/ROOTCORNER/KNOWLEDGEAREAS1/BUSIN ESS_PRACTICE/Methods/Learn_about_OUM.html

Conventions

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

The following text conventions are used in this document:

Introduction

Oracle WebLogic Server connects to a PeopleSoft system through Oracle Application Adapter for PeopleSoft, which provides connectivity and carries out interactions on a PeopleSoft system. This chapter contains the following topics:

- Section 1.1, "Adapter Features"
- Section 1.2, "PeopleSoft Concepts"
- Section 1.3, "Integration with PeopleSoft"
- Section 1.4, "Adapter Architecture"
- Section 1.5, "BSE Versus Oracle Adapter J2CA Deployment"

1.1 Adapter Features

Oracle Application Adapter for PeopleSoft provides a means to exchange real-time business data between PeopleSoft systems and other applications, databases, and external business partner systems. The adapter enables inbound and outbound processing with PeopleSoft. Oracle Application Adapter for PeopleSoft can be deployed as a J2EE Connector Architecture (J2CA) version 1.0 resource adapter. This deployment is referred to as Oracle Adapter J2CA. It can also be deployed as a Web services servlet and is referred to as Oracle Adapter Business Services Engine (BSE).

Oracle Application Adapter for PeopleSoft uses XML messages to enable non-PeopleSoft applications to communicate and exchange transactions with PeopleSoft using services and events. The roles of services and events are outlined as follows:

- Services: Enable applications to initiate a PeopleSoft business event.
- Events: Enable applications to access PeopleSoft data only when a PeopleSoft business event occurs.

To support event functionality, channels are supported. A **channel** represents configured connections to particular instances of back-end or other types of systems.

The channel is the adapter component that receives events in real time from the enterprise information system (EIS) application. The channel component can be a File reader, an HTTP listener, a TCP/IP listener, or an FTP listener. A channel is always EIS specific. The adapter supports multiple channels for a particular EIS, which enables the user to choose the optimal channel component based on deployment requirements.

Oracle Application Adapter for PeopleSoft provides:

 Synchronous and asynchronous, bidirectional message interactions for PeopleSoft component interfaces and PeopleSoft Application Messaging / Integration Broker.

- Oracle WebLogic Server Adapter Application Explorer (Application Explorer), a GUI tool that explores PeopleSoft metadata and builds XML schemas or Web services.
- XML schemas and WSDL files for the J2CA 1.0 and J2CA 1.5 resource adapter.
- Web services for BSE.

The adapter connects to the PeopleSoft Application Server by accessing APIs for the component interfaces that correspond to its supported business objects. Every component interface contains data and business logic for the business component, thus alleviating a requirement for the adapter to duplicate the processes defined within the business component.

See Also: Oracle Application Server Adapter Concepts Guide

1.2 PeopleSoft Concepts

PeopleSoft enables integration with other applications and systems through its component interface framework and its Integration Broker (in release 8.4) or Application Messaging (in release 8.1) facility. Oracle Application Adapter for PeopleSoft uses the PeopleSoft framework and leverages various integration access methods to provide the greatest amount of flexibility and functionality. Integration access methods supported by Oracle Application Adapter for PeopleSoft include:

- PeopleSoft Java API using component interfaces
- PeopleSoft messages using PeopleSoft Application Messaging / Integration Broker

This section contains the following topics:

- Section 1.2.1, "PeopleSoft Component Interface"
- Section 1.2.2, "PeopleSoft Application Messaging / Integration Broker"

1.2.1 PeopleSoft Component Interface

In the PeopleSoft environment, a component interface is a container for distributing PeopleSoft application data among PeopleSoft logical systems and for exchanging PeopleSoft application data with non-PeopleSoft systems.

The component interface is based on an existing business process within PeopleSoft. An example is a purchase order entry, which can be a PeopleSoft-delivered process or a user-developed process. The component interface also inherits its methods (Add, Update, and so on) and its business logic from the underlying business process.

PeopleSoft delivers generic component interfaces with each of its applications. These are called Enterprise Integration Points (EIP). Customers can also develop their own custom component interfaces, or they can modify EIP as required. Oracle Application Adapter for PeopleSoft supports both types of component interfaces.

1.2.2 PeopleSoft Application Messaging / Integration Broker

PeopleSoft Application Messaging / Integration Broker facilitates the integration of PeopleSoft XML with PeopleSoft. Oracle Application Adapter for PeopleSoft provides a handler that must be configured within the PeopleSoft application gateway using TCP/IP transport services.

1.3 Integration with PeopleSoft

Oracle Application Adapter for PeopleSoft enables you to:

- Access a PeopleSoft component using a component interface. Component methods are referred to as services.
- Receive messages from a PeopleSoft application. Messages are referred to as events.

When you access a PeopleSoft component from another application, you work with:

- Component interfaces. If a component interface does not exist, then create, secure, and test one. If the component interface exists but you modified it, then secure and test it. For more information, see your PeopleSoft documentation. Alternatively, you can secure and test the component interface and create the component interface API after you generate schemas or Web services.
- Component interface APIs. Create an API for the component interface.
- Schemas and Web services. Create schemas or Web services for the component methods.

For more information, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".

To receive a message from PeopleSoft, you work with:

- The Integration environment. Configure and test your PeopleSoft Integration Broker (release 8.4) or Application Messaging environment (release 8.1). To ensure that the environment is properly configured, see your PeopleSoft documentation.
- Message routing. Configure TCP/IP Target Connector (release 8.4), HTTP Target Connector (release 8.4), or TCP/IP Handler (release 8.1).

See Also:

- Oracle Application Server Adapter Concepts Guide
- Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server

1.4 Adapter Architecture

Oracle Application Adapter for PeopleSoft uses Application Explorer with one of the following components:

- Oracle WebLogic Server Adapter Business Services Engine (BSE)
- Enterprise Connector for J2EE Connector Architecture (J2CA)

Application Explorer (used to configure PeopleSoft connections and create Web services and events) can be configured to work in a Web services environment with BSE. When working in a J2CA environment, the connector uses the Common Client Interface (CCI) to provide integration services using adapters instead of Web services.

This section contains the following topics:

- Section 1.4.1, "Oracle WebLogic Server Adapter Business Services Engine (BSE) Architecture"
- Section 1.4.2, "Oracle WebLogic Server Adapter J2CA Architecture"

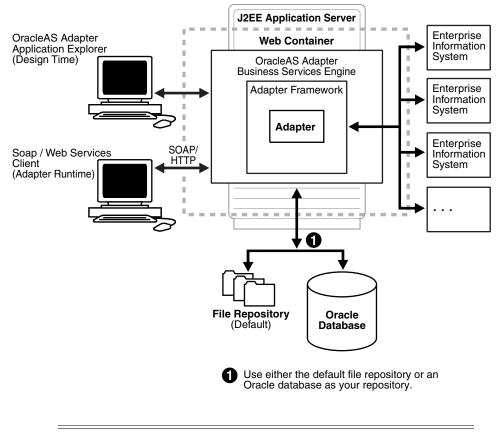
1.4.1 Oracle WebLogic Server Adapter Business Services Engine (BSE) Architecture

Figure 1–1 shows the generic architecture for the Oracle Web service adapter for packaged applications. The adapter works with BSE, as deployed to a Web container in a J2EE application server.

Application Explorer, a design-time tool deployed along with BSE, is used to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. Metadata created while you perform these operations are stored in the repository by BSE.

BSE uses SOAP as a protocol for receiving requests from clients, interacting with the EIS, and sending responses from the EIS back to clients.

Figure 1–1 Oracle WebLogic Server Adapter Business Services Engine (BSE) Generic Architecture

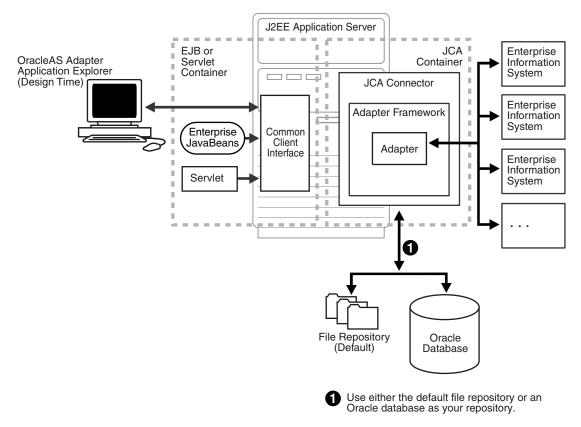


Note: Do not use a file repository for BSE in production environments.

1.4.2 Oracle WebLogic Server Adapter J2CA Architecture

Figure 1–2 shows the generic architecture for Oracle Adapter J2CA for packaged applications. Oracle Adapter J2CA is deployed to a standard J2CA Container and serves as a host container to the adapters. The connector is configured with a repository. The repository can be a file system or an Oracle database. It is deployed as a RAR file and has an associated deployment descriptor called ra.xml. You can create multiple connector factories by editing the Oracle WebLogic Server deployment descriptor ra.xml. For more information, see Chapter 3, "Oracle WebLogic Server Deployment and Integration".

Application Explorer, a design tool that works with the connector, is used to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. Metadata created while you perform these operations are stored in the repository by the connector.





1.5 BSE Versus Oracle Adapter J2CA Deployment

If you are using Oracle Application Adapter for PeopleSoft with Oracle SOA Suite components (for example, BPEL, Mediator, BPM, or OSB), then note that:

- Only Oracle Adapter J2CA deployment supports inbound integration (event notification) with Oracle SOA Suite components.
- Oracle Adapter J2CA and BSE deployments support outbound integration (request-response service) with Oracle SOA Suite components.

The following two factors explain the differences between deploying BSE and Oracle Adapter J2CA. Understanding these factors can help in selecting a deployment option.

- **1.** BSE has the following advantages:
 - Can be deployed in a separate instance of Oracle WebLogic Server.
 - Provides better distribution of load.
 - Conforms more closely to the Service Oriented Architecture (SOA) model for building applications.
- 2. Oracle Adapter J2CA does provide slightly better performance than BSE.

Configuring Oracle Application Adapter for PeopleSoft

Oracle Adapter Application Explorer (Application Explorer) enables the processing of Component Interfaces and Messages.

External applications that access PeopleSoft through the adapter use either XML schemas or Web services to pass data between the external application and the adapter. You can use Application Explorer to create the required XML schemas and Web services.

This chapter contains the following topics:

- Section 2.1, "Starting Application Explorer"
- Section 2.2, "Configuring Repository Settings"
- Section 2.3, "Creating a Repository Configuration"
- Section 2.4, "Establishing a Connection (Target) for PeopleSoft"
- Section 2.5, "Viewing Application System Objects"
- Section 2.6, "Creating XML Schemas"
- Section 2.7, "Generating a WSDL (J2CA Configurations Only)"
- Section 2.8, "Creating and Testing a Web Service (BSE Configurations Only)"
- Section 2.9, "Configuring an Event Adapter"

2.1 Starting Application Explorer

To start Application Explorer:

- **1.** Ensure that Oracle WebLogic Server is started, which is where Application Explorer is deployed.
- 2. Open the command prompt.
- **3.** Navigate to the following directory:

<WLS_Home>\user_projects\domains\base_domain\bin

4. Execute setDomainEnv.cmd(Windows) or . ./setDomainEnv.sh
 (UNIX/Linux).

This command sets the class path and other environment variables for Application Explorer in the Oracle WebLogic Server environment. In addition, it allows Application Explorer to access the Oracle WebLogic Server APIs to publish WSDL files to the Oracle Service Bus (OSB) Console.

- 5. Do not close the command prompt.
- 6. Navigate to the following directory:

For Oracle SOA Suite:

<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\tools\iwae\bin\ae.bat

In this example, *<ORACLE_HOME>* is the location where Oracle SOA Suite is installed.

For OSB:

<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\tools\iwae\bin\ae.bat

In this example, *<OSB_HOME>* is the location where Oracle Service Bus is installed.

<OSB_Home>\3rdparty\ApplicationAdapters\tools\iwae\bin

7. Execute *ae.bat* (Windows) or *iwae.sh* (UNIX/Linux) to start Application Explorer.

Application Explorer starts. You are ready to define new targets to your PeopleSoft system.

Note: Before you run the **iwae.sh** file on UNIX or Linux platforms, the permissions must be changed. For example:

chmod +x iwae.sh

2.2 Configuring Repository Settings

A repository holds information about configuration details, adapter targets, channels, and other configuration information. For more information on how to configure BSE and J2CA repository settings, see the *Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server* (Section 2.8.4, "Configuring the Database Repository").

2.3 Creating a Repository Configuration

Before you use Application Explorer with Oracle Application Adapter for PeopleSoft, you must create a repository configuration. You can create two kinds of repository configurations, Web services and J2CA, depending on the container to which the adapter is deployed.

During design time, the repository is used to store metadata created when using Application Explorer to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. The information in the repository is also referenced at run-time.

Web services and BSE refer to the same type of deployment. For more information, see "Adapter Features" on page 1-1.

This section contains the following topics:

- Section 2.3.1, "Creating a Configuration for BSE"
- Section 2.3.2, "Creating a Configuration for J2CA"
- Section 2.3.3, "Connecting to a BSE or J2CA Configuration"

2.3.1 Creating a Configuration for BSE

To create a repository configuration for BSE using Application Explorer, you must first define a new configuration.

Defining a New Configuration for BSE

To define a new configuration for BSE:

- 1. Start the Application Explorer.
- 2. Right-click Configurations and select New.

The New Configuration dialog is displayed, as shown in Figure 2–1.

Figure 2–1 New Configuration Dialog

New Con	figuration	×
?	Name:	-
	OK Cancel	

3. Enter a name for the new configuration (for example, myConfig) and click **OK**. The New Configuration dialog is displayed, as shown in Figure 2–2.

Figure 2–2 New Configuration Dialog - Service Provider List and iBSE URL

🙀 New Configuration		
Service Provider BSE		
iBSE URL http://localhost7001/ibse/IBSEServlet		
OK Cancel		

- 4. From the Service Provider list, select iBSE.
- **5.** In the **BSE URL** field, accept the default URL or replace it with a different URL with the following format:

http://host name:port/ibse/IBSEServlet

Where *host name* is the system where Oracle WebLogic Server resides and *port* is the HTTP port for a managed Oracle WebLogic Server (for example, soa_server1).

6. Click OK.

A node representing the new configuration appears beneath the root Configurations node, as shown in Figure 2–3.

Figure 2–3 New Configuration Node - myConfig



2.3.2 Creating a Configuration for J2CA

To create a configuration for Oracle Adapter J2CA using Application Explorer, you must first define a new configuration.

This section contains the following topic:

Section 2.3.2.1, "HTTP Repository Connection"

To define a new configuration for J2CA:

- 1. Start the Application Explorer.
- 2. Right-click Configurations and select New.

The New Configuration dialog is displayed, as shown in Figure 2–4.

Figure 2–4 New Configuration Dialog

🙀 New Configurat	ion			×
Service Provider J	CA 🔽			
Home C:\oracle\Mid	dleware\	Oracle_SO	A1\soa\thirdp	part
	ок	Cancel]	

- **3.** Enter a name for the new configuration (for example, myConfig) and click **OK**.
- 4. From the Service Provider list, select JCA.
- 5. Click OK.

A node representing the new configuration appears beneath the root Configurations node, as shown in Figure 2–5.

Figure 2–5 New Configuration Node - myConfig



The Oracle Adapter J2CA configuration folder is stored in a location based on your adapter installation:

For Oracle SOA Suite:

<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_name

In this example, *<ORACLE_HOME>* is the location where Oracle SOA Suite is installed.

For OSB:

<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_name

In this example, *<OSB_HOME>* is the location where Oracle Service Bus is installed.

The *configuration_name* is the name of the configuration you created (for example, SampleConfig).

2.3.2.1 HTTP Repository Connection

J2CA users can create an HTTP repository connection, which enables them to generate and store WSDL documents remotely. Perform the following steps to create an HTTP repository connection in Application Explorer. To use the HTTP repository, ensure that the iwafjcaivp test tool is successfully deployed and running.

- 1. Start the Application Explorer.
- 2. Right-click the **Configurations** node in the left pane and select **New**.

The New Configuration dialog opens.

- **3.** Type a name for the configuration and click **OK**.
- **4.** Select **JCA** from the Service Provider list box and enter an HTTP target value in the Home field.

Use the following format for the HTTP target value:

http://host name:port/iwafjca/JCAServlet

For example:

http://iwserv14:8001/iwafjca/JCAServlet

5. Click OK.

The new HTTP repository connection is added to the Configurations node.

Once you connect to the remote server, you can create new Adapter targets, generate WSDL documents, and store them in the remote server.

Note: When you configure an Adapter target with the J2CA HTTP repository, you are not required to restart the Oracle WebLogic Server for run time purposes.

2.3.3 Connecting to a BSE or J2CA Configuration

To connect to a new configuration:

- **1.** Right-click the configuration to which you want to connect, for example, myConfig.
- 2. Select Connect.

Nodes appear for Adapters, Events, and Business Services (also known as Web services). The Business Services node is only available for BSE configurations. If you are connected to a J2CA configuration, then the Business Services node is not shown.

Events are not applicable when using a BSE configuration. You can configure events using a J2CA configuration only.

An example of a BSE configuration named myConfig, as shown in Figure 2–6.

Figure 2–6 New BSE Configuration - myConfig Node



- Use the Adapters folder to create inbound interaction with PeopleSoft. For example, you use the PeopleSoft node in the Adapters folder to configure a service that updates PeopleSoft.
- Use the Events folder (available for J2CA configurations only) to configure listeners that listen for events in PeopleSoft.
- Use the Business Services folder (available for BSE configurations only) to test Web services created in the Adapters folder. You can also control security settings for the Web services by using the security features of the Business Services folder.

You are now ready to define new targets to PeopleSoft.

2.4 Establishing a Connection (Target) for PeopleSoft

Part of the application definition includes adding a target for Oracle Application Adapter for PeopleSoft. Setting up the target in Application Explorer requires information that is specific to the target.

To browse PeopleSoft business objects, you must create a target for the system you intend to use. The target serves as your connection point and is automatically saved after you create it. You must establish a connection to this system every time you start Application Explorer or after you disconnect from the system.

When you launch Application Explorer, the left pane displays (as nodes) the application systems supported by Application Explorer, based on the adapters that are installed.

This section contains the following topics:

- Section 2.4.1, "Defining a Target to PeopleSoft"
- Section 2.4.2, "Connecting to a Defined PeopleSoft Target"
- Section 2.4.3, "Managing a Target"

2.4.1 Defining a Target to PeopleSoft

To connect to PeopleSoft for the first time, you must define a new target. Oracle Application Adapter for PeopleSoft supports PeopleSoft standard security, in addition to component interface-level security. Once connected to the PeopleSoft application server, application security is managed by user ID, roles and privileges. For more information on PeopleSoft application security, see the appropriate PeopleSoft documentation.

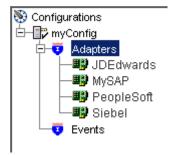
When you define a new target, you must restart the Oracle WebLogic Server to update the repository for run time purposes.

To define a target:

1. In the left pane, expand the **Adapters** node.

The applications systems supported by Application Explorer appear as nodes based on the adapters that are installed, as shown in Figure 2–7.

Figure 2–7 Adapters List



2. Right-click the **PeopleSoft** node and select **Add Target**.

The Add Target dialog is displayed. Provide the following information:

- **a.** In the **Name** field, enter a descriptive name for the target, for example, **PSoftTarget**.
- **b.** In the **Description** field, enter a description for the target (optional).
- c. From the Target Type list, select Application Server.

This is the only possible value for target type.

3. Click OK.

The Application Server dialog is displayed, as shown in Figure 2–8. You must specify connection information for PeopleSoft and the application server that is hosting PeopleSoft.

Figure 2–8 Application Server Dialog

Application Server		×
Application Server*		
Port*		
User*		
Password*		
C	Cancel	
Fields marked with * are	required.	

Provide the following information:

- **a.** In the **Application Server** field, enter the host name or IP address for the computer that is hosting the PeopleSoft application.
- **b.** In the **Port** field, enter the port number where the PeopleSoft application is listening.
- c. In the User field, enter a valid user ID for the PeopleSoft application.

- d. In the Password field, enter a valid password for the PeopleSoft application.
- 4. Click OK.

In the left pane, the new target (**PSoftTarget**) appears the PeopleSoft node, as shown in Figure 2–9.

Figure 2–9 Disconnected PeopleSoft Target Node



You are ready to connect to your PeopleSoft target.

2.4.2 Connecting to a Defined PeopleSoft Target

To connect to an existing target:

- 1. In the left pane, expand the Adapters node.
- 2. Expand the **PeopleSoft** node.
- **3.** Click the target name (for example, **PSoftTarget**) under the PeopleSoft node.

The Connection dialog displays the values you entered for connection parameters.

- 4. Verify your connection parameters.
- 5. Right-click the target name and select Connect.

The x icon disappears, indicating that the node is connected. A list of PeopleSoft business objects is displayed, as shown in Figure 2–10.

Figure 2–10 PeopleSoft Business Objects



2.4.3 Managing a Target

Although you can maintain multiple open connections to different transaction processing systems, it is recommended that you disconnect from connections not in use. After you disconnect, you can modify an existing target.

You can modify the connection parameters when your system properties change. You also can delete a target. The following procedures describe how to disconnect from a target, edit a target, and delete a target.

This section contains the following topics:

- Section 2.4.3.1, "Disconnecting from a Connection to PeopleSoft"
- Section 2.4.3.2, "Modifying Connection Parameters"
- Section 2.4.3.3, "Deleting a Connection to PeopleSoft"

2.4.3.1 Disconnecting from a Connection to PeopleSoft

To disconnect from a connection to PeopleSoft:

- 1. Expand the Adapters node.
- 2. Expand the **PeopleSoft** node.
- **3.** Right-click the target to which you are connected (for example, PSoftTarget), and select **Disconnect**, as shown in Figure 2–11.

Figure 2–11 Disconnect

E		
Com	Disconnect	
Mes:	Delete	
🔤 🗌 🔤 🚮 🖌 🔤	oonent Interfaces(R	PC)

Disconnecting from PeopleSoft drops the connection with PeopleSoft, but the node remains.

The x icon appears, indicating that the node is disconnected, as shown in Figure 2–12.

Figure 2–12 Disconnected PeopleSoft Target Node

Ę	H🎒 PeopleSoft
	🚽 🖵 PSoftTarget

2.4.3.2 Modifying Connection Parameters

After you create a target for PeopleSoft using Application Explorer, you can edit any of the information that you provided previously.

When modify connection parameters for a defined target, you must restart the Oracle WebLogic Server to update the repository for run time purposes.

To edit a target:

- 1. Verify that the target you want to edit is disconnected.
- 2. Right-click the target and select Edit, as shown in Figure 2–13.

Figure 2–13 PSoftTarget Node Menu



The Application Server dialog displays the target connection information.

3. Change the properties in the dialog as required and click OK.

2.4.3.3 Deleting a Connection to PeopleSoft

You can delete a connection, rather than just disconnecting and closing it. When you delete the connection, the node disappears from the list of PeopleSoft connections in the left pane of Application Explorer.

When you delete a connection, you must restart the Oracle WebLogic Server to update the repository for run time purposes.

To delete a connection to PeopleSoft:

- 1. Locate the target you want to delete.
- **2.** Right-click the target (for example, PsoftTarget), and select **Delete**, as shown in Figure 2–14.

Figure 2–14 PSoftTarget Node - Delete Option



The node disappears from the list of available connections.

2.5 Viewing Application System Objects

After you are connected to PeopleSoft, Application Explorer enables you to explore and browse business object metadata. For example, Application Explorer enables you to view PeopleSoft Component Interface and Message metadata stored in the PeopleSoft business object repository.

For Component Interfaces(RPC), the adapter enables Delete, Insert, Query, Update, and Find.

To view application system objects:

1. Click the icon to the left of the target name, for example, PSoftTarget.

The target expands and the available system objects are displayed, as shown in Figure 2–15.





2. To expand the desired PeopleSoft repository node, click the icon to the left of the repository name, for example, Component Interfaces.

A list of PeopleSoft Component Interfaces appears. You can now generate schemas.

Note: The Component Interfaces (RPC) node only displays the level 1 Component Interfaces.

2.6 Creating XML Schemas

After you browse the PeopleSoft business object repository, you can generate XML request and response schemas for the object you want to use with your adapter.

This section contains the following topics:

- Section 2.6.1, "Creating XML Request and Response Schemas Against BSE"
- Section 2.6.2, "Creating XML Request and Response Schemas Against the Oracle Adapter J2CA"

2.6.1 Creating XML Request and Response Schemas Against BSE

To create XML request and response schemas for a PeopleSoft Component Interface against a BSE implementation:

- 1. Expand the PeopleSoft node and then, expand the Component Interfaces node.
- 2. From the list of Component Interfaces, select LOCATION.
- **3.** Click the **Request Schema** or **Response Schema** tab to view the request or response schema information.

The schema you selected is displayed.

After you browse the Component Interfaces and make a selection, the request and response XML schemas are automatically created for that Component Interface and stored in the repository you created.

2.6.2 Creating XML Request and Response Schemas Against the Oracle Adapter J2CA

To create XML request and response schemas for a PeopleSoft Component Interface against an Oracle Adapter J2CA implementation:

- 1. Expand the **PeopleSoft** node and then, expand the **Component Interfaces** node.
- 2. From the list of Component Interfaces, select LOCATION.
- **3.** Click the **Request Schema** or **Response Schema** tab to view the request or response schema information.

The schema you selected is displayed.

After you browse the Component Interfaces and make a selection, the request and response XML schemas are automatically created for that Component Interface and stored in the repository you created.

2.7 Generating a WSDL (J2CA Configurations Only)

The Web Service Definition Language (WSDL) description of a service enables you to make the service available to other services within a host server. You use Application Explorer to create both request-response (outbound) and event notification (inbound) JCA services of the adapter.

Note: The **Create Inbound JCA Service (Event)** option is only available when the selected node supports events.

Note: PeopleSoft Component Interfaces only support services. As a result, only outbound WSDL files can be generated.

To generate a WSDL file for request-response service:

1. After you create a schema, right-click the respective object.

The options are displayed, as shown in Figure 2–16.

Figure 2–16 Create Outbound JCA Service (Request/Response) Option

VY_CI_MESSAGES OCATION		and a state
 Export Schema(s)		
Create Outbound JCA Service(Request/Response	e)	
Apply Filter		

2. Select Create Outbound JCA Service (Request/Response).

The Export WSDL dialog is displayed, as shown in Figure 2–17.

Figure 2–17 Export WSDL Dialog

Export WSDL		×
Name	tionAdapters\tools\\iwae\bin\\\.wsdls\LOCATION_invoke.wsdl	Browse
Export to OS	В	
Location		
Host		
Port		
User		
Password		
	OK Cancel	

3. Accept the default name for the file.

The **.wsdl** file extension is added automatically. By default, the names of WSDL files generated for request-response services end with _invoke, while those generated for event notification end with _receive.

4. Click OK.

The WSDL file is saved in the specified location.

The procedure for generating WSDL for event notification is similar to request-response. To generate WSDL for event notification, you must first create a channel for every event.

2.8 Creating and Testing a Web Service (BSE Configurations Only)

You can create Web services (also known as a **business service**) using Application Explorer. The PeopleSoft Component Interface called LOCATION is used as an example in the following procedure.

Note: In a J2EE Connector Architecture (J2CA) implementation of adapters, Web services are not available. When the adapters are deployed to use Oracle Adapter J2CA, the Common Client Interface provides integration services using the adapters.

Creating a Web Service

To create a Web service, perform the following steps:

- 1. Connect the created PeopleSoft target under the BSE configuration and expand the **Component Interfaces** node.
- 2. From the list of **Component Interfaces**, select **LOCATION**.
- **3.** Right-click the node from which you want to create a **business service** and select **Create Web Service**, as shown in Figure 2–18.

Figure 2–18 Create Web Service Option



The Create Web Service dialog is displayed, as shown in Figure 2–19.

Figure 2–19 Create Web Service Dialog

Create Web Service
Existing Service Names: <pre></pre>
Service Name:
Service Description:
Next Cancel

You can add the business function as a method for a new Web service or as a method for an existing one. Perform the following steps:

- **a.** From the **Existing Service Names** list, select either **<new service>** or an existing service.
- b. If you are creating a new service, then specify a service name. This name identifies the Web service in the list of services under the Business Services node.
- **c.** Enter a brief description for the service (optional).
- 4. Click Next.

The license and method dialog is displayed, as shown in Figure 2–20.

Figure 2–20 License and Method Dialog

🙀 Create Web Serv	ice	×
License Name:	test 🔽	
Method Name:	LOCATION	
Method Description:	A V	
DTD Directory:	C:\OraHome_2\adapters\application\tools Browse	
	Back OK Cancel	

Perform the following steps:

- **a.** In the **License Name** field, select one or more license codes to assign to the Web service. To select more than one, hold down the **Ctrl** key and click the licenses.
- **b.** In the **Method Name** field, leave the default method name.
- **c.** In the **Method Description** field, enter a brief description of the method (optional).
- **d.** The **DTD Directory** field specifies a destination for your Web service. You may click **Browse** to change the default location.
- 5. Click OK.

Application Explorer switches the view to the **Business Services** node, and the new Web service appears in the left pane.

6. Right-click the new Web service and select **Save WSDL** from the menu.

The Save dialog is displayed.

- **7.** Provide a name for the WSDL file and a location to save the WSDL file on your file system.
- 8. Click Save.

Testing a Web Service

After a Web service is created, you can test it to ensure that it functions properly. A test tool is provided for testing the Web service.

To test a business service:

- 1. Click the **Business Services** node to access your Web services.
- 2. Expand the Services node.
- **3.** Select the name of the business service you want to test.

The business service name appears as a link in the right pane.

4. In the right pane, click the named business services link.

The test option appears in a separate BSE Servlet page. If you are testing a Web service that requires XML input, then an input field appears.

- **5.** Enter the appropriate input.
- 6. Click Invoke.

The BSE Servlet page displays the results.

Identity Propagation

If you test or execute a Web service using a third party XML editor, for example XMLSPY, then the user name and password values that you specify in the SOAP header must be valid and are used to connect to PeopleSoft. The user name and password values that you provided for PeopleSoft during target creation using Application Explorer are overwritten for this Web service request. The following is a sample SOAP header that is included in the WSDL file for a Web service:

<SOAP-ENV:Header>

```
<m:ibsinfo xmlns:m="urn:schemas-iwaysoftware-com:iwse">
    <m:service>String</m:service>
    <m:method>String</m:method>
    <m:license>String</m:license>
    <m:disposition>String</m:disposition>
    <m:Username>String</m:Username>
    <m:Password>String</m:Password>
    <m:language>String</m:language>
    </m:ibsinfo>
</SOAP-ENV:Header>
```

You can remove the <m:disposition> and <m:language> tags from the SOAP header, since they are not required.

2.9 Configuring an Event Adapter

Events are generated by activity in an application system. You can use events to trigger an action in your application. For example, PeopleSoft may generate an event when customer information is updated. If your application performs an action when this happens, then your application is a consumer of this event.

Note: BSE configurations do not support events.

After you create a connection to your application system, you can add events using Application Explorer. To create an event, you must create a channel.

Note: If you are using a J2CA configuration, then you must create a new channel for every event object and select this channel when you generate WSDL. Creating a channel is required for J2CA configurations only.

A **channel** represents configured connections to particular instances of back-end systems. For more information, see "Creating and Editing a Channel" on page 2-15.

2.9.1 Creating and Editing a Channel

The following procedures describe how to create a channel for your event. All defined event ports must be associated with a channel.

When you create, modify, or delete a channel, you must restart the Oracle WebLogic Server to recognize the change and update the repository for run time purposes.

Note: If using a J2CA configuration, then you must create a new channel for every event and select this channel when creating an inbound service. Creating a channel is required for J2CA configurations only.

Creating a Channel Using Specific Protocols

You can create the following types of channels using Application Explorer:

HTTP

It is recommended to use HTTP channels with PeopleTools Version 8.4.

TCP

It is recommended to use TCP channels with PeopleTools Version 8.1.

File

It is recommended to use File channels for testing purposes only. Do not use File channels in a production environment.

Note: Channels can be configured and started only on the system where the Oracle Application Adapter for PeopleSoft is installed. Configuring and starting a channel for a remote host is not supported.

The following procedures explain how to create these channels.

2.9.1.1 Creating an HTTP Channel

To create an HTTP Channel:

- **1.** Click the **Events** node.
- 2. Expand the **PeopleSoft** node.

The ports and channels nodes appear in the left pane.

3. Right-click Channels and select Add Channel.

The Add Channel dialog is displayed, as shown in Figure 2–21.

🙀 Add Channel 📃 🕨	١
Name:	
PSFT_channel	
Description:	
Protocol:	
HTTP Listener	
Available Port(s)	
Next Cancel	

Figure 2–21 Add Channel Dialog

Provide the following information:

- **a.** Enter a name for the channel, for example, **PSFT_channel**.
- **b.** Enter a brief description.
- c. From the Protocol list, select HTTP Listener.
- 4. Click Next.

The Http Listener dialog is displayed, as shown in Figure 2–22.

Figure 2–22 Http Listener Dialog

Http Listener	×
Listener port*	8080
Https	
Synchronization Type	REQUEST_RESPONSE
Encoding Type	UTF-8
	OK Cancel
Fields marked with * are r	equired.

5. Enter the system information as specified in the following table:

Parameter	Description
Listener port	Port on which to listen for PeopleSoft event data.
Https	For a secure HTTP connection, select the Https check box.
	This option is currently not supported.
	Choose from the following synchronization options:
Туре	 REQUEST_RESPONSE
	 REQUEST_ACK
	Important: The PeopleSoft channel does not work if the synchronization type is set to REQUEST.
Encoding Type	Choose an encoding type to be used from the list. By default, ASCII is selected.

6. Click OK.

A summary pane is displayed, providing the channel description, channel status, and available ports. All the information is associated with the channel you created.

The channel appears under the channels node in the left pane.

An X over the icon indicates that the channel is currently disconnected. You must start the channel to activate your event configuration.

Note: If you are planning to integrate Oracle Application Adapter for PeopleSoft with BPM, BPEL, or OSB inbound process components, then do not start the channel. The channel is managed by the run-time server after the BPM, BPEL, or OSB process component is deployed. If you start the channel from Application Explorer for testing and debugging purposes, then stop it before run-time (when working with BPM, BPEL, or OSB process components).

7. Right-click the channel and select **Start**.

The channel you created becomes active. The X over the icon in the left pane disappears.

8. To stop the channel, right-click the channel and select **Stop**.

2.9.1.2 Creating a TCP Channel

- **1.** Click the **Events** node.
- **2.** Expand the **PeopleSoft** node.

The ports and channels nodes appear in the left pane.

3. Right-click Channels and select Add Channel.

The Add Channel dialog is displayed, as shown in Figure 2–23.

🙀 Add Channel	×
Name:	
PSoftChannel	
Description:	
This channel listens for events on PeopleSoft	
Protocol:	
TCP Listener	T
Available Port(s)	
Next Cancel	

Figure 2–23 Add Channel Dialog

Perform the following steps:

- **a.** Enter a name for the channel, for example, PSoftChannel.
- **b.** Enter a brief description.
- c. From the Protocol list, select TCP Listener.
- 4. Click Next.

The Tcp Listener dialog is displayed, as shown in Figure 2–24.

Figure 2–24 TCP Listener Dialog

Port Number*	
Host/IP Binding	
Synchronization Type	REQUEST_RESPONSE
🗌 Is Length Prefix	REQUEST_RESPONSE REQUEST_ACK
✓ Is XML	REQUEST
🗌 Is Keep Alive	
	OK Cancel

Provide the following information:

- **a.** In the **Port Number** field, specify the port number for your TCP listener (required).
- **b.** In the **Host/IP Binding** field, specify the host IP for your TCP listener (optional).

Note: Channels can be configured and started only on the system where the Oracle Application Adapter for PeopleSoft is installed. Configuring and starting a channel for a remote host is not supported.

c. From the **Synchronization Type** list, select from the following synchronization type options:

REQUEST_RESPONSE

REQUEST_ACK

REQUEST

Important: The PeopleSoft channel only works with one of these synchronization types.

- **d.** Is Length Prefix check box: For PeopleSoft events that return data that is not in XML format. The TCP/IP event application must prefix the data with a 4-byte binary length field when writing data to the TCP/IP port.
- **e.** Is XML check box: For PeopleSoft events that return data in XML format. No preparser is required.
- f. Is Keep Alive check box: Maintains continuous communication between the event transaction and the channel.
- 5. Click OK.

The channel appears under the Channels node in the left pane, as shown in Figure 2–25.

Figure 2–25 Inactive PeopleSoft Channel Node



An X over the icon indicates that the channel is currently disconnected. You must start the channel to activate your event configuration.

Note: If you are planning to integrate Oracle Application Adapter for PeopleSoft with BPEL inbound or Mediator inbound process components, then do not start the channel. The channel is managed by the run-time server after the BPEL or Mediator process component is deployed. If you start the channel from Application Explorer for testing and debugging purposes, then stop it before run-time (when working with BPEL or Mediator process components). 6. Right-click the channel node and select **Start**.

The channel becomes active, as shown in Figure 2–26.

Figure 2–26 Active PeopleSoft Channel Node

È−O Channels └─O PSoftChannel

The X over the icon disappears.

 To stop the channel, right-click the connected channel node and select Stop. The channel becomes inactive and an X appears over the icon.

2.9.1.3 Creating a File Channel

To create a channel for the File listener:

- 1. Click the Events node.
- **2.** In the left pane, expand the **PeopleSoft** node.

The ports and channels nodes appear.

3. Right-click Channels and select Add Channel.

The Add Channel dialog is displayed, as shown in Figure 2–27.

Figure 2–27 Add Channel Dialog

🙀 Add Channel		×
Name:		
NewFileChannel		
Description:		
Protocol:		
File Listener		•
Available Port(s)	Selected Port(s)	_

Perform the following steps:

- a. Enter a name for the channel, for example, NewFileChannel.
- **b.** Enter a brief description (optional).
- c. From the Protocol list, select File Listener.
- 4. Click Next.
- 5. The File Listener dialog is displayed, as shown in Figure 2–28.

ile Listener	
Request Reponse .	Advanced
Polling Location*	
File Mask*	*
	OK Cancel
ields marked with * an	e required.

Figure 2–28 File Listener Dialog

Enter the system information as follows:

a. In the **Request** tab, enter values for the following parameters:

Parameter	Description
Polling Location	Target file system location for the PeopleSoft XML file.
File Mask	File name to be used for the output file generated by the operation.

b. In the **Response** tab, enter values for the following parameters:

Parameter	Description
Synchronization Type	Choose from the following synchronization options:
	 REQUEST_RESPONSE
	 REQUEST_ACK
	Important: The PeopleSoft channel does not work if the synchronization type is set to REQUEST.
Response/Ack Directory	Target file system location for the PeopleSoft XML file.

c. In the Advanced tab, enter values for the following parameters:

Parameter	Description
Error directory	Directory to which documents with errors are written.
Poll interval (msec)	Interval (in milliseconds) when to check for new input. The default is three seconds. Optional.
Processing Mode	Sequential indicates single processing of requests.
	Threaded indicates processing of multiple requests simultaneously.
Thread limit	If you selected threaded processing, then indicate the maximum number of requests that can be processed simultaneously.

6. Click OK.

A summary pane is displayed, providing the channel description and channel status. All the information is associated with the channel you created.

The channel appears under the channels node in the left pane. An X over the icon indicates that the channel is currently disconnected. You must start the channel to activate your event configuration.

Note: If you are planning to integrate Oracle Application Adapter for PeopleSoft with BPEL inbound or Mediator inbound process components, then do not start the channel. The channel is managed by the run-time server after the BPEL or Mediator process component is deployed. If you start the channel from Application Explorer for testing and debugging purposes, then stop it before run-time (when working with BPEL or Mediator process components).

7. Right-click the channel and select **Start**.

The channel you created becomes active. The X over the icon in the left pane disappears.

8. To stop the channel, right-click the channel and select **Stop**.

2.9.1.4 Editing a Channel

You must stop the channel before you can edit it. When you edit the channel, you must also restart the Oracle WebLogic Server to update the repository for run time purposes. To edit a channel:

- 1. In the left pane, locate the channel you want to edit.
- 2. Right-click the channel and select Edit.

The Edit channels pane is displayed.

3. Make the required changes to the channel configuration and click Finish.

2.9.1.5 Deleting a Channel

You must stop the channel before you can delete it. When you delete the channel, you must also restart the Oracle WebLogic Server to update the repository for run time purposes. To delete a channel:

- 1. In the left pane, locate the channel you want to delete.
- 2. Right-click the channel and select Delete.

The channel disappears from the list in the left pane.

2.9.2 Schema Validation

Root validation, namespace validation, and schema validation for inbound processing (events) are supported for the Oracle Application Adapter for PeopleSoft with BPEL.

To validate inbound processing using the Oracle Application Adapter for PeopleSoft, perform the following steps. This procedure uses the LOCATION_SYNC.VERSION_1 PeopleSoft Message as an example for inbound processing.

- **1.** Start Application Explorer.
- 2. Connect to the PeopleSoft target.
- **3.** Expand the **Messages** node.
- 4. Verify that you have already created a channel for the PeopleSoft adapter.

5. Right-click the LOCATION_SYNC.VERSION_1 node and select Create Inbound JCA Service (event).

The Export WSDL dialog opens and includes three check boxes for Root, Namespace, and Schema validation, as shown in Figure 2–29.

Export WSDL			×
Name	ae\bin\.1.1.hvsdls\	LOCATION_SYNC.VERSION_1_receive.wsd	Browse
Channel	PSFT_CHANNEL	•	
Validation	Root		
	Namespace		
	Schema		
Export to OSB			
Location			
Host			
Port			
User			
Password			
		OK Cancel	
	' You must create a	separate channel for each inbound service	

Figure 2–29 Export WSDL Dialog

- Selection of multiple validation options is allowed.
- Root validation is used to validate the root element in the inbound XML document.
- Namespace validation is used to validate the namespace in the inbound XML document.
- Schema validation is used to validate the inbound XML document with the schema in the WSDL document.
- During run time, validation is processed based on the validation options that are selected.
- If more than one validation option is selected, during run time if the first validation option fails, then the remaining validation options are not processed.
- Root and namespace validations are considered modest levels of validation.
 Schema validation is a stricter validation level.
- It is recommended to use root and namespace validation options together, unless the root element and namespace are different between the Messages in the PeopleSoft environment.

- 6. Generate the WSDL document and create the BPEL process.
- 7. Trigger the transactions (Messages) from the PeopleTools environment.

Oracle WebLogic Server Deployment and Integration

This chapter describes Oracle WebLogic Server (OracleWLS) deployment and integration with Oracle Application Adapter for PeopleSoft.

This chapter contains the following topics:

- Section 3.1, "Adapter Integration with Oracle WebLogic Server"
- Section 3.2, "Deployment of Adapter"
- Section 3.3, "Updating Adapter Configuration"

See Also:

Oracle Application Server Adapter Concepts Guide

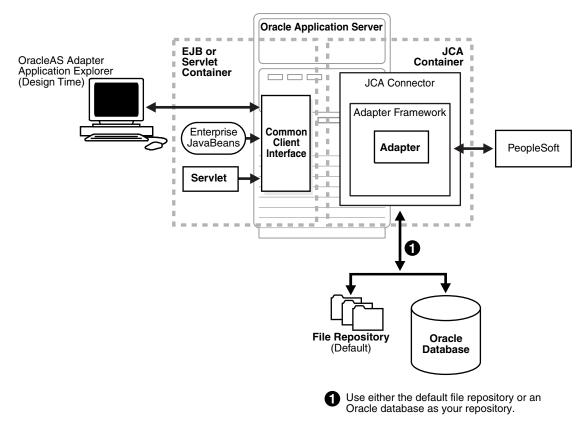
3.1 Adapter Integration with Oracle WebLogic Server

Oracle Application Adapter for PeopleSoft is deployed within an OracleWLS container during installation. All client applications run within the OracleWLS environment. In J2CA deployment, the Common Client Interface (CCI) integrates an OracleWLS client application with a resource adapter.

3.2 Deployment of Adapter

Figure 3–1 shows deployment of the J2CA Connector to the Oracle Application Server. In a run-time service scenario, an Enterprise Java Bean, servlet, or Java program client makes CCI calls to J2CA resource adapters. The adapters process the calls as requests and send them to the EIS. The EIS response is then sent back to the client.





3.3 Updating Adapter Configuration

During the J2CA deployment of Oracle Application Adapter for PeopleSoft, OracleWLS generates a deployment descriptor called ra.xml, located in:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\iwafjca.rar\META-INF

Your installation contains more than one file named ra.xml. The OracleWLS deployment descriptor that is described in this section is located in the directory specified above.

Note: Multiple managed connection factories are supported only for outbound processing (services).

Creating a Managed Connector Factory Object

The ra.xml descriptor provides OracleWLS-specific deployment information for resource adapters. For example, the jca_sample configuration in Application Explorer is represented in the ra.xml file as follows:

```
<version>1.0</version>
  <license>
   clicense-required>false</license-required>
  </license>
  <resourceadapter>
<managedconnectionfactory-class>com.ibi.afjca.spi.IWAFManagedConnectionFactory</ma
nagedconnectionfactory-class>
<connectionfactory-interface>javax.resource.cci.ConnectionFactory</connectionfacto
ry-interface>
<connectionfactory-impl-class>com.ibi.afjca.cci.IWAFConnectionFactory</connectionf
actory-impl-class>
   <connection-interface>javax.resource.cci.Connection</connection-interface>
<connection-impl-class>com.ibi.afjca.cci.IWAFConnection</connection-impl-class>
   <transaction-support>NoTransaction</transaction-support>
   <config-property>
      <config-property-name>AdapterName</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
    </config-property>
    <config-property>
      <config-property-name>Config</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
   </config-property>
    <config-property>
      <config-property-name>IWayHome</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters</config-property-value>
   </config-property>
   <config-property>
      <config-property-name>IWayConfig</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>jca_sample</config-property-value>
   </config-property>
    <config-property>
      <config-property-name>IWayRepoDriver</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
   </config-property>
    <config-property>
      <config-property-name>IWayRepoURL</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
   </config-property>
    <config-property>
      <config-property-name>IWayRepoUser</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
   </config-property>
    <config-property>
      <config-property-name>IWayRepoPassword</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value></config-property-value>
    </config-property>
    <config-property>
```

```
<config-property-name>LogLevel</config-property-name>
<config-property-type>java.lang.String</config-property-type>
<config-property-value>DEBUG</config-property-value>
</config-property>
<authentication-mechanism>
<authentication-mechanism-type>BasicPassword</authentication-mechanism-type>
<credential-interface>javax.resource.spi.security.PasswordCredential</credential-interface>
</authentication_mechanism>
```

```
</authentication-mechanism>
<reauthentication-support>true</reauthentication-support>
</resourceadapter>
</connector>
```

The parameters defined in the ra.xml file are described in the following table:

Parameter Name	Description
IWayHome	The base installation directory for the OracleWLS packaged application adapter.
IWayConfig	The adapter configuration name as defined in Application Explorer. For example, Oracle Application Adapter for PeopleSoft has a preconfigured jca_sample configuration in Application Explorer.
IWayRepoURL	The URL to use when opening a connection to the database. This is necessary only when using an Oracle database as the repository.
IWayRepoUser	User name to use when connecting to the database. This is necessary only when using an Oracle database as the repository.
IWayRepoPassword	Password. If provided, it overwrites configuration. This is necessary only when using an Oracle database as the repository.
loglevel	It overwrites the level set by the ManagedConnectorFactory property.

Creating Multiple Managed Connector Factory Objects

To establish multiple managed connector factory objects, you must edit the weblogic-ra.xml file and add more <connection-instance> nodes. This file is located in:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\iwafjca.rar\META-INF

For example, the first jca_configuration in Application Explorer is represented in the weblogic-ra.xml file as follows:

```
<?xml version="1.0"?>
<weblogic-connector xmlns="http://www.bea.com/ns/weblogic/90">
    <enable-access-outside-app>true</enable-access-outside-app>
    <enable-global-access-to-classes>true</enable-global-access-to-classes>
    <outbound-resource-adapter>
        <default-connection-properties>
        <pool-params>
        <initial-capacity>0</initial-capacity>
        </pool-params>
        <transaction-support>LocalTransaction</transaction-support>
        </default-connection-properties>
```

<connection-definition-group>

<connection-factory-interface>javax.resource.cci.ConnectionFactory</connection-factory-interface>

To create multiple managed connector factory objects, you must add new <connection-instance> nodes in the file. For example:

```
<?xml version="1.0"?>
<weblogic-connector xmlns="http://www.bea.com/ns/weblogic/90">
   <enable-access-outside-app>true</enable-access-outside-app>
   <enable-global-access-to-classes>true</enable-global-access-to-classes>
   <outbound-resource-adapter>
       <default-connection-properties>
       <pool-params>
       <initial-capacity>0</initial-capacity>
       </pool-params>
       <transaction-support>LocalTransaction</transaction-support>
        </default-connection-properties>
        <connection-definition-group>
<connection-factory-interface>javax.resource.cci.ConnectionFactory</connection-fac
tory-interface>
            <connection-instance>
                <jndi-name>eis/OracleJCAAdapter/DefaultConnection</jndi-name>
            </connection-instance>
            <connection-instance>
                <jndi-name>eis/OracleJCAAdapter/DefaultConnection1</jndi-name>
                <connection-properties>
                <properties>
                <property>
<name>IWayHome</name>
<value>C:\oracle\Middleware\Oracle_SOA1\soa\thirdparty\ApplicationAdapters</value>
                </property>
                <property>
                <name>IWayConfig</name>
                <value>jca_sample2</value>
                </property>
                <property>
   <name>IWayRepoURL</name>
   <value></value>
                </property>
                <property>
      <name>IWayRepoUser</name>
      <value></value>
                </property>
                <property>
      <name>IWayRepoPassword</name>
      <value></value>
                </property>
                <property>
      <name>LogLevel</name>
      <value>Debug</value>
```

```
</property>
</properties>
</connection-properties>
</connection-instance>
</connection-definition-group>
</outbound-resource-adapter>
</weblogic-connector>
```

If you do not specify a <property> element in the <connection-instance> section, the value is taken from the ra.xml file. You can specify the default properties in the ra.xml file and then override them as required in the weblogic-ra.xml file. In addition, note that the J2CA configuration (for example, jca_sample2) must already be created in Application Explorer.

Note: When you modify the ra.xml and weblogic-ra.xml files, the application server must be restarted. If the application server is already running, stop the application server and then restart it.

In addition, the iwafjca.rar file must be redeployed in the Oracle WebLogic Administration Console to activate these changes.

Modifying WSDL Files for Additional Connection Factory Values

Application Explorer generates the J2CA properties file using the default connection factory name <code>eis/OracleJCAAdapter/DefaultConnection</code>. If you created additional connection factories, the WSDLs generated for the additional configuration and connection factory should be changed to reflect the location field of the <code>jca:address</code> section in the J2CA properties file. The default J2CA properties file for the Oracle Application Adapter for PeopleSoft with a configuration of <code>isdsrv2_</code> conn2 is shown in the following example.

Notice that the J2CA properties file has the following default connection factory: eis/OracleJCAAdapter/DefaultConnection

```
<jca:address location="eis/OracleJCAAdapter/DefaultConnection"
ConnectionSpec="com.ibi.afjca.cci.IWAFConnectionSpec"
cs.AdapterName="PeopleSoft" cs.Config="isdsrv2_conn2"
UIConnectionName="Connection1"/>
```

The connection factory value must be changed to the following: eis/OracleJCAAdapter/DefaultConnection1

For example:

Note that only the value for the location field in the jca:address section should be modified. Do not modify any other field or section.

Integration With BPEL Service Components in the Oracle SOA Suite

Oracle Application Adapter for PeopleSoft integrates seamlessly with Oracle Business Process Execution Language (BPEL) Process Manager to facilitate Web service integration. Oracle BPEL Process Manager is based on the Service-Oriented Architecture (SOA). It consumes adapter services exposed as Web Service Definition Language (WSDL) documents.

This chapter contains the following topics:

- Section 4.1, "Overview"
- Section 4.2, "Deployment of Adapter"
- Section 4.3, "Configuring a New Application Server Connection"
- Section 4.4, "Designing an Outbound BPEL Process for Service Integration"
- Section 4.5, "Designing an Inbound BPEL Process for Event Integration"

4.1 Overview

To integrate with Oracle SOA Suite, Oracle Application Adapter for PeopleSoft must be deployed in the same WLS container as Oracle BPEL Process Manager. The underlying adapter services must be exposed as WSDL files, which are generated during design time in Oracle Application Adapter Application Explorer (Application Explorer) for both request-response (outbound) and event notification (inbound) services of the adapter. For more information, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".

The generated WSDL files are used to design the appropriate BPEL processes for inbound or outbound adapter services. A completed BPEL process must be successfully compiled in JDeveloper and deployed to a SOA server. Upon deployment to the SOA server, every newly built process is automatically deployed to the Oracle Enterprise Manager Console, where you run, monitor, and administer BPEL processes, and listen to adapter events.

4.2 Deployment of Adapter

During installation, Oracle Application Adapter for PeopleSoft is deployed as a J2CA 1.0 resource adapter within the WLS container. The adapter must be deployed in the same WLS container as Oracle BPEL Process Manager.

4.3 Configuring a New Application Server Connection

To configure a new Application Server connection in Oracle JDeveloper:

- 1. Open Oracle JDeveloper on your system.
- **2.** From the menu bar, click **View** and select **Application Server Navigator**, as shown in Figure 4–1.

Figure 4–1 Application Server Navigator

b Orac	le JD	eve	lope	er 11g Releas	e 1 - mysap	_iBSE_ou	itbound.jws	: mysap	_iBSE	_BusinessAre	a_get	det	ail.j
<u>File</u>	dit	⊻ie	w	Application	Refa <u>c</u> tor	<u>S</u> earch	<u>N</u> avigate	<u>B</u> uild	<u>R</u> un	Versi <u>o</u> ning	Tool	5	<u>W</u> ir
9 🖻		ø	Арр	dication Navigat	or					Ctrl+Shi	ft-A		t
-		-1	App	olication Server	Navigator					Ctrl+Shi	ft-G		
Appli	atio	٥Ξ	<u>B</u> re	akpoints						Ctrl+Shi	ft-R	-	٩R
	ap_it			ngonent Palette						Ctrl+Shi	ft-P	Ь	
V Proje	ts		Dat	abase							•	F	+
🔜 xsû			Deb	bugger							•	n	por
📃 xsl			Jav	a							•		Т
Busin			Log	1						Ctrl+Shi	ft-L		Т
📲 comp		P		file Points									Т
💑 mysa	- 1	(C)	Pro	- perty Inspector						Ctrl+Shi	ft-I		Т
🖀 mysa	-	in s	Res	source Palette						Ctrl+Shi	ft-O		Т
@ mysa	- 1			n Manager									Т
mysa 🔲	-	9	Sta										Т
서 mysa 서 mysa				-						Ctrl+Shi	ft-S		Q

The Application Server tab is displayed, as shown in Figure 4–2.

Figure 4–2 Application Server Tab

Application	pplication Server	_	omposite
🔁 I 🗶 -			A 4
Application Serve	ers		
	New Application Ser	ver	κp
	Import		
	Export		
	🚱 Refresh		

3. Right-click Application Servers, and then select New Application Server.

The Create Application Server Connection Wizard is displayed, as shown in Figure 4–3.

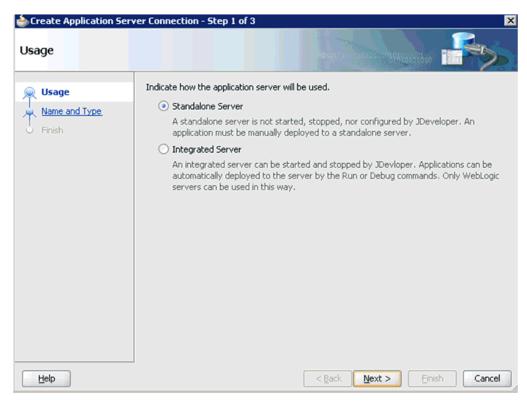


Figure 4–3 Create Application Server Connection Wizard - Usage Page

4. Accept the default selection (Standalone Server) and click Next.

The Name and Type page is displayed, as shown in Figure 4–4.

Figure 4–4 Name and Type Page

Name and Type	ver Connection - Step 2 of 6
Vision	Specify a unique name and type for the connection. The name must be a valid Java identifier.
Name and Type	Create connection in: Resource Palette
Authentication	Cgnnection Name:
Configuration	machine167
Test	Gonnection Type:
Finish	WebLogic 10.3

 Specify a new name for the Application Server connection and click Next. The Authentication page is displayed, as shown in Figure 4–5.

Icreate Application Se	rver Connection - Step 3 of 6	×
Authentication		
义 Usage	Specify a username and password to authenticate the connection.	
Name and Type	Username:	
Authentication	weblogic]
Configuration	Password:	
u Test	••••••]
Ö Finish		
Help	< <u>Back</u> <u>N</u> ext > Einish Cancel	

Figure 4–5 Authentication Page

- **6.** Specify a valid user name (for example, weblogic) and a password (for example, welcome1) for your new connection.
- 7. Click Next.

The Configuration page is displayed, as shown in Figure 4–6.

Section Sectio	erver Connection - Step 4 of 6
Configuration	
Usage Name and Type Authentication Configuration Test Finish	WebLogic Server connections use a host name and port to establish a connection. The Domain of the target will be verified Weblogic Hostname (Administration Server): localhost Port: SSL Port: 7001 7002 Always use SSL Weblogic Domain: base_domain
Help	< <u>Back</u> <u>N</u> ext > Einish Cancel

Figure 4–6 Configuration Page

- **8.** Specify the Oracle WebLogic host name (for example, localhost), which is the machine IP where the process needs to deploy and Oracle WebLogic domain (for example, base_domain).
- 9. Click Next.

The Test page is displayed, as shown in Figure 4–7.

Figure 4–7 Test Page

Create Application S	erver Connection - Step 5 of 6
Vsage Name and Type Authentication	Click Test Connection to determine if the information specified successfully establishes a connection with the application server. Iest Connection Status: Test ing JSR-160 Runtime success.
	Testing J3R-160 DomainRuntime success. Testing J3R-88 success. Testing J3R-88-LOCAL success. Testing J3R-160 Edit success. Testing J3R-160 Edit success. Testing Server MBeans Model success. 8 of 8 tests successful.
Help	< Back Next > Finish Cancel

- **10.** Click **Test Connection**.
- **11.** Ensure that the test status is successful.
- 12. Click Next.

The Finish page is displayed, as shown in Figure 4–8.

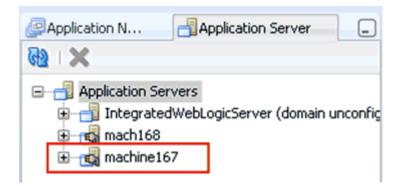
Create Application S	erver Connection - Step 6 of 6
Finish	
🔍 Usage	You have completed creating the connection.
Name and Type	To open your connection, expand the connection node in the Application Server Navigator.
Authentication	
Configuration	
🖕 <u>Test</u>	
🧅 Finish	
Help	< Back Next > Einish Cancel

Figure 4–8 Finish Page

13. Click Finish.

The new Application Server connection is listed in the left pane (Application Server tab), as shown in Figure 4–9.

Figure 4–9 New Application Server Connection



4.4 Designing an Outbound BPEL Process for Service Integration

The following tools are required to complete your adapter design-time configuration:

- Oracle Adapter Application Explorer (Application Explorer)
- Oracle JDeveloper BPEL Designer (JDeveloper) or Eclipse

Note: The examples in this chapter demonstrate the use of JDeveloper.

A sample outbound BPEL process is provided in the etc/sample folder of the application adapter installation.

Before you design a BPEL process, you must create a schema and generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Request/Response Service" on page 4-8.

4.4.1 Generating WSDL for Request/Response Service

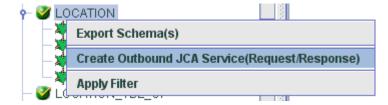
To generate WSDL for outbound interaction in Application Explorer:

1. Start **Application Explorer** and connect to a defined PeopleSoft target or create a new target.

For more information, see "Defining a Target to PeopleSoft" on page 2-6.

- 2. Expand Component Interfaces and select LOCATION.
- **3.** Right-click LOCATION, and then select **Create Outbound JCA Service** (**Request/Response**), as shown in Figure 4–10.

Figure 4–10 Create Outbound JCA Service (Request/Response) Option



The Export WSDL dialog is displayed, as shown in Figure 4–11.

ame	tionAdapters\tools\iwae\bin\\\.wsdls\LOCATION_invoke.wsdl
Export to	OSB
ocation	
lost	
ort	
lser	
assword	
	OK Cancel

Figure 4–11 Export WSDL Dialog

4. Specify an export location on your file system or accept the default path.

The **.wsdl** file extension is added automatically. By default, the names of WSDL files generated for request-response services end with **_invoke**.

5. Click OK.

You can now create a new SOA application, which is the first step that is required to define a BPEL outbound process in JDeveloper.

4.4.2 Creating a New SOA Application for the Outbound BPEL Process

Perform the following steps to create a new SOA application for the outbound BPEL process:

- 1. Open Oracle JDeveloper on your system.
- **2.** Click **Application** in the menu bar and select **New** from the menu, as shown in Figure 4–12.

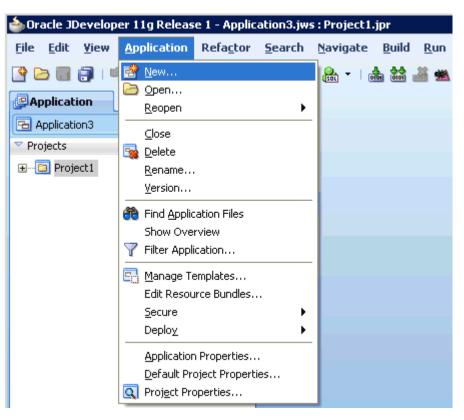


Figure 4–12 New Option

The Create SOA Application wizard is displayed, as shown in Figure 4–13.

Figure 4–13 Create SOA Application Wizard

💩 Create SOA Application	1 - Step 1 of 3 🛛 🔀
Name your application	
Application Name Project Name Project SOA Settings	Application Name: PSoft_Outbound_BPEL Directory: C:\JDeveloper\mywork\PSoft_Outbound_BPEL Browse Application Package Prefix: Davabeans commongres. Browse Davabeans commongres. Creates a databound rich client application. The application consists of one project for the client (ADF Swing), and another project for the ADF Model (ADF Business Components). Image: Dava EE Web Application Creates a databound web application. The application consists of one project for the view and controller components (JSF), and another project for the data model (EJB
Help	session beans and JPA entities). SOA Application Creates a SOA (service-oriented architecture) application. The application consists of one SOA project for the SOA composite, components, and adapters. < Back Next S Einish Cancel

- **3.** From the Application Template list, click **SOA Application**.
- **4.** Enter a name for the new SOA application (for example, PSoft_Outbound_BPEL) and click **Next**.

The Name your project page is displayed, as shown in Figure 4–14.

Figure 4–14 Name Your Project Page

💩 Create SOA Application	- Step 2 of 3 X
Name your project	
Application Name Project Name Project SOA Settings	Project Name: LOCATION_Invoke Dirgctory: Developer\mywork\PSoft_Outbound_BPEL\LOCATION_Invoke Browse Project Technologies Generated Components Associated Libraries Available: Selected: SOA ADF Business Components Selected: SOA ADF Desktop Integration Image: Selected: SOA ADF Library Web Application Support Image: Selected: SOA ADF Swing Image: Selected: SOA Ant Image: Selected: SOA Database (Offline) Image: Selected: SOA Introduction Support Image: Selected: Soa Introduc
Help	< Back Next > Einish Cancel

5. Enter a project name (for example, LOCATION_Invoke) and click **Next**.

The Configure SOA settings page is displayed, as shown in Figure 4–15.

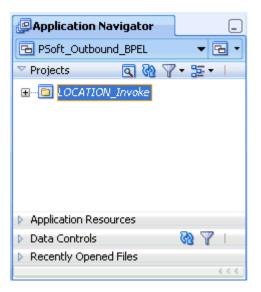
Intersection SOA Application	- Step 3 of 3	×
Configure SOA settin	gs	
Application Name	Composite <u>N</u> ame:	
	LOCATION_Invoke	
Reviect Name	Composi <u>t</u> e Template:	
💧 🍥 Project SOA Settings		
	Composite With BPEL	
	Composite With Business Rule	
	Composite With Human Task Composite With Mediator	
	Composite From Oracle BPA Blueprint	
< >>>	⊆ustomizable	
Help		<back next=""> Finish Cancel</back>

Figure 4–15 Configure SOA Settings Page

6. From the Composite Template list, select **Empty Composite** and click **Finish**.

The new SOA application (PSoft_Outbound_BPEL) and associated project (LOCATION_Invoke) are added to the Application Navigator tab in the left pane, as shown in Figure 4–16.

Figure 4–16 New SOA Application and Associated Project



4.4.3 Defining a BPEL Outbound Process

This section describes how to define a BPEL outbound process, which consists of the following stages:

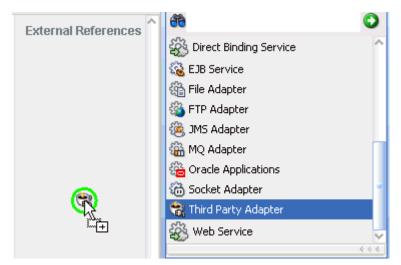
- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Outbound BPEL Process Component

Configuring a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

1. Drag and drop the **Third Party Adapter** component from the Component Palette tab (Service Adapters section) to the External References pane, as shown in Figure 4–17.

Figure 4–17 Third Party Adapter Component



The Create Third Party Adapter Service dialog is displayed, as shown in Figure 4–18.

🖕 Create Third Party	y Adapter Service	×
Third Party Adapter		
Create a JCA adapt	ter service for a third party adapter.	
<u>N</u> ame:	Location	
<u>Т</u> уре:	Reference 💌	
WSDL URL:		
<u>P</u> ort Type:		.0
Operation:	•	
<u>C</u> allback Port Type:	•	
Callback Operation	:	
<u>J</u> CA File:		2
Help	ОКСС	ancel

Figure 4–18 Create Third Party Adapter Service Dialog

- 2. Enter a name for the new third party adapter service.
- 3. Ensure that **Reference** is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 4–19.

Figure 4–19 SOA Resource Browser Dialog

📥 SOA Resou	rce Browser	×
😤 File Syste	m	
Location:	🗀 wsdls	- 🗈 🖄 🍱 🗄
📄 queryW	ON_invoke.wsdl /ithView_invoke.wsdl _Account_receive.wsdl	
File <u>N</u> ame:	LOCATION_invoke.wsdl	
File <u>T</u> ype:	WSDL Files (*.wsdl)	•
Help		OK Cancel

5. Browse and select an outbound WSDL file (for example, LOCATION_ invoke.wsdl) from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 4–20.

Figure 4–20 Localize Files Dialog

🖕 Localize Files	×		
file:/C:/oracle/Middleware/Oracle_SOA1/soa/thirdparty/ApplicationAdapters/wsdls/LOCATION_invoke.wsdl is external to the current project. In order to make this file available to your project at runtime, JDeveloper can now make a local copy of this file and any dependent files that it imports or includes.			
Copy Options: Maintain original directory structure for imported files The following files will be created in directory C:\JDeveloper\mywork\PSoft_Outbound_BPEL\LOCATION_Invoke :			
LOCATION_invoke.wsdl LOCATION_invoke_request.xsd LOCATION_invoke_response.xsd			
Help	OK Cancel		

7. Click OK.

The outbound WSDL file and associated request and response XML schema files (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 4–21.

rd Party Adapter	Service	2
Create a JCA adapte	r service for a third party adapter.	
<u>N</u> ame:	Location	
<u>T</u> ype:	Reference 💌	
WSDL URL:	LOCATION_invoke.wsdl	2
Port Type:	LOCATIONPortType	-
Operation:	LOCATION	
<u>C</u> allback Port Type:	No Callback	V
Callback Operation:		T
<u>J</u> CA File:		

Figure 4–21 Create Third Party Adapter Service Dialog

 Click the Find JCA Files icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 4–22.

Figure 4–22 SOA Resource Browser Dialog

💩 SOA Resou	irce Browser 🗙
📸 File Syste	m
Location:	🗀 wsdls 🔹 🔀 🔛 🖿
📄 queryW	ION_invoke.jca /ithView_invoke.jca _Account_receive.jca
File <u>N</u> ame:	LOCATION_invoke.jca
File <u>T</u> ype:	JCA Files (*.jca)
Help	

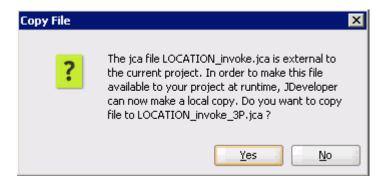
9. Browse and select the JCA properties file (for example, LOCATION_invoke.jca) from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

10. Click **OK**.

The following message is displayed, as shown in Figure 4–23.

Figure 4–23 Copy File Confirmation Message



11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 4–24.

Figure 4–24	Create Third Party	[,] Adapter S	Service Dialog
-------------	--------------------	------------------------	----------------

١	Create Third Party	Adapter Service	×
Tł	nird Party Adapter	Service	5
	Create a JCA adapte	r service for a third party adapter.	Th
	<u>N</u> ame:	Location	
	<u>Т</u> уре:	Reference 💌	
	WSDL URL:	LOCATION_invoke.wsdl	1
	Port Type:	LOCATIONPortType	
	Operation:		
	<u>C</u> allback Port Type:	No Callback	
	Callback Operation:	· · · · · · · · · · · · · · · · · · ·	
	<u>J</u> CA File:	LOCATION_invoke_3P.jca	1
	Help	ОК	Cancel

12. Click **OK**.

The third party adapter service component (Location) is created and displayed in the External References pane, as shown in Figure 4–25.

External References	
Derations:	

Figure 4–25 Third Party Adapter Service Component

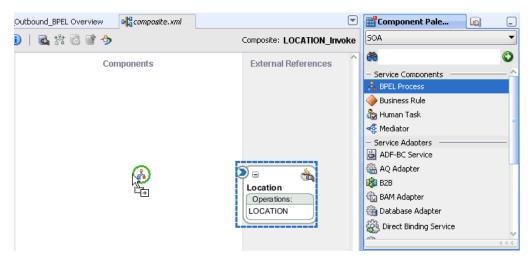
You are now ready to configure an outbound BPEL process component.

Configuring an Outbound BPEL Process Component

Perform the following steps to configure an outbound BPEL process component:

1. Drag and drop the **BPEL Process** component from the Component Palette tab (Service Components section) to the Components pane, as shown in Figure 4–26.

Figure 4–26 BPEL Process Component



The Create BPEL Process dialog is displayed, as shown in Figure 4–27.

business pr	cess is a service orchestration, based on the BPEL specification, used to describe/execute a ocess (or large grained service), which is implemented as a stateful service.
Name:	location_out
Namegpace:	http://xmins.oracle.com/PS3_testing/LOCATION_Invoke/location_out
[emplate:	😂 Synchronous BPEL Process 👻 🥥
Sergice Name:	location_out_clent
	Egpose as a SOAP service
	Input: {http://xmins.oracle.com/PS3_testing/LOCATION_Invoke/location_out}process
	Qutput: http://xmins.oracle.com/PS3_testing/LOCATION_Invoke/location_out/processResponse

Figure 4–27 Create BPEL Process Dialog

2. In the Name field, enter a name to identify the new outbound BPEL process component (for example, location_out).

By default, the BPEL specification is set to **BPEL 1.1 Specification**. The BBPEL Process also supports BPEL 2.0 Specification.

- 3. From the Template list, select Synchronous BPEL Process.
- **4.** Click the **Browse Input Elements** icon, which is located to the right of the Input field to select the associated XML request schema file.

The Type Chooser dialog is displayed, as shown in Figure 4–28.

Figure 4–28 Type Chooser Dialog

📥 Type Chooser	×
	名 🖻
Vype Explorer Project Schema Files LOCATION_invoke_request.xsd Scheme Schema Files LOCATION_invoke_response.xsd Project WSDL Files	
$\underline{T}ype: \hspace{0.1 in} \{urn: iwaysoftware: adapter: peoplesoft: location: ci: request\}$	}P58
Show Detailed Node Information	
Help	OK Cancel

- 5. Expand Project Schema Files, LOCATION_invoke_request.xsd, and select PS8.
- 6. Click OK.

You are returned to the Create BPEL Process dialog, as shown in Figure 4–29.

Figure 4–29 Create BPEL Process Dialog

💩 Create BPE	L Process	×
	s cess is a service orchestration, based on the BPEL specification, used to describe/execute a ocess (or large grained service), which is implemented as a stateful service.	2
BPEL 1.1 Sp	pecification O BPEL 2.0 Specification	
Name:	location_out	
Namespace:	http://xmlns.oracle.com/P53_testing/LOCATION_Invoke/location_out	
<u>T</u> emplate:	😂 Synchronous BPEL Process	0
Service Name:	location_out_client	
	✓ Expose as a SOAP service	
	Input: {urn:iwaysoftware:adapter:peoplesoft:location:ci:request}PS8	٩,
	Qutput: http://xmlns.oracle.com/P53_testing/LOCATION_Invoke/location_out}processResponse	٩
		Brow
Help	OK Cance	

7. Click the **Browse Output Elements** icon, which is located to the right of the Output field to select the associated XML response schema file.

The Type Chooser dialog is displayed, as shown in Figure 4–30.

🖕 Type Chooser	×
	絮 🙋
Vpe Explorer Project Schema Files LOCATION_invoke_request.xsd LOCATION_invoke_response.xsd VP58 Project WSDL Files	
\underline{I} ype: {urn:iwaysoftware:adapter:peoplesoft:location:ci:respondence:	nse}PS8
Show Detailed Node Information	
Help	OK Cancel

Figure 4–30 Type Chooser Dialog

- 8. Expand Project Schema Files, LOCATION_invoke_response.xsd, and select PS8.
- 9. Click OK.

You are returned to the Create BPEL Process dialog, as shown in Figure 4–31.

Figure 4–31 Create BPEL Process Dialog

	掵 Create BPE	L Process	×
		5 cess is a service orchestration, based on the BPEL specification, used to describe/execute a ocess (or large grained service), which is implemented as a stateful service.	.
	BPEL 1.1 Sp	pecification O BPEL 2.0 Specification	
ł	<u>N</u> ame:	location_out	
	Namespace:	http://xmlns.oracle.com/P53_testing/LOCATION_Invoke/location_out	
;	Template:	Synchronous BPEL Process	- 3
	Service Name:	location_out_client	
		Expose as a SOAP service	
		Input: {urn:iwaysoftware:adapter:peoplesoft:location:ci:request}P58	_ 🔍
		Qutput: {urn:iwaysoftware:adapter:peoplesoft:location:ci:response}PS8	
	Help	ОК	Cancel

10. Click OK.

11. Create a connection between the outbound BPEL process component (location_ out) and the third party adapter service component (Location), as shown in Figure 4–32.

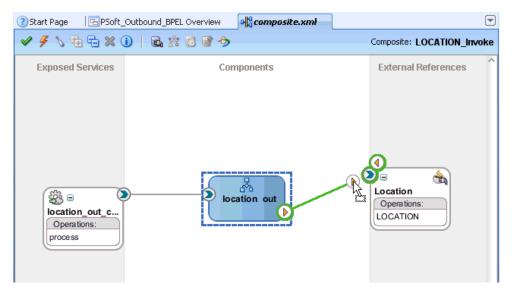


Figure 4–32 Component Connection

12. Double-click the outbound BPEL process component (location_out) in the Components pane.

The following is displayed, as shown in Figure 4–33.

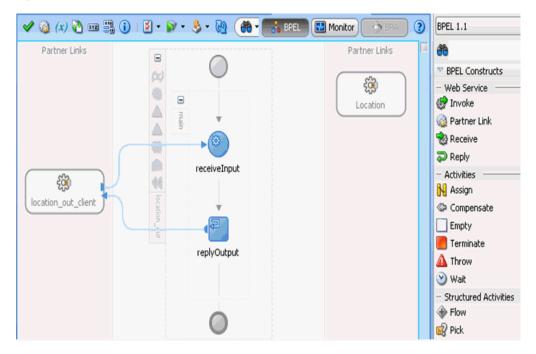


Figure 4–33 Outbound BPEL Process Component

13. Drag and drop the **Invoke** activity component to the Components pane and place it between the **receiveInput** activity component and the **replyOutput** activity component, as shown in Figure 4–34.

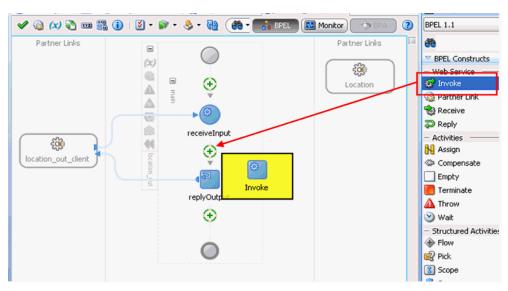
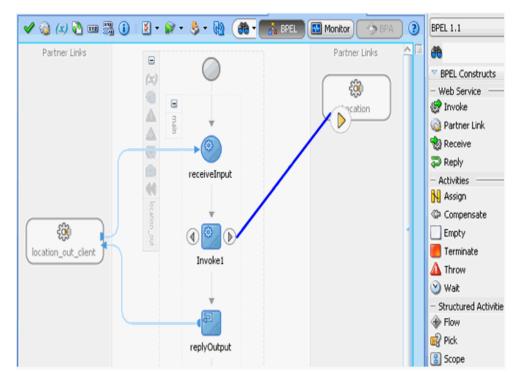


Figure 4–34 Invoke Activity Component

14. Create a connection between the new Invoke activity component (Invoke1) and the third party adapter service component (Location), as shown in Figure 4–35.

Figure 4–35 Created Connection



The Edit Invoke dialog is displayed, as shown in Figure 4–36.

Skip Condition	Timeout	Targets	Sources	Headers	
General	Correlations	Propert	ies	Annotations	Assertions
<u>N</u> ame:	Invoke1				
onversation ID					.
etail Label:					
	Invoke	as Detail			
- Interaction	Type: 🔯 P]		
Partner Role \			,		
Partner Link:	Location				Q
Operation:	COCATI	ON			-
Variables —					
Input:					
Output:					
	L				
Help			Apply	ОК	Cancel

Figure 4–36 Edit Invoke Dialog

15. Click the **Automatically Create Input Variable** icon, which is located to the right of the Input field to configure a new input variable.

The Create Variable dialog is displayed, as shown in Figure 4–37.

Figure 4–37 Create Variable Dialog

<u>N</u> ame:	Invoke1_LOCATION_InputVariable
<u>T</u> ype:	{http://xmlns.oracle.com/pcbpel/iWay/wsdl/PeopleSoft/psft_isdsrv14_tgt
	Global Variable Local Variable

16. Accept the default values that are provided for the new input variable and click **OK**.

You are returned to the Edit Invoke dialog, as shown in Figure 4–38.

kip Condition		Targets Source		
General C	Correlations	Properties	Annotations	Assertions
lame:	Invoke1			
onversation ID	:			fx
etail Label:				
	🗌 <u>I</u> nvoke a	is Detail		
Interaction 1	Гуре: 🔞 Ра	rtner Link 🔻		
Partner Role V	Veb Service In	terface		
Partner Link:	Location			
. arenor Enno				2
Operation:		DN		•
_		N		•
Operation:		DN CATION_InputVar	iable	
Operation: Variables			iable	•
Operation: Variables			iable	
Operation: Variables			iable	

Figure 4–38 Edit Invoke Dialog

17. Click the **Automatically Create Output Variable** icon, which is located to the right of the Output field to configure a new output variable.

The Create Variable dialog is displayed, as shown in Figure 4–39.

Figure 4–39 Create Variable Dialog

🖕 Create	· Variable		
<u>N</u> ame:	Invoke1_LOCATION_OutputVariable		
Type:	{http://xmlns.oracle.com/pcbpel/iWay/wsdl/PeopleSoft/psft_isdsrv14_tgt/l		
	0-		
Help	OK Cancel		

18. Accept the default values that are provided for the new output variable and click **OK**.

You are returned to the Edit Invoke dialog, as shown in Figure 4–40.

kip Condition	Timeout	Targets	Sources	Headers	
General	Correlations	Prope	rties	Annotations	Assertions
<u>V</u> ame:	Invoke1				
onversation II	D:				
2etail Label:					
	<u>I</u> nvoke	as Detail			
	Туре: 🔯 Р	artner Link	-		
Partner Role	Web Service I	interface –			
Partner <u>L</u> ink	Location				Q.
Operation:	COCATI				
Variables —					
Input:	Invoke1_LC	CATION_Ir	nputVariabl	e	💠 🔍
Output:	Invoke1_LC	CATION_O	utputVaria	ble	

Figure 4–40 Edit Invoke Dialog

19. Click **Apply** and then **OK**.

The Invoke activity component (Invoke1) is updated accordingly, as shown in Figure 4–41.

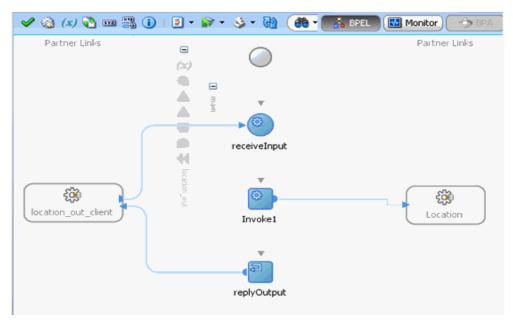
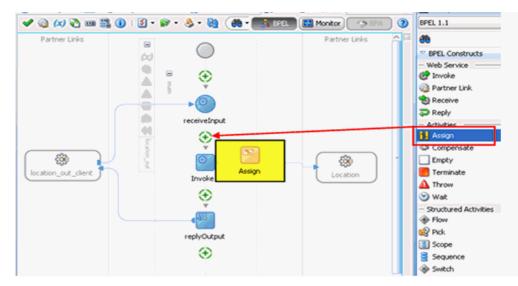


Figure 4–41 Invoke Activity Component

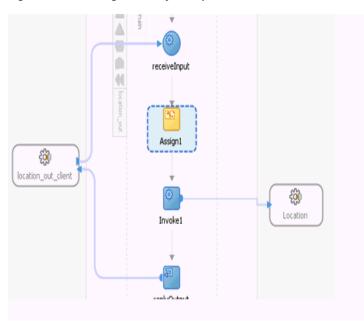
20. Drag and drop the **Assign** activity component to the Components pane and place it between the Receive activity component (receiveInput) and the Invoke activity component (Invoke1), as shown in Figure 4–42.

Figure 4–42 Assign Activity Component



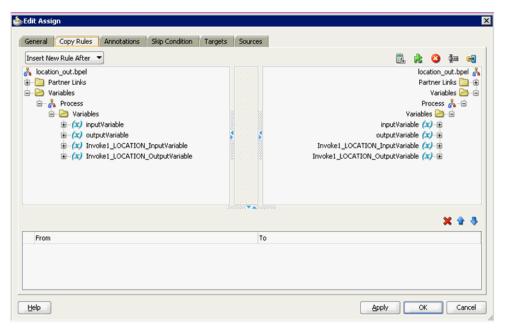
21. Double-click the new Assign activity component (**Assign1**), as shown in Figure 4–43.

Figure 4–43 Assign Activity Component



The Edit Assign dialog is displayed, as shown in Figure 4-44.

Figure 4–44 Edit Assign Dialog



- 22. In the left pane, under Variables, expand InputVariable, and then select payload.
- **23.** In the right pane, under Variables, expand **Invoke1_LOCATION_InputVariable** and select **input_LOCATION**.
- **24.** Drag and map the **payload** variable to the **input_LOCATION** variable as shown in Figure 4–45.

Insert New Rule After 💌		📆 🔥 🙆 👾 e
Insert wew kille Atter • Insert wew kille Atter • Partner Links Variables • Variables • (x) inputVariable • (x) outputVariable • (x) Invoke1_LOCATION_InputVariable • (x) Invoke1_LOCATION_OutputVariable		Iocation_out.bpel Partner Links Partner Links Variables Porcess R = Variables Porcess R = inputVariable (x) = Invoke1_LOCATION_InputVariable (x) = Invoke1_LOCATION = = Invoke1_LOCATION_OutputVariable (x) =
		X û 3
	То	

Figure 4–45 Edit Assign Dialog

The mapped variables are populated in the highlighted area as shown in

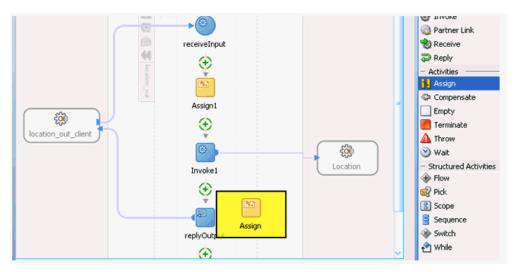
Figure 4–46

eneral Copy Rules Annotations Skip Condition Targets Source	
nsert New Rule After 💌	🖪 🚖 🔕 🐙 🛁
a location_out.bpel → Partner Links → Variables → Variables → Variables → A InputVariable → (x) inputVariable → (x) inputVariable → (x) invoke1_LOCATION_InputVariable → (x) Invoke1_LOCATION_OutputVariable	location_out.topel & Partner Links
200y •	X 🕆 🗟
From	To
្ញុំជំពូ inputVariable/payload/	20 Invoke1_LOCATION_InputVariable/input_LOCATION/

25. Click **Apply** and then **OK**.

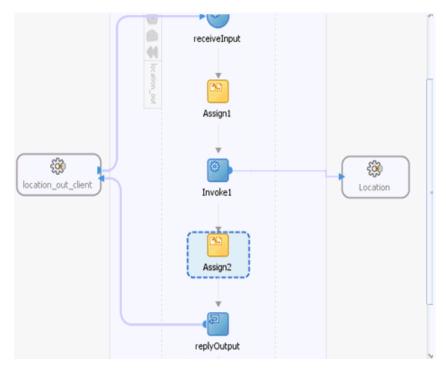
26. Drag and drop the **Assign** activity component to the Components pane and place it between the Invoke activity (Invoke1) and the Reply activity (replyOutput), as shown in Figure 4–47.

Figure 4–47 Assign Activity Component



27. Double-click the new Assign activity component (**Assign2**), as shown in Figure 4–48.

Figure 4–48 Assign Dialog



The Edit Assign dialog is displayed, as shown in Figure 4–49.

ieneral Copy Rules Annotations Skip Condition	Targets	Sources	
insert New Rule After 💌			🗒 🚖 🥝 痺 🛁
 location_out.bpel Partner Links Variables Process Variables (x) inputVariable (x) Invoke1_LOCATION_OutputVariable (x) Invoke1_LOCATION_OutputVariable 	**		location_out.bpel Partner Links Variables Process Variables inputVariable (x) ⊕ outputVariable (x) ⊕ Invoke1_LOCATION_InputVariable (x) ⊕ Invoke1_LOCATION_OutputVariable (x) ⊕
		0007	X 🕯 🛛
From		То	

Figure 4–49 Edit Assign Dialog

- **28.** In the left pane, under **Variables**, expand **Invoke_1_LOCATION_OutputVariable**, and then select **output_LOCATION**.
- **29.** In the right pane, under **Variables**, expand **outputVariable**, and then select **payload**.
- **30.** Drag and map the output_LOCATION variable to the payload variable as shown in Figure 4–50.

Figure 4–50 Edit Assign Dialog

Insert New Rule After Insert New Rule After Insert Sector Secto		🔃 🚖 🔕 👾 e
		leasting and head
Partner Links Variables Process		location_out.bpel Partner Links → Variables → Process → inputVariable (x) → outputVariable (x) → payload → Invoke1_LOCATION_InputVariable (x) → Invoke1_LOCATION_OutputVariable (x) →
		X û -
From	То	

The mapped variables are populated in the highlighted area as shown in Figure 4–51.

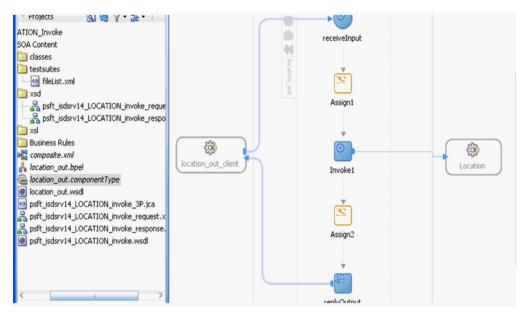
Figure 4–51 Edit Assign Dialog

Edit Assign			
General Copy Rules Annotations Skip Condition Target	ts Sources		
Insert New Rule After		Β.	🚖 🥝 🚈 🛁
location_out.bpel Partner Links Process Process			location_out.bpel & Partner Links Variables Process & Process
Сору 👻			X 🕆 🗄
From	То		
📄 ຊື່ຢູ່ Invoke1_LOCATION_OutputVariable/output_LOCATION/	¢₫ outpu	tVariable/payload/	
Beb		éspiy	OK Cancel

31. Click **Apply** and then **OK**.

The completed activity flow is now displayed, as shown in Figure 4–52.

Figure 4–52 Completed Activity Flow



32. Double-click **composite.xml** in the left pane, as shown in Figure 4–53.

Start Page Boot	t_Outbound_BPEL Overview	Geomposite.xml	💑 location_out.bpel	
🗸 🖌 🖒 🔁 😂 🗶	i) 🗟 🗱 🗟 🗑 🤣		Composite: LOCATIO	N_Invoke
Exposed Services	Com	ponents	External Reference	\$
location_out_c Operations: process	loca	tion_out	Cocation Operations: LOCATION	

Figure 4–53 Composite.xml Tab

33. Click the **Save All** icon in the menu bar to save the new outbound BPEL process component that was configured, as shown in Figure 4–54.

Figure 4–54 Save All Icon

🍲 Oracle JDeveloper 11g Release 1 - PSo			
<u>File Edit Yiew Application Refacto</u>			
🔮 🗁 🖩 👰 । 🤊 🔍 । 🗶 🗎 🛍 । (
Application Navigator			
🖻 PSoft_Outbound_BPEL 🛛 👻 🖻 🔹			
🗢 Projects 💽 🗞 🍸 + 📴 + 🗌			
⊡ <mark>© LOCATION_Invoke</mark>			

You are now ready to deploy the BPEL outbound process.

4.4.4 Deploying the BPEL Outbound Process

Perform the following steps to deploy the BPEL outbound process.

1. Right-click the project name in the left pane (for example, LOCATION_Invoke), select **Deploy**, and then click LOCATION_Invoke, as shown in Figure 4–55.

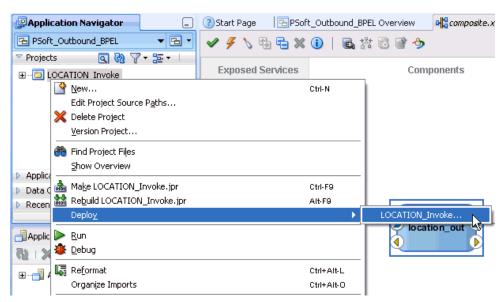


Figure 4–55 Deploy Option

The Deployment Action page is displayed, as shown in Figure 4–56.

Figure 4–56 Deployment Action Page

Deploy LOCATION_Invo	
Deployment Action	Select a deployment action from the list below. Deploy to Application Server Deploy to SAR Deploy to sarchive to SOA configured Application server(s)
Help	< Back Next Finish Cancel

- 2. Ensure that **Deploy to Application Server** is selected.
- 3. Click Next.

The Deploy Configuration page is displayed, as shown in Figure 4–57.

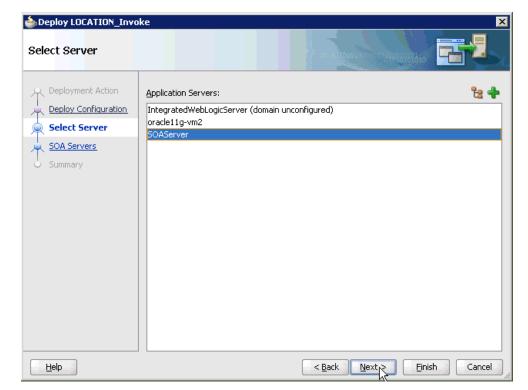
Deploy LOCATION_Invok	2	
Deployment Action Deploy Configuration Select Server Summary	Composite Revision ID Project : LOCATION_Invoke Current Revision ID : 1.0 New Revision ID : 1.0	SOA Configuration Plan Do not attach Select a configuration plan from the list.
Kep		as default. composites with the same revision ID. onfiguration plan for all composites: Browse Cancel

Figure 4–57 Deploy Configuration Page

4. Leave the default values selected and click Next.

The Select Server page is displayed, as shown in Figure 4–58.

Figure 4–58 Select Server Page



 Select an available application server that was configured and click Next. The SOA Servers page is displayed, as shown in Figure 4–59.

SOA Servers			orour oforeren	
A Deployment Action	Choose the target SOA se archive.	rver(s) and corres	sponding partitions to	which you want to deploy this
O Deploy Configuration	SOA Server:	Partition:	Status:	Server URL:
Select Server	🗹 🚟 soa_server1	default	- RUNNING	http://amtex-ch-ga1
🙊 SOA Servers				
Summary.				
Help			< Back Next >	Einish Cancel

Figure 4–59 SOA Servers Page

6. Select a target SOA server and click Next.

The Summary page is displayed, as shown in Figure 4–60.

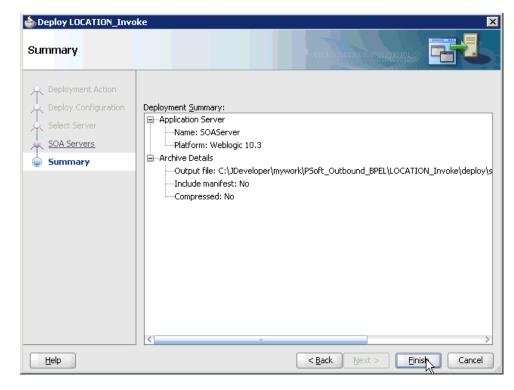


Figure 4–60 Summary Page

7. Review and verify all the available deployment information for your project and click **Finish**.

The process is deployed successfully, as shown in Figure 4–61.

Figure 4–61 Successful Deployment Message



4.4.5 Invoking the Input XML Document in the Oracle Enterprise Manager Console

Perform the following steps to invoke the input XML document in the Oracle Enterprise Manager console.

1. Log in to the Oracle Enterprise Manager console by using the following URL:

http://localhost:7001/em

2. Expand your domain in the left pane followed by the **SOA** folder, as shown in Figure 4–62.



ORACLE Enterprise Manager Fusion Middleware Control 1
특용 Farm 최 Topology
E Barm_base_domain
🗉 🛅 Application Deployments
🖃 🚞 SOA
🗆 器 soa-infra (soa_server1)
🗆 🔞 default
JDE_Outbound_GetEffectiveAddress_BPEL [1.0]
JDE_Outbound_GetEffectiveAddress_Mediator [1.0]
PSfot_Outbound_LOCATION_Mediator [1.0]
PSoft_Inbound_LOCATION_SYNC.VERSION_1_BPEL [1.0]
PSoft_Inbound_LOCATION_SYNC.VERSION_1_Mediator [1.0]
PSoft_Outbound_LOCATION_BPEL [1.0]
Siebel_Inbound_saacc_ionod_Mediator [1.0]
Siebel_Inbound_sampacc_ionode_BPEL [1.0]
Siebel_Outbound_queryWithView_BPEL [1.0]
Siebel_Outbound_queryWithView_Mediator [1.0]
🕀 🧰 WebLogic Domain
🕀 🚞 Metadata Repositories
🕀 🦳 User Messaging Service

3. Select an available project (for example, PSoft_Outbound_LOCATION_BPEL), as shown in Figure 4–63.

Figure 4–63 PSoft_Outbound_LOCATION_BPEL Project

PSoft_O		ION_BPEL [1.0		ogic Host 2001:1b1:19:1b1:215: ed Feb 18, 2010 1:23:45 PM EST 🍋
Running Instar	ices 0 Total 17 Act	ive Retire	Shut Down Test	Settings 🗸 崎 🔊
Dashboard	Instances Faults and	Rejected Messages	Unit Tests Policies	1¢
?	L L		u u	_
⊡Recent Ir	nstances			
Show Only R	unning Instances 🛛 🗖	Runn	ing O	Total 17
Instance ID	Name	Conversation ID	State	Start
670036			Completed	Feb 18, 2010 10:57: 🔺
640018			Completed	Feb 17, 2010 8:34:2
640017			Completed	Feb 17, 2010 8:33:4
640016			Completed	Feb 17, 2010 8:33:0
4 40015			A conduct	E-1-17 2010 0.22.2
Show All				

4. Click **Test** in the right pane.

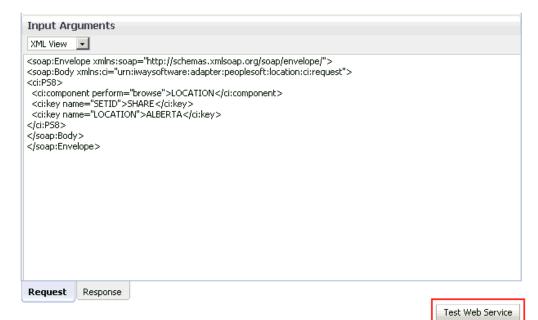
The Test Web Service page is displayed, as shown in Figure 4–64.

Figure 4–64 Test Web Service Page

ြ PSoft_Oι ၈ြ¦agSOA Composi	utbound_LOCATION_BPEL [1.0]	Logged in as weblogic Host 200: Page Refresh	1:1b1:19:1b1:215:c5ff:fef0:cba9 ed Feb 18, 2010 2:17:17 PM EST 🍋
Parse WSDL, V	Service ② to test any WSDL, including WSDLs that are not in the When the page refreshes with the WSDL details, first s t you want to test. Specify any input parameters, and	elect the Service,then select the Po	
WSDL	http://iworalx:8001/soa-infra/services/default/PSoft Contemporate VSDL HTTP Basic Auth Option for WSDL Access	t_Outbound_LOCATION_BPEL/bpelp	process_location_clie
Service	bpelprocess_location_client_ep		
Port	BPELProcess_Location_pt		
Operation	process 💌		
Endpoint URL	http://iworalx:8001/soa-infra/services/default/PSoft	_Outbound_LOCATION_BPEL/bpel	Edit Endpoint URL 🔲
Request	Response		
Security			
C WSS Use	rname Token $$ O HTTP Basic Auth $$ O Custom Policy	⊙ None	

- 5. Click the **Request** tab.
- 6. Scroll down to the Input Arguments section, as shown in Figure 4–65.

Figure 4–65 Input Arguments Section



- 7. Select XML View from the list in the upper-left corner.
- 8. Provide an appropriate input XML document in the Input Arguments area.

For example:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Body xmlns:ci="urn:iwaysoftware:adapter:peoplesoft:location:ci:request">
<ci:PS8>
```

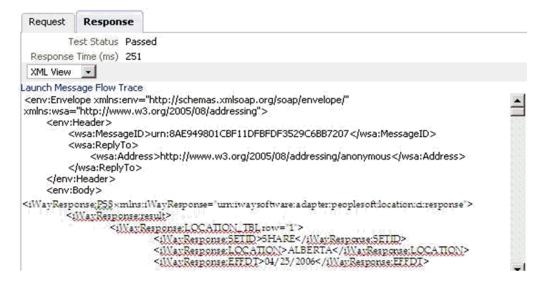
<ci:component perform="browse">LOCATION</ci:component>

```
<ci:key name="SETID">SHARE</ci:key>
<ci:key name="LOCATION">ALBERTA</ci:key>
</ci:PS8>
</soap:Body>
</soap:Envelope>
```

9. Click Test Web Service.

The output response is received in the Response tab of the Oracle Enterprise Manager console, as shown in Figure 4–66.

Figure 4–66 Output Response Tab



4.4.6 Testing Outbound BPEL and Mediator Processes

When testing an outbound BPEL process or an outbound Mediator process from the Oracle Enterprise Manager console, do not use the XML envelopes that are generated by these consoles. Instead, remove them and use the XML payloads that are generated from the schemas, which conform to the WSDLs for namespace qualifications.

The Mediator data flows can be tested using the Oracle Enterprise Manager console. When creating a Mediator data flow and interactions, the Web services are created and registered with the Oracle WebLogic Server. For more information on how to create a Mediator outbound process, see Chapter 5, "Integration With Mediator Service Components in the Oracle SOA Suite".

4.5 Designing an Inbound BPEL Process for Event Integration

This section demonstrates how Oracle Application Adapter for PeopleSoft integrates with PeopleSoft to receive event data. In this example, a PeopleSoft event occurs when a customer record is added to a PeopleSoft system.

Samples have been provided for this usecase scenario in the etc/sample folder in Application Adapters installation.

The following tools are required to complete your adapter design-time configuration:

- Oracle Adapter Application Explorer (Application Explorer)
- Oracle JDeveloper BPEL Designer (JDeveloper) or Eclipse

Note: The examples in this chapter demonstrate the use of JDeveloper.

Before you design a BPEL process, you must generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Event Integration" on page 4-41.

4.5.1 Generating WSDL for Event Integration

You must create a separate channel for every event and select that channel when you generate WSDL for inbound interaction using Application Explorer.

Note: If two or more events share the same channel, event messages may not be delivered to the right BPEL process.

Creating a Channel

To create a channel:

- 1. Click the Events node.
- 2. Expand the **PeopleSoft** node.

The ports and channels nodes appear in the left pane, as shown in Figure 4–67.

Figure 4–67 Expanded PeopleSoft Events Node



3. Right-click Channels and select Add Channel.

The Add Channel dialog is displayed, as shown in Figure 4–68.

🙀 Add Channel	×
Name:	
PSFT_channel	
Description:	
Protocol:	
HTTP Listener	•
Available Port(s)	t <u>(s)</u>
Next Cancel	

Figure 4–68 Add Channel Dialog

Provide the following information:

- **a.** Enter a name for the channel, for example, **PSFT_Channel**.
- **b.** Enter a brief description (optional).
- c. From the Protocol list, select HTTP Listener.
- 4. Click Next.
- **5.** When the HTTP listener dialog is displayed, enter the system information as specified in the following table:

Parameter	Description	
Listener port	Port on which to listen for PeopleSoft event data.	
Https	For a secure HTTP connection, select the Https check box.	
Synchronization Type	Choose from the following synchronization options:	
Type	 REQUEST_RESPONSE 	
	 REQUEST_ACK 	
	Important: The PeopleSoft channel does not work if the synchronization type is set to REQUEST.	

6. Click OK.

The channel appears under the channels node in the left pane. An X over the icon indicates that the channel is currently disconnected.

Note: Do not start the channel, as it is managed by BPEL PM Server. If you start the channel for testing and debugging purposes, stop it before run-time.

Generating WSDL for Event Notification

After you create a channel and verify that it is not started, you must generate WSDL for the event using Application Explorer.

1. Start Application Explorer.

2. Expand the Adapters node.

A list of all available adapters is displayed.

- 3. Expand PeopleSoft.
- 4. Click a target name under the **PeopleSoft** node, for example, **PSFTtarget**.

The Logon pane on the right displays the saved parameters.

- 5. Verify your connection parameters.
- 6. Right-click the target name and select **Connect**.

The x icon disappears, indicating that the target is connected, as shown in Figure 4–69.

Figure 4–69 Connected PSFT Target



- 7. Expand Messages and select LOCATION_SYNC.VERSION_1.
- 8. Right-click LOCATION_SYNC.VERSION_1.

Figure 4–70 Create Inbound JCA Service (Event) Option

	SYNC VERSION 1
LOCA	Export Schema(s)
	(resteinbound ICO Service (Event)
	Apply Filter

9. Select **Create Inbound JCA Service (Event)**, as shown in Figure 4–70. The Export WSDL dialog is displayed, as shown in Figure 4–71.

xport WSDL	۵
Name	aetbintt.twsdlstLOCATION_SYNC.VERSION_1_receive.wsdl Browse
Channel	PSFT_Channel
Validation	Root
	Namespace
	Schema
Export to OSB	
Location	
Host	
Port	
User	
Password	
	OK Cancel
	* You must create a separate channel for each inbound service

Figure 4–71 Export WSDL Dialog

Perform the following steps:

a. In the **Name** field, specify the name of the WSDL file.

The **.wsdl** file extension is added automatically. By default, the names of WSDL files generated for request-response services end with **_receive**.

b. From the **Channel** list, select the channel you created for this inbound service.

Important: You must create a separate channel for every event. Verify that the channel is stopped before run-time.

c. Three check boxes for Root, Namespace, and Schema validation are also available. Selection of multiple validation options is allowed.

- Root validation is used to validate the root element in the inbound XML document.

- Namespace validation is used to validate the namespace in the inbound XML document.

- Schema validation is used to validate the inbound XML document with the schema in the WSDL document.

During run time, validation is processed based on the validation options that are selected. If more than one validation option is selected, during run time if the first validation option fails, the remaining validation options are not processed. Root and namespace validations are considered modest levels of validation. Schema validation is a stricter validation level. It is recommended to use root and namespace validation options together, unless the root element and namespace are different between the Messages in the PeopleSoft environment.

10. Click **OK**.

You can now create a new SOA application, which is the first step that is required to define a BPEL inbound process in JDeveloper.

4.5.2 Creating a New SOA Application for the Inbound BPEL Process

Perform the following steps to create a new SOA application for the inbound BPEL process:

- 1. Open Oracle JDeveloper on your system.
- **2.** Click **Application** in the menu bar and select **New** from the menu, as shown in Figure 4–72.

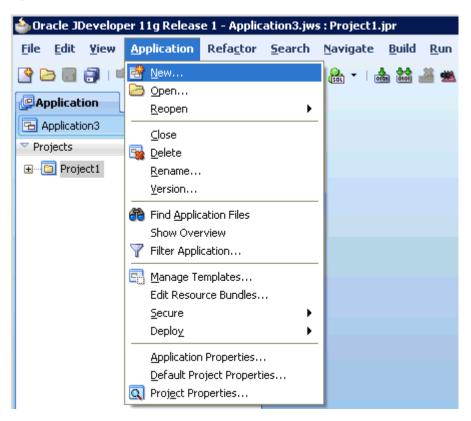


Figure 4–72 New Option

The Create SOA Application wizard is displayed, as shown in Figure 4–73.

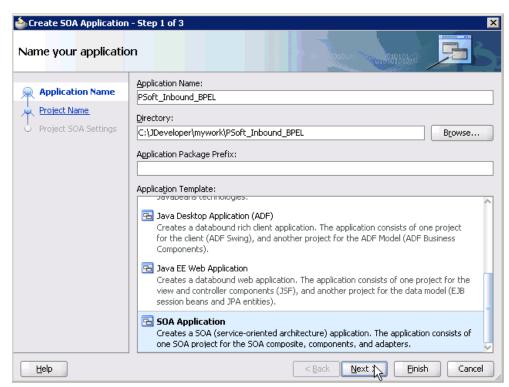


Figure 4–73 Create SOA Application Wizard

- **3.** From the Application Template list, click **SOA Application**.
- **4.** Enter a name for the new SOA application (for example, PSoft_Inbound_BPEL) and click **Next**.

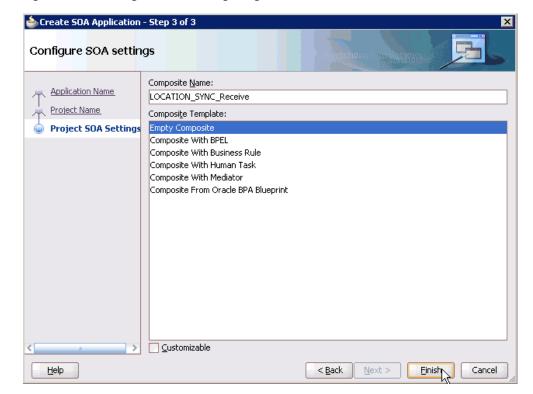
The Name your project page is displayed, as shown in Figure 4–74.

💩 Create SOA Application	- Step 2 of 3
Name your project	
Project Name Project Name Project SOA Settings	Project Name: LOCATION_SYNC_Receive Dirgctory: >per\mywork\PSoft_Inbound_BPEL\LOCATION_SYNC_Receive Project Technologies Generated Components Associated Libraries Available: Selected:
	ADF Business Components ADF Desktop Integration ADF Faces ADF Library Web Application Support ADF Page Flow ADF Swing Ant Database (Offline) EJB HTML Java Iechnology Description: SOA SOA SOA SOA SOA SOA SOA SOA
Help	< Back Next Finish Cancel

Figure 4–74 Name Your Project Page

 Enter a project name (for example, LOCATION_SYNC_Receive) and click Next. The Configure SOA settings page is displayed, as shown in Figure 4–75.

Figure 4–75 Configure SOA Settings Page



6. From the Composite Template list, select **Empty Composite** and click **Finish**.

Application (Navigator		
🔁 PSoft_Inbour	nd_BPEL	-	- 6
Projects	୍ର 🚯 🔎	7-15-	•
	W_SYNC_Rec	eive	
Application Res	sources		
Data Controls		ି ଅନ୍ତି 🖓	'
Recently Open	ed Files		
			666

Figure 4–76 Application Navigator Tab

The new SOA application (PSoft_Inbound_BPEL) and associated project (LOCATION_SYNC_Receive) are added to the Application Navigator tab in the left pane, as shown in Figure 4–76.

4.5.3 Defining a BPEL Inbound Process

This section describes how to define a BPEL inbound process, which consists of the following stages:

- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Inbound BPEL Process Component

Creating a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

 Drag and drop the Third Party Adapter component from the Component Palette tab (Service Adapters section) to the Exposed Services pane, as shown in Figure 4–77.

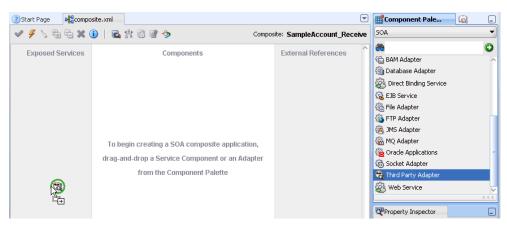


Figure 4–77 Third Party Adapter Component

The Create Third Party Adapter Service dialog is displayed, as shown in Figure 4–78.

🥧 Create Third Party	Adapter Service	×
Third Party Adapter	Service r service for a third party adapter.	
<u>N</u> ame:	location_sync	
<u>T</u> ype:	Service	
WSDL URL:		2
Port Type:	•	43
Operation:	•	
<u>C</u> allback Port Type:		
Callback Operation:		
JCA File:		1
Help	OK C	iancel

Figure 4–78 Create Third Party Adapter Service Dialog

- 2. Enter a name for the third party adapter service.
- **3.** Ensure that **Service** is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 4–79.

SOA Resou	urce Browser		×
Location:	🗀 wsdls	•	🛍 🖄 🎬 🗄
	ION_invoke.wsdl		
	ION_SYNC.VERSION_1_receive.wsdl VithView_invoke.wsdl		
	_Account_receive.wsdl		
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.wsdl		
File <u>T</u> ype:	WSDL Files (*.wsdl)		-
Help			OK Cancel

Figure 4–79 SOA Resource Dialog

5. Browse and select an inbound WSDL file (for example, LOCATION_SYNC.VERSION_1_receive.wsdl) from the following directory:

<aDAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 4–80.

Sea to get	
🖕 Localize Files	×
file:/C:/oracle/Middleware/Oracle_50A1/soa/thirdparty/ApplicationAdapters/wsdls/LOC ve.wsdl is external to the current project. In order to make this file available to your pri can now make a local copy of this file and any dependent files that it imports or includes	oject at runtime, JDeveloper
Copy Options: V Maintain original directory structure for imported files The following files will be created in directory C:\JDeveloper\mywork\PSoft_Inbound_BPEL\LOCATION_SYNC_Receive :	
LOCATION_SYNC.VERSION_1_receive.wsdl LOCATION_SYNC.VERSION_1_receive_request.xsd	
	OK Cancel

Figure 4–80 Localize Files Dialog

7. Click OK.

The inbound WSDL file and associated receive/request XML schema file (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 4–81.

Figure 4–81 Create Third Party Adapter Service Dialog

💩 Create Third Party	Adapter Service	×
Third Party Adapter Create a JCA adapte	Service er service for a third party adapter.	÷
<u>N</u> ame:	location_sync	
<u>T</u> ype:	Service	
<u>W</u> SDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
<u>P</u> ort Type:	LOCATION_SYNC.VERSION_1PortType	•
Operation:	LOCATION_SYNC.VERSION_1	•
<u>C</u> allback Port Type:	No Callback	
Callback Operation:		-
<u>J</u> CA File:		1
Help	ОК	Cancel

 Click the Find JCA Files icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 4–82.

SOA Resou	n <mark>rce Browser</mark> M		-	×
Location:	🗀 wsdls	•	۲ 🍅 🖄 🗈	
	ION_invoke.jca			
	ION_SYNC.VERSION_1_receive.jca /ithView_invoke.jca			
	_Account_receive.jca			
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.jca			
File <u>T</u> ype:	JCA Files (*.jca)		•	
Help			OK R Cancel]

Figure 4–82 SOA Resource Browser Dialog

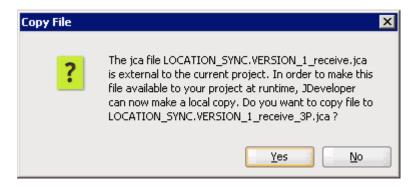
9. Browse and select the JCA properties file (for example, LOCATION_SYNC.VERSION_1_receive.jca)from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

10. Click OK.

The following message is displayed, as shown in Figure 4–83.

Figure 4–83 Copy File Confirmation Message



11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 4–84.

Figure 4–84	Create Third Party Adapter Service	Dialog
-------------	------------------------------------	--------

🍅 Create 1	Third Part <mark>y</mark>	Adapter Service	×
	y Adapter a JCA adapte	Service r service for a third party adapter.	÷
<u>N</u> ame:		location_sync	
<u>Т</u> уре:		Service	
<u>W</u> SDL L	JRL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
<u>P</u> ort Ty	pe:	LOCATION_SYNC.VERSION_1PortType	
<u>O</u> perati	ion:	LOCATION_SYNC.VERSION_1	
⊆allbac	k Port Type:	No Callback 💌	
Callbac	k Operation:	· · · · · · · · · · · · · · · · · · ·	
<u>J</u> CA File	e:	LOCATION_SYNC.VERSION_1_receive_3P.jca	1
Help]	ок	Cancel

12. Click **OK**.

The third party adapter service component (location_sync) is created and displayed in the Exposed Services pane, as shown in Figure 4–85.

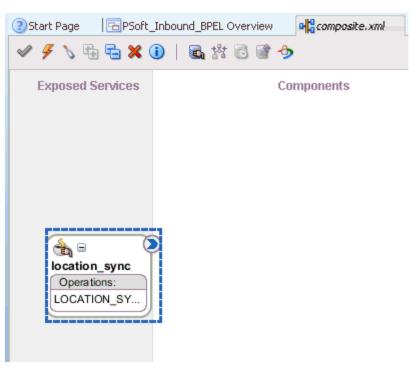


Figure 4–85 Third Party Adapter Service Component

You are now ready to configure an inbound BPEL process component.

Creating an Inbound BPEL Process Component

Perform the following steps to create an inbound BPEL process component:

 Drag and drop the BPEL Process component from the Component Palette tab (Service Components section) to the Components pane, as shown in Figure 4–86.

Figure 4–86 BPEL Process Component

Start Page Boot_Inbound_E	PEL Overview	💌 🎬 Component Pale 🙀 🤅
🖉 🗲 🏷 🖶 🔁 🗶 🕕 🛛 🖓	摺 🗟 🗑 🤣	Composite: LOCATION_SYNC_Receive
Exposed Services	Components	External References
		A BPEL Process
		Business Rule
		👌 Human Task
		Kediator
		Service Adapters
	_	AQ Adapter
location_sync	R	😥 B2B
Operations:	¶¥ ≞	🛍 BAM Adapter
LOCATION_SY		Database Adapter
		Direct Binding Service

The Create BPEL Process dialog is displayed, as shown in Figure 4–87.

Create BPE	L Process		×
	ess is a service orche	stration, based on the BPEL specification, used to describe/execute a d service), which is implemented as a stateful service.	
BPEL 1.1 Sp	ecification 🔿 BPEL 2	2.0 Specification	
Name:	Location_Sync_Inbo	und	
Namegpace:	http://xmins.oracle.	com/PS3_testing/LOCATION_SYNC_Receive/Location_Sync_Inbound	
Template:	Base on a WSDL		• 🥥
Service Name:	location_sync_inbou	nd_client	
	Expose as a SOA	P service	_
	WSDL URL:		۵
	Port Type:	9	
	⊆allback Port Type:	-	1
Help		ОК	Cancel

Figure 4–87 Create BPEL Process Dialog

2. In the Name field, enter a name to identify the new inbound BPEL process component (for example, Location_Sync_Inbound).

By default, the BPEL specification is set to **BPEL 1.1 Specification**. The BBPEL Process also supports BPEL 2.0 Specification.

- **3.** From the Template list, select **Base on a WSDL**.
- 4. Uncheck the **Expose as SOAP service** check box.
- **5.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 4–88.

SOA Reso	u <mark>rce Browser</mark> em			×
📄 LOCAT	wsdls ION_invoke.wsdl ION_SYNC.VERSION_1_receive.wsdl WithView_invoke.wsdl e_Account_receive.wsdl	•	ک ک	
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.wsdl			
File <u>T</u> ype:	WSDL Files (*.wsdl)			-
Help			окр	Cancel

Figure 4–88 SOA Resource Browser

- **6.** Browse and select an inbound WSDL file (for example, LOCATION_SYNC.VERSION_1_receive.wsdl) from the default WSDL location.
- 7. Click OK.

The Localize Files dialog is displayed, as shown in Figure 4–89.

Figure 4–89 Localize Files Dialog

🕌 Localize Files	×
file:/C:/oracle/Middleware/Oracle_SOA1/soa/thirdparty/ApplicationAdapters/wsd ve.wsdl is external to the current project. In order to make this file available to y can now make a local copy of this file and any dependent files that it imports or in	our project at runtime, JDeveloper
Copy Options: Maintain original directory structure for imported files Rename duplicate files The following files will be created in directory C:\JDeveloper\mywork\PSoft_Inbound_BPEL\LOCATION_SYNC_Receive :	
LOCATION_SYNC.VERSION_1_receive_1.wsdl LOCATION_SYNC.VERSION_1_receive_request_1.xsd	
Help	OK Cancel

8. Uncheck the **Rename duplicate files** option in the Copy Options area, and then click **OK**.

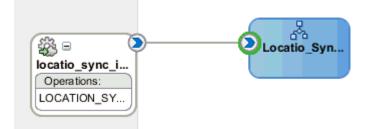
You are returned to the Create BPEL Process dialog, as shown in Figure 4–90.

Figure 4–90 Create BPEL Process Dialog

🍲 Create BPE	L Process		×
	ess is a service orch	estration, based on the BPEL specification, used to describe/execute a ad service), which is implemented as a stateful service.	
BPEL 1.1 Sp	pecification O BPEL	2.0 Specification	
<u>N</u> ame:	Location_Sync_Inbo	bund	
Namespace:	http://xmlns.oracle.	.com/PS3_testing/LOCATION_SYNC_Receive/Location_Sync_Inbound	
Template:	🔞 Base on a WSD	L	• 🥹
Service Name:	location_sync_inbou	und_client	
	Expose as a SO4	AP service	
	WSDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
	Port Type:	LOCATION_SYNC.VERSION_1PortType)
	<u>C</u> allback Port Type:	No Callback]
Help		ОК	Cancel

9. Click OK.

Figure 4–91 Created Connection



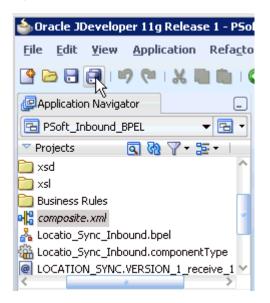
- **10.** Create a connection between the third party adapter service component (location_ sync) and the inbound BPEL process component (Location_Sync_Inbound), as shown in Figure 4–91.
- 11. Double-click composite.xml in the left pane, as shown in Figure 4–92.



Application Navigator	Start Page Boot Inbound BPEL Overview
🔁 PSoft_Inbound_BPEL 🛛 🔻 🔁 🔻	🗸 🥖 🏷 🖶 🖶 🗶 🕕 🛛 📓 🏦 🎝
Projects Projects Xsd Xsd Xsl Business Rules Composite.xml Locatio_Sync_Inbound.bpel Locatio_Sync_Inbound.componentType LOCATION_SYNC.VERSION_1_receive_1 Application Resources Data Controls X Application Server Navigator X Application Servers	Locatio Syn Doperations: LOCATION_SY

12. Click the **Save All** icon in the menu bar to save the new inbound BPEL process component that was configured, as shown in Figure 4–93.

Figure 4–93 Save All Icon



You are now ready to deploy the BPEL inbound process.

4.5.4 Deploying the BPEL Inbound Process

Perform the following steps to deploy the BPEL inbound process.

 Right-click the project name in the left pane (for example, LOCATION_SYNC_ Receive), select Deploy, and then click LOCATION_SYNC_Receive, as shown in Figure 4–94.

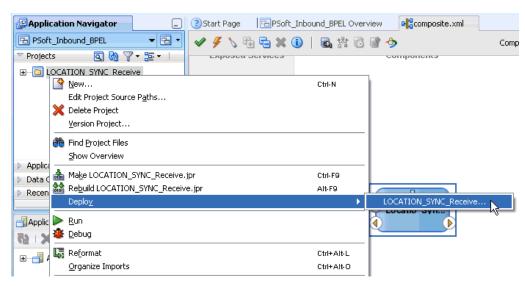


Figure 4–94 Deploy Option

The Deployment Action page is displayed, as shown in Figure 4–95.

Figure 4–95 Deployment Action Page

Deploy LOCATION_SYNC	_Receive	×
Deployment Action		Я.
Q Deployment Action	Select a deployment action from the list below.	
Deploy Configuration	Deploy to Application Server	
ំ Summary	Deploy to SAR Deploy this archive to SOA configured Application server(s)	
Help]

- 2. Ensure that **Deploy to Application Server** is selected.
- 3. Click Next.

The Deploy Configuration page is displayed, as shown in Figure 4–96.

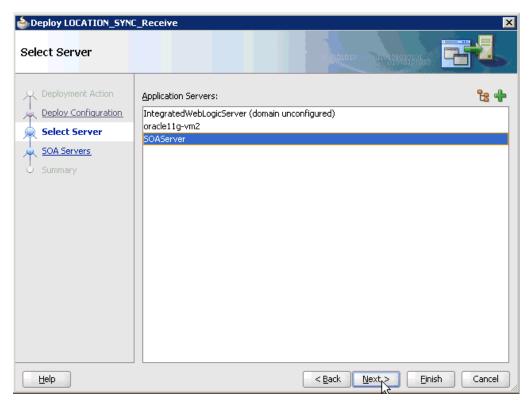
Deploy LOCATION_SYNC_	Receive X
Deployment Action Deploy Configuration Select Server Summary	Composite Revision ID SOA Configuration Plan Project : Do not attach LOCATION_SYNC_Receive Select a configuration plan from the list. Current Revision ID : . 1.0 .
<	Mark composite revision as default. Overwrite any existing composites with the same revision ID. Use the following SOA configuration plan for all composites: Browse Cancel Cancel Cancel

Figure 4–96 Deploy Configuration Page

4. Leave the default values selected and click Next.

The Select Server page is displayed, as shown in Figure 4–97.

Figure 4–97 Select Server Page



 Select an available application server that was configured and click Next. The SOA Servers page is displayed, as shown in Figure 4–98.

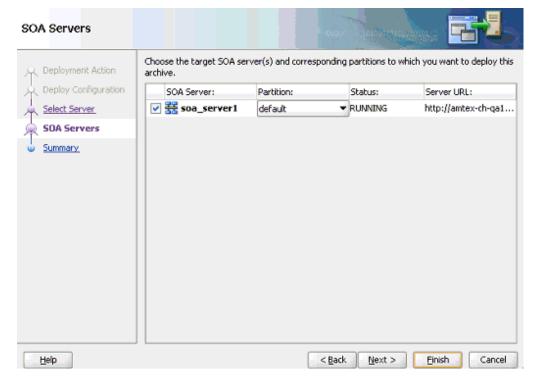


Figure 4–98 SOA Servers Page

6. Select a target SOA server and click Next.

The Summary page is displayed, as shown in Figure 4–99.

Deploy LOCATION_SYN	
Deployment Action Deploy Configuration Select Server SOA Servers Summary	Deployment Summary: Application Server Name: SOAServer Platform: Weblogic 10.3 Archive Details Output file: C:\JDeveloper\mywork\PSoft_Inbound_BPEL\LOCATION_SYNC_Receive\de Include manifest: No Compressed: No
Help	< <u>Back</u> <u>Mext</u> > <u>Finish</u> Cancel

Figure 4–99 Summary Page

7. Review and verify all the available deployment information for your project and click **Finish**.

The process is deployed successfully, as shown in Figure 4–100.

Figure 4–100 Successful Deployment Message



Once event messages are triggered through PeopleSoft, successful instances are received in the Oracle Enterprise Manager console.

4.5.5 Triggering an Event in PeopleSoft

Events are generated by activity in an application system. For example, PeopleSoft may generate an event as customer information is updated in the system. The following topics describe how to trigger an event in PeopleSoft and verify the event using Oracle Application Adapter for PeopleSoft.

To trigger an event in PeopleSoft:

1. Log in to PeopleSoft, select **PeopleTools**, **Integration Broker**, **Integration Setup** and then **Nodes**, as shown in Figure 4–101.

Figure 4–101 PeopleTools Node Definitions

2. Enter the node name you are using, for example, EXTERNAL, then click **Search**, as shown in Figure 4–102.

Figure 4–102 External Node Name

ORACLE					
Favorites Main Menu	> PeopleTools	>	Integration Broker >	Integration Setup >	Nodes

Nodes

Enter any information you have and click Search. Leave fields blank for a list of all values.



Find an Existing Value Add a New Value

3. Click the **Connectors** tab, as shown in Figure 4–103.

Figure 4–103 Connectors Tab

		Day	pleTools > Integratic	on Brr	war in the	ntegration Setup > Nodes	Home	w	orklist
Ť		nnec				tings			5
	Name EXTER	NAL	Ping	Node					
Deta	ils								
	Gateway ID:	LOC	AL.		Q				
	Connector ID:	HTT	PTARGET		Q				
-	operties operties Data Typ	e / De	escription (TTT)			- Sustanize End 🏧 🚟 - Fra	1-3 of 3	, D	Last
	*Property ID		Property Name		Required	Value			
1	HEADER	Q	sendUncompressed	Q	7	Y	Q	÷	
2	HTTPPROPERTY	Q	Method	Q	V	POST	Q	+	
3	PRIMARYURL	Q	URL	Q	V	http://172.19.20.242.1837	Q	Ð	Ξ

- 4. Enter HTTPTARGET in the Connector ID field; then enter the listener URL and its port in the PRIMARYURL field.
- **5.** To save the configuration, click **Save**.

A successful dialog window is displayed.

To check the listener status, click on the **Ping Node** button and continue the triggering if a window appears, as shown in Figure 4–104.

Figure 4–104 Ping Node

Ping Node Results			
Node Information			
Node Information Integration Gateway ID	Connector ID	Connector URL	Message Text

- **6.** Select **Integration Broker**, **Integration Setup**, and then **Services** from the main menu.
- **7.** Enter **LOCATION_SYNC** in the Services field, and then click **Search**, as shown in Figure 4–105.

Figure	4–105	Services
--------	-------	----------

ORA	ACLE"								
Favorites	Main Menu	>	PeopleTools	>	Integration Broker	>	Integration Setup	>	Services

Services

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Value	Add a Ne	w۷	alue			
Maximum number of row	s to return (up	to to	300): 300			
Service:	begins with	~	LOCATION_SYNC	1		
Service Alias:	begins with	~				
Object owner identifier:	= 🛩]		~		
Case Sensitive						
Search Clear	Basic Search	h (Save Search Criteria			

- **8.** Click **LOCATION_SYNC.VERSION_1** in the Operation tab, as shown in Figure 4–106.
- Figure 4–106 Operation Tab

Services

Service:	LOCATION_SYNC							
'Description:	Location Table - Sync Message							
Comments:	Incremental (Component Publish) N	dessage.						
Service Alias:								
Object Owner ID:	HR Core Objects	*						
'Namespace:	http://mins.oracle.com/Enterprise/H	(CM/service	S					
Link Existing Operations	View WSDL							
Service Operations								
Service Operation:								
Operation Type:	8		Add					
Existing Operations	Quatomize End View	al 🔍 🕯	First C 1 of 1 D Las					
Operation Message Links								
Operation.Default Version	Description	Active	Operation Type					
LOCATION SYNC VERSION	Location Table - Sync Message		Asynch					

9. Click the **Routings** tab, as shown in Figure 4–107.

Favorites Main Menu > R	PeopleTools > Integration Brok	er > Integration Setup > Services
General Handlers Service Operation: Operation Type: 'Operation Description: Operation Comments:	Routings LOCATION_SYNC Asynchronous - One Way Location Table - Sync Message	User Password Required
Object Owner ID:	HR Core Objects	'Security Verification:
Operation Alias:		Service Operation

Figure 4–107 Routings Tab

10. Click **ADD_LOC** in the Routing Definitions section, as shown in Figure 4–108.

Figure 4–108 Routing Definitions Section

	e Operation: LOCATION_SYNC ault Version: VERSION_1							
Routing	Name:			Add	1			
Routing Del	finitions						Oustomize	End Vie
Selected	Hame		Version	Operation Type	Sender Node	Receiver Node	Direction	Status
	LOCA	TION SYNC	VERSION_1	Asynch	PSFT_HR	PSFT_HR	Local	Inactive
	~GEN	~UPG~12670	VERSION_1	Asynch	PSFT_HR	PSFT_CR	Outbound	Inactive
	~GEN	~UPG~21086	VERSION_1	Asynch	PSFT_HR	PSFT_EP	Outbound	Inactive
	~GEN	~UPG~26595	VERSION_1	Asynch	PSFT_EP	PSFT_HR	Inbound	Inactive
	ADD	00	VERSIÓN_1	Asynch	PSFT_HR	EXTERNAL	Outbound	Active

11. Click the **Connector Properties** tab, as shown in Figure 4–109.

ORACLE		
Favorites Main Menu > Peo	pleTools > Integration Broker >	Integration Setup > Services
Routing Definitions Parar	neters Connector Properties	Routing Properties
Routing Name:	ADD_LOC	Active
'Service Operation:	LOCATION_SYNC	System Generated
Version:	VERSION_1	
'Description:	ADD_LOC	Graphical View
-	_	
Comments:		
'Sender Node:	PSFT_HR	
'Receiver Node:	EXTERNAL	

Figure 4–109 Connector Properties Tab

12. Enter the URL and the port number of the HTTP listener in the Connector Properties section and click **Save**, as shown in Figure 4–110.

Figure 4–110 Connector Properties Section

Routing Definitions Parame	ters Connector Properties	Routing Properties	
Routing Name:	ADD LOC		
Service Operation:	LOCATION_SYNC		
Service Operation Version:	VERSION_1		
Gateway ID:	LOCAL	Q	
Connector ID:	HTTPTARGET	Q	

Connector Properties Customize Find View All 🗷 🛗 First 🚺 1-3 of 3 D Last				
Property ID	Property Name	Value		
HEADER	sendUncompressed	Υ	Q 🛨 🗖	
HTTPPROPERTY	Method	POST	Q 🛨 🗖	
PRIMARYURL	URL	http://172.19.20.242:1837	Q 🛨 🖃	
		No Match Data		
Save	Return			

13. From the **Main Menu** in the left pane, select **Set Up HRMS**, **Foundation Tables**, **Organization**, and then **Location**, as shown in Figure 4–111.

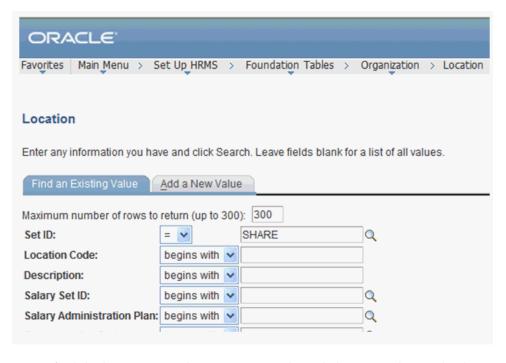


Figure 4–111 PeopleSoft Integration Broker Connectors Tab

14. To find the location record you want to update, click **Search**; then make the changes and click **Save**, as shown in Figure 4–112.

Figure 4–112 Location Definition Pane

SetID: SHARE	Location Code: ALBERTA			Find View All	First 🖪 1 of 1 🕨 Last
*Eff Date: 05/0	04/2004 🗊 Active 💌	*Descr: Alb	erta - Canada		+-
Country: Address 1: Address 2: Address 3:	CAN Canada 600 Maple Street Suite 9000 A11ddress 3 Changed		Prefix: Phone: Ext: Fax:		
Address 4: City: County: Province: Building #:	Massapequa Kent NF Q Newfoundland Floor #:	Postal: Jurisdictior	In City Limit A9A 9B9		
	turn to Search) (E [®] Notify) n <u>Location Detail</u>		(E +Add) (Æ	Update/Display) 🔏	Include History) (🗊 Correct Histor

Verifying the Results

To verify your results:

- Log in to the Oracle Enterprise Manager console by using the following URL: http://localhost:7001/em
- 2. Expand your domain in the left pane followed by the SOA folder.



Figure 4–113 Oracle Enterprise Manager Console

3. Select an available project (for example, PSoft_Inbound_LOCATION_ SYNC.VERSION_1_BPEL), as shown in Figure 4–113.

Figure 4–114 PSoft_Inbound_LOCATION_SYNC.VERSION_1_BPEL Project

PSoft_Inbound_LOCATION_SYNC.VERSION_1_BPEL [1.0] ^(Logged in as weblogic Host 200)						lost 2001	
📲 SOA Composit	e 🗸			Page Refr	eshed Feb 18, 2010	2:47:40 PM	iest 🗘
		L					
Running Instance	es 0 Total 2 Active	Retire Sh	ut Down	Test 🔻	Settings 🔻	<>>	»
Dashboard In	Faults and R	ejected Messages	Unit Tests Po	licies			
composite audit tr	50A composite are listed b acking is disabled, compor ns to purge the instances I	ient instances may be					
■Search							
Instance ID							
Name							
Conversation ID							
Start Time From		🖄 (UTC-05:00)) US Eastern Tim	e			
Start Time To		🖄 (UTC-05:00)) US Eastern Tim	е			
Show Any	×				Se	earch R	eset
View 🗸 🛛 💥	Delete Selected 🛛 🗶	Delete With Options .	. Abort				
Instance ID	Name	Conversation ID	State		Start Tim	-	Logs
650002		iWay126641924951	-		Feb 17, 2010 10:0		
650001		iWay126641924832	😳 Stale		Feb 17, 2010 10:0	17:28 AM	1

4. Click the Instances tab in the right pane, as shown in Figure 4–114.

Recently received run-time events are displayed in the Instances tab, as shown in Figure 4–115.

Figure 4–115 Recently Received Run-time Events

View 👻 🚿	Delete Selected	💥 Delete With Options	. 📄 Abort	
Instance ID	Name	Conversation ID	State	Start Time 🛆 🔻
<u>650002</u>		iWay126641924951	🔘 Stale	Feb 17, 2010 10:07:29
650002 650(^{hr})		iWay126641924832	🔘 Stale	Feb 17, 2010 10:07:28

5. Select a PeopleSoft instance ID.

The Flow Trace page is displayed, as shown in Figure 4–116.

Figure 4–116 Flow Trace Page

$Flow\ Trace\ 0$ This page shows the flow of the message through various composite and	component instances. 📀		ECID 0000IR5QN5 Started Feb 17, 2010	9Fw000jzwkno18¥068000009 10:07:29 AM
Faults (0)				
Faults Select a fault to locate it in the trace view.				
Error Message No faults found	Recove	ry	Fault Time Fault Location	Composite Instance
Sensors (0) Trace Cikka component instance to see its detailed audit trail. Show Instance IDs				
Instance	Туре	State	Time	Composite Instance
Service1_location_sync	Service	💿 Stale	Feb 17, 2010 10:07:28 AM	PSoft_Inbound_LOCATION_SYN
A BPELProcess1 slocat	BPEL Component	🔕 Stale	Feb 17, 2010 10:07:30 AM	PSoft_Inbound_LOCATION_SYN•
	Service	💿 Stale	Feb 17, 2010 10:07:29 AM	PSoft_Inbound_LOCATION_SYN

6. Select a component instance to view its detailed audit trail.

The Instance page for the selected component is displayed, as shown in Figure 4–117.

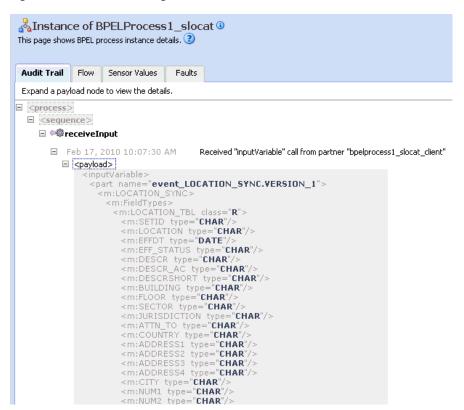


Figure 4–117 Instance Page

7. Click the Audit Trail tab to view the event message.

The message received from the PeopleSoft system is displayed in the Audit Trail tab.

Integration With Mediator Service Components in the Oracle SOA Suite

This chapter describes integration with Mediator service components in the Oracle SOA Suite. It contains the following topics:

- Section 5.1, "Configuring a New Application Server Connection"
- Section 5.2, "Configuring a Mediator Outbound Process"
- Section 5.3, "Configuring a Mediator Inbound Process"

The scenarios shown in this chapter require the following prerequisites.

Prerequisites

The following are installation and configuration requirements:

- Oracle Application Adapter for PeopleSoft must be installed on Oracle WebLogic Server.
- PeopleSoft must be configured for inbound and outbound processing.

See Also: Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server

The examples in this chapter present the configuration steps necessary for demonstrating service and event integration with PeopleSoft. Prior to using this material, you must be familiar with the following:

- How to configure Oracle Application Adapter for PeopleSoft for services and events. For more information, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".
- How to configure a new Application Server and Integration Server connection in Oracle JDeveloper. For more information, see Chapter 4, "Integration With BPEL Service Components in the Oracle SOA Suite".

Overview of Mediator Integration

Mediator provides a comprehensive application integration framework. Oracle Application Adapter for PeopleSoft used with Mediator enables you to seamlessly integrate enterprise software, eliminating the need to write custom code. Functional modeling, as opposed to custom coding solutions, allows for software reuse and reduces the complexity and management challenges that arise over the software lifecycle. This integration model consists of two components--high-level integration logic and low-level platform services.

Adapter integration with Oracle WebLogic Server, Mediator is a two-step process:

- 1. **Design Time:** Oracle Application Adapter for PeopleSoft is configured in Application Explorer for services and events, as described in Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft". Integration logic is modeled in Oracle JDeveloper. Metadata are stored in repositories.
- **2. Runtime:** The underlying platform treats this metadata as run-time instructions to enable the communication between participating applications.

5.1 Configuring a New Application Server Connection

For more information on how to configure a new Application Server connection in Oracle JDeveloper, see Section 4.3, "Configuring a New Application Server Connection".

5.2 Configuring a Mediator Outbound Process

The following example describes how to configure a Mediator outbound process to your PeopleSoft system, using a Mediator project in Oracle JDeveloper.

Prerequisites

Before you design a Mediator outbound process, you must generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Request/Response Service" on page 4-8.

Samples have been provided for this usecase scenario in the etc/sample folder in Application Adapters installation.

5.2.1 Creating a New SOA Application for the Outbound Mediator Process

Perform the following steps to create a new SOA application for the outbound Mediator process:

- 1. Open Oracle JDeveloper on your system.
- **2.** Click **Application** in the menu bar and select **New** from the menu, as shown in Figure 5–1.

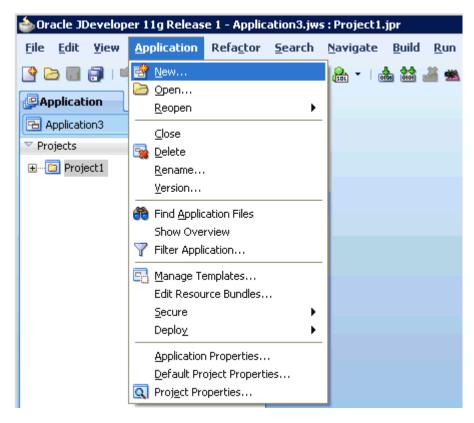


Figure 5–1 New Option

The Create SOA Application wizard is displayed, as shown in Figure 5–2.

Figure 5–2 Create SOA Application Wizard

Create SOA Application	n - Step 1 of 3
lame your applicatio	
Application Name	Application Name:
T	PSoft_Outbound_Mediator
Project Name	Directory:
Project SOA Settings	C:\JDeveloper\mywork\PSoft_Outbound_Mediator Browse
	Application Package Prefix:
	Java Desktop Application (ADF) Creates a databound rich client application. The application consists of one project for the client (ADF Swing), and another project for the ADF Model (ADF Business Components). Java EE Web Application Creates a databased with application.
	Creates a databound web application. The application consists of one project for the view and controller components (JSF), and another project for the data model (EJB session beans and JPA entities).
	SOA Application Creates a SOA (service-oriented architecture) application. The application consists of one SOA project for the SOA composite, components, and adapters.
Help	< Back Next > Einish Cancel

- 3. From the Application Template list, click SOA Application.
- **4.** Enter a name for the new SOA application (for example, PSoft_Outbound_ Mediator) and click **Next**.

The Name your project page is displayed, as shown in Figure 5–3.

Figure 5–3 Name Your Project Page

Interste SOA Application	- Step 2 of 3 🛛 🕺
Name your project	
Application Name Project Name Project SOA Settings	Project Name: LOCATION_Invoke Dirgctory: eloper\mywork\PSoft_Outbound_Mediator\LOCATION_Invoke Browse Project Technologies Generated Components Associated Libraries Available: Selected: Sola ADF Business Components Associated Libraries ADF Desktop Integration Selected: ADF Library Web Application Support Sola ADF Swing Image: Sola Ant Image: Sola Database (Offline) Image: Sola EJB HTML Java Sola is the Service Oriented Architecture to build composite applications.
Help	< Back Next Finish Cancel

 Enter a project name (for example, LOCATION_Invoke) and click Next. The Configure SOA settings page is displayed, as shown in Figure 5–4.

5-4 Oracle Fusion Middleware Application Adapter for PeopleSoft User's Guide for Oracle WebLogic Server

💩 Create SOA Application	- Step 3 of 3	×
Configure SOA settin	gs	
Application Name Project Name Project SOA Settings	Composite <u>N</u> ame: LOCATION_Invoke Composite Template: <u>Empty Composite</u> Composite With BPEL Composite With Business Rule Composite With Human Task Composite With Mediator Composite From Oracle BPA Blueprint	
< >>	<u>C</u> ustomizable	< <u>Back</u> Mext > Finish Cance

Figure 5–4 Configure SOA Settings Page

6. From the Composite Template list, select **Empty Composite** and click **Finish**.

Figure 5–5 New SOA Application and Associated Project

Application Navig	ator		_
🔁 PSoft_Outbound	_Mediator	-	- 13
Projects	Q & V	- 5	•
⊡ <mark>`</mark>] LOCATION_	Invoke		
🗄 🛅 SOA Col	ntent		
Application Resource	rcec		
	ICES	5 0 577	, ,
Data Controls		63 A	
Recently Opened	Files		
			666

The new SOA application (PSoft_Outbound_Mediator) and associated project (LOCATION_Invoke) are added to the Application Navigator tab in the left pane, as shown in Figure 5–5.

5.2.2 Defining a Mediator Outbound Process

This section describes how to define a Mediator outbound process, which consists of the following stages:

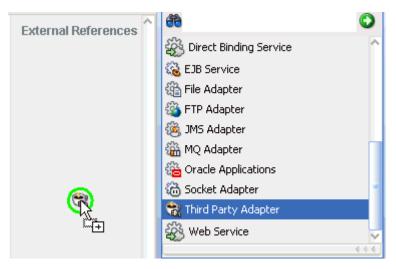
- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Outbound Mediator Process Component
- 3. Configuring the Routing Rules

Configuring a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

 Drag and drop the Third Party Adapter component from the Component Palette tab (Service Adapters section) to the External References pane, as shown in Figure 5–6.

Figure 5–6 Third Party Adapter Component



The Create Third Party Adapter Service dialog is displayed, as shown in Figure 5–7.

💩 Create Third Party	Adapter Service	×
Third Party Adapter	Service	5
Create a JCA adapte	er service for a third party adapter.	Th
<u>N</u> ame:	Location	
<u>Т</u> уре:	Reference 💌	
WSDL URL:		
Port Type:	•	- 10
Operation:	•	
<u>C</u> allback Port Type:	•	
Callback Operation:		
JCA File:		2
Help	OK C	Cancel

Figure 5–7 Create Third Party Adapter Service Dialog

- 2. Enter a name for the new third party adapter service.
- 3. Ensure that **Reference** is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 5–8.

Figure 5–8 SOA Resource Browser Dialog

SOA Resou	irce Browser M		×
Location:	🗀 wsdls	•	🖻 🖄 🌁 🗄 🚍
📄 queryW	ION_invoke.wsdl /ithView_invoke.wsdl _Account_receive.wsdl		
File <u>N</u> ame:	LOCATION_invoke.wsdl		
File <u>T</u> ype:	WSDL Files (*.wsdl)		•
Help			OK Cancel

5. Browse and select an outbound WSDL file (for example, LOCATION_ invoke.wsdl) from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 5–9.

Figure 5–9 Localize Files Dialog

🖕 Localize Files	×
file:/C:/oracle/Middleware/Oracle_SOA1/soa/thirdparty/ApplicationAdapters/ws to the current project. In order to make this file available to your project at runt copy of this file and any dependent files that it imports or includes.	
Copy Options: I Maintain original directory structure for imported files The following files will be created in directory C:\JDeveloper\mywork\PSoft_Outbound_BPEL\LOCATION_Invoke :	
LOCATION_invoke.wsdl LOCATION_invoke_request.xsd LOCATION_invoke_response.xsd	
Help	OK Cancel

7. Click OK.

The outbound WSDL file and associated request and response XML schema files (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 5–10.

🍲 Create Third Party	Adapter Service	×
Third Party Adapter	Service	5
Create a JCA adapte	r service for a third party adapter.	-A
<u>N</u> ame:	Location	
<u>Т</u> уре:	Reference 🔻	
WSDL URL:	LOCATION_invoke.wsdl	1
Port Type:	LOCATIONPortType -)
Operation:)
<u>C</u> allback Port Type:	No Callback 💌)
Callback Operation:)
JCA File:		1
Help	OK	Cancel

Figure 5–10 Create Third Party Adapter Service Dialog

 Click the Find JCA Files icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 5–11.

Figure 5–11 SOA Resource Browser Dialog

💩 SOA Resou	irce Browser	×
🖹 File Syste	m	
Location:	🗀 wsdls	- 🛍 🖄 🞬 🗄
	ION_invoke.jca /ithView_invoke.jca	
	_Account_receive.jca	
File <u>N</u> ame:	LOCATION_invoke.jca	
File <u>T</u> ype:	JCA Files (*.jca)	-
Help		OK Cancel

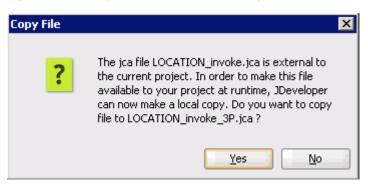
9. Browse and select the JCA properties file (for example, LOCATION_invoke.jca) from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

10. Click **OK**.

The following message is displayed, as shown in Figure 5–12.

Figure 5–12 Copy File Confirmation Message



11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 5–13.

Figure 5–13 Create Third Party Adapter Service Dialog

💩 Create Third Party	Adapter Service	×
Third Party Adapter Create a JCA adapte	Service r service for a third party adapter.	
<u>N</u> ame:	Location	
<u>T</u> ype: <u>W</u> SDL URL:	Reference LOCATION_invoke.wsdl	1
Port Type:	LOCATIONPortType -	
_	No Callback 💌	
Callback Operation:		
<u>J</u> CA File:	LOCATION_invoke_3P.jca	1
Help	ок 🔓 🗌	Cancel

12. Click **OK**.

The third party adapter service component (Location) is created and displayed in the External References pane, as shown in Figure 5–14.



Figure 5–14 External References Pane

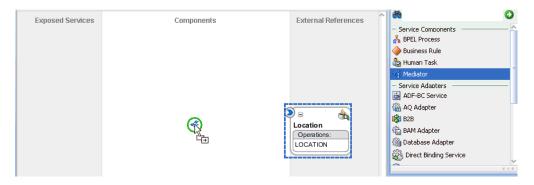
You are now ready to configure an outbound Mediator process component.

Configuring an Outbound Mediator Process Component

Perform the following steps to configure an outbound Mediator process component:

1. Drag and drop the **Mediator** component from the Component Palette tab (Service Components section) to the Components pane, as shown in Figure 5–15.

Figure 5–15 Mediator Component



The Create Mediator dialog is displayed, as shown in Figure 5–16.

譮 Create Mee	diator	×
Mediator Co	mponent	
Create a me	ediator component to perform routing, filtering, and transformations.	48
<u>N</u> ame:	LOCATION_Mediator	
<u>T</u> emplate:	🞏 Synchronous Interface	• 0
	✓ Create Composite Ser <u>v</u> ice with SOAP Bindings	
	Input: {http://xmlns.oracle.com/singleString}singleString	- <u>R</u>
	Qutput: {http://xmlns.oracle.com/singleString}singleString	
Help	OK	Cancel

Figure 5–16 Create Mediator Dialog

- **2.** In the Name field, enter a name to identify the new outbound Mediator process component (for example, LOCATION_Mediator).
- 3. From the Template list, select Synchronous Interface.
- **4.** Click the **Browse Input Elements** icon, which is located to the right of the Input field to select the associated XML request schema file.

The Type Chooser dialog is displayed, as shown in Figure 5–17.

Figure 5–17	Type Ch	ooser Dialog
-------------	---------	--------------

🖕 Type Chooser	×
	* 💩
Vype Explorer Project Schema Files COATION_invoke.wsdl LOCATION_invoke.wsdl Imported Schemas Inline Schema Schema Schema Imported WSDL	
Type: {urn:iwaysoftware:adapter:peoplesoft:location:ci:reque	st}PS8
Show Detailed Node Information	
Help	

- 5. Expand Project WSDL Files, LOCATION_invoke.wsdl, Inline Schemas, schema, and select PS8.
- 6. Click OK.

You are returned to the Create Mediator dialog, as shown in Figure 5–18.

Figure 5–18 Create Mediator Dialog

💩 Create Me	diator 🗙
Mediator Co	mponent
Create a m	ediator component to perform routing, filtering, and transformations.
<u>N</u> ame:	LOCATION_Mediator
<u>T</u> emplate:	🞏 Synchronous Interface 🗾 🥥
	✓ Create Composite Service with SOAP Bindings
	Input: {urn:iwaysoftware:adapter:peoplesoft:location:ci:request}P58
	Output: {http://xmlns.oracle.com/singleString}singleString
	U
Help	OK Cancel

7. Click the **Browse Output Elements** icon, which is located to the right of the Output field to select the associated XML response schema file.

The Type Chooser dialog is displayed, as shown in Figure 5–19.

Figure 5–19	Type Choose	r Dialog
-------------	-------------	----------

🖕 Type Chooser	×
	名 迿
C Type Explorer	
Project Schema Files	
Project WSDL Files	
E LOCATION_invoke.wsdl	
Imported Schemas	
inline Schemas	
💼 🛃 schema	
schema	
Imported WSDL	
Type: {urn:iwaysoftware:adapter:peoplesoft:location:ci:respon	nse}PS8
Show Detailed Node Information	
Help	OK Cancel
	K //

- 8. Expand Project WSDL Files, LOCATION_invoke.wsdl, Inline Schemas, schema, and select PS8.
- 9. Click OK.

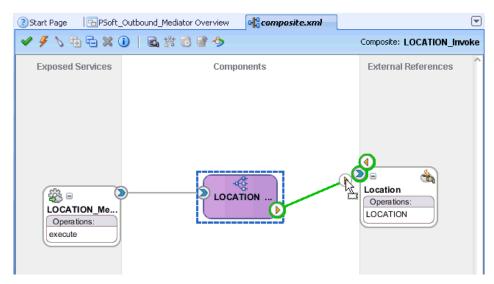
You are returned to the Create Mediator dialog, as shown in Figure 5–20.

💩 Create Me	diator	×
Mediator Co	mponent	
Create a me	ediator component to perform routing, filtering, and transformations.	A.
<u>N</u> ame:	LOCATION_Mediator	
Template:	🞏 Synchronous Interface 🗸 🗸	
<u>_</u> p		
✓ Create Composite Service with SOAP Bindings		
	Input: {urn:iwaysoftware:adapter:peoplesoft:location:ci:request}P58	٩
	Qutput: {urn:iwaysoftware:adapter:peoplesoft:location:ci:response}P58	۹
Help	ОКЪС	ancel

Figure 5–20 Create Mediator Dialog

- **10.** Click **OK**.
- **11.** Create a connection between the outbound Mediator process component (LOCATION_ Mediator) and the third party adapter service component (Location), as shown in Figure 5–21.

Figure 5–21 Created Connection



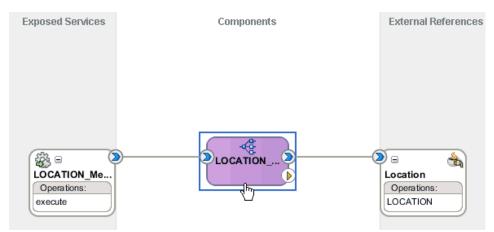
You are now ready to configure the routing rules.

Configuring the Routing Rules

Perform the following steps to configure routing rules for the Mediator outbound process component:

1. Double-click the outbound Mediator process component (LOCATION_ Mediator) in the Components pane, as shown in Figure 5–22.

Figure 5–22 Outbound Mediator Process Component



The Routing Rules dialog is displayed, as shown in Figure 5–23.

Figure 5–23 Routing Rules Dialog

Operations								•	٩
execute		Priority 4	7	Validate Syn	itax (XSD)		\bigtriangledown	╬᠇	×
Callout To < <ja< td=""><td>ava Callout Class>></td><td></td><td></td><td></td><td></td><td>۲</td><td></td><td></td><td></td></ja<>	ava Callout Class>>					۲			
Static Routing									_
😑 < Filter Ex	pression>>	9	\$	Location::LOCA	TION	¢۵	Sequ	uential	¥
	٧	alidate Semantic			+	8			
		Transform Using	inpu	t_LOCATION:‹	< <trans td="" 🔻<=""><td>R</td><td></td><td></td><td></td></trans>	R			
		Assign Values			-	6 5			
Sync	hronous Reply		*Init	ial Caller*::exec	ute:output	٩			
		Transform Using	repl	y : < <transform< td=""><td>nation M 👻</td><td>ж</td><td></td><td></td><td></td></transform<>	nation M 👻	ж			
		Assign Values			+	69			

In the <<Filter Expression>> area, click the Select an existing mapper file or create a new one icon to the right of the Transform Using field.

The Request Transformation Map dialog is displayed, as shown in Figure 5–24.

Figure 5–24 Request Transformation Map Dialog

leavest Transformation		X
Transformation from request n	nessage requestMessage to message request.	
Transformation to part:	input_LOCATION	
Use Existing Mapper File:		Q /
Create New Mapper File:	P58_To_P58.xsl	
Help		OK Cancel

3. Select the Create New Mapper File option and click OK.

The PS8_To_PS8.xsl tab is displayed, as shown in Figure 5–25.

Figure 5–25 PS8_To_PS8.xsl Tab

⁻ t_Outbound_Mediator Overview	Composite.xml	diator.mplan	PS8_To_PS8.xsl
Source: LOCATION_Mediator.wsdl		[XSLT File: LOCATION_invoke.wsdl
💏 <sources></sources>			<target> 💏 🖃</target>
🖻 ··· 🖇 ci:PS8	· · · · · ·	· · · · · · · · · · · · · · · · · · ·	ci:PS8 🖇 🖷
🗄 ··· 🖇 ci:component			🛱 🗘 component
🗊 🐼 ci:key			ci:key 🔯 🕀
🗄 🖓 ci:LOCATION_TBL			ci:LOCATION_TBL 🗱 💮

4. Map the ci:PS8 source element to the ci:PS8 target element.

The Auto Map Preferences dialog is displayed, as shown in Figure 5–26.

Figure 5–26 Auto Map Preferences Dialog

🖕 Auto Map Preferences 🛛 🗙
Confirm Auto Map Results Prompt for Preferences before Auto Map
Mode: Basic
During Auto Map:
 Match Elements with Similar Names Match Elements with Exact Names
 Match Elements with Exact Types Match Elements Considering their Ancestor Names
Insert xsl:if statements: • Never
 For optional nodes with reguired children For all optional nodes
Show Dictionaries >>
🕑 <u>E</u> nable Auto Map
Help OK Cancel

5. Retain the default values and click OK.

6. Click the LOCATION_Mediator.mplan tab, as shown in Figure 5–27.

it_Outbound_Mediator Overview	or a composite. xr	n 🦂 1000 ATION_Mediator.mp	olan 🗙 🔀 P58_To_P58.xsl 🔳 🔍
Source: LOCATION_Mediator.wsdl		k	XSLT File: LOCATION_invoke.wsdl
🖃 🖓 <sources></sources>			<target> 📸 🖃</target>
🖮 🖇 ci:PS8			ci:PS8 🖇 🛁
🗄 🗠 🖘 ci:component			ci:component 🖇 🗄
😐 🐼 ci:key —			for-each 🕸 🗄
🗄 🔀 ci:LOCATION_TBL			for-each 🛞 🗄

Figure 5–27 LOCATION_Mediator.mplan Tab

You are returned to the Routing Rules dialog, as shown in Figure 5–28.

Figure 5–28 Routing Rules Dialog

Static Routing	
< <filter expression="">></filter>	Sequential
Validate Ser	mantic 📃 🖌 🕹
Transform	Using input_LOCATION : xsl/P58 👻 🔣
Assign ¹	Values 🗾 🐨
Synchronous Reply	🛥 *Initial Caller*::execute:output 🤯
Transform	Using reply : < <transformation m="" th="" 👻="" 🔣<=""></transformation>
Assign ^v	Values Select an existing

7. In the Synchronous Reply area, click the **Select an existing mapper file or create a new one** icon to the right of the Transform Using field.

The Reply Transformation Map dialog is displayed, as shown in Figure 5–29.

Figure 5–29 Reply Transformation Map Dialog

left Reply Transformation N	lap		×
Transformation from reply me	ssage response to message replyMessage.		
Transformation to part:	reply]	Q /
<u>Create New Mapper File:</u> Tradude Deguartie the D			
Include Request in the Re	piy Payload		
Help	(ок	Cancel

8. Select the Create New Mapper File option and click OK.

The PS8_To_PS8_2.xsl tab is displayed, as shown in Figure 5–30.

Figure 5–30 PS8_To_PS8_2.xsl Tab

Outbound_Mediator Overview	posite.xml decorrection_Mediator.mplan	₩P58_To_P58_2.xsl
Source: LOCATION_invoke.wsdl		XSLT File: LOCATION_Mediator.wsdl
⊡ 🎲 <sources></sources>		<target> 💏 🖃</target>
🖮 🖇 iWayResponse:PS8		iWayResponse:PS8 🦇 📄
🗄 🚱 iWayResponse:result	k	iWayResponse:result 🚧 🚠
iWayResponse:error	· · · · · · · · · · · · · · · · · · ·	iWayResponse:error 🙌 🔤
iWayResponse:done		iWayResponse:done 🐼
🗄 🖓 iWayResponse:record		iWayResponse:record 🐼 🗄

9. Map the **iWayResponse:PS8** source element to the **iWayResponse:PS8** target element.

The Auto Map Preferences dialog is displayed, as shown in Figure 5–31.

Figure 5–31 Auto Map Preferences Dialog

🖕 Auto Map Preferences 🛛 🗙
Confirm Auto Map Results Prompt for Preferences before Auto Map
Mode: Basic
During Auto Map:
 Match Elements with Similar Names Match Elements with Exact Names
 Match Elements with Exact Types Match Elements Considering their Ancestor Names
Insert xsl:if statements: Never For optional nodes with reguired children
For all optional nodes Show Dictionaries >>
💌 Enable Auto Map
Help OK Cancel

10. Retain the default values and click **OK**.

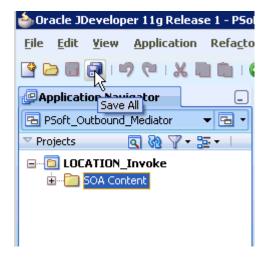
The mapping is completed, as shown in Figure 5–32.

Figure 5–32 Completed Mapping

Outbound_Mediator Overview	posite.xml	CATION_Med	iator.mplan 🎽	< ₩P58_To_P58_2.xsl <
Source: LOCATION_invoke.wsdl		2	[XSLT File: LOCATION_Mediator.wsdl
🎇 <sources></sources>				<target> 🎇 🖃</target>
🖮 🖇 iWayResponse:PS8				iWayResponse:PS8 🦇 📄
😥 🐼 iWayResponse:result				- iWayResponse:result 🚧 🖷
iWayResponse:error —				iWayResponse:error 🚧 🔤
iWayResponse:done —				iWayResponse:done 🚧 🔤
🗄 🐼 iWayResponse:record —			· · · ·	for-each 🕸 🗄

11. Click the **Save All** icon in the menu bar to save the new outbound Mediator process component that was configured, as shown in Figure 5–33.

Figure 5–33 Save All Icon



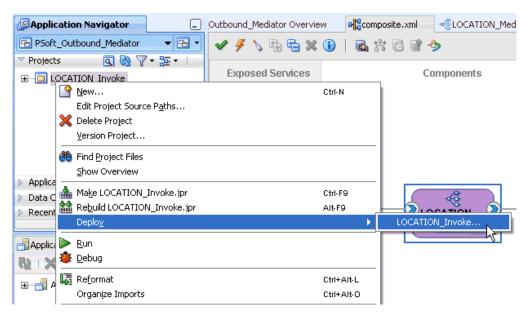
You are now ready to deploy the Mediator outbound process.

5.2.3 Deploying the Mediator Outbound Process

Perform the following steps to deploy the Mediator outbound process.

1. Right-click the project name in the left pane (for example, LOCATION_Invoke), select **Deploy**, and then click LOCATION_Invoke, as shown in Figure 5–34.

Figure 5–34 Deploy Option



The Deployment Action page is displayed, as shown in Figure 5–35.

💩 Deploy LOCATION_Invo	ke 🛛 🕹
Deployment Action	
Deployment Action	Select a deployment action from the list below. Deploy to Application Server Deploy to SAR
Heip	Deploy this archive to SOA configured Application server(s)

Figure 5–35 Deployment Action Page

- **2.** Ensure that **Deploy to Application Server** is selected.
- 3. Click Next.

The Deploy Configuration page is displayed, as shown in Figure 5–36.

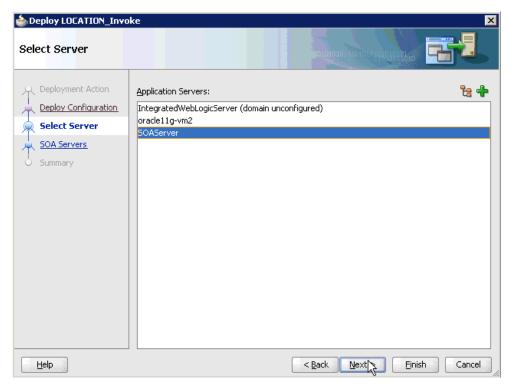
📤 Deploy LOCATION_Invok	×
Deploy Configuration	
Deployment Action Deploy Configuration Select Server Summary	Composite Revision ID SOA Configuration Plan Project : Do not attach Select a configuration plan from the list. Select a configuration plan from the list. New Revision ID : 1.0
< >>>	Mark composite revision as default. Overwrite any existing composites with the same revision ID. Use the following SOA configuration plan for all composites: Browse Cancel

Figure 5–36 Deploy Configuration Page

4. Leave the default values selected and click Next.

The Select Server page is displayed, as shown in Figure 5–37.

Figure 5–37 Select Server Page



 Select an available application server that was configured and click Next. The SOA Servers page is displayed, as shown in Figure 5–38.

SOA Servers Choose the target SOA server(s) and corresponding partitions to which you want to deploy this Deployment Action archive. Deploy Configuration SOA Server: Partition: Status: Server URL: 🗹 🚟 soa_server1 default RUNNING http://amtex-ch-ga1... Select Server SOA Servers Summary, Help < Back Next > Einish Cancel

Figure 5–38 SOA Servers Page

6. Select a target SOA server and click Next.

The Summary page is displayed, as shown in Figure 5–39.

Deploy LOCATION_Inv	
Deployment Action Deploy Configuration Select Server SOA Servers Summary	Deployment Summary: Application Server Platform: Weblogic 10.3 Archive Details Output file: C:\JDeveloper\mywork\PSoft_Outbound_Mediator\LOCATION_Invoke\depl Include manifest: No Compressed: No
Help	< <u>Back</u> Mext > Einite Cancel

Figure 5–39 Summary Page

7. Review and verify all the available deployment information for your project and click **Finish**.

The process is deployed successfully, as shown in Figure 5–40.

Figure 5–40 Successful Deployment Message



5.2.4 Invoking the Input XML Document in the Oracle Enterprise Manager Console

Perform the following steps to invoke the input XML document in the Oracle Enterprise Manager console.

1. Logon to the Oracle Enterprise Manager console by using the following URL:

http://localhost:7001/em

2. Expand your domain in the left pane followed by the **SOA** folder, as shown in Figure 5–41.



Figure 5–41 Oracle Enterprise Manager Console

3. Select an available project (for example, PSoft_Outbound_LOCATION_Mediator).

Figure 5–42 Test Button

PSfot_O	utbound_L(DCATION_Medi	iator [1.0] ₍₎ Logg	ged in as weblogic Host	2001:151:19:151:
SOA Compos	site 👻			Page Refreshed Feb 18, 2	010 2:35:54 PM EST
Running Instan	ices 0 Total 1	0 Active Retire	Shut Down	Test Settings	-
ashboard	Instances Fa	ults and Rejected Mess	ages Unit Tests	Policies 3	
)	u.		u u		
⊡Recent Ir	nstances				
Show Only R	unning Instances		Running 0	Total 10	
Instance ID	Name	Conversatio	n ID State		Start Time
670035			💜 Completer	d Feb 18, 20	010 10:56:28 AM
670028			💜 Completer	d Feb 18, 20	010 10:34:32 AM
670016			💜 Completed	d Feb 18, 2	2010 9:29:23 AM
670014			💜 Completed	d Feb 18, 2	2010 9:28:28 AM
670013			Complete	d Feb 18, 2	2010 9:27:37 AM
Show All					
⊡Recent Fa	aults and Reje	cted Messages			
show only syst	em faults 🔽				
Error Message	•	Recovery	Fault	t Time Fault Location	Composite In: ID
No faults found	1				

4. Click **Test** in the right pane, as shown in Figure 5–42.

The Test Web Service page is displayed, as shown in Figure 5–43.



PSfot_Outbound_LOCATION_Mediator [1.0] □Logged in as weblogic Host 2001:1b1:19:1b1:215 SOA Composite Page Refreshed Feb 18, 2010 2:39:03 PM EST
Test Web Service (2) Use this page to test any WSDL, including WSDLs that are not in the farm. To test a Web service, enter the WSDL and click Parse WSDL. When the page refreshes with the WSDL details, first select the Service, then select the Port, and then select the Operation that you want to test. Specify any input parameters, and click Test Web Service.
WSDL http://iworalx:8001/soa-infra/services/default/PSfot_Outbound_LOCATION_Mediator/Mediatorlocation_ep
HTTP Basic Auth Option for WSDL Access
Service Mediatorlocation_ep
Port execute_pt
Operation execute
Endpoint URL http://iworalx:8001/soa-infra/services/default/PSfot_Outbound_LOCATION_Mediator/I Edit Endpoint UR
Request Response
Security
O WSS Username Token O HTTP Basic Auth O Custom Policy 💿 None

- 5. Click the **Request** tab.
- 6. Scroll down to the Input Arguments section, as shown in Figure 5–44.

Figure 5–44 Input Arguments Section

Input Arguments						
XML View						
<soap:envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"> <soap:body xmlns:ci="urn:iwaysoftware:adapter:peoplesoft:location:ci:request"> <ci:p58></ci:p58></soap:body></soap:envelope>						
<pre><ci:component perform="browse">LOCATION</ci:component> <ci:key name="SETID">SHARE</ci:key> <ci:key name="LOCATION">ALBERTA</ci:key></pre>	<ci:component perform="browse">LOCATION</ci:component> <ci:key name="SETID">SHARE</ci:key>					
Request Response						
	Test Web Service					

- 7. Select XML View from the list in the upper-left corner.
- **8.** Provide an appropriate input XML document in the Input Arguments area.

For example:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Body xmlns:ci="urn:iwaysoftware:adapter:peoplesoft:location:ci:request">
<ci:PS8>
```

```
<ci:component perform="browse">LOCATION</ci:component>
<ci:key name="SETID">SHARE</ci:key>
<ci:key name="LOCATION">ALBERTA</ci:key>
</ci:PS8>
</soap:Body>
</soap:Envelope>
```

9. Click Test Web Service.

The output response is received in the Response tab of the Oracle Enterprise Manager console, as shown in Figure 5–45.

Figure 5–45 Oracle Enterprise Manager Console



5.3 Configuring a Mediator Inbound Process

The following example describes how to configure a Mediator inbound process to your PeopleSoft system, using a Mediator project in Oracle JDeveloper.

Prerequisites

Before you design a Mediator inbound process, you must generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Event Integration" on page 4-41.

Samples have been provided for this usecase scenario in the etc/sample folder in Application Adapters installation.

5.3.1 Creating a New SOA Application for the Inbound Mediator Process

Perform the following steps to create a new SOA application for the inbound Mediator process:

- 1. Open Oracle JDeveloper on your system.
- Click Application in the menu bar and select New from the menu, as shown in Figure 5–46.

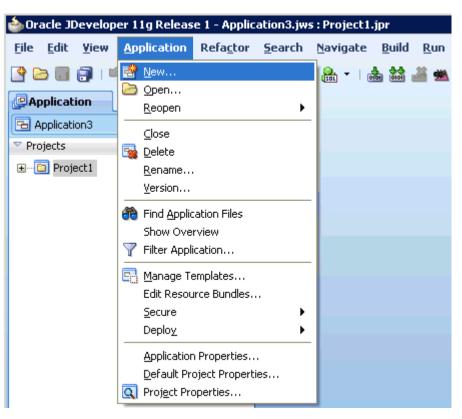


Figure 5–46 New Option

The Create SOA Application wizard is displayed, as shown in Figure 5–47.

Figure 5–47 Create SOA Application Wizard

💩 Create SOA Application	n - Step 1 of 3 🛛 🔀 🗙
Name your application	
Application Name	Application Name: PSoft_Inbound_Mediator Directory:
U Project SOA Settings	C:\JDeveloper\mywork\PSoft_Inbound_Mediator Browse Application Package Prefix:
	Application Template: Devadeants technologies.
	Java EE Web Application Creates a databound web application. The application consists of one project for the view and controller components (JSF), and another project for the data model (EJB session beans and JPA entities).
	SOA Application Creates a SOA (service-oriented architecture) application. The application consists of one SOA project for the SOA composite, components, and adapters.
Help	< Back Next > Einish Cancel

- **3.** From the Application Template list, click **SOA Application**.
- **4.** Enter a name for the new SOA application (for example, PSoft_Inbound_ Mediator) and click **Next**.

The Name your project page is displayed, as shown in Figure 5–48.

Figure 5–48 Name Your Project Page

💩 Create SOA Application	- Step 2 of 3
Name your project	
Application Name Project Name Project SOA Settings	Project Name: LOCATION_SYNC_Receive Dirgctory: [mywork\PSoft_Inbound_Mediator\LOCATION_SYNC_Receive] Project Technologies Generated Components Available: Associated Libraries Available: Selected: ADF Business Components Sold ADF Desktop Integration Sold ADF Paces ADF Library Web Application Support ADF Swing Image: Component Selected: Ant Image: Component Selected: Database (Offline) Image: Component Selected: EJB Image: Component Selected: Technology Description: SOA SOA is the Service Oriented Architecture to build composite applications.
Help	< <u>Back</u> <u>Pext</u> <u>Finish</u> Cancel

5. Enter a project name (for example, LOCATION_SYNC_Receive) and click **Next**. The Configure SOA settings page is displayed, as shown in Figure 5–49.

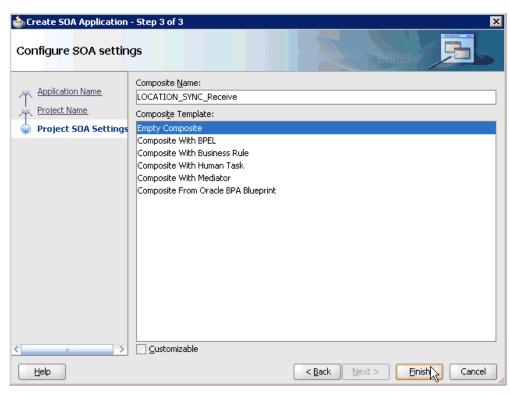
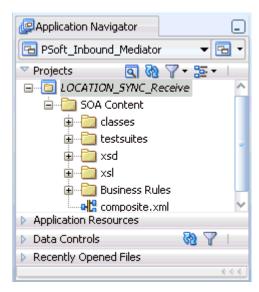


Figure 5–49 Configure SOA Settings Page

6. From the Composite Template list, select **Empty Composite** and click **Finish**.

Figure 5–50 New SOA Application and Associated Project



The new SOA application (PSoft_Inbound_Mediator) and associated project (LOCATION_SYNC_Receive) are added to the Application Navigator tab in the left pane, as shown in Figure 5–50.

5.3.2 Defining a Mediator Inbound Process

This section describes how to define a Mediator inbound process, which consists of the following stages:

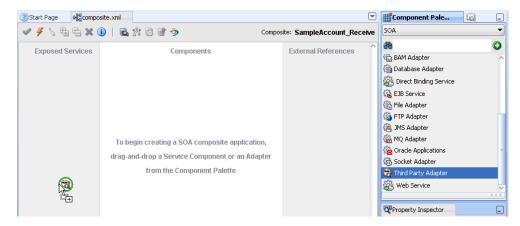
- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Inbound Mediator Process Component With a File Adapter
- 3. Configuring the Routing Rules

Configuring a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

 Drag and drop the Third Party Adapter component from the Component Palette tab (Service Adapters section) to the Exposed Services pane, as shown in Figure 5–51.

Figure 5–51 Third Party Adapter Component



The Create Third Party Adapter Service dialog is displayed, as shown in Figure 5–52.

Create Third Party ird Party Adapter :		: چ
Create a JCA adapte	r service for a third party adapter.	- Ch
<u>N</u> ame:	location_sync	
<u>Т</u> уре:	Service	
<u>W</u> SDL URL:		
Port Type:		. 43
Operation:		•]
<u>C</u> allback Port Type:	•	•
Callback Operation:	•)
JCA File:		1
Help	OK	Cancel

Figure 5–52 Create Third Party Adapter Service Dialog

- 2. Enter a name for the third party adapter service.
- **3.** Ensure that **Service** is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 5–53.

ঌ SOA Reso	urce Browser		×
සි File Syste	em		•
Location:	🔁 wsdls	-	🛍 🚵 🎬 🔡 🖿
	ION_invoke.wsdl		
	ION_SYNC.VERSION_1_receive.wsdl		
	WithView_invoke.wsdl e_Account_receive.wsdl		
E Sample	_hecoant_recorrectional		
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.wsdl		
File <u>T</u> ype:	WSDL Files (*.wsdl)		•
Help			

Figure 5–53 SOA Resource Browser Dialog

5. Browse and select an inbound WSDL file (for example, LOCATION_SYNC.VERSION_1_receive.wsdl) from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 5–54.



💩 Localize Files	×
file:/C:/oracle/Middleware/Oracle_SOA1/soa/thirdparty/ApplicationAdapters/wsdl ve.wsdl is external to the current project. In order to make this file available to yo can now make a local copy of this file and any dependent files that it imports or in	our project at runtime, JDeveloper
Copy Options: V Maintain original directory structure for imported files The following files will be created in directory C:\JDeveloper\mywork\PSoft_Inbound_BPEL\LOCATION_SYNC_Receive :	
LOCATION_SYNC.VERSION_1_receive.wsdl LOCATION_SYNC.VERSION_1_receive_request.xsd	
Help	OK Cancel

7. Click OK.

The inbound WSDL file and associated receive/request XML schema file (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 5–55.

Figure 5–55 Create Third Party Adapter Service Dialog

💩 Create Third Party	Adapter Service	×
Third Party Adapter	Service	5
Create a JCA adapte	er service for a third party adapter.	Th
<u>N</u> ame:	location_sync]
<u>Т</u> уре:	Service	
WSDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
<u>P</u> ort Type:	LOCATION_SYNC.VERSION_1PortType	
Operation:	LOCATION_SYNC.VERSION_1	
<u>C</u> allback Port Type:	No Callback 💌	
Callback Operation:	·	
JCA File:		1
Help	OK	Cancel

 Click the Find JCA Files icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 5–56.

SOA Reso	urce Browser em			•
Location:	🗀 wsdls	•	🛍 🖄 🍱 BBB	=
LOCA1	TION_invoke.jca			
	TION_SYNC.VERSION_1_receive.jca			
📄 query	WithView_invoke.jca			
📄 Sample	e_Account_receive.jca			
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.jca			
File <u>T</u> ype:	JCA Files (*.jca)			-
, <u>T</u> ype:				
Help			OK Canc	el

Figure 5–56 SOA Resource Browser Dialog

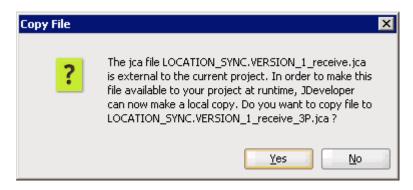
9. Browse and select the JCA properties file (for example, LOCATION_SYNC.VERSION_1_receive.jca)from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

10. Click **OK**.

The following message is displayed, as shown in Figure 5–57.





11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 5–58.

💩 Create Third Party	Adapter Service	×
Third Party Adapter Create a JCA adapte	Service r service for a third party adapter.	S
<u>N</u> ame:	location_sync	
<u>Т</u> уре:	Service	
<u>W</u> SDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	۱
Port Type:	LOCATION_SYNC.VERSION_1PortType	-
Operation:	LOCATION_SYNC.VERSION_1	-
<u>C</u> allback Port Type:	No Callback	
Callback Operation:		
<u>J</u> CA File:	LOCATION_SYNC.VERSION_1_receive_3P.jca	1
Help		OK Cancel

Figure 5–58 Create Third Party Adapter Service Dialog

12. Click OK.

The third party adapter service component (location_sync) is created and displayed in the Exposed Services pane, as shown in Figure 5–59.

③Start Page	und_BPEL Overview
🖉 🗲 🍾 🖶 🔁 🗶 🚺	🗟 探 🐻 🗑 🤣
Exposed Services	Components
کې ۵	
Operations:	
LOCATION_SY	
L	

Figure 5–59 Third Party Adapter Service Component

You are now ready to configure an inbound Mediator process component.

Configuring an Inbound Mediator Process Component With a File Adapter

Perform the following steps to configure an inbound Mediator process component with a File adapter.

1. Drag and drop the **Mediator** component from the Component Palette tab (Service Components section) to the Components pane, as shown in Figure 5–60.

Figure 5–60 Mediator Component

Start Page Boot_Inboun	d_Mediator Overview	V	🛗 Component Pale 🙀 💷
🖉 🗲 🏷 🔁 🔁 🗶 🕕 🛛	🖬 搭 🗟 🗑 🤣	Composite: LOCATION_SYNC_Receive	SOA
Exposed Services	Components	External References	Service Components Service Components Service Components Service Service Business Rule Human Task Service Adapters
location_sync Operations: LOCATION_SY			ADF-BC Service AQ Adapter B28 AM Adapter Control Database Adapter Control Database Adapter Control Direct Binding Service

The Create Mediator dialog is displayed, as shown in Figure 5–61.

💩 Create Mee	diator X
Mediator Cor	mponent
Create a me	ediator component to perform routing, filtering, and transformations.
<u>N</u> ame:	LOCATION_SYNC_Mediator
<u>T</u> emplate:	🔅 Define Interface Later 🔹 🥥
Help	OK Cancel

Figure 5–61 Create Mediator Dialog

- **2.** In the Name field, enter a name to identify the new inbound Mediator process component (for example, LOCATION_SYNC_Mediator).
- 3. From the Template list, select **Define Interface Later**.
- 4. Click the OK.

The new Mediator process component is added to the Components pane, as shown in Figure 5–62.

Figure 5–62 Mediator Process Component

Exposed Services	Components	External References	^ 8	0
Exposed Services	componenta	External tereferences	🐔 BAM Adapter	^
			🍘 Database Adapter	
			🛞 Direct Binding Service	
			🔞 EJB Service	
			🐔 File Adapter	
			🚳 FTP Adapter	
			🍓 JMS Adapter	
🍓 = 🛛 🔊			🖓 MQ Adapter	
location_sync			Gracle Applications	-
Operations:	LOCATION S	R	👸 Socket Adapter	
LOCATION_SY			😪 Third Party Adapter	
			🛞 Web Service	~
			-	$c \in c$

5. Drag and drop the **File Adapter** component from the Service Adapters pane to the External References pane.

The Adapter Configuration Wizard is displayed, showing the Welcome page, as shown in Figure 5–63.

Section 4 Adapter Configuration 4	/izard - Step 1 of 4		×
Welcome			1954 ** 5
Welcome to the Adap	oter Configuration ¹	Wizard	-
This wizard helps you create a and define an operation for the		er. You will be asked to specify co	figuration parameters
🗆 Chia Mia Dana Maut Tina			
Skip this Page Next Time		< Back	

Figure 5–63 Adapter Configuration Wizard

6. Click Next.

The Service Name page is displayed, as shown in Figure 5–64.

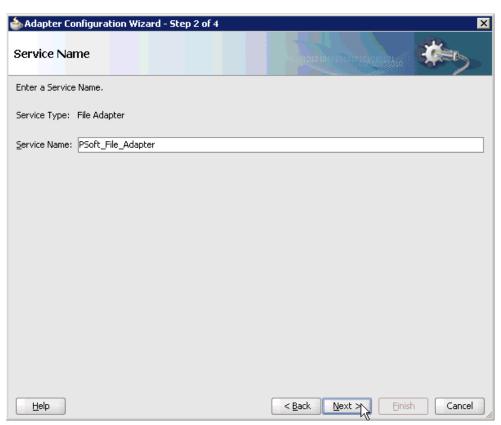


Figure 5–64 Service Name Page

 Type a name for the new File adapter in the Service Name field and click Next. The Adapter Interface page is displayed, as shown in Figure 5–65.

Adapter Configuration Wizard - Ste	ep 3 of 4	X
Adapter Interface		
	that is generated using the operation name and schema(s) specified later ace may be defined by importing an existing WSDL.	rin
Interface: Define from operation and so 	chema (specified later)	
◯ Import an existing WSDL		
WSDL URL:		6
Port Type:		
Operation:		
Help	< Back Next N Einish Cance	al

Figure 5–65 Adapter Interface Page

- **8.** Ensure that the **Define from operation and schema (specified later)** option is selected.
- 9. Click Next.

The Operation page is displayed, as shown in Figure 5–66.

ঌ Adapter Con	figuration Wizard - Step	4 of 7		×
Operation				185 *
system, a Write I contents of a file	File operation that creates o , and a List Files operation th	utgoing files, a Syr nat lists file names	e operation that polls for incor nchronous Read File operation in specified locations. Specif- be defined using this wizard.	n that reads the current
Operation Type:	◯ <u>R</u> ead File			
	Write File			
	○ <u>S</u> ynchronous Read File			
	🔾 List Files			
Operation Name:	Write			
			A Deale Allow Con	
Help			< Back Next	Einish Cancel

Figure 5–66 Operation Page

- **10.** Select **Write File** from the list of Operation Type options and specify an Operation Name (for example, Write).
- 11. Click Next.

The File Configuration page is displayed, as shown in Figure 5–67.

langter Configuration Wiza	rd - Step 5 of 7		×
File Configuration		1010161210201010101010101010101010101010	*
Specify the parameters for the Wri	te File operation.		
Directory specified as Directory for Outgoing Files (physic C:\PSoft_Output	ysical Path O <u>L</u> ogical Nar :al path):	ne	Browse
File Naming Convention (po_%SEQ	%,txt); PSoft_Output	.xml	
Append to existing file		1.211	
Write to output file when any of t			
✓ Number of Messages Equals:	1		
Elapsed Time Exceeds:	1	minutes	
File Size Exceeds:	1000	🗧 kilobytes 💌	
		File S	ize Units
Help		< Back Next	Einish Cancel

Figure 5–67 File Configuration Page

- **12.** Specify a location on your file system where the output file is written.
- **13.** In the File Naming Convention field, specify a name for the output file.
- 14. Click Next.

The Messages page is displayed, as shown in Figure 5–68.

📤 Adapter Config	juration Wizard - Step 6 of 7		×
Messages			
defines the message	e for the Write File operation. Specify the Scher jes in the outgoing files. Use the Browse button ', then you do not need to specify a Schema.		
-Message Schema-			
Native <u>f</u> ormat t	translation is not required (Schema is Opaque)		
			Define Schema for Native Format
URL			
<u>S</u> chema Element			▼ ⁴
Help		< <u>B</u> ack	Next > Einish Cancel

Figure 5–68 Messages Page

15. Click **browse for schema file**, which is located to the right of the URL field.

The Type Chooser dialog is displayed, as shown in Figure 5–69.

Figure 5–69	Туре	Chooser	Dialog
-------------	------	---------	--------

💩 Type Chooser	×
	2: 10
Type Explorer Project Schema Files Project WSDL Files LOCATION_SYNC.VERSION_1_receive.wsdl Imported Schemas Inline Schemas Schema COCATION_SYNC PSCAMA Imported WSDL	
Type: {urn:iwaysoftware:adapter:peoplesoft:location_sync:mes	sage}LOCATION_SYNC
Show Detailed Node Information	
Help	

- **16.** Expand **Project WSDL Files**, **LOCATION_SYNC.VERSION_1_receive.wsdl**, **Inline Schemas**, and **schema**.
- **17.** Select the available schema (for example, LOCATION_SYNC)
- **18.** Click **OK**.

You are returned to the Messages page, as shown in Figure 5–70.

譮 Adapter Config	guration Wizard - Step 6 of 7
Messages	distant to respect to the second s
defines the messag	e for the Write File operation. Specify the Schema File Location and select the Schema Element that ges in the outgoing files. Use the Browse button to find an existing schema definition. If you check ', then you do not need to specify a Schema.
-Message Schema-	
Native <u>f</u> ormat t	translation is not required (5chema is Opaque) Define Schema for Native Format
URL	LOCATION_SYNC.VERSION_1_receive.wsdl
<u>S</u> chema Element	LOCATION_SYNC
Help	< Back Next Einish Cancel

Figure 5–70 Messages Page

19. Click Next.

The Finish page is displayed, as shown in Figure 5–71.

adapter Configura	ation Wizard - Step 7 of 7		×
Finish			
When you click Finish, I	the wizard will create the	Adapter Service : PSoft DCATION_SYNC_Receive\PSoft_Fil	·
Help		< <u>B</u> ack <u>N</u> ext	> Einish Cancel

Figure 5–71 Finish Page

- 20. Click Finish.
- **21.** Create a connection between the inbound Mediator process component and the third party adapter service component, as shown in Figure 5–72.

Figure 5–72 Created Connection

Start Page Boft_	Inbound_Mediator Overview	e composite.xml	
🖌 🥖 🏷 🖷 🖶 🗙 (D 🗟 🗱 🔂 🗑 🥠	c	Composite: LOCATION_SYNC_Receive
Exposed Services	Comp	onents	External References
location_sync Operations: LOCATION_SY		(ION S	PSoft_File_Ad Operations: Write

22. Create a connection between the inbound Mediator process component and the File adapter component, as shown in Figure 5–73.

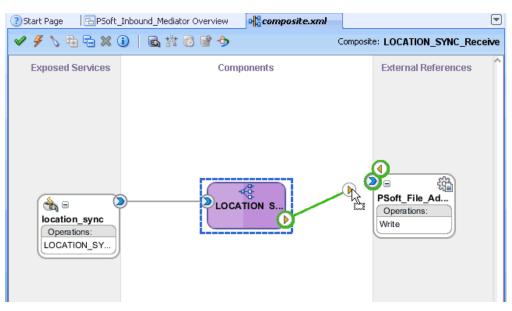


Figure 5–73 Created Connection

You are now ready to configure the routing rules.

Configuring the Routing Rules

Perform the following steps to configure routing rules for the Mediator inbound process component:

1. Double-click the inbound Mediator process component in the Components pane, as shown in Figure 5–74.

Figure 5–74 Inbound Mediator Process Component



The Routing Rules dialog is displayed, as shown in Figure 5–75.

Operations					9
LOCATION_SYNC.VERSION_1	Priority 4 🚍	Validate Syntax (XSD)		∀ †•	×
Callout To < <java callout="" class=""></java>	>		٩		
Static Routing					
< <filter expression="">></filter>	9	PSoft_File_Adapter::Write	٩	Sequenti	al 🗸
	Validate Semantic	-			
		body : < <transformation m="" td="" 🔻<=""><td>B</td><td></td><td></td></transformation>	B		

Figure 5–75 Routing Rules Dialog

 In the <<Filter Expression>> area, click the Select an existing mapper file or create a new one icon to the right of the Transform Using field.

The Request Transformation Map dialog is displayed, as shown in Figure 5–76.

Figure 5–76 Request Transformation Map Dialog

A Request Transformation Map		
Transformation from request r	message event to message Write_msg.	
Transformation to part:	body	
O Use Existing Mapper File:		م 🥒
Oreate New Mapper File:	LOCATION_SYNC_To_LOCATION_SYNC.xsl	
Help	С С С	iancel

3. Select the Create New Mapper File option and click OK.

The LOCATION_SYNC_To_LOCATION_SYNC.xsl tab is displayed, as shown in Figure 5–77.

Figure 5–77 LOCATION_SYNC_To_LOCATION_SYNC.xsl Tab

omposite.xml	WINC_Mediator.mplan
Source: LOCATION_SYNC.VERSION_1_re	XSLT File: PSoft_File_Adapter.wsdl
E 🚼 <sources></sources>	<target> 🎲 🖃</target>
iWayEvent:LOCATION_SYNC	iWayEvent:LOCATION_SYNC 🦇 🚊
🗈 🐼 iWayEvent:FieldTypes	iWayEvent:FieldTypes 🚧 🕀
🖮 🚧 iWayEvent:MsgData	iWayEvent:MsgData 🚧 🕀

 Map the iWayEvent:LOCATION_SYNC source element to the iWayEvent:LOCATION_SYNC target element.

The Auto Map Preferences dialog is displayed, as shown in Figure 5–78.

🖕 Auto Map Preferences 🛛 🔀
Confirm Auto Map Results Prompt for Preferences before Auto Map
Mode: Basic
During Auto Map:
 Match Elements with Similar Names Match Elements with Exact Names
Match Elements with Exact Types Match Elements Considering their Ancestor Names
Insert xsl:if statements: <u>N</u>ever For optional nodes with reguired children For all optional nodes
Show Dictionaries >>
💌 Enable Auto Map
Help OK Cancel

Figure 5–78 Auto Map Preferences Dialog

5. Retain the default values and click **OK**.

The mapping is now complete, as shown in Figure 5–79.

Figure 5–79 Completed Mapping

emposite.xml	SYNC_Mediator.mplan	HLDCATION_SYNC_TO_LOCATION_SYNC.xsl	
Source: LOCATION_SYNC.VERSION_1_re	:	XSLT File: PSoft_File_Adapte	r.wsdl
E ¹ (sources>		<target></target>	🌺 🖃
iWayEvent:LOCATION_SYNC		iWayEvent:LOCATION_SYNC 🖇	Ė
🗄 🚱 iWayEvent:FieldTypes		iWayEvent:FieldTypes 🚧 💼	
🗄 🐶 iWayEvent:MsgData		iWayEvent:MsgData 🚧 🕀	

6. Click the **Save All** icon in the menu bar to save the new inbound Mediator process component that was configured, as shown in Figure 5–80.

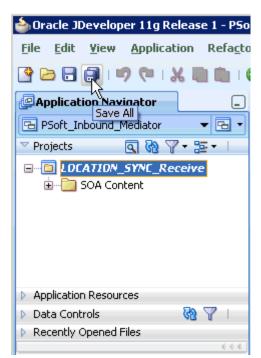


Figure 5–80 Save All Icon

You are now ready to deploy the Mediator inbound process. You can follow the same procedure that is described in "Deploying the BPEL Inbound Process" on page 4-58.

Once event messages are triggered through PeopleSoft, output XML is received in the location that was specified for the File adapter component. For more information on how to trigger events in PeopleSoft, see "Triggering an Event in PeopleSoft" on page 4-62.

Integration With BPM Service Components in the Oracle SOA Suite

Oracle Application Adapter for PeopleSoft integrates seamlessly with Oracle Business Process Management (BPM) to facilitate Web service integration. Oracle BPM is based on the Service-Oriented Architecture (SOA). It consumes adapter services exposed as Web Service Definition Language (WSDL) documents.

This chapter contains the following topics:

- Section 6.1, "Overview"
- Section 6.2, "Deployment of Adapter"
- Section 6.3, "Configuring a New Application Server Connection"
- Section 6.4, "Designing an Outbound BPM Process Using Transformations for Service Integration"
- Section 6.5, "Designing an Inbound BPM Process Using Transformations for Event Integration"

6.1 Overview

To integrate with Oracle BPM, Oracle Application Adapter for PeopleSoft must be deployed in the same WLS container as Oracle BPM. The underlying adapter services must be exposed as WSDL files, which are generated during design time in Oracle Adapter Application Explorer (Application Explorer) for both request-response (outbound) and event notification (inbound) services of the adapter. For more information, see "Generating a WSDL (J2CA Configurations Only)" on page 2-11.

The generated WSDL files are used to design the appropriate BPM processes for inbound or outbound adapter services. A completed BPM process must be successfully compiled in JDeveloper and deployed to a BPM server. Upon deployment to the BPM server, every newly built process is automatically deployed to the Oracle Enterprise Manager console, where you run, monitor, and administer BPM processes, and listen to adapter events.

6.2 Deployment of Adapter

During installation, Oracle Application Adapter for PeopleSoft is deployed as a J2CA 1.0 resource adapter within the WLS container. The adapter must be deployed in the same WLS container as Oracle BPM.

6.3 Configuring a New Application Server Connection

For more information on how to configure a new Application Server connection in Oracle JDeveloper, see Section 4.3, "Configuring a New Application Server Connection".

6.4 Designing an Outbound BPM Process Using Transformations for Service Integration

The following tools are required to complete your outbound design-time configuration:

- Oracle Adapter Application Explorer (Application Explorer)
- Oracle JDeveloper BPM Designer (JDeveloper) or Eclipse

Note: The examples in this chapter demonstrate the use of JDeveloper.

Before you design a BPM process, you must generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Request/Response Service" on page 4-8.

Samples have been provided for this usecase scenario in the etc/sample folder in Application Adapters installation.

6.4.1 Creating an Empty Composite for BPM

Perform the following steps to create an empty composite for BPM:

- 1. Create a new BPM application.
- **2.** Enter a name for the new BPM application and click **Next**, as shown in Figure 6–1.

Screate BPM Application	1 - Step 1 of 3
Name your application	
	Application Name:
Application Name	BPM_Application
🔶 Project Name	Directory:
Project SOA Settings	C:\JDeveloper\mywork\BPM_Application Browse
	Application Package Prefix:
	Application Template:
	Generic Application Creates an application which includes a single project. The project is not preconfigured with JDeveloper technologies, but can be customized to include any technologies.
	BPM Application Creates a BPM application. The application consists of one BPM project. This project has also SOA technology
	Fusion Web Application (ADF) Creates a databound ADF web application. The application consists of one project for the view and controller components (ADF Faces and ADF Task Flows), and another project for the data model (ADF Business Components).
Help	< Back Next > Finish Cancel

Figure 6–1 Name Your Application Page

The Name your project page is displayed, as shown in Figure 6–2.

Figure 6–2 Name Your Project Page

Application Name Project Name: PSoft_JCA_Outbound Project Name Dirgctory: :\JDeveloper\mywork\BPM_Application\PSoft_JCA_Outbound Browse Project SOA Settings Project Technologies Generated Components Associated Libraries Available: Selected: ADF Business Components Associated Libraries ADF Desktop Integration ADF Paces ADF Library Web Application Support SOA ADF Swing Ant SOA SOA Database (Offline) EJB Technology Technology Technology EPM Technology EPM Technology	Screate BPM Application	1010 ···· United and the
Available: ADF Business Components ADF Desktop Integration ADF Faces ADF Library Web Application Support ADF Page Flow ADF Swing Ant Database (Offline) EJB HTML Java Iechnology Description:	· · · · · · · · · · · · · · · · · · ·	Project Name: PSoft_JCA_Outbound
	• <u>Froject Jon Jocung</u>	Available: ADF Business Components ADF Desktop Integration ADF Faces ADF Library Web Application Support ADF Page Flow ADF Swing Ant Database (Offline) EJB HTML Java Iechnology Description:

3. Enter a project name (for example, PSoft_JCA_Outbound) and click **Next**. The Configure SOA settings page is displayed, as shown in Figure 6–3.

In the second se	- Step 3 of 3		×
Configure SOA settin	gs	1 1010 at	E.
Application Name Project Name Project SOA Settings	Composite Name: PSoft_JCA_Outbound Composite Template: Empty Composite Composite With BPEL Process Composite With Business Rule Composite With Mediator Composite With Human Task Composite With Spring Context Composite With BPMN Process		
<	<u>C</u> ustomizable	<back next=""> Einish</back>	Cancel

Figure 6–3 Configure SOA Settings Page

4. From the Composite Template list, select Empty Composite and click Finish.

6.4.2 Defining a BPM Outbound Process

This section describes how to define a BPM outbound process, which consists of the following stages:

- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Outbound BPM Process Component
- 3. Creating a File Adapter for the Write Operation

Configuring a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

1. Drag and drop the **Third Party Adapter** component from the Service Adapters pane to the External References pane, as shown in Figure 6–4.

	255	
External References	99	•
	🛞 Direct Binding Service	^
	🔞 EJB Service	
	ि File Adapter	
	🚳 FTP Adapter	
	🍓 JMS Adapter	
	🏭 MQ Adapter	
	Gracle Applications	
	🛗 Socket Adapter	•
S.	😪 Third Party Adapter	
₩÷	🍪 Web Service	~
		$- \varepsilon \in \varepsilon$

Figure 6–4 Third Party Adapter Component

The Create Third Party Adapter Service dialog is displayed, as shown in Figure 6–5.

Figure 6–5 Create Third Party Adapter Service Dialog

💩 Create Third Party :	Adapter Service	×
Third Party Adapter 9	Service	5
Create a JCA adapter	er service for a third party adapter.	- Th
<u>N</u> ame:	Location	
<u>T</u> ype:	Reference 💌	
WSDL URL:		0
Port Type:		
Operation:		
<u>C</u> allback Port Type:	-	
Callback Operation:	•	
JCA File:	[] {	<u>e</u>
Help	ОК Са	ncel

- 2. Enter a name for the third party adapter service.
- 3. Ensure that **Reference** is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 6–6.

📥 SOA Reso	ource Browser	X
😤 File Syst	em	•
Location:	🗀 wsdls	- 🛍 🖄 🔡 🗄
E LOCA	TION_invoke.wsdl	
File <u>N</u> ame:	LOCATION_invoke.wsdl	
File <u>T</u> ype:	WSDL Files (*.wsdl)	•
Help		OK Cancel

Figure 6–6 SOA Resource Browser Dialog

5. Browse and select an outbound PeopleSoft WSDL file from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 6–7.

Figure 6–7 Localize Files Dialog

🖢 Localize Files	×
file:(C:/oracle/Middleware/Cracle_SOA1/soa/thirdparty/ApplicationAdapters/v to the current project. In order to make this file available to your project at ru copy of this file and any dependent files that it imports or includes.	
Copy Options: 🔽 Maintain original directory structure for imported files	
The following files will be created in directory C:\JDeveloper\mywork\PSoft_Cutbound_BPEL\LOCATION_Invoke :	
LOCATION_invoke.wsdl LOCATION_invoke_request.xsd LOCATION_invoke_response.xsd	
Help	OK Cancel

7. Click **OK**.

The outbound WSDL file and associated request and response XML schema files (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 6–8.

譮 Create Third Party	Adapter Service	×
Third Party Adapter 9 Create a JCA adapte	Service r service for a third party adapter.	÷
<u>N</u> ame:	Location	
<u>T</u> ype:	Reference 💌	
WSDL URL:	LOCATION_invoke.wsdl	1
Port Type:	LOCATIONPortType	•
Operation:	LOCATION	-
<u>C</u> allback Port Type:	No Callback	-
Callback Operation:		T
JCA File:		
Help	OK	Cancel

Figure 6–8 Create Third Party Adapter Service Dialog

 Click the Find JCA file icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 6–9.

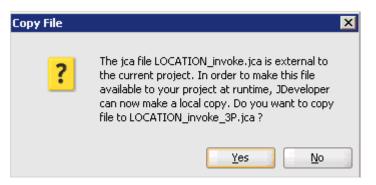
	urce Browser			×
ිසි File Syst	em			
Location:	🔁 wsdls	•	ت 🖄 🖻	
LOCA	TION_invoke.jca			
File <u>N</u> ame:	LOCATION_invoke.jca			
File <u>T</u> ype:	JCA Files (*.jca)			-
Help			ок 🖓	Cancel //

Figure 6–9 SOA Resource Browser Dialog

- 9. Browse and select the JCA properties file from the following directory: <aDAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls
- **10.** Click **OK**.

The following message is displayed, as shown in Figure 6–10.

Figure 6–10 Copy File Confirmation



11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 6–11.

💩 Create Third Party	Adapter Service	×
Third Party Adapter	Service	5
Create a JCA adapte	r service for a third party adapter.	- A
<u>N</u> ame:	Location	
_ <u>Т</u> уре:	Reference 🔻	1
WSDL URL:	LOCATION_invoke.wsdl	1
<u>P</u> ort Type:	LOCATIONPortType -)
Operation:		
<u>C</u> allback Port Type:	No Callback 💌	
Callback Operation:		
JCA File:	LOCATION_invoke_3P.jca	1
Help	OK N	Cancel

Figure 6–11 Create Third Party Adapter Service Dialog

12. Click **OK**.

The third party adapter service component (Location) is created and displayed in the External References pane, as shown in Figure 6–12.

Figure 6–12 Third Party Adapter Service Component

Composite: PSoft_JCA_Outh	ound
External Reference	s ^
Derations: LOCATION	

You are now ready to configure an outbound BPM process component.

Configuring an Outbound BPM Process Component

Perform the following steps to configure an outbound BPM process component:

1. Drag and drop the **BPMN Process** component from the Service Components pane to the Components pane, as shown in Figure 6–13.

Composite.xml	(∍	Component Palette
🗃 今	Composite: PSoft_JCA_Outbour	nd	SOA
Components	External References	^	ði 🗘
			- Service Components ^ & BPEL Process
			😪 BPMN Process 📀
			I Business Rule
			🏠 Human Task
~	ک 🗨 🍋		🐗 Mediator
	Location		🎭 Spring Context
	Operations:	а	- Service Adapters
			🚵 ADF-BC Service
			🏭 AQ Adapter 🗸 🗸

Figure 6–13 BPMN Process Component

The Create BPMN Process dialog is displayed, as shown in Figure 6–14.

Figure 6–14 Create BPMN Process Dialog

	PMN Process - Step 1 of 2	
BPMN P BPMN pr are depk	TOCESS rocesses enable process analysts and process developers to design and implement detailed process flows that oyed to Oracle BPMN runtime and run as working applications.	
lame:	Process	
escription:	Process	
Type:		
	chronous Service	
Create	is a process with an asynchronous interface definition	
	Start End	
	enneur Camien	
😋 Synchr	onous service	
<u> </u>		
😪 Synchr 😪 Manua 😪 Reusal		
😋 Manua	l Process	
😋 Manua	l Process	
式 Manua	l Process	Cancel

2. Accept the default option that is selected in the **Type** area (Asynchronous Service) and click **Finish**.

The BPMN Process component is created, as shown in Figure 6–15.

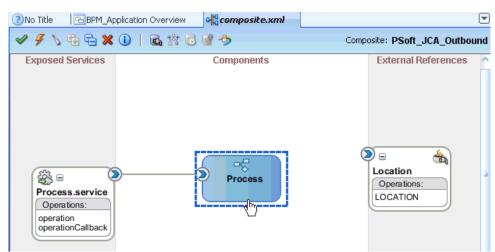
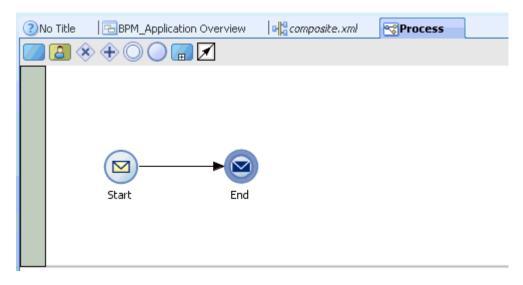


Figure 6–15 BPMN Process Component

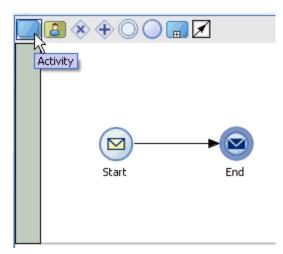
3. Double-click the BPMN Process component in the Components pane. The BPMN process is displayed, as shown in Figure 6–16.

Figure 6–16 BPMN Process



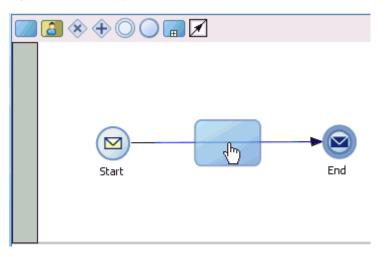
4. Click the Activity icon, as shown in Figure 6–17.

Figure 6–17 Activity Icon



5. Drop the Activity icon on the wire between the Start and End event components, as shown in Figure 6–18.

Figure 6–18 Activity Icon



The Properties - Activity dialog is displayed, as shown in Figure 6–19.

Properties - Acti	vity		×
Basic Implemental	tion		
	Name:	Activity	
٩. 🏈	Description:		
	E Sampling	Point	
Help		OK	

Figure 6–19 Properties - Activity Dialog

6. Click the **Implementation** tab.

Figure 6–20 Service Task

📥 Properties - Activi	ty	×
Basic Implementatio	n	
	, 	
Implementation Type:	C Activity	
	C Activity	
	🙆 User task	
	🚌 Service task	
	🔂 Send task 🛛 🗟	
	📷 Receive task	
	🎇 Business Rule task	
	🗊 Script task	
	😋 Manual task	
Help		OK Cancel

7. Select Service Task from the Implementation Type list, as shown in Figure 6–20.

Figure 6–21 Service Call

🖕 Properties - Activity 🗙 🗙
Basic Implementation Service Properties
Basic Implementation Service Properties Implementation Type: Service task Service task Implementation: Not Implemented Service Call Use Associations Service Call Use Associations Implemented Service Call Use Transformations Use Transformations Implementation Implemented Implemented Implemented Implemented Implemented Implemented
Help OK Cancel

- **8.** Select **Service Call** from the Implementation list, as shown in Figure 6–21.
- **9.** Click the Browse icon to the right of the Name field, as shown in Figure 6–22.

Properties - Activity	×
Basic Implementation Service Properties	
Implementation Type: 👩 Service task	•
Service task	
Implementation: 🔯 Service Call	
Name:	ام ک
Operation:	•
Data Associations Use Associations Use Transformations	
Help	OK Cancel

Figure 6–22 Browse Icon

The Type dialog is displayed, as shown in Figure 6–23.

Figure 6–23 Type Dialog

🖕 Type	×
Search:	
/Services/Externals/Location:	
Help	OK Cancel

10. Select the Third Party Service that has been created for PeopleSoft (for example, Location) and click **OK**.

You are returned to the Properties - Activity dialog, as shown in Figure 6–24.

Figure 6–24	Properties	- Activity Dialog
-------------	-------------------	-------------------

🖕 Propertie	s - Activity			×
Basic Imp	emntation	Service Properties		
Implementat	ion Type: 🔞	Service task	•	
Service tas	k			
Implement	ation: 🛞 Se	rvice Call	•	
Name:	Location		۹, 🏈	
Operation:	location		•	
	ssociations	Edit Data Associations		
Help			OK Cancel	

- **11.** Select the **Use Associations** option that is located under Data Associations.
- **12.** Click the Edit Data Associations icon.

The Data Associations dialog is displayed, as shown in Figure 6–25.

📤 Data Associations				×
H 🖻			;	👀 📲 🔚 📼 📼
Orag variables from the right panel into fields on the le	rt.			Provesse PS PS Add
Input	ServiceTask.	Output		
.	Input			
	Output			
	🖻 🏹 ps8Output) »	.	
Help				OK Cancel

Figure 6–25 Data Associations Dialog

13. Right-click the Process node in the right pane and select Add.

The Create Data Object dialog is displayed, as shown in Figure 6–26.

Figure 6–26 Create Data Object Dialog

🖕 Create Data Object 🛛 🗙 🗙			
Name:	Request		
Type:	abc String	-	
🗸 Aut	o initialize		
Help	•	OK Cancel	

14. Enter a name in the Name field (for example, Request) and click on the drop-down button in the Type field and select **<Component>** from the list.

The Create Data Object dialog is displayed, as shown in Figure 6–27.

Figure 6–27 Create Data Object Dialog

📥 Cre	ate Data Object	×
Name:	Request	
Type:	abc String	-
	999 Int	^
	99E Real	
🖌 Aut	999 Decimal	
	🚫 Bool	
Help	Time	-
	Interval	<u></u>
	iii Binary	
	🐯 <component></component>	~
	<component></component>	

15. Click on the Browse button below the Type field, as shown in Figure 6–28.

Figure 6–28 Create Data Object

🖕 Cre	ate Data Object	×
Name:	Request	
Type:	Component>	•
		9
🖌 Aut	o initialize	
Hel	P	OK Cancel

The Browse window opens, as shown inFigure 6–29.

Component	×
Find:	(
26 PS8	
P581	
Types.PS8	
Help	OK Cancel

Figure 6–29 Browse Window

16. Select the first component (for example, PS8) and click OK.

You are returned to the Create Data Object dialog, as shown in Figure 6-30.

Figure 6–30 Create Data Object Dialog

💩 Cre	ate Data Object	X
Name:	Request	
Type:	Component>	•
	Types.P58	٩,
🗹 Aut	o initialize	
Hel	P	OK Cancel

17. Click OK.

The Data Object (for example, Request) that has been created is displayed under the Process node in the Data Associations dialog, as shown in Figure 6–31.

Figure 6–31 Data Associations Dialog

💩 Data Associations			
M 🖻			🕺 🖓 📋 🔄 🗕
Drag variables from the right panel into fields on the left			Point Request Poot CA_Outbound
Input	ServiceTask Input Tage 1	Output	
	Overa B B ps80utput	······ •	

18. Create another Data Object by right-clicking the **Process** node in the right pane and selecting **Add**, as shown in Figure 6–32.

Figure 6–32 Add Option in Data Associations Dialog

Data Associations			
× 1			
rag variables from the right panel into fields on the lef	t.		B - 3 Process ⊕ - 32 R the Add PSoft_JCA_Outbound
Input	Service Task	Output	
	Output		

The Create Data Object dialog is displayed, as shown in Figure 6–33.

Figure 6–33 Create Data Object Dialog

譮 Cre	ate Data Object	×
Name:	Response	
Type:	abc String	-
🗹 Aut	o initialize	
Help		OK Cancel

19. Enter a name in the Name field (for example, Response) and click the drop-down button in the Type field and select **<Component>** from the list.

The Create Data Object dialog is displayed, as shown in Figure 6–34.

Figure 6–34	Create Data	Object
-------------	-------------	--------

譮 Cre	ate Data Object	×
Name:	Response	
Type:	abc String	-
	999 Int	~
	99E Real	
🖌 Aut	999 Decimal	
	Sool	
Hei	Time	
	 ♦ Interval 	20
	Binary	
	Component>	~
	<component></component>	

20. Click on the Browse icon below the Type field, as shown in Figure 6–35.

Figure 6–35 Browse Icon

b Cre	ate Data Object	×
Name:	Response	
Type:	Component>	-
		Q
🗸 Aut	o initialize	
Hel	P	OK Cancel

The Browse window opens as shown in Figure 6–36.

la 🖕	×
Component	
Find:	
R P58	
PS81	
Types.PS81	
Help	OK Cancel

Figure 6–36 Browse Window

21. Select the second component (for example, PS81) and click **OK**.

You are returned to the Create Data Object dialog, as shown in Figure 6–37.

Figure 6–37 Create Data Object Dialog

🌢 Cre	ate Data Object	X
Name:	Response	
Type:	Component>	•
	Types.PS81	٩,
🗹 Aut	o initialize	
Hel	p	OK Cancel

22. Click OK.

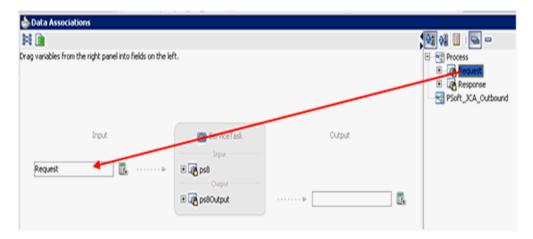
The Data Object (for example, Response) that has been created is displayed under the Process node in the Data Associations dialog, as shown in Figure 6–38.

Figure 6–38	Data Associations Dialog
-------------	--------------------------

🖕 Data Associations				
¥ 🗎				📲 🖓 🔝 🛯 🖕 🚥
Drag variables from the right panel into fields on the lef	t.			E-S Process E-Request E-Response PSoft_JCA_Outbound
Input	Input	Output		
	Output	······ \$] 🖪	

23. Select the Request Data Object under the Process node in the right pane and drag it to the field below the Inputs area, as shown in Figure 6–39.

Figure 6–39 Request Data Object



24. Select the Response Data Object under the Process node in the right pane and drag it to the field below the Outputs area, as shown in Figure 6–40.

Data Associations Data Constructions Drag variables from the right panel into fields on the lef	t.		Constant Constant Constant Constant Constant Constant Constant Constant
Irput Request	ServiceTask Jopu Bigg pað Ocean Digg paðOutput	Cutput	
нер			OK Cancel

Figure 6–40 Response Data Object

25. Click OK.

You are returned to the Properties - Activity dialog, as shown in Figure 6–41.

Figure 6–41 Properties - Activity Dialog

💩 Properties - Activity	×
Basic Implementation Service Properties	
Implementation Type: 🔯 Service task	•
-Service task	
Implementation: 😥 Service Call	•
Name: Location	🧠 🧳
Operation: location	-
Use Associations Use Transformations	
Help	OK Cancel

26. Click **OK**.

The Service Task is created between the Start and End Event components, as shown in Figure 6–42.

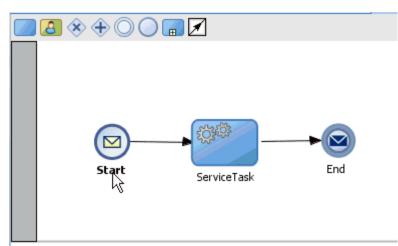


Figure 6–42 Service Task

27. Save the process and double-click the Start event component.

The Properties - Start dialog is displayed, as shown in Figure 6–43.

Figure 6–43 Properties - Start Dialog

🖕 Propertie	es - Start	×
Basic Im	plementation Service Properties	
Name:	Start	0
		9
Description:		
		,
Help	ОК Са	ancel

28. Click the **Implementation** tab, as shown in Figure 6–44.

🖕 Properties - Start		×
Basic Implementation Service Properties		
Implementation Type: Message Conversation		-
Initiates Continues		
Properties		
Implementation: 📝 Define Interface		-
Arguments Definition		🔶 / 🗙
Name	Туре	Add
Advanced		
-Data Associations		
Use Associations		
Use Transformations		
Help		OK Cancel

Figure 6–44 Implementation Tab

29. Click the **Plus** icon to the right of the Arguments Definition field.

The Create Argument dialog is displayed, as shown in Figure 6–45.

Figure 6–45 Create Argument Dialog

譮 Cre	ate Argument	×
Name:	argument1	
Type:	abc String	•
Help		OK Cancel

30. Enter a name in the Name field (for example, argument1) and click on the drop-down button in the Type field and select **<Component>** from the list.

The Create Argument dialog is displayed, as shown in Figure 6–46.

📥 Cre	ate Argument	×
Name:	argument1	
Type:	abc String	-
	999 Int	~
	99E Real	
	999 Decimal	
Hale	S Bool	
Help	Time	-
	♦ Interval	
Associati	Binary	
Jse Asso	Component>	~
Jse Trans	sformations <a>Component>	

Figure 6–46 Create Argument Dialog

31. Click on the Browse icon below the Type field, as shown in Figure 6–47.

Figure 6–47 Create Argument

🎃 Cre	ate Argument	×
Name:	argument1	
Type:	Component>	•
Help	Þ	OK Cancel

32. Select the first component (for example, PS8) and click OK.

You are returned to the Create Argument dialog, as shown in Figure 6–48.

Figure 6–48 Create Argument Dialog

🖕 Cre	ate Argument	×
Name:	argument1	
Type:	Component>	•
	Types.PS8	٩
Hel	p	OK Cancel

33. Click **OK**.

You are returned to the Properties - Start dialog, as shown in Figure 6–49.

operties - Start		
Implementation Service P	roperties	
mentation Type: 🙆 Message		
wersation		
Initiates 🔘 Continues		
roperties		
mplementation: 📝 Define Inte	face	
irguments Definition		+/>
Name	Type	
argument1	Types.P58	
Advanced		
a Associations Use Associations Use Transformations	ata Associations	
6		ок с

Figure 6–49 Properties - Start Dialog

- 34. Select the Use Associations option that is located under Data Associations.
- **35.** Click the Edit Data Associations icon.

The Data Associations dialog is displayed, as shown in Figure 6–50.

36. Select the Request Data Object under the Process node in the right pane and drag it to the field below the Outputs area.

ata Associations			00 08 1	
ariables from the right panel into fields on the left.			8-3 Proc 8-33	ess
© Sart Outpu B @ argument1	⊙ ······⊳ Request	utput	6.	

Figure 6–50 Data Associations Dialog

37. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in Figure 6–51.

Figure 6–51 Properties - Activity Dialog

🖕 Properties - Start		×
Basic Implementation Service Prope	rties	
Implementation Type: O Message		-
Conversation		
 Initiates O Continues 		
Properties		
Implementation: 📝 Define Interface	•	-
Arguments Definition		₽ ⁄×
Name	Туре	
argument1	Types.PS8	
Advanced		
Data Associations		
Use Associations 🥖		
Use Transformations 🥖		
Help		OK Cancel

38. Click OK.

You are returned to the Process workspace area, as shown in Figure 6–52.

39. Double-click **composite.xml** in the left pane.

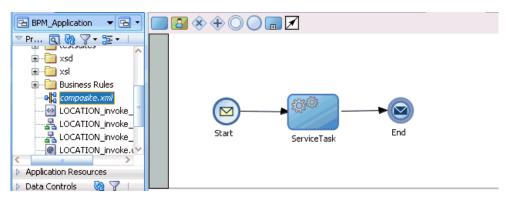


Figure 6–52 Process Workspace Area

40. Click the **Save All** icon in the menu bar to save the new outbound BPM process component that was configured.

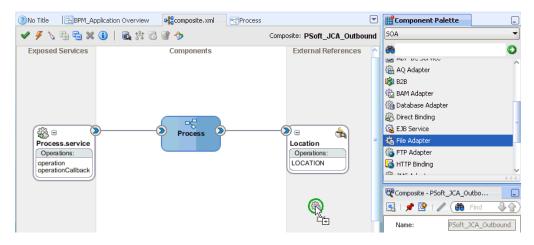
You are now ready to create a File adapter for the write operation.

Creating a File Adapter for the Write Operation

Perform the following steps to create a File adapter for the write operation:

1. Drag and drop the File Adapter component from the Service Adapters pane to the External References pane, as shown in Figure 6–53.

Figure 6–53 File Adapter Component



The Adapter Configuration Wizard is displayed, as shown in Figure 6–54.

📥 Adapter Configuration Wizard	d - Step 1 of 7			×
Welcome			721-376737323.ea	*
Welcome to the Adapter	Configuration W	/izard		
This wizard helps you create a servi and define an operation for the serv		r. You will be asked to :	specify configuratio	n parameters
Skip this Page Next Time				
		< <u>B</u> ack	ext > Einish	Cancel

Figure 6–54 Adapter Configuration Wizard

2. Click Next.

The Service Name page is displayed, as shown in Figure 6–55.

Adapter Configuration Wizard - Step 2 of 7		×
Service Name		*
Enter a Service Name.		
Service Type: File Adapter		
Service Name: Write_file		
Help	< Back Next >	nish Cancel

Figure 6–55 Service Name Page

3. Type a name for the new File adapter in the Service Name field and click **Next**. The Adapter Interface page is displayed, as shown in Figure 6–56.

🖕 Adapter Configuration Wizard - Step 3 of 7	×
Adapter Interface	
The adapter interface is defined by a wsdl that is gene this wizard. Optionally, the adapter interface may be	rated using the operation name and schema(s) specified later in defined by importing an existing WSDL.
Interface: Define from operation and schema (spe 	cified later)
◯ <u>I</u> mport an existing W5DL	
WSDL URL:	b
Port Type:	
Operation:	
Help	< Back Next > Einish Cancel

Figure 6–56 Adapter Interface Page

- **4.** Ensure that the **Define from operation and schema (specified later)** option is selected.
- 5. Click Next.

The Operation page is displayed, as shown in Figure 6–57.

📥 Adapter Conf	iguration Wizard - Sto	ep 4 of 7				×
Operation					New 🕃	
system, a Write F contents of a file,	supports four operations ile operation that create: and a List Files operatio Only one operation per	s outgoing files, a S n that lists file name	Synchronous Read I es in specified locat	File operation t ions, Specify t	hat reads th	ne current
Operation Type:	◯ <u>R</u> ead File					
	⊙ <u>W</u> rite File					
	○ <u>S</u> ynchronous Read F	ile				
	🔘 List Files					
Operation Name:	Write					
Help			< <u>B</u> ack	<u>N</u> ext >	Einish	Cancel

Figure 6–57 Operation Page

- **6.** Select **Write File** from the list of Operation Type options and specify an Operation Name (for example, Write).
- 7. Click Next.

The File Configuration page is displayed, as shown in Figure 6–58.

lacktrian Adapter Configuration Wiza	rd - Step 5 of 7		×
File Configuration			*
Specify the parameters for the Wri	ite File operation.		
Directory specified as 💿 Ph	ysical Path 🔿 Logical Name		
Directory for Outgoing Files (physic	· · · · ·		
C:\PSoft_Output			Browse
Eile Naming Convention (po_%SEQ	%.txt): PSoft_Output.xml		
Append to existing file			
Write to output file when any of I			
✓ Number of Messages Equals:	1		
Elapsed Time Exceeds:	1	minutes	-
File Size Exceeds:	1000	kilobytes 🔻	
	-		
Help		< <u>Back</u> <u>N</u> ext > Ein	ish Cancel

Figure 6–58 File Configuration Page

- **8.** Specify a location on your file system where the output file is written.
- **9.** In the File Naming Convention field, specify a name for the output file.
- 10. Click Next.

The Messages page is displayed, as shown in Figure 6–59.

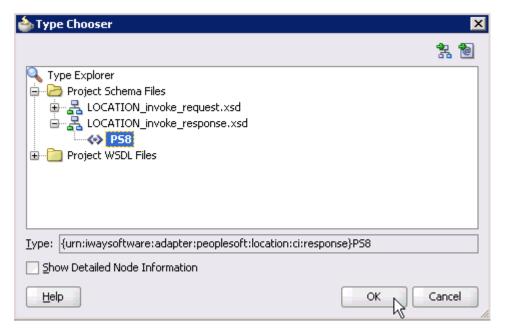
📥 Adapter Configu	uration Wizard - Step 6 of 7			×
Messages		1010:		
defines the message	for the Write File operation. Sp as in the outgoing files. Use the then you do not need to specify	Browse button to find an exis		
Message Schema-				
Native <u>f</u> ormat tr	ranslation is not required (Schen	ia is Opaque)		
URL				
<u>S</u> chema Element			-	· V 6
Help		< <u>B</u> ack	Next > Einish	Cancel

Figure 6–59 Messages Page

11. Click **Browse**, which is located to the right of the URL field.

The Type Chooser dialog is displayed, as shown in Figure 6–60.

Figure 6–60 Type Chooser Dialog



12. Expand Project Schema Files and LOCATION_invoke_response.xsd.

- **13.** Select the available schema (for example, PS8).
- **14.** Click **OK**.

You are returned to the Messages page, as shown in Figure 6–61.

Adapter Config	uration Wizard - S	tep 6 of 7		
lessages				*
efines the messag	es in the outgoing file		chema File Location and select ton to find an existing schema	
Message Schema-				
Native <u>f</u> ormat t URL		iired (Schema is Opaqu	e)	0
-	LOCATION_invoke_	response.xsa		🖌 😒
<u>S</u> chema Element	PS8			
Help			< Back Next >	Finish Cancel

Figure 6–61 Messages Page

15. Click Next.

The Finish page is displayed, as shown in Figure 6–62.

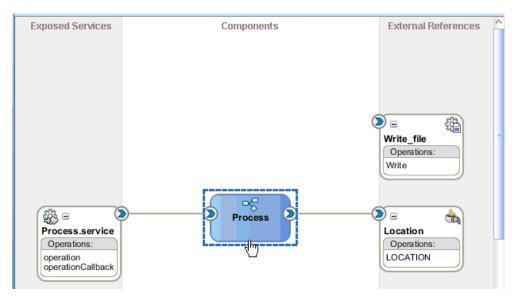
📤 Adapter Configuration Wizard - Step 7 of 7	×
Finish	
You have finished defining the File When you click Finish, the wizard will create the C:\JDeveloper\mywork\BPM_Application\PSoft_JCA,	Adapter Service : Write_file _Outbound\Write_file.wsdl file in your project directory.
Customize Adapter Services in the Business Cata	alog
Help	< Back Next > Finish Cancel

Figure 6–62 Finish Page

16. Click Finish.

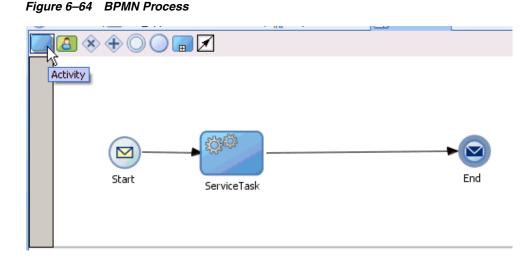
The File Adapter service is created in the External References pane, as shown in Figure 6–63.

Figure 6–63 File Adapter Service



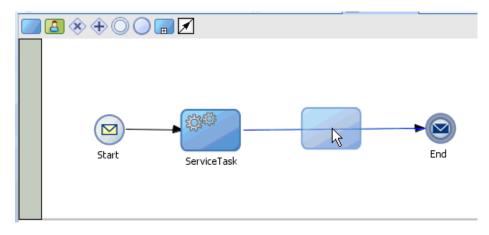
17. Double-click the BPMN Process component.

The BPMN process is displayed, as shown in Figure 6–64.



- **18.** Click the **Activity** icon.
- **19.** Drop the Activity icon on the wire between the Service Task and End event components, as shown in Figure 6–65.

Figure 6–65 Activity Icon



The Properties - Activity dialog is displayed, as shown in Figure 6–66.

Properties - Activ			×
Basic Implementat	ion		
	Name:	Activity	۲
Q 4	Description:		۲
	🗉 Sampling	Point	
Help		ОК	Cancel

Figure 6–66 Properties - Activity Dialog

20. Click the **Implementation** tab.

Figure 6–67 Service Task

💩 Properties - Activi	ty	×
Basic Implementatio	n	
Implementation Type:	Activity Activity User task Service task Service task Receive task Business Rule task Sript task Manual task	
Help		OK Cancel

21. Select **Service Task** from the Implementation Type list, as shown in Figure 6–67.

Interpreties - Activity		×
Basic Implementation	Service Properties	
Implementation Type:	Service task	•
Service task		
Implementation:	ot Implemented	•
Data Associations	ervice Call rocess Call	
Use Associat	ot Implemented	
Use Transformation	в 🖉	
Help		OK Cancel

Figure 6–68 Service Call

- **22.** Select **Service Call** from the Implementation list, as shown in Figure 6–68.
- **23.** Click the **Browse** icon to the right of the Name field, as shown in Figure 6–69.

Figure 6–69 Browse Icon

plementation Type: 👩 Service task	
Service task	
Implementation: 🛞 Service Call	
Name:	[Q
Operation:	
Data Associations	
Use Associations	
Use Transformations	

The Type dialog is displayed, as shown in Figure 6–70.

Figure 6–70 Type Dialog

🖕 Type	×
Search:	
Write_file	
/Services/Externals/Write_file:	
Help	OK Cancel

24. Select the service for write operation that has been created (for example, Write_file) and click **OK**.

You are returned to the Properties - ServiceTask1 dialog, as shown in Figure 6–71.

Properties	- Activity	E
Basic Impl	ementation Service Properties	
Implementati	n Type: 👩 Service task	
Service task		
Implementa	tion: 🛞 Service Call	•
Name:	Write_file	۹ 🏈
Operation:	write	•
	Edit XSL Transformation	2
Help		OK Cancel

Figure 6–71 Properties - ServiceTask1 Dialog

- **25.** Select the **Use Transformations** option that is located under Data Associations.
- 26. Click the Edit Transformations icon.

The Edit Transformations dialog is displayed, as shown in Figure 6–72.

Figure 6–72 Edit Transformations Dialog

Edit Transformations		×
Input Output		
		Ŧ 🗸 🗙
Name	Target	

27. Click the Plus icon.

The Create Transformation dialog is displayed, as shown in Figure 6–73.

Sources:	Request		🚽 🕂 🗘	J. 34
Selected Elements:	Request			~ ~
Delected Elements.	Response			
		Respons	se l	
larget				
-				
Target: ps8				
Transformation				
~ · · · -				
Create				
O Use Existing				

Figure 6–73 Create Transformation Dialog

28. Select the **Response** Data Object that was created from the Sources list, as shown in Figure 6–74.

ireate Transform		
Sources: Selected Elements:	Request Response	- + G & X
arget		
Target: ps8		
Create Re Use Existing	sponse_body	
Help		OK Cancel

Figure 6–74 Create Transformation Dialog

- **29.** Click the **Plus** icon so that the Data Object 'Response' is added to the Selected Elements area.
- **30.** Accept the default value that is selected in the Target list, as shown in Figure 6–74.
- 31. Leave the default name displayed in the Create field and click OK.

You are returned to the Edit Transformations dialog, as shown in Figure 6–75.

Figure 6–75 Edit Transformations Dialog

Edit Transformations	×
Input Output	
	🛨 / 🗙
Name	Target
Response_body	ps8
Help	OK Cancel

32. Click OK.

You are returned to the Properties - Activity dialog, as shown in Figure 6–76.

🖕 Propert	ies - Activity		×
Basic Ir	nplementation	Service Properties	
Implement	ation Type: 度	Service task	•
-Service t	ask		
Impleme	ntation: 💮 Se	ervice Call	-
Name:	Write_file		۹. 🧳
Operatio	n: write		•
	Associations Transformation	s 🥖	
Help			OK Cancel

Figure 6–76 Properties - Activity Dialog

33. Click **OK**.

The Response_body.xsl tab is displayed, as shown in Figure 6–77.

Figure 6–77 Response_body.xsl Tab

🖬 😭 composite.xml 🛛 🔤 Process	Response_body.xsl	
Source: psft_isdsrv14_LOCATION_inv	l	XSLT File: psft_isdsrv14_LOCATION_ir
- cources>		<target> 🎇 😑</target>
🖻 🚸 <mark>ci:PS8</mark>		ci:PS8 🔇 🖒
🗄 🖓 ci:result		ci:result 🔕 🕀
ci:error		ci:error 🚳
ci:done		ci:done 🚯
🕀 🖓 ci:record		ci:record 🚷 🕀

34. Automap the Source and Target elements.

The Auto Map Preferences dialog is displayed, as shown in Figure 6–78.

🕹 Auto Map Preferences 💦 👌	<
Confirm Auto Map Results Prompt for Preferences before Auto Map	
Mode: Basic	
During Auto Map:	
Match Elements with Similar Names	
\bigcirc Match Elements with Exact Names	
Match Elements with Exact Types Match Elements Considering their Ancestor Names	
Insert xsl:if statements:	
Never For optional nodes with required children	
 For all optional nodes 	
Show Dictionaries >>	
💌 Enable Auto Map	
Help OK Cancel	//

Figure 6–78 Auto Map Preferences Dialog

35. Accept the default values and click **OK**.

The transformation is completed, as shown in Figure 6–79.

Figure 6–79 Completed Transformation

🗣 🕻 composite.xml 🛛 📉 Process	₩Response_body.xsl	
Source: psft_isdsrv14_LOCATION_inv		XSLT File: psft_isdsrv14_LOCATION_ir
Generation and the second		<target> 🎇 😑</target>
🖨 🚸 ci:PS8		ci:PS8 🚸 🚊
🛓 🖓 ci:result		ci:result 🐼 🕁
(ti:error		ci:error
🛶 🐼 ci:done		ci:done 🐼
庄 🛞 ci:record		for-each 🕺 🛨

36. Save the transformation.

37. Return to the Process workspace area, as shown in Figure 6–80.

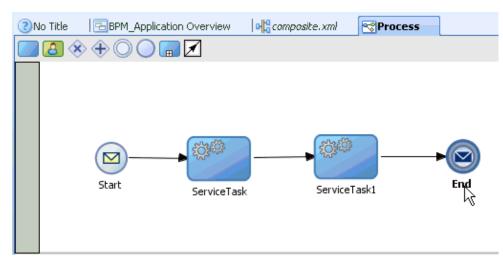


Figure 6–80 Process Workspace Area

The ServiceTask1 component is created between the ServiceTask component and the End event component.

- **38.** Save the process.
- **39.** Double-click the End event component.

The Properties - End dialog is displayed, as shown in Figure 6–81.

40. Click the **Implementation** tab.

Figure 6–81 Properties - End Dialog

	mentation nd	Service Properti	8		
Name: E	nd				
					3
Description:					
Help				OK	Cancel

41. Select **None** from the Implementation Type list, as shown in Figure 6–82.

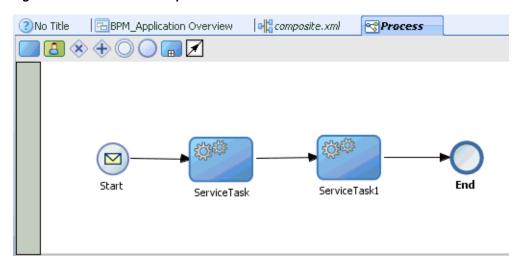
🖕 Properties - End 🛛 🛛 🔀
Basic Implementation Service Properties
Implementation Type: Message Conversation Initiates Contended Signal Initiator Node: Terminate Arguments Definition
Name Type
Advanced Data Associations Use Associations Use Transformations
Help OK Cancel

Figure 6–82 Implementation Type List

42. Click OK.

You are returned to the Process workspace area, as shown in Figure 6–83.

Figure 6–83 Process Workspace Area



43. Save the Process and double-click the **composite.xml** file, as shown in Figure 6–84.

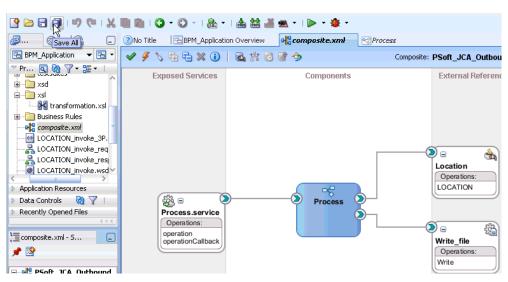


Figure 6–84 Composite.xml File

44. Click the **Save All** icon in the menu bar to save the new outbound BPM process component that was configured.

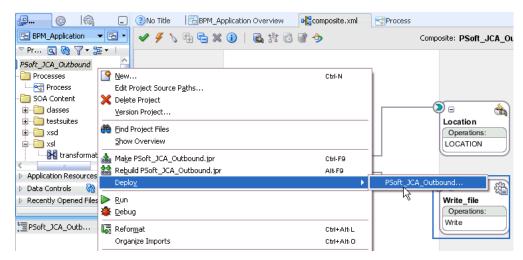
You are now ready to deploy the outbound BPM process.

6.4.3 Deploying the BPM Outbound Process

Perform the following steps to deploy the BPM outbound process.

1. Right-click the project name in the left pane (for example, **PSoft_JCA_Outbound**), select **Deploy**, and then click **PSoft_JCA_Outbound**, as shown in Figure 6–85.

Figure 6–85 Deploy Option



The Deployment Action page is displayed, as shown in Figure 6–86.

Deploy PSoft_JCA_Outh	bound
Deployment Action	
Deployment Action	Select a deployment action from the list below. Deploy to Application Server Deploy to SAR Deploy to sar Deploy this archive to SOA configured Application server(s)
Help	< Back Next > Einish Cancel

Figure 6–86 Deployment Action Page

- **2.** Ensure that **Deploy to Application Server** is selected.
- 3. Click Next.

The Deploy Configuration page is displayed, as shown in Figure 6–87.

Deploy PSoft_JCA_Outb	ound	×
Deploy Configuration		
Deployment Action Deploy Configuration Select Server Summary	Composite Revision ID Project: PSoft_JCA_Outbound Current Revision ID: 1.0 New Revision ID: 1.0	SOA Configuration Plan
< <u> </u>		s default. mposites with the same revision ID. figuration plan for all composites: Browse Cancel

Figure 6–87 Deploy Configuration Page

4. Leave the default values selected and click Next.

The Select Server page is displayed, as shown in Figure 6–88.

Figure 6–88 Select Server Page

Select Server		
Deployment Action Deploy Configuration Select Server SOA Servers Summary	Application Servers:	

 Select an available application server that was configured and click Next. The SOA Servers page is displayed, as shown in Figure 6–89.

SOA Servers			Alant, or or sund	
R Deployment Action	Choose the target SOA se archive.	rver(s) and corresp	onding partitions to w	hich you want to deploy this
Deploy Configuration	SOA Server:	Partition:	Status:	Server URL:
Select Server	🗹 🧱 soa_server1	default	- RUNNING	http://amtex-ch-ga1
SOA Servers				
Summary				
Help			< Back Next >	Einish Cancel

Figure 6–89 SOA Servers Page

6. Select a target SOA server and click Next.

The Summary page is displayed, as shown in Figure 6–90.

Summary	
Deployment Action Deploy Configuration Select Server SOA Servers Summary	Deployment Summary SOA Deployment Summary Global Configuration Plan: none Mark Composite Revision as Default: Yes Overwrite Existing Composites: No SOA Archive: sca_Mysap_ica_outbound_rev1.0.jar SOA Server Target(s) SOA Server: soa_server1
Help	< <u>Back</u> Next > Einish Cancel

Figure 6–90 Summary Page

7. Review and verify all the available deployment information for your project and click **Finish**.

The process is deployed successfully, as shown in Figure 6–91.

Figure 6–91 Successful Deployment Message

₩ Mysap_jca_outboun		es - Log 🧧	Simulations	Documentat	ion	
No Structure	ignorin ignorin ignorin [4:56:02	<pre>ignoring C:\JDeveloper\mywork\bpm\mysap_inbound\config\preferences.xm ignoring C:\JDeveloper\mywork\bpm\mysap_inbound\ProcessDocumentation. ignoring C:\JDeveloper\mywork\bpm\mysap_inbound\testsuites\fileList.x ignoring C:\JDeveloper\mywork\bpm\mysap_inbound\testsuites\fileList.x [4:56:02 PM] Successful compilation: 0 errors, 0 warnings. Creating adf-config.xml for workspace BPM Application.jws</pre>			tion.xml; not on : ist.xml; not on s	
	< Messages	Extensions	_ ∎\$SOA	Deployment		> •
3:38:07 PM] Successful compilatio	n: 0 errors, 0 warni	ngs.				Log

6.4.4 Invoking the Input XML Document in the Oracle Enterprise Manager Console

Perform the following steps to invoke the input XML document in the Oracle Enterprise Manager console.

1. Logon to the Oracle Enterprise Manager console, as shown in Figure 6–92.

Figure 6–92 Oracle Enterprise Manager Console

ORACLE Enterprise Manage	r Fusion Midd	leware Control 11g				
📑 Farm 🗸 🕺 Topology						
Farm_base_domain Application Deployments	¹ Soa-infra ¹					
	Dashboard	Deployed Composite	Instances	Faults and Rej	ected Mess	ages
 	composite an	SOA composite revisions d click the appropriate but		oyed. To deploy a	a new comp Sear	Composite
🗄 🚞 WebLogic Domain	Show only ac	tive composites				
🗄 🚞 Metadata Repositories	View 🗸	Start Up Activate .	Set As Defa	ult Depk	y Ur	ndeploy Re
🗉 🛅 User Messaging Service	Composite		Pa	rtition	Status	Mode I
	Mys	ap_jca_outbound [1.0]	d	efault	<u>ି</u>	Active
	 Simple 	bleApproval [1.0]	d	efault	Û	Active

- 2. Expand your domain in the left pane followed by the SOA folder.
- 3. Select an available project (for example, PSoft_JCA_Outbound).
- 4. Click Test.
- 5. Click the **Request** tab.
- 6. Provide an appropriate input value in the Value field and click Test Web Service.

A response is received in the Response tab to indicate that invocation was successful in the Oracle Enterprise Manager console.

7. Navigate to the defined output directory on your file system and open the XML response document that was received.

The XML response document contains the generated output with values.

6.5 Designing an Inbound BPM Process Using Transformations for Event Integration

This section demonstrates how Oracle Application Adapter for PeopleSoft integrates with PeopleSoft to receive event data.

Samples have been provided for this usecase scenario in the etc/sample folder in the Application Adapters installation.

The following tools are required to complete your adapter design-time configuration:

- Oracle Adapter Application Explorer (Application Explorer)
- Oracle JDeveloper BPM Designer (JDeveloper) or Eclipse

Note: The examples in this chapter demonstrate the use of JDeveloper.

Before you design a BPM process, you must generate the respective WSDL file using Application Explorer. For more information, see "Generating WSDL for Event Integration" on page 4-41.

6.5.1 Creating an Empty Composite for BPM

Perform the following steps to create an empty composite for BPM:

- **1.** Create a new BPM application.
- **2.** Enter a name for the new BPM application and click **Next**, as shown in Figure 6–93.

💩 Create BPM Application	n - Step 1 of 3 🛛 🔀
Name your application	
And in the Name	Application Name:
Application Name	BPM_Application
Project Name	Directory:
 Project SOA Settings 	C:\JDeveloper\mywork\BPM_Application Browse
	Application Package Prefix:
	Application Template:
	Generic Application Creates an application which includes a single project. The project is not preconfigured with JDeveloper technologies, but can be customized to include any technologies.
	BPM Application Creates a BPM application. The application consists of one BPM project. This project has also SOA technology
	Fusion Web Application (ADF) Creates a databound ADF web application. The application consists of one project for the view and controller components (ADF Faces and ADF Task Flows), and another project for the data model (ADF Business Components).
Help	<pre>< Back Next > Einish Cancel ////////////////////////////////////</pre>

Figure 6–93 Name Your Application Page

The Name your project page is displayed, as shown in Figure 6–94.

In the second se	n - Step 2 of 3
Name your project	Data 19 ANTA AND AND AND AND AND AND AND AND AND AN
Application Name	Project Name: PSoft_JCA_Inbound Directory: C:\JDeveloper\mywork\BPM_Application1\PSoft_JCA_Inbound Browse
Project SOA Settings	Project Technologies Generated Components Associated Libraries Available: Selected: ADF Business Components BPM ADF Desktop Integration SOA ADF Faces ADF Library Web Application Support SOA ADF Swing Image: Component Selected: Image: Component Selected: ADF Library Web Application Support Image: Component Selected: Image: Component Selected: ADF Swing Image: Component Selected: Image: Component Selected: Image: Component Selected: Ant Database (Offline) Image: Component Selected: Image: Component Selected: Image: Component Selected: Java Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Java Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected: Java Image: Component Selected: Image: Component Selected: Image: Component Selected: Image: Component Selected:
Help	< <u>Back</u> Next > Einish Cancel

Figure 6–94 Name Your Project Page

3. Enter a project name (for example, PSoft_JCA_Inbound) and click **Next**.

The Configure SOA settings page is displayed, as shown in Figure 6–95.

Figure 6–95 Configure SOA Settings Page

💩 Create BPM Application	1 - Step 3 of 3
Configure SOA settir	ngs
	Composite Name:
Application Name	PSoft_JCA_Inbound
Project Name	Composi <u>t</u> e Template:
🖕 Project SOA Settings	
	Composite With BPEL Process
	Composite With Business Rule Composite With Mediator
	Composite With Human Task
	Composite With Spring Context
	Composite With BPMN Process
< · · · · · · · · · · · · · · · · · · ·	Customizable
Help	< Back Next > Finish Cancel

4. From the Composite Template list, select Empty Composite and click Finish.

6.5.2 Defining a BPM Inbound Process

This section describes how to define a BPM inbound process, which consists of the following stages:

- 1. Configuring a Third Party Adapter Service Component
- 2. Configuring an Inbound BPM Process Component
- 3. Creating a File Adapter for the Write Operation

Configuring a Third Party Adapter Service Component

Perform the following steps to create a third party adapter service component:

1. Drag and drop the **Third Party Adapter** component from the Service Adapters pane to the **Exposed Services** pane, as shown in Figure 6–96.

Figure 6–96 Third Party Adapter Component



The Create Third Party Adapter Service dialog is displayed, as shown in Figure 6–97.

💩 Create Third Party	Adapter Service	×
Third Party Adapter 9		4
Create a JCA adapte	r service for a third party adapter.	- Carl
<u>N</u> ame:	location_sync	
<u>Т</u> уре:	Service	
WSDL URL:		
Port Type:		
Operation:	•	
<u>C</u> allback Port Type:	•	
Callback Operation:		
<u>J</u> CA File:		1
Help	OK	Cancel

Figure 6–97 Create Third Party Adapter Service Dialog

- 2. Enter a name for the third party adapter service.
- 3. Ensure that Service is selected from the Type list (default).
- **4.** Click the **Find existing WSDLs** icon, which is located to the right of the WSDL URL field.

The SOA Resource Browser dialog is displayed, as shown in Figure 6–98.

Figure 6–98 SOA Resource Browser Dialog

📥 SOA Resou	ırce Browser	×
😤 File Syste	m	
Location:	📬 wsdls	- 🖻 🏠 🎬 🗄
LOCAT.	ION_invoke.wsdl	
📄 LOCAT	ION_SYNC.VERSION_1_receive.wsdl	
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.wsdl	
File <u>T</u> ype:	WSDL Files (*.wsdl)	-
Help		OK Cancel

5. Browse and select an inbound WSDL file from the following directory:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click OK.

The Localize Files dialog is displayed, as shown in Figure 6–99.

Figure 6–99 Localize Files Dialog

🚖 Localize Files	×
file:/C:/oracle/Middleware/Oracle_SOA1/soa/thirdparty/ApplicationAdapters/wsd ve.wsdl is external to the current project. In order to make this file available to y can now make a local copy of this file and any dependent files that it imports or in	our project at runtime, JDeveloper
Copy Options: Maintain original directory structure for imported files The following files will be created in directory C:\JDeveloper\mywork\BPM_Application1\PSoft_JCA_Inbound :	
LOCATION_SYNC.VERSION_1_receive.wsdl LOCATION_SYNC.VERSION_1_receive_request.xsd	
Help	OK Cancel

7. Click OK.

The inbound WSDL file and associated receive_request XML schema file (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 6–100.

🧁 Create Third Party	Adapter Service	×
Third Party Adapter 9	Service	4
Create a JCA adapter	r service for a third party adapter.	यम
<u>N</u> ame:	location_sync]
<u>Т</u> уре:	Service	
WSDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
Port Type:	LOCATION_SYNC.VERSION_1PortType]
Operation:	LOCATION_SYNC.VERSION_1]
<u>C</u> allback Port Type:	No Callback]
Callback Operation:]
JCA File:] 🍢
Help	ОК	Cancel

Figure 6–100 Create Third Party Adapter Service Dialog

 Click the Find JCA file icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in Figure 6–101.

Figure 6–101 SOA Resource Browser Dialog

📥 SOA Reso	urce Browser		×
😤 File Syste	em		•
Location:	🗀 wsdls	•	🐿 🖄 🎬 📴 🗁
🖹 LOCAT	ION_invoke.jca		
E LOCAT	ION_SYNC.VERSION_1_receive.jca		
File <u>N</u> ame:	LOCATION_SYNC.VERSION_1_receive.jca		
File <u>T</u> ype:	JCA Files (*.jca)		-
	·		
Help			OK Cancel

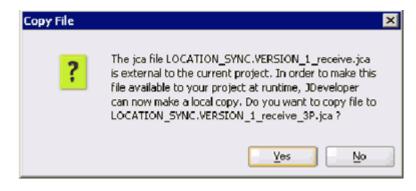
9. Browse and select the JCA properties file from the following directory:

<abalancestic contract of the state of the s

10. Click OK.

The following message is displayed, as shown in Figure 6–102.

Figure 6–102 Copy File Confirmation Message



11. Click Yes.

A copy of the JCA properties file is made in the project folder.

You are returned to the Create Third Party Adapter Service dialog, as shown in Figure 6–103.

Figure 6–103 Create Third Party Adapter Service Dialog

Create Third Party	Adapter Service	
ird Party Adapter Create a JCA adapte	Service or service for a third party adapter.	1
Name:	location_sync	
Iype:	Service 💌	
WSDL URL:	LOCATION_SYNC.VERSION_1_receive.wsdl	1
Port Type:	LOCATION_SYNC.VERSION_1PortType	•
Operation:	LOCATION_SYNC.VERSION_1	•
⊆aiback Port Type:	No Callback	*
Callback Operation:	[Ŧ
JCA Fle:	LOCATION_SYNC.VERSION_1_receive_3P.jca	1

12. Click OK.

The third party adapter service component (location_sync) is created in the Exposed References pane, as shown in Figure 6–104.

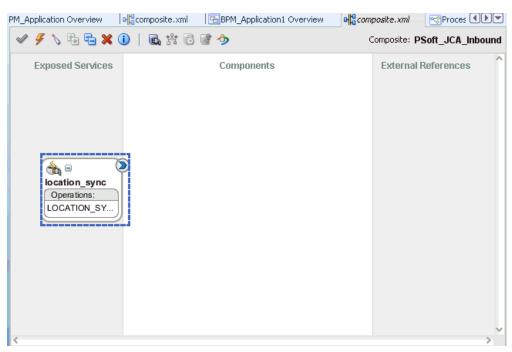


Figure 6–104 Third Party Adapter Service Component

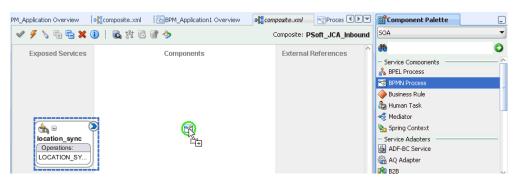
You are now ready to configure an inbound BPM process component.

Configuring an Inbound BPM Process Component

Perform the following steps to configure an inbound BPM process component:

1. Drag and drop the **BPMN Process** component from the Service Components pane to the Components pane, as shown in Figure 6–105.

Figure 6–105 BPMN Process Component



The Create BPMN Process dialog is displayed, as shown in Figure 6–106.

are deplo	ocesses enable process analysts and process developers to design and implement detailed process flows that yed to Oracle BPMN runtime and run as working applications.	
ame:	Processi	
escription:	Process1	
	hronous Service s a process with an asynchronous interface definition	
Synchro	Start End	

Figure 6–106 Create BPMN Process Dialog

2. Click on the Manual Process in the Type field as shown in Figure 6–107.

A Courte D	MN Process - Step 1 of 2	×
BPMN P		
Name:	Process	
Description:	Process	٢
Synchro Manua	ronous Service onous Service al Process s an interactive process based on a user task.	
	al Process s an interactive process based on a user task.	
Reusak	Start UserTask: End	
Help	<box: next=""> Finish</box:>	Cancel

Figure 6–107 Manual Process

3. Click Finish.

The BPMN Process component is created, as shown in Figure 6–108.

Figure 6–108 BPMN Process Component

🖉 🕖 🏷 🐁 🔁 🗶 🕕 🛛	a, ∦: © ≌ →	Composite: PSoft_JCA_Inbound
Exposed Services	Components	External References
Decation_sync Operations: LOCATION_SY	Process	

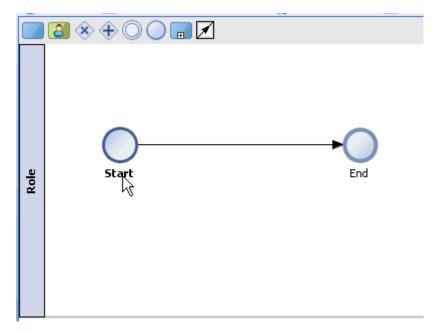
 Double-click the BPMN Process component in the Components pane. The BPMN process is displayed, as shown in Figure 6–109.



Figure 6–109 BPMN Process

- 5. Right-click **UserTask** and select **Delete** from the menu.
- 6. Double-click the **Start** event component, as shown in Figure 6–110.

Figure 6–110 Start Event Component



The Properties - Start dialog is displayed, as shown in Figure 6–111.

Figure 6–111 Properties - Start Dialog

🖕 Properties - Start 🛛 🛛 🔀				
Basic Imp	lementation			
Name:	Start	۲		
Description:		۲		
Help	OK Car	ncel		

7. Click the **Implementation** tab, as shown in Figure 6–112.

Figure 6–112 Implementation Tab

🖕 Properties - Start 🛛 🔀
Basic Implementation
Implementation Type: None Message Timer Signal
Help OK Cancel

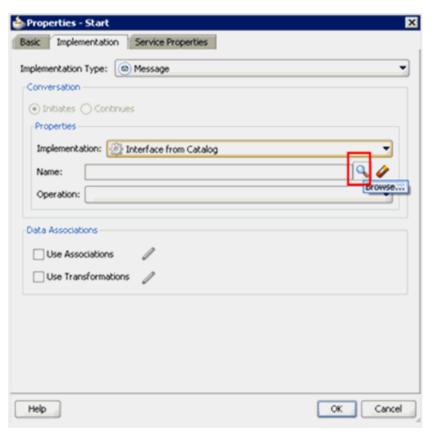
8. Select Message from the Implementation Type list, as shown in Figure 6–113.

Properties - Start Basic Implementation Service Properties	X
Implementation Type: Message	•
Conversation Initiates Continues	
Properties	
Implementation: Not Implemented	
Data Associations	
Use Associations	
Help	OK Cancel

Figure 6–113 Message

- 9. Select Interface from Catalog from the Implementation list.
- **10.** Click the **Browse** icon to the right of the Name field, as shown in Figure 6–114.

Figure 6–114 Browse Icon



The Type dialog is displayed, as shown in Figure 6–115.

Figure 6–115 Type Dialog

🖕 Type	×
Search:	
@ Location_sync	
/References/Externals/Location_sync:	
Help	OK Cancel

11. Select the Third Party Service that has been created and click **OK**.

You are returned to the Properties - Start dialog, as shown in Figure 6–116.

Properties -	Start		×
Basic Implen	nentation	Service Properties	
Implementation	Туре: 🧕	Message	•
Conversation			
 Initiates (🔵 Continu	es	
Properties			
Implementa	ition: 🔯	Interface from Catalog	•
Name:	Location_s	sync	٩, 🏈
Operation:	locationsy	ncversion1	 -
Use Asso	sformation	Edit Data Associations	
Help			OK Cancel

Figure 6–116 Properties - Start Dialog

- **12.** Select the **Use Associations** option that is located under Data Associations.
- 13. Click the Edit Data Associations icon.

The Data Associations dialog is displayed, as shown in Figure 6–117.

Figure 6–117 Data Associations Dialog

🖕 Data Associations		
10 m		
Drag variables from the right panel into fields on the left.		Processe Reg PSoft + Add
Start Output	Output	
		<u>L</u>

14. Right-click the **Process** node in the right pane and select **Add**.

The Create Data Object dialog is displayed, as shown in Figure 6–118.

Figure 6–118 Create Data Object Dialog

譮 Create Data Object	×
Name: location_sync_in	
Type: abc String	•
✓ Auto initialize	
Help	OK Cancel

15. Enter a name in the Name field (for example, location_sync_in) and click on the drop-down button in the Type field and select **<Component>** from the list.

The Create Data Object dialog is displayed, as shown in Figure 6–119.

Figure 6–119 Create Data Object Dialog

🚖 Cre	ate Data Object	×
Name:	location_sync_in	
Type:	abc String	-
	999 Int	^
	99E Real	Ы
🗹 Aut	999 Decimal	
	Sool	
Help	Time	
-	Interval	ľ
	iii Binary	
	Component>	¥
	<component></component>	

16. Click on the Browse icon below the Type field, as shown in Figure 6–120.

Figure 6–120 Create Data Object Dialog

📥 Create Data Object	×
Name: location_sync_in	
Type: Component>	*
	٩
 Auto initialize 	
Help	OK Cancel

The Browse window opens as shown in Figure 6–121.

è	×
Component	
Find:	P
Relocation_sync	
Types.LOCATION_SYNC	
Help	OK Cancel

Figure 6–121 Browse Window

17. Select the first component (for example, LOCATION_SYNC) and click **OK**. You are returned to the Create Data Object dialog, as shown in Figure 6–122.

Figure 6–122 Create Data Object Dialog

譮 Cre	🖕 Create Data Object 🛛 🔀			
Name:	location_sync_in			
Type:	Component>			
	Types.LOCATION_SYNC	Q		
🗹 Aut	o initialize			
Help	>	OK Cancel		

18. Click **OK**.

The Data Object (for example, location_sync_in) that has been created is displayed under the Process node in the Data Associations dialog, as shown in Figure 6–123.

Figure 6–123 Data Associations Dialog

💩 Data Associations		
× 1		
Drag variables from the right panel into fields on the left.		E
		Deation_sync_in Soft_JCA_Inbound
		PSoft_JCA_Inbound
🐵 Start	Output	
Output		
🗉 🏹 locationsync	····· location_sync_in	E.
		(12)

- **19.** Select the **location_sync_in** Data Object under the Process node in the right pane and drag it to the field below the Outputs area.
- 20. Click OK.

You are returned to the Properties - Start dialog, as shown in Figure 6–124.

Figure 6–124 Properties - Start Dialog

🖕 Properties - Start 🛛 🔀
Basic Implementation Service Properties
Implementation Type: O Message
Conversation
Initiates Continues
Properties
Implementation: 🔯 Interface from Catalog
Name: Location_sync
Operation: locationsyncversion1
Data Associations Use Associations Use Transformations
Help OK Cancel

21. Click **OK**.

You are returned to the Process workspace area, as shown in Figure 6–125.

22. Double-click **composite.xml** in the left pane.

Figure 6–125 Process Workspace Area

암 🗁 🗔 💽 👘 🔍 🗉	🛍 🗘 • 🕼 • 🏯 • 📥 🕍 🚢 ᆇ •	🕨 • 🅸 •		
Save All	BPM_Application Overview	BPM_Application1 Overview	or composite.xml	
🔁 BPM_Application1 🛛 👻 🔁 🔻	🖌 🗲 🔪 🖶 🖶 💥 🕕 📓 🖓 🛃	>	Composite: PSoft_JCA	Inbound
∑ Proj 💽 🗞 🍞 + 📴 + 🛛	Exposed Services	Components		Exter
i testsuites	Explored Sci vices	Componenta		LAGIT
i xsd i xsl				
Dusiness Rules				
Composite.xml				
OCATION_invoke_3P.jca				
LOCATION_SYNC.VERSION_1		_		
<pre>@ LOCATION_SYNC.VERSION_1_</pre>				
Process.componentType		Process		
Application Resources	location_sync			
Data Controls <a>R	Operations:		-	
Recently Opened Files	LOCATION_SY			
<				

23. Click the **Save All** icon in the menu bar to save the new inbound BPM process component that was configured.

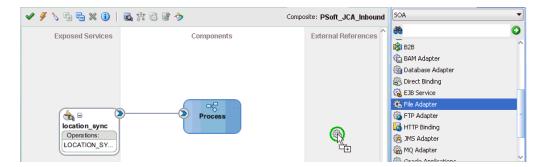
You are now ready to create a File adapter for the write operation.

Creating a File Adapter for the Write Operation

Perform the following steps to create a File adapter for the write operation:

1. Drag and drop the File Adapter component from the Service Adapters pane to the External References pane, as shown in Figure 6–126.

Figure 6–126 File Adapter Component



The Adapter Configuration Wizard is displayed, as shown in Figure 6–127.

譮 Adapter Configura	tion Wizard - Ste	p 1 of 4				×
Welcome					1934) 🥰	
Welcome to the	Adapter Cont	figuration V	Vizard			
This wizard helps you cr and define an operation		g the File Adapte	er. You will be ask	ed to specify conl	figuration par	ameters
Skip this Page Next	Time					
Help			< <u>B</u> ack	Next >	Einish	Cancel

Figure 6–127 Adapter Configuration Wizard

2. Click Next.

The Service Name page is displayed, as shown in Figure 6–128.

🖕 Adapter Configuration Wizard - Step 2 of 4		×
Service Name	010101010101010101010101010101015	*
Enter a Service Name.		
Service Type: File Adapter		
Service Name: PSoft_File_Adapter		
Help	< Back Next > Ein	ish Cancel

Figure 6–128 Service Name Page

3. Type a name for the new File adapter in the Service Name field and click **Next**. The Adapter Interface page is displayed, as shown in Figure 6–129.

Adapter Configuration Wizard - Step 3 of 4	×
Adapter Interface	
The adapter interface is defined by a wsdl that is generate this wizard. Optionally, the adapter interface may be defi	ed using the operation name and schema(s) specified later in ned by importing an existing WSDL.
Interface:) Define from operation and schema (specifie	d later)
◯ Import an existing WSDL	
WSDL URL:	100 B
Port Type:	
Operation:	
Help	< Back Next Einish Cancel

Figure 6–129 Adapter Interface Page

- **4.** Ensure that the **Define from operation and schema (specified later)** option is selected.
- 5. Click Next.

The Operation page is displayed, as shown in Figure 6–130.

Adapter Cor	nfiguration Wizard - Step 4 of 7	1
peration		
ystem, a Write contents of a file	er supports four operations. There is a Read File operation that po e File operation that creates outgoing files, a Synchronous Read Fi le, and a List Files operation that lists file names in specified location e. Only one operation per Adapter Service may be defined using t	le operation that reads the current ons. Specify the Operation type and
Operation Type:	: O <u>R</u> ead File	
	○ Synchronous Read File	
	◯ List Files	
peration Name	e: Write	

Figure 6–130 Operation Page

- **6.** Select **Write File** from the list of Operation Type options and specify an Operation Name (for example, Write).
- 7. Click Next.

The File Configuration page is displayed, as shown in Figure 6–131.

💩 Adapter Configuration Wizard - Step 5 of 7	×
File Configuration	
Specify the parameters for the Write File operation.	
Directory specified as Physical Path Logical Name Directory for Outgoing Files (physical path):	
C:\PSoft_Output	Browse
Eile Naming Convention (po_%SEQ%.txt): PSoft_Output.xm	l
Append to existing file	
Write to output file when any of these conditions are met	
✓ Number of Messages Equals: 1	
Elapsed Time Exceeds:	minutes 💌
File Size Exceeds: 1000	kilobytes 💌
	File Size Units
Help	< Back Next Einish Cancel

Figure 6–131 File Configuration Page

- **8.** Specify a location on your file system where the output file is written.
- **9.** In the File Naming Convention field, specify a name for the output file.
- 10. Click Next.

The Messages page is displayed, as shown in Figure 6–132.

📥 Adapter Configu	uration Wizard - Step 6 of 7 🛛 🗙
Messages	
defines the message	e for the Write File operation. Specify the Schema File Location and select the Schema Element that es in the outgoing files. Use the Browse button to find an existing schema definition. If you check , then you do not need to specify a Schema.
-Message Schema-	
Native <u>f</u> ormat tr	ranslation is not required (Schema is Opaque)
	Define Schema for Native Format
URL	
<u>S</u> chema Element	brow
Help	<u> </u>

Figure 6–132 Messages Page

11. Click **browse for schema file**, which is located to the right of the URL field.

The Type Chooser dialog is displayed, as shown in Figure 6–133.

Figure 6–133 Type Chooser Dialog

🖕 Type Chooser	×
	架 迿
Type Explorer Project Schema Files COCATION_SYNC.VERSION_1_receive_request.x COCATION_SYNC PSCAMA Project WSDL Files	sd
Iype: {urn:iwaysoftware:adapter:peoplesoft:location_sync:m	nessage}LOCATION_SYNC
Show Detailed Node Information	
Help	OK Cancel

- **12.** Expand **Project Schema Files** and **LOCATION_SYNC.VERSION_1_receive_** request.xsd.
- **13.** Select the available schema (for example, LOCATION_SYNC).
- 14. Click OK.

You are returned to the Messages page, as shown in Figure 6–134.

Figure 6–134 Messages Page

🖕 Adapter Config	uration Wizard - Step 6 of 7		×
Messages			*
defines the messag 'Schema is Opaque', Message Schema-	es in the outgoing files. Use the Brow then you do not need to specify a S		
-	ranslation is not required (Schema is	Opaque)	
URL	LOCATION_SYNC.VERSION_1_rece	eive_request.xsd	🔍 🧼
<u>S</u> chema Element	LOCATION_SYNC		-
Help		< <u>B</u> ack <u>N</u> ext >	inish Cancel

15. Click Next.

The Finish page is displayed, as shown in Figure 6–135.

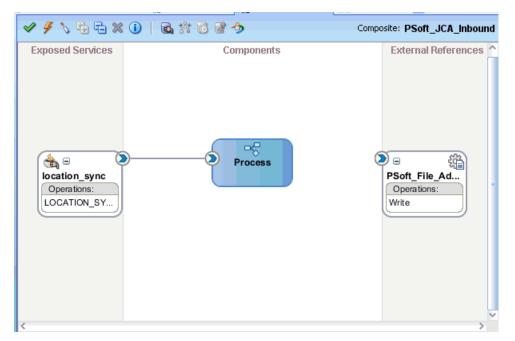
📥 Adapter Configuration Wizard - Ste	:p 7 of 7	
Finish		
You have finished defining the When you click Finish, the wizard will creat C:\JDeveloper\mywork\P5oft_Inbound_Me project directory.	e the	
Help	< <u>B</u> ack	Next > Einish Cancel

Figure 6–135 Finish Page

16. Click Finish.

The File Adapter service is created in the External References pane, as shown in Figure 6–136.

Figure 6–136 File Adapter Service



17. Double-click the BPMN Process component.

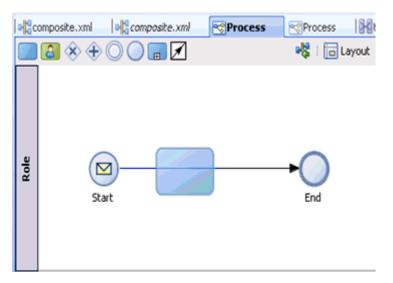
The BPMN process is displayed, as shown in Figure 6–137.

👝 Layout 💧
)

Figure 6–137 BPMN Process

- **18.** Click the **Activity** icon.
- **19.** Drop the Activity icon on the wire between the Start and End event components, as shown in Figure 6–138.

Figure 6–138 Activity Icon



The Properties - Activity dialog is displayed, as shown in Figure 6–139.

Properties - Acti				×
Basic Implemental	tion			
	Name:	Activity		٢
				۲
	Description:			
۹. 🏈				
	🗉 Sampling	Point		
Help			OK Car	ncel

Figure 6–139 Properties - Activity Dialog

20. Click the **Implementation** tab, as shown in Figure 6–140.

Figure 6–140 Implementation Tab

े Properties - Activ	it y	×
Basic Implementation	n	
Implementation Type:	Activity Activity Control Activity Contr	
Help		OK Cancel

21. Select **Service Task** from the Implementation Type list, as shown in Figure 6–141.

Properties - Activity	×
Basic Implementation Service Properties	
Implementation Type: 🔯 Service task	-
Service task	
Implementation: Not Implemented	-
Data Associations	
Use Associat Not Implemented	
Use Transformations	
Нер	Cancel

Figure 6–141 Service Task

- **22.** Select **Service Call** from the Implementation list.
- **23.** Click the **Browse** icon to the right of the Name field, as shown in Figure 6–142.

ssic Implementation	Service Properties	
plementation Type:	Service task	
Service task		
Implementation: 🛞	Service Call	•
Name:		19.4
Operation:		•

Figure 6–142 Browse Icon

The Type dialog is displayed, as shown in Figure 6–143.

Figure 6–143 Type Dialog

🖕 Туре	×
Search:	
/Services/Externals/PSoft_File_Adapter:	
Help	OK Cancel

24. Select the service for write operation that has been created (for example, PSoft_File_Adapter) and click **OK**.

You are returned to the Properties - Activity dialog, as shown in Figure 6–144.

Figure 6–144	Properties - Activi	ty Dialog
--------------	---------------------	-----------

💩 Propertie	s - Activity	×
Basic Imp	ementation Service Properties	
Implementat	on Type: 🔯 Service task	•
Service tas		
Implement	ation: 🔯 Service Call	¥
Name:	PSoft_File_Adapter	٩, 🏈
Operation:	write	•
	ansformations	ations
Help		OK Cancel

- 25. Select the Use Transformations option that is located under Data Associations.
- 26. Click the Edit XSL Transformations icon.

The Edit Transformations dialog is displayed, as shown in Figure 6–145.

	Þ
	* * ×
Target	
	OK Cancel
	Target

Figure 6–145 Edit Transformations Dialog

27. Click the **Plus** icon.

The Create Transformation dialog is displayed, as shown in Figure 6–146.

Figure 6–146 Create Transformation Dialog

Create Transform	ation	
Sources		
Sources: Selected Elements:	location_sync_in	- 🔂 🖓 🗶
		MUU
Target]
Target: locationsy	nc	•
Transformation		
 Create 		
O Use Existing		•
Help		OK Cancel

28. Click the **Plus** icon so that the Data Object 'location_sync_in' is added to the Selected Elements area, as shown in Figure 6–147.

ources		
Sources:		🚽 🕂 🗘 🖇
Selected Elements:	location_sync_in	
arget		
Target: locations	ync	-
ransformation		
	ation_sync_in_body	
Create loc		
Create loo Use Existing		

Figure 6–147 Selected Elements Area

- **29.** Accept the default value that is selected in the Target list.
- **30.** Leave the default name displayed in the Create field and click **OK**.

You are returned to the Edit Transformations dialog, as shown in Figure 6–148.

Figure 6–148 Edit Transformations Dialog

📤 Edit Transformations	×
Input Output	
	💠 / 💥
Name	Target
location_sync_in_body	locationsync
Help	OK

31. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in Figure 6–149.

Properties	- Activity		x
Basic Impl	ementation	Service Properties	
Implementatio	on Type: 🙍	Service task	•
Service task			
Implementa	ition: 💮 Se	rvice Call	-
Name:	PSoft_File_A	dapter	۹. 🧳
Operation:	write		•
	sociations ansformation:		
Help			OK Cancel

Figure 6–149 Properties - Activity Dialog

32. Click OK.

The location_sync_in_body.xsl tab is displayed, as shown in Figure 6–150.

Figure 6–150 location_sync_in_body.xsl Tab

ologicomposite.xml	ml	6	S.	Pro	ces	s		2	{]I	oc	ati	ior	1_s	ync_in_body.xsl 🛛 😒 Pr 🖉 🕨 💌
Source: LOCATION_SYNC.VERSION_1	1													XSLT File: LOCATION_SYNC.VERSION
🚷 <sources></sources>														<target> 🔗 😑</target>
B m:LOCATION_SYNC		1		-			-			4	1			m:LOCATION_SYNC
庄 🐶 m:FieldTypes	ŀ												• •	m:FieldTypes 🚯 🕀
😥 🐼 m:MsgData														m:MsgData 🐼 🕀
	ŀ			•			•			•	1			
	[: :			,										
		1									j,			

33. Automap the Source and Target elements.

The Auto Map Preferences dialog is displayed, as shown in Figure 6–151.

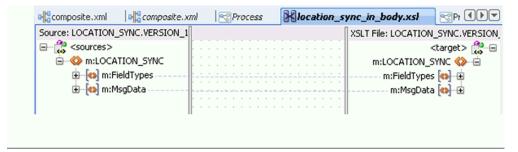
📥 Auto Map Preferences	×
Confirm Auto Map Results Prompt for Preferences before Auto Map	
Mode: Basic	
During Auto Map:	
 Match Elements with Similar Names Match Elements with Exact Names 	
Match Elements with Exact Types Match Elements Considering their Ancestor Names	;
Insert xsl:if statements: <u>N</u> ever For optional nodes with reguired children	
For all optional nodes	
Show Dictionaries >>	
🔽 Enable Auto Ma	зp
Help OK Cancel	

Figure 6–151 Auto Map Preferences Dialog

34. Accept the default values and click **OK**.

The transformation is completed, as shown in Figure 6–152.

Figure 6–152 Completed Transformation



- **35.** Save the transformation.
- **36.** Return to the Process workspace area, as shown in Figure 6–153.

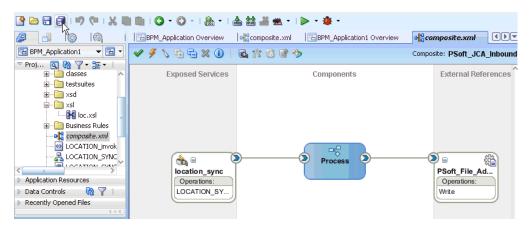
-1 0 BPM_Application Overview Composite.xml BPM_App BPM_Application1 ▼ 🖪 ▼ (★) (♠) (Proj... 💽 🖓 🍸 + 🏣 + 🛅 testsuites 🚞 xsd 📄 xsl 🔀 loc.xsl 🛅 Business Rules ${\bf \boxtimes}$ 📲 composite.xml Role Start End 💁 LOCATION_invoke_3P.jca ServiceTask 💦 LOCATION_SYNC.VERSION_1 LOCATION_SYNC.VERSION_1 @

Figure 6–153 Process Workspace Area

The ServiceTask component is created between the Start event component and the End event component.

37. Save the Process and double-click the **composite.xml** file.

Figure 6–154 Save All Icon



38. Click the **Save All** icon in the menu bar to save the new inbound BPM process component that was configured, as shown in Figure 6–154.

You are now ready to deploy the BPM inbound process. You can follow the same procedure that is described in "Deploying the BPEL Inbound Process" on page 4-58. Once event messages are triggered through PeopleSoft, output XML is received in the location that was specified for the File adapter component. For more information on how to trigger events in PeopleSoft, see "Triggering an Event in PeopleSoft" on page 4-62.

7

Configuring Outbound and Inbound Processing Using Oracle Service Bus

Oracle Application Adapter for PeopleSoft integrates seamlessly with Oracle Service Bus (OSB) to facilitate Web service integration. OSB is based on the Service-Oriented Architecture (SOA). It consumes adapter services exposed as Web Service Definition Language (WSDL) documents.

This chapter contains the following topics:

- Section 7.1, "Overview of Application Adapter Integration with Oracle Service Bus"
- Section 7.2, "Configuring Outbound Processing Using Oracle Service Bus (J2CA Configuration)"
- Section 7.3, "Configuring Inbound Processing Using Oracle Service Bus (J2CA Configuration)"
- Section 7.4, "Configuring Outbound Processing Using Oracle Service Bus (BSE Configuration)"

7.1 Overview of Application Adapter Integration with Oracle Service Bus

To integrate with Oracle Service Bus (OSB), Oracle Application Adapter for PeopleSoft must be deployed in the same Oracle WebLogic Server as OSB. The underlying adapter services must be exposed as WSDL files, which are generated during design time in Oracle Adapter Application Explorer (Application Explorer) for both request-response (outbound) and event notification (inbound) services of the adapter.

7.2 Configuring Outbound Processing Using Oracle Service Bus (J2CA Configuration)

This section describes how to configure outbound processing using Oracle Service Bus for J2CA configurations.

Samples have been provided for this use case scenario in the *etc/sample* folder in the Application Adapters installation.

This section includes the following topics:

- Section 7.2.1, "Starting Oracle Service Bus and Creating Project Folders"
- Section 7.2.2, "Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus"

- Section 7.2.3, "Publishing a WSDL From Application Explorer to Oracle Service Bus"
- Section 7.2.4, "Configuring a WSDL-based Business Service"
- Section 7.2.5, "Configuring a File Type Business Service"
- Section 7.2.6, "Configuring a Proxy Service"
- Section 7.2.7, "Configuring a Pipeline"

7.2.1 Starting Oracle Service Bus and Creating Project Folders

Perform the following steps to start Oracle Service Bus and create project folders:

- 1. Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- **2.** Open the Oracle Service Bus Console in a Web browser by entering the following URL:

http://hostname:port/sbconsole

Where *hostname* is the name of the machine where Oracle WebLogic Server is running and *port* is the port for the domain you are using. The port for the default domain is 7001.

The Oracle Service Bus Console logon page is displayed.

3. Log on to the Oracle Service Bus Console using a valid user name and password.

The Oracle Service Bus Console home page is displayed, as shown in Figure 7–1.

Change Center 🔗	SLA Alerts (30 mins)	to:base_domain	🔂 Hai	me (Oracle	INLS Console	Logout ; He	lp 🕴 Oracle Supp	oort (Ab	aut Service Bus	
View Changes									,	
View All Sessions	SLA Aler	rts	Pipeline Alert	s	Serv	ice Health	Serv	er Health		
Creale Disord E.A.	🔶 SLA Alerts (30 r	mins)				Services Wit	th Most Alerts	5		
Operations Monitoring										
Dashboard	No A	lerts in the c	urrent Alert History du	ration			No	Services to displa;	γ.	
Configuration Smart Search										
Global Settings	🚸 Alert History (3	li mins)								nded Alert History
User Preferences							🛗 [ter	ns 0-0 of C		
Reporting	Timestamp 🗢		Alert Name		Alert Sever	ity Service	Servi	се Туре		Action
View All Sessions View All Sessions					No Alerts	to display.				
								[ter	rs 0-0 of C	
	• Тор									
> Operations										
Resource Browser										
Project Explorer										

Figure 7–1 Oracle Service Bus Console Home Page

4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in Figure 7–2.

Figure 7–2 Change Center



5. Click **Project Explorer** in the left pane, as shown in Figure 7–3.

Figure 7–3 Project Explorer Option

> Operations
Resource Browser
Project Explorer
Security Configuration
System Administration

The Project Explorer page is displayed, as shown in Figure 7–4.

Figure 7–4 Project Explorer Page

Change Center 🔗	Welcome, weblogic Connected to : base_domain	🟠 Home 🕴 Ora	acle WLS Console 🕴 Logout
weblogic session		weblogic session	Created 6/19/09 5:37 PM
 No Conflicts 			
 View Changes View All Sessions 			
	Enter New Project Name:		Add Project
Activate Discard Exit			
Project Explorer			
Projects ^L default	🔲 default		
	Delete		

6. Provide a valid name for the new project and click Add Project.

The project is successfully created and listed.

7. Click on the created project.

The project page is displayed.

Figure 7–5 Enter New Folder Name Field

😂 Folders		
Enter New Folder Name:	Business Service	Add Folder

- **8.** In the Enter New Folder Name field, type **Business Service** and click **Add Folder**, as shown in Figure 7–5.
- 9. In the Enter New Folder Name field, type **Proxy Service** and click **Add Folder**.
- **10.** In the Enter New Folder Name field, type **wsdls** and click **Add Folder**.

The Business Service, Proxy Service, and wsdls folders are listed in the left pane below the project node, as shown in Figure 7–6.

Figure 7–6 Project Node

Project Explorer
Projects B- default
B- MySAP_Sanity
B- PSFT_Sanity - Business Service
Proxy Service wedis

7.2.2 Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus

Before starting and using Application Explorer to publish a WSDL directly to the Oracle Service Bus (OSB) Console (project/folder), OSB users must perform the following steps:

- 1. Open the command prompt window.
- **2.** Navigate to the following directory:

<OSB_Home>\user_projects\domains\base_domain\bin

3. Execute setDomainEnv.cmd (Windows) or . ./setDomainEnv.sh (UNIX/Linux).

This command sets the class path for Application Explorer to access the Oracle WebLogic Server APIs to publish the WSDLs to the OSB Console.

- 4. Do not close the command prompt window.
- **5.** Navigate to the following directory:

<OSB_Home>\3rdparty\ApplicationAdapters\tools\iwae\bin

 Execute ae.bat (Windows) or iwae.sh (UNIX/Linux) to start Application Explorer. You are now ready to publish WSDLs from Application Explorer to the OSB Console.

7.2.3 Publishing a WSDL From Application Explorer to Oracle Service Bus

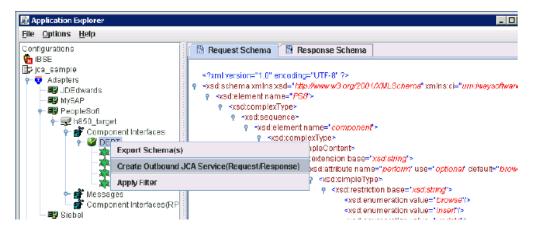
Perform the following steps to publish a WSDL from Application Explorer to Oracle Service Bus:

1. Start Application Explorer, connect to a J2CA configuration, and connect to a PeopleSoft target.

For more information, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".

- 2. Expand Component Interfaces.
- **3.** Right-click the **DEPT** business object and select **Create Outbound JCA Service(Request/Response)** from the menu, as shown in Figure 7–7.

Figure 7–7 Create Outbound JCA Service(Request/Response) Option



The Export WSDL dialog is displayed, as shown in Figure 7–8.

Figure 7–8 Export WSDL Dialog

Export WSDL	×
Name	icationAdapters\tools\iwae\bin\\.\wsdIs\H850_DEPT_query_(Browse
🖌 Export to OSB	
Location	PSFT_Sanity/wsdls
Host	192.168.128.122
Port	7001
User	weblogic
Password	•••••
	OK Cancel

- **4.** In the Name field, a default file name for the WSDL file is provided. You can accept the default or provide your own.
- 5. Select the Export to OSB option.
- **6.** In the Location field, enter the folder name in Oracle Service Bus where you want to publish the WSDL document.

The location is composed of an Oracle Service Bus project name and optionally, one or more folder names. The project name and any folder names must be separated by a forward slash character "/".

- **7.** In the Host field, enter the name of the machine where Oracle Service Bus is installed.
- 8. In the Port field, enter the port that is being used by Oracle Service Bus.
- 9. In the User field, enter your username to access Oracle Service Bus.
- **10.** In the Password field, enter your password to access Oracle Service Bus.
- 11. Click OK.

The WSDL is published to the location specified in the Export WSDL dialog and is now available for use with a Business Service or Proxy Service in Oracle Service Bus.

7.2.4 Configuring a WSDL-based Business Service

Perform the following steps to configure a WSDL-based business service:

1. Open the Oracle Service Bus Console and select the created WSDL folder in the left pane (for example, wsdls), as shown in Figure 7–9.

Figure 7–9 WSDL Folder

Project Explorer	Referenced By 2 F	Ref(s) Edit Description
Projects ৳- default	😂 Folders	
MySAP_Sanity Series	Enter New Folder Name:	Add Folder
- BusinessService - ProxyService		
wsdls	Name 🛆	
		No Folders to display.
	Delete	

2. Ensure that the exported WSDL is listed, as shown in Figure 7–10.

Figure 7–10 Exported WSDL

⊳ Ci	reate Resource: Select Resource Type 📃 💌					
			🛗 Items 1-7 of 7	1	1	•
	Name 🛆	Resource Type	Actions	C	ption	5
	😸 H350_DEPT_query_invake	JCA Binding	2	a <u>ī</u> e	i 22	1
Г	4 ∰ H850_DEPT_query_invoke	WSDL		a[e	i 88	1
	Heso_DEPT_query_nvake_request	XML Schema		a[e	1	
	H350_DEPT_query_invake_response	XML Schema		aŢe	22	1
	H350_DEPT_SYNC_receive	JCA Binding	<u></u>	a]e	i 88	1
	42 H350_DEPT_SYNC_receive	WSDL		a[e	1	
	H350_DEPT_SYNC_receive_request	XML Schema		aŢe	22	1
	·	'	Items 1-7 of 7	10 4	1	•

3. Click the icon that corresponds to the exported WSDL in the Actions column. The Generate WSDL and Service page is displayed, as shown in Figure 7–11.

🕘 Oracle Service Bus : Gene	rate WSDL and Service - Micros	oft Internet Explorer		
🛃 Generate WSDL a	Senerate WSDL and Service			
JCA Binding Name	H850_DEPT_query_invoke			
New WSDL Name*	HB50_DEPT_query_invoke	HB50_DEPT_query_invoke		
New Service Name*	HB50_DEPT_query_invoke			
Location	Project default MySAP_Sarity PSFT_Sanity	Sub-folder BusinessService ProxyService wscls		
Generate	Cancel		*	

Figure 7–11 Generate WSDL and Service Page

4. Provide a new WSDL name and a new service name in the corresponding fields, as shown in Figure 7–12.

🕘 Oracle Service Bus : Gene	rate WSDL and Service - Mic	rosoft Internet Explorer	_ 🗆 🗙
湭 Generate WSDL a	nd Service		<u> </u>
JCA Binding Name	H850_DEPT_query_invok	e	
New WSDL Name*	H850_DEPT_query_contr	ete_wsdl	
New Service Name*	H850_DEPT_query_BS		
Location	Project	Sub-folder BusinessService ProxyService wsds	
Generate	Cancel		•

Figure 7–12 WSDL Name and New Service Name Fields

- **5.** In the Location area, select an available project and the sub-folder that is designated for Business Services.
- 6. Click Generate.

If the WSDL and Service resources are successfully created, the following message is displayed, as shown in Figure 7–13.

Figure 7–13 Resources Created Successfully Message



7.2.5 Configuring a File Type Business Service

Perform the following steps to configure a File type Business Service:

1. Select the **Business Service** folder you created in the left pane, as shown in Figure 7–14.

Figure 7–14 Business Service Folder

2. In the right pane, select **Business Service** from the Create Resource menu, as shown in Figure 7–15.

🖁 Resources			
⊳ Cr	eate Resource:	Select Resource Type 🛛 💌	
		Select Resource Type	
	Name 🛆	Proxy Service Business Service	
	🏂 Н850_СЕРТ	Split-Join	
	€ H850_DEPT	WSDL XML Schema	
		WS-Policy JCA Binding	
	Delete	Iransformation	

Figure 7–15 Business Service

The General Configuration page is displayed, as shown in Figure 7–16.

Figure 7–16 General Configuration Page

-	Service (default/PSFT/BusinessService/)	
General Configuratio	n	
Service Name*		
Description		
Service Type*	Create a New Service WSDL Web Service Transport Typed Service Messaging Service Any SOAP Service Any SOAP Service Any XML Service Any XML Service	Browse (port ar binding)
	Create From Existing Service Business Service Proxy Service	Browse Browse

- **3.** Provide a name for the Business Service and from the Service Type area select **Messaging Service**.
- 4. Click Next.

The Message Type Configuration page is displayed, as shown in Figure 7–17.

Service a Business Service (PSFT_Sanity/BusinessService/File_output)			
Message Type Configuration	Message Type Configuration		
Request Message Type	C None O Binary O Text O MFL MFL XML		Browse Browse (element or type)
Response Message Type	 None Binary Text MFL XML Java 		Browse Browse (element ar type)
<< Prev.	Nezz>>	Last >>	Cancel

Figure 7–17 Message Type Configuration Page

- **5.** Select **XML** as the Request Message Type and **None** as the Response Message Type.
- 6. Click Next.

The Transport Configuration page is displayed, as shown in Figure 7–18.

Figure 7–18 Transport Configuration Page

🍃 Create a Business Service (PSFT_Sanity/BusinessService/File_output)			
Transport Configuration			
Protocol*	file 🔽		
Load Balancing Algorithm	round-robin		
Endpoint URI*	Format: file:///root-dir/dir1 file:///C:/output/psft/dept Add EXISTING URIS OPTIONS There are no URI configured. At least one URI must be configured.		
Retry Count	D		
Retry Iteration Interval	30		
<< Prev.	lext >> Cancel		

- 7. Select file from the Protocol list.
- **8.** Enter the path to a destination folder on your file system in the Endpoint URI field and click **Add**.
- **9.** Click **Next**, as shown in Figure 7–19.

Figure 7–19	Transport	Configuration	Page
-------------	-----------	---------------	------

🍃 Create a Business Service (PSFT_Sanity/BusinessService/File_output)			
Transport Configuration			
Protocol*	fle 💌		
Load Balancing Algorithm	round-robin 💌		
Endpoint URT*	Format: file:///root-dir/dir1 file://// Add EXISTING URIS OF file:///C:/output/psft/dept 1		
Retry Count	0		
Retry Iteration Interval	90		
<- Prev. Next >> Cancel			

The FILE Transport Configuration page is displayed, as shown in Figure 7–20.

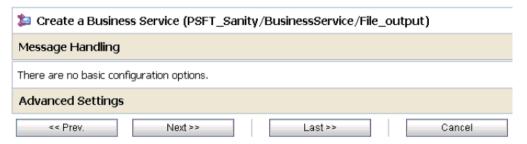
Figure 7–20 FILE Transport Configuration Page

🝃 Create a Business Service (PSFT_Sanity/BusinessService/File_output)		
FILE Transport Configuration		
Prefix	Dept_query	
Suffix	.xml	
Request encoding	utf-8	
	lext >> Cancel	

10. Enter the prefix and suffix for the output file to be received and click **Next**.

The Message Handling and Advanced Settings page is displayed, as shown in Figure 7–21.

Figure 7–21 Message Handling and Advanced Settings Page



11. Click Next.

The following Summary page is displayed, as shown in Figure 7–22.

Disiness Service - S	Summary (PSFT_Sanity/BusinessService/File_o
General Configuration	
Service Name	File_output
Description	
Service Type	Messaging Service
Message Type Configuration	
Request Message Type	XML
Response Message Type	None
Transport Configuration	
Retry Count	0
Retry Iteration Interval	30
FILE Transport Configuration	
Retry Count	0
Message Type Configuration	
Request Message Type	XML
Response Message Type	None
Transport Configuration	
Protocol	file
Load Balancing Algorithm	round-robin
Endpoint URI	file:///C:/output/psft/dept
Retry Count	0
Retry Iteration Interval	30
Protacol Prefix	fie Dept_query
	.xml
Suffix	1010
	utf-8
Suffix Request encoding Message Handling Configuration	

Figure 7–22 Summary Page

- **12.** Review all the information for your Business Service and click **Save**.
- **13.** Check if the success message is displayed once it is saved, as shown in Figure 7–23.

Figure 7–23 Success Message

The Service "File_output" was created successfully.		
PSFT_Sanity/BusinessService		
References	2 Ref(s)	Description - no description -
Referenced By	1 Ref(s)	Edit Description
😂 Folders		
Enter New Folder Name: Add Folder		

7.2.6 Configuring a Proxy Service

Perform the following steps to configure a Proxy Service:

1. Select the **Proxy Service** folder you created in the left pane, as shown in Figure 7–24.

Figure 7–24 Proxy Service

Project Explorer	Referenced By	0 Edit D
Projects 由- default	😂 Folders	
È- MySAP_Sanity È- PSFT_Sanity └ BusinessService	▶ Enter New Folder N	Name:
ProxyService wsdls	Name 🛆	
	Delete	
	ᡖ Resources	
	Create Resource:	Select Resource Type 🛛 💌
		Select Resource Type
	□ <u>Name</u> △	Proxy Service Business Service
	🗖 📲 HB50_DEPT	Split-Join
Operations	🗖 🏂 H850_DEPT	WSDL XML Schema
Resource Browser		WS-Policy
> Project Explorer	Delete	JCA Binding Transformation

2. In the right pane, select **Proxy Service** from the Create Resource menu. The General Configuration page is displayed, as shown in Figure 7–25

🏂 Create a Proxy Service (PSFT_Sanity/ProxyService/)
General Configuration	
Service Name*	Dept_query_ob_PS
Description	× V
Service Type*	Create a New Service
	 Transport Typed Service Messaging Service Any SOAP Service SOAP 1.1 Any XML Service Create From Existing Service Business Service Proxy Service
Next >>	Last >> Cancel

Figure 7–25 General Configuration Page

- **3.** Provide a name for the Proxy Service and from the Service Type area select **Any XML Service**.
- **4.** Click **Next**, as shown in Figure 7–26.

Figure 7–26 Transport Configuration Page

🍃 Create a Proxy Service (PSFT_Sanity/ProxyService/Dept_query_ob_PS)				
Transport Configuration				
Protocol*	île 💌			
Endpoint URI*	Format: file:///root-dir/dir1 file:///C:/input/psft/dept_ob			
Get All Headers	C Yes No Header Add Header Add There are no headers configured.			
ss Prev. N	Last >> Cancel			

- 5. Select file from the Protocol list.
- 6. Enter the path to an input folder on your file system in the Endpoint URI field.
- 7. Click Next, as shown in Figure 7–27.

Directe a Proxy Service (PSFT_Sanity/ProxyService/Dept_query_ob_PS) 🐉			
FILE Transport Configurati	on		
File Mask*	4 . 4		
Polling Interval*	60		
Read Limit*	10		
Sort By Arrival			
Scan SubDirectories			
Pass By Reference			
Post Read Action*	delete 💌		
Stage Directory*	C:\input\stage		
Archive Directory			
Error Directory*	C:\input\error		
Request encoding	utf-B		
<≺ Prev. ♪	le[≱≁ Last≻⊁ Cancel		

Figure 7–27 FILE Transport Configuration Page

- **8.** Provide any folder locations on your file system for the Stage Directory and Error Directory fields.
- **9.** Click **Next**, as shown in Figure 7–28.

Figure 7–28 Message Handling Page

Provide a Proxy Service (PSFT_Sanity/ProxyService/Dept_query_ob_PS)		
Message Handling		
Transaction Required	🗖 Enabled	
Same Transaction For Response	Enabled	
Content Streaming	 Enabled Buffer Type Memory Buffer Disk Buffer Compression Enabled 	
≺< Prev. Next ≻≻	Last >> Cancel	

10. Accept the default values and click **Next**.

The following Summary page is displayed, as shown in Figure 7–29.

Get Al Headers	No				
Headers					
FILE Transport Configuration	FILE Transport Configuration				
Fie Mask	4.4				
Poling Interval	60				
Read Limit	10				
Sort By Arrival	false				
Scan SubDirectories	false				
Pass By Reference	false				
Post Read Action	delete				
Stage Directory	C:\input\stage				
Error Directory	C:\input\error				
Request encoding	utf-B				
Message Handling Configuration					
Transaction Required	Disabled				
Same Transaction For Response	Disabled				
Content Streaming	Disabled				
<< Prev. Save	Cancel				

Figure 7–29 Summary Page

- 11. Review all the information for your Proxy Service and click Save.
- **12.** Check if the success message is displayed, as shown in Figure 7–30.

Figure 7–30 Success Message

Z The Service "Dept_query_	.ob_PS" wa	as created successfully.			
😂 PSFT_Sanity/ProxySe	rvice				
References	3 Ref(s)	Description - no description -			
Referenced By	٥	Edit Description			
🗳 Folders					
Enter New Folder Name: Add Folder					

7.2.7 Configuring a Pipeline

Perform the following steps to configure a Pipeline:

1. Click the Edit Message Flow icon in the row of the Proxy Service you created, as shown in Figure 7–31.

Figure 7–31 Edit Message Flow Icon

Name 🛆	Resource Type	Actions
Dept_query_ob_PS	Proxy Service	\$ *
4 H350_DEPT_SYNC_concrete_wsdl	WSDL	վեղ
a H350_DEPT_SYNC_PS	Proxy Service	1 🖡 🕸 🖂
		Items 1-3 of 3

The Edit Message Flow workspace area is displayed, as shown in Figure 7–32.

Figure 7–32 Edit Message Flow Workspace Area

Edit Message Flow : PSFT_Sanity/ProxyService/Dept_query_ob_PS					
Save	Cancel	Clear	Save All	Cancel All	
		Der	at_quer¥_ob_PS		

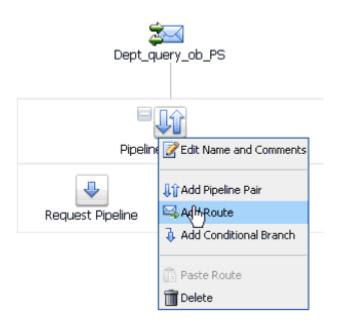
2. Click the **Proxy Service** icon and select **Add Pipeline Pair** from the menu, as shown in Figure 7–33.

Figure 7–33 Add Pipeline Pair



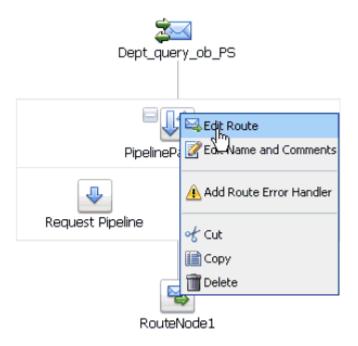
3. Click the **Request Pipeline** icon and select **Add Route** from the menu, as shown in Figure 7–34.

Figure 7–34 Add Route



The RouteNode1 icon is added below the Request Pipeline icon.

Figure 7–35 Edit Route Option



4. Click the **RouteNode1** icon and select **Edit Route** from the menu, as shown in Figure 7–35.

The Edit Stage Configuration workspace area is displayed, as shown in Figure 7–36.

Edit Stage (Configuration : Route	Node		
Save	Validate		Cancel	Clear
Add an Act	tion			
	Communication	+	Dynamic Routing	
•	Flow Control	•	Routing	
🗢 Тор			Routing Table	

Figure 7–36 Edit Stage Configuration Workspace Area

5. Click Add an Action, select Communication from the menu, and click Routing.

Figure 7–37 Route Destination

Edit Stag	e Config	guration : Route Node			
Save		Validate	Cancel	Clear	
\$	Route	to <u>Serrice></u> *			
	Reques	t Actions:			
	•	Add an Action			
	Respon	se Actions:			
	۲	Add an Action			

6. Click **<Service>**, as shown in Figure 7–37.

The Select Service dialog is displayed, as shown in Figure 7–38.

ý s	earch: Name: Path: Path:	Search Yiew All	
		Items 1-12 of 12	1
	Name 🗠	Path	Resource Type
Ċ	CC_GD_B5	default/BusinessService	Business Service
С	CC_GD_PS	default/ProxyService	Praxy Service
0	Dept_query_ob_PS	PSFT_Sanity/ProxyService	Praxy Service
С	FILE_BS	default/BusinessService	Business Service
Ċ.	File_output	PSFT_Sanity/BusinessService	Business Service
e	H850_DEPT_query_BS	PSFT_Sanity/BusinessService	Business Service
C	H850_DEPT_SYNC_PS	PSFT_Sanity/Prox)=ervice	Proxy Service
С	HOLIDAY_CHECK_BS	MySAP_Sanity/BusinessService	Business Service
Ċ.	Isdarv2_DEBMASC5_P5	MySAP_Sanity/ProxyService	Praxy Service
С	matmas01_IB_PS	default/ProxyService	Praxy Service
C	MySAP_Fie_output	MySAP_Sanity/BusinessService	Business Service
С	RFC_Hoiday_PS	MySAP_Sanity/ProxyService	Praxy Service
		Items 1-12 of 12	₩ 4 1 1 1

Figure 7–38 Select Service Dialog

7. Select a WSDL type Business Service and click Submit.

You are returned to the Edit Stage Configuration workspace area, as shown in Figure 7–39.

Figure 7–39 Edit Stage Configuration Workspace Area

Edit Stage Configuration : Route Node					
Save		Validate	Cancel	Clear	
e e		o H850_DEPT_query_BS* t Actions : Add an Action se Actions: Add an Action	invoking Operation 💌 Operation DEPT		

8. Select the name of the PeopleSoft business object (for example, DEPT) as the operational attribute from the list, as shown in Figure 7–40.

Edit Stage Configuration : Route Node				
Save		Validate	Cancel	Clear
	à			
Route to H850_DEPT_query_BS* invoking DEPT				
Request Actions:				
	۲	Add an Action		
	Respons	se Actions :		
	۲	Add an Action		

Figure 7–40 Operational Attribute

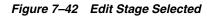
9. Click Save.

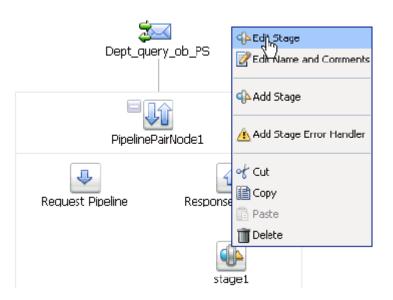
Figure 7–41 Add Stage

🚦 Edit Message Fl	ow : PSFT_Sanity/ProxyService	/Dept_query_ob_PS		
Save	Cancel	Clear	Save All	Cancel All
		Dept_	query_ob_PS	
		Pipeli	inePairNode1	
		Request Pipeline	Response Add St	age
		Rc	Add Pip	b eline Error Hander

10. Click the **Response Pipeline** icon and select **Add Stage** from the menu, as shown in Figure 7–41.

The Stage1 icon is added below the Response Pipeline icon.





11. Click the **Stage1** icon and select **Edit Stage** from the menu, as shown in Figure 7–42.

The Edit Stage Configuration workspace area is displayed, as shown in Figure 7–43.

Figure 7–43 Edit Stage Configuration Workspace Area

Edit Stage Configuration : Response Pipeine - stage1					
Save	Validat	е	Cancel	Clear	
<u> </u>					
🛛 🔵 🛛 🖂 🖉	n Action				
<u> </u>	Communication	•	Dynamic Publish		
	Flow Control	•	Publis (
🛆 Тор	Message Processing	•	Publish Table		
	Reporting	•	Service Callout		
			Transport Headers		

12. Click Add an Action, select Communication from the menu, and click Publish.

Edit Stage Configuration : Response Pipeline - stage1					
Validate	Cancel	Clear			
Publish to <a>Service					
Request Actions:					
Add an Action					
	Validate Publish to <service>* Request Actions:</service>	Validate Cancel Publish to <service>* Request Actions:</service>			

Figure 7–44 Edit Stage Configuration Workspace Area

13. Click **<Service>**, as shown in Figure 7–44.

The Select Service dialog is displayed, as shown in Figure 7–45.

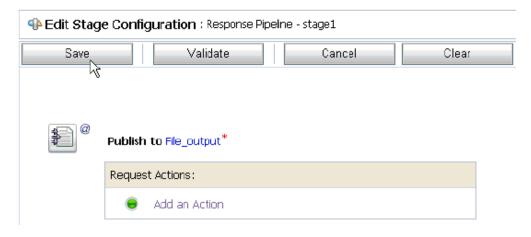
Figure 7–45 Select Service Dialog

រៀន	earch: Name: Path:	Search View All		
		Items 1-12 of 12	14 4 1 🕨 🖗	
	Name 🛆	Path	Resource Type	
С	CC_GD_BS	default/BusinessService	Business Service	
С	CC_GD_PS	default/ProxyService	Proxy Service	
C	Dept_query_ob_PS	PSFT_Sanity/ProxyService	Proxy Service	
0	FILE_BS	default/BusinessService	Business Service	
C	File_output	PSFT_Sanity/BusinessService	Business Service	
ĉ.	H850_DEPT_query_B5	PSFT_Sanity/BushessService	Business Service	
C.	H850_DEPT_SYNC_PS	PSFT_Sanity/ProxyService	Proxy Service	
С	HOLIDAY_0-ECK_BS	MySAP_Sanity/BusinessService	Business Service	
C	isdsrv2_DEBMAS05_PS	MySAP_Sanity/ProxyService	Proxy Service	
c	matmas01_18_P5	default/ProxyService	Proxy Service	
C	MySAP_File_output	MySAP_Sanity/BusinessService	Business Service	
С	RFC_Holiday_PS	MySAP_Sanity/ProxyService	Proxy Service	
		Items 1-12 of 12	4 4 1 ▶ B	

14. Select a File type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in Figure 7–46.

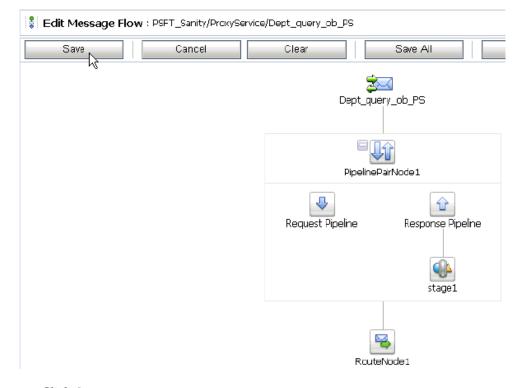
Figure 7–46 Edit Stage Configuration Workspace Area



15. Click Save.

You are returned to the Edit Message Flow workspace area, as shown in Figure 7–47.

Figure 7–47 Edit Message Flow Workspace Area



16. Click Save.

Figure 7–48 Successful Update Message

Message flow was successfully updated.						
PSFT_Sanity/ProxyService						
References 4 Ref(s) Description -						
Referenced By	Referenced By O Edit Description					
🗳 Folders						
Enter New Folder Name: Add Folder						

17. Check if the success message is displayed and click **Activate** in the Change Center, as shown in Figure 7–48.

The Activate Session page is displayed, as shown in Figure 7–49.

Figure 7–49 Activate Session Page

Activate Session				
Session Name	weblogic			
User	weblogic			
Description				
Submit				

- 18. Click Submit.
- **19.** Check if the View Configuration Changes page is displayed, as shown in Figure 7–50.

View Configuration Changes					
		🛅 Pa	ge 1 of 2	💽 Items 1-20 d	of 32 🔟 🍕
Task	Description	Execution Time 🗢	User	Task Status	Undone B
Activate session weblogic		6/25/10 5:31 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 5:28 PM	weblogic	Activated	None
Activate session iwsession, 1277466997290	wsdl import	6/25/10 5:26 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 5:21 PM	weblogic	Activated	None
Activate session invession, 1277466511037	wsdl import	6/25/10 5:18 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 5:10 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 4:42 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 4:37 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 4:31 PM	weblogic	Activated	None
Activate session insession, 1277463568503	wsdl import	6/25/10 4:29 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 4:24 PM	weblogic	Activated	None
Activate session iwsession, 1277462782851	wsdl import	6/25/10 4:16 PM	weblogic	Activated	None
Activate session weblogic		6/25/10 4:13 PM	weblogic	Activated	None

Figure 7–50 View Configuration Changes Page

20. Copy and paste an input XML file in the input folder you have configured, as shown in Figure 7–51.

Figure 7–51 Input XML File

Address 🛅 C:\input						
			Name 🔺	Size Type		
	File and Folder Tasks	*	Pept_input.xml	1 KB XML Document		
	Make a new folder Publish this folder to the Web					

21. Output is received in the configured output location.

7.3 Configuring Inbound Processing Using Oracle Service Bus (J2CA Configuration)

This section describes how to configure inbound processing using Oracle Service Bus for J2CA configurations.

Samples have been provided for this use case scenario under the *etc/sample* folder in the Application Adapters installation.

This section includes the following topics:

- Section 7.3.1, "Starting Oracle Service Bus and Creating Project Folders"
- Section 7.3.2, "Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus"
- Section 7.3.3, "Publishing a WSDL From Application Explorer to Oracle Service Bus"

- Section 7.3.4, "Configuring a WSDL-based Proxy Service"
- Section 7.3.5, "Configuring a File Type Business Service"
- Section 7.3.6, "Configuring a Pipeline"

7.3.1 Starting Oracle Service Bus and Creating Project Folders

Perform the following steps to start Oracle Service Bus and create project folders:

- 1. Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- **2.** Open the Oracle Service Bus Console in a Web browser by entering the following URL:

http://hostname:port/sbconsole

Where *hostname* is the name of the machine where Oracle WebLogic Server is running and *port* is the port for the domain you are using. The port for the default domain is 7001.

The Oracle Service Bus Console logon page is displayed.

3. Log on to the Oracle Service Bus Console using a valid user name and password.

The Oracle Service Bus Console home page is displayed, as shown in Figure 7–52.

Figure 7–52 Oracle Service Bus Console Home Page

Change Center 🔗	Welcome, weblogic Connected	to : base_domain 🏠 Ho	me (Oracle	e IMLS Console 🕴 I	.ogout ; Help ; Oracle Support ;	About Service Bus
 View Changes View All Sessions 	SLA Alerts	Pipeline Alerts	Serv	ice Health	Server Health	
Create Distand E.R.	🔶 SLA Alerts (30 mins)			Services With	n Most Alerts	
Operations Monitoring Deshboard Configuration Smart Search	No Alerts in the c	urrent Alert History duration			No Services to display.	
Global Settings	🚸 Alert History (30 mins)					Extended Alert History
User Preferences					Items 0-0	3 of0 4 4 ⊫ ⊮
Reporting	Timestamp 🗢	Alert Name	Alert Sever	ity Service	Service Type	Action
Message Reports			No Alerts	to display.		
					Items 0-0	3 of 0 🖂 🔍 🕨 👀
	• Тор					
> Operations						

4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in Figure 7–53.

Figure 7–53 Create Button



5. Click **Project Explorer** in the left pane, as shown in Figure 7–54.

Figure 7–54 Project Explorer Option

> Operations
Resource Browser
Project Explorer
Security Configuration
System Administration

The Project Explorer page is displayed, as shown in Figure 7–55.

Figure 7–55 Project Explorer Page

Change Center 🔗 😣	Welcon	ne, weblogic	Connected to	: base_domain	🟠 Home 🕴 Ora	acle WLS Console 🕴 Logout
weblogic session					weblogic session	Created 6/19/09 5:37 PM
No Conflicts						
View Changes	🕋 Р	rojects				
View All Sessions	► En	iter New Proje	ect Name:			Add Project
Activate Discard Exit			eccivalite.			
Project Explorer		Name 🛆				
Projects ^L default		default				
		Delete				

6. Provide a valid name for the new project and click Add Project.

The project is successfully created and listed.

7. Click on the created project.

The project page is displayed.

Figure 7–56 Enter New Folder Name Field



- **8.** In the Enter New Folder Name field, type **Business Service** and click **Add Folder**, as shown in Figure 7–56.
- **9.** In the Enter New Folder Name field, type **Proxy Service** and click **Add Folder**.
- 10. In the Enter New Folder Name field, type wsdls and click Add Folder.

The Business Service, Proxy Service, and wsdls folders are listed in the left pane below the project node, as shown in Figure 7–57.

Figure 7–57 Project Node

Project Explorer	
Projects 🕀 default	
B- MySAP_Sanity B- PSFT_Sanity	
Business Service Proxy Service	
wedls	

7.3.2 Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus

Before starting and using Application Explorer to publish a WSDL directly to the Oracle Service Bus (OSB) Console (project/folder), OSB users must perform the following steps:

- 1. Open the command prompt window.
- **2.** Navigate to the following directory:

<OSB_Home>\user_projects\domains\base_domain\bin

3. Execute setDomainEnv.cmd (Windows) or . ./setDomainEnv.sh (UNIX/Linux).

This command sets the class path for Application Explorer to access the Oracle WebLogic Server APIs to publish the WSDLs to the OSB Console.

- **4.** Do not close the command prompt window.
- **5.** Navigate to the following directory:

<OSB_Home>\3rdparty\ApplicationAdapters\tools\iwae\bin

 Execute ae.bat (Windows) or iwae.sh (UNIX/Linux) to start Application Explorer. You are now ready to publish WSDLs from Application Explorer to the OSB Console.

7.3.3 Publishing a WSDL From Application Explorer to Oracle Service Bus

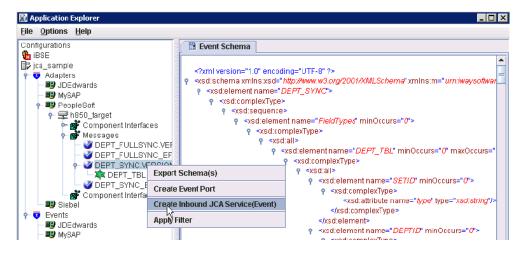
Perform the following steps to publish a WSDL from Application Explorer to Oracle Service Bus:

1. Start Application Explorer, connect to a J2CA configuration, and connect to a PeopleSoft target.

For more information, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".

- 2. Expand Messages.
- **3.** Right-click the **DEPT_SYNC.VERSION.1** business object and select **Create Inbound JCA Service(Event)** from the menu, as shown in Figure 7–58.

Figure 7–58 Create Inbound JCA Service(Event) Option



The Export WSDL dialog is displayed, as shown in Figure 7–59.

Figure 7–59 Export WSDL Dialog

Export WSDL	X
Name	ers/tools/iwae/bin///. /wsdls/H850_DEPT_8YNC_receive.wsdl Browse
	Diowae
Channel	h850_ch 💌
Validation	Root
	Namespace
	Schema
Export to OSB	
Location	PSFT_Sanity/wsdIs
Host	192.169.129.122
Port	7001
User	weblogic
Password	******
	OK Cancel

- **4.** In the Name field, a default file name for the WSDL file is provided. You can accept the default or provide your own.
- 5. Select a configured channel from the Channel list.

The Validation options can be used for schema validation scenarios, but are optional.

- 6. Select the Export to OSB option.
- **7.** In the Location field, enter the folder name in Oracle Service Bus where you want to publish the WSDL document.

The location is composed of an Oracle Service Bus project name and optionally, one or more folder names. The project name and any folder names must be separated by a forward slash character "/".

- **8.** In the Host field, enter the name of the machine where Oracle Service Bus is installed.
- 9. In the Port field, enter the port that is being used by Oracle Service Bus.
- **10.** In the User field, enter your username to access Oracle Service Bus.
- **11.** In the Password field, enter your password to access Oracle Service Bus.
- 12. Click OK.

The WSDL is published to the location specified in the Export WSDL dialog and is now available for use with a Proxy Service in Oracle Service Bus.

7.3.4 Configuring a WSDL-based Proxy Service

Perform the following steps to configure a WSDL-based Proxy Service:

1. Open the Oracle Service Bus Console and select the created WSDL folder in the left pane (for example, wsdls), as shown in Figure 7–60.

Figure 7–60 WSDL Folder

Project Explorer	Referenced By 2 Ref(s) Edit Description
Projects	😂 Folders
	Enter New Folder Name: Add Folder
	Name 🛆
	No Folders to display.
	Poleto
	Delete

2. Ensure that the exported WSDL is listed, as shown in Figure 7–61.

Figure 7–61 Exported WSDL

å 1	🖁 Resources						
⊳ Ci	> Create Resource: Select Resource Type 📃						
			📗 Items 1-3 of 3				
Г	Name 🛆	Resource Type	Actions	Options			
	HB50_DEPT_SYNC_receive	JCA Binding	<u></u>	aje 😽 😫 💼			
	HB50_DEPT_SYNC_receive	WSDL	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	aje 😽 😫 📆			
	HB50_DEPT_SYNC_receive_request	XML Schema		ale 😽 🛅 🕅			
			Items 1-3 of 3	14 4 1 D D			

3. Click the icon that corresponds to the exported WSDL in the Actions column. The Generate WSDL and Service page is displayed, as shown in Figure 7–62.

🎒 Oracle Service Bus : Gene	rate WSDL and Service - M	icrosoft Internet Explorer					
💰 Generate WSDL a	Senerate WSDL and Service						
JCA Binding Name	H850_DEPT_SYNC_rece	ive					
New WSDL Name*	H850_DEPT_SYNC_cond	crete_wsdl					
New Service Name*	H850_DEPT_SYNC_PS						
Location	Project default MySAP_Sanity PSFT_Sanity	Sub-folder BusinessService ProxyService wsdls					
Generate	Cancel		Y				

Figure 7–62 Generate WSDL and Service Page

- 4. Provide a new WSDL name and a new service name in the corresponding fields.
- **5.** In the Location area, select an available project and the sub-folder that is designated for Proxy Services.
- 6. Click Generate.

If the WSDL and Service resources are successfully created, a message is displayed, as shown in Figure 7–63.

Figure 7–63 Resources Successfully Created Message

WSDL and Service Resources were generated successfully.

7. Click **Proxy Service** under Project Explorer and check if the generated WSDL and Proxy Service are listed, as shown in Figure 7–64.

Project Explorer						
Projects ⊕- default	😂 Folders					
B MySAP_Sanity B PSFT_Sanity	Enter New Folder Name:					
BusinessService ProxyService wsdis						
WSDIS	Name 🗠					
	Delete					
	🔓 Resources					
	Create Resource: Select Resource Type					
	□ Name △					
•	HISO DEPT SYNC concrete wed					
Operations						
Resource Browser						
> Project Explorer	Delete					

Figure 7–64 WSDL List

7.3.5 Configuring a File Type Business Service

Perform the following steps to configure a File type Business Service:

1. Select the **Business Service** folder you created in the left pane, as shown in Figure 7–65.

Figure 7–65 Business Service Folder



2. In the right pane, select **Business Service** from the Create Resource menu, as shown in Figure 7–66.

Figure 7–66 Business Service

🕹 Resources				
⊳ cr	eate Resource:	Select Resource Type 🛛 💌		
		Select Resource Type		
	Name 🛆	Proxy Service Business Service		
	🏂 Н850_СЕРТ	Split-Join		
	년출 H850_DEPT			
		WS-Policy JCA Binding		
	Delete	Transformation -		

The General Configuration page is displayed, as shown in Figure 7–67.

Figure 7–67 General Configuration Page

Create a Business Service (PSFT_Sanity/BusinessService/)					
General Configuration					
Service Name*	File_output				
Description		×			
Service Type*	Create a New Service				
	 Transport Typed Service Messaging Service Any SOAP Service Any XML Service 	SOAP 1.1 -			
	Create From Existing Service				
	C Proxy Service				
Next ->	Last >> C	Cancel			

- **3.** Provide a name for the Business Service and from the Service Type area select **Messaging Service**.
- 4. Click Next.

The Message Type Configuration page is displayed, as shown in Figure 7–68.

Create a Business Service (PSFT_Sanity/BusinessService/File_output)					
Message Type Configuration					
Request Message Type	C None C Binary C Text C MFL C XML C Java	Browse Browse (element or tγpe)			
Response Message Type	© None O Binary O Text O MFL O XML O Java	Browse Browse (element or type)			
<< Prev.	N6.2>>	Last >> Cancel			

Figure 7–68 Message Type Configuration Page

- **5.** Select **XML** as the Request Message Type and **None** as the Response Message Type.
- 6. Click Next.

The Transport Configuration page is displayed, as shown in Figure 7–69.

Figure 7–69 Transport Configuration Page

2 Create a Business Service (PSFT_Sanity/BusinessService/File_output)				
Transport Configuration				
Protocol*	file 🔽			
Load Balancing Algorithm	round-robin			
Endpoint URI*	Format: file:///root-dir/dir1 file:/// EXISTING URIS file:///C:/output/psft/dept_sync			
Retry Count	0			
Retry Iteration Interval	30			
<< Prev.	Last >> Cancel			

7. Select **file** from the Protocol list.

- **8.** Enter the path to a destination folder on your file system in the Endpoint URI field and click **Add**.
- 9. Click Next.

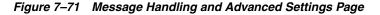
The FILE Transport Configuration page is displayed, as shown in Figure 7–70.

Figure 7–70 FILE Transport Configuration Page

🝃 Create a Business Service (PSFT_Sanity/BusinessService/File_output)				
FILE Transport Configuration				
Prefix	Dept_sync			
Suffix	.xml			
Request encoding	utf-8			
<< Prev. Next >> Last >> Cancel				

10. Enter the prefix and suffix for the output file to be received and click Next.

The Message Handling and Advanced Settings page is displayed, as shown in Figure 7–71.



🝃 Create a Business Service (PSFT_Sanity/BusinessService/File_output)				
Message Handling				
There are no basic configuration options.				
Advanced Settings				
<< Prev. Next >> Last >> Cancel				

11. Click Next.

The following Summary page is displayed, as shown in Figure 7–72.

Message Type Configuration				
Request Message Type	XML			
Response Message Type	None			
Transport Configuration				
Protocol	île			
Load Balancing Algorithm	round-robin			
Endpoint URI	file:///C:/output/psft/dept_sync			
Retry Count	0			
Retry Iteration Interval	30			
FILE Transport Configuration				
Prefix	Dept_sync			
Suffix	.xml			
Request encoding	utf-8			
Message Handling Configuration				
Result Caching	Not Supported			
≺≺ Prev. Save	Cancel			

Figure 7–72 Summary Page

- 12. Review all the information for your Business Service and click Save.
- **13.** Check if the success message is displayed once it is saved, as shown in Figure 7–73.

Figure 7–73 Success Message

The Service "File_output" was created successfully.					
PSFT_Sanity/BusinessService					
References	2 Ref(s)	Description - no description -			
Referenced By	1 Ref(s)	Edit Description			
😂 Folders					
Enter New Folder Name: Add Folder					

7.3.6 Configuring a Pipeline

Perform the following steps to configure a Pipeline:

1. Click the **Edit Message Flow** icon in the row of the Proxy Service you created, as shown in Figure 7–74.

Figure 7–74 Edit Message Flow Icon

🖁 🖁	🖁 Resources				
⊳ Ci	Create Resource: Select Resource Type				
			📑 Items 1-2 of 2 ド		
	Name 🛆	Resource Type	Actions		
	1 H850_DEPT_SYNC_concrete_wsdl	WSDL			
	A H850_DEPT_SYNC_PS	Proxy Service	[🎄 🖾 🕴		
			Edit Message Flow		
	Delete				

The Edit Message Flow workspace area is displayed, as shown in Figure 7–75.

Figure 7–75 Edit Message Flow Workspace Area

	\triangleleft
H850_DEPT	🕼 Add Pipeline Pair
	🚯 Add Conditional Branch
	萙 Add Operational Branch
	Add Service Error Handler
	🔋 Paste Route

 Right-click the displayed Proxy Service icon and select Add Route from the menu. The RouteNode1 icon is added below the Request Pipeline icon.

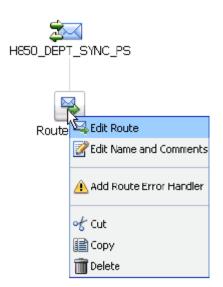


Figure 7–76 Edit Route

3. Click the **RouteNode1** icon and select **Edit Route** from the menu, as shown in Figure 7–76.

The Edit Stage Configuration workspace area is displayed, as shown in Figure 7–77.

Figure 7–77 Edit Stage Configuration Workspace Area

Edit Stage Configuration : Route Node					
Save	Validate		Cancel	Clear	
Add an Act	tion				
	Communication	•	Dynamic Routing		
•	Flow Control	•	Routing		
🛆 Тор			Routing Table		

4. Click Add an Action, select Communication from the menu, and click Routing.

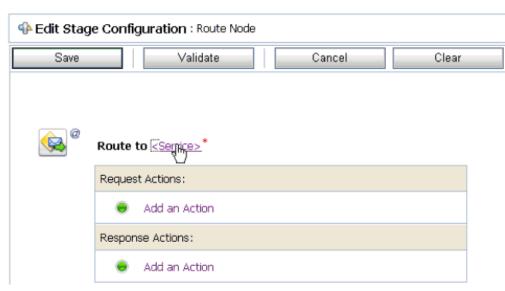


Figure 7–78 Edit Stage Configuration Page

5. Click **<Service>**, as shown in Figure 7–78.

The Select Service dialog is displayed, as shown in Figure 7–79.

Figure 7–79 Select Service Dialog

💐 ទ	earch: Name:	Path:	Search View All			
			Items 1-10 of 10 🛛 🔍 1			
	Name 🛆	Path	Resource	Туре		
\circ	CC_GD_BS	default/BusinessService	Business Se	ervice		
0	CC_GD_PS	default/ProxyService	Proxy Servi	ce		
0	FILE_BS	default/BusinessService	Business Se	ervice		
۲	File_output	PSFT_Sanity/BusinessSen	vice Business Se	ervice		
0	H850_DEPT_SYNC_PS	PSFT_Sanity/ProxyService	e Proxy Servi	сө		
0	HOLIDAY_CHECK_BS	MySAP_Sanity/BusinessSa	ervice Business Se	ervice		
0	kdsrv2_DEBMA5D5_PS	MySAP_Sanity/ProxyServ	ice Proxy Service	ce		
0	matmasO1_IB_PS	default/ProxyService	Proxy Servin	ce		
0	MySAP_File_output	MySAP_Sanity/Business5a	ervice Business Se	ervice		
0	RFC_Holiday_PS	MySAP_Sanity/ProxyServi	ice Proxy Servi	се		
Items 1-10 of 10 🕅 🔍 1 🕨 🕅						

6. Select the File type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in Figure 7–80.

Edit Stage Configuration : Route Node								
Save		Validate	Cancel	Clear				
Ŭ								
Route to File_output*								
	Request Actions:							
	•	Add an Action						
	Respon	se Actions:						
		Add an Action						

Figure 7–80 Edit Stage Configuration Workspace Area

7. Click Save.

You are returned to the Edit Message Flow workspace area, as shown in Figure 7–81.

Figure 7–81 Edit Message Flow Workspace Area

Edit Message Flow : PSFT_Sanity/ProxyService/H850_DEPT_SYNC_PS								
Save Cancel Clear Save All Cancel	All							
H850_DEPT_SYNC_PS								

8. Click Save.

Figure 7–82 Successful Update Message

Change Center 🔗	Welcome, weblogic Co	nnected to : base	_domain 🛛 🟠 Home	((
weblogic session			weblogic sess	ion	
No Conflicts					
View Changes	Message flow was successfully updated.				
View All Sessions					
Activate Discard Exit	📫 PSFT_Sanity/Pr	oxyservice	1		
Project Explorer	J References	3 Ref(s)	Description - no description -		
Projects ⊕- default	Referenced By	0	Edit Description		

9. Check if the success message is displayed and click **Activate** in the Change Center, as shown in Figure 7–82.

The Activate Session page is displayed, as shown in Figure 7–83.

Figure 7–83 Activate Session Page

Activate Session						
Session Name	weblogic					
User	weblogic					
Description						
Submit 💦						

10. Click Submit.

11. Check if the View Configuration Changes page is displayed, as shown in Figure 7–84.

Figure 7–84	View Configuration	Changes Page
-------------	--------------------	--------------

	📗 Page 1 of 2 💽 Items 1-20 of 32 🖂					
Task	Description	Execution Time 🗢	User	Task Status	Undone 8	
Activate session weblogic		6/25/10 5:31 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 5:28 PM	weblogic	Activated	None	
Activate session invsession, 1277466997290	wsdl import	6/25/10 5:26 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 5:21 PM	weblogic	Activated	None	
Activate session invisession, 1277466511037	wsdl import	6/25/10 5:18 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 5:10 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 4:42 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 4:37 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 4:31 PM	weblogic	Activated	None	
Activate session iwsession, 1277463568503	wsdl import	6/25/10 4:29 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 4:24 PM	weblogic	Activated	None	
Activate session iwsession, 1277462762851	wsdl import	6/25/10 4:16 PM	weblogic	Activated	None	
Activate session weblogic		6/25/10 4:13 PM	weblogic	Activated	None	
and a second						

12. Trigger an event from the PeopleSoft system and check if the output is received in the configured output location.

7.4 Configuring Outbound Processing Using Oracle Service Bus (BSE Configuration)

This section describes how to configure outbound processing using Oracle Service Bus for BSE configurations.

Samples have been provided for this usecase scenario under the etc/sample folder in the Application Adapters installation.

This section includes the following topics:

- Section 7.4.1, "Starting Oracle Service Bus and Creating Project Folders"
- Section 7.4.2, "Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus"
- Section 7.4.3, "Publishing a WSDL From Application Explorer to Oracle Service Bus"
- Section 7.4.4, "Configuring a File Type Business Service"
- Section 7.4.5, "Configuring a WSDL Type Business Service"
- Section 7.4.6, "Configuring a Proxy Service"
- Section 7.4.7, "Configuring a Pipeline"

7.4.1 Starting Oracle Service Bus and Creating Project Folders

Perform the following steps to start Oracle Service Bus and create project folders:

- 1. Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- **2.** Open the Oracle Service Bus Console in a Web browser by entering the following URL:

http://hostname:port/sbconsole

Where *hostname* is the name of the machine where Oracle WebLogic Server is running and *port* is the port for the domain you are using. The port for the default domain is 7001.

The Oracle Service Bus Console logon page is displayed.

3. Log on to the Oracle Service Bus Console using a valid user name and password.

The Oracle Service Bus Console home page is displayed, as shown in Figure 7–1.

Change Center	Welcome, weblogic Connected	to:base domain 🚯 Ho	me : Oracle	e IVLS Console	Logout Help Oracle Suppo	rt : About Service Bus :	
 View Changes 				,			
View All Sessions	SLA Alerts	Pipeline Alerts	Serv	ice Health	Server Health		
Crash Disard Est	🔶 SLA Alerts (30 mins)			Services With Most Alerts			
Operations							
Monitoring Dashboard	No Alarts in the current Alart History duration No Services to display.						
Configuration Smart Search							
Global Settings	Alert History (30 mins)					Extended Alert History	
User Preferences					[tem	s 0-0 of 0 14 4 14 141	
Reporting	Timestamp ♡	Alert Name	Alert Sever	ity Service	Service Type	Action	
Message Reports No Alerts to display.							
					Item	s 0-0 of 0 🖂 🖣 🕨 🖬	
	9 Top						
*							
> Operations							
Resource Browser							
Project Explorer							

Figure 7–85 Oracle Service Bus Console Home Page

4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in Figure 7–2.

Figure 7–86 Change Center

Change Center 🔗					
View Changes					
View All Sessions					
Create Discard Exit					

5. Click **Project Explorer** in the left pane, as shown in Figure 7–3.

Figure 7–87 Project Explorer Option



The Project Explorer page is displayed, as shown in Figure 7–4.

Figure 7–88 Project Explorer Page

Change Center 🛛 🔗	Welcome, weblogic Connected to : base_domain		Home : Oracle WLS Console : Logout		
weblogic session • No Conflicts			weblogic session	Created 6/19/09 5:37 PM	
View Changes	😭 F	Projects			
View All Sessions Activate Discard Exit	⊳ Er	iter New Project Name:		Add Project	
Project Explorer		Name 🛆			
Projects ^L default		default			
		Delete			

6. Provide a valid name for the new project and click Add Project.

The project is successfully created and listed.

7. Click on the created project.

The project page is displayed.

Figure 7–89 Enter New Folder Name Field

😂 Folders		
Enter New Folder Name:	Business Service	Add Folder

- **8.** In the Enter New Folder Name field, type **Business Service** and click **Add Folder**, as shown in Figure 7–5.
- 9. In the Enter New Folder Name field, type **Proxy Service** and click **Add Folder**.
- 10. In the Enter New Folder Name field, type wsdls and click Add Folder.

The Business Service, Proxy Service, and wsdls folders are listed in the left pane below the project node, as shown in Figure 7–6.

Figure 7–90 Project Node



7.4.2 Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus

Before starting and using Application Explorer to publish a WSDL directly to the Oracle Service Bus (OSB) Console (project/folder), OSB users must perform the following steps:

- 1. Open the command prompt window.
- 2. Navigate to the following directory:

<OSB_Home>\user_projects\domains\base_domain\bin

3. Execute setDomainEnv.cmd (Windows) or . ./setDomainEnv.sh (UNIX/Linux).

This command sets the class path for Application Explorer to access the Oracle WebLogic Server APIs to publish the WSDLs to the OSB Console.

- 4. Do not close the command prompt window.
- 5. Navigate to the following directory:

<OSB_Home>\3rdparty\ApplicationAdapters\tools\iwae\bin

6. Execute ae.bat (Windows) or iwae.sh (UNIX/Linux) to start Application Explorer.

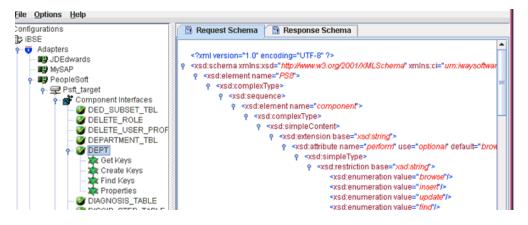
You are now ready to publish WSDLs from Application Explorer to the OSB Console.

7.4.3 Publishing a WSDL From Application Explorer to Oracle Service Bus

This section describes how to publish a WSDL from Application Explorer (BSE configuration) to Oracle Service Bus.

1. Start Application Explorer, connect to a BSE configuration, and connect to a PeopleSoft target, as shown in Figure 7–91.

Figure 7–91 BSE Configuration



- **2.** Expand the **Component Interfaces** node and select the **DEPT** component interface.
- **3.** Right-click the **DEPT** component interface and select **Create Web Service** from the menu.

The Create Web Service dialog is displayed, as shown in Figure 7–92.

Figure 7–92	Create	Web Service	Dialog
-------------	--------	-------------	--------

-	Create Web Service
Existing Service Names:	<new service=""></new>
Service Name:	Psft_DEPT_ibse
Service Description:	
	Next Cancel

- 4. Enter a service name and click Next.
- 5. Click **OK** on the next dialog that is displayed.

Application Explorer switches the view to the Business Services node, and the new Web service appears in the left pane, as shown in Figure 7–93.

Figure 7–93 Business Services Node

🖕 😇 🛛 Business Services		
🔶 📑 Configuration		
🖕 🛅 Services		
— 🚱 iwayivp		
	e 8	
두 <table-of-contents> Licenses</table-of-contents>	Save WSDL	
🔶 📑 Methods 🖵 🔎 DEPT	Export WSDL	
0	Delete	

 Right-click the new Web service and select Export WSDL from the menu. The Export WSDL dialog is displayed, as shown in Figure 7–94.

Figure 7–94	Export V	/SDL Dialog
-------------	----------	-------------

1	Export WSDL
Name	Psft_DEPT_ibse_Jun1.wsdl
Location	default/wsdls
Host	localhost
Port	8005
User	weblogic
Password	
	OK Cancel

- **7.** In the Name field, a default file name for the WSDL file is provided. You can accept the default or provide your own.
- **8.** In the Location field, enter the location where you want to publish the WSDL document.

The location is composed of an Oracle Service Bus project name and optionally, one or more folder names. The project name and any folder names must be separated by a forward slash character "/".

- **9.** In the Host field, enter the name of the machine where Oracle WebLogic Server is running.
- 10. In the Port field, enter the port for the domain you are using.
- **11.** In the User field, enter your username to access Oracle Service Bus.
- 12. In the Password field, enter your password to access Oracle Service Bus.
- 13. Click OK.

The WSDL is published to the location specified in the Export WSDL dialog and is now available for use with a Business Service or Proxy Service in Oracle Service Bus.

7.4.4 Configuring a File Type Business Service

This section describes how to configure a File type Business Service using the Oracle Service Bus Console.

1. Select the **Business Service** folder you created in the left pane, as shown in Figure 7–95.

🖁 🖁	Resources		
⊳ Cr	eate Resource:	Select Resource Type	Ŧ
		Select Resource Type <i>Service</i>	-
	Name 🛆	Proxy Service Business Service	
	& Psft_dept_i	Split-Join Interface	
	Delete	WSDL XML Schema WS-Policy <i>Transformation</i> XOuery	

2. In the right pane, select **Business Service** from the Create Resource menu. The General Configuration page is displayed, as shown in Figure 7–96.

Figure 7–96 General Configuration Page

🝃 Create a Business	Service (default/BusinessService/)
General Configuration	1
Service Name*	Psft_DEPT_IBSE_out
Description	× •
Service Type*	Create a New Service WSDL Web Service Browse Transport Typed Service (port or binding) Messaging Service Any SOAP Service Any SOAP Service SOAP 1.1 * Any XML Service Create From Existing Service
	Business Service Proxy Service Browse
Next >>	Last >> Cancel

- **3.** Provide a name for the Business Service and from the Service Type area select **Messaging Service**.
- 4. Click Next.

The Message Type Configuration page is displayed, as shown in Figure 7–97.

🝃 Create a Business Servi	ce (default/Bi	usinessService/Psft_DEPT_iBSE_out)
Message Type Configuration	n	
Request Message Type	C None C Binary C Text C MFL C MFL	Browse Browse (element or type)
Response Message Type	 None Binary Text MFL XML 	Browse Browse (element or type)
<< Prev.	Next >>	Last >> Cancel

Figure 7–97 Message Type Configuration Page

- **5.** Select **XML** as the Request Message Type and **None** as the Response Message Type.
- 6. Click Next.

The Transport Configuration page is displayed, as shown in Figure 7–98.

Figure 7–98 Transport Configuration Page

🝃 Create a Business Servio	e (default/BusinessService/Psft_DEPT_iBSE_out)	
Transport Configuration		
Protocol*	file 💌	
Load Balancing Algorithm	round-robin	
Endpoint URI* Format: file:///root-dir/dir1 file:/// file:///C:/output		0
Retry Count	D	
Retry Iteration Interval	30	
<< Prev.	lext >> Cancel	

- 7. Select file from the Protocol list.
- **8.** Enter the path to a destination folder on your file system in the Endpoint URI field and click **Add**.
- 9. Click Next.

The FILE Transport Configuration page is displayed, as shown in Figure 7–99.

🍃 Create a Business Serv	ice (default/BusinessService/Psft_DEPT_iBSE_out)
FILE Transport Configura	tion
Prefix	Psft_Dept_out
Suffix	.xml
Request encoding	utf-8
<< Prev.	Next >> Last >> Cancel

Figure 7–99 FILE Transport Configuration Page

10. Enter the prefix and suffix for the output file to be received and click **Next**.

The Summary page is displayed, as shown in Figure 7–100.

Description	
Service Type	Messaging Service
Message Type Configuration	
Request Message Type	XML
Response Message Type	None
Transport Configuration	^
Protocol	file
Load Balancing Algorithm	round-robin
Endpoint URI	file:///C:/output
Retry Count	0
Retry Iteration Interval	30
FILE Transport Configuration	
Prefix	Psft_Dept_out
Suffix	.xml
Request encoding	utf-8
<< Prev. Save	Cancel

Figure 7–100 Summary Page

11. Review all the information for your Business Service and click Save.

7.4.5 Configuring a WSDL Type Business Service

This section describes how to configure a WSDL type Business Service using the Oracle Service Bus Console.

1. Select the **Business Service** folder you created in the left pane, as shown in Figure 7–101.

Figure 7–101 Business Service

💑 F	Resources		
⊳ Cr	eate Resource	: Select Resource Type	•
		Select Resource Type	-
	<u>Name</u> △	Proxy Service Business Service	
	🔒 Psft_dept	Split-Join Interface	
	Delete	WSDL XML Schema WS-Policy <i>Transformation</i>	
_		XQuery	-

2. In the right pane, select **Business Service** from the Create Resource menu. The General Configuration page is displayed, as shown in Figure 7–102.

Figure 7–102 General Configuration Page

🝃 Create a Business	Service (default/BusinessService/)		
General Configuration	1		
Service Name*	Psft_Dept_IBSE_BS		
Description		*	
Service Type*	Create a New Service WSDL Web Service Transport Typed Service Messaging Service Any SOAP Service Any XML Service Create From Existing Service	DAP 1.1 💌	Browse (port or binding)
	Business Service Proxy Service		Browse Browse
Next >>	Last >> Can	cel	

- **3.** Provide a name for the Business Service and from the Service Type area select **WSDL Web Service**.
- 4. Click Browse.

The Select a WSDL dialog is displayed, as shown in Figure 7–103.

🖉 Oracle Service Bus : Select a WSDL - Windows Internet Explorer		
◆薓 Select a WSDL		
Search: Name: Path:		
Name 🛆	Path	
h850_DEPT_SYNC.VERSION_1_receive	PSft/wsdls	
h850_DEPT_SYNC.VERSION_1_wsdl	PSft/proxyservice	
ibse_cc_getdetail_invoke	mysap3/wsdls	
jde90_uow_SalesOrder_invoke	jde/wsdls	
jde90_uow_SalesOrder_WSDL	jde/Business Service	
MATMAS01_receive	mysap3/wsdls	
MATMAS01_receive_con	mysap3/proxyservice	
mysap3_GetDetail_invoke	mysap3/wsdls	
mysap3_GetDetail_invoke_con	mysap3/businessservice	
psft_DEPT_ibse	PSft/wsdls	
siebel_isdsrv1.psft_DEPT_ibseinvoke	siebel/wsdls	
siebel_isdsrv15_stress_query_WSDL	siebel/Business Service	
Submit Cancel		

Figure 7–103 Select a WSDL Dialog

5. Select a BSE WSDL that you published for Oracle Application Adapter for PeopleSoft using Application Explorer and click **Submit**.

The Select a WSDL Definition dialog is displayed, as shown in Figure 7–104.

Figure 7–104 Select a WSDL Definition Dialog

Select a WSDL definition	1	
Search: Name:	Path:	Search View All Adv. Search
ame	Path	WSDL Namespace
ft_dept_ibse_wsdl	default/wsdls	urn:schemas-iwaysoftware-com:iwse
escription:		
 Select WSDL definition Bindings PS_dept_ibseSoap Ports PS_dept_ibseSoap1 	15	
Bindings PS_dept_ibseSoap Ports	15	
Bindings PS_dept_ibseSoap Ports	15	
<i>Bindings</i> PS_dept_ibseSoap <i>Ports</i>	15	

6. Select the WSDL definition under the Ports section and click **Submit**.

You are returned to the General Configuration page where the WSDL you selected is now available, as shown in Figure 7–105.

Service a Business Service (default/BusinessService/)			
General Configuration			
Service Name*	Psft_DEPT_IBSE_BS		
Description		X	
Service Type*	Create a New Service WSDL Web Service Transport Typed Service Messaging Service Any SOAP Service	default/wsdis/Psft_dept_ibse_wsdi PS_dept_ibseSoap1	Browse (port)
Next >>	C Any XML Service Create From Existing Service C Business Service C Proxy Service Last >>	ancel	Browse Browse

Figure 7–105 General Configuration Page

7. Leave the default values and click Next.

The Transport Configuration page is displayed, as shown in Figure 7–106.

Figure 7–106 Transport Configuration Page

🍃 Create a Business Servic	e (default/BusinessService/Psft_DEPT_iBSE_BS)	
Transport Configuration		
Protocol*	http 💌	
Load Balancing Algorithm	round-robin	
Endpoint URI*	Format: http://host:port/someService http:// Add Existing URIs Def http://AMTEX-CH-QA162.AMTEXPDC:7001/ibse/IBSEServlet/XDSOAPRouter Page 1	
Retry Count	0	
Retry Iteration Interval	30	
Retry Application Errors	€ Yes C No	
<< Prev.	Last >> Cancel	

8. Leave the default values and click Next.

The HTTP Transport Configuration page is displayed, as shown in Figure 7–107.

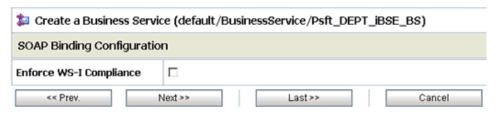
Section 2 Create a Business Service (default/BusinessService/Psft_DEPT_iBSE_BS)		
HTTP Transport Configuration		
Timeout	0	
HTTP Request Method	POST 💌	
Authentication	 None Basic Client Certificate 	
Service Account	Browse,	
Dispatch Policy	default 🔽	
Request Encoding		
Response Encoding		
Advanced Settings		
<< Prev. N	Last >> Cancel	

Figure 7–107 HTTP Transport Configuration Page

9. Leave the default values and click Next.

The SOAP Binding Configuration page is displayed, as shown in Figure 7–108.

Figure 7–108 SOAP Binding Configuration



10. Click Next.

The Message Content Handling page is displayed, as shown in Figure 7–109.

Figure 7–109 Message Content Handling Page

Create a Business Service (default/BusinessService/Psft_DEPT_iBSE_BS)	
Message Content Handling	
XOP/MTOM Support Enabled Include Binary Data by Reference Include Binary Data by Value	
Attachments Disk	
<< Prev.	Next >> Last >> Cancel

11. Click Next.

The Summary page is displayed, as shown in Figure 7–110.

Endpoint URI	http://AMTEX-CH-QA162.AMTEXPDC:7001/ibse/IBSEServlet/XDSOAPRouter	
Retry Count	0	
Retry Iteration Interval	30	
Retry Application Errors	Yes	
HTTP Transport Configuration		
Timeout	0	
HTTP Request Method	POST	
Authentication	None	
Proxy Server		
Follow HTTP redirects	DISABLED	
Use Chunked Streaming Mode	ENABLED	
SOAP Binding Configuration		
Enforce WS-I Compliance	No	
Message Content Handling Configuration		
XOP/MTOM Support	Disabled	
Page Attachments to Disk	No	
<< Prev. Save	Cancel	

Figure 7–110 Summary Page

12. Review all the information for your Business Service and click Save.

7.4.6 Configuring a Proxy Service

This section describes how to configure a Proxy Service using the Oracle Service Bus Console.

1. Select the **Proxy Service** folder you created in the left pane, as shown in Figure 7–111.

Figure 7–111 Proxy Service

Name 🛆	Select Resource Type
	Service Proxy Service Business Service Split-Join Interface
Delete	WSDL XML Schema WS-Policy
ᡖ Resources	Transformation XQuery
Create Resource:	Select Resource Type 📃

2. In the right pane, select **Proxy Service** from the Create Resource menu.

The General Configuration page is displayed, as shown in Figure 7–112.

🝃 Create a Proxy Se	rvice (default/ProxyService/)	
General Configuration	n	
Service Name*	Psft_DEPT_IBSE_PS	
Description		
Service Type*	Create a New Service ○ WSDL Web Service ○ Messaging Service ○ Any SOAP Service ○ Any SOAP Service ○ Any XML Service Create From Existing Service ○ Business Service ○ Proxy Service	Browse (port or binding) Browse Browse
Next >>	Last >> Cancel	

Figure 7–112 General Configuration Page

- **3.** Provide a name for the Proxy Service and from the Service Type area select **Any XML Service**.
- 4. Click Next.

The Transport Configuration page is displayed, as shown in Figure 7–113.

Figure 7–113 Transport Configuration Page

Create a Proxy Service (default/ProxyService/Psft_DEPT_iBSE_PS)		
Transport Configuration		
Protocol*	file 🔽	
Endpoint URI*	Format: file:///root-dir/dir1 file:///C:/input	
Get All Headers	O Yes O No Header Add	
	HEADER ACTION	
	There are no headers configured.	
<< Prev.	Next >> Cancel	

- **5.** Select **file** from the Protocol list.
- 6. Enter the path to an input folder on your file system in the Endpoint URI field.
- 7. Click Next.

The FILE Transport Configuration page is displayed, as shown in Figure 7–114.

Create a Proxy Service (default/ProxyService/Psft_DEPT_iBSE_PS)		
FILE Transport Configuration		
File Mask*	•.•	
Polling Interval*	60	
Read Limit*	10	
Sort By Arrival		
Scan SubDirectories		
Pass By Reference		
Post Read Action*	delete 💌	
Stage Directory*	C:\input\stage	
Archive Directory		
Error Directory*	C:\input\error	
Request encoding	utf-8	
<< Prev.	Next >> Cancel	

Figure 7–114 FILE Transport Configuration Page

- **8.** Provide any folder locations on your file system for the Stage Directory and Error Directory fields.
- 9. Click Next.

The Message Content Handling page is displayed, as shown in Figure 7–115.

Figure 7–115 Message Content Handling Page

Create a Proxy Service (default/ProxyService/Psft_DEPT_iBSE_PS)				
Message Content Handling				
Content Streaming	Enabled Buffer Type Memory Buffer Disk Buffer Compression Enabled			
<< Prev. Next >> Last >> Cancel				

10. Click Next.

The Summary page is displayed, as shown in Figure 7–116.

Protocol	file			
Endpoint URI	file:///C:/input			
Get All Headers	No			
Headers				
FILE Transport Configuration				
File Mask	*.*			
Poling Interval	60			
Read Limit	10			
Sort By Arrival	false			
Scan SubDirectories	false			
Pass By Reference	false			
Post Read Action	delete			
Stage Directory	C:\input\stage			
Error Directory	C:\input\error			
Request encoding	utf-8			
Message Content Handling Configuration				
Content Streaming	Disabled			
<< Prev. Save	Cancel			

Figure 7–116 Summary Page

11. Review all the information for your Proxy Service and click **Save**.

7.4.7 Configuring a Pipeline

This section describes how to configure a Pipeline using the Oracle Service Bus Console.

1. Click the Edit Message Flow icon in the row of the Proxy Service you created, as shown in Figure 7–117.

Figure 7–117 Edit Message Flow Icon

Na	ame 🛆			
		No Folders to display.		
				Items 0-0 of 0
	Delete			
å F	Resources			
Þ Ci	reate Resource: Select Resource Type			
				🛗 Items 1-2 of 2
	Name 🛆		Resource Type	Actions
	DEPT_IBSE_PS		Proxy Service	🔹 🎉 🕹
	DEPT_PS		Proxy Service	ि 🎋 🕴
				Items 1-2 of 2
	Delete			

The Edit Message Flow workspace area is displayed.

2. Click the **Proxy Service** icon and select **Add Pipeline Pair** from the menu, as shown in Figure 7–118.

Figure 7–118 Add Pipeline Pair Option

Psft_DEPT	🕼 Add Pipeline Pair	
	😂 Add Route	
	Add Conditional Branch	
	Add Service Error Handler	
	💼 Paste Route	

3. Click the **PipelinePairNode1** icon and select **Add Route** from the menu, as shown in Figure 7–119.

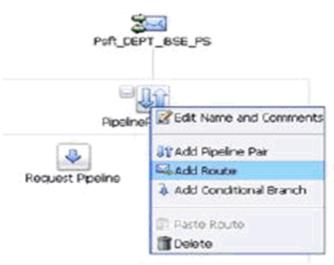
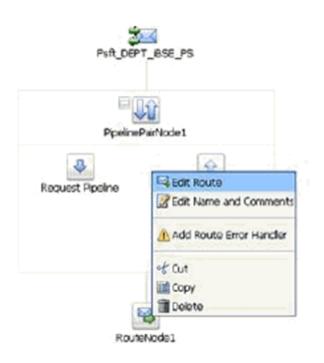


Figure 7–119 Add Route Option

4. Click the **RouteNode1** icon and select **Edit Route** from the menu, as shown in Figure 7–120.

Figure 7–120 Edit Route



 Click Add an Action, select Communication from the menu, and click Routing. The Route Node configuration page is displayed, as shown in Figure 7–121.



Edit Stag	e Confi	guration : Route Node			
Save		Validate	Cancel	Clear	
\$	Route	to <service>*</service>			
	Reques	t Actions:			
	•	Add an Action			
	Respon	ise Actions:			
	•	Add an Action			

6. Click <Service>.

The Select Service dialog is displayed, as shown in Figure 7–122.

Figure 7–122 Select Service Dialog

🞝 Se	arch: Name:	Path:	Search	View All]
				Items 1-5 of 5	14 4 1 P P
	Name 🛆	Path			Resource Type
0	Psft_DEPT_BS	default/Bu	usinessService		Business Service
•	Psft_DEPT_IBSE_BS	default/Bu	usinessService		Business Service
0	Psft_DEPT_iBSE_out	default/Bu	usinessService		Business Service
0	Psft_DEPT_IBSE_PS	default/Pr	oxyService		Proxy Service
0	Psft_DEPT_PS	default/Pr	oxyService		Proxy Service

7. Select a WSDL type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in Figure 7–123.

Edit Stag	e Confiç	guration : Route Node	1			
Save		Validate		Cancel	Clear	
Contraction of the second seco	Reques	to Psft_DEPT_IBSE_BS* t Actions: Add an Action se Actions: Add an Action	invoking	Operation Operation OPPT		

Figure 7–123 Edit Stage Configuration Workspace Area

- **8.** Select **DEPT** as the operational attribute from the list.
- 9. Click Validate and then Save.
- **10.** Click the **Response Pipeline** icon and select **Add Stage** from the menu, as shown in Figure 7–124.

Figure 7–124 Add Stage



The Stage1 icon is added below the Response Pipeline icon, as shown in Figure 7–125.

Figure 7–125 Stage 1 Icon

Psft_DEPT_BSE_PS	GEdt Stage
	Edit Name and Comments
	Add Stage
PipelinePairNode1	Add Stage Error Handler
Para unit Gradian	1 of Cut
Request Pipeline Respon	Se m Copy
	Paste
	📢 🛅 Delete
s	tage1

11. Click the **Stage1** icon and select **Edit Stage** from the menu.

The Edit Stage Configuration workspace area is displayed, as shown in Figure 7–126.

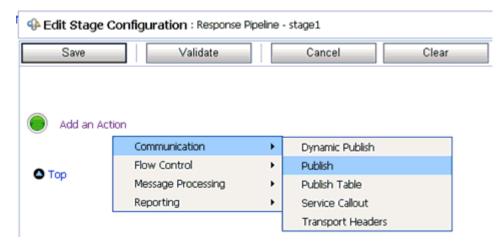


Figure 7–126 Edit Stage Configuration Workspace Area

12. Click Add an Action, select Communication from the menu, and click Publish. The Publish configuration page is displayed, as shown in Figure 7–127.

Figure 7–127 Publish Configuration Page

Save	Validate Cancel	Clear
\$] @	Publish to <service>*</service>	
	Publish to <service>*</service>	

13. Click <Service>.

The Select Service dialog is displayed, as shown in Figure 7–128.

Figure 7–128 Select Service Dialog

N 26	arch: Name: Path:	Search View All	
		Items 1-5 of 5	4 4 1 ▶ ▶
	Name 🛆	Path	Resource Type
0	Psft_DEPT_BS	default/BusinessService	Business Service
c	Psft_DEPT_IBSE_BS	default/BusinessService	Business Service
•	Psft_DEPT_iBSE_out	default/BusinessService	Business Service
C	Psft_DEPT_IBSE_PS	default/ProxyService	Proxy Service
0	Psft_DEPT_PS	default/ProxyService	Proxy Service

14. Select a File type Business Service and click Submit.

You are returned to the Edit Stage Configuration workspace area, as shown in Figure 7–129.

🗣 Edit Stag	e Configuration	: Response Pipeline - stage1			
Save		alidate Car	ncel	Clear	
e e	Publish to Psft_C Request Actions:				
		Communication Flow Control Message Processing)))		
• Тор		Reporting	•	Alert	
				Log	
				Report	

Figure 7–129 Edit Stage Configuration Workspace Area

15. Click **Validate** and then **Save**.

The pipeline configuration is now completed, as shown in Figure 7–130.





- 16. Click Save.
- **17.** Click **Activate** in the Change Center area to activate your changes in the Oracle Service Bus session, as shown in Figure 7–131.



Figure 7–131 Change Center Area

18. Copy and paste an input XML file in the input folder you have configured to receive an output XML file in the destination folder.

New Features

11g Release 1 (11.1.1.4.0) provides new features for the Oracle Application Adapter for PeopleSoft, which are described in this chapter. This chapter contains the following topics:

- Section 8.1, "Exception Filter"
- Section 8.2, "Credential Mapping for Oracle SOA Suite (BPEL, Mediator, or BPM)"
- Section 8.3, "Credential Mapping for Oracle Service Bus (OSB)"

8.1 Exception Filter

This section describes how to configure exception filter functionality for the Oracle Application Adapter for PeopleSoft and includes a sample testing scenario.

The exception filter is supported only for outbound processes that use J2CA configurations. This feature is not supported for BSE configurations and inbound processes that use J2CA configurations.

The exception filter uses the com.ibi.afjca.oracle.AdapterExceptionFilter class to filter the generated exceptions. This class filters the exceptions and categorizes them into the following categories:

- PCRetriableResourceException
- PCResourceException

The following exceptions are represented in the fault policies file:

- PCRetriableResourceException A remote fault.
- PCResourceException A binding fault.

8.1.1 Prerequisites

This section lists the prerequisites for the exception filter.

- Oracle PS3 SOA Suite must be installed.
- Oracle JDeveloper for PS3 must be installed with the updated SOA composite editor.
- Oracle Application Adapter for PeopleSoft for 11g Release 1 (11.1.1.4.0) must be installed.

For more information, see the Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server.

8.1.2 Configuring the Exception Filter

Exception filter configuration consists of the following steps:

- **1.** Generate a WSDL file.
- 2. Create a BPEL process with exception filter functionality.
- 3. Create fault policies and fault binding files.
- 4. Deploy and test the BPEL process with exception filter functionality.

8.1.2.1 Generating a WSDL File

To generate the WSDL file:

1. Open Application Explorer and create a J2CA configuration.

For more information, see "Creating a Configuration for J2CA" on page 2-4.

2. Create a target for the PeopleSoft adapter and then connect to the target.

For more information, see "Establishing a Connection (Target) for PeopleSoft" on page 2-6.

3. Generate a WSDL for the appropriate object.

For more information, see "Generating a WSDL (J2CA Configurations Only)" on page 2-11.

8.1.2.2 Creating a BPEL process With Exception Filter Functionality

To create a BPEL process with exception filter functionality:

1. Open JDeveloper and create a new SOA application.

For more information, see "Creating a New SOA Application for the Outbound BPEL Process" on page 4-9.

- 2. Create a new SOA project (for example, PSoft_Exception_Filter).
- **3.** Create a third party adapter service component.

For more information, see "Configuring a Third Party Adapter Service Component" on page 4-13.

Once the third party adapter service component is created, the WSDL file (with corresponding schemas and JCA file) is imported to the JDeveloper project.

For more information, see "Defining a BPEL Outbound Process" on page 4-48.

- 4. Modify the imported JCA file.
 - **a.** Right-click the imported JCA file and select **Open** from the menu, as shown in Figure 8–1.

Application Navigator	_	Composite.xml
Exception_Filter_Testing	- 🖻 -	🛷 🥖 👎 🖶 🖶
Projects Projects Projects SOA Content SOA Content Classes Clastase C] @ ? . ≌ •	Exposed Service
LOCATION_invoke_red	Open	
LOCATION_invoke_res	W2 million	ntent
	Reformat Validate XML	Ctri+Alt-L
	<u>M</u> ake Rebuild	Ctrl+Shift-F9 Alt+Shift-F9
	⊆ompare With Replace <u>W</u> ith	>

Figure 8–1 Application Navigator Tab

b. In the <interaction-spec> element, add the ExceptionFilter property. For example:

<property name="FunctionName" value="PROCESS"/><property name="ExceptionFilter" value="com.ibi.afjca.oracle.AdapterExceptionFilter"/></interaction-spec>

- **c.** Save the modified JCA file.
- **5.** Once the third party adapter service component is created and the JCA file is modified, continue with the remainder of the BPEL process creation.

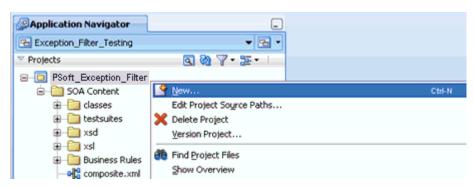
For more information, see "Defining a BPEL Outbound Process" on page 4-48.

8.1.2.3 Creating Fault Policies and Fault Binding Files

To create fault policies and fault binding files:

1. Right-click the created SOA project (for example, PSoft_Exception_Filter) and select **New** from the menu, as shown in Figure 8–2.

Figure 8–2 Application Navigator Tab



The New Gallery dialog is displayed, as shown in Figure 8–3.

Figure 8–3 New Gallery Dialog

New Gallery		×
All Technologies Current Project Tech This list is filtered according to the curren Search Categories:		Show All Descriptions
Applications Connections Deployment Descriptors Deployment Profiles Projects BPM Tier Social Ter Service Components Transformations All Items	Generic Project File Opens the Create File dialog, in new empty file.	which you define a directory and filename for a select a project or a file within a project in the
Help		OK Cancel

2. Select File and click OK.

The Create File dialog is displayed, as shown in Figure 8–4.

Figure 8–4 Create File Dialog

Create File	×
Enter the details of your new file.	
Eile Name: fault-bindings.xml	
Directory:	
C:\JDeveloper\mywork\Exception_	Filter_Testing\PSoft_Exception_Filter
Help	OK Cancel

- 3. In the File Name field, type **fault-bindings.xml** and click **OK**.
- 4. Add the appropriate fault binding functions in the fault-bindings.xml file.

To view a sample **fault-bindings.xml** file, see "Sample Fault-Bindings.xml File" on page 8-5.

Note: The parameter in the <name> element is the name of the created BPEL process.

- 5. Save the fault-bindings.xml file.
- **6.** Repeat steps 1 to 5 for the **fault-policies.xml** file, but ensure to add the appropriate fault policies functions.

To view a sample **fault-policies.xml** file, see "Sample Fault-Policies.xml File" on page 8-6.

Note: The parameter ID in the <fault policy> element is obtained from the **fault-bindings.xml** file, which can be found in the <Component> element of the **fault-bindings.xml** file. This ID can have any name as long as it is identical in the **fault-policies.xml** and **fault-bindings.xml** files.

Tip: The **fault-bindings.xml** and **fault-policies.xml** files can also be created externally and manually copied to the JDeveloper project.

Sample Fault-Bindings.xml File

```
<?xml version="1.0" encoding="UTF-8" ?>
<faultPolicyBindings version="2.0.1"
xmlns="http://schemas.oracle.com/bpel/faultpolicy"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<component faultPolicy="bpelFaultHandling">
<component faultPolicy="bpelFaultHandling">
</component faultPolicy="bpelFaultHandling"
</component faultPolicy="bpelFaultHandling">
</component faultPolicy="bpelFaultHandling"
</component faultPolicy="bpelFaultHandling">
</component faultPolicy="bpelFaultHandling"
</component faultPolicy="bpelFaultHandling"
</component faultPolicy="bpelFaultHandling"
</component faultPolicy="bpedfaultHandling"
</component faultPolicy="bpedfaultHandling"
</component faultHandling="bpddauge"
</component faultHandling="bpddauge"
</component faultHandling="bpddauge"
<
```

</faultPolicyBindings>

Sample Fault-Policies.xml File

<?xml version="1.0" encoding="UTF-8"?>

<faultPolicies xmlns="http://schemas.oracle.com/bpel/faultpolicy">

```
<faultPolicy version="2.0.1" id="bpelFaultHandling"
xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.oracle.com/bpel/faultpolicy"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

<Conditions>

```
<faultName xmlns:bpelx="http://schemas.oracle.com/bpel/extension"
name="bpelx:remoteFault">
  <condition>
  <action ref="ora-retry-3"/>
```

</condition>

```
</faultName>
```

```
<faultName xmlns:bpelx="http://schemas.oracle.com/bpel/extension"
name="bpelx:bindingFault">
<condition>
 <action ref="ora-retry-5"/>
 </condition>
 </faultName>
 </Conditions>
 <Actions>
<Action id="ora-retry-3">
<retry>
<retryCount>3</retryCount>
<retryInterval>2</retryInterval>
<retryFailureAction ref="ora-terminate"/>
<exponentialBackoff/>
</retrv>
 </Action>
 <Action id="ora-retry-5">
 <retry>
<retryCount>5</retryCount>
<retryInterval>2</retryInterval>
<retryFailureAction ref="ora-terminate"/>
<exponentialBackoff/>
</retry>
 </Action>
 <Action id="ora-terminate">
 <abort/>
 </Action>
 </Actions>
 </faultPolicy>
 </faultPolicies>
```

8.1.2.4 Deploying and Testing the BPEL Process With Exception Filter Functionality

To deploy and test the BPEL process with exception filter functionality:

1. Deploy the created BPEL process.

For more information, see "Deploying the BPEL Outbound Process" on page 4-33.

- **2.** Simulate a communication error by disconnecting the system (where the servers are running) from the network.
- 3. Invoke the deployed BPEL process with a valid input.

For more information, see "Invoking the Input XML Document in the Oracle Enterprise Manager Console" on page 4-37.

4. Select the process ID.

You can observe the BPEL process being retried or aborted based on the configuration of the **fault-policies.xml** file.

8.2 Credential Mapping for Oracle SOA Suite (BPEL, Mediator, or BPM)

This section describes how to configure credential mapping functionality for the Oracle Application Adapter for PeopleSoft in a configuration that uses Oracle SOA Suite (BPEL, Mediator, or BPM). A sample testing scenario is also included. This section contains the following topics:

- Section 8.2.1, "Prerequisites"
- Section 8.2.2, "Configuring Credential Mapping"

Credential mapping is supported only for outbound processes that use J2CA configurations. This feature is not supported for BSE configurations and inbound processes that use J2CA configurations.

Note: The J2CA connector is common to all four application adapters (SAP R/3, PeopleSoft, Siebel, and J.D. Edwards OneWorld). If credential mapping is required, then ensure that only one application adapter is used in a particular instance. For example, in one adapter instance only the PeopleSoft application adapter can be used. Credential mapping cannot be configured at the individual adapter level. If you require the use of credential mapping for two adapters, then both adapters must be running in two independent adapter instances.

To pass user credentials to the iWay J2CA resource adapter, create a credential map from the Oracle WebLogic Server user credentials to the EIS user credentials (PeopleSoft adapter). Then associate a credential policy with a BPEL, Mediator, or BPM Web service and invoke the Web service using Oracle WebLogic Server user credentials. These credentials are mapped to the EIS user credentials and then passed to the iWay J2CA container, which uses them to connect with the EIS adapter (PeopleSoft).

8.2.1 Prerequisites

This section lists the prerequisites for credential mapping.

- Oracle PS3 SOA Suite with an extended BPM domain must be installed.
- Oracle JDeveloper for PS3 must be installed with the updated SOA/BPM composite editor.
- Oracle Application Adapter for PeopleSoft for 11g Release 1 (11.1.1.4.0) must be installed.

For more information, see the Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server.

8.2.2 Configuring Credential Mapping

Configuring credential mapping consists of the following steps:

1. Deploy the adapter.

For more information, see Chapter 3, "Oracle WebLogic Server Deployment and Integration".

2. Associate Oracle WebLogic Server credentials with EIS credentials.

For more information, see "Associating Oracle WebLogic Server Credentials With EIS Credentials" on page 8-8.

3. Generate a WSDL file.

For more information, see "Generating a WSDL File" on page 8-11.

4. Create an outbound process.

For more information, see "Creating an Outbound Process" on page 8-11.

5. Attach a security policy to an outbound process.

For more information, see "Attaching a Security Policy to an Outbound Process Using the Oracle Enterprise Manager Console" on page 8-12.

8.2.2.1 Associating Oracle WebLogic Server Credentials With EIS Credentials

To associate Oracle WebLogic Server credentials with EIS credentials:

- 1. Log in to the Oracle WebLogic Server Administration Console.
- **2.** In the Domain Structure section in the left pane, click **Deployments**, as shown in Figure 8–5.

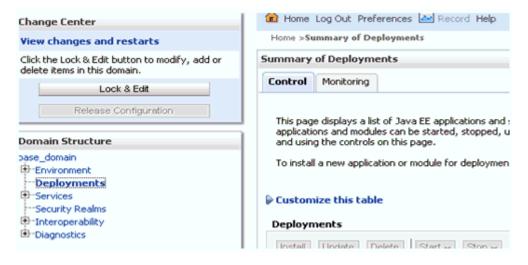


Figure 8–5 Domain Structure Section

The Deployments page is displayed, as shown in Figure 8–6.

	(g) ние дарсег
System Status 😑	FMW Welcome Page Application (11.1.0.0.0)
Health of Running Servers	FtpAdapter
Failed (0) Critical (0)	
Overloaded (0) Warning (0)	iwafica
OK (2)	🛨 🦲 iwafjca, Level 1, 13 of 33
	🐼 JmsAdapter
	MQSeriesAdapter
	🛜 Oracle Apps Adapter

Figure 8–6 Deployments Page

3. Click the **iwafjca** resource adapter.

The Settings for iwafjca page is displayed, as shown in Figure 8–7.

Figure 8–7 Settings for iwafjca Page

rvie	w Depk	syment Plan	Configuration	Security	Targets	Control	Testing	Monitoring	Notes	
oles	Policies	Credentia	l Mappings	Principals						
				erver username ion pools in the						
mappir Custo	ngs for this mize this		spter.			,				
nappir Custo	ngs for this mize this ntial Map	table pings	spter.							
nappir Custo rede	ngs for this mize this ntial Map	table pings	apter.	EI	i User			Outbound		

4. Click the **Credential Mappings** tab under the Security tab, and then click **New**.

The Create a New Security Credential Mapping page is displayed, as shown in Figure 8–8.

	Next Finish Cancel					
Outbou						
	und Connection Pool					
	Outbound Connection Pool would you like the credential map to be associated w source adapter. Each Outbound Connection Pool can then configure themselves					
Custor	mize this table					
Create	a New Security Credential Map Entry for:					
	lutbound Connection Pool 🔗					
🗹 ei	eis/OracleJCAAdapter/DefaultConnection					
C Re	Resource Adapter Default					
Back	Next Finish Cancel					

Figure 8–8 Create a New Security Credential Mapping Page

5. Select the outbound connection pool.

For example:

eis/OracleJCAAdapter/DefaultConnection

6. Click Next.

The WebLogic Server User page is displayed, as shown in Figure 8–9.

Figure 8–9 WebLogic Server User Page

Create a New Security Credential Mapping	
Back Next Finish Cancel	
WebLogic Server User	
Select the WebLogic Server User that you would like to map an EIS user to. Select the resource adapter is first started. Selecting 'Default User' will configure the use specifically for them. Selecting 'User for unauthenticated user' will configure the u WebLogic Server user that you are configuring. This user must be a configured W	r that will be used as the default for any a ser that will be used for an unauthenticate
C User for creating initial connections	
C Default User	
C Unauthenticated WLS User	
Configured User Name	
WebLogic Server User Name:	weblogic
Back Next Finish Cancel	

7. Select Configured User Name, enter a valid Oracle WebLogic Server user name, and then click **Next**.

The EIS User Name and Password page is displayed, as shown in Figure 8–10.

Create a New Security Credential Mapping	
Back Next Finish Cancel	
EIS User Name and Password	
Configure the EIS User Name and Password that you w	ould like to map the WebLogic Server User to:
* Indicates required fields	
Enter the EIS User Name:	
* EIS User Name::	iwayqa
Enter the EIS Password:	
* EIS Password::	•••••
* Confirm Password::	•••••
Back Next Finish Cancel	

Figure 8–10 EIS User Name and Password Page

8. Enter the user name and password for the EIS and click Finish.

The credentials for an Oracle WebLogic Server user are now mapped with an EIS user (PeopleSoft). The mapping is invoked automatically before invoking the J2CA service.

8.2.2.2 Generating a WSDL File

To generate a WSDL file:

1. Open Application Explorer and create a J2CA configuration.

For more information, see "Creating a Configuration for J2CA" on page 2-4.

2. Create a target for the PeopleSoft adapter and then connect to the target.

For more information, see "Establishing a Connection (Target) for PeopleSoft" on page 2-6.

3. Generate a WSDL for the appropriate object.

For more information, see "Generating a WSDL (J2CA Configurations Only)" on page 2-11.

8.2.2.3 Creating an Outbound Process

This section describes how to configure an outbound process. For demonstration purposes, specific references to the BPEL outbound process are made. However, the same steps apply to Mediator and BPM outbound processes.

For more information about creating a Mediator outbound process, see Chapter 5, "Integration With Mediator Service Components in the Oracle SOA Suite".

For more information about creating a BPM outbound process, see Chapter 6, "Integration With BPM Service Components in the Oracle SOA Suite".

To create a BPEL outbound process:

1. Open JDeveloper and create a new SOA application.

For more information, see "Creating a New SOA Application for the Outbound BPEL Process" on page 4-9.

- 2. Create a new SOA project (for example, Credential_Mappings).
- 3. Deploy the BPEL outbound process.

For more information, see "Deploying the BPEL Outbound Process" on page 4-33.

8.2.2.4 Attaching a Security Policy to an Outbound Process Using the Oracle Enterprise Manager Console

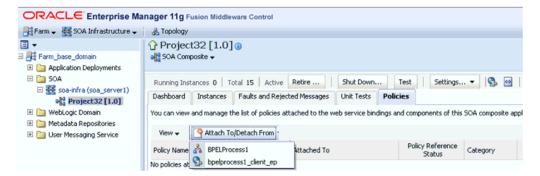
To attach a security policy to an outbound process using the Oracle Enterprise Manager console:

- **1.** Log in to the Oracle Enterprise Manager console and navigate to the deployed composite.
- 2. Click the **Policies** tab.

From the Attach To/Detach From list, select the BPEL, Mediator, or BPM outbound process.

BPEL or Mediator outbound processes have _client appended to the process name. BPM outbound processes use the Process.service naming convention.

Figure 8–11 Policies Tab



The Attached Policies page is displayed, as shown in Figure 8–12.

Attached Policies					
Name	Category	Enable	ed Description	View Descrip	
oracle/wss_http_token_service_policy	Security	~	This policy uses the crede.	66	\$
Attach		🗢 Detach			
wailable Policies			-		
Search Category - Security - 0					
Search Category Security				View Full	
Name	Category	Enabled	Description	Description	
oracle/binding_authorization_denyall_policy	Security	~	This policy is a special c	66	
oracle/binding_authorization_permitall_policy	Security	×	This policy is a special c	66	
oracle/binding_permission_authorization_policy	Security	~	This policy is a special c	60	
oracle/wss10_message_protection_service_policy	Security	~	This policy enforces messa	66	
oracle/wss10_saml_hok_token_with_message_protection_service_policy	Security	~	This policy enforces messa	60	
oracle/wss10_saml_token_service_policy	Security	~	This policy authenticates	66	
oracle/wss10_saml_token_with_message_integrity_service_policy	Security	~	This policy enforces messa	66	
oracle/wss10_saml_token_with_message_protection_service_policy	Security	~	This policy enforces messa	60	
oracle/wss10_saml_token_with_message_protection_ski_basic256_service_policy	Security	~	This policy enforces messa	66	
oracle/wss10_username_id_propagation_with_msg_protection_service_policy	Security	~	This policy enforces messa	66	
oracle/wss10_username_token_with_message_protection_service_policy	Security	~	This policy enforces messa	66	
oracle/wss10_username_token_with_message_protection_ski_basic256_service_p	Security	~	This policy enforces messa	60	

Figure 8–12 Attached Policies Page

- 3. Select the **Security** category and click **Search**.
- **4.** Scroll through the list and select **oracle/wss_http_token_service_policy**.
- 5. Click Attach and then OK.

The selected policy is now displayed in the Policies tab.

6. Click the **Test** tab and select **WSS Username Token** in the Security section of the Request tab. Enter a valid Oracle WebLogic Server user name and password, as shown in Figure 8–13

Figure 8–13 Test Tab

Operation	process 💌	-		
Endpoint URL	http://dchunt	er1.ibi.com:8001/soa-infra/services/default/Project32/bpelprocess1_clier	Edit End	point URL 🔲
Request	Response			
Security				
WSS Use	rname Token	C HTTP Basic Auth C Custom Policy C None		
* Username	weblogic	Pas	ssword	•••••
Quality of	Service			

7. Invoke the deployed BPEL outbound process with a valid input.

For more information, see "Invoking the Input XML Document in the Oracle Enterprise Manager Console" on page 4-37.

8. Check the J2CA log files and locate the encrypted password, which shows that the user credentials have been passed to the EIS through Oracle WebLogic Server.

For example:

FINEST IWAFManagedConnectionFactory com.ibi.afjca.Util

```
getPasswordCredential(78) InLoop:
User-iwayqa:Password-ENCR(3109311731831131382333215315332323192322731773172)
FINEST IWAFManagedConnectionFactory com.ibi.afjca.Util
getPasswordCredential(90) Use the system PasswordCredential:
User-iwayqa:Password-ENCR(310931173183113182333215315332323192322731773172)
```

8.3 Credential Mapping for Oracle Service Bus (OSB)

This section describes how to configure credential mapping functionality for the Oracle Application Adapter for PeopleSoft in a configuration that uses Oracle Service Bus (OSB). A sample testing scenario is also included. This section contains the following topics:

- Section 8.3.1, "Prerequisites"
- Section 8.3.2, "Configuring Credential Mapping"

Credential mapping is supported only for outbound processes that use J2CA configurations. This feature is not supported for BSE configurations and inbound processes that use J2CA configurations.

Note: The J2CA connector is common to all four application adapters (SAP R/3, PeopleSoft, Siebel, and J.D. Edwards OneWorld). If credential mapping is required, then ensure that only one application adapter is used in a particular instance. For example, in one adapter instance only the PeopleSoft application adapter can be used. Credential mapping cannot be configured at the individual adapter level. If you require the use of credential mapping for two adapters, then both adapters must be running in two independent adapter instances.

To pass user credentials to the iWay J2CA resource adapter, create a credential map from the Oracle WebLogic Server user credentials to the EIS user credentials (PeopleSoft adapter). Then associate a credential policy with a Web service and invoke the Web service using Oracle WebLogic Server user credentials. These credentials are mapped to the EIS user credentials and then passed to the iWay J2CA container, which uses them to connect with the EIS adapter (PeopleSoft).

8.3.1 Prerequisites

This section lists the prerequisites for credential mapping.

- Oracle Service Bus (OSB) for PS3 must be installed.
- Oracle Application Adapter for PeopleSoft for 11g Release 1 (11.1.1.4.0) must be installed.

For more information, see the Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server.

8.3.2 Configuring Credential Mapping

Configuring credential mapping consists of the following steps:

1. Deploy the adapter.

For more information, see Chapter 3, "Oracle WebLogic Server Deployment and Integration".

2. Associate Oracle WebLogic Server credentials with EIS credentials.

For more information, see "Associating Oracle WebLogic Server Credentials With EIS Credentials" on page 8-15.

3. Generate a WSDL file.

For more information, see "Generating a WSDL File" on page 8-18.

4. Create an Oracle Service Bus (OSB) outbound process.

For more information, see "Creating an Oracle Service Bus (OSB) Outbound Process" on page 8-18.

8.3.2.1 Associating Oracle WebLogic Server Credentials With EIS Credentials

To associate Oracle WebLogic Server credentials with EIS credentials:

- 1. Log in to the Oracle WebLogic Server Administration Console.
- **2.** In the Domain Structure section in the left pane, click **Deployments**, as shown in Figure 8–14.

Figure 8–14 Domain Structure Section

Change Center	🛍 Home Log Out Preferences 🔤 Record Help					
View changes and restarts	Home >Summary of Deployments					
Click the Lock & Edit button to modify, add or delete items in this domain.	Summary of Deployments Control Monitoring					
Lock & Edit Release Configuration Domain Structure	This page displays a list of Java EE applications and : applications and modules can be started, stopped, u and using the controls on this page.					
Dase_domain Environment Deployments	To install a new application or module for deploymen					
Services Security Realms Interoperability	Customize this table					
Diagnostics	Install [Indate] Delete] Start - Ston -					

The Deployments page is displayed, as shown in Figure 8–15.

Figure 8–15	Deployments	Page
-------------	-------------	------

	(@hieedapter
System Status 😑	
Health of Running Servers	
Failed (0)	
Critical (0)	🗈 🧿ibse
Overloaded (0) Warning (0)	<mark>⊘iwafica</mark>
OK (2)	🖅 🧃 iwafjca, Level 1, 13 of 33
	🔯 JmsAdapter
	MQSeriesAdapter
	A Oracle Apps Adapter

3. Click the **iwafjca** resource adapter.

The Settings for iwafjca page is displayed, as shown in Figure 8–16.

Figure 8–16 Settings for iwafjca Page

Settings	for iwafj	ca								
Overvie	w Depk	yment Plan	Configuration	Securit	y Targets	Control	Testing	Monitoring	Notes	
Roles	Policies	Credentia	l Mappings	Principals						
creder mappi	itial mappir	ngs for all out resource ada table	bound connecti							to which you want t for individual conne
New	Delete	2								
	□ WLS User ↔ EIS User Outbound Connection Pool									
							There ar	e no items to	display	
New	Delete	2								

4. Click the Credential Mappings tab under the Security tab, and then click New.

The Create a New Security Credential Mapping page is displayed, as shown in Figure 8–17.

	a New Security Credential Mapping				
Out	bound Connection Pool				
	h Outbound Connection Pool would you like the credential map to be associated w resource adapter. Each Outbound Connection Pool can then configure themselves				
Customize this table					
cus	comize this cable				
	te a New Security Credential Map Entry for:				
	te a New Security Credential Map Entry for:				
	te a New Security Credential Map Entry for:				
Crea	outbound Connection Pool 🗞				

Figure 8–17 Create a New Security Credential Mapping Page

5. Select the outbound connection pool.

For example:

eis/OracleJCAAdapter/DefaultConnection

6. Click Next.

The WebLogic Server User page is displayed, as shown in Figure 8–18.



Create a New Security Credential Mapping	
Back Next Finish Cancel	
WebLogic Server User	
Select the WebLogic Server User that you would like to map an EIS user to the resource adapter is first started. Selecting 'Default User' will configure specifically for them. Selecting 'User for unauthenticated user' will configu WebLogic Server user that you are configuring. This user must be a config	the user that will be used as the default for any a re the user that will be used for an unauthenticate
C User for creating initial connections	
C Default User	
C Unauthenticated WLS User	
Configured User Name	
WebLogic Server User Name:	weblogic
Back Next Finish Cancel	

7. Select Configured User Name, enter a valid Oracle WebLogic Server user name, and then click **Next**.

The EIS User Name and Password page is displayed, as shown in Figure 8–19.

Create a New Security Credential Mapping	
Back Next Finish Cancel	
EIS User Name and Password	
Configure the EIS User Name and Password that you we * Indicates required fields	ould like to map the WebLogic Server User to:
Enter the EIS User Name:	
*EIS User Name::	iwayqa.
Enter the EIS Password:	
* EIS Password::	•••••
* Confirm Password::	•••••
Back Next Finish Cancel	

Figure 8–19 EIS User Name and Password Page

8. Enter the user name and password for the EIS and click Finish.

The credentials for an Oracle WebLogic Server user are now mapped with an EIS user (PeopleSoft). The mapping is invoked automatically before invoking the J2CA service.

8.3.2.2 Generating a WSDL File

To generate a WSDL file:

1. Set the class path for Application Explorer to integrate with Oracle Service Bus (OSB).

For more information, see "Setting the Class Path for Application Explorer to Integrate With Oracle Service Bus" on page 7-4.

2. Open Application Explorer and create a J2CA configuration.

For more information, see "Creating a Configuration for J2CA" on page 2-4.

3. Create a target for the PeopleSoft adapter and then connect to the target.

For more information, see "Establishing a Connection (Target) for PeopleSoft" on page 2-6.

4. Publish a WSDL to OSB for the appropriate object.

For more information, see "Publishing a WSDL From Application Explorer to Oracle Service Bus" on page 7-4.

8.3.2.3 Creating an Oracle Service Bus (OSB) Outbound Process

To create an Oracle Service Bus (OSB) outbound process with credential mapping functionality:

1. Start Oracle Service Bus and create project folders.

For more information, see "Starting Oracle Service Bus and Creating Project Folders" on page 7-2.

2. Configure a File type Business Service.

For more information, see "Configuring a File Type Business Service" on page 7-8.

3. Configure a Business Service.

For more information, see "Configuring a WSDL-based Business Service" on page 7-6.

4. Configure a Proxy Service.

For more information, see "Configuring a Proxy Service" on page 7-13.

5. Configure a Pipeline.

For more information, see "Configuring a Pipeline" on page 7-16.

6. Configure a Service account by selecting the created folder in the left pane.

In the right pane, select **Service Account** from the Create Resource list, as shown in Figure 8–20.

XML Schema WS-Policy JCA Binding Transformation XQuery XSLT MFL File Security Service Account Service Key Provider Utility JAR Alert Destination XML Document Bulk Resources from URL Resources * Zipped Resources Create Resource: Select Resource Type •

Figure 8–20 Select Service Account Option

The Create a New Service Account page is displayed, as shown in Figure 8–21.

Figure 8–21	General	Configuration	Page
-------------	---------	---------------	------

& Create a New Service Ad	ccount (Path - Sanity)
General Configuration	
Resource Name*	OSB_static
Resource Description	
Resource Type	 C Pass Through ● Static ⊂ Mapping
Next >>	Last >> Cancel

- **7.** Provide a name for the resource and select **Static** as the resource type.
- 8. Click Next.

The Static User Configuration page is displayed, as shown in Figure 8–22.

Figure 8–22 Static User Configuration Page

& Create a New Service Account (Path - Sanity)		
Static User Configuration		
User Name*	weblogic	
Password*	•••••	
Confirm Password*	•••••	
<< Prev.	Last >> Cancel	

9. Provide a valid user name and password for Oracle WebLogic Server, and then click **Last**.

The Summary page is displayed, as shown in Figure 8–23.

& Create New Service Account - Summary [Path -Sanity]		
General Configuration		
Name	OSB_static	
Description		
Туре	Static	
Static Credentials		
User Name	weblogic	
Password	****	
<< Prev. Save	Cancel	

- **10.** Review the information and click **Save**.
- **11.** In the left pane, select the Business Service that was created while publishing the WSDL, as shown in Figure 8–24.

Figure 8–24 Select the Business Service

		No Folders to display.
	Delete	
	Create Resource: Select Resource Type	
	□ Name △	
Ŧ	LOCATION invoke BS	

For more information, see "Configuring a WSDL-based Business Service" on page 7-6.

12. Click **Edit** to edit the process, as shown in Figure 8–25.

Security Configuration	Adapter Name	iWay ERP Adapter	
System Administration	Adapter Type	ERP	
	JNDI Service Account	Sanity/sta	
	Always use configuration from JCA file	True	
	Message Handling Configuration		
	Result Caching	Not Supported	
	Back Edit]	

Figure 8–25 Edit Option

The General Configuration page is displayed.

13. Click Next.

The Transport Configuration page is displayed, as shown in Figure 8–26.

Figure 8–26 Transport Configuration Page

Protocol*	jca 💌	
Load Balancing Algorithm	round-robin	
Endpoint URI*	Format: jca:// <resource_adapter_jndi> jca:// EXISTING URIS jca://eis/OracleJCAAdapter/DefaultConnection</resource_adapter_jndi>	
Retry Count	0	
Retry Iteration Interval	30	
Retry Application Errors	⊙ Yes O No	
<< Prev. Ne	xt >> Cancel	

14. Click Next.

The JCA Transport Configuration page is displayed, as shown in Figure 8–27.

JCA Transport Configuration			
JCA File	Sanity/wsdls/LOCATION_invoke		
Adapter Name	Way ERP Adapter		
Adapter Type	ERP		
Dispatch Policy	default		
JNDI Service Account	Sanity/sta		
EndPoint Properties	PROPERTY VALUE ACTI		

15. Browse the JNDI service account that was created and click **Last**.

The Summary page is displayed, as shown in Figure 8–28.

Figure 8–28 Summary Page

JCA Transport Configuration		
JCA File	Sanity/wsdls/LOCATION_invoke	
Adapter Name	iWay ERP Adapter	
Adapter Type	ERP	
JNDI Service Account	Sanity/sta	
Always use configuration from JCA file	True	
Message Handling Configuration		
Result Caching	Not Supported	
<< Prev. Save	Cancel	

- **16.** Review the information and click **Save**.
- **17.** Check if the success message is displayed and click **Activate** in the Change Center, as shown in Figure 8–29.

Figure 8–29 Success Message

weblogic session			
No Conflicts			
View Changes	Marche Service "LOCATION_invoke_BS" was crea		
View All Sessions			
Activate Discard Exit	Sanity/PSoft_BS		
Project Explorer	References	3 Ref(s)	Descri - no de
rojects dchunter	Referenced By	2 Ref(s)	E
default	😂 Folders		

The Activate Session page is displayed, as shown in Figure 8–30.

Figure 8–30 Activate Session Page

Session Name	weblogic
User	weblogic
Description	
Submit	

- 18. Click Submit.
- **19.** Copy and paste a valid input XML file in the input folder you configured and check to see that the output is received in the configured output location.
- **20.** Check the J2CA log files and locate the encrypted password, which shows that the user credentials have been passed to the EIS through Oracle WebLogic Server.

For example:

```
FINEST IWAFManagedConnectionFactory com.ibi.afjca.Util
getPasswordCredential(78) InLoop:
User-iwayqa:Password-ENCR(3189321331831132502333215312132323192322731773156)
Tue FINEST IWAFManagedConnectionFactory com.ibi.afjca.Util
getPasswordCredential(90) Use the system PasswordCredential:
User-iwayqa:Password-ENCR(318932133183113250233215312132323192322731773156)
```

Troubleshooting and Error Messages

This chapter explains the limitations and workarounds when connecting to PeopleSoft. It contains the following topics:

- Section 9.1, "Troubleshooting"
- Section 9.2, "BSE Error Messages"

The adapter-specific errors listed in this chapter can arise whether using the adapter with an Oracle Adapter J2CA or with an Oracle Adapter Business Services Engine (BSE) configuration.

9.1 Troubleshooting

This topic provides troubleshooting information for PeopleSoft, separated into four categories:

- Application Explorer
- PeopleSoft
- Oracle Adapter J2CA
- Oracle Adapter Business Services Engine (BSE)

Log file information that can be relevant in troubleshooting can be found in the following locations based on your adapter installation:

The Oracle Adapter J2CA trace information can be found under the following directory:

For Oracle SOA Suite:

<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_name\log

For OSB:

<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\log

BSE trace information can be found under the following directory:

<ADAPTER_HOME>\user_projects\domains\base_domain\servers\soa_ server1\stage\ibse.war\ibselogs

The log file for Application Explorer can be found under the following directory:

For Oracle SOA Suite:

<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\tools\iwae\bin

For OSB:

<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\tools\iwae\bin

Application Explorer

This topic discusses the different types of errors that can occur when using Application Explorer.

Error	Solution	
Cannot connect to Oracle Application Adapter for PeopleSoft from Application Explorer. The following error message appears: Problem activating adapter	Ensure that:	
	 PeopleSoft is running. 	
	 The PeopleSoft user ID and password are correct. 	
	 The port number is correct. 	
	 The custom component interface is properly installed. 	
The following error message appears:	You have provided invalid connection	
java.lang.IllegalStateException: java.lang.Exception: Error Logon to PeopleSoft System	information for PeopleSoft or the wrong psjoa.jar is in the lib directory.	
	The psjoa.jar file version is specific to the PeopleTools release.	
PeopleSoft does not appear in the Application Explorer Adapter node list.	Ensure that the PeopleSoft JAR files, iwpsci84.jar (or iwpsci81.jar) and psjoa.jar, are added to the lib directory.	
Logon failure error at run-time.	If the password for connecting to your PeopleSoft system is not specified when creating a target or with the Edit option in Application Explorer, you will be unable to connect to PeopleSoft. The connection password is not saved in repository.xml. Update the password using the Edit option in Application Explorer, then restart the application server.	
The following error message appears:	The host name or port number for PeopleSoft	
Jolt Session Pool cannot provide a connection to the appserver. This appears to be because there is no available application server domain. [Fri Aug 27 13:06:27 EDT 2004] bea.jolt.ServiceException: Invalid Session	is incorrect.	
Properties are not displayed for a component interface.	You are using the wrong iwpsci8x.jar file.	
Cannot generate schemas.	If the error message "Index: -1, Size:0" appears, or if you can log on to Application Explorer but you cannot see any Component Interfaces or Messages, then you may have both the iwpsci81.jar and iwpsci84.jar files in your lib directory. Stop your server, remove the unrequired jar file, and restart the	

server.

Error	Solution
The following exception occurs when you start Application Explorer by activating ae.bat (not iaexplorer.exe):	This is a benign exception. It does not affect adapter functionality. Download BouncyCastle files from:
<pre>java.lang.ClassNotFoundException: org.bouncycastle.jce.provider.Boun cyCastleProvider</pre>	<pre>ftp://ftp.bouncycastle.org/pub</pre>
Unable to start Application Explorer in a Solaris environment. The following exception is thrown in the console:	JAVACMD is not set on the user system. Before starting Application Explorer, export JAVACMD as follows:
<pre>javax.resource.ResourceException: IWAFManagedConnectionFactory: License violation.at com.ibi.afjca.spi.IWAFManagedConne ctionFactory.createConnectionFacto ry(IWAFManagedConnectionFactory.ja va:98)at com.iwaysoftware.iwae.common.JCATr ansport.getConnectionFactory(JCATr ansport.java:133) at com.iwaysoftware.iwae.common.JCATr ansport.initJCA(JCATransport.java: 69)at com.iwaysoftware.iwae.common.JCATr ansport.<init>(JCATransport.java: 62)at com.iwaysoftware.iwae.common.Adapt erClient.<init>(AdapterClient.java :85)at com.ibi.bse.ConfigWorker.run(Confi gWorker.java:41)at java.lang.Thread.run(Thread.java:5 34)</init></init></pre>	JAVACMD=/ <jdk_home>/bin/java, where <jdk_home> is the directory where JDK is installed on your system.</jdk_home></jdk_home>
Could not create the connection factory.	

PeopleSoft

Error	Solution
Services are not working properly when using the PeopleSoft Component Interface testing tool in three-tier mode.	To test properly using the Component Interface testing tool:
	1. Open Application Designer.
	2. Select the Component Interface.
	3. Use the test tool.
	If service works in test tool, then review the XML and check for redundant fields in XML.
The following error message appears: Jolt Session Pool cannot provide a connection to the appserver. This appears to be because there is no available application server domain. [Fri Aug 27 13:06:27 EDT 2004] bea.jolt.ServiceException: Invalid Session	The host name or port number for PeopleSoft is incorrect.
Component Interfaces and Messages do not appear in the adapter tree.	The project is not installed properly on the PeopleSoft system.

Error	Solution
Return error code -1 is received from PeopleSoft at run-time, for example:	You are either using the incorrect version of psjoa.jar, or have both the iwpsci81.jar and iwpsci84.jar files in your lib directory. In the second case, you must delete the unused JAR file, and then restart the server.
<locationprocessresponse xmlns="http://xmlns.oracle.com/LOC ATION"></locationprocessresponse 	
<pre><error xmlns="">-1</error></pre>	The psjoa.jar file version is specific to the PeopleTools release. This file is required for PeopleSoft 8.1. If you are using PeopleSoft 8.1, you should add this file. If you are not using PeopleSoft 8.1 and this error message still appears, ignore the message.
Pstools.properties file has not been initialized.	
The following error message appears:	The reason may be either of the following:
Cannot find Component Interface {CI name}	• The Java API for the selected component interface is not found in the API JAR file. Please check the Java API for the class file for the CI. If not found, please add the class file for the CI.
	 The component interface name is mentioned incorrectly in the request document.
The following error message appears: Not Authorized (90,6) Failed to execute PSSession request	The component interface does not have the necessary access to perform the operation. Change the permission settings in the PeopleSoft > Security > Permission list for the component interface.
The following error message appears:	The reason may be any of the following:
Must also provide values for keys {keyname}	 The request XML document does not have the element for the mandatory key. Please include the keyname and the value in the request document.
	 The Key field name is mentioned incorrectly in the request document.
	• The Perform operation is mentioned incorrectly in the request XML document.

Oracle Adapter J2CA

Error	Solution
In Application Explorer, the following error message appears when you attempt to connect to an Oracle Adapter J2CA configuration: Could not initialize JCA	In the Details tab in the right pane, ensure that the directory specified in the Home field points to the correct directory, for example:
	<adapter_ HOME>\soa\thirdparty\ApplicationAdapter s\tools\iwae\bin\\\</adapter_

9.2 BSE Error Messages

This topic discusses the different types of errors that can occur when processing Web services through Oracle WebLogic Server Adapter Business Services Engine (BSE).

9.2.1 General Error Handling in BSE

BSE serves as both a SOAP gateway into the adapter framework and as the engine for some of the adapters. In both design time and run-time, various conditions can cause errors in BSE when Web services that use adapters run. Some of these conditions and resulting errors are exposed the same way, regardless of the specific adapter; others are exposed differently, based on the adapter being used. This topic explains what you can expect when you encounter some of the more common error conditions on an adapter-specific basis.

Usually, the SOAP gateway (agent) inside BSE passes a SOAP request message to the adapter required for the Web service. If an error occurs, how it is exposed depends on the adapter and the API or interfaces that the adapter uses. The APIs are generated from PeopleTools and are specific to the PeopleTools release. A few scenarios cause the SOAP gateway to generate a SOAP fault. In general, anytime the SOAP agent inside BSE receives an invalid SOAP request, a SOAP fault element is generated in the SOAP response. The SOAP fault element contains fault string and fault code elements. The fault code contains a description of the SOAP agent error.

The following SOAP response document results when BSE receives an invalid SOAP request:

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">

```
<SOAP-ENV:Body>
<SOAP-ENV:Fault>
<faultcode>SOAP-ENV:Client</faultcode>
<faultstring>Parameter node is missing</faultstring>
</SOAP-ENV:Fault>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

In this example, BSE did not receive an element in the SOAP request message that is mandatory for the WSDL for this Web service.

9.2.2 Adapter-Specific Error Handling

When an adapter raises an exception during run-time, the SOAP agent in BSE produces a SOAP fault element in the generated SOAP response. The SOAP fault element contains fault code and fault string elements. The fault string contains the native error description from the adapter target system. Since adapters use the target system interfaces and APIs, whether an exception is raised depends on how the target systems interface or API treats the error condition. If a SOAP request message is passed to an adapter by the SOAP agent in BSE, and that request is invalid based on the WSDL for that service, the adapter may raise an exception yielding a SOAP fault.

While it is almost impossible to anticipate every error condition that an adapter may encounter, the following is a description of how adapters handle common error conditions and how they are then exposed to the Web services consumer application.

Oracle Application Adapter for PeopleSoft Invalid SOAP Request

If the PeopleSoft agent receives a SOAP request message that does not conform to the WSDL for the Web service being executed, then the following SOAP response is generated.

```
<SOAP-ENV:Envelope xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/1999/XMLSchema">
<SOAP-ENV:Body>
```

```
<m:CARRIERResponse xmlns:m="urn:schemas-iwaysoftware-com:iwse"
xmlns="urn:schemas-iwaysoftware-com:iwse"
cid="2A3CB42703EB20203F91951B89F3C5AF">
<PS8>
<PS8>
</error>Cannot find Component Interface {VARRIER} (91,2)Initialization
failed (90,7)Not Authorized (90,6)Failed to execute PSSession request Cannot
find Component Interface {VARRIER} (91,2)</error>
</PS8>
</m:CARRIERResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Empty Result From PeopleSoft Request

If Oracle Application Adapter for PeopleSoft executes a component interface as a Web service using input parameters passed in the SOAP request that do not match records in PeopleSoft, then the following SOAP response is generated.

```
<SOAP-ENV:Enve
lope xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/1999/XMLSchema">
<SOAP-ENV:Body>
<m:CARRIERResponse xmlns:m="urn:schemas-iwaysoftware-com:iwse"
xmlns="urn:schemas-iwaysoftware-com:iwse" cid="2A3CB42703EB20203F91951B89F3C5AF">
<PS8>
<error>No rows exist for the specified keys. {CARRIER} (91,50)Failed to
execute PSBusComp request</error>
</PS8>
</m:CARRIERResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Failure to Connect to PeopleSoft

If Oracle Application Adapter for PeopleSoft cannot connect to PeopleSoft, then the following SOAP response is generated.

```
<?xml version="1.0" enco
ding="ISO-8859-1" ?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Body>
<SOAP-ENV:Fault>
<faultcode>SOAP-ENV:Server</faultcode>
<faultstring>java.lang.Exception: Error Logon to PeopleSoft
System<faultstring>
</SOAP-ENV:Fault>
</SOAP-ENV:Fault>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Invalid SOAP Request

If Oracle WebLogic Server Application Adapter receives a SOAP request message that does not conform to the WSDL for the Web services being executed, then the following SOAP response is generated.

```
<?xml version="1.0" encoding="ISO-8859-1"
?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Body>
<SOAP-ENV:Fault>
<faultcode>SOAP-ENV:Server</faultcode>
```

```
<faultstring>RPC server connection failed: Connection refused:
connect</faultstring>
</SOAP-ENV:Fault>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Empty Result From Oracle WebLogic Server Application Adapter Request

If the adapter executes a SOAP request using input parameters passed that do not match records in the target system, then the following SOAP response is generated.

Note: The condition for this adapter does not yield a SOAP fault.

```
<SOAP-ENV:Envelope xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/1999/XMLSchema">
<SOAP-ENV:Body>
<m:RunDBQueryResponse xmlns:m="urn:schemas-iwaysoftware-com:iwse"
xmlns="urn:schemas-iwaysoftware-com:iwse"
cid="2A3CB42703EB20203F91951B89F3C5AF">
<RunDBQueryResponse xmlns:m="urn:schemas-iwaysoftware-com:iwse"
cid="2A3CB42703EB20203F91951B89F3C5AF">
<RunDBQueryResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Body>
```

Advanced User Tools

This chapter describes advanced user tools. It contains the following topics:

- Section 10.1, "Web Services Policy-Based Security"
- Section 10.2, "Migrating Repositories"

10.1 Web Services Policy-Based Security

Oracle Adapter Application Explorer (Application Explorer) provides a security model called Web services policy-based security. The following topics describe how the feature works and how to configure it.

Web services provide a layer of abstraction between the back-end business logic and the user or application running the Web service. Easy application integration is enabled. However, the issue of controlling the use and implementation of critical and sensitive business logic that is run as a Web service is raised.

Application Explorer controls the use of Web services that use adapters, using a feature called policy-based security. This feature enables an administrator to apply policies to business services (Web services) to deny or permit their execution.

A policy is a set of privileges dealing with the execution of a business service that can be applied to an existing or new business service. When you set specific rights or privileges inside a policy, you do not have to re-create privileges for every business service that has security concerns in common with other business services. Instead, you reuse a policy on multiple business services.

The goal of the feature is to secure requests at both the transport and the SOAP request level transmitted on the wire. Some of the policies do not deal with security issues directly, but do affect the run-time behavior of the Web services to which they have been applied.

The BSE administrator creates an "instance" of a policy type, names it, associates individual users or groups (a collection of users), and then applies that policy to one or more business services.

You can assign a policy to a business service, or to a method within a business service. If a policy is only applied to a method, other methods in that business service will not be governed by it. However, if a policy is applied to the business service, all methods are governed by it. At run-time, the user ID and password that are sent to BSE in the SOAP request message are checked against the list of users for all policies applied to that specific business service. The policy type that is supported is Resource Execution, which dictates who can or cannot execute the business service.

When a policy is not applied, the default value for a business service is to "grant all". For example, anybody can execute the business service, until the Resource Execution policy is associated to the business service. At that time, only those granted execution permissions, or users not part of the group that has been denied execution permissions, have access to the business service.

10.1.1 Configuring Web Services Policy-Based Security

The following procedures describe how to configure Web services policy-based security.

Creating and Associating a User with a Policy

Before you create instances of policies, you must have a minimum of one user or one group to associate to an instance. You can create users and groups using Application Explorer.

- 1. Start Application Explorer.
- 2. Right-click the configuration to which you want to connect, for example, SampleConfig. For more information on how to create a new configuration, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".
- 3. Select Connect.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in Figure 10–1.

Figure 10–1 Sample Configuration Node

SampleConfig
 Adapters
 Business Services

- a. Expand the Business Services node.
- **b.** Expand the **Configuration** node.
- c. Expand the Security node.
- **d.** Expand the **Users and Groups** node, as shown in Figure 10–2.

Figure 10–2 New User Option



4. Right-click Users and click New User.

The New User dialog is displayed, as shown in Figure 10–3.

Figure 10–3 New User Dialog

🖻 New User	
Name:	
Password:	
Description:	
	OK Cancel

- **a.** In the **Name** field, enter a user ID.
- **b.** In the **Password** field, enter the password associated with the user ID.
- c. In the Description field, enter a description of the user (optional).
- 5. Click OK.

Figure 10–4 Users Node



The new user is added under the Users node, as shown in Figure 10-4.

Creating a Group to Use With a Policy

To create a group to use with a policy:

- 1. Start Application Explorer.
- 2. Right-click the configuration to which you want to connect, for example, SampleConfig. For more information on how to create a new configuration, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".
- 3. Select Connect.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in Figure 10–5.

Figure 10–5 Web Services



- a. Expand the Business Services node.
- **b.** Expand the **Configuration** node.
- **c.** Expand the **Security** node.
- d. Expand the Users and Groups node.





4. Right-click Groups and select New Group, as shown in Figure 10–6.

The New Group dialog is displayed, as shown in Figure 10–7.

Figure 10–7 New Group Dialog

🖻 New Group	
Name:	
Description:	
Available	Selected
ibse1	>>> <<
	OK Cancel

- **a.** In the **Name** field, enter a name for the group.
- **b.** In the **Description** field, enter a description for the group (optional).
- **c.** From the available list of users in the left pane, select one or more users and add them to the **Selected** list by clicking the double right-facing arrow.
- 5. When you have selected at least one user, click OK.

The following shows the new group added under the **Groups** node, as shown in Figure 10–8.

Figure 10–8 New Group

9 號 Groups 👷 test

Creating an Execution Policy

An execution policy governs who can execute the business services to which the policy is applied.

To create an execution policy:

- 1. Start Application Explorer.
- 2. Right-click the configuration to which you want to connect, for example, SampleConfig. For more information on how to create a new configuration, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".

3. Select Connect.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in Figure 10–9.

Figure 10–9 Web Services



- a. Expand the Business Services node.
- **b.** Expand the **Configuration** node.
- c. Expand the Security node.
- d. Expand the Policies.

Figure 10–10 Policies Node



4. Right-click Policies and select New Policy, as shown in Figure 10–10.

The New policy dialog is displayed, as shown in Figure 10–11.

Figure 10–11 New Policy Dialog

Policy New Policy	, 🔀
Name:	
Туре:	Execution 🔻
Description:	
Available group.test user.ibse1 user.ibse2	Selected
	Next Cancel

Provide the following information:

- **a.** In the **Name** field, enter a name for the policy.
- **b.** From the Type list, select **Execution**.
- c. In the Description field, enter a description for the policy (optional).

d. From the available list of users in the left pane, select one or more users and add them to the **Selected** list by clicking the double right-facing arrow.

Note: This user ID is checked against the value in the user ID element of the SOAP header sent to BSE in a SOAP request.

- 5. When you have selected at least one user, click **OK**.
- 6. Click Next.

The New Policy permissions dialog is displayed, as shown in Figure 10–12.

Figure 10–12 New Policy Permissions Dialog

New Policy	
Execution Granted group.test	Execution Denied
Back	OK Cancel

- **7.** To grant permission to a user or group to execute a business service, select the user or group and move them into the **Execution Granted** list by selecting the double left-facing arrow.
- **8.** To deny permission to a user or group to execute a business service, select the user or group and move them into the Execution Denied list by selecting the double right-facing arrow.
- 9. Click OK.

The following pane summarizes your configuration, as shown in Figure 10–13.

Figure 10–13 Policy Permissions Summary

- Name test
- Type Execution
- Description
- User and Group Restrictions
 - group test Execution Granted

Using the IP and Domain Restrictions Policy Type

You configure the IP and Domain Restriction policy type slightly differently from other policy types. The IP and Domain Restriction policy type controls connection access to BSE and therefore need not be applied to individual Web services. You need not create a policy; however, you must enable the Security Policy option in Application Explorer.

1. Start Application Explorer.

- 2. Right-click the configuration to which you want to connect, for example, SampleConfig. For more information on how to create a new configuration, see Chapter 2, "Configuring Oracle Application Adapter for PeopleSoft".
- 3. Select Connect.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in Figure 10–14.

Figure 10–14 Web Services



Perform the following steps:

- **a.** Expand the **Business Services** node.
- **b.** Expand the **Configuration** node.
- **c.** Expand the **Security** node.
- Right-click IP and Domain and select New IP and Domain Restriction, as shown in Figure 10–15.

Figure 10–15 IP and Domain Node



The New IP and Domain Restriction dialog is displayed, as shown in Figure 10–16.

Figure 10–16 New IP and Domain Restriction Dialog

🖻 New IP and Domain Restriction 🛛 👔 🔁								
IP(Mask)/Domain								
Туре:	Single 🗸							
Description:								
🗹 Grant Access								
	OK Cancel							

Perform the following steps:

a. In the **IP(Mask)/Domain** field, enter the IP or domain name using the following guidelines.

If you select **Single** (Computer) from the **Type** list, you must provide the IP address for that computer. If you only know the DNS name for the computer, click **DNS Lookup** to obtain the IP Address based on the DNS name.

If you select **Group** (of Computers), you must provide the IP address and subnet mask for the computer group.

If you select **Domain**, you must provide the domain name.

- **b.** From the **Type** list, select the type of restriction.
- c. In the Description field, enter a description (optional).
- d. To grant access, select the Grant Access check box.
- 5. Click OK.

The new domain is added under the IP and Domain node.

The following pane summarizes your configuration, as shown in Figure 10–17.

Figure 10–17 IP and Domain Permissions Configuration

- IP Address (Mask) /Domain www.yahoo.com
- Type Domain
- Access Denied
- Description

10.2 Migrating Repositories

During design time, the Oracle repository is used to store metadata created when using Application Explorer to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. The information in the repository is also referenced at run-time. For management purposes, you can migrate BSE and J2CA repositories that are configured for Oracle to new destinations without affecting your existing configuration. For example, you may want to migrate a repository from a test environment to a production environment.

Migrating a BSE Repository

To migrate a BSE repository:

1. Copy the BSE control service URL, for example:

http://localhost:8001/ibse/IBSEServlet/admin/iwcontrol.ibs

- 2. Open a third party XML editor, for example, XMLSPY.
- **3.** From the menu bar, click **SOAP**.

A list of options appears, as shown in Figure 10–18.

Figure 10–18 Expanded SOAP Menu



4. Select Create new SOAP request.

The WSDL file location dialog is displayed, as shown in Figure 10–19.

Figure 10–19 WSDL File Location Dialog

Please enter the WSDL file location (local path or url)	? ×
Choose a file: //localhost:7777/ibse/IBSEServlet/admin/iwconfig.ibs?wsdl 💌 Browse Window	OK Cancel
Please choose a file from your hard disk or select one of the other windows currently open in XMLSPY.	

Perform the following steps:

- a. In the Choose a file field, paste the BSE control service URL.
- **b.** Append **?wsdl** to the URL, for example:

http://localhost:8001/ibse/IBSEServlet/admin/iwcontrol.ibs?wsdl

5. Click OK.

The soap operation name dialog is displayed, listing the available control methods, as shown in Figure 10–20.

Figure 10–20 Soap Operation Name Dialog

Please select a soap operation name	×
Please select a soap operation name GETIBSECONFIG(GETIBSECONFIG parameters) SETIBSECONFIG(SETIBSECONFIG parameters) MIGRATEREPO(MIGRATEREPO parameters) GETMTHCONNECTION(GETMTHCONNECTION parameters) SETMTHCONNECTION(SETMTHCONNECTION parameters)	OK Cancel
V	

6. Select the **MIGRATEREPO(MIGRATEREPO parameters)** control method and click **OK**.

Note: The **MIGRATEREPO(MIGRATEREPO parameters)** control method is available from the BSE administration console. This control method migrates all Web services to the new (empty) repository. You can choose to migrate select Web services only.

The following window is displayed. It shows the structure of the SOAP envelope, as shown in Figure 10–21.

DAP-ENV:Envelop		
xmins:SOAP-	ENV http://schemas.xmlsoap.c	org/soap/envelope/
xmins:SOAP-	ENC http://schemas.xmlsoap.c	org/soap/encoding/
xmins:xsi	http://www.w3.org/2001	
xmins:xsd	http://www.w3.org/2001	/XMLSchema
SOAP-ENV:He		
	m:ibsinfo	
	= xmins:m	urn:schemas-iwayso
	() m:service	String
	m:method	String
	() m:license	String
	() m:disposition	String
	🚺 🚺 m:Username	String
	🚺 🚺 m:Password	String
	📕 🌔 m:language	String
SOAP-ENV:Bo	dy	
	m:MIGRATEREPO	
	z xmins:#	urn:schemas-iwayso
	version	
	m:repositorys	etting
		() m:rname file
		() m:rconn String

Figure 10–21 SOAP Envelope Structure

7. Locate the **Text view** icon in the toolbar, as shown in Figure 10–22.

Figure 10–22 Text View Icon



8. To display the structure of the SOAP envelope as text, click the **Text view** icon.

The <SOAP-ENV:Header> tag is not required and can be deleted from the SOAP envelope.

9. Locate the following section:

```
<m:MIGRATEREPO xmlns:m="urn:schemas-iwaysoftware-com:jul2003:ibse:config"
version="">
<m:repositorysetting>
<m:rname>oracle</m:rname>
<m:rconn>String</m:rconn>
<m:rdriver>String</m:rdriver>
<m:ruser>String</m:ruser>
<m:rpwd>String</m:rpwd>
</m:repositorysetting>
<m:servicename>String</m:servicename>
</m:MIGRATEREPO>
```

Perform the following steps:

a. For the **<m:rconn>** tag, replace the String placeholder with a repository URL where you want to migrate your existing BSE repository.

The Oracle repository URL has the following format:

jdbc:oracle:thin:@[host]:[port]:[sid]

b. For the **<m:rdriver>** tag, replace the String placeholder with the location of your Oracle driver.

- **c.** For the **<m:ruser>** tag, replace the String placeholder with a valid user name to access the Oracle repository.
- **d.** For the **<m:rpwd>** tag, replace the String placeholder with a valid password to access the Oracle repository.
- **10.** Perform one of the following migration options.
 - If you want to migrate a single Web service from the current BSE repository, enter the Web service name in the <m:servicename> tag, for example:

<m:servicename>PeopleSoftService1</m:servicename>

 If you want to migrate multiple Web services from the current BSE repository, duplicate the <m:servicename> tag for each Web service, for example:

```
<m:servicename>PeopleSoftService1</m:servicename>
<m:servicename>PeopleSoftService2</m:servicename>
```

- If you want to migrate all Web services from the current BSE repository, remove the <m:servicename> tag.
- **11.** From the menu bar, click **SOAP** and select **Send request to server**, as shown in Figure 10–23.

Figure 10–23 SOAP Menu

S <u>O</u> A	P	<u>T</u> ools	<u>W</u> indow	<u>H</u> elp
	⊆r	eate ne	w SOAP re	equest
	<u>S</u> e	end requ	jest to ser	ver
	Cł	hange S	OAP reque	est <u>p</u> arameters

Your BSE repository and any Web services you specified are now migrated to the new Oracle repository URL you specified.

Migrating a J2CA Repository

To migrate a J2CA repository:

1. Navigate to the location of your J2CA configuration directory where the repository schemas and other information is stored, for example:

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\config\JCA_CONFIG

Where *JCA_CONFIG* is the name of your J2CA configuration.

- 2. Locate and copy the repository.xml file.
- **3.** Place this file in a new J2CA configuration directory to migrate the existing repository.

Your J2CA repository is migrated to the new J2CA configuration directory.

Generating Component Interface APIs

This appendix describes how to generate component interface APIs to use with Oracle Application Adapter for PeopleSoft. It contains the following topics:

- Section A.1, "Building the PeopleSoft API Java Programs"
- Section A.2, "Compiling the PeopleSoft API Java Programs"

A.1 Building the PeopleSoft API Java Programs

Whether you are using an Enterprise Integration Point (EIP) supplied by PeopleSoft or a customized component interface, you must create a PeopleSoft API to enable communications with the PeopleSoft application. The API is a collection of Java class files that reside on the client system and mediate between the client application layer and PeopleSoft.

Before using your component interface, you must apply security to it and test it.

To build a PeopleSoft API Java program:

1. Open the PeopleSoft Application Designer, as shown in Figure A–1.

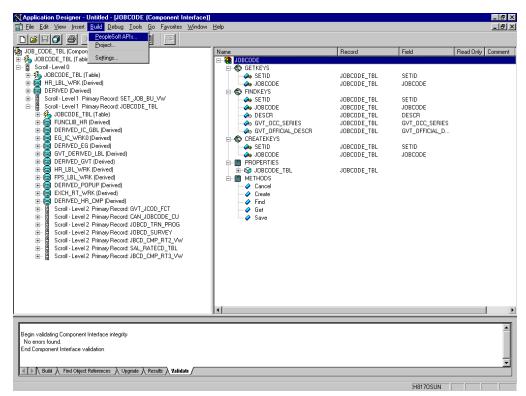


Figure A–1 PeopleSoft Application Designer Component Interface

- 2. From the PeopleSoft Application Designer, open a component interface.
- 3. Click the right pane and select **PeopleSoft APIs** from the **Build** menu.

The Build PeopleSoft API Bindings dialog prompts you for the types of bindings to create, as shown in Figure A–2.

Application Designer - Untitled - [JOBCODE (Designer - Untitled - JOBCODE (Designer - Untitle						_ & ×
		Шоф				
JOB_CODE_TBL (Component)		Name	Record	Field	Read Only	Comment
JOBCODE_TBL (Table) - Search Record		E- 🍓 JOBCODE				· · · ·
Begin validating Component Interface integrity No ecrot Stoud Sorol - Level 2 Primary Record SET_JOB_E Sorol - Level 1 Primary Record SET_JOB_E DERIVED [Derived] DERIVED POPUP (Derived] DERIVED POPUP (Derived) DERIVED POPUP (Der	COM Serv.	Collection Collection Collection		SETID JOBCODE SETID JOBCODE DESCR GVT_OCC_SERIES GVT_OFFICIAL_D SETID JOBCODE	1	
Date				U0170CU81		
Ready				H8170SUN		

Figure A–2 Build PeopleSoft API Bindings Dialog

- 4. Because you are creating Java files, ensure you deselect COM Type Library Build.
- 5. Ensure that Java Classes Build is selected, and then select a directory on your local system where the Java files are to be placed, for example, c:\psoft8_ components.
 - To build all API files, select the default, **All** (potentially a large number), and click **OK**.

PeopleSoft generates the files. This takes a few minutes. After the process is complete, a message appears in the output window.

You are now ready to compile the Java files. For more information, see "Compiling the PeopleSoft API Java Programs" on page A-5.

The following pane illustrates the GP_PYE_ERN_DED_ASGN component interface from the HR 8.1 application, as shown in Figure A–3.

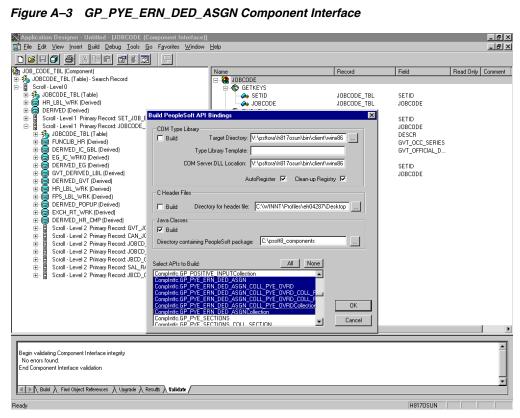


Figure A–3 GP_PYE_ERN_DED_ASGN Component Interface

To create APIs for a specific component interface or interfaces, click None. .

This clears the selected APIs, so you can select the appropriate APIs for your component interface. These APIs begin with the name of your component interface. There may be fewer than five, or more than 50 APIs, for a particular component interface.

The following dialog displays the following APIs, including generic component interface properties, as shown in Figure A-4.

XApplication Designer - Untitled - [JOBCODE (C R File Edit View Insert Build Debug Tools G					_ & ×
JOB_CODE_TBL (Component)	Nar	ne	Record	Field	Read Only Comment
JOBCDDE_TBL (Table) - Search Record JOBCDDE_TBL (Table) JOBCDDE_TBL (Table) HR_LBL_WRK (Derived) HR_LBL_WRK (Derived) JOBCDDE_TBL (Table) JOBCDE_TBL (Table)	Build PeopleSoft API Bindi COM Type Library Build Targe Type Library COM Server DLL CM Server DLL CM Server DLL CM Server DLL CM Server DLL CM Server DLL Directory for Java Classes Java Classes Java Classes Java Classes Select APIs to Build Complete CD SALARY PLA Complete CD SALARY PLAT Complete CD SALARY PLAT Complete COMPLATE CAC Complete COMPLATE CAC Complete COMPLATE CAC	t Directory: V:\pshtra\h817osun\bin\client\win Template: Location: V:\pshtra\h817osun\bin\client\win AutoRegister ♥ Clean-up Registr header file: C:\WINNT\Profiles\eh04287\De ioft package: C:\psoft8_components All None LGRP LGRPCollection RD	1000 1000 1000 1000 1000 1000 1000 100	SETID JUBCODE SETID JUBCODE DESCR GVT_OCC_SERIES GVT_OFICIAL_D SETID JUBCODE	
Complete Complete PropertyInfo Complete Complete PropertyInfoCollection Done					
Build / Find Object References / Upgrade / R	esuits 👌 Validate /				<u>_</u>
Readu				H8170SUN	

Figure A–4 Generic Component Interface Properties

a. In addition to the APIs for the selected component interface, you also must generate the API files for the following generic component interface properties:

CompIntfcPropertyInfo

CompIntfcPropertyInfoCollection

You may select these items in the same step as the component interface build, or you may select them separately.

b. Click **OK**.

PeopleSoft generates the files. This takes a few minutes. After the process is complete, a message appears in the output window. You are now ready to compile the Java files. For more information, see "Compiling the PeopleSoft API Java Programs" on page A-5.

A.2 Compiling the PeopleSoft API Java Programs

PeopleSoft places the Java programs to compile in the directory called *psoft8_ components*\PeopleSoft\Generated\CompIntfc.

Where psoft8_components is the directory specified during the build process.

If you chose to generate all APIs, the systems creates a second directory, *psoft8_components*\PeopleSoft\Generated\PeopleSoft. You are not required to access it.

The process for compiling the PeopleSoft API Java programs depends on whether you are compiling on the system where you installed Application Explorer or on another system.

Note: There are two Java programs for every API file that you selected when you built the Java programs. For more information, see "Building the PeopleSoft API Java Programs" on page A-1.

Before you compile the Java programs, you require the PeopleSoft Java Object Adapter, the psjoa.jar file that resides on your PeopleSoft Application Server under the *PS_HOME*\Web\psjoa directory. This is the file that you placed in the adapter lib directory during installation.

If you are compiling on the same system where you installed Application Explorer

Point to the psjoa.jar file or copy it to the directory where you placed the Java API files, for example, c:\psoft8_components.

If you are compiling on a system other than the one where you installed Application Explorer

Perform the following steps:

- 1. Obtain a copy of the psjoa.jar file from the PeopleSoft Application Server. Ensure that the psjoa.jar file is in the Java class path before you compile the programs.
- **2.** Compile the Java programs and ensure that you include the \PeopleSoft\Generated\CompIntfc path.

The path is case-sensitive.

The following Windows batch file, run from the psoft8_components directory, properly compiles the Java APIs. The code assumes that psjoa.jar was placed in psoft8_components.

```
@echo off
set JAVA_HOME=<my-java-home>
set PATH=%JAVA_HOME%\bin;%PATH%
set CLASSPATH=%JAVA_HOME%\lib\tools.jar;psjoa.jar;%CLASSPATH%
javac -classpath %CLASSPATH% .\PeopleSoft\Generated\CompIntfc\*.java
```

Where <my-java-home> is the fully qualified path name of your Java home directory.

This code places the class files in the same directory with the Java files, but you can choose a different location depending on your site requirements.

3. Compress the class files into a JAR file.

The following Windows batch file, if run from the psoft8_components directory, creates a correct JAR file:

```
@echo off
set JAVA_HOME= my-java-home
set PATH=%JAVA_HOME%\bin;%PATH%
set CLASSPATH=%JAVA_HOME%\lib\tools.jar;%CLASSPATH%
jar cvf my-jar-file.jar .\PeopleSoft\Generated\CompIntfc\*.class
```

Where appropriate, substitutions are made for my-java-home and my-jar-file.

4. To verify that your JAR file is correct, open it with the WinZip application, as shown in Figure A–5.

File Actions	; Options	Help									
New New	🊧 Open	(Favorites	Add	Extract	🥝 View	CheckOut	婆 Wizard				
Path					Name	۸			Туре	Modified	
PeopleSoft\(Generated\Co	mpIntfc\			Amou	ntincJpn.class			CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\				ntincJpnCollec			CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\				ntincJpnJob.cl			CLASS File	6/24/2003 4:56 PM	
	Generated\Co					ntincJpnJobCo			CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\				ntincJpnJobCo			CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\			🔁 Amou	ntincJpnJobCo	mpensati	nCollection.class	CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\			📑 BeaCi	Attributes.clas	s		CLASS File	6/24/2003 4:56 PM	
eopleSoft\(Generated\Co	mpIntfc\			📑 BeaCi	AttributesBeal	PsbcitemV	v.class	CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\			🔁 BeaCi	AttributesBeal	PsbcitemV	vCollection.class	CLASS File	6/24/2003 4:56 PM	
eopleSoft\(Generated\Co	mpIntfc\			🔁 BeaCi	AttributesColle	ction.clas	5	CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\			🔁 BeaCi	Messages.clas	s		CLASS File	6/24/2003 4:56 PM	
PeopleSoft\(Generated\Co	mpIntfc\			📑 BeaCi	MessagesBeal	smsgfldV	v.class	CLASS File	6/24/2003 4:56 PM	
eopleSoft\(Generated\Co	mpIntfc\			📑 BeaCi	MessagesBeal	smsgfldV	Collection.class	CLASS File	6/24/2003 4:56 PM	
eopleSoft(Generated (Co	mpIntfc\			BeaCi	MessagesColle	ction.clas		CLASS File	6/24/2003 4:56 PM	
eopleSoft(Generated\Co	mpIntfc\				RuleDefn.clas			CLASS File	6/24/2003 4:56 PM	
eopleSoft(Generated\Co	mpIntfcl			CiCmc	RuleDefnColk		fn.class	CLASS File	6/24/2003 4:56 PM	
PeopleSoft(Generated\Co	mpIntfcl						fnCollCmpRuleRatecd.class	CLASS File	6/24/2003 4:56 PM	
	Generated\Co							fnCollCmpRuleRatecdCollection.class	CLASS File	6/24/2003 4:56 PM	
eopleSoft\(Generated\Co	mpIntfc			CiCm	RuleDefnColk	ImpRuleDe	fnCollCmpRuleWhere.class	CLASS File	6/24/2003 4:56 PM	
	Generated\Co							fnCollCmpRuleWhereCollCmpRuleValues.clas	s CLASS File	6/24/2003 4:56 PM	
	Generated (Co							fnCollCmpRuleWhereCollCmpRuleValuesCol.		6/24/2003 4:56 PM	
	Senerated\Co							fnCollCmpRuleWhereCollection.class	CLASS File	6/24/2003 4:56 PM	
	Generated\Co							fnCollection.class	CLASS File	6/24/2003 4:56 PM	
	Generated\Co				<u> </u>	RuleDefnColle			CLASS File	6/24/2003 4:56 PM	
	Generated\Co					Ctg.class	-conneida	, ,	CLASS File	6/24/2003 4:56 PM	
	Generated\Co					CtgCollection	class		CLASS File	6/24/2003 4:56 PM	
	Generated\Co					iCtaCollEmplC			CLASS File	6/24/2003 4:56 PM	
	Generated)(Co Generated)(Co					lCtgCollEmplC		!	CLASS File	6/24/2003 4:56 PM	
	Generated)Co Generated)Co					ICtgL1.class	lycollectic	n.udss	CLASS File	6/24/2003 4:56 PM	
						lCtgL1.class lCtgL1Collecti	an alaaa		CLASS File		
	Senerated\Co									6/24/2003 4:56 PM	
	Senerated\Co					CtgL1CollEmp			CLASS File	6/24/2003 4:56 PM	
	Senerated\Co					CtgL1CollEmp			CLASS File	6/24/2003 4:56 PM	
	Generated\Co							EmplCtgL2.class	CLASS File	6/24/2003 4:56 PM	
	Generated\Co							EmplCtgL2Collection.class	CLASS File	6/24/2003 4:56 PM	
	Senerated\Co							EmplCtgL2CollEmplCtgL3.class	CLASS File	6/24/2003 4:56 PM	
	Senerated\Co	mpIntfc\			CiEmp	ICtgL1CollEmp	iCtgL1Col	EmplCtgL2CollEmplCtgL3Collection.class	CLASS File	6/24/2003 4:56 PM	

Figure A–5 PeopleSoft Jar Files

If the JAR file does not use the case-sensitive PeopleSoft\Generated\CompIntfc\ path, you must go back and correct it.

5. Place the JAR file in the adapters common lib directory, which enables the Oracle Application Adapter for PeopleSoft to communicate with the PeopleSoft component interface.

<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\lib

Note: If you run on UNIX, perform the compile and JAR steps on Windows and then move the file to your UNIX system. The JAR file is binary. If you use an FTP-based tool to move your JAR file from Windows to UNIX, the file format must be set to binary.

Configuring the PeopleSoft Message Router

This appendix describes how to configure and test a TCP/IP or HTTP target connector and a TCP/IP handler for PeopleSoft. It contains the following topics:

- Section B.1, "Configuring the TCP/IP or HTTP Target Connector for PeopleSoft 8.4"
- Section B.2, "Configuring the TCP/IP Target Connector"
- Section B.3, "Configuring the Node for the TCP/IP 8.4 Connector"
- Section B.4, "Configuring the TCP/IP Handler for PeopleSoft 8.1"
- Section B.5, "Testing Your PeopleSoft Configuration"

The information in this appendix assumes that you are familiar with PeopleSoft Integration Broker (in release 8.4) or Application Messaging (in release 8.1). For more information, see Appendix D, "Using PeopleSoft Integration Broker". For a complete description *before* you work with Oracle Application Adapter for PeopleSoft, see your PeopleSoft documentation.

Note: In PeopleSoft release 8.1, the messaging architecture is called Application Messaging and includes Application Messaging Gateway. In release 8.4, the messaging architecture is called Integration Broker, which includes Integration Gateway. When discussing release-independent issues, this section uses release 8.4 terminology. When discussing release-specific issues, it uses release-specific terminology.

B.1 Configuring the TCP/IP or HTTP Target Connector for PeopleSoft 8.4

The procedures in this topic assume that your Integration Broker environment is configured and tested. For more information, see Appendix D, "Using PeopleSoft Integration Broker".

 Configure the gateway for the TCP/IP Target Connector or HTTP Target Connector. For more information, see "Configuring the TCP/IP Target Connector" on page B-2.

Note: This step is optional when configuring the HTTP Connector. The HTTP Target Connector is supplied with your PeopleSoft application, and no special configuration steps are required. If you choose, you may configure default connection values on the Gateway. You can override these values when you configure the node. **2.** Configure the node. For more information, see "Configuring the Node for the TCP/IP 8.4 Connector" on page B-3.

Note: Starting with release 8.4, the Integration Broker is delivered with an HTTP Outbound Connector. For more information, see "Configuring the HTTP Connector" on page B-8.

B.2 Configuring the TCP/IP Target Connector

To configure the gateway for the TCP/IP Target Connector:

- 1. In a Web browser, open your PeopleSoft release 8.4 application.
- 2. In the menu pane, expand **PeopleTools**, then expand **Integration Broker**, and click **Gateways**.
- 3. Open the LOCAL Gateway ID.

A pane similar to the following Gateway ID pane is displayed, as shown in Figure B–1.

Figure B–1 Gateway ID Pane

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4. If you do not see the TCPIPTARGET84 Connector ID, click Load and scroll to locate TCPIPTARGET84 in the list.

If TCPIPTARGET84 still does not appear, the connector class file was not installed in the Integration Gateway.

Perform the following steps:

a. Click the **Properties** URL for TCPIPTARGET84.

The Properties pane for TCPIPTARGET84 is displayed, as shown in Figure B–2. Default values appear for the host and the port. For complex business situations, you can override this setting on the individual node.

Figure B–2 Properties Pane

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My Personalizations					
My System Profile					

- **b.** Enter the values for the host and the port for the system on which your PeopleSoft XML listener is listening for incoming messages.
- 5. Click OK.

The Gateway window is displayed.

6. Scroll to the bottom of the window and click **Save**.

You have finished configuring the gateway for the TCP/IP Target Connector.

B.3 Configuring the Node for the TCP/IP 8.4 Connector

To configure the node for the TCP/IP 8.4 Connector:

- 1. In the Menu pane, select **PeopleTools**, **Integration Broker**, and then click **Node Definitions**.
- **2.** Select the node that you want to configure.

Note: This procedure uses a node called EXTERNAL. For more information about creating and using nodes, see Appendix D, "Using PeopleSoft Integration Broker" or your PeopleSoft documentation.

Perform the following steps:

- a. Select External from the Node Type list.
- **b.** Select **Implicit** from the **Routing Type** list.
- **3.** Select the **Connectors** tab, as shown in Figure B–3.

Figure B–3 Connectors Tab

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Perform the following steps:

a. Select TCPIPTARGET84 as the Connector ID.

Default values appear for the host and the port.

- **b.** Enter the values for the host and the port for the system and port that route XML to Oracle WebLogic Server. You can accept or override the default values for individual nodes.
- c. Click Save.
- 4. If you are warned that you are changing the connector, click OK.
- 5. Select the Transactions tab, as shown in Figure B–4.

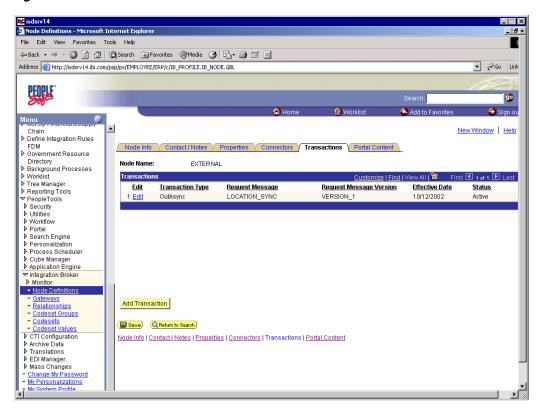


Figure B–4 Transactions Tab

Perform the following steps:

- **a.** If there are no transactions, click **Add Transaction** to add the message with which you are working. In this procedure, the node is already configured with the LOCATION_SYNC message.
- **b.** To view transaction details for the LOCATION_SYNC message, click Edit.

The Transaction Detail tab appears, as shown in Figure B–5.



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- **c.** Add the message with which you are working.
- d. Verify that the Routing Type is Implicit.
- 6. Click Save.
- 7. Return to the **Transactions** tab.

Perform the following steps:

- **a.** Edit additional transactions by clicking **Edit** and navigating to the **Transaction Detail** tab.
- **b.** In the Transaction Detail tab, select Inactive from the Status list.

Inactive status is for initial testing only. After you test your configuration, you may change the status to Active and have as many nodes and transactions as required to satisfy your business requirements.

8. Click Save.

You can now send XML messages to your PeopleSoft XML listener.

B.3.1 Configuring the HTTP Target Connector

The HTTP Target Connector is supplied with your PeopleSoft application, and no special configuration steps are required. If you choose, you may configure default connection values on the Gateway. You can override these values when you configure the node. To configure the gateway for the HTTP Target Connector:

- 1. In a Web browser, open your PeopleSoft 8.4 application.
- 2. In the Menu pane, expand **PeopleTools**, then expand **Integration Broker**, and click **Gateways**.

3. Open the LOCAL Gateway ID.

A pane similar to the following Gateway ID pane is displayed, as shown in Figure B–6.

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Figure B–6 HTTP Target Connector Gateway ID Pane

4. If you do not see the HTTPTARGET Connector ID, click Load.

If it does not appear, your Gateway was not installed properly. Check with your PeopleSoft system administrator.

5. Click the **Properties** URL for HTTPTARGET.

The Properties pane for HTTPTARGET displays default values, as shown in Figure B–7.

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Figure B–7 HTTPTARGET Properties Pane

6. Scroll to the bottom and enter a value for the PRIMARYURL.

This is the default HTTP address (system and port) on which your PeopleSoft XML listener is listening for incoming messages.

Note: For complex business situations, you can override this setting on the individual node.

7. Click OK.

The Gateway window is displayed.

8. Scroll to the bottom of the window and click Save.

You have finished configuring the gateway for the HTTP Target Connector.

B.3.2 Configuring the HTTP Connector

Starting with release 8.4, the Integration Broker is delivered with an HTTP Outbound Connector. This connector can be used in place of the TCP/IP 8.4 connector for sending messages to Oracle WebLogic Server.

To configure the node to use the HTTP Connector:

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Search Engine Default Local Node	
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Figure B–8 Connector Configuration Pane

- 1. In the Menu pane, expand **PeopleTools**, **Integration Broker**, and then click **Node Definitions**, as shown in Figure B–8.
- 2. Select the node that you want to configure.

Note: This procedure uses a node called EXTERNAL. For more information about creating and using nodes, see Appendix D, "Using PeopleSoft Integration Broker" or your PeopleSoft documentation.

Perform the following steps:

- a. From the Node Type list, select External.
- **b.** From the **Routing Type** list, select **Implicit**.

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Figure B–9 PeopleSoft Integration Broker Connectors Tab

3. Select the **Connectors** tab, as shown in Figure B–9.

Perform the following steps:

- a. Change the Connector ID to HTTPTARGET.
- **b.** Enter a value for each property based on the following:

Property ID	Property Name	Value
HEADER	sendUncompressed	Y
HTTPPROPERTY	Method	POST
PRIMARYURL	URL	URL and the port of the HTTP listener

Note: For complex business situations you can configure multiple nodes and multiple listeners.

- 4. Click Save.
- 5. If you are warned that you are changing the Connector, click **OK**.
- **6.** Select the **Transactions** tab, as shown in Figure B–10.

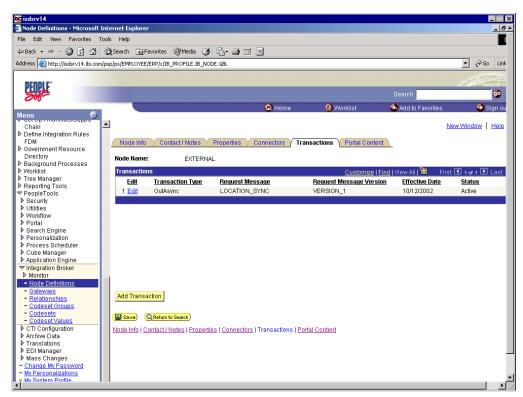


Figure B–10 PeopleSoft Integration Broker Transactions Tab

7. If there are no transactions, click Add Transaction.

In this procedure, the node is already configured with the LOCATION_SYNC message.

The Transaction Detail tab appears, as shown in Figure B–11.

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▶ EDI Manager						
▶ Mass Changes	1					
- Change My Password	1					
- My Personalizations	1					
 My System Profile 	1					

Figure B–11 Transaction Detail Tab

You can add the message with which you are working.

- **a.** Verify that the **Routing Type** is **Implicit**.
- b. Click Save.
- **8.** Return to the Transaction List. Perform the following steps:
 - **a.** If there are other transactions, edit them.
 - **b.** Set the status to **Inactive**.

Inactive status is for initial testing only. After you test your configuration, you may change the status to Active and have as many nodes and transactions as required to satisfy your business requirements.

9. Click **Save** on the Transaction List.

You can now send XML messages to your PeopleSoft XML listener.

B.4 Configuring the TCP/IP Handler for PeopleSoft 8.1

The following procedure assumes that your Application Messaging environment is properly configured and tested. For more information, see Appendix D, "Using PeopleSoft Integration Broker".

To configure the TCP/IP Handler for PeopleSoft 8.1 to send messages to Oracle WebLogic Server:

- **1.** In a Web browser, launch the **PeopleSoft 8.1 Gateway Configuration** servlet interface.
- **2.** If the Simple File Handler is currently loaded, unload and delete it before proceeding.

You must see an empty Handler directory, as shown in Figure B–12.

Figure B–12 Empty Handler Directory

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3. Click **Add handler**, as shown in Figure B–13.

Figure B–13 Loaded Add Handler Directory

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Perform the following steps:

a. Enter the full path of TCPIPHandler81 (case-sensitive):

psft.pt8.tcphandler.TCPIPHandler81

- b. Click Save.
- 4. Click Load.

The PeopleSoft Handler Directory window is displayed.

5. Click Configure.

The TCPIP81 Handler Directory window is displayed.

6. Click Add a TCPIP81 node.

Note: The screens illustrating this procedure show a node named EXTERNAL. For more information about creating and using nodes, see Appendix D, "Using PeopleSoft Integration Broker" or your PeopleSoft documentation.

The Add TCPIP81 Handler window is displayed, as shown in Figure B–14.

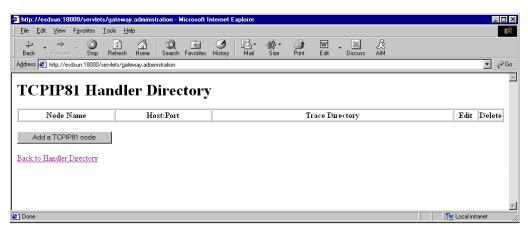


Figure B–14 Add TCPIP81 Handler Window

7. Enter the requested values based on the information in the following table.

Field	Value Example	Description
Node Name	EXTERNAL	The name of the TCP/IP node.
Host Name	172.19.25.152	The system on which your PeopleSoft XML listener is listening for incoming messages.
Port	3694	The port on which your PeopleSoft XML listener is listening for incoming messages.
Trace Directory	/tmp	The directory where a trace file is created when errors occur in message delivery.

The system does not validate your entries.

8. Click Save.

The TCPIP81 Handler Directory window is displayed, as shown in Figure B–15.

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Figure B–15 TCPIP81 Handler Directory Window

- **9.** For your changes to take effect, click **Back to Handler Directory** to return to the PeopleSoft 8.1 Handler Directory window.
- 10. Click Unload and re-Load TCPIPHandler81.

You can now send messages from PeopleSoft to Oracle Application Adapter for PeopleSoft.

B.5 Testing Your PeopleSoft Configuration

PeopleSoft 8.1 and 8.4 provide a ping node mechanism for testing your configuration. The mechanism functions identically in both versions.

Test your configuration to ensure that:

- Oracle WebLogic Server is up and running.
- The server name and port number for PeopleSoft and Oracle WebLogic Server match.
- The default page for HTTP exists.

To test a PeopleSoft configuration:

- 1. In a Web browser, open your PeopleSoft application.
- 2. Navigate to the message monitoring menu.

For PeopleSoft 8.4:

- a. In the menu pane, expand PeopleTools, Integration Broker, and Monitor.
- b. Select Monitor Message.

For PeopleSoft 8.1:

- a. In the menu pane, expand Home, PeopleTools, Application Message Monitor, and Use.
- b. Select Application Message Monitor.
- **3.** Click the **Node Status** tab, as shown in Figure B–16.

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 <u>My Personalizations</u> My System Profile My Dictionary - 1 Þ 🔹 🚺 🔮 Internet ٥Ì

Figure B–16 Node Status Tab

- **a.** From the Message Node Name list, select your node.
- **b.** Click **Ping Node**.

If you properly configured both PeopleSoft and Oracle WebLogic Server, you receive a Success message.

An error indicates a configuration problem. For more information, see the Integration Broker error log.

С

Using Component Interfaces

This appendix describes how to create new and modify existing component interfaces for use with Oracle Application Adapter for PeopleSoft. It also describes how to apply security to those component interfaces and how to test them.

You can:

- Use component interfaces supplied by PeopleSoft with your application.
- Component interfaces also are known as Enterprise Integration Points (EIP).
- Modify an existing component interface.
- Create a new component interface.

Before using your component interface you must apply security to it and test it.

After securing and testing a component interface, you must generate its API. For more information, see Appendix A, "Generating Component Interface APIs".

Note: This section is intended as a helpful supplement; it is not a substitute for PeopleSoft documentation. For complete and up-to-date information about PeopleSoft component interfaces, see the PeopleSoft Online Library for your PeopleSoft system.

This appendix contains the following topics:

- Section C.1, "Working With Properties"
- Section C.2, "Securing a Component Interface"
- Section C.3, "Testing a Component Interface"

C.1 Working With Properties

You create component interfaces using the PeopleSoft Application Designer. For more information about Application Designer, see your PeopleSoft documentation.

You can add properties from the records in the component view. You can delete a property in the component interface that you do not want to expose. You can rename properties by clicking the property and then clicking again until you can enter a new name. If you rename a property, it can be referenced in the component interface only by the new name, not by the underlying component name.

Properties may have various icons adjacent to them. For example, EMPLID has an icon indicating that it is a key field from the underlying record. NAME has an icon

indicating that it is an alternate key field from the underlying record. For a complete list of property icons, see the PeopleBooks documentation.

C.1.1 Creating a New Component Interface

To create a component interface:

- 1. Open the PeopleSoft Application Designer.
- 2. Select New from the File menu.

The New dialog is displayed, as shown in Figure C–1.

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Figure C–1 New Dialog

Perform the following steps:

- a. Select Component Interface.
- **b.** Click **OK**.

The Select Source Component for Component Interface dialog is displayed, as shown in Figure C–2.

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Figure C–2 Select Source Component for Component Interface Dialog

3. Highlight the component to use as a basis for the component interface and click **Select**.

The Application Designer dialog is displayed, as shown in Figure C–3.



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Note: If the component interface is large, expose the component properties manually.

4. To create the component interface without displaying properties and to expose component properties manually, click **No**.

Perform the following steps:

- **a.** Drag the relevant fields from the left pane to the right pane.
- **b.** To select various functions to perform, right-click either the right or left pane, depending on which pane is active, as shown in Figure C–4.

For a complete list of functions, see the PeopleBooks documentation.

5. To create the component interface and display the properties of the underlying component interface, click **Yes**.

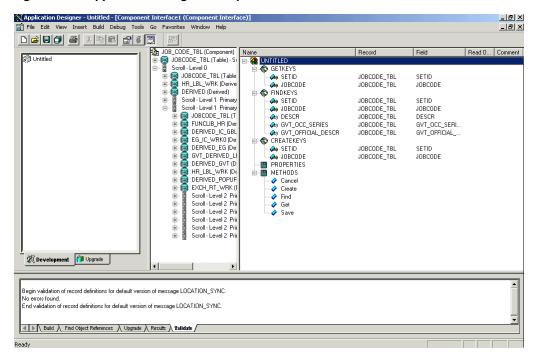


Figure C–4 Application Designer Component Interface

Standard Methods

The standard methods for the component interface are:

- Create
- Find
- Get
- Save

Only those methods in the underlying component are available. For example, if the underlying component does not contain Add capabilities, Create is not available.

C.1.2 Viewing or Changing Available Methods

To view or change available methods:

1. Display the Component Interface Properties dialog, as shown in Figure C–5.

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Figure C–5 Component Interface Properties Dialog

- 2. Click the Standard Methods tab.
- **3.** Select the desired methods.

C.2 Securing a Component Interface

You must set up security for the component interface before you can begin testing.

C.2.1 Configuring Component Interface Security for PeopleSoft Version 8.1x

The following procedure describes how to configure component interface security for PeopleSoft Version 8.1 in 2- and 3-tier mode.

To configure component interface security:

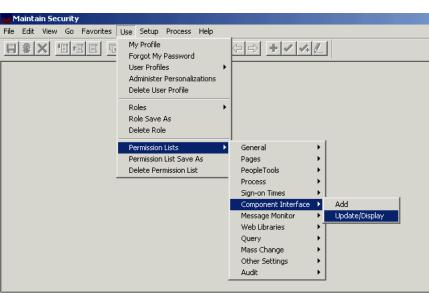


Figure C–6 Component Interface Security Options

1. From the Use menu, select Permission Lists, Component Interface, and then click Update/Display, as shown in Figure C-6.

The Permission Lists dialog is displayed, as shown in Figure C–7.

Figure C–7 Permission Lists Dialog

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For Help, click Help Topics on the Help Menu.	115,289 //.

Before Security can be set, you must identify the permission lists.

2. Select the relevant permission list and click OK.

For more information on permission lists, see the PeopleBooks documentation. The Permissions Lists pane is displayed, as shown in Figure C–8.

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Figure C–8 Peremission Lists Pane

- **3.** Insert the new component interface that you created.
- 4. Click Edit.

When you select the component interface, all available methods appear, including user-defined methods. You can specify whether this particular Permission List must have full or partial access.

The ALLPORTL Permission List has full access to all methods, as shown in Figure C–9.

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Figure C–9 ALLPORTL Permission List

- **5.** Select the desired level of access.
- 6. Click OK.

C.2.2 Configuring Component Interface Security for PeopleSoft Version 8.4 or Higher

The following procedure describes how to configure component interface security for PeopleSoft Version 8.4 or higher.

To configure interface security:

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▶ Banking	
Cash Management	
Deal Management	
▶ Risk Management	
VAT and Intrastat	
Commitment Control General Ledger	
Allocations	
Statutory Reports	
Data Exchanges	
Set Up Financials/Supply Chain	
Define Integration Rules FDM	
Government Resource Directory	
Background Processes	
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Tree Manager	
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- Roles	
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- Delete Roles	
- Execute Role Rules	
Directory	
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▶ Utilities	
▶ Workflow	
▶ Portal	
Search Engine	
▶ Personalization	
Process Scheduler	
▶ Cube Manager	
Application Engine	

Figure C–10 Configure Component Interface Security

- **1.** Expand **PeopleTools**, **Security**, **User Profiles**, and **Permissions & Roles** and then click **Permission Lists**, as shown in Figure C–10.
- 2. Click Search.

The Permission Lists Search pane is displayed.

3. Select the relevant permission list, as shown in Figure C–11.

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- My Personalizations				
- My System Profile				
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Figure C–11 Permission List Pane

4. Click the right arrow next to the **Sign-on Times** tab.

The **Component Interfaces** tab appears, as shown in Figure C–12.

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- Review Security		AR_CREDIT_AGENT	<u>Edit</u>	+ -		
Information		AR_ITEM_AGENT	Edit	+ -		
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Portal			Edit	+ -		
Search Engine		AUC_CREATE_CLONE_CI	_			
Personalization		AUC_CREATE_PO	<u>Edit</u>	+ -		
Process Scheduler Cube Manager		AUC_PAGELET_PREF_CI	<u>Edit</u>	+ -		
Application Engine		AUC VNDR ID CI	Edit	+ -		
Integration Broker		AUC_WF_APPR_CI	Edit	+ -		
CTI Configuration						
Archive Data Translations		BDG_CNTRL_EW_NTFY	Edit	+ -		
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Figure C–12 Component Interfaces Tab

- 5. Click the **Component Interfaces** tab.
- 6. Click + to add a new row to the Component Interfaces list.

A field appears where you can enter the component interface name, as shown in Figure C–13.

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Figure C–13 Component Interface Name Field

7. Enter the component interface name and click **Edit**.

This example uses the component interface AR_ITEM_AGENT, as shown in Figure C–14.

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Cube Manager										
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Translations										
EDI Manager										
Mass Changes										
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Figure C–14 Component Interface Permissions Window

- **8.** From the lists, select the desired access level for each method.
- 9. Click OK.

The Permissions list window is displayed, as shown in Figure C–15.

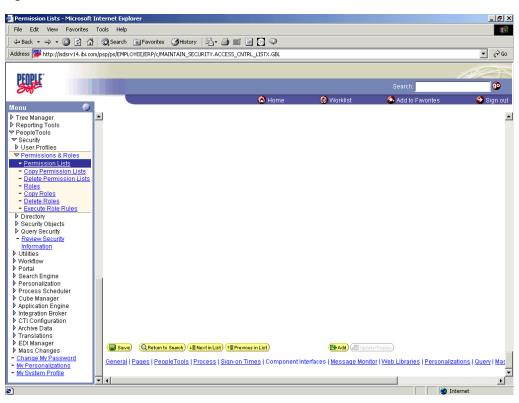


Figure C–15 Permissions List Window

10. Scroll down in the right pane and click Save.

C.3 Testing a Component Interface

Oracle Application Adapter for PeopleSoft uses PeopleSoft metadata and component interfaces; therefore, it can accommodate new or modified component interfaces. The adapter makes no assumptions about component interfaces except that they are logical and valid. Each component interface must be tested before being used as a source for the adapter.

If changes are made to the underlying application by the user or by a PeopleSoft upgrade and the changes invalidate a component interface, the user must repair the invalid component interface before the adapter uses it.

To test a component interface:

1. In Application Designer, select **Test Component Interface** from the **Tools** menu.

The Component Interface Tester dialog is displayed, as shown in Figure C–16.

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Figure C–16 Component Interface Tester Dialog

- **2.** If required, click the Component Interface Tester dialog to bring it to the foreground.
- **3.** To test the component interface, use one the following methods.
 - To test the component interface using the Find method, click **Find**.

The Component Interface Tester - Find Results dialog displays all of the possible entries for the underlying component, as shown in Figure C–17. If there are more than 300 entries, a message appears.

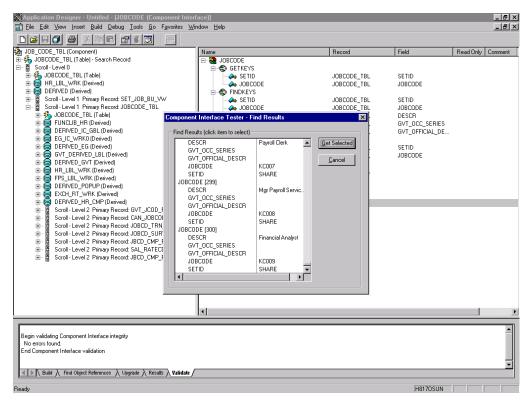


Figure C–17 Component Interface Tester - Find Results Dialog

- In the left pane of the Find Results dialog, select a field.
- To display the relevant data for that particular field, click **Get Selected**.

The Find Results dialog is displayed, as shown in Figure C-18.

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🗄 🏂 JOBCODE_TBL (Table)			PESCR		
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EG_IC_WRK0 (Derived)	CreateKeyInfoCollection		VT_OFFICIAL_DE		
DERIVED_EG (Derived)	Government G		ETID		
GVT_DERIVED_LBL (Derived)	DISCODE_TBL [1]		OBCODE		
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DERIVED_POPUP (Derived)	BA_CD				
EXCH_RT_WRK (Derived)	BPS_ACTIVITY_CD				
DERIVED_HR_CMP (Derived)	CAN NOC CD	0011			
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Figure C–18 Find Results Dialog

- If the security settings permit, you can change the values in the individual fields.
- **4.** To test the component interface using the Get method, perform the following steps:
 - **a.** Enter the existing key(s).
 - **b.** Click **Get Existing**.

This returns the exposed properties for the key that you entered. You can change values if Update access was specified.

Alternatively, you can test using the Create method, as shown in Figure C–19.

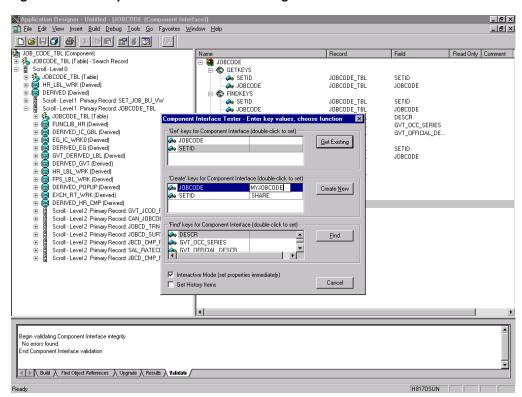


Figure C–19 Component Interface Tester Dialog

- **a.** Enter all required key values.
- **b.** Click Create New.

When you enter valid values in Create keys, a pane showing the JOBCODE data is displayed after the Table name is expanded with default data in place, as shown in Figure C–20.

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JOB_CODE_TBL (Component)	Name	Record	Field	Read Only Comment
JOBCODE_TBL (Table) - Search Record Scroll - Level 0	⊟ 🧱 JOBCODE ⊟ 😂 GETKEYS			
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HR_LBL_WRK (Derived)	B Component Interface Tester		OBCODE	
😟 🗄 Scroll · Level 1 Primary Record: SET	Live Component View. Double-click to change values, Right	click to execute methods.	ETID	
Scroll - Level 1 Primary Record: JOB(Item Name	Value	OBCODE	
⇒ JOBCODE_TBL (Table) ⊕ ⇒ JOBCODE_TBL (Table) ⊕ DERIVED_IC_GBL (Derived) ⊕ ⇒ DERIVED_LEG (Derived) ⊕ ⇒ DERIVED_LEG (Derived) ⊕ ⇒ DERIVED_CARL (Derived) ⊕ ⇒ DERIVED_VED_LBL (Derived) ⊕ ⇒ DERIVED_VED_VEN (Derived) ⊕ ⇒ ⇒ ⊕ ⇒ DERIVED_VEN (Derived) ⊕ ⇒ ⇒ ⊕ ⇒ ⇒ ⊕ ⇒ ⇒ ⊕ ⇒ ⇒ ⊕ ⇒ ⇒ ⊕ ⇒ ⇒ ⊕ ⇒ > ⊕ ⇒ > ⊕ ⇒ > ⊕ > > ⊕ > > ⊕ > > ⊕ > > ⊕ > > ⊕ > > ⊕ > > ⊕ > >	JORCODE_TBL[1]	GBI M USD My brand new JOBCODE My JOBCODE N N N N N N N N N N	► ESCR NT_OCC_SERIES NT_OFFICIAL_DE ETID OBCODE	
	J			
Begin validating Component Interface integrity No errors found. End Component Interface validation	e ∕ Results ∕ Validate /			×
Ready			H817OSUN	

Figure C–20 JOBCODE Data

You can change fields at this point. Changes are validated against the component's underlying business logic.

- **c.** After you finish making changes, right-click the top item in the pane.
- **5.** To save your changes, click **Save**.

The keys used to create the record can be used with the Get method for viewing data. The data that was added can be viewed in the PeopleSoft Component as shown in the following example. The Effective Date is one of the default values.

You have finished testing the component interface. Before using the component interface, you must generate its API. For more information, see Appendix A, "Generating Component Interface APIs".

Using PeopleSoft Integration Broker

This appendix describes how to configure and test PeopleSoft Integration Broker (release 8.4) and PeopleSoft Application Messaging (release 8.1) using a PeopleSoft-supplied File Output interface. In PeopleSoft release 8.1, the messaging architecture is called Application Messaging and includes Application Messaging Gateway. In release 8.4, the messaging architecture is called Integration Broker, which includes Integration Gateway. When discussing release-generic issues, this section uses release 8.4 terminology. When discussing release-specific issues, it uses release-specific terminology.

Note: This section is not a substitute for PeopleSoft documentation. For more complete and up-to-date information on PeopleSoft Messaging and Integration Broker, see the *PeopleSoft Online Library* for your PeopleSoft system.

This appendix contains the following topics:

- Section D.1, "PeopleSoft Integration Broker"
- Section D.2, "Configuring Application Messaging in PeopleSoft Release 8.1"
- Section D.3, "Viewing the PeopleCode for a Message"
- Section D.4, "Testing the Integration Broker"
- Section D.5, "Using Outbound Synchronous Messages"
- Section D.6, "Generating Events Using PeopleTools Tutorial"

D.1 PeopleSoft Integration Broker

PeopleSoft Integration Broker provides a mechanism for communicating with the outside world using XML files. Communication can take place between different PeopleSoft applications or between PeopleSoft and third-party systems.

To subscribe to data, third-party applications can accept and process XML messages posted by PeopleSoft using the available PeopleSoft connectors or by adding a custom built connector to the Integration Gateway. This topic primarily covers publishing outbound asynchronous messages from a PeopleSoft system to a third-party application using the delivered File Output connector. For information on outbound synchronous messages, see "Using Outbound Synchronous Messages" on page D-24.

To send a message, you must properly configure various internal structures and processes. The following descriptions are generally release-generic. Detailed differences between releases 8.1 and 8.4 are discussed in other topics.

Message

A Message is a container for the data that goes into the XML. It contains basic structural information, such as records and fields. The Message must be in an Active status to send the XML file

Message Channel

The Message Channel is a mechanism for structuring records into logical groupings. Each Message can belong to only one Message Channel. The Message Channel must be in an Active (Run) status for the Message to be delivered.

In release 8.1, the Message Channel also provides preliminary routing instructions; you can specify which Message Nodes handle the message. Each Message Channel can route messages to multiple Message Nodes

Message Node

Message node functionality changed from 8.1 to 8.4:

In release 8.1, the primary function of the Message Node is to specify which Gateway receives the messages.

In release 8.4, much of the "intelligence" that was built into the Message Channel moved to the Message Node. This provides additional flexibility over release 8.1. You can specify which messages the Message Node can handle. In addition, the Gateway Connector is bound to the Message Node. Each Message Node can route messages to only one Connector.

Integration Gateway

The Integration Gateway is a program that runs on the PeopleSoft Web Server. It is the physical hub between PeopleSoft and the third-party system.

Target Connector/Handler

Connectors are Java programs that run under the control of the Integration Gateway and control the final output destination of the XML file. PeopleSoft release 8.4 comes with several connectors including HTTP, FTP, SMTP, JMS, POP3, and a Simple File connector that places the file in a directory on the Web Server. This section discusses the Simple File connector.

PeopleCode

PeopleCode is the programming tool provided with PeopleTools that enables you to create complex application functionality. A message can only be initiated using specific PeopleCode instructions. This code is typically triggered by an application event, such as creating a new database entry through an online panel or through a batch job.

Most of the examples in this section use the LOCATION_SYNC message, which is a PeopleSoft Enterprise Integration Point (EIP) and is supplied with most PeopleSoft applications. If LOCATION_SYNC is not part of your package, you may use any supplied message.

D.1.1 Configuring Integration Broker in PeopleSoft 8.4

You can configure PeopleSoft 8.4 to send an asynchronous outbound message to the File Output connector.

To configure application messaging in PeopleSoft 8.4:

1. Ensure that the message is active and is routed to the proper Message Channel.

- **2.** Configure the Message Channel.
- **3.** Configure the IntegrationGateway.properties file to communicate with your PeopleSoft 8.4 application.
- 4. Configure the Integration Gateway and File Output connector.
- 5. Create and configure a new Gateway node.

These tasks are described in detail in the following procedures.

Ensuring the Message Is Active and Is Routed Correctly

To ensure that the message is active and is routed to the proper Message Channel:

- 1. Open Application Designer.
- On the File menu, point to Open, click Message, and then open the LOCATION_ SYNC message, as shown in Figure D–1.

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Message Structure		Field Name	Alias	Include	
A VERSION_1	1	SETID		V	
COCATION_TBL	2	LOCATION			
Message Subscriptions	3	EFFDT			
% LocationSync	4	EFF_STATUS		N N	
LocationSyncEff	5	DESCR			
	6	DESCR_AC			
	7	DESCRSHORT			
	8	BUILDING			
		FLOOR			
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	21	HOUSE_TYPE			
	22	ADDR_FIELD1		<u> </u>	
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		ADDR_FIELD3			
		COUNTY			
		STATE			
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		OFFICE_TYPE NCR_SW_CAN		ব	

Figure D–1 LOCATION_SYNC Message

- 3. To view the fields that are included in the Message, highlight LOCATION_TBL.
- 4. Right-click LOCATION_TBL and select Properties.

The Message Properties dialog is displayed, as shown in Figure D–2.

7460		
Application Designer - Untitled - [LOCATION_SY File Edit View Insert Build Debug Tools Go		<u>_ 문 ×</u> _ 문 ×
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🗄 🍓 VERSION_1	1 SETID	-
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LocationSync	4 EFF STATUS	
LocationSyncEff	5 DESCR	
	General Use	
	Status Non-Repudiation	
	Message Channel: ENTERPRISE_SETUP	
	Default Version: VERSION_1	
	Message Viewing / Correction	
	⊡se Message Monitor Dialog O Use Page	
	r Page	
	Menu Name: DEFINE_GENERAL_OPTIONS	
	Bar Name: USE_E-P	
	Item Name: LOCATION	
	Page Name: LOCATION_DEFINITION	
	Action:	
	OK Cancel	
	36 LANG_CD	
	37 HOLIDAY_SCHED	
	39 LOCALITY	
	40 CAN_CMA 41 CAN_DEE_AREAC	
	42 GEOLOC_CODE	
	43 OFFICE_TYPE	<u> </u>
Ready		F840DM0

Figure D–2 Message Properties Dialog

- 5. Select the Use tab.
- 6. Ensure the Active check box is selected.

The message is routed to the Message Channel, ENTERPRISE_SETUP, and the default message version is VERSION_1 (messages can have multiple versions).

7. Click **OK** and then save the message.

You have finished ensuring that the message is active and is routed correctly.

Configuring the IntegrationGateway.properties File

To configure the IntegrationGateway.properties file:

- 1. Open the IntegrationGateway.properties file using the editor of your choice.
- **2.** Find the section of the file that specifies the JOLT connect string setting for the default application server. This is usually near line 75, and looks similar to the following:

JOLT connect string setting for optional Default Application Server. Do NOT specify a NODENAME.

```
#
# Example:
#ig.isc.serverURL=//MYSERVER:9000
#ig.isc.userid=MYUSERID
#ig.isc.password=MYPASSWORD
#ig.isc.toolsRel=8.40
```

- **3.** Uncomment (or copy and uncomment) the four lines that specify the connection.
- **4.** Enter the appropriate information.

In the following example, the tools release is 8.40.09:

ig.isc.serverURL=//isdsrv14:9000
ig.isc.userid=VP1
ig.isc.password=VP1
ig.isc.toolsRel=8.40.09

The PeopleSoft tools release must be precise to the last decimal.

Note: With release 8.42, the password must be stored in an encrypted format. PeopleSoft provides a script called PSCipher.bat (PSCipher.sh on UNIX) to accomplish encryption. Typically, this script is located in the path of the IntegrationGateway.properties file. Follow the instructions supplied by PeopleSoft to run this script.

You have finished configuring the IntegrationGateway.properties file.

Configuring the Integration Gateway and the File Output Connector

To configure the Integration Gateway and the File Output Connector:

- 1. In a Web browser, open your PeopleSoft 8.4 application in 4-tier mode.
- 2. In the Menu pane, expand **PeopleTools**, **Integration Broker**, and then click **Gateways**.
- **3.** Open the LOCAL Gateway ID and enter the following Gateway URL:

host name/PSIGW/PeopleSoftListeningConnector

Where host name is the name of your PeopleSoft Web Server.

4. Click Refresh.

A message appears stating the outcome of the refresh process, as shown in Figure D–3.

Gateways - Microsoft Interne							- 8
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- Relationships	5 Properties	JMSTARGET		JMSTargetCo	nnector	+	-1
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- Codeset Values	6 Properties	POP3TARGET		POP3Target0	onnector	+	-
CTI Configuration	7 Properties	PSFT81TARGET		ApplicationMe	ssagingTargetConnector	+	-1
Archive Data		1					
Translations	8 Properties	PSFTTARGET		PeopleSoftTa	rgetConnector	+	-
EDI Manager	9 Properties	SMTPTARGET		SMTPTarget	connector	+	-1
	5 Flobellies						
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Mass Changes <u>Change My Password</u> • My Personalizations	10 Properties	TCPIPTARGET84		TCPIPTARGE	184		
Change My Password	10 Properties	TCPIPTARGET84			184	<u> </u>	

Figure D–3 Refresh Process Outcome Message

5. Click OK and scroll down to click Save.

You must click Save before continuing.

6. Click the **Properties** link for the FILEOUTPUT Connector ID.

The Properties window for the FILEOUTPUT Connector is displayed.

7. Accept or overwrite the default values.

The FilePath PROPERTY from the c:\temp default was changed to d:\ps\cache, as shown in Figure D-4.

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▶ EDIManager ▶ Mass Changes					
 Mass Changes Change My Password 					
- My Personalizations					

Figure D–4 Gateway ID Property Pane

- 8. To return to the Gateway window, click OK.
- 9. Scroll down and click Save.

You have finished configuring the Integration Gateway and the File Output Connector.

Creating and Configuring a New Gateway Node

To create and configure a new Gateway Node:

- 1. In the Menu pane, expand **PeopleTools**, **Integration Broker**, and then, click **Node Definitions**.
- 2. Select the Add a New Value tab.
- 3. In the Node Name field, enter a node name.

It is recommended that you name your first (trial) message node EXTERNAL. After successfully configuring and sending messages using this node, you can create additional message nodes with names appropriate for your application.

4. Click Add.

The Node Info tab becomes available, as shown in Figure D–5.

Figure D–5 Node Info Tab

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Node Definitions - Microsoft						_ & ×
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V Background Processes	Node Name:	EXTERNAL				
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♦ Security	Company ID:					
▶ Utilities ▶ Workflow	company ib.					
Portal	'Node Type:	External 💌	🗹 Active Node	•		
Search Engine		Implicit 💌	🗖 Local Node			
Personalization	'Routing Type:		Default Loc	al Node		
Process Scheduler	'Authentication Option:	None 💌	Non-Repudi	ation		
 Cube Manager Application Engine 	"Authentication Option:			uuun		
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- My Personalizations						
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- **a.** In the **Description** field, enter an appropriate description.
- b. From the Node Type list, select EXTERNAL.
- c. From the Routing Type list, select Implicit.
- **5.** Select the **Connectors** tab.

The Connectors tab becomes available, as shown in Figure D–6.

Node Definitions - Microso	oft Internet Explorer					_ 8 >
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▶ Worklist	Node Name:	EXTERNAL				
Tree Manager						
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Figure D–6 Connectors Tab

- a. Specify LOCAL for the Gateway ID.
- **b.** Specify **FILEOUTPUT** for the **Connector ID**.
- c. Accept or overwrite the default Gateway property values.
- 6. Click Save.
- **7.** To specify the transactions to route messages to your node, select the **Transactions** tab and click **Add Transaction**.

The Node Transactions pane is displayed, as shown in Figure D–7.

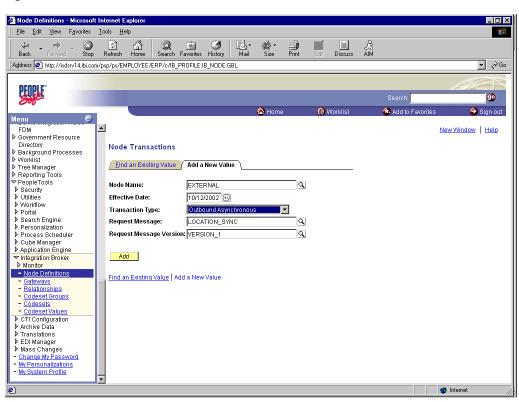


Figure D–7 Node Transactions Pane

- **a.** From the **Transaction Type** list, select **Outbound Asynchronous**.
- **b.** In the **Request Message** field, specify **LOCATION_SYNC**.
- c. In the Request Message Version field, specify VERSION_1.In the Request Message Version field, specify VERSION_1.
- 8. Click Add.

The Transaction Detail pane is displayed, as shown in Figure D–8.

Node Definitions - Microsoft	Internet Explorer					
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▶ Portal	Transaction Type:	OutAsync				
Search Engine	Request Message:	LOCATION_SY	NC			
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Figure D–8 Transaction Detail Pane

- a. Verify that the Routing Type is Implicit.
- b. Click Save, then click the Return to Transaction List link.
- c. To ensure that your data entry is not lost, click Save again.

You have finished creating and configuring the new Gateway Node.

For more information, see "Viewing the PeopleCode for a Message" on page D-26.

D.2 Configuring Application Messaging in PeopleSoft Release 8.1

You can configure PeopleSoft 8.1 to send an asynchronous outbound message to the Simple File Handler.

To configure application messaging in PeopleSoft 8.1:

- 1. Create and configure a new Message Node.
- 2. Ensure the message is active and is routed to the proper Message Channel.
- **3.** Configure the Message Channel.
- **4.** Configure the Simple File Handler in the Gateway.

These tasks are described in detail in the following procedures.

Creating and Configuring a New Message Node

To create and configure a new message node:

1. Select New from the File menu and click Message Node.

A Message Node window is displayed, as shown in Figure D–9.

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<u>File Edit View Insert Build D</u> ebug	
r	
	👔 Message Node2 (Message Node)
	Locations:
	Insert Location
	Find Object <u>R</u> eferences
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Figure D–9 Message Node Window

2. Right-click anywhere inside the white space and select Insert Location.

The Location URL box is displayed, as shown in Figure D–10.

Figure D–10 Location URL Box

Application Designer - Untitled - [EXTERNAL (Message Node)]
📸 Eile Edit View Insert Build Debug Iools 🖸 Favorites Window Help
Locations:
Location
URL: http://esdsun.ibi.com/18000//servlets/psft.pt8.gateway.GatewayServlet Cancel
Cancel

3. Enter the following URL for the PeopleSoft Application Gateway (handler directory):

host name:port/servlets/psft.pt8.gateway.GatewayServlet

Where host name is the host name of your PeopleSoft Web server and port is the socket on which the server is listening. The characters you enter after host name are case-sensitive.

- 4. Click OK.
- 5. Display the Message Node Properties dialog, as shown in Figure D–11.

💭 Application Designer - Untitled - Message Node2 (Message Node)	
<u>File Edit View Insert Build Debug Iools Go Favorites Window H</u> elp	
Message Node Properties	
General Use	
Local Node	
Local Node?	
- Version	
Locations: PeopleTools Version: 8.17	
http://esdsun.ibi.com	
Application Version: 8.30.000	
- Access Password	
Password	
Re-verify Password	
Distinguished Name	
OK Cancel	

Figure D–11 Message Node Properties Dialog

Perform the following steps:

- **a.** Select the **Use** tab.
- **b.** In the text boxes, enter the PeopleTools and Application Version numbers.
- c. Click OK.
- **6.** Display the Save As dialog, as shown in Figure D–12.

Application Designer - Untitled - Message Node2 (Message Node)	
le <u>E</u> dit <u>V</u> iew <u>I</u> nsert <u>B</u> uild <u>D</u> ebug <u>T</u> ools <u>G</u> o F <u>a</u> vorites <u>W</u> indow <u>H</u> elp	
🎬 Message Node2 (Message Node)	
Locations:	
http://esdsun.ibi.com:18000/servlets/psft.pt8.gateway.GetwayServlet	
Save As	
Save Name Ar:	
Cancel	

Figure D–12 Save As Dialog

7. To save the Message Node, click **OK**.

It is recommended that you name your first (trial) message node EXTERNAL. After successfully configuring and sending messages using this node, you can create additional message nodes with names appropriate for your application.

If you intend to migrate this message node to a different PeopleSoft environment (for example, from Test to QA), you can create a PeopleSoft project and insert the Message Node into the project.

You have finished creating and configuring the message node.

Ensuring the Message Is Active and Is Routed Correctly

To ensure that the message is active and is routed to the proper message channel:

- 1. Open Application Designer.
- 2. On the File menu, point to Open, click Message, and open the LOCATION_ SYNC message, as shown in Figure D–13.

XApplication Designer - Untitled - [LOCATION_SYNC (Message)]					_ 8 ×
The Edit View Insert Build Debug Tools Go Favorites Window	<u>H</u> el	p			_ 8 ×
Message Structure		Field Name	Alias	Include	
🗄 🌆 VERSION_1	1	SETID			
Cocation_tbl	2	LOCATION		V	
Message Subscriptions	3	EFFDT		•	
- LocationSync	4	EFF_STATUS		V	
LocationSyncEff		DESCR		V	
	6	DESCR_AC			
	7	DESCRSHORT		<u> </u>	
		BUILDING		<u>v</u>	
		FLOOR		<u> </u>	
		SECTOR		<u> </u>	
		JURISDICTION			
		ATTN_TO COUNTRY		<u>v</u>	
				V V	
		ADDRESS1 ADDRESS2		V V	
		ADDRESS2		V V	
		ADDRESS3		V V	
		NUM1			
	20	NUM2			
		HOUSE_TYPE			
		ADDR_FIELD1			
		ADDR_FIELD2			
	24	ADDR_FIELD3			
		COUNTY			
		STATE		<u>v</u>	
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		IN_CITY_LIMIT		<u>v</u>	
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		EXTENSION		V	
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	144	NCR_SW_CAN		v	

Figure D–13 LOCATION_SYNC Message

- **3.** To view the fields that are included in the message, highlight **LOCATION_TBL**.
- 4. Right-click LOCATION_TBL and select Properties.

The Message Properties dialog is displayed, as shown in Figure D-14.

X Application Designer - Untitled - [LOCATION_S]	/NC (Message)]					_ 8 ×
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	ŤŦŦŦ					
Message Structure		Field Name	Alias	Include		<u> </u>
		1 SETID 2 LOCATION		<u> </u>		
Message Subscriptions		3 EFFDT				
LocationSync		4 EFF_STATUS		<u> </u>		
LocationSyncEff	Message Propertie	5 IDESCB			×	
	General Use				-	
	Status				1	
	☑ Active					
	Message <u>C</u> hannel		1	•		
	Default Version:	VERSION_1		•		
	– Message Viewin	g / Correction				
	Use Message	e Monitor Dialog				
	C Use <u>P</u> age					
	Page Me <u>n</u> u Name:			~		
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		41 CAN_OEE_AREAC		<u> </u>		
		42 GEOLOC_CODE 43 OFFICE_TYPE		<u>v</u>		
		44 NCR_SW_CAN		<u>v</u>		•
Ready					H8170SU	N

Figure D–14 Message Properties Dialog

Perform the following steps:

- **a.** Select the **Use** tab.
- **b.** Ensure the **Status** check box is selected, which indicates that the message is active.
- c. From the Message Channel list, select ENTERPRISE_SETUP.
- **d.** From the Default Version list, select **VERSION_1** (messages can have multiple versions).
- 5. Click OK.
- **6.** Save the message.

Configuring the Message Channel

To configure the message channel:

- 1. From the File menu, choose **Open** and click **Message Channel**.
- 2. To open the ENTERPRISE_SETUP Message Channel, select ENTERPRISE_ SETUP.
- 3. Right-click ENTERPRISE_SETUP and select Properties.

The Message Channel Properties dialog is displayed, as shown in Figure D–15.

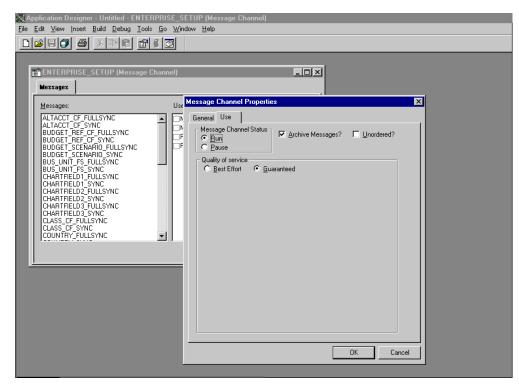


Figure D–15 Message Channel Properties Dialog

Perform the following steps:

- **a.** Select the **Use** tab.
- **b.** Ensure that the Message Channel status is set to **Run**.
- c. Click OK.
- 4. From the left pane, select the **Routing Rules** tab.

The pane is blank, as shown in Figure D–16.

Figure D–16 Routing Rules Pane

X Application Designer - Untitled - [ENTERPRISE_S	ETUP (Message Channel)]
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Messages Routing Rules	
Direction Message Node Name	Message Node Description
	View <u>D</u> efinition
	View OnRoutePublication PeopleCode
	View On <u>R</u> outeSubscription PeopleCode
	Insert Message <u>N</u> ode
	Find Object <u>R</u> eferences
	Routing Direction

5. Right-click the pane and select **Insert Message Node**.

The Insert Message Node dialog is displayed, as shown in Figure D-17.

Application Designer - Untitled - [ENTERPRISE_SETUP (Message Channel)]	
The Edit View Insert Build Debug Tools Go Favorites Window Help	
Messages Routing Rules	
Direction Message Node Name Message Node Description	
Insert Message Node	
Object Type: Message Node Y	
Selection Criteria	
Name EXTERNAL	
Description New Search	
Project All Projects	
Objects matching selection criteria:	
Name Local Description	
PSFT_EPPS_FDM - Local Node	
PSFT_HR X PS HRMS - Local Node	
PSFT_PF PS EPM - Local Node PSFT_XINBND	
PSFT_XOUTBND Outbound Node PT_LOCAL	
7 abject(s) found	

Figure D–17 Insert Message Node Dialog

Perform the following steps:

- **a.** Select the message node that you created in "Creating and Configuring a New Message Node" on page D-11, for example, EXTERNAL.
- b. Click Insert.
- 6. Click Cancel.

Information appears on the Routing Rules tab, as shown in Figure D–18.

Figure D–18 Routing Rules Tab

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	irection			Message N	ode Name		Message Node	Description		
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			Routing (Direction	•	Put	oscribe From olish To h (Pub & Sub)			

Perform the following steps:

a. Right-click the message node and point to **Routing Direction**.

- **b.** From the **Routing Direction** menus, select **Publish To**.
- 7. Save the Message Channel, and if you require it, place it in your project.

You have finished configuring the Message Channel.

Configuring the Simple File Handler in the Gateway

To configure the Simple File Handler in the Gateway:

1. In a Web browser, launch the PeopleSoft 8.1 configuration servlet interface (also known as the server gateway) by entering the following URL:

host name:port/servlets/gateway.administration

Where host name is the name of the application server that hosts PeopleSoft and port is the port number on which the application server is listening.

The Handler Directory window is displayed, as shown in Figure D–19.

Figure D–19 Handler Directory Window

🏄 http://esdsun:18000/servlets/gatev	vay.administration - Microsoft Internet Explorer	
<u> F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	Help	
Address 🙆 http://esdsun:18000/servlets/	ateway.administration	🔻 🔗 Go
PeopleSoft 8.17	Handler Directory	<u>A</u>
Handler	Status	Load Unload Configure Delete
Add handler		2
🙋 Done		🛛 🧕 🔤 Local intranet

2. Click Add Handler.

The Add Handler window is displayed, as shown in Figure D–20.

Figure D–20 Add Handler Window

🗿 http://esdsun:18000/servlets/gateway.administration - Microsoft Internet Explorer												
Eile Edit View Favorites Iools Help												
(누> · ⓒ 한 삶 영 때 · · · · · · · · · · · · · · · · · ·												
Address 🙆 http://esdsurc18000/servlets/gateway.administration 💌 🔗 Go												
Add Handler Handler class: pstt.pt8.filehandler.SimpleFileHandler Cancel	×											
Done	🛛 🧱 Local intranet 🍡											

3. Enter the full name of the Simple File Handler class, psft.pt8.filehandler.SimpleFileHandler.

Note: The name is case-sensitive.

4. Click Save.

The Handler Directory window is displayed, as shown in Figure D–21.

Figure D–21 Handler Directory Window

ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> el	p													1
 ↔ → → ⊗ ↔ Back Forward Stop Refresh	<u>a</u>		3 History	Mail	A • Size	Print	Edit	• Discuss	2℃ AIM					
dress 🙋 http://esdsun:18000/servlets/gate	way.administration												•	è
eopleSoft 8.17 I	Iandler	Dire	ecto	•							1			_
Handler				Sta	tus					Load	Unload	d Configure	Delete	
										Load			Delete	
sft.pt8.filehandler.SimpleFileHandler	Not loaded								-		1			
sft.pt8.filehandler.SimpleFileHandler	Not loaded													
· · ·	Not loaded									_				
· · ·	Not loaded													
· · ·	Not loaded													

5. To load the handler, click **Load**.

After the handler loads, "Loaded successfully" appears in the Status column.

6. Click Configure.

The Simple File Handler Directory window is displayed, as shown in Figure D-22.

Figure D–22 Simple File Handler Directory Window

Back Forward Stop Refresh Home Search Favorites History Mail Size Print Edit Address http://esdsun:18000/servlets/gateway.administration Simple File Handler Directory Node Name Output Directory	. 🗐 🔏	Ø	4	≱ •	₽.	3	*	0	ep ال	Iools He	<u>a</u> vorites	ew F	dit ⊻ie	<u>E</u> di	Eile
Simple File Handler Directory	Discuss AIM			Size		~			Home		Stop	ward	Forv		
Simple File Handler Directory								inistration	awau admi	servlets/ast	up:190007	Hoods	🗿 bitou	ee 🚂	ddres
•								inisuauon	sway.aum	seiviets/yat	un. 10000/	.//esua	en undra	•• ~	gares
N						1*87	octo	• Dii	alb	Han	'ila I	οŦ	nla	m	Zi.

7. Click Add a file handler node.

The Add File Handler window is displayed, as shown in Figure D–23.

Figure D–23	Add File Handler	Window
-------------	------------------	--------

http://esdsun:18000/serv	lets/gateway.administration - Microsoft Internet Explorer				- 🗆 ×		
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites					-		
Back Forward Sto							
🛛 Address 🙋 http://esdsun:1800	0/servlets/gateway.administration			•	∂Go		
Add File Handler							
Node Name	Output Directory	Header? I	Decode?	Uncompres	s ?		
EXTERNAL	//tmp			v			
Save					•		

8. In the Node Name field, enter the name of the message node that you created in "Creating and Configuring a New Message Node" on page D-11, for example, EXTERNAL.

D.3 Viewing the PeopleCode for a Message

Messages are initiated by the PeopleCode that is attached to a record. Usually, this record is one of the records associated with the message itself.

1. Open Application Designer, as shown in Figure D–24.

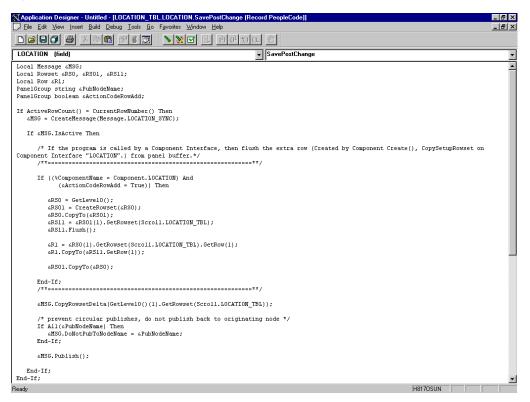
Figure D–24 Application Designer

-21			al		001100	معنا ا		the latest									
	50 4 <u>x 6</u> 6 6	9 🗵	꾀		-> ->	ť		调整									
e el	Fields Record Type																
	raceia ()pe																
Num		Туре	FDe	FEd	FCh	FFo	RIn	RIs	RDe	RSe	SEd	SPr	SPo	Srl	SrS	₩rk	PPr
	SETID	Char												~			
	LOCATION	Char											~				
3	EFFDT	Date															
4	EFF_STATUS	Char									~						
5	DESCR	Char										~					
6	DESCR_AC	Char															
7	DESCRSHORT	Char															
	BUILDING	Char															
9	FLOOR	Char															
	SECTOR	Char															
	JURISDICTION	Char															
	ATTN_TO	Char															
	ADDRESS_SBR	SRec															
	PHONE_SBR	SRec															
	EXTENSION	Char															
	FAX	Char															
	SETID_SALARY	Char															
	SAL_ADMIN_PLAN	Char															
	LANG_CD	Char															
	REG_REGION	Char															
	HOLIDAY_SCHEDULE	Char															
	LOC_TBLUSA_SBR	SRec															
	LOC_TBLCAN_SBR	SRec															
	WRKS_CNCL_SBR	SRec															
	LOC_TBLGER_SBR	SRec															
	LOC_TBLUK_SBR	SRec															
	LOC_TBL_FED_SBR	SRec															
	LOC_TBLESP_SBR	SRec															
	LABEL_FORMAT_ID2	Char															
	LABEL_FORMAT_ID3	Char															
	USG_LBL_FORMAT_ID	Char															
	LOC_TBLMEX_SBR	SRec															
	ESTABID	Char									~						
34	COMMENTS_2000	Long															

- 2. On the **Record Fields** tab, select the **LOCATION_TBL** record.
- 3. Select the PeopleCode display option.
- 4. Select the Save Post Change (SPo) box for the LOCATION field.

The following window displays the PeopleCode that initiates a LOCATION_SYNC message, as shown in Figure D–25.

Figure D–25 PeopleCode



For more information about PeopleCode, consult your PeopleSoft Online Library.

You have finished viewing the PeopleCode for a message. You can now test Integration Broker (in PeopleSoft 8.4) or Application Messaging (in PeopleSoft 8.1).

D.4 Testing the Integration Broker

To test the Integration Broker by generating a message, you can navigate to the Location Transaction window and add, update, or delete a location entry in your application. Depending on your application, the way you navigate varies.

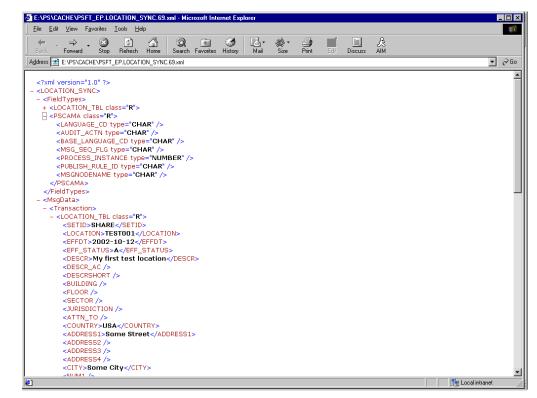
An example that illustrates a Financials 8.4 application where a new location with a SetID of SHARE and a Location Code of TEST001 was added, as shown in Figure D–26.

_					
Location - Microsoft Internet I					×
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites]	ools <u>H</u> elp				
🗢 - 🔿 - 🔕 Back Forward Stop	Image: Constraint of the second sec	Mail Size Print	Edit Discuss AIM		
Address 🛃 http://isdsrv14.ibi.com/	psp/ps/EMPLOYEE/ERP/c/DEFINE_GENERAL_OPTI	IONS.LOCATION_TBL.GBL			💌 🥐 Go
DEODIE:					
PEUPPE				Search:	f o
200-				<u></u>	
		🙆 Home	📵 Worklist	🙆 Add to Favorites	😔 Sign out
Menu 🥥					
Location - Country				1	New Window Help
- Country Statistics					
- Division Area Code	/ Location Definition Location Detail				
- Fax Location	SetID: SHARE Location Code: TEST001				
 Location 	Location Definition				
- Region Codes	Location Definition		<u>Fin</u>	d View All 🔋 First 🔳	1 of 1 💽 Last
 Region Type Codes State 	'Eff Date: 10/12/2002 🔟 Active	Descr: My first te	st location		+ -
Market Rates					
▶ Notes	Country: USA Q United States		Prefix:		
Position Accounting	Address 1: Some Street		Phone:		
Process Partition ID	Address 1:		Ext:		
Sales and Use Tax Shipping and Receiving	Address 2:				
Team Members	Address 3:		Fax:		
▶ Units of Measure	Add(03) 5.				
♦ User Preferences					
VAT and Intrastat	City: Some City		🗖 In City Limit		
Vorkflow Xml Schema					
Product Related	County:	Postal:			
Vilities	State: NY Q	Jurisdiction:			
Define Integration Rules					
FDM	Building #: Flo	or #:	Sector:		
Government Resource	1 · · · · · · · · · · · · · · · · · · ·				
Directory Background Processes	🕒 Save) 🖃 Notify		(El-Add) (2 Updat	e (Display) 🔊 Include History	Correct History
Vorklist				eroispiay) (2-pincidde history	(ag contect history)
Tree Manager	Location Definition Location Detail				
Reporting Tools					
PeopleTools					
 Change My Password My Personalizations 					
M. Overlage Durfte	-				
2]					🧿 Internet

Figure D–26 Financials 8.4 Application

A portion of the XML output is shown in Figure D–27.

Figure D–27 XML Output



Note: The name of the file is PSFT_EP.LOCATION_SYNC.69.xml, which is the concatenation of PSFT_EP (the local Publishing Node), the name of the message, and the number of the Publication ID.

If you cannot send a message successfully, PeopleSoft provides a set of tools for monitoring the progress of your messages. In release 8.1, you use a tool called the Application Messaging Monitor. In release 8.4, you use the Monitor Menu in the Integration Broker.

For a complete description on how to isolate and resolve problems with your messaging environment, consult your PeopleSoft Online Library. If you are still unable to send your XML file, the PeopleSoft Customer Connection can help solve your problem.

D.5 Using Outbound Synchronous Messages

Starting with PeopleTools 8.4, you can send outbound synchronous messages. From a high-level point of view, the primary difference between outbound synchronous and asynchronous is that with outbound asynchronous, the transaction is completed whether the message is actually sent or received.

For synchronous outbound messages:

- The transaction must wait for a response from the external system before continuing.
- The transaction must process the response message.
- The external system must ensure that the response message is correctly formatted.

Oracle Application Adapter for PeopleSoft can work with PeopleSoft outbound synchronous messages. Outbound synchronous messages involve additional configuration steps, both within PeopleSoft and in Oracle WebLogic Server. This topic briefly describes the configuration requirements within PeopleSoft.

Note: The instructions in this topic build upon the instructions for outbound asynchronous messages. It is strongly recommended that you familiarize yourself with outbound asynchronous messaging before attempting outbound synchronous. For more information on outbound asynchronous messages, see "Configuring Integration Broker in PeopleSoft 8.4" on page D-2.

Ensure that both outbound and inbound messages are created and active. PeopleSoft provides template examples called IB_INST_VER_ SYNC_MSG and IB_INST_VER_RESP_MSG. For information on examining these messages, see "Ensuring the Message Is Active and Is Routed Correctly" on page D-3.

D.5.1 Configuring Outbound Synchronous Messages

You can use an existing node, or you can create a new node to configure outbound synchronous messages. For more information on creating and configuring a node, see "Creating and Configuring a New Gateway Node" on page D-7. In either case, you must set up your outbound synchronous transaction.

The following example uses a node and transaction delivered by PeopleSoft. However, this example is for illustrative purposes only and does not actually work as delivered

without additional steps. As of Financials release 8.42, there are no preconfigured outbound synchronous transactions that you can use for testing purposes.

Configuring an Outbound Synchronous Message

To configure an outbound synchronous message:

- 1. Navigate to the **Node Definitions** page and open the **PT_LOCAL** node.
- 2. Click the Transactions tab.

The Transactions pane is displayed, as shown in Figure D-28.

Figure D–28 Transactions Pane

← Back • => -> 🙁 🛐 (.ddress 🛃 http://esdsun.ibi.co				C I I I I I I I I I I I I I I I I I I I			-	<i>ନ</i> ିରେ
PeopleSoft.	-	N						
reopieson					Home :	Norklist Add	to Favorites	<u>Sign</u>
enu –								
Set Up Financials/Supply Chain	<u> </u>						New Win	ndow Hel
Define Integration Rules	6	Node	Info Contact / Not	es Properties Connectors	Transactions Portal Content			
FDM	1	NUGE	iniu y contact/ Not	es / Propenies / Connectors	Transactions Ponal Content	<u>.</u>		
Government Resource		Node Name	PT LO	CAL				
Directory Background Processes		Transactio	-		Anotania I Padulation		1-9 of 10	▶ Last
Worklist					Customize Find View /			
Tree Manager		Edit	Transaction Type		Request Message Version	Effective Date		Delete
Reporting Tools PeopleTools		1 Edit	InAsync	IB_INST_VER_ASYNC_MSG	VERSION_1	03/13/2002	Active	-
> Security		2 Edit	InAsync	IB_INST_VER_RESP_MSG	VERSION_1	03/13/2002	Inactive	-
> Utilities		3 Edit	InSync	IB INST VER SYNC MSG	VERSION 1	03/13/2002	Active	-1
> Workflow > Portal					-			
Search Engine		4 Edit	OutAsync	IB_INST_VER_ASYNC_MSG	VERSION_1	03/13/2002	Inactive	-
> Personalization		5 Edit	OutAsync	IB_INST_VER_RESP_MSG	VERSION_1	03/13/2002	Active	-
Process Scheduler Cube Manager		6 Edit	OutSync	IB_INST_VER_SYNC_MSG	VERSION 1	03/13/2002	Inactive	-
Application Engine					-		A	
Integration Broker		7 Edit	InAsync	EMAIL_MSG	VERSION_1	01/01/1900	Active	-
D Monitor		8 <u>Edit</u>	InAsync	ROLESYNCH_MSG	VERSION_1	01/01/1900	Active	-
Otilities Node Definitions		9 Edit	OutAsync	EMAIL_MSG	VERSION_1	01/01/1900	Active	-
- Gateways			,	-	-			
- Relationships		Add Trans:	action Copy All Tra	magational				
 <u>Codeset Groups</u> Codesets 		Aug Trans	Соруни на	Insactions				
- Codeset Values								
MultiChannel Framework	- U	🚽 Save) (Q Return to Search					
Archive Data	1	Node Info C	contact / Notes Prope	erties Connectors Transactions F	Portal Content			
∙ Translations • EDIManaαer								
Mass Changes								
Change My Password								
My Personalizations								

One outbound synchronous message, IB_INST_VER_SYNC_MSG, appears in the Transaction Type list.

3. Click the **Edit** link in the IB_INST_VER_SYNC_MSG row.

The following pane is displayed, as shown in Figure D–29.

Figure D–29 Message Tab

25 N L N C 22 N C C 7 L							_ 8 ×
Node Definitions - Microsoft Internet							
File Edit View Favorites Tools	·····						
← Back • ⇒ -> 🙆 🔂 🚮 🔞 S	iearch 🛊 Favorites	🗐 Media 🦪	Z- 🖨 🖻 🗐 (3 A			
Address 🙋 http://esdsun.ibi.com:20000/	psp/ps/EMPLOYEE/ERP	/c/IB_PROFILE.IB_M	IODE.GBL				▼ 🖉 Go 🛛 Links
D LCC							
PeopleSoft.					Home	Worklist	Add to Favorites Sign out
1				- AB		<u>vvorkiist</u>	Add to Pavontes Sign out
Menu 📃							
Set Up Financials/Supply Chain							New Window Help
N Defension intermetion Dutes							
FDM	Fransaction Detail	Messages \			_		
N Government Recourse	lode Name:	PT LOCAL					
Directory	ioue Maine.	FI_LOCAL					
D Background Processes	ransaction Messag	es		Find View All First	🛙 1 of 1 🕩 Last		
D Worklist D Tree Manager							
D Reporting Tools	Effective Date:	03/13/2002	Status:	Inactive			
✓ PeopleTools				🗹 Log Message Deta	10		
▷ Security	Transaction Type:	OutSync		Lug message Deta	m.c.		
D Utilities	Request Message						
D VVorkflow							
D Portal	Name:	IB_INST_VER_:	BYNC_MSG	Version: VERSION_1			
Search Engine Personalization	External Name:						
Process Scheduler	External Name.	1					
Cube Manager	D 11						
▶ Application Engine	Response Message	;					
▽ Integration Broker	Name:	IB_INST_VER_F	RESP_MSG	Version: VERSION_1	۹		
D Monitor		, 		,			
D ∪tilities	External Name:	<u> </u>					
Node Definitions							
- <u>Gateways</u> - Relationships				Return to T	ransaction List		
- Codepat Orauna							
- Codesets	Save						
- Codeset Values Tra	ansaction Detail Me	ssages					
MultiChannel Framework							
D Archive Data							
D Translations							
D EDIManager D Mass Changes							
- Change My Password							
- My Personalizations							
- My System Profile							
- My Dictionary							
(#) Done							🔮 Internet

4. Click the **Messages** tab.

Both request and response messages appear. The target system must ensure that the response message follows the format of the request message. As the target system is your Oracle WebLogic Server, you must transform the XML that is sent and returned from your final destination.

Note: You must use the PeopleSoft-supplied HTTP target connector when you are working with synchronous outbound messages. You cannot use the TCPIP84TARGET connector for outbound synchronous messages.

D.5.2 Viewing the PeopleCode for a Synchronous Message

The sample PeopleCode in the following example is for a synchronous outbound message. It differs from asynchronous outbound in that it must handle a response message.

Viewing the PeopleCode for a Financials Synchronous Outbound Message

The following sample code is supplied with the Financials application and is associated with the two messages IB_INST_VER_SYNC_MSG and IB_INST_VER_RESP_MSG.

To view the code, perform the following steps:

- 1. From Application Designer, open the **PSINST_VER** record.
- 2. Select the PeopleCode display option.
- 3. Select the Field Change (FCh) box for the IB_SEND_SOS_BTN field.

The following window is displayed, as shown in Figure D–30.

_ 🗗 X _ 8 × IB SEND SOS BTN (field) + FieldChange • /* SyncRequest example */ /* SyncRequest example */ Local Message &request_MSG, &response_MSG; Local Reovet aregonage_MS, &response_KS, &IB_INST_VER_TRX_RS; Local Row(a cresponse_PCC, &IB_INST_VER_DB_REC; Local SQL &delete_SQL; Local any «I; «request_RS = GetLevel0(); «request_MSG = CreateMessage(Message.IB_INST_VER_SYNC_MSG); «request_MSG.CopyRowset(«request_RS); /* Create the database record object for the response data */
&IB_INST_VER_DB_REC = CreateRecord(Record.PSINST_VER_TRX); /* publish the request and wait for the response */
aresponse_MSG = arequest_MSG.SyncRequest(); If (&response MSG.ResponseStatus = 0) Then /* Get the response rowset object from the buffer */ aresponse_RS = aresponse_MSG.GetRowset(); /* Loop through the message rows moving the data into the database table */
For 4I = 1 To (aresponse_RS.RowCount)
 aresponse_REC = aresponse_RS.GetRow(aI).GetRecord(Record.PSINST_VER_TRX);
 aresponse_REC.GoyPiteldsTo(4EB_INST_VER_DB_REC);
 dIB_INST_VER_DB_REC.Insert(); End-For; End-If; /* Manual refresh of scrollable area */
alB_INST_VER_TRX_RS = GetLevel0()(1).GetRowset(Scroll.PSINST_VER_TRX);
alB_INST_VER_TRX_RS_Flugh(); GIB INST VER TRX RS.Select(Record.PSINST VER TRX); F842OSUN NUM

Figure D–30 Field Change Box

D.6 Generating Events Using PeopleTools Tutorial

This section provides a tutorial that walks you through the PeopleSoft event generation process using PeopleTools version 8.48 and 8.49. The tutorial uses the PeopleTools version 8.48.02 and 8.90 Financial / SCM application. As a result, if you are using a different platform, then correlate the terms and commands specific to that operating system. For more information, refer to the appropriate user guide for each specific component.

D.6.1 Configuring PeopleSoft Services

This section describes how to configure PeopleSoft services.

Adding a Remote Node

To add a remote node:

- 1. Logon to PeopleSoft using the browser-based GUI (Pure Internet Architecture).
- 2. Select PeopleTools, Integration Broker, Integration Setup, followed by Nodes.

The Node Definitions tab is displayed, as shown in Figure D–31.

Node Definitions	Portal <u>W</u> S Security	Routings	
Node Name:			Copy Node
Node Name:	EXTERNAL		
'Description:	Message publish to third party		Rename Node
'Node Type:	External 🔽	Default Local Node	
		Local Node	Delete Node
		Active Node	
*Authentication Option:	None 🗸	Non-Repudiation	
		🔲 Segment Aware	
'Default User ID:	PS	Q	

Figure D–31 Node Definitions Tab

- **3.** Perform the following steps:
 - **a.** In the Node Name field, type a name for the new node definition, for example, **EXTERNAL**.
 - **b.** In the Description field, type a brief description for the new node definition.
 - c. From the Node Type drop-down list, select External.
 - **d.** From the Authentication Option drop-down list, ensure that the default option, **none**, is selected.
 - **e.** In the Default User ID field, type the user ID that is being used by the PeopleSoft system, for example, **PS**.
 - f. Select the Active Node check box.
- 4. Click the **Connectors** tab.

The Connectors tab is displayed, as shown in Figure D–32.

Figure D–32 Connectors Tab

Node Definitions Connector	ors <u>P</u> ortal <u>y</u>	VS Security	Routings	
Node Name EXTERNAL			Ping Node	
Details				
Gateway ID LOCAL		Q		
Connector ID HTTPTARGET	Г	Q		
Properties			<u>Customize Find</u> 🏪	First 🛃 1-3 of 3 🕨 Last
Properties Data Type / Data Type / Data Type				
'Property ID	Property Name	Require	d <u>Value</u>	
1 HEADER	sendUncompressed	۹ 🗹	Y	< ∓ =
2 HTTPPROPERTY	Method	Q 🗹	POST	Q 🕂 🗖
3 PRIMARYURL	URL	۹ 🗹	http://bpelclientt1971	Q 🕂 🗖
Password Encryption Utili	ty			

- **5.** Perform the following steps:
 - **a.** In the Gateway ID field, type **LOCAL**.
 - **b.** In the Connector ID field, type **HTTPTARGET**.
 - **c.** For the PRIMARYURL value, enter the host and port number of the PeopleSoft adapter instance that is used to listen for events.

- d. Leave the default values for the remaining properties.
- **6.** Save your changes.

Selecting a Service

To select a service:

- 1. Select PeopleTools, Integration Broker, Integration Setup, followed by Services.
- 2. Search for the DEPT_SYNC service and select it.

The DEPT_SYNC Services pane is displayed, as shown in Figure D–33.

Figure D–33 DEPT_SYNC Services Pane

Services			
Service:	DEPT_SYNC		
*Description:	Dept Sync Incr. Message		
Comments:	Incremental (Component Publish) De Message	ept Sync	
		2	B
Service Alias:		_	
Object Owner ID:	Human Resources 🛛 🗸		
'Namespace:	http://xmlns.oracle.com/Enterprise/To	ols/services]
	View WSDL Provide Web Service	ce	
Service Operations			
Service Operation:			
Operation Type:	×	ADI	D
Existing Operations	Customize Find View A	ll 🛄 🛛 First	🛃 1-2 of 2 🕑 Last
Operation Message Lin	iks 🕅 🥅		
Operation.Default Version	Description	<u>Active</u>	Operation Type
ADD_DEPT.v1	Add Department	V	Asynch
DEPT_SYNC.VERSION_1	Dept Sync Incr. Message	4	Asynch

3. From the Existing Operations section on the lower-left, click the **DEPT**_**SYNC.VERSION_1** service operation.

The Service Operation - General pane is displayed, as shown in Figure D–34.

Figure D–34 Service Operation - General Pane

Default Service Operation	n Version				
'Version:	VERSION_1]	🗹 Default	Active	
Version Description:	Dept Sync Incr. Message		Routing Status		
Version Comments:		~	Any-to-Local:	Exists	
			Local-to-Local:	Exists	
		~	Routing Actions Up	oon Save	
	Non-Repudiation		🔲 Regenerate A		
Introspection	Runtime Schema Validation		📃 Regenerate L	ocal-to-Local	

- 4. Click the Active check box.
- 5. Click the Routings tab to add a new routing, as shown in Figure D–35.

Figure D–35 Routings Tab

General Handle	ers Routings	
Service Operation:	DEPT_SYNC	
Default Version:	VERSION_1	
Routing Name:	ADD_DEPT	ADD

- **6.** In the Routing Name field, type a name for the new routing, for example, **ADD**_**DEPT**.
- 7. Click Add.
- **8.** Click the **Routing Definitions** tab to add a new routing definition, as shown in Figure D–36.

Figure D–36 Routing Definitions Tab

Routing Definitions	ameters γ Connector Properties γ	
Routing Name: 'Service Operation: Version: 'Description:	ADD_DEPT DEPT_SYNC VERSION_1 ADD_DEPT	✓ Active
Comments:		
'Sender Node:	PSFT_HR	
'Receiver Node:	EXTERNAL	
Routing Type:	Asynchronous - One Way	
Object Owner ID:	×	
Save	Return	

- **9.** Perform the following steps:
 - **a.** In the Sender Node field, type **PSFT_HR**, which is the default PeopleSoft node that publishes the message.
 - **b.** In the Receiver Node field, type **EXTERNAL**, which is the new node that has been created to subscribe the message published by PeopleSoft.
- **10.** Click the **Connector Properties** tab, as shown in Figure D–37.

Routing Definitions	Paramet	ers Connector	Properties		
Routing	Name:	ADD_DEPT			
Service Ope	ration:	DEPT_SYNC			
Service Operation Ve	ersion:	VERSION_1			
Gateway ID:		LOCAL		Q	
Connec	tor ID:	HTTPTARGET		<u>a</u>	
Connector Propert	ies	Customiz	e Find View All 🚟 🛛	First 🛃 1-3	of 3 🕑 Last
Property ID	Property N	lame_	<u>Value</u>		
HEADER	sendUnco	mpressed	Y		Q 🛨 🗖
HTTPPROPERTY	Method		POST		< ₽ =
PRIMARYURL	URL		http://bpelclient:1971		Q 🛨 🖃

Figure D–37 Connector Properties Tab

- **11.** Perform the following steps:
 - **a.** In the Gateway ID field, type **LOCAL**.
 - **b.** In the Connector ID field, type **HTTPTARGET**.
 - **c.** For the PRIMARYURL value, enter the host and port number of the PeopleSoft adapter instance that is used to listen for events.
- **12.** Click **Save** and then click **Return**.

You are returned to the Routing Definitions pane. Notice that the new routing definition (ADD_DEPT) is now added to the list, as shown in Figure D–38.

Figure D–38 Routing Definitions Pane

General	Handlers Routing	5					
Service Opera	ation: DEPT_SYNC						
Default Ve	rsion: VERSION_1						
Routing N	łame:		Ade	b			
Routing Defi	nitions			<u>c</u>	ustomize Find Vi	ew All 🔛	First 🛃 1-7 of 7 🕨
Selected	<u>Name</u>	Version	Routing Type	Sender Node	Receiver Node	Direction	Status
	~GEN~UPG~24704	VERSION_1	Asynch	PSFT_HR	PSFT_EP	Inbound	Inactive
	ADD DEPT	VERSION_1	Asynch	PSFT_EP	EXTERNAL	Outbound	Active

- 13. Click Save to save the details of the Service Operation.
- 14. Click the **Return to Service** link to return to the Services pane.
- **15.** Click **Save** on the Services pane.

Activating the Gateway

To activate the gateway:

- 1. Select PeopleTools, Integration Broker, Configuration, followed by Gateways.
- 2. Search for the Integration Gateway ID, for example, Local and select it.

The Gateways pane is displayed, as shown in Figure D–39.

Figure D–39 Gateways Pane

Gateway	S		
Gateway ID:	LOCAL		
	🗹 Local Gateway	Load Balancer	
URL:	http://peoplesoftdemo.	oracle.com:19000/PSIGW//PeopleSoftListeningC	Ping Gateway
Gateway Setu	Properties		
Load Gatew	vay Connectors		

3. Click Ping Gateway.

A new browser window is displayed, which shows that the gateway is active, as shown in Figure D–40.

Figure D–40 New Browser Window



4. Close the new browser window to return to the Gateways pane, as shown in Figure D–41.

Figure D–41 Gateways Pane

Gateway	s			
Gateway ID:	LOCAL			
	🗹 Local Gatew	ay 📃 Load Balancer		
URL:	http://peoplesof	tdemo.oracle.com:19000/PSIGW/People	eSoftListeningC Ping Gateway	
Gateway Setu:	Properties			
Load Gatev	vay Connectors			
Connectors			Customize Find 🗮	First 🖪 1-10 of 10 🕨 Last
<u>'Connect</u>	or ID	Description	'Connector Class Name	
1 AS2TAR)ET		AS2TargetConnector	Properties + -
2 FILEOUT	PUT		SimpleFileTargetConnector	Properties + -
3 FTPTAR)ET		FTPTargetConnector	Properties + -
4 GETMAIL	TARGET		GetMailTargetConnector	Properties + -
5 HTTPTAR	RGET		HttpTargetConnector	Properties + -

5. Ensure that **HTTPTARGET** is listed in the Connectors section. If it is not listed, click **Load Gateway Connectors** to refresh the available connectors.

Activating the Domain

To activate the domain:

1. Select **PeopleTools**, **Integration Broker**, **Configuration**, followed by **Quick Configuration**.

The Quick Configuration pane is displayed, as shown in Figure D–42.

ocal Gateway		
The integration	gateway manages message transport through several communication prot	ocols.
Gateway URL:	http://peoplesoftdemo.oracle.com:19000/PSIGW//PeopleSoftListeningCon	nectc Ping Gateway
Advanced Gatev	way Setup Use to access additional integration gateway featur	es.
To process asyn	er Domains Inchronous messages, one application server domain must be active. If inac I Status dron-down list to activate the angropriate domain	tive,
To process asyn use the Domain	nchronous messages, one application server domain must be active. If inac Status drop-down list to activate the appropriate domain.	
To process asyn	nchronous messages, one application server domain must be active. If inac Status drop-down list to activate the appropriate domain. <u>Customize Find</u> 🇮	tive, First 🗨 1-13 of 13 🕑 Last Domain Status
To process asyn use the Domain Domains	nchronous messages, one application server domain must be active. If inac Status drop-down list to activate the appropriate domain. <u>Customize Find</u> 🇮	First 🕙 1-13 of 13 🕑 Last
To process asyn use the Domain Domains Machine Name	nchronous messages, one application server domain must be active. If inac Status drop-down list to activate the appropriate domain. <u>Customize Find</u> <u>Application Server Path</u>	First [▲] 1-13 of 13 ▶ Last Domain Status
To process asyn use the Domain Domains Machine Name ADNTAS44	nchronous messages, one application server domain must be active. If inac Status drop-down list to activate the appropriate domain. <u>Customize Find </u> : <u>Application Server Path</u> E:\PT840RC4\appserv\HC840MST_ADNTAS44	First 🛃 1-13 of 13 🕨 Last Domain Status Active

Figure D–42 Quick Configuration Pane

2. Ensure that the domain is active.

Activating the Service

To activate the service:

- Select PeopleTools, Integration Broker, Integration Setup, followed by Services. The Services pane is displayed, as shown in Figure D–43.
- Figure D–43 Services Pane

General Handlers	Routings			
Service Operation:	DEPT_SYNC			
Service: Operation Type:	DEPT_SYNC Asynchronous - One Way			
'Operation Description:	Dept Sync Incr. Message		User/Pass	sword Required
Operation Comments:		~		
Object Owner ID:	Human Resources	>		
Operation Alias:			Ser	vice Operation Security
Default Service Operation	Version			
'Version:	VERSION_1		🗹 Default	🗹 Active
Version Description:	Dept Sync Incr. Message		Routing Status	
Version Comments:		~	Any-to-Local:	Exists
			Local-to-Local:	Exists
		v	Routing Actions U	pon Save
	Non-Repudiation		📃 Regenerate A	ny-to-Local
Introspection	Runtime Schema Validation		🔲 Regenerate L	ocal-to-Local

2. Ensure that the service is active.

Activating the Service Operation (Queue and Message Node)

To activate the service operation:

1. Select **PeopleTools**, **Integration Broker**, **Configuration**, **Integration Setup**, followed by **Services**.

The Services pane is displayed, as shown in Figure D-44.

Existing Operat	ions	Customize Find View A	di 🛗 🛛 First 🛛	🛃 1-2 of 2 🕑 Last
Operation	Message Links			
Operation.Defa	ult Version	Description	Active	Operation Type
ADD_DEPT.v1		Add Department	\checkmark	Asynch
DEPT SYNC.VI	ERSION 1	Dept Sync Incr. Message	\checkmark	Asynch

2. From the Existing Operations section on the lower-left, click the **DEPT_SYNC.VERSION_1** service operation.

The Service Operation - General pane is displayed, as shown in Figure D-45.

Figure D–45 Service Operation - General Pane

Default Service Operation	Version			
"Version:	VERSION_1		🗹 Default	🗹 Active
Version Description:	Dept Sync Incr. Message		Routing Status	
Version Comments:		2	Any-to-Local:	Exists
			Local-to-Local:	Exists
			Routing Actions Up	07 \$200
	Non-Repudiation		📃 Regenerate A	ny-to-Local
			📃 Regenerate Lo	cal-to-l ocal
Introspection	Runtime Schema Validation		Integenerate Et	

3. In the message information section on the bottom of the page, note the value in the Queue Name field of the service operation, as shown in Figure D–46.

Figure D–46 Message Information Section

Message Information		
Type:	Request	
Message.Version:	DEPT_SYNC.VERSION_1	Q View Message
'Queue Name:	ENTERPRISE_SETUP	Q View Queue Add New Queue

4. Click the View Queue link.

The Queue Definitions pane is displayed, as shown in Figure D-47.

Queue Defi	nitions					
Queue Name:	ENTER	PRISE_SETUP		E	Archive 2	Unordered
Description:	EC Setu	p Data			Queue Status:	Run 💙
Comments:	EC Setu	p Data	< >	Ob	iect Owner ID:	Entr Comp 💌
Operations Assign	ed to Queue	9	Define	Partiti	oning Fields	
Service	View All	First 🖪 1-10 of	Comm	ion Fie	lds	View-All 🛛 First 🗹 1-3 of 3 🕩 Last
Operations		42 🕨 <u>Last</u>	Incl	ude	Field	<u>Alias Name</u>
Operation		Version	[OPERATIONNA	ME
ALTACCT_CF_FU		VERSION_1		7	PUBLISHER	
ALTACCT_CF_SY	NC	VERSION_1			PODEISHER	
BUDGET_REF_CI	F_FULLSYN	VC VERSION_1			PUBPROC	
BUDGET_REF_CI	F_SYNC	VERSION_1				
BUS_UNIT_FS_FU	JLLSYNC	VERSION_1				
BUS_UNIT_FS_S	YNC	VERSION_1				
CHARTFIELD1_FU	JLLSYNC	VERSION_1				
CHARTFIELD1_S	YNC	VERSION_1				
CHARTFIELD2_FU	JLLSYNC	VERSION_1				
CHARTFIELD2_S	YNC	VERSION_1				
Save	Return		Add F	ield		

Figure D–47 Queue Definitions Pane

- 5. Ensure that the Queue Status drop-down list has **Run** selected.
- 6. Click Return to return to the Service operation pane.
- 7. Click the **Routings** tab, as shown in Figure D–48.

Figure D–48 Routings Tab

General Handlers Routings Service Operation: DEPT_SYNC Default Version: VERSION_1							
Routing N Routing Defin	nitions				<u>ustomize Find </u> Vi		First 🕙 1-6 of 6 🕨
Selected	Name ~GENERATED~946522	Version 40 VERSION_1	Routing Type Asynch	Sender Node ~~ANY~~	Receiver Node PSFT_HR	Direction Inbound	Status Active
	~GEN~UPG~12357	VERSION_1	Asynch	PSFT_HR	PSFT_CR	Outbound	Inactive
	ADD DEPT	VERSION_1	Asynch	PSFT_HR	EXTERNAL	Outbound	Active
	~GEN~UPG~20085	VERSION_1	Asynch	PSFT_HR	PSFT_EP	Outbound	Inactive
	~GEN~UPG~25397	VERSION_1	Asynch	PSFT_HR	PSFT_HR	Local	Inactive
	~GEN~UPG~13180	VERSION_1	Asynch	PSFT_HR	PSFT_LM	Outbound	Inactive

- **8.** Ensure that the routings are active.
- **9.** Click the **Return to Service** link on the bottom of the pane to return to the Services pane.
- **10.** Click **Return to Search** to go to the Services search pane.

In the above steps, if the status has been activated in any of the panes for any of the components, then make sure to save the status at the appropriate pane and the respective components.

11. Select **PeopleTools**, **Integration Broker**, **Configuration**, **Integration Setup**, **Services**, followed by **Nodes**.

The Node Definitions pane is displayed, as shown in Figure D–49.

Node Definitions	Portal <u>W</u> S Security	Routings	
Node Name:	EXTERNAL		Copy Node
'Description:	Message publish to third party		Rename Node
'Node Type:	External 🔽	Default Local Node	Delete Node
		■ Local Node ✓ Active Node	
'Authentication Option:	None 💌	Non-Repudiation	
		📃 Segment Aware	

Figure D–49 Node Definitions Pane

12. Ensure that the status of the External node is active.

This completes the configuration on the PeopleSoft side.

D.6.2 Triggering the Event in PeopleSoft

This section describes how to trigger the event in PeopleSoft.

Triggering the Event

To trigger the event:

- 1. Logon to PeopleSoft using the browser-based GUI (Pure Internet Architecture).
- 2. Navigate to Main Menu, Set up HRMS, Foundation Tables, followed by Departments.

The Departments pane is displayed, as shown in Figure D–50.

Figure D–50 Departments Pane

Departments							
Enter any information you have and click Search. Leave fields blank for a list of all values.							
Find an Existing Value Add a New Value							
SetID:	= 💌	SHARE	Q				
Department:	begins with 🔽]				
Description:	begins with 🔽]				
Company:	begins with 🔽		Q				
Location SetID:	begins with 🔽		Q				
Location Code:	begins with 🔽		Q				
Manager ID:	begins with 🔽		Q				
Budget with Department: begins with 🐱							
Include History Correct History Case Sensitive							
Search Clear	Basic Search	Save Search Criteria					

3. Click the **Add a New Value** tab, as shown in Figure D–51.

Figure D–51 Add a New Value Tab

Departme	nts		
<u> </u>	isting Value Y	Add a New Value	٢
SetID:	SHARE 🔍		
Department:	BPELTEST01]	
Add			

- 4. Enter the appropriate value in the SetID and Department fields
- 5. Click Add.

The Department Profile tab is displayed, as shown in Figure D–52.

Figure D–52 Department Profile Tab

Department Profile Comm. Acctg. and EG	
SetID: SHARE Department: BPELTEST01	Business Units that use this Setid
Department Profile	<u>Find</u> View All First 🛃 1 of 1 🗈 Last
'Effective Date: 08/25/2008	*Status: Active 👻 + -
'Description: BPEL Inbound Test	Short Description: BPEL Inbou
Location SetID:	
Location:	
Manager Type	
None	
CEMPIID Manager ID:	
OPosition Manager Position:	
EmpliD:	
Budget Year End Date:	'Budget Level: None 🗸
Tax Location:	

- **6.** Provide the necessary information according to your requirements to create a new Department record.
- 7. Click **Save** at the bottom of the pane when you are finished.

D.6.3 Verifying the Event Results

This section describes how to verify the event results.

Verifying the Results

To verify the results:

1. Logon to PeopleSoft using the browser-based GUI (Pure Internet Architecture).

2. Navigate to Main Menu, PeopleTools, Integration Broker, Service Operation Monitor, followed by Asynchronous Services.

The Monitor Overview tab is displayed, as shown in Figure D–53.

Monitor Overview Coperation Instances Contracts Contracts Contracts									_	
Publish Node Archived										
'Queue Level 🛛 Oper Inst 🔽 'Grou	ıp By [Queue			~					
Time Period										
From Date:	To Da	te:		Dt						
From Time:	To Tir	ne:			R	tefresh				
Result				<u>c</u>	ustomiz	e Find	View All	Firs	t 🖪 1-4 of 4	🕑 Last
Queue Name	Error	New	<u>Started</u>	Working	Done	<u>Retry</u>	<u>Timeout</u>	Edited	Canceled	Hold
ENTERPRISE_SETUP	0	0	0	0	5	0	0	0	0	0
PSRF_REPORTING_FOLDERS	0	0	0	0	1366	0	0	0	0	0
PSXP_MSG_CHNL	0	0	0	0	1	0	0	0	0	0
USER_PROFILE	0	0	0	0	1	0	0	0	0	0

Figure D–53 Monitor Overview Tab

Here you can view the results of the events at the queue level.

3. Click the number link (5) queue (Enterprise_Setup) in the Result section.

The Operation Instances tab is displayed, as shown in Figure D–54.

Figure D–54 Operation Instances Tab

Monitor Ove	rview / Operati	on instance:	Publication	n Contracts	Subs	ription	Contracts			_
	Node Name				Q		Archived			
External Se	ervice Name]					
Servic	e Operation		Q							
Q	ueue Name	ENTERPRIS	BE_SETUP]Q	Status	Done	~		
Tra	ansaction ID					_				
Time Period	d									
From Date:		31	To Date:		31					
From Time:	:		To Time:				Refresh			
Result						Custom	<u>iize Find </u> Vi	ew All (🏙	First 🖪 1-5 of	5 🕑 Last
Select T	ransaction ID		<u>Queue Name</u>		<u>blishing</u> de	<u>Sub</u>	Queue	<u>Status</u>	<u>Time Stamp</u>	
1000	727c644-72d0-11 53768245214	l dd-9dd0-	ENTERPRISE	SETUP PS	FT_HR	Sub	Queue Link	Done	08/25/2008 2:07:48PM	<u>Details</u>

Notice that a new record for the event (department) is available.

4. Click the **Details** link on the lower-right.

A new browser window (Asynchronous Details) is displayed, as shown in Figure D–55.

Figure D–55	Asynchronous	Details
-------------	--------------	---------

Asynchronous	Details					
Transaction ID	b727c644-72d	10-11dd-9dd0-b	53768245214			
External Service Name	DEPT_SYNC.\	/ERSION_1				Refresh
Publishing Node Queue Name Queue Sequence ID Sub Queue	PSFT_HR ENTERPRISE 5	_SETUP		*Segment	1 View XML	Reliesii
Original Pub Node	PSFT_HR		Uncom	ressed Data Length	7526	
Status	DONE		Da	ta Length View Limit	100000	
View IB Info Publication Contracts Actions	mation TTT)			Cus	tomize Find 🎬	First 🛃 1 of 1 🕨 Last
Subscriber Node	<u>'Segment</u>	<u>Status</u>				
EXTERNAL	1	Done	View XML	Resubmit Ca	ncel Error Messag	ges View IB Info

Notice that the status of the transaction is **DONE** for the Publishing and Subscriber nodes.

Glossary

adapter

Provides universal connectivity by enabling an electronic interface to be accommodated (without loss of function) to another electronic interface.

agent

Supports service protocols in listeners and documents.

business service

Also known as a Web service. A Web service is a self-contained, modularized function that can be published and accessed across a network using open standards. It is the implementation of an interface by a component and is an executable entity.

channel

Represents configured connections to particular instances of back-end systems. A channel binds one or more event ports to a particular listener managed by an adapter.

listener

A component that accepts requests from client applications.

port

Associates a particular business object exposed by the adapter with a particular disposition. A disposition is a URL that defines the protocol and location of the event data. The port defines the end point of the event consumption.

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