

## **Oracle® Fusion Middleware**

Application Adapter for J.D. Edwards OneWorld User's Guide for  
Oracle WebLogic Server

11g Release 1 (11.1.1.4.0)

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# Preface

*Oracle Fusion Middleware Application Adapter for J.D. Edwards OneWorld User's Guide for Oracle WebLogic Server* describes how to provide connectivity and integrate with J.D. Edwards OneWorld systems.

## Audience

*Oracle Fusion Middleware Application Adapter for J.D. Edwards OneWorld User's Guide for Oracle WebLogic Server* is intended for those who integrate with J.D. Edwards OneWorld systems and develop applications.

## Documentation Accessibility

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## Related Documents

For more information, see the following documents in the Oracle Enterprise Repository 11g 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)

A wealth of additional Governance information can be found within Oracle's Unified Method (OUM). OUM can be used by Oracle employees, Oracle Partner Network Certified Partners or Certified Advantage Partners, and Clients who either participate in the OUM Customer Program or are engaged on projects where Oracle provides consulting services. OUM is a web-deployed toolkit for planning, executing and controlling software development and implementation projects.

For more information about OUM, see the OUM FAQ at

[http://my.oracle.com/portal/page/myo/ROOTCORNER/KNOWLEDGEAREAS1/BUSINESS\\_PRACTICE/Methods/Learn\\_about\\_OUM.html](http://my.oracle.com/portal/page/myo/ROOTCORNER/KNOWLEDGEAREAS1/BUSINESS_PRACTICE/Methods/Learn_about_OUM.html)

## Conventions

The following text conventions are used in this document:

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

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# Introduction

Oracle WebLogic Server connects to a J.D. Edwards OneWorld system through Oracle Application Adapter for J.D. Edwards OneWorld. Oracle Application Adapter for J.D. Edwards OneWorld provides connectivity and carries out interactions on a J.D. Edwards OneWorld system. This chapter discusses the following topics:

This chapter contains the following topics:

- [Section 1.1, "Adapter Features"](#)
- [Section 1.2, "J.D. Edwards OneWorld Platforms, Products, and Releases Supported"](#)
- [Section 1.3, "J.D. Edwards OneWorld Concepts"](#)
- [Section 1.4, "Integration with J.D. Edwards OneWorld"](#)
- [Section 1.5, "Adapter Architecture"](#)
- [Section 1.6, "BSE Versus Oracle Adapter J2CA Deployment"](#)

## 1.1 Adapter Features

Oracle Application Adapter for J.D. Edwards OneWorld provides a means to exchange real-time business data between J.D. Edwards systems and other applications, databases, or external business partner systems. The **adapter** enables inbound and outbound processing with J.D. Edwards.

Oracle Application Adapter for J.D. Edwards OneWorld can be deployed as a J2EE Connector Architecture (J2CA) 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 J.D. Edwards OneWorld uses XML messages to enable non-J.D. Edwards OneWorld applications to communicate and exchange transactions with J.D. Edwards OneWorld using services and events. Services and events are described as follows:

- **Services:** Enables applications to initiate a J.D. Edwards OneWorld business event.
- **Events:** Enables applications to access J.D. Edwards OneWorld data only when a J.D. Edwards OneWorld 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 J.D. Edwards OneWorld provides:

- XML schemas and WSDLs for the J2CA 1.0 and 1.5 resource adapter.
- Web services for BSE.

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**See Also:** *Oracle Application Server Adapter Concepts Guide*

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## 1.2 J.D. Edwards OneWorld Platforms, Products, and Releases Supported

The following table indicates which combinations of adapter platforms and J.D. Edwards OneWorld platforms are supported, and for each combination, which J.D. Edwards OneWorld products and releases are supported.

Adapter Platform	J.D. Edwards OneWorld Platform	J.D. Edwards OneWorld Product and Release
Windows, AS400, HP 9000/B, Sun or IBM RS/6000	Windows, AS400, HP 9000/B, Sun or IBM RS/6000	<ul style="list-style-type: none"> <li>■ XE (B7333) from SP19 to SP23</li> <li>■ ERP 8.0 (B7334)</li> <li>■ EnterpriseOne B9 (8.9)</li> <li>■ EnterpriseOne 8.10 (with Tools release 8.93 and 8.94)</li> <li>■ EnterpriseOne 8.11 (SP1 and Tools Release 8.95)</li> <li>■ EnterpriseOne 8.12 (up to Tools Release 8.97 1.2)</li> <li>■ EnterpriseOne 9.0 (Tools Release 8.98)</li> </ul>

### 1.2.1 J.D. Edwards OneWorld Inbound WSDL Generation on UNIX Platforms

On UNIX platforms, manual inbound WSDL documents can be generated for J.D. Edwards OneWorld.

### 1.2.2 J.D. Edwards OneWorld Unit Of Work (UOW)

The following section provides information on the J.D. Edwards OneWorld Unit of Work (UOW).

1. iWay recommends the customer to generate individual business functions of J.D. Edwards OneWorld and then group them together.
2. Generating the individual business functions and grouping them together is completely based on the experience and knowledge related to the business functions of J.D. Edwards OneWorld. There is no documentation on generating the UOW.
3. To create the XML Schema Document (XSD) files that can be used for UOW, perform the following steps:
  - a. Trigger the appropriate event from the J.D. Edwards OneWorld GUI and generate an XML output file based on the event.
  - b. Using the XML file, create an XSD file using an XML editor, such as XMLSPY.

- c. When creating the XSD, ensure that the XSD satisfies the SOA 11g namespace requirements. Manually add the namespace, target namespace, and other items that are required.
4. Once generated, copy the XSD files for the UOW into the repository folder. This repository folder is automatically configured on your file system when a J.D. Edwards OneWorld target is created using Application Explorer.

### 1.2.3 J.D. Edwards OneWorld Versions and Library Files

The following table lists the library files by version that are required for the Oracle Application Adapter for J.D. Edwards OneWorld.

J.D. Edwards OneWorld Version	Required Library Files
XE (B7333)	Connector.jar and Kernel.jar
ERP 8.0 (B7334)	Connector.jar and Kernel.jar
EnterpriseOne 8.9 (B9)	Connector.jar, Kernel.jar, jdeutil.jar, and log4j.jar
EnterpriseOne 8.10	Connector.jar, Kernel.jar, jdeutil.jar, and log4j.jar
EnterpriseOne 8.11 (SP1 and Tools Release 8.95)	Base_JAR.jar, Connector.jar, JdeNet_JAR.jar, log4j.jar, and System_JAR.jar
EnterpriseOne 8.12 (Tools Release 8.96 2.0)	Connector.jar, log4j.jar, Base_JAR.jar, EventProcessor_EJB.jar, EventProcessor_JAR.jar, JdeNet_JAR.jar, and System_JAR.jar
EnterpriseOne 8.12 (up to Tools Release 8.97 1.2)	Connector.jar, log4j.jar, Base_JAR.jar, EventProcessor_EJB.jar, EventProcessor_JAR.jar, JdeNet_JAR.jar, System_JAR.jar, jmxremote_optional.jar, jmxri.jar, ManagementAgent_JAR.jar, and commons-httpclient-3.0.jar
EnterpriseOne 9.0 (Tools Release 8.98)	Connector.jar, log4j.jar, Base_JAR.jar, EventProcessor_EJB.jar, EventProcessor_JAR.jar, JdeNet_JAR.jar, System_JAR.jar, jmxremote_optional.jar, jmxri.jar, ManagementAgent_JAR.jar, and commons-httpclient-3.0.jar

On the J.D. Edwards OneWorld system, these library files are located in the following folder:

```
\\system\classes
```

## 1.3 J.D. Edwards OneWorld Concepts

You can use Oracle Application Adapter for J.D. Edwards OneWorld to call a J.D. Edwards OneWorld Master Business Function, such as Address Book, Purchase Order, and Sales Order. You can also use the adapter as a part of an integration effort to connect J.D. Edwards OneWorld with non-J.D. Edwards OneWorld systems.

Oracle Application Adapter for J.D. Edwards OneWorld can receive an XML document, or it can run one or more J.D. Edwards OneWorld Master Business Functions (MBF) by passing an XML document into J.D. Edwards OneWorld through the J.D. Edwards OneWorld ThinNet API.

## 1.4 Integration with J.D. Edwards OneWorld

J.D. Edwards OneWorld supports multiple methods and technologies to provide interoperability. The three supported entry points are:

- Flat files
- Database tables
- Master Business Function (MBF) interactive calls

You configure Oracle AS Adapter to send requests to J.D. Edwards OneWorld. The adapter processes requests for J.D. Edwards OneWorld Master Business Functions (MBF), embedded in XML documents, and forwards them to a back-end J.D. Edwards OneWorld system. The resulting response information is then returned and processed for further routing.

Oracle Application Adapter for J.D. Edwards OneWorld can receive an XML request document from a client and call a specific function in the target Enterprise Information System (EIS). Oracle Application Adapter for J.D. Edwards OneWorld acts as a consumer of request messages and provides a response. An adapter performs the following functions:

- Receives requests from a legacy system, another EIS, or a non-EIS client.
- Transforms the XML request document into the EIS-specific format.  
The request document conforms to a request XML schema.  
The schema is based on metadata in the EIS.
- Calls the underlying function in the EIS and waits for its response.
- Transforms the response from the EIS-specific data format to an XML document.  
The response document conforms to a response XML schema that is generated by the adapter.  
The schema is based on metadata in the EIS.

You can configure a channel for the adapter to receive messages from J.D. Edwards OneWorld. The information the channel receives is used to build an XML record and is forwarded to any specified disposition for further processing.

Channels are consumers of EIS-specific messages and may or may not provide a response. A channel performs the following functions:

- Receives messages from an EIS client
- Transforms the EIS-specific message format into an XML format.

### Propagating Internal Listeners out of J.D. Edwards OneWorld

Integrating a J.D. Edwards OneWorld listener with external systems is similar to the outbound process, except in reverse. The Data Export Control table maintains the determination of whether a transaction must be integrated with an external system. When a transaction must be integrated, the MBF handles logging of all additions, changes, and deletions to the unedited transaction table. After the transaction information writes to the table, a key for that record is sent from the MBF to the subsystem data queue.

The subsystem data queue triggers the processing of the new record by launching an outbound subsystem batch process that is generic and handles all inbound transactions. The J. D. Edwards outbound subsystem then accesses the Data Export Control table to determine the configured external subscriber to run.

## J.D. Edwards OneWorld Interoperability Framework

J.D. Edwards OneWorld enables integration with systems through its interoperability framework. The adapter uses the framework and leverages various integration access methods to provide the greatest amount of flexibility and functionality.

Oracle Application Adapter for J.D. Edwards OneWorld supports the following integration access methods:

- J.D. Edwards OneWorld ThinNet API
- J.D. Edwards OneWorld XML
- J.D. Edwards OneWorld unedited transaction tables (Z tables)

Figure 1–1 illustrates the outbound processing framework.

The adapter uses the J.D. Edwards OneWorld ThinNet API to communicate with the J.D. Edwards OneWorld application. Using the ThinNet API, the adapter can run one or more MBF in a single Unit Of Work (UOW). When any of the MBF fail, the entire UOW fails, preventing partial updates. Validation of data, business rules, and communications to the underlying database are handled by the J.D. Edwards OneWorld application because the adapter runs the MBF.

**Figure 1–1 J.D. Edwards OneWorld Outbound Processing**

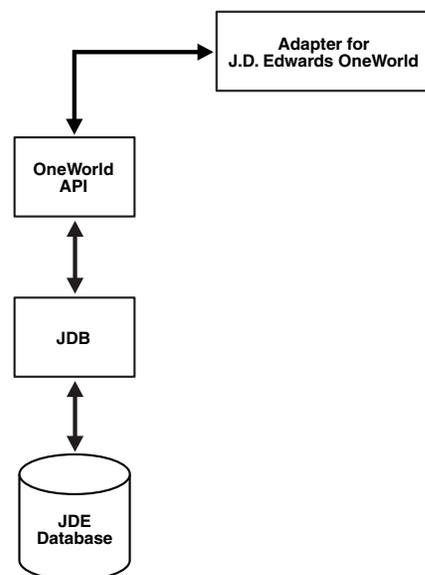
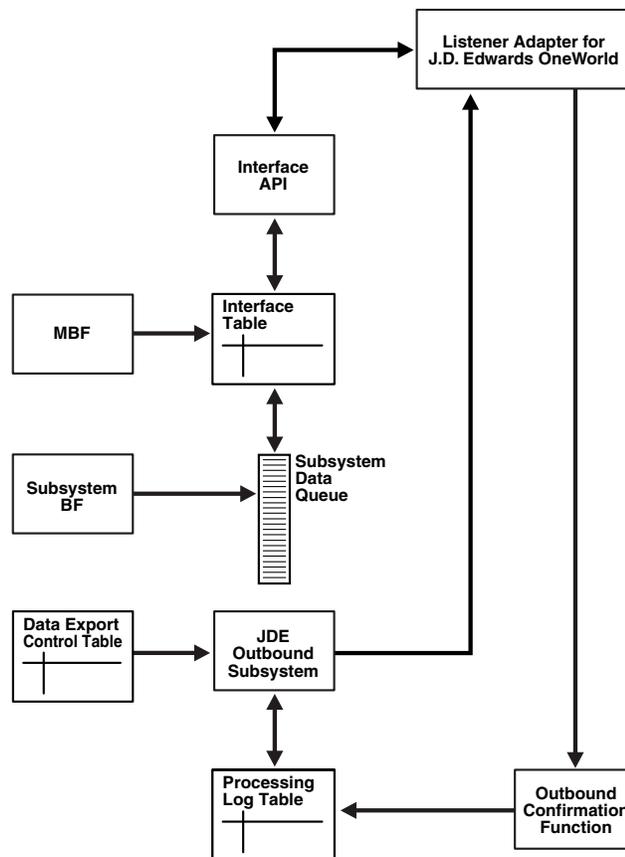


Figure 1–2 illustrates the inbound processing framework.

Figure 1–2 J.D. Edwards OneWorld Inbound Processing



In the outbound process, the event starts when a specific MBF is executed in the J.D. Edwards OneWorld environment. The MBF writes the required information for the event into the appropriate interface table and then notifies the subsystem Batch Function (BF) that an event occurred. The subsystem BF then places an entry about the event on the Subsystem Data Queue.

The J.D. Edwards OneWorld outbound subsystem retrieves the data queue entry and looks in the Data Export Control table for the external processes to notify. The J.D. Edwards OneWorld outbound subsystem then calls the Oracle Application Adapter for J.D. Edwards OneWorld listener with notification. The listener passes the notification to the generator. The generator then uses the J.D. Edwards OneWorld ThinNet API to retrieve the appropriate information from the interface table.

## 1.5 Adapter Architecture

Oracle Application Adapter for J.D. Edwards OneWorld uses Application Explorer with one of the following components:

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

### Oracle Adapter Application Explorer (Application Explorer)

Application Explorer is used to configure database connections and create Web services and events. It can be configured to work in a Web services environment with BSE or with the Enterprise Connector for J2EE Connector Architecture (J2CA). When

working in a J2CA environment, the connector uses the Common Client Interface (CCI) to provide fast integration services using Adapters instead of using Web services.

Both BSE and the connector for J2CA are deployed to an application server with Application Explorer and the adapters.

Application Explorer uses an explorer metaphor for browsing the J.D. Edwards system for business functions. Application Explorer enables you to create XML schemas and Web services for the associated business function.

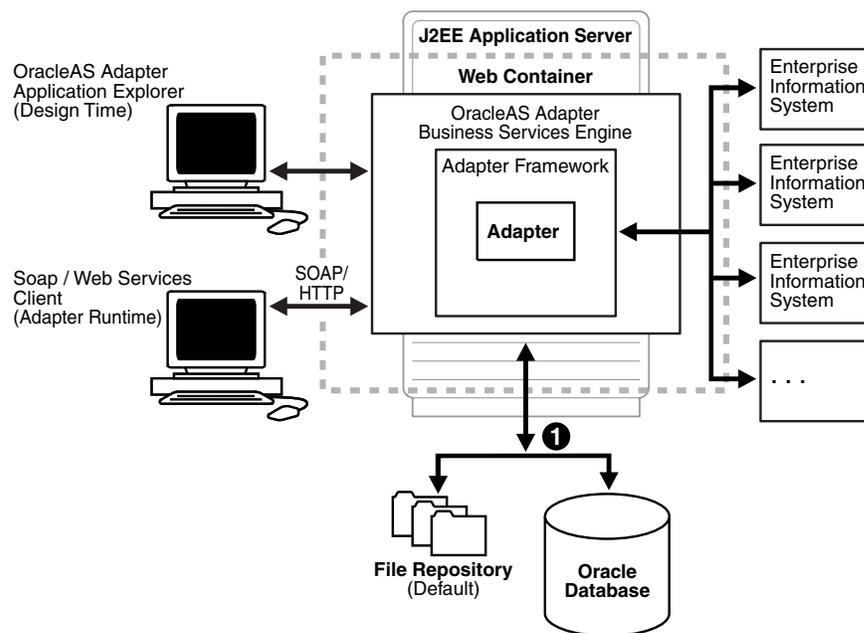
## Resource Adapters

Oracle Application Adapter for J.D. Edwards OneWorld is a J2CA-based component also known as resource adapter. Resource adapters connect applications that were not originally designed to communicate with each other. Adapters are bidirectional, that is, they can send requests to an Enterprise Information System (EIS), and receive notification of events occurring in an EIS.

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

Figure 1-3 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.

**Figure 1-3 Oracle Adapter Business Services Engine (BSE) Architecture**



① Use either the default file repository or an Oracle database as your repository.

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

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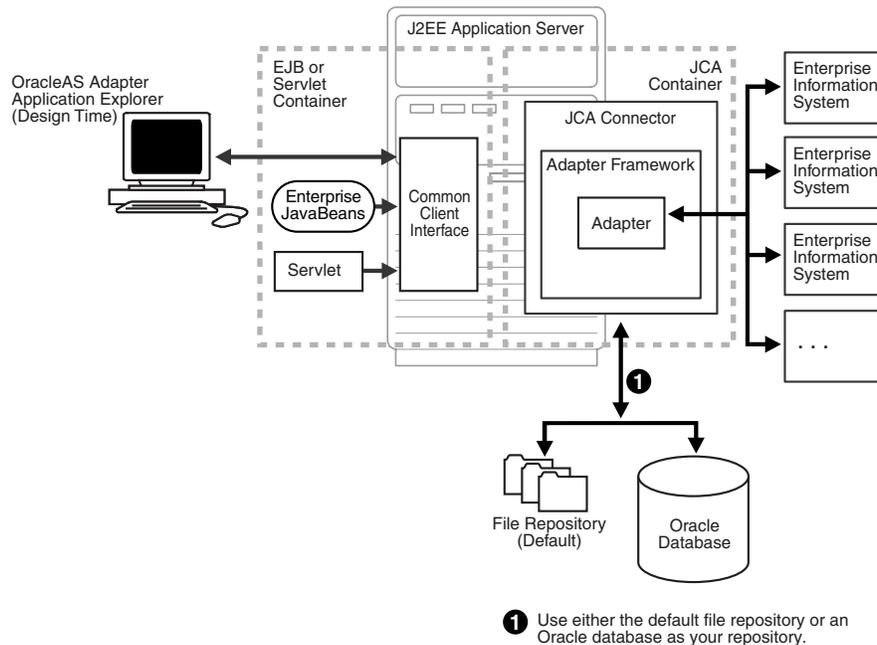
Application Explorer, a design-time tool deployed along with BSE, is used to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. Metadata created while you perform these operations are stored in the repository by BSE.

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

### Oracle WebLogic Server Adapter Generic J2CA Architecture

Figure 1–4 shows the generic architecture for Oracle J2CA adapter for packaged applications. The J2CA connector is deployed to a standard J2CA Container and serves as host container to the adapters. The connector is configured with a repository.

**Figure 1–4 Oracle Adapter Generic J2CA Architecture**



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 during these operations is stored in the repository by the connector. 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"](#).

### Processing Business Functions

Oracle Application Adapter for J.D. Edwards OneWorld enables the processing of J.D. Edwards OneWorld business functions through the J.D. Edwards ThinNet API. Using the API eliminates the requirement of creating complex and impractical batch processes. In addition, a transport layer, such as IBM MQSeries, File, or HTTP is not required because a listener is defined through a TCP connection.

External applications that access J.D. Edwards OneWorld through Oracle Application Adapter for J.D. Edwards OneWorld use either XML schemas or Web services to pass data between the external application and the adapter. [Chapter 2, "Configuring Oracle](#)

[Application Adapter for J.D. Edwards OneWorld](#)" describes how to use Application Explorer to create XML schemas and Web services for the J.D. Edwards Master Business Functions (MBF) used with the adapter.

## 1.6 BSE Versus Oracle Adapter J2CA Deployment

If you are using Oracle Application Adapter for J.D. Edwards OneWorld 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.



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# Configuring Oracle Application Adapter for J.D. Edwards OneWorld

This chapter describes how to use Oracle Adapter Application Explorer (Application Explorer) to define a target to connect to a J.D. Edwards OneWorld system, view system objects, and create XML schemas and Web services. This chapter also explains how to configure an event adapter.

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 J.D. Edwards OneWorld"](#)
- [Section 2.5, "Creating an XML Schema"](#)
- [Section 2.6, "Generating WSDL \(J2CA Configurations Only\)"](#)
- [Section 2.7, "Creating and Testing a Web Service \(BSE Configurations Only\)"](#)
- [Section 2.8, "Configuring an Event Adapter"](#)
- [Section 2.9, "Runtime Overview"](#)
- [Section 2.10, "Modifying the JDE.INI File for Outbound and Inbound Processing"](#)

## 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\iwaeb\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\iwaeb\bin\ae.bat
```

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

```
<OSB_Home>\3rdparty\ApplicationAdapters\tools\iwaeb\bin
```

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

Application Explorer starts. You can now define new targets to a J.D. Edwards OneWorld system.

---

---

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

```
chmod +x iwaeb.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 J.D. Edwards OneWorld, 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.

### 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.

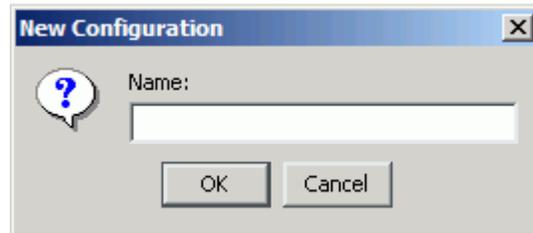
**Defining a New Configuration for BSE**

To define a new configuration for BSE:

1. Right-click **Configurations** and select **New**.

The New Configuration dialog is displayed, as shown in [Figure 2-1](#).

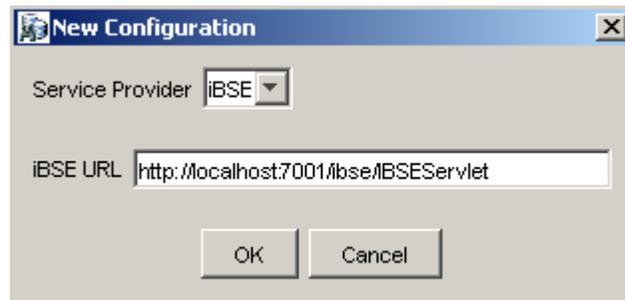
**Figure 2-1 New Configuration Dialog**



2. 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**



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

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

Where *host name* is the system where your Oracle WebLogic Server resides and *port* is the HTTP port for a managed Oracle WebLogic Server (for example, soa\_server1).

5. Click **OK**.

A node representing the new configuration appears beneath the root Configurations node, as shown in [Figure 2-3](#).

**Figure 2-3 Configurations Node**



## 2.3.2 Creating a Configuration for J2CA

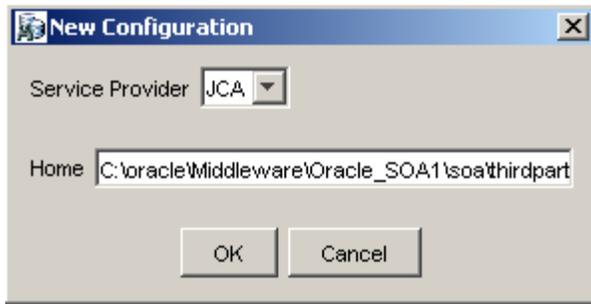
To create a configuration for J2CA using Application Explorer, you must first define a new configuration.

### Defining a New Configuration for J2CA

To define a new configuration for J2CA:

1. Right-click **Configurations** and select **New**.  
The New Configuration dialog is displayed.
2. Enter a name for the new configuration (for example, myConfig) and click **OK**, as shown in [Figure 2-4](#).

**Figure 2-4** New Configuration Dialog



3. From the **Service Provider** list, select **JCA**.
4. Click **OK**.  
A node representing the new configuration appears beneath the root Configurations node, as shown in [Figure 2-5](#).

**Figure 2-5** Configurations Node



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).

### HTTP Repository Connection

You can create an HTTP repository connection using J2CA, 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 Oracle WebLogic Server for run time purposes.

### 2.3.3 Connecting to a BSE or J2CA Configuration

To connect to a BSE or J2CA 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. The following is an example of a BSE configuration named myConfig, as shown in Figure 2-6.

**Figure 2-6 BSE Configuration**



- Use the **Adapters** folder to create inbound interaction with J.D. Edwards OneWorld. For example, you use the JDEdwards node in the Adapters folder to configure a service that updates J.D. Edwards OneWorld.
- Use the **Events** folder (available for J2CA configurations only) to configure listeners that listen for events in J.D. Edwards OneWorld.
- 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 can now define new targets to J.D. Edwards OneWorld.

## 2.4 Establishing a Connection (Target) for J.D. Edwards OneWorld

Part of the application definition includes adding a target for the adapter. Setting up the target in Application Explorer requires information which is specific to the target.

To browse the available Master Business Functions (MBF), you must first define a target to the system you use. After you define the target, it is automatically saved. You must connect to the system every time you start Application Explorer or after you disconnect.

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.

### 2.4.1 Defining a Target to J.D. Edwards OneWorld

To connect to an application system for the first time, you must define a new target.

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

---

**Note:** Before you create a new target, you must obtain the required library files for your J.D. Edwards OneWorld system and copy them to the appropriate location where the Oracle Application Adapter for J.D. Edwards OneWorld is deployed. For more information, see the *Oracle Fusion Middleware Application Adapters Installation Guide for Oracle WebLogic Server*.

---

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.
2. Right-click the **JDEdwards** node and select **Add Target**.  
The Add Target dialog is displayed, as shown in [Figure 2–7](#).

**Figure 2–7 Add Target Dialog**



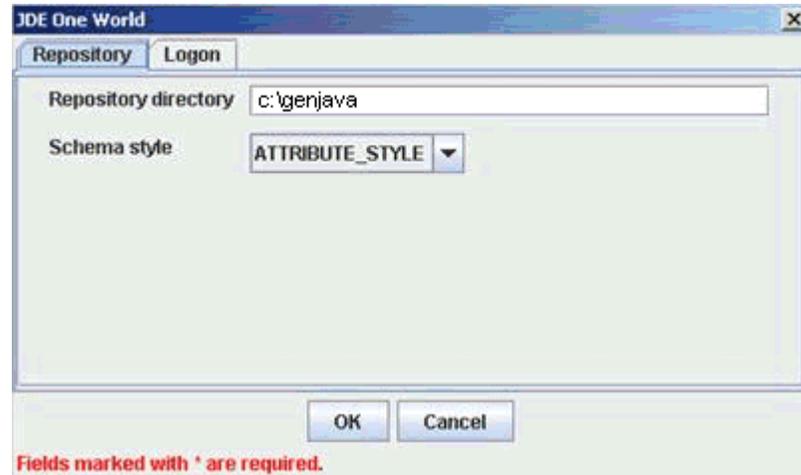
Perform the following steps:

- a. In the **Name** field, enter a descriptive name, for example, JDEConnection.
- b. In the **Description** field, enter a description for the target (optional).

- c. From the **Type** list, select **JDE One World**.
3. Click **OK**.

The JDE One World dialog appears, as shown in [Figure 2–8](#).

**Figure 2–8 JDE One World Dialog**



- a. In the **Repository** tab, enter the path to the GenJava repository in the Repository directory field.

This is the location of the Java wrappers for accessing the J.D. Edwards OneWorld business functions, which are created by the GenJava development tool. Please note that this is a prerequisite step, which must be performed before a new target is created using Application Explorer.

---

**Note:** Generating schemas requires the GenJava repository. For more comprehensive information on building the J.D. Edwards OneWorld Master Business Function repository, see the *J.D. Edwards Interoperability Guide for OneWorld Xe*. For information on how to use the GenJava program, see [Using the GenJava Development Tool \(Outbound Processing\)](#) in [Appendix A, "Configuring J.D. Edwards OneWorld for Outbound and Inbound Processing"](#).

---

- b. From the **Schema style** list, select **ELEMENT\_STYLE** or **ATTRIBUTE\_STYLE**.
- c. Click the **Logon** tab and enter the appropriate information for your target type based on the information in the following table. Fields marked with an asterisk are required, as shown in [Figure 2–9](#).

**Figure 2–9 Logon Tab**

Parameter	Description
User id*	A valid user ID for J.D. Edwards OneWorld.
User password*	The password associated with the user ID.
JDE environment*	The J.D. Edwards OneWorld environment, for example, DU7333. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your J.D. Edwards OneWorld system administrator.
Server IP address*	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address.
Server Port*	The port number on which the server is listening, for example, 6009.
User role	This property setting depends on your J.D. Edwards OneWorld system version. <ul style="list-style-type: none"> <li>■ For <b>B7333</b>: You can leave this field blank.</li> <li>■ For <b>EnterpriseOne 8.10</b>: You must specify <b>*ALL</b>.</li> </ul>

**4. Click OK.**

The new target, JDEConnection, appears under the JDEdwards node, as shown in [Figure 2–10](#).

**Figure 2–10 JDE Target Node**



For information on how to create schemas for the adapter, see "[Creating an XML Schema](#)" on page 2-10.

**Connecting to a Defined J.D. Edwards OneWorld Target**

To connect to a target:

1. Expand the **Service Adapters** node.
2. Expand the **JDEdwards** node.

The disconnected target is displayed, as shown in [Figure 2–11](#).

**Figure 2–11 JDEdwards Target Node**



3. Click the target name (for example, JDEConnection) under the JDEdwards node.
4. Click the **Logon** tab on the right.

The Logon tab displays the values you entered for connection parameters.

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

The x icon disappears, indicating that the node is connected, as shown in [Figure 2–12](#).

**Figure 2–12 JDEdwards Target Node**



## Disconnecting from J.D. Edwards OneWorld

To disconnect from a target:

1. Expand the **Adapters** node.
2. Expand the **JDEdwards** node.
3. Right-click the target to which you are connected (for example, JDEConnection), and select **Disconnect**.

The x icon appears, indicating that the node is disconnected, as shown in [Figure 2–13](#).

**Figure 2–13 JDEdwards Target Node**



## Editing a Target

To edit a target:

1. In the left pane, ensure that the target you want to edit is disconnected.
2. Right-click the target and select **Edit**.

A window is displayed that enables you to edit the existing connection parameters.

3. Modify the target information.

4. Click **OK**.

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

### Deleting a Target

You can delete a target, rather than just disconnecting and closing it. When you delete the target, the node disappears from the list of J.D. Edwards OneWorld targets in the left pane of the explorer.

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

To delete a target:

1. Expand the **Adapters** node.
2. Expand the **JDEdwards** node.
3. Right-click the target to which you are connected (for example, JDEConnection), and select **Delete**.

The node disappears from the list of available connections.

For information on how to view application system objects, see *J.D. Edwards Interoperability Guide Release OneWorld XE*.

## 2.5 Creating an XML Schema

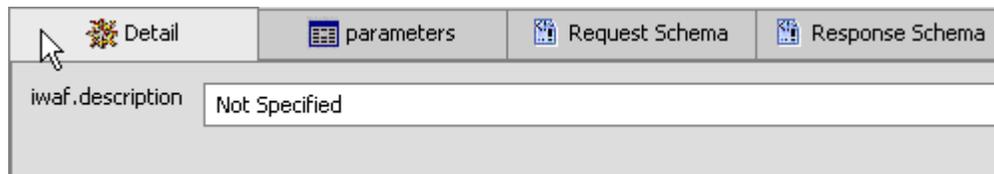
To execute an MBF, the adapter must receive a request document through the J.D. Edwards OneWorld ThinNet API. The agent processes the request and sends an XML response document indicating the result. Application Explorer creates both the XML request schema and the XML response schema.

### 2.5.1 Creating a Request and a Response Schema

The following procedure explains how to create request and response schemas for a J.D. Edwards OneWorld business function. Application Explorer enables you to create XML schemas for this function.

1. Connect to a J.D. Edwards OneWorld target as described in "[Connecting to a Defined J.D. Edwards OneWorld Target](#)" on page 2-8.
2. Expand the **Services** node.
3. Expand the node of the MBF for which you want to create the schema.
4. Expand and then select the node beneath the MBF, as shown in [Figure 2–14](#).

**Figure 2–14 Detail Tab**



5. Click the **parameters** tab to view the parameter information [Figure 2–15](#).

**Figure 2–15 Parameters Tab**

Detail		parameters
Field	Type	MaxLength
szLedgerType	String	3
szUnitsLedg...	String	3
cRetainedEa...	Char	1
cLedgerReq...	Char	1
cIntercompa...	Char	1
cRestateme...	Char	1
szCurrency...	String	4
cDirectBalan...	Char	1

- Click **Request Schema** to view the request schema information, as shown in Figure 2–16.

**Figure 2–16 Request Schema Tab**

```

Detail | parameters | Request Schema | Response Schema
-----|-----|-----|-----
<?xml version="1.0" encoding="UTF-8" ?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:element name="jdeRequest">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="callMethod">
          <xsd:complexType>
            <xsd:sequence>
              <xsd:element name="params">
                <xsd:complexType>
                  <xsd:sequence>
                    <xsd:element name="param" minOccurs="0" maxOccurs="3">
                      <xsd:complexType>
                        <xsd:simpleContent>
                          <xsd:extension base="xsd:string">
                            <xsd:attribute name="name" use="required">
                              <xsd:simpleType>
                                <xsd:restriction base="xsd:NMTOKEN">
                                  <xsd:enumeration value="szUsrlibname"/>
                                  <xsd:enumeration value="szPathcode"/>
                                </xsd:restriction>
                              </xsd:simpleType>
                            </xsd:attribute>
                          </xsd:extension>
                        </xsd:simpleContent>
                      </xsd:complexType>
                    </xsd:element>
                  </xsd:sequence>
                </xsd:complexType>
              </xsd:element>
            </xsd:sequence>
          </xsd:complexType>
        </xsd:element>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>

```

- Click **Response Schema** to view the response schema information, as shown in Figure 2–17.

**Figure 2–17 Response Schema Tab**



## 2.6 Generating WSDL (J2CA Configurations Only)

The procedure for generating WSDL (Web Service Definition Language) for request-response (outbound) services differs from that of generating WSDL for event notification (inbound) J2CA services of the adapter. The following sections describe each procedure.

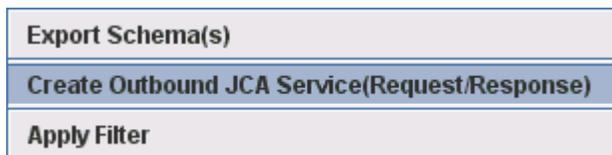
### Generating WSDL for Outbound Interaction

To generate a WSDL file for request-response service:

1. Start Application Explorer and connect to a defined J.D. Edwards OneWorld target.
2. Expand **Services**, **JDEJAVA\_CFIN**, and then **B0100033**. Select **GetEffectiveAddress**.
3. Right-click GetEffectiveAddress.

The following menu is displayed, as shown in [Figure 2–18](#).

**Figure 2–18 Create Outbound JCA Service (Request/Response) Option**



4. Select **Create Outbound JCA Service (Request/Response)**.

The Export WSDL dialog is displayed, as shown in [Figure 2–19](#).

**Figure 2–19 Export WSDL Dialog**

5. 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**.

6. Click **OK**.

The WSDL file is saved in the specified location.

### Generating WSDL for Inbound Interaction

You cannot generate a WSDL for J.D. Edwards OneWorld event notification using Application Explorer. To generate a WSDL from the command prompt, you must perform the steps that are described in the following section.

You can create an inbound J2CA service only if the node that you selected supports events.

1. Create a channel using Application Explorer under the J.D. Edwards Events node.
2. Start the channel.

Do not restart Oracle WebLogic Server after the channel is started.

3. Send an inbound message from J.D. Edwards OneWorld.
4. Capture the inbound message payload in the log file, which is located in the following directory based on your adapter installation:

#### For Oracle SOA Suite:

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
```

```
name\log\iwaf_jca1500.log
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\log\iwaf_jca1500.log
```

Alternatively, you can create a port using the File protocol under the Events node in Application Explorer, which disposes the event message to the file system.

5. Use a third party tool (for example, XMLSpy) to create the XML schema (.xsd file) using the XML payload that was captured in the previous step.
6. In the generated XML schema (.xsd file) perform the following modifications:
  - a. Search for Schemas-jdedwards-com and replace it with iwaysoftware.

```
<xs:schema
targetNamespace="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
  xmlns="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
  xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

to:

```
<xs:schema
  targetNamespace="urn:iwaysoftware:trans.response.JDES00UT"
  xmlns="urn:iwaysoftware:trans.response.JDES00UT"
  xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

- b. Cut the following syntax:

```
<xs:element name="jdeResponse">
<xs:complexType>
</xs:complexType>
</xs:element>
```

- c. Paste it before the following line:

```
<xs:element name="transaction">
```

7. Copy the XML schema (.xsd file) to the following directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

---

**Note:** Edit the created channel by providing the location of the schema (.xsd) file (as mentioned in step 7) in the PreParser tab of Application Explorer. For example:

**For Oracle SOA Suite:**

```
<ORACLE_
HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

**For OSB:**

```
<OSB_HOME>\Oracle_
OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

---

8. Open a command prompt and navigate to the base domain directory and execute the *setDomainEnv.sh* file:

```
<ORACLE_HOME>\user_projects\domains\base_domain\bin
```

Navigate to the following Application Explorer directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\tools\iwaeb\bin
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\tools\iwaeb\bin
```

9. Execute the *obadapter.bat* file to set the environment.
10. Based on your adapter installation, navigate to the following directory where the XML schema (.xsd file) is copied:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

11. Enter the following command to generate a WSDL:

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser adapterhome adapter
target channel schemaPrefix wsdlFileName
```

where:

*adapterhome* is the path to your ApplicationAdapters home. For example:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\
```

*adapter* is the name of the adapter. For example, JDEdwards.

*target* is the name of the adapter target you created in Application Explorer.

*channel* is the name of the channel you created in Application Explorer.

*schemaPrefix* is the prefix for the XSD schema. The schema file must be in the same directory where the Java command is executed, for example:

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl
```

Once the command is executed, the following is displayed in the command window:

```
Running Inbound WSDL generation tool...
-> user.dir = java com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl

-> Generating WSDL...
-> Done.
-> Writing WSDL 'C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\Jde812_salesorder_receive.wsdl '
to disk...
-> Done.
```

---



---

**Note:** It is good practice to append **\_receive** to the names of WSDL files that are generated for event notification services. This allows you to easily distinguish between them and those generated for request-response services.

---



---

12. Stop the channel in Application Explorer.

## 2.7 Creating and Testing a Web Service (BSE Configurations Only)

You can generate a Web service (also known as a **business service**) using Application Explorer. You can explore the business function repository and generate Web services for the functions you want to use with the adapter. The following procedure uses an example called BusinessUnitExistenceCheck.

---



---

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

---



---

### Creating a Web Service

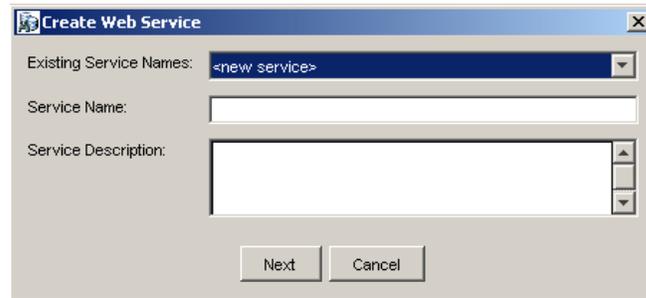
To create a Web service for a business function:

1. Expand the **JDEdwards** node and then the **Services** node.

2. Expand the MBF, **B100012**, also called **BusinessUnitExistenceCheck**.
3. Right-click the node from which you want to create a business service and select **Create Web Service**.

The Create Web Service dialog is displayed, as shown in [Figure 2–20](#).

**Figure 2–20 Create Web Service Dialog**



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

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

Perform the following steps:

- a. In the **License Name** field, select one or more license codes to assign to the Web service.
  - b. In the **Method Name** field, leave the default method name.
  - c. In the **Description** field, enter a brief description of the method (optional).
  - d. In the **DTD Directory** field, specify a location where the Web service are saved. If you want to select a location different than the default, then click **Browse** and navigate to the desired 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 it functions properly. A test tool is provided for testing the Web service.

To test a Web 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 the right pane. If you are testing a Web service that requires XML input, then an input field is displayed.

5. Enter the appropriate input.

6. Click **Invoke**.

Application Explorer displays the results, as shown in [Figure 2–21](#).

**Figure 2–21 Web Service XML Results**

```

<?xml version="1.0" encoding="UTF-8" ?>
- <SOAP-ENV:Envelope
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:SOAP-
  ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance">
- <SOAP-ENV:Body>
  - <AddressUpdateResponse
    xmlns="urn:iwaysoftware:ibse:jul2003:AddressUpda
    cid="BDF3FEF8CD73B26E42CF1722575DFA62">
    - <jdeResponse user="JDE" sessionid=""
      type="callmethod"
      session="604.1078520390.1"
      environment="DV7333">
    - <callMethod app="" trans=""
      name="AddressBookMasterMBF"
      runOnError="">
      <returnCode code="0" />
    - <params>
      <param
        name="cActionCode">U</param>
      <param
        name="cUpdateMasterFile">1</param>
      <param
  
```

### 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 J.D. Edwards OneWorld. The user name and password values that you provided for J.D. Edwards OneWorld 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.

## 2.8 Configuring an Event Adapter

Events are generated by activity in a database or in an application system. You can use events to trigger an action in your application. For example, an update to a database can reflect an update to customer information. If your application must perform when this happens, then your application is a consumer of this event.

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 2-19.

### 2.8.1 Creating and Editing a Channel

The following section describes 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. After successfully creating the channel and inbound WSDL file, close Application Explorer before you restart the application server.

---

---

**Note:** If you are planning to integrate Oracle Application Adapter for J.D. Edwards OneWorld 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).

---

---

Three channel types are available:

- HTTP
- TCP
- File

---

---

**Note:** Channels can be configured only on the system where the Oracle Application Adapter for J.D. Edwards OneWorld is installed.

---

---

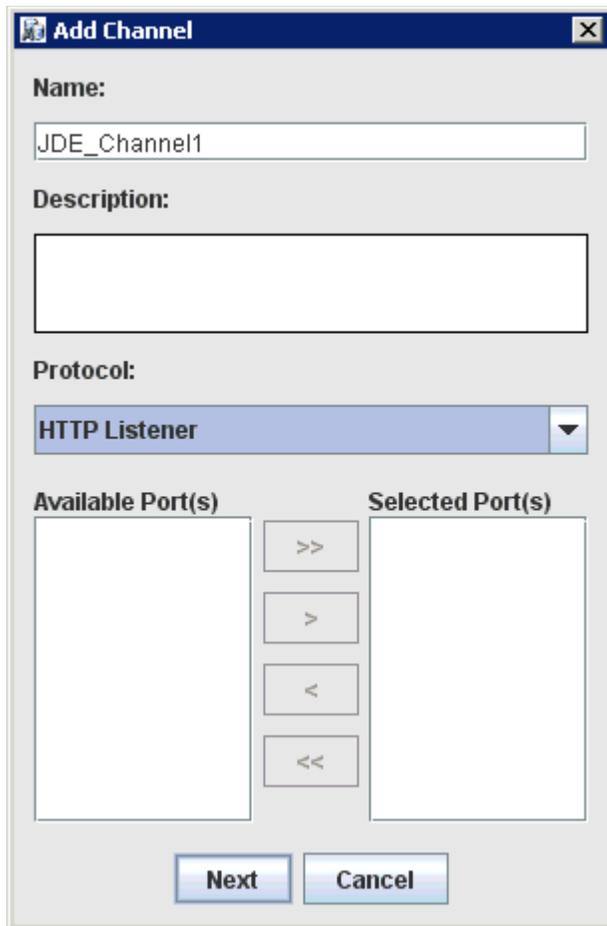
### Creating an HTTP Channel

To create an HTTP Channel:

1. Click the **Events** node.
2. Expand the **JDEdwards** 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 2–22](#).

**Figure 2–22** Add Channel Dialog



The screenshot shows a standard Windows-style dialog box titled "Add Channel". It features a close button in the top right corner. The main content area is divided into several sections: a "Name:" label followed by a text input field containing "JDE\_Channel1"; a "Description:" label followed by a larger empty text area; a "Protocol:" label followed by a dropdown menu currently showing "HTTP Listener"; and two list boxes, "Available Port(s)" on the left and "Selected Port(s)" on the right, with four arrow buttons (two right-pointing and two left-pointing) between them for moving items. At the bottom of the dialog are two buttons: "Next" and "Cancel".

Provide the following information:

- a. Enter a name for the channel, for example, **JDE\_Channel1**.
  - 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 2–23](#).

Figure 2–23 *Http Listener Dialog Basic Tab*

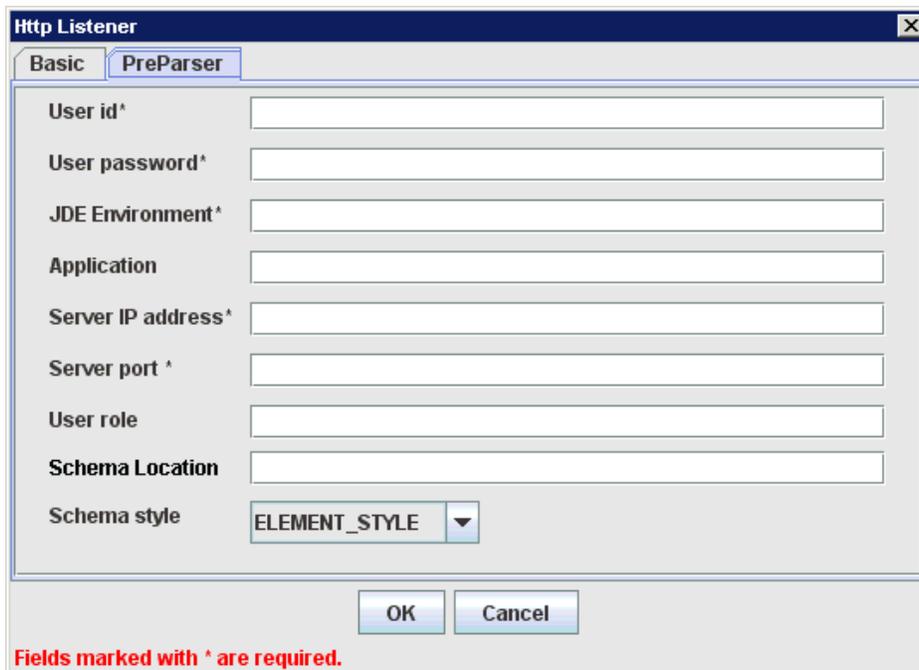
The screenshot shows the 'Http Listener' dialog box with the 'Basic' tab selected. The 'Listener port\*' field is set to 8080. The 'Https' checkbox is unchecked. The 'Synchronization Type' dropdown is set to 'REQUEST'. The 'Encoding Type' dropdown is set to 'ASCII'. The 'OK' and 'Cancel' buttons are visible at the bottom. A red note at the bottom left indicates that fields marked with an asterisk are required.

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

Parameter	Description
Listener port	Port on which to listen for J.D. Edwards OneWorld event data.
Https	For a secure HTTP connection, select the <b>Https</b> check box. This option is currently not supported.
Synchronization Type	Choose from the following synchronization options: <ul style="list-style-type: none"> <li>■ REQUEST_RESPONSE</li> <li>■ REQUEST_ACK</li> </ul> <p><b>Important:</b> The J.D. Edwards OneWorld channel does not work if the synchronization type is set to REQUEST.</p>
Encoding Type	Choose an encoding type to be used from the list. By default, ASCII is selected.

6. Click the **PreParser** tab, as shown in [Figure 2–24](#).

**Figure 2–24 Http Listener Dialog Preparser Tab**



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

Parameter	Description
User id	A valid user ID for J.D. Edwards OneWorld.
User password	The password associated with the J.D. Edwards OneWorld user ID.
JDE Environment	The J.D. Edwards OneWorld environment, for example, DU7333. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your J.D. Edwards OneWorld system administrator.
Application	The application that is defined in the J.D. Edwards OneWorld environment.
Server IP address	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address.
Server port	The port number on which the server is listening, for example, 6009.
User role	This property setting depends on your J.D. Edwards OneWorld system version. <ul style="list-style-type: none"> <li>■ For <b>B7333</b>: You can leave this field blank.</li> <li>■ For <b>EnterpriseOne 8.10</b>: You must specify <b>*ALL</b>.</li> </ul>

Parameter	Description
Schema Location	<p>The location of the XML schema (.xsd file) that was generated from the event output. For example:</p> <p><b>For Oracle SOA Suite:</b></p> <pre>&lt;ORACLE_ HOME&gt;\soa\thirdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p><b>For OSB:</b></p> <pre>&lt;OSB_HOME&gt;\Oracle_ OSB1\3rdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p>For more information, see "<a href="#">Generating WSDL for Inbound Interaction</a>" on page 2-13.</p>
Schema Style	<p>Choose from one of the following options:</p> <ul style="list-style-type: none"> <li>■ ELEMENT_STYLE (default)</li> <li>■ ATTRIBUTE_STYLE</li> </ul>

**8. 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.

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

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

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

### Creating a TCP Channel

To create a TCP Channel:

**1. Click the **Events** node.**

**2. Expand the **JDEdwards** 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 2-25](#).

**Figure 2–25 Add Channel Dialog**

The screenshot shows a standard Windows-style dialog box titled "Add Channel". It features a close button in the top right corner. The main content area is divided into several sections: a "Name:" label followed by a text input field containing "JDE\_Channel2"; a "Description:" label followed by a larger empty text area; a "Protocol:" label followed by a dropdown menu currently displaying "TCP Listener"; and two side-by-side empty list boxes labeled "Available Port(s)" and "Selected Port(s)". Between these two list boxes are four arrow buttons: a right-pointing double arrow (>>), a right-pointing single arrow (>), a left-pointing single arrow (<), and a left-pointing double arrow (<<). At the bottom of the dialog are two buttons labeled "Next" and "Cancel".

Provide the following information:

- a. Enter a name for the channel, for example, **JDE\_Channel2**.
  - 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 2–26](#).

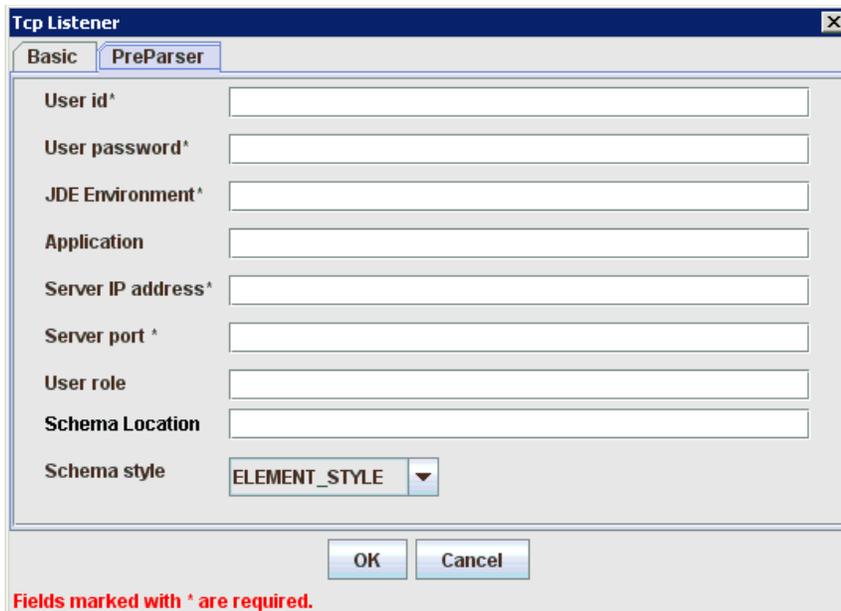
Figure 2–26 *Tcp Listener Dialog Basic Tab*

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

Parameter	Description
Port Number	Port on which the Host database is listening.
Host/IP Binding	Name or URL of the system where the database resides.
Synchronization Type	Choose from the following synchronization options: <ul style="list-style-type: none"> <li>■ REQUEST_RESPONSE</li> <li>■ REQUEST_ACK</li> </ul> <p><b>Important:</b> The J.D. Edwards OneWorld channel does not work if the synchronization type is set to REQUEST.</p>
Is Length Prefix	For J.D. Edwards OneWorld events that send data back that is not in XML format. The TCP/IP event application must prefix the data with a 4-byte binary length field when writing the data to the TCP/IP port.
Is XML	For J.D. Edwards OneWorld events that send data back in XML format. No preparser is required.
Is Keep Alive	Maintains continuous communication between the event transaction and the channel.

6. Click the **PreParser** tab, as shown in [Figure 2–27](#).

Figure 2–27 Tcp Listener Dialog PreParser Tab



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

Parameter	Description
User id	A valid user ID for J.D. Edwards OneWorld.
User password	The password associated with the J.D. Edwards OneWorld user ID.
JDE Environment	The J.D. Edwards OneWorld environment, for example, DU7333. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your J.D. Edwards OneWorld system administrator.
Application	The application that is defined in the J.D. Edwards OneWorld environment.
Server IP address	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address.
Server port	The port number on which the server is listening, for example, 6009.
User role	This property setting depends on your J.D. Edwards OneWorld system version. <ul style="list-style-type: none"> <li>■ For <b>B7333</b>: You can leave this field blank.</li> <li>■ For <b>EnterpriseOne 8.10</b>: You must specify <b>*ALL</b>.</li> </ul>

Parameter	Description
Schema Location	<p>The location of the XML schema (.xsd file) that was generated from the event output. For example:</p> <p><b>For Oracle SOA Suite:</b></p> <pre>&lt;ORACLE_ HOME&gt;\soa\thirdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p><b>For OSB:</b></p> <pre>&lt;OSB_HOME&gt;\Oracle_ OSB1\3rdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p>For more information, see "<a href="#">Generating WSDL for Inbound Interaction</a>" on page 2-13.</p>
Schema Style	<p>Choose from one of the following options:</p> <ul style="list-style-type: none"> <li>■ ELEMENT_STYLE (default)</li> <li>■ ATTRIBUTE_STYLE</li> </ul>

**8. 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.

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

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

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

### Creating a File Channel

To create a File Channel:

**1. Click the **Events** node.**

**2. Expand the **JDEdwards** 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 2-28](#).

**Figure 2–28 Add Channel Dialog**

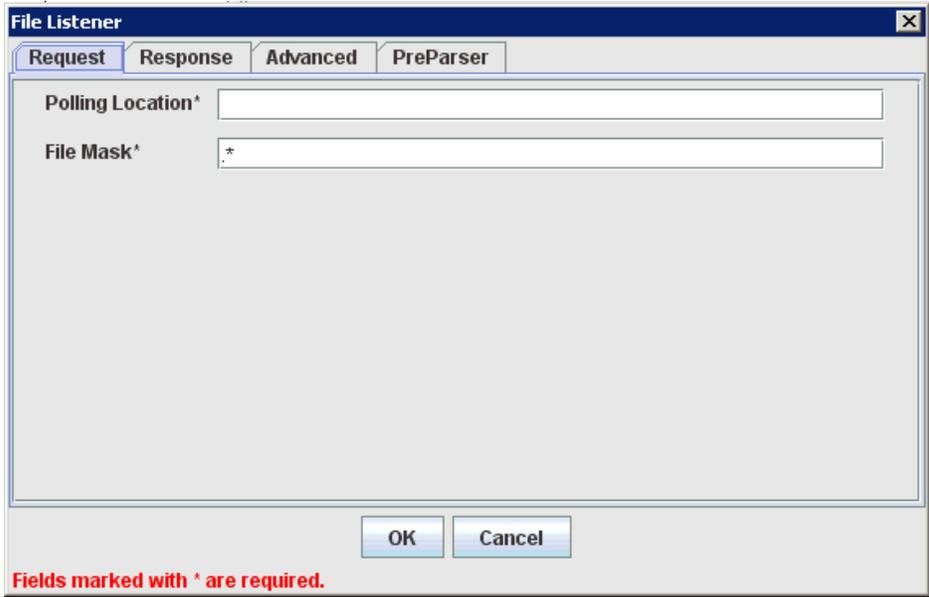
The screenshot shows a standard Windows-style dialog box titled "Add Channel". It features a title bar with a close button (X). The main area is divided into several sections: a "Name:" label followed by a text input field containing "JDE\_Channel3"; a "Description:" label followed by a larger empty text area; a "Protocol:" label followed by a dropdown menu currently showing "File Listener"; and two side-by-side empty list boxes labeled "Available Port(s)" and "Selected Port(s)". Between these two list boxes are four buttons with symbols: ">>", ">", "<", and "<<". At the bottom of the dialog are two buttons labeled "Next" and "Cancel".

Provide the following information:

- a. Enter a name for the channel, for example, **JDE\_Channel3**.
  - b. Enter a brief description.
  - c. From the **Protocol** list, select **File Listener**.
4. Click **Next**.

The File Listener dialog is displayed, as shown in [Figure 2–29](#).

Figure 2–29 File Listener Dialog

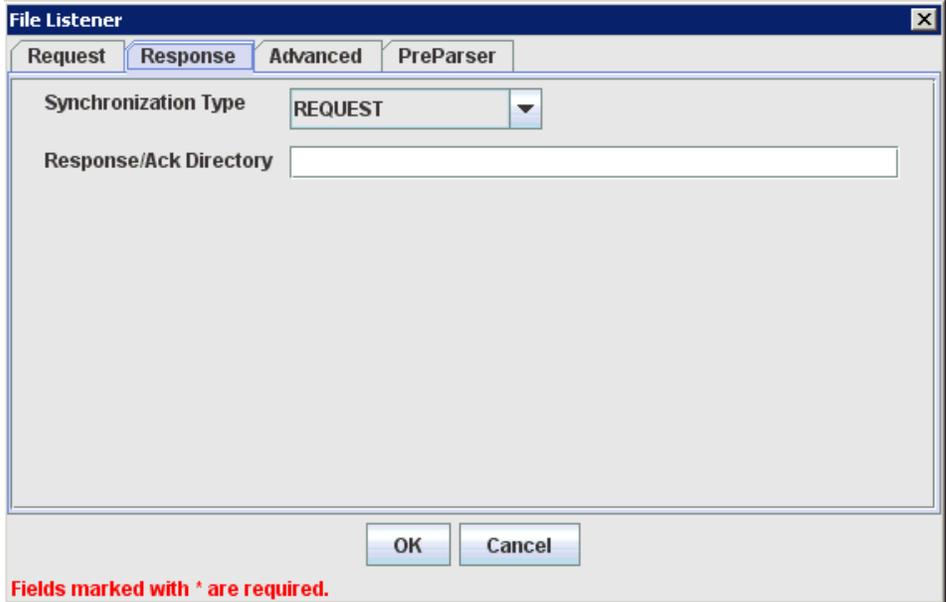


5. Enter the system information in the Request tab as specified in the following table:

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

6. Click the Response tab, as shown in Figure 2–30.

Figure 2–30 File Listener Dialog Response Tab

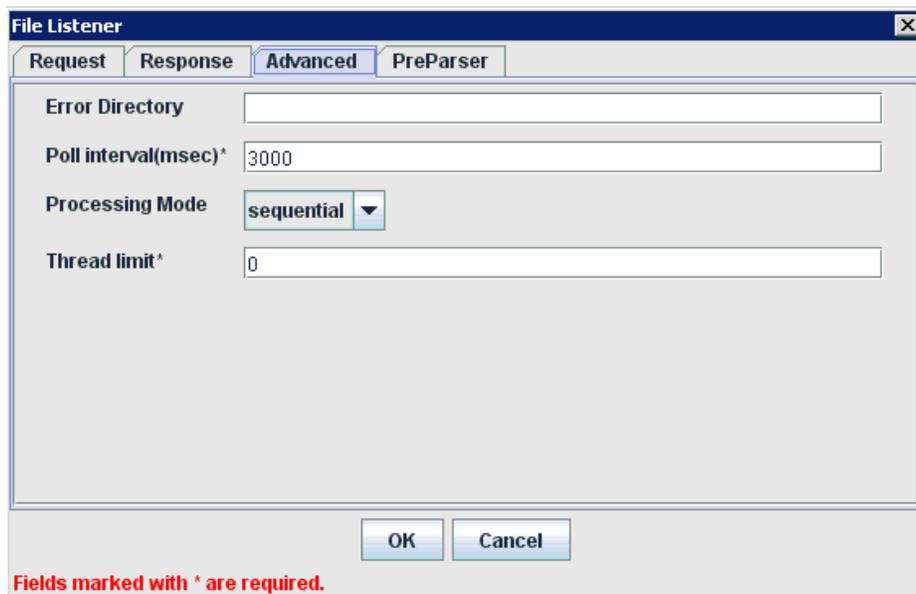


7. Enter the system information in the Response tab as specified in the following table:

Parameter	Description
Synchronization Type	<p>Choose from the following synchronization options:</p> <ul style="list-style-type: none"> <li>■ REQUEST_RESPONSE</li> <li>■ REQUEST_ACK</li> </ul> <p><b>Important:</b> The J.D. Edwards OneWorld channel does not work if the synchronization type is set to REQUEST.</p>
Response/Ack Directory	Target file system location for the J.D. Edwards OneWorld XML file.

8. Click the **Advanced** tab, as shown in [Figure 2–31](#).

**Figure 2–31 File Listener Dialog Advanced Tab**

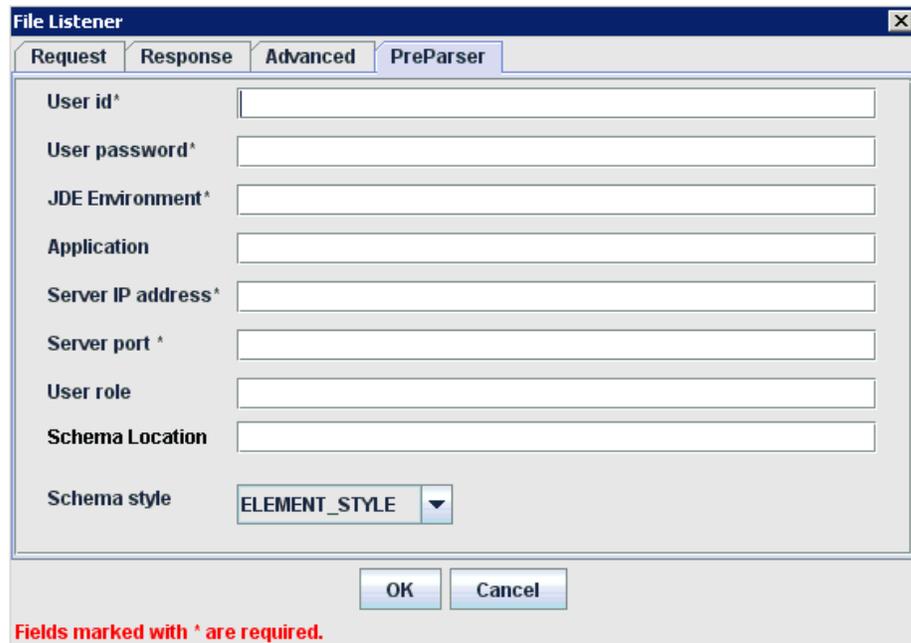


9. Enter the system information in the Advanced tab as specified in the following table:

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	<p><b>Sequential</b> indicates single processing of requests.</p> <p><b>Threaded</b> indicates processing of multiple requests simultaneously.</p>
Thread limit	If you selected threaded processing, then indicate the maximum number of requests that can be processed simultaneously.

10. Click the **PreParser** tab, as shown in [Figure 2–32](#).

Figure 2–32 File Listener Dialog Preparser Tab



The screenshot shows a dialog box titled "File Listener" with a close button (X) in the top right corner. It has four tabs: "Request", "Response", "Advanced", and "PreParser". The "PreParser" tab is selected. The dialog contains the following fields:

- User id\* (text input)
- User password\* (text input)
- JDE Environment\* (text input)
- Application (text input)
- Server IP address\* (text input)
- Server port \* (text input)
- User role (text input)
- Schema Location (text input)
- Schema style (dropdown menu showing "ELEMENT\_STYLE")

At the bottom of the dialog are "OK" and "Cancel" buttons. Below the dialog, a red text note reads: "Fields marked with \* are required."

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

Parameter	Description
User id	A valid user ID for J.D. Edwards OneWorld.
User password	The password associated with the J.D. Edwards OneWorld user ID.
JDE Environment	The J.D. Edwards OneWorld environment, for example, DU7333. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your J.D. Edwards OneWorld system administrator.
Application	The application that is defined in the J.D. Edwards OneWorld environment.
Server IP address	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address.
Server port	The port number on which the server is listening, for example, 6009.
User role	This property setting depends on your J.D. Edwards OneWorld system version. <ul style="list-style-type: none"> <li>■ For <b>B7333</b>: You can leave this field blank.</li> <li>■ For <b>EnterpriseOne 8.10</b>: You must specify <b>*ALL</b>.</li> </ul>

Parameter	Description
Schema Location	<p>The location of the XML schema (.xsd file) that was generated from the event output. For example:</p> <p><b>For Oracle SOA Suite:</b></p> <pre>&lt;ORACLE_HOME&gt;\soa\thirdparty\ApplicationAdapters\config\configuration_name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p><b>For OSB:</b></p> <pre>&lt;OSB_HOME&gt;\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p>For more information, see <a href="#">"Generating WSDL for Inbound Interaction"</a> on page 2-13.</p>
Schema Style	<p>Choose from one of the following options:</p> <ul style="list-style-type: none"> <li>■ ELEMENT_STYLE (default)</li> <li>■ ATTRIBUTE_STYLE</li> </ul>

## 12. 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.

## 13. Right-click the channel and select **Start**.

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

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

### Editing a Channel

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**.

### Deleting a Channel

To delete a channel:

1. In the left pane, locate the channel you want to delete.

2. Right-click the channel and select **Delete**.

A confirmation dialog is displayed.

3. To delete the channel you selected, click **OK**.

The channel disappears from the list in the left pane.

## 2.8.2 The J.D. Edwards OneWorld Event Listener

Oracle Application Adapter for J.D. Edwards OneWorld Event Listener is designed specifically to provide J.D. Edwards OneWorld approved access to your business events. The J.D. Edwards OneWorld Event Listener refers to a specialized application that runs with J.D. Edwards OneWorld business functions and is called by the J.D. Edwards OneWorld application system.

The J.D. Edwards OneWorld application system provides the Event Listener with the information required to retrieve the event information for only the desired events. For information about configuring the J.D. Edwards OneWorld environment, see the *J.D. Edwards Interoperability Guide for OneWorld*.

The J.D. Edwards OneWorld Event Listener is called directly from the J.D. Edwards OneWorld application and is passed a Z-file record identifier. This identifier then generates a request document that is passed to the server for processing. The server retrieves the event information from the J.D. Edwards OneWorld system and propagates the information for integration with other application systems.

## 2.8.3 Configuring the J.D. Edwards OneWorld Event Listener

The J.D. Edwards OneWorld Event Listener is installed as part of the basic installation. The J.D. Edwards OneWorld Adapter is automatically installed in the appropriate directory. If the integration server is not installed on the same computer as the J.D. Edwards OneWorld application server, then you must configure the J.D. Edwards OneWorld Event Listener.

The J.D. Edwards OneWorld Event Listener is invoked by J.D. Edwards OneWorld for specific transactions as configured in the J.D. Edwards OneWorld environment.

The J.D. Edwards OneWorld Event Listener includes the following components:

- The listener exit (`IWOEvent`), located under `adapters_home\etc\jde`, where `adapters_home` is `<ORACLE_HOME>\Oracle_SOA1\soa\thirdparty\ApplicationAdapters`. For example:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\etc\jde\iwoevent.dll
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\etc\jde\iwoevent.dll
```

The file extension varies depending on your operating system:

- For **Windows**, the exit is `iwoevent.dll`.
- For **Sun Solaris**, the exit is `libiwoevent.so`.
- For **HP-UX**, the exit is `libiwoevent.sl`.
- For **AS/400**, the exit is `iwaysav.sav`.
- For **IBM AIX**, the exit is `libiwoevent.so`.
- The listener configuration file (`iwoevent.cfg`), which must be created by the user.

The J.D. Edwards OneWorld Event listener exit is the function that passes the key fields for a record in the J.D. Edwards OneWorld outbound transaction tables to the integration server for processing by the inbound Oracle Application Adapter for J.D. Edwards OneWorld. The J.D. Edwards OneWorld Event listener is deployed under the J.D. Edwards OneWorld Enterprise Server. The Java class for the J.D. Edwards

OneWorld Event listener is called `IWOEvent` (the file extension depends on the operating system) and is case-sensitive.

1. Create a folder called `Outbound` under the JDE structure on the JDE Enterprise Server, for example:

```
\\JDEdwards\E812\DDP\Outbound
```

2. Copy the `iwoevent.dll` file in the new `Outbound` folder.
3. Create an environment variable, `IWOEVENT_HOME`, to point to the directory containing the `iwoevent.dll` file.
  - On Windows: Add `IWOEVENT_HOME` to the system environment variables.
  - On UNIX: Add the following command to your start-up script:

```
export IWOEVENT_HOME =/directory_name
```

4. On the J.D. Edwards OneWorld Server, create an `iwoevent.cfg` file in the defined directory, `IWOEVENT_HOME`.

The J.D. Edwards OneWorld Event listener requires connection information for the associated adapter to initiate events properly. This information is contained in the `iwoevent.cfg` file. You must create this file and add the connection information to it. The J.D. Edwards OneWorld Event Listener requires connection information for the associated integration server to function properly. This information is contained in the `iwoevent.cfg` file. The `iwoevent.cfg` file has three distinct sections:

- **Common**

The common section of the configuration file contains basic configuration options. Currently, only the trace option is supported.

To set the trace option, select **on** or **off**.

```
common.trace=on|off
```

Where `on` sets the tracing to on and `off` sets the tracing to off. Off is the default value.

- **Alias**

The alias section of the configuration file contains the connection information required to send transactions to specific servers. Currently, the Oracle Application Adapter for J.D. Edwards OneWorld supports 100 entries (alias names) in the configuration file.

The alias values to these entries are as follows:

```
Alias.aliasname={ipaddress|dsn}:port, trace={on|off}
```

Where:

`aliasname` is the symbolic name given to the connection.

`ipaddress|dsn` is the IP address or DSN name for the server containing Oracle Application Adapter for J.D. Edwards OneWorld (required).

`port` is the port defined for Oracle Application Adapter for J.D. Edwards OneWorld in the TCP channel configuration (required).

`trace={on|off}` sets the tracing to on for the particular alias.

- **Trans**

The trans section of the configuration file contains transaction information required to route J.D. Edwards OneWorld transactions to specified servers.

If a particular J.D. Edwards OneWorld transaction is not defined to an alias, then it is sent to all aliases. The trans values to these entries are as follows:

```
trans.jdeTransactionName=alias1,alias2,aliasn
```

Where `jdeTransactionName` is the JDE-defined name for the outbound transaction and `alias1, alias2, aliasn` is the list of aliases to which the transactions are sent.

The following is a sample entry for `iwoevent.cfg` that supplies connection information:

```
common.trace=on

alias.edamcs1=172.1.1.1:3694
alias.edamcs1t=172.1.1.1:3694, trace=on
alias.edamcs2=222.2.2.2:1234

trans.JDES00OUT=edamcs1t,edamcs2
trans.JDEP00OUT=edamcs1
```

5. Create a folder using the alias names that are specified in the `iwoevent.cfg` file under the defined directory, `IWOEVENT_HOME`. For example:

```
\\JDEdwards\E812\DDP\Outbound\edamcs1
```

## 2.9 Runtime Overview

After J.D. Edwards OneWorld starts the J.D. Edwards OneWorld Event listener, the listener accesses the configuration file, called `iwoevent.cfg` (case-sensitive). Based on the information in the configuration file, the listener sends the event notification to the integration server. All log information is saved in a file called `iwoevent.log`. The `iwoevent.log` file is created in the outbound folder where the `iwoevent.dll` and `iwoevent.cfg` files are located.

## 2.10 Modifying the JDE.INI File for Outbound and Inbound Processing

This section describes the settings that are required in the JDE.INI file for the XML call object kernel (outbound and inbound processing).

Open the JDE.INI file and modify the `[JDENET_KERNEL_DEF6]` and `[JDENET_KERNEL_DEF15]` sections as follows:

```
[JDENET_KERNEL_DEF6]
krnlName=CALL OBJECT KERNEL
dispatchDLLName=XMLCallObj.dll
dispatchDLLFunction=_XMLTransactionDispatch@28
maxNumberOfProcesses=1
numberOfAutoStartProcesses=1

[JDENET_KERNEL_DEF15]
krnlName=XML TRANSACTION KERNEL
dispatchDLLName=XMLTransactions.dll
dispatchDLLFunction=_XMLTransactionDispatch@28
maxNumberOfProcesses=1
numberOfAutoStartProcesses=1
```

The parameters containing an underscore ( \_ ) and @28 are for Windows NT operating systems only. For other operating systems, replace the parameters with the values in the following table:

<b>Operating System</b>	<b>Call Object dispatch DLLName</b>	<b>XML Trans dispatch DLLName</b>
AS400	XMLCALLOBJ	XMLTRANS
HP9000B	libxmlcallobj.sl	libxmltransactions.lo
Sun or RS6000	libxmlcallobj.so	Libxmltransactions.so

---

**Note:** The J.D. Edwards OneWorld installation for version B7333(XE) does not include [J DENET\_KERNEL\_DEF15]. As a result, if you are using version B7333(XE), you must manually add it to the jde.ini file. For all other J.D. Edwards OneWorld versions, [J DENET\_KERNEL\_DEF15] is included with the installation.

---

---

---

# Oracle WebLogic Server Deployment and Integration

This chapter describes Oracle WebLogic Server (OracleWLS) deployment and integration with Oracle Application Adapter for J.D. Edwards OneWorld. It 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 J.D. Edwards OneWorld 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.

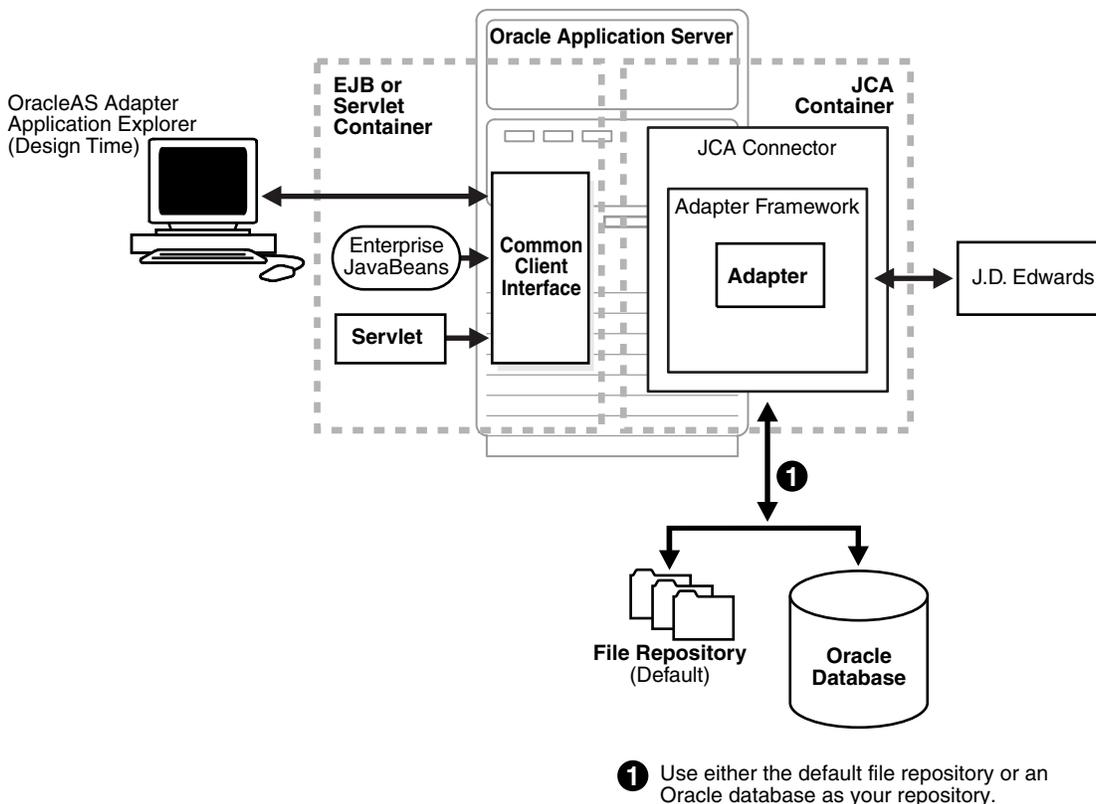
**See Also:**

- *Oracle Application Server Adapter Concepts Guide*

## 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.

Figure 3–1 Oracle Application Server J2CA Architecture

**See Also:**

- *Oracle Application Server Adapter Concepts Guide*

### 3.3 Updating Adapter Configuration

During the J2CA deployment of Oracle Application Adapter for J.D. Edwards OneWorld, 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 default `jca_sample` configuration in Application Explorer is represented in the `ra.xml` file as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE connector PUBLIC "-//Sun Microsystems, Inc.//DTD Connector 1.0//EN"
'http://java.sun.com/dtd/connector_1_0.dtd'>
<connector>
```

```

<display-name>IWAFJCA10</display-name>
<vendor-name>IWAY Software</vendor-name>
<spec-version>1.0</spec-version>
<eis-type>IWAF</eis-type>
<version>1.0</version>
<license>
  <license-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-i
nterface>
    </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 J.D. Edwards OneWorld has a preconfigured <code>jca_sample</code> 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, then 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:

#### For Oracle SOA Suite:

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

#### For OSB:

```
<OSB_HOME>\Oracle_OSB1\3rdparty\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>
  <connection-instance>
    <jndi-name>eis/OracleJCAAdapter/DefaultConnection</jndi-name>
  </connection-instance>
</connection-definition-group>
</outbound-resource-adapter>
</weblogic-connector>

```

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-factory-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, then 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, then 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 `eis/OracleJCAAdapter/DefaultConnection`. If you created additional connection factories, then the WSDLs generated for the additional configuration and connection factory should be changed to reflect the location field of the `jca:address` section in the J2CA properties file. The default J2CA properties file for the Oracle Application Adapter for J.D. Edwards OneWorld with a configuration of `isdsrv2_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="JDEdwards" cs.Config="isdsrv2_conn2"
UIConnectionName="Connection1"/>

```

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

For example:

```

<jca:address location="eis/OracleJCAAdapter/DefaultConnection1"
  ConnectionSpec="com.ibi.afjca.cci.IWAFConnectionSpec"
  cs.AdapterName="JDEdwards" cs.Config="isdsrv2_conn2"
UIConnectionName="Connection1"/>

```

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 J.D. Edwards OneWorld integrates seamlessly with 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 BPEL Process Manager, Oracle Application Adapter for J.D. Edwards OneWorld 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 J.D. Edwards OneWorld"](#).

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 Oracle JDeveloper and deployed to a BPEL server. Upon deployment to the BPEL server, every newly built process is automatically deployed to the Oracle Enterprise Manager console, where you run, monitor, administer BPEL processes, and listen to adapter events.

### 4.2 Deployment of Adapter

During installation, Oracle Application Adapter for J.D. Edwards OneWorld 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.

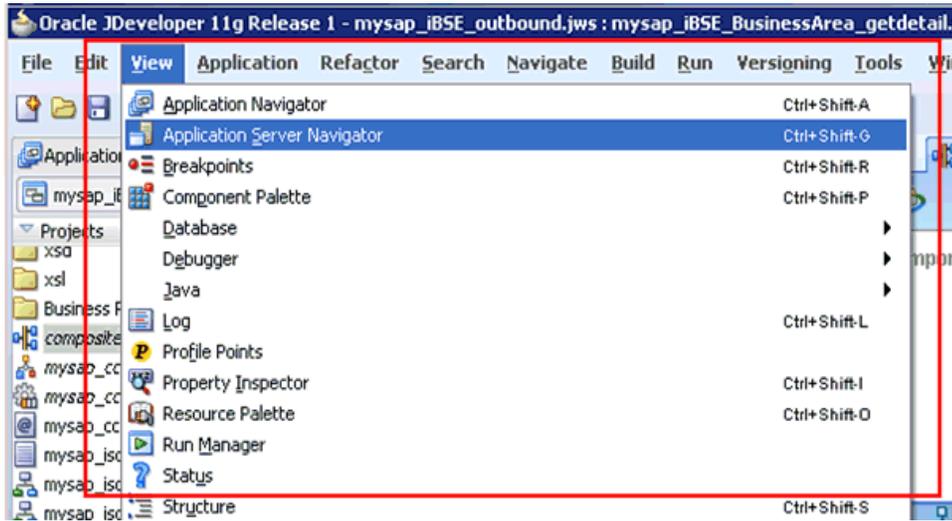
**See Also:** *Oracle Application Server Adapter Concepts Guide*

### 4.3 Configuring a New Application Server Connection

To configure a new Application Server connection in Oracle JDeveloper:

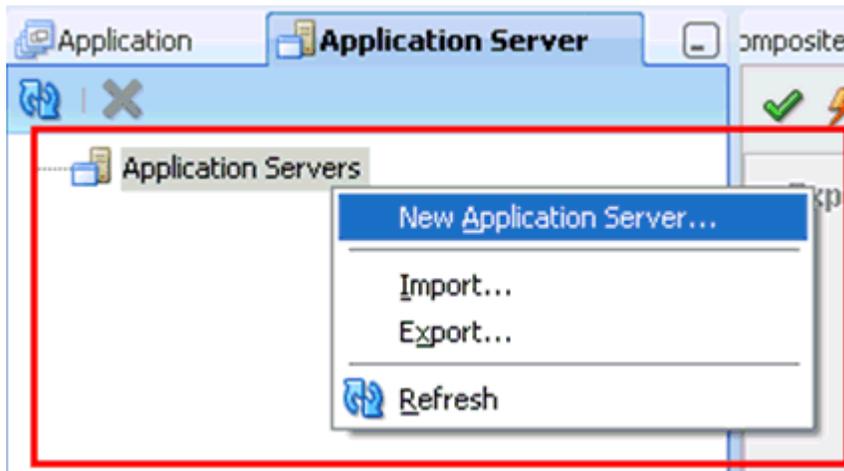
1. Open Oracle JDeveloper on your system.
2. From the menu bar, click **View** and select **Application Server Navigator**, as shown in Figure 4-1.

Figure 4-1 Application Server Navigator



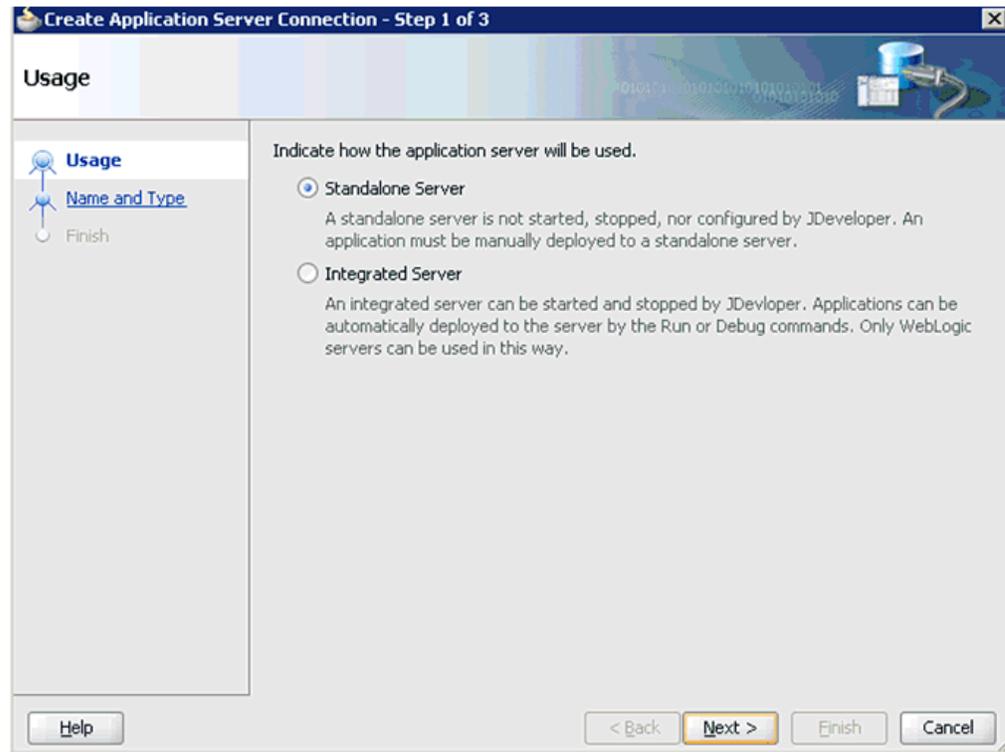
The Application Server tab is displayed, as shown in Figure 4-2.

Figure 4-2 Application Server Tab

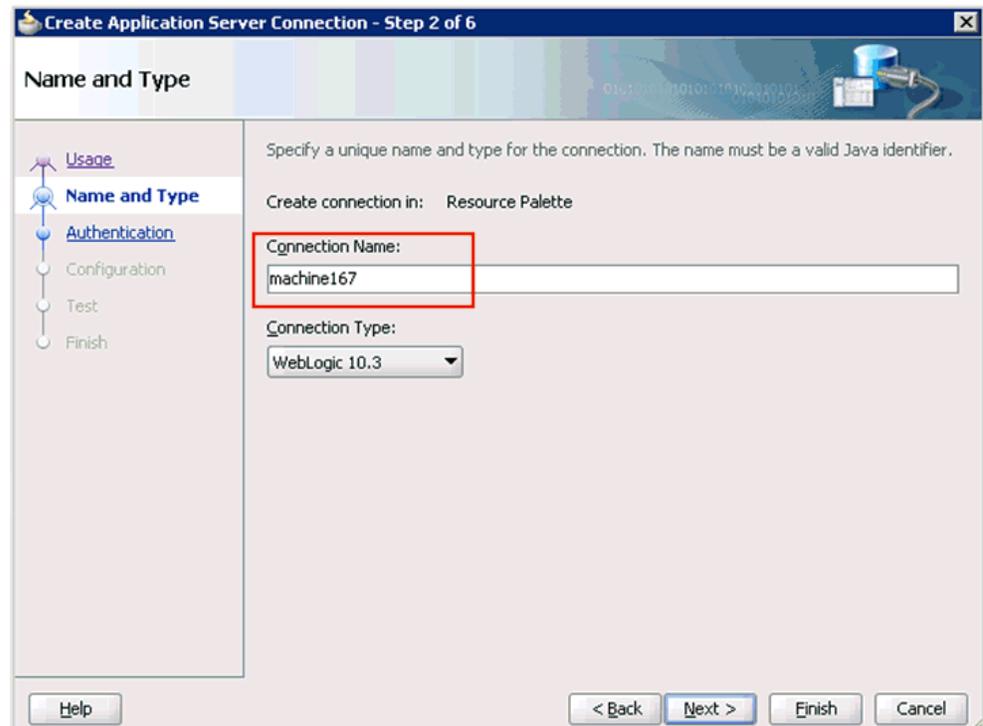


3. Right-click **Application Servers**, and then select **New Application Server**.

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

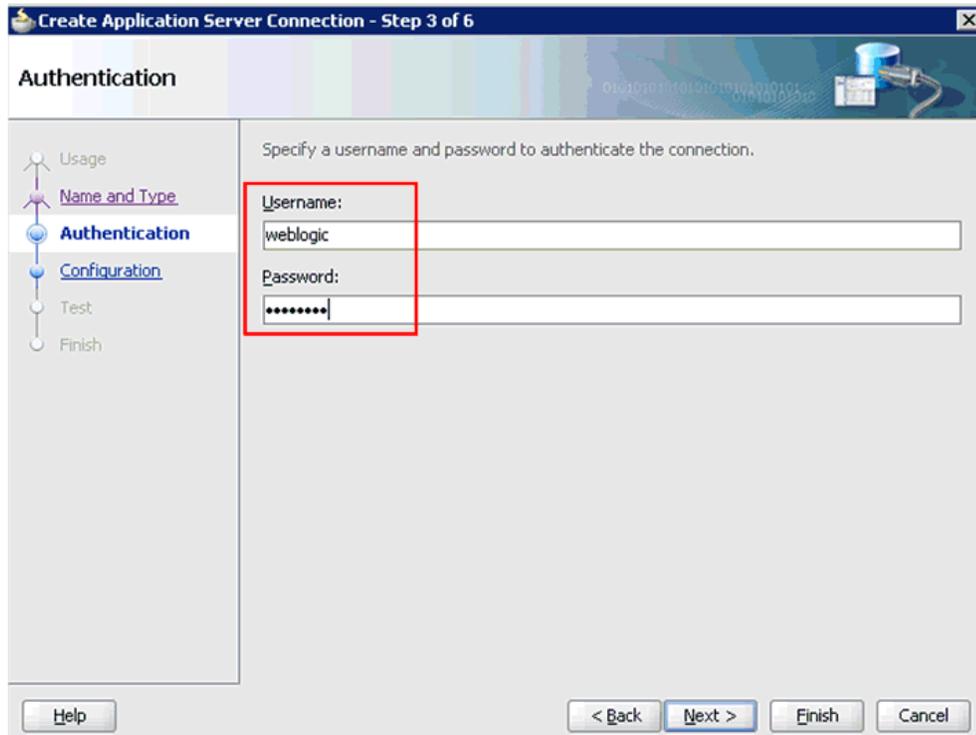
**Figure 4–3 Create Application Server Connection Wizard**

- Accept the default selection (Standalone Server) and click **Next**.  
The Name and Type page is displayed, as shown in [Figure 4–4](#).

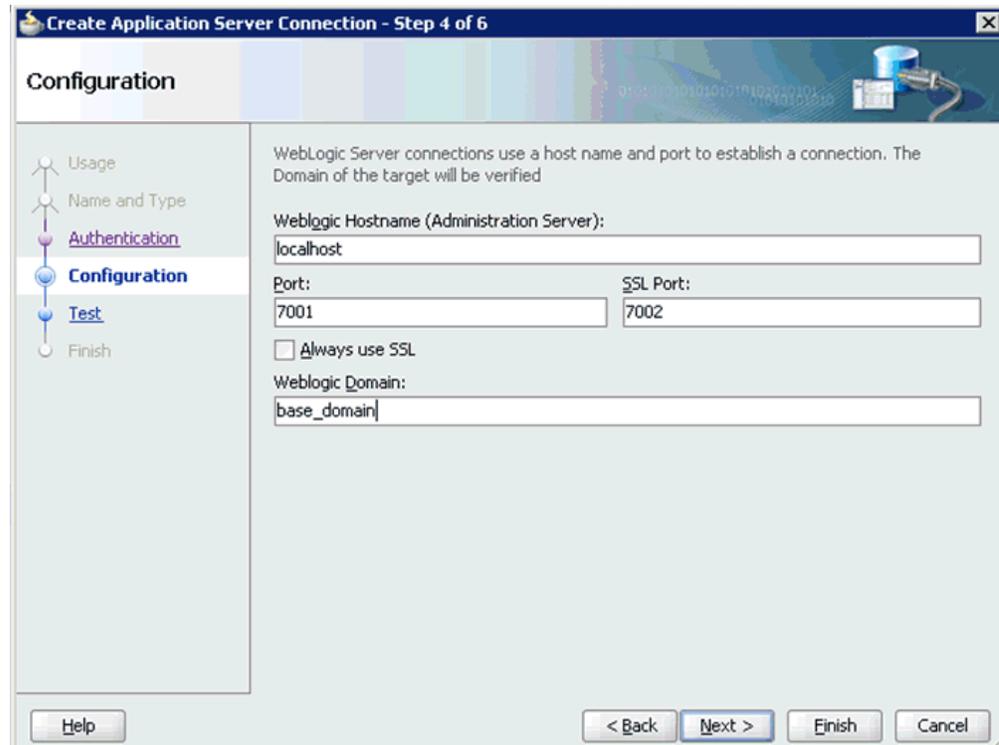
**Figure 4–4 Name and Type Page**

5. Specify a new name for the Application Server connection and click **Next**.  
The Authentication page is displayed, as shown in [Figure 4-5](#).

**Figure 4-5 Authentication Page**



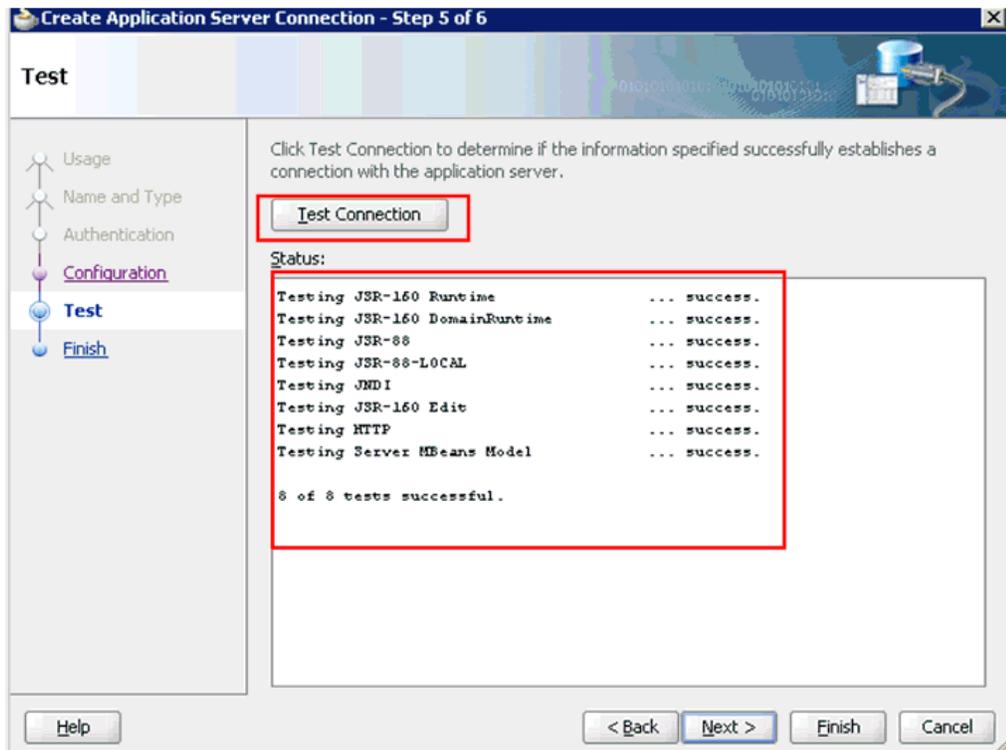
6. Specify a valid user name (for example, weblogic) and a password (for example, welcome1) for your new connection.
7. Click **Next**.  
The Configuration page is displayed, as shown in [Figure 4-6](#).

**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.

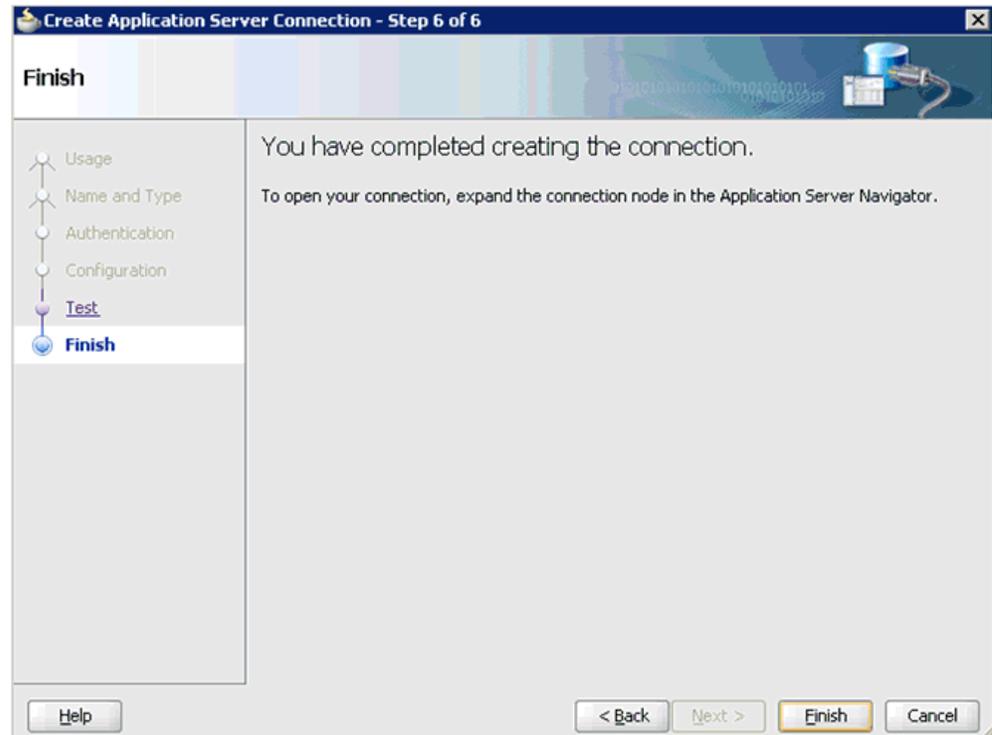
The Test page is displayed, as shown in [Figure 4–7](#).

**Figure 4–7 Test Page**

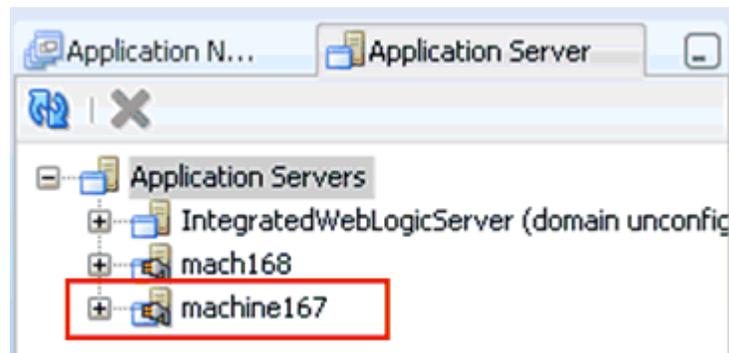


10. Click **Test Connection**.
11. Ensure that the test status is successful.
12. Click **Next**.

The Finish page is displayed, as shown in [Figure 4–8](#).

**Figure 4–8** *Finish Page***13. Click Finish.**

The new Application Server connection is listed in the left pane (Application Server tab), 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 Oracle JDeveloper.

---

Before you design a BPEL process, you must generate WSDL using Application Explorer. For more information, see ["Generating WSDL for Request/Response Service"](#) on page 4-8. The WSDL generated in Application Explorer is used during the BPEL process configuration.

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

#### 4.4.1 Generating WSDL for Request/Response Service

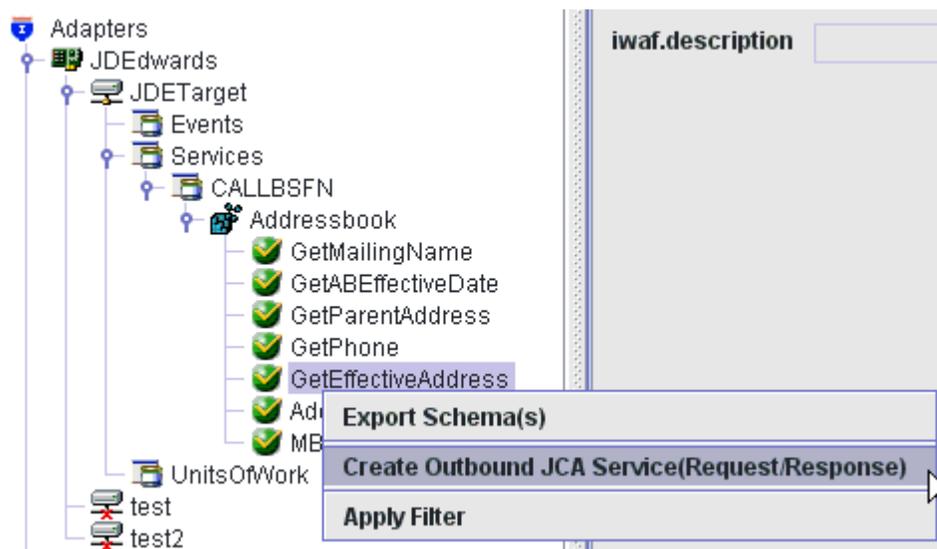
Perform the following steps to generate a WSDL for request/response service:

1. Start Application Explorer and connect to a defined J.D. Edwards OneWorld target.

For more information, see ["Defining a Target to J.D. Edwards OneWorld"](#) on page 2-6.

2. Expand **Services**, **CALLBSFN**, and **Addressbook**.

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



3. Right-click **GetEffectiveAddress**, and then select **Create Outbound JCA Service (Request/Response)**, as shown in [Figure 4–10](#).

The Export WSDL dialog is displayed, as shown in [Figure 4–11](#).

Figure 4–11 Export WSDL Dialog

4. 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`.

5. Click **OK**.

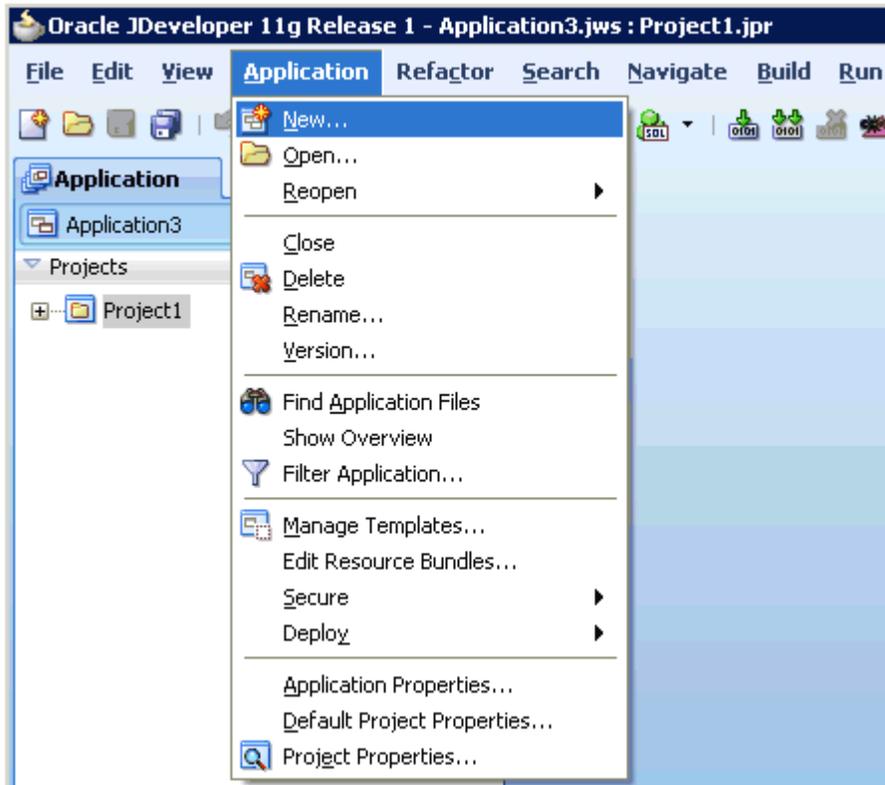
You can now create a new SOA application, which is the first step that is required to define a BPEL outbound process in Oracle JDeveloper.

#### 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:

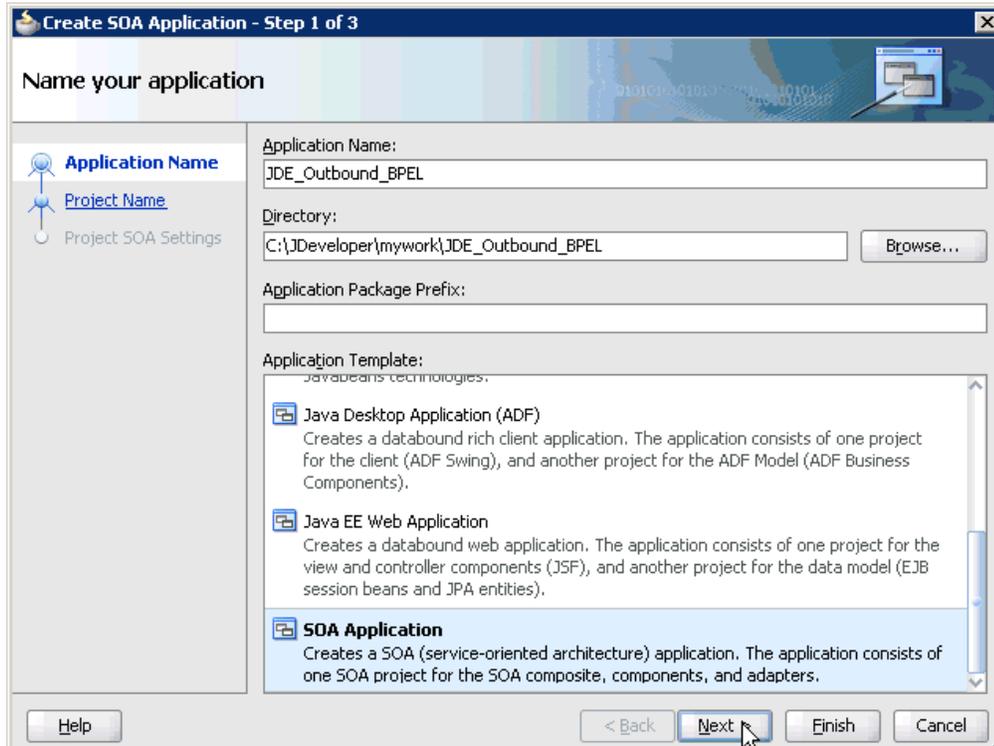
1. Open Oracle JDeveloper on your system.
2. Click **Application** in the menu bar and select **New** from the menu, as shown in [Figure 4–12](#).

**Figure 4–12 Application Menu**



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

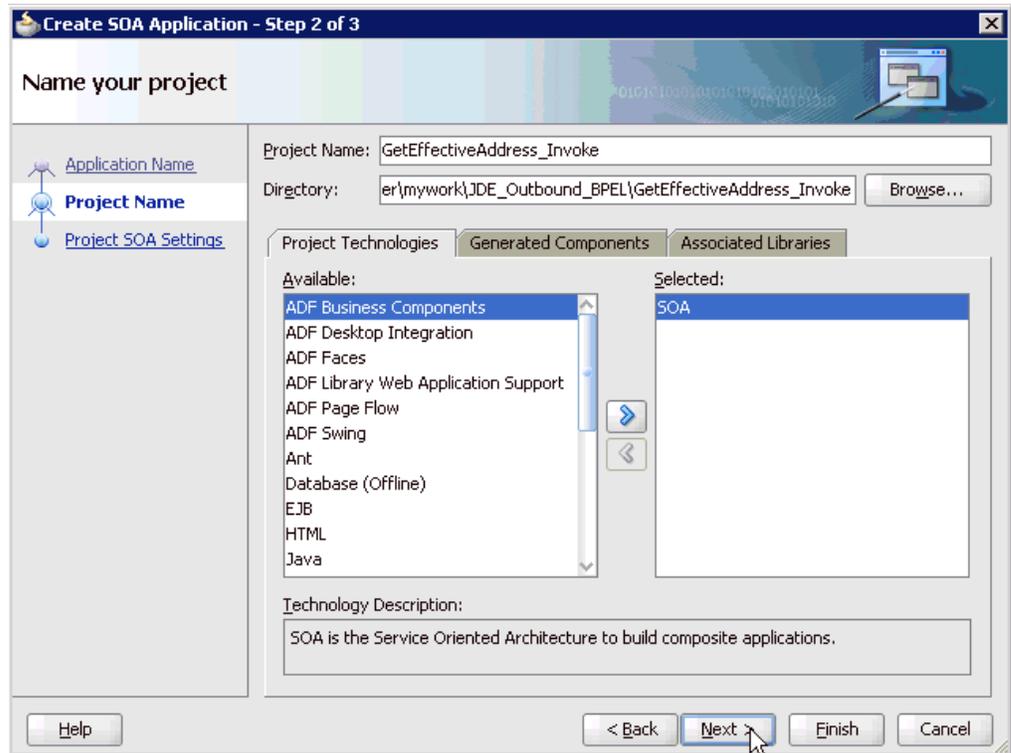
**Figure 4–13 Create SOA Application Wizard**



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

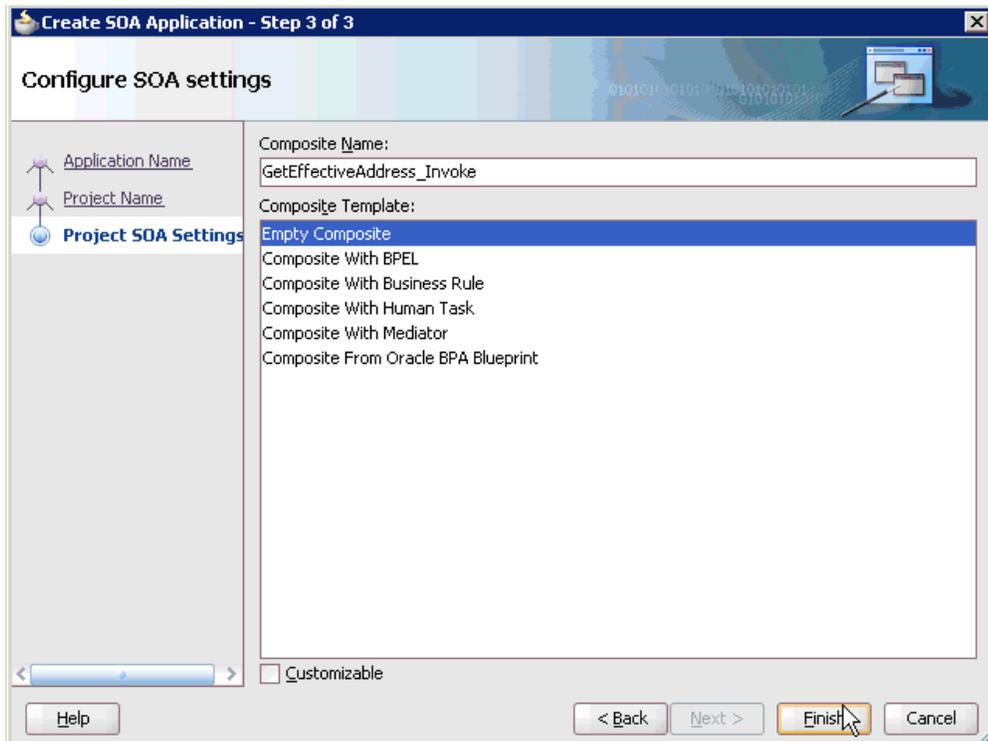
The Name your project page is displayed, as shown in [Figure 4-14](#).

**Figure 4-14** Name Your Project Page



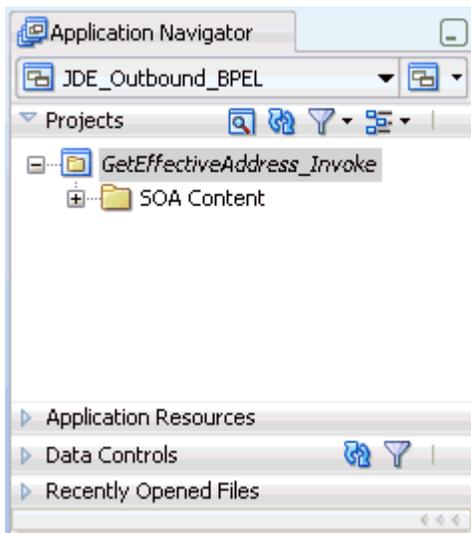
5. Enter a project name (for example, `GetEffectiveAddress_Invoke`) and click **Next**. The Configure SOA settings page is displayed, as shown in [Figure 4-15](#).

**Figure 4–15 Configure SOA Settings Page**



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

**Figure 4–16 Application Navigator Tab**



The new SOA application (JDE\_Outbound\_BPEL) and associated project (GetEffectiveAddress\_Invoke) are added to the Application Navigator tab in the left pane, as shown in [Figure 4–16](#).

### 4.4.3 Defining a BPEL Outbound Process

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

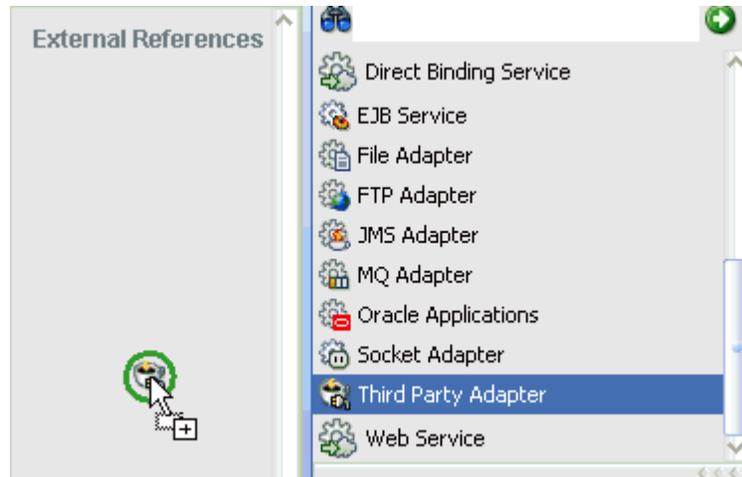
1. Configuring a Third Party Adapter Service Component
2. Configuring an Outbound BPEL Process Component

### Configuring a Third Party Adapter Service Component

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

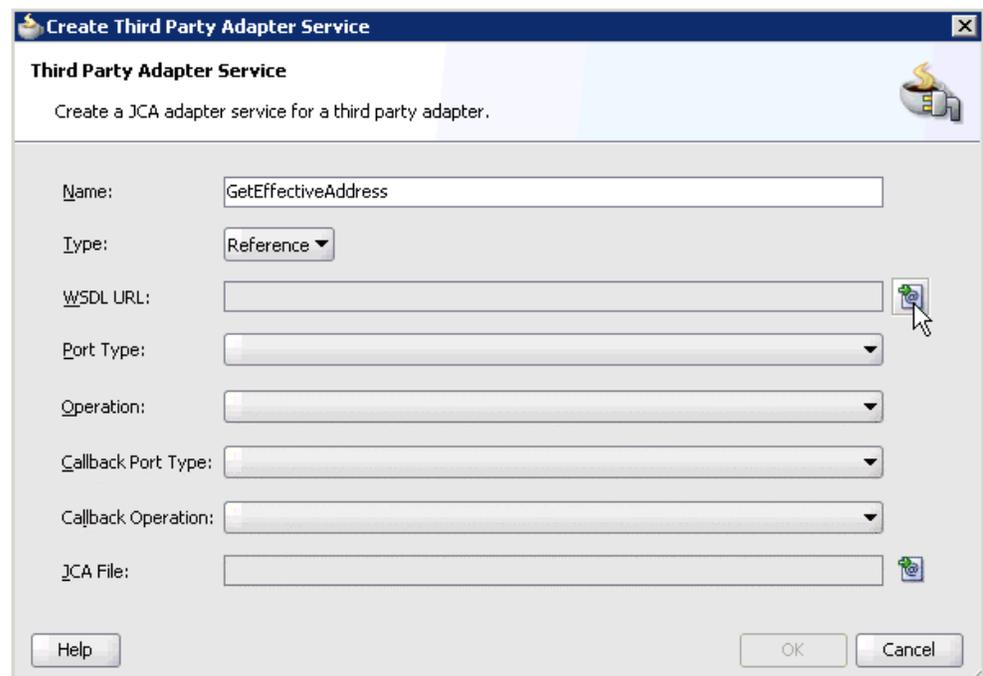
1. Drag and drop the **Third Party Adapter** component from the Component Palette tab (Service Adapters section) to the External References pane, as shown in [Figure 4-17](#).

**Figure 4-17 Third Party Adapter Component**



The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 4-18](#).

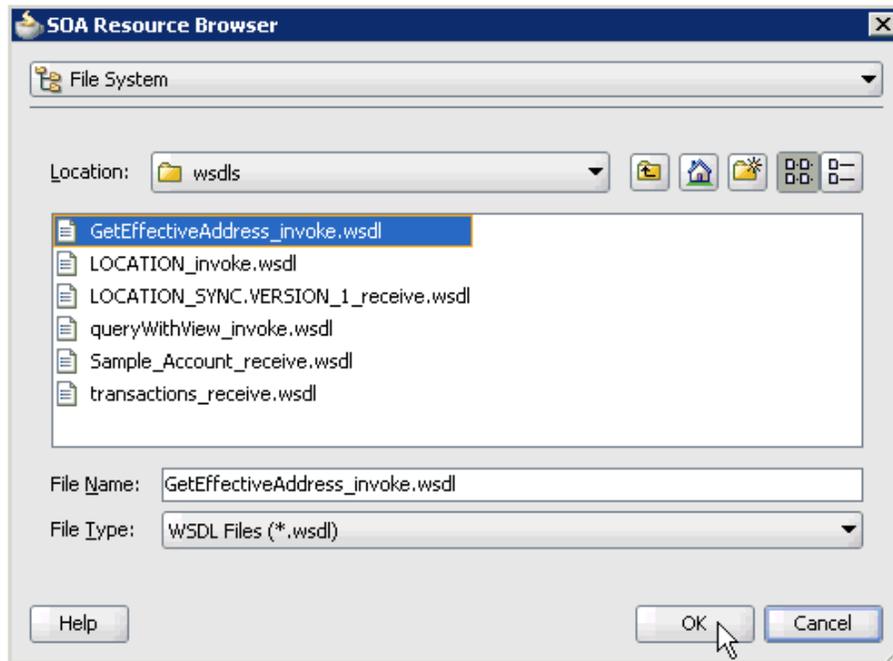
**Figure 4-18 Create Third Party Adapter Service Dialog**



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**

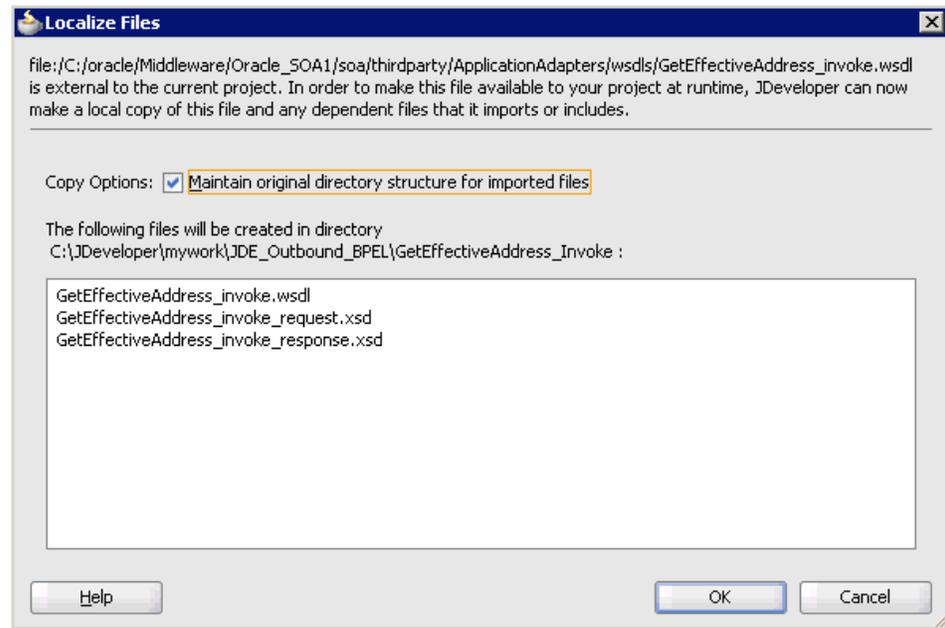


5. Browse and select an outbound WSDL file (for example, GetEffectiveAddress\_invoke.wSDL) from the following directory:

<ADAPTER\_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click **OK**.

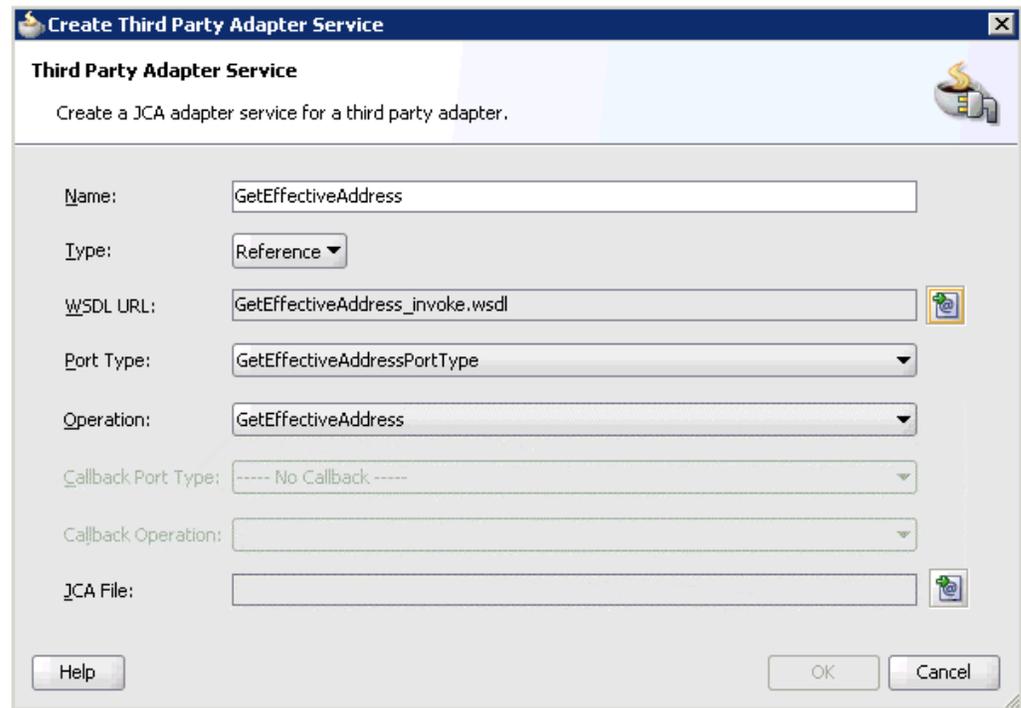
The Localize Files dialog is displayed, as shown in [Figure 4-20](#).

**Figure 4–20 Localize Files Dialog**

7. Click **OK**.

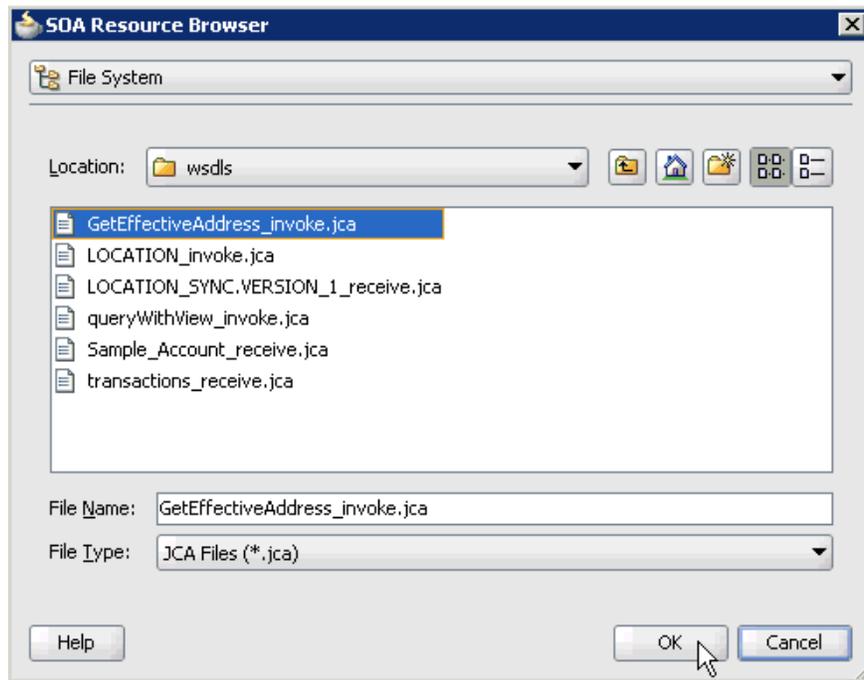
The outbound WSDL file and associated request and response XML schema files (.xsd) are imported to the project folder that has been created.

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

**Figure 4–21 Create Third Party Adapter Service Dialog**

8. 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**



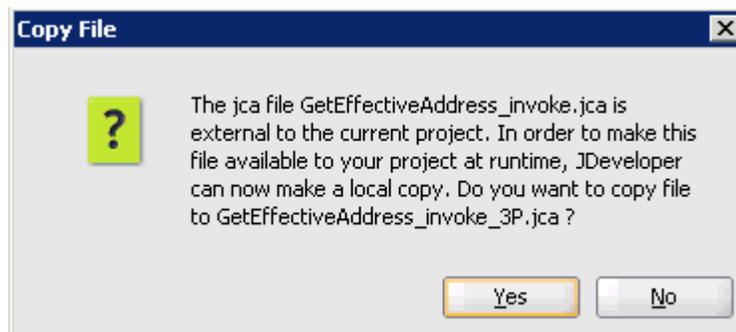
9. Browse and select the JCA properties file (for example, GetEffectiveAddress\_invoke.jca) from the following directory:

`<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls`

10. Click **OK**.

The Copy File message is displayed, as shown in [Figure 4-23](#).

**Figure 4-23 Copy File Confirmation Message**



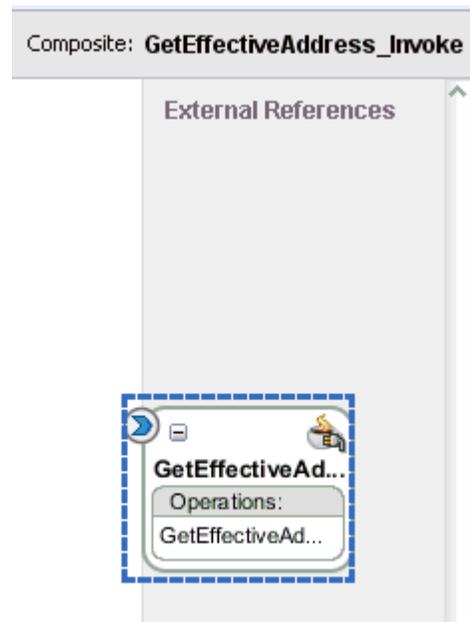
11. Click **Yes**.

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 Service Dialog**
**12. Click OK.**

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

**Figure 4–25 Third Party Adapter Service Component**

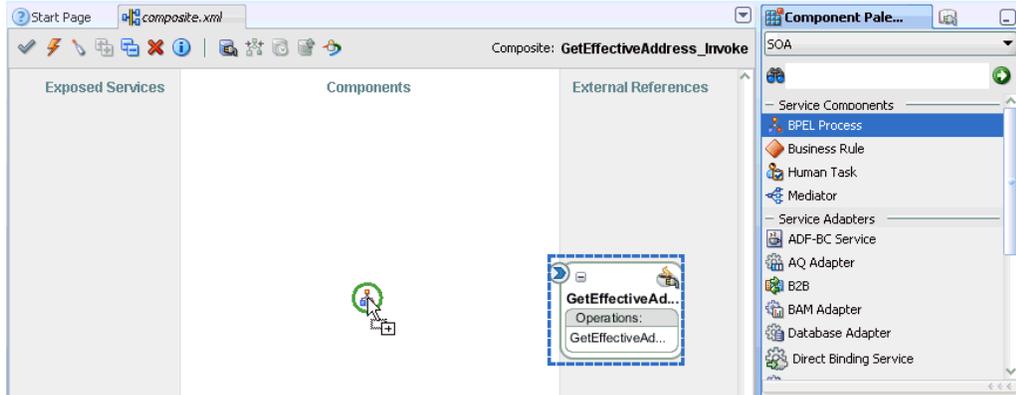
You are now ready to configure an outbound BPEL process component.

### Configuring an Outbound BPEL Process Component

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

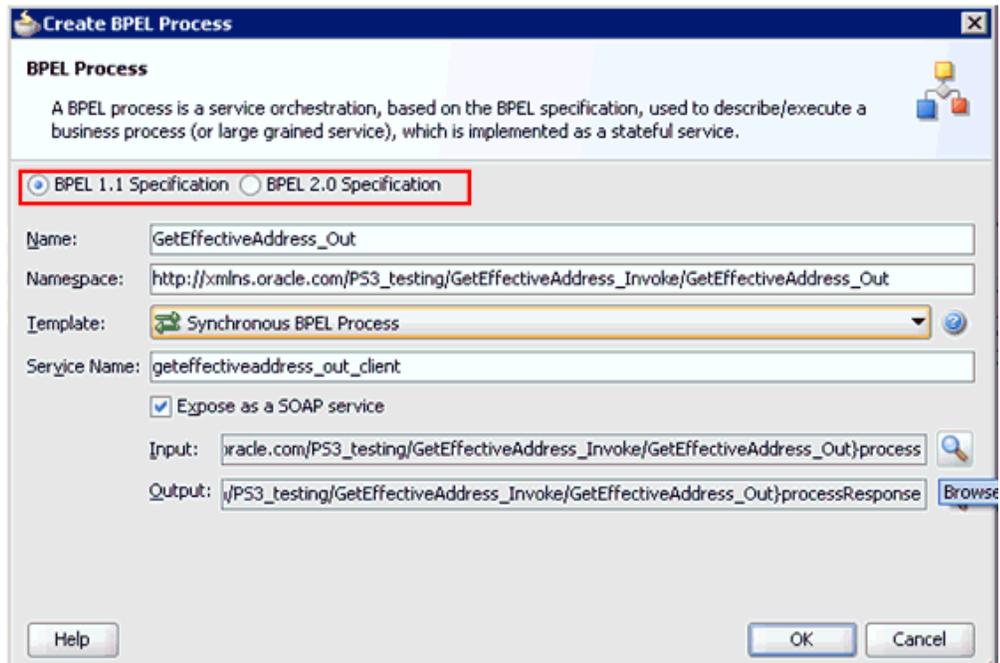
1. Drag and drop the **BPEL Process** component from the Component Palette tab (Service Components section) to the Components pane, as shown in [Figure 4–26](#).

**Figure 4–26 BPEL Process Component**



The Create BPEL Process dialog is displayed, as shown in [Figure 4–27](#).

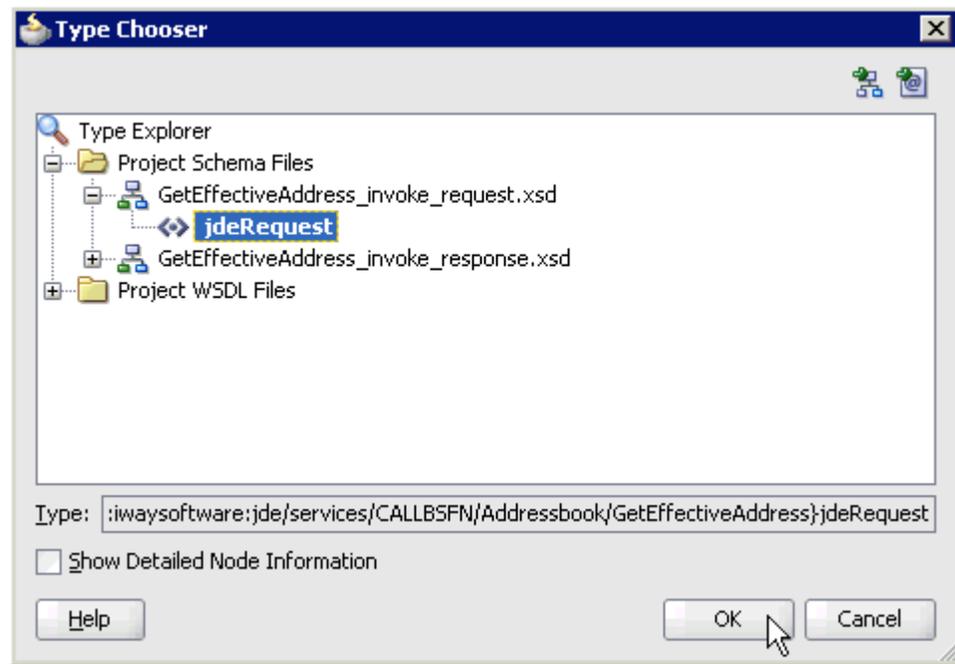
**Figure 4–27 Create BPEL Process Dialog**



2. In the Name field, enter a name to identify the new outbound BPEL process component (for example, GetEffectiveAddress\_Out).  
By default, the BPEL 1.1 Specification option is selected. The BPEL 2.0 Specification option is also available.
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](#).

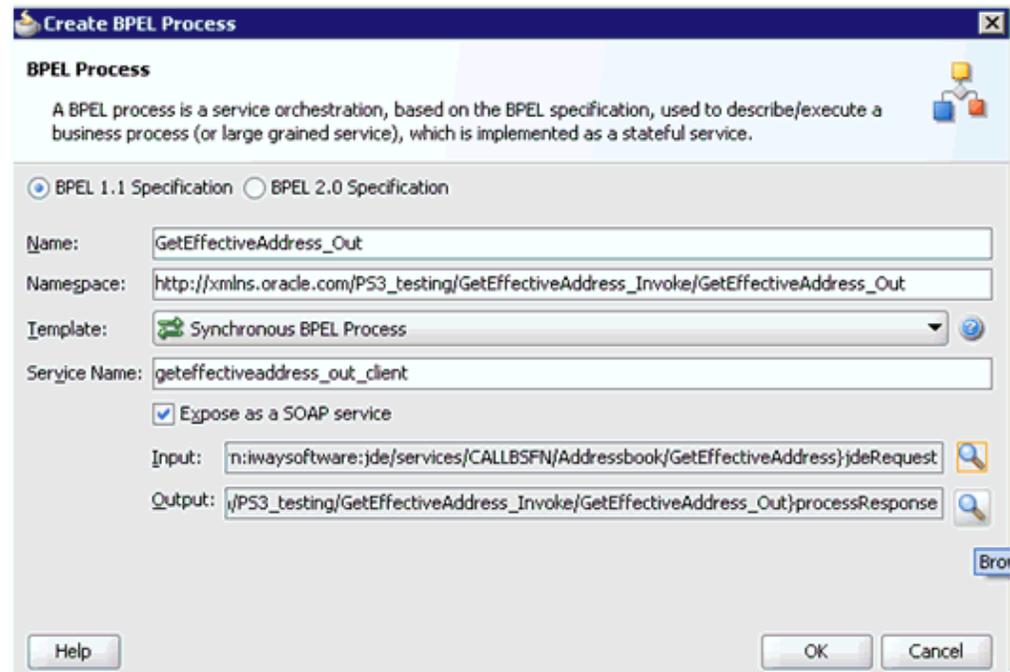
**Figure 4-28** Type Chooser Dialog



5. Expand **Project Schema Files**, **GetEffectiveAddress\_invoke\_request.xsd**, and select **jdeRequest**.
6. Click **OK**.

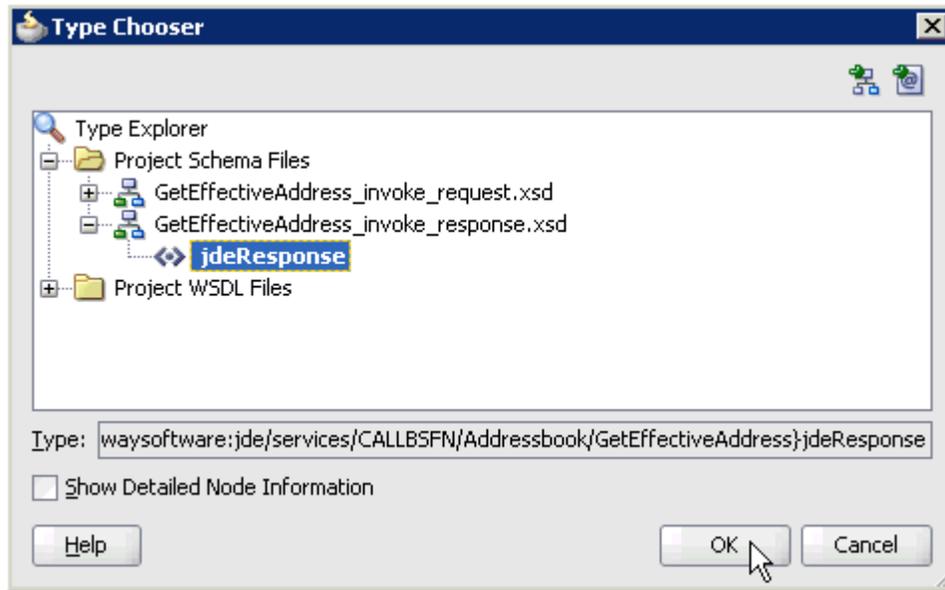
You are returned to the Create BPEL Process dialog, as shown in [Figure 4-29](#).

**Figure 4-29** Create BPEL Process Dialog

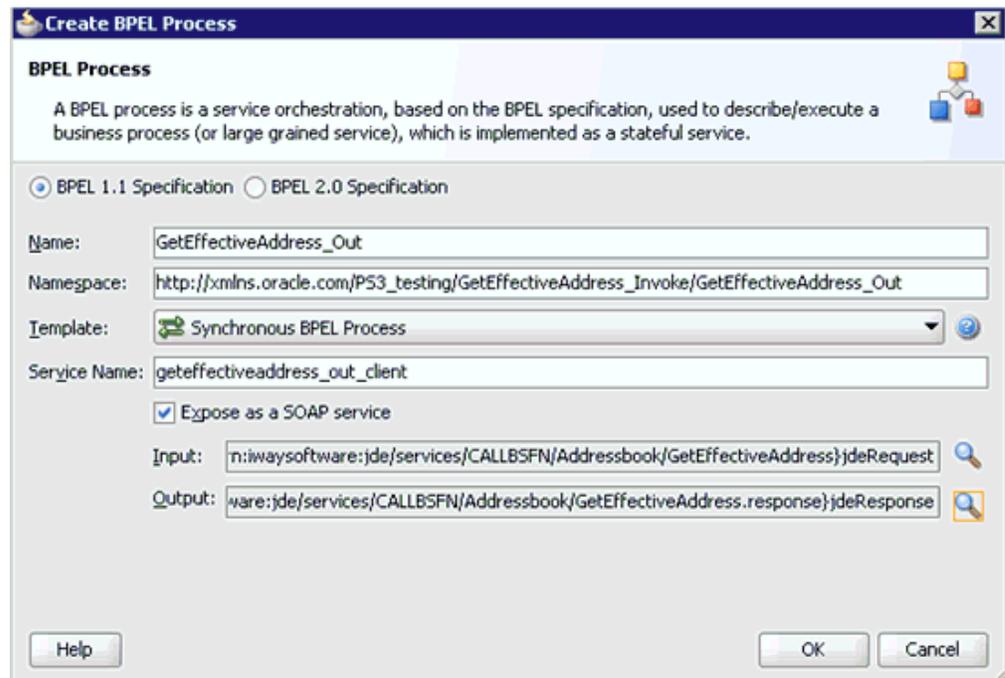


7. Click the **Browse Output Elements** icon, which is located to the right of the Output field to select the associated XML response schema file.  
The Type Chooser dialog is displayed, as shown in [Figure 4-30](#).

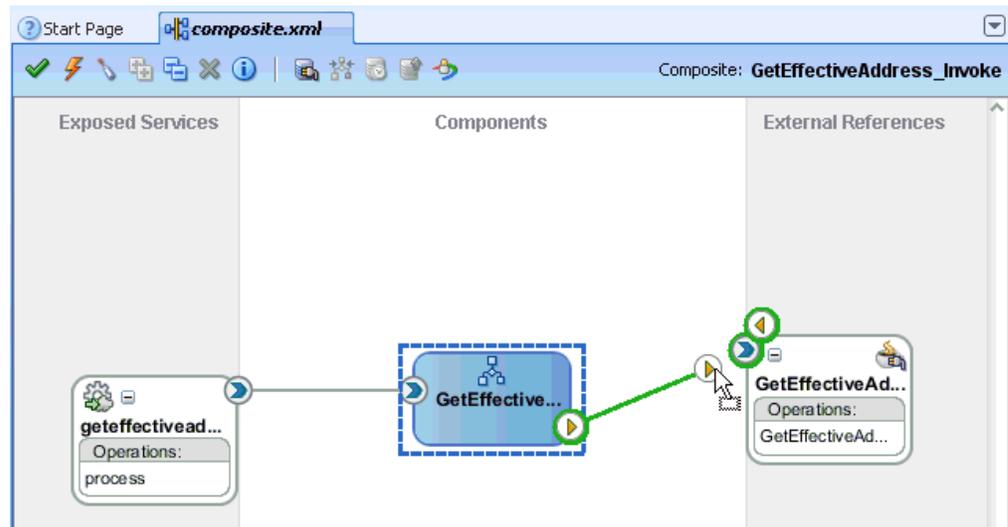
**Figure 4-30 Type Chooser Dialog**



8. Expand **Project Schema Files**, **GetEffectiveAddress\_invoke\_response.xsd**, and select **jdeResponse**.
9. Click **OK**.  
You are returned to the Create BPEL Process dialog, as shown in [Figure 4-31](#).

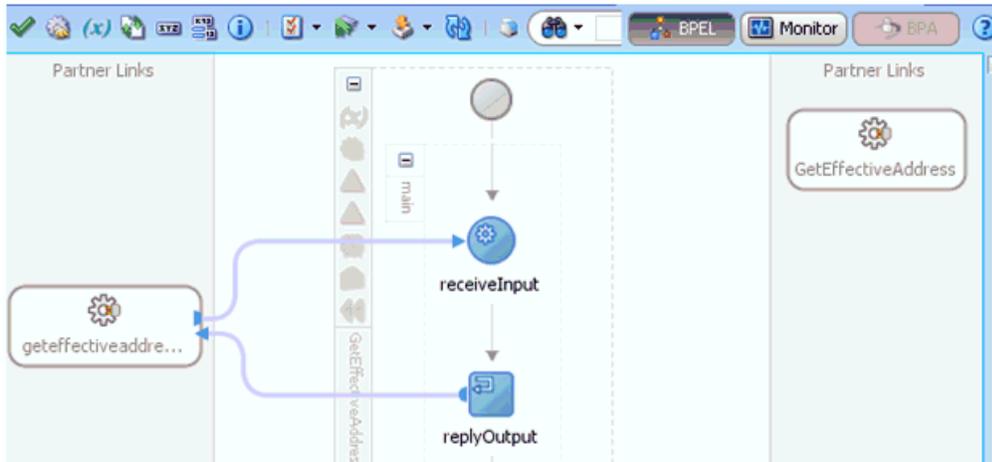
**Figure 4–31 Create BPEL Process Dialog**

10. Click OK.
11. Create a connection between the outbound BPEL process component (GetEffectiveAddress\_Out) and the third party adapter service component (GetEffectiveAddress), as shown in [Figure 4–32](#).

**Figure 4–32 Created Connection**

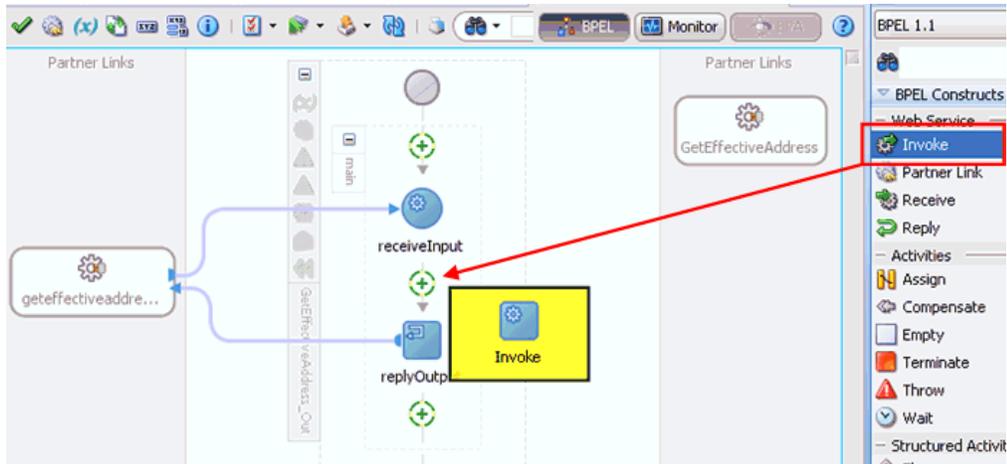
12. Double-click the outbound BPEL process component (GetEffectiveAddress\_Out) in the Components pane, as shown in [Figure 4–33](#).

**Figure 4–33 Outbound BPEL Process Component**



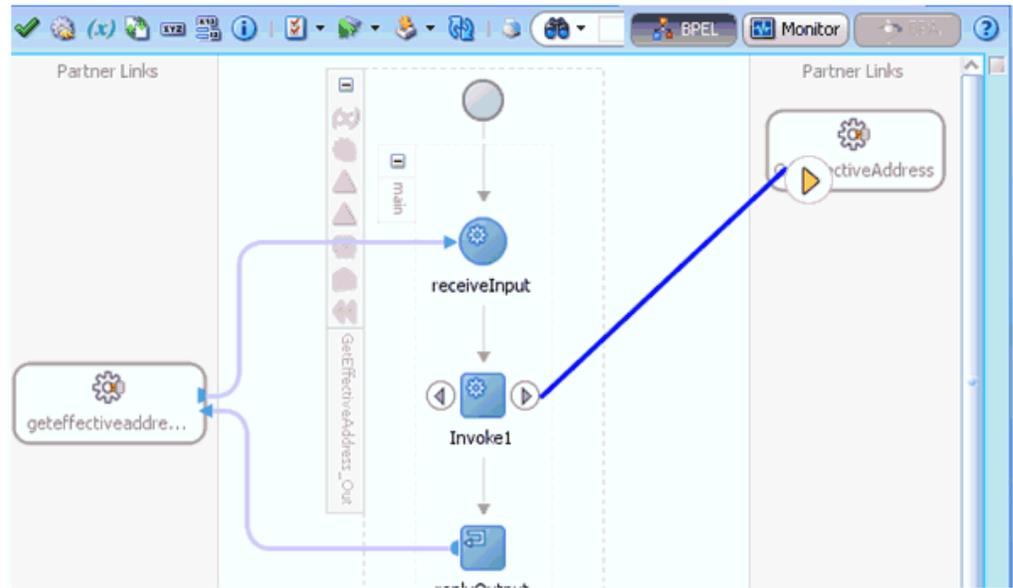
13. Drag and drop the **Invoke** activity component to the Components pane and place it between the **receiveInput** activity component and the **replyOutput** activity component, as shown in [Figure 4–34](#).

**Figure 4–34 Invoke Activity Component**



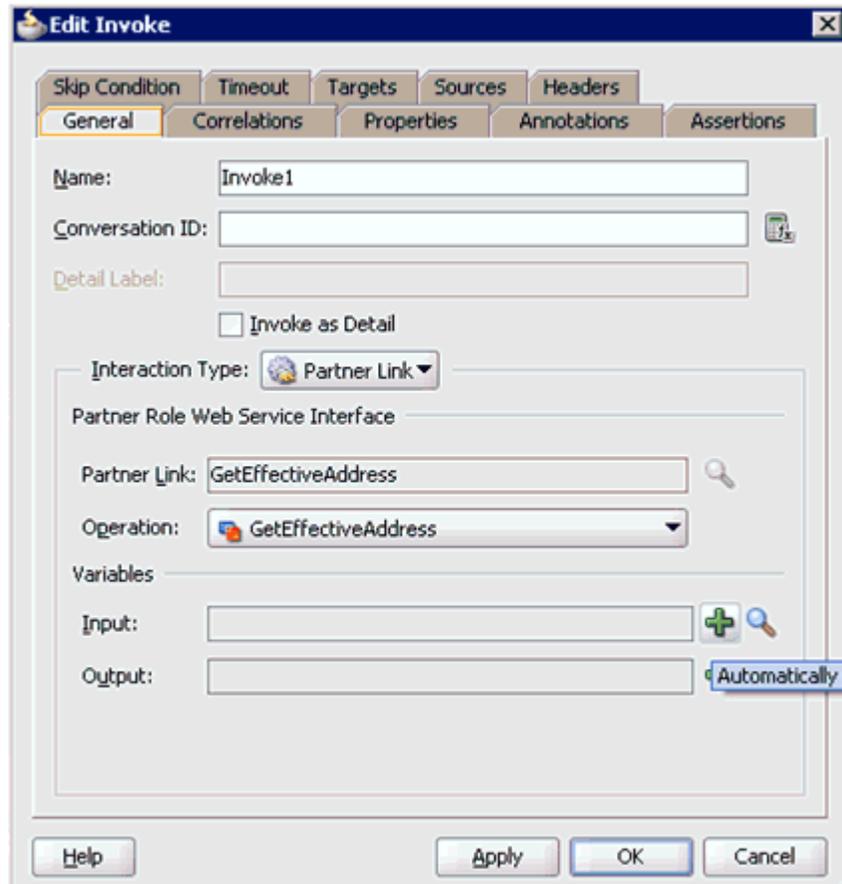
14. Create a connection between the new Invoke activity component (Invoke1) and the third party adapter service component (GetEffectiveAddress), as shown in [Figure 4–35](#).

**Figure 4–35 Created Connection**



The Edit Invoke dialog is displayed, as shown in [Figure 4–36](#).

**Figure 4–36 Edit Invoke Dialog**



- 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](#).

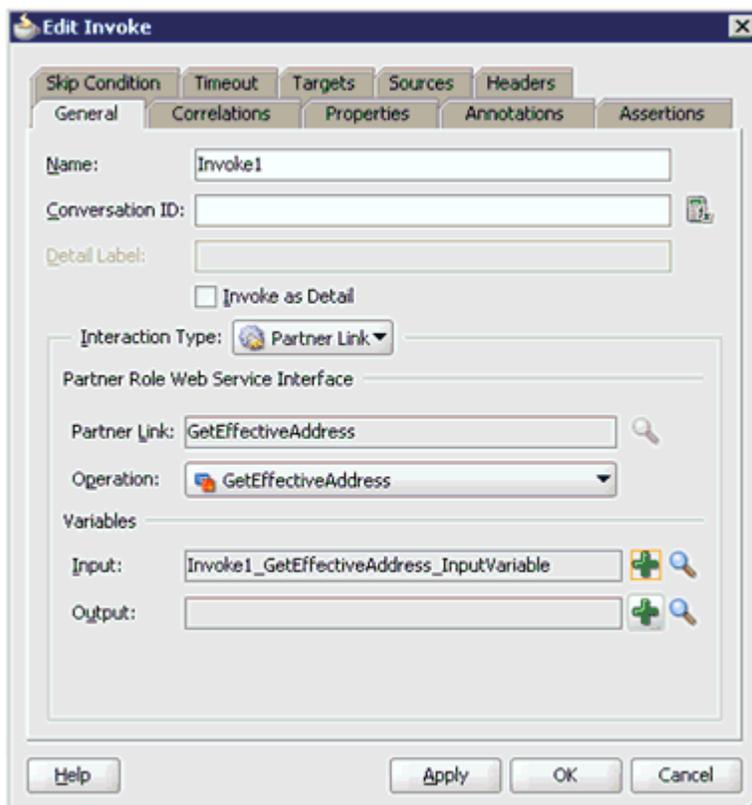
**Figure 4–37** Create Variable Dialog



- 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](#).

**Figure 4–38** Edit Invoke Dialog



- 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](#).

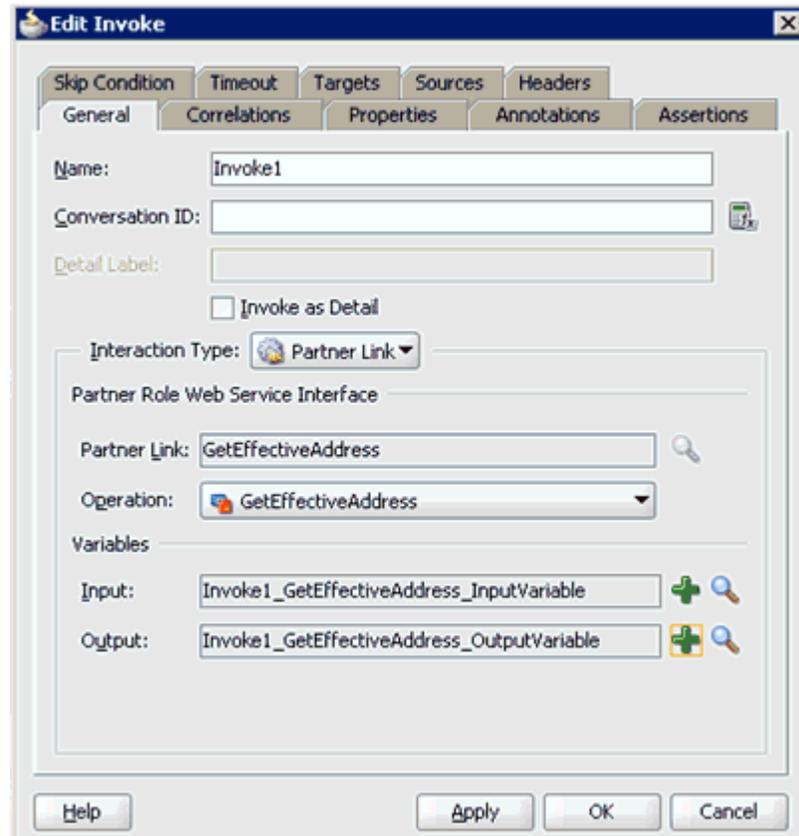
Figure 4–39 Create Variable Dialog



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](#).

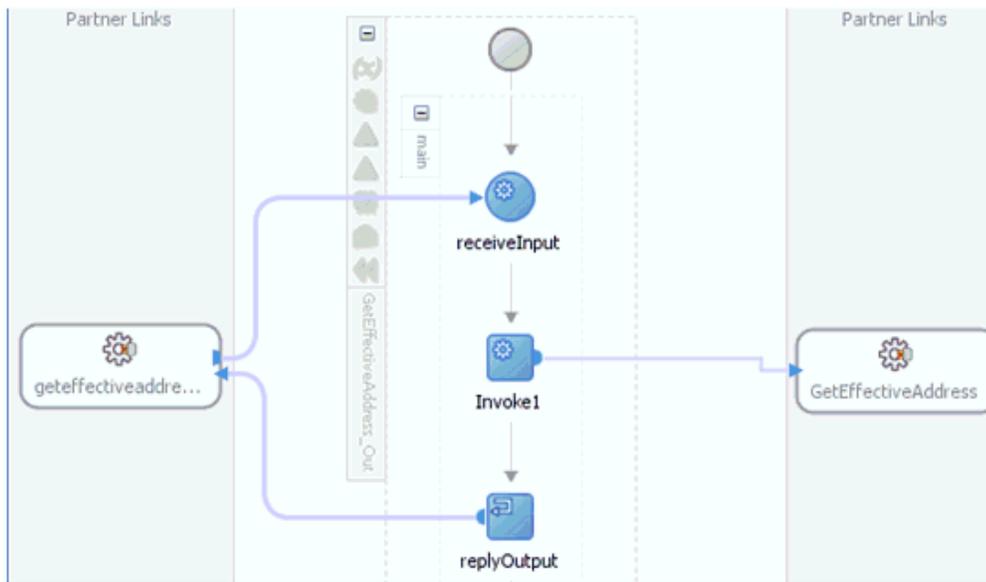
Figure 4–40 Edit Invoke Dialog



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

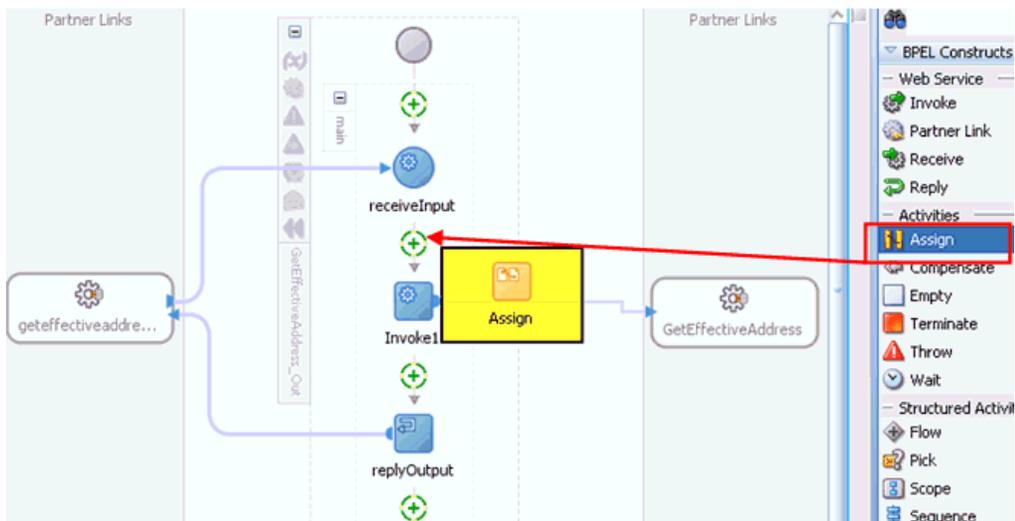
The Invoke activity component (Invoke1) is updated accordingly, as shown in [Figure 4–41](#).

**Figure 4–41 Invoke Activity Component (Invoke 1)**



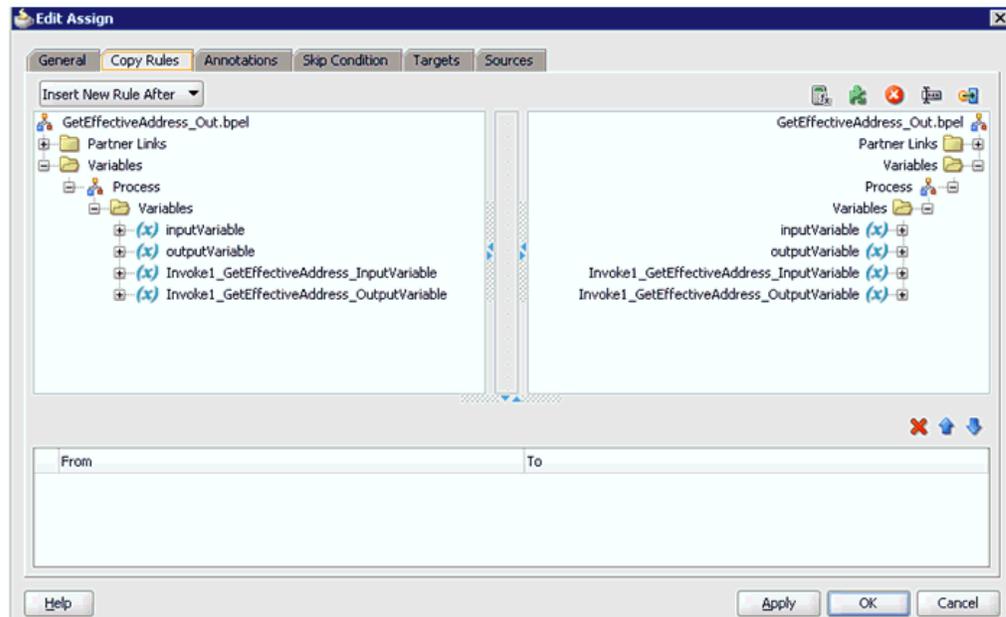
20. Drag and drop the **Assign** activity component to the Components pane and place it between the Receive activity component (receiveInput) and the Invoke activity component (Invoke1), as shown in [Figure 4–42](#).

**Figure 4–42 Assign Activity Component**



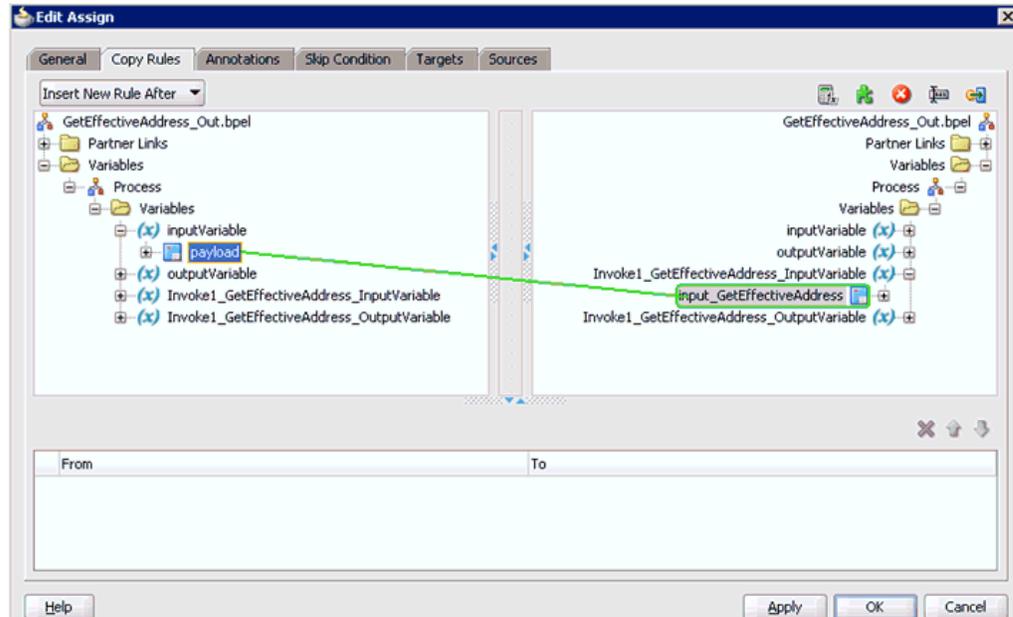
The Edit Assign dialog is displayed, as shown in [Figure 4–43](#).

Figure 4–43 Edit Assign Dialog



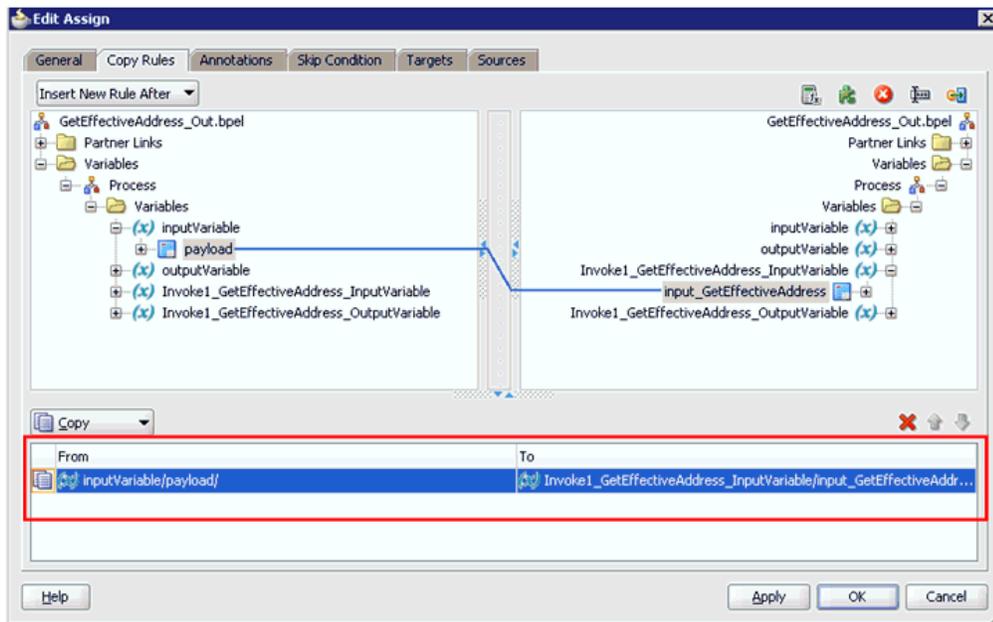
21. In the left pane, under Variables, expand **InputVariable**, and then select **payload**.
22. In the right pane, under Variables, expand **Invoke1\_GetEffectiveAddress\_**  
**InputVariable** and select **input\_GetEffectiveAddress**.
23. Drag and map the **payload** variable to the **input\_GetEffectiveAddress** variable, as shown in Figure 4–44.

Figure 4–44 Edit Assign Dialog



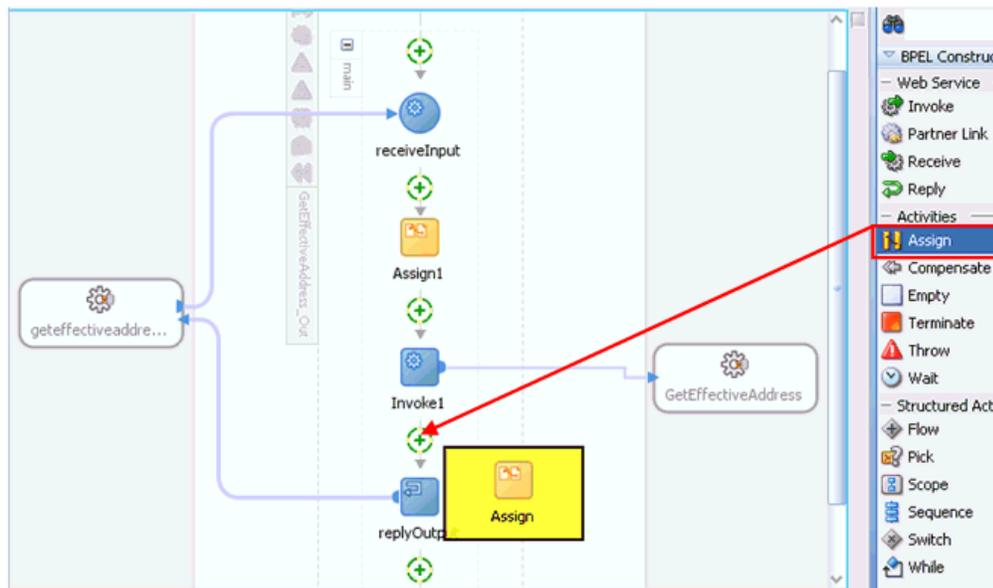
The mapped variables are populated in the highlighted area as shown in Figure 4–45.

**Figure 4–45 Edit Assign Dialog**



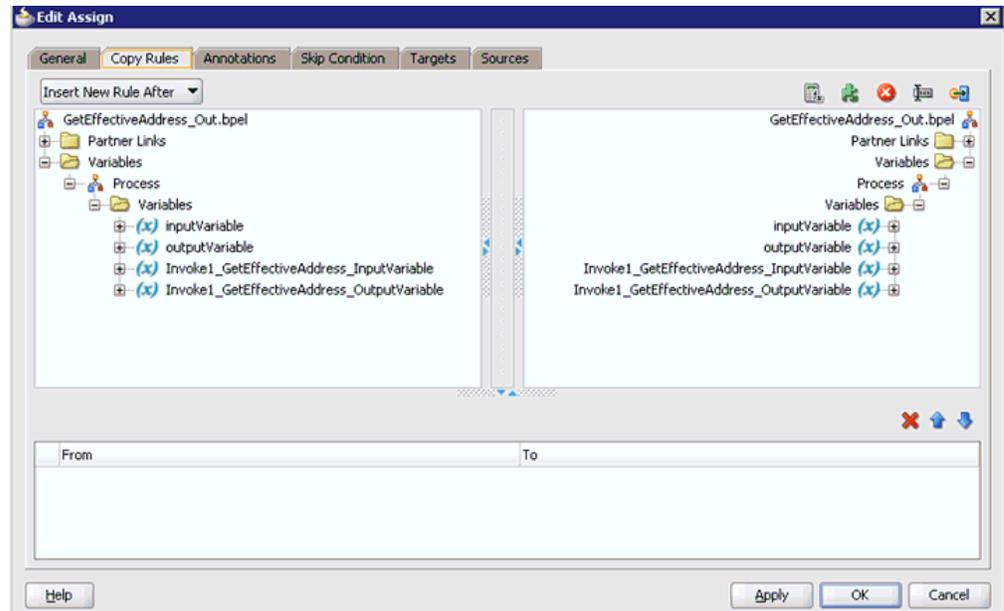
24. Click **Apply** and then **OK**.
25. Drag and drop the **Assign** activity component to the Components pane and place it between the Invoke activity (Invoke1) and the Reply activity (replyOutput), as shown in [Figure 4–46](#).

**Figure 4–46 Assign Activity Component**



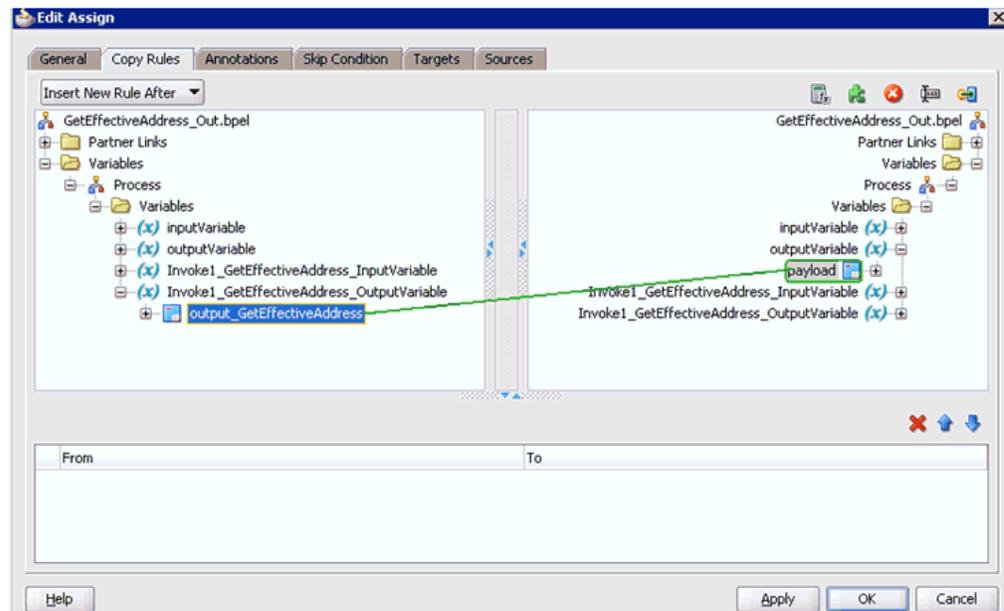
The Edit Assign dialog is displayed, as shown in [Figure 4–47](#).

Figure 4–47 Edit Assign Dialog



26. In the left pane, under Variables, expand **Invoke1\_GetEffectiveAddress\_OutputVariable**, and then select **output\_GetEffectiveAddress**.
27. In the right pane, under Variables, expand **outputVariable** and select **payload**.
28. Drag and map the **output\_GetEffectiveAddress** variable to the **payload** variable, as shown in Figure 4–48.

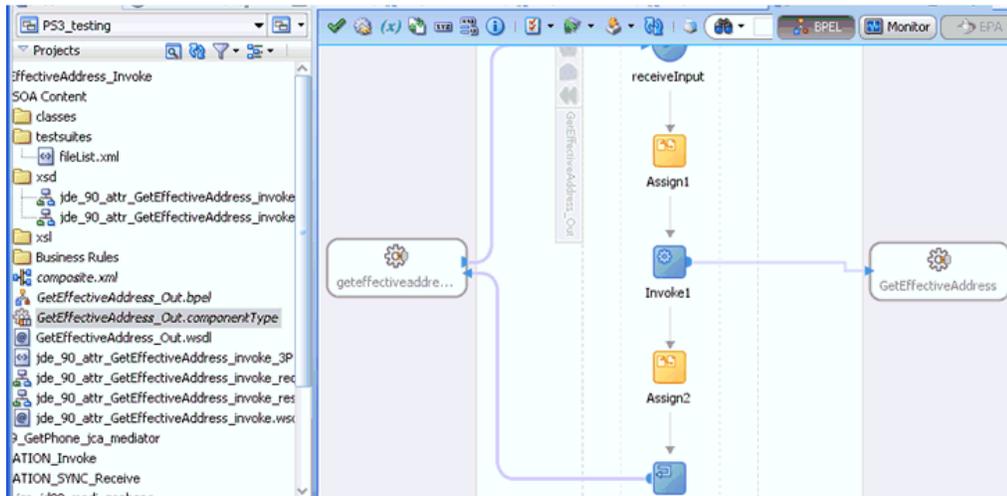
Figure 4–48 Edit Assign Dialog



29. Click **Apply** and then **OK**.

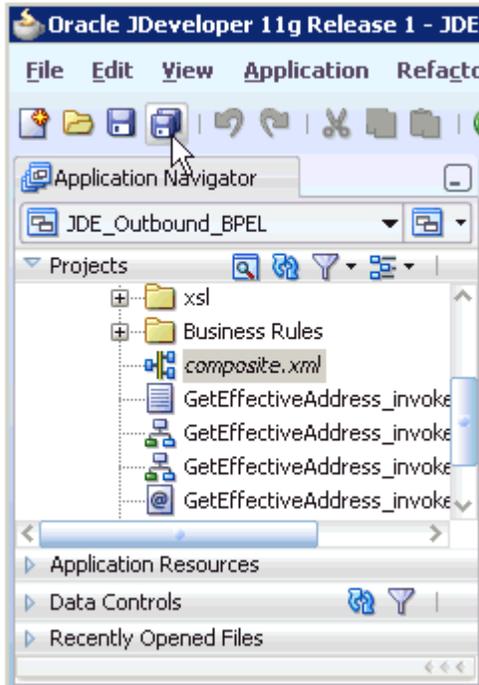
The completed activity flow is now displayed, as shown in Figure 4–49.

**Figure 4–49 Completed Activity Flow**



30. Double-click **composite.xml** in the left pane.
31. Click the **Save All** icon in the menu bar to save the new outbound BPEL process component that was configured, as shown in [Figure 4–50](#).

**Figure 4–50 Save All Icon**



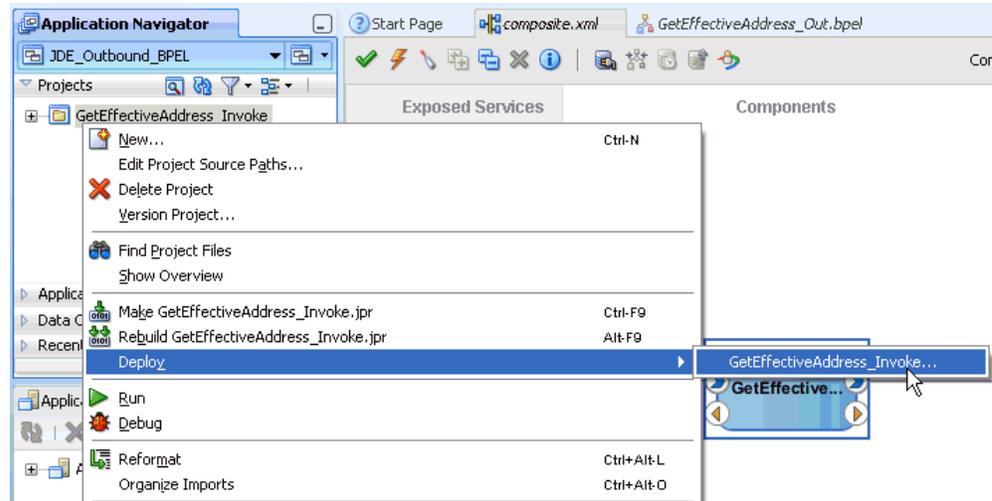
You are now ready to deploy the BPEL outbound process.

#### 4.4.4 Deploying the BPEL Outbound Process

Perform the following steps to deploy the BPEL outbound process.

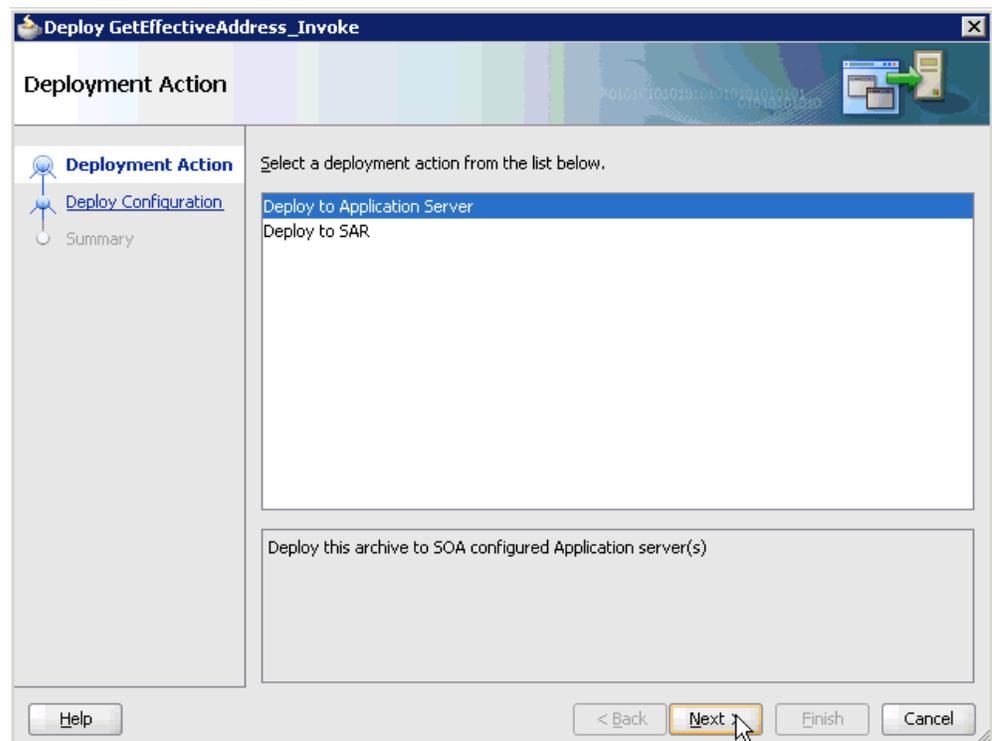
1. Right-click the project name in the left pane (for example, **GetEffectiveAddress\_Invoke**), select **Deploy**, and then click **GetEffectiveAddress\_Invoke**, as shown in [Figure 4-51](#).

**Figure 4-51** *Deploy Option*



The Deployment Action page is displayed, as shown in [Figure 4-52](#).

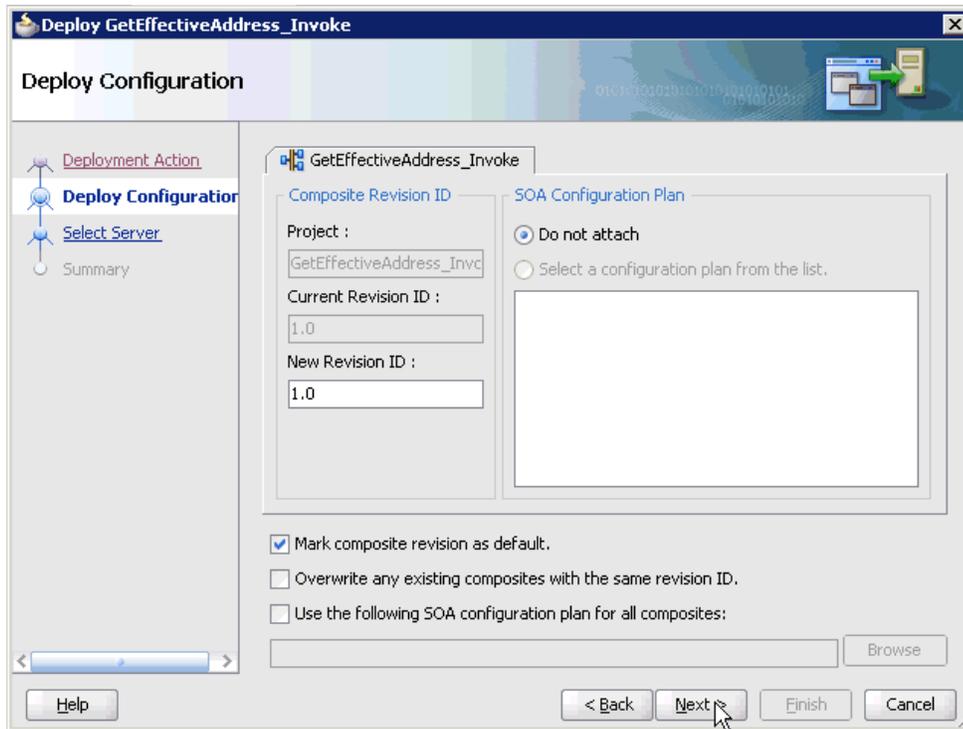
**Figure 4-52** *Deployment Action Page*



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

The Deploy Configuration page is displayed, as shown in [Figure 4-53](#).

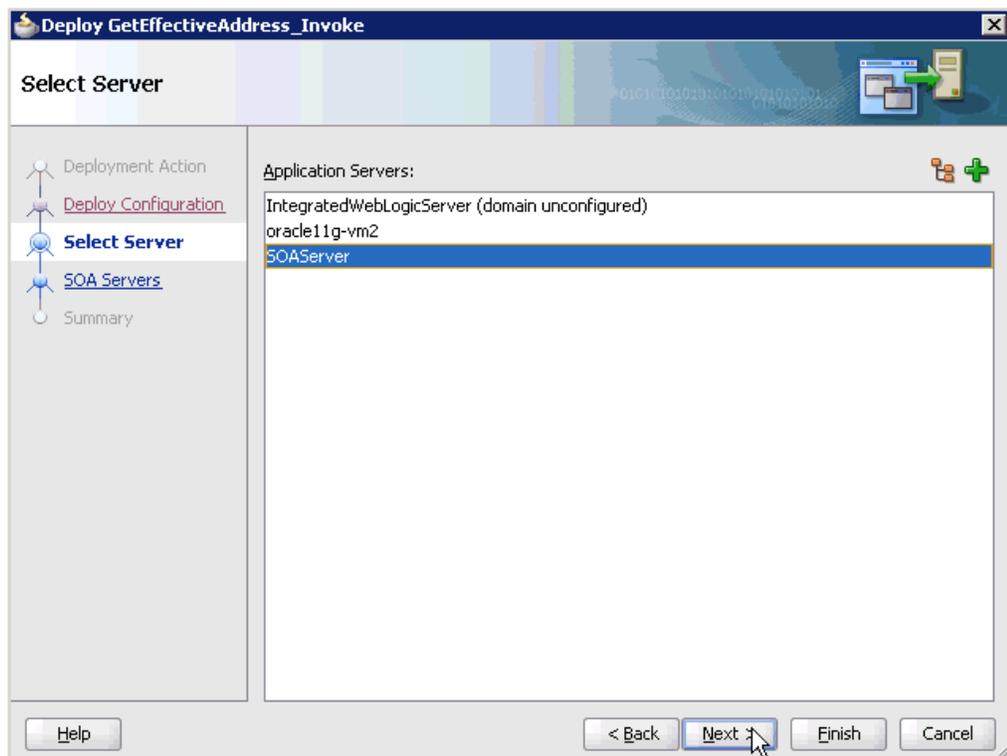
**Figure 4–53 Deploy Configuration Page**



4. Leave the default values selected and click **Next**.

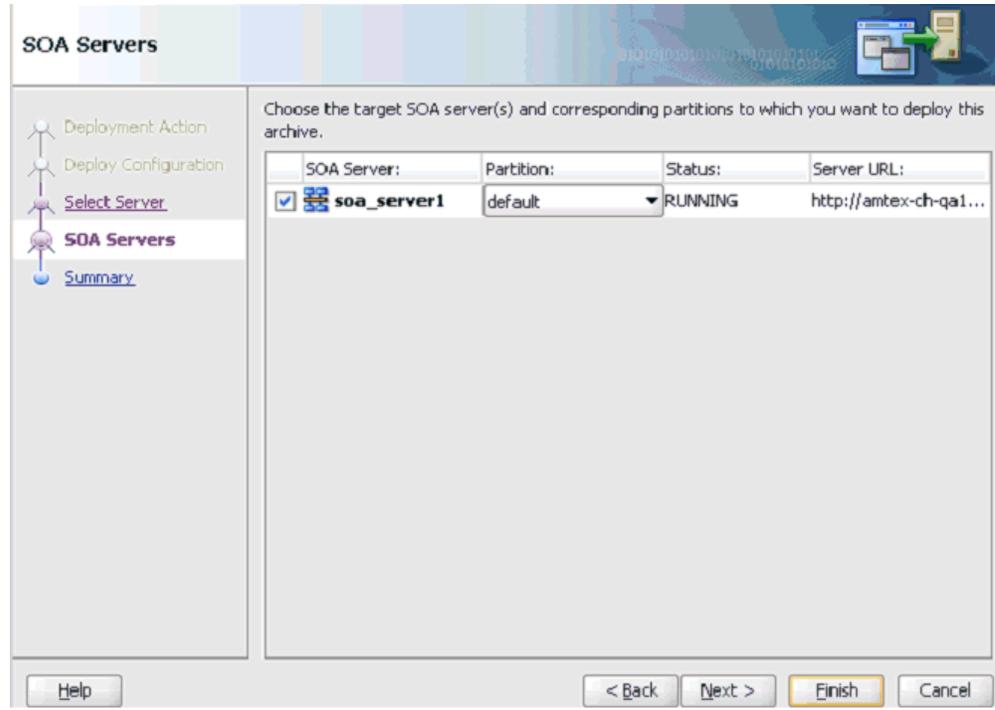
The Select Server page is displayed, as shown in [Figure 4–54](#).

**Figure 4–54 Select Server Page**

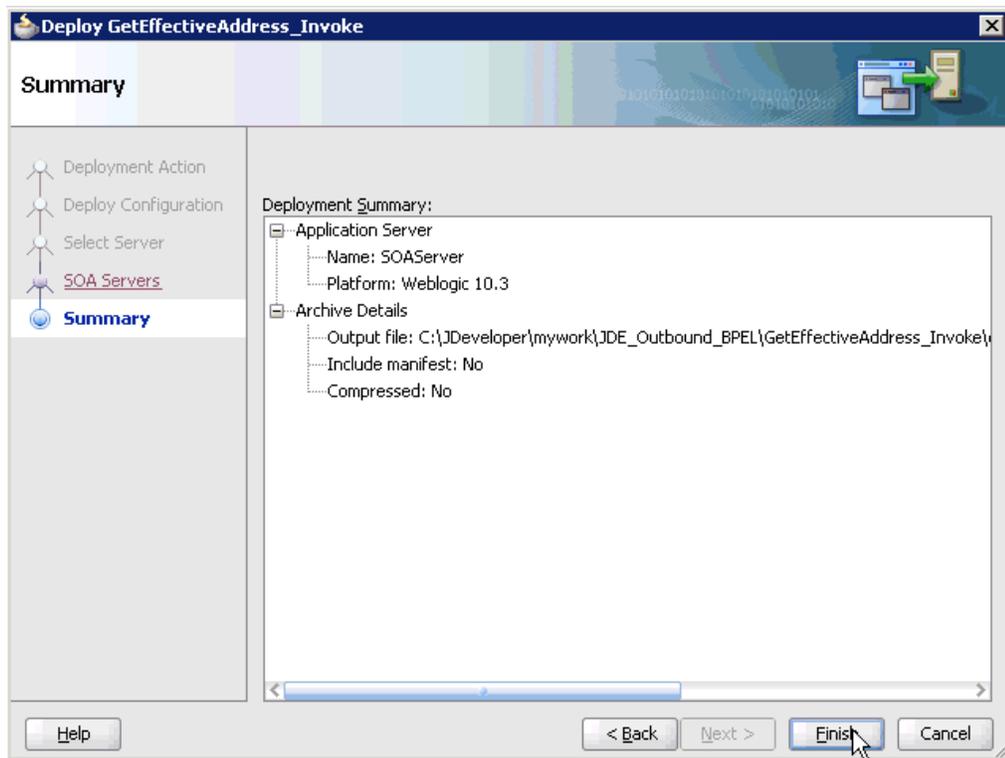


5. Select an available application server that was configured and click **Next**.  
The SOA Servers page is displayed, as shown in [Figure 4-55](#).

**Figure 4-55 SOA Servers Page**



6. Select a target SOA server and click **Next**.  
The Summary page is displayed, as shown in [Figure 4-56](#).

**Figure 4–56 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 4–57](#).

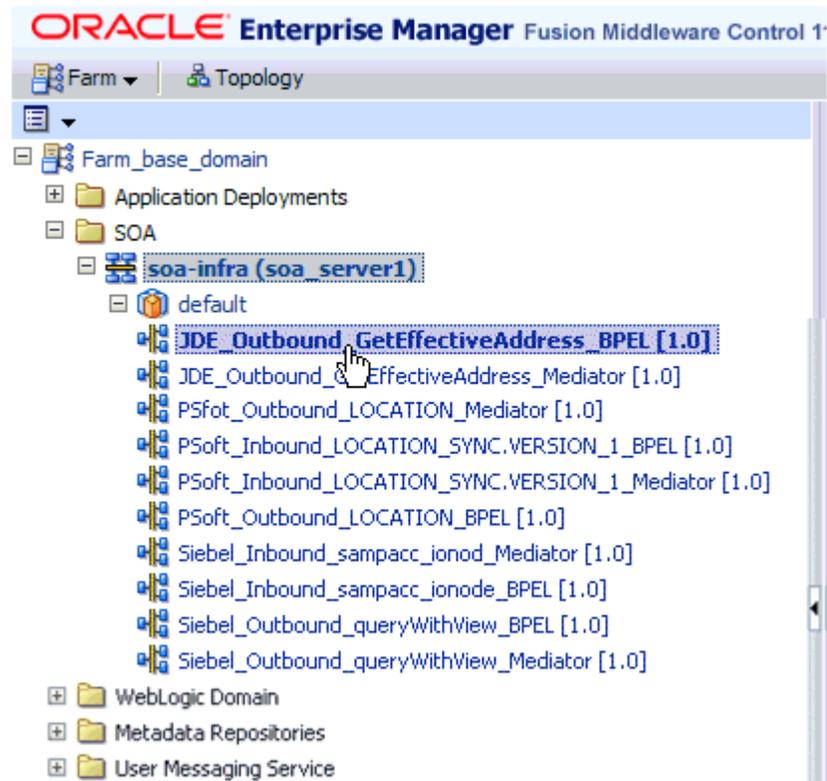
**Figure 4–57 Successful Deployment Message**

#### 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.

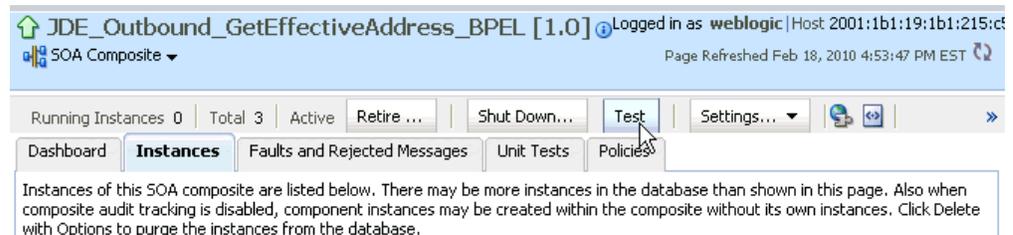
1. Log in to the Oracle Enterprise Manager console by using the following URL:  
`http://localhost:7001/em`
2. Expand your domain in the left pane followed by the **SOA** folder.

Figure 4–58 Oracle Enterprise Manager Console



3. Select an available project (for example, `JDE_Outbound_GetEffectiveAddress_BPEL`), as shown in Figure 4–58.

Figure 4–59 Test Button



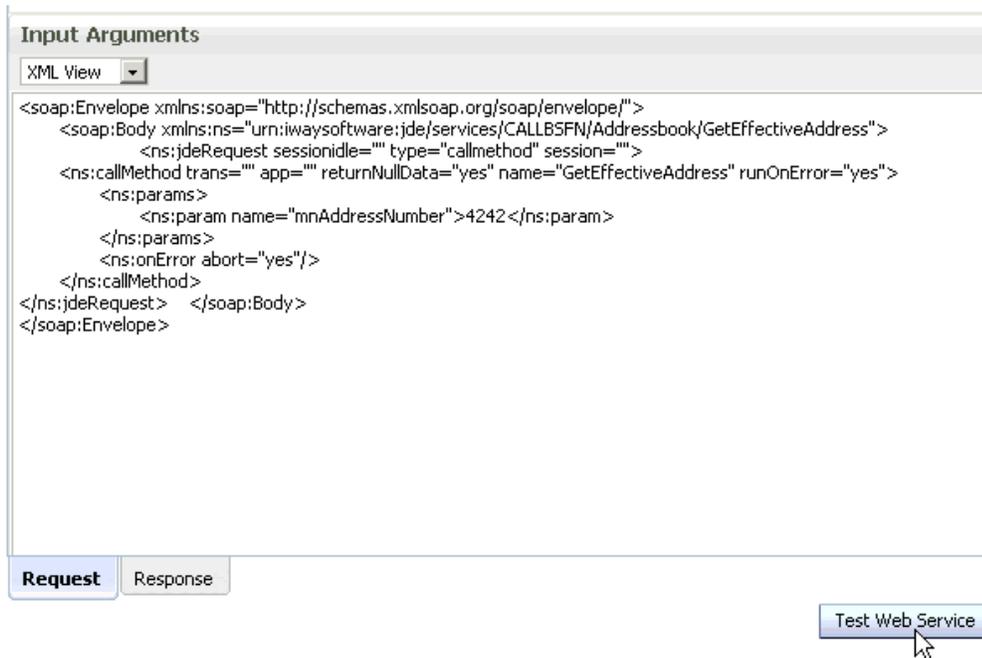
4. Click **Test** in the right pane, as shown in Figure 4–59.  
The Test Web Service page is displayed, as shown in Figure 4–60.

**Figure 4–60 Test Web Service Page**



5. Click the **Request** tab.
6. Scroll down to the Input Arguments section, as shown in [Figure 4–61](#).

**Figure 4–61 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:ns="urn:iwaysoftware:jde/services/CALLBSFN/Addressbook/GetEffectiveAddress">
    <ns:jdeRequest sessionid="" type="callmethod" session="">
      <ns:callMethod trans="" app="" returnNullData="yes" name="GetEffectiveAddress" runOnError="yes">
        <ns:params>
          <ns:param name="mnAddressNumber">4242</ns:param>
        </ns:params>
        <ns:onError abort="yes"/>
      </ns:callMethod>
    </ns:jdeRequest> </soap:Body>
  </soap:Envelope>
```

```

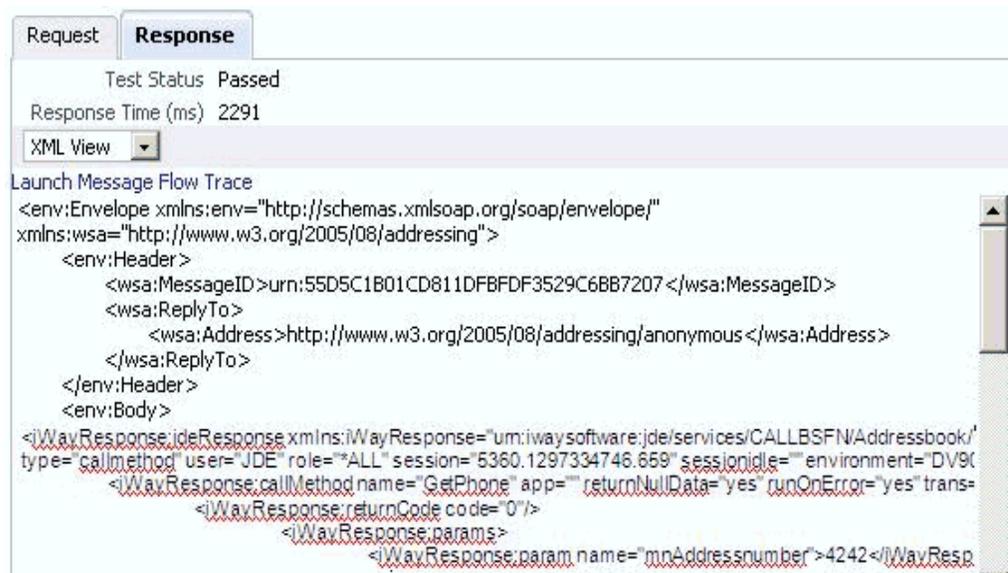
s">
    <ns:jdeRequest sessionidle="" type="callmethod" session="">
    <ns:callMethod trans="" app="" returnNullData="yes" name="GetEffectiveAddress"
runOnError="yes">
    <ns:params>
    <ns:param name="mnAddressNumber">4242</ns:param>
    </ns:params>
    <ns:onError abort="yes"/>
    </ns:callMethod>
    </ns:jdeRequest>    </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 4-62](#).

**Figure 4-62 Output Response**



## 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 Enterprise Manager console. When creating a Mediator data flow and interactions, the Web services are created and registered with the Oracle Application Server. For more information on creating 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 illustrates how Oracle Application Adapter for J.D. Edwards OneWorld integrates with J.D. Edwards OneWorld to receive event data. The design-time and run-time configuration procedures are outlined in the following sections.

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 Oracle 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 4-38.

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

### 4.5.1 Generating WSDL for Event Integration

Before you design a BPEL process using Oracle JDeveloper, you must create a separate channel for every J2CA 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, then event messages may not be delivered to the right BPEL process.

---

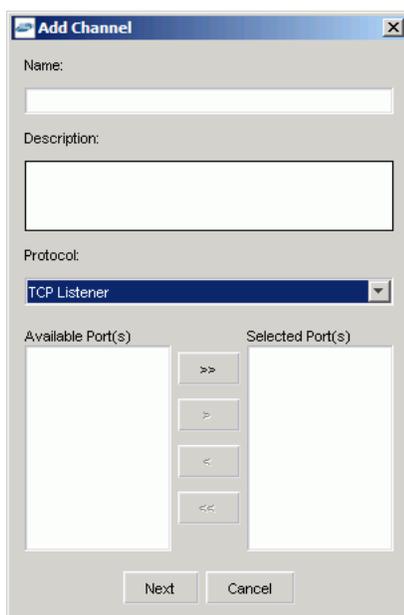
#### Creating a Channel in Application Explorer

To create a channel:

1. In Application Explorer, expand the **JDEdwards** node.
2. Right-click the **Channels** node, and select **Add Channels**.

The Add Channel dialog is displayed, as shown in [Figure 4-63](#).

**Figure 4-63 Add Channel Dialog**



3. In the **Name** field, enter a descriptive name for the channel.
4. In the **Description** field, enter a description (optional).
5. From the **Protocol** list, choose a protocol for your channel.
6. Click **Next**.

The dialog is displayed for the selected listener, as shown in [Figure 4–64](#).

**Figure 4–64 TCP Listener Dialog**

7. Enter the port number of the channel in the **Port Number** field.
8. Enter the location of the server in the **Host/IP Binding** field.
9. Select the Synchronization type from the **Synchronization Type** list.
10. Select **Is Length Prefix** for events that send data which is not in XML format. The TCP/IP event application must prefix the data with a 4-byte binary length field when writing the data to the TCP/IP port.
11. Select **Is XML** for events that send data back in XML format. No preparser is required.
12. Select **Is Keep Alive** to maintain a continuous communication between the event transaction and the channel.
13. Click the **PreParser** tab, as shown in [Figure 4–65](#).

**Figure 4–65 PreParser Tab**

Enter values based on the table.

Parameter	Description
User id*	A valid user ID for J.D. Edwards OneWorld.
User password*	The password associated with the user ID.
JDE environment*	Your J.D. Edwards OneWorld environment. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your OneWorld system administrator.
Application	XMLInterop or the application name in J.D. Edwards OneWorld. Optional.
Server IP address*	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address, for example, 123.45.67.89.
Server Port*	The port number on which the server is listening, for example, 6009.
User Role	Define a user role according to your requirements.

Parameter	Description
Schema Location	<p>The location of the XML schema (.xsd file) that was generated from the event output. For example:</p> <p><b>For Oracle SOA Suite:</b></p> <pre>&lt;ORACLE_ HOME&gt;\soa\thirdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p><b>For OSB:</b></p> <pre>&lt;OSB_HOME&gt;\Oracle_ OSB1\3rdparty\ApplicationAdapters\config\configuration_ name\schemas\JDEdwards\target_name\jde-schema.xsd</pre> <p>For more information, see "<a href="#">Generating WSDL for Inbound Interaction</a>" on page 2-13.</p>
Schema style	<p>Choose from one of the following options:</p> <ul style="list-style-type: none"> <li>▪ ELEMENT_STYLE (default)</li> <li>▪ ATTRIBUTE_STYLE</li> </ul>

Click **OK**.

The channel is created and displayed under the Channels node. An X over the icon indicates that the channel is currently disconnected.

---

**Note:** The channel you created in Application Explorer is managed by BPEL PM Server. If you start the channel for testing and debugging purposes, then stop it before run-time.

---

### Generating WSDL for Event Notification (Command Prompt Only)

You cannot generate WSDL for J.D. Edwards OneWorld event notification using Application Explorer. To generate WSDL from the command prompt, you must perform the following steps.

You can create inbound J2CA service only if the node you have selected supports events.

---

**Note:** The schema validation options (Root, Namespace, Schema) are not applicable for the Oracle Application Adapter for J.D. Edwards OneWorld.

---

To generate a WSDL file for J.D. Edwards OneWorld event notification:

1. Create a channel using Application Explorer under the J.D. Edwards Events node.
2. Start the channel.

Do not restart the BPEL PM Server or Oracle Application Server after the channel is started.

3. Send an inbound message from J.D. Edwards OneWorld.
4. Capture the inbound message payload in the log file, which is located in the following directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\log\iwaf_jca1500.log
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\log\iwaf_jca1500.log
```

Alternatively, you can create a port using the File protocol under the Events node in Application Explorer, which disposes the event message to the file system.

5. Use a third party tool (for example, XMLSpy) to create the XML schema (.xsd file) using the XML payload that was captured in the previous step.
6. In the generated XML schema (.xsd file) perform the following modifications:
  - a. Search for Schemas-jdedwards-com and replace it with iwaysoftware.

```
<xs:schema
targetNamespace="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
  xmlns="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
  xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

to:

```
<xs:schema
  targetNamespace="urn:iwaysoftware:trans.response.JDES00UT"
  xmlns="urn:iwaysoftware:trans.response.JDES00UT"
  xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

- b. Cut the following syntax:

```
<xs:element name="jdeResponse">
  <xs:complexType>
</xs:complexType>
</xs:element>
```

- c. Paste it before the following line:

```
<xs:element name="transaction">
```

7. Copy the XML schema (.xsd file) to the following directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

---



---

**Note:** Edit the created channel by providing the location of the schema (.xsd) file (as mentioned in step 7) in the PreParser tab of Application Explorer. For example:

**For Oracle SOA Suite:**

```
<ORACLE_
HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

**For OSB:**

```
<OSB_HOME>\Oracle_
OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

---



---

8. Open a command prompt and navigate to the base domain directory and execute the *setDomainEnv.sh* file:

```
<ORACLE_HOME>\user_projects\domains\base_domain\bin
```

Navigate to the following Application Explorer directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\tools\iwaeb\bin
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\tools\iwaeb\bin
```

9. Execute the *obadapter.bat* file to set the environment.
10. Based on your adapter installation, navigate to the following directory where the XML schema (.xsd file) is copied:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

11. Enter the following command to generate a WSDL:

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser adapterhome adapter
target channel schemaPrefix wsdlFileName
```

where:

*adapterhome* is the path to your ApplicationAdapters home. For example:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\
```

*adapter* is the name of the adapter. For example, JDEdwards.

*target* is the name of the adapter target you created in Application Explorer.

*channel* is the name of the channel you created in Application Explorer.

*schemaPrefix* is the prefix for the XSD schema. The schema file must be in the same directory where the Java command is executed, for example:

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl
```

Once the command is executed, the following is displayed in the command window:

```
Running Inbound WSDL generation tool...
-> user.dir = java com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl

-> Generating WSDL...
-> Done.
-> Writing WSDL 'C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\Jde812_salesorder_receive.wsdl '
to disk...
-> Done.
```

---

**Note:** It is good practice to append **\_receive** to the names of WSDL files that are generated for event notification services. This allows you to easily distinguish between them and those generated for request-response services.

---

## 12. Stop the channel in Application Explorer.

---

**Note:** You can organize your WSDL files in subfolders, creating your own WSDL hierarchy structure. Create the folders under `<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls`. The WSIL browser in Oracle JDeveloper displays the full tree structure of your WSDL hierarchy.

---

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

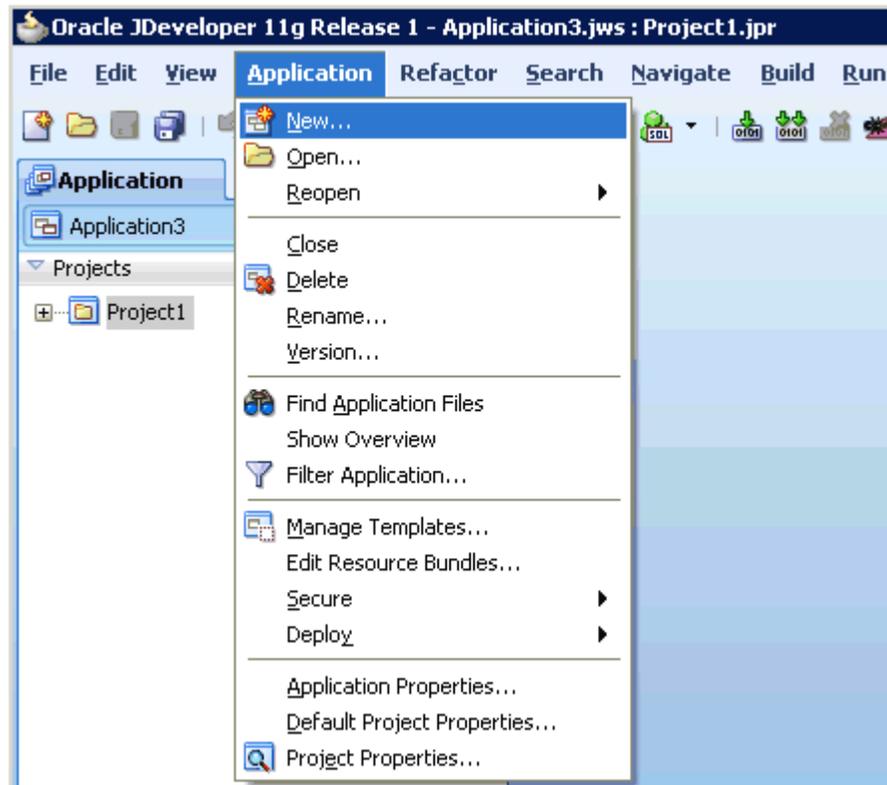
## 4.5.2 Creating a New SOA Application for the Inbound BPEL Process

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

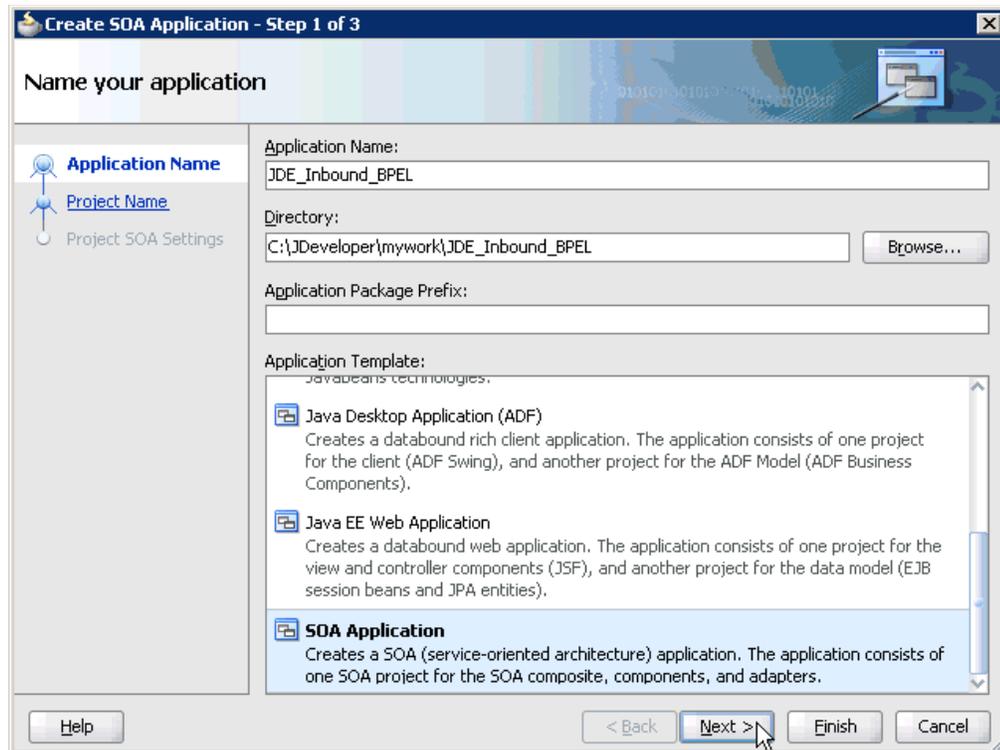
1. Open Oracle JDeveloper on your system.

2. Click **Application** in the menu bar and select **New** from the menu, as shown in [Figure 4–66](#).

**Figure 4–66** Application Menu

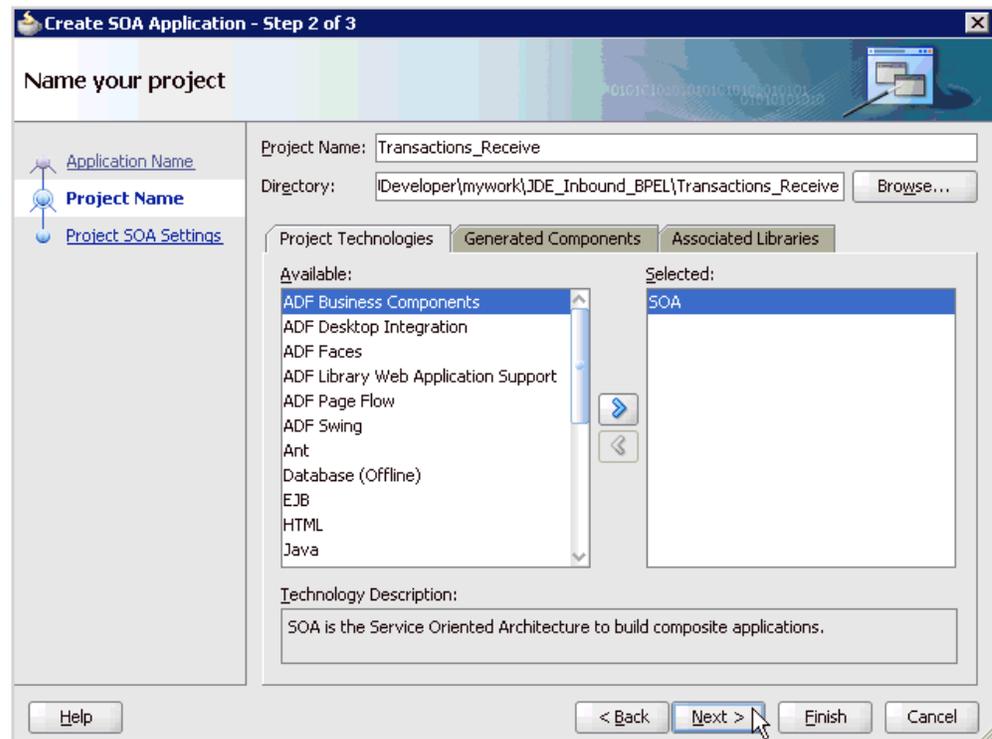


The Create SOA Application wizard is displayed, as shown in [Figure 4–67](#).

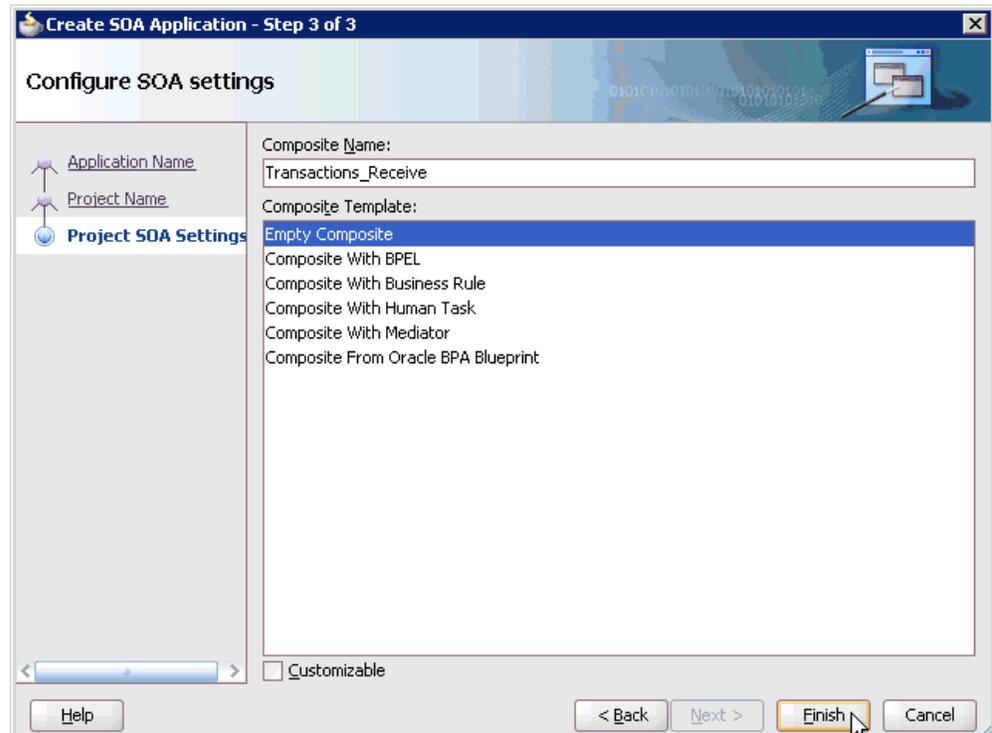
**Figure 4–67 Create SOA Application Wizard**

3. From the Application Template list, click **SOA Application**.
4. Enter a name for the new SOA application (for example, JDE\_Inbound\_BPEL) and click **Next**.

The Name your project page is displayed, as shown in [Figure 4–68](#).

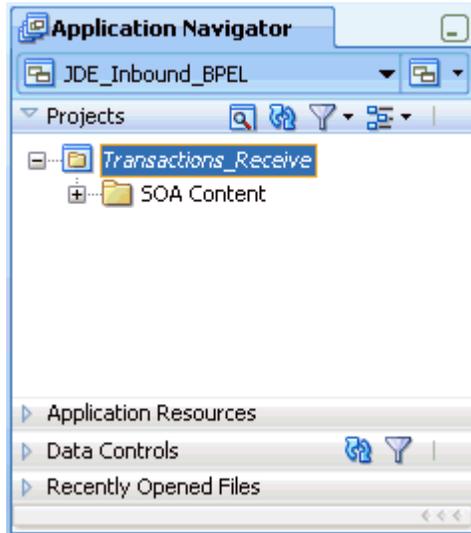
**Figure 4–68 Name Your Project Page**

5. Enter a project name (for example, Transactions\_Receive) and click **Next**.  
The Configure SOA settings page is displayed, as shown in Figure 4–69.

**Figure 4–69 Configure SOA Settings Page**

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

**Figure 4–70 Application Navigator Tab**



The new SOA application (JDE\_Inbound\_BPEL) and associated project (Transactions\_Receive) are added to the Application Navigator tab in the left pane, as shown in [Figure 4–70](#).

### 4.5.3 Defining a BPEL Inbound Process

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

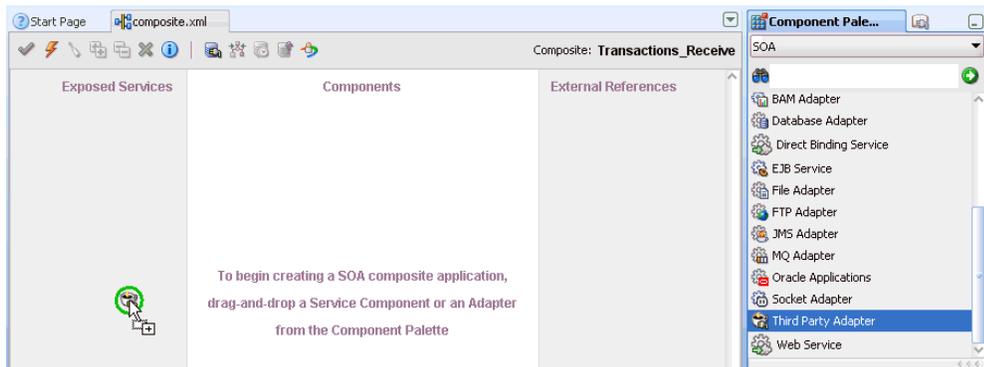
- Configuring a Third Party Adapter Service Component
- Configuring an Inbound BPEL Process Component

#### 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 4–71](#).

**Figure 4–71 Third Party Adapter Component**



The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 4-72](#).

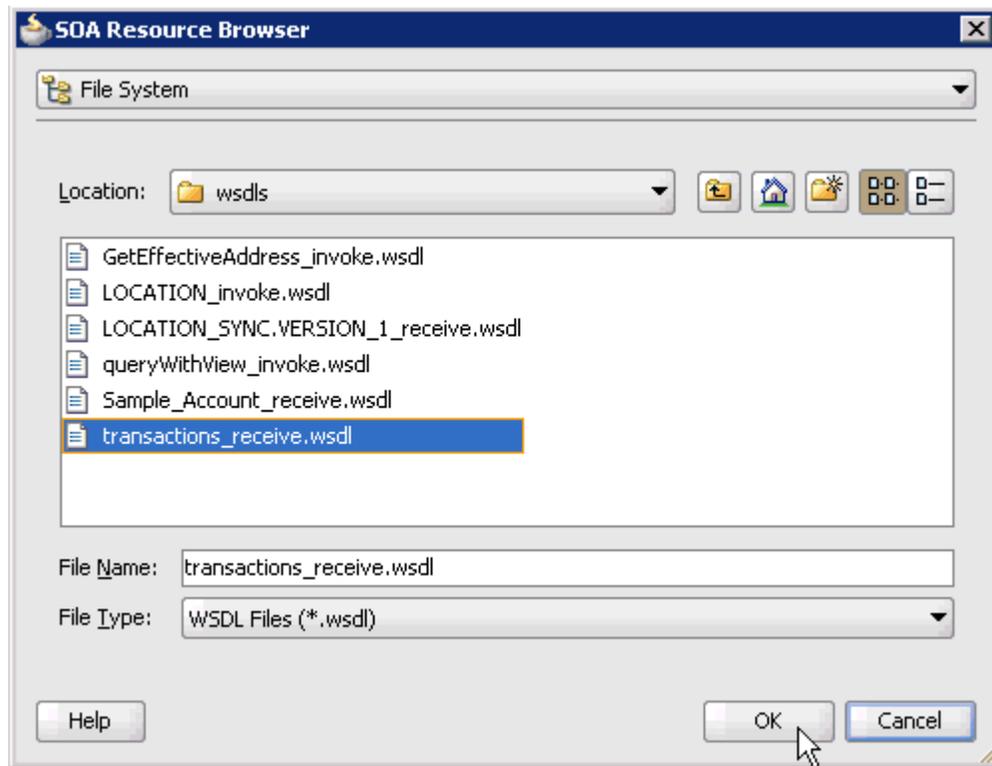
**Figure 4-72 Create Third Party Adapter Service Dialog**



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 4-73](#).

**Figure 4–73 SOA Resource Browser Dialog**

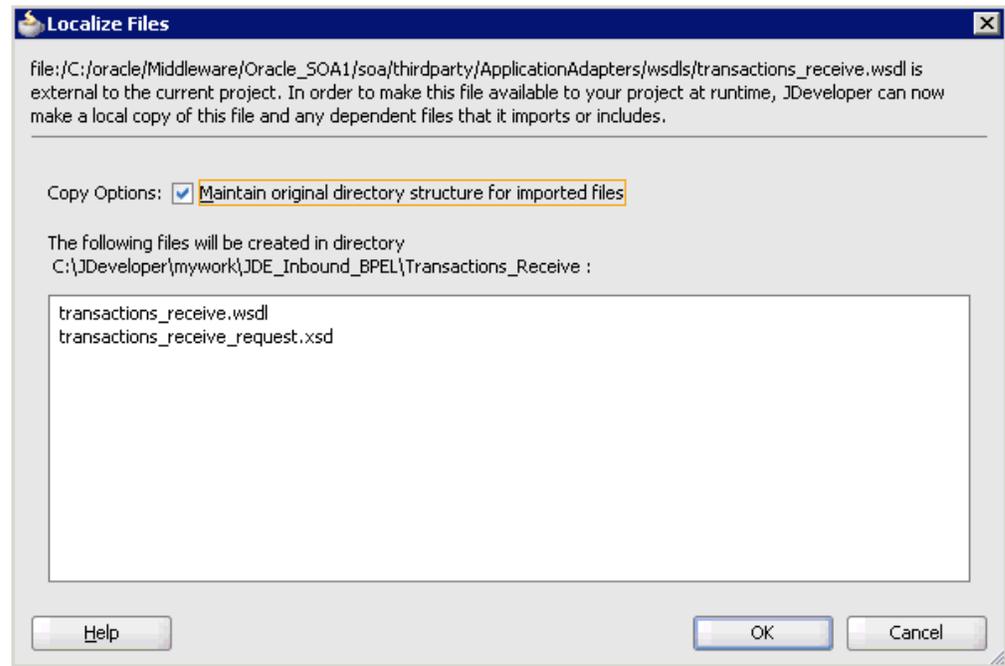


5. Browse and select an inbound WSDL file from the following directory:

<ADAPTER\_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click **OK**.

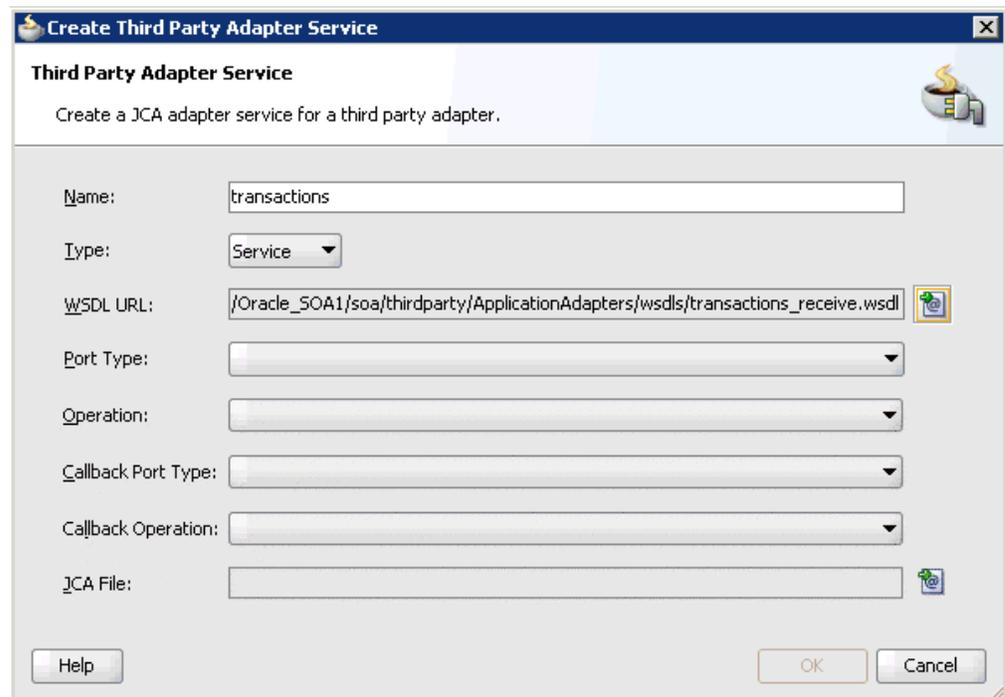
The Localize Files dialog is displayed, as shown in [Figure 4–74](#).

**Figure 4–74 Localize Files Dialog**

7. Click **OK**.

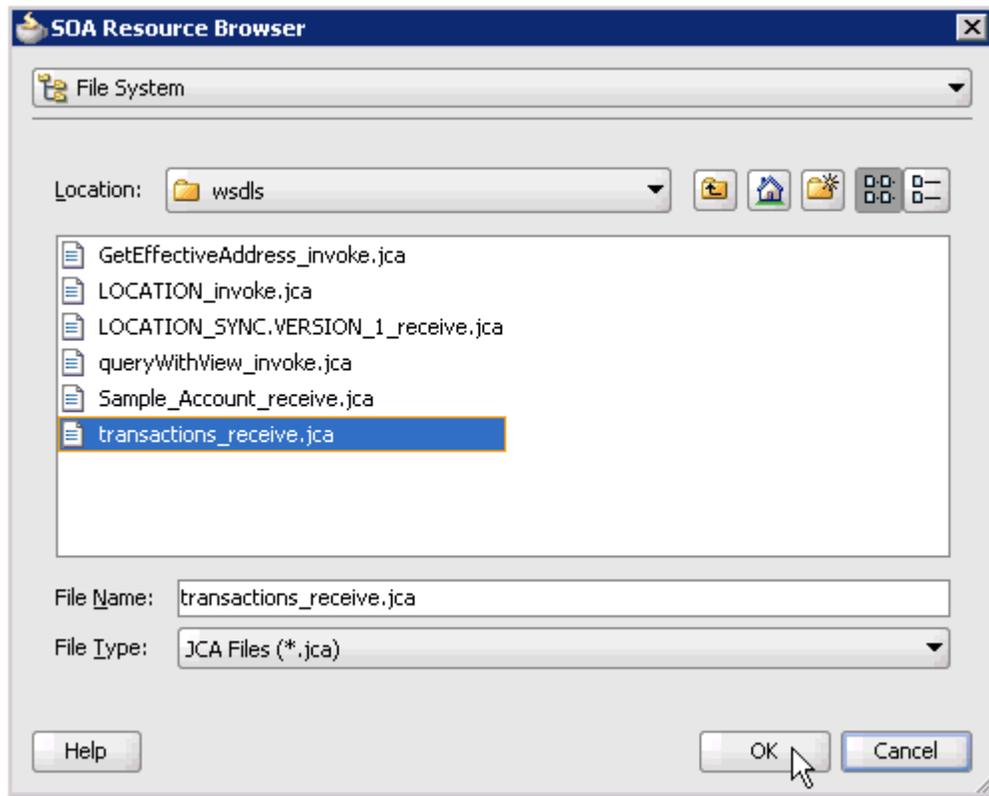
The inbound WSDL file and associated receive/request XML schema file (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 4–75](#).

**Figure 4–75 Create Third Party Adapter Service Dialog**

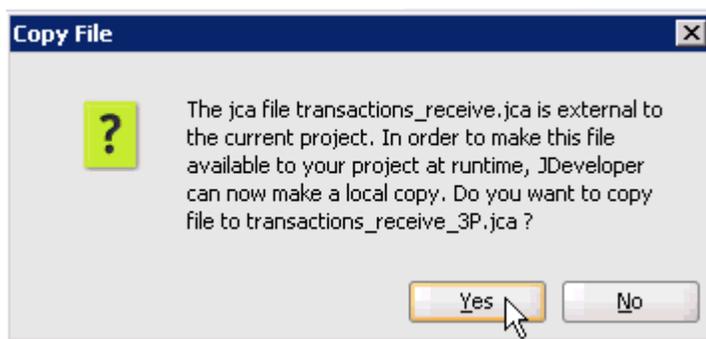
8. Click the **Find JCA Files** icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in [Figure 4-76](#).

**Figure 4-76 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 Copy File message is displayed, as shown in [Figure 4-77](#).

**Figure 4-77 Copy File Confirmation Message**



11. Click **Yes**.  
 A copy of the JCA properties file is made in the project folder.

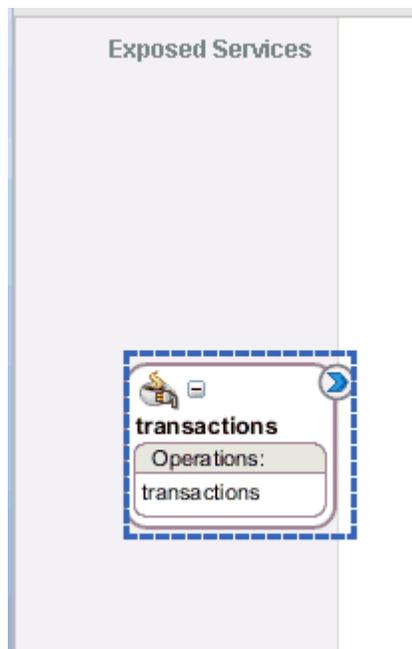
You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 4-78](#).

**Figure 4-78 Create Third Party Adapter Service Dialog**

**12. Click OK.**

The third party adapter service component (transactions) is created and displayed in the Exposed Services pane, as shown in [Figure 4-79](#).

**Figure 4-79 Third Party Adapter Service Component**



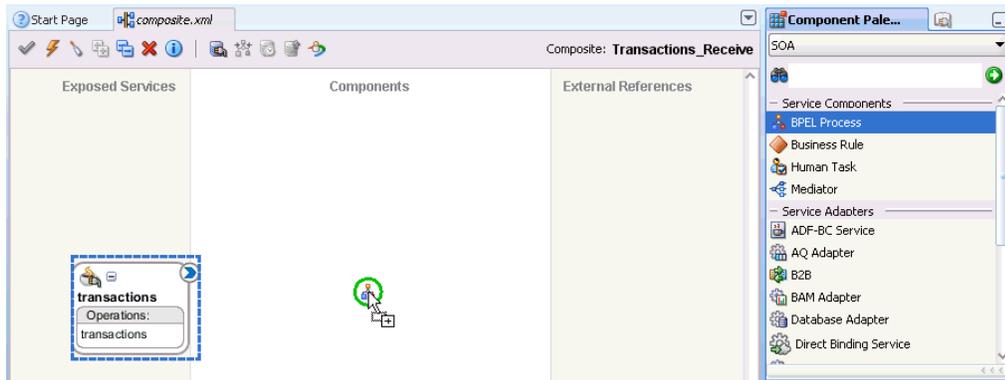
You are now ready to configure an inbound BPEL process component.

### Creating an Inbound BPEL Process Component

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

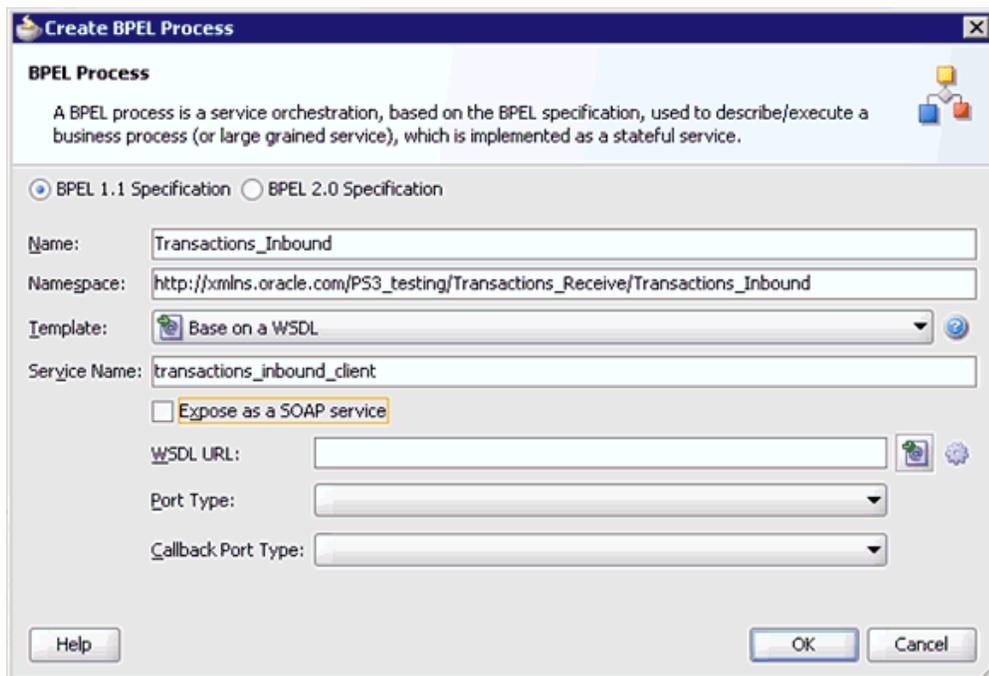
1. Drag and drop the **BPEL Process** component from the Component Palette tab (Service Components section) to the Components pane, as shown in [Figure 4–80](#).

**Figure 4–80 BPEL Process Component**



The Create BPEL Process dialog is displayed, as shown in [Figure 4–81](#).

**Figure 4–81 Create BPEL Process Dialog**



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

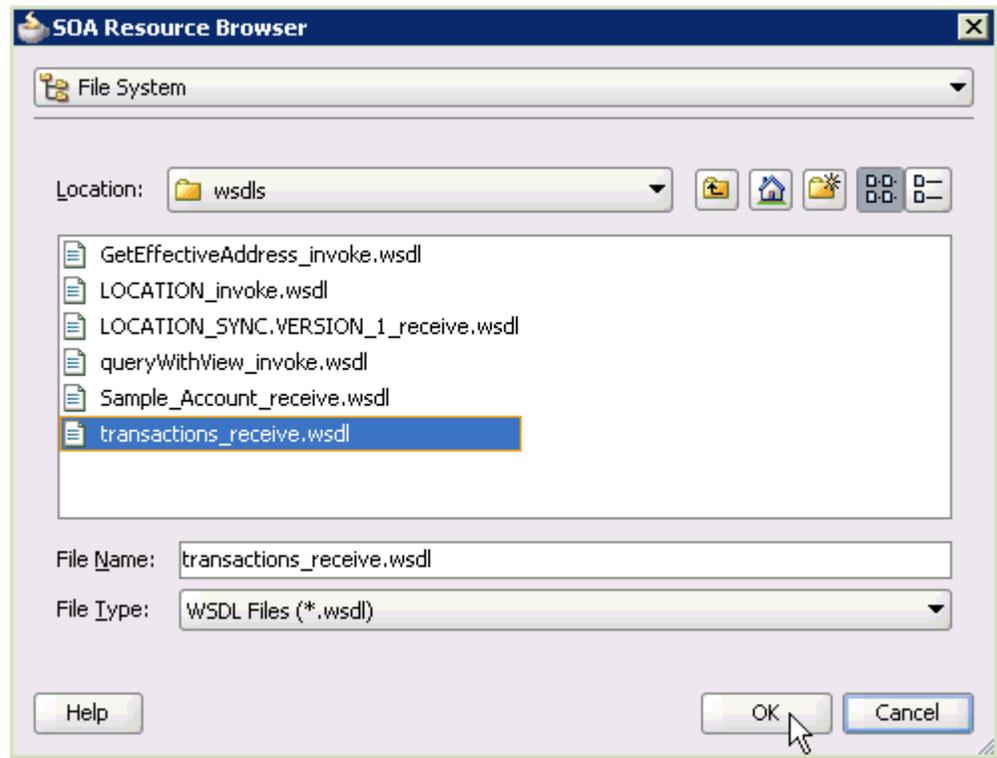
By default, the BPEL 1.1 Specification option is selected. The BPEL 2.0 Specification option is also available.

3. From the Template list, select **Base on a WSDL**.

4. Uncheck the **Expose as a 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 4-82](#).

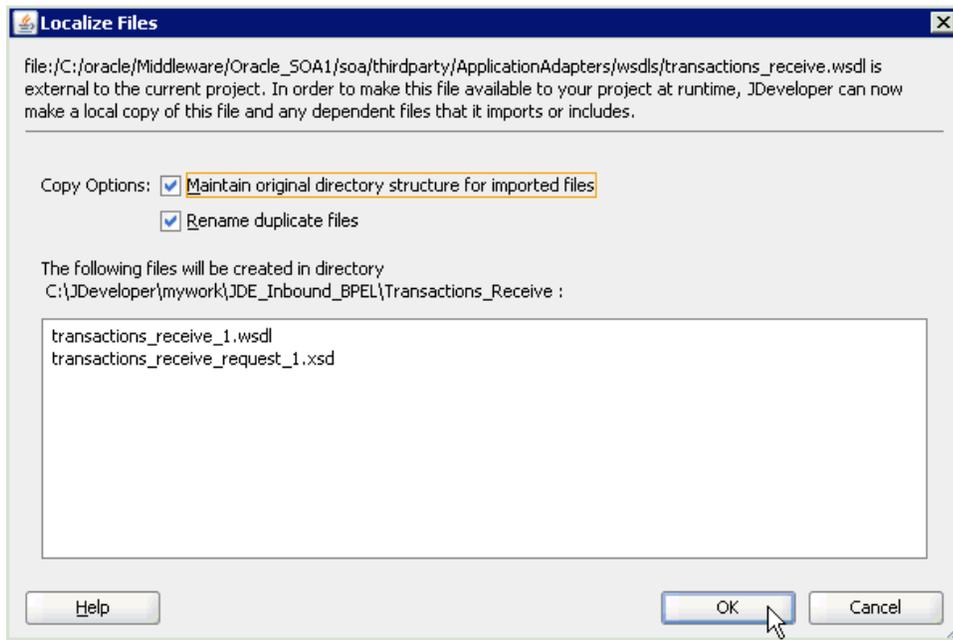
**Figure 4-82** SOA Resource Browser Dialog



6. Browse and select an inbound WSDL file from the wsdls folder (for example, transactions\_receive.wsd)
7. Click **OK**.

The Localize Files dialog is displayed, as shown in [Figure 4-83](#).

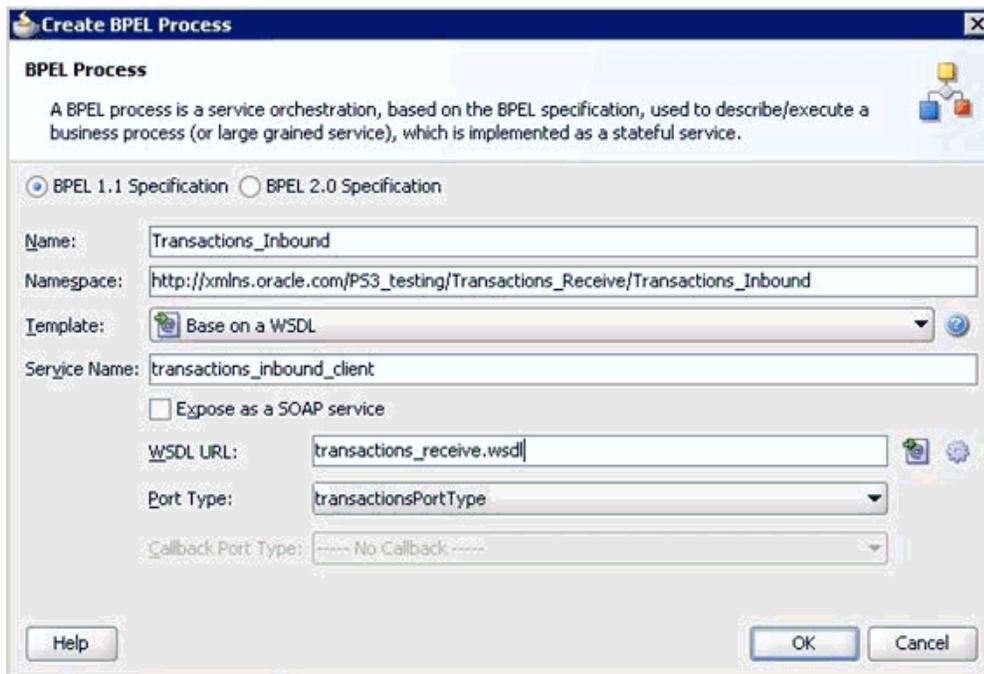
**Figure 4–83 Localize Files Dialog**



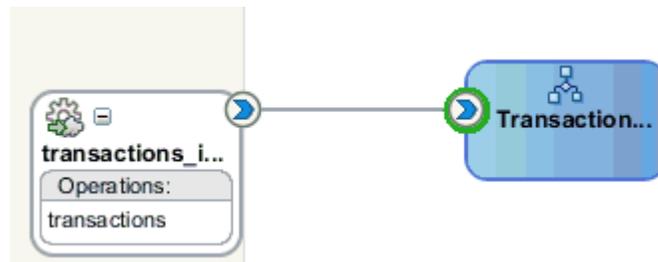
8. Uncheck the **Rename duplicate files** option in the Copy Options section and click **OK**.

You are returned to the Create BPEL Process dialog, as shown in [Figure 4–84](#).

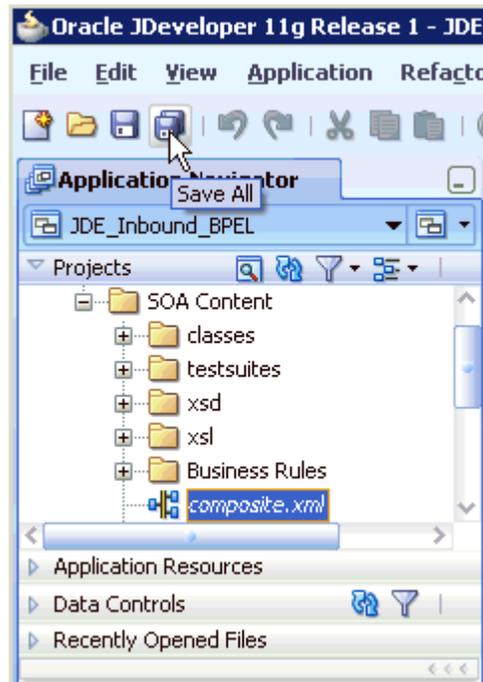
**Figure 4–84 Create BPEL Process Dialog**



9. Click **OK**.

**Figure 4–85 Created Connection**

10. Create a connection between the third party adapter service component (transactions) and the inbound BPEL process component (Transactions\_Inbound), as shown in [Figure 4–85](#).
11. Click the **Save All** icon in the menu bar to save the new inbound BPEL process component that was configured, as shown in [Figure 4–86](#).

**Figure 4–86 Save All Icon**

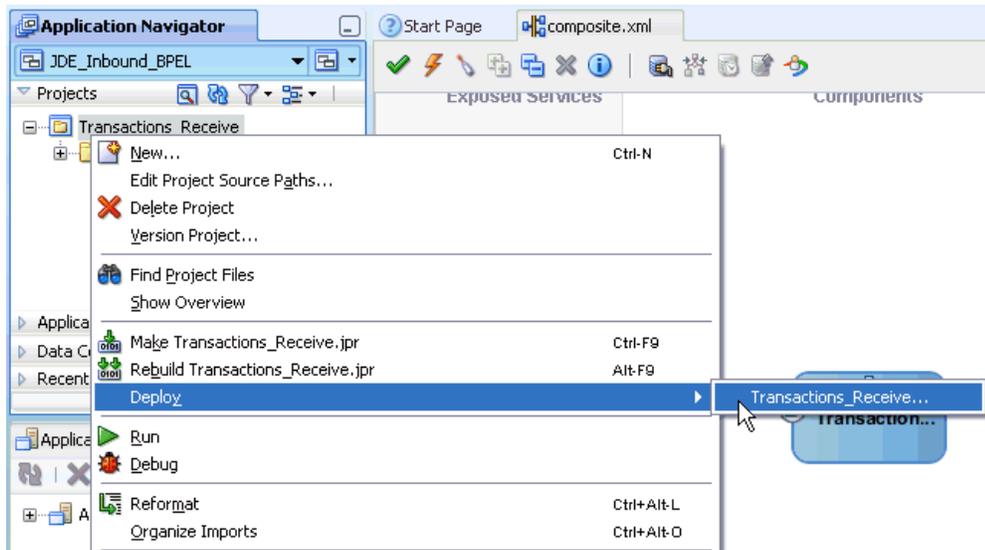
You are now ready to deploy the BPEL inbound process.

#### 4.5.4 Deploying the BPEL Inbound Process

Perform the following steps to deploy the BPEL inbound process.

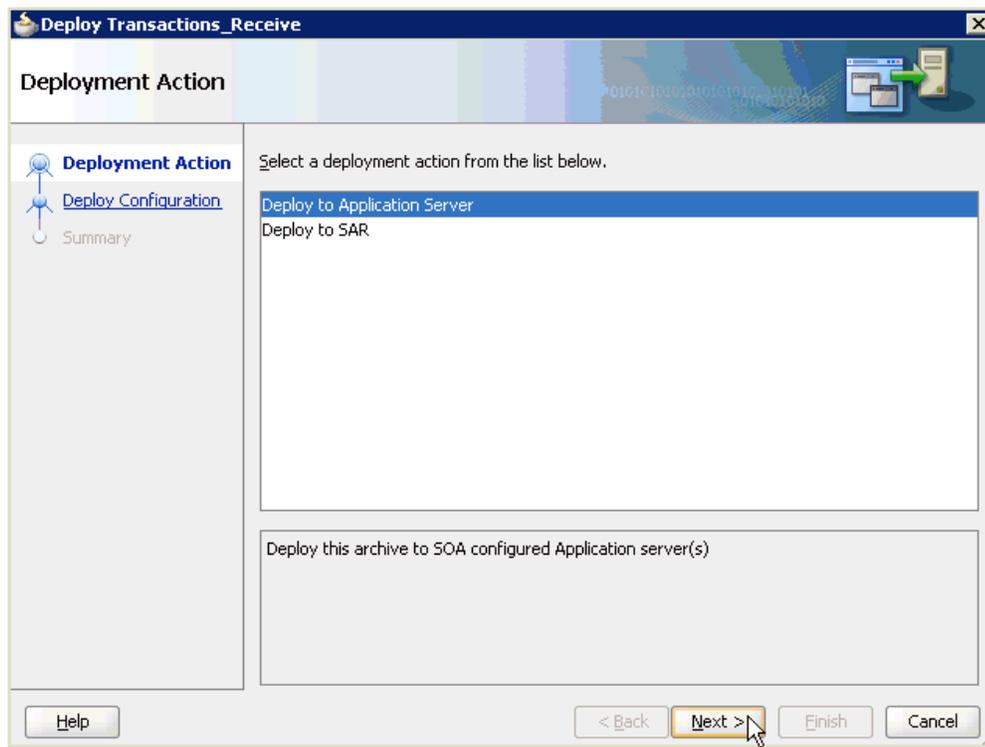
1. Right-click the project name in the left pane (for example, **Transactions\_Receive**), select **Deploy**, and then click **Transactions\_Receive**, as shown in [Figure 4–87](#).

**Figure 4–87 Deploy Option**



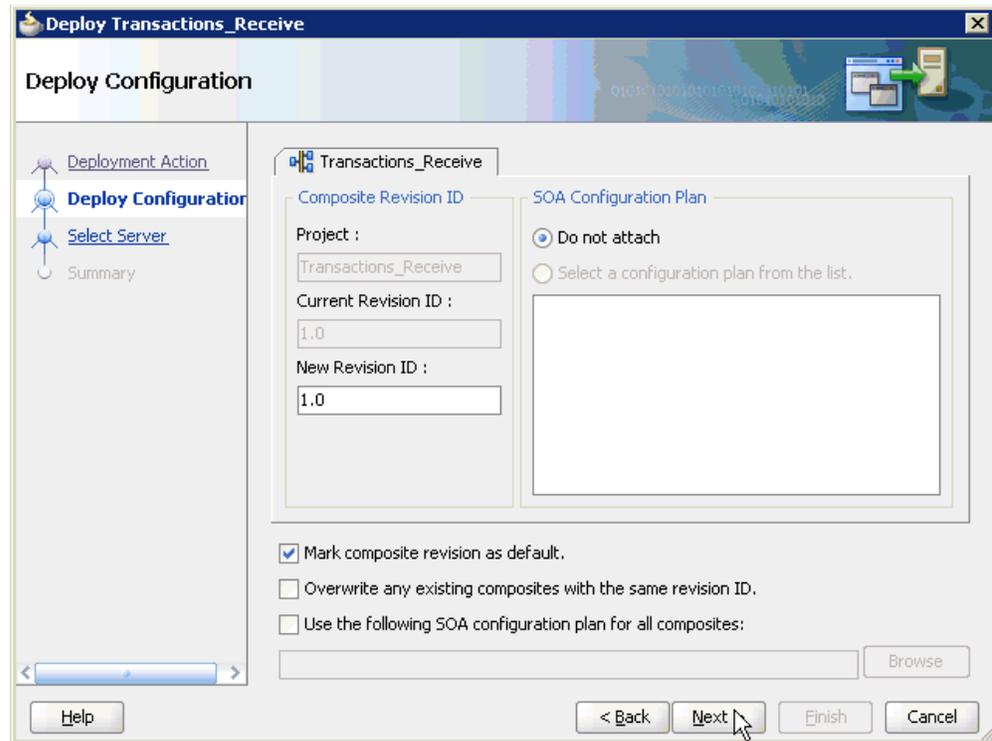
The Deployment Action page is displayed, as shown in [Figure 4–88](#).

**Figure 4–88 Deployment Action Page**



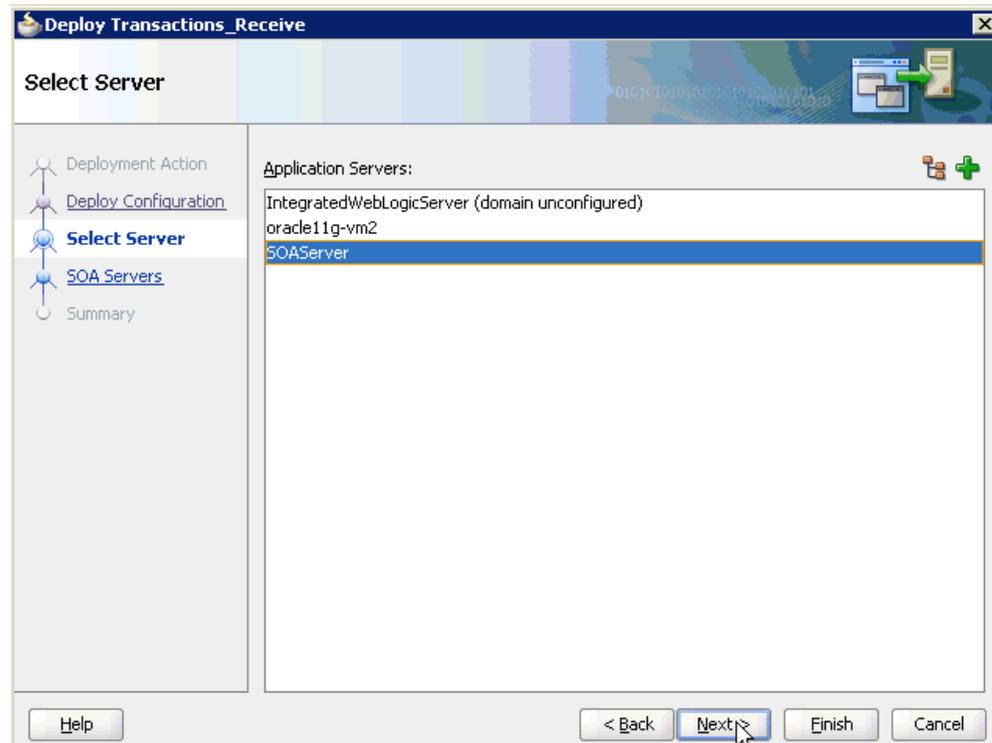
2. Ensure that **Deploy to Application Server** is selected.
3. Click **Next**.

The Deploy Configuration page is displayed, as shown in [Figure 4–89](#).

**Figure 4–89 Deploy Configuration Page**

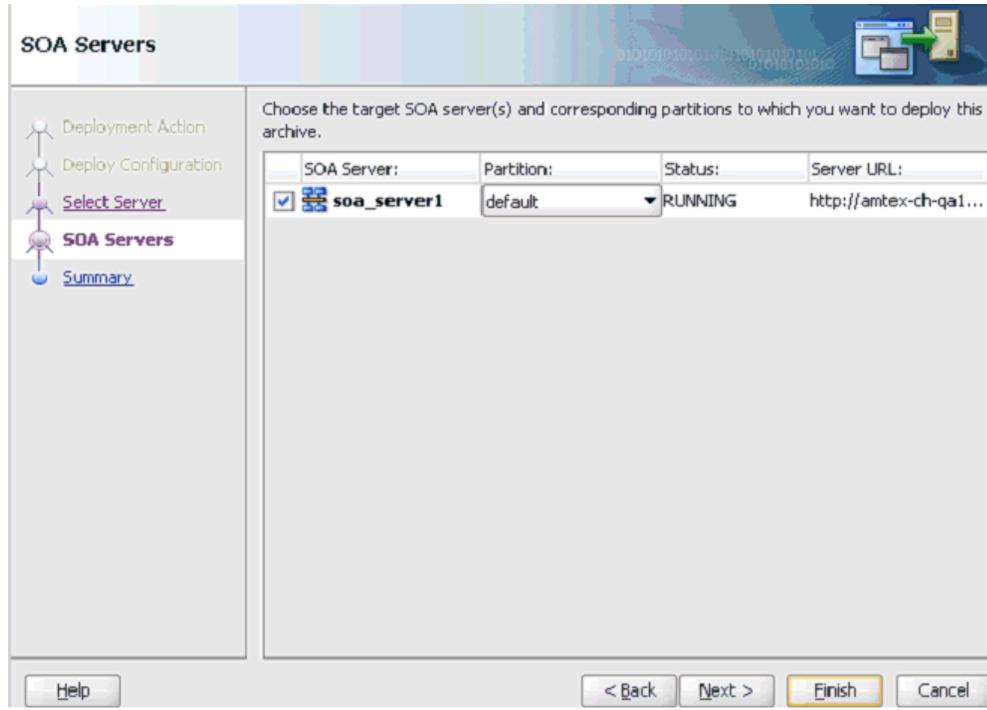
4. Leave the default values selected and click **Next**.

The Select Server page is displayed, as shown in [Figure 4–90](#).

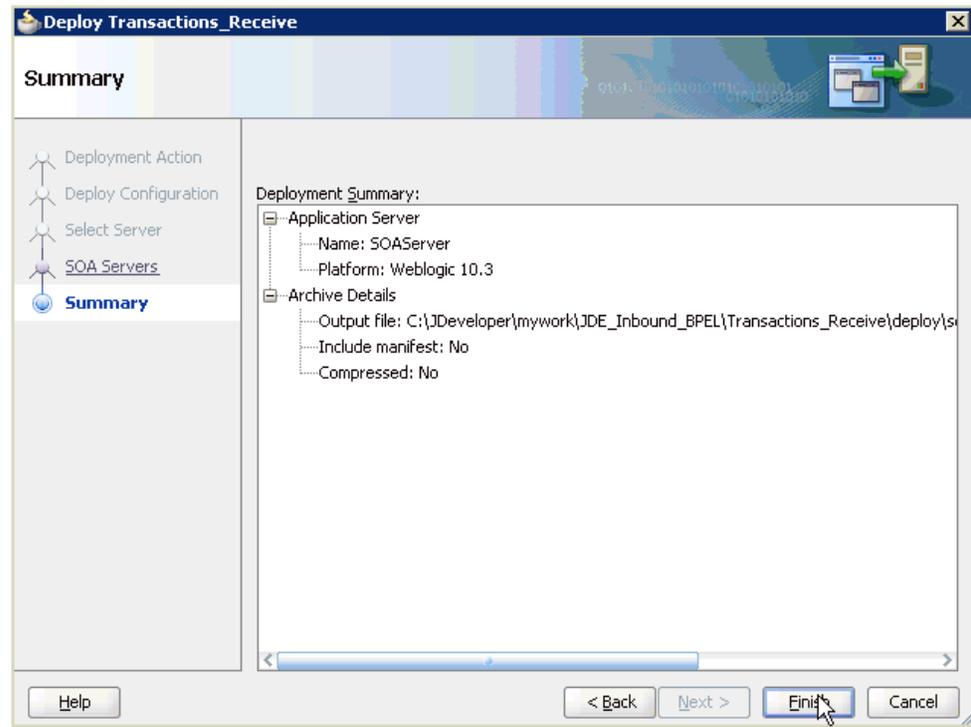
**Figure 4–90 Select Server Page**

5. Select an available application server that was configured and click **Next**.  
The SOA Servers page is displayed, as shown in [Figure 4–91](#).

**Figure 4–91 SOA Servers Page**



6. Select a target SOA server and click **Next**.  
The Summary page is displayed, as shown in [Figure 4–92](#).

**Figure 4–92 Summary Page**

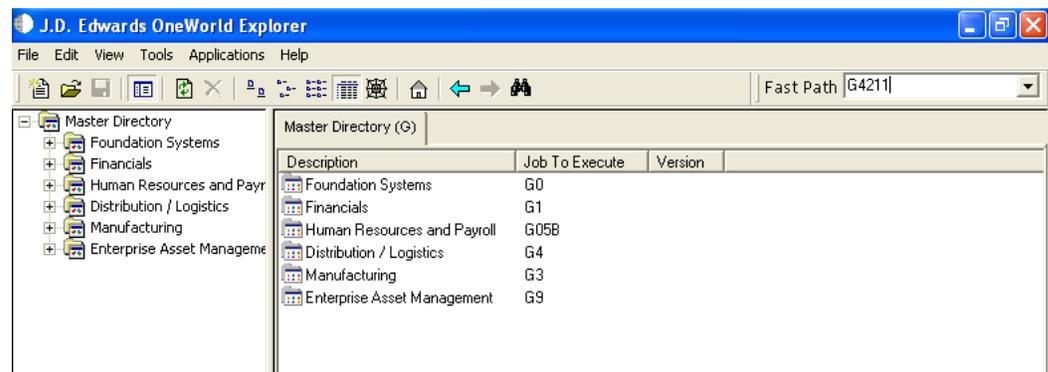
7. Review and verify all the available deployment information for your project and click **Finish**.

Once event messages are triggered through J.D. Edwards OneWorld, successful instances are received in the Oracle Enterprise Manager console.

#### 4.5.5 Triggering an Event in J.D. Edwards OneWorld

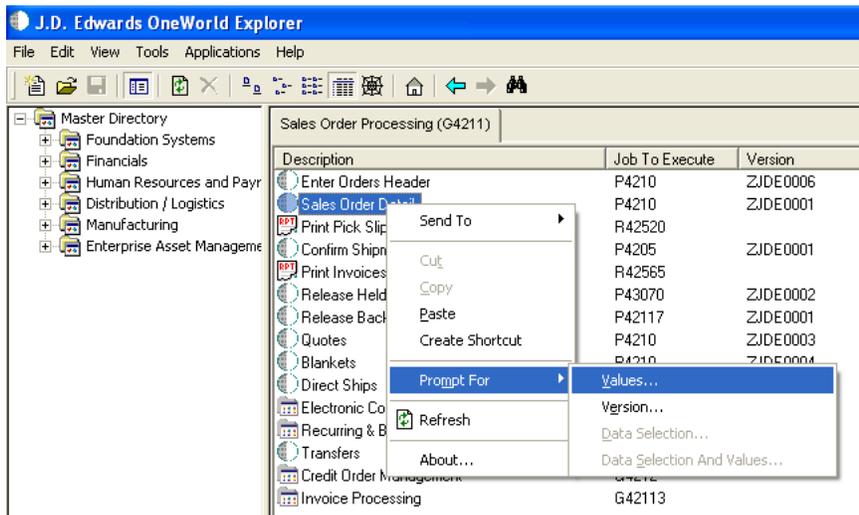
Events are generated by activity in a database or in an application system. You can use events to trigger an action in your application. To trigger an event in J.D. Edwards OneWorld:

1. Log in to your J.D. Edwards OneWorld system.
2. In the **Fast Path** field of the J.D. Edwards OneWorld Explorer window, type **G4211** and press **Enter**, as shown in [Figure 4–93](#).

**Figure 4–93 J.D. Edwards OneWorld Explorer Window**

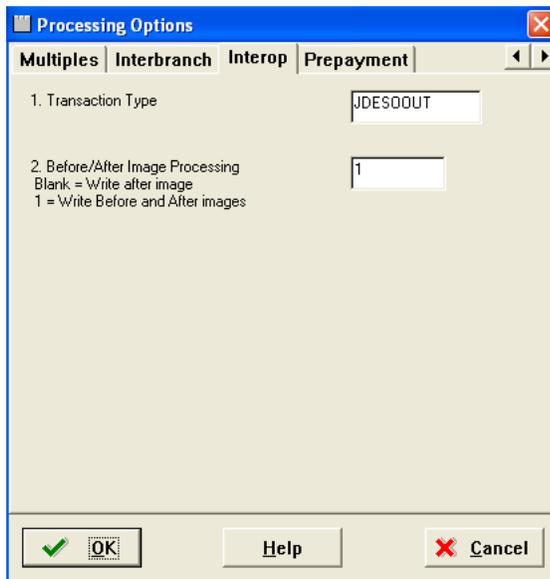
3. Right-click **Sales Order Detail (P4210)**.

**Figure 4–94 Sales Order Detail Menu**



4. Select **Prompt for**, and then **Values**, as shown in [Figure 4–94](#).  
The Processing Options dialog is displayed, as shown in [Figure 4–95](#).

**Figure 4–95 Processing Options Dialog**

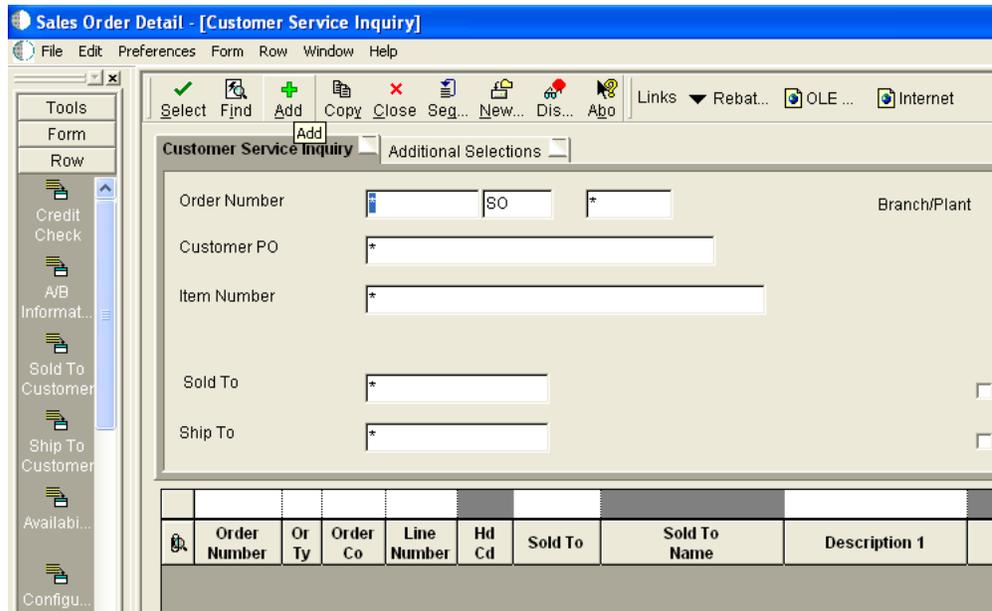


Perform the following steps:

- a. Click the **Interop** tab.
  - b. In the **Transaction Type** field, type **JDES00UT**.
  - c. Verify that the value in the **Before/After Image Processing Blank** field is 1.
5. Click **OK**.

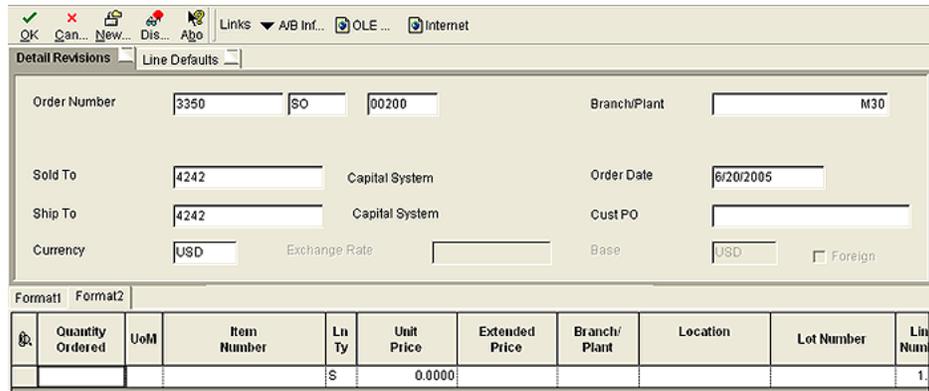
The **Sales Order Detail - (Customer Service Inquiry)** window is displayed, as shown in [Figure 4–96](#).

**Figure 4–96 Sales Order Detail Window**



6. Click the **Add** icon (third icon from left).
7. Enter the values as shown in [Figure 4–97](#).  
To move to a different field, use the **Tab** key on your keyboard.

**Figure 4–97 Values**



8. Enter a value for **Quantity Ordered** and **Item Number**, as shown in [Figure 4–98](#).

**Figure 4–98 Sample Values**

Detail Revisions | Line Defaults

Order Number: 3350 | SO | 00200

Sold To: 4242 | Capital System

Ship To: 4242 | Capital System

Currency: USD | Exchange Rate:

Format1 | Format2

Quantity Ordered	UoM	Item Number	Ln Ty	Unit Price	Extended Price
1		210	S	0.0000	
			S	0.0000	

- Click the first field in the second row and allow a few seconds for processing, as shown in Figure 4–99.

**Figure 4–99 Sample Values**

Detail Revisions | Line Defaults

Order Number: 3350 | SO | 00200

Sold To: 4242 | Capital System

Ship To: 4242 | Capital System

Currency: USD | Exchange Rate:

Format1 | Format2

Quantity Ordered	UoM	Item Number	Ln Ty	Unit Price	Extended Price
1	EA	210	S	5.0000	5.00
			S	0.0000	

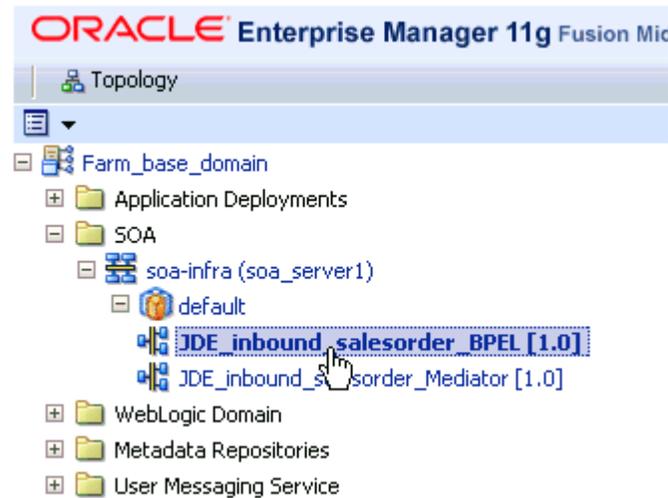
- Click **OK**.

An event is triggered in the J.D. Edwards OneWorld system.

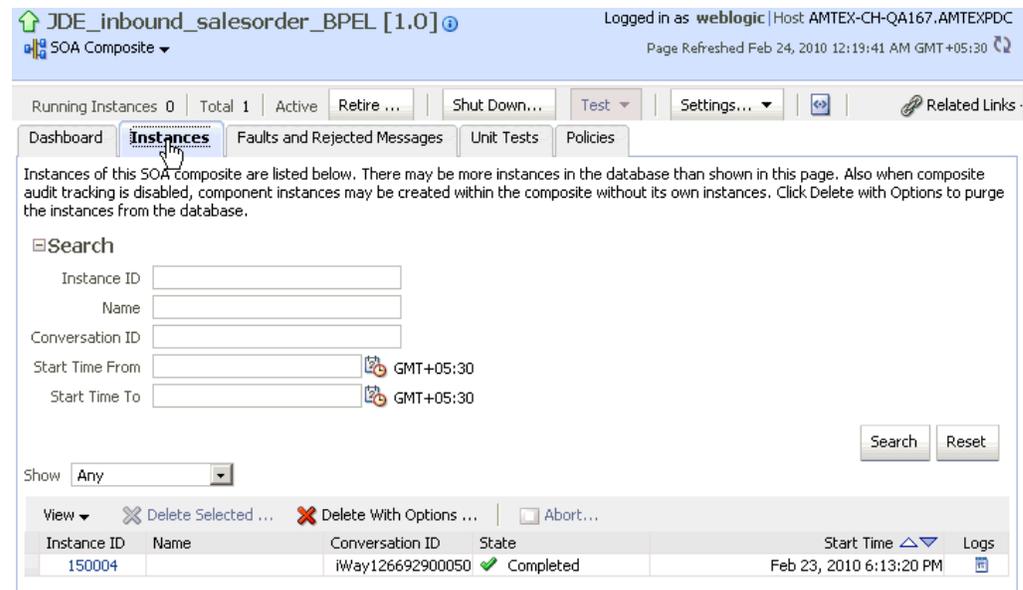
**Verifying the Results**

To verify your results:

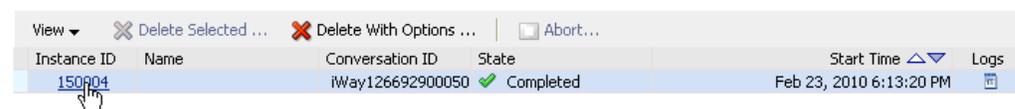
- Log in to the Oracle Enterprise Manager console by using the following URL:  
<http://localhost:7001/em>
- Expand your domain in the left pane followed by the **SOA** folder.

**Figure 4–100 Oracle Enterprise Manager Console**

3. Select an available project (for example, JDE\_Inbound\_salesorder\_BPEL), as shown in Figure 4–100.

**Figure 4–101 Instances Tab**

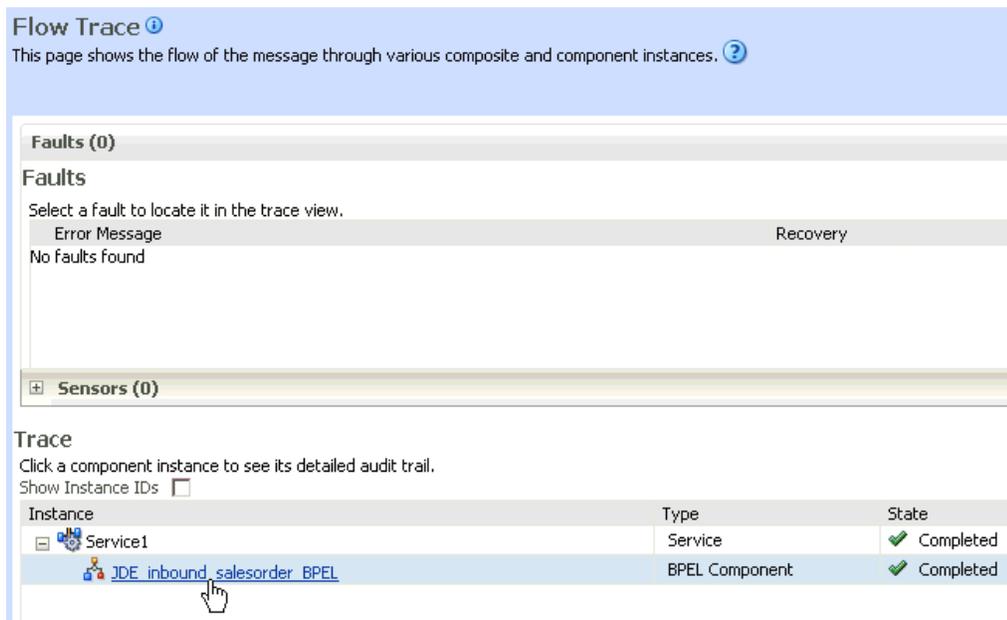
4. Click the **Instances** tab in the right pane, as shown in Figure 4–101.  
Recently received run-time events are displayed in the Instances tab, as shown in Figure 4–102.

**Figure 4–102 Received Run-time Events**

5. Select a J.D. Edwards OneWorld instance ID.

The Flow Trace page is displayed, as shown in [Figure 4–103](#).

**Figure 4–103 Flow Trace Page**



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

The Instance page for the selected component is displayed, as shown in [Figure 4–104](#).

Figure 4–104 Instance Page

Instance of JDE\_inbound\_salesorder\_BPEL

This page shows BPEL process instance details.

**Audit Trail** | Flow | Sensor Values | Faults

Expand a payload node to view the details.

```

<process>
  <sequence>
    @receiveInput
      Feb 23, 2010 6:13:21 PM Received "inputVariable" call from partner "jde_inbound_salesorder_bpel_client"
        <payload>
          <inputVariable>
            <part name="event_jdeinbound_event">
              <jdeResponse environment="DV900" session="2728.1266929153.43" role="*ALL" type="trans" user="JDE">
                <transaction action="transactionInfo" type="JDES00UT">
                  <returnCode code="0">XML Request OK</returnCode>
                  <key>
                    <column name="EdiUserId" type="String">JDE</column>
                    <column name="EdiBatchNumber" type="String">15390</column>
                    <column name="EdiTransactNumber" type="String">103525</column>
                  </key>
                  <table name="F420121" type="Header">
                    <column name="EdiUserId" type="String">JDE</column>
                    <column name="EdiBatchNumber" type="String">15390</column>
                    <column name="EdiTransactNumber" type="String">103525</column>
                    <column name="EdiLineNumber" type="Double">1.000</column>
                    <column name="EdiDocumentType" type="String">SO</column>
                    <column name="TypeTransaction" type="String">JDES00UT</column>
                    <column name="EdiTranslationFormat" type="String"/>
                    <column name="EdiTransmissionDate" type="Date"/>
                    <column name="DirectionIndicator" type="Character">2</column>
                    <column name="EdiDetailLinesProcess" type="Double">0</column>
                    <column name="EdiSuccessfullyProcess" type="Character">Y</column>
                    <column name="TradingPartnerId" type="String"/>
                    <column name="TransactionAction" type="String">A</column>
                    <column name="CompanyKeyOrderNo" type="String">00200</column>
                    <column name="DocumentOrderInvoiceE" type="Double">2957</column>
                    <column name="OrderType" type="String">SO</column>
                    <column name="OrderSuffix" type="String">000</column>
                    <column name="CostCenter" type="String">M30</column>
                    <column name="Company" type="String">00200</column>
                    <column name="CompanyKeyOriginal" type="String"/>
                    <column name="OriginalPoSoNumber" type="String"/>
                    <column name="OriginalOrderType" type="String"/>
                  </table>
                </transaction>
              </jdeResponse>
            </part>
          </inputVariable>
        </payload>
      </receiveInput>
    </sequence>
  </process>

```

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

The message received from the J.D. Edwards OneWorld 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 J.D. Edwards OneWorld must be installed on Oracle WebLogic Server.
- J.D. Edwards OneWorld must be configured for inbound and outbound processing.

**See Also:** *Oracle Application Server Adapter Concepts Guide*

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

- How to configure Oracle Application Adapter for J.D. Edwards OneWorld for services and events. For more information, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).
- How to configure 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 J.D. Edwards OneWorld 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 J.D. Edwards OneWorld is configured in Application Explorer for services and events, as described in [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#). Integration logic is modeled in iStudio. 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 J.D. Edwards OneWorld system, using a Mediator project in Oracle JDeveloper.

### Prerequisites

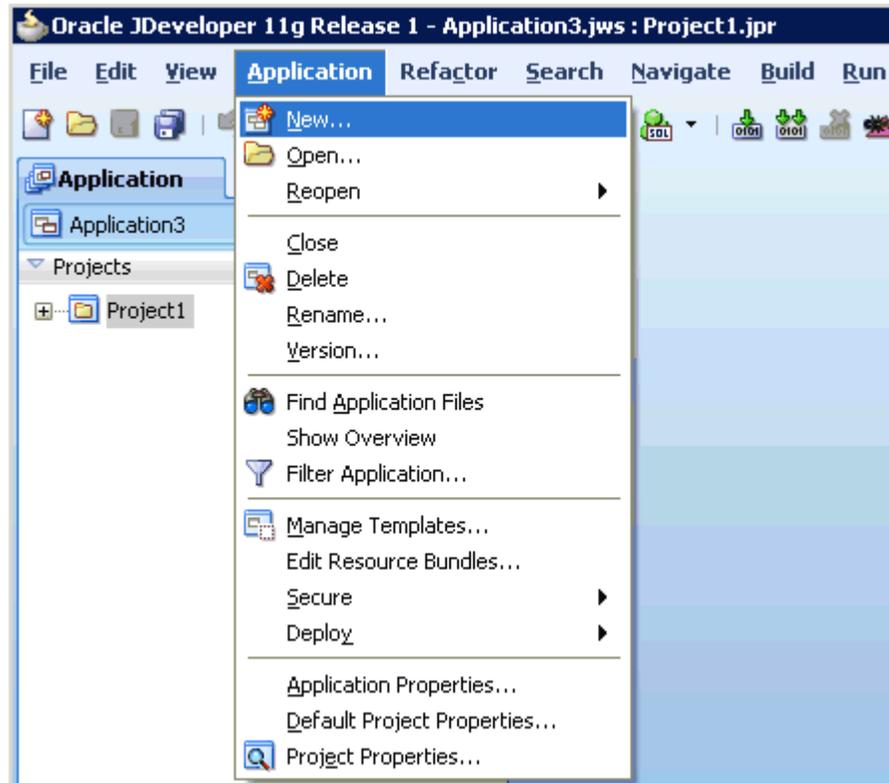
Before you design a Mediator outbound process, you must generate the respective WSDL file using Application Explorer. For more information, see ["Generating WSDL for Request/Response Service"](#) on page 4-8.

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

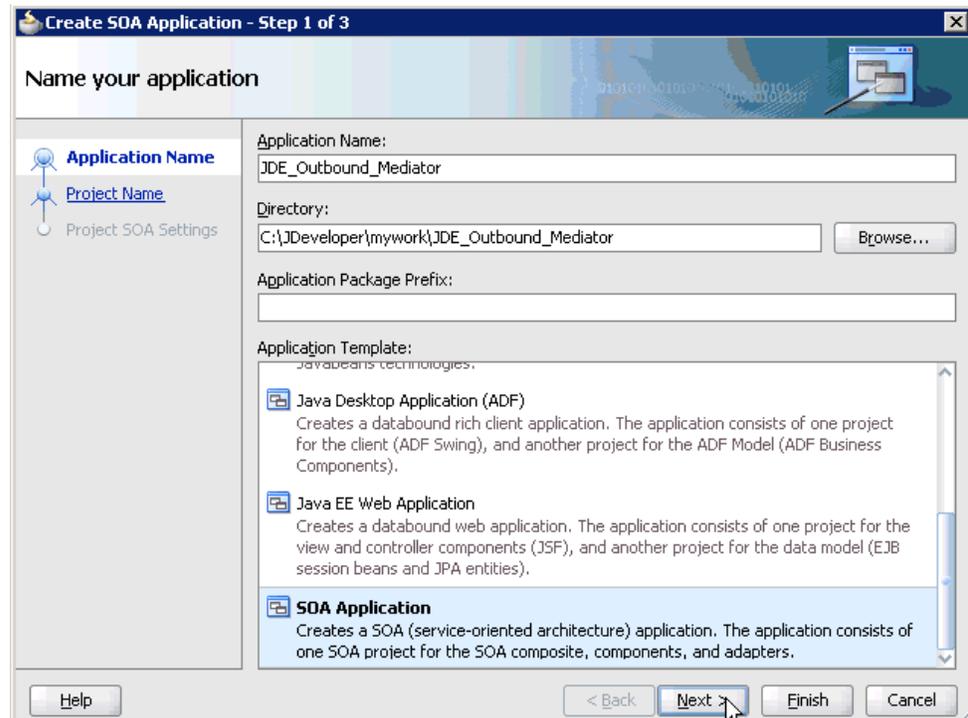
### 5.2.1 Creating a New SOA Application for the Outbound Mediator Process

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 Application Menu New Option**

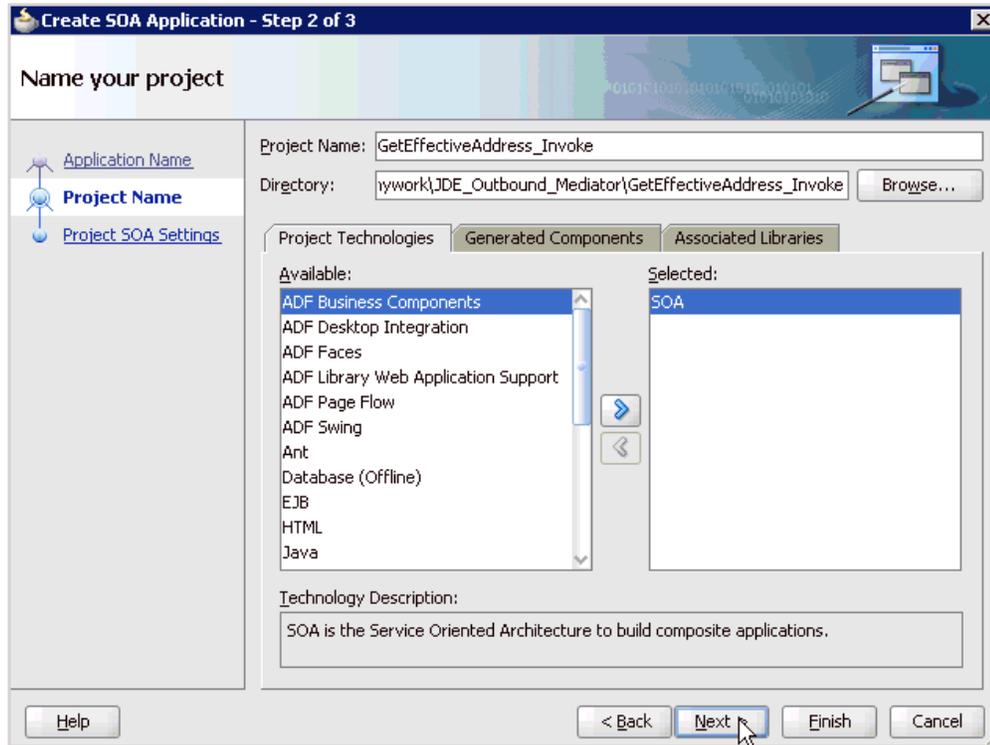
The Create SOA Application wizard is displayed, as shown in [Figure 5–2](#).

**Figure 5–2 Create SOA Application Wizard**

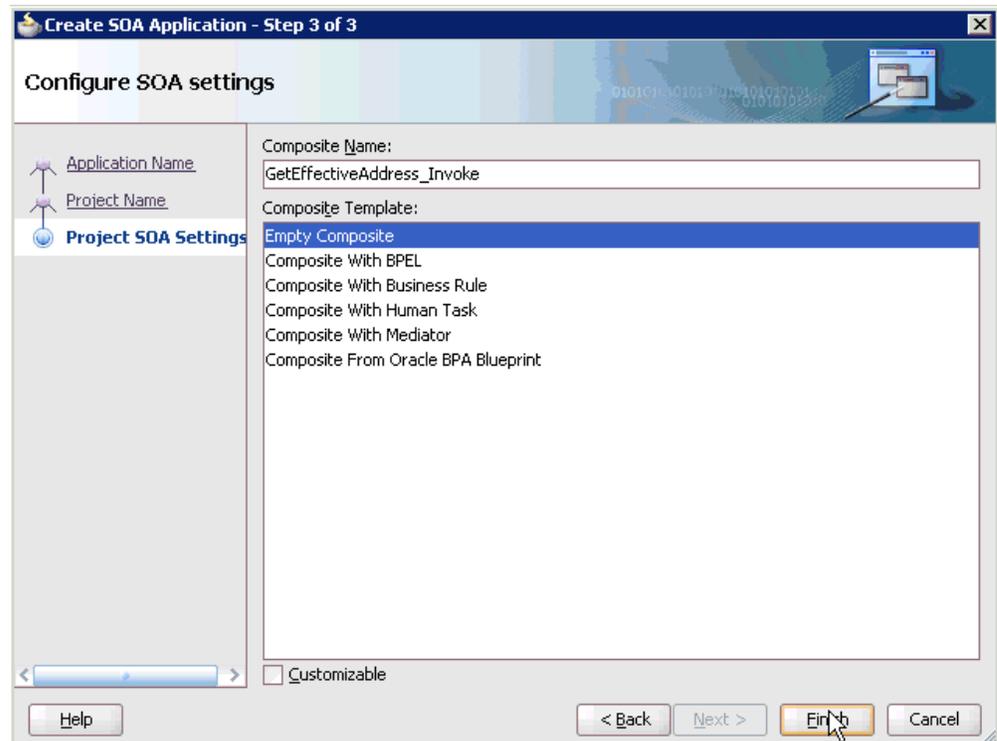
3. From the Application Template list, click **SOA Application**.
4. Enter a name for the new SOA application (for example, JDE\_Outbound\_Mediator) and click **Next**.

The Name your project page is displayed, as shown in [Figure 5-3](#).

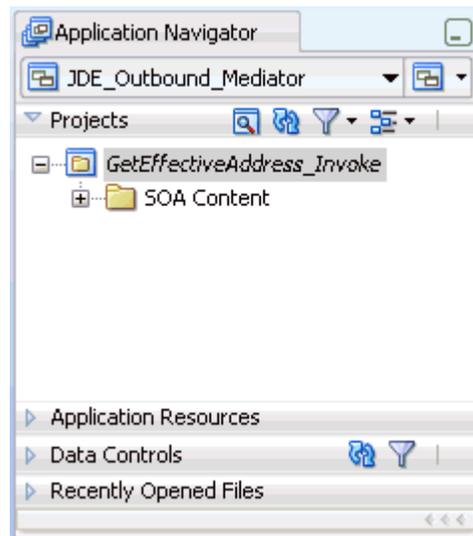
**Figure 5-3 Name Your Project Page**



5. Enter a project name (for example, GetEffectiveAddress\_Invoke) and click **Next**.  
The Configure SOA settings page is displayed, as shown in [Figure 5-4](#).

**Figure 5–4 Configure SOA Settings Page**

- From the Composite Template list, select **Empty Composite** and click **Finish** as shown in [Figure 5–5](#).

**Figure 5–5 Application Navigator Tab**

The new SOA application (JDE\_Outbound\_Mediator) and associated project (GetEffectiveAddress\_Invoke) are added to the Application Navigator tab in the left pane.

## 5.2.2 Defining a Mediator Outbound Process

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

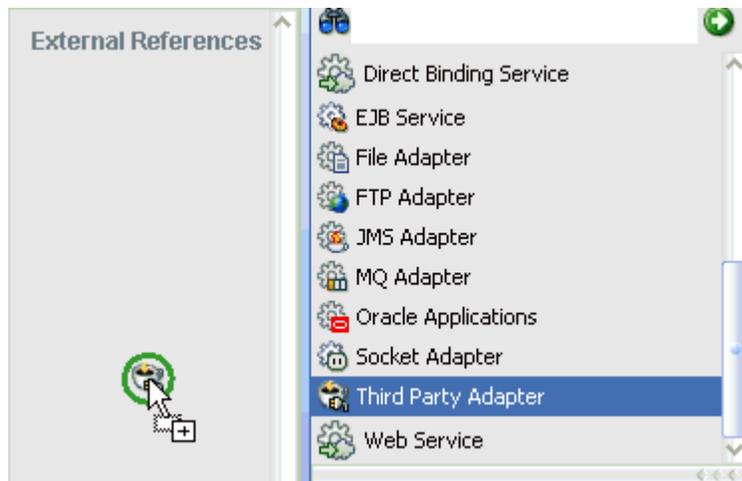
1. Configuring a Third Party Adapter Service Component
2. Configuring an Outbound Mediator Process Component
3. Configuring the Routing Rules

### Configuring a Third Party Adapter Service Component

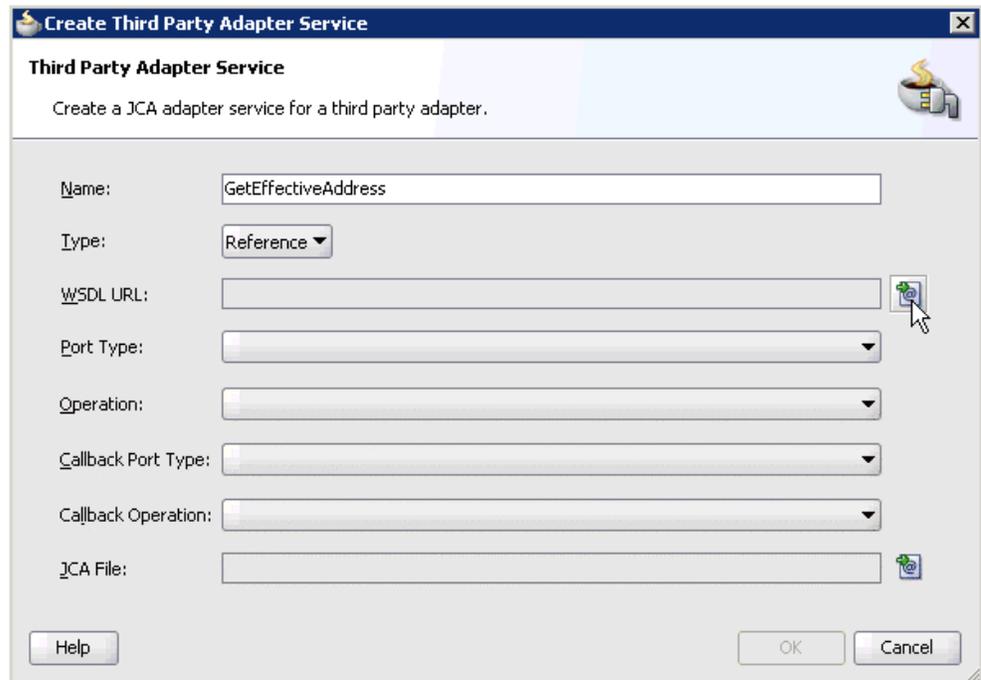
Perform the following steps to create a third party adapter service component:

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 5-6](#).

**Figure 5-6** *Third Party Adapter*

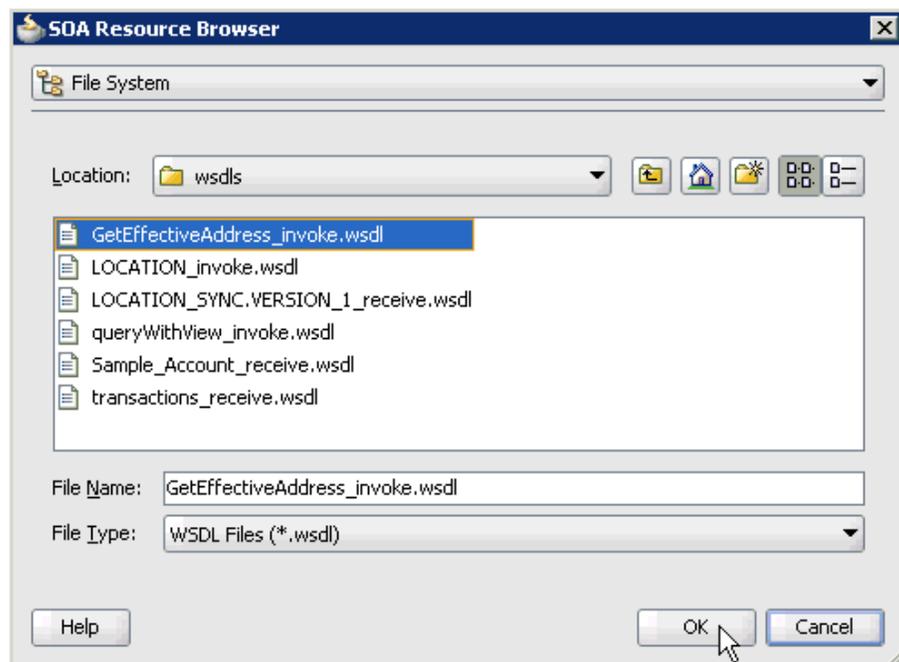


The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 5-7](#).

**Figure 5-7 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**

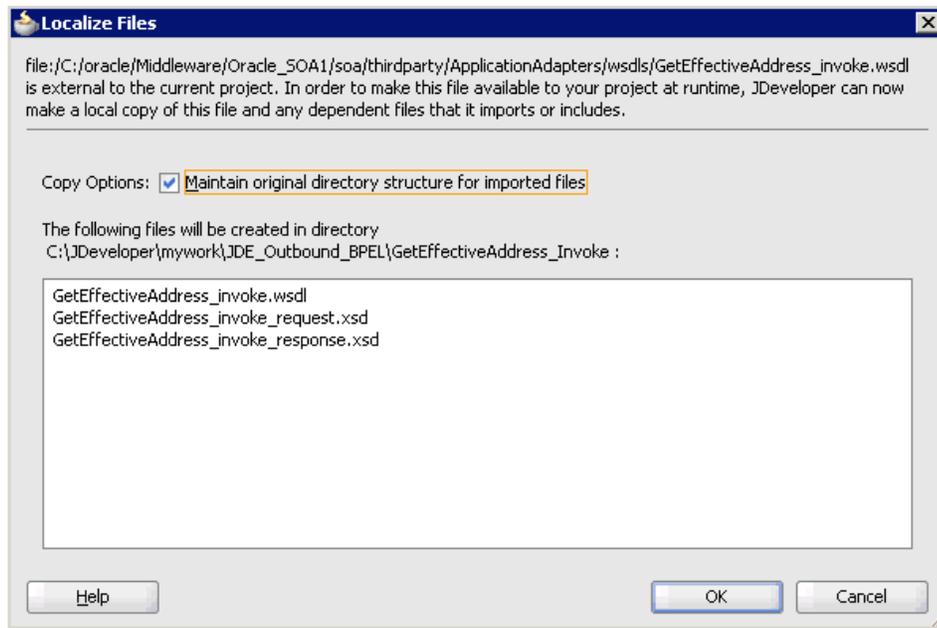
5. Browse and select an outbound WSDL file (for example, GetEffectiveAddress\_invoke.wsdl) from the following directory:

<ADAPTER\_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click **OK**.

The Localize Files dialog is displayed, as shown in [Figure 5–9](#).

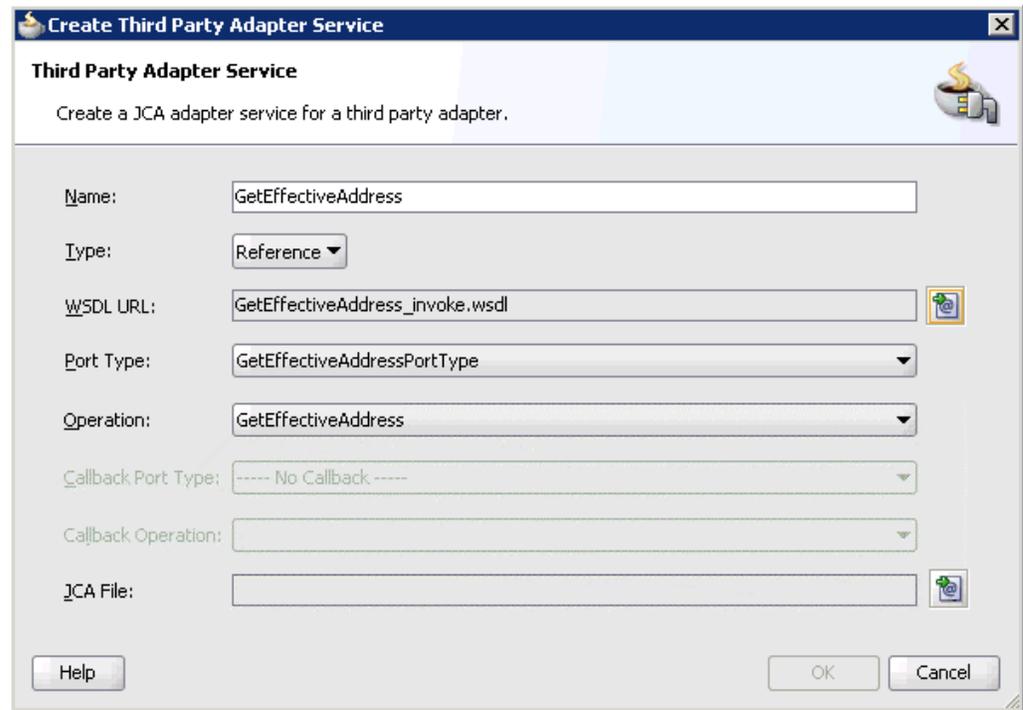
**Figure 5–9 Localize Files Dialog**



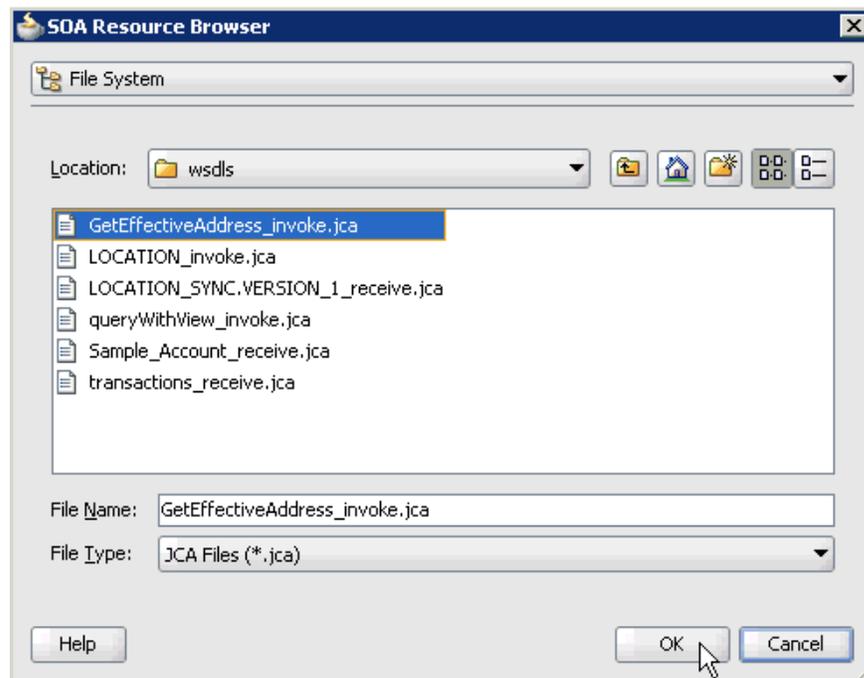
7. Click **OK**.

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](#).

**Figure 5–10 Create Third Party Adapter Service Dialog**

8. 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**

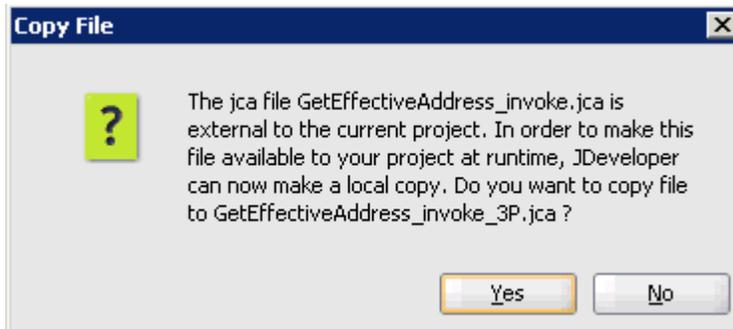
9. Browse and select the JCA properties file (for example, GetEffectiveAddress\_invoke.jca) from the following directory:

<ADAPTER\_HOME>\soa\thirdparty\ApplicationAdapters\wsdl

10. Click **OK**.

The following message is displayed, as shown in [Figure 5-12](#).

**Figure 5-12 Copy File Confirmation Message**

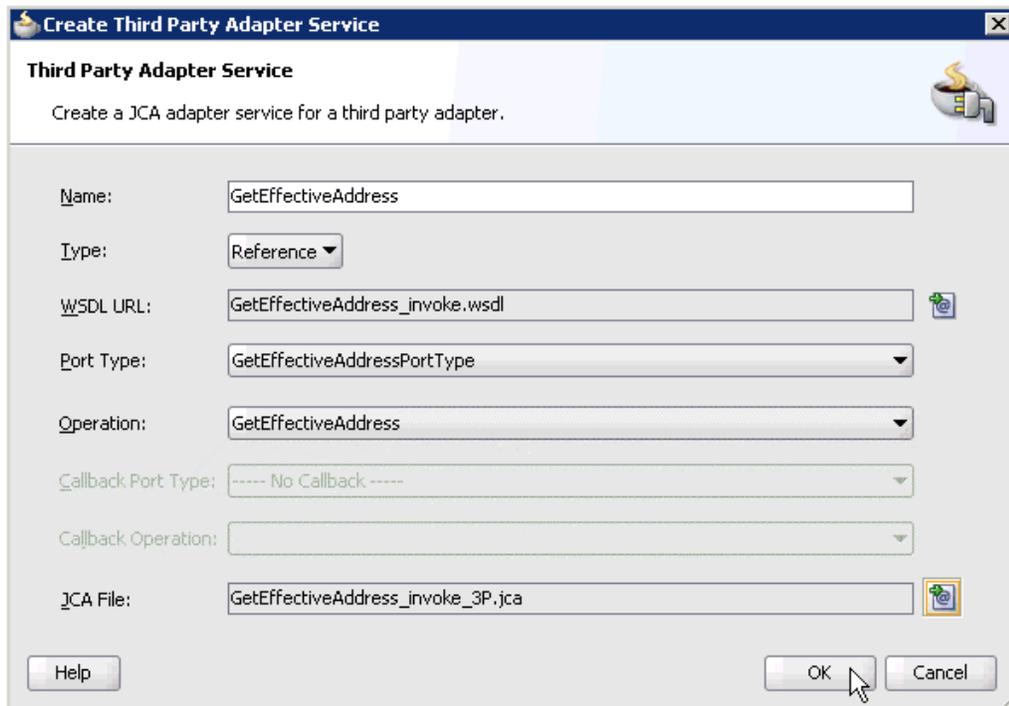


11. Click **Yes**.

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

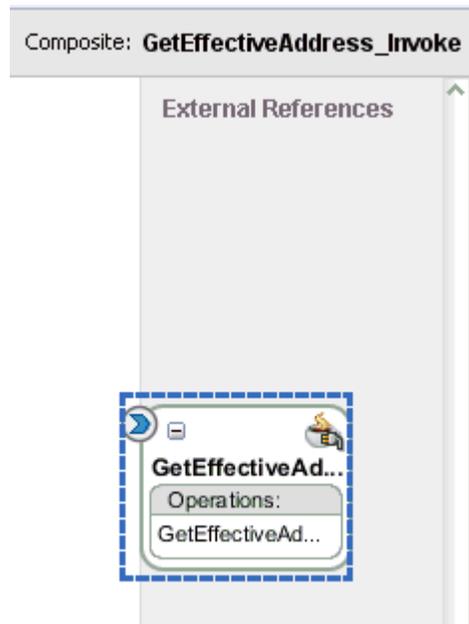
You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 5-13](#).

**Figure 5-13 Create Third Party Adapter Service Dialog**



12. Click **OK**.

The third party adapter service component (GetEffectiveAddress) is created and displayed in the External References pane, as shown in [Figure 5-14](#).

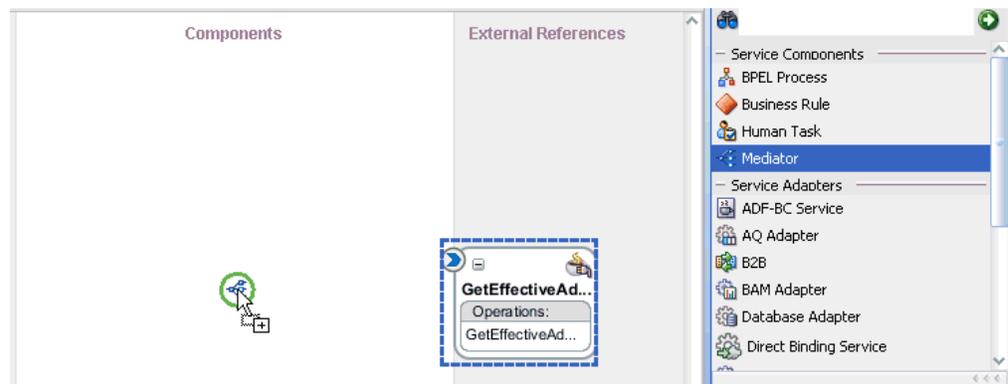
**Figure 5–14 External References Pane**

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

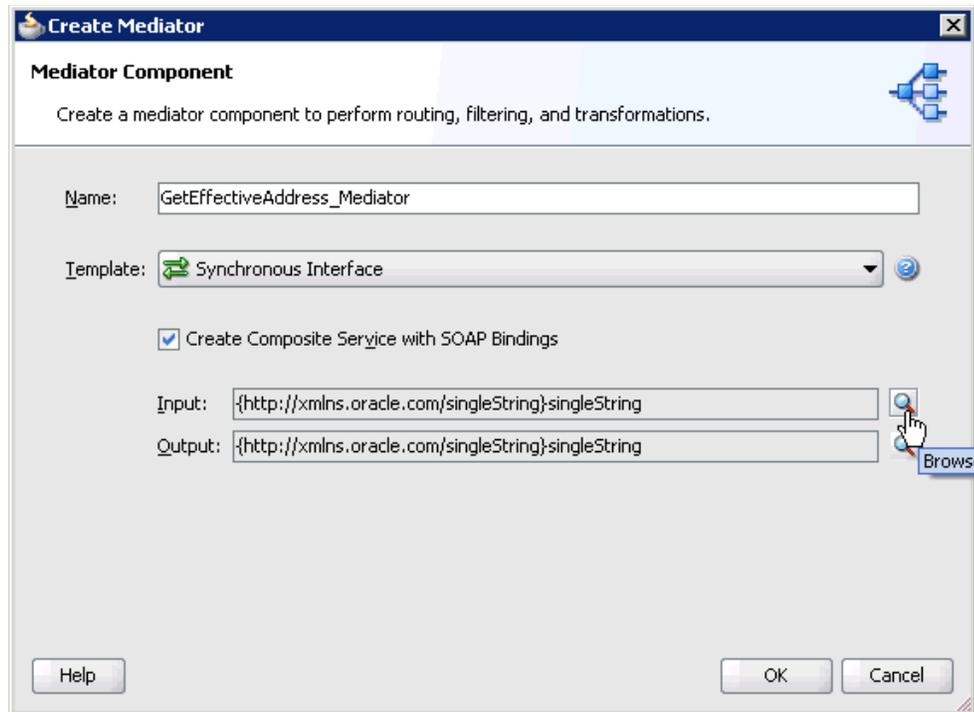
### Configuring an Outbound Mediator Process Component

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**

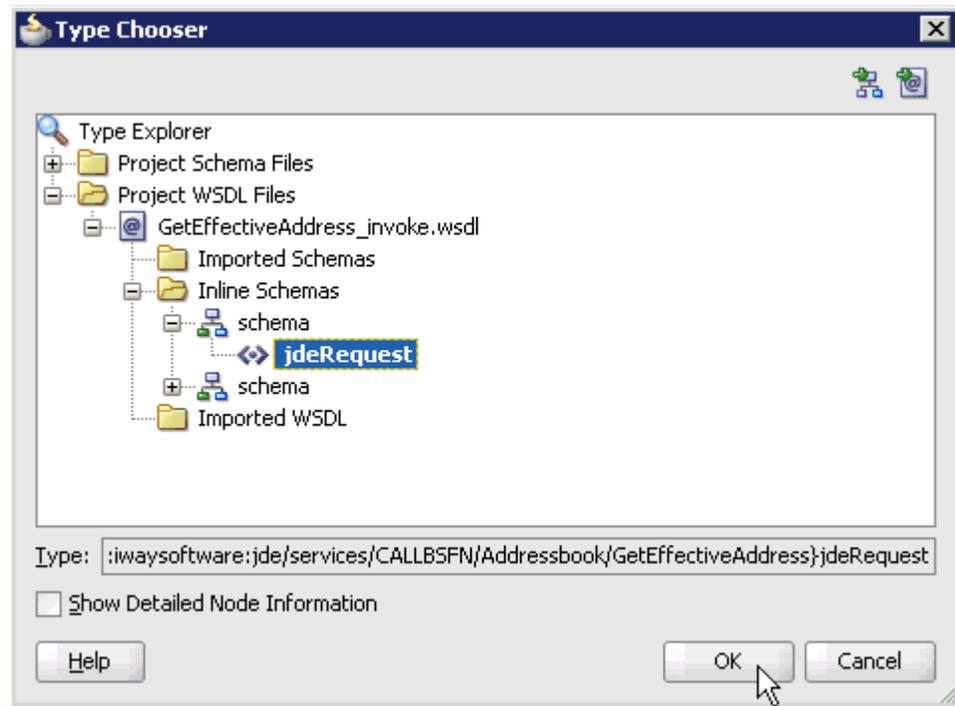
The Create Mediator dialog is displayed, as shown in [Figure 5–16](#).

**Figure 5–16 Create Mediator Dialog**

2. In the Name field, enter a name to identify the new outbound Mediator process component (for example, `GetEffectiveAddress_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](#).

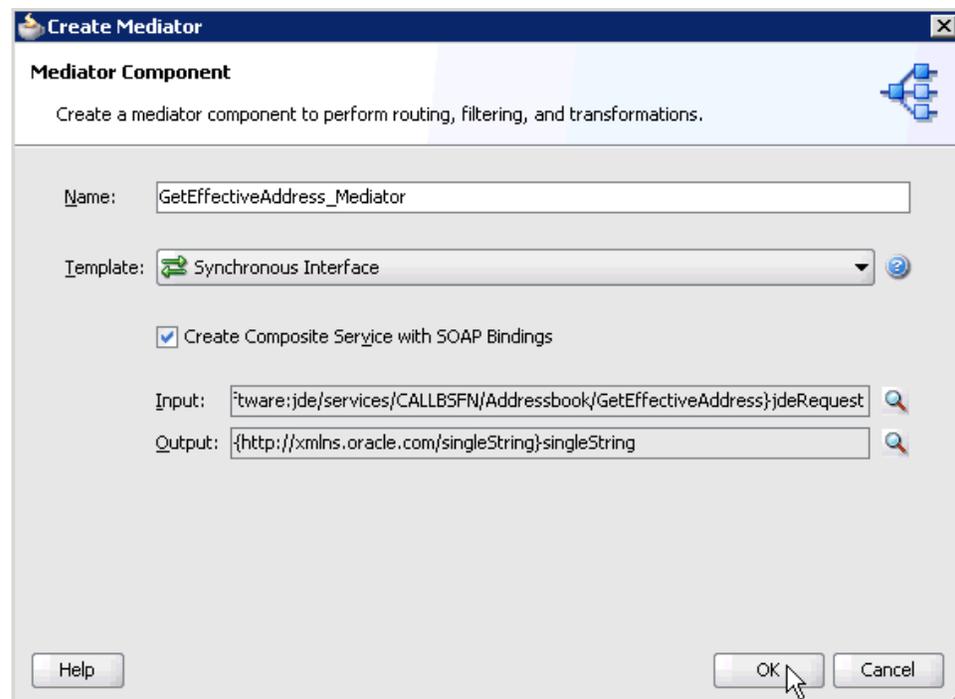
Figure 5-17 Type Chooser Dialog



5. Expand **Project WSDL Files**, **GetEffectiveAddress\_invoke.wSDL**, **Inline Schemas**, **schema**, and select **jdeRequest**.
6. Click **OK**.

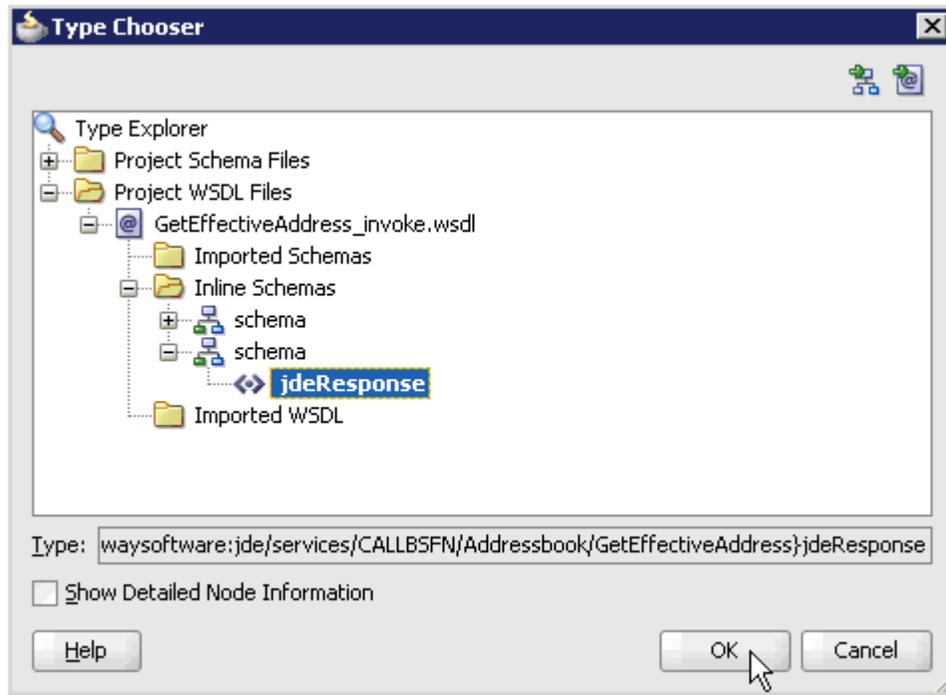
You are returned to the Create Mediator dialog, as shown in [Figure 5-18](#).

Figure 5-18 Create Mediator Dialog



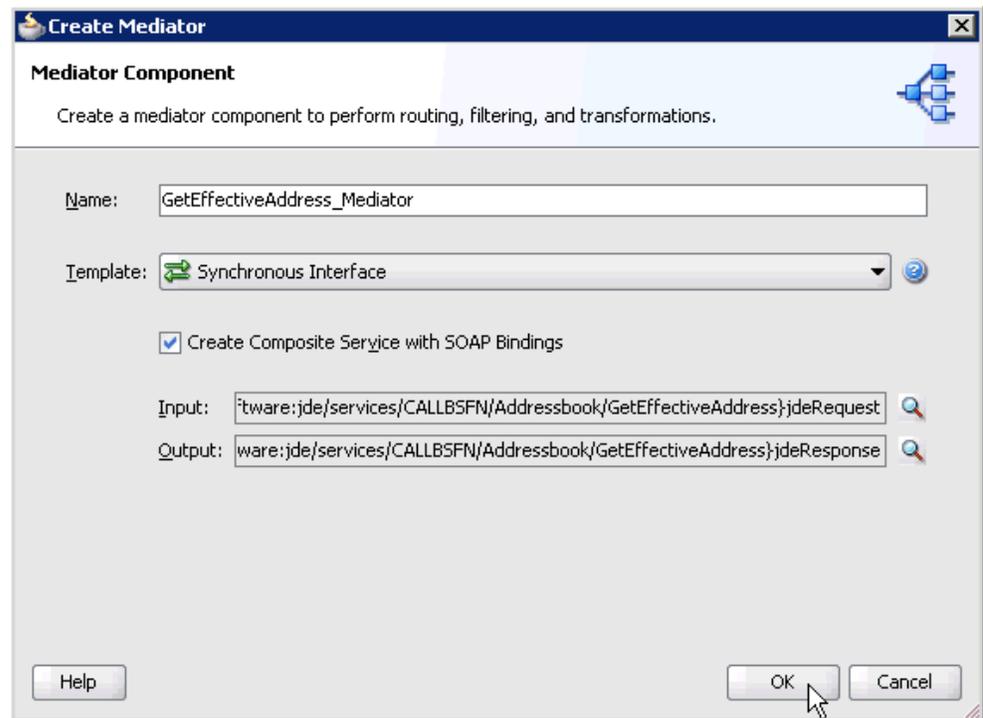
7. Click the **Browse Output Elements** icon, which is located to the right of the Output field to select the associated XML response schema file.  
The Type Chooser dialog is displayed, as shown in [Figure 5–19](#).

**Figure 5–19 Type Chooser Dialog**

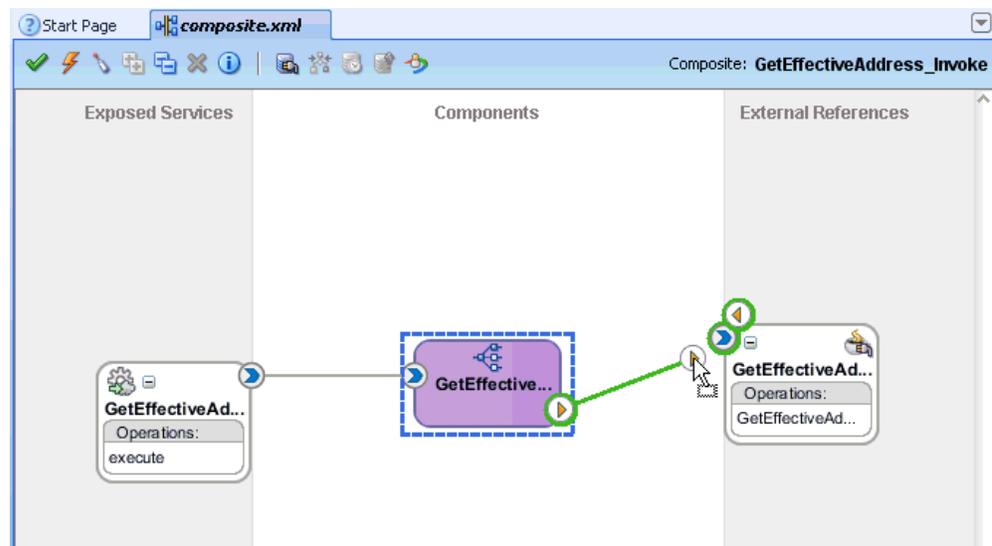


8. Expand **Project WSDL Files**, **GetEffectiveAddress\_invoke.wsdl**, **Inline Schemas**, **schema**, and select **jdeResponse**.
9. Click **OK**.

You are returned to the Create Mediator dialog, as shown in [Figure 5–20](#).

**Figure 5–20 Create Mediator Dialog**

10. Click OK.
11. Create a connection between the outbound Mediator process component (GetEffectiveAddress\_Mediator) and the third party adapter service component (GetEffectiveAddress), as shown in [Figure 5–21](#).

**Figure 5–21 Connection Creation**

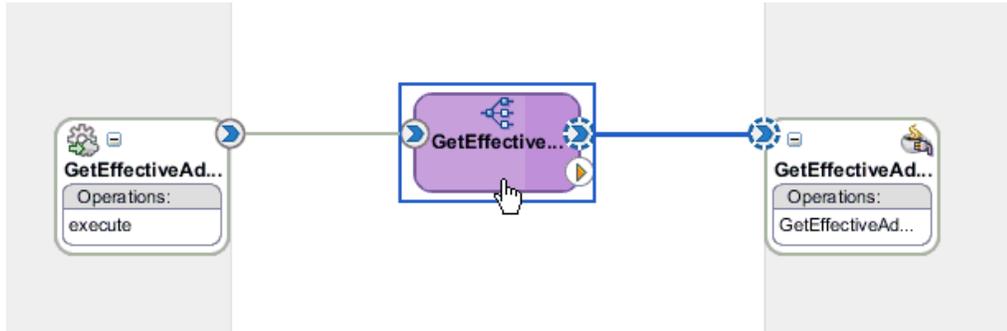
You are now ready to configure the routing rules.

### Configuring the Routing Rules

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

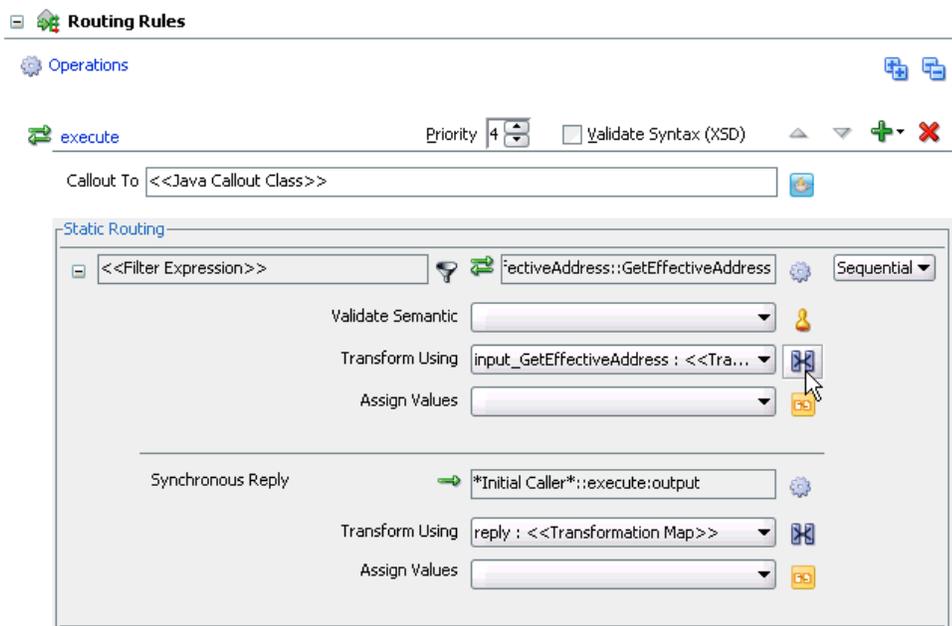
1. Double-click the outbound Mediator process component (GetEffectiveAddress\_Mediator) in the Components pane, as shown in [Figure 5-22](#).

**Figure 5-22 Outbound Mediator Process Component**



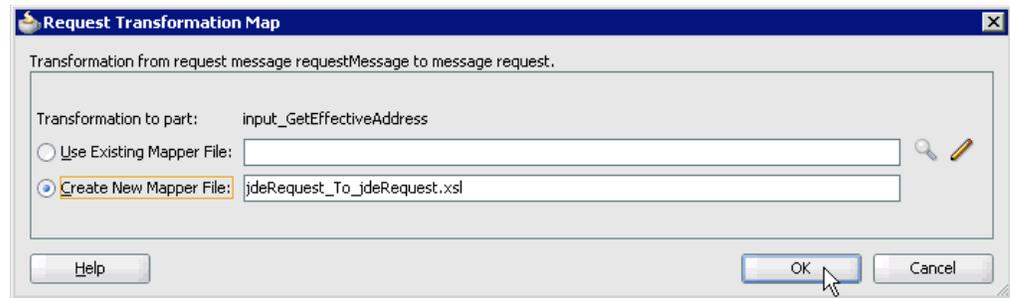
The Routing Rules dialog is displayed, as shown in [Figure 5-23](#).

**Figure 5-23 Routing Rules Dialog**



2. 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**

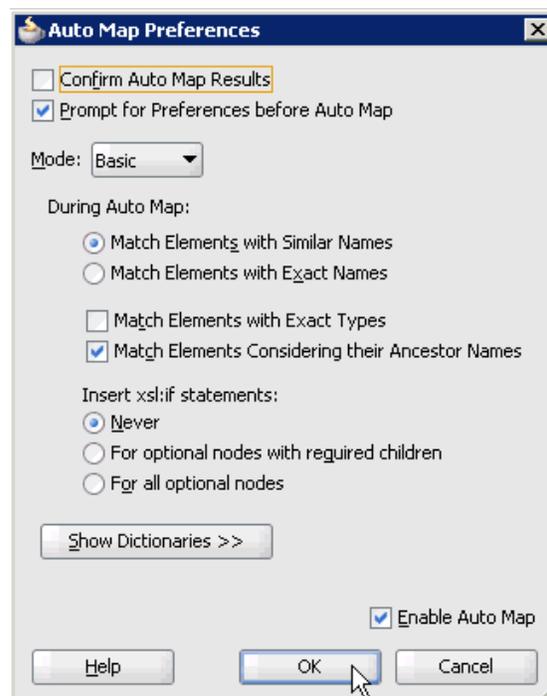
3. Select the **Create New Mapper File** option and click **OK**.

The `jdeRequest_To_jdeRequest.xml` tab is displayed, as shown in [Figure 5–25](#).

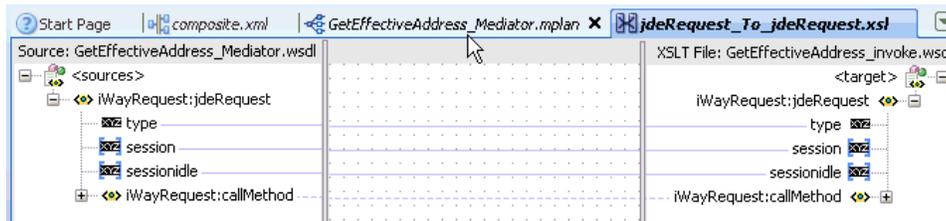
**Figure 5–25 jdeRequest\_To\_jdeRequest.xml tab**

4. Map the `iWayRequest:jdeRequest` source element to the `iWayRequest:jdeRequest` target element.

The Auto Map Preferences dialog is displayed, as shown in [Figure 5–26](#).

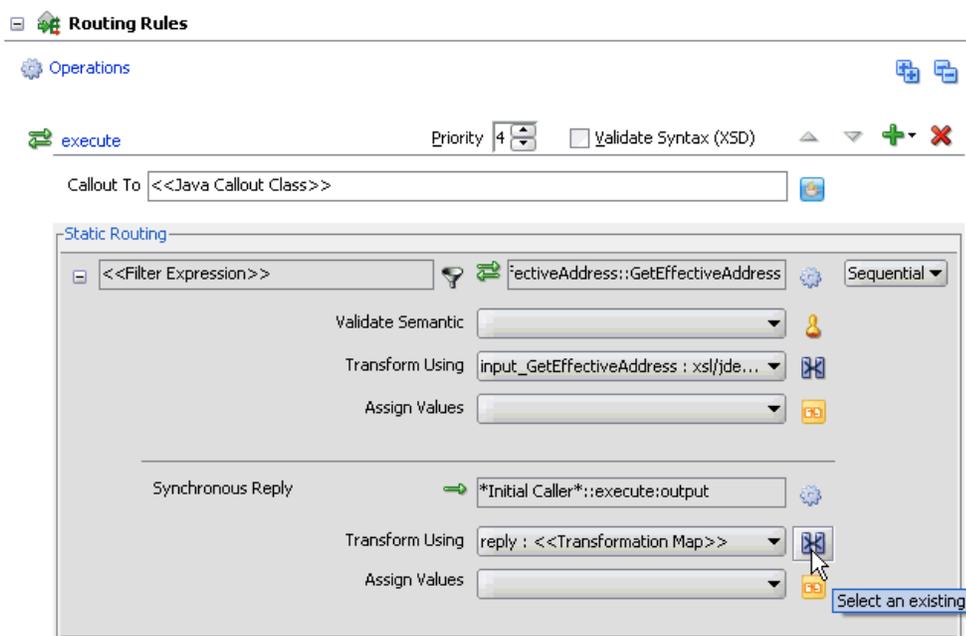
**Figure 5–26 Auto Map Preferences Dialog**

5. Retain the default values and click OK.
6. Click the **GetEffectiveAddress\_Mediator.mplan** tab.



You are returned to the Routing Rules dialog, as shown in [Figure 5-27](#).

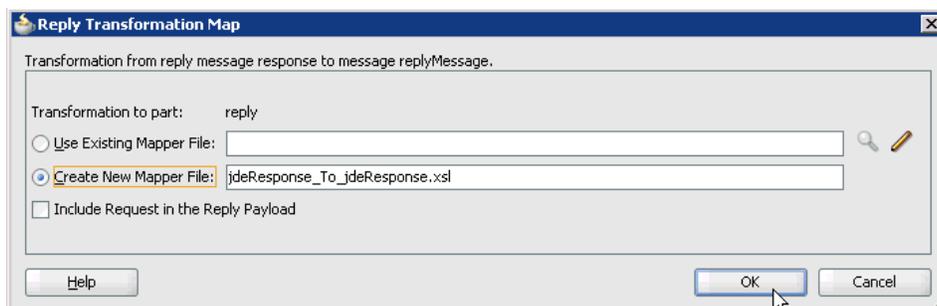
**Figure 5-27 Routing Rules Dialog**



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 5-28](#).

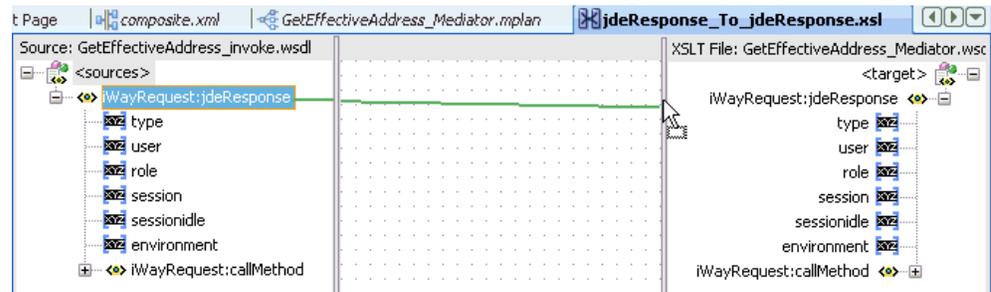
**Figure 5-28 Reply Transformation Map Dialog**



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

The `jdeResponse_To_jdeResponse.xml` tab is displayed, as shown in [Figure 5–29](#).

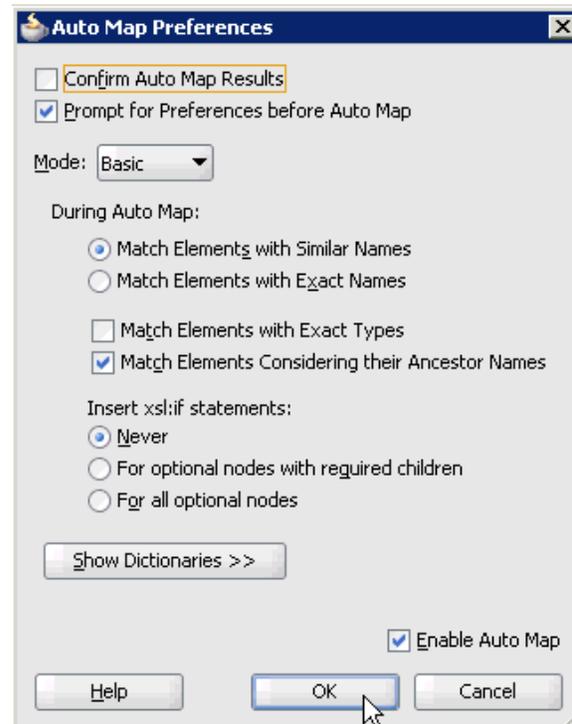
**Figure 5–29** `jdeResponse_To_jdeResponse.xml` Tab



9. Map the `iWayRequest:jdeResponse` source element to the `iWayRequest:jdeResponse` target element.

The Auto Map Preferences dialog is displayed, as shown in [Figure 5–30](#).

**Figure 5–30** Auto Map Preferences Dialog



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

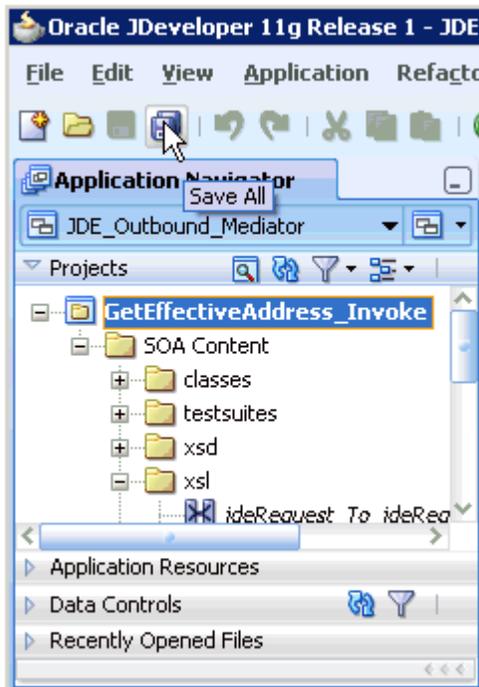
The mapping is completed, as shown in [Figure 5–31](#).

**Figure 5–31 Mapping Completion**



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 5–32](#).

**Figure 5–32 Save All Icon**



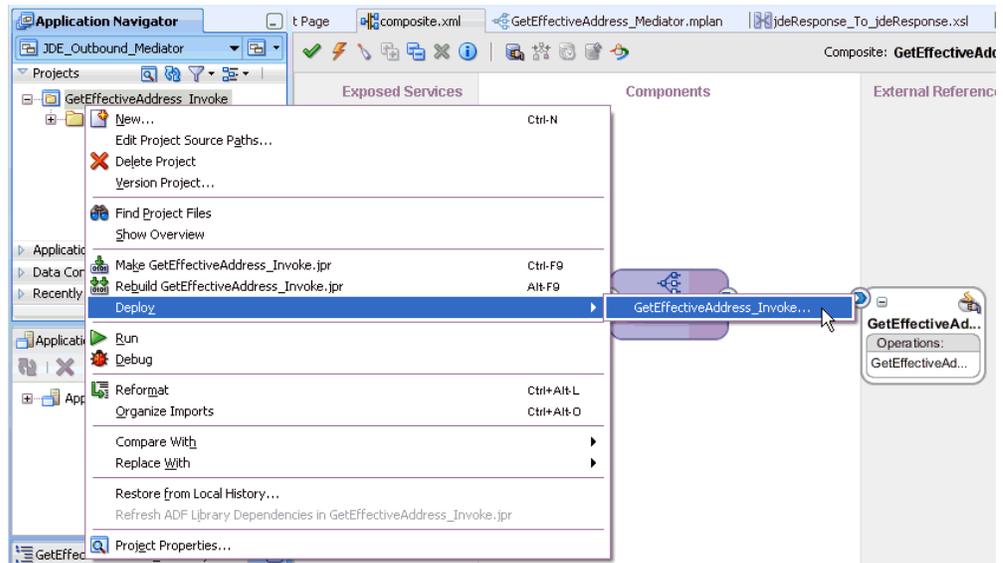
You are now ready to deploy the Mediator outbound process.

### 5.2.3 Deploying the Mediator Outbound Process

Perform the following steps to deploy the Mediator outbound process.

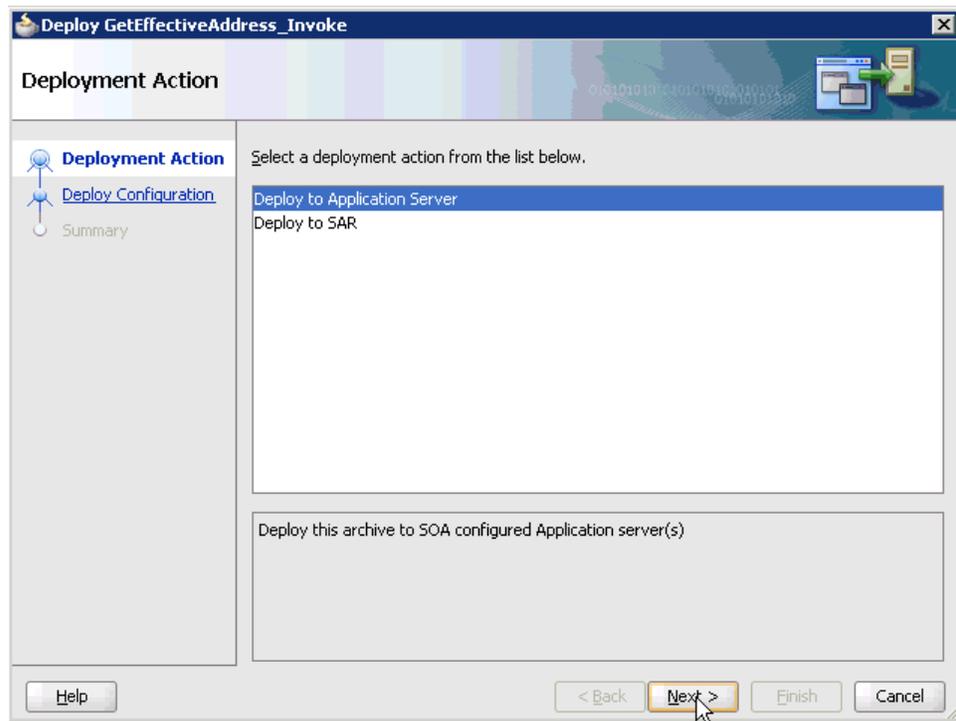
1. Right-click the project name in the left pane (for example, **GetEffectiveAddress\_Invoke**), select **Deploy**, and then click **GetEffectiveAddress\_Invoke**, as shown in [Figure 5–33](#).

**Figure 5–33 Deploy Option**



The Deployment Action page is displayed, as shown in [Figure 5–34](#).

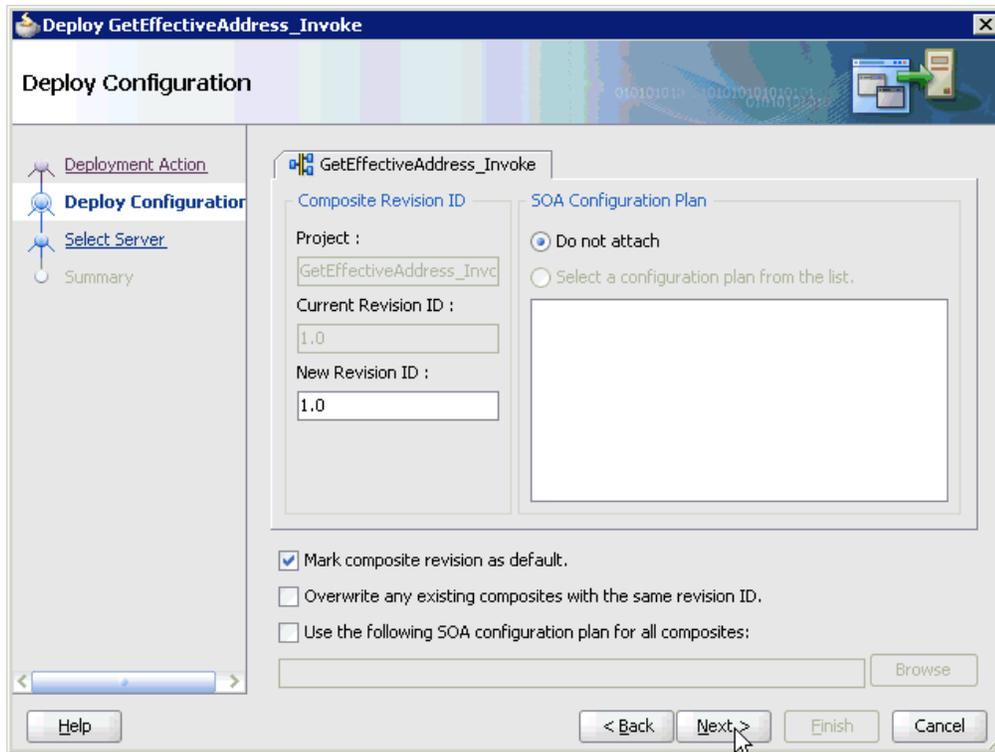
**Figure 5–34 Deployment Action Page**



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

The Deploy Configuration page is displayed, as shown in [Figure 5–35](#).

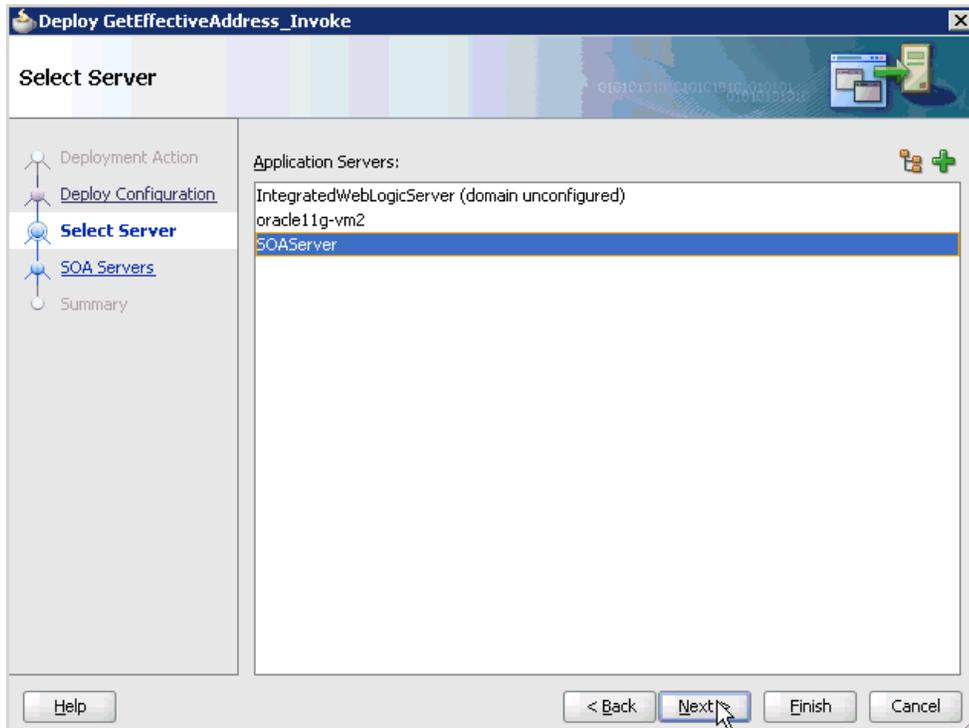
**Figure 5–35 Deploy Configuration Page**



4. Leave the default values selected and click **Next**.

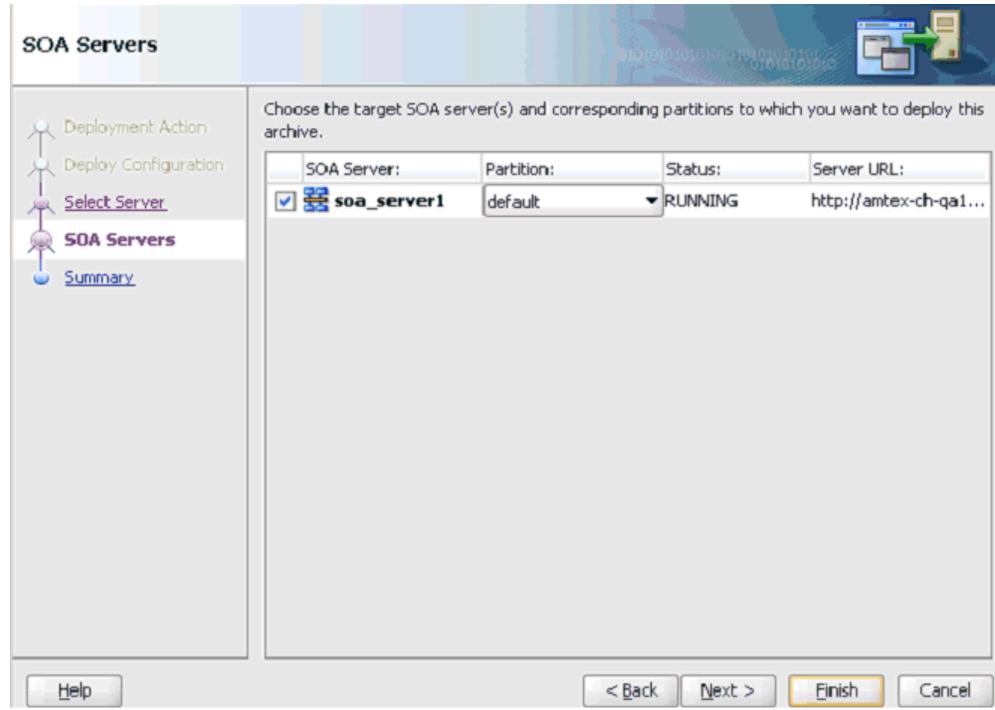
The Select Server page is displayed, as shown in [Figure 5–36](#).

**Figure 5–36 Select Server Page**



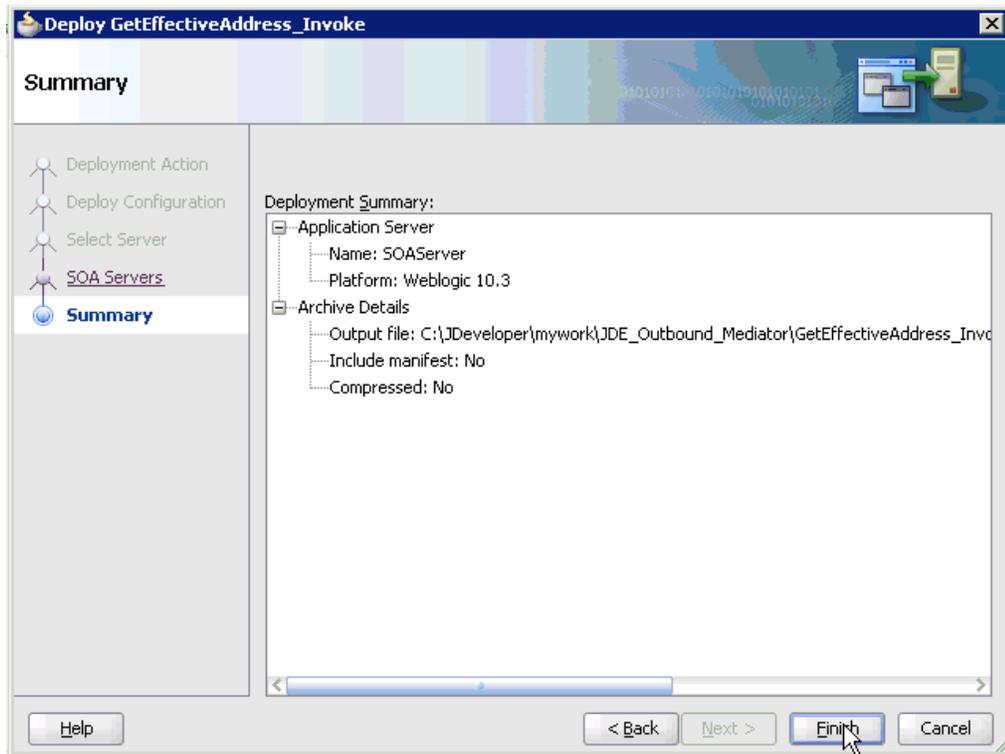
5. Select an available application server that was configured and click **Next**.  
The SOA Servers page is displayed, as shown in [Figure 5-37](#).

**Figure 5-37 SOA Servers Page**



6. Select a target SOA server and click **Next**.  
The Summary page is displayed, as shown in [Figure 5-38](#).

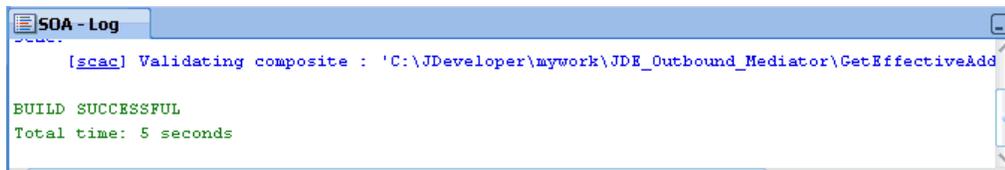
**Figure 5–38 Summary Page**



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

The process is deployed successfully, as shown in [Figure 5–39](#).

**Figure 5–39 Success 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. 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 5–40](#).

**Figure 5–40 Oracle Enterprise Manager Console**

3. Select an available project (for example, JDE\_Outbound\_GetEffectiveAddress\_Mediator), as shown in [Figure 5–41](#).

**Figure 5–41 Project Selection**

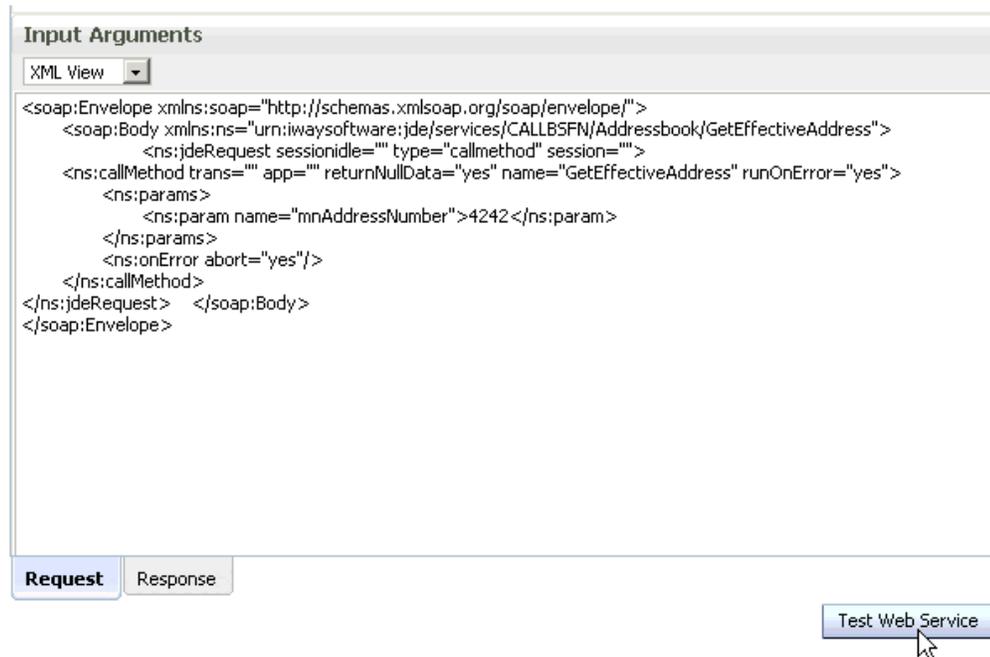
4. Click **Test** in the right pane.  
The Test Web Service page is displayed, as shown in [Figure 5–42](#).

**Figure 5–42 Test Web Service Page**



5. Click the **Request** tab.
6. Scroll down to the **Input Arguments** section, as shown in [Figure 5–43](#).

**Figure 5–43 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:ns="urn:iwaysoftware:jde/services/CALLBSFN/Addressbook/GetEffectiveAddress"
  >
```

```

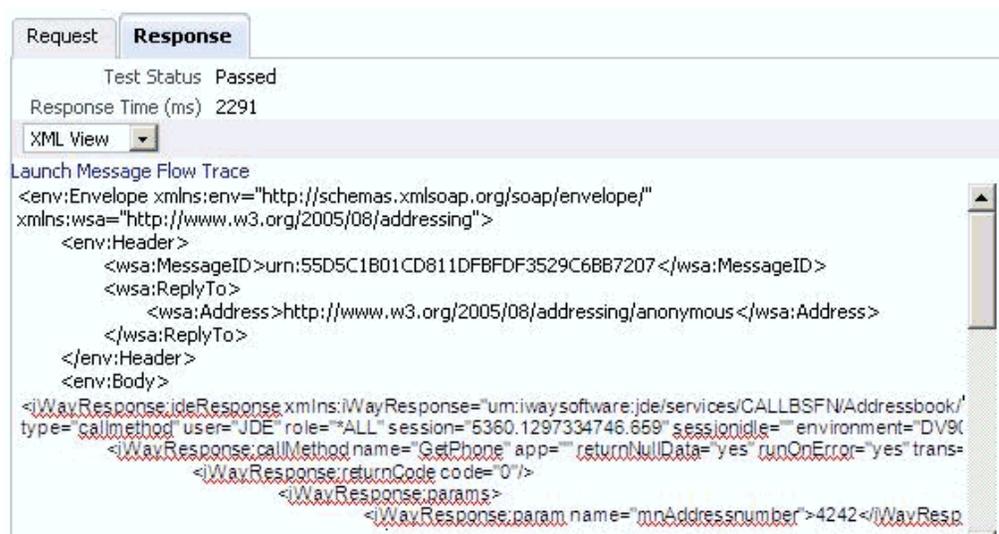
        <ns:jdeRequest sessionid="" type="callmethod" session="">
<ns:callMethod trans="" app="" returnNullData="yes" name="GetEffectiveAddress"
runOnError="yes">
<ns:params>
<ns:param name="mnAddressNumber">4242</ns:param>
</ns:params>
<ns:onError abort="yes" />
</ns:callMethod>
</ns:jdeRequest>    </soap:Body>
</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 5-44](#).

**Figure 5-44 Oracle Enterprise Manager Console Response Tab**



## 5.3 Configuring a Mediator Inbound Process

The following example describes how to configure a Mediator inbound process to your J.D. Edwards OneWorld 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 4-38.

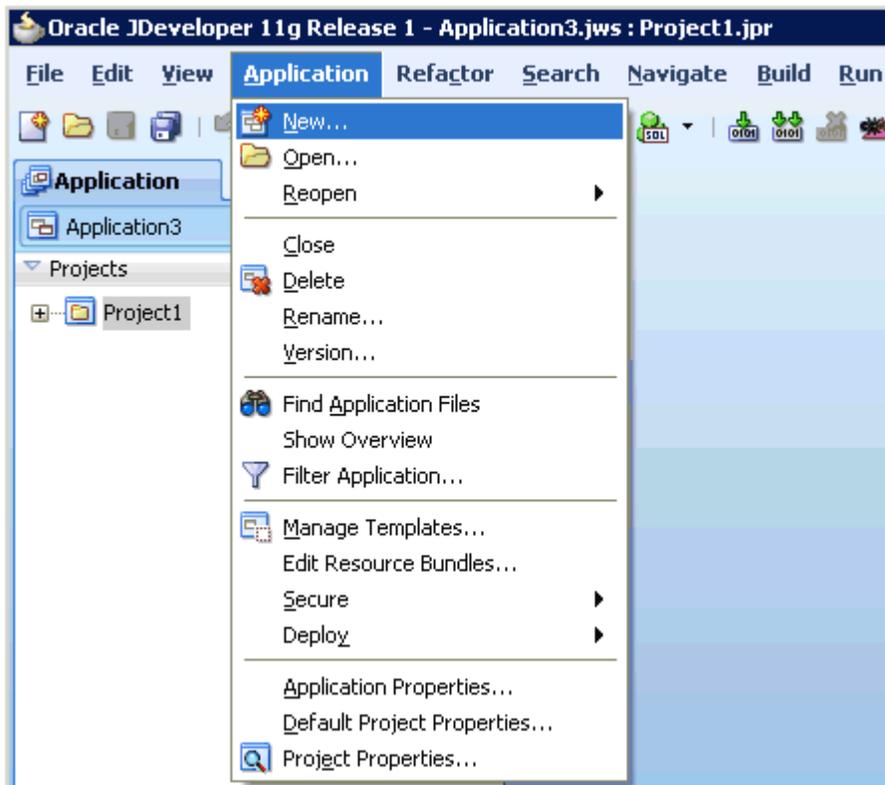
Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

### 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:

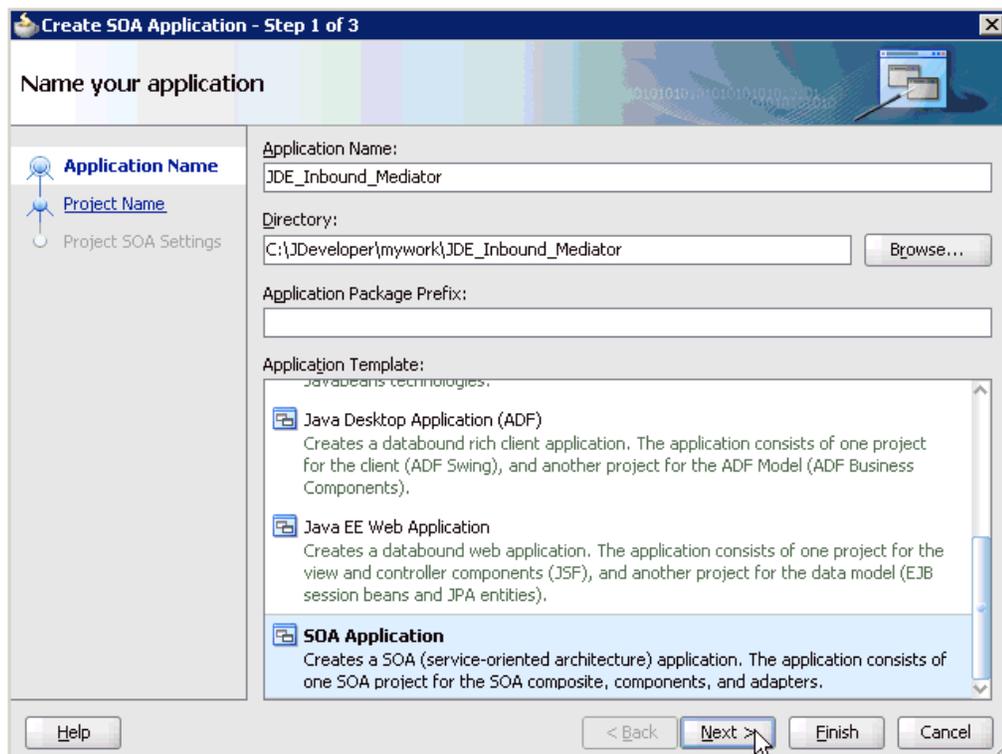
1. Open Oracle JDeveloper on your system.
2. Click **Application** in the menu bar and select **New** from the menu, as shown in [Figure 5-45](#).

**Figure 5–45 Application Menu New Option**



The Create SOA Application wizard is displayed, as shown in Figure 5–46.

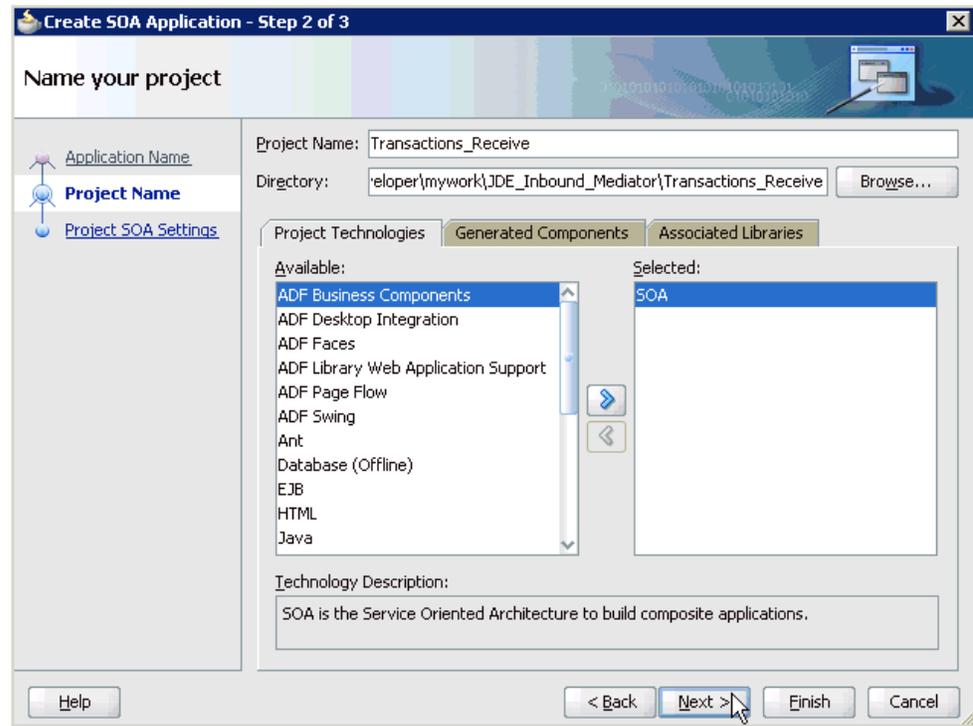
**Figure 5–46 Create SOA Application Wizard**



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

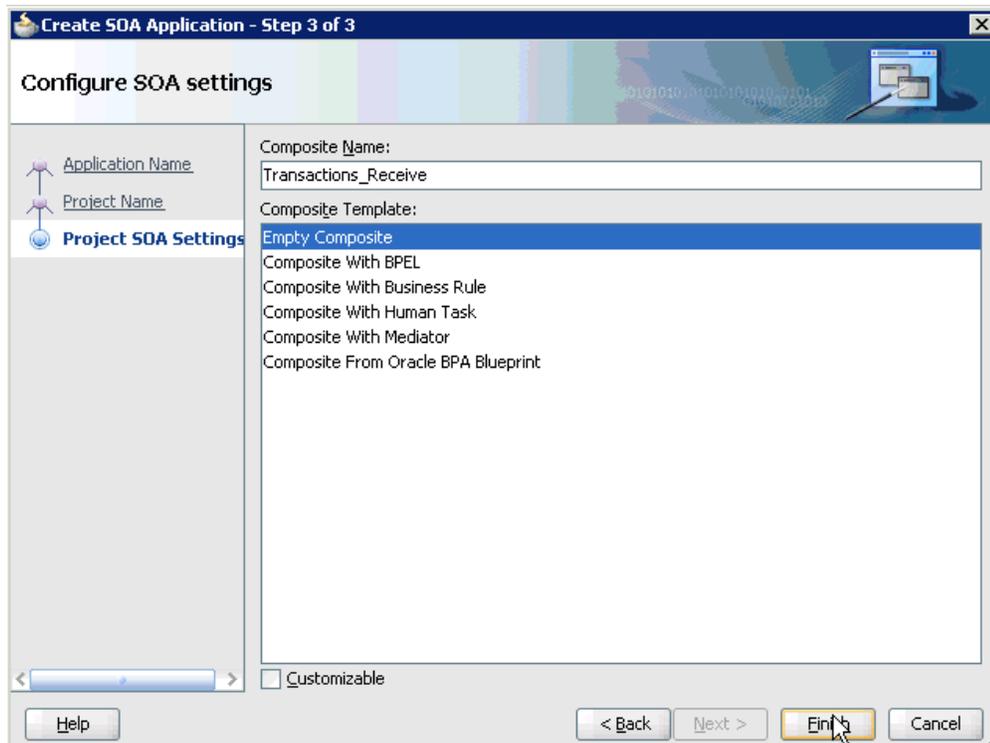
The Name your project page is displayed, as shown in [Figure 5-47](#).

**Figure 5-47 Name Your Project Page**



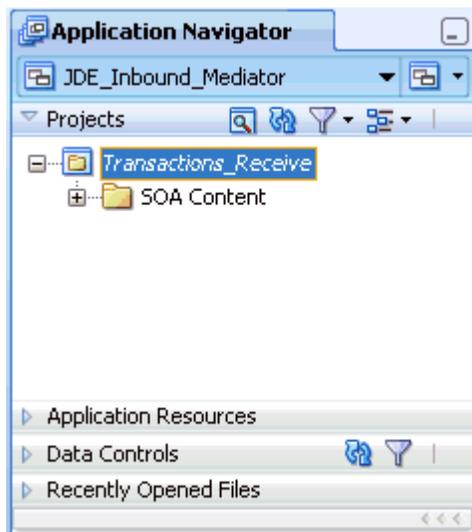
5. Enter a project name (for example, `Transactions_Receive`) and click **Next**.  
The Configure SOA settings page is displayed, as shown in [Figure 5-48](#).

**Figure 5–48 Configure SOA Settings Page**



- From the Composite Template list, select **Empty Composite** and click **Finish**, as shown in [Figure 5–49](#).

**Figure 5–49 Application Navigator Tab**



The new SOA application (JDE\_Inbound\_Mediator) and associated project (Transactions\_Receive) are added to the Application Navigator tab in the left pane.

## 5.3.2 Defining a Mediator Inbound Process

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

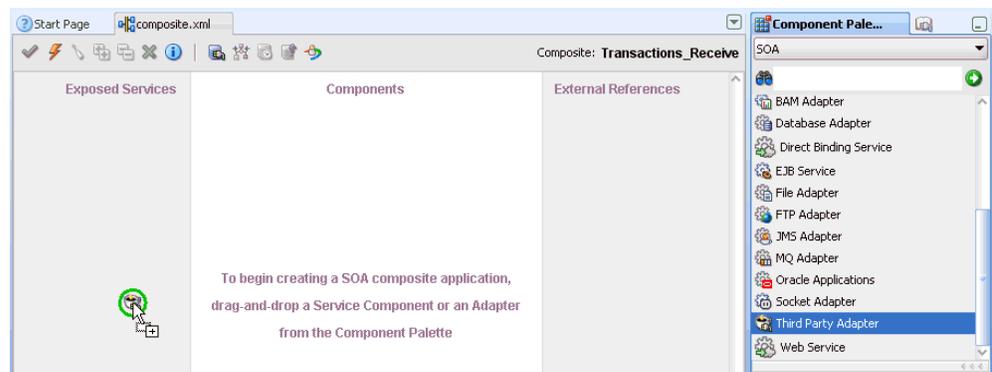
1. Configuring a Third Party Adapter Service Component
2. Configuring an Inbound Mediator Process Component With a File Adapter
3. Configuring the Routing Rules

### Configuring a Third Party Adapter Service Component

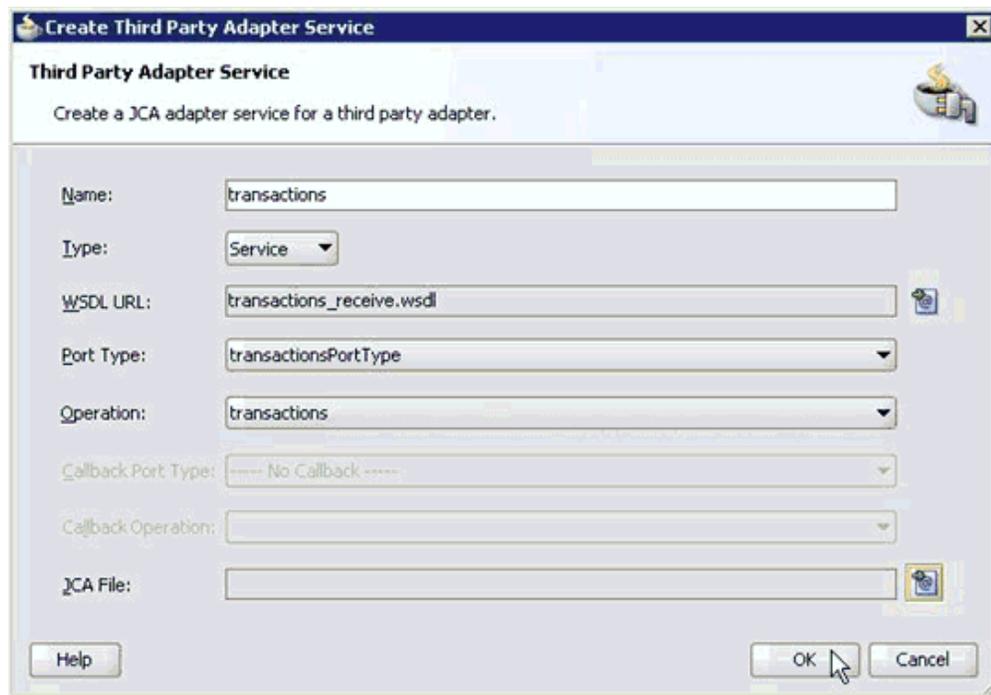
Perform the following steps to create a third party adapter service component:

1. 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 5–50](#).

**Figure 5–50** *Third Party Adapter Component*

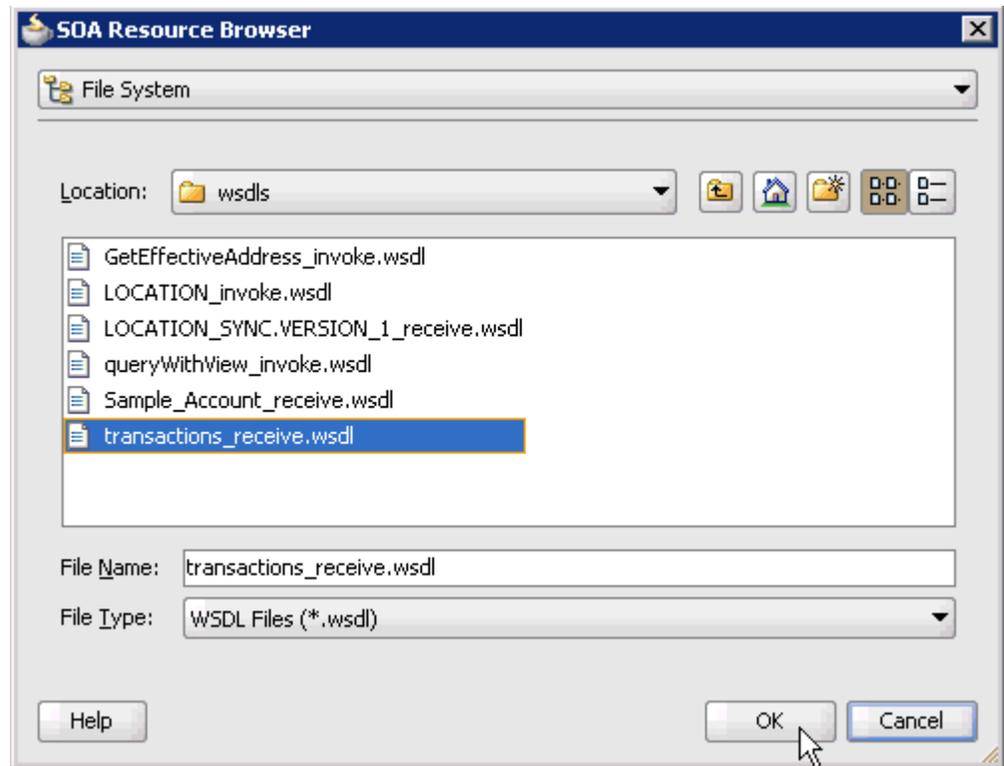


The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 5–51](#).

**Figure 5–51 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 5–52](#).

**Figure 5–52 SOA Resource Browser Dialog**

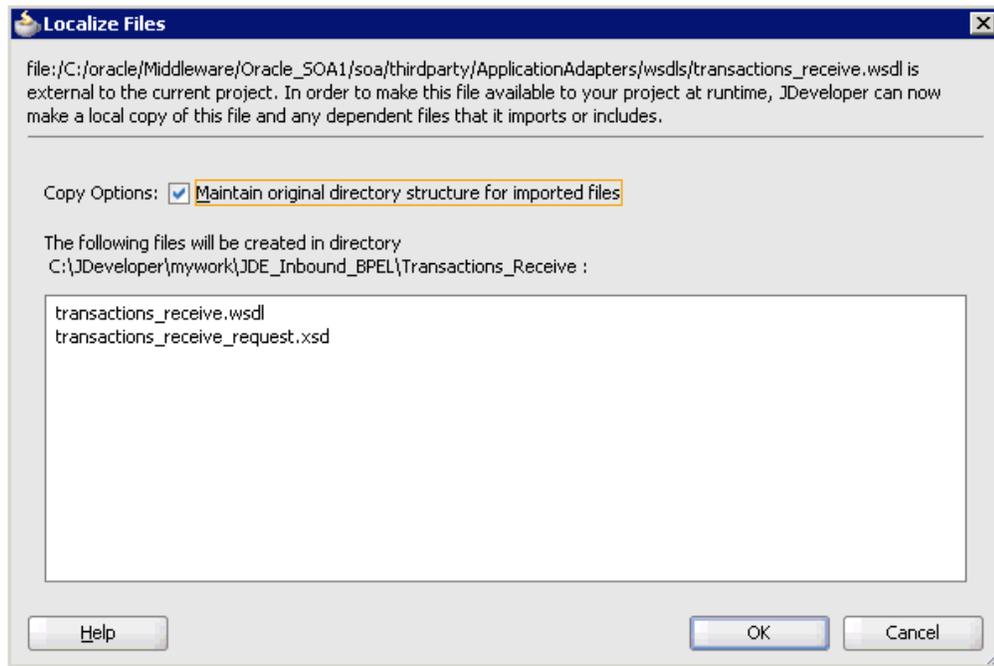
5. Browse and select an inbound WSDL file from the following directory:

<ADAPTER\_HOME>\soa\thirdparty\ApplicationAdapters\wsdls

6. Click **OK**.

The Localize Files dialog is displayed, as shown in [Figure 5–53](#).

**Figure 5–53 Localize Files Dialog**

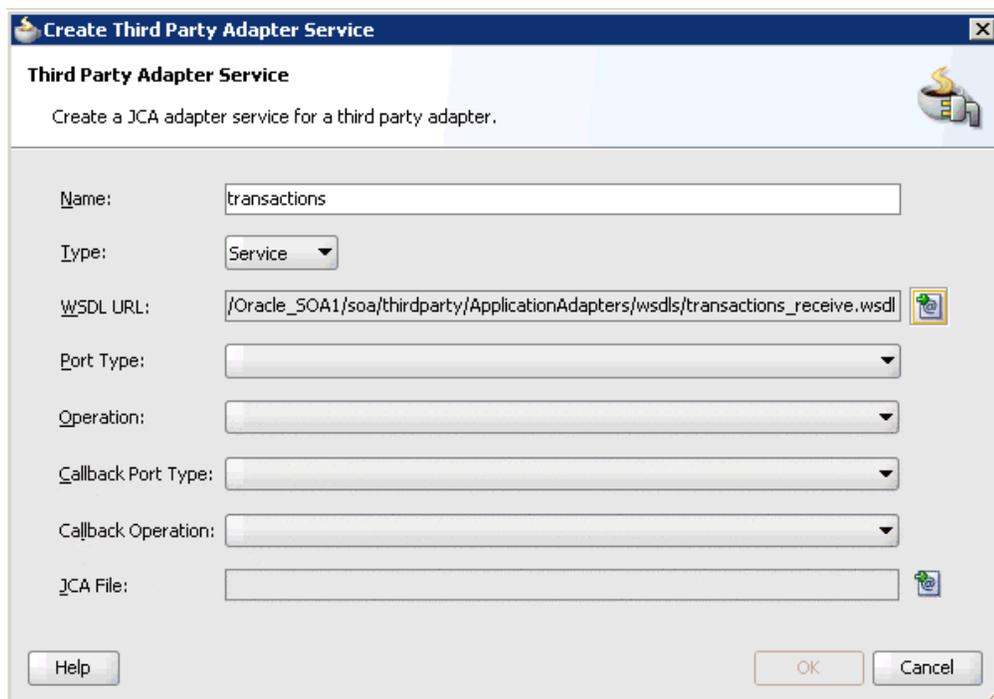


7. Click **OK**.

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

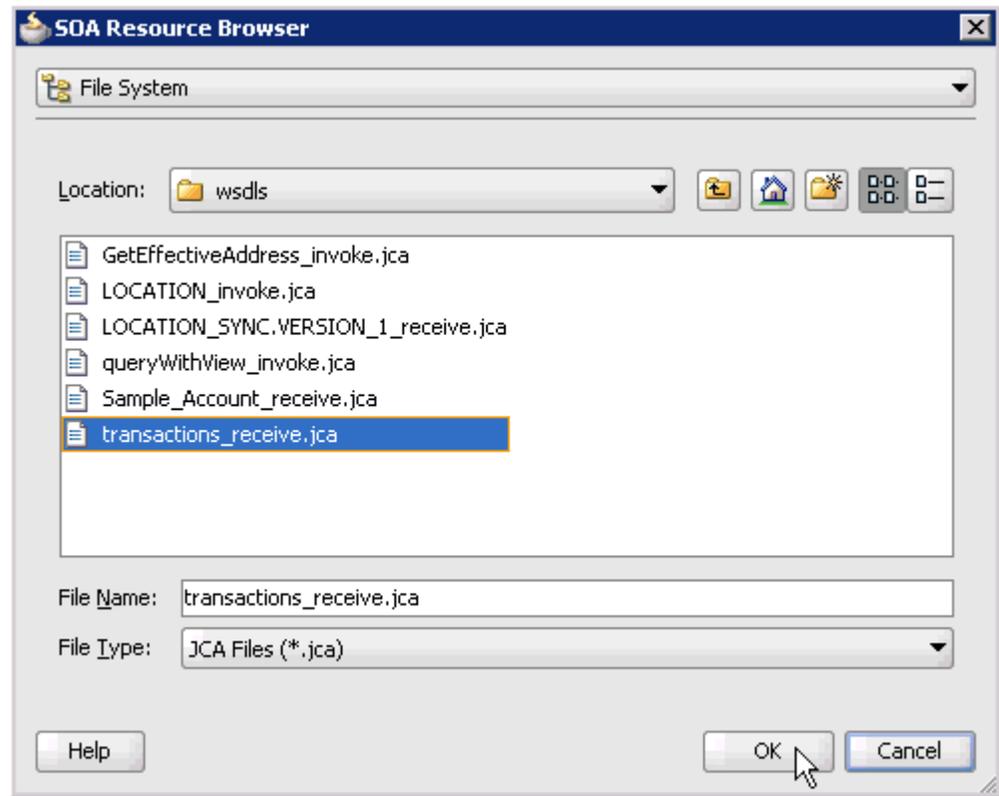
You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 5–54](#).

**Figure 5–54 Create Third Party Adapter Service Dialog**



8. 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 5-55](#).

**Figure 5-55 SOA Resource Browser Dialog**



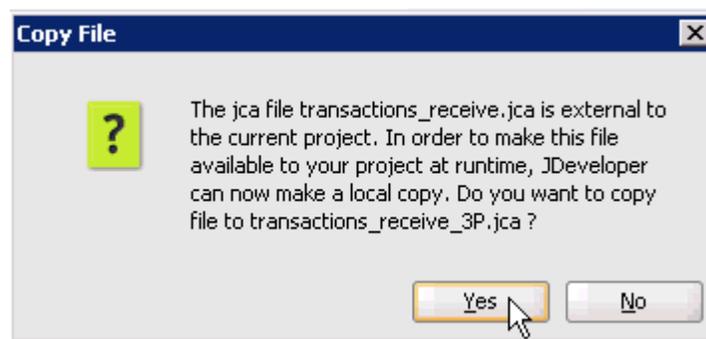
9. Browse and select the JCA properties file from the following directory:

`<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls`

10. Click **OK**.

The following message is displayed, as shown in [Figure 5-56](#).

**Figure 5-56 Copy File Confirmation Message**

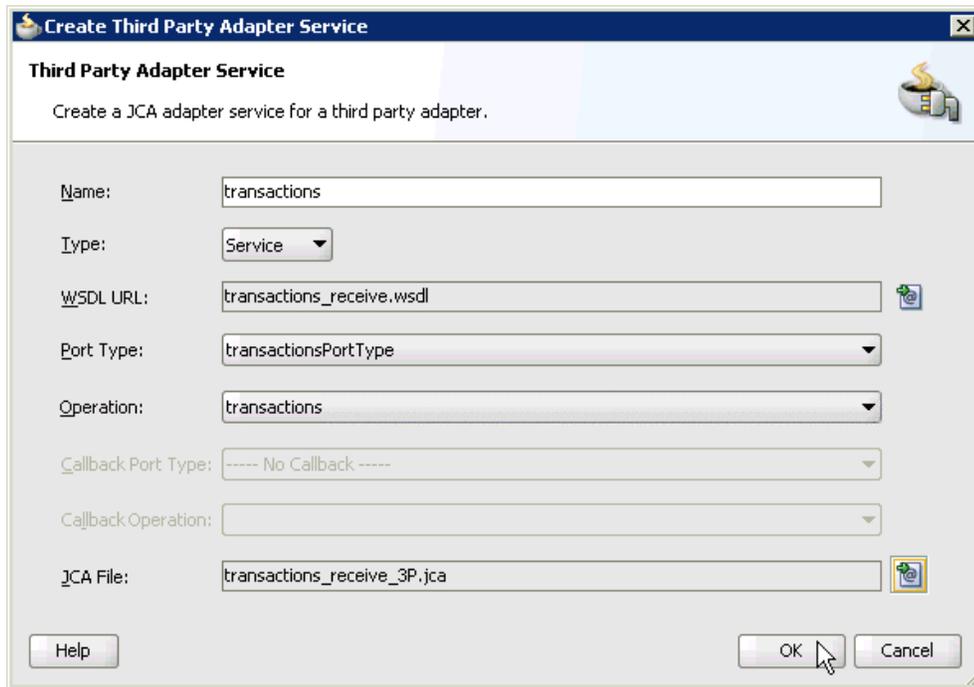


11. Click **Yes**.

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 5-57](#).

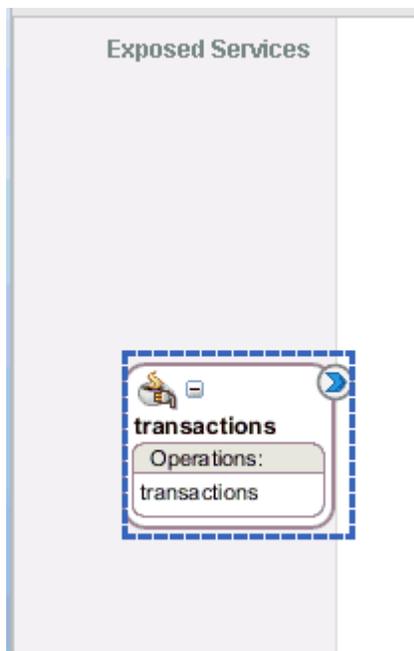
**Figure 5-57 Create Third Party Adapter Service Dialog**



12. Click **OK**.

The third party adapter service component (transactions) is created and displayed in the Exposed Services pane, as shown in [Figure 5-58](#).

**Figure 5-58 Exposed Services Pane**



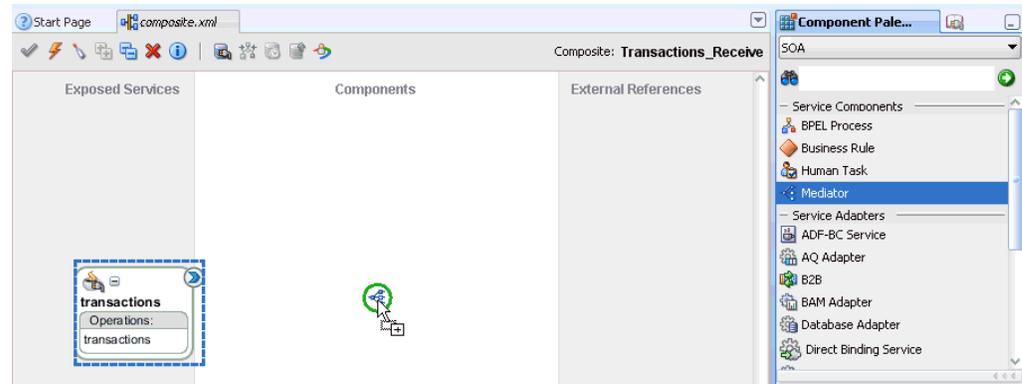
You are now ready to configure an inbound Mediator process component.

### 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.

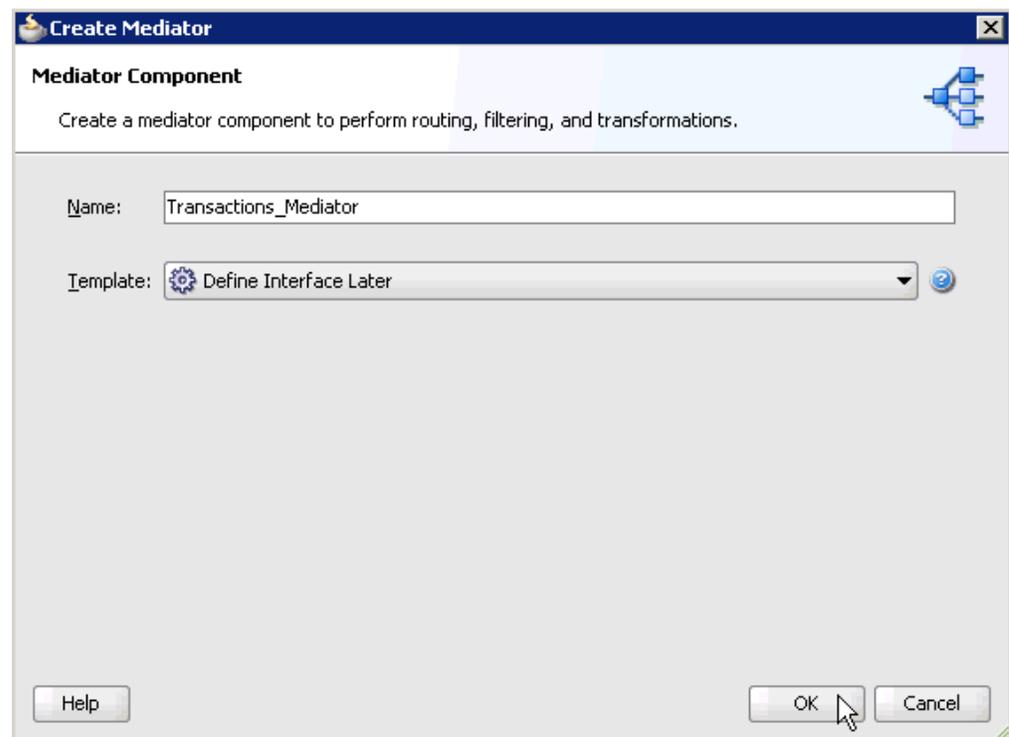
1. Drag and drop the **Mediator** component from the Component Palette tab (Service Components section) to the Components pane, as shown in [Figure 5–59](#).

**Figure 5–59** Mediator Component



The Create Mediator dialog is displayed, as shown in [Figure 5–60](#).

**Figure 5–60** Create Mediator Dialog

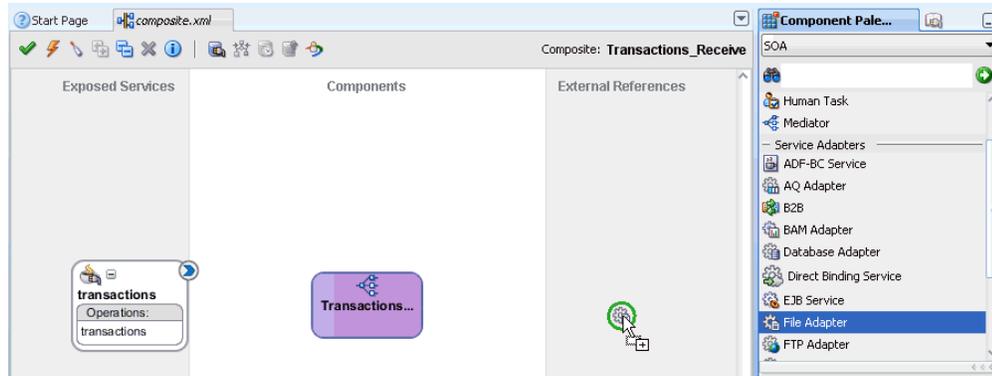


2. In the Name field, enter a name to identify the new inbound Mediator process component (for example, Transactions\_Mediator).
3. From the Template list, select **Define Interface Later**.

4. Click the **OK**.

The new Mediator process component is added to the Components pane, as shown in [Figure 5-61](#).

**Figure 5-61 Mediator Process Component**



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 5-62](#).

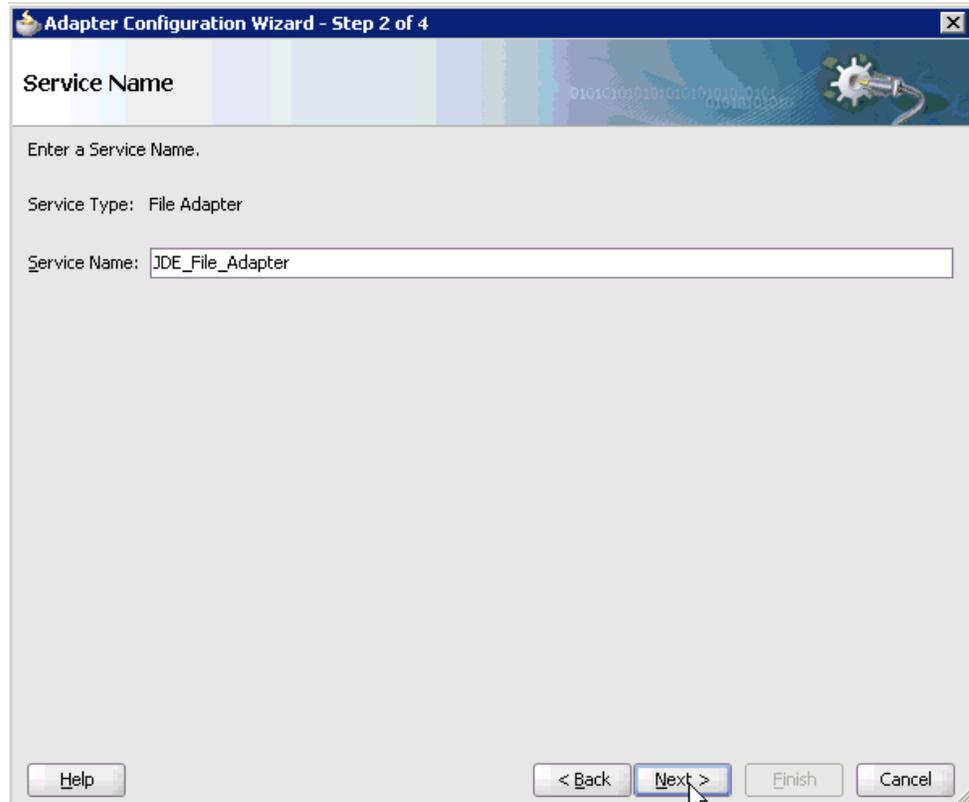
**Figure 5-62 Adapter Configuration Wizard Welcome page**



6. Click **Next**.

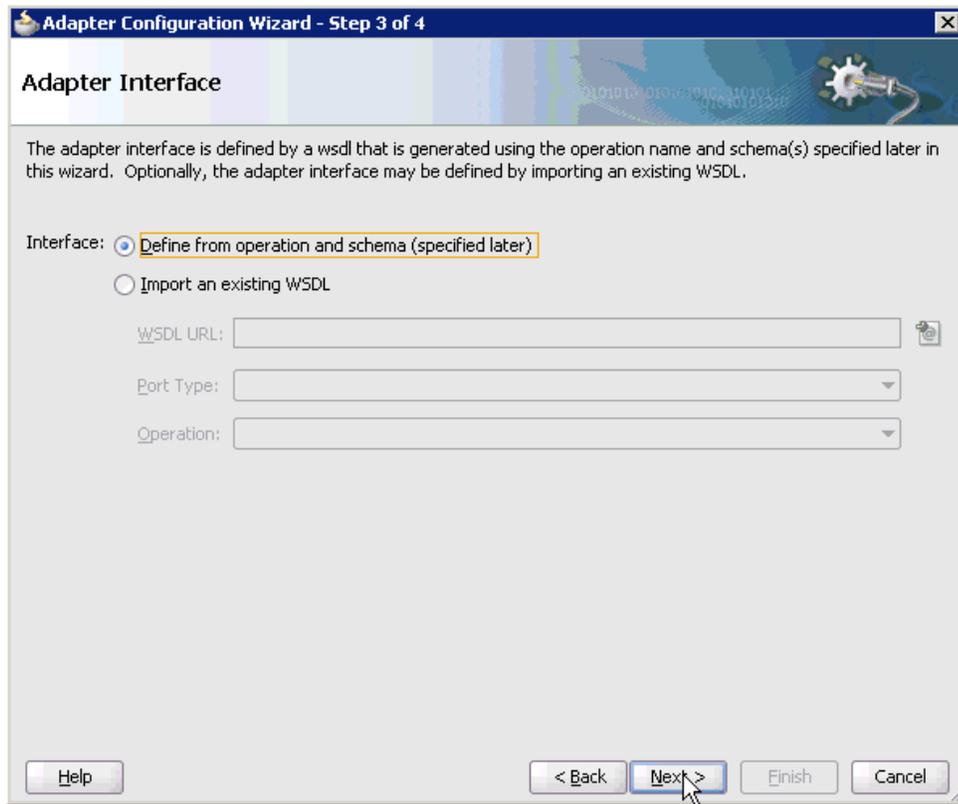
The Service Name page is displayed, as shown in [Figure 5-63](#).

**Figure 5-63 Service Name Change**



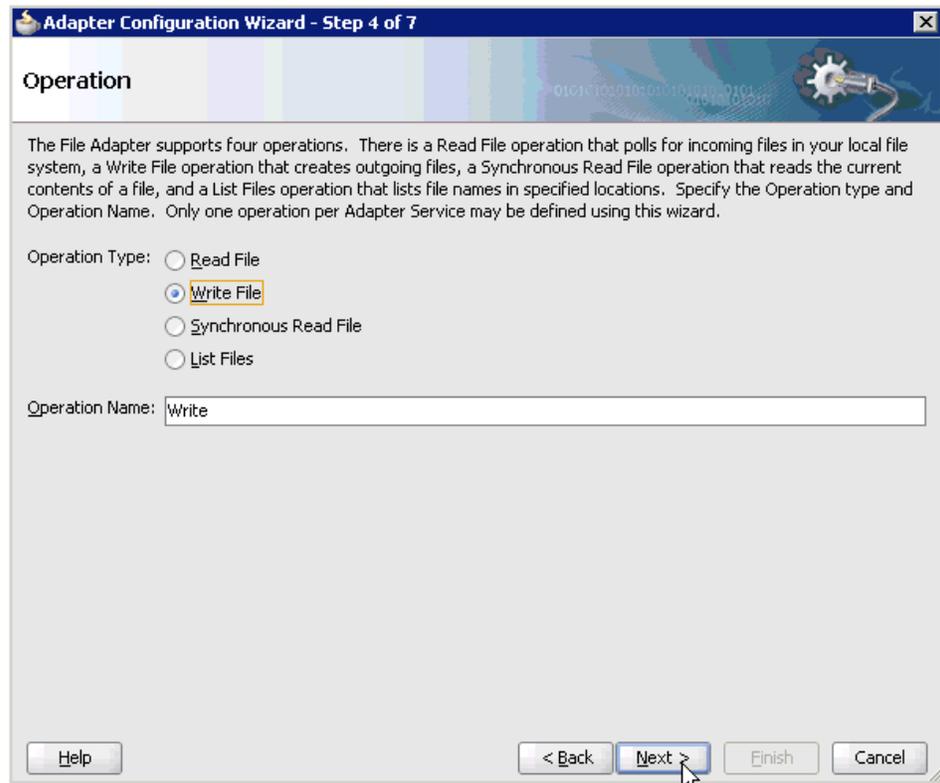
7. Type a name for the new File adapter in the Service Name field and click **Next**. The Adapter Interface page is displayed, as shown in [Figure 5-64](#).

**Figure 5–64 Adapter Interface Page**



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

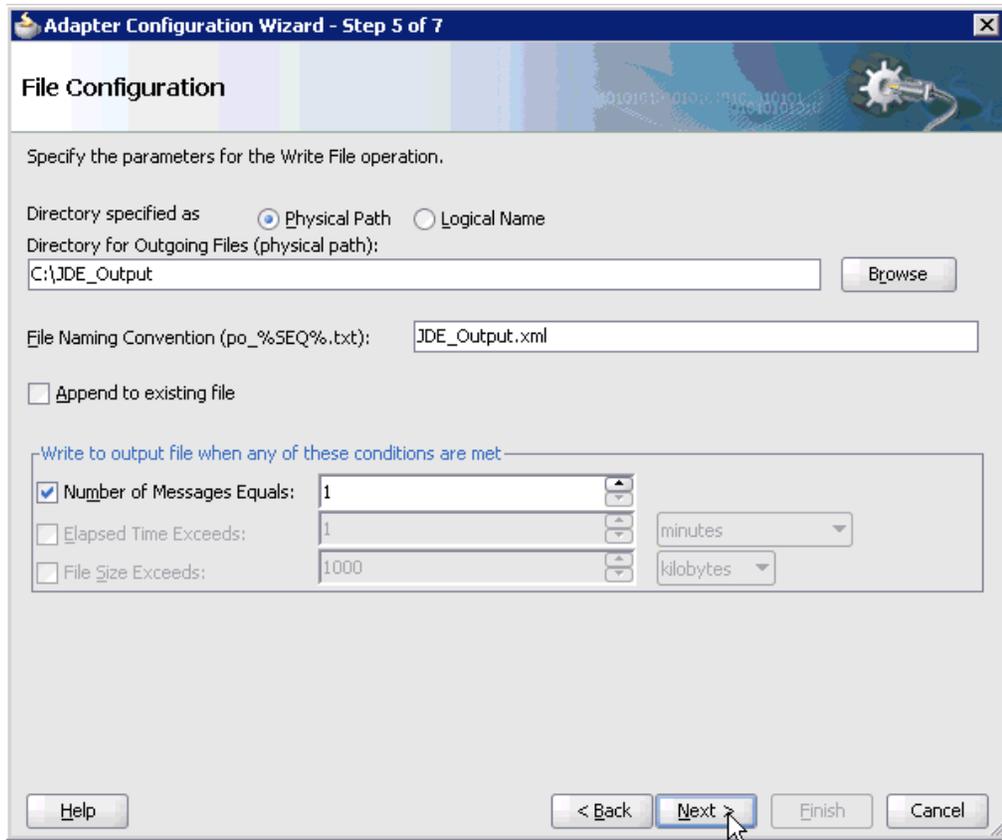
The Operation page is displayed, as shown in [Figure 5–65](#).

**Figure 5–65 Operation Page**

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

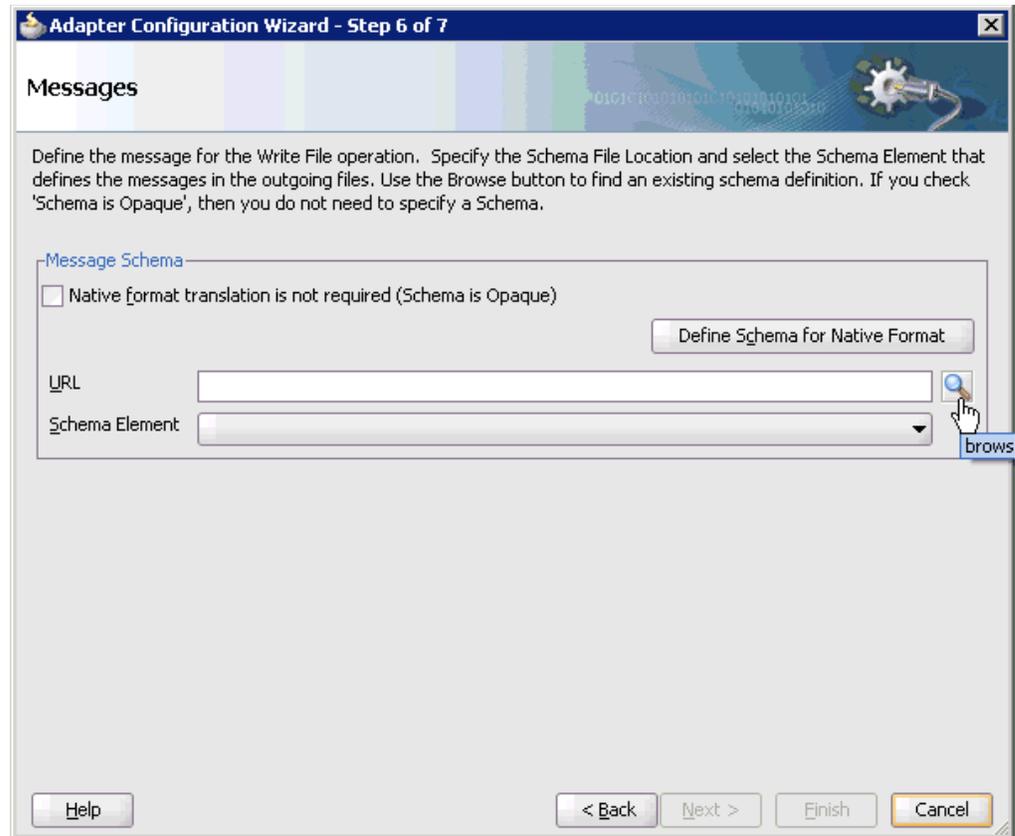
The File Configuration page is displayed, as shown in [Figure 5–66](#).

**Figure 5–66 File Configuration Page**

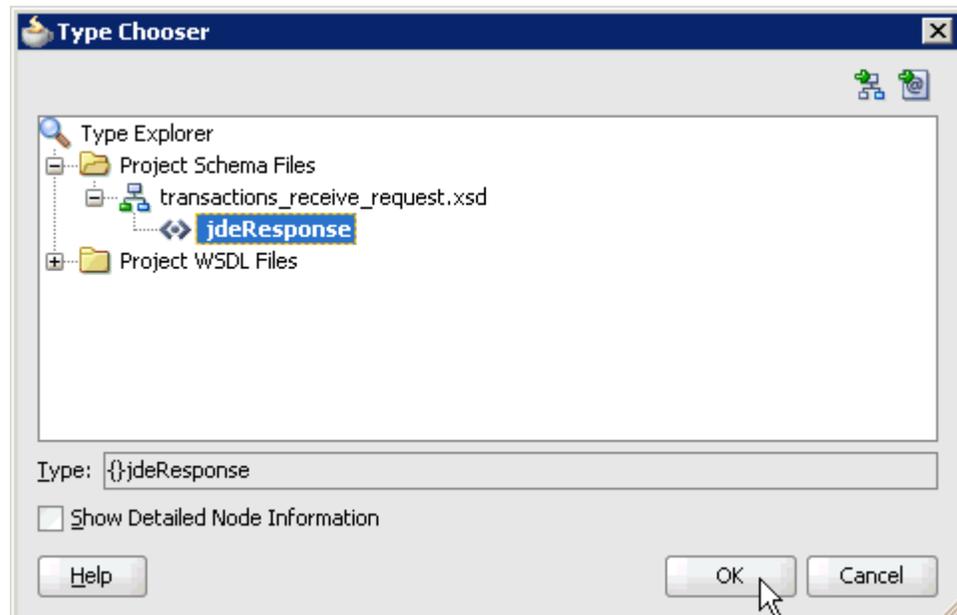


12. Specify a location on your file system where the output file is written.
13. In the File Naming Convention field, specify a name for the output file.
14. Click **Next**.

The Messages page is displayed, as shown in [Figure 5–67](#).

**Figure 5–67 Messages Page**

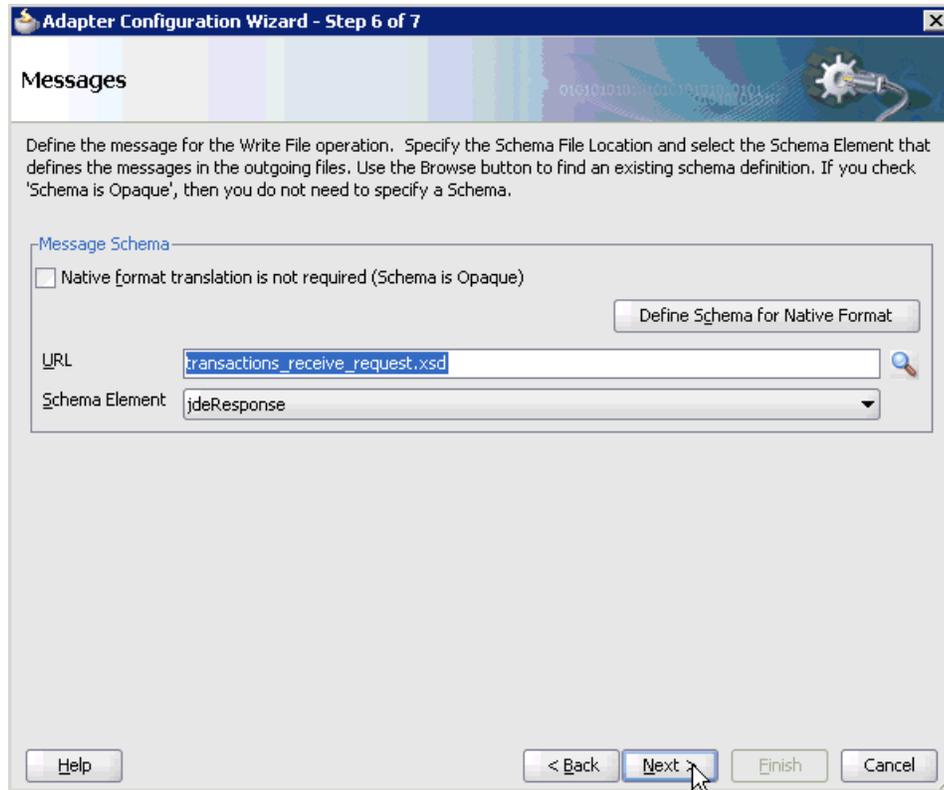
15. Click **browse for schema file**, which is located to the right of the URL field.  
The Type Chooser dialog is displayed, as shown in [Figure 5–68](#).

**Figure 5–68 Type Chooser Dialog**

16. Select the available schema.
17. Click OK.

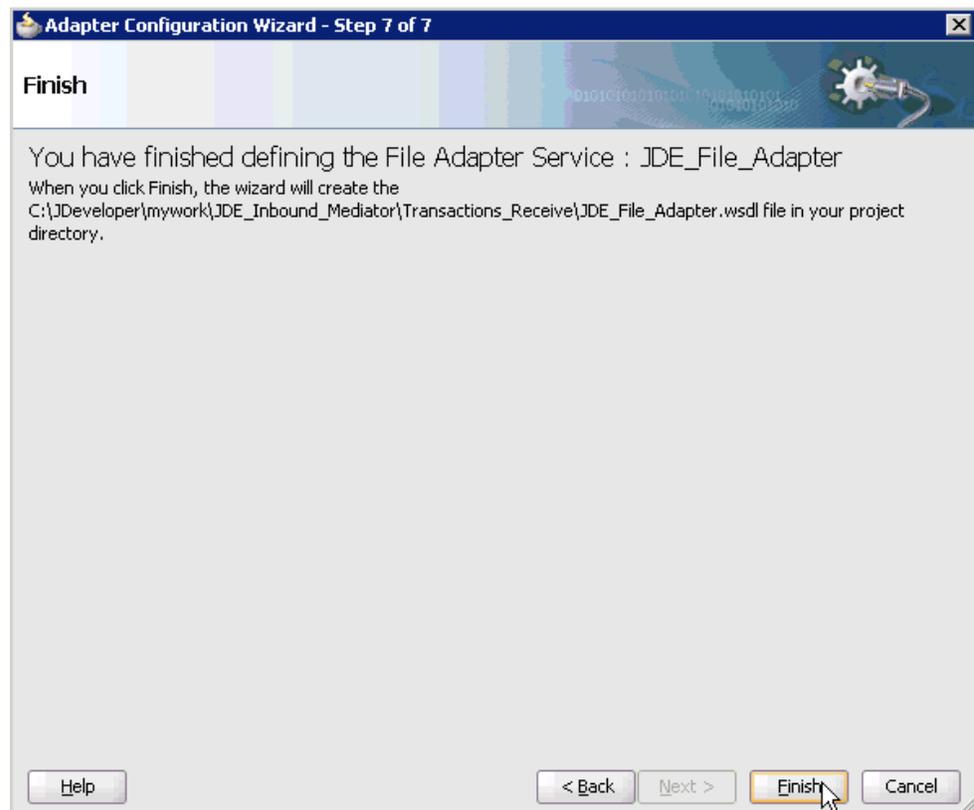
You are returned to the Messages page, as shown in [Figure 5–69](#).

**Figure 5–69 Messages Page**

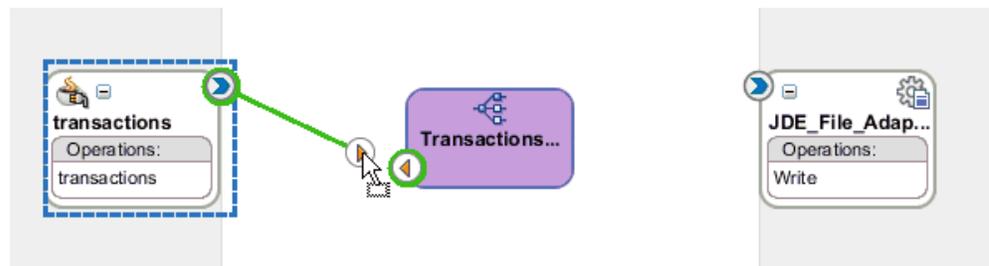


18. Click Next.

The Finish page is displayed, as shown in [Figure 5–70](#).

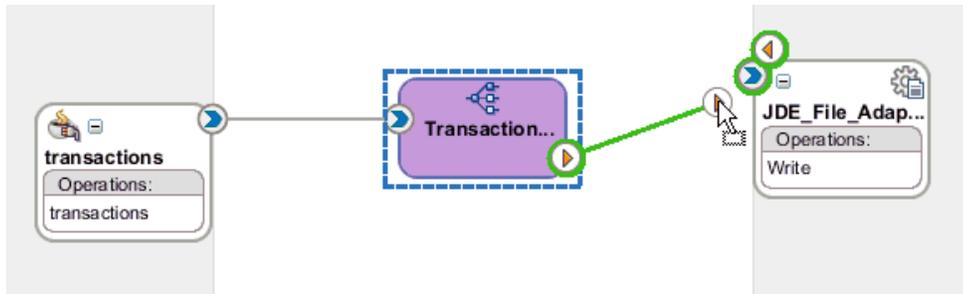
**Figure 5–70 Finish Page**

19. Click **Finish**.
20. Create a connection between the inbound Mediator process component and the third party adapter service component, as shown in [Figure 5–71](#).

**Figure 5–71 Connection Creation**

21. Create a connection between the inbound Mediator process component and the File adapter component, as shown in [Figure 5–72](#).

**Figure 5–72 Connection Creation**



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:

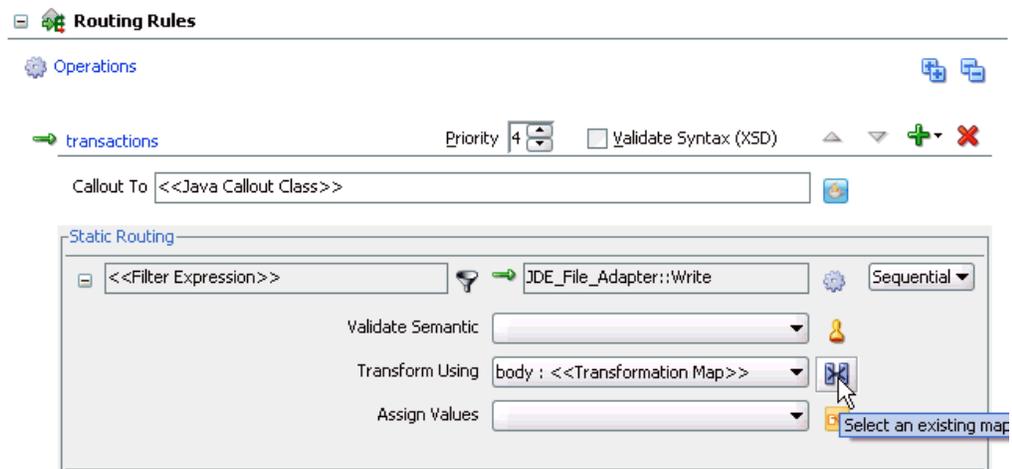
1. Double-click the inbound Mediator process component in the Components pane, as shown in [Figure 5–73](#).

**Figure 5–73 Inbound Mediator Process Component**



The Routing Rules dialog is displayed, as shown in [Figure 5–74](#).

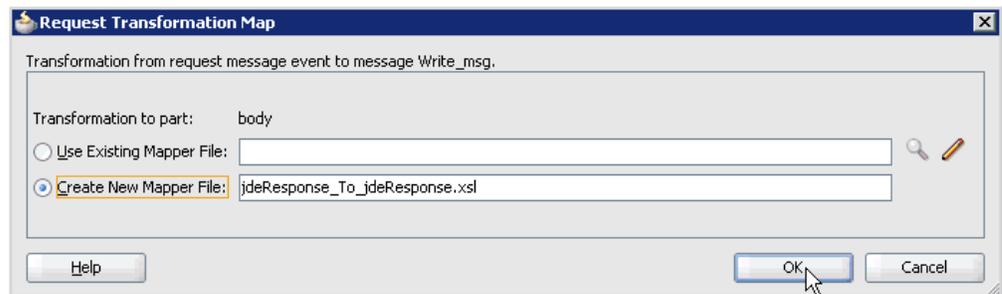
**Figure 5–74 Routing Rules Dialog**



2. 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 5–75](#).

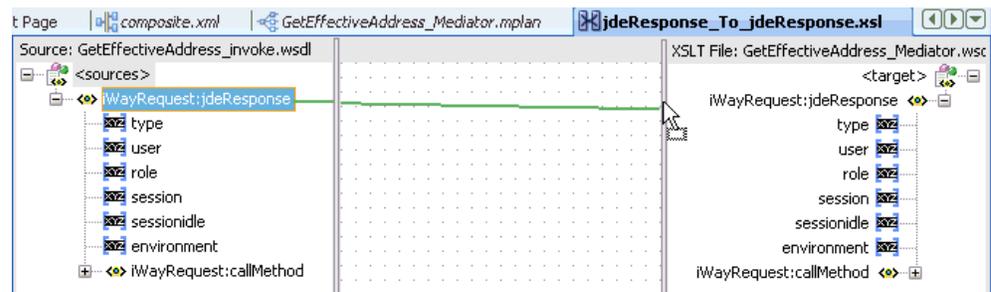
**Figure 5–75 Request Transformation Map Dialog**



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

The `jdeResponse_To_jdeResponse.xml` tab is displayed, as shown in [Figure 5–76](#).

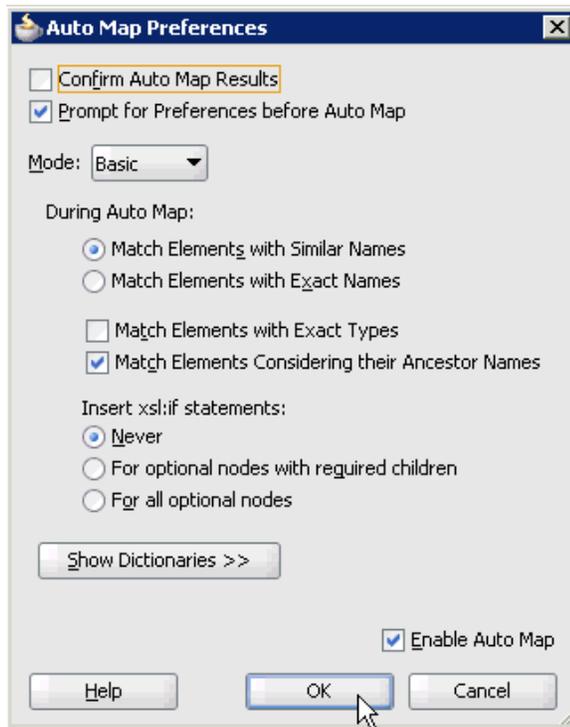
**Figure 5–76 jdeResponse\_To\_jdeResponse.xml Tab**



4. Map the `iWayRequest:jdeResponse` source element to the `iWayRequest:jdeResponse` target element.

The Auto Map Preferences dialog is displayed, as shown in [Figure 5–77](#).

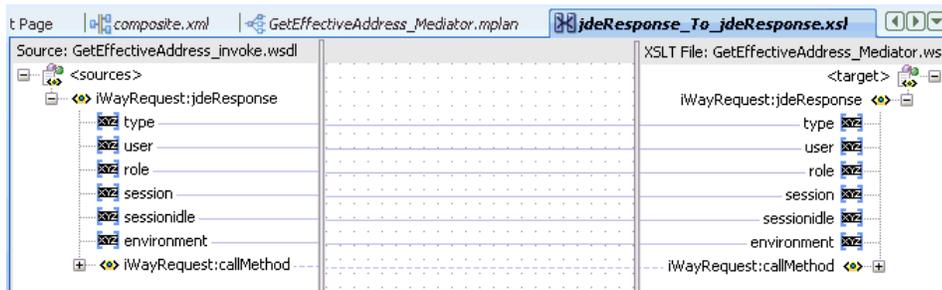
**Figure 5–77 Auto Map Preferences Dialog**



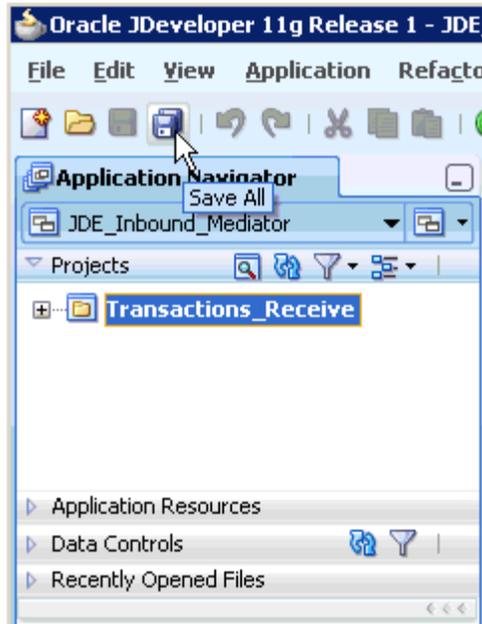
5. Retain the default values and click **OK**.

The mapping is completed, as shown in [Figure 5–78](#).

**Figure 5–78 Completed Mapping**



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 5–79](#).

**Figure 5-79 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 4-57.

Once event messages are triggered through J.D. Edwards OneWorld, output XML is received in the location that was specified for the File adapter component. For more information on triggering events in J.D. Edwards OneWorld, see ["Triggering an Event in J.D. Edwards OneWorld"](#) on page 4-61.



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## Integration With BPM Service Components in the Oracle SOA Suite

Oracle Application Adapter for J.D. Edwards OneWorld 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 J.D. Edwards OneWorld 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 WSDL \(J2CA Configurations Only\)](#)" on page 2-12.

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 J.D. Edwards OneWorld 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

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

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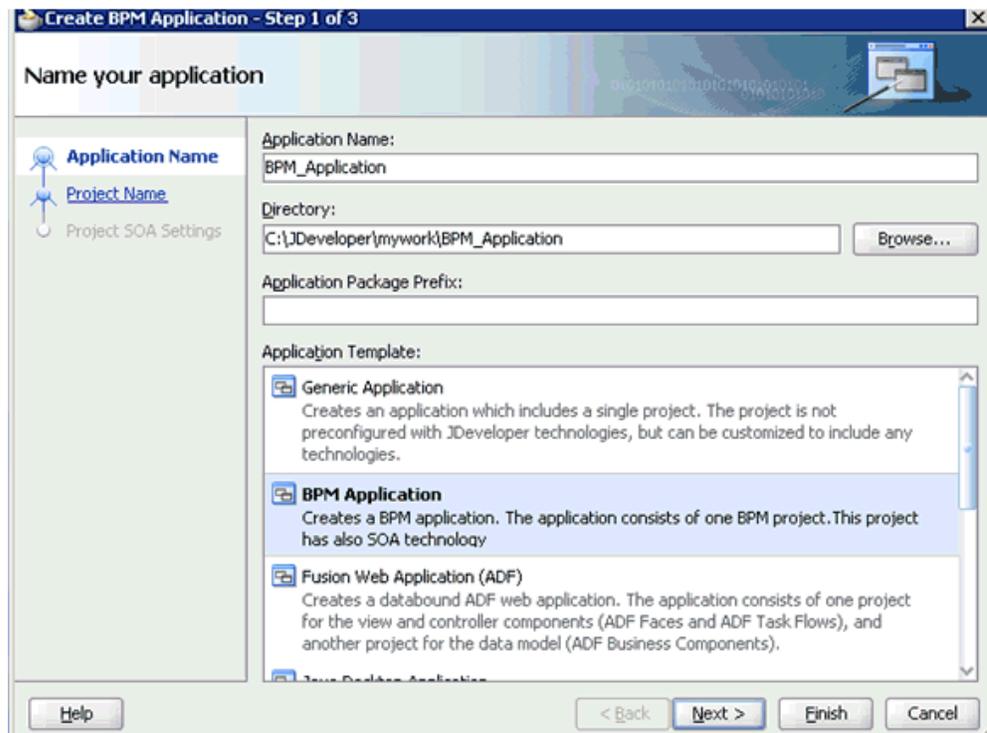
Before you design a BPM process, you must generate the respective WSDL file using Application Explorer. For more information, see "[Generating WSDL for Request/Response Service](#)" on page 4-8.

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

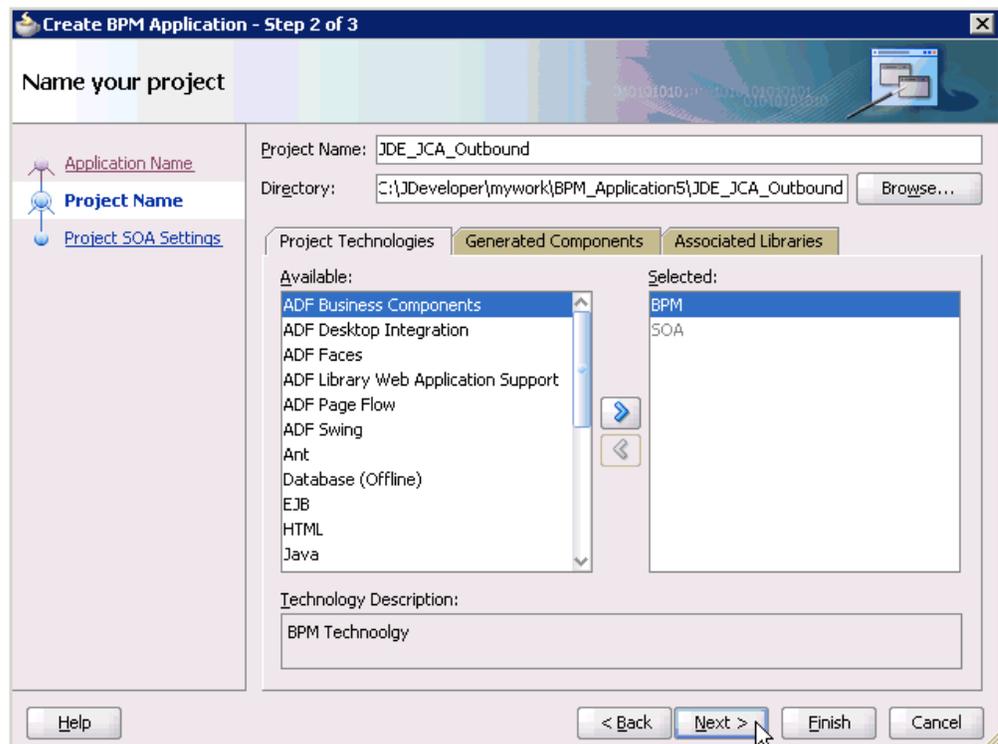
### 6.4.1 Creating an Empty Composite for BPM

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](#).

**Figure 6–1 Name Your Application Page**

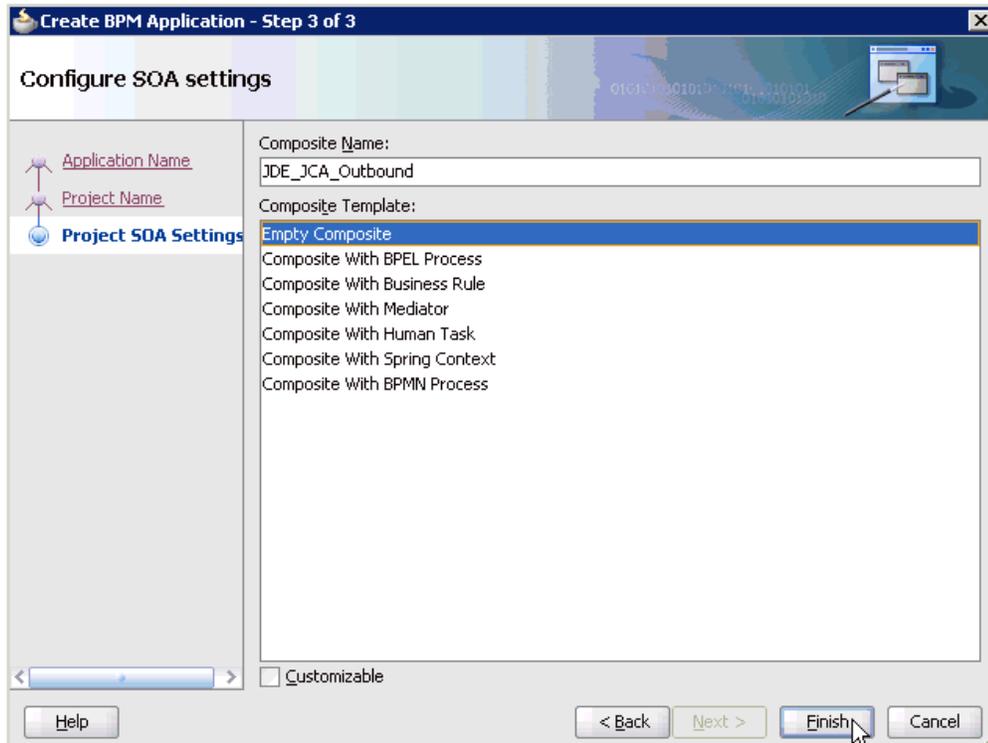
The Name your project page is displayed, as shown in [Figure 6–2](#).

**Figure 6–2 Name Your Project Page**

3. Enter a project name (for example, JDE\_JCA\_Outbound) and click **Next**.

The Configure SOA settings page is displayed, as shown in [Figure 6-3](#).

**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

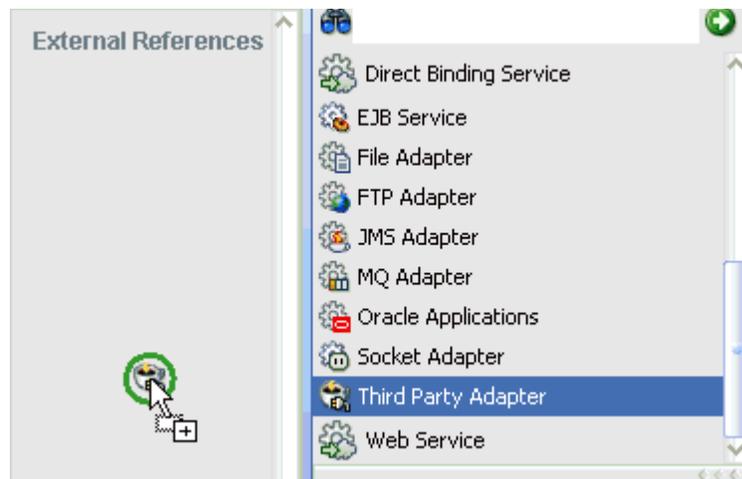
This section describes how to define a BPM outbound process, which consists of the following stages:

1. Configuring a Third Party Adapter Service Component
2. Configuring an Outbound BPM Process Component
3. Creating a File Adapter for the Write Operation

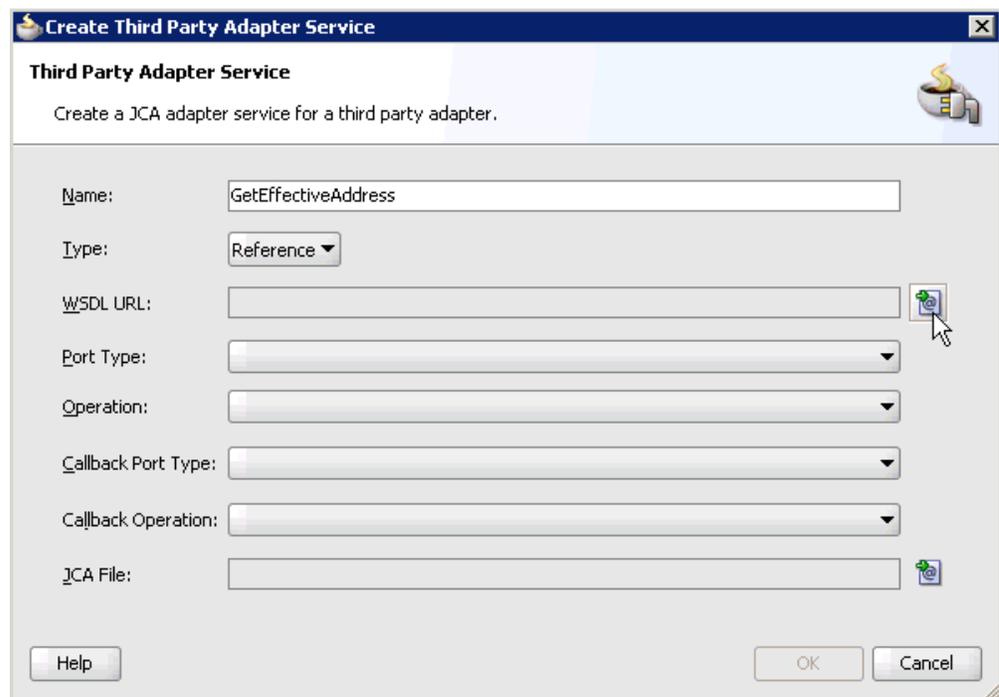
### Configuring a Third Party Adapter Service Component

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](#).

**Figure 6–4 Third Party Adapter Component**

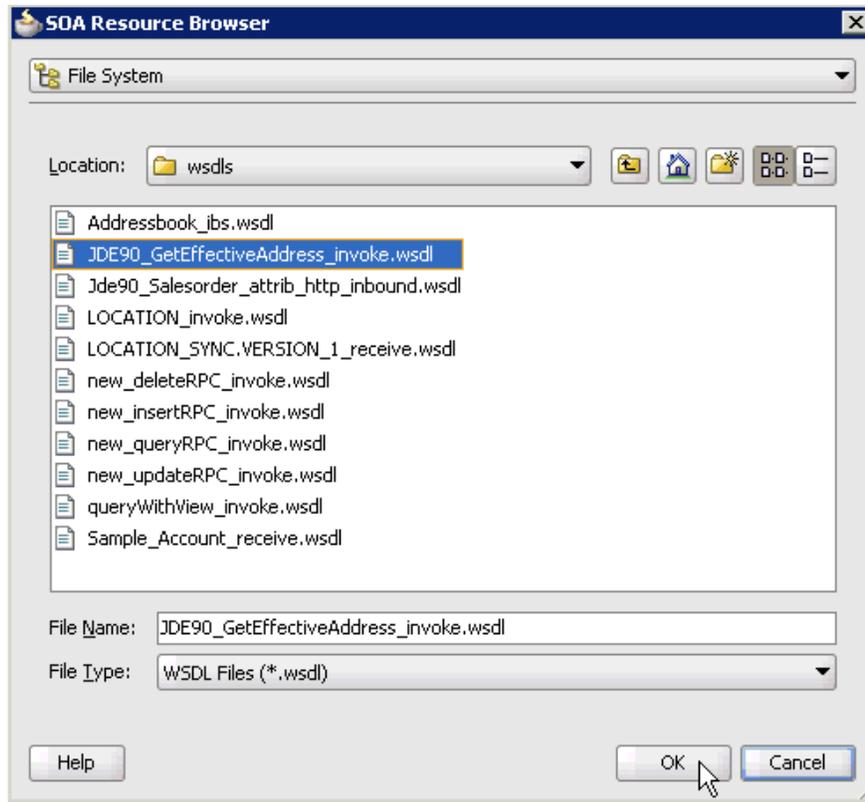
The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 6–5](#).

**Figure 6–5 Create Third Party Adapter Service Dialog**

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](#).

**Figure 6–6 SOA Resource Browser Dialog**

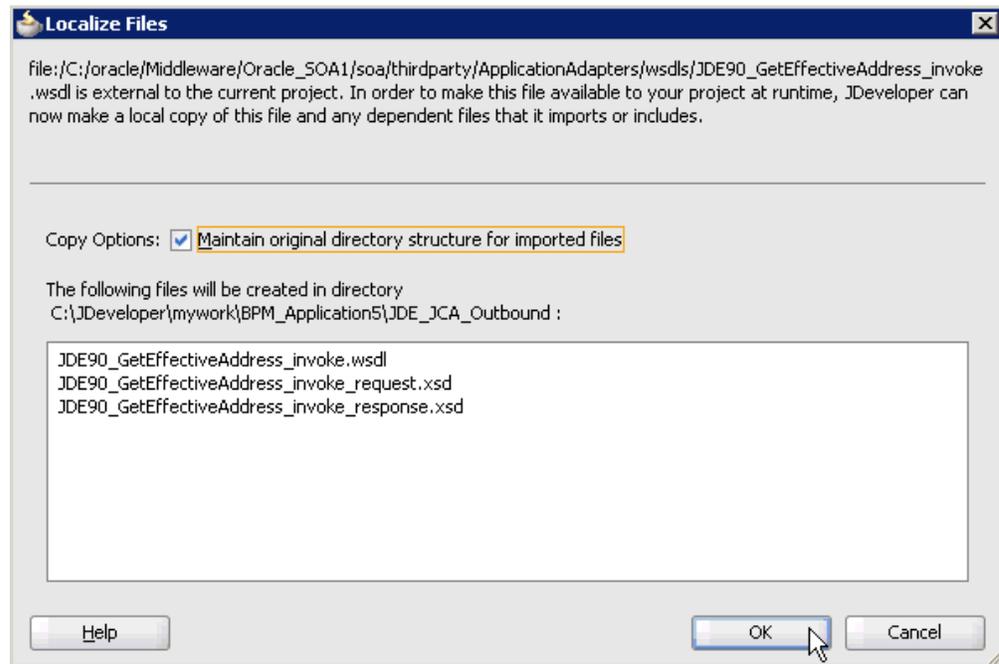


5. Browse and select an outbound WSDL file from the following directory:

`<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdls`

6. Click **OK**.

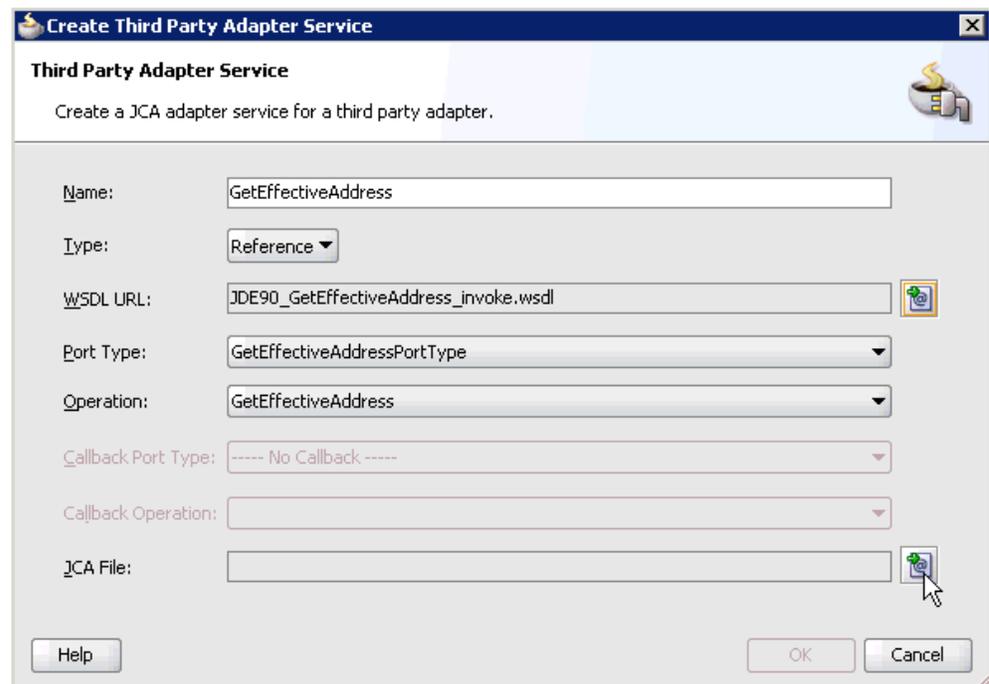
The Localize Files dialog is displayed, as shown in [Figure 6–7](#).

**Figure 6–7 Localize Files Dialog**

7. Click **OK**.

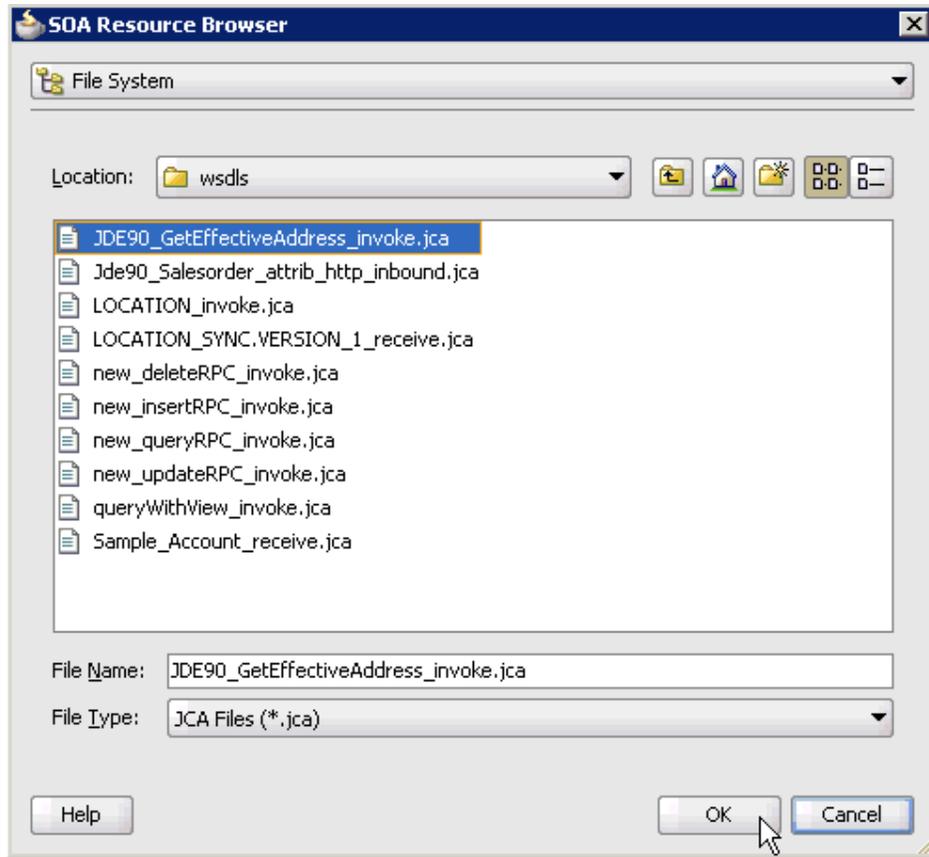
The outbound WSDL file and associated request and response XML schema files (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 6–8](#).

**Figure 6–8 Create Third Party Adapter Service Dialog**

8. 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](#).

**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 Message**

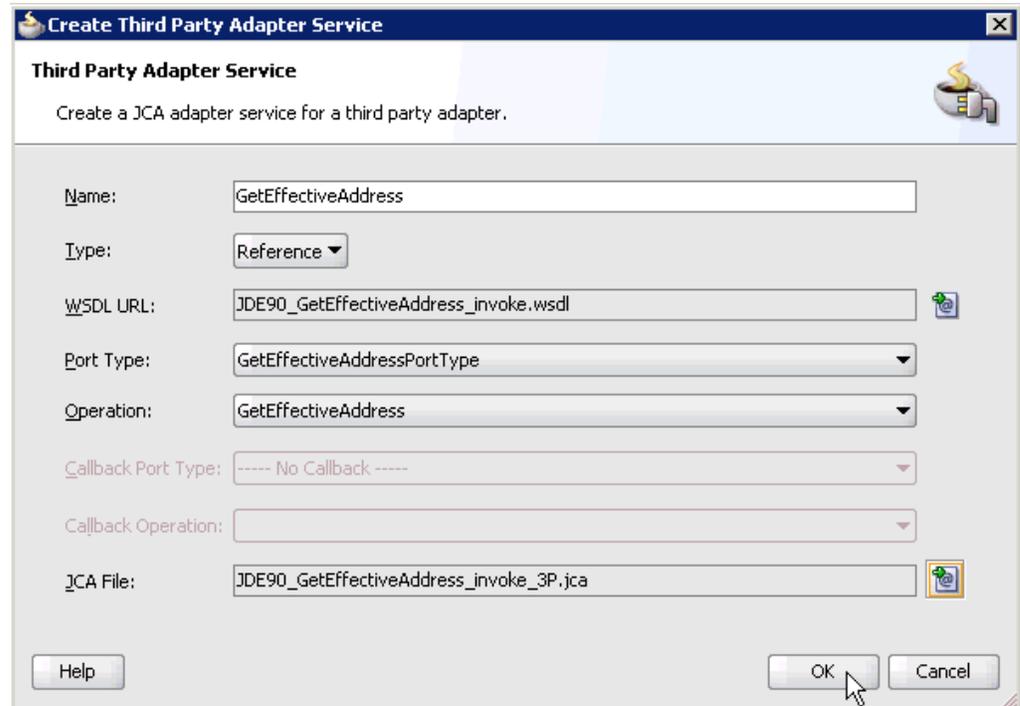


11. Click **Yes**.

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 6–11](#).

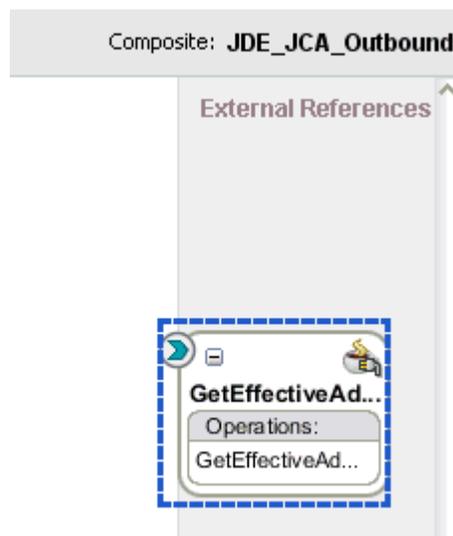
**Figure 6–11 Create Third Party Adapter Service Dialog**



**12. Click OK.**

The third party adapter service component (GetEffectiveAddress) is created and displayed in the External References pane, as shown in [Figure 6–12](#).

**Figure 6–12 Third Party Adapter Service Component**



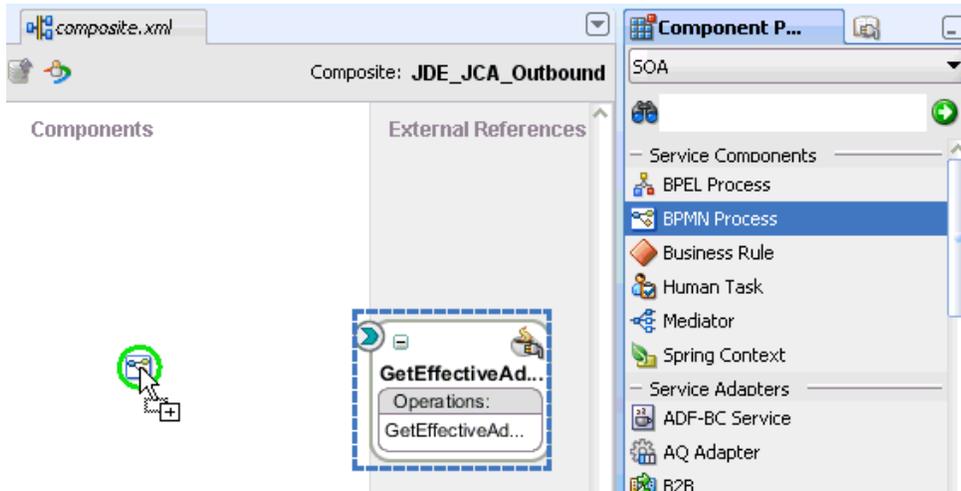
You are now ready to configure an outbound BPM process component.

### Configuring an Outbound BPM Process Component

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

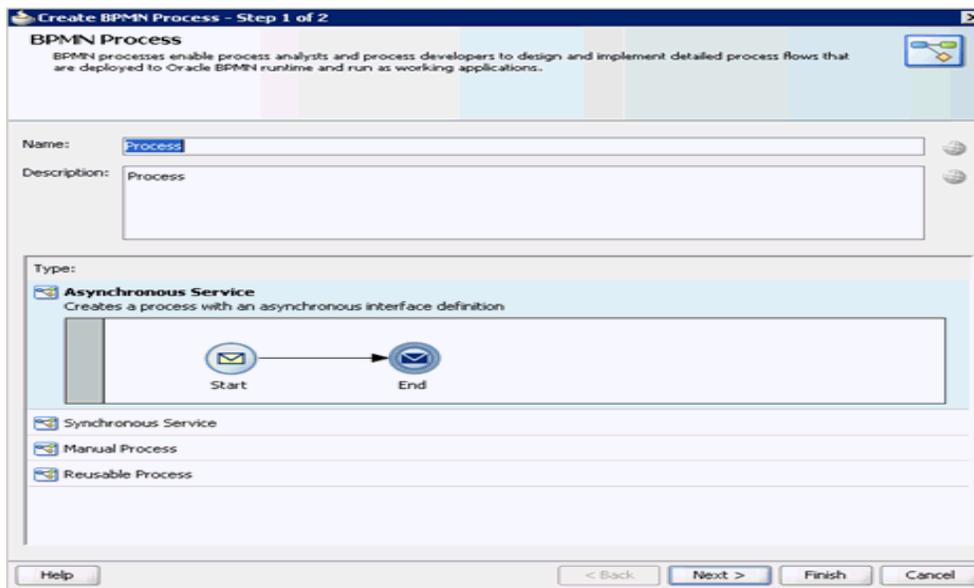
1. Drag and drop the **BPMN Process** component from the Service Components pane to the Components pane, as shown in [Figure 6–13](#).

**Figure 6–13** *BPMN Process Component*



The Create BPMN Process dialog is displayed, as shown in [Figure 6–14](#).

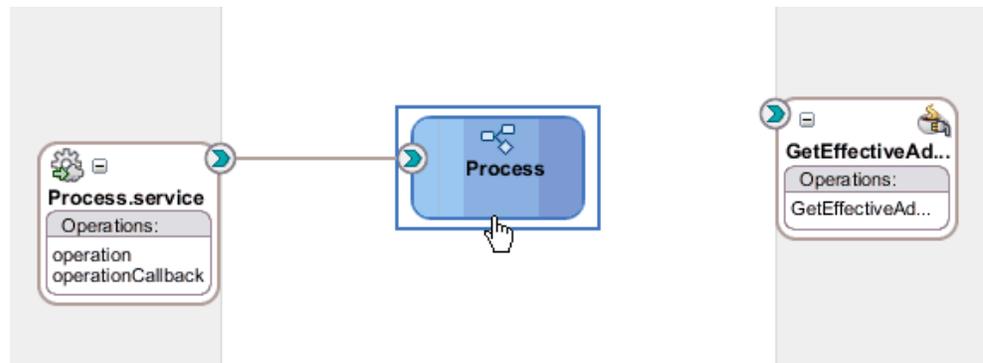
**Figure 6–14** *Create BPMN Process Dialog*



2. Accept the default option that is selected under the **Type** area (Asynchronous Service) and click **Finish**.

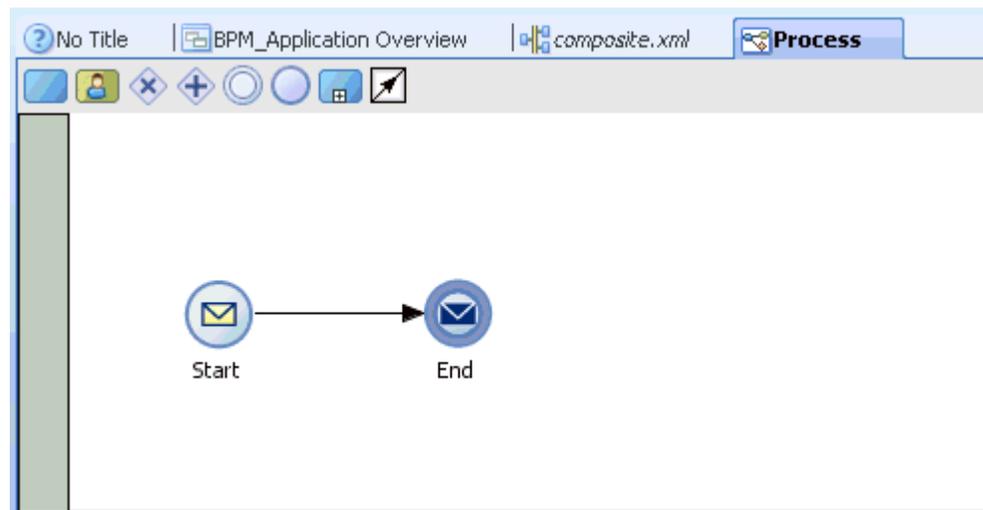
The BPMN Process component is created, as shown in [Figure 6–15](#).

**Figure 6–15 BPMN Process Component**



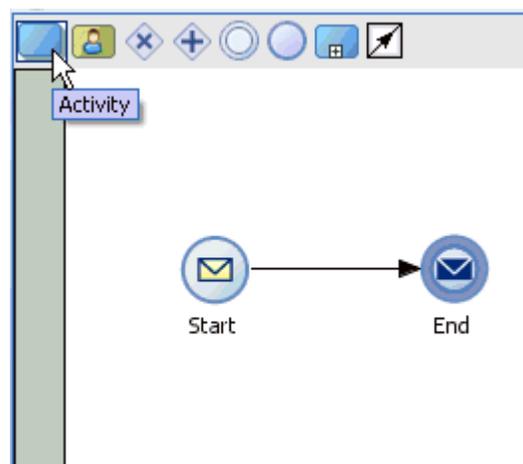
3. Double-click the BPMN Process component in the Components pane.  
The BPMN process is displayed, as shown in [Figure 6–16](#).

**Figure 6–16 BPMN Process**



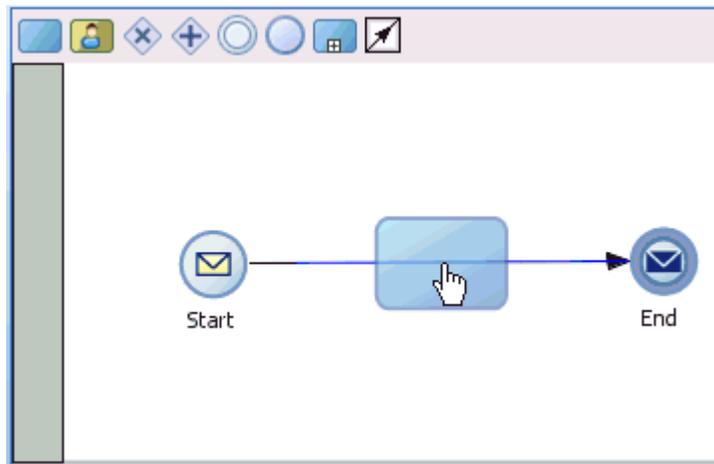
4. Click the **Activity** icon, as shown in [Figure 6–17](#).

**Figure 6–17 Activity Icon**



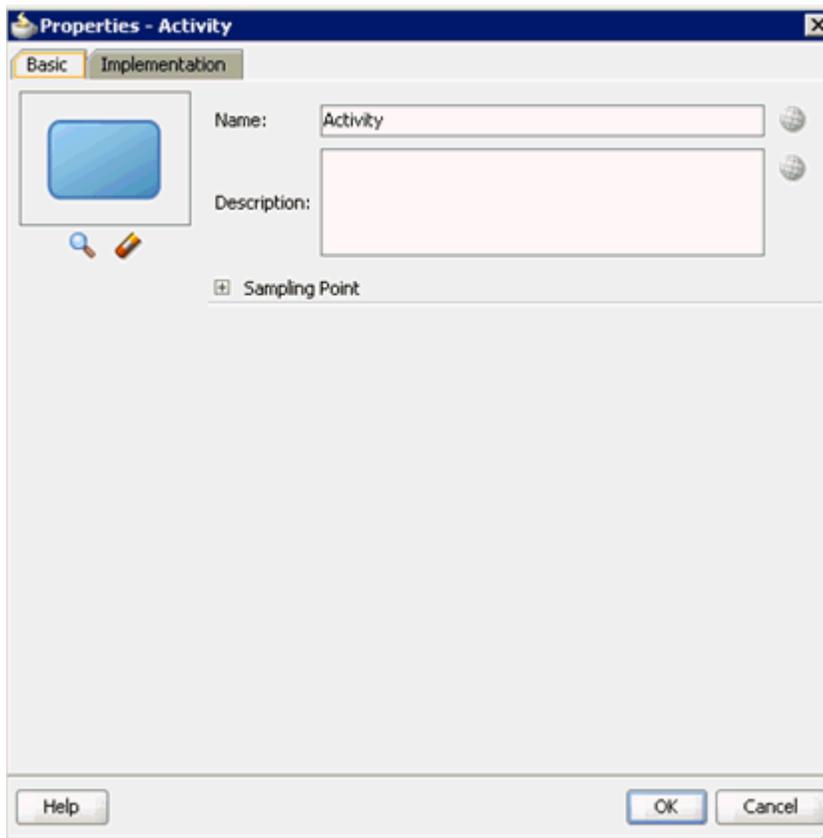
5. Drop the Activity icon on the wire between the Start and End event components, as shown in [Figure 6–18](#).

**Figure 6–18 Activity Icon**

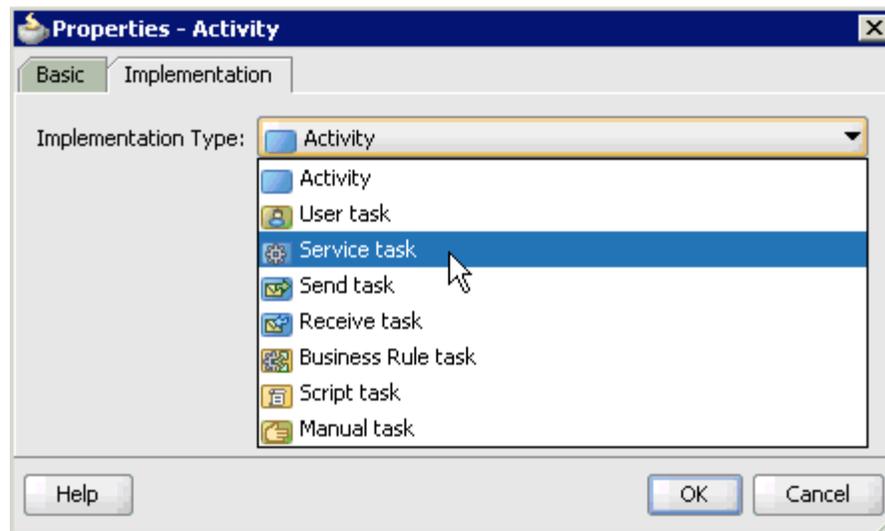


The Properties - Activity dialog is displayed, as shown in [Figure 6–19](#).

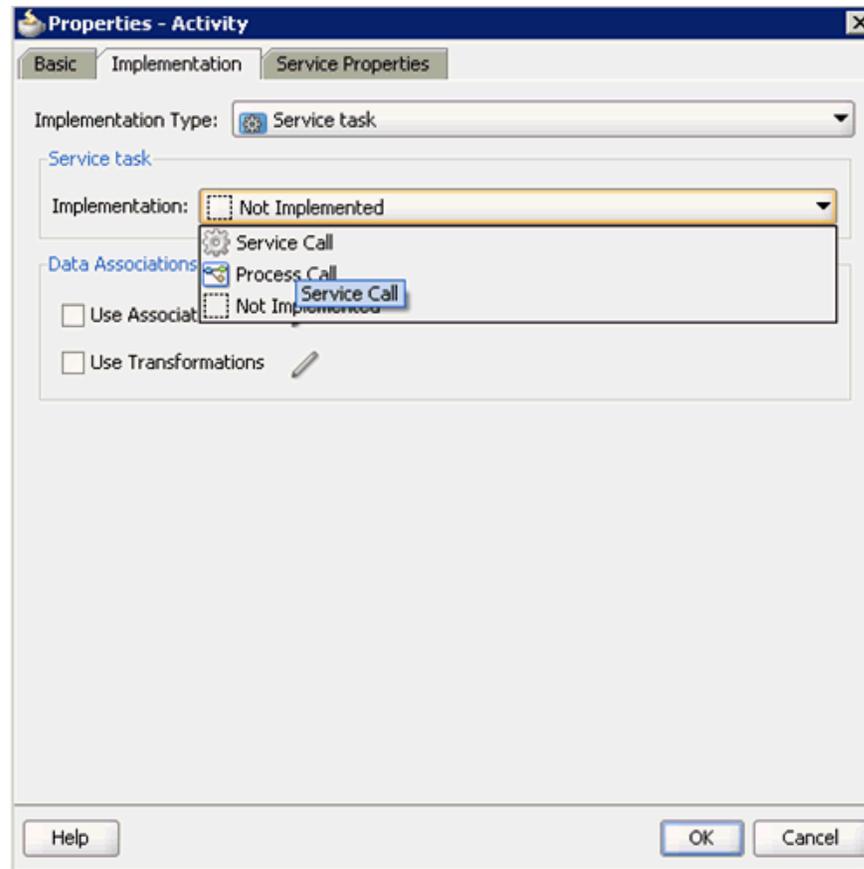
**Figure 6–19 Properties - Activity Dialog**



6. Click the **Implementation** tab.

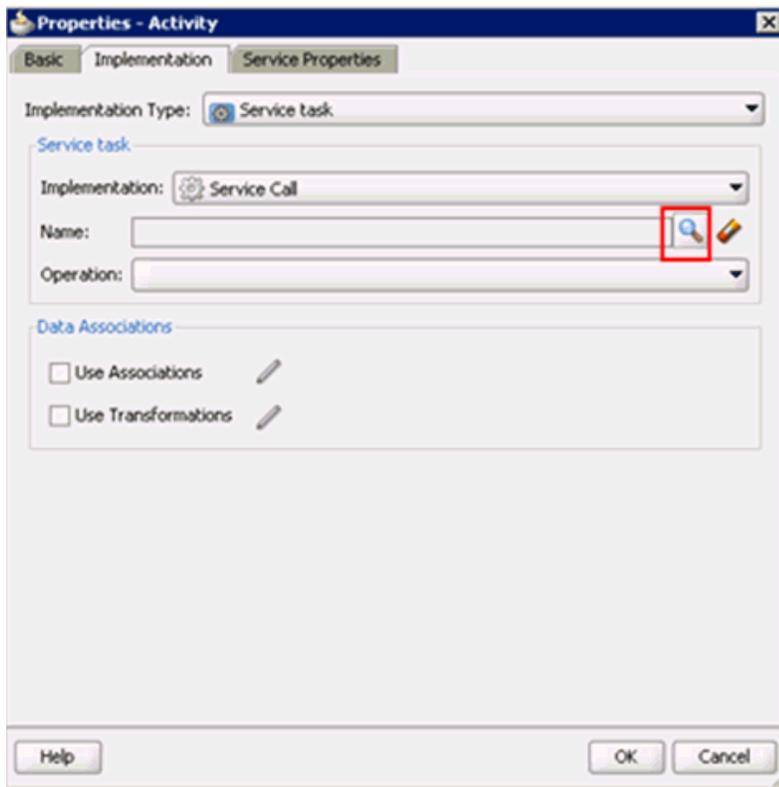
**Figure 6–20 Service Task**

7. Select **Service Task** from the Implementation Type list, as shown in [Figure 6–20](#).

**Figure 6–21 Service Call**

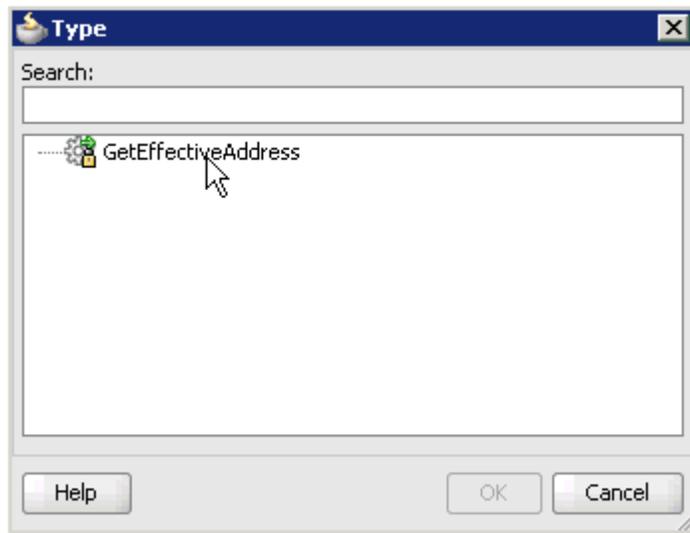
8. Select **Service Call** from the Implementation list, as shown in [Figure 6–21](#).
9. Click the Browse icon to the right of the Name field, as shown in [Figure 6–22](#).

**Figure 6–22 Browse Icon**



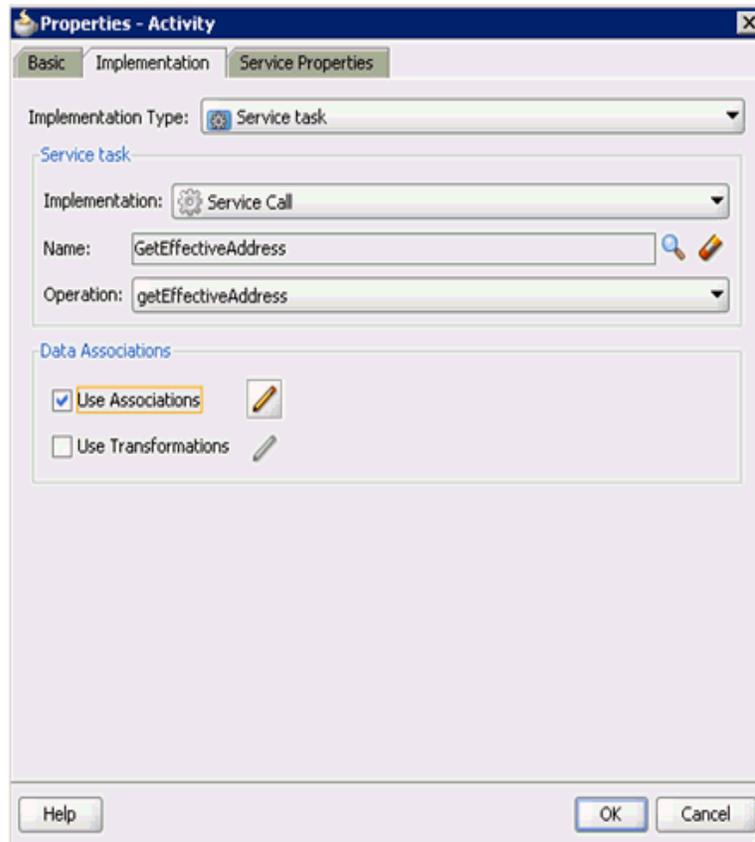
The Type dialog is displayed, as shown in [Figure 6–23](#).

**Figure 6–23 Type Dialog**



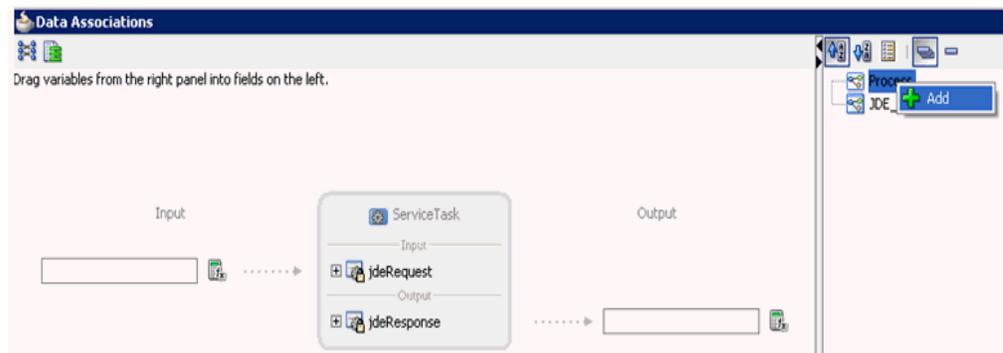
10. Select the Third Party Service that has been created and click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6–24](#).

**Figure 6–24 Properties - Activity Dialog**

11. Select the **Use Associations** option that is located under Data Associations.
12. Click the **Edit Data Associations** icon.

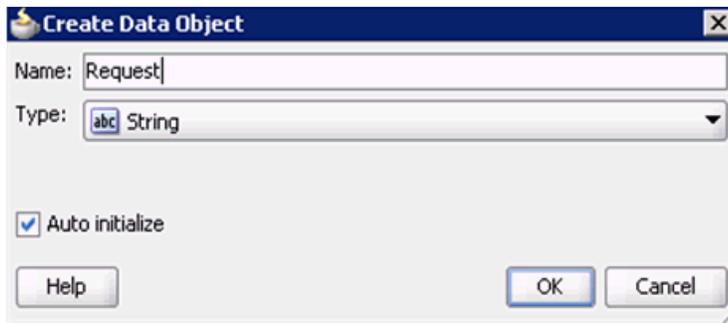
The Data Associations dialog is displayed, as shown in [Figure 6–25](#).

**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](#).

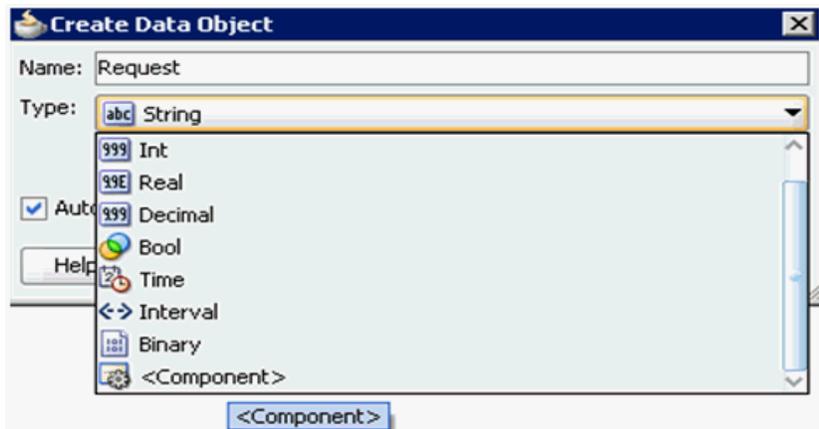
**Figure 6–26 Create Data Object Dialog**



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.

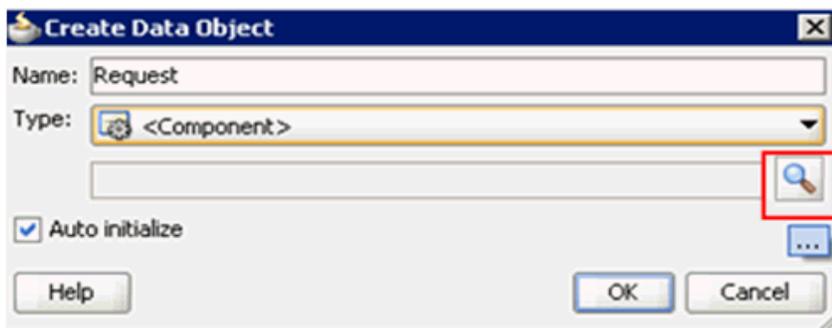
The Create Data Object is displayed, as shown in [Figure 6–27](#).

**Figure 6–27 Create Data Object**

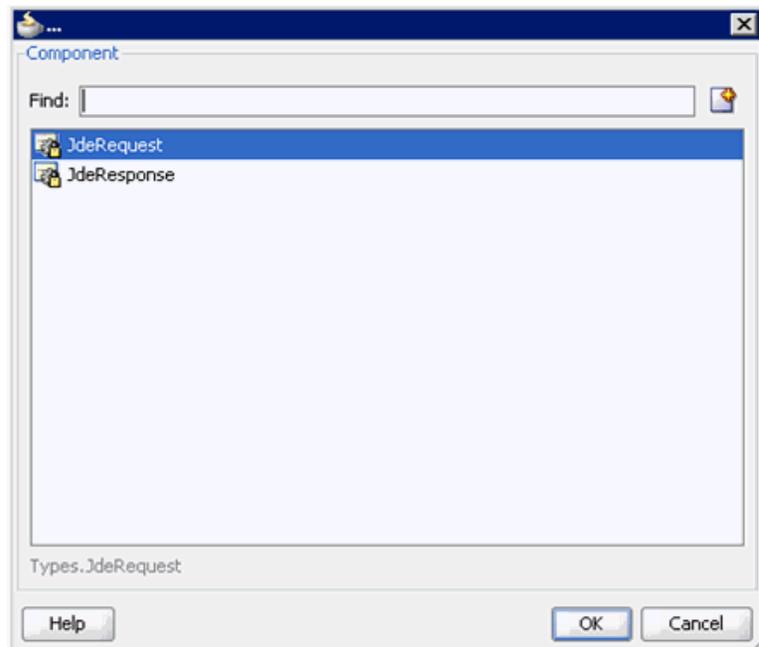


15. Click on the **Browse** icon below the Type field, as shown in [Figure 6–28](#).

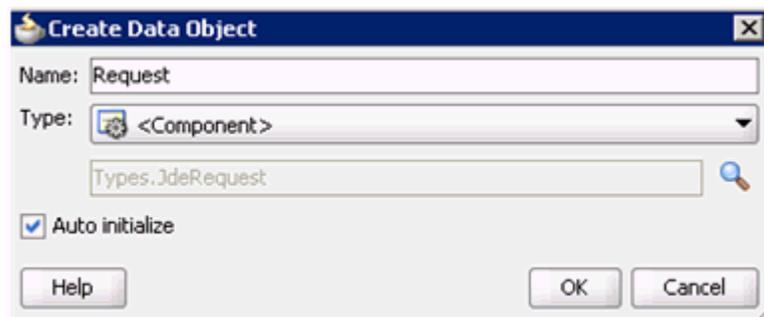
**Figure 6–28 Browse Icon**



16. Select the first component (for example, JdeRequest) and click **OK**, as shown in [Figure 6–29](#).

**Figure 6–29 Browse Window**

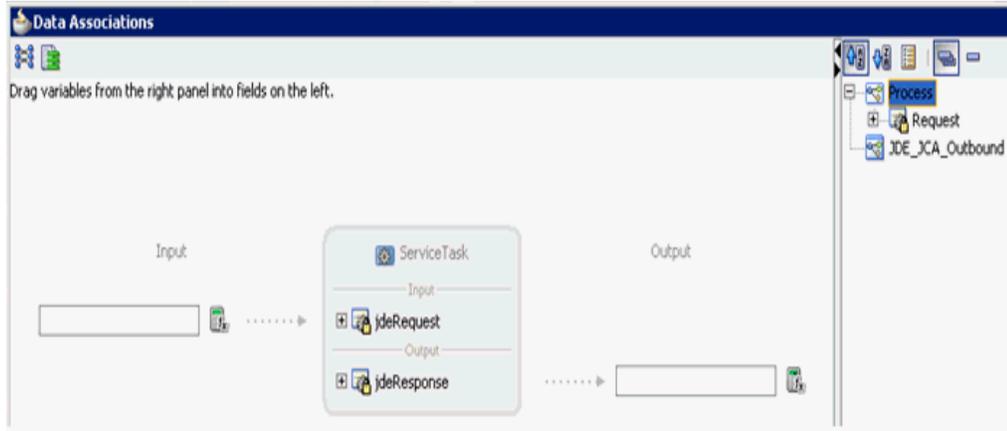
You are returned to the Create Data Object dialog, as shown in [Figure 6–30](#).

**Figure 6–30 Create Data Object Dialog**

17. Click **OK**.

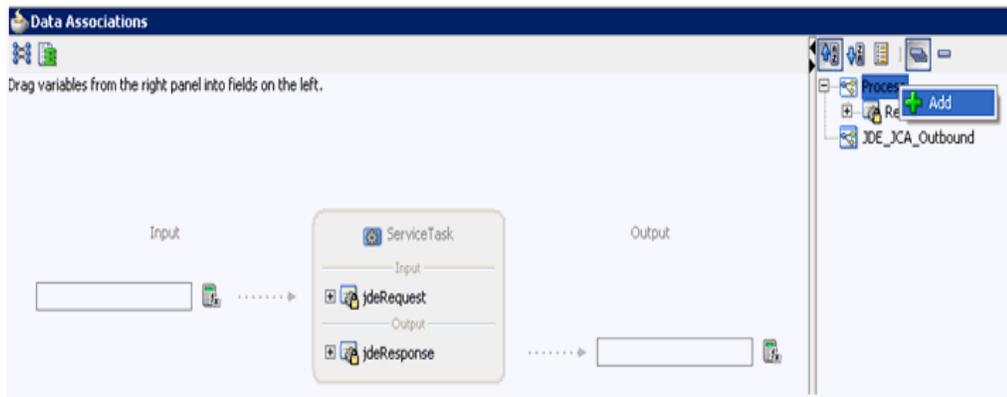
The Data Object (for example, Request) that has been created is displayed under the Process node in the Data Associations dialog, as shown in [Figure 6–31](#).

**Figure 6–31 Data Associations Dialog**



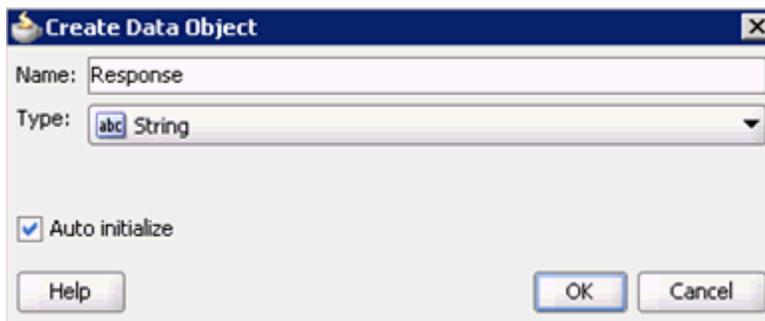
18. Create another Data Object by right-clicking the **Process** node in the right pane and selecting **Add**, as shown in [Figure 6–32](#).

**Figure 6–32 Add Option**

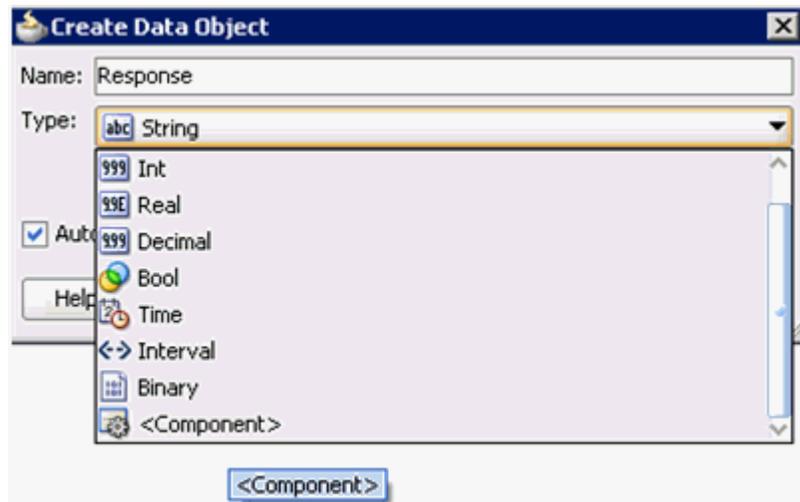


The Create Data Object dialog is displayed, as shown in [Figure 6–33](#).

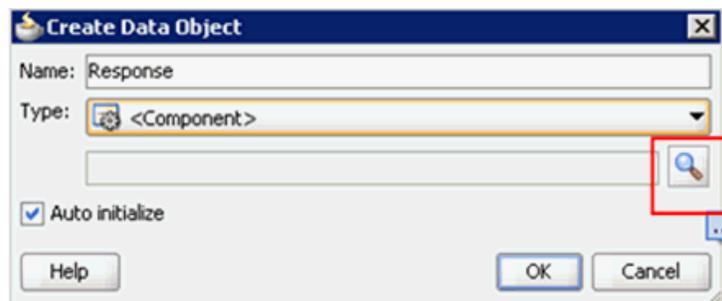
**Figure 6–33 Create Data Object Dialog**



19. Enter a name in the Name field (for example, Response), click on the drop-down button in the Type field, and select **<Component>** from the list, as shown in [Figure 6–34](#).

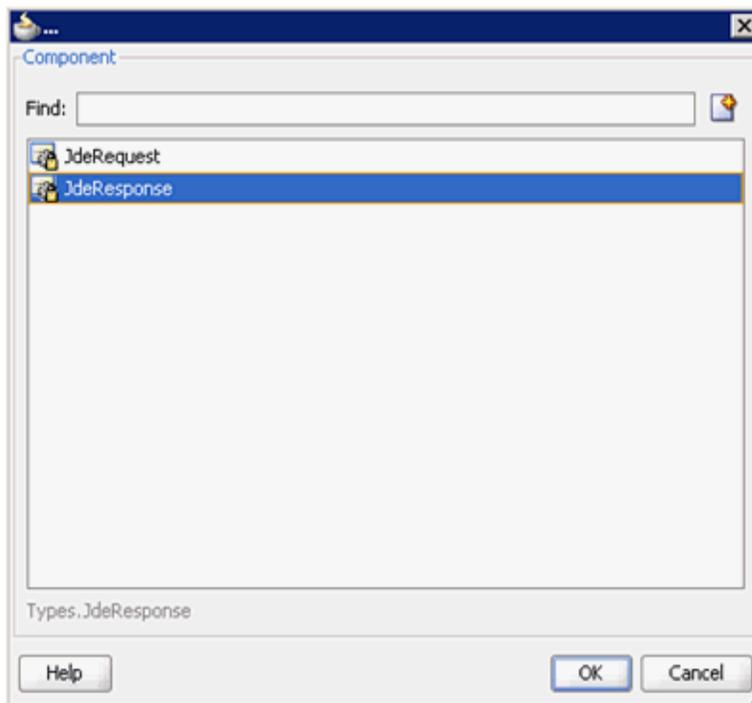
**Figure 6–34 Create Data Object Dialog**

20. Click on the Browse icon below the Type field, as shown in [Figure 6–35](#).

**Figure 6–35 Browse Icon**

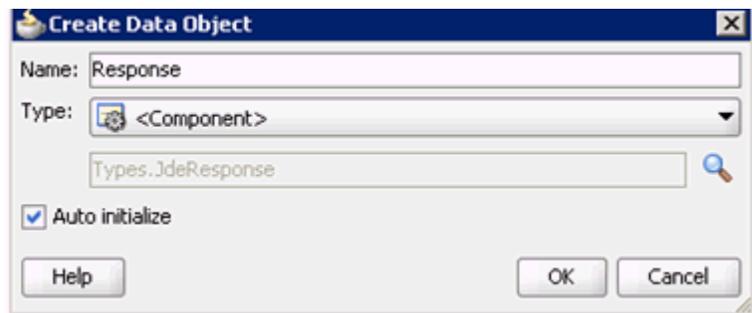
21. Select the second component (for example, JdeResponse) and click **OK**, as shown in [Figure 6–36](#).

**Figure 6–36 Browse Window**



You are returned to the Create Data Object dialog, as shown in [Figure 6–37](#).

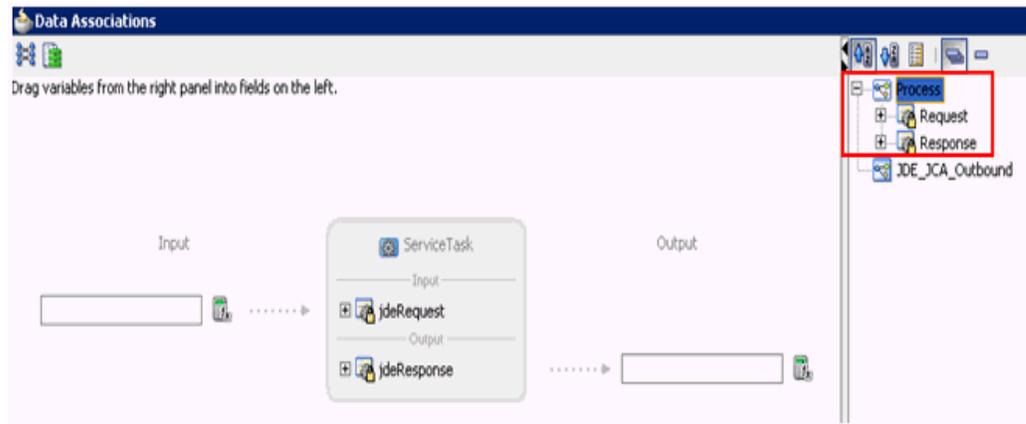
**Figure 6–37 Create Data Object**



22. Click **OK**.

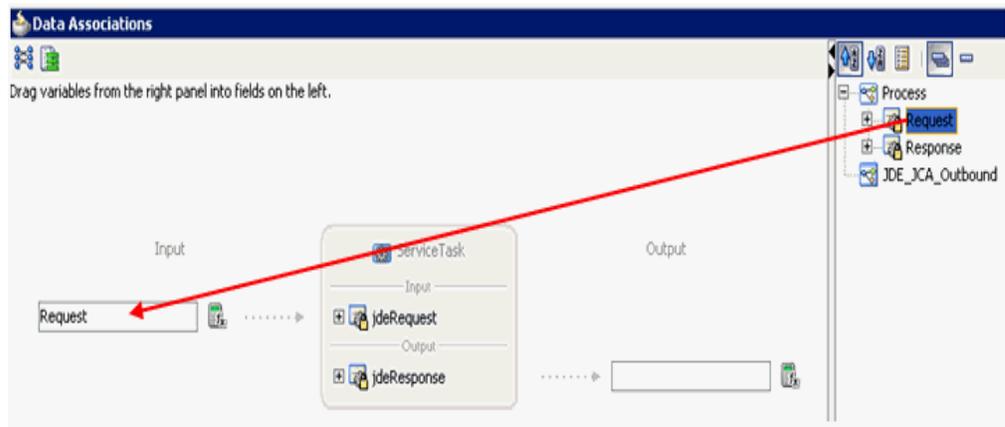
The Data Object (for example, Response) that has been created is displayed under the Process node in the Data Associations dialog, as shown in [Figure 6–38](#).

**Figure 6–38 Data Associations Dialog**



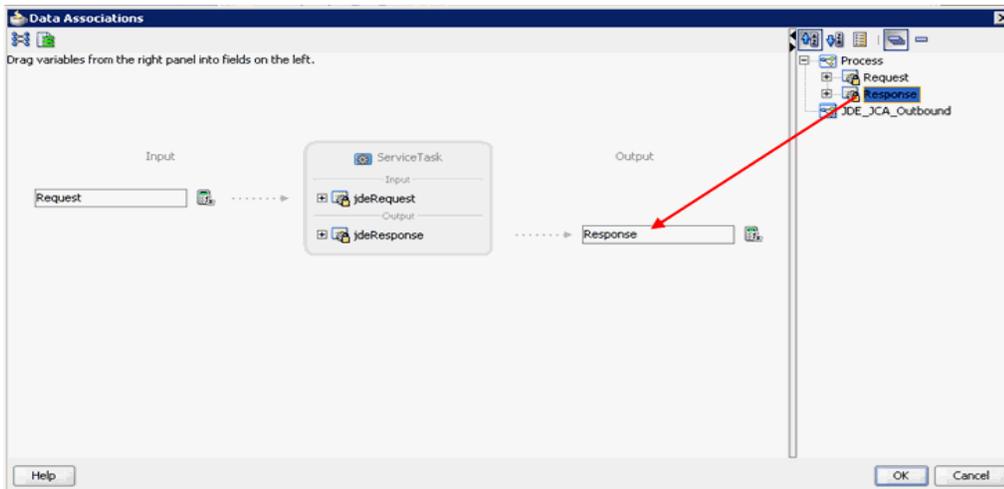
23. Select the Request Data Object under the Process node in the right pane and drag it to the field below the Inputs area, as shown in [Figure 6–39](#).

**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](#).

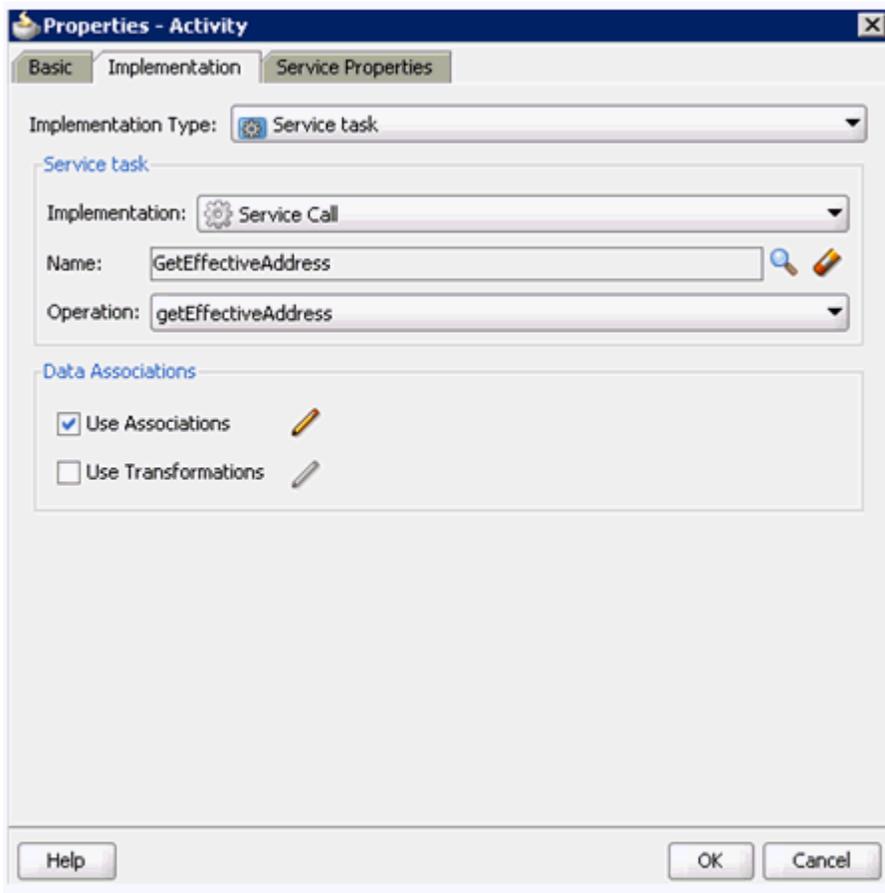
**Figure 6–40 Response Data Object**



25. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6–41](#).

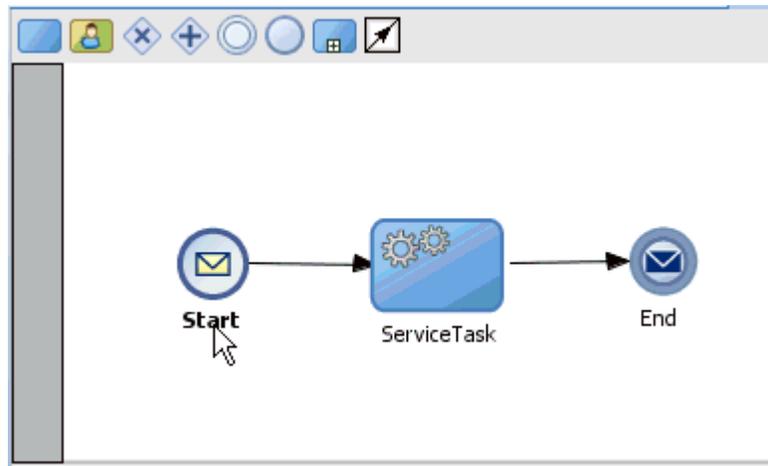
**Figure 6–41 Properties - Activity Dialog**



26. Click **OK**.

The Service Task is created between the Start and End Event components, as shown in [Figure 6-42](#).

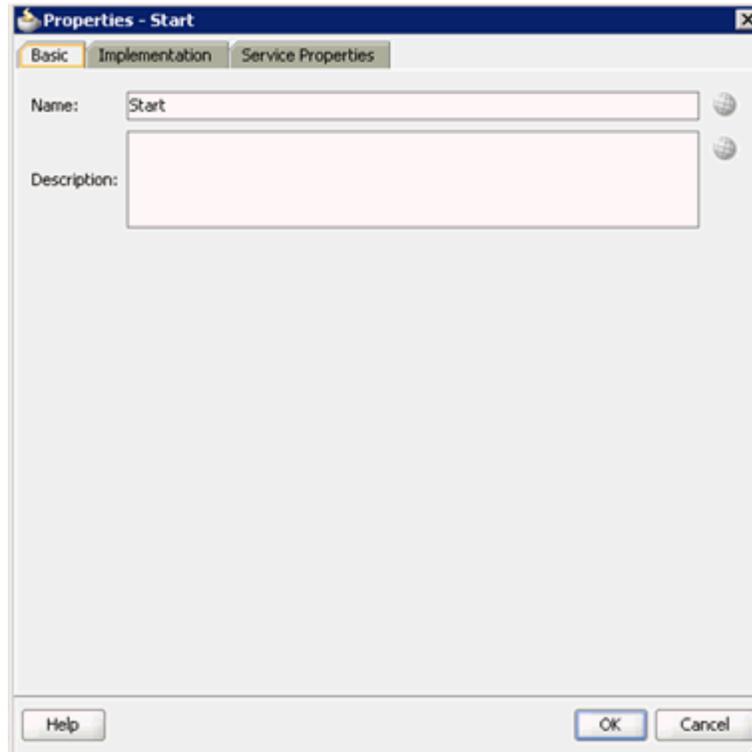
**Figure 6-42 Service Task**



27. Save the process and double-click the Start event component.

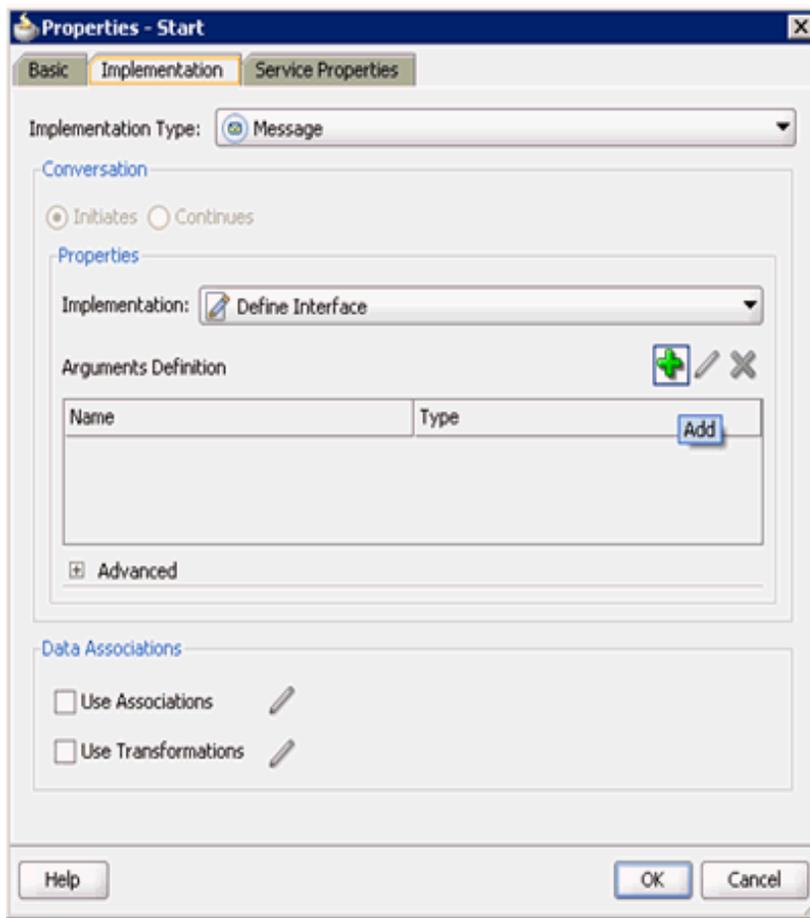
The Properties - Start dialog is displayed, as shown in [Figure 6-43](#).

**Figure 6-43 Properties - Start Dialog**



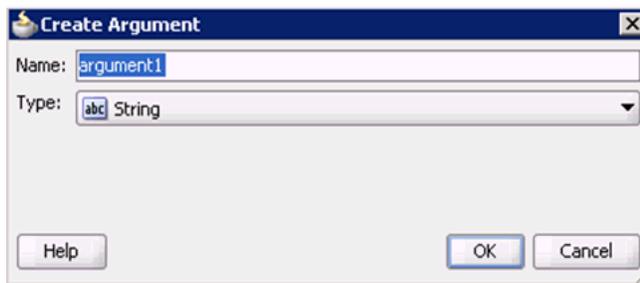
28. Click the **Implementation** tab, as shown in [Figure 6-44](#).

**Figure 6–44 Implementation Tab**



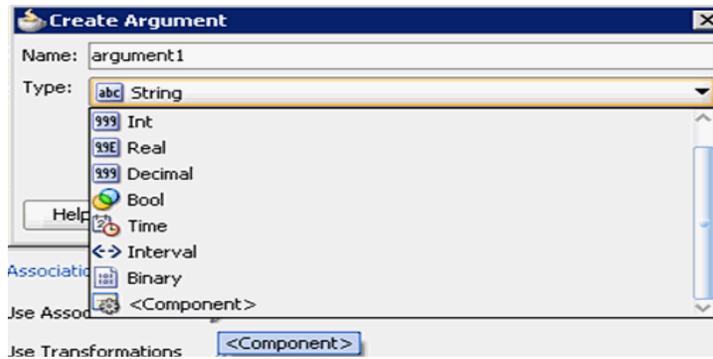
29. Click the **Plus** icon to the right of the Arguments Definition field.  
The Create Argument dialog is displayed, as shown in [Figure 6–45](#).

**Figure 6–45 Create Argument Dialog**



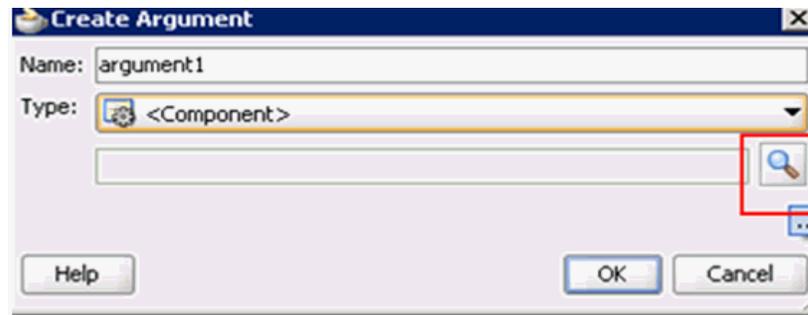
30. Enter a name in the Name field (for default, argument1) and click on the drop-down button in the Type field and select **<Component>** from the list.  
The Create Argument dialog is displayed, as shown in [Figure 6–46](#).

**Figure 6–46 Create Argument Dialog**



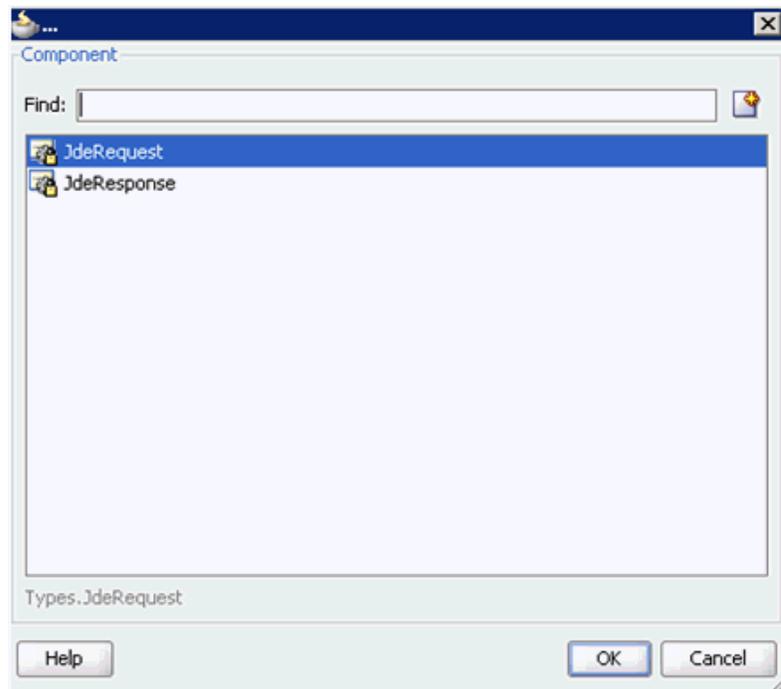
31. Click on the Browse icon below the Type field, as shown in [Figure 6–47](#).

**Figure 6–47 Browse Icon**



The Browse window opens, as shown in [Figure 6–48](#).

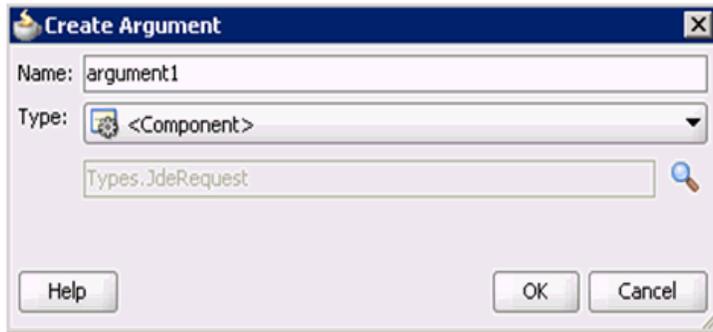
**Figure 6–48 Browse Window**



32. Select the first component (for example, JdeRequest) and click **OK**, as shown in [Figure 6–48](#).

You are returned to the Create Argument dialog, as shown in [Figure 6–49](#).

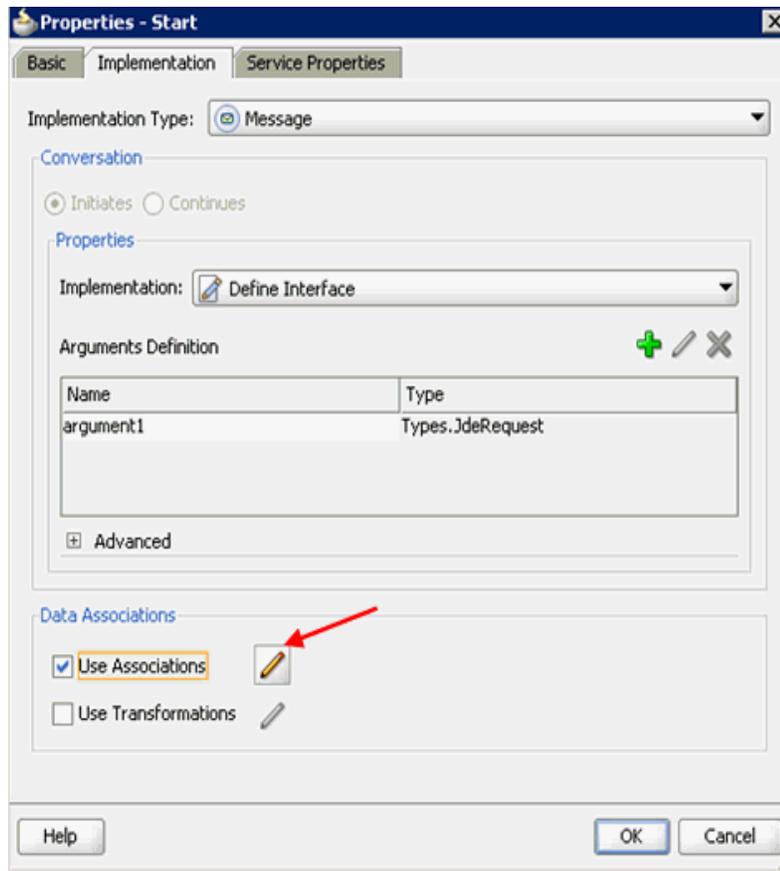
**Figure 6–49 Create Argument Dialog**



33. Click **OK**.

You are returned to the Properties - Start dialog, as shown in [Figure 6–50](#).

**Figure 6–50 Properties - Start Dialog**



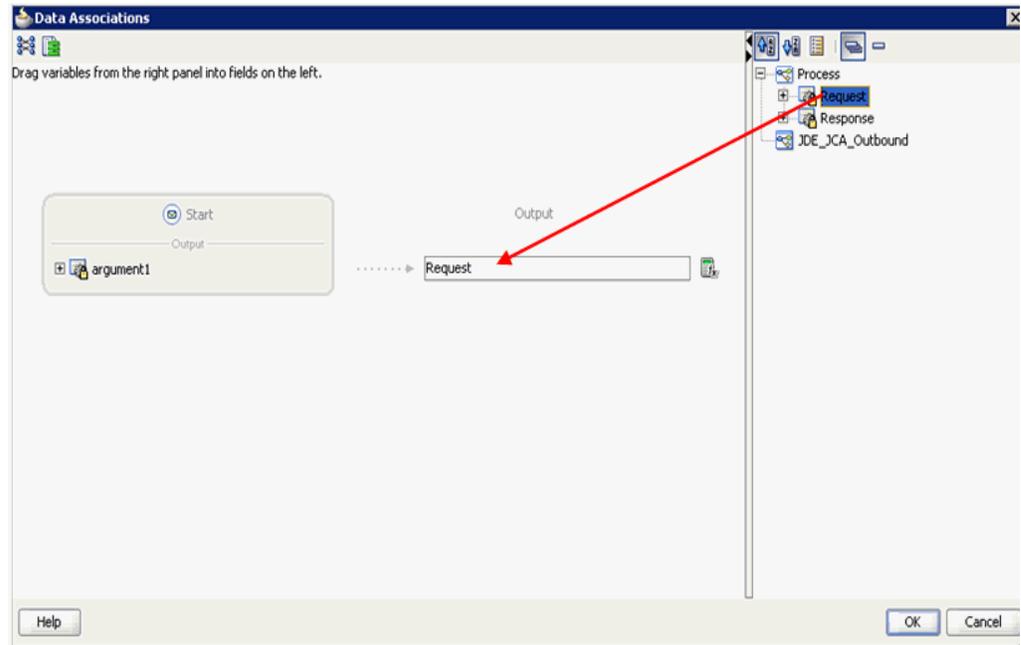
34. Select the **Use Associations** option that is located under Data Associations.

35. Click the **Edit Data Associations** icon.

The Data Associations dialog is displayed.

36. Select the Request Data Object under the Process node in the right pane and drag it to the field below the Outputs area, as shown in [Figure 6-51](#).

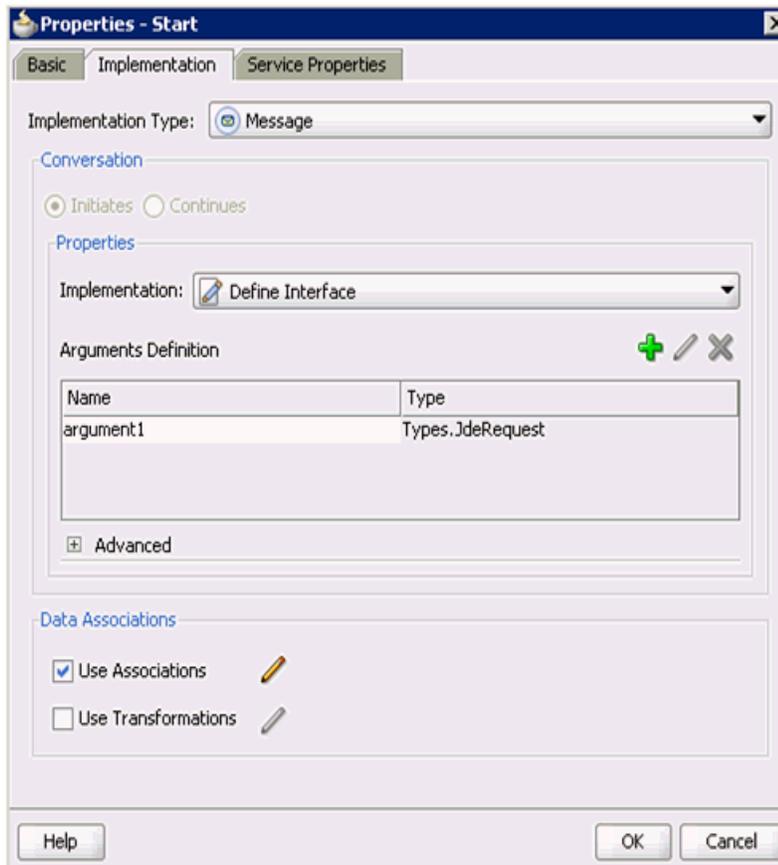
**Figure 6-51 Request Data Object**



37. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6-52](#).

**Figure 6–52 Properties - Activity Dialog**

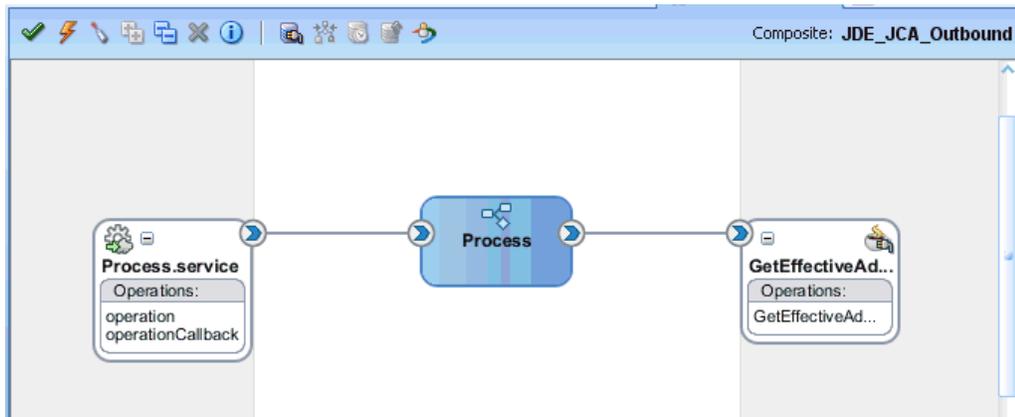


38. Click **OK**.

You are returned to the Process workspace area, as shown in [Figure 6–53](#).

39. Double-click **composite.xml** in the left pane.

**Figure 6–53 Process Workspace Area**



40. Click the **Save All** icon in the menu bar to save the new outbound BPM process component that was configured.

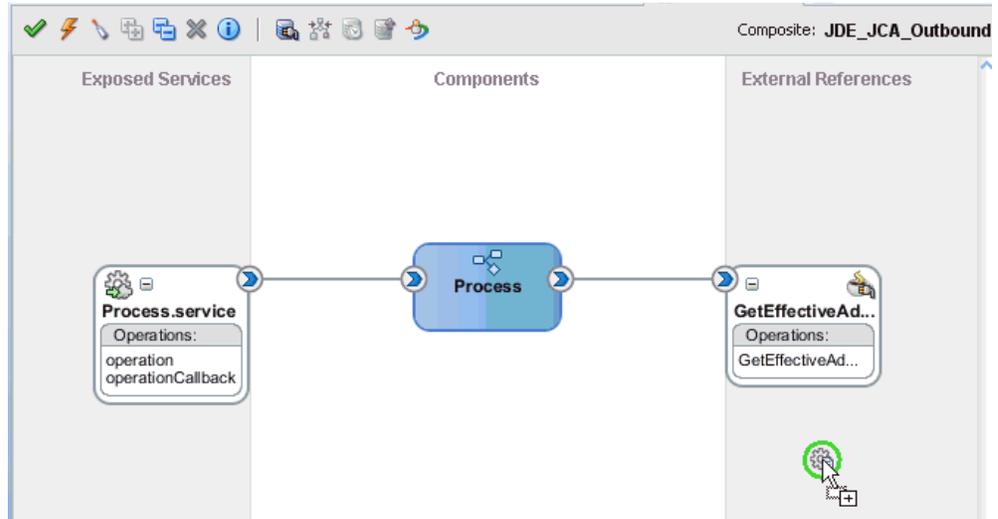
You are now ready to create a File adapter for the write operation.

### Creating a File Adapter for the Write Operation

Perform the following steps to create a File adapter for the write operation:

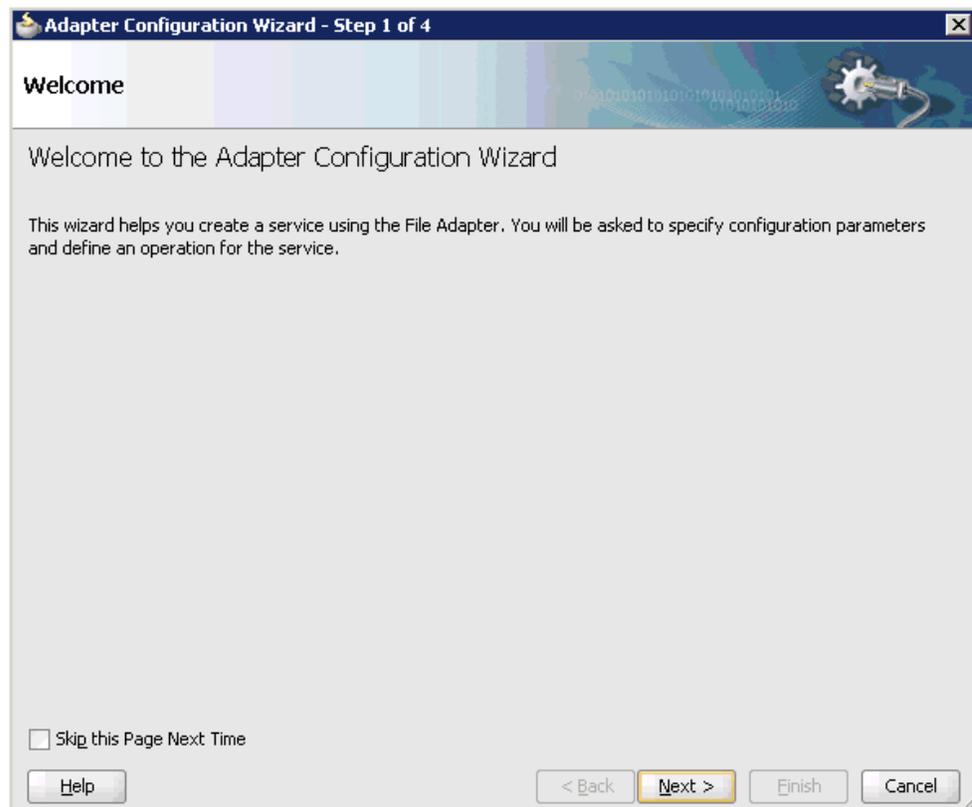
1. Drag and drop the **File Adapter** component from the Service Adapters pane to the External References pane, as shown in [Figure 6-54](#).

**Figure 6-54 File Adapter Component**



The Adapter Configuration Wizard is displayed, as shown in [Figure 6-55](#).

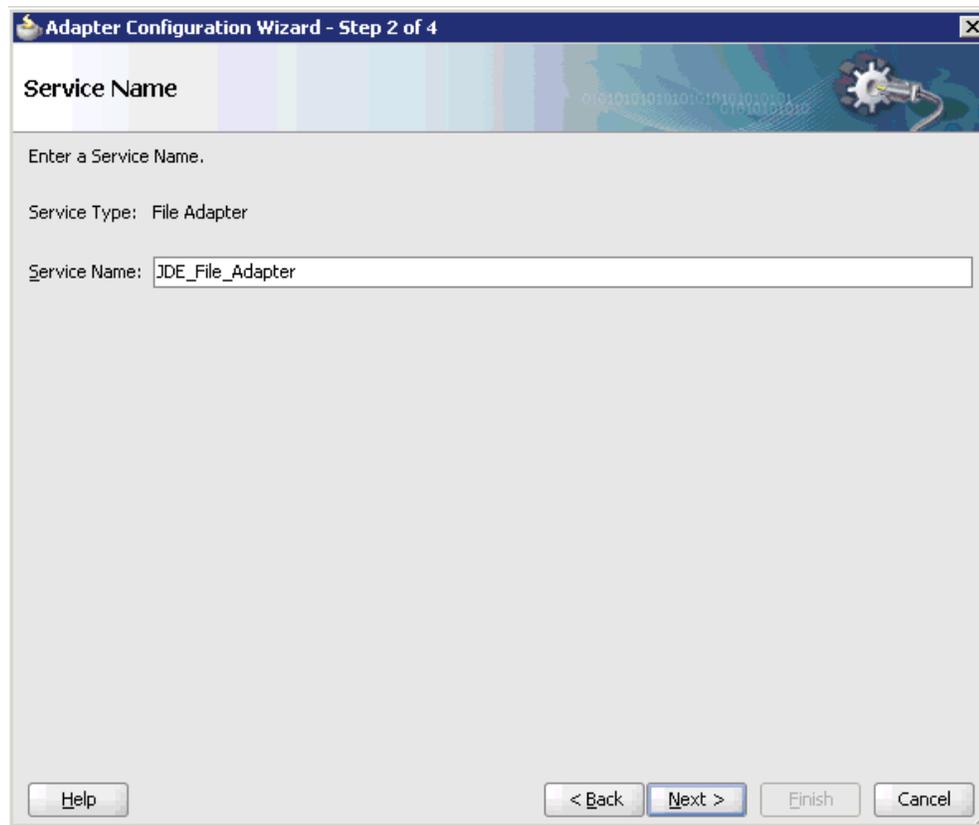
**Figure 6-55 Adapter Configuration Wizard**



2. Click **Next**.

The Service Name page is displayed, as shown in [Figure 6–56](#).

**Figure 6–56** 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 6–57](#).

**Figure 6–57 Adapter Interface Page**

**Adapter Configuration Wizard - Step 3 of 4**

### Adapter Interface

The adapter interface is defined by a wsdl that is generated using the operation name and schema(s) specified later in this wizard. Optionally, the adapter interface may be defined by importing an existing WSDL.

Interface:  Define from operation and schema (specified later)

Import an existing WSDL

WSDL URL:

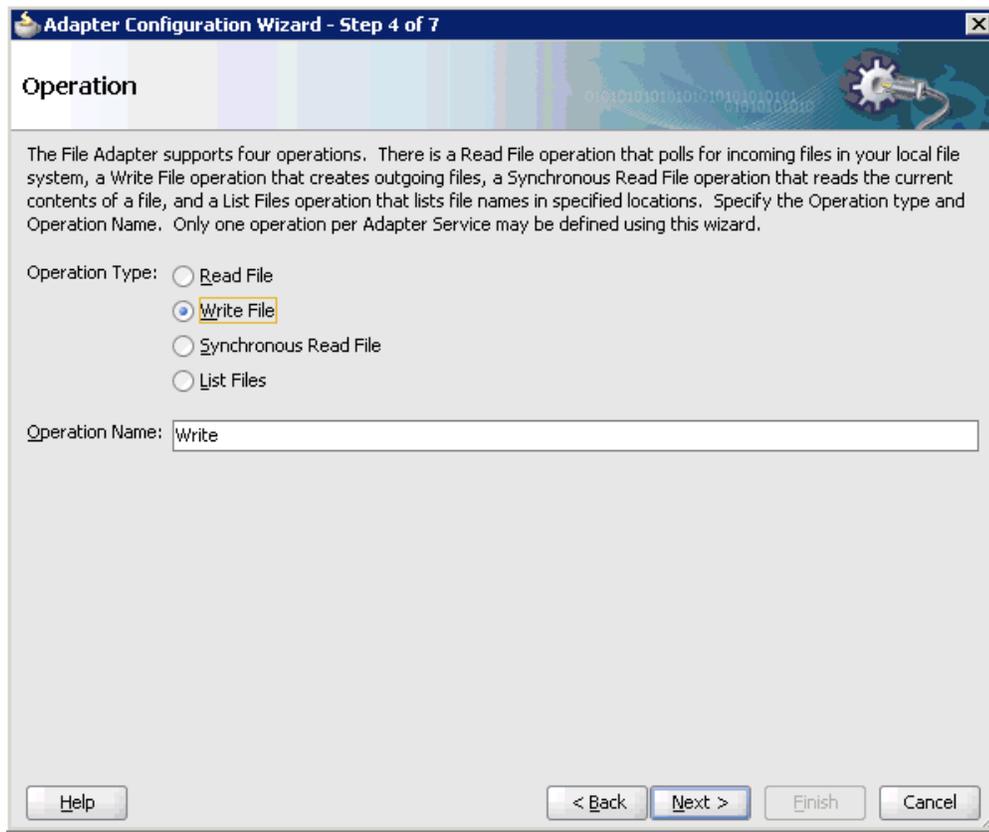
Port Type:

Operation:

Help < Back Next > Finish Cancel

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 6–58](#).

**Figure 6–58 Operation Page**

The screenshot shows a window titled "Adapter Configuration Wizard - Step 4 of 7". The main heading is "Operation". Below the heading, there is a paragraph of text: "The File Adapter supports four operations. There is a Read File operation that polls for incoming files in your local file system, a Write File operation that creates outgoing files, a Synchronous Read File operation that reads the current contents of a file, and a List Files operation that lists file names in specified locations. Specify the Operation type and Operation Name. Only one operation per Adapter Service may be defined using this wizard." Below this text, there are four radio button options under the heading "Operation Type": "Read File", "Write File" (which is selected and highlighted with a yellow box), "Synchronous Read File", and "List Files". Below the radio buttons, there is a text input field labeled "Operation Name:" with the word "Write" entered. At the bottom of the window, there are four buttons: "Help", "< Back", "Next >", and "Cancel".

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 6–59](#).

**Figure 6–59 File Configuration Page**

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:\JDE\_OUTPUT

File Naming Convention (po\_%SEQ%.txt): JDE\_OUTPUT.xml

Append to existing file

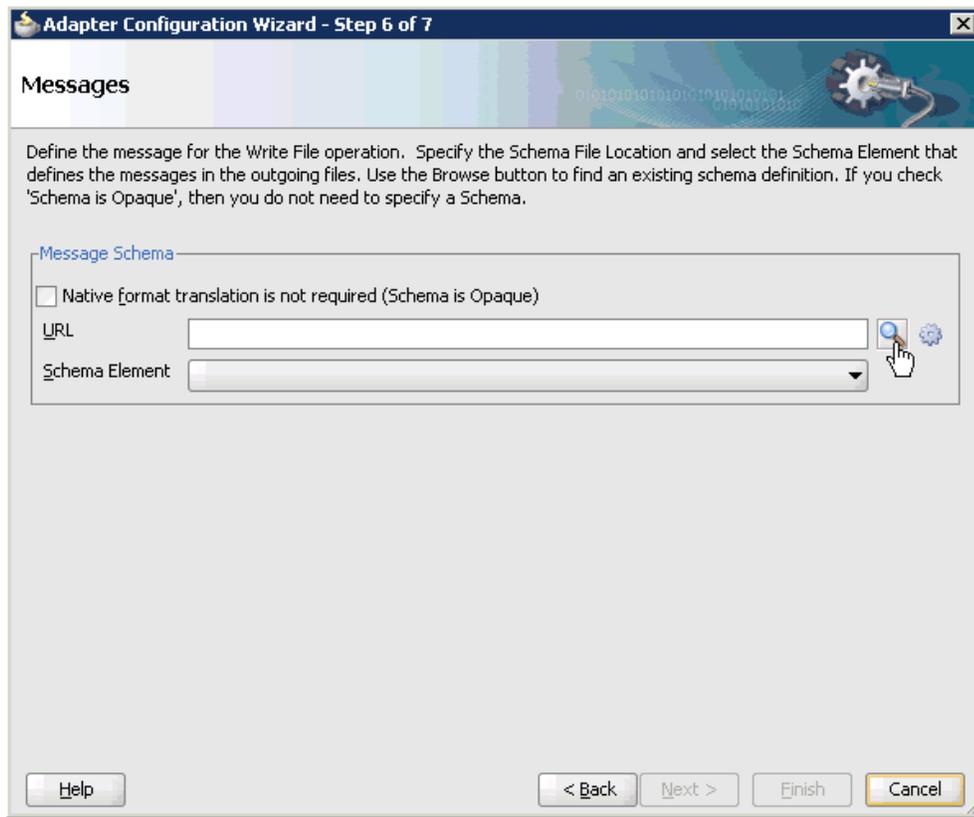
Write to output file when any of these conditions are met:

<input checked="" type="checkbox"/> Number of Messages Equals:	1	
<input type="checkbox"/> Elapsed Time Exceeds:	1	minutes
<input type="checkbox"/> File Size Exceeds:	1000	kilobytes

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 6–60](#).

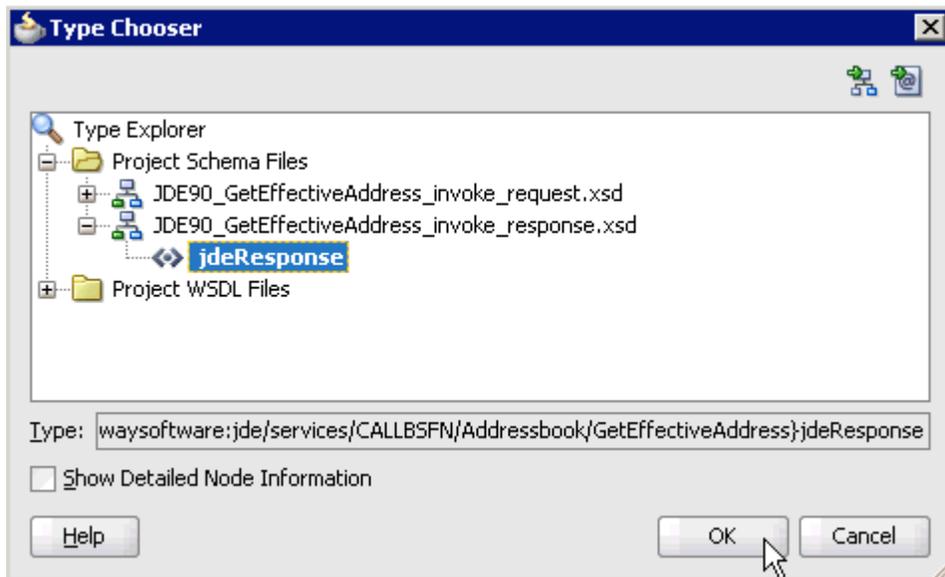
**Figure 6–60 Messages Page**



11. Click **Browse**, which is located to the right of the URL field.

The Type Chooser dialog is displayed, as shown in [Figure 6–61](#).

**Figure 6–61 Type Chooser Dialog**

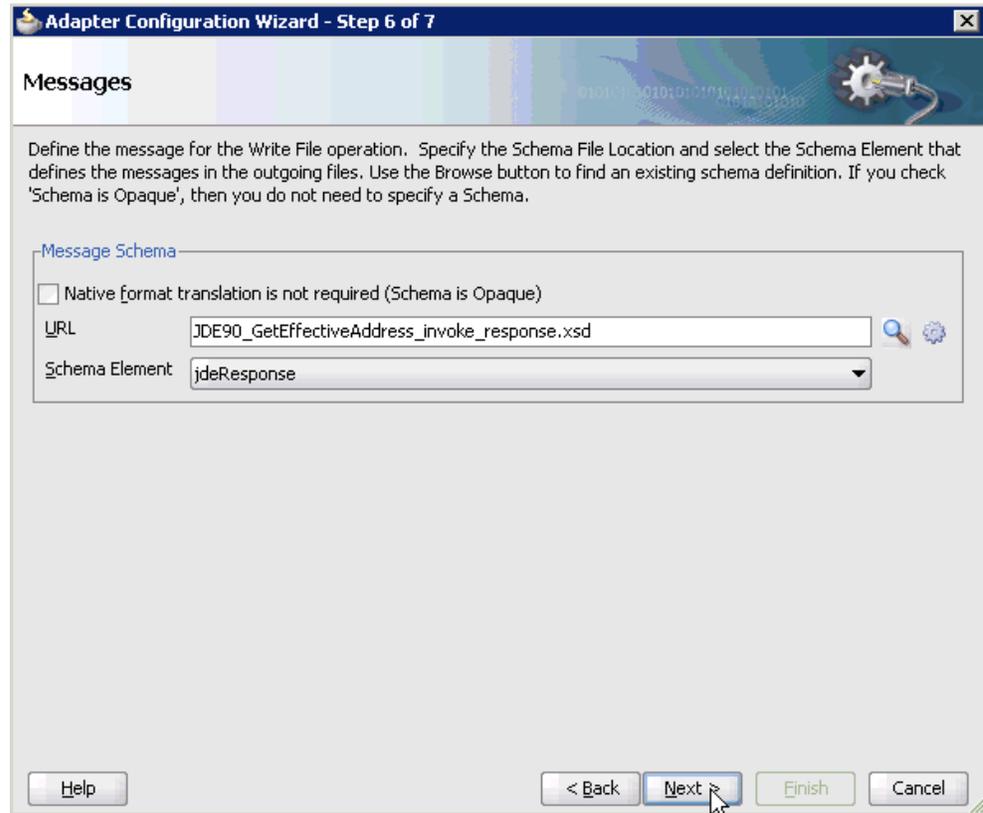


12. Expand **Project Schema Files** and **JDE90\_GetEffectiveAddress\_invoke\_response.xsd**.

13. Select the available schema (for example, jdeResponse).
14. Click OK.

You are returned to the Messages page, as shown in [Figure 6–62](#).

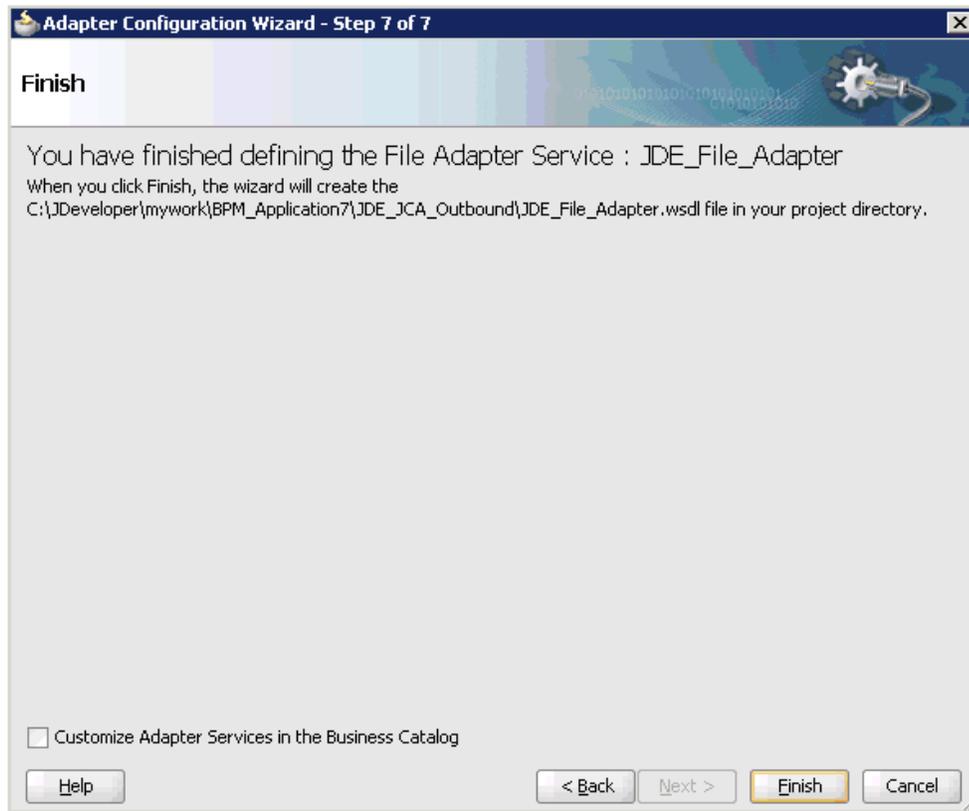
**Figure 6–62** Messages Page



15. Click Next.

The Finish page is displayed, as shown in [Figure 6–63](#).

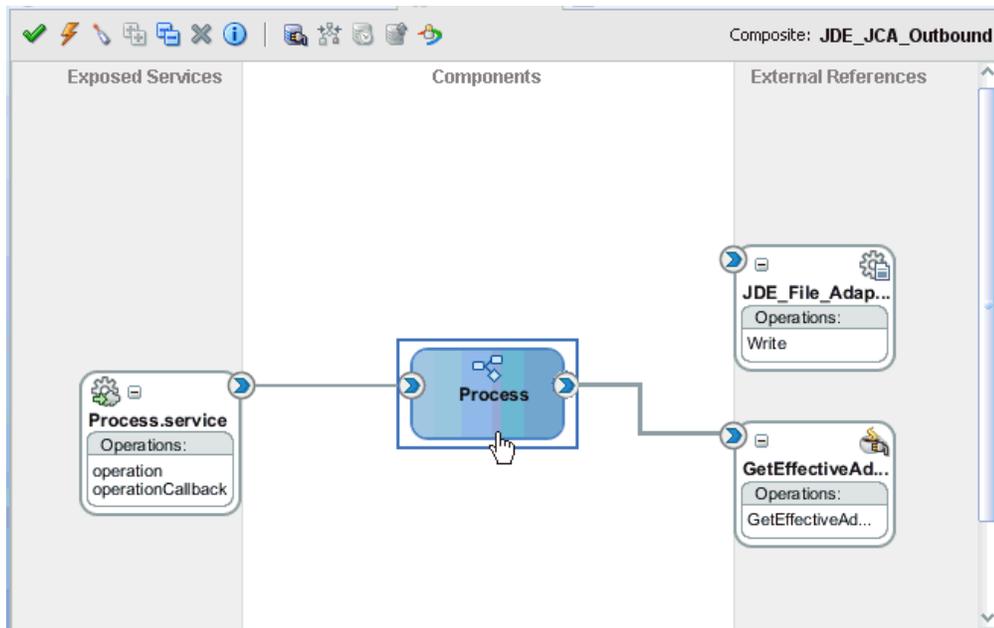
**Figure 6–63 Finish Page**



16. Click **Finish**.

The File Adapter service is created in the External References pane, as shown in [Figure 6–64](#).

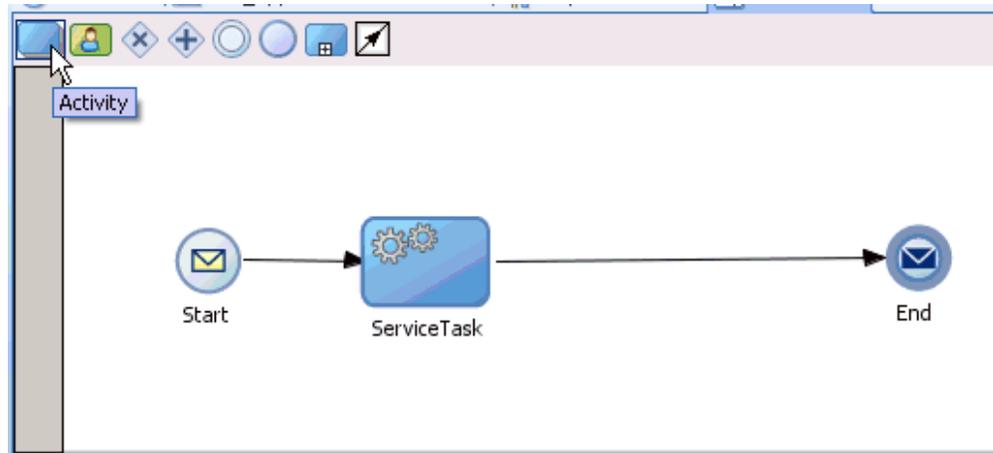
**Figure 6–64 File Adapter Service**



17. Double-click the BPMN Process component.

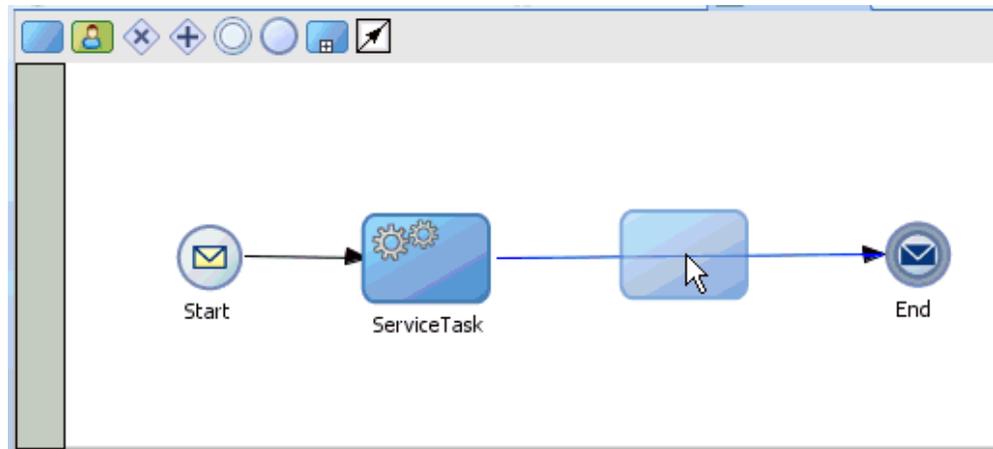
The BPMN process is displayed, as shown in [Figure 6-65](#).

**Figure 6-65** *BPMN Process*



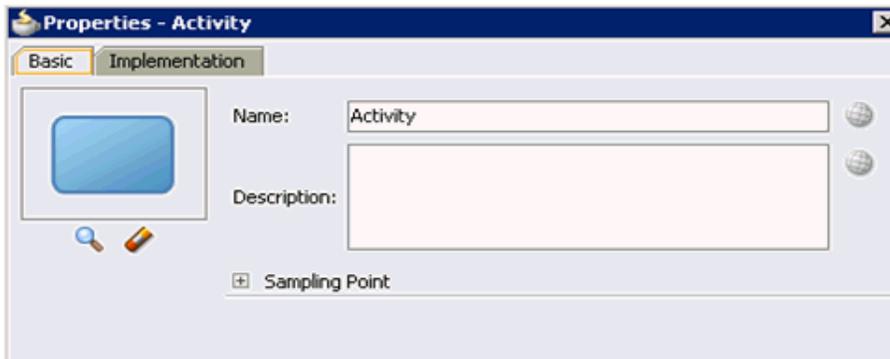
18. Click the **Activity** icon.
19. Drop the Activity icon on the wire between the Service Task and End event components, as shown in [Figure 6-66](#).

**Figure 6-66** *Activity Icon*



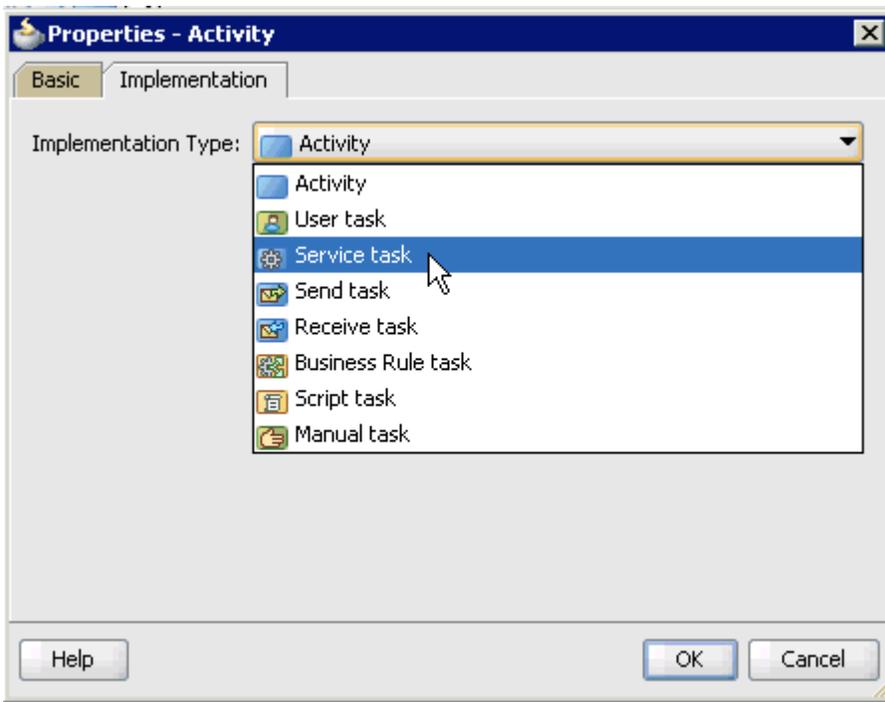
The Properties - Activity dialog is displayed, as shown in [Figure 6-67](#).

**Figure 6–67 Properties - Activity Dialog**

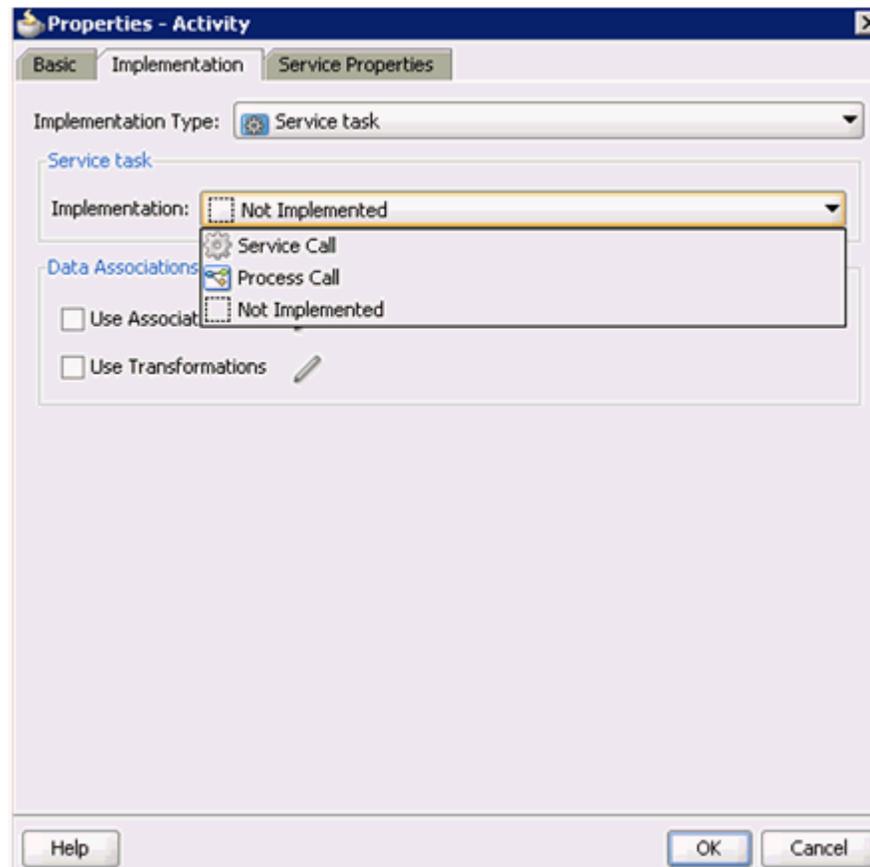


20. Click the **Implementation** tab.

**Figure 6–68 Service Task**

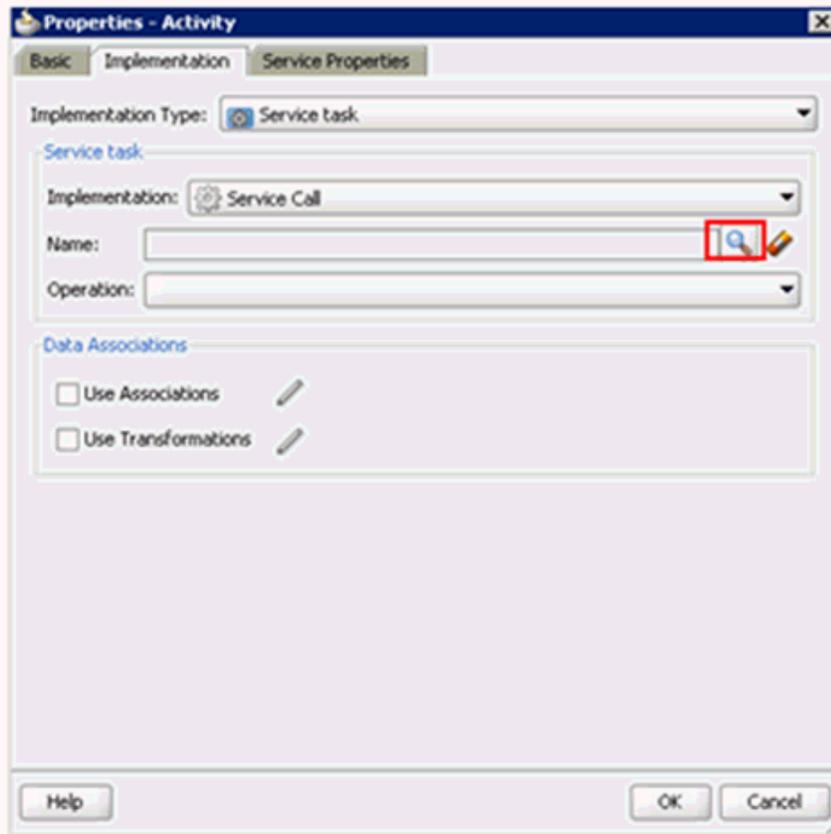


21. Select **Service Task** from the Implementation Type list, as shown in [Figure 6–68](#).

**Figure 6–69 Service Call**

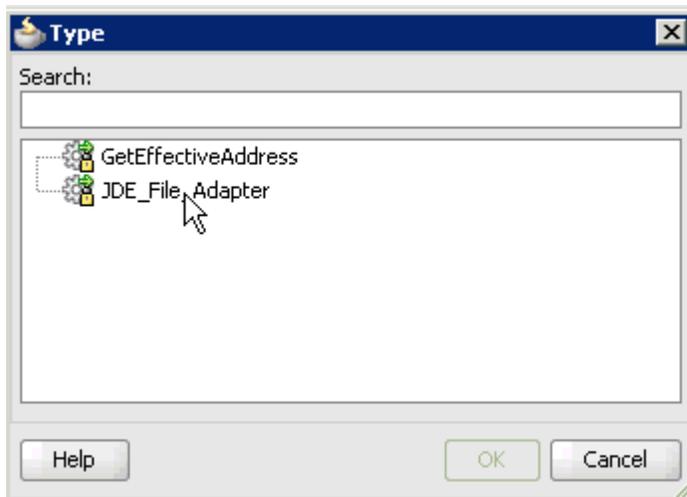
22. Select **Service Call** from the Implementation list, as shown in [Figure 6–69](#).
23. Click the **Browse** icon to the right of the Name field, as shown in [Figure 6–70](#).

**Figure 6–70 Browse Icon**



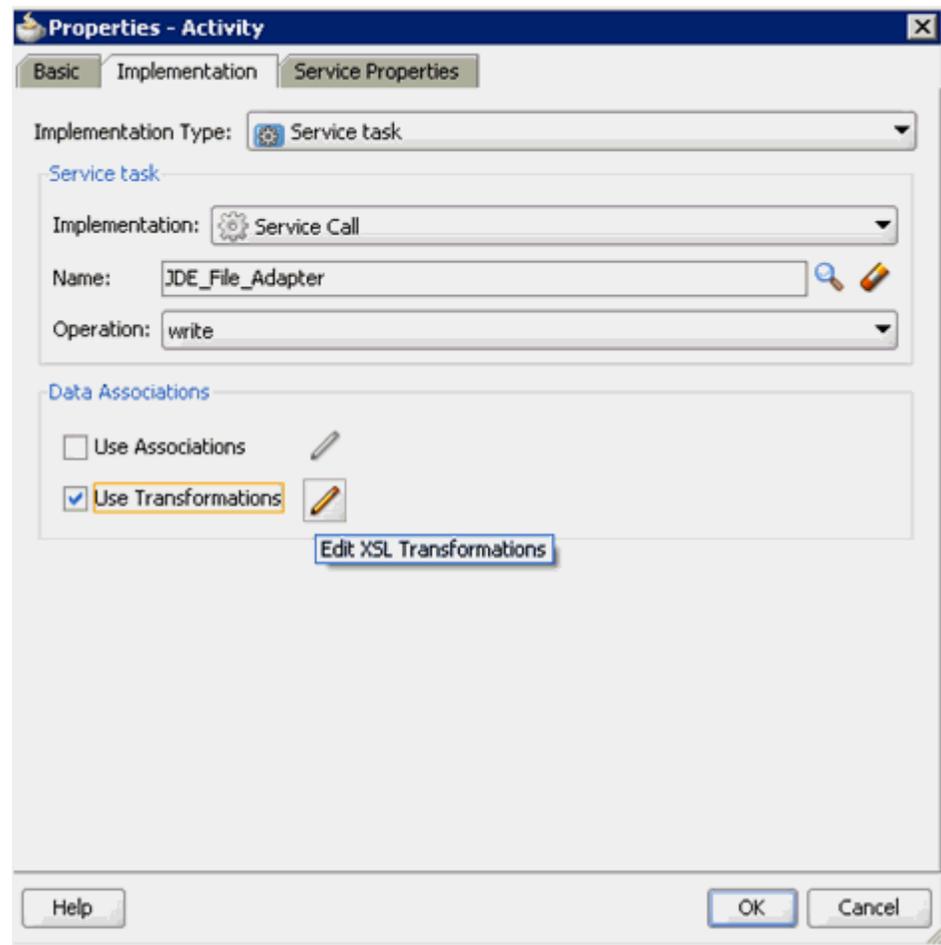
The Type dialog is displayed, as shown in [Figure 6–71](#).

**Figure 6–71 Type Dialog**



24. Select the service for write operation that has been created (for example, JDE\_File\_Adapter) and click **OK**.

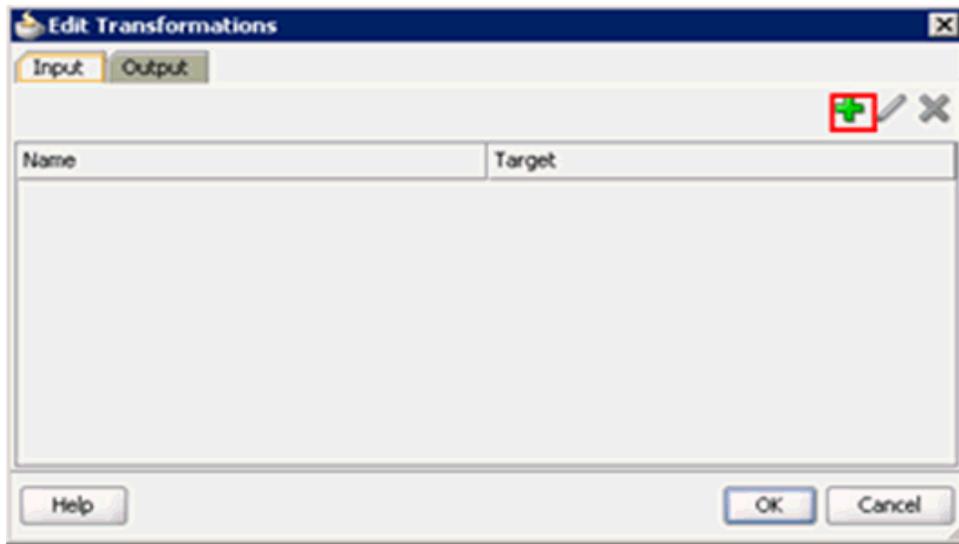
You are returned to the Properties - Activity dialog, as shown in [Figure 6–72](#).

**Figure 6–72 Properties - Activity Dialog**

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 6–73](#).

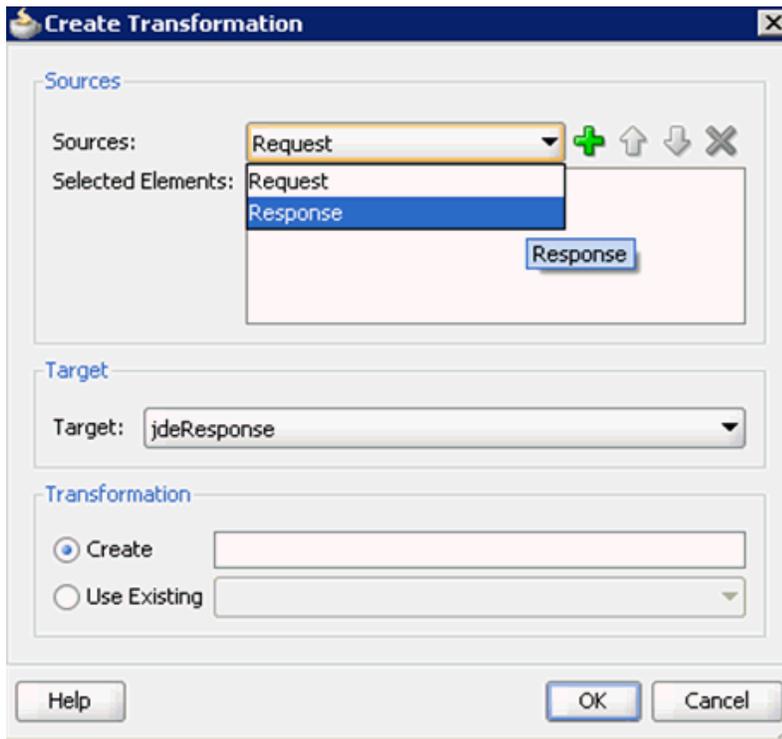
**Figure 6–73 Edit Transformations Dialog**



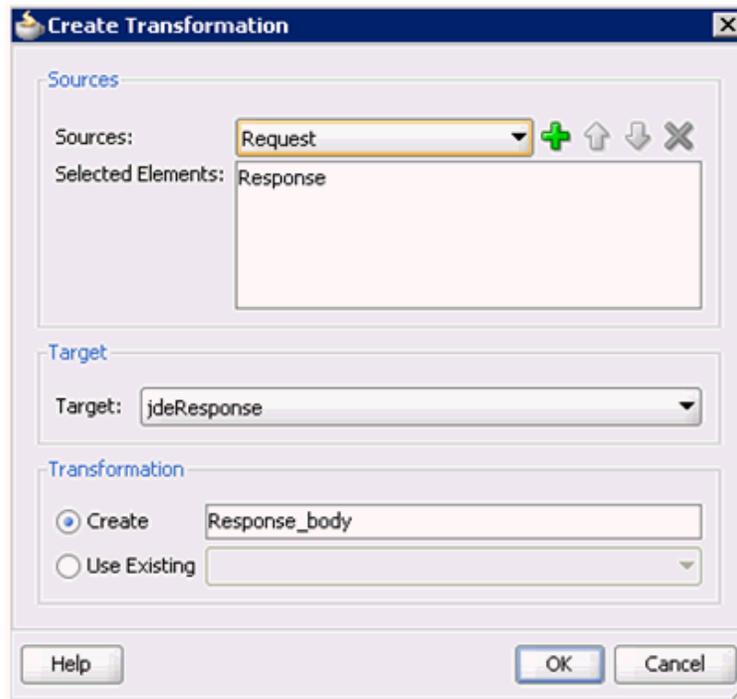
27. Click the **Plus** icon.

The Create Transformation dialog is displayed, as shown in [Figure 6–74](#).

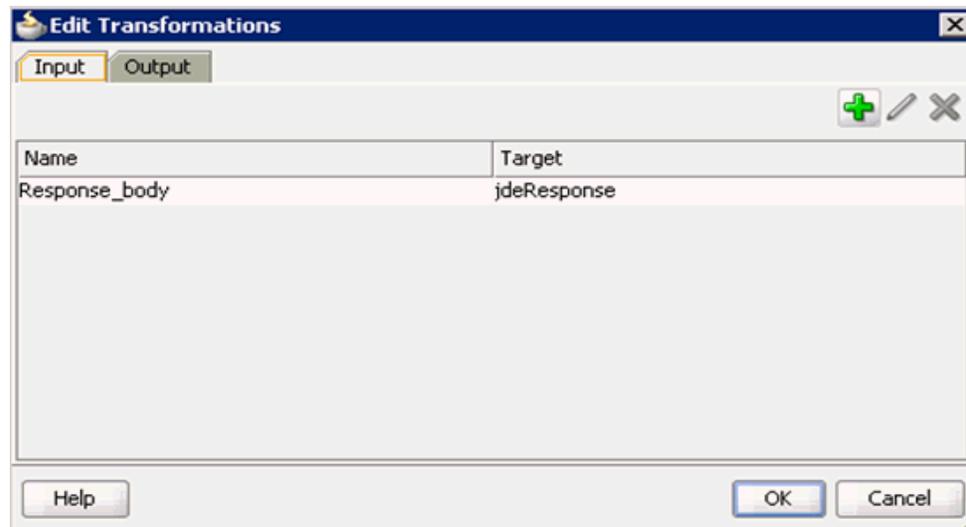
**Figure 6–74 Create Transformation Dialog**



28. Select the **Response** Data Object that was created from the Sources list.

**Figure 6–75 Plus Icon**

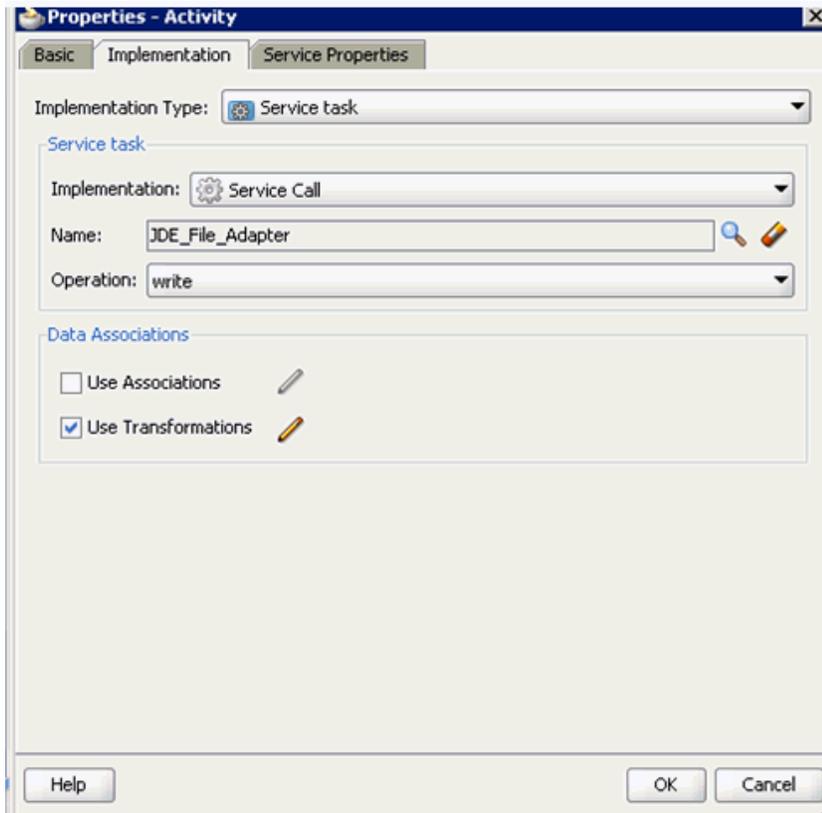
29. Click the **Plus** icon so that the Data Object 'Response' is added to the Selected Elements area, as shown in [Figure 6–75](#).
30. Accept the default value that is selected in the Target list.
31. Leave the default name displayed in the Create field and click **OK**.  
You are returned to the Edit Transformations dialog, as shown in [Figure 6–76](#).

**Figure 6–76 Edit Transformations Dialog**

32. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6–77](#).

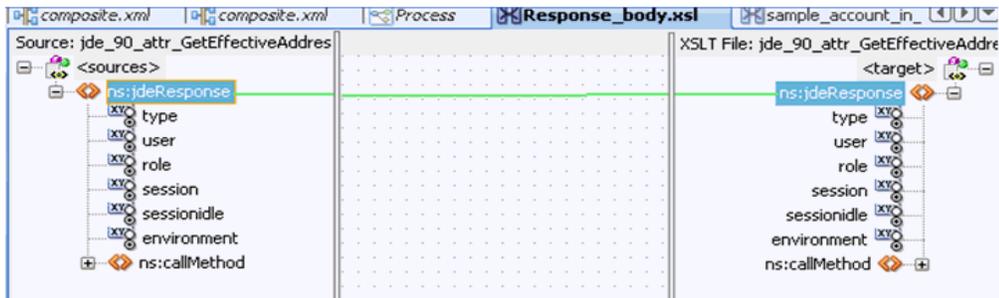
**Figure 6–77 Properties - Activity Dialog**



33. Click OK.

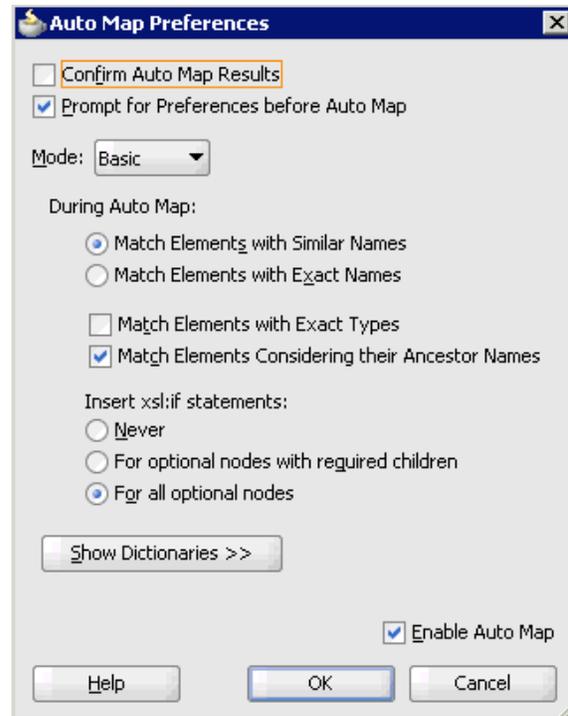
The Response\_body.xsl tab is displayed, as shown in [Figure 6–78](#).

**Figure 6–78 Response\_body.xsl Tab**



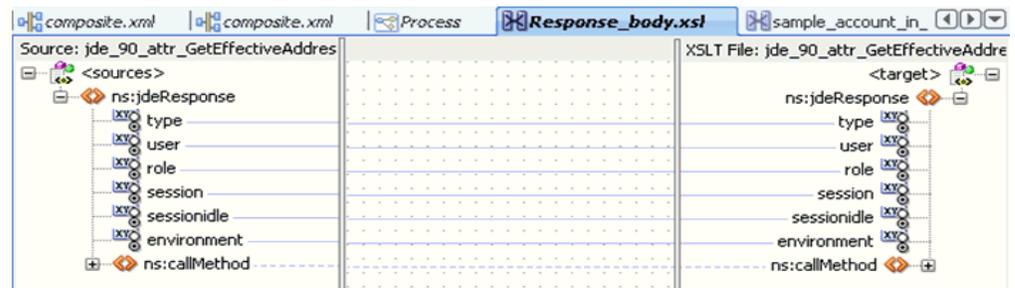
34. Automap the Source and Target elements.

The Auto Map Preferences dialog is displayed, as shown in [Figure 6–79](#).

**Figure 6–79 Auto Map Preferences Dialog**

35. Accept the default values and click **OK**.

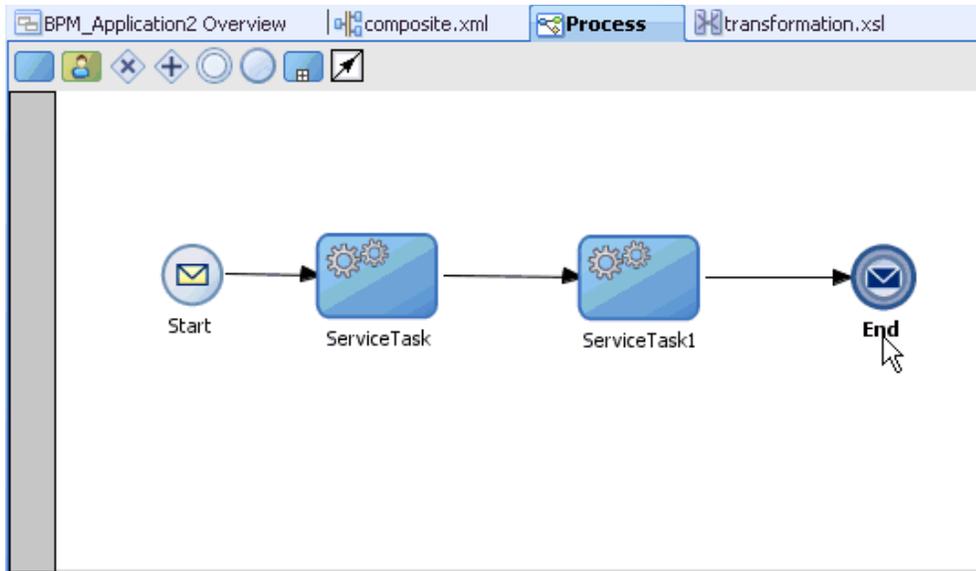
The transformation is completed, as shown in [Figure 6–80](#).

**Figure 6–80 Completed Transformation**

36. Save the transformation.

37. Return to the Process workspace area, as shown in [Figure 6–81](#).

**Figure 6–81 Process Workspace Area**



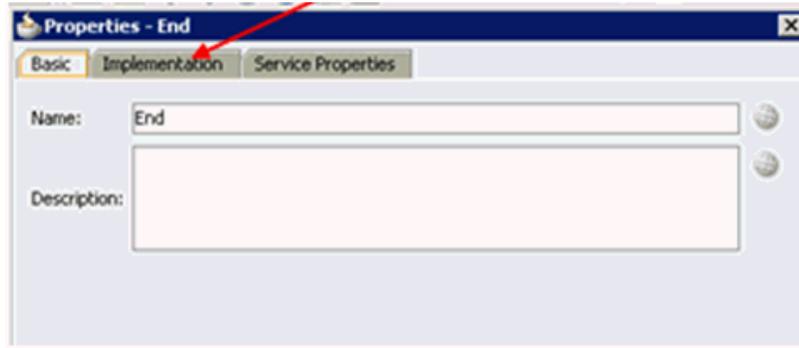
The ServiceTask1 component is created between the ServiceTask component and the End event component.

38. Save the process.
39. Double-click the **End** event component.

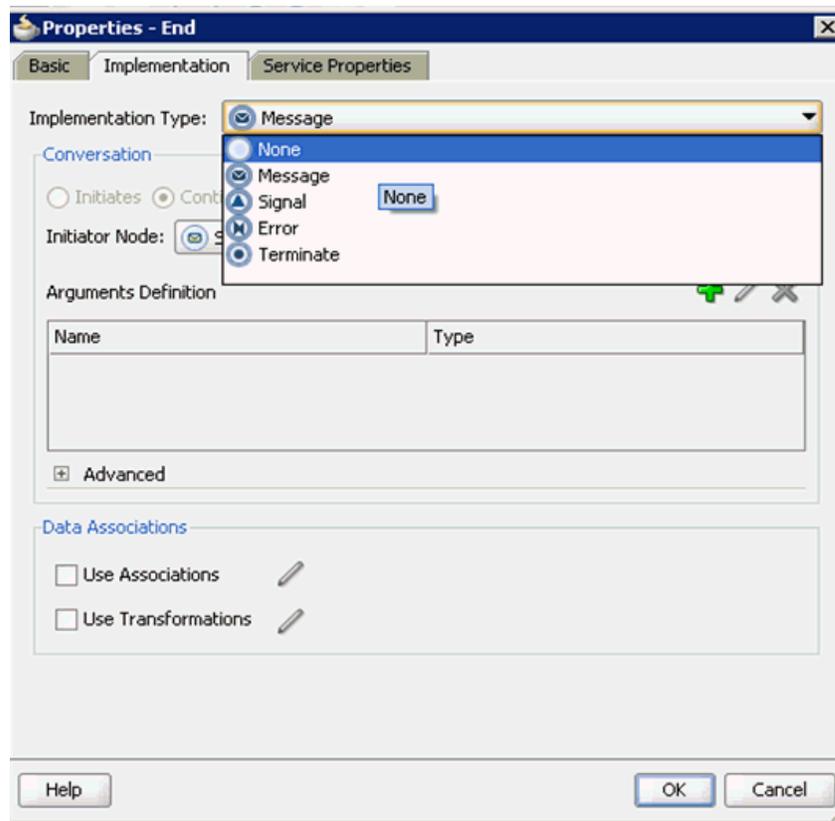
The Properties - End dialog is displayed, as shown in [Figure 6–82](#).

40. Click the **Implementation** tab.

**Figure 6–82 Properties - End Dialog**



41. Select **None** from the Implementation Type list, as shown in [Figure 6–83](#).

**Figure 6–83 Implementation Type List**

42. Click **OK**.

You are returned to the Process workspace area.

43. Save the Process and double-click the **composite.xml** file.

44. Click the **Save All** icon in the menu bar to save the new outbound BPM process component that was configured.

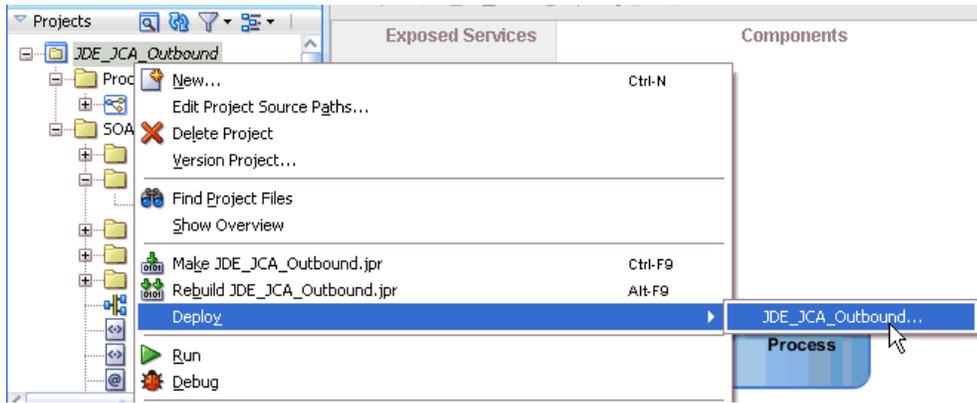
You are now ready to deploy the outbound BPM process.

### 6.4.3 Deploying the BPM Outbound Process

Perform the following steps to deploy the BPM outbound process.

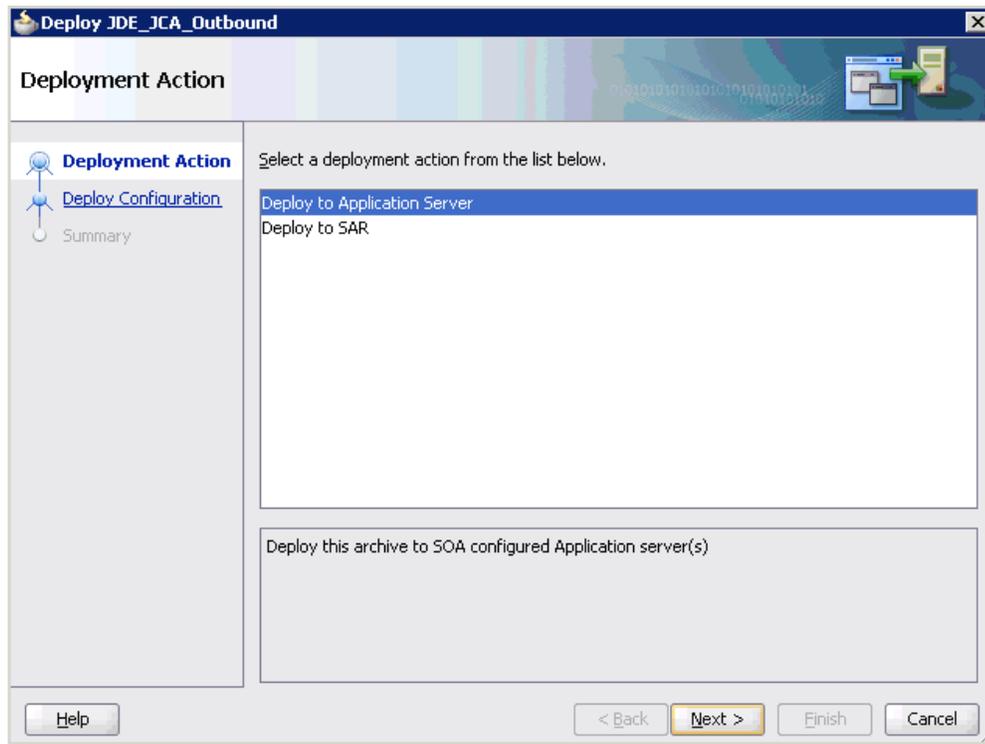
1. Right-click the project name in the left pane (for example, **JDE\_JCA\_Outbound**), select **Deploy**, and then click **JDE\_JCA\_Outbound**, as shown in [Figure 6–84](#).

**Figure 6–84 JDE\_JCA\_Outbound Deploy Option**



The Deployment Action page is displayed, as shown in [Figure 6–85](#).

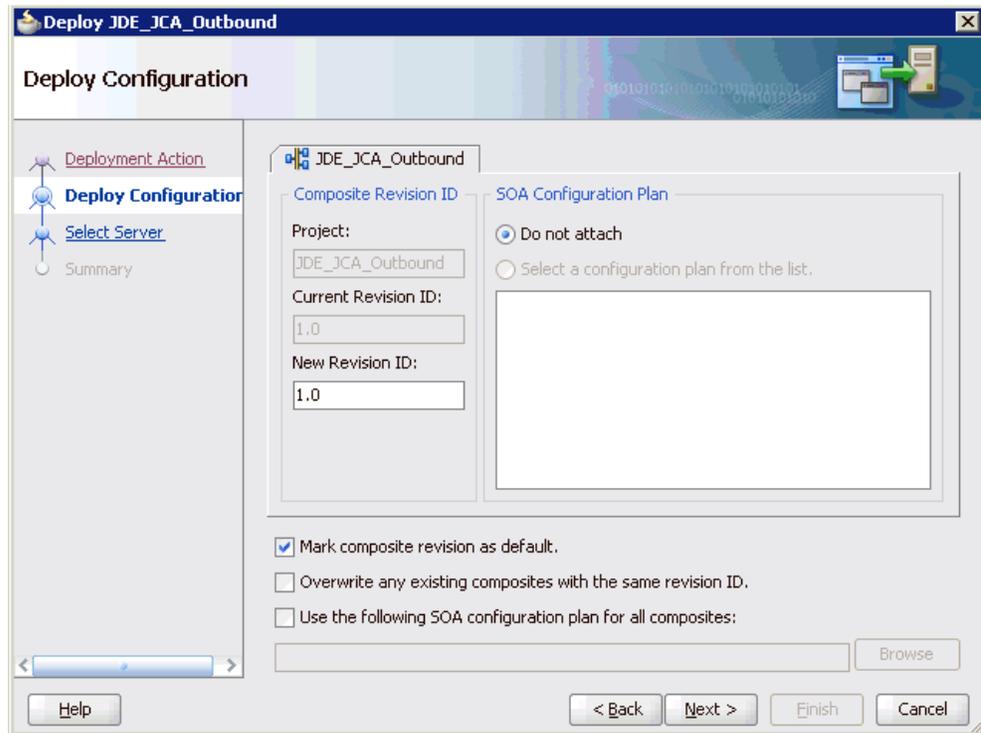
**Figure 6–85 Deployment Action Page**



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

The Deploy Configuration page is displayed, as shown in [Figure 6–86](#).

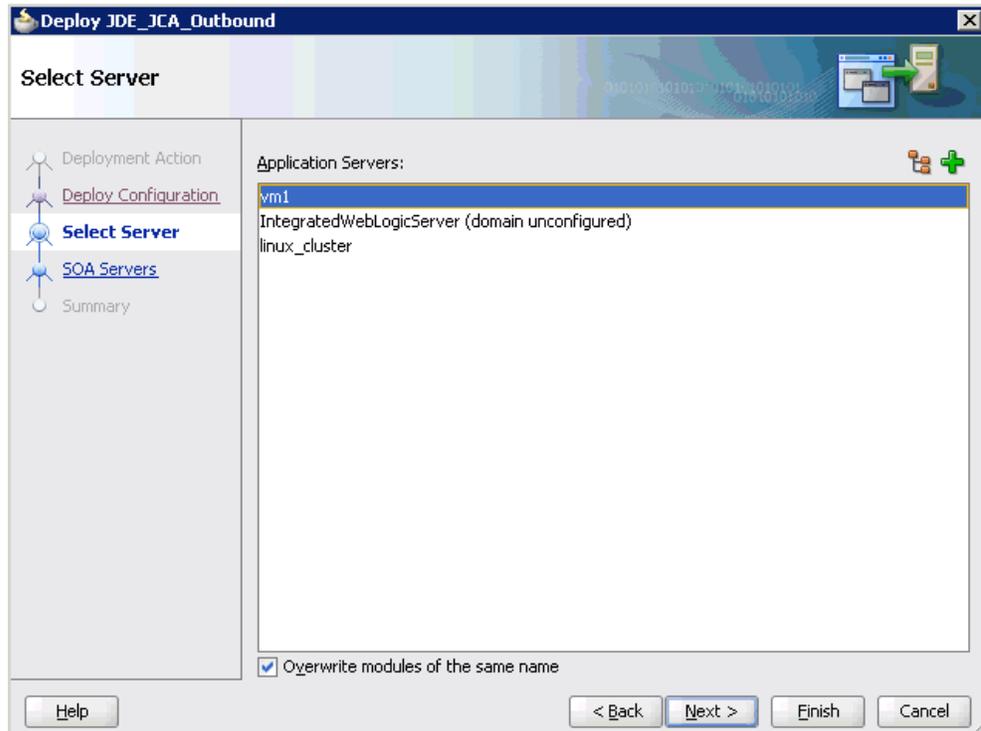
**Figure 6–86 Deploy Configuration Page**



4. Leave the default values selected and click **Next**.

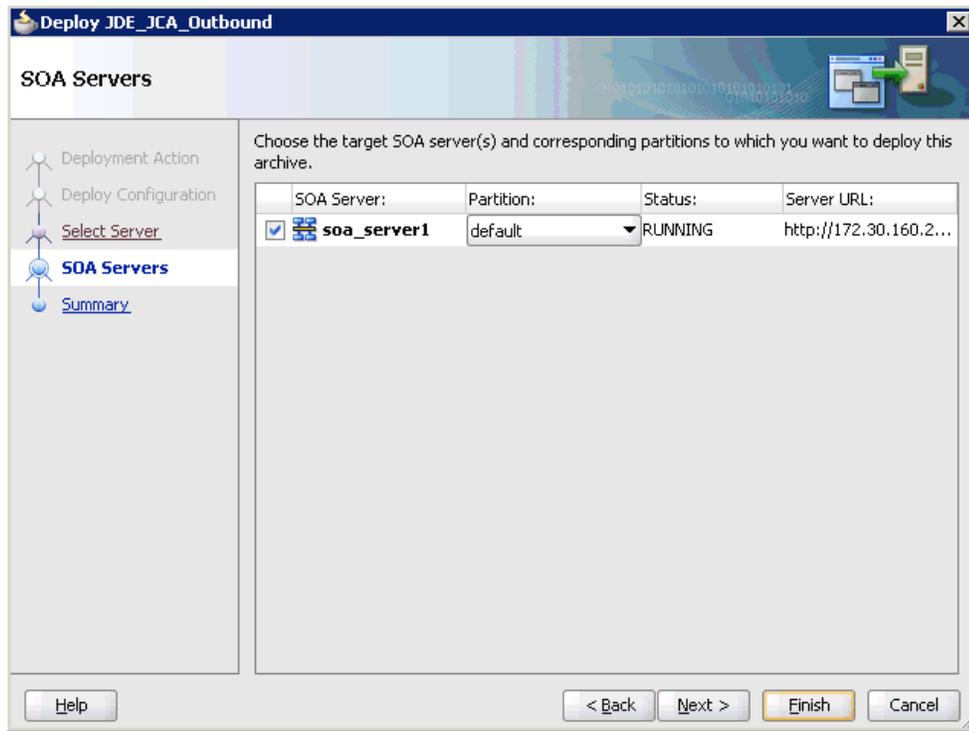
The Select Server page is displayed, as shown in [Figure 6–87](#).

**Figure 6–87 Select Server Page**

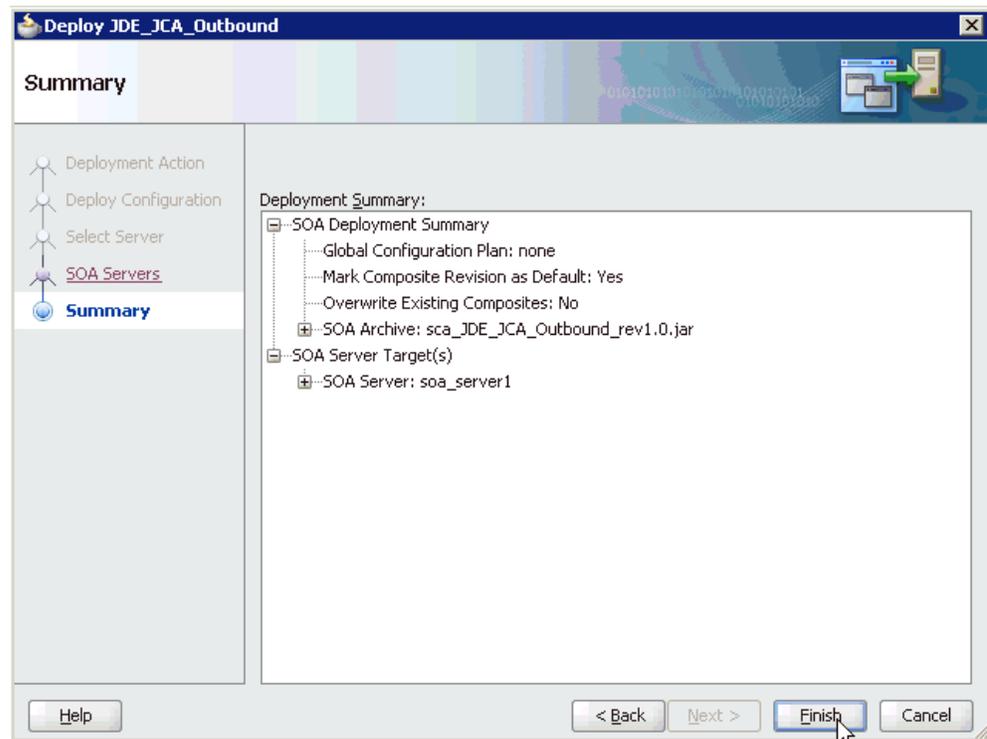


5. Select an available application server that was configured and click **Next**.  
The SOA Servers page is displayed, as shown in [Figure 6–88](#).

**Figure 6–88 SOA Servers Page**

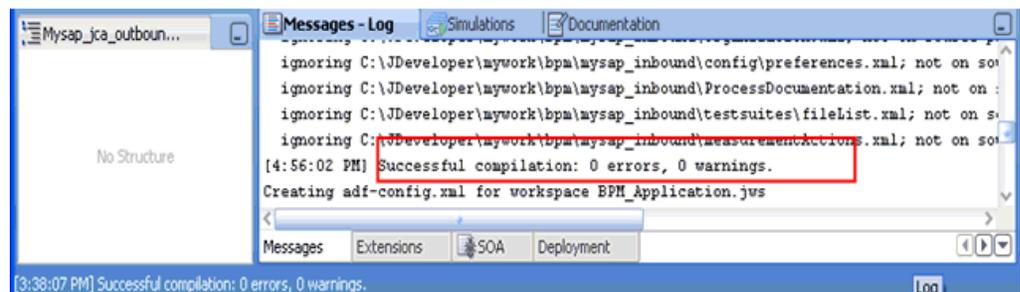


6. Select a target SOA server and click **Next**.  
The Summary page is displayed, as shown in [Figure 6–89](#).

**Figure 6–89 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 6–90](#).

**Figure 6–90 Successful Deployment Message**

#### 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.

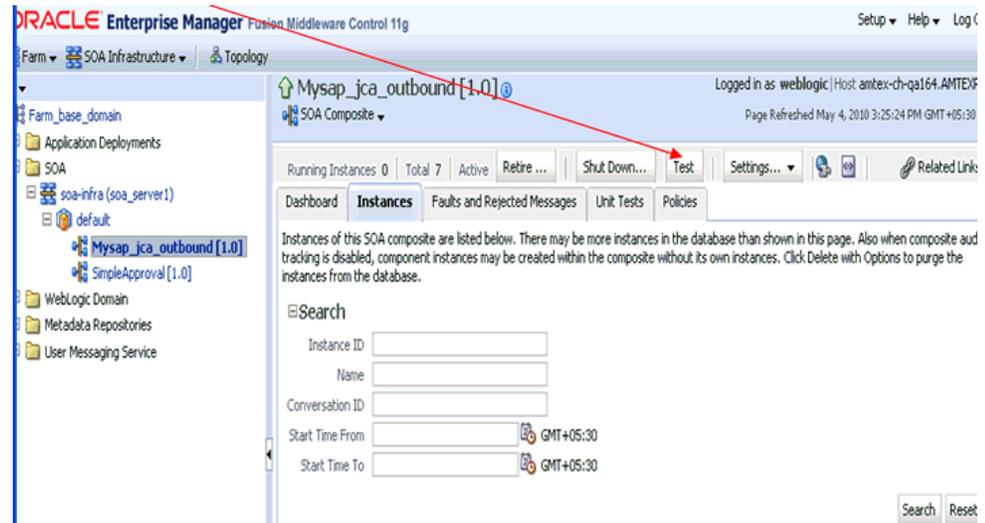
1. Logon to the Oracle Enterprise Manager console, as shown in [Figure 6–91](#).

**Figure 6–91 Oracle Enterprise Manager Console**



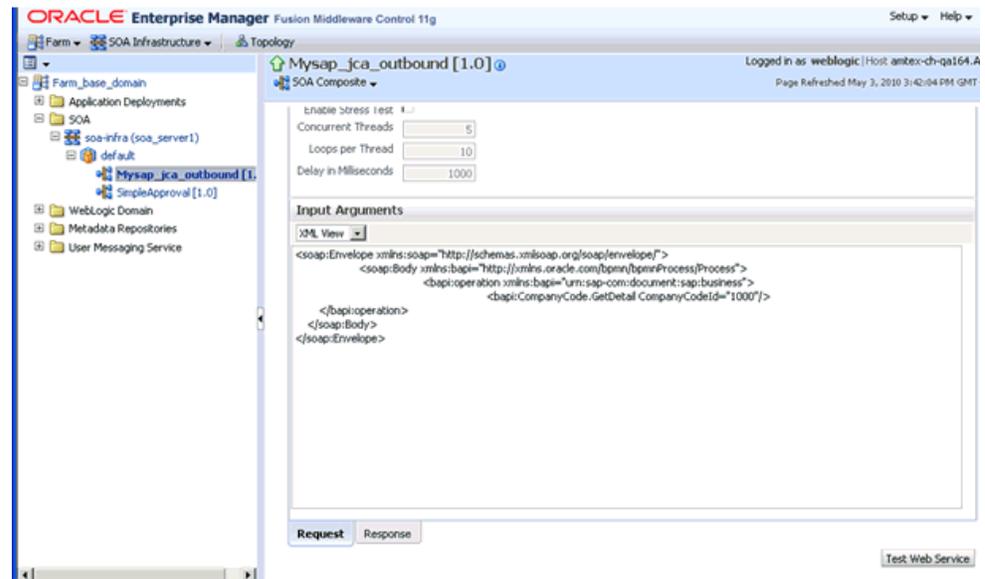
2. Expand your domain in the left pane followed by the **SOA** folder.
3. Select an available project.

**Figure 6–92 Test Button**



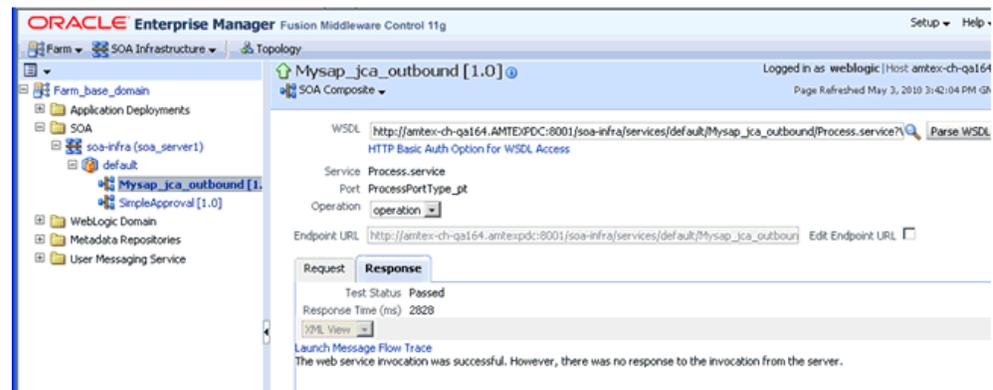
4. Click **Test**, as shown in Figure 6–92.

**Figure 6–93 Request Tab**



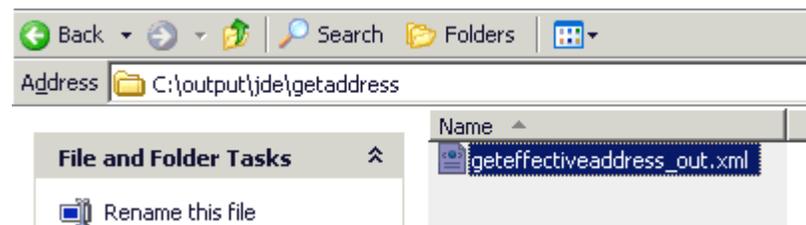
5. Click the **Request** tab, as shown in Figure 6–93.
6. Provide an appropriate input value in the Value field and click **Test Web Service**.  
A response is received in the Response tab to indicate that invocation was successful in the Oracle Enterprise Manager console, as shown in Figure 6–94.

**Figure 6–94 Received Output Response**



7. Navigate to the defined output directory on your file system and open the XML response document that was received, as shown in Figure 6–95.

**Figure 6–95 XML Response Document**



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 J.D. Edwards OneWorld integrates with J.D. Edwards OneWorld to receive event data.

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

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

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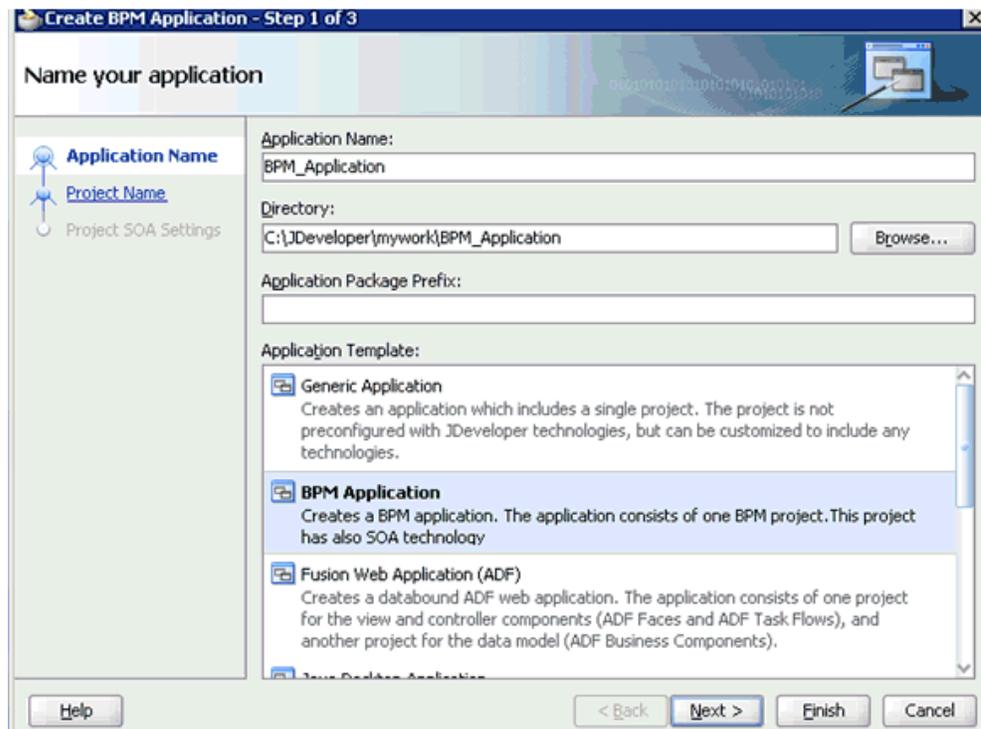
Before you design a BPM process, you must generate the respective WSDL file using Application Explorer. For more information, see "[Generating WSDL for Event Integration](#)" on page 4-38.

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

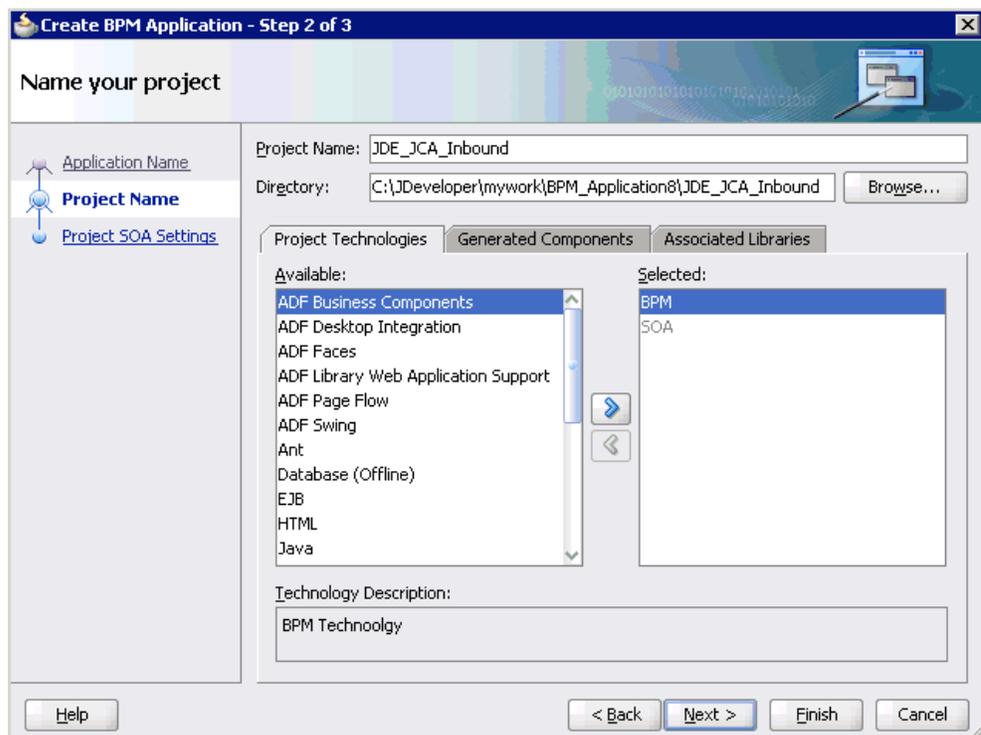
### 6.5.1 Creating an Empty Composite for BPM

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 6-96](#).

**Figure 6–96 Name Your Application Page**

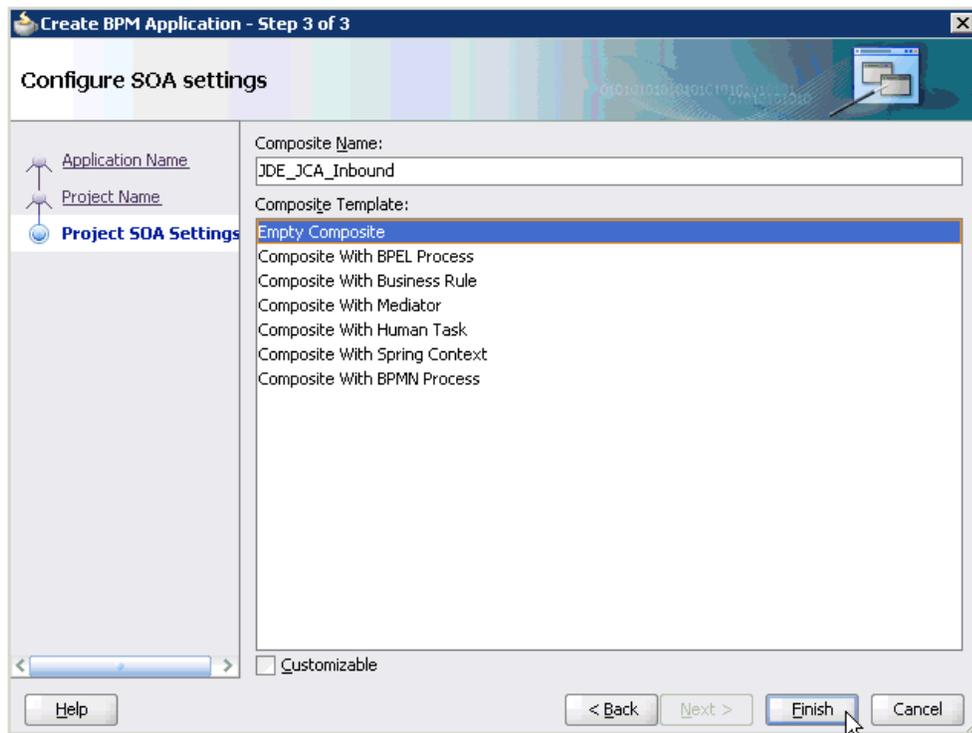
The Name your project page is displayed, as shown in [Figure 6–97](#).

**Figure 6–97 Name Your Project Page**

3. Enter a project name (for example, JDE\_JCA\_Inbound) and click **Next**.

The Configure SOA settings page is displayed, as shown in [Figure 6–98](#).

**Figure 6–98** Configure SOA Settings Page



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

## 6.5.2 Defining a BPM Inbound Process

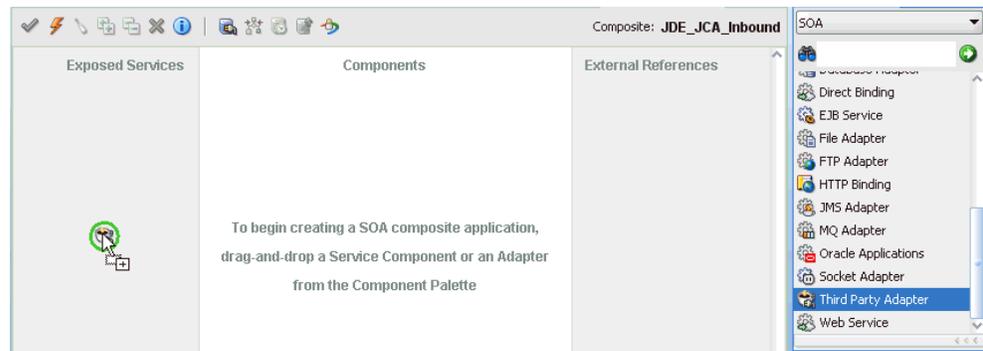
This section describes how to define a BPM inbound process, which consists of the following stages:

1. Configuring a Third Party Adapter Service Component
2. Configuring an Inbound BPM Process Component
3. Creating a File Adapter for the Write Operation

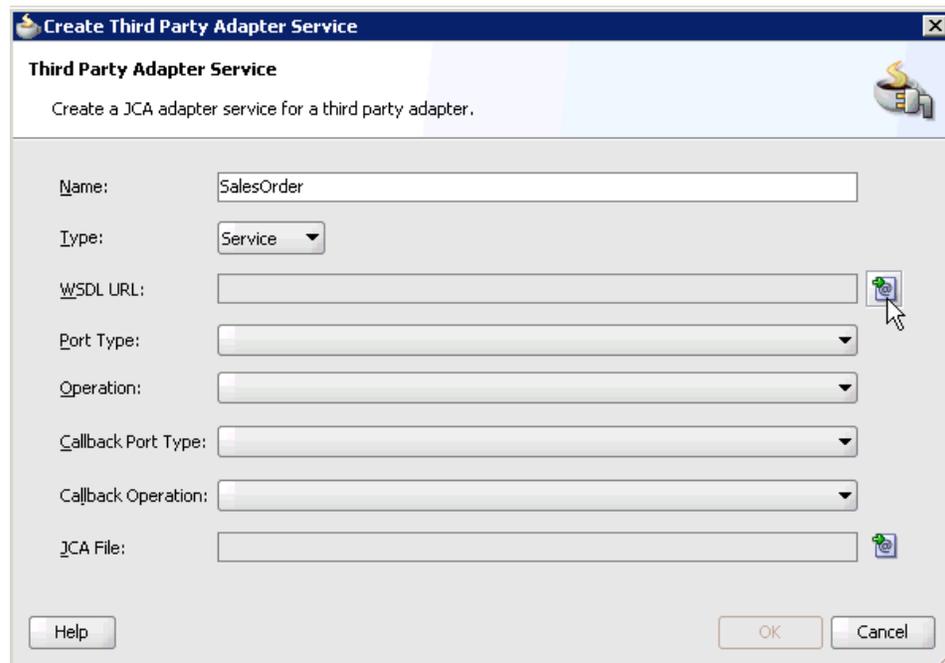
### Configuring a Third Party Adapter Service Component

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 References pane, as shown in [Figure 6–99](#).

**Figure 6–99 Third Party Adapter Component**

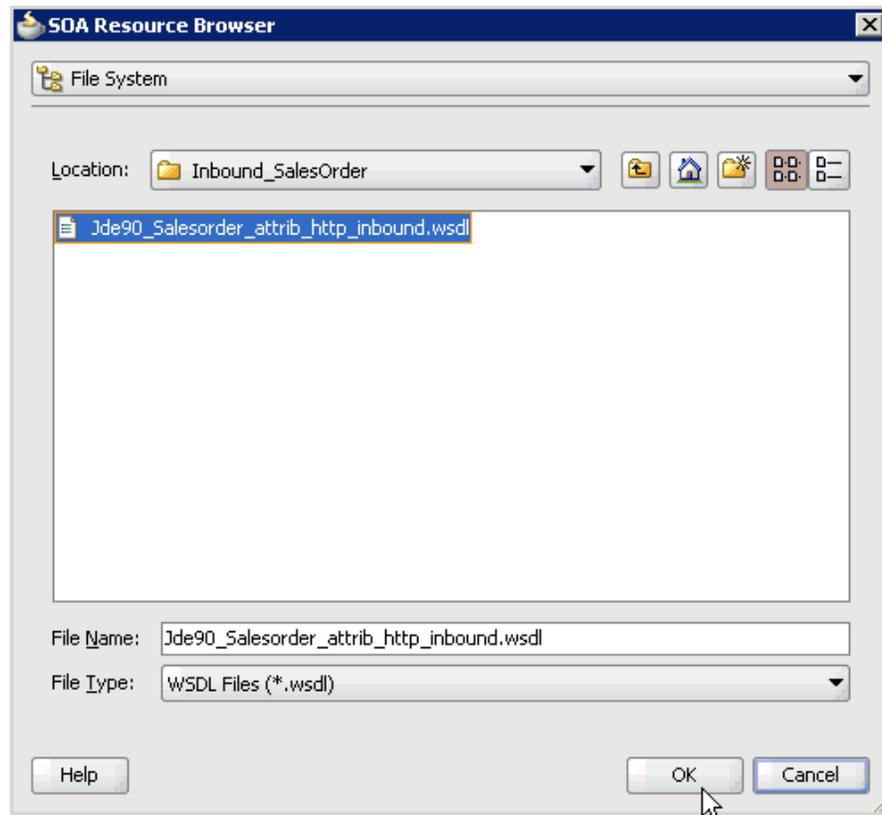
The Create Third Party Adapter Service dialog is displayed, as shown in [Figure 6–100](#).

**Figure 6–100 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 6–101](#).

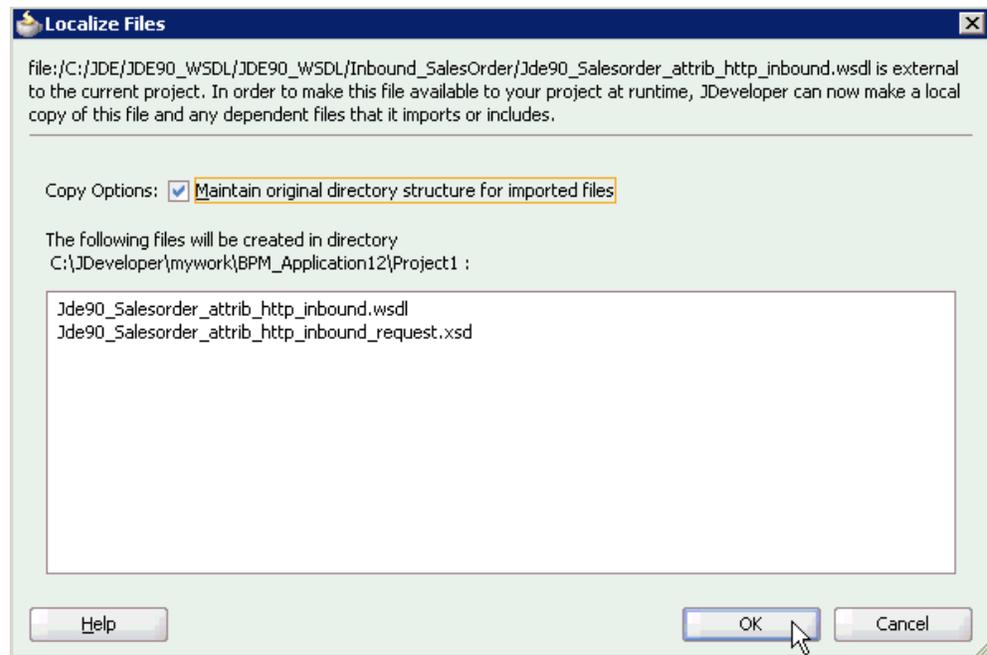
**Figure 6–101 SOA Resource Browser Dialog**



5. Browse and select an inbound WSDL file from the following directory:  
`<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdl`

6. Click **OK**.

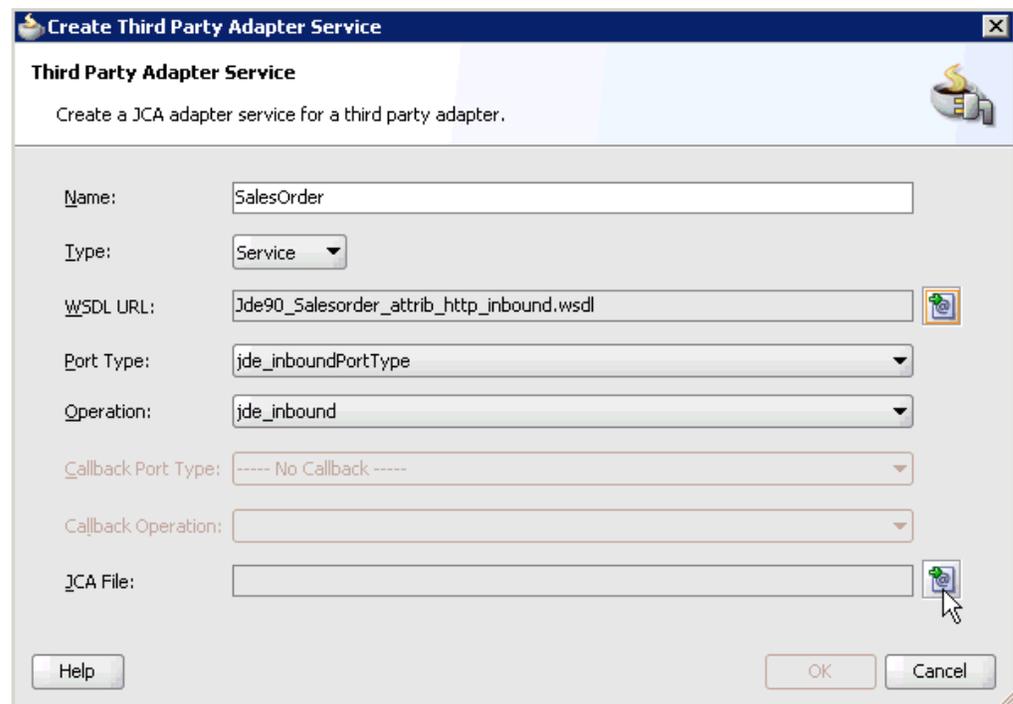
The Localize Files dialog is displayed, as shown in [Figure 6–102](#).

**Figure 6–102 Localize Files Dialog**

7. Click **OK**.

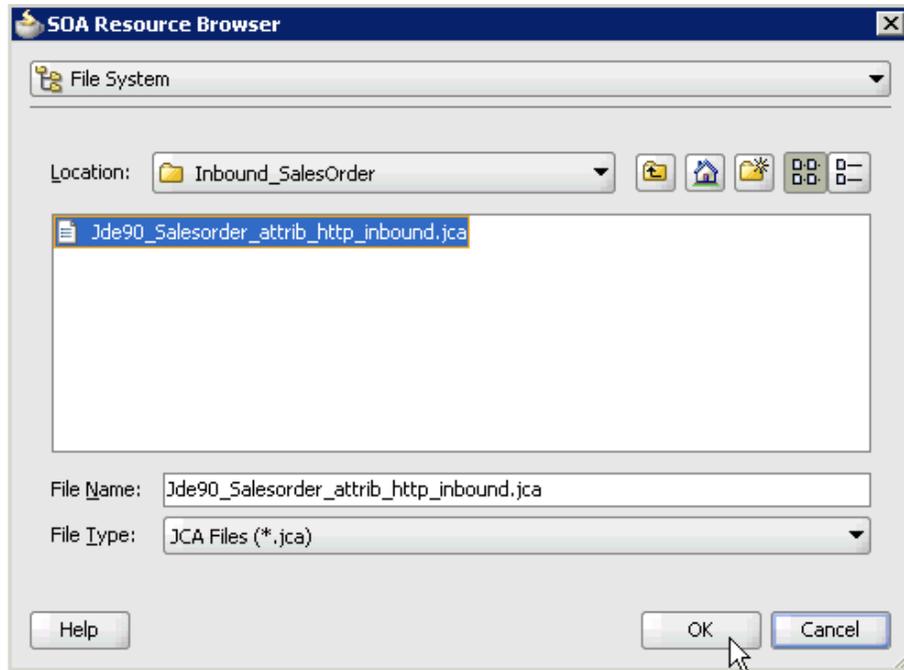
The inbound WSDL file and associated receive\_request XML schema file (.xsd) are imported to the project folder that has been created.

You are returned to the Create Third Party Adapter Service dialog, as shown in [Figure 6–103](#).

**Figure 6–103 Create Third Party Adapter Service Dialog**

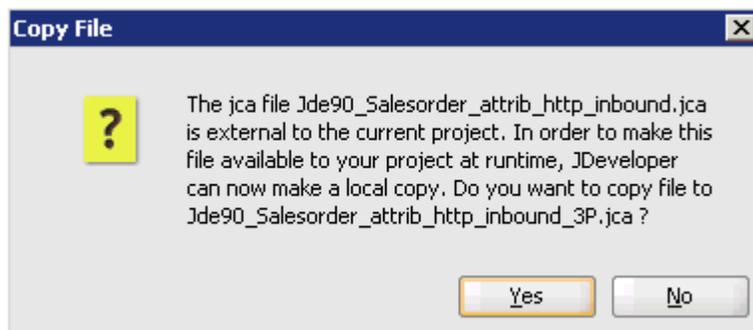
8. Click the **Find JCA file** icon, which is located to the right of the JCA File field. The SOA Resource Browser dialog is displayed, as shown in [Figure 6-104](#).

**Figure 6-104 SOA Resource Browser Dialog**



9. Browse and select the JCA properties file from the following directory:  
`<ADAPTER_HOME>\soa\thirdparty\ApplicationAdapters\wsdl`
10. Click **OK**.  
 The following message is displayed, as shown in [Figure 6-105](#).

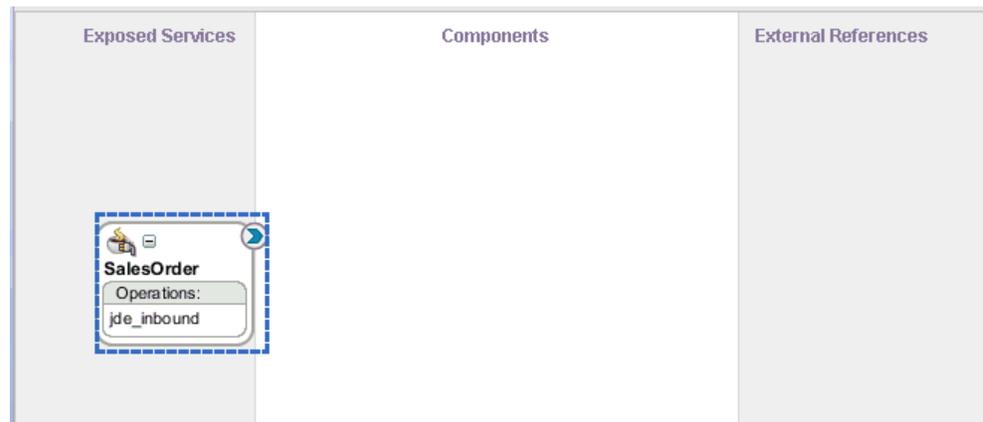
**Figure 6-105 Copy File Confirmation Message**



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 6-106](#).

**Figure 6–106 Create Third Party Adapter Service Dialog**
**12. Click OK.**

The third party adapter service component (SalesOrder) is created and displayed in the Exposed References pane, as shown in [Figure 6–107](#).

**Figure 6–107 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:

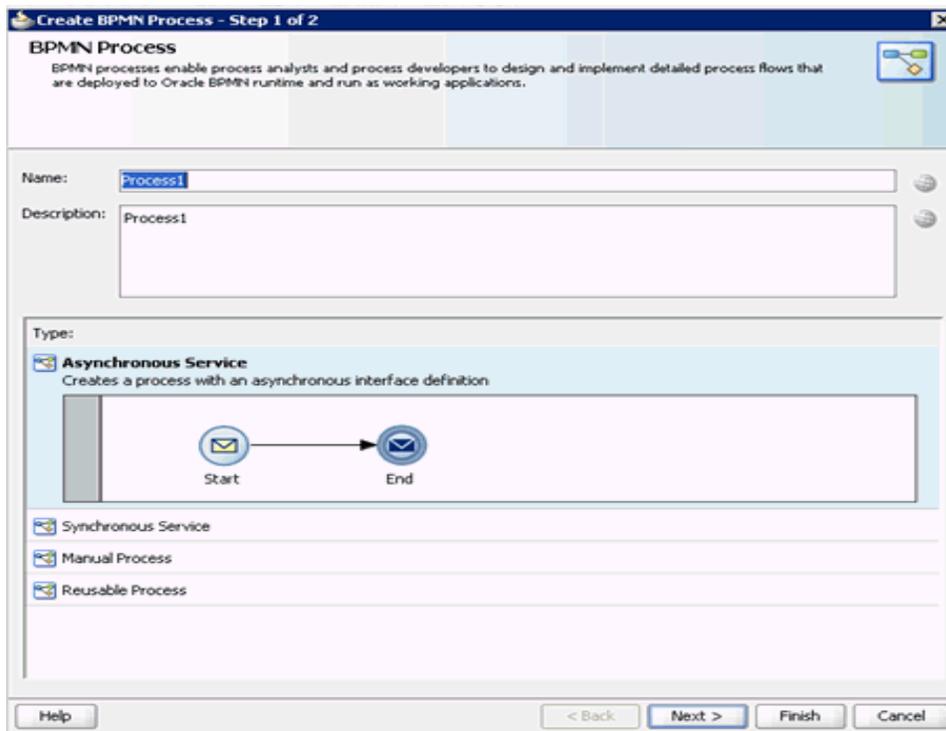
1. Drag and drop the **BPMN Process** component from the Service Components pane to the Components pane, as shown in [Figure 6–108](#).

**Figure 6–108 BPMN Process Component**

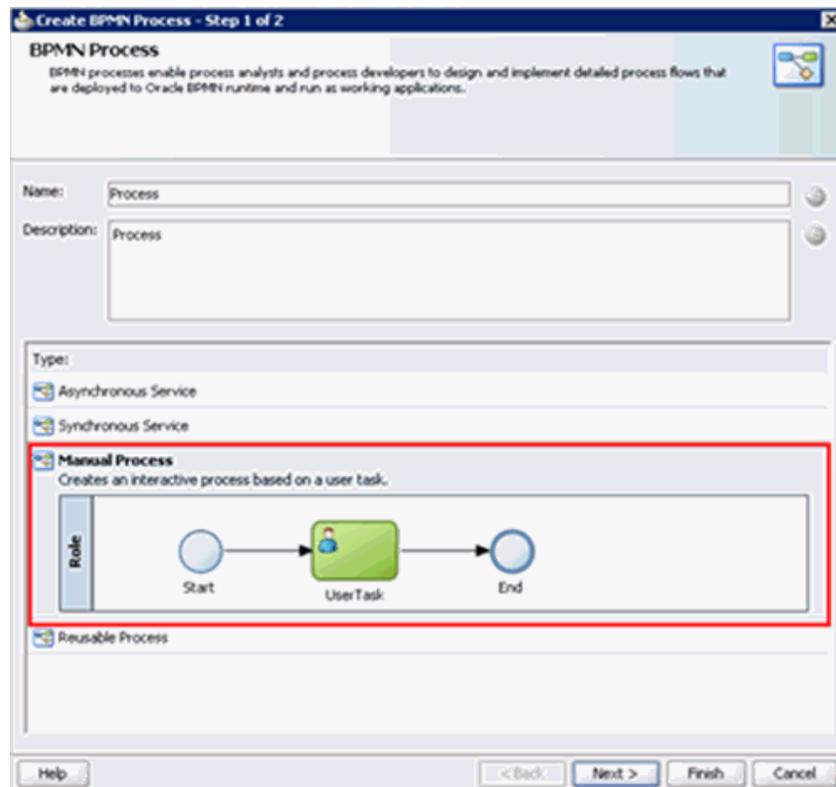


The Create BPMN Process dialog is displayed, as shown in [Figure 6–109](#).

**Figure 6–109 Create BPMN Process Dialog**

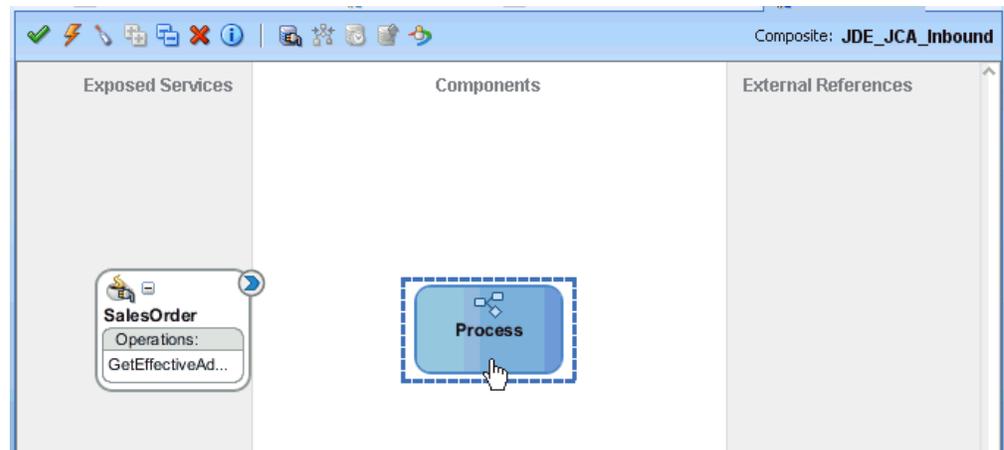


2. Click on **Manual Process** in the Type field as shown in [Figure 6–110](#).

**Figure 6–110 Manual Process**

3. Click **Finish**.

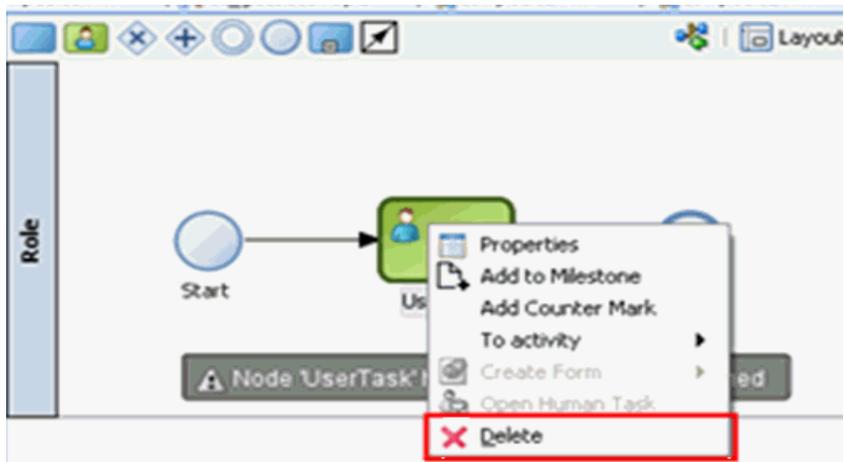
The BPMN Process component is created, as shown in [Figure 6–111](#).

**Figure 6–111 BPMN Process Component**

4. Double-click the BPMN Process component in the Components pane.

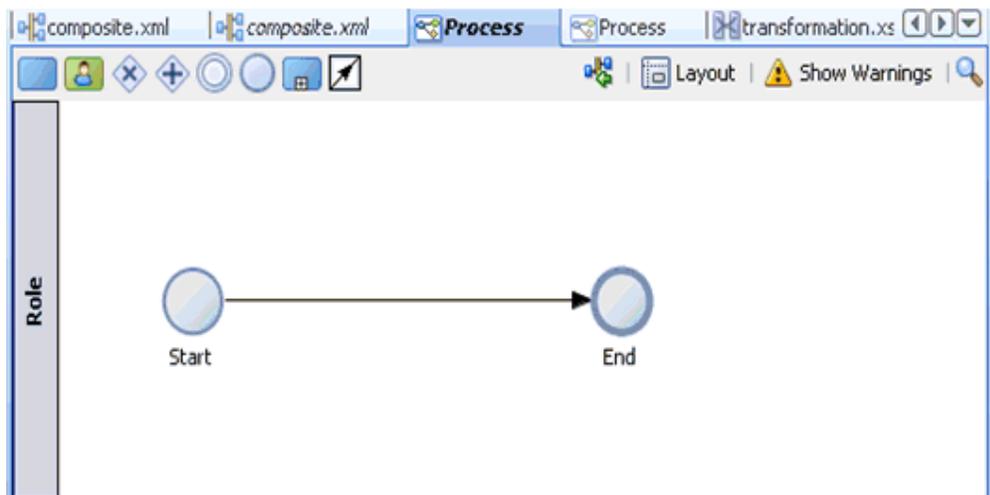
The BPMN process is displayed, as shown in [Figure 6–112](#).

Figure 6–112 BPMN Process

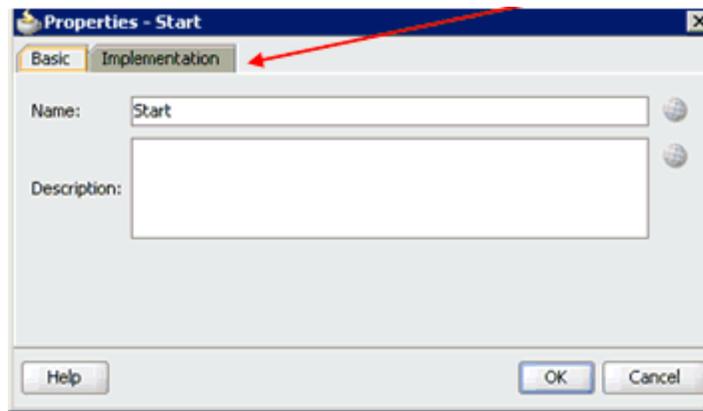


5. Right-click **UserTask** and select **Delete** from the menu.
6. Double-click the **Start** event component, as shown in Figure 6–113.

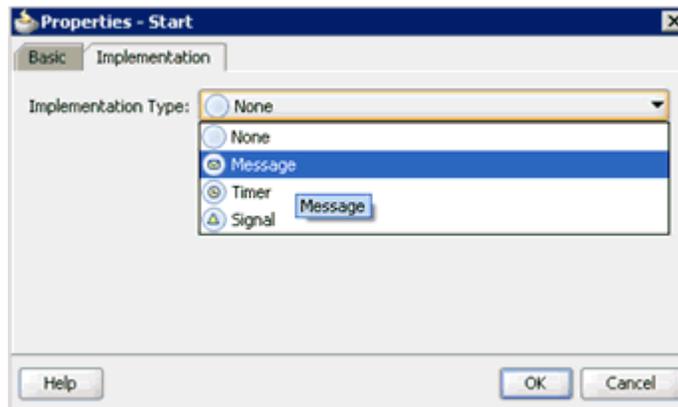
Figure 6–113 Start Event Component



The Properties - Start dialog is displayed, as shown in Figure 6–114.

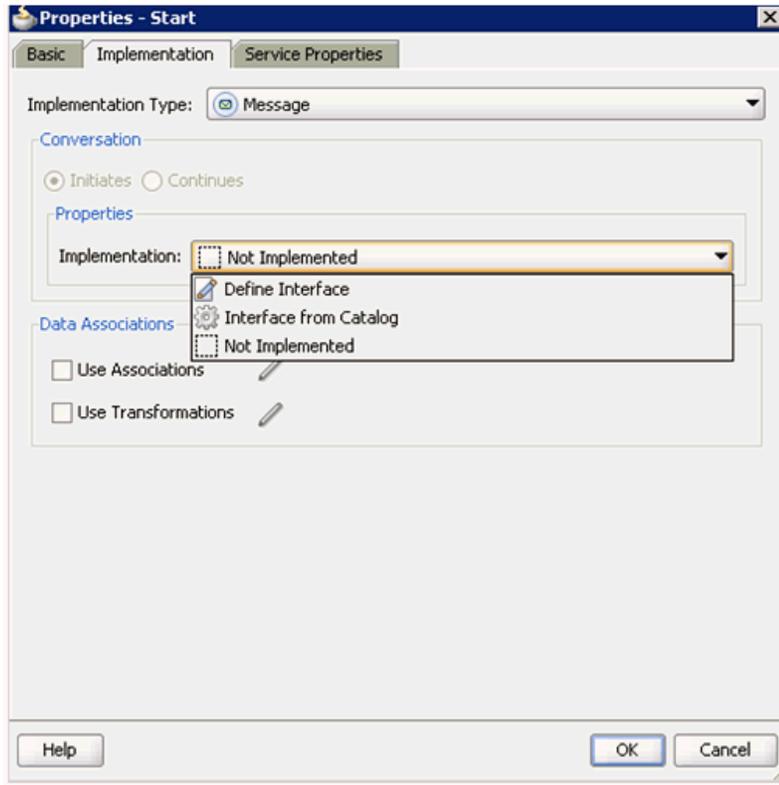
**Figure 6–114 Properties - Start Dialog**

7. Click the **Implementation** tab, as shown in [Figure 6–115](#).

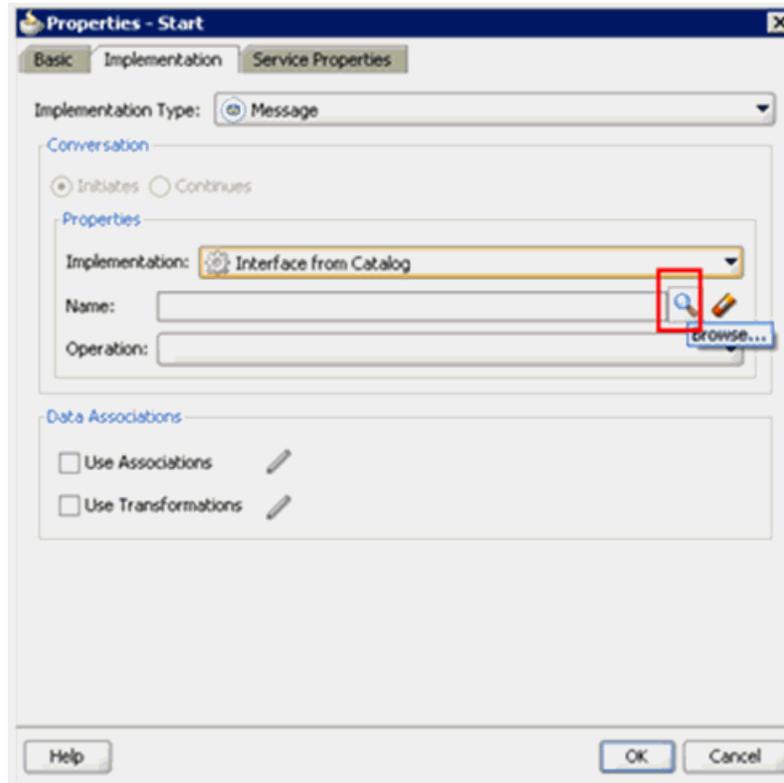
**Figure 6–115 Implementation Tab**

8. Select **Message** from the Implementation Type list, as shown in [Figure 6–116](#).

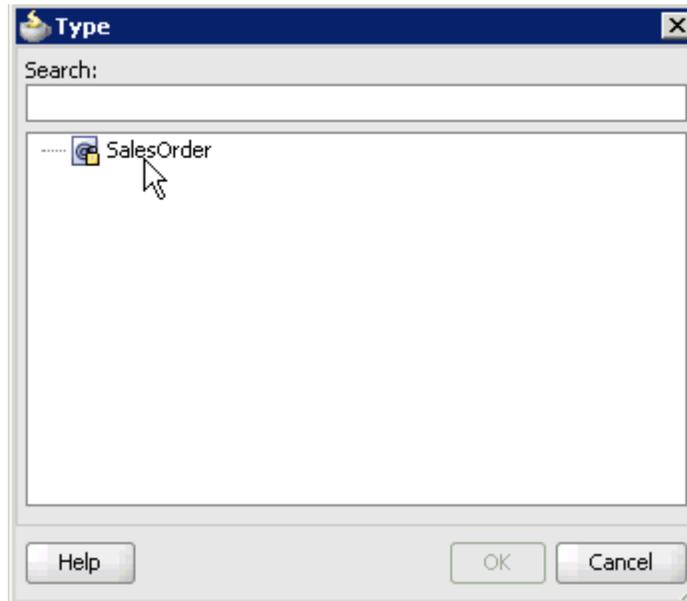
Figure 6–116 Implementation Type List



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 6–117](#).

**Figure 6–117 Browse Icon**

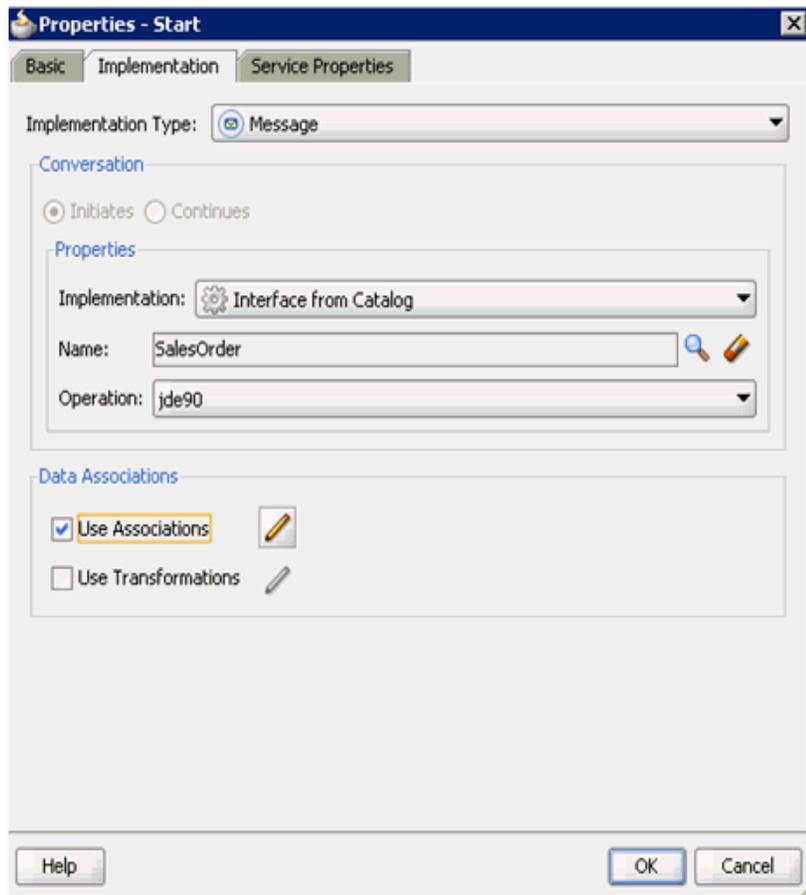
The Type dialog is displayed, as shown in [Figure 6–118](#).

**Figure 6–118 Type Dialog**

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 6–119](#).

**Figure 6–119 Properties - Start Dialog**

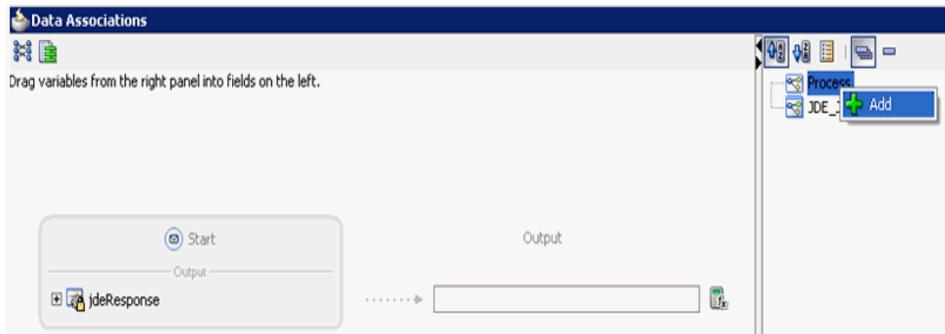


12. Select the **Use Associations** option that is located under Data Associations.

13. Click the **Edit Data Associations** icon.

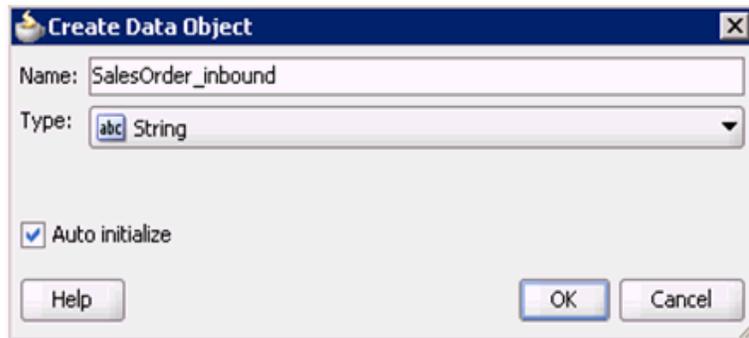
The Data Associations dialog is displayed, as shown in [Figure 6–120](#).

**Figure 6–120 Data Associations Dialog**



14. Right-click the **Process** node in the right pane and select **Add**.

The Create Data Object dialog is displayed, as shown in [Figure 6–121](#).

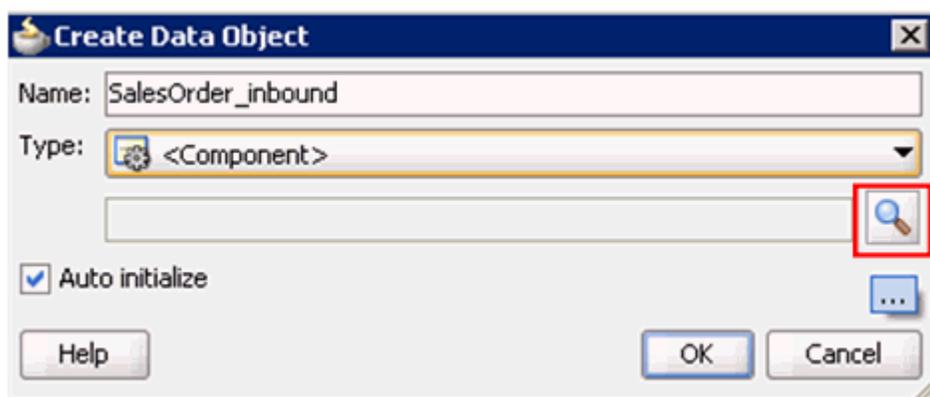
**Figure 6–121 Create Data Object Dialog**

15. Enter a name in the Name field (for example, SalesOrder\_inbound) 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 6–122](#).

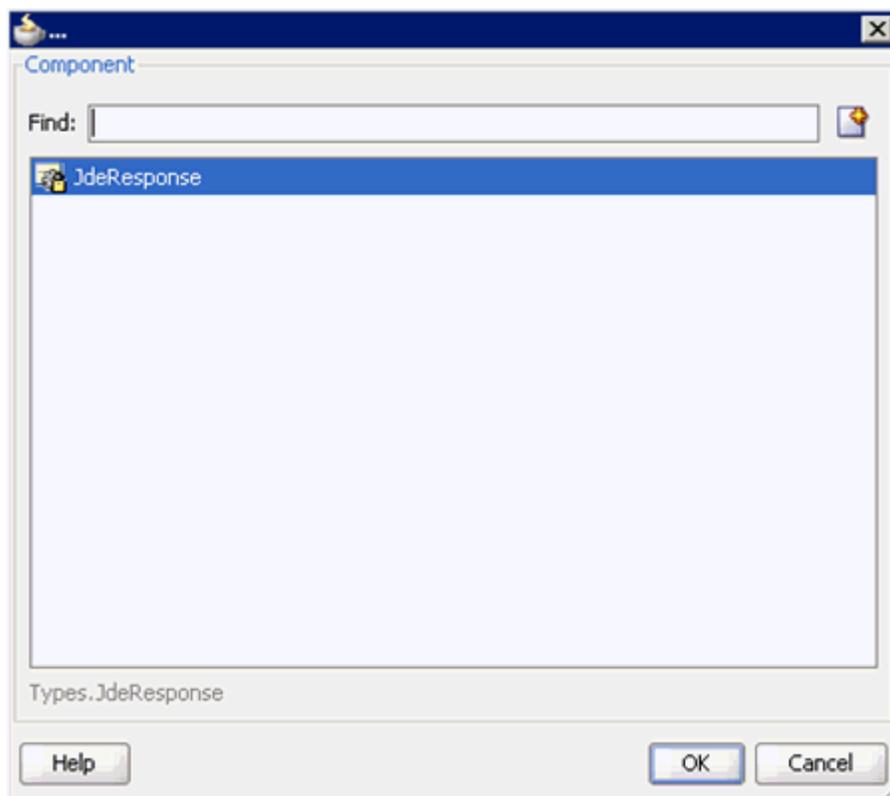
**Figure 6–122 Create Data Object**

16. Click on the Browse icon below the Type field, as shown in [Figure 6–123](#).

**Figure 6–123 Browse Icon**

The Browse window opens, as shown in [Figure 6–124](#).

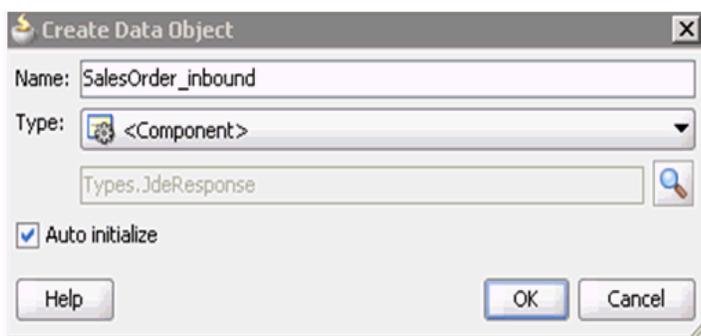
**Figure 6–124 Browse Window**



17. Select the first component (for example, JdeResponse) and click **OK**, as shown in [Figure 6–124](#).

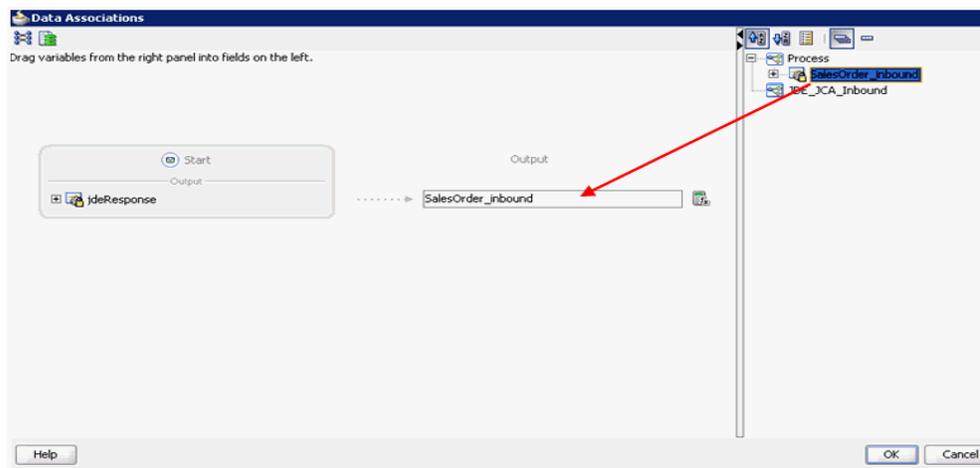
You are returned to the Create Data Object dialog, as shown in [Figure 6–125](#).

**Figure 6–125 Create Data Object Dialog**



18. Click **OK**.

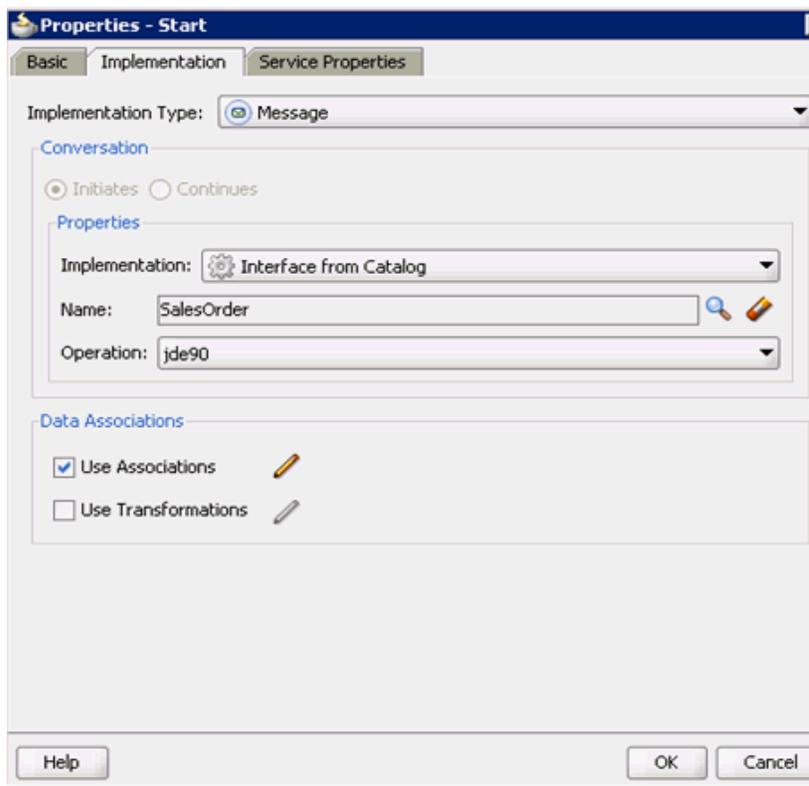
The Data Object (for example, SalesOrder\_inbound) that has been created is displayed under the Process node in the Data Associations dialog, as shown in [Figure 6–126](#).

**Figure 6–126 Data Associations Dialog**

19. Select the **SalesOrder\_inbound** 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 6–127](#).

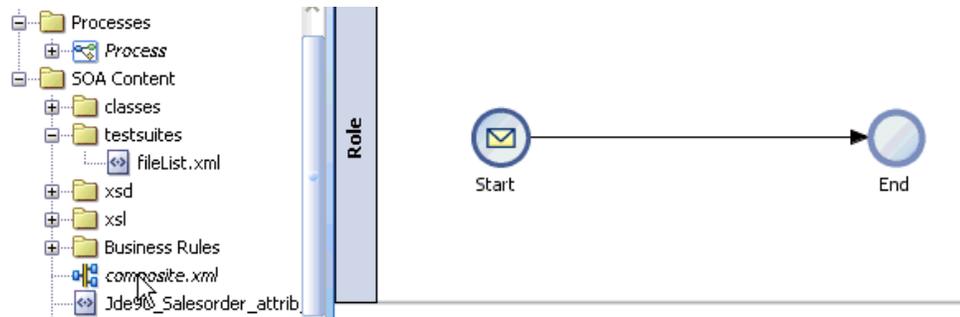
**Figure 6–127 Properties - Start Dialog**

21. Click **OK**.

You are returned to the Process workspace area, as shown in [Figure 6–128](#).

22. Double-click **composite.xml** in the left pane.

**Figure 6–128 Process Workspace Area**



23. Click the **Save All** icon in the menu bar to save the new inbound BPM process component that was configured.

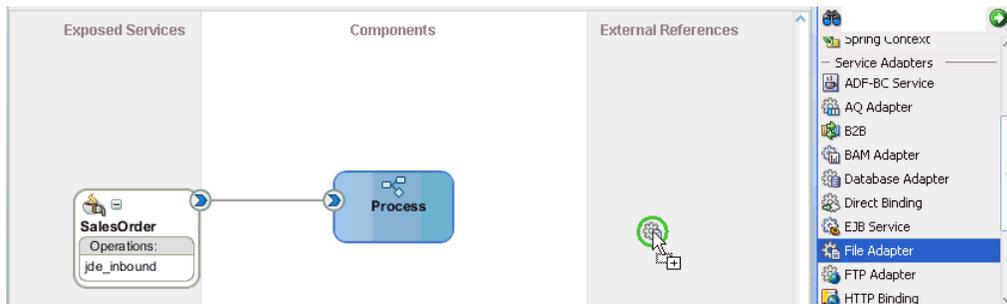
You are now ready to create a File adapter for the write operation.

**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 6–129](#).

**Figure 6–129 File Adapter Component**

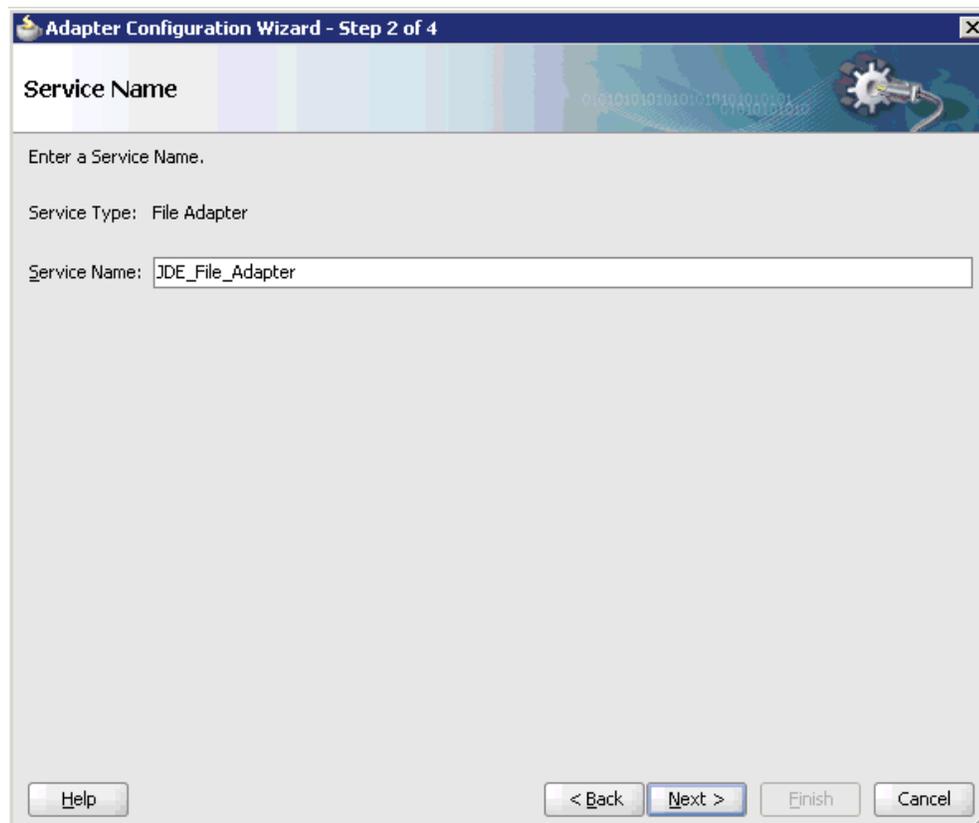


The Adapter Configuration Wizard is displayed, as shown in [Figure 6–130](#).

**Figure 6–130 Adapter Configuration Wizard****2. Click Next.**

The Service Name page is displayed, as shown in [Figure 6–131](#).

**Figure 6–131 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 6–132](#).

**Figure 6–132 Adapter Interface Page**

The screenshot shows a window titled "Adapter Configuration Wizard - Step 3 of 4" with a close button in the top right corner. The main heading is "Adapter Interface". Below the heading is a descriptive paragraph: "The adapter interface is defined by a wsdl that is generated using the operation name and schema(s) specified later in this wizard. Optionally, the adapter interface may be defined by importing an existing WSDL." Below this text are two radio button options under the label "Interface:". The first option, "Define from operation and schema (specified later)", is selected and highlighted with a yellow box. The second option is "Import an existing WSDL". Below these options are three input fields: "WSDL URL:" with a text box and a copy icon, "Port Type:" with a dropdown menu, and "Operation:" with a dropdown menu. At the bottom of the window are four buttons: "Help", "< Back", "Next >", and "Finish", with a "Cancel" button to the right of "Finish".

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 6–133](#).

**Figure 6–133 Operation Page**

The screenshot shows a window titled "Adapter Configuration Wizard - Step 4 of 7". The main heading is "Operation". Below the heading, there is a paragraph of text: "The File Adapter supports four operations. There is a Read File operation that polls for incoming files in your local file system, a Write File operation that creates outgoing files, a Synchronous Read File operation that reads the current contents of a file, and a List Files operation that lists file names in specified locations. Specify the Operation type and Operation Name. Only one operation per Adapter Service may be defined using this wizard." Below this text, there are four radio button options under the label "Operation Type": "Read File", "Write File" (which is selected and highlighted with a yellow box), "Synchronous Read File", and "List Files". Below the radio buttons, there is a text input field labeled "Operation Name:" with the word "Write" entered. At the bottom of the window, there are four buttons: "Help", "< Back", "Next >", and "Cancel".

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 6–134](#).

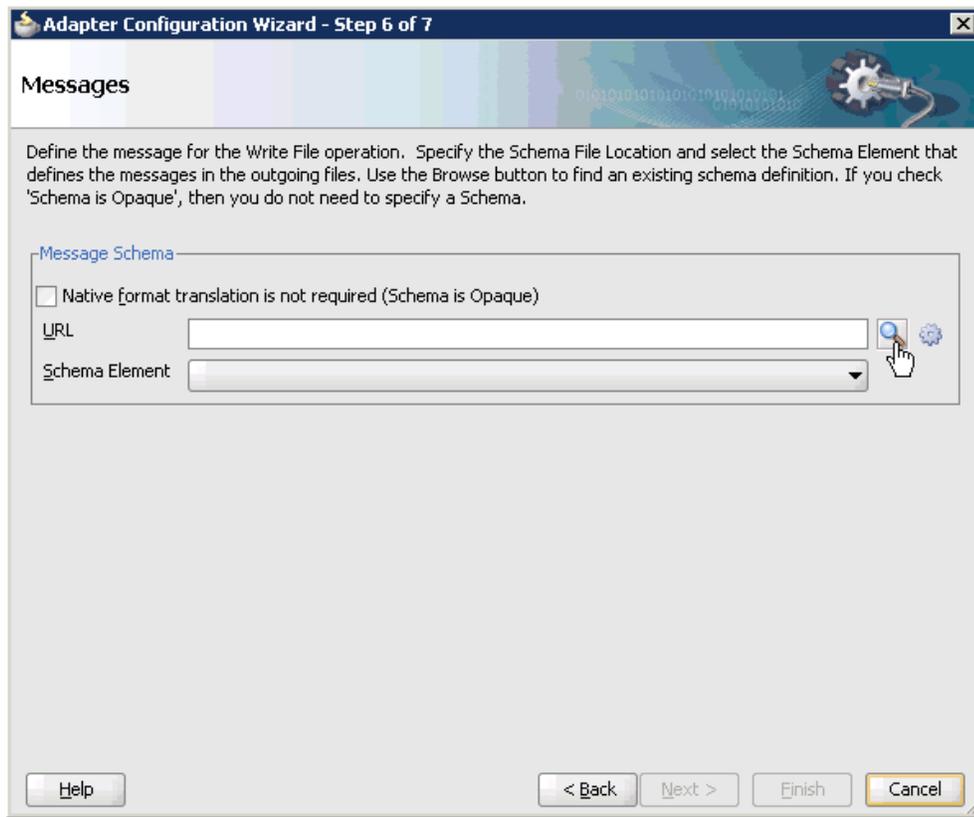
**Figure 6–134 File Configuration Page**

The screenshot shows a window titled "Adapter Configuration Wizard - Step 5 of 7" with a "File Configuration" header. Below the header, it says "Specify the parameters for the Write File operation." There are two radio buttons: "Physical Path" (selected) and "Logical Name". Below this is a text field for "Directory for Outgoing Files (physical path):" containing "C:\JDE\_OUTPUT" and a "Browse" button. The "File Naming Convention (po\_%SEQ%.txt):" field contains "JDE\_OUTPUT.xml". There is an unchecked checkbox for "Append to existing file". A section titled "Write to output file when any of these conditions are met" contains three options: "Number of Messages Equals:" (checked, value 1), "Elapsed Time Exceeds:" (unchecked, value 1, unit minutes), and "File Size Exceeds:" (unchecked, value 1000, unit kilobytes). At the bottom are buttons for "Help", "< Back", "Next >", "Finish", and "Cancel".

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 6–135](#).

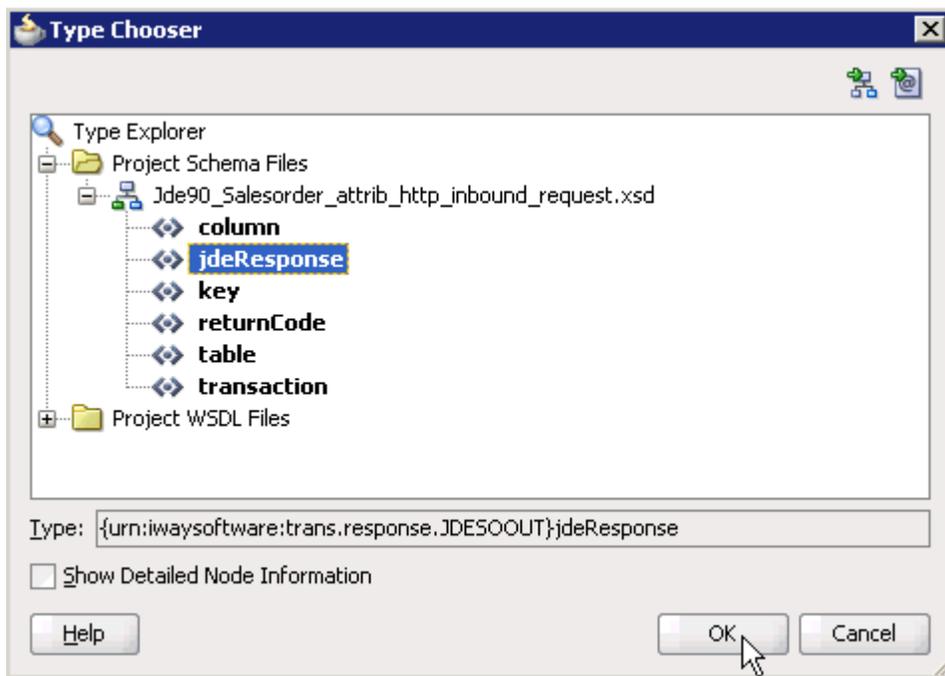
**Figure 6–135 Messages Page**



11. Click **Browse**, which is located to the right of the URL field.

The Type Chooser dialog is displayed, as shown in [Figure 6–136](#).

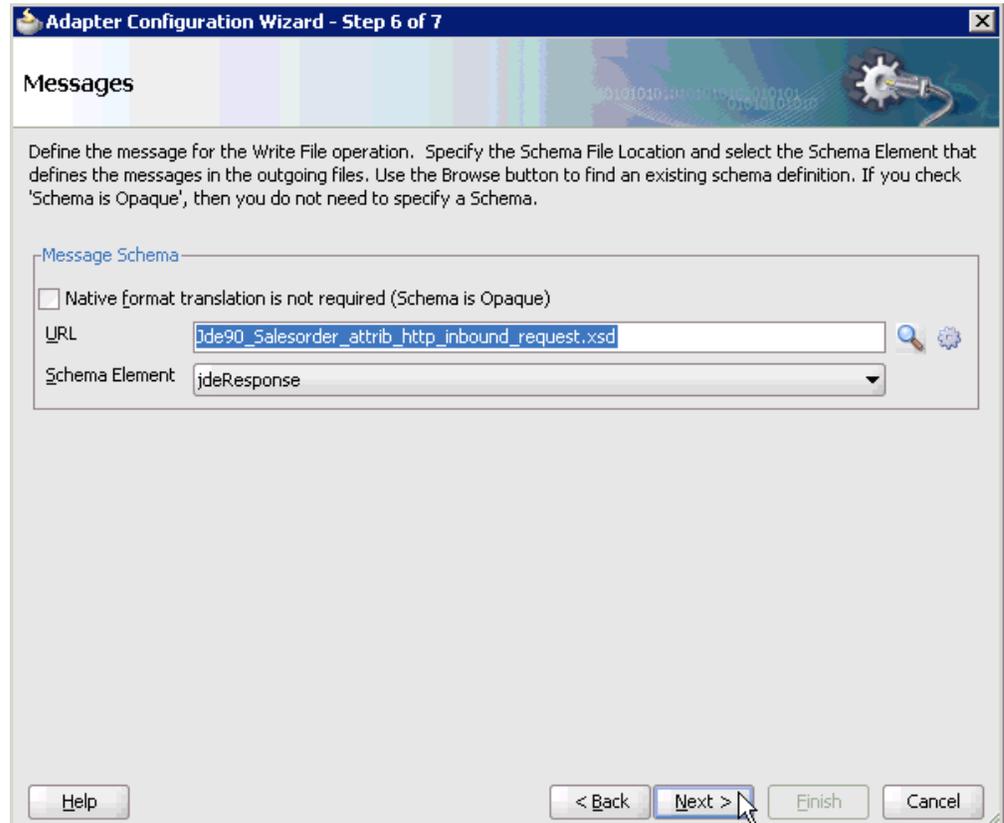
**Figure 6–136 Type Chooser Dialog**



12. Expand **Project Schema Files** and **JDE90\_Salesorder\_attrib\_http\_inbound\_request.xsd**.
13. Select the available schema (for example, **jdeResponse**).
14. Click **OK**.

You are returned to the Messages page, as shown in [Figure 6–137](#).

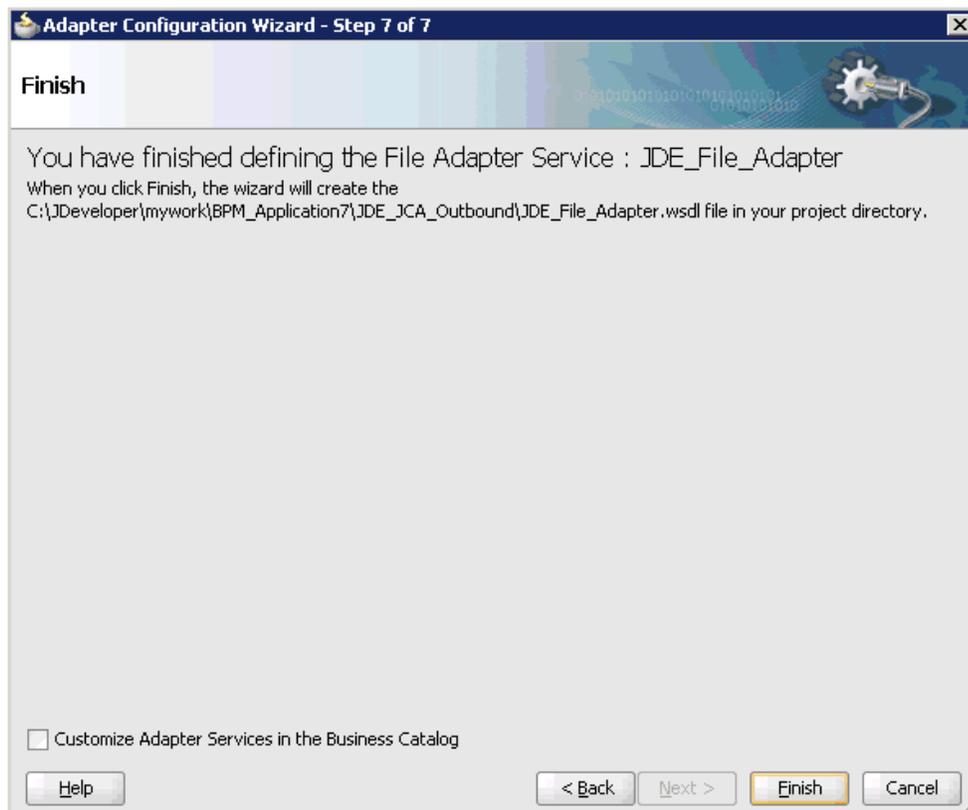
**Figure 6–137** Messages Page



15. Click **Next**.

The Finish page is displayed, as shown in [Figure 6–138](#).

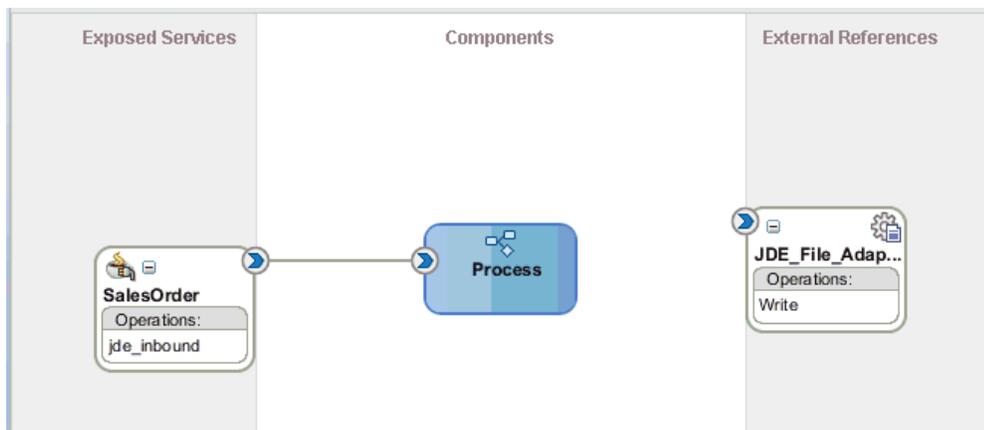
**Figure 6–138** *Finish Page*



16. Click **Finish**.

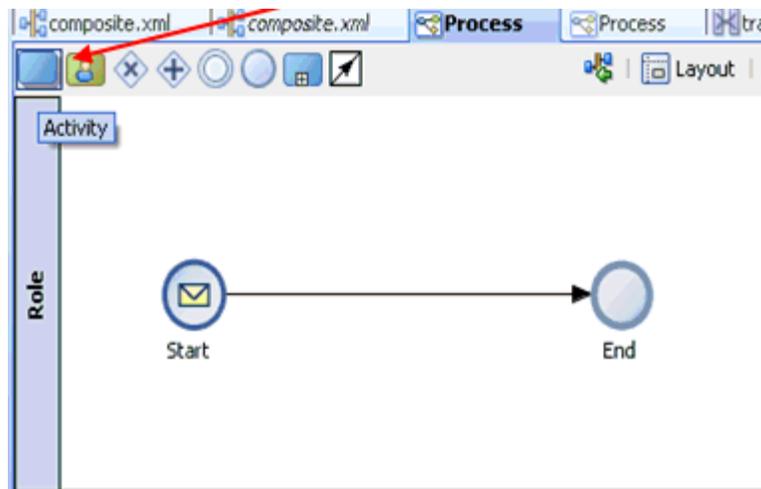
The File Adapter service is created in the External References pane, as shown in [Figure 6–139](#).

**Figure 6–139** *File Adapter Service*



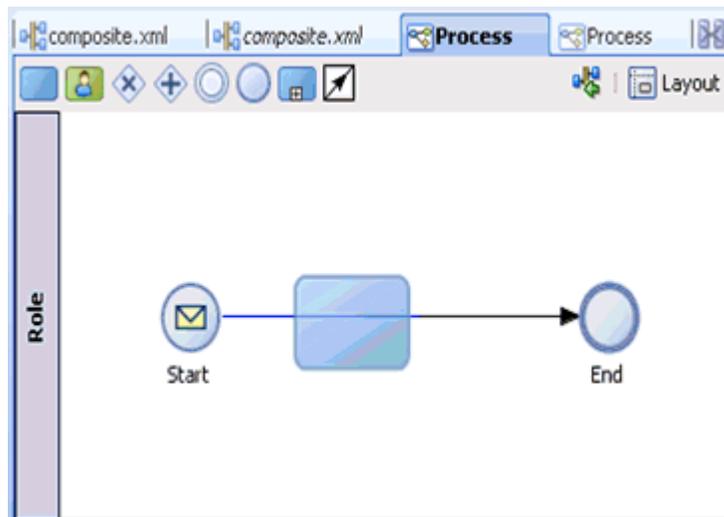
17. Double-click the BPMN Process component.

The BPMN process is displayed, as shown in [Figure 6–140](#).

**Figure 6–140 BPMN Process**

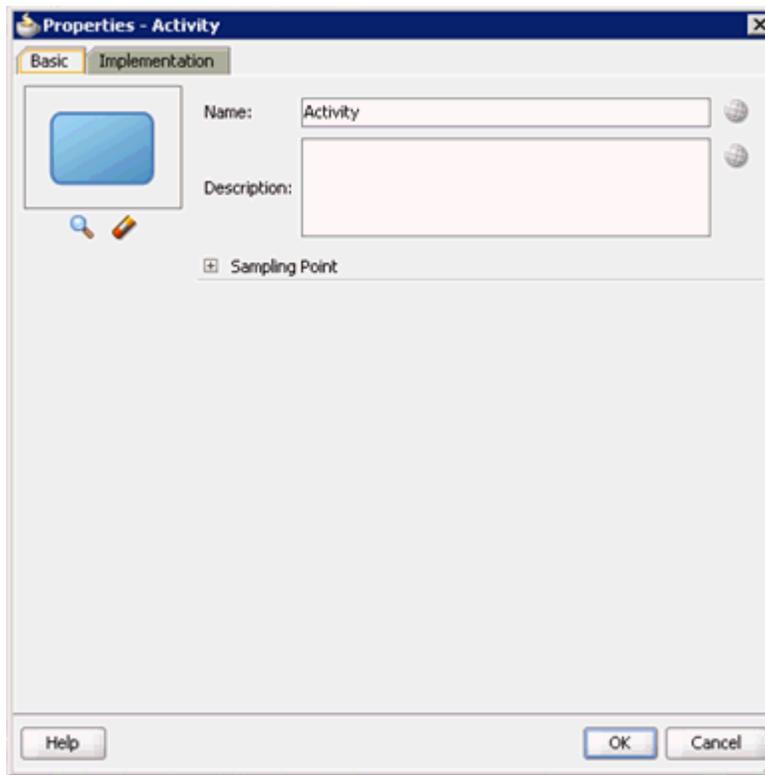
18. Click the **Activity** icon.

19. Drop the Activity icon on the wire between the Start and End event components, as shown in [Figure 6–141](#).

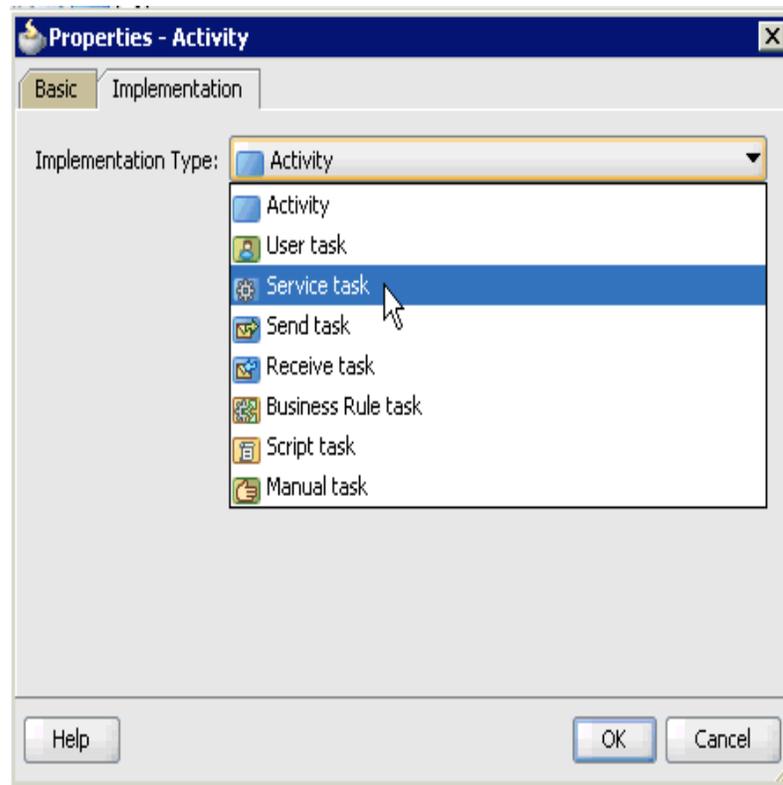
**Figure 6–141 Activity Icon**

The Properties - Activity dialog is displayed, as shown in [Figure 6–142](#).

**Figure 6–142 Properties - Activity Dialog**

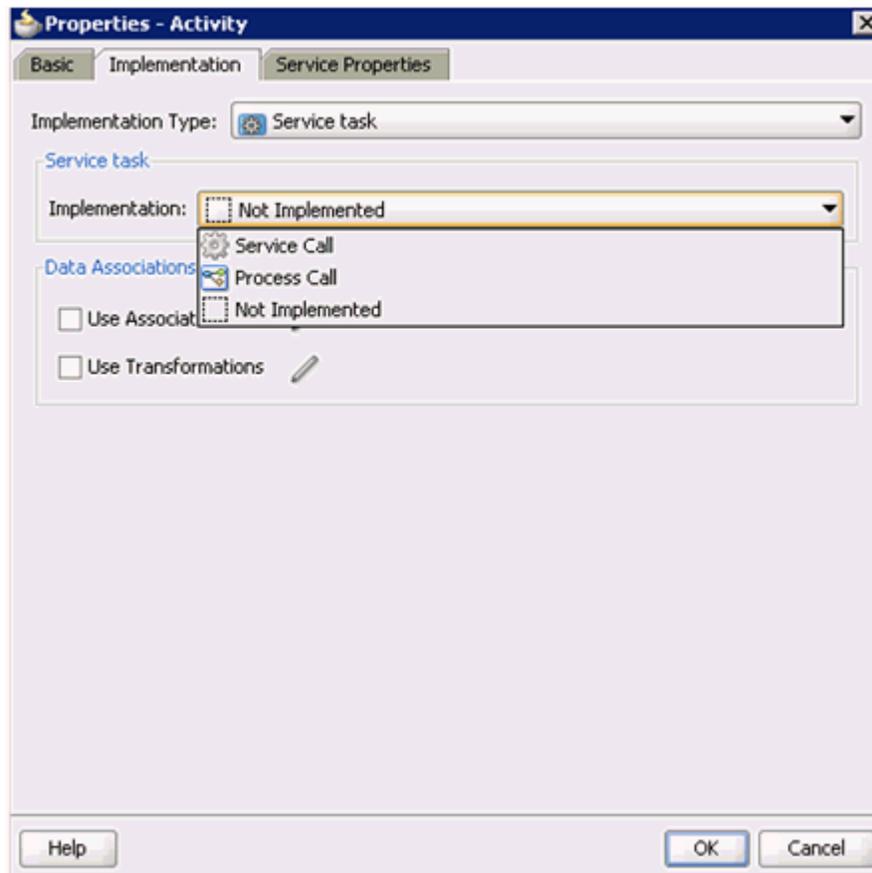


20. Click the **Implementation** tab, as shown in [Figure 6–143](#).

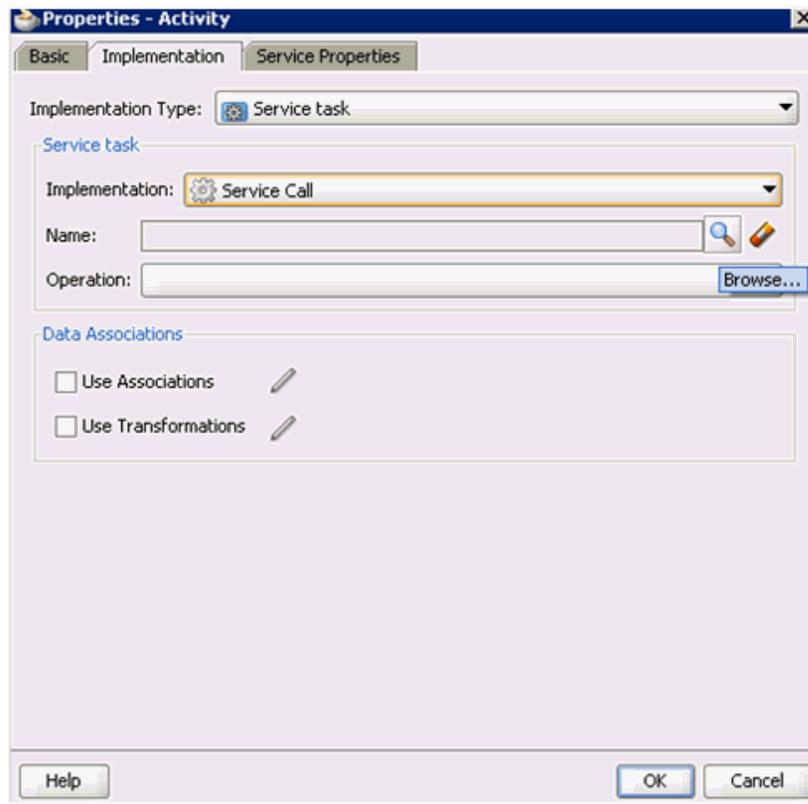
**Figure 6–143 Implementation Tab**

21. Select **Service Task** from the Implementation Type list, as shown in [Figure 6–144](#).

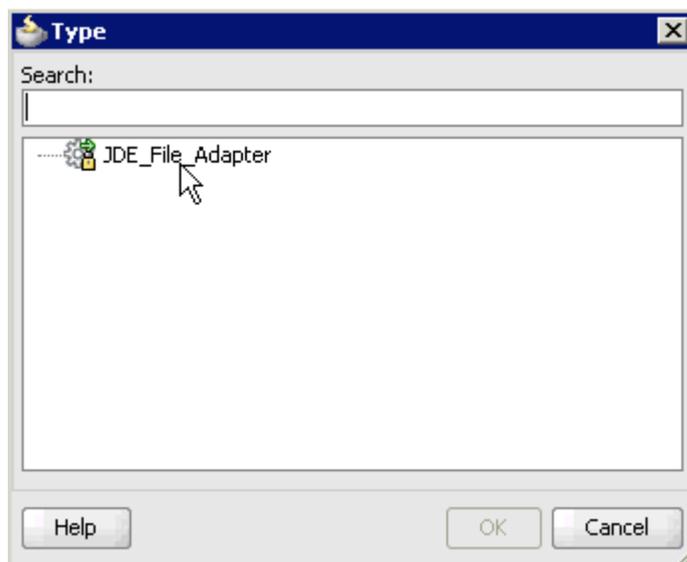
**Figure 6–144 Service Task**



22. Select **Service Call** from the Implementation list.
23. Click the **Browse** icon to the right of the Name field, as shown in [Figure 6–145](#).

**Figure 6–145 Browse Icon**

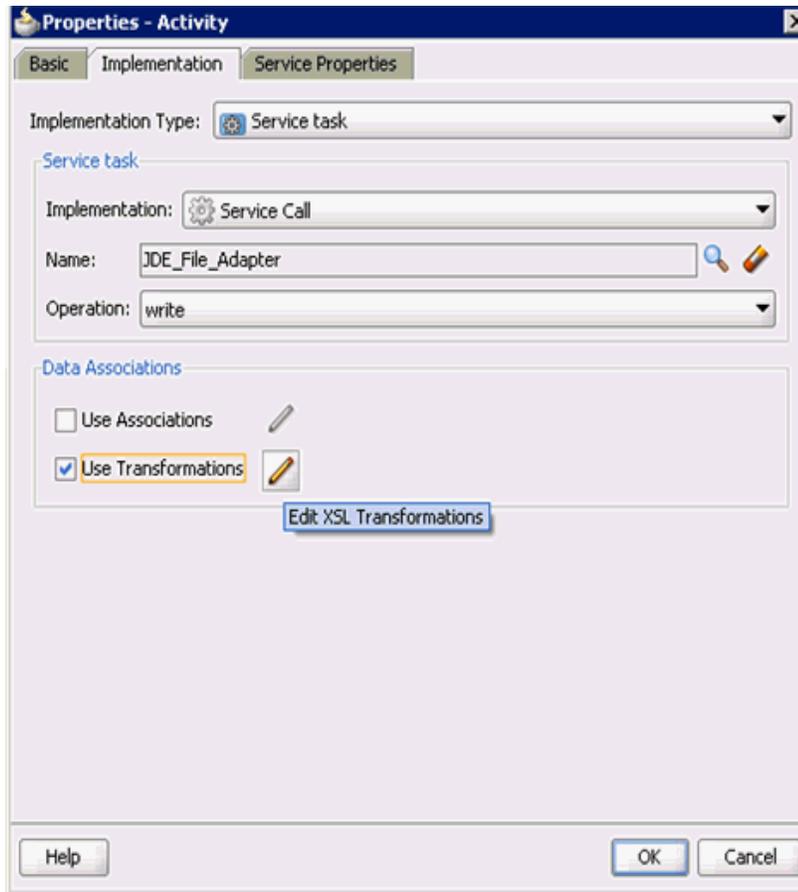
The Type dialog is displayed, as shown in [Figure 6–146](#).

**Figure 6–146 Type Dialog**

24. Select the service for write operation that has been created and click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6–147](#).

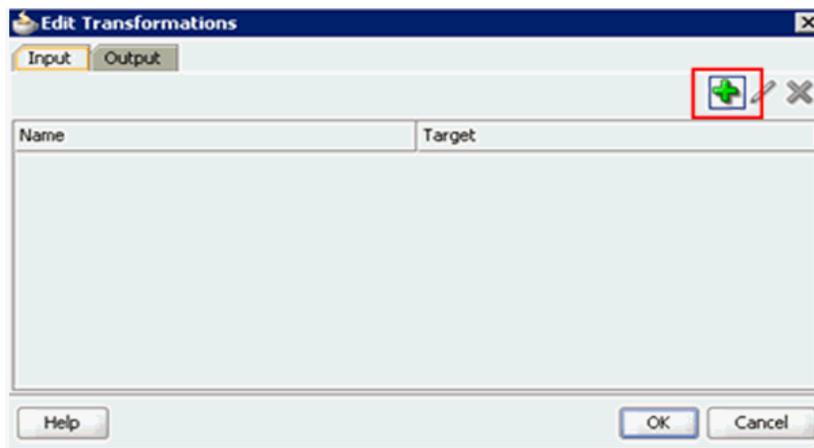
**Figure 6–147 Properties - Activity Dialog**



25. Select the **Use Transformations** option that is located under Data Associations.
26. Click the **Edit XSL Transformations** icon.

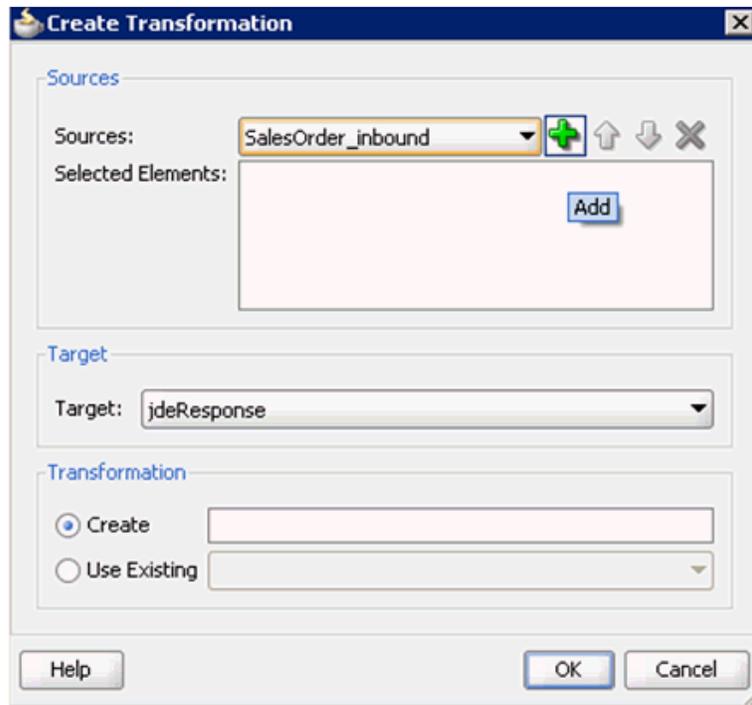
The Edit Transformations dialog is displayed, as shown in [Figure 6–148](#).

**Figure 6–148 Edit Transformations Dialog**

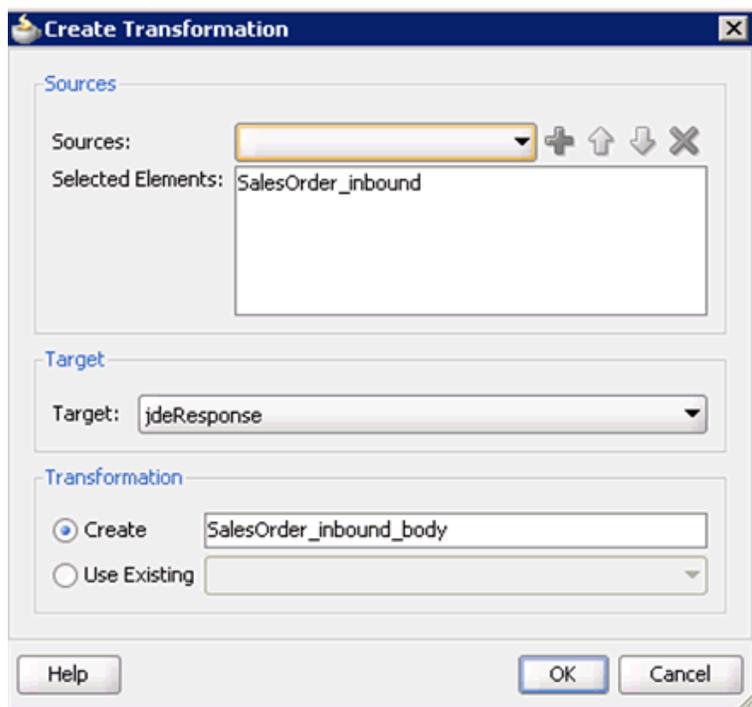


27. Click the **Plus** icon.

The Create Transformation dialog is displayed, as shown in [Figure 6–149](#).

**Figure 6–149 Create Transformation Dialog**

28. Click the **Plus** icon so that the Data Object 'SalesOrder\_inbound' is added to the Selected Elements area.

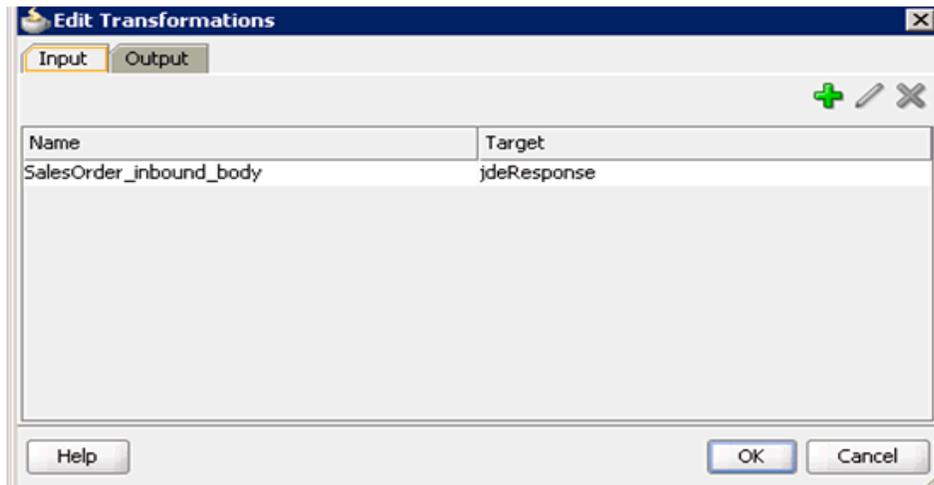
**Figure 6–150 Target List Default Value**

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 6–151](#).

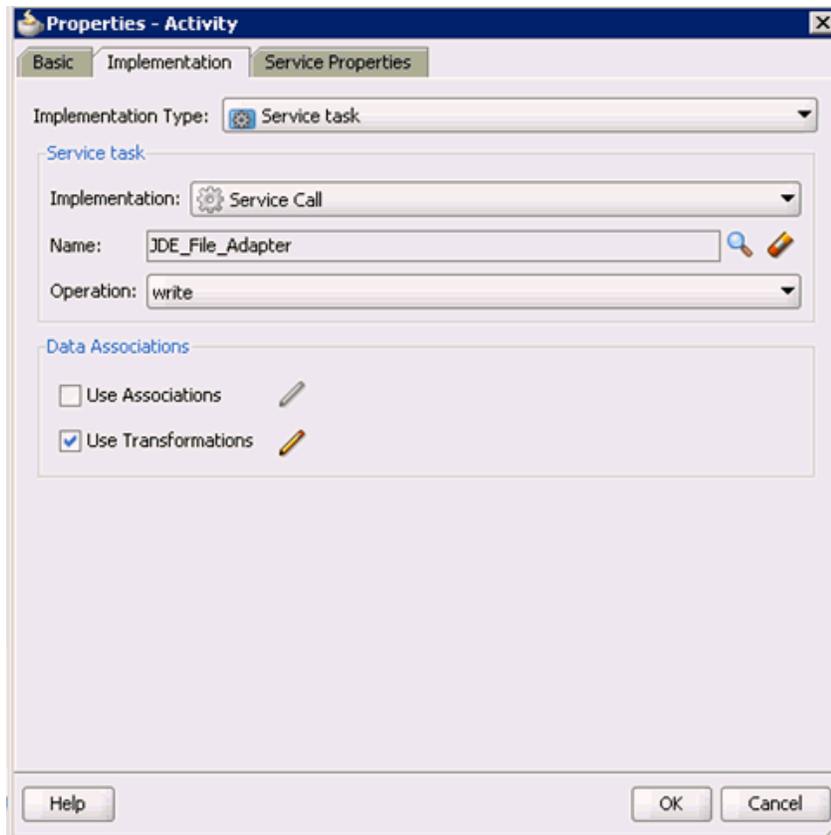
**Figure 6–151 Edit Transformations Dialog**



31. Click **OK**.

You are returned to the Properties - Activity dialog, as shown in [Figure 6–152](#).

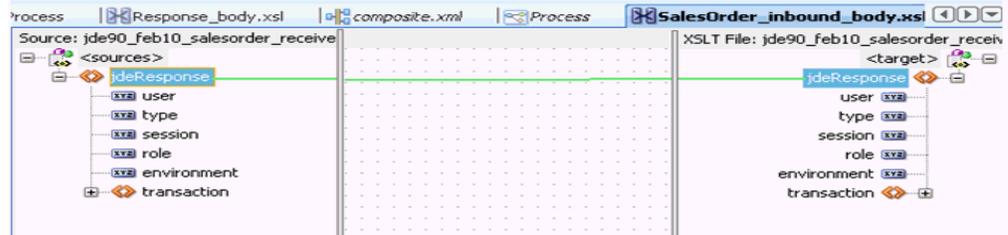
**Figure 6–152 Properties - Activity Dialog**



32. Click **OK**.

The SalesOrder\_inbound\_body.xml tab is displayed, as shown in [Figure 6–153](#).

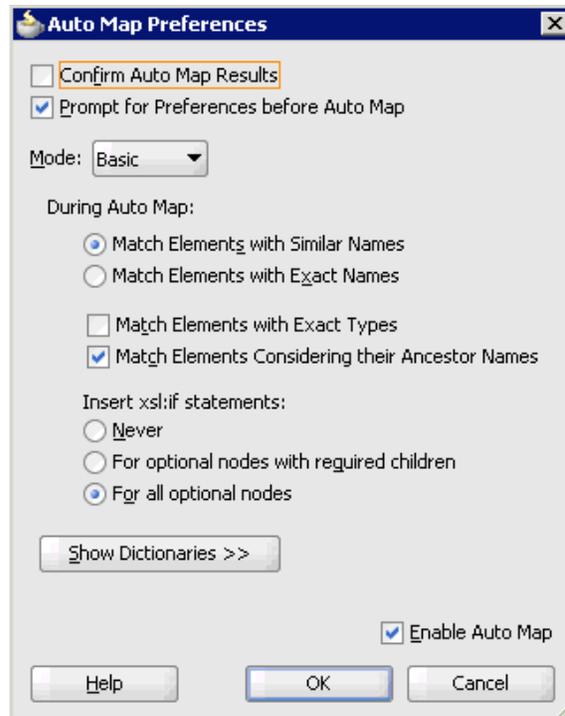
**Figure 6–153 SalesOrder\_inbound\_body.xml Tab**



33. Automap the Source and Target elements.

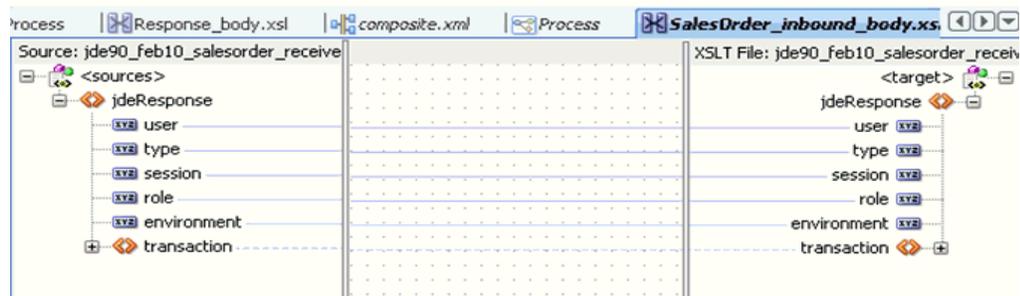
The Auto Map Preferences dialog is displayed, as shown in [Figure 6–154](#).

**Figure 6–154 Auto Map Preferences Dialog**



34. Accept the default values and click **OK**.

The transformation is completed, as shown in [Figure 6–155](#).

**Figure 6–155 Completed Transformation**

35. Save the transformation.
36. Return to the 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.
38. 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 deploy the inbound BPM process. You can follow the same procedure that is described in "[Deploying the BPEL Inbound Process](#)" on page 4-57. For more information on how to trigger events in J.D. Edwards OneWorld, see "[Triggering an Event in J.D. Edwards OneWorld](#)" on page 4-61.

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# Configuring Outbound and Inbound Processing Using Oracle Service Bus

Oracle Application Adapter for J.D. Edwards OneWorld 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 J.D. Edwards OneWorld 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.

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"](#)

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

## 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:

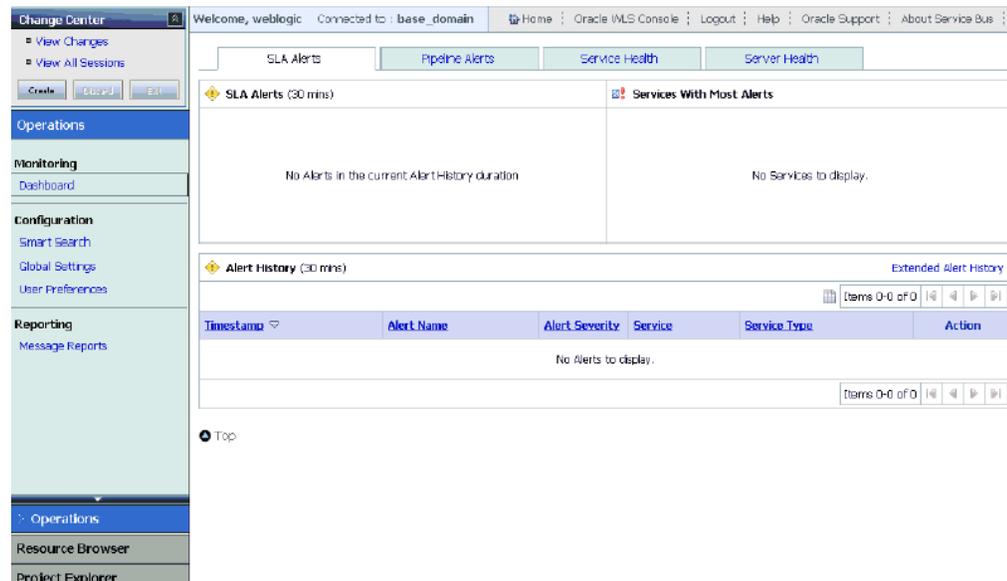
`http://hostname:port/sbconsole`

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](#).

**Figure 7–1 Oracle Service Bus Console**



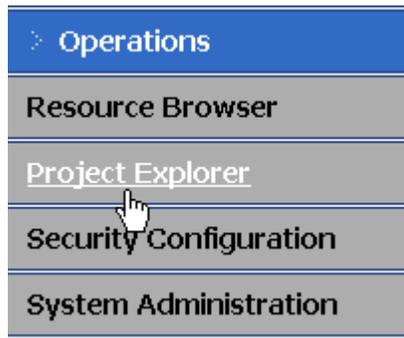
4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in [Figure 7–2](#).

**Figure 7-2 Change Center Create Button**



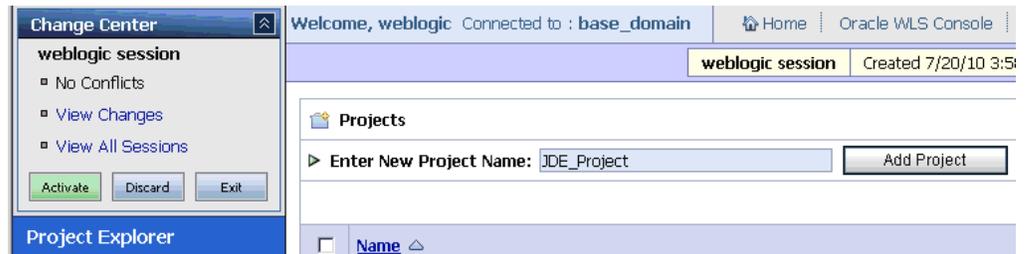
5. Click **Project Explorer** in the left pane, as shown in [Figure 7-3](#).

**Figure 7-3 Project Explorer Selection**



The Project Explorer page is displayed, as shown in [Figure 7-4](#).

**Figure 7-4 Project Explorer Page**



6. Provide a valid name for the new project (for example, JDE\_Project) and click **Add Project**.  
The project is successfully created and listed.
7. Click on the created project.  
The project page is displayed, as shown in [Figure 7-5](#).

**Figure 7-5 Project Page**



8. In the Enter New Folder Name field, type **Business Service** and click **Add Folder**.
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 Explorer**



## 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`
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.

### 7.2.3 Publishing a WSDL From Application Explorer to Oracle Service Bus

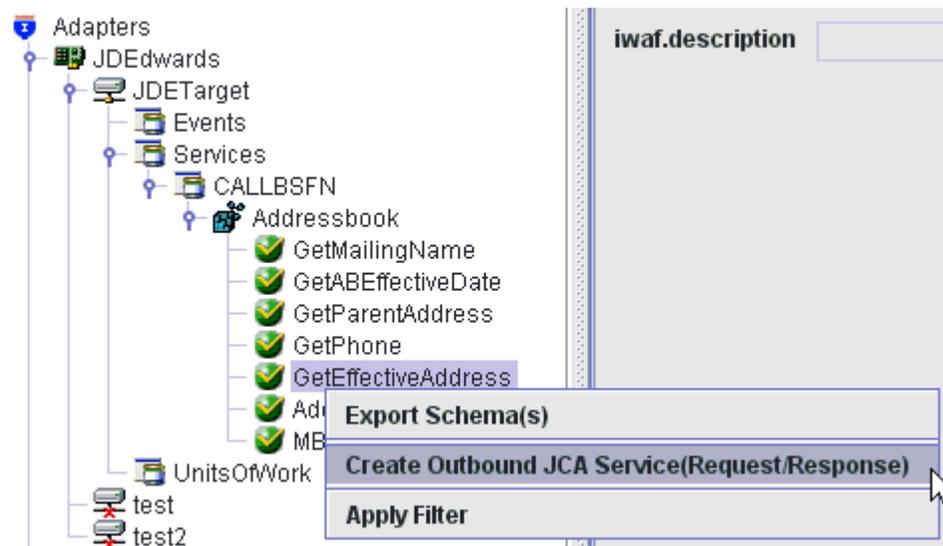
Perform the following steps to publish a WSDL from Application Explorer to Oracle Service Bus:

1. Start Application Explorer, connect to a J2CA configuration, and connect to a J.D. Edwards OneWorld target.

For more information, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).

2. Expand **Services**, **CALLBSFN**, and **Addressbook**, as shown in [Figure 7-7](#).

**Figure 7-7 Create Outbound JCA Service (Request/Response) Option**



3. Right-click **GetEffectiveAddress**, and then select **Create Outbound JCA Service (Request/Response)**.

The Export WSDL dialog is displayed, as shown in [Figure 7-8](#).

**Figure 7–8 Export WSDL Dialog**

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:

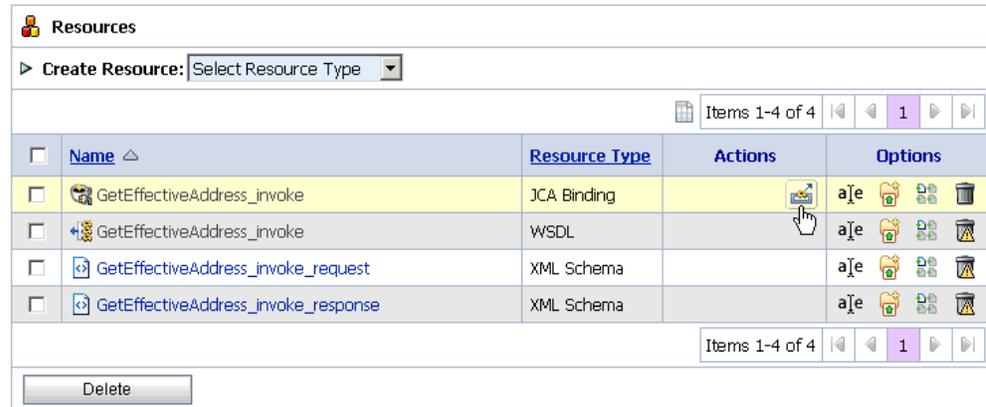
1. Open the Oracle Service Bus Console and select the created WSDL folder in the left pane (for example, wsdls), as shown in [Figure 7–9](#).

**Figure 7-9 Oracle Service Bus Console**



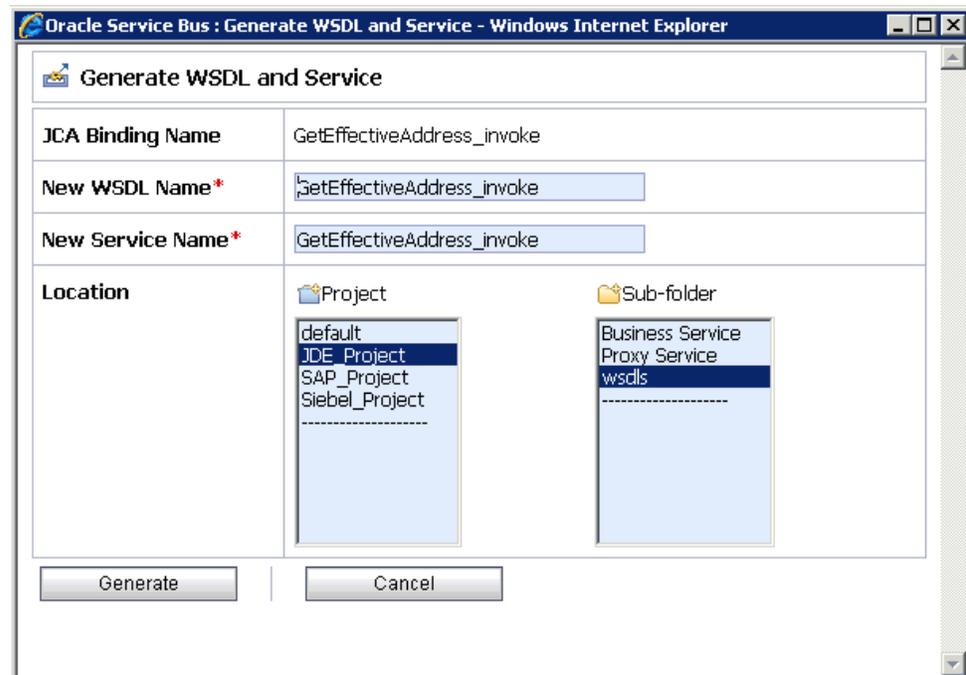
2. Ensure that the exported WSDL is listed, as shown in Figure 7-10.

**Figure 7-10 Resource List**



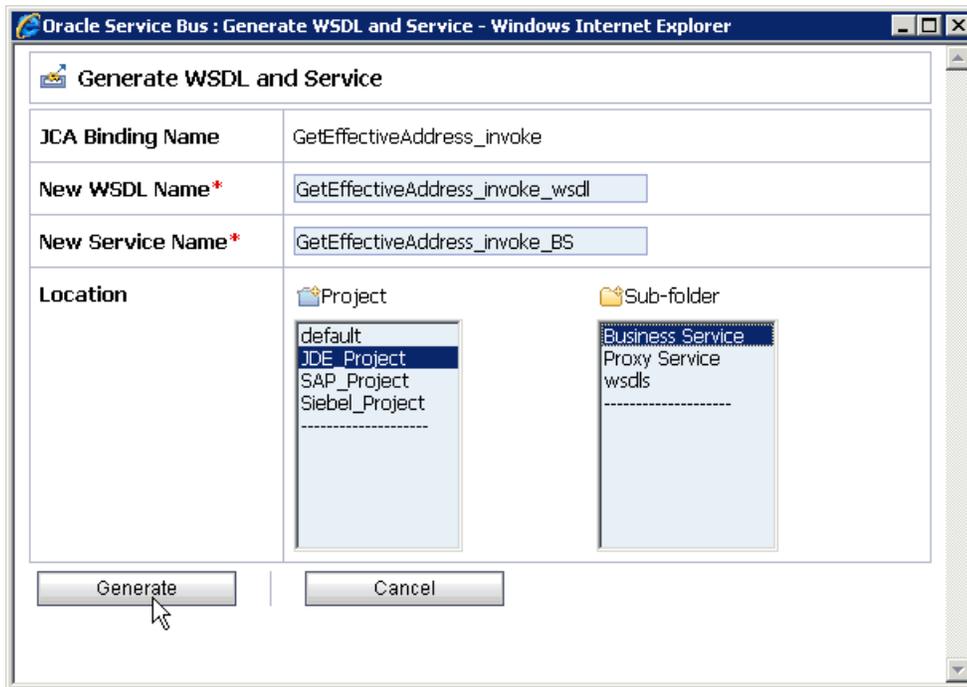
3. Click the icon that corresponds to the exported WSDL in the Actions column. The Generate WSDL and Service page is displayed, as shown in Figure 7-11.

**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](#).

**Figure 7-12 Generate WSDL and Service Page**



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, then the following message is displayed, as shown in [Figure 7-13](#).

**Figure 7-13 Success Message**

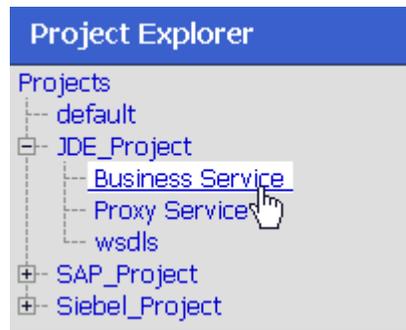


## 7.2.5 Configuring a File Type Business Service

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 Project Explorer**



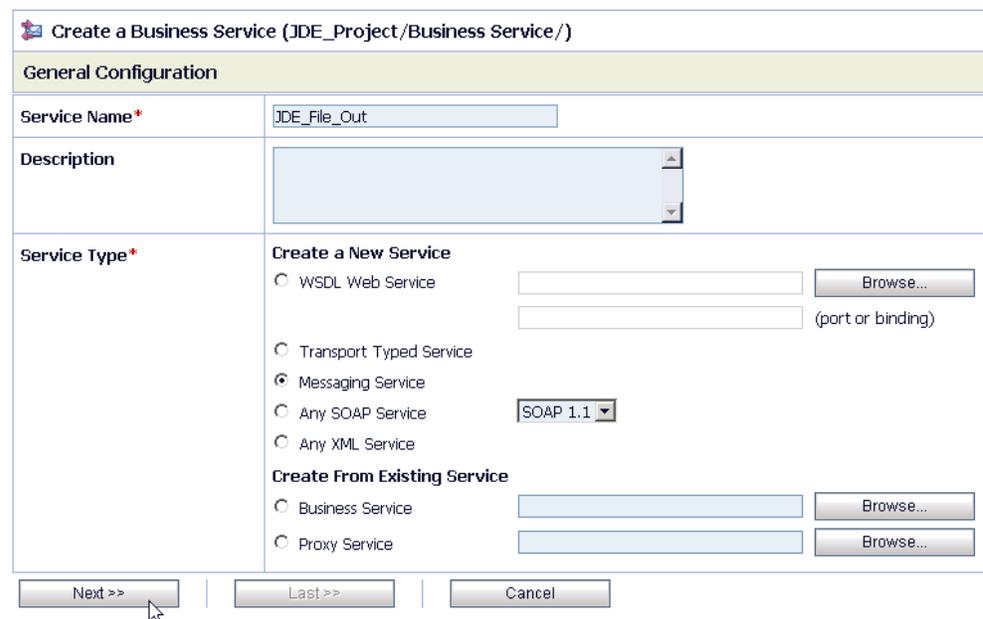
- In the right pane, select **Business Service** from the Create Resource menu, as shown in Figure 7–15.

**Figure 7–15 Create Resource Menu**



The General Configuration page is displayed, as shown in Figure 7–16.

**Figure 7–16 General Configuration Page**



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](#).

**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**

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**

The FILE Transport Configuration page is displayed, as shown in [Figure 7–20](#).

**Figure 7–20 FILE Transport Configuration Page**

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](#).

**Figure 7–22 Summary Page**

General Configuration	
Service Name	JDE_File_Out
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/jde/getaddress
Retry Count	0
Retry Iteration Interval	30
FILE Transport Configuration	
Prefix	get_address
Suffix	.xml
Request encoding	utf-8
Message Handling Configuration	
Result Caching	Not Supported

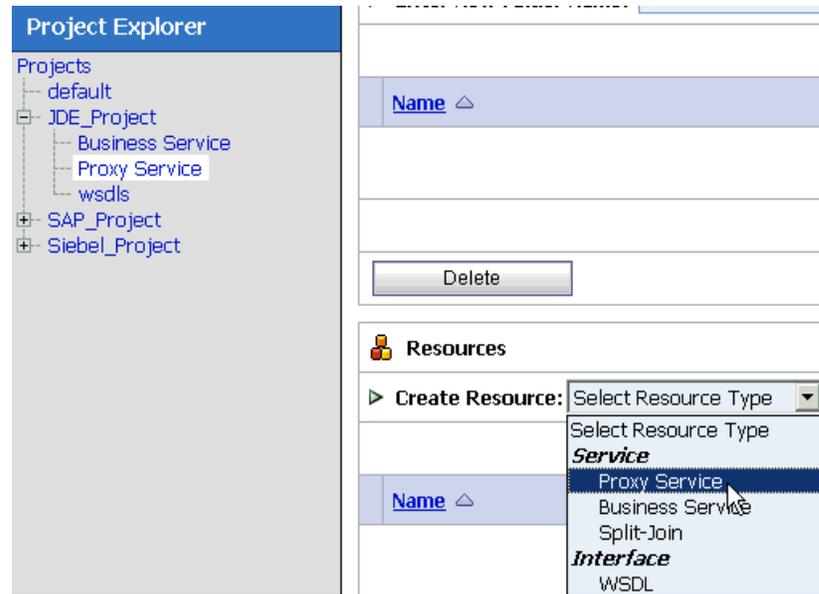
12. Review all the information for your Business Service and click **Save**.

### 7.2.6 Configuring a Proxy Service

Perform the following steps to configure a Proxy Service:

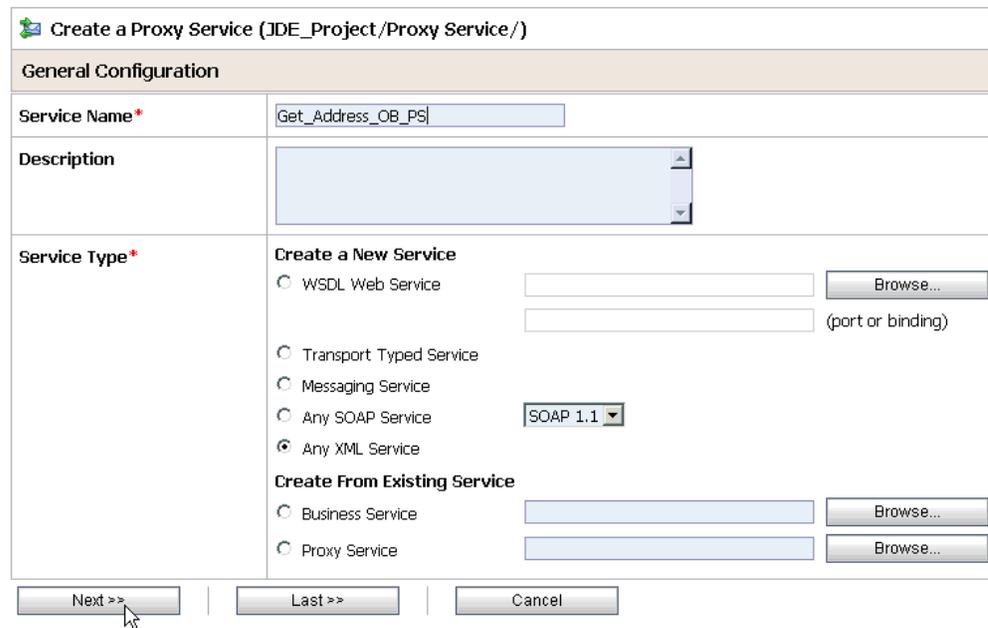
1. Select the **Proxy Service** folder you created in the left pane, as shown in [Figure 7–23](#).

**Figure 7–23 Create Resource Menu Proxy Service**



- In the right pane, select **Proxy Service** from the Create Resource menu.  
The General Configuration page is displayed, as shown in [Figure 7–24](#).

**Figure 7–24 General Configuration Page**



- Provide a name for the Proxy Service and from the Service Type area select **Any XML Service**.
- Click **Next**, as shown in [Figure 7–25](#).

**Figure 7-25 Transport Configuration Page**

Create a Proxy Service (JDE\_Project/Proxy Service/Get\_Address\_OB\_PS)

**Transport Configuration**

<b>Protocol*</b>	file				
<b>Endpoint URI*</b>	Format: file:///root-dir/dir1 file:///C:/input/jde/get_address				
<b>Get All Headers</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No Header <input type="text"/> <input type="button" value="Add"/> <table border="1"> <thead> <tr> <th>HEADER</th> <th>ACTION</th> </tr> </thead> <tbody> <tr> <td colspan="2">There are no headers configured.</td> </tr> </tbody> </table>	HEADER	ACTION	There are no headers configured.	
HEADER	ACTION				
There are no headers configured.					

<< Prev. | **Next >>** | 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 7-26](#).

**Figure 7-26 FILE Transport Configuration Page**

Create a Proxy Service (JDE\_Project/Proxy Service/Get\_Address\_OB\_PS)

**FILE Transport Configuration**

<b>File Mask*</b>	*.*
<b>Polling Interval*</b>	60
<b>Read Limit*</b>	10
<b>Sort By Arrival</b>	<input type="checkbox"/>
<b>Scan SubDirectories</b>	<input type="checkbox"/>
<b>Pass By Reference</b>	<input type="checkbox"/>
<b>Post Read Action*</b>	delete
<b>Stage Directory*</b>	C:\input\stage
<b>Archive Directory</b>	
<b>Error Directory*</b>	C:\input\error
<b>Request encoding</b>	utf-8

<< Prev. | **Next >>** | Last >> | Cancel

8. Provide any folder locations on your file system for the Stage Directory and Error Directory fields.
9. Click **Next**, as shown in [Figure 7-27](#).

**Figure 7-27 Message Handling Page**

Create a Proxy Service (JDE\_Project/Proxy Service/Get\_Address\_OB\_PS)

**Message Handling**

Transaction Required	<input type="checkbox"/> Enabled
Same Transaction For Response	<input type="checkbox"/> Enabled
Content Streaming	<input type="checkbox"/> Enabled <b>Buffer Type</b> <input checked="" type="radio"/> Memory Buffer <input type="radio"/> Disk Buffer <b>Compression</b> <input type="checkbox"/> Enabled

<< Prev.    Next >>    Last >>    Cancel

10. Accept the default values and click **Next**.

The following Summary page is displayed, as shown in [Figure 7-28](#).

**Figure 7–28 Summary Page**

General Configuration	
Service Name	Get_Address_OB_PS
Description	
Service Type	Any XML Service
Transport Configuration	
Protocol	file
Endpoint URI	file:///C:/input/jde/get_address
Get All Headers	No
Headers	
FILE Transport Configuration	
File Mask	*.*
Polling 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 Handling Configuration	
Transaction Required	Disabled
Same Transaction For Response	Disabled
Content Streaming	Disabled

11. Review all the information for your Proxy Service and click **Save**.
12. Check if the success message is displayed, as shown in [Figure 7–29](#).

**Figure 7–29 Success Message**

The Service "Get\_Address\_OB\_PS" was created successfully.

JDE\_Project/Proxy Service

**Folders**

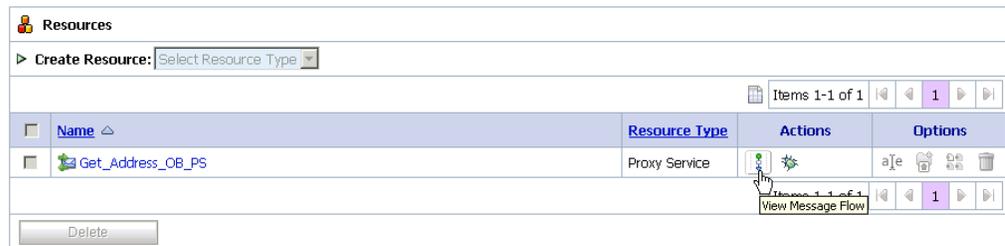
**Enter New Folder Name:**

## 7.2.7 Configuring a Pipeline

Perform the following steps to configure a Pipeline:

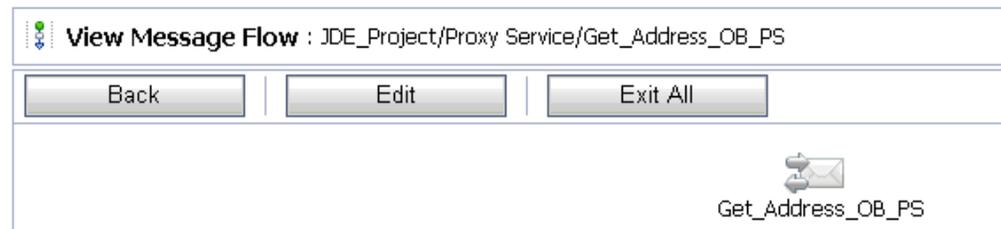
1. Click the **Edit Message Flow** icon in the row of the Proxy Service you created, as shown in [Figure 7-30](#).

**Figure 7-30 Edit Message Flow Icon**

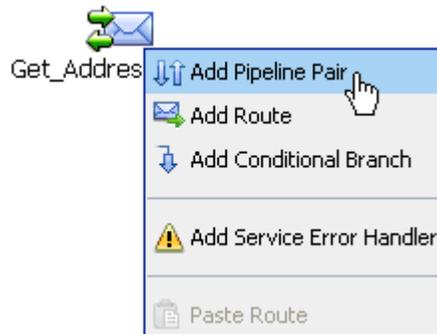


The Edit Message Flow workspace area is displayed, as shown in [Figure 7-31](#).

**Figure 7-31 Edit Message Flow Workspace Area**

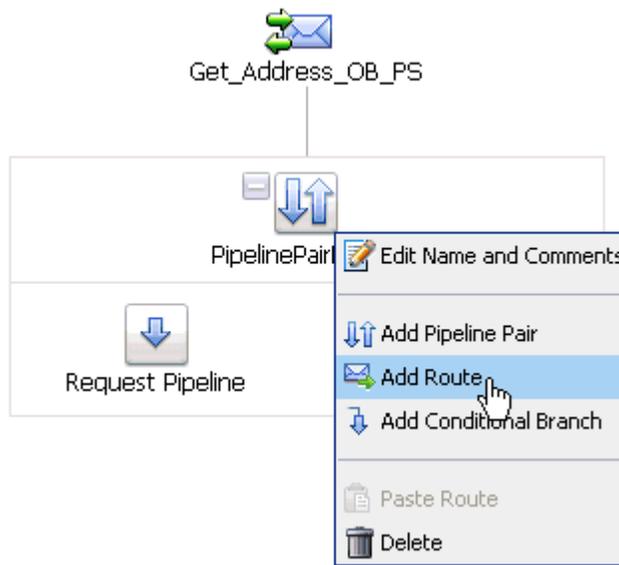


2. Click the **Proxy Service** icon and select **Add Pipeline Pair** from the menu.



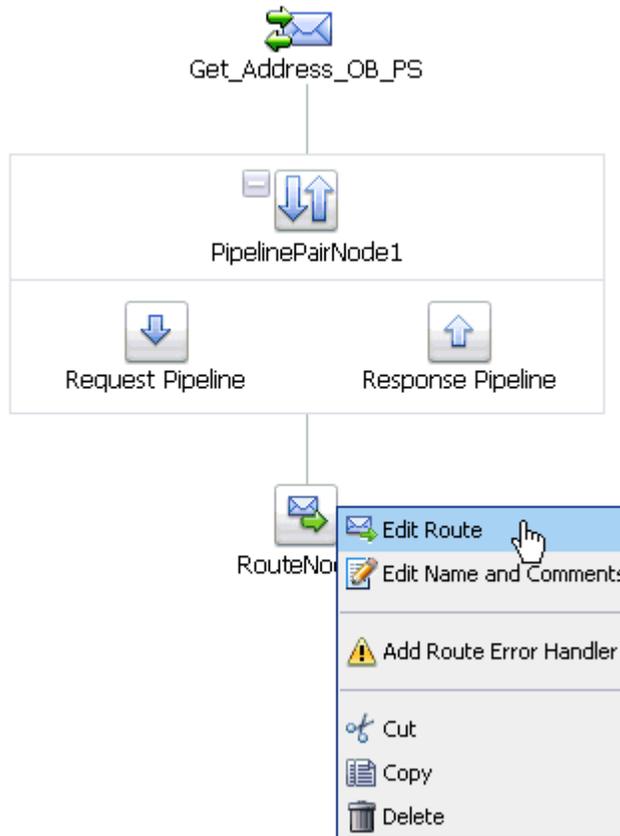
3. Click the **PipelinePairNode1** icon and select **Add Route** from the menu, as shown in [Figure 7-32](#).

**Figure 7–32 Add Route Menu Selection**



The RouteNode1 icon is added below the Request Pipeline icon, as shown in Figure 7–33.

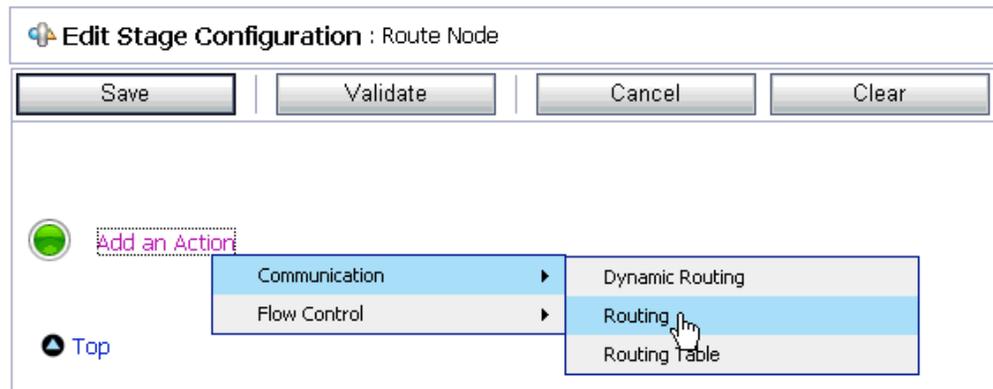
**Figure 7–33 Edit Route Menu Selection**



4. Click the **RouteNode1** icon and select **Edit Route** from the menu.

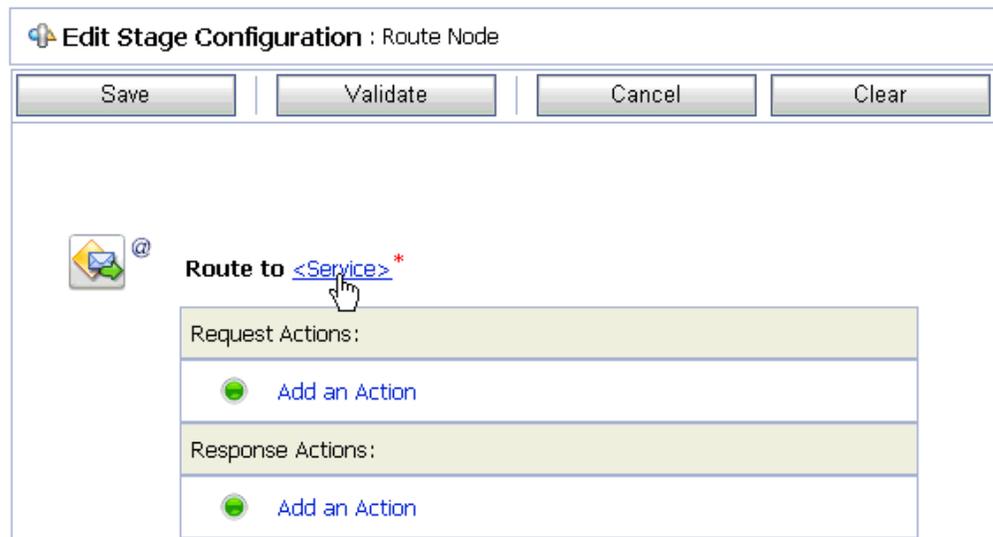
The Edit Stage Configuration workspace area is displayed, as shown in [Figure 7-34](#).

**Figure 7-34 Edit Stage Configuration Workspace Area**



5. Click **Add an Action**, select **Communication** from the menu, and click **Routing**, as shown in [Figure 7-35](#).

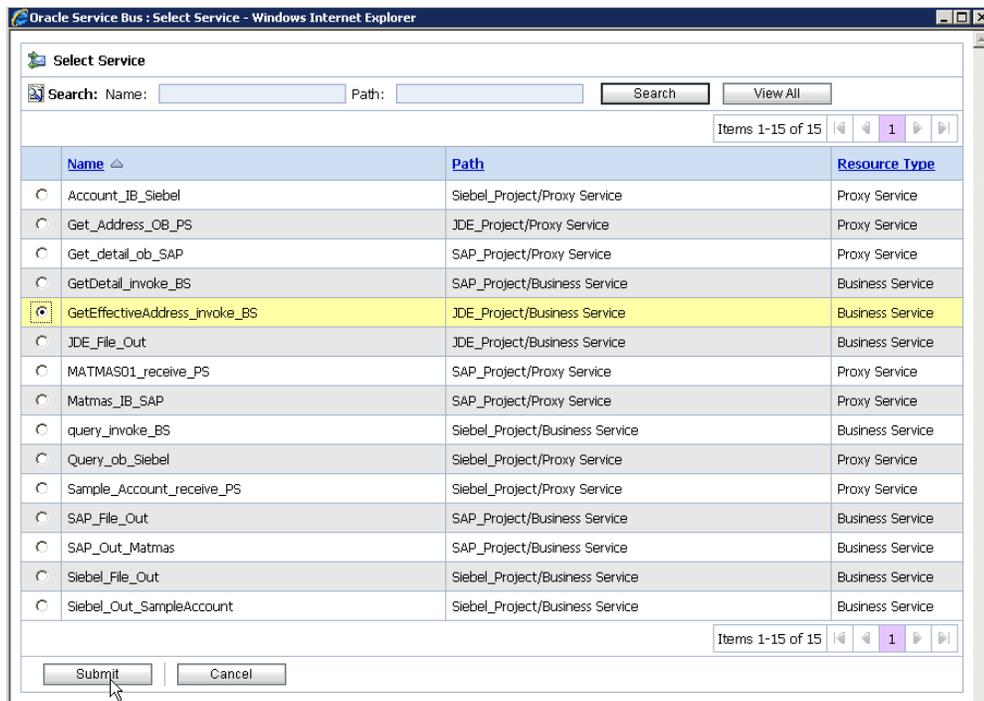
**Figure 7-35 Edit Stage Configuration Workspace Area**



6. Click **<Service>**.

The Select Service dialog is displayed, as shown in [Figure 7-36](#).

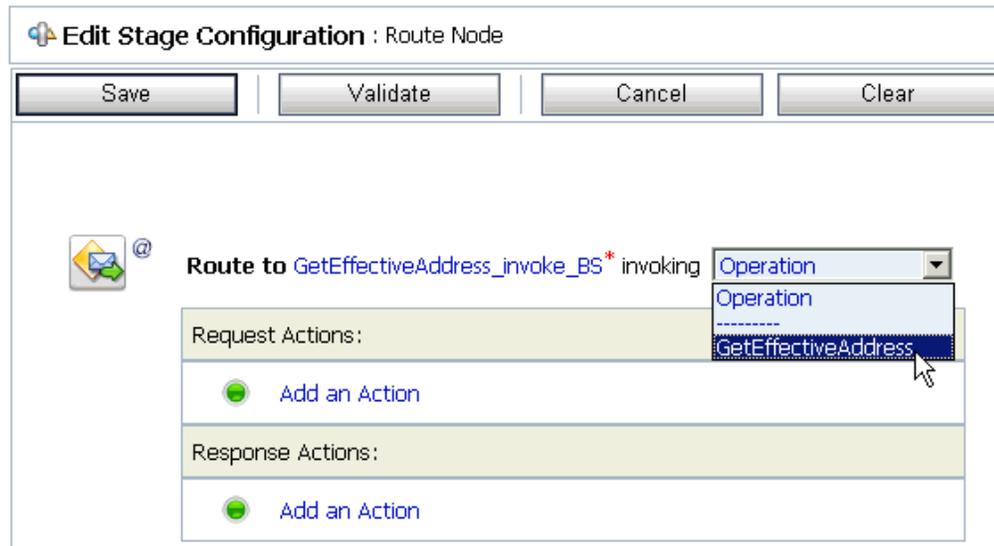
**Figure 7–36 Select Service Dialog**



7. Select a WSDL type Business Service and click **Submit**.

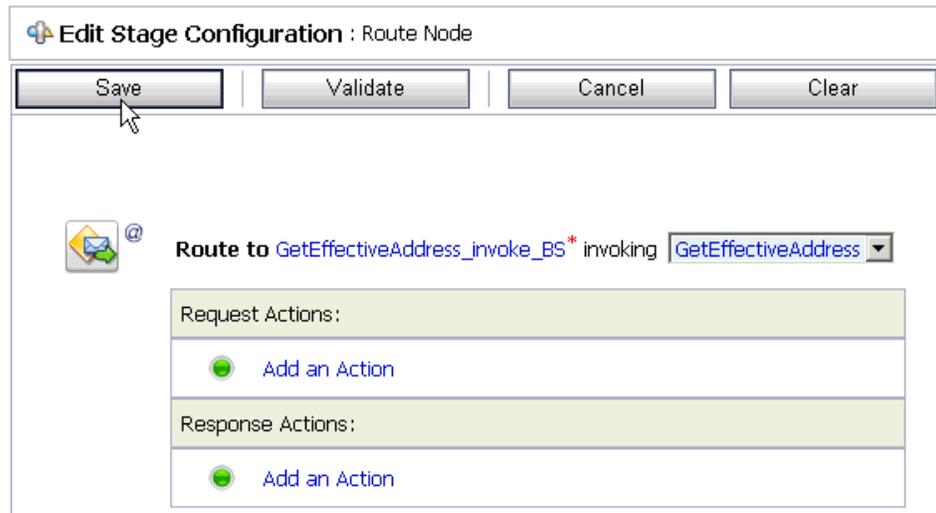
You are returned to the Edit Stage Configuration workspace area, as shown in [Figure 7–37](#).

**Figure 7–37 Edit Stage Configuration Workspace Area**



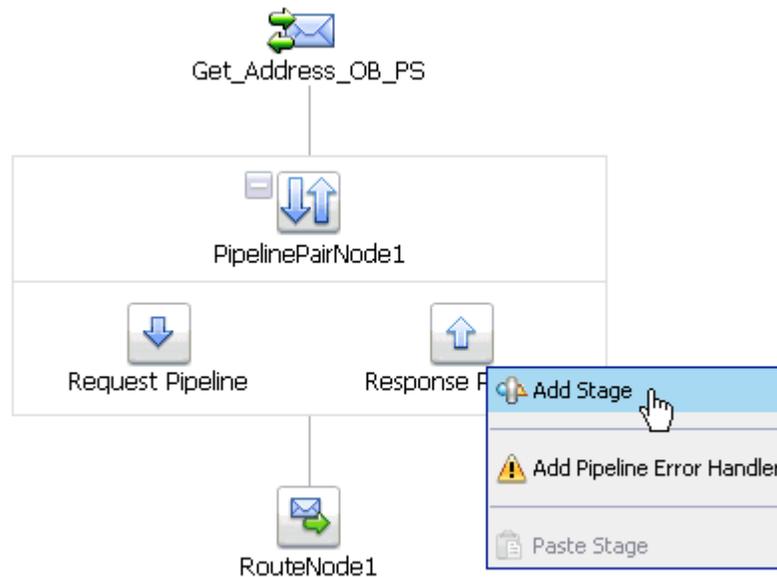
8. Select the name of the J.D. Edwards OneWorld business object (for example, GetEffectiveAddress) as the operational attribute from the list, as shown in [Figure 7–38](#).

**Figure 7-38 Edit Stage Configuration**



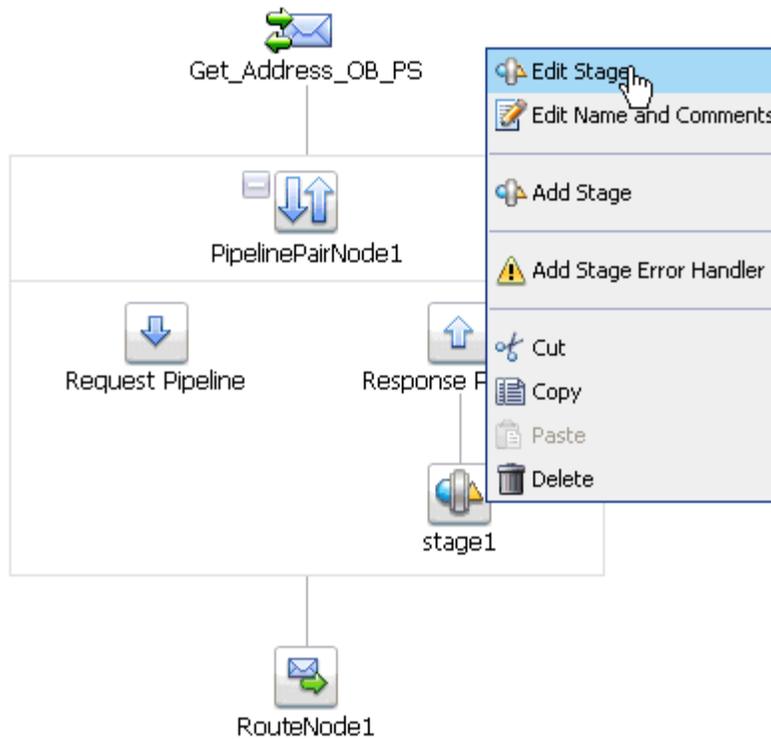
9. Click **Save**, as shown in [Figure 7-39](#).

**Figure 7-39 Add Stage Menu Selection**



10. Click the **Response Pipeline** icon and select **Add Stage** from the menu. The Stage1 icon is added below the Response Pipeline icon, as shown in [Figure 7-40](#).

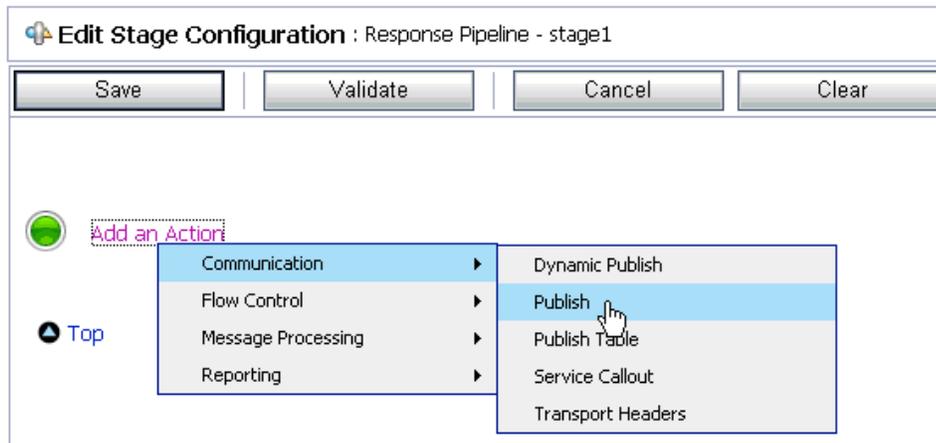
**Figure 7-40 Edit Stage Menu Selection**



11. Click the **Stage1** icon and select **Edit Stage** from the menu.

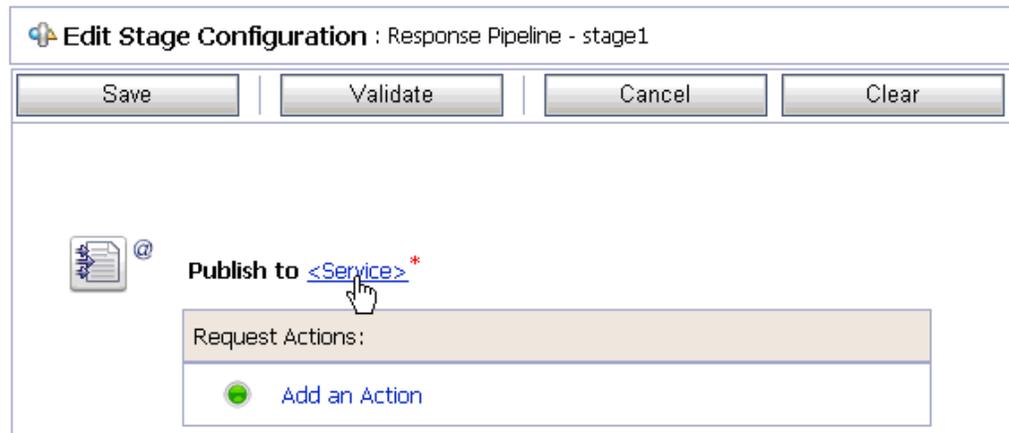
The Edit Stage Configuration workspace area is displayed, as shown in [Figure 7-41](#).

**Figure 7-41 Edit Stage Configuration Workspace Area**



12. Click **Add an Action**, select **Communication** from the menu, and click **Publish**, as shown in [Figure 7-42](#).

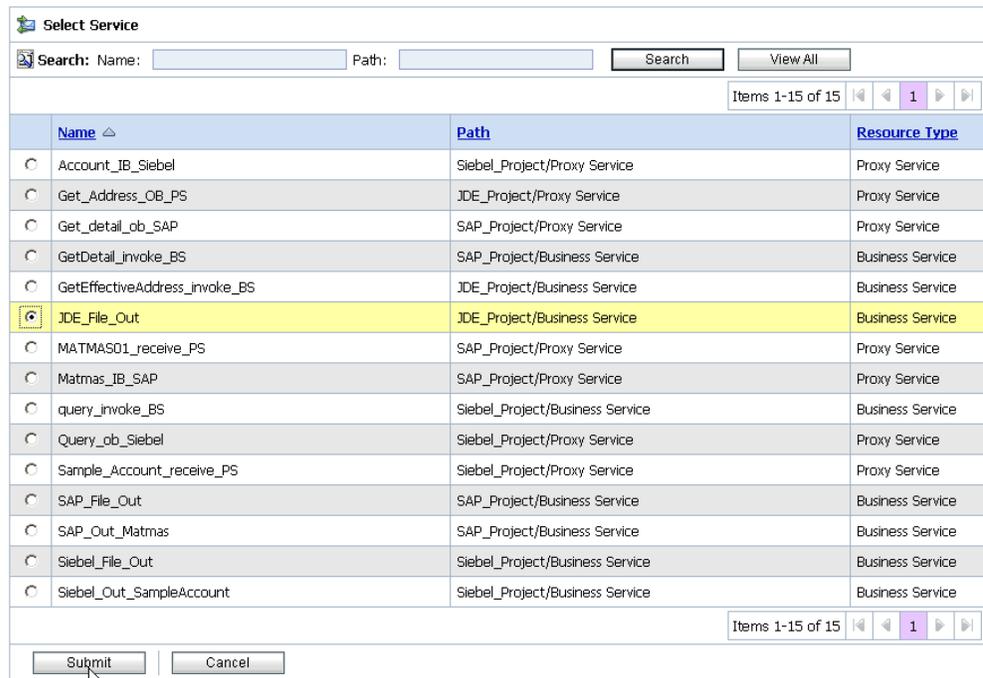
**Figure 7-42 Edit Stage Configuration Workspace Area**



13. Click <Service>.

The Select Service dialog is displayed, as shown in [Figure 7-43](#).

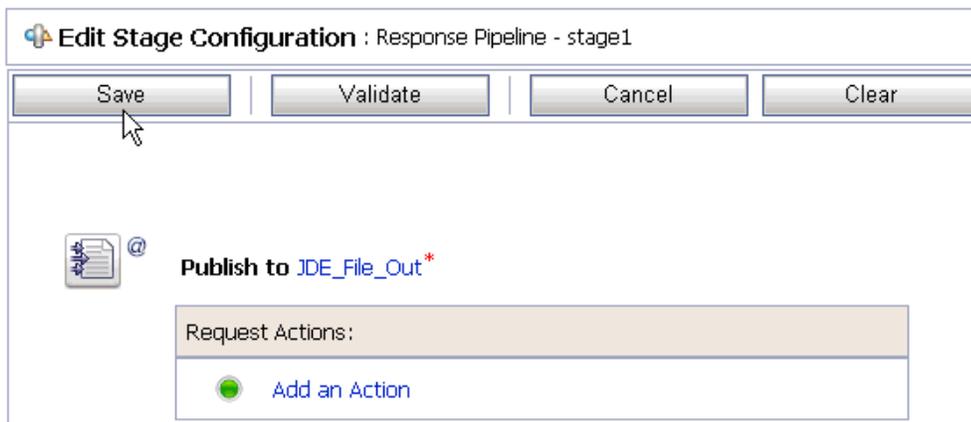
**Figure 7-43 Select Service Dialog**



14. Select a File type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in [Figure 7-44](#).

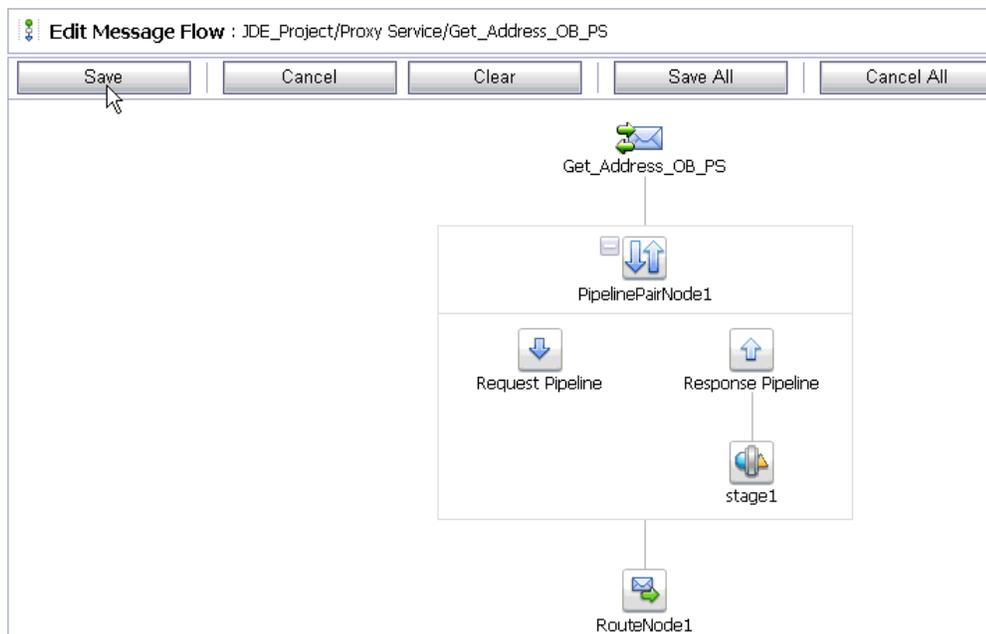
**Figure 7-44 Edit Stage Configuration Workspace Area**



15. Click **Save**.

You are returned to the Edit Message Flow workspace area, as shown in [Figure 7-45](#).

**Figure 7-45 Edit Message Flow Workspace Area**



16. Click **Save**, as shown in [Figure 7-46](#).

**Figure 7-46 Success Message**



17. Check if the success message is displayed and click **Activate** in the Change Center. The Activate Session page is displayed, as shown in [Figure 7-47](#).

**Figure 7-47 Activate Session Page**



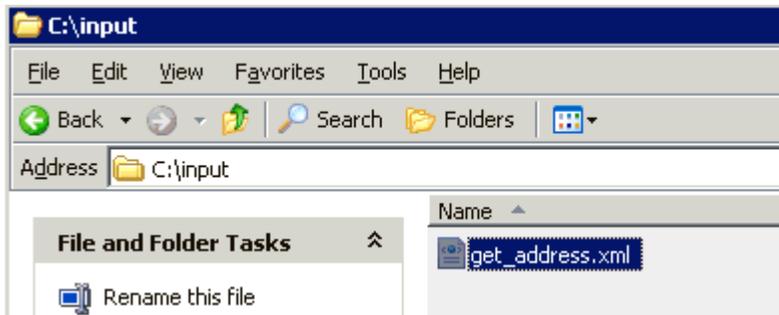
18. Click **Submit**.
19. Check if the View Configuration Changes page is displayed, as shown in [Figure 7-48](#).

**Figure 7-48 View Configuration Changes Page**

The screenshot shows the 'View Configuration Changes' page with a table of tasks. The table has columns for Task, Description, Execution Time, User, Task Status, Undone By, and Options. The table contains six rows of 'Activate session weblogic' tasks, all with a status of 'Activated'.

Task	Description	Execution Time	User	Task Status	Undone By	Options
Activate session weblogic		7/20/10 7:57 PM	weblogic	Activated	None	
Activate session weblogic		7/20/10 7:31 PM	weblogic	Activated	None	
Activate session weblogic		7/20/10 6:27 PM	weblogic	Activated	None	
Activate session weblogic		7/20/10 11:37 AM	weblogic	Activated	None	
Activate session weblogic		7/20/10 11:35 AM	weblogic	Activated	None	
Activate session weblogic		7/20/10 11:33 AM	weblogic	Activated	None	

20. Copy and paste an input XML file in the input folder you have configured, as shown in [Figure 7-49](#).

**Figure 7–49 Input Folder**

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.

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, "Importing the Inbound J.D. Edwards OneWorld WSDL File Into Oracle Service Bus"](#)
- [Section 7.3.5, "Configuring a File Type Business Service"](#)
- [Section 7.3.6, "Configuring a Pipeline"](#)

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

### 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:

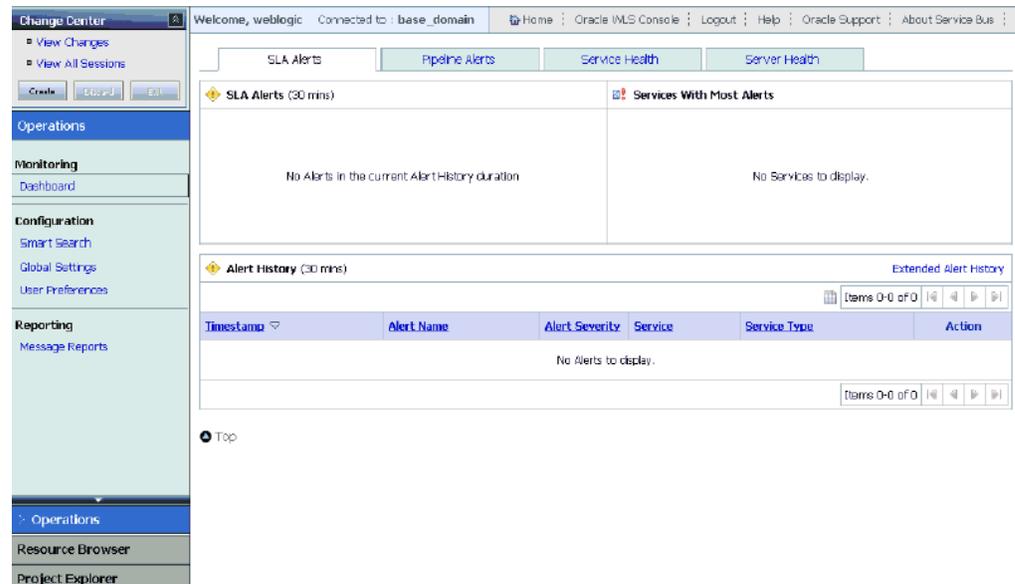
```
http://hostname:port/sbconsole
```

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 7–50](#).

**Figure 7–50 Oracle Service Bus Console Home Page**



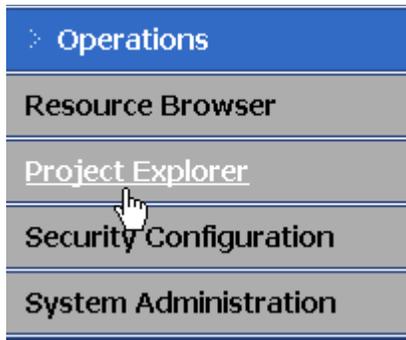
4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in [Figure 7–51](#).

**Figure 7–51 Change Center**



5. Click **Project Explorer** in the left pane, as shown in [Figure 7–52](#).

**Figure 7–52 Project Explorer**



The Project Explorer page is displayed, as shown in [Figure 7–53](#).

**Figure 7–53 Project Explorer Page**



6. Provide a valid name for the new project (for example, JDE\_Project) and click **Add Project**.

The project is successfully created and listed.

7. Click on the created project.

The project page is displayed, as shown in [Figure 7–54](#).

**Figure 7–54 Enter New Folder Name Field**



8. In the Enter New Folder Name field, type **Business Service** and click **Add Folder**.
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 7–55](#).

**Figure 7–55 Project Explorer**

### 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`
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.

### 7.3.3 Publishing a WSDL From Application Explorer to Oracle Service Bus

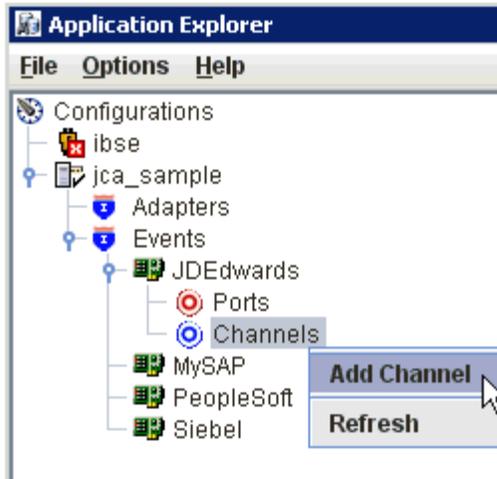
Before you publish a WSDL from Application Explorer to Oracle Service Bus, you must create a separate channel for every J2CA event and select that channel when you generate WSDL for inbound interaction using Application Explorer.

#### Creating a Channel in Application Explorer

To create a channel:

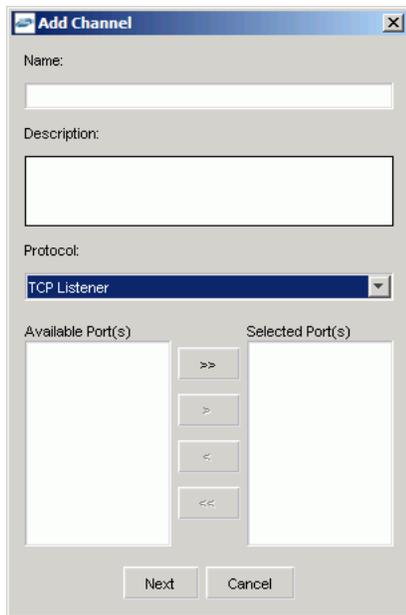
1. In Application Explorer, connect to a J2CA configuration.
2. Expand the **Events** node and then the **JDEdwards** node, as shown in [Figure 7–56](#).

**Figure 7-56 Application Explorer Add Channel Option**



3. Right-click the **Channels** node, and select **Add Channels**.  
The Add Channel dialog is displayed, as shown in [Figure 7-57](#).

**Figure 7-57 Add Channel Dialog**



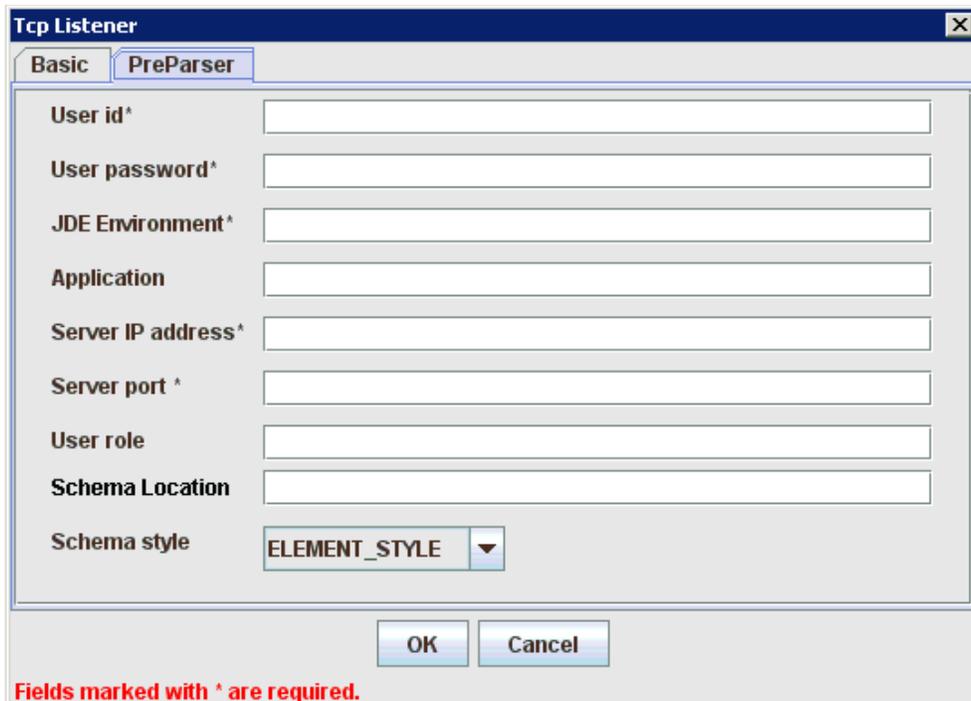
4. In the **Name** field, enter a descriptive name for the channel.
5. In the **Description** field, enter a description (optional).
6. From the **Protocol** list, choose a protocol for your channel.
7. Click **Next**.  
The dialog is displayed for the selected listener, as shown in [Figure 7-58](#).

**Figure 7–58** *TcpListener Dialog*

The screenshot shows the 'Tcp Listener' dialog box with the 'Basic' tab selected. The 'PreParser' tab is also visible. The 'Port Number' field is marked with an asterisk. The 'Host/IP Binding' field is empty. The 'Synchronization Type' dropdown is set to 'REQUEST\_RESPONSE'. There are three checkboxes: 'Is Length Prefix' (unchecked), 'Is XML' (checked), and 'Is Keep Alive' (unchecked). At the bottom, there are 'OK' and 'Cancel' buttons. A red note at the bottom left states 'Fields marked with \* are required.'

8. Enter the port number of the channel in the **Port Number** field.
9. Enter the location of the server in the **Host/IP Binding** field.
10. Select the Synchronization type from the **Synchronization Type** list.
11. Select **Is Length Prefix** for events that send data which is not in XML format. The TCP/IP event application must prefix the data with a 4-byte binary length field when writing the data to the TCP/IP port.
12. Select **Is XML** for events that send data back in XML format. No preparser is required.
13. Select **Is Keep Alive** to maintain a continuous communication between the event transaction and the channel.
14. Click the **PreParser** tab, as shown in [Figure 7–59](#).

**Figure 7–59 Tcp Listener PreParser Tab**



Enter values based on the table.

Parameter	Description
User id*	A valid user ID for J.D. Edwards OneWorld.
User password*	The password associated with the user ID.
JDE environment*	Your J.D. Edwards OneWorld environment. For more information about this parameter, see your J.D. Edwards OneWorld documentation or ask your OneWorld system administrator.
Application	XMLInterop or the application name in J.D. Edwards OneWorld. Optional.
Server IP address*	The name of the server on which J.D. Edwards OneWorld is running. This can be the name of the server, for example, JDEOW, or its IP address, for example, 123.45.67.89.
Server Port*	The port number on which the server is listening, for example, 6009.
User Role	Define a user role according to your requirements.
Schema Location	The location of the XML schema (.xsd file) that was generated from the event output. For example: <code>&lt;OSB_Home&gt;\3rdparty\ApplicationAdapters\config\config_name\schemas\JDEdwards\target_name\jde-schema.xsd</code>
Schema style	Choose from one of the following options: <ul style="list-style-type: none"> <li>■ ELEMENT_STYLE (default)</li> <li>■ ATTRIBUTE_STYLE</li> </ul>

Click **OK**.

The channel is created and displayed under the Channels node. An X over the icon indicates that the channel is currently disconnected.

### Generating WSDL for Event Notification (Command Prompt Only)

You cannot generate WSDL for J.D. Edwards OneWorld event notification using Application Explorer. To generate WSDL from the command prompt, you must perform the following steps.

You can create inbound J2CA service only if the node you have selected supports events.

---



---

**Note:** The schema validation options (Root, Namespace, Schema) are not applicable for the Oracle Application Adapter for J.D. Edwards OneWorld.

---



---

To generate a WSDL file for J.D. Edwards OneWorld event notification:

1. Create a channel using Application Explorer under the J.D. Edwards Events node.
2. Start the channel.

Do not restart the Oracle Application Server after the channel is started.

3. Send an inbound message from J.D. Edwards OneWorld.
4. Capture the inbound message payload in the log file, which is located in the following directory based on your adapter installation:

#### For Oracle SOA Suite:

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\log\iwaf_jca1500.log
```

#### For OSB:

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\log\iwaf_jca1500.log
```

Alternatively, you can create a port using the File protocol under the Events node in Application Explorer, which disposes the event message to the file system.

5. Use a third party tool (for example, XMLSpy) to create the XML schema (.xsd file) using the XML payload that was captured in the previous step.
6. In the generated XML schema (.xsd file) perform the following modifications:
  - a. Search for Schemas-jdedwards-com and replace it with iwaysoftware.

```
<xs:schema
targetNamespace="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
xmlns="urn:Schemas-jdedwards-com:trans.response.JDES00UT"
xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

to:

```
<xs:schema
targetNamespace="urn:iwaysoftware:trans.response.JDES00UT"
xmlns="urn:iwaysoftware:trans.response.JDES00UT"
xmlns:xs=http://www.w3.org/2001/XMLSchema elementFormDefault="qualified">
```

- b. Cut the following syntax:

```
<xs:element name="jdeResponse">
```

```
<xs:complexType>
</xs:complexType>
</xs:element>
```

- c. Paste it before the following line:

```
<xs:element name="transaction">
```

7. Copy the XML schema (.xsd file) to the following directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

---

**Note:** Edit the created channel by providing the location of the schema (.xsd) file (as mentioned in step 7) in the PreParser tab of Application Explorer. For example:

**For Oracle SOA Suite:**

```
<ORACLE_
HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

**For OSB:**

```
<OSB_HOME>\Oracle_
OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\jde-schema.xsd
```

---

8. Open a command prompt and navigate to the base domain directory and execute the *setDomainEnv.sh* file:

```
<ORACLE_HOME>\user_projects\domains\base_domain\bin
```

Navigate to the following Application Explorer directory based on your adapter installation:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\tools\iwae\bin
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\tools\iwae\bin
```

9. Execute the *obadapter.bat* file to set the environment.  
 10. Based on your adapter installation, navigate to the following directory where the XML schema (.xsd file) is copied:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\config\configuration_
```

```
name\schemas\JDEdwards\target_name\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\config\configuration_
name\schemas\JDEdwards\target_name\
```

**11. Enter the following command to generate a WSDL:**

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser adapterhome adapter
target channel schemaPrefix wsdlFileName
```

where:

*adapterhome* is the path to your ApplicationAdapters home. For example:

**For Oracle SOA Suite:**

```
<ORACLE_HOME>\soa\thirdparty\ApplicationAdapters\
```

**For OSB:**

```
<OSB_HOME>\Oracle_OSB1\3rdparty\ApplicationAdapters\
```

*adapter* is the name of the adapter. For example, JDEdwards.

*target* is the name of the adapter target you created in Application Explorer.

*channel* is the name of the channel you created in Application Explorer.

*schemaPrefix* is the prefix for the XSD schema. The schema file must be in the same directory where the Java command is executed, for example:

```
java -Diway.oem=oracle11g
com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl
```

Once the command is executed, the following is displayed in the command window:

```
Running Inbound WSDL generation tool...
-> user.dir = java com.iwaysoftware.af.container.tools.wsdl.IWayWSILBrowser
C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\JDEdwards jde812_tgt jde_ch
Jde812_Schema Jde812_salesorder_receive.wsdl

-> Generating WSDL...
-> Done.
-> Writing WSDL 'C:\oracle\Middleware\Oracle_
SOA1\soa\thirdparty\ApplicationAdapters\wsdls\Jde812_salesorder_receive.wsdl '
to disk...
-> Done.
```

---

**Note:** It is good practice to append **\_receive** to the names of WSDL files that are generated for event notification services. This allows you to easily distinguish between them and those generated for request-response services.

---

12. Stop the channel in Application Explorer.

---

**Note:** You can organize your WSDL files in subfolders, creating your own WSDL hierarchy structure. Create the folders under <OSB\_Home>\3rdparty\ApplicationAdapters\wsdls. The WSIL browser in Oracle JDeveloper displays the full tree structure of your WSDL hierarchy.

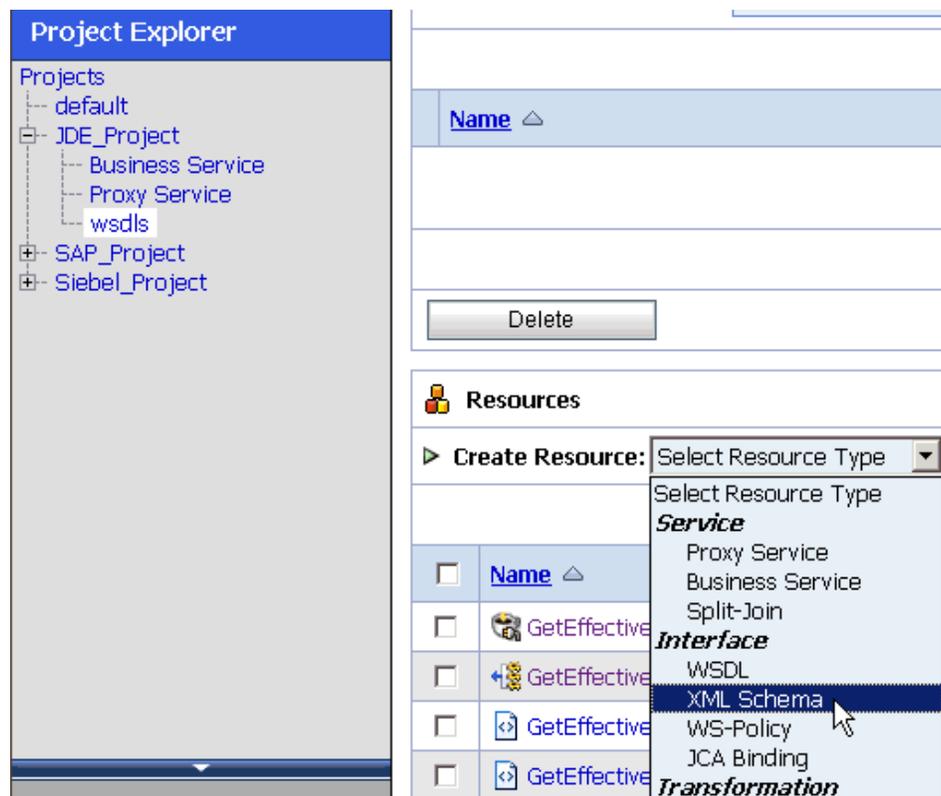
---

### 7.3.4 Importing the Inbound J.D. Edwards OneWorld WSDL File Into Oracle Service Bus

Once you have generated the inbound WSDL for J.D. Edwards OneWorld, you must import the inbound WSDL file into Oracle Service Bus.

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 Create Resource Menu**



2. In the right pane, select **XML Schema** from the Create Resource menu. The Create a New XML Schema Resource page is displayed, as shown in [Figure 7-61](#).

**Figure 7–61 Create a New XML Schema Resource Page**

3. Enter a name for the inbound XML schema in the Resource Name field.  
You can also provide a brief description for the resource (optional).
4. Using the Browse option in the XML Schema field, navigate to the location of the inbound XML schema file (.xsd) on your file system.
5. Click Save.  
The inbound XML schema is added to the OSB console, as shown in [Figure 7–62](#).

**Figure 7–62 OSB Console**

<input type="checkbox"/>	Name <span>△</span>	Resource Type
<input type="checkbox"/>	GetEffectiveAddress_invoke	JCA Binding
<input type="checkbox"/>	GetEffectiveAddress_invoke	WSDL
<input type="checkbox"/>	GetEffectiveAddress_invoke_request	XML Schema
<input type="checkbox"/>	GetEffectiveAddress_invoke_response	XML Schema
<input type="checkbox"/>	Salesorder_attrib_http_inbound	WSDL
<input type="checkbox"/>	Salesorder_attrib_http_inbound_request	XML Schema

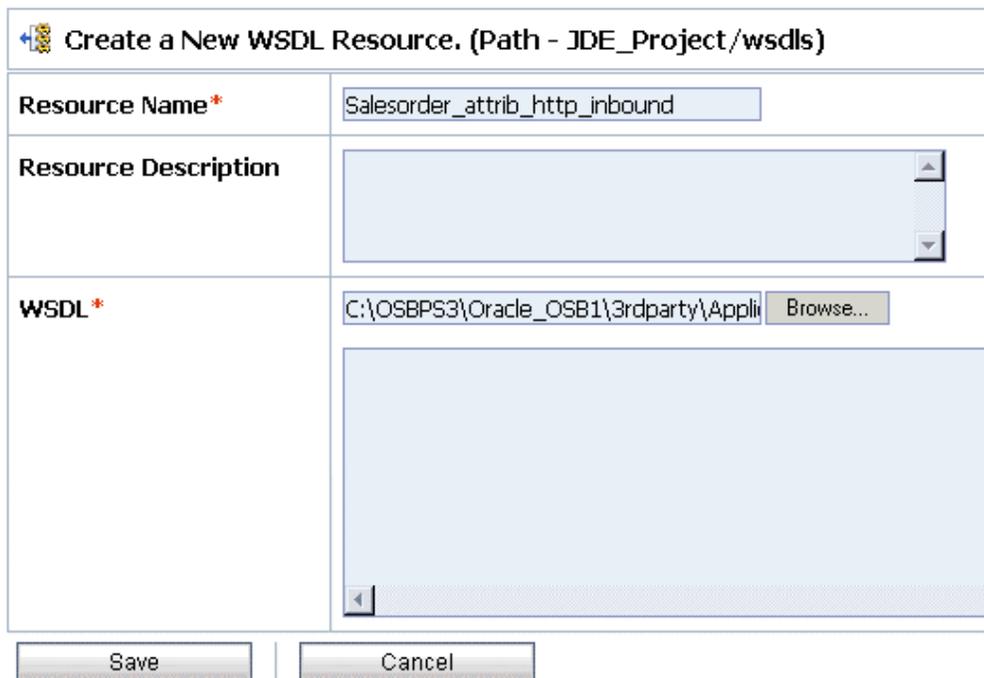
6. In the right pane, select **WSDL** from the Create Resource menu, as shown in [Figure 7–63](#).

**Figure 7-63 Create Resource Menu WSDL Option**



The Create a New WSDL Resource page is displayed, as shown in [Figure 7-64](#).

**Figure 7-64 Create a New WSDL Resource Page**



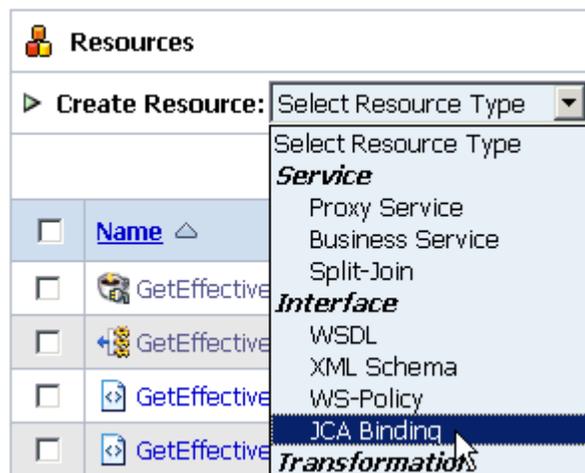
7. Enter a name for the inbound WSDL in the Resource Name field.  
You can also provide a brief description for the resource (optional).
8. Using the Browse option in the WSDL field, navigate to the location of the inbound WSDL file (.wsdl) on your file system.
9. Click **Save**.  
The inbound WSDL is added to the OSB console, as shown in [Figure 7-65](#).

**Figure 7-65 OSB Console**

<input type="checkbox"/>	Name <sup>△</sup>	Resource Type
<input type="checkbox"/>	GetEffectiveAddress_invoke	JCA Binding
<input type="checkbox"/>	GetEffectiveAddress_invoke	WSDL
<input type="checkbox"/>	GetEffectiveAddress_invoke_request	XML Schema
<input type="checkbox"/>	GetEffectiveAddress_invoke_response	XML Schema
<input type="checkbox"/>	Salesorder_attrib_http_inbound	WSDL
<input type="checkbox"/>	Salesorder_attrib_http_inbound_request	XML Schema

- In the right pane, select **JCA Binding** from the Create Resource menu, as shown in Figure 7-66.

**Figure 7-66 Create Resource Menu JCA Binding Option**



The Create a New JCA Binding Resource page is displayed, as shown in Figure 7-67.

**Figure 7–67 Create a New JCA Binding Resource Page**

11. Enter a name for the inbound JCA binding in the Resource Name field.  
You can also provide a brief description for the resource (optional).
12. Using the Browse option in the JCA File field, navigate to the location of the inbound JCA binding file (.jca) on your file system.
13. Click Save.  
The inbound JCA binding is added to the OSB console, as shown in [Figure 7–68](#).

**Figure 7–68 OSB Console**

<input type="checkbox"/>	Name <small>△</small>	Resource Type
<input type="checkbox"/>	GetEffectiveAddress_invoke	JCA Binding
<input type="checkbox"/>	GetEffectiveAddress_invoke	WSDL
<input type="checkbox"/>	GetEffectiveAddress_invoke_request	XML Schema
<input type="checkbox"/>	GetEffectiveAddress_invoke_response	XML Schema
<input type="checkbox"/>	Salesorder_attrib_http_inbound	JCA Binding
<input type="checkbox"/>	Salesorder_attrib_http_inbound	WSDL
<input type="checkbox"/>	Salesorder_attrib_http_inbound_request	XML Schema

14. Click the icon that corresponds to the exported WSDL in the Actions column, as shown in [Figure 7–69](#).

**Figure 7–69 OSB Console**

<input type="checkbox"/>	Name	Resource Type	Actions
<input type="checkbox"/>	GetEffectiveAddress_invoke	JCA Binding	a e
<input type="checkbox"/>	GetEffectiveAddress_invoke	WSDL	a e
<input type="checkbox"/>	GetEffectiveAddress_invoke_request	XML Schema	a e
<input type="checkbox"/>	GetEffectiveAddress_invoke_response	XML Schema	a e
<input type="checkbox"/>	Salesorder_attrib_http_inbound	JCA Binding	a e
<input type="checkbox"/>	Salesorder_attrib_http_inbound	WSDL	a e
<input type="checkbox"/>	Salesorder_attrib_http_inbound_request	XML Schema	a e

The Generate WSDL and Service page is displayed.

15. Provide a new WSDL name and a new service name in the corresponding fields, as shown in [Figure 7–70](#).

**Figure 7–70 Generate WSDL and Service Page**

Oracle Service Bus : Generate WSDL and Service - Windows Internet Explorer

**Generate WSDL and Service**

JCA Binding Name: Salesorder\_attrib\_http\_inbound

New WSDL Name\*: Salesorder\_attrib\_http\_inbound\_wsd

New Service Name\*: Salesorder\_attrib\_http\_inbound\_PS

Location:

- Project:
  - default
  - JDE\_Project
  - SAP\_Project
  - Siebel\_Project
- Sub-folder:
  - Business Service
  - Proxy Service
  - wsdls

Buttons: Generate, Cancel

16. In the Location area, select an available project and the sub-folder that is designated for Proxy Services.

17. Click **Generate**.

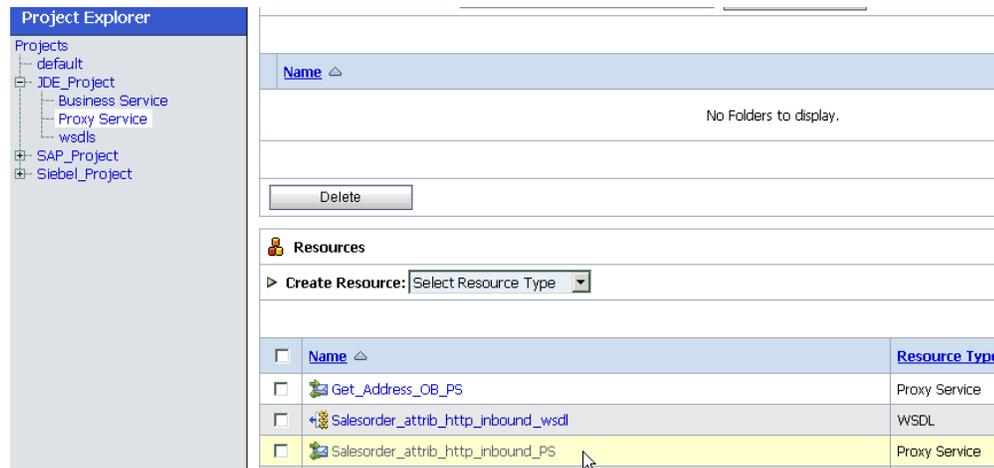
If the WSDL and Service resources are successfully created, then the following message is displayed, as shown in [Figure 7–71](#).

**Figure 7–71 Success Message**



18. Select the **Proxy Service** folder you created in the left pane and verify that the Proxy Service is successfully generated and listed, as shown in [Figure 7-72](#).

**Figure 7-72 Project Explorer**

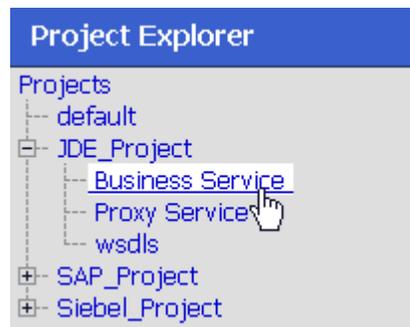


### 7.3.5 Configuring a File Type Business Service

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 7-73](#).

**Figure 7-73 Project Explorer**



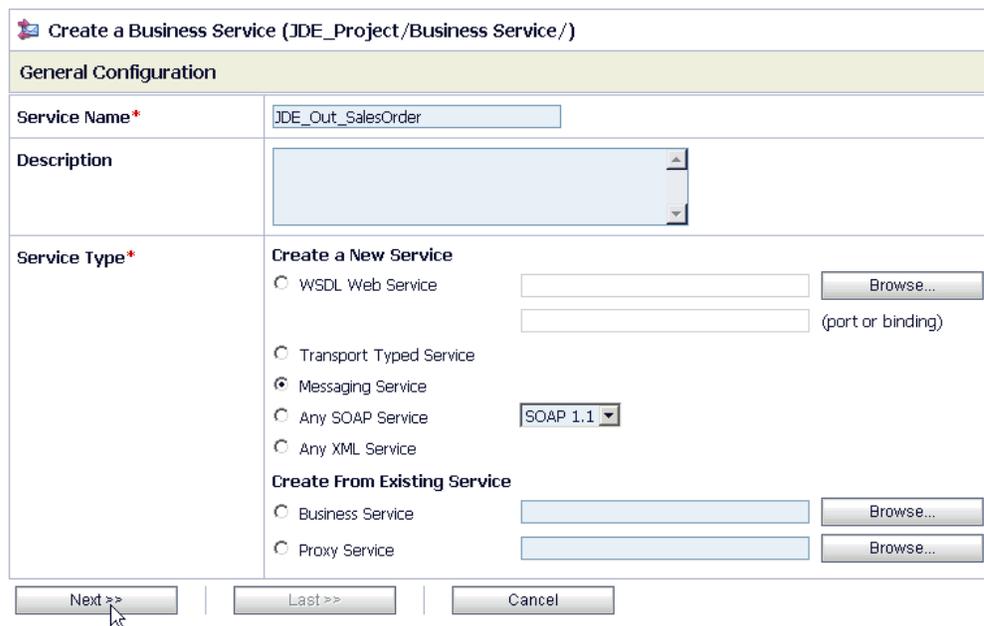
2. In the right pane, select **Business Service** from the Create Resource menu, as shown in [Figure 7-74](#).

**Figure 7–74 Create Resource Menu**



The General Configuration page is displayed, as shown in [Figure 7–75](#).

**Figure 7–75 General Configuration Page**



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 7–76](#).

**Figure 7-76 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 7-77](#).

**Figure 7-77 Transport Configuration Page**

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 7–78](#).

**Figure 7–78 FILE Transport Configuration Page**

FILE Transport Configuration	
Prefix	sales_order
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 7–79](#).

**Figure 7–79 Message Handling and Advanced Settings Page**

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 7–80](#).

**Figure 7–80 Summary Page**

General Configuration	
Service Name	JDE_Out_SalesOrder
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/jde/salesorder
Retry Count	0
Retry Iteration Interval	30
FILE Transport Configuration	
Prefix	sales_order
Suffix	.xml
Request encoding	utf-8
Message Handling Configuration	
Result Caching	Not Supported

12. Review all the information for your Business Service and click **Save**.

### 7.3.6 Configuring a Pipeline

Perform the following steps to configure a Pipeline:

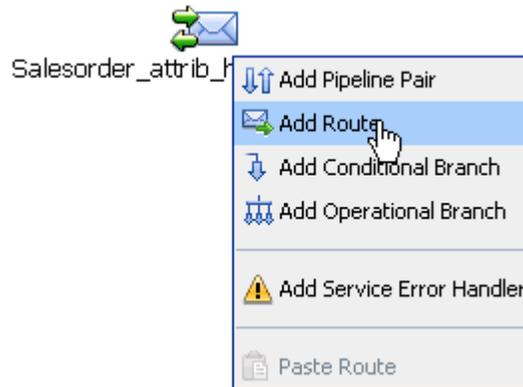
1. Click the **Edit Message Flow** icon in the row of the Proxy Service you created, as shown in [Figure 7–81](#).

**Figure 7–81 Edit Message Flow Icon**

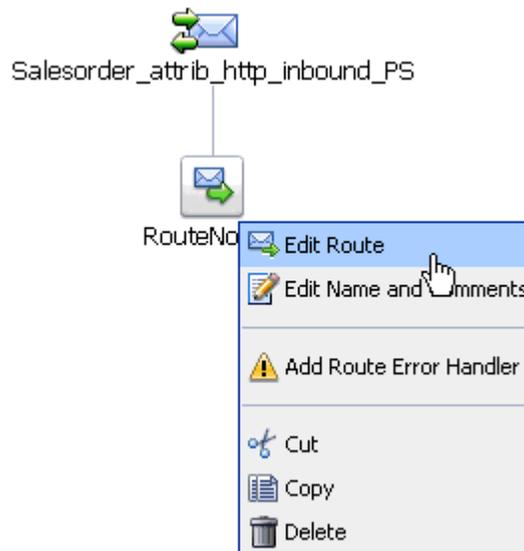
Resources			
Create Resource: <input type="text" value="Select Resource Type"/>			
Items 1-4 of 4			
Name	Resource Type	Actions	Options
Get_Address_OB_PS	Proxy Service		a e
Salesorder_attrib_http_inbound_PS	Proxy Service		a e
Salesorder_attrib_http_inbound_wsdl	WSDL		a e
Salesorder_IB_JDE	Proxy Service		a e

Items 1-4 of 4

The Edit Message Flow workspace area is displayed, as shown in [Figure 7–82](#).

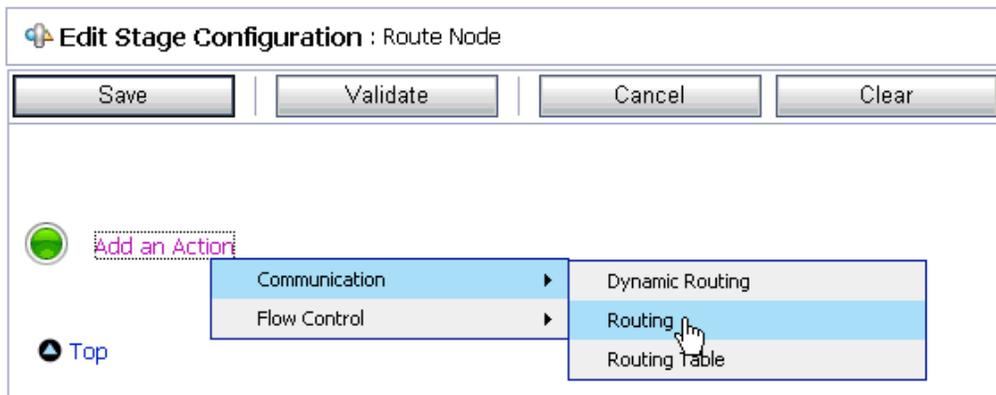
**Figure 7–82 Edit Message Flow Workspace Area**

2. Click the displayed Proxy service icon and select **Add Route** from the menu. The RouteNode1 icon is added below the Request Pipeline icon, as shown in [Figure 7–83](#).

**Figure 7–83 Edit Message Flow Edit Route Option**

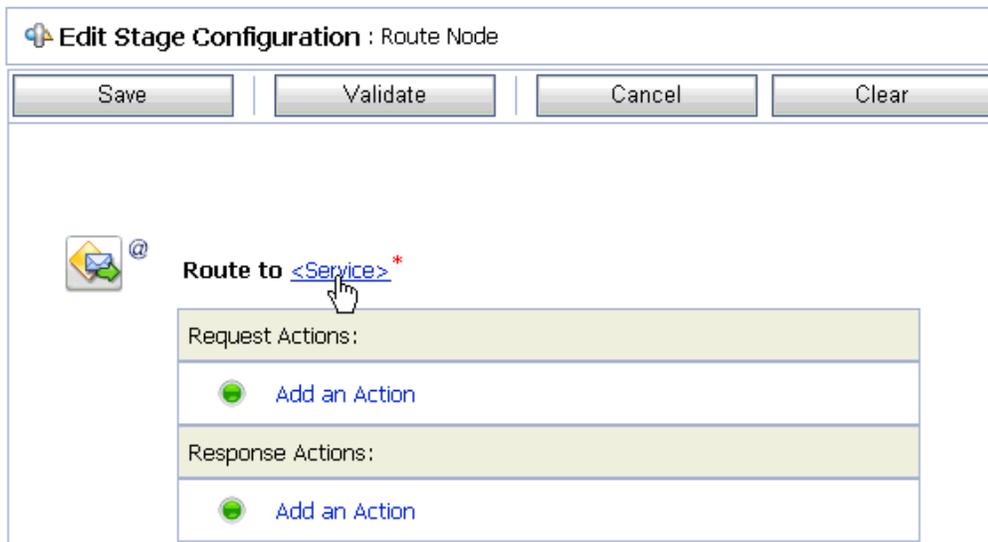
3. Click the **RouteNode1** icon and select **Edit Route** from the menu. The Edit Stage Configuration workspace area is displayed, as shown in [Figure 7–84](#).

**Figure 7–84 Edit Stage Configuration Routing Option**



4. Click **Add an Action**, select **Communication** from the menu, and click **Routing**, as shown in [Figure 7–85](#).

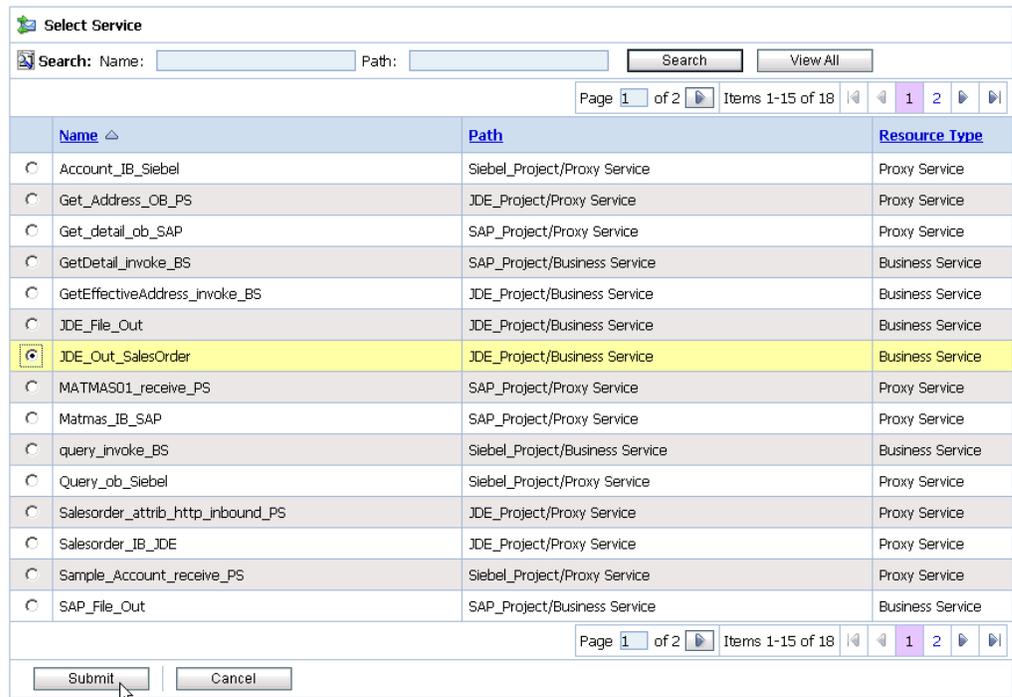
**Figure 7–85 Edit Stage Configuration Page**



5. Click **<Service>**.

The Select Service dialog is displayed, as shown in [Figure 7–86](#).

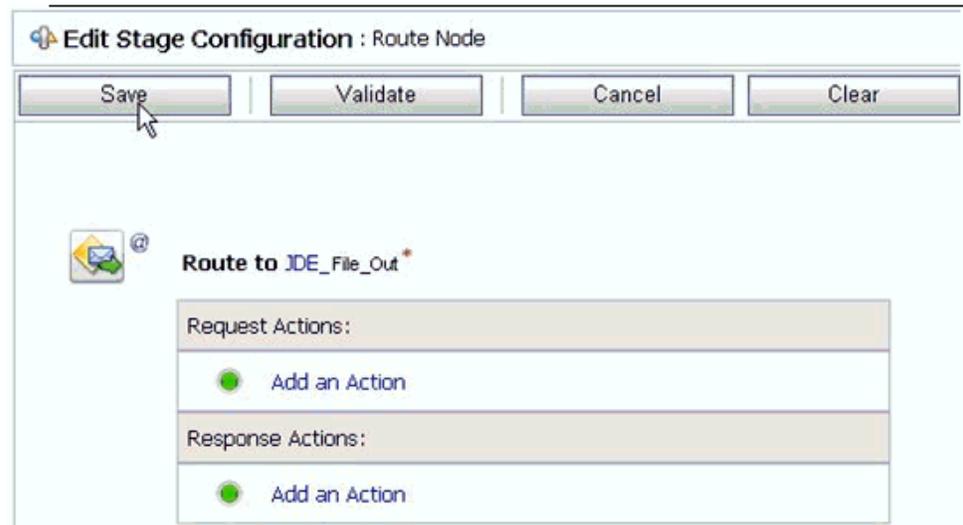
**Figure 7–86 Select Service Dialog**



6. Select a File type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in [Figure 7–87](#).

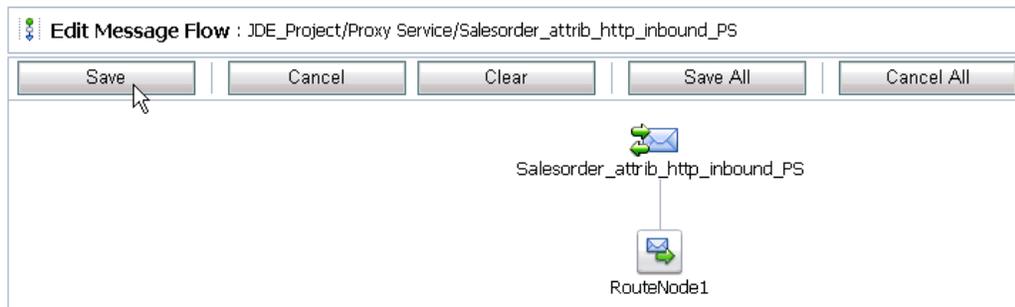
**Figure 7–87 Edit Stage Configuration Workspace Area**



7. Click **Save**.

You are returned to the Edit Message Flow workspace area, as shown in [Figure 7–88](#).

**Figure 7–88 Edit Message Flow Workspace Area**



8. Click **Save**, as shown in [Figure 7–89](#).

**Figure 7–89 Success Message**



9. Check if the success message is displayed and click **Activate** in the Change Center. The Activate Session page is displayed as shown in [Figure 7–90](#).

**Figure 7–90 Activate Session Page**



10. Click **Submit**.
11. Check if the View Configuration Changes page is displayed, as shown in [Figure 7–91](#).

**Figure 7–91 View Configuration Changes Page**

Task	Description	Execution Time	User	Task Status	Undone By	Options
Activate session weblogic		7/20/10 7:57 PM	weblogic	Activated	None	↶ ↷
Activate session weblogic		7/20/10 7:31 PM	weblogic	Activated	None	↶ ↷
Activate session weblogic		7/20/10 6:27 PM	weblogic	Activated	None	↶ ↷
Activate session weblogic		7/20/10 11:37 AM	weblogic	Activated	None	↶ ↷
Activate session weblogic		7/20/10 11:35 AM	weblogic	Activated	None	↶ ↷
Activate session weblogic		7/20/10 11:33 AM	weblogic	Activated	None	↶ ↷

12. Trigger an event from the J.D. Edwards OneWorld 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.

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"

Samples have been provided for this use case scenario under the *etc/sample* folder of the Application Adapters installation.

### 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:

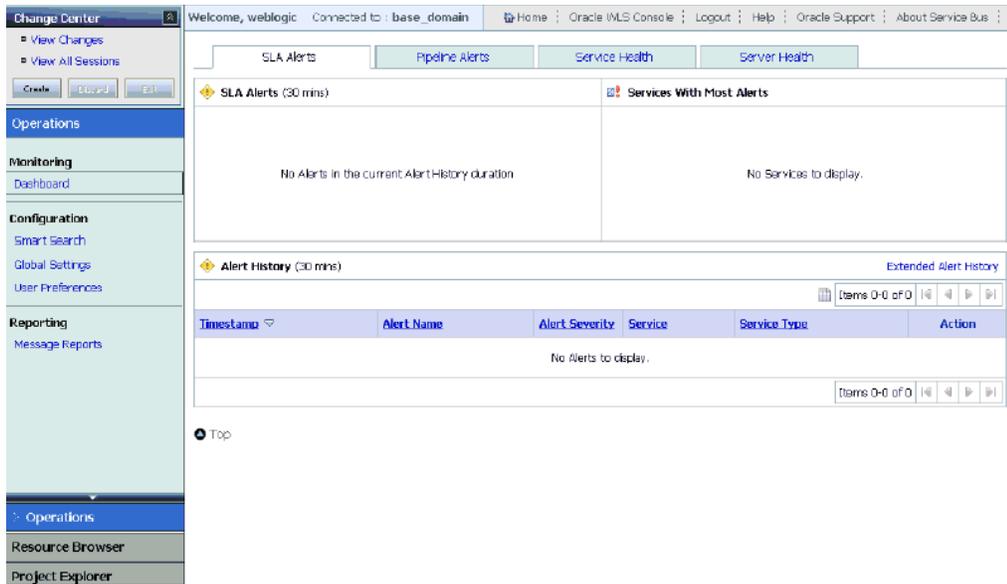
```
http://hostname:port/sbconsole
```

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 7–92](#).

**Figure 7–92 Oracle Service Bus Console Home Page**



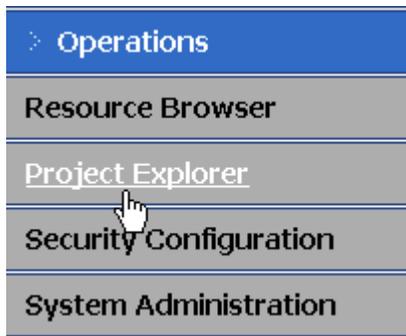
4. Click **Create** in the Change Center area to start a new Oracle Service Bus session, as shown in [Figure 7–93](#).

**Figure 7–93 Change Center Create Button**



5. Click **Project Explorer** in the left pane, as shown in [Figure 7–94](#).

**Figure 7–94 Project Explorer**



The Project Explorer page is displayed, as shown in [Figure 7–95](#).

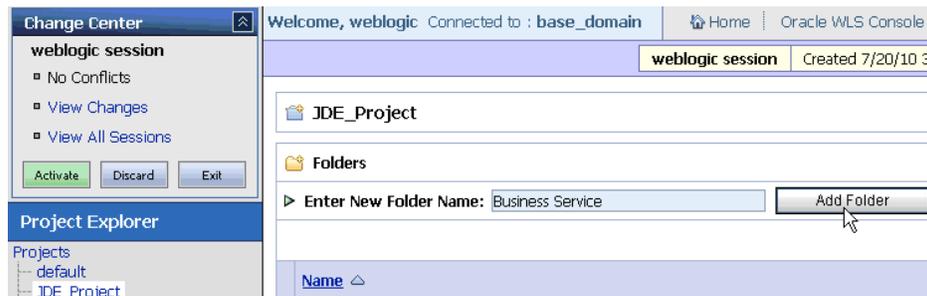
**Figure 7–95 Project Explorer Page**


6. Provide a valid name for the new project (for example, JDE\_Project) and click **Add Project**.

The project is successfully created and listed.

7. Click on the created project.

The project page is displayed, as shown in [Figure 7–96](#).

**Figure 7–96 New Folder Name Field**


8. In the Enter New Folder Name field, type **Business Service** and click **Add Folder**.
9. In the Enter New Folder Name field, type **Proxy Service** and click **Add Folder**.
10. In the Enter New Folder Name field, type **wsdl's** and click **Add Folder**.

The Business Service, Proxy Service, and wsdl's folders are listed in the left pane below the project node, as shown in [Figure 7–97](#).

**Figure 7–97 Project Explorer**


## 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:

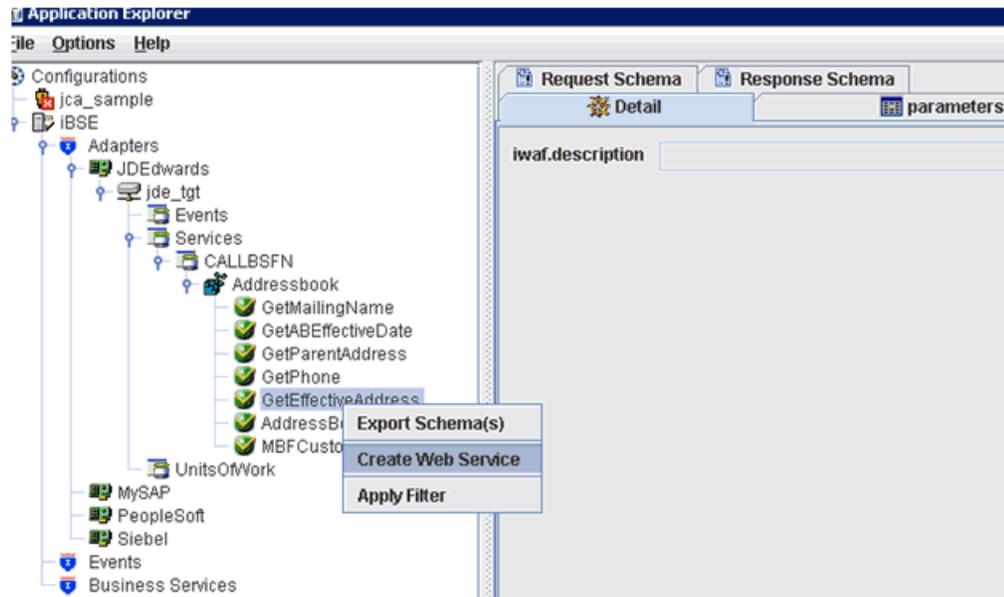
1. Open the command prompt window.
2. Navigate to the following directory:  
`<OSB_Home>\user_projects\domains\base_domain\bin`
3. Execute **setDomainEnv.cmd** (Windows) or **./setDomainEnv.sh** (UNIX/Linux).  
 This command sets the class path for Application Explorer to access the Oracle WebLogic Server 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 J.D. Edwards target, as shown in [Figure 7–98](#).

**Figure 7–98 Application Explorer Create Web Service Option**



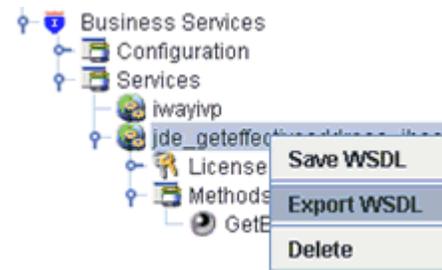
2. Expand the **Services** node, followed by **CALLBSFN** and **Addressbook**.
3. Right-click the **GetEffectiveAddress** business object and select **Create Web Service** from the menu.

The Create Web Service dialog is displayed, as shown in [Figure 7–99](#).

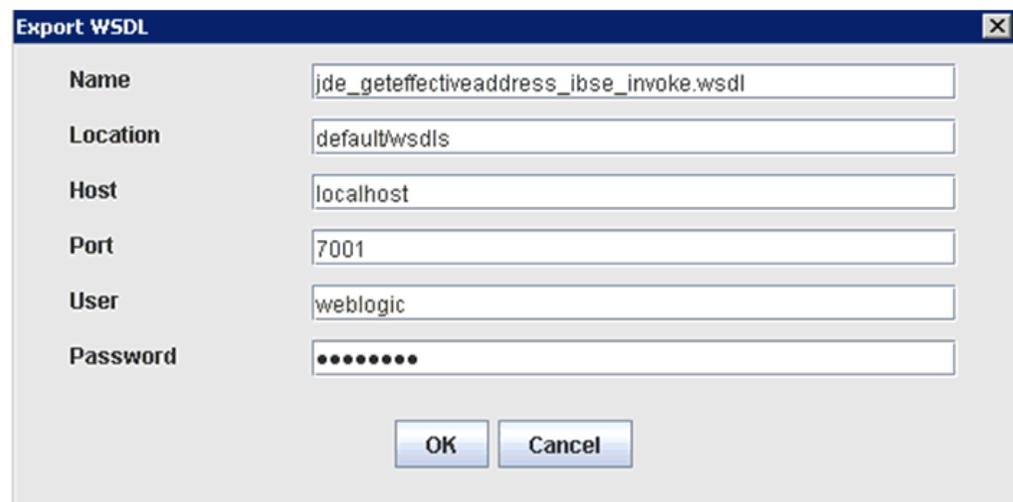
**Figure 7–99 Create Web Service Dialog**

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 7–100](#).

**Figure 7–100 Application Explorer Export WSDL Option**

6. Right-click the new Web service and select **Export WSDL** from the menu.
- The Export WSDL dialog is displayed, as shown in [Figure 7–101](#).

**Figure 7–101 Export WSDL Dialog**

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 7-102](#).

**Figure 7-102 Create Resource Menu**



2. In the right pane, select **Business Service** from the Create Resource menu.  
The General Configuration page is displayed, as shown in [Figure 7-103](#).

**Figure 7–103 General Configuration Page**

Create a Business Service (default/BusinessService/)

**General Configuration**

Service Name\*

Description

Service Type\*

**Create a New Service**

WSDL Web Service    
 (port or binding)

Transport Typed Service

Messaging Service

Any SOAP Service

Any XML Service

**Create From Existing Service**

Business Service

Proxy Service

|  |

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 7–104](#).

**Figure 7–104 Message Type Configuration Page**

**Message Type Configuration**

**Request Message Type**

None

Binary

Text

MFL

XML    
 (element or type)

**Response Message Type**

None

Binary

Text

MFL

XML    
 (element or type)

|  |  |

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 7–105](#).

**Figure 7–105 Transport Configuration Page**

Transport Configuration	
Protocol*	file
Load Balancing Algorithm	round-robin
Endpoint URI*	Format: file:///root-dir/dir1 <input type="text" value="file:///"/> <input type="button" value="Add"/> EXISTING URIS file:///C:/output
Retry Count	0
Retry Iteration Interval	30
<input type="button" value=" &lt;&lt; Prev."/> <input type="button" value=" Next &gt;&gt;"/> <input type="button" value=" Last &gt;&gt;"/> <input type="button" value=" 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 7–106](#).

**Figure 7–106 FILE Transport Configuration Page**

Create a Business Service (default/BusinessService/jde_geteffective_ibse_out )	
FILE Transport Configuration	
Prefix	jde_geteffetitive_out
Suffix	.xml
Request encoding	utf-8
<input type="button" value=" &lt;&lt; Prev."/> <input type="button" value=" Next &gt;&gt;"/> <input type="button" value=" Last &gt;&gt;"/> <input type="button" value=" Cancel"/>	

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 7–107](#).

**Figure 7–107 Summary Page**

Protocol	file
Load Balancing Algorithm	round-robin
Endpoint URI	file:///C:/output
Retry Count	0
Retry Iteration Interval	30
<b>FILE Transport Configuration</b>	
Prefix	ide_geteffetitive_out
Suffix	.xml
Request encoding	utf-8
<input style="margin-right: 20px;" type="button" value=" &lt;&lt; Prev. "/> <input style="margin-right: 20px;" type="button" value=" Save "/> <input style="margin-right: 20px;" type="button" value=" Cancel "/>	

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 7–108](#).

**Figure 7–108 Create Resource Menu**



2. In the right pane, select **Business Service** from the Create Resource menu. The General Configuration page is displayed, as shown in [Figure 7–109](#).

**Figure 7–109 General Configuration Page**

**Create a Business Service (default/Proxy Service/)**

**General Configuration**

**Service Name\***

**Description**

**Service Type\***

**Create a New Service**

WSDL Web Service    
 (port or binding)

Transport Typed Service

Messaging Service

Any SOAP Service

Any XML Service

**Create From Existing Service**

Business Service

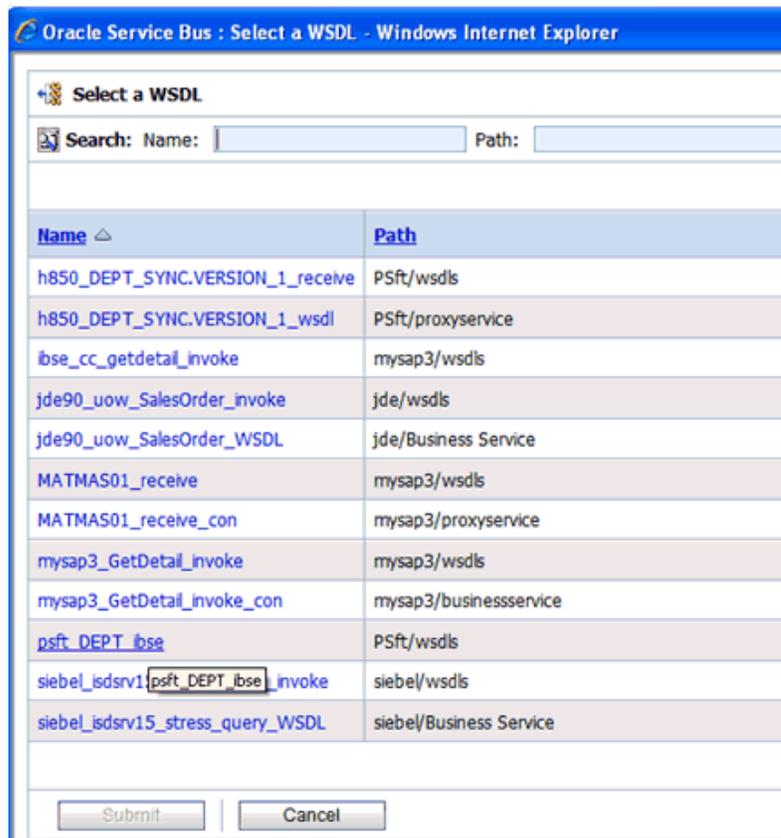
Proxy Service

|  |

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 7–110](#).

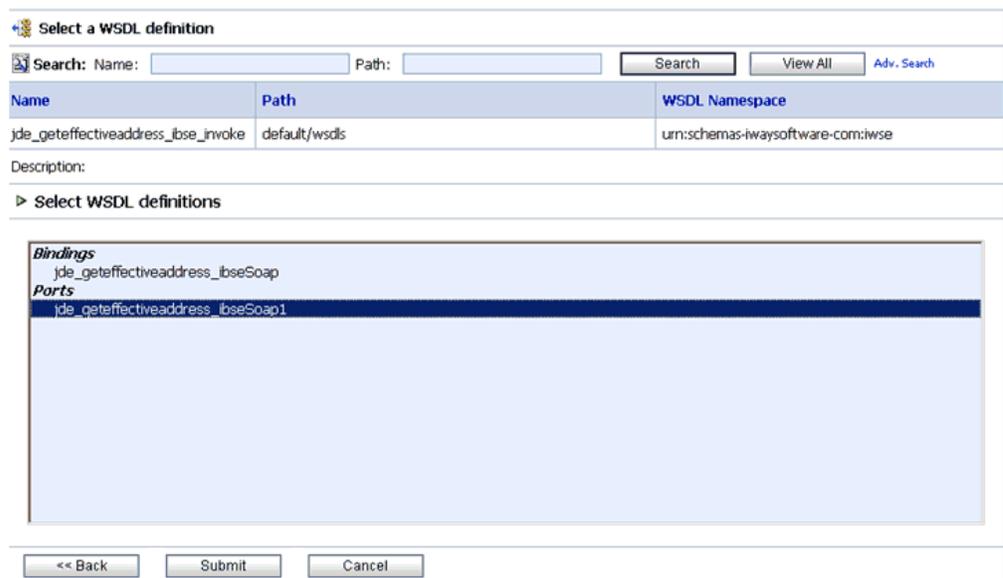
Figure 7–110 Select a WSDL Dialog



5. Select a BSE WSDL that you published for Oracle Application Adapter for J.D. Edwards OneWorld using Application Explorer and click **Submit**.

The Select a WSDL Definition dialog is displayed, as shown in Figure 7–111.

Figure 7–111 Select a WSDL Definition Dialog



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.
7. Click **Next**.  
The Transport Configuration page is displayed, as shown in [Figure 7-112](#).

**Figure 7-112 Transport Configuration Page**

8. Leave the default values and click **Next**.  
The HTTP Transport Configuration page is displayed, as shown in [Figure 7-113](#).

**Figure 7-113 HTTP Transport Configuration Page**

9. Leave the default values and click **Next**.  
The SOAP Binding Configuration page is displayed, as shown in [Figure 7-114](#).

**Figure 7–114 SOAP Binding Configuration Page**

SOAP Binding Configuration	
Enforce WS-I Compliance	<input type="checkbox"/>
<input style="width: 100px;" type="button" value=" &lt;&lt; Prev. "/> <input style="width: 100px;" type="button" value=" Next &gt;&gt; "/> <input style="width: 100px;" type="button" value=" Last &gt;&gt; "/> <input style="width: 100px;" type="button" value=" Cancel "/>	

10. Click Next.

The Message Content Handling page is displayed, as shown in [Figure 7–115](#).

**Figure 7–115 Message Content Handling Page**

Message Content Handling	
XOP/MTOM Support	<input type="checkbox"/> Enabled <input checked="" type="radio"/> Include Binary Data by Reference <input checked="" type="radio"/> Include Binary Data by Value
Attachments	<input type="checkbox"/> Page Attachments to Disk
<input style="width: 100px;" type="button" value=" &lt;&lt; Prev. "/> <input style="width: 100px;" type="button" value=" Next &gt;&gt; "/> <input style="width: 100px;" type="button" value=" Last &gt;&gt; "/> <input style="width: 100px;" type="button" value=" Cancel "/>	

11. Click Next.

The Summary page is displayed, as shown in [Figure 7–116](#).

**Figure 7–116 Summary Page**

Load Balancing Algorithm	round-robin
Endpoint URI	http://172.19.21.199:7001/lbse/lbseServlet/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
<input style="width: 100px;" type="button" value=" &lt;&lt; Prev. "/> <input style="width: 100px;" type="button" value=" Save "/> <input style="width: 100px;" type="button" value=" Cancel "/>	

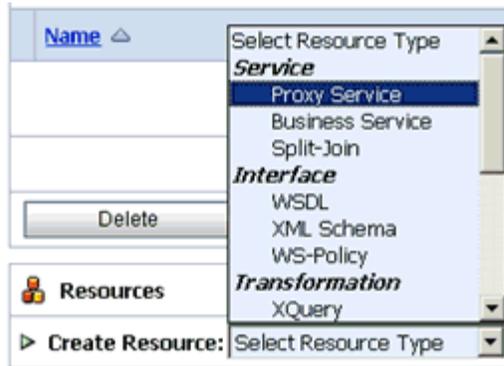
12. Review all the information for your Business Service and click **Save**.

## 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 7-117](#).

**Figure 7-117 Create Resource Menu**



2. In the right pane, select **Proxy Service** from the Create Resource menu. The General Configuration page is displayed, as shown in [Figure 7-118](#).

**Figure 7-118 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 7-119](#).

**Figure 7–119 Transport Configuration Page**

Transport Configuration					
Protocol*	file				
Endpoint URI*	Format: file:///root-dir/dir1 file:///C:/input				
Get All Headers	<input type="radio"/> Yes <input checked="" type="radio"/> No Header <input type="text"/> <input type="button" value="Add"/> <table border="1"> <thead> <tr> <th>HEADER</th> <th>ACTION</th> </tr> </thead> <tbody> <tr> <td colspan="2">There are no headers configured.</td> </tr> </tbody> </table>	HEADER	ACTION	There are no headers configured.	
HEADER	ACTION				
There are no headers configured.					
<input type="button" value=" &lt;&lt; Prev."/> <input type="button" value=" Next &gt;&gt;"/> <input type="button" value=" Last &gt;&gt;"/> <input type="button" value=" 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 7–120](#).

**Figure 7–120 FILE Transport Configuration Page**

FILE Transport Configuration	
File Mask*	*.*
Polling Interval*	60
Read Limit*	10
Sort By Arrival	<input type="checkbox"/>
Scan SubDirectories	<input type="checkbox"/>
Pass By Reference	<input type="checkbox"/>
Post Read Action*	delete
Stage Directory*	C:\input\stage
Archive Directory	
Error Directory*	C:\input\error
Request encoding	utf-8
<input type="button" value=" &lt;&lt; Prev."/> <input type="button" value=" Next &gt;&gt;"/> <input type="button" value=" Last &gt;&gt;"/> <input type="button" value=" Cancel"/>	

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 7–121](#).

**Figure 7–121 Message Content Handling Page**

Message Content Handling	
<b>Content Streaming</b>	<input type="checkbox"/> Enabled <b>Buffer Type</b> <input checked="" type="radio"/> Memory Buffer <input type="radio"/> Disk Buffer <b>Compression</b> <input checked="" type="checkbox"/> Enabled
<input type="button" value=" &lt;&lt; Prev. "/> &nbsp; <input type="button" value=" Next &gt;&gt; "/> &nbsp;                      &nbsp; <input type="button" value=" Last &gt;&gt; "/> &nbsp;                      &nbsp; <input type="button" value=" Cancel "/> &nbsp;	

10. Click Next.

The Summary page is displayed, as shown in [Figure 7–122](#).

**Figure 7–122 Summary Page**

Transport Configuration	
Protocol	file
Endpoint URI	file:///C:/input
Get All Headers	No
Headers	
FILE Transport Configuration	
File Mask	*.*
Polling 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
<input type="button" value=" &lt;&lt; Prev. "/> &nbsp;                      &nbsp; <input type="button" value=" Save "/> &nbsp;                      &nbsp; <input type="button" value=" Cancel "/> &nbsp;	

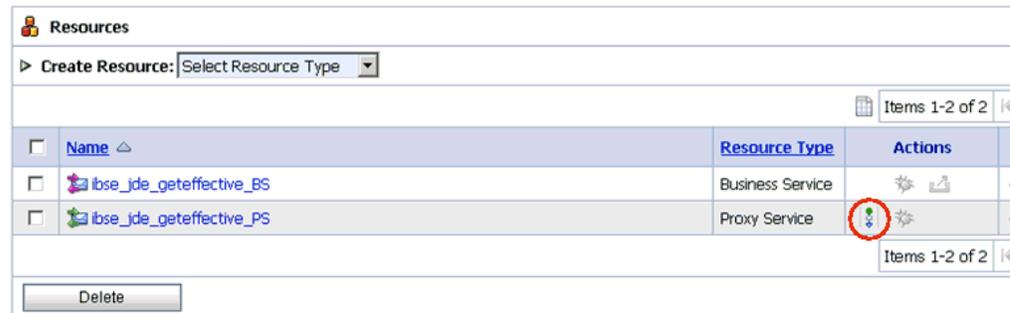
- Review all the information for your Proxy Service and click **Save**.

## 7.4.7 Configuring a Pipeline

This section describes how to configure a Pipeline using the Oracle Service Bus Console.

- Click the **Edit Message Flow** icon in the row of the Proxy Service you created, as shown in [Figure 7-123](#).

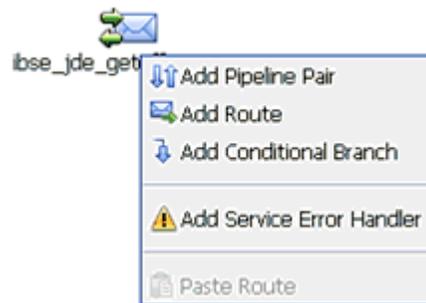
**Figure 7-123 Edit Message Flow Icon**



The Edit Message Flow workspace area is displayed.

- Click the **Proxy Service** icon and select **Add Pipeline Pair** from the menu, as shown in the following image, as shown in [Figure 7-124](#).

**Figure 7-124 Add Pipeline Pair Option**



- Click the **PipelinePairNode1** icon and select **Add Route** from the menu, as shown in [Figure 7-125](#).

Figure 7–125 Add Route Option

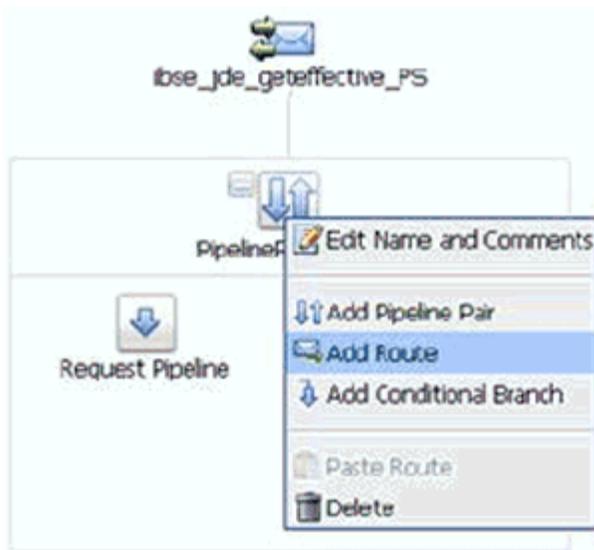
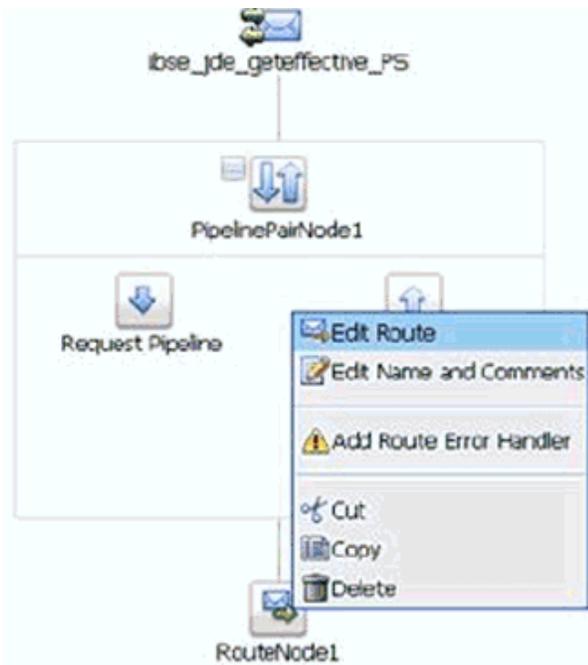
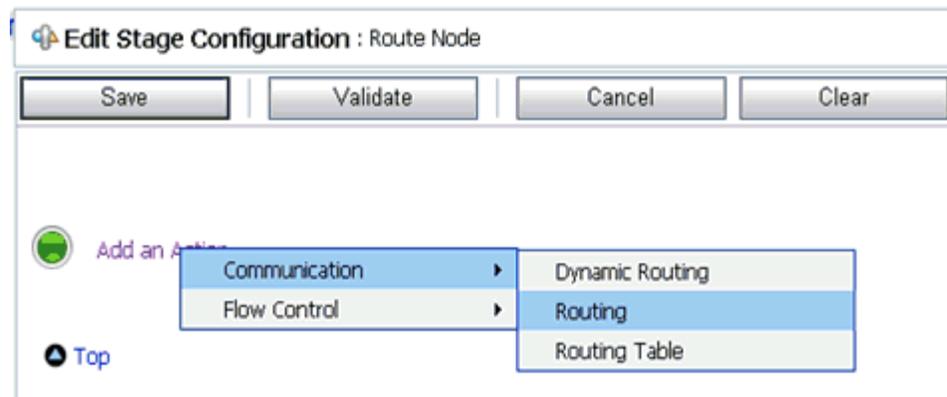


Figure 7–126 Edit Route Option



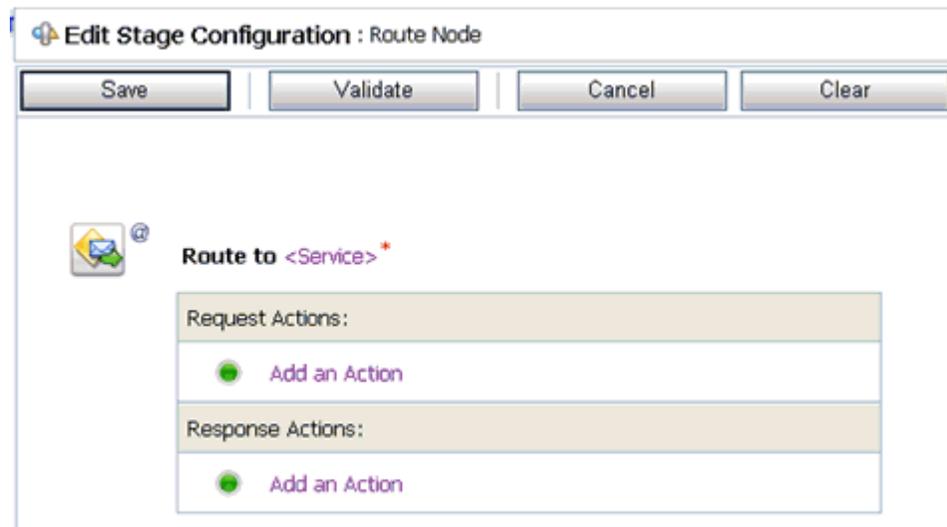
4. Click the **RouteNode1** icon and select **Edit Route** from the menu, as shown in [Figure 7–126](#).

**Figure 7-127 Edit Stage Configuration Routing Option**



5. Click **Add an Action**, select **Communication** from the menu, and click **Routing**, as shown in [Figure 7-127](#).

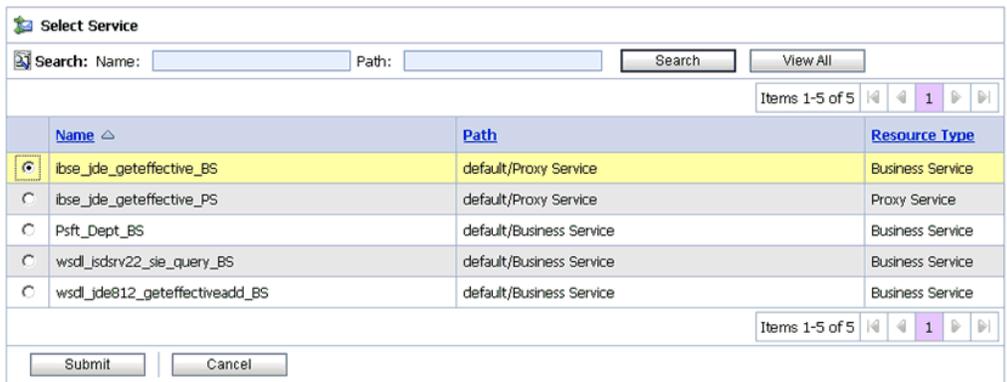
**Figure 7-128 Edit Stage Configuration Workspace Area**



6. Click **<Service>**.

The Select Service dialog is displayed, as shown in [Figure 7-129](#).

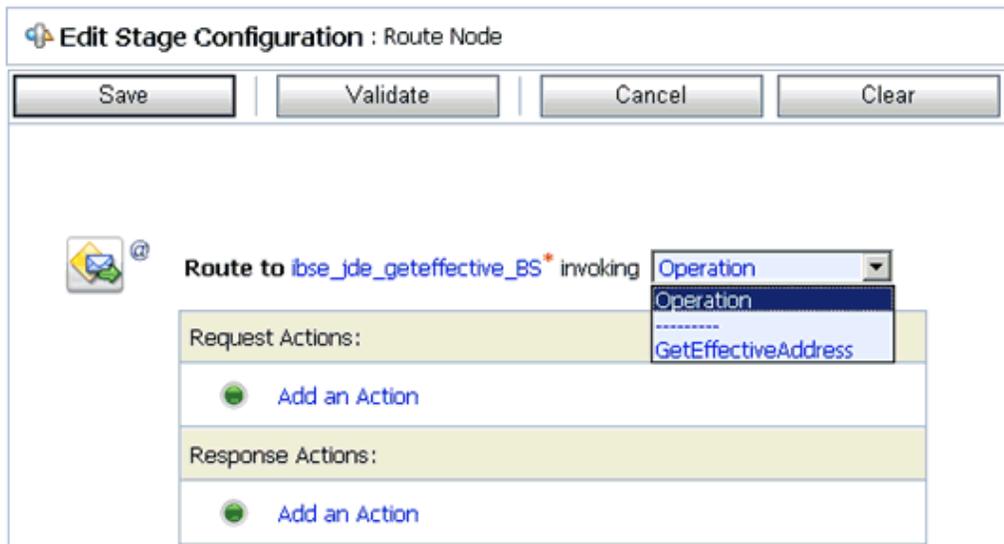
**Figure 7–129 Select Service Dialog**



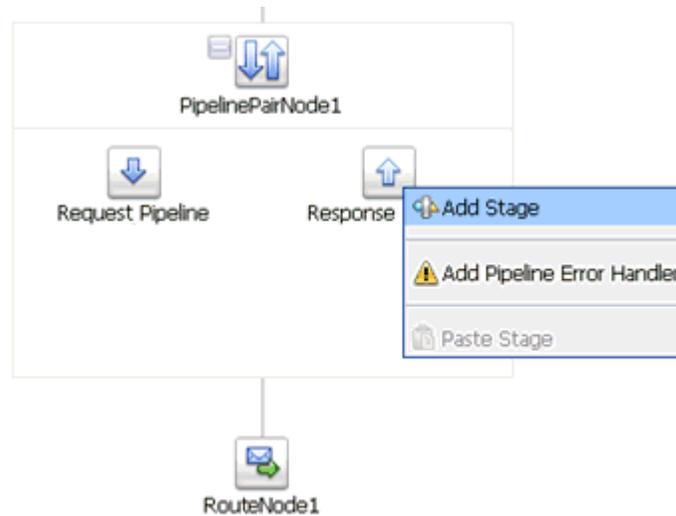
7. Select a WSDL type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area, as shown in [Figure 7–130](#).

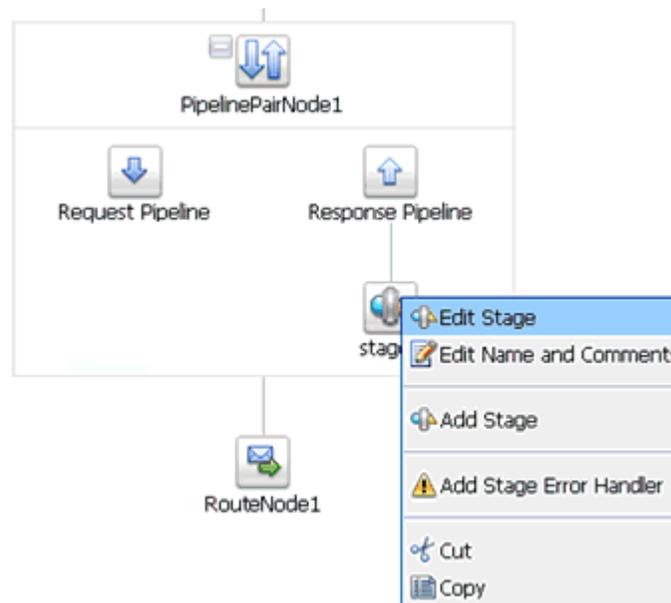
**Figure 7–130 Edit Stage Configuration Workspace Area**



8. Select **GetEffectiveAddress** as the operational attribute from the list.
9. Click **Validate** and then **Save**, as shown in [Figure 7–131](#).

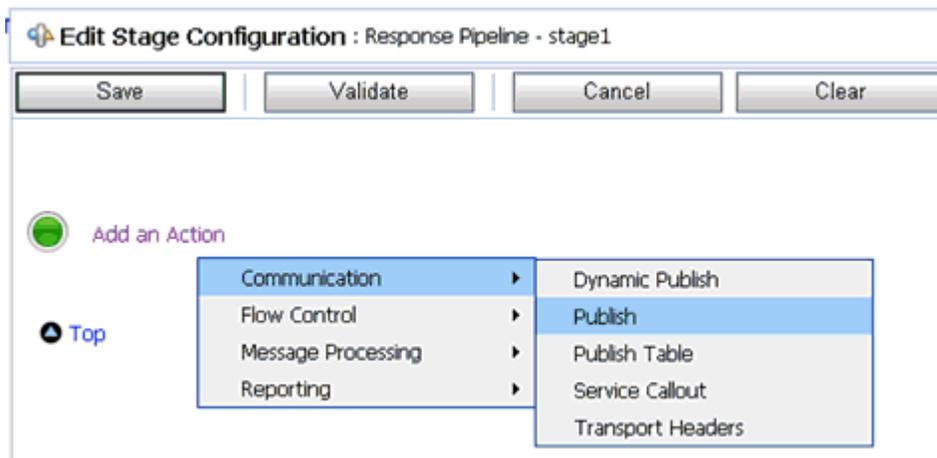
**Figure 7–131 Add Stage Option**

10. Click the **Response Pipeline** icon and select **Add Stage** from the menu. The Stage1 icon is added below the Response Pipeline icon, as shown in [Figure 7–132](#).

**Figure 7–132 Edit Stage Option**

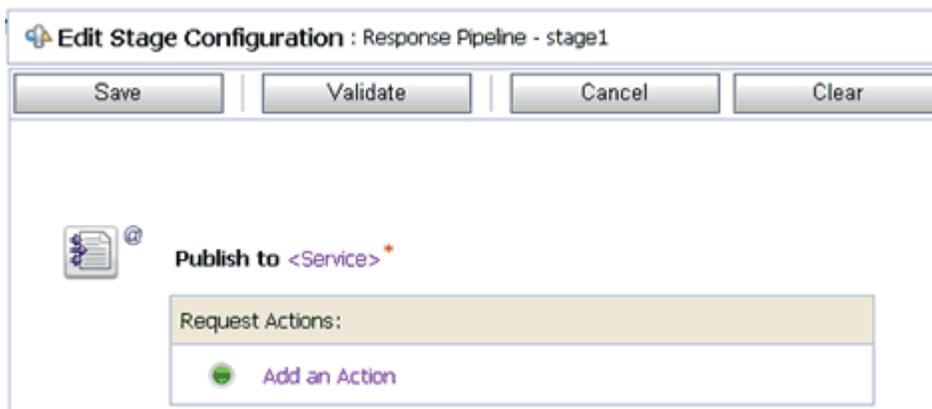
11. Click the **Stage1** icon and select **Edit Stage** from the menu. The Edit Stage Configuration workspace area is displayed, as shown in [Figure 7–133](#).

**Figure 7–133 Edit Stage Configuration Workspace Area**



12. Click **Add an Action**, select **Communication** from the menu, and click **Publish**, as shown in [Figure 7–134](#).

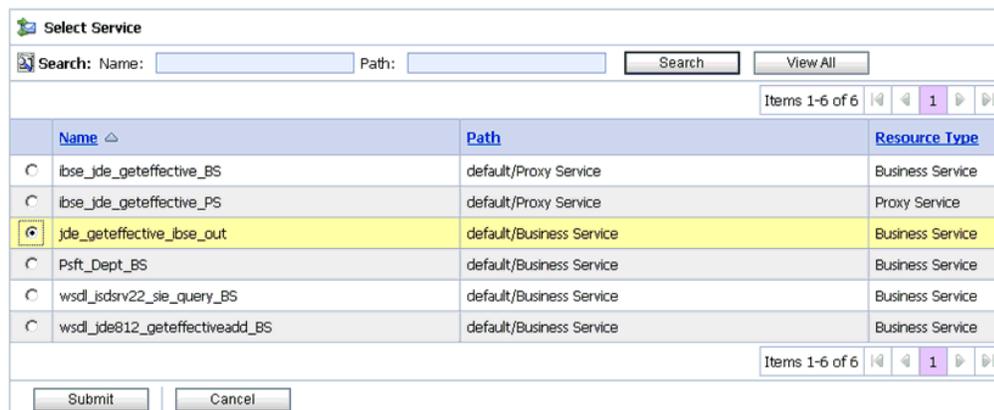
**Figure 7–134 Edit Stage Configuration Workspace Area**



13. Click **<Service>**.

The Select Service dialog is displayed, as shown in [Figure 7–135](#).

**Figure 7–135 Select Service Dialog**



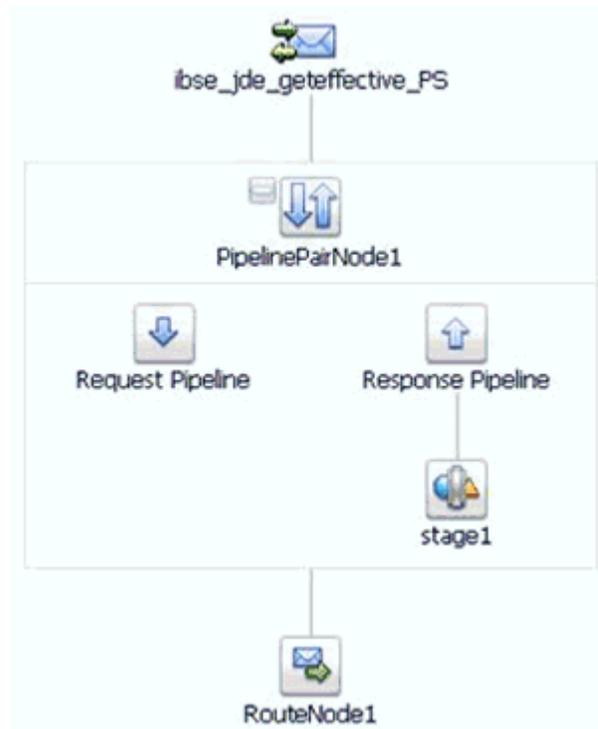
14. Select a File type Business Service and click **Submit**.

You are returned to the Edit Stage Configuration workspace area.

15. Click **Validate** and then **Save**.

The completed Pipeline is displayed, as shown in [Figure 7-136](#).

**Figure 7-136 Completed Pipeline**



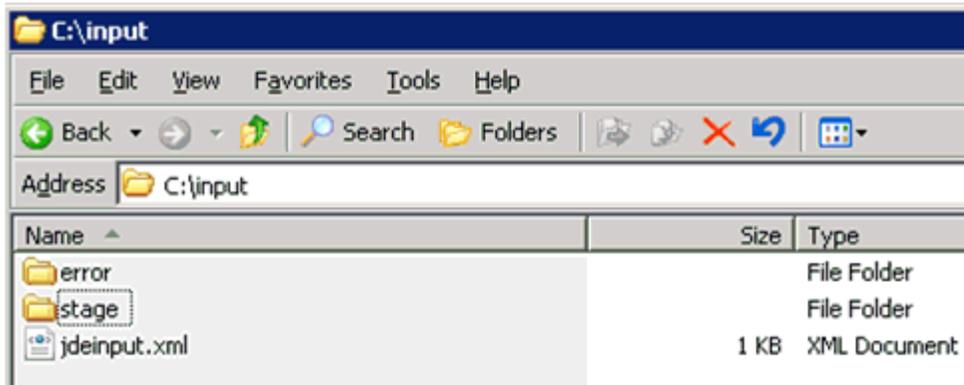
16. Click **Save**.
17. Click **Activate** in the Change Center area to activate your changes in the Oracle Service Bus session, as shown in [Figure 7-137](#).

**Figure 7-137 Change Center Activate Button**



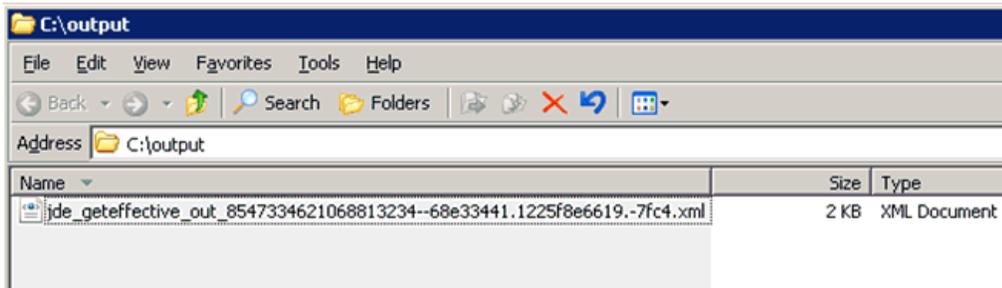
18. Copy and paste an input XML file in the input folder you have configured, as shown in [Figure 7-138](#).

**Figure 7–138 Input Folder**



An output XML file is received in the destination folder, as shown in [Figure 7–139](#).

**Figure 7–139 Output XML Destination Folder**



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## New Features

11g Release 1 (11.1.1.4.0) provides new features for the Oracle Application Adapter for J.D. Edwards OneWorld, 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 J.D. Edwards OneWorld 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 J.D. Edwards OneWorld 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:

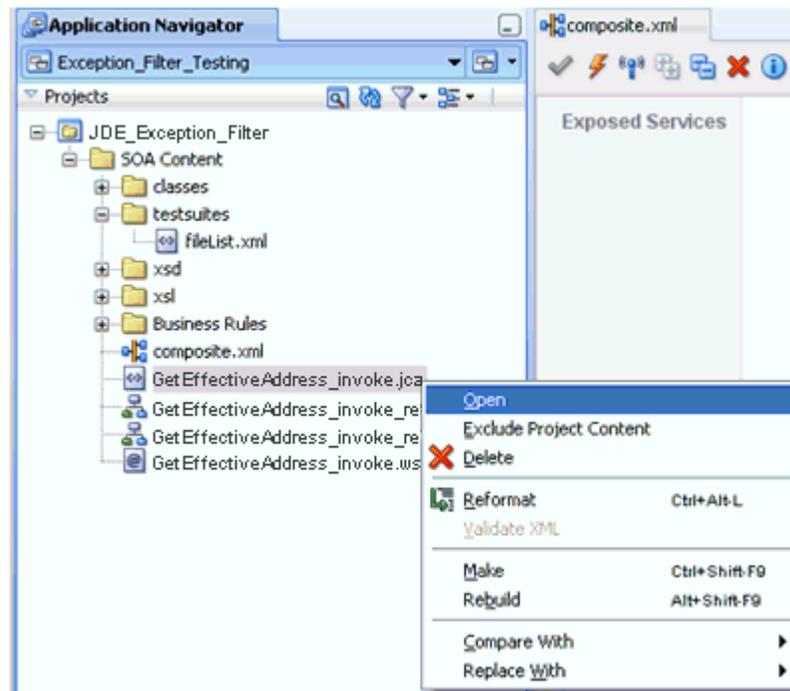
1. Open Application Explorer and create a J2CA configuration.  
For more information, see ["Creating a Configuration for J2CA"](#) on page 2-3.
2. Create a target for the PeopleSoft adapter and then connect to the target.  
For more information, see ["Establishing a Connection \(Target\) for J.D. Edwards OneWorld"](#) on page 2-6.
3. Generate a WSDL for the appropriate object.  
For more information, see ["Generating WSDL \(J2CA Configurations Only\)"](#) on page 2-12.

### 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, JDE\_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 4-12.
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](#).

Figure 8–1 Application Navigator Tab



- b. In the <interaction-spec> element, add the ExceptionFilter property. For example:

```
<interaction-spec className="com.ibi.afjca.cci.IWAFInteractionSpec">
  <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.

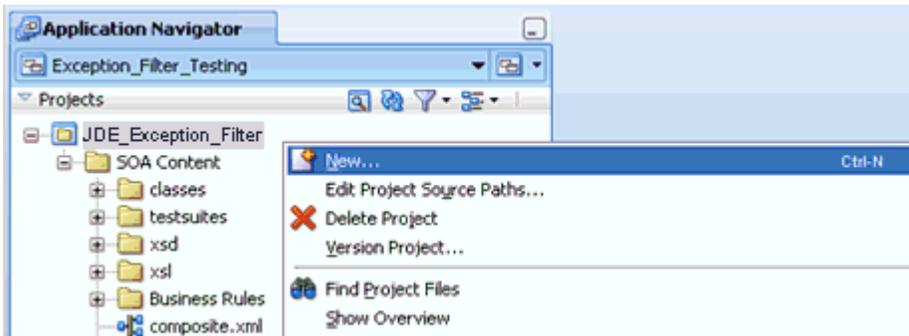
For more information, see ["Defining a BPEL Outbound Process"](#) on page 4-12.

### 8.1.2.3 Creating Fault Policies and Fault Binding Files

To create fault policies and fault binding files:

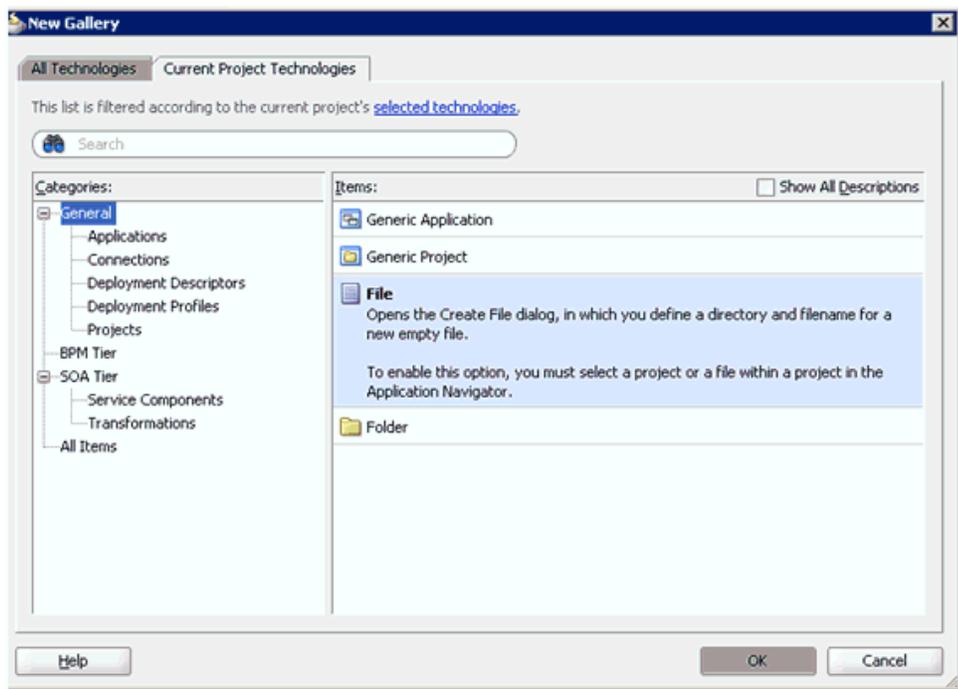
1. Right-click the created SOA project (for example, JDE\_Exception\_Filter) and select **New** from the menu, as shown in [Figure 8–2](#).

**Figure 8–2 Application Navigator Tab**



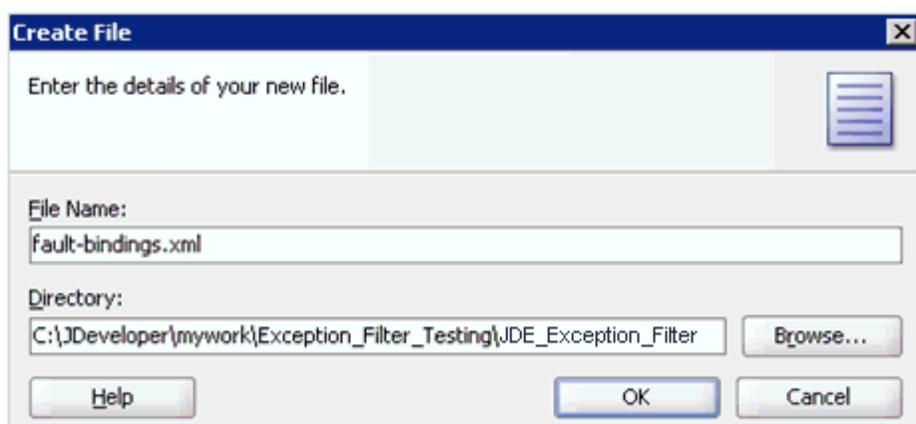
The New Gallery dialog is displayed, as shown in [Figure 8–3](#).

**Figure 8–3 New Gallery Dialog**



2. Select **File** and click **OK**.

The Create File dialog is displayed, as shown in [Figure 8–4](#).

**Figure 8-4 Create File Dialog**

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">
<name>BPELProcess1</name>
</component>

</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/>
        </retry>
      </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 4-30.

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 4-34.

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 J.D. Edwards OneWorld 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 J.D. Edwards OneWorld 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 (J.D. Edwards OneWorld 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 (J.D. Edwards OneWorld).

### 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 J.D. Edwards OneWorld 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:

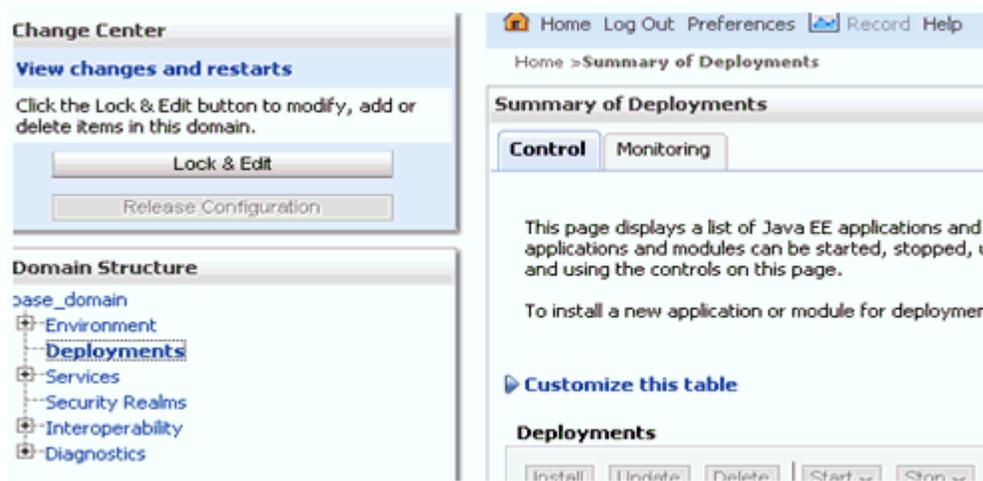
1. Deploy the adapter.  
For more information, see [Chapter 3, "Oracle WebLogic Server Deployment and Integration"](#).
2. Associate Oracle WebLogic Server credentials with EIS credentials.  
For more information, see ["Associating Oracle WebLogic Server Credentials With EIS Credentials"](#) on page 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:

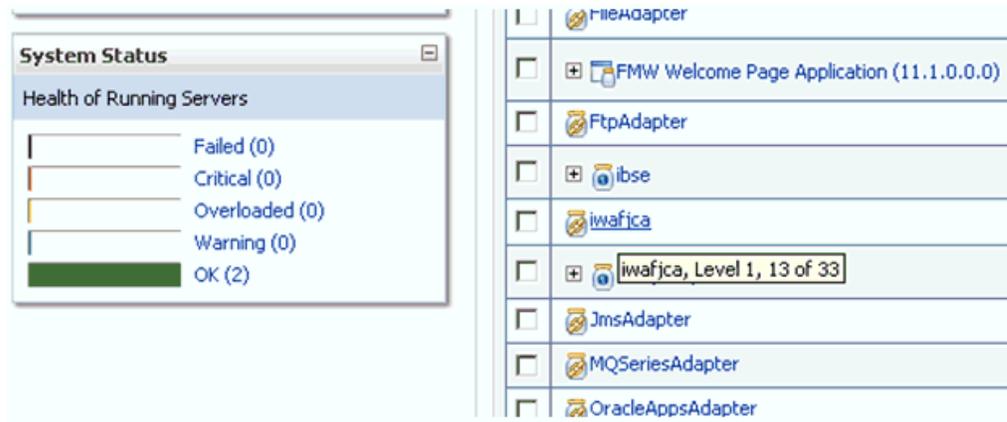
1. Log in to the Oracle WebLogic Server Administration Console.
2. In the Domain Structure section in the left pane, click **Deployments**, as shown in [Figure 8-5](#).

**Figure 8-5 Domain Structure Section**



The Deployments page is displayed, as shown in [Figure 8-6](#).

**Figure 8–6 Deployments Page**



3. Click the **iwafjca** resource adapter.

The Settings for iwafjca page is displayed, as shown in [Figure 8–7](#).

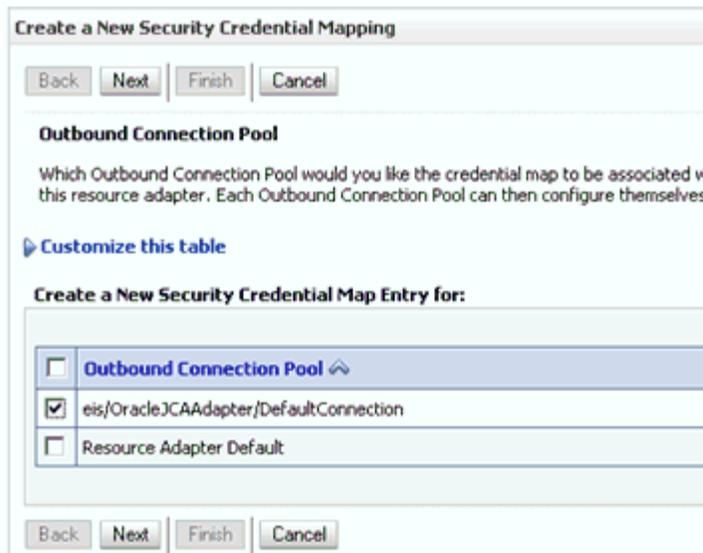
**Figure 8–7 Settings for iwafjca Page**



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](#).

**Figure 8–8 Create a New Security Credential Mapping Page**



5. Select the outbound connection pool.

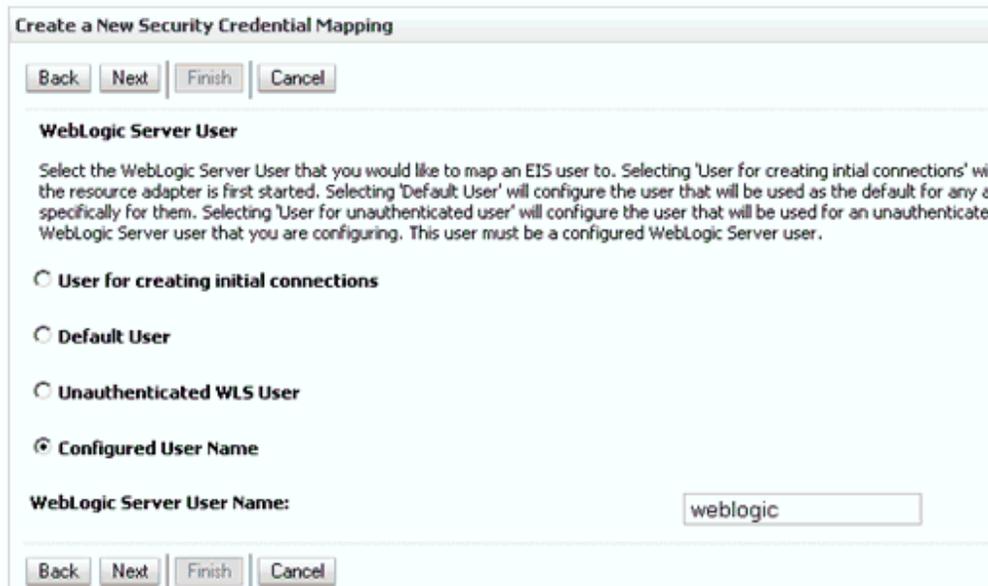
For example:

`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**



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](#).

**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 (J.D. Edwards OneWorld). 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 2-3.
2. Create a target for the J.D. Edwards OneWorld adapter and then connect to the target.  
For more information, see ["Establishing a Connection \(Target\) for J.D. Edwards OneWorld"](#) on page 2-6.
3. Generate a WSDL for the appropriate object.  
For more information, see ["Generating WSDL \(J2CA Configurations Only\)"](#) on page 2-12.

### 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 4-30.

### 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.

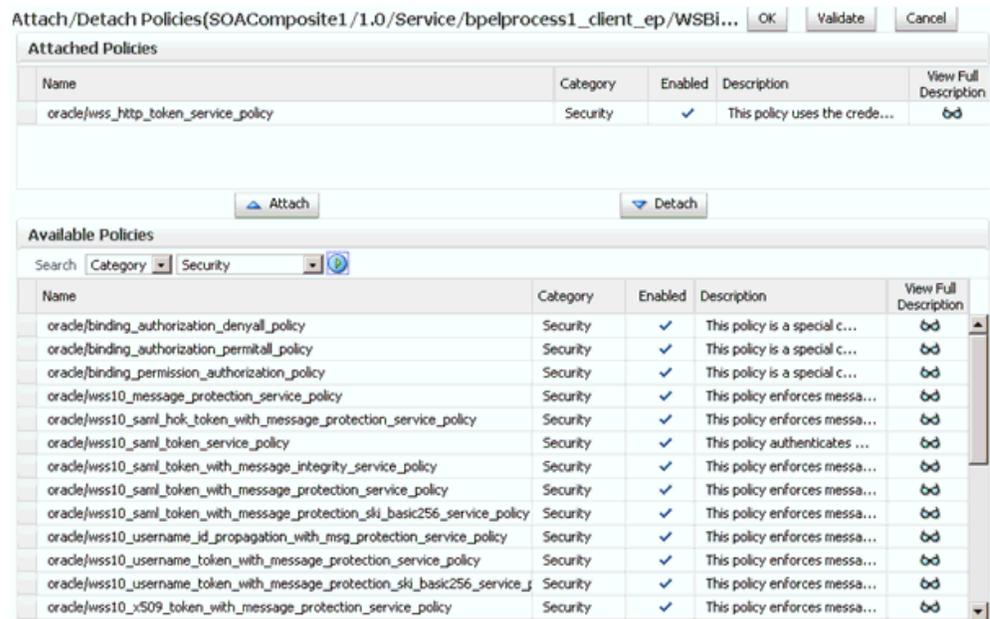
BPEL or Mediator outbound processes have `_client` appended to the process name. BPM outbound processes use the `Process.service` naming convention.

**Figure 8–11 Policies Tab**



The Attached Policies page is displayed, as shown in [Figure 8–12](#).

**Figure 8–12 Attached Policies Page**

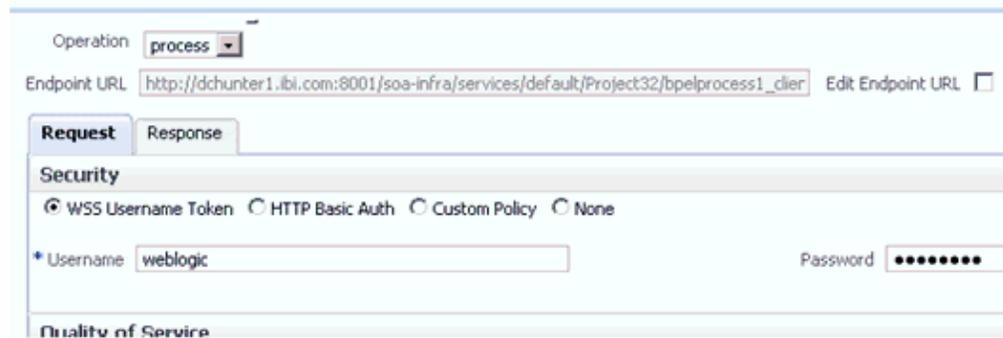


3. Select the **Security** category and click **Search**.
4. Scroll through the list and select **oracle/wss\_http\_token\_service\_policy**.
5. Click **Attach** and then **OK**.

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**



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 4-34.
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 IWAManagedConnectionFactory com.ibi.afjca.Util  
getPasswordCredential(90) Use the system PasswordCredential:  
User-iwayqa:Password-ENCR(3109311731831131382333215315332323192322731773172)
```

## 8.3 Credential Mapping for Oracle Service Bus (OSB)

This section describes how to configure credential mapping functionality for the Oracle Application Adapter for J.D. Edwards OneWorld 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.

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**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 J.D. Edwards OneWorld 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.

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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 (J.D. Edwards OneWorld 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 (J.D. Edwards OneWorld).

### 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 J.D. Edwards OneWorld 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.

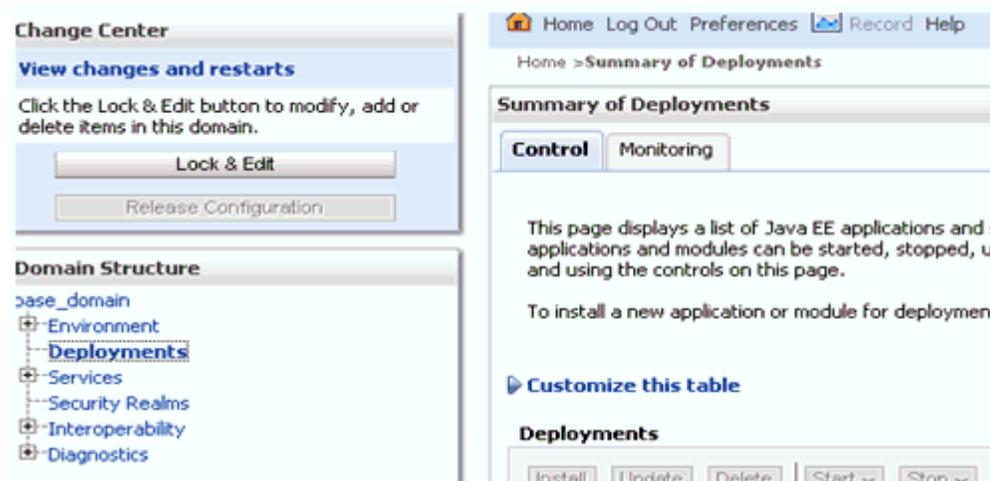
For more information, see ["Creating an Oracle Service Bus \(OSB\) Outbound Process"](#) on page 8-18.

### 8.3.2.1 Associating Oracle WebLogic Server Credentials With EIS Credentials

To associate Oracle WebLogic Server credentials with EIS credentials:

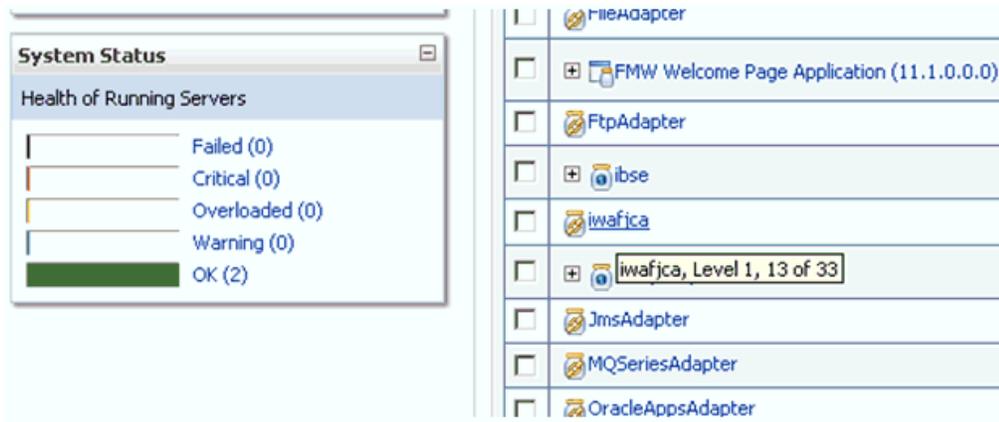
1. Log in to the Oracle WebLogic Server Administration Console.
2. In the Domain Structure section in the left pane, click **Deployments**, as shown in [Figure 8–14](#).

**Figure 8–14 Domain Structure Section**



The Deployments page is displayed, as shown in [Figure 8–15](#).

**Figure 8–15 Deployments Page**



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**



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](#).

**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](#).

**Figure 8–18 WebLogic Server User Page**

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](#).

**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 (J.D. Edwards OneWorld). 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 2-3.

3. Create a target for the J.D. Edwards OneWorld adapter and then connect to the target.

For more information, see ["Establishing a Connection \(Target\) for J.D. Edwards OneWorld"](#) 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 7-5.

### 8.3.2.3 Creating an Oracle Service Bus (OSB) Outbound Process

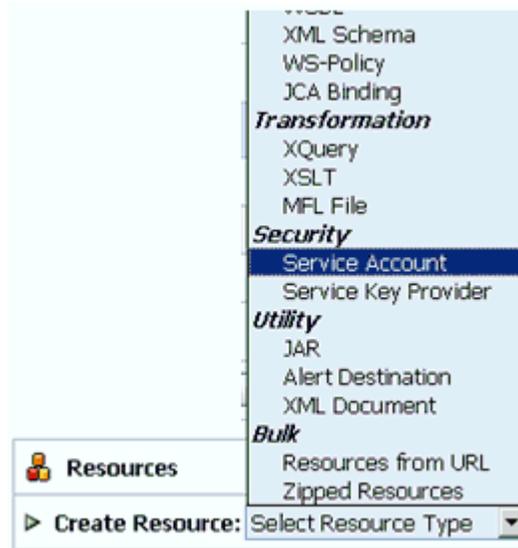
To create an Oracle Service Bus (OSB) outbound process with credential mapping functionality:

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 7-12.
5. Configure a Pipeline.  
For more information, see ["Configuring a Pipeline"](#) on page 7-17.
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](#).

**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 Account (Path - Sanity)	
General Configuration	
Resource Name *	<input type="text" value="OSB_static"/>
Resource Description	<input type="text"/>
Resource Type	<input type="radio"/> Pass Through <input checked="" type="radio"/> Static <input type="radio"/> Mapping
<input type="button" value="Next &gt;&gt;"/>   <input type="button" value="Last &gt;&gt;"/>   <input type="button" value="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 *	<input type="text" value="weblogic"/>
Password *	<input type="password" value="....."/>
Confirm Password *	<input type="password" value="....."/>
<input type="button" value="&lt;&lt; Prev."/>   <input type="button" value="Last &gt;&gt;"/>   <input type="button" value="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](#).

**Figure 8–23 Summary Page**

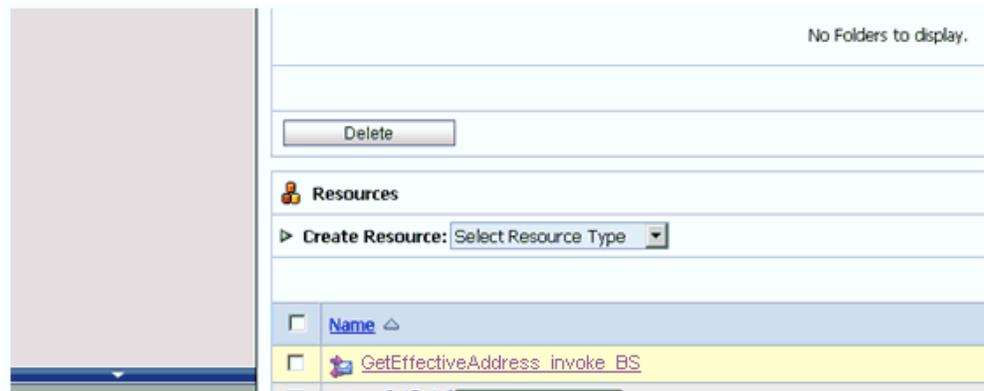
General Configuration	
Name	OSB_static
Description	
Type	Static

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**

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](#).

**Figure 8–25 Edit Option**

<b>Security Configuration</b>	Adapter Name	iWay ERP Adapter
<b>System Administration</b>	Adapter Type	ERP
	JNDI Service Account	Sanity/sta
	Always use configuration from JCA file	True
	<b>Message Handling Configuration</b>	
	Result Caching	Not Supported
<input type="button" value="Back"/>		<input type="button" value="Edit"/>

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**

<b>Protocol*</b>	jca
<b>Load Balancing Algorithm</b>	round-robin
<b>Endpoint URI*</b>	<p>Format: jca://&lt;resource_adapter_jndi&gt;</p> <p>jca://</p> <p><b>EXISTING URIS</b></p> <p>jca://eis/OracleJCAAdapter/DefaultConnection</p>
<b>Retry Count</b>	0
<b>Retry Iteration Interval</b>	30
<b>Retry Application Errors</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No
<input type="button" value=" &lt;&lt; Prev."/> <input type="button" value=" Next &gt;&gt;"/> <input type="button" value=" Last &gt;&gt;"/> <input type="button" value=" Cancel"/>	

14. Click Next.

The JCA Transport Configuration page is displayed, as shown in [Figure 8–27](#).

**Figure 8–27 JCA Transport Configuration Page**

JCA Transport Configuration		
JCA File	Sanity/wsdl/GetEffectiveAddress_invoke	
Adapter Name	iWay ERP Adapter	
Adapter Type	ERP	
Dispatch Policy	default ▾	
JNDI Service Account	Sanity/sta	
EndPoint Properties	PROPERTY	VALUE

15. Browse the JNDI service account that was created and click **Last**.

The Summary page is displayed, as shown in [Figure 8–28](#).

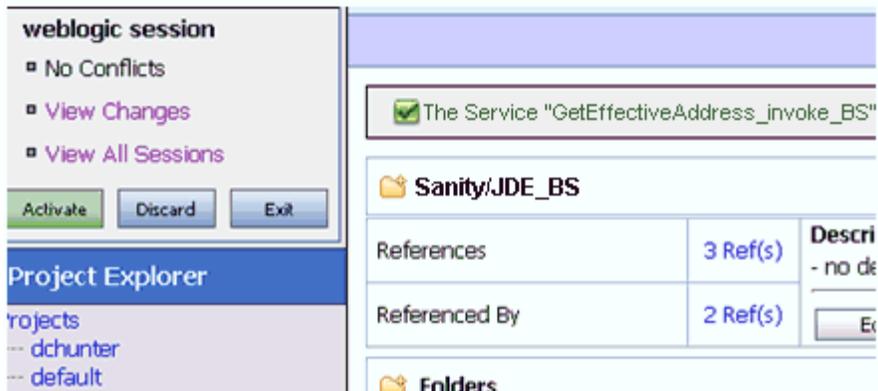
**Figure 8–28 Summary Page**

JCA Transport Configuration	
JCA File	Sanity/wsdl/GetEffectiveAddress_
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

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**



The Activate Session page is displayed, as shown in [Figure 8–30](#).

**Figure 8–30 Activate Session Page**

<b>Session Name</b>	weblogic
<b>User</b>	weblogic
<b>Description</b>	
<input type="button" value="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(3189321331831132502333215312132323192322731773156)
```

---



---

## Troubleshooting and Error Messages

This chapter explains the limitations and workarounds when connecting to J.D. Edwards OneWorld. 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 a Oracle Adapter Business Services Engine (BSE) configuration.

### 9.1 Troubleshooting

This topic provides troubleshooting information for J.D. Edwards OneWorld, separated into four categories:

- Oracle Adapter Application Explorer (Application Explorer)
- J.D. Edwards OneWorld
- 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\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\iwaeb\bin
```

**For OSB:**

<OSB\_HOME>\Oracle\_OSB1\3rdparty\ApplicationAdapters\tools\iwaeb\bin

**Application Explorer**

This topic discusses the different types of errors that can occur when using Application Explorer.

Error	Solution
<p>Cannot connect to Oracle Application Adapter for J.D. Edwards OneWorld from Application Explorer:</p> <p>Problem activating adapter. (Failed to connect to J.D. Edwards OneWorld, check system availability and configuration parameters:...) Check logs for more information.</p>	<p>Ensure that:</p> <ul style="list-style-type: none"> <li>■ J.D. Edwards OneWorld is running.</li> <li>■ The J.D. Edwards OneWorld user ID and password is correct.</li> <li>■ The port number is correct.</li> </ul>
<p>The following error message appears:</p> <pre>java.lang.IllegalStateException: java.lang.Exception: Error Logon to J.D. Edwards OneWorld System</pre>	<p>You have provided invalid connection information for J.D. Edwards OneWorld or the wrong JAR file is in the lib directory.</p>
<p>J.D. Edwards OneWorld does not appear in the Application Explorer Adapter node list.</p> <p>Logon failure error at run-time.</p>	<p>Ensure that the J.D. Edwards OneWorld JAR files, are added to the lib directory.</p> <p>If the password for connecting to your J.D. Edwards OneWorld system is not specified when creating a target or with the Edit option in Application Explorer, then you are unable to connect to J.D. Edwards OneWorld. The connection password is not saved in <code>repository.xml</code>. Update the password using the Edit option in Application Explorer, then restart the application server.</p>
<p>The following exception occurs when you start Application Explorer by activating <code>ae.bat</code> (not <code>iaexplorer.exe</code>):</p> <pre>java.lang.ClassNotFoundException: org.bouncycastle.jce.provider.BouncycastleProvider</pre>	<p>This is a benign exception. It does not affect adapter functionality. Download BouncyCastle files from:</p> <p><code>ftp://ftp.bouncycastle.org/pub</code></p>

Error	Solution
<p>Unable to start Application Explorer in a Solaris environment. The following exception is thrown in the console:</p> <pre> javax.resource.ResourceException: IWAFFManagedConnectionFactory: License violation.at com.ibi.afjca.spi.IWAFFManagedConne ctionFactory.createConnectionFacto ry(IWAFFManagedConnectionFactory.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.&lt;init&gt;(JCATransport.java:6 2)at com.iwaysoftware.iwae.common.Adapt erClient.&lt;init&gt;(AdapterClient.java :85)at com.ibi.bse.ConfigWorker.run(Confi gWorker.java:41)at java.lang.Thread.run(Thread.java:5 34) </pre> <p>Could not create the connection factory.</p>	<p>JAVACMD is not set on the user system. Before starting Application Explorer, export JAVACMD as follows:</p> <p>JAVACMD=/&lt;jdk_home&gt;/bin/java, where &lt;jdk_home&gt; is the directory where JDK is installed on your system.</p>

### J.D. Edwards OneWorld

Error	Cause	Solution
Action code invalid	In the Sales Order request, the Action code appears as "H," an invalid action code.	Use: <ul style="list-style-type: none"> <li>■ "I" for inquiry.</li> <li>■ "C" for change.</li> <li>■ "D" for delete.</li> <li>■ "A" to add a new record.</li> </ul>
Invalid address number.	The address number does not exist in the Address Book Master file (F0101).	Enter an address number using the Address Book Revisions program (PO1051). Ensure that the number entered is correct.
Record invalid	The record being processed either already exists for an ADD function or does not exist for an INQUIRY, CHANGE, or DELETE function.	If you are attempting to inquire, change, or delete a record you added previously, then there could be database problems in your production library. Contact your data processing department.
Item Branch record does not exist.	An Item Branch record (F4102) does not exist for this item in the Branch/Plant specified.	Correct the Branch or enter an Item Branch record for this item in Branch Plant Item Information (P41026).
&1 does not match any of the valid values.	The &1 does not match any of the valid values specified in the Data Dictionary for this field.	Enter a valid value.

Error	Cause	Solution
Date out of range.	The Last Service Date and the Inspection Date must be within the range of the effective dates of the Service Contract.	Change the date to be greater than or equal to the beginning effective date and less than or equal to the ending effective date of the Service Contract.
Jde.net timeout exception	Net timeout is set to a wrong value	Verify that net timeout is set to 180 at jde.ini of [NETWORK QUEUE SETTINGS], for example JDENETTimeout=180
Cannot connect to EnterpriseOne Version 8.10	Missing required library files	Kernel.jar and Connector.jar are required for version B7333. jdeutil.jar and log4j.jar are required for EnterpriseOne Version 8.10, in addition to Kernel.jar and Connector.jar.

### 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\iwa\bin\..\..\..\

## 9.2 BSE Error Messages

This topic discusses the different types of errors that can occur when processing Web services through 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, then how it is exposed depends on the adapter and the API or interfaces that the adapter uses. 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, then 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.

### Invalid SOAP Request

If Oracle WebLogic Server 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 Adapter Request

If Oracle WebLogic Server 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">

```

```

        <RunDBQueryResult run="1" />
    </m:RunDBQueryResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### Error Logging In

If Oracle WebLogic Server Adapter executes an invalid SOAP log in request, then the following SOAP response is generated.

```

[2004-07-19T16:28:56:718Z] DEBUG (SOAP1) W.SOAP1.2: POST received
[2004-07-19T16:28:56:718Z] DEBUG (SOAP1) W.SOAP1.2: in XDSOAPHTTPWorker agentName
is [XDSOAPRouter]
[2004-07-19T16:28:56:718Z] DEBUG (SOAP1) W.SOAP1.2: before parse:
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<SOAP-ENV:Header>
<m:ibsinfo xmlns:m="urn:schemas-iwaysoftware-...[861]
[2004-07-19T16:28:56:718Z] ERROR (SOAP1) W.SOAP1.2: Attempting string, no encoding
recognized in document
[2004-07-19T16:28:56:734Z] DEEP (SOAP1) W.SOAP1.2: parse complete in 16 msec
[2004-07-19T16:28:56:859Z] DEEP (SOAP1) W.SOAP1.2: ST_NODICT
[2004-07-19T16:28:56:859Z] DEEP (SOAP1) W.SOAP1.2: ST_FINISH
[2004-07-19T16:28:56:859Z] DEBUG (SOAP1) extractControl - edaDoc: false
[2004-07-19T16:28:56:859Z] DEBUG (SOAP1) now: 2004-07-19T16:28:56Z expires:
2004-07-20T16:28:56Z
[2004-07-19T16:28:56:859Z] DEBUG (SOAP1) W.SOAP1.2: checking for cached agent
[2004-07-19T16:28:56:859Z] DEBUG (SOAP1) W.SOAP1.2: pushagent: adding agent
com.ibi.iwse.XDSOAPRouter
[2004-07-19T16:28:56:875Z] DEBUG (SOAP1) W.SOAP1.2: inside worker the soap Action
is [B0100033.GetEffectiveAddressRequest#test##]
[2004-07-19T16:28:56:875Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:28:56:875Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:28:56:875Z] DEBUG (SOAP1) W.SOAP1.2: numagents: 1
[2004-07-19T16:28:56:890Z] DEBUG (SOAP1) W.SOAP1.2: running agent 1 name
com.ibi.iwse.XDSOAPRouter document 1
[2004-07-19T16:28:56:890Z] INFO (manager) MGR00X01: Adding active worker:
W.SOAP1.2
[2004-07-19T16:28:56:890Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header>
    <m:ibsinfo xmlns:m="urn:schemas-iwaysoftware-com:iwse">
      <m:service>B0100033</m:service>
      <m:method>GetEffectiveAddress</m:method>
      <m:license>test</m:license>
      <m:Username>user</m:Username>
      <m>Password>password</m>Password>
    </m:ibsinfo>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <m:GetEffectiveAddress
xmlns:m="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress">
      <m:jdeRequest type="callmethod">
        <m:callMethod name="GetEffectiveAddress">
          <m:params>

```

```

        <m:param name="mnAddressNumber">12345</m:param>
    </m:params>
    <m:onError/>
</m:callMethod>
</m:jdeRequest>
</m:GetEffectiveAddress>
</SOAP-ENV:Body>
<SOAPAction agentName="XDSOAPRouter"
cid="1FF3D44E0B0AFB2A4E9538ED42B71437">B0100033.GetEffectiveAddressRequest#test##<
/SOAPAction>
</SOAP-ENV:Envelope>
[2004-07-19T16:28:56:890Z] DEBUG (SOAP1) W.SOAP1.2: business method:
m:GetEffectiveAddress
[2004-07-19T16:28:56:906Z] DEBUG (SOAP1) W.SOAP1.2: input:
[2004-07-19T16:28:56:906Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?><jdeRequest xmlns:xsd="http://www.w3.org/2001/XMLSchema"
type="callmethod" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><callMethod
name="GetEffectiveAddress"><params><param name="mnAddressNumber">12345</param>
</params><onError/></callMethod></jdeRequest>
[2004-07-19T16:28:58:234Z] DEBUG (SOAP1) W.SOAP1.2: Agent returned success
[2004-07-19T16:28:58:234Z] INFO (manager) MGR00X02: Removing active worker:
W.SOAP1.2
[2004-07-19T16:28:58:234Z] DEBUG (SOAP1) W.SOAP1.2: doing docTran, docVal,
listTran for agent(1)
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: sendToAll reply to XDReply:
[protocol=http */null]
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: preemitters from doc: null
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: no preemitters, emitting
contents of doc, usestream=false encoding=UTF-8
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeEntity, len: 670 data:
<?xml version="1.0" encoding="UTF-8" ?><SOAP-ENV:Envelope
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><SOAP-ENV:Body><GetEffective
AddressResponse xmlns="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress:response"
cid="1FF3D44E0B0AFB2A4E9538ED42B71437"><jdeResponse user="USER" type="callmethod"
session="" environment="DV7333"><returnCode code="12">Environment
&apos;DV7333&apos; could not be initialized for user, check user, pwd and
environment attribute
values</returnCode></jdeResponse></GetEffectiveAddressResponse></SOAP-ENV:Body></S
OAP-ENV:Envelope>
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: HTTP/1.0
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 200
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: OK
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Type:
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: text/xml
[2004-07-19T16:28:58:250Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Length:
[2004-07-19T16:28:58:265Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 670
[2004-07-19T16:28:58:265Z] INFO (SOAP1) W.SOAP1.2: W0000X13: Ended message
processing, rc=0
[2004-07-19T16:28:58:265Z] DEEP (SOAP1) W.SOAP1.2: storing used socket
[2004-07-19T16:28:58:265Z] DEBUG (SOAP1) W.SOAP1.2: entering waitForDocument
[2004-07-19T16:29:03:875Z] DEEP (SOAP1) W.SOAP1.2: cleanup: closing sockets(0)

```

### Empty Result From Oracle WebLogic Server Adapter Request

If Oracle WebLogic Server 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.

---

```
[2004-07-19T16:27:05:640Z] DEBUG (SOAP1) W.SOAP1.2: POST received
[2004-07-19T16:27:05:640Z] DEBUG (SOAP1) W.SOAP1.2: in XDSOAPHTTPWorker agentName
is [XDSOAPRouter]
[2004-07-19T16:27:05:640Z] DEBUG (SOAP1) W.SOAP1.2: before parse:
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<SOAP-ENV:Body>
<m:GetEffectiveAddress xmlns:m="urn:iwaysoftwar...[590]
[2004-07-19T16:27:05:640Z] ERROR (SOAP1) W.SOAP1.2: Attempting string, no encoding
recognized in document
[2004-07-19T16:27:05:640Z] DEEP (SOAP1) W.SOAP1.2: parse complete in 0 msec
[2004-07-19T16:27:05:781Z] DEEP (SOAP1) W.SOAP1.2: ST_NODICT
[2004-07-19T16:27:05:781Z] DEEP (SOAP1) W.SOAP1.2: ST_FINISH
[2004-07-19T16:27:05:781Z] DEBUG (SOAP1) extractControl - edaDoc: false
[2004-07-19T16:27:05:781Z] DEBUG (SOAP1) now: 2004-07-19T16:27:05Z expires:
2004-07-20T16:27:05Z
[2004-07-19T16:27:05:781Z] DEBUG (SOAP1) W.SOAP1.2: inside isAsync() the soap
Action is ["B0100033.GetEffectiveAddressRequest#test##"]
[2004-07-19T16:27:05:781Z] DEBUG (SOAP1) W.SOAP1.2: inside isAsync() the soap
Action is [B0100033.GetEffectiveAddressRequest#test##]
[2004-07-19T16:27:05:781Z] DEBUG (SOAP1) W.SOAP1.2: checking for cached agent
[2004-07-19T16:27:05:796Z] DEBUG (SOAP1) W.SOAP1.2: pushagent: adding agent
com.ibi.iwse.XDSOAPRouter
[2004-07-19T16:27:05:796Z] DEBUG (SOAP1) W.SOAP1.2: inside worker the soap Action
is [B0100033.GetEffectiveAddressRequest#test##]
[2004-07-19T16:27:05:796Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:27:05:796Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:27:05:796Z] DEBUG (SOAP1) W.SOAP1.2: numagents: 1
[2004-07-19T16:27:05:812Z] DEBUG (SOAP1) W.SOAP1.2: running agent 1 name
com.ibi.iwse.XDSOAPRouter document 1
[2004-07-19T16:27:05:812Z] INFO (manager) MGR00X01: Adding active worker:
W.SOAP1.2
[2004-07-19T16:27:05:812Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <m:GetEffectiveAddress
      xmlns:m="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress">
      <m:jdeRequest type="callmethod">
        <m:callMethod name="GetEffectiveAddress">
          <m:params>
            <m:param name="mnAddressNumber">12345</m:param>
          </m:params>
          <m:onError/>
        </m:callMethod>
      </m:jdeRequest>
```

```

    </m:GetEffectiveAddress>
  </SOAP-ENV:Body>
  <SOAPAction agentName="XDSOAPRouter"
cid="9F71FEA4C932CD8786F7388D7EF293A1">B0100033.GetEffectiveAddressRequest#test##<
/SOAPAction>
</SOAP-ENV:Envelope>
[2004-07-19T16:27:05:812Z] DEBUG (SOAP1) W.SOAP1.2: business method:
m:GetEffectiveAddress
[2004-07-19T16:27:05:828Z] DEBUG (SOAP1) W.SOAP1.2: input:
[2004-07-19T16:27:05:828Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?><jdeRequest xmlns:xsd="http://www.w3.org/2001/XMLSchema"
type="callmethod" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><callMethod
name="GetEffectiveAddress"><params><param name="mnAddressNumber">12345</param>
</params><onError/></callMethod></jdeRequest>
[2004-07-19T16:27:07:843Z] DEBUG (SOAP1) W.SOAP1.2: Agent returned success
[2004-07-19T16:27:07:843Z] INFO (manager) MGR00X02: Removing active worker:
W.SOAP1.2
[2004-07-19T16:27:07:843Z] DEBUG (SOAP1) W.SOAP1.2: doing docTran, docVal,
listTran for agent(1)
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: sendToAll reply to XDReply:
[protocol=http */null]
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: preemitters from doc: null
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: no preemitters, emitting
contents of doc, usestream=false encoding=UTF-8
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeEntity, len: 643 data:
<?xml version="1.0" encoding="UTF-8" ?><SOAP-ENV:Envelope
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><SOAP-ENV:Body><GetEffective
AddressResponse xmlns="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress:response"
cid="9F71FEA4C932CD8786F7388D7EF293A1"><jdeResponse user="JDE" type="callmethod"
environment="DV7333"><callMethod name="GetEffectiveAddress"><returnCode code="2"/>
</params><param
name="mnAddressNumber">12345</param></params></callMethod></jdeResponse></GetEffec
tiveAddressResponse></SOAP-ENV:Body></SOAP-ENV:Envelope>
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeString: HTTP/1.0
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 200
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeString: OK
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Type:
[2004-07-19T16:27:07:859Z] DEBUG (SOAP1) W.SOAP1.2: writeString: text/xml
[2004-07-19T16:27:07:875Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Length:
[2004-07-19T16:27:07:875Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 643
[2004-07-19T16:27:07:875Z] INFO (SOAP1) W.SOAP1.2: W0000X13: Ended message
processing, rc=0
[2004-07-19T16:27:07:875Z] DEEP (SOAP1) W.SOAP1.2: storing used socket
[2004-07-19T16:27:07:875Z] DEEP (SOAP1) W.SOAP1.2: entering waitForDocument
[2004-07-19T16:27:12:781Z] DEEP (SOAP1) W.SOAP1.2: cleanup: closing sockets(0)

```

### Invalid Call Method

If an invalid call is made to Oracle WebLogic Server Adapter, then the following SOAP response is generated.

```

[2004-07-19T16:24:34:859Z] DEBUG (SOAP1) W.SOAP1.2: POST received
[2004-07-19T16:24:34:859Z] DEBUG (SOAP1) W.SOAP1.2: in XDSOAPHTTPWorker agentName
is [XDSOAPRouter]
[2004-07-19T16:24:34:859Z] DEBUG (SOAP1) W.SOAP1.2: before parse:
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"

```

```

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<SOAP-ENV:Body>
<m:GetEffectiveAddress xmlns:m="urn:iwaysoftwar...[581]
[2004-07-19T16:24:34:859Z] ERROR (SOAP1) W.SOAP1.2: Attempting string, no encoding
recognized in document
[2004-07-19T16:24:34:859Z] DEEP (SOAP1) W.SOAP1.2: parse complete in 0 msec
[2004-07-19T16:24:34:875Z] DEEP (SOAP1) W.SOAP1.2: ST_NODICT
[2004-07-19T16:24:34:875Z] DEEP (SOAP1) W.SOAP1.2: ST_FINISH
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) extractControl - edaDoc: false
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) now: 2004-07-19T16:24:34Z expires:
2004-07-20T16:24:34Z
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) W.SOAP1.2: inside isAsync() the soap
Action is ["B0100033.GetEffectiveAddressRequest#test##"]
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) W.SOAP1.2: inside isAsync() the soap
Action is [B0100033.GetEffectiveAddressRequest#test##]
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) W.SOAP1.2: checking for cached agent
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) W.SOAP1.2: pushagent: adding agent
com.ibi.iwse.XDSOAPRouter
[2004-07-19T16:24:34:875Z] DEBUG (SOAP1) W.SOAP1.2: inside worker the soap Action
is [B0100033.GetEffectiveAddressRequest#test##]
[2004-07-19T16:24:34:890Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:24:34:890Z] DEBUG (SOAP1) W.SOAP1.2: precedence: 1
[2004-07-19T16:24:34:890Z] DEBUG (SOAP1) W.SOAP1.2: numagents: 1
[2004-07-19T16:24:34:890Z] DEBUG (SOAP1) W.SOAP1.2: running agent 1 name
com.ibi.iwse.XDSOAPRouter document 1
[2004-07-19T16:24:35:031Z] INFO (manager) MGR00X01: Adding active worker:
W.SOAP1.2
[2004-07-19T16:24:35:031Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Body>
    <m:GetEffectiveAddress
xmlns:m="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress">
      <m:jdeRequest type="callmethod">
        <m:callMethod name="GetAddress">
          <m:params>
            <m:param name="mnAddressNumber">34518</m:param>
          </m:params>
          <m:onError/>
        </m:callMethod>
      </m:jdeRequest>
    </m:GetEffectiveAddress>
  </SOAP-ENV:Body>
  <SOAPAction agentName="XDSOAPRouter"
cid="4C0AD8398CB7A5B4DED18057D963AA44">B0100033.GetEffectiveAddressRequest#test##<
/SOAPAction>
</SOAP-ENV:Envelope>
[2004-07-19T16:24:35:031Z] DEBUG (SOAP1) W.SOAP1.2: business method:
m:GetEffectiveAddress
[2004-07-19T16:24:35:031Z] DEBUG (SOAP1) W.SOAP1.2: input:
[2004-07-19T16:24:35:031Z] DEBUG (SOAP1) W.SOAP1.2: <?xml version="1.0"
encoding="UTF-8" ?><jdeRequest xmlns:xsd="http://www.w3.org/2001/XMLSchema"
type="callmethod" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><callMethod
name="GetAddress"><params><param name="mnAddressNumber">34518</param>

```

```
</params><onError/></callMethod></jdeRequest>
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: Agent returned success
[2004-07-19T16:24:36:781Z] INFO (manager) MGR00X02: Removing active worker:
W.SOAP1.2
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: doing docTran, docVal,
listTran for agent(1)
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: sendToAll reply to XDReply:
[protocol=http */null]
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: preemitters from doc: null
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: no preemitters, emitting
contents of doc, usestream=false encoding=UTF-8
[2004-07-19T16:24:36:781Z] DEBUG (SOAP1) W.SOAP1.2: writeEntity, len: 595 data:
<?xml version="1.0" encoding="UTF-8" ?><SOAP-ENV:Envelope
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"><SOAP-ENV:Body><GetEffective
AddressResponse xmlns="urn:iwaysoftware:ibse:jul2003:GetEffectiveAddress:response"
cid="4C0AD8398CB7A5B4DED18057D963AA44"><jdeResponse user="JDE" type="callmethod"
environment="DV7333"><callMethod name="GetAddress"><returnCode code="99"/><params>
</params></callMethod></jdeResponse></GetEffectiveAddressResponse></SOAP-ENV:Body>
</SOAP-ENV:Envelope>
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: HTTP/1.0
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 200
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: OK
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Type:
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: text/xml
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: Content-Length:
[2004-07-19T16:24:36:796Z] DEBUG (SOAP1) W.SOAP1.2: writeString: 595
[2004-07-19T16:24:36:796Z] INFO (SOAP1) W.SOAP1.2: W0000X13: Ended message
processing, rc=0
[2004-07-19T16:24:36:796Z] DEEP (SOAP1) W.SOAP1.2: storing used socket
[2004-07-19T16:24:36:812Z] DEBUG (SOAP1) W.SOAP1.2: entering waitForDocument
[2004-07-19T16:24:42:671Z] DEEP (SOAP1) W.SOAP1.2: cleanup: closing sockets(0)
```



This chapter 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. This section describes 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, but 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 (BS) that can be applied to an existing or new BS. When you set specific rights or privileges inside a policy, you do not have to re-create privileges for every BS 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 Business Services 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, then other methods in that Business Service are not 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 Oracle Adapter Business Services Engine (BSE) in the SOAP request message are verified 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, **newtest**. For information on creating a new configuration, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).
3. Select **Connect**.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in [Figure 10–1](#).

**Figure 10–1 Service Nodes**



Perform the following steps:

- 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](#).

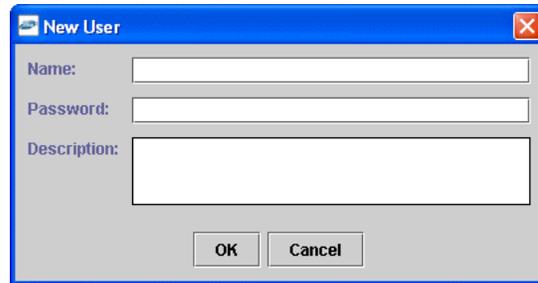
**Figure 10–2 User Group Node**



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**



Perform the following steps:

- 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**.

The new user is added under the Users node.

### 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, **newtest**. For information on creating a new configuration, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).
3. Select **Connect**.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in [Figure 10-4](#).

**Figure 10-4 Service Node**



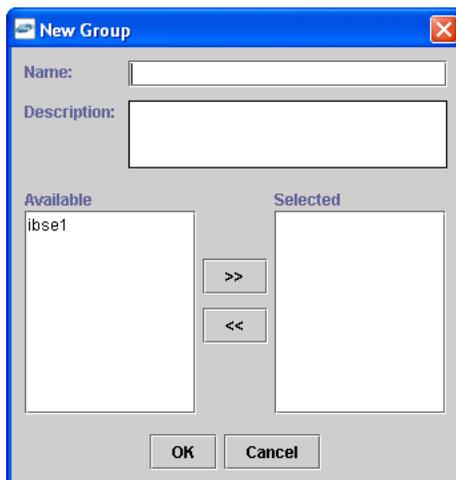
Perform the following steps:

- 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 10-5](#).

**Figure 10–5 User and Group Node**

4. Right-click **Groups** and select **New Group**.

The New Group dialog is displayed, as shown in [Figure 10–6](#).

**Figure 10–6 New Group Dialog**

Perform the following steps:

- 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 new group is added under the Groups node.

### Creating an Execution Policy

An execution policy determines 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 information on creating a new configuration, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).

3. Select **Connect**.

Nodes appear for Adapters and Business Services (also known as Web services), as shown in [Figure 10-7](#).

**Figure 10-7 Service Nodes**



Perform the following steps:

- a. Expand the **Business Services** node.
- b. Expand the **Configuration** node.
- c. Expand the **Security** node.
- d. Expand the **Policies** node, as shown in [Figure 10-8](#).

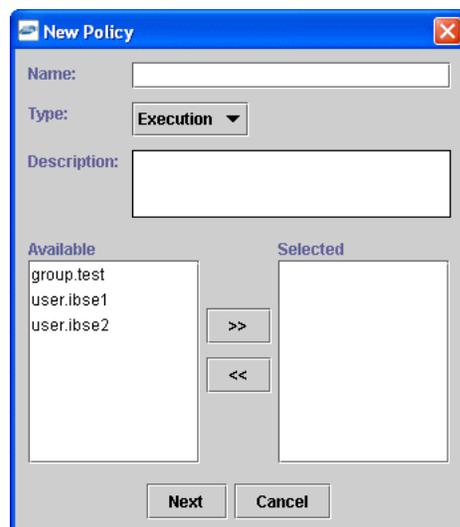
**Figure 10-8 Policies Node**



4. Right-click **Policies** and select **New Policy**.

The New Policy dialog is displayed, as shown in [Figure 10-9](#).

**Figure 10-9 New Policy Dialog**



Perform the following steps:

- 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 verified 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 selected, click **OK**.
6. Click **Next**.

The New Policy permissions dialog is displayed, as shown in [Figure 10–10](#).

**Figure 10–10** *New Policy Permissions Dialog*



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 10–11](#).

**Figure 10–11 Summary**

- **Name** test
- **Type** Execution
- **Description**
- **User and Group Restrictions**
  - group.test Execution Granted

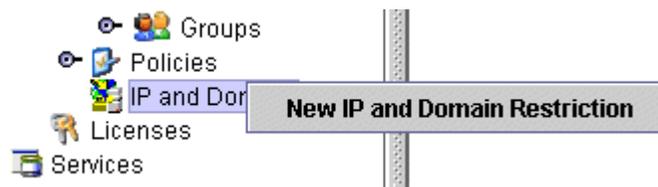
**Using the IP and Domain Restrictions Policy Type**

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 information on creating a new configuration, see [Chapter 2, "Configuring Oracle Application Adapter for J.D. Edwards OneWorld"](#).
3. Select **Connect**.
 

Nodes appear for Adapters and Business Services (also known as Web services). Perform the following steps:

  - a. Expand the **Business Services** node.
  - b. Expand the **Configuration** node.
  - c. Expand the **Security** node.
4. Right-click **IP and Domain** and select **New IP and Domain Restriction**, as shown in [Figure 10–12](#).

**Figure 10–12 IP and Domain Node**

The New IP and Domain Restriction dialog is displayed, as shown in [Figure 10–13](#).

**Figure 10–13** *New IP and Domain Restriction Dialog*

The dialog box titled "New IP and Domain Restriction" contains the following fields and controls:

- IP(Mask)/Domain:** A text input field.
- Type:** A dropdown menu currently showing "Single".
- Description:** A text area for entering a description.
- Grant Access:** A checked checkbox.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

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, then you must provide the IP address for that computer. If you only know the DNS name for the computer, then click **DNS Lookup** to obtain the IP Address based on the DNS name.
    - If you select **Group** (of Computers), then you must provide the IP address and subnet mask for the computer group.
    - If you select **Domain**, then 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 10–14](#).

**Figure 10–14** *Summary*

- **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 10-15](#).

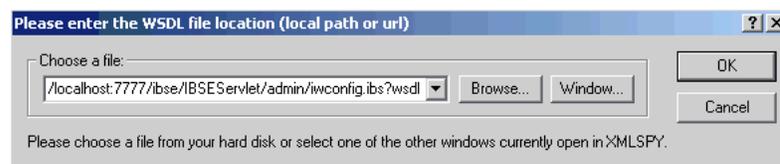
**Figure 10-15** Create New SOAP Request Option



4. Select **Create new SOAP request**.

The WSDL file location dialog is displayed, as shown in [Figure 10-16](#).

**Figure 10-16** WSDL File Location Dialog



Perform the following steps:

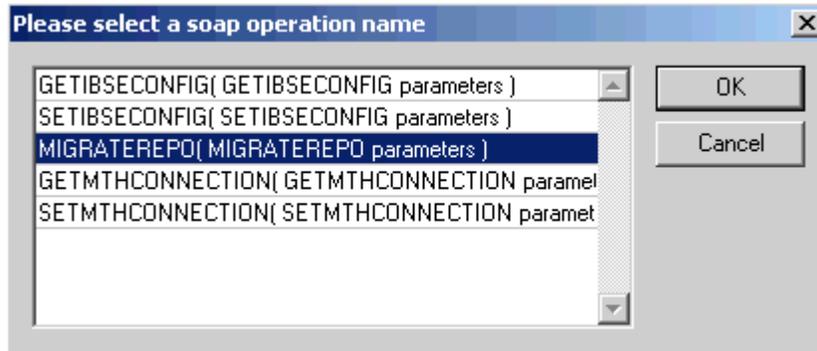
- a. In the **Choose a file** field, paste the BSE control service URL.
- b. Append **?wsdl** to the URL, for example:

```
http://localhost:8001/ibse/IBSEServlet/admin/iwcontrol.ibs?wsdl
```

5. Click **OK**.

The soap operation name dialog is displayed and lists the available control methods, as shown in [Figure 10-17](#).

**Figure 10–17 SOAP Operation Name Dialog**

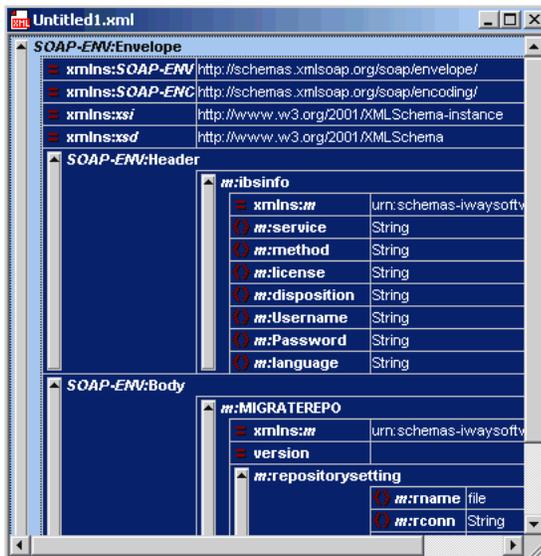


6. Select the **MIGRATEREPO(MIGRATEREPO parameters)** control method and click OK.

**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 shows the structure of the SOAP envelope, as shown in [Figure 10–18](#).

**Figure 10–18 SOAP Envelope Structure**



7. Locate the **Text view** icon in the toolbar, as shown in [Figure 10–19](#).

**Figure 10–19 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, then enter the Web service name in the <m:servicename> tag, for example:

```
<m:servicename>JDEService1</m:servicename>
```

- If you want to migrate multiple Web services from the current BSE repository, then duplicate the <m:servicename> tag for each Web service, for example:

```
<m:servicename>JDEService1</m:servicename>
```

```
<m:servicename>JDEService2</m:servicename>
```

- If you want to migrate all Web services from the current BSE repository, then remove the <m:servicename> tag.

11. From the menu bar, click **SOAP** and select **Send request to server**, as shown in [Figure 10-20](#).

**Figure 10–20 Send Request To Server Option**

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.

---



---

# Configuring J.D. Edwards OneWorld for Outbound and Inbound Processing

J.D. Edwards OneWorld enables you to specify inbound functionality for Master Business Functions (MBF).

This chapter describe how to enable outbound and inbound transaction processing in J.D. Edwards OneWorld and how to modify the `jde.ini` file for XML support. It contains the following topics:

- [Section A.1, "Modifying the JDE.INI File for Outbound and Inbound Processing"](#)
- [Section A.2, "Using the GenJava Development Tool \(Outbound Processing\)"](#)
- [Section A.3, "Triggering J.D. Edwards OneWorld Events"](#)

## A.1 Modifying the JDE.INI File for Outbound and Inbound Processing

This section describes the settings that are required in the JDE.INI file for the XML call object kernel (outbound and inbound processing).

Open the JDE.INI file and modify the [JDENET\_KERNEL\_DEF6] and [JDENET\_KERNEL\_DEF15] sections as follows:

```
[JDENET_KERNEL_DEF6]
krnlName=CALL OBJECT KERNEL
dispatchDLLName=XMLCallObj.dll
dispatchDLLFunction=_XMLTransactionDispatch@28
maxNumberOfProcesses=1
numberOfAutoStartProcesses=1
```

```
[JDENET_KERNEL_DEF15]
krnlName=XML TRANSACTION KERNEL
dispatchDLLName=XMLTransactions.dll
dispatchDLLFunction=_XMLTransactionDispatch@28
maxNumberOfProcesses=1
numberOfAutoStartProcesses=1
```

The parameters containing an underscore (`_`) and `@28` are for Windows NT operating systems only. For other operating systems, replace the parameters with the values in the following table:

Operating System	Call Object dispatch DLLName	XML Trans dispatch DLLName
AS400	XMLCALLOBJ	XMLTRANS

Operating System	Call Object dispatch DLLName	XML Trans dispatch DLLName
HP9000B	libxmlcallobj.sl	libxmltransactions.lo
Sun or RS6000	libxmlcallobj.so	Libxmltransactions.so

---

**Note:** The J.D. Edwards installation for version B7333(XE) does not include [JDENET\_KERNEL\_DEF15]. As a result, if you are using version B7333(XE), you must manually add it to the jde.ini file. For all other J.D. Edwards versions, [JDENET\_KERNEL\_DEF15] is included with the installation.

---

## A.2 Using the GenJava Development Tool (Outbound Processing)

This section describes how to use the GenJava development tool, which is used to create Java wrappers for accessing the J.D. Edwards business functions. The Oracle Application Adapter for J.D. Edwards OneWorld uses these wrappers to call the J.D. Edwards business functions.

J.D. Edwards provides a Java Generation tool called GenJava that you can use to expose J.D. Edwards business functions externally as Java class files. A J.D. Edwards system administrator usually runs the GenJava tool.

During GenJava operation, you must specify a library of business functions, for example CALLBSFN. GenJava creates the associated Java class files for the business functions and related data structures. GenJava also compiles the business functions, generates Java documents, and packages them into two .JAR files. One .JAR file contains Java classes and the second .JAR file contains Java documents.

For example, if the business function library you specified in GenJava is CALLBSFN, the following files are found in the <install>\system\classes directory or any user-specified directory redirected by GenJava:

- JDEJAVA\_CALLBSFN.xml
- JDEJAVA\_CALLBSFNInterop.jar
- JDEJAVA\_CALLBSFNInteropDoc.jar

Once they are generated, these library files must be added to the CLASSPATH.

GenJava also provides access to J.D. Edwards business functions by generating pure Java interfaces for these business functions. GenJava can be generated from a thick client or a deployment server.

### Running GenJava

GenJava is located in the <install>\system\bin32 directory. You run GenJava from the command line. There are two GenJava command options that can be used to generate the wrappers.

#### GenJava Command Option 1

The following command generates Java wrappers for Category 1 (Master Business Functions), Category 2 (Major Business Functions), Category 3 (Minor Business Functions), and Category - (Uncategorized Business Functions) in the CALLBSFN library:

```
GenJava /Cat 1 /Cat 2 /Cat 3 /Cat - CALLBSFN
```

## GenJava Command Option 2

The GenJava command can also be run with a JDEScript file and prompts a J.D. Edwards log on window, where you must enter a valid user ID, password, and environment.

1. Using an editor, create a new file called `AddressBook.cmd` and enter the following commands:

```
define library CALLBSFN
login
library CALLBSFN
interface AddressBook
import B0100031
import B0100019
import B0100032
import B0100002
import B0100033
build
logout
```

2. Run the following GenJava command:

```
GenJava /cmd .\AddressBook.cmd
```

3. GenJava generates the wrappers (`CALLBSFNInterop.jar`, `CALLBSFNInteropDoc.jar`, and `CALLBSFN.xml`) in Java for all business functions that are mentioned in the script file.

## A.3 Triggering J.D. Edwards OneWorld Events

The flow of inbound data to third parties is controlled through the Data Export Controls application. For each transaction type and order type, one or more records can be defined with different function names and libraries.

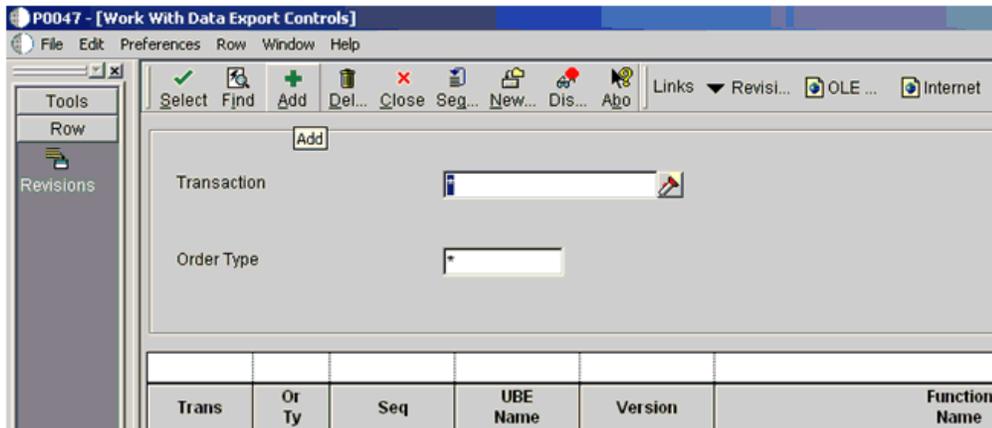
1. Type `P0047` in the Fast Path field and press **Enter** as shown in, [Figure A-1](#).

**Figure A-1** JD Edwards Solutio Explorer



The Work With Data Export Controls window is displayed, as shown in [Figure A-2](#).

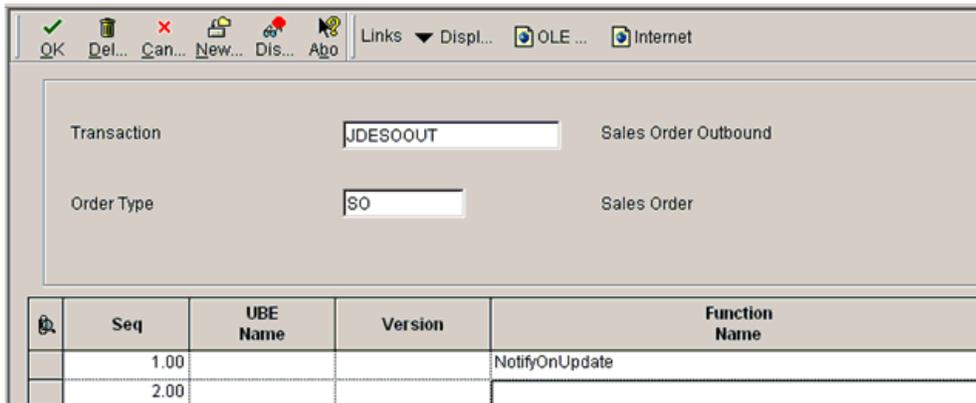
**Figure A-2 Work With Data Export Controls Window**



2. Click **Add**.

The Data Export Control Revisions window is displayed. Notice that the sequence (Seq) number automatically increments for each new line, as shown in [Figure A-3](#).

**Figure A-3 Data Export Control Revisions Window**



3. Perform the following steps:
  - a. Type **JDES00OUT** in the Transaction field.
  - b. Type **SO** in the Order Type field.
  - c. Type **NotifyOnUpdate** in the first row of the Function Name column.
  - d. Type the absolute path to the location of the `iwoevent.dll` file in the first row of the Function Library column, for example:  
`D:\JDEdwards\E812\DDP\Outbound\iwoevent.dll`
  - e. Type **1** in the first row of the Execute for Add column if you want the notifications for add/insert.
  - f. Make the same decision for update, delete, and inquiry and type **1** in the appropriate column.
  - g. Type **1** in the Launch Immediately column to launch the Outbound Subsystem batch process (R00460).
4. Click **OK**, as shown in [Figure A-4](#).

**Figure A-4 Data Export Control Revisions Window**

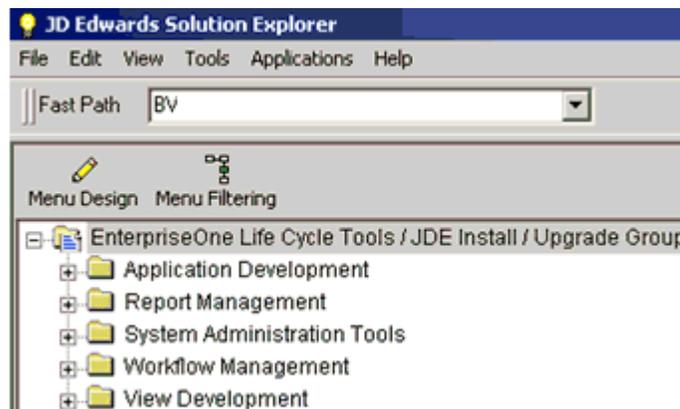
	Execute For Add	Execute For Upd	Execute For Del	Execute For Inq	Flat File Exp Mode	Ext DB Exp Mode	Ext API Exp Mode	Launch Immediately
	1	1	1	1	0	0	0	1

**Starting the Outbound Scheduler Subsystem Process (R00460)**

Once you have finished defining one or more records for each transaction type and order type, you must manually start the outbound scheduler subsystem process.

1. Type **BV** in the Fast Path field and press **Enter**, as shown in [Figure A-5](#).

**Figure A-5 JD Edwards Solution Explorer**



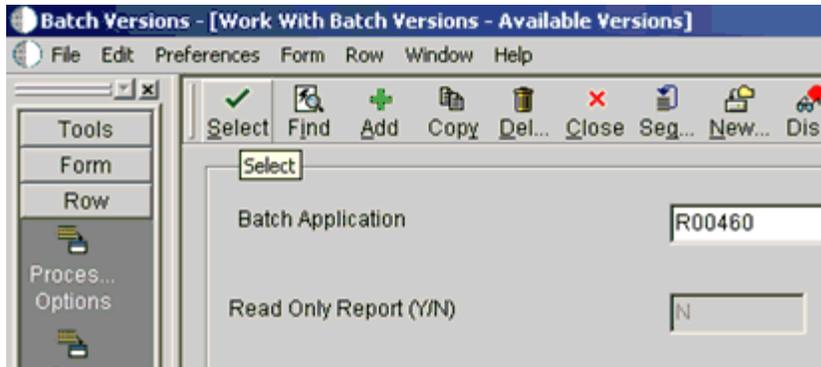
The Work With Batch Versions - Available Versions window is displayed, as shown in [Figure A-6](#).

**Figure A-6 Work With Batch Versions - Available Versions Window**

Version	Version Title	Web Only	User	Last Modified	Security	Description
XJDE0001	Interoperability Genenc Outbound Subsystem UBE		JDE	1/22/2008	1	Medium Security

2. Type **R00460** in the Batch Application field and click **Find**, as shown in [Figure A-7](#).

**Figure A-7 Batch Application Field**



3. Select **Interoperability Generic Outbound Subsystem UBE (XJDE0001)** and click **Select**.

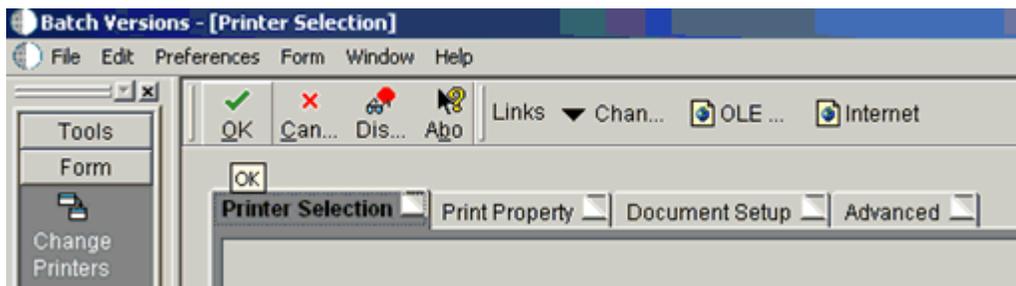
The Version Prompting window is displayed, as shown in [Figure A-8](#).

**Figure A-8 Version Prompting Window**



4. Click **Submit**, as shown in [Figure A-9](#).

**Figure A-9 OK Option Selection**



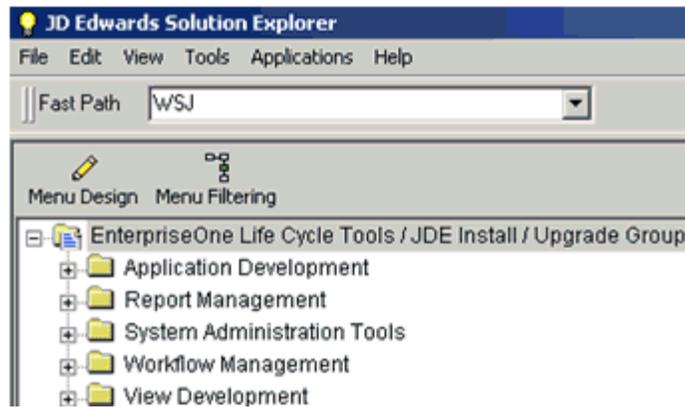
5. Navigate to the last screen and click **OK**.

### Verifying the Subsystem Process

This section describes how to verify the outbound scheduler subsystem process.

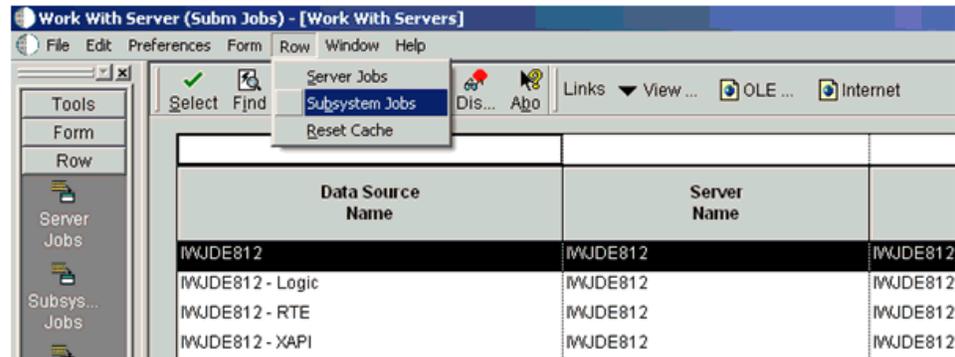
1. Type **WSJ** in the Fast Path field and press **Enter**, as shown in [Figure A-10](#).

**Figure A-10 JD Edwards Solution Explorer**



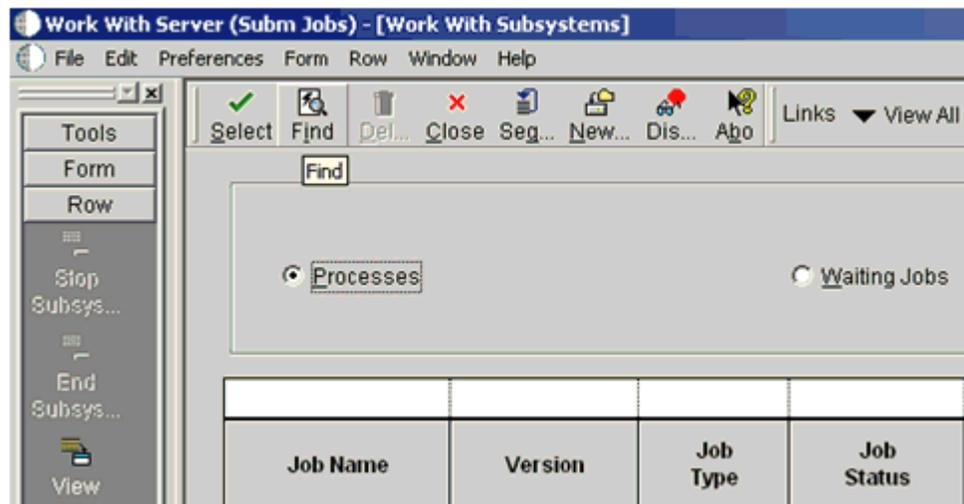
The Work With Server (Subm Jobs) window is displayed, as shown in [Figure A-11](#).

**Figure A-11 Work With Server (Subm Jobs) window**



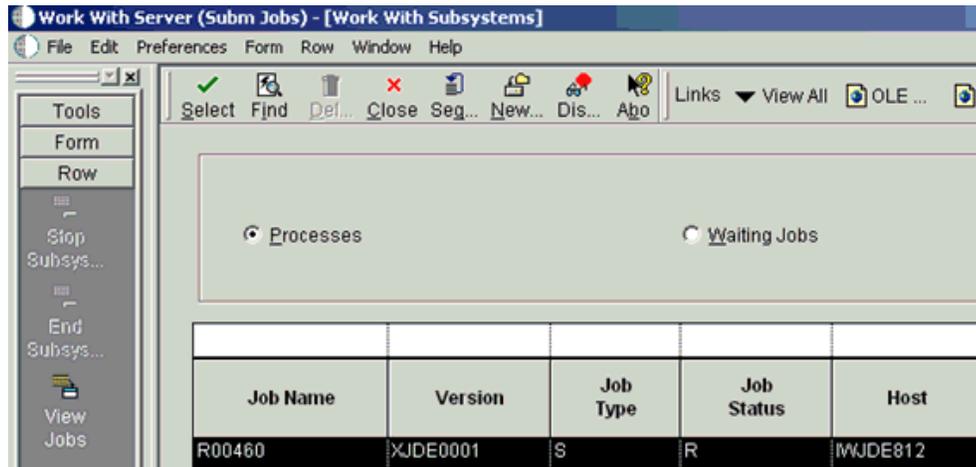
2. Select a corresponding server from the table.
3. Click **Row** from the menu bar and select **Subsystem Jobs**, as shown in [Figure A-12](#).

**Figure A-12 Find Option Selection**



- Click **Find**, as shown in [Figure A-13](#).

**Figure A-13 Job Status Column**



- Verify that **R** is listed in the Job Status column.

### Configuring P4210 (Sales Order) to Trigger an Event

This section describes how to configure a P4210 (Sales Order) to trigger an event.

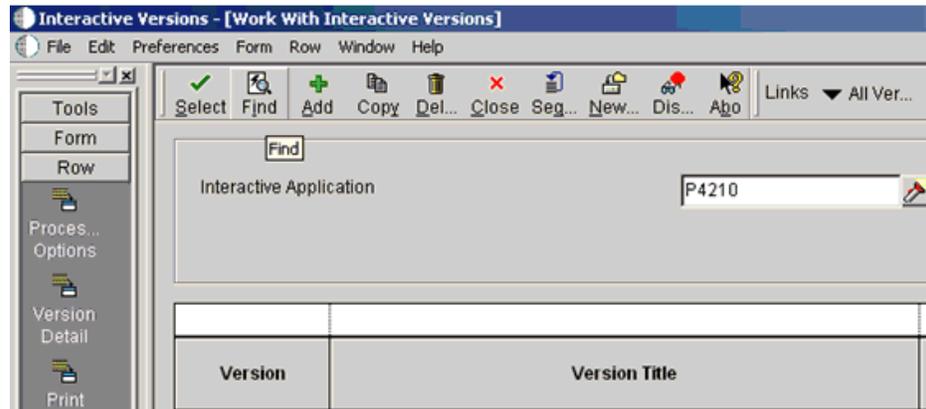
- Type **IV** in the Fast Path field and press **Enter**, as shown in [Figure A-14](#).

**Figure A-14 JD Edwards Solution Explorer**



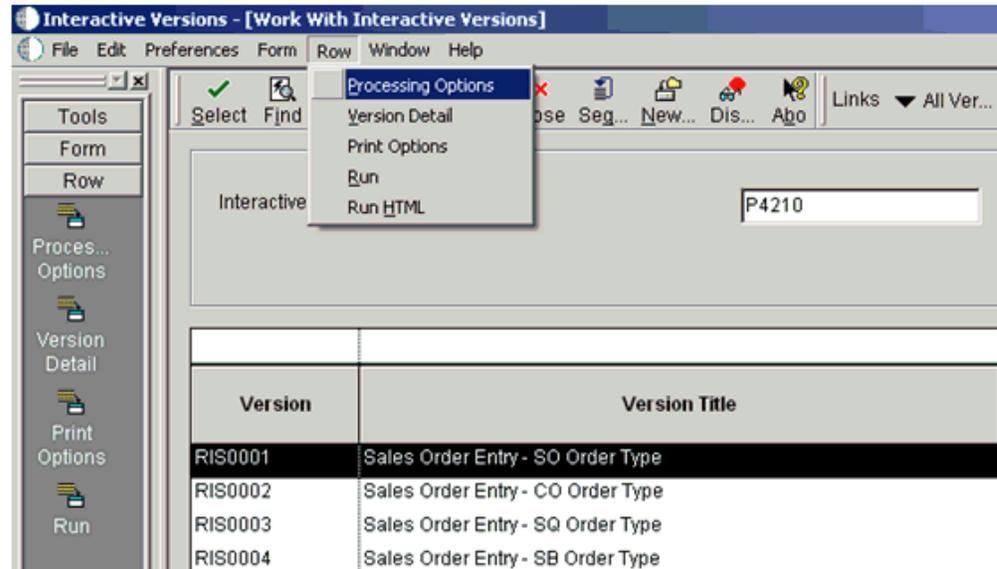
The Interactive Versions window is displayed, as shown in [Figure A-15](#).

**Figure A-15 Interactive Versions Window**



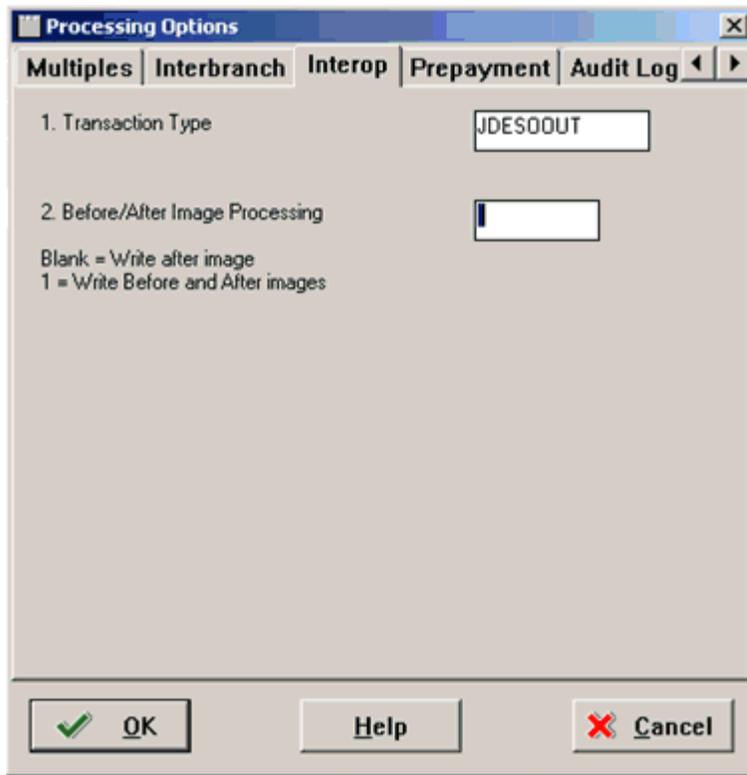
2. Type **P4210** in the Interactive Application field and click **Find**, as shown in [Figure A-16](#).

**Figure A-16 Interactive Application Field**



3. Select a document version from the table, for example, **RIS0001 - Sales Order Entry - SO Order Type**.
4. Click **Row** from the menu bar and select **Processing Options**.  
The Processing Options dialog is displayed, as shown in [Figure A-17](#).

**Figure A-17 Processing Options Dialog**



5. Click the **Interop** tab.
6. Type **JDES00OUT** in the Transaction Type field.
7. Add **Sales Order**.

**Verifying the Configuration Steps**

This section describes how to verify the configuration steps by updating F0046.

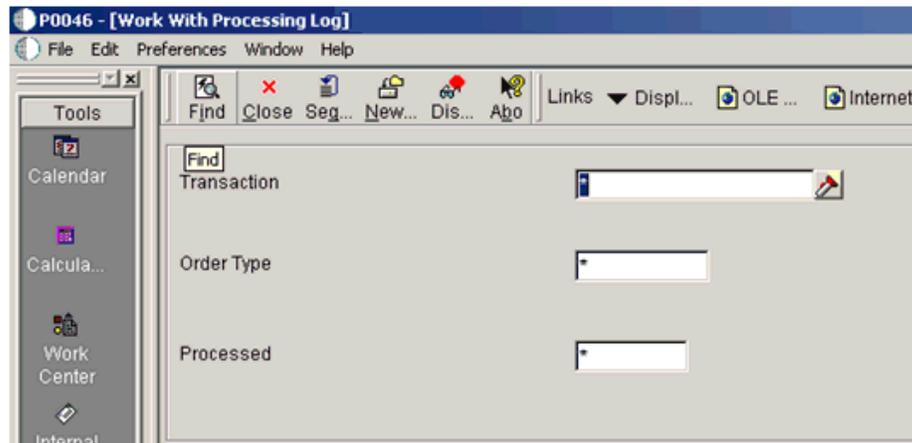
1. Type **P0046** in the Fast Path field and press **Enter**, as shown in [Figure A-18](#).

**Figure A-18 JD Edwards Solution Explorer**



The P0046 - Work With Processing Log window is displayed, as shown in [Figure A-19](#).

**Figure A-19 Work With Processing Log Window**



**2. Click Find.**

The following data is displayed, as shown in [Figure A-20](#).

**Figure A-20 Data Display Table**

User ID	Batch Number	Transaction Number	Line Number	Trans	Or Ty	Seq	UBE Name	Version	S P
JDE	15147	103322	1.000	JDES00UT	SO	1.00			N
JDE	15148	103323	1.000	JDES00UT	SO	1.00			N
JDE	15149	103324	1.000	JDES00UT	SO	1.00			N
JDE	15150	103325	1.000	JDES00UT	SO	1.00			N
JDE	15151	103326	1.000	JDES00UT	SO	1.00			N
JDE	15152	103327	1.000	JDES00UT	SO	1.00			N
JDE	15153	103328	1.000	JDES00UT	SO	1.00			N
JDE	15154	103329	1.000	JDES00UT	SO	1.00			N
JDE	15155	103330	1.000	JDES00UT	SO	1.00			N
JDE	15156	103331	1.000	JDES00UT	SO	1.00			N
JDE	15157	103332	1.000	JDES00UT	SO	1.00			N
JDE	15158	103333	1.000	JDES00UT	SO	1.00			N
JDE	15159	103334	1.000	JDES00UT	SO	1.00			N
JDE	15160	103335	1.000	JDES00UT	SO	1.00			N
JDE	15163	103452	1.000	JDES00UT	SO	1.00			N
JDE	15164	103453	1.000	JDES00UT	SO	1.00			N
JDE	15165	103454	1.000	JDES00UT	SO	1.00			N
JDE	15166	103455	1.000	JDES00UT	SO	1.00			N

**3. Search for the corresponding transaction.**

The iwoevent.log file is created in the following directory:

```
\\iwJDE812\JDEdwards\E812\DDP\system\bin32
```

The iwoevent.log file is created in the outbound folder where the iwoevent.dll and iwoevent.cfg files are located. The following is an example of the event log file:

```
Event call begin...
Server time      : Tue May 27 07:23:55 2008
userId          : JDE
batchNumber     : 15205
transactionNumber: 103494
lineNumber      : 1.000000
transactionType  : JDES00UT
sequenceNumber  : 1.000000
Request xml:
=====
<? xml version="1.0" encoding="UTF-8"?><jde><request><connection><dsn /><user /><password /><sp><proc>JDES00UT</proc><data><ediUserId>JDE
</ediUserId><ediBatchNumber>15205
```

```
</ediBatchNumber><ediTransactionNumber>103494  
</ediTransactionNumber></data></sp></connection></request></jde>  
=====
```

---

---

# 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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