iWay

iWay Adapter for Oracle AQ for
BEA WebLogic User's Guide
Version 5 Release 5

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Preface

This documentation describes how to use the iWay Adapter for Oracle AQ for BEA WebLogic. It is intended for system integrators who develop client-server interfaces to various message-oriented middleware applications that have adopted the JMS standard.

How This Manual Is Organized

The following table lists the numbers and titles of the chapters and appendices for this manual with a brief description of the contents of each chapter and appendix.

Chapter/Appendix		Contents
1	Introducing the iWay Adapter for Oracle AQ for BEA WebLogic	Introduces the iWay Adapter for Oracle AQ for BEA WebLogic.
2	Creating Connections and Business Services	Describes how to open a connection to Oracle AQ, create XML request and response schemas for Oracle AQ services, and create business services (or Web services).
3	Listening for Events in Oracle AQ	Describes how to use the adapter to listen, react, and dispose of event data coming from the Oracle AQ queue
4	Using Web Services Policy-Based Security	Describes how to configure Web services policy-based security.
5	Management and Monitoring	Describes how to configure and use monitoring tools provided by iBSE and JCA to gauge the performance of your run-time environment.
A	Using Application Explorer in BEA WebLogic Workshop to Create XML Schemas and Web Services	Describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to create XML schemas and Web services.
B	Using Application Explorer in BEA WebLogic Workshop for Event Handling	Describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to listen, react, and dispose of event data coming from an Oracle AQ queue.

Documentation Conventions

The following table lists the conventions that apply in this manual and a description of each.

Convention	Description
`THIS TYPEFACE` or `this typeface`	Denotes syntax that you must enter exactly as shown.
`this typeface`	Represents a placeholder (or variable) in syntax for a value that you or the system must supply.
underscore	Indicates a default setting.
this typeface	Represents a placeholder (or variable), a cross-reference, or an important term.
this typeface	Highlights a file name or command.
Key + Key	Indicates keys that you must press simultaneously.
`{ }`	Indicates two or three choices; type one of them, not the braces.
`|`	Separates mutually exclusive choices in syntax. Type one of them, not the symbol.
`...`	Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis points (…).
`.` `.` `.`	Indicates that there are (or could be) intervening or additional commands.

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If you bought the product directly from iWay Software, call Information Builders Customer Support Services (CSS) at (800) 736-6130 or (212) 736-6130. Customer Support Consultants are available Monday through Friday between 8:00 A.M. and 8:00 P.M. EST to address all your iWay Adapter for Oracle AQ for BEA WebLogic questions. Information Builders consultants can also give you general guidance regarding product capabilities and documentation. Please be ready to provide your six-digit site code (*xxxx.xx*) when you call.

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Help Us to Serve You Better

To help our consultants answer your questions effectively, please be prepared to provide specifications and sample files and to answer questions about errors and problems.

The following tables list the specifications our consultants require.

Platform	
Operating System	
OS Version	
Product List	
Adapters	
Adapter Deployment	For example, JCA, Business Services Engine, iWay Adapter Manager
Container Version	

The following table lists components. Specify the version in the column provided.

Component	**Version**
iWay Adapter	
EIS (DBMS/APP)	
HOTFIX / Service Pack	

The following table lists the types of Application Explorer. Specify the version (and platform, if different than listed previously) in the columns provided.

Application Explorer Type	**Version**	**Platform**
Swing		
Servlet		
ASP		

In the following table, specify the JVM version and vendor in the columns provided.

Version	**Vendor**

The following table lists additional questions to help us serve you better.

Request/Question	**Error/Problem Details or Information**
Provide usage scenarios or summarize the application that produces the problem.	
Did this happen previously?	
Can you reproduce this problem consistently?	
Any **change in the application environment**: software configuration, EIS/ database configuration, application, and so forth?	

Request/Question	Error/Problem Details or Information
Under what circumstance does the problem *not* occur?	
Describe the **steps** to reproduce the problem.	
Describe the **problem**.	
Specify the **error** message(s).	

The following table lists error/problem files that might be applicable.

XML schema
XML instances
Other input documents (transformation)
Error screen shots
Error output files
Trace and log files
Log transaction

User Feedback

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Contents

CHAPTER 1

Introducing the iWay Adapter for Oracle AQ for BEA WebLogic

Topics:

- Message Queueing
- Oracle Advanced Queuing
- Deployment Information for the Adapter

TheiWay Adapter for Oracle AQ for BEA WebLogic employs the Java Message Service (JMS) application programming interface (API) as the underlying technology for inter-client communication between distributed applications. JMS provides a common interface that wraps around the underlying message delivery systems of a number of vendors.

Message Queueing

Message queueing is a method by which a process can exchange or pass data using an interface to a system-managed message queue. Messages can vary in length and be assigned different types or usages.

A message queue can be created by one process and used by multiple processes that read and/or write messages to the queue. For example, a server process can read messages from and write messages to a queue created for client processes. The message type can be used to associate a message with a particular client process even though all messages are in the same queue.

An architecture for distributed systems is based on reliable message queueing. Messages are queued asynchronously between applications and systems.

Benefits of a Message Queueing System

The benefits of a message queueing system are:

- Multiple providers can post messages to a queue.
- Multiple message consumers can be attached to a single queue.
- The queueing infrastructure ensures messages are delivered only once.
- Messages can be submitted to a queue even when the message consumer(s) are not running or are unreachable.
- Multiple posters/readers ensure scalability.
- Systems that can make queues persistent provide reliability.
- Since producers and consumers are not interconnected, abstraction is provided (similar to a loosely coupled “pipes and filters” architecture).

Oracle Advanced Queuing

Oracle Advanced Queuing (AQ) is the message queuing function of the Oracle database system. With Oracle AQ, you can perform message queuing operations in a manner similar to that of SQL operations.

The message queuing function of AQ enables asynchronous communication, using queues, between applications and users on Oracle databases. It offers:

- Multiple ways for applications to place a message in a queue.
- Multiple ways for applications to retrieve a message from a queue.
- Ways to distribute messages to appropriate queues.
- Guaranteed delivery of messages, with exception handling (when messages cannot be delivered).

AQ offers ways to prioritize the messages and offers time properties for messages such as expiration and delays. Notifications also are provided for immediate attention.

With AQ, message queuing operations benefit from the reliability, integrity, high availability, security, and scalability of a database. All of the message queuing operations are transactional. After messages are committed, they are guaranteed to be delivered. You can perform multiple message queuing and database operations in the same transaction. A database offers disaster protection for the messages. You also can use the advanced security features of the Oracle database.

The integration of message queuing with a database also offers unique benefits. Message queuing can use the management functions of a database. All the AQ operations are automatically audited, and you can look up the messaging information using an SQL view. You can use these SQL views to extract additional intelligence about the messaging environment.

Message queuing can take advantage of the system type of the Oracle database. Each message can be of an Oracle object type. Queuing brings the structure to the messaging system, which brings benefits such as better querying and content-based subscriptions.

AQ is used extensively in application integration, e-Businesses for online operations, and B2B exchanges.

Deployment Information for the Adapter

The iWay Adapter for Oracle AQ for BEA WebLogic works in conjunction with the following components:

- iWay Application Explorer

with either

- Integration Business Services Engine (iBSE)

or

- iWay Enterprise Connector for J2EE™ Connector Architecture (JCA)

iWay Application Explorer, used to configure connections and create Web services and events, can be configured to work in a Web services environment in conjunction with the Integration Business Services Engine or with the iWay Enterprise Connector for J2EE Connector Architecture (JCA). When working in a JCA environment, the connector uses the Common Client Interface (CCI) to provide fast integration services using iWay Adapters instead of using Web services.

Both iBSE and the iWay connector for JCA are deployed to an application server such as BEA WebLogic Server with iWay Application Explorer and the adapters.

Deployment Roadmap

The following table lists the location of information about deploying the iWay Adapter for Oracle AQ for BEA WebLogic in the three iWay operating environments. A description of each environment follows the table.

Deployed Component	For more information, see
iWay Application Explorer	Chapters 2 and 3, and Appendices A and B of this guide *iWay Installation and Configuration for BEA WebLogic* *iWay Servlet Application Explorer for BEA WebLogic User's Guide*
Integration Business Services Engine (iBSE)	*iWay Installation and Configuration for BEA WebLogic*

Deployed Component	For more information, see
iWay Enterprise Connector for J2EE Connector Architecture (JCA)	*iWay Connector for JCA for BEA WebLogic User's Guide* *iWay Installation and Configuration for BEA WebLogic*

The Integration Business Services Engine (iBSE)

The Integration Business Services Engine (iBSE) exposes—as Web services—enterprise assets that are accessible from adapters regardless of the programming language or the particular operating system. The iBSE simplifies the creation and execution of Web services when running:

- Custom and legacy applications
- Database queries and stored procedures
- Packaged applications
- Terminal emulation and screen-based systems
- Transactional systems

Web services is a distributed programming architecture that promises to solve Enterprise Application Integration (EAI) hurdles that other programming models cannot. It enables programs to communicate with one another using a text-based, but platform and language independent message format called XML (Extensible Markup Language).

Coupled with a platform and language independent messaging protocol called SOAP (Simple Object Access Protocol), XML enables application development and integration by assembling previously built components from multiple Web services. The iBSE includes a preconfigured SOAP listener for incoming SOAP requests.

The iWay Enterprise Connector for J2EE Connector Architecture (JCA)

The iWay Enterprise Connector for J2EE Connector Architecture (JCA) enables developers of JCA-compliant applications to deploy iWay adapters as JCA resources. The connector is supported on J2EE-compliant application servers such as BEA WebLogic Server.

The iWay Connector for JCA is distributed as both a standard Resource Adapter Archive (RAR) for deployment to the application server and as a JAR file for stand-alone applications. Thus, the connector can be employed in systems that are non-compliant, although services such as pooled connections will not be available.

CHAPTER 2

Creating Connections and Business Services

Topics:

- Starting Servlet iWay Application Explorer
- Creating and Managing a Connection
- Creating Schemas for Services
- Understanding Integration Business Services

The iWay Adapter for Oracle AQ for BEA WebLogic uses XML documents to communicate with applications. The format of these XML documents is determined by schemas you generate using iWay Application Explorer. You can also use Application Explorer to create business services (or Web services) for your application.

Starting Servlet iWay Application Explorer

Before you can use iWay Application Explorer, you must start the server where Application Explorer is running.

Procedure How to Start Application Explorer

1. Ensure the server is started where Application Explorer is running.
2. Enter the following URL in your browser window:

   `http://hostname:port/iwae/index.html`

   where:

   hostname

   Is the machine where Application Explorer is installed.

   port

   Is the port number for iBSE. The default port is 7001.

   Application Explorer opens.

   The Available Hosts drop-down list appears in the upper-right corner. Three tabs appear near the top of the Application Explorer screen. From left to right they are:

   - Service Adapters, where you create and manage connections to your Oracle AQ-enabled application.
   - Event Adapters, where you configure event listening for your Oracle AQ-enabled application.
   - Integration Business Services, where you create and view business services.

   The left pane of the window contains an expandable list of adapter nodes (based on the iWay adapters installed), events, or business services, depending on the tab that is selected. The right pane provides the details of the selected adapter, event, or service, and is the work area where you will define and modify adapter functions and services.

   The Available Hosts drop-down list specifies to which Servlet iBSE instance or JCA instance you connect.

   For more information on accessing different instances of a JCA installation or a Servlet iBSE, see the *iWay 5.5 Installation and Configuration* documentation.

   You are now ready to define a new target to Oracle AQ.

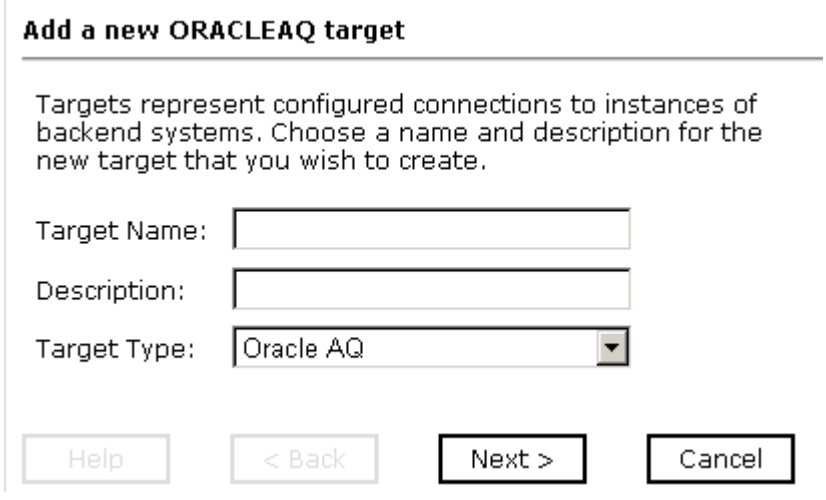
Creating and Managing a Connection

To access an adapter, you must define a target that connects to the adapter. After the defined target is created, it automatically is saved. You must establish a connection to the defined target every time you start Application Explorer or after disconnecting.

Procedure **How to Define a New Target**

1. In the left pane of Application Explorer, expand the *Service Adapters* node.
2. Click the *OracleAQ* node.
3. In the right pane, move the pointer over *Operations* and select *Define a new target*.

   The Add a new ORACLEAQ target dialog box opens in the right pane containing the Target Name, Description, and Target Type fields.



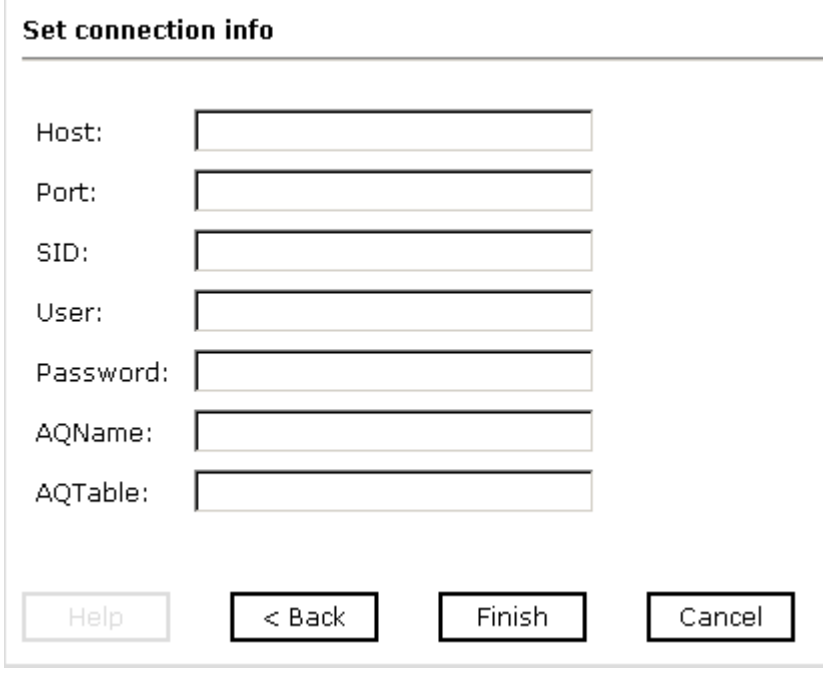
   a. In the Target Name field, type a descriptive name for the target, for example, OracleAQ.

   b. In the Description field, type a brief description for the connection.

   c. In the Target Type field, specify Oracle AQ.

4. Click *Next*.

The Set connection info dialog box opens in the right pane containing parameters and three action buttons (Back, Finish, and Cancel).



a. Specify the parameters in the Set connection info dialog box.

Note: The Oracle AQ connection parameters are consistent with those found in your Oracle AQ system. For more information on parameter values that are specific to your Oracle AQ configuration, consult your Oracle AQ system administrator.

The following table lists and describes the parameters for connecting to your Oracle AQ target.

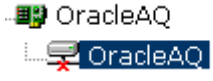
Parameter	Description
Host	Name of the server on which the Oracle database instance resides.
Port	Port number on which the database is listening.
SID	Unique name of the database service, chosen by the database administrator or the person who installed Oracle.
User	Oracle database user ID to access the Oracle database underlying the Oracle AQ system. The user ID must have database access to the interface tables being accessed.
Password	Password associated with the specified user ID.
AQName	Queue that enables asynchronous communication between your application and the Oracle database.
AQTable	Table in the Queue being queried.

5. Click *Finish*.

   In the left pane, the target name appears under the node where you created the new target. You have finished creating the new target.

Procedure How to Connect to a Defined Target

1. In the left pane of Application Explorer, expand the *Service Adapters* node.
2. Expand the *OracleAQ* node and select the defined target (for example, OracleAQ) to which you want to connect.

3. In the right pane, move the pointer over *Operations* and select *Connect*.

   The connection dialog box opens displaying the connection information.

4. Verify your connection parameters and then click *OK*.

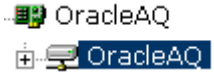
   If the parameters are correct and the Oracle AQ component is available, the node under the Oracle AQ node displays a plus sign indicating that you are connected to the defined target. Otherwise, an error message appears in the right pane.

Disconnecting From a Defined Target

Although you can maintain multiple open connections, iWay Software recommends disconnecting from targets that are not in use.

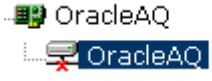
Procedure How to Disconnect From a Defined Target

1. In the left pane of Application Explorer, expand the *Service Adapters* node.
2. Expand the *OracleAQ* node and select the defined target (for example, Oracle AQ) from which you want to disconnect.

3. In the right pane, move the pointer over *Operations* and select *Disconnect*.

   Disconnecting from the application closes the connection, but the connection still appears in the left pane so that you can re-open it. The connection node now has an x icon, indicating that it is closed, as shown in the following figure:

   When you want to re-establish a connection, Connect is available from the pop-up menu.

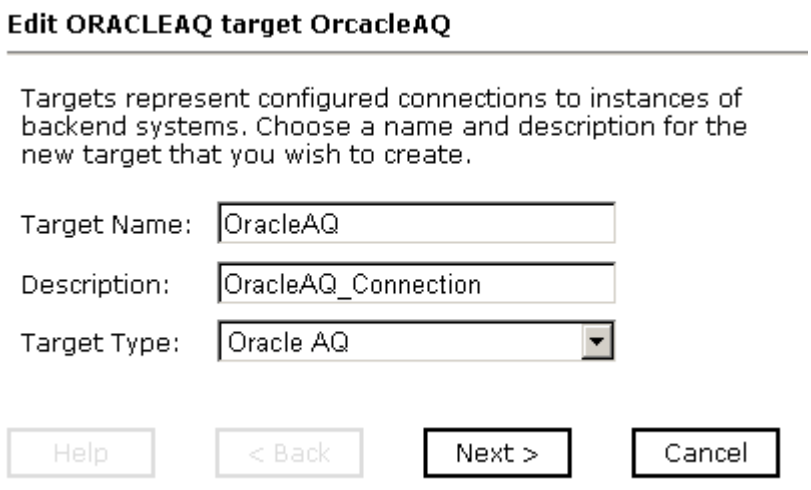
Editing a Defined Target

After you create a defined target using Application Explorer, you can edit any information that you provided during the creation process.

Procedure How to Edit a Defined Target

1. In the left pane of Application Explorer, expand the *Service Adapters* node.
2. Expand the *OracleAQ* node and select the defined target (for example, Oracle AQ) you want to edit.
3. In the right pane, move the pointer over *Operations* and select *Edit*.

The Edit dialog box opens in the right pane containing three fields (Target Name, Description, and Target Type) and two action buttons (Next and Cancel).



4. Modify the target information as required and then click *Next*.

   The Set connection info dialog box opens in the right pane containing the connection parameters and three action buttons (Back, Finish, and Cancel).

5. Modify the connection information as required and then click *Finish*.

Deleting a Defined 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 Oracle AQ targets in the left pane of the explorer.

Procedure How to Delete a Defined Target

1. In the left pane of Application Explorer, expand the *Service Adapters* node.
2. Expand the *OracleAQ* node to view the list of connections.
3. Click the defined target you want to delete.
4. In the right pane, move the pointer over *Operations* and select *Delete*.

   A message appears, prompting you to confirm the deletion of the node.

5. Click *OK*.

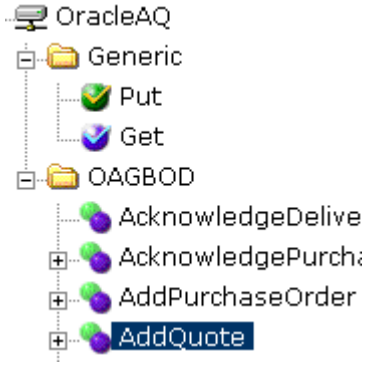
   The node disappears from the list of available connections.

Creating Schemas for Services

Application Explorer creates schemas for services that interact directly with your target Oracle AQ system. Each service the adapter uses must be defined by an XML schema. In order to use services, you must generate XML schemas for service requests and service responses. These schemas are dependent upon the application listening for the document being posted by the service.

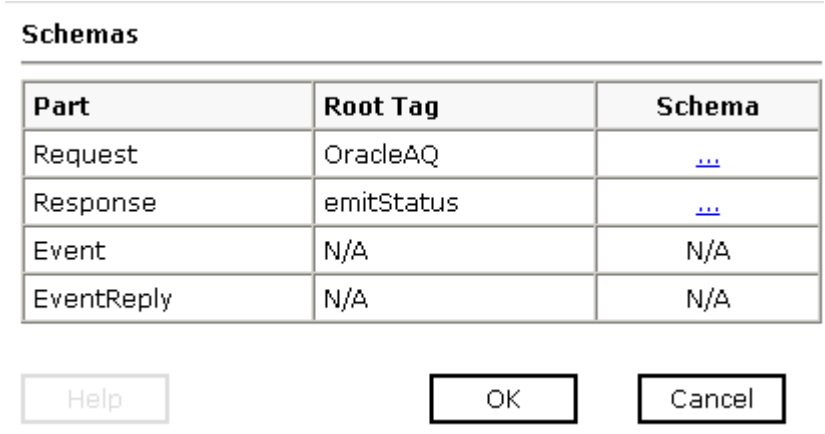
Procedure How to Create Schemas for Services

1. If you are not connected to an Oracle AQ target, connect to one, as described in *How to Connect to a Defined Target* on page 2-5.
2. Click the service for which you want to generate the schemas (for example, AddQuote). Note that the adapter supplies a generic queue where you can put services, and a predefined queue (OAGBOD).



3. In the right pane, move the pointer over *Operations* and select *Generate Schema*.

   A table that lists the created schemas appears in the right pane.



   a. To view the request schema, click the ellipsis symbol that is located in the third column of the Request row.

   b. To view the response schema, click the ellipsis symbol that is located in the third column of the Response row.

Reference Schema Location

Application Explorer stores the schemas it creates in subdirectories under the iWay home directory of the machine where it is installed. The exact location of the schemas differs depending on whether you deploy Application Explorer with an iBSE or a JCA configuration.

- When using the adapter with an iBSE configuration, the schemas are stored under a \schemas subdirectory of the iWay home directory, for example,

  ```
  C:\Program
  Files\iway55\bea\ibse\wsdl\schemas\service\OracleAQ\OracleAQ
  ```

  where:

  OracleAQ

  Is the name of the connection to the Oracle AQ system as defined in Application Explorer. Under this directory, Application Explorer creates subdirectories containing schemas.

- When using the adapter with a JCA configuration, the schemas are stored under a \schemas subdirectory of the iWay home directory, for example,

  ```
  C:\Program Files\iWay55\config\base\schemas\OracleAQ\OracleAQ
  ```

  where:

  OracleAQ

  Is the name of the connection to the Oracle AQ system as defined in Application Explorer. Application Explorer stores the schemas in this directory.

Understanding Integration Business Services

Application Explorer provides Web developers with a simple, consistent mechanism for extending the capabilities of the adapter. The Integration Business Services Engine exposes functionality as Web services. It serves as a gateway to heterogeneous back-end applications and databases.

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. For the caller or sender, a Web service can be considered as a "black box" that may require input and delivers a result. A Web service integrates within an enterprise as well as across enterprises on any communication technology stack, whether asynchronous or synchronous, in any format.

Note: In a J2EE Connector Architecture (JCA) implementation of iWay adapters, Web services are not available. When the adapters are deployed to use the iWay Connector for JCA, the Common Client Interface provides integration services using the iWay adapters. For more information, see the *iWay Installation and Configuration for BEA WebLogic* manual and the *iWay Connector for JCA for BEA WebLogic User's Guide*.

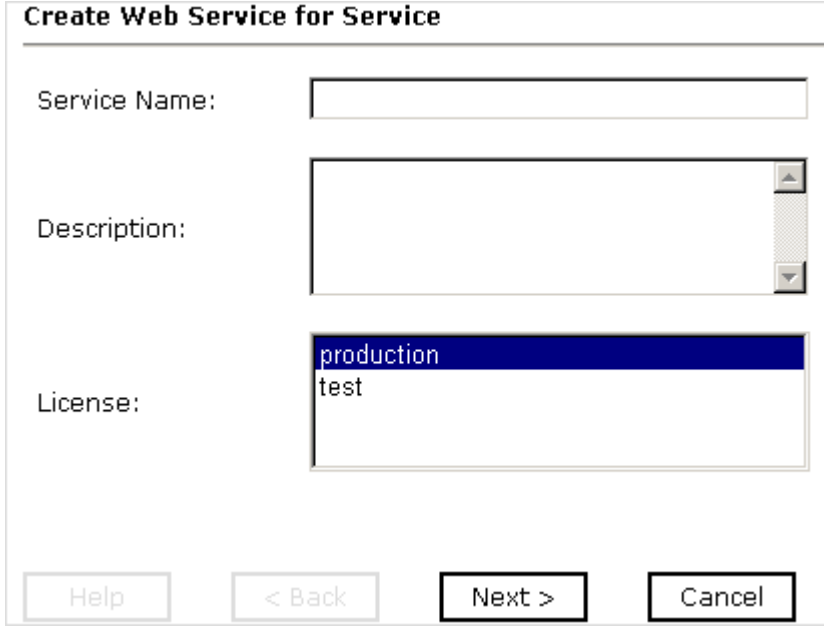
Procedure How to Generate a Business Service

1. If you are not connected to a defined target, connect to one, as described in *How to Connect to a Defined Target* on page 2-5.
2. Click the node containing the service for which you want to create a business service.
3. In the right pane, move the pointer over *Operations* and select *Create Integration Business Service*.

   The Create Web Service information appears in the right pane.

4. Choose whether to create a new service or use an existing service.

   - If you select *Use an existing service*, a drop-down list appears from which you must select the service. Select an existing service and proceed to step 5.
   - If you select *Create a new service*, the Create Web Service dialog box opens in the right pane:



   If you are creating a new service, type the following parameters:

   a. In the Service Name field, type a name to identify the Web service (under the Service node in the left pane of the Integration Business Services tab).

   b. In the Description field, type a brief description of the Web service.

   c. In the License field, select the license(s) with which you want to associate this business service. To select more than one, hold down the *Ctrl* key and click the licenses.

5. Click *Next*.

   Another dialog box with the Method Name and Description fields opens.

   a. In the Method Name field, type a name to specify the name of the SQL statement or stored procedure to be added to the business service.

   b. In the Description field, type a brief description of the method.

6. Click *Finish*.

   Application Explorer switches the view to the Integration Business Services tab, and the new business service appears in the left pane.

Testing a Business Service

After a business service is created, test it to ensure that it functions properly. iWay provides a test tool for testing the business service.

Procedure How to Test a Business Service

1. If you are not on the Integration Business Services tab of Application Explorer, click the tab to access business services.
2. If it is not expanded, expand the list of business services under Integration Business Services.
3. Expand the *Services* node.
4. Select the name of the business service you want to test.

   The business service name appears as a link in the right pane.
5. In the right pane, click the named business services link.

   The test option appears in the right pane. This pane provides a text field in which to paste the XML input or browse to a file that can be uploaded. Below the text field is the browse field and three action buttons.
6. Provide the appropriate XML input.
7. Click *Invoke*.

   The result appears in the right pane.

Generating WSDL From a Web Service

Generating Web Services Description Language (WSDL) from a Web service enables you to make the Web service available to other services within a host server such as BEA WebLogic Server.

Procedure How to Generate WSDL From a Web Service

1. If you are not already in the Integration Business Services tab, click the tab to access business services.
2. In the left pane, expand the list of services to display the Web service for which you want to generate WSDL.
3. Click the Web service.

   The link for the service appears in the right pane.
4. Right-click the *Service Description* link and choose *Save Target As*.
5. Choose a location for the file and specify .wsdl for the extension.

   Note: The file extension must be .wsdl.
6. Click *Save*.

Identity Propagation

If you test or execute a Web service using a third party XML editor, for example XMLSPY, the Username and Password values that you specify in the SOAP header must be valid and are used to connect to Oracle AQ. The user name and password values that you provided for Oracle AQ 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>
```

Note: You can remove the following tags from the SOAP header, since they are not required:

```
<m:disposition>String</m:disposition>
<m:language>String</m:language>
```

CHAPTER 3

Listening for Events in Oracle AQ

Topics:

- Understanding iWay Event Functionality
- Creating, Editing, or Deleting an Event Port
- Creating, Editing, or Deleting an Event Channel

Application Explorer, deployed to a BEA WebLogic Server., enables you to listen for events posted to a Oracle AQ queue. This section describes how to use the iWay Adapter for Oracle AQ for BEA WebLogic to listen, react, and dispose of event data coming from the Oracle AQ queue.

Understanding iWay Event Functionality

Events are generated as a result of a document arriving on an Oracle AQ queue. For example, an update to an application (for example, Oracle applications) results in a document being posted to an Oracle AQ queue. If your integration application must perform an act upon this event, your integration application is the consumer of the event.

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

- Port

  A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and resulting location of the event data. The port defines the end point of the event consumption. For more information, see *Creating, Editing, or Deleting an Event Port on page 3-3*.

- Channel

  A channel represents configured connections to particular instances of back-end systems or protocols. A channel binds one or more event ports to a particular listener managed by an adapter. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

Creating, Editing, or Deleting an Event Port

The following topics describe how to create, edit, or delete an event port using Application Explorer.

Creating an Event Port From the iWay Event Adapters Tab

The following procedures describe how to create an event port from the iWay Event Adapters tab for various dispositions. You can switch between an iBSE and a JCA deployment by using the drop-down menu in the upper right of Application Explorer.

The following dispositions are available when using Application Explorer in conjunction with an iBSE deployment:

- File
- iBSE
- MSMQ
- JMSQ
- SOAP
- HTTP
- MQSeries

Note: The MAIL disposition option will be supported in a future release.

The following dispositions are available when using Application Explorer in conjunction with a JCA connector deployment.

- File
- JMSQ
- HTTP
- MQSeries

Procedure How to Create an Event Port for File

1. Click the *Event Adapters* tab.

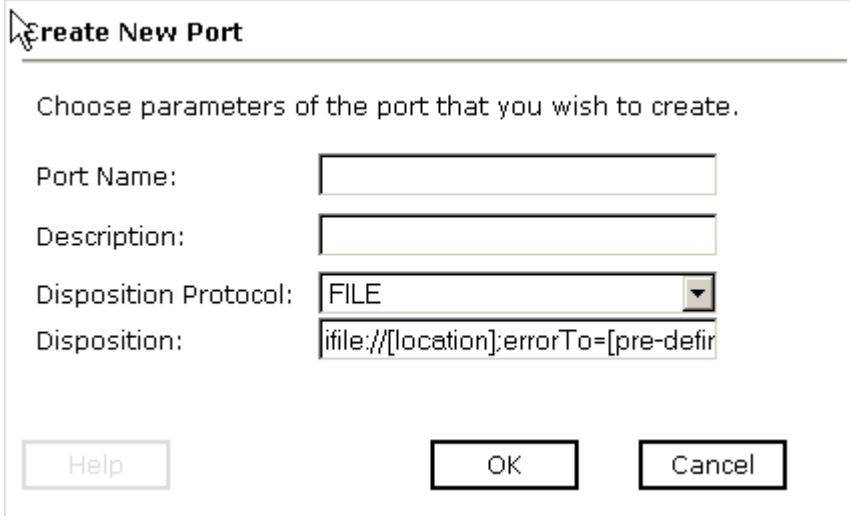
   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.

3. Select the *ports* node.

4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

   The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



   a. Type a name and a brief description for the event port.

   b. From the Disposition Protocol drop-down list, select *FILE*.

   c. In the Disposition field, specify a destination file to which the event data is written.

      When pointing Application Explorer to an **iBSE** deployment, specify the destination file using the following format:

      ```
      ifile://[location];errorTo=[pre-defined port name or another
      disposition url]
      ```

      When pointing Application Explorer to a **JCA** deployment, specify the full path to the directory.

The following table lists and defines the parameters for the File disposition.

Parameter	Description
location	Destination and file name of the document where event data is written. For example, D:\in\x.txt
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

   The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

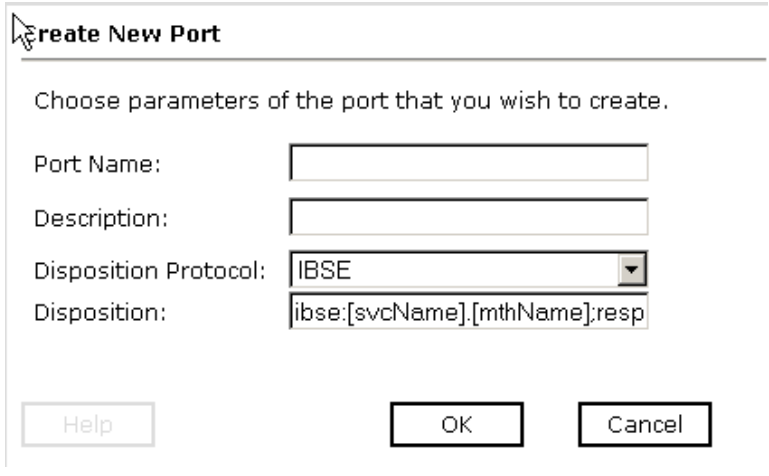
Procedure How to Create an Event Port for iBSE

1. Click the *Event Adapters* tab.

   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.
3. Select the *ports* node.
4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



a. Type a name and a brief description for the event port.

b. From the Disposition Protocol drop-down list, select *IBSE*.

c. In the Disposition field, type an iBSE destination using the following format:

```
ibse:[svcName].[mthName];responseTo=[pre-defined port name or
another disposition url];errorTo=[pre-defined port name or another
disposition url]
```

The following table lists and defines the parameters for the iBSE disposition.

Parameter	Description
svcName	Name of the service created with iBSE.
mthName	Name of the method created for the Web service.
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

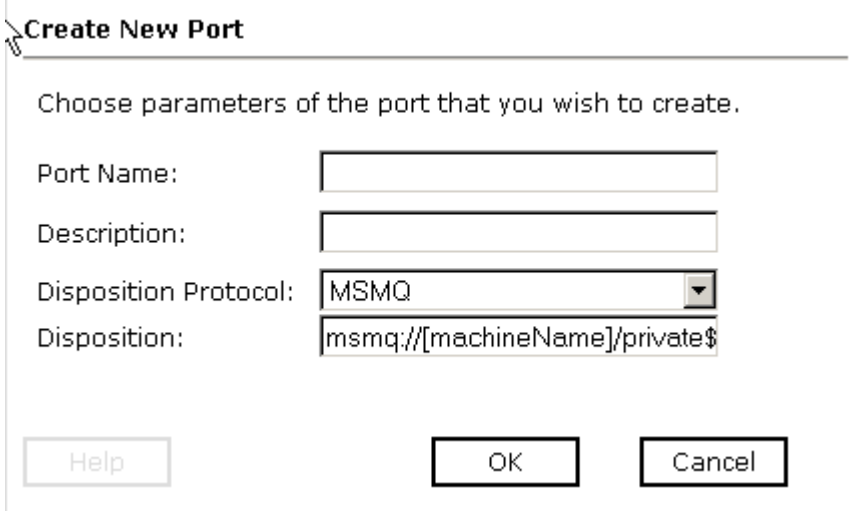
Procedure How to Create an Event Port for MSMQ

1. Click the *Event Adapters* tab.

   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.
3. Select the *ports* node.
4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

   The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



   a. Type a name and a brief description for the event port.
   b. From the Disposition Protocol drop-down list, select *MSMQ*.
   c. In the Disposition field, type an MSMQ destination using the following format:

```
msmq:/[machineName]/private$/[qName];errorTo=[pre-defined port
name or another disposition url]
```

Note: This syntax is for a private queue. Private queues are queues that are not published in Active Directory. They appear only on the local computer that contains them. Private queues are accessible only by Message Queuing applications that recognize the full path name or format name of the queue.

The following table lists and defines the parameters for the MSMQ disposition.

Parameter	Description
machineName	Machine name where the Microsoft Queuing system is running.
qName	Name of the private queue where messages are placed.
errorTo	Predefined port name or another disposition URL to which error logs are sent. Optional.

5. Click *OK*.

   The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

   You are now ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

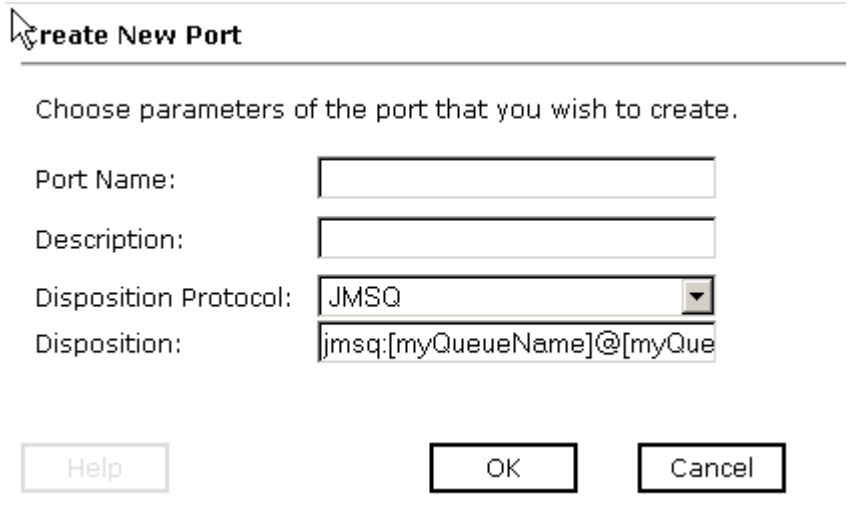
Procedure How to Create an Event Port for JMSQ

1. Click the *Event Adapters* tab.

   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.
3. Select the *ports* node.
4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



a. Type a name and a brief description for the event port.

b. From the Disposition Protocol drop-down list, select *JMSQ*.

c. In the Disposition field, type a JMS destination.

When pointing Application Explorer to an **iBSE** deployment, specify the destination using the following format:

```
jmsq:[myQueueName]@[myQueueFac];jndiurl=[myurl];jndifactory=[myfac
tory];user=[user];password=[xxx];errorTo=[pre-defined port name or
another disposition url]
```

When pointing Application Explorer to a **JCA** deployment, specify the destination using the following format:

```
jms:jmsqueue@jmsfactory;jndiurl=;jndifactory=;
```

The following table lists and defines the parameters for the JMSQ disposition.

Parameter	Description
myQueueName or jmsqueue	JNDI name of a queue to which events are emitted.

Parameter	Description
myQueueFac or jmsfactory	Resource that contains information about the JMS Server. The WebLogic connection factory is: `javax.jms.QueueConnectionFactory`

jndiurl	URL to use to contact the JNDI provider. The syntax of this URL depends on the JNDI provider being used. This value corresponds to the standard JNDI property,
	`java.naming.provider.url.`
	The URL of the WebLogic Server is
	`t3://host:port`
	where:
	`host`
	Is the machine name where WebLogic Server is installed.
	`port`
	Is the port on which WebLogic Server is listening. The default port, if not changed at installation, is 7001.

jndifactory	Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider. For WebLogic Server, the WebLogic factory is: `weblogic.jndi.WLInitialContextFactory.`
user	Valid user name required to access a JMS server.
password	Valid password required to access a JMS server.
errorTo	Predefined port name or another disposition URL to which error logs are sent. Optional.

5. Click *OK*.

The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

You are now ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

Procedure How to Create a Port for SOAP

1. Click the *Event Adapters* tab.

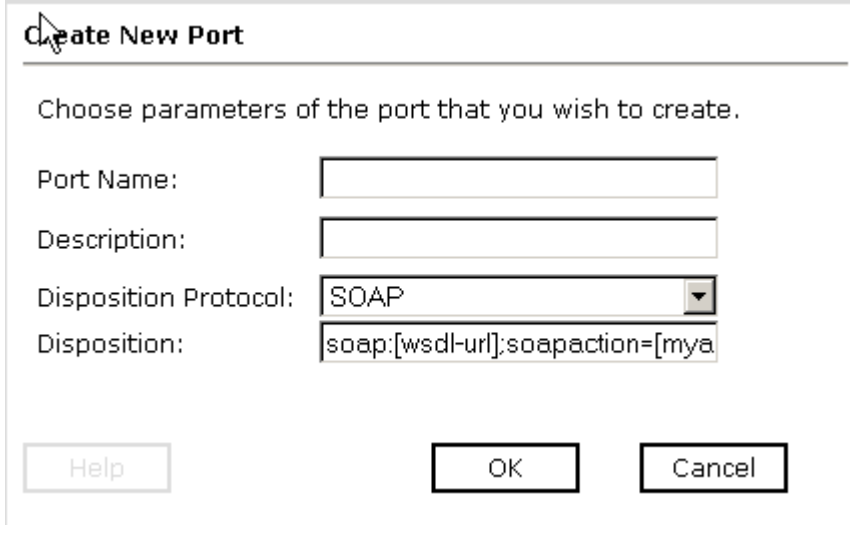
   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.

3. Select the *ports* node.

4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

   The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



   a. Type a name and a brief description for the event port.

   b. From the Disposition Protocol drop-down list, select *SOAP*.

   c. In the Disposition field, type a SOAP destination using the following format:

```
soap:[wsdl-url];soapaction=[myaction];method=[web service
method];namespace=[namespace];responseTo=[pre-defined port name or
another disposition URL];errorTo=[pre-defined port name or another
disposition url]
```

The following table lists and defines the parameters for the SOAP disposition.

Parameter	Description

wsdl-url	The URL to the WSDL file that is required to create the SOAP message. For example:
	`http://localhost:7001/ibse/IBSEServlet/test/webservice.ibs?wsdl`
	where:
	`webservice`
	Is the name of the Web service you created using Application Explorer.
	This value can be found by navigating to the Integration Business Services tab and opening the *Service Description* link in a new window. The WSDL URL appears in the Address field.
	You can also open the WSDL file in a third party XML editor (for example, XMLSPY) and view the SOAP request settings to find this value.

soapaction	The method that will be called by the SOAP disposition. This value can be found in the WSDL file.
method	Web service method you are using. This value can be found in the WSDL file.
namespace	XML namespace you are using. This value can be found in the WSDL file.
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the port you created.

You are now ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

Procedure How to Create an Event Port for HTTP

1. Click the *Event Adapters* tab.

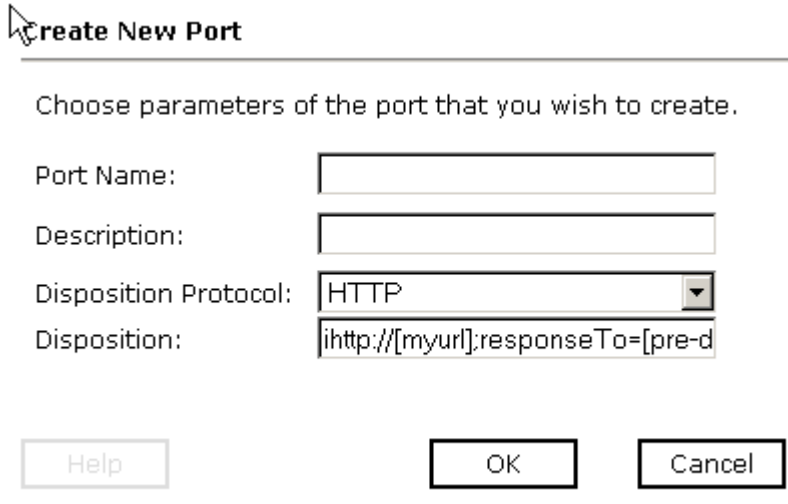
   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.

3. Select the *ports* node.

4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

   The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



   a. Type a name and a brief description for the event port.

   b. From the Disposition Protocol drop-down list, select *HTTP*.

   c. In the Disposition field, type an HTTP destination.

      When pointing Application Explorer to an **iBSE** deployment, specify the destination using the following format:

      ```
      ihttp://[myurl];responseTo=[pre-defined port name or another
      disposition url];
      ```

      When pointing Application Explorer to a **JCA** deployment, specify the destination using the following format:

      ```
      http://host:port/uri
      ```

The following table lists and defines the parameters for the HTTP disposition when using an **iBSE** deployment.

Parameter	Description
myurl	URL target for the post operation, for example, `http://myhost:1234/docroot`
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

The following table lists and defines the parameters for the HTTP disposition when using a **JCA** deployment.

Parameter	Description
host:port	Combination of the name of the host on which BEA WebLogic Server resides and the port on which the server is listening for the post operation.
uri	Universal resource identifier that completes the URL specification.

5. Click *OK*.

   The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

   You are now ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

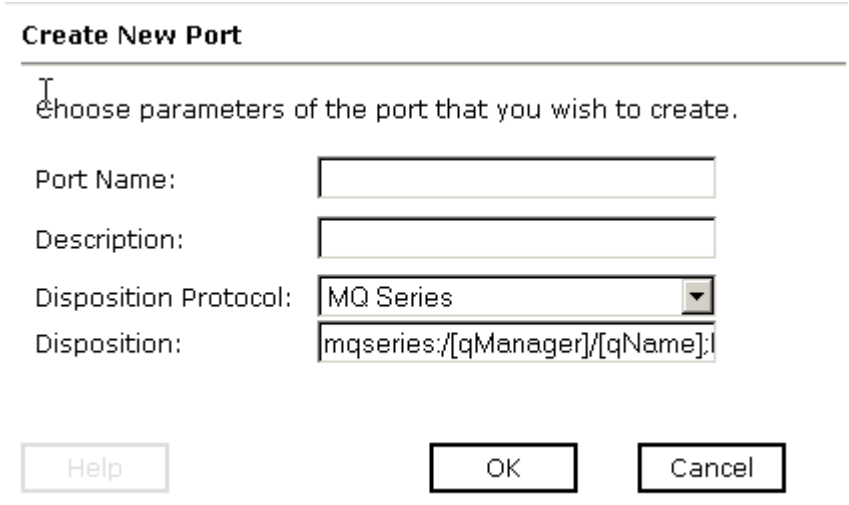
Procedure How to Create an Event Port for MQSeries

1. Click the *Event Adapters* tab.

   The Event Adapters window opens.

2. In the left pane, expand the *OracleAQ* node.
3. Select the *ports* node.
4. In the right pane, move the pointer over *Operations* and select *Add a new port*.

The Create New Port dialog box opens in the right pane containing fields to enter a name, description, disposition protocol, and disposition.



a. Type a name and a brief description for the event port.

b. From the Disposition Protocol drop-down list, select *MQSeries*.

c. In the Disposition field, type an MQSeries destination.

When pointing Application Explorer to an **iBSE** deployment**,** specify the destination using the following format:

```
mqseries:/qManager/
qName;host=[hostname];port=[port];channel=[channnelname];errorTo=[
pre-defined port name or another disposition url]
```

When pointing Application Explorer to a **JCA** deployment, specify the destination using the following format:

```
mq:qmanager@respqueue;host=;port=;channel=
```

The following table lists and defines the parameters for the MQSeries disposition.

Parameter	Description
qManager	Name of the queue manager to which the server must connect.
qName or respqueue	Name of the queue where messages are placed.
host	Host on which the MQ server is located (for the MQ Client only).
port	Number to connect to an MQ server queue manager (for the MQ client only).
channel	Case-sensitive name of the channel that connects with the remote MQ server queue manager (for the MQ client only). SYSTEM.DEF.SVRCONN is the default channel name for MQSeries.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

The port appears under the ports node in the left pane. In the right pane, a table appears that summarizes the information associated with the event port you created.

You are now ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page 3-17.

Editing and Deleting an Event Port

The following procedures describe how to edit and delete an event port.

Procedure How to Edit an Event Port

1. In the left pane, select the event port you want to edit.
2. In the right pane, move the pointer over *Operations* and select *Edit*.

   The Edit Port dialog box opens.
3. Make the required changes and click *OK*.

Procedure How to Delete an Event Port

1. In the left pane, select the event port you want to delete.
2. In the right pane, move the pointer over *Operations* and select *Delete*.

   A confirmation dialog box opens.
3. To delete the event port you selected, click *OK*.

   The event port disappears from the list in the left pane.

Creating, Editing, or Deleting an Event Channel

The following topics describe how to create, edit, or delete a channel for your iWay Event. All defined event ports must be associated with a channel.

Creating a Channel

The following procedure describes how to create a channel using Application Explorer.

Procedure How to Create a Channel

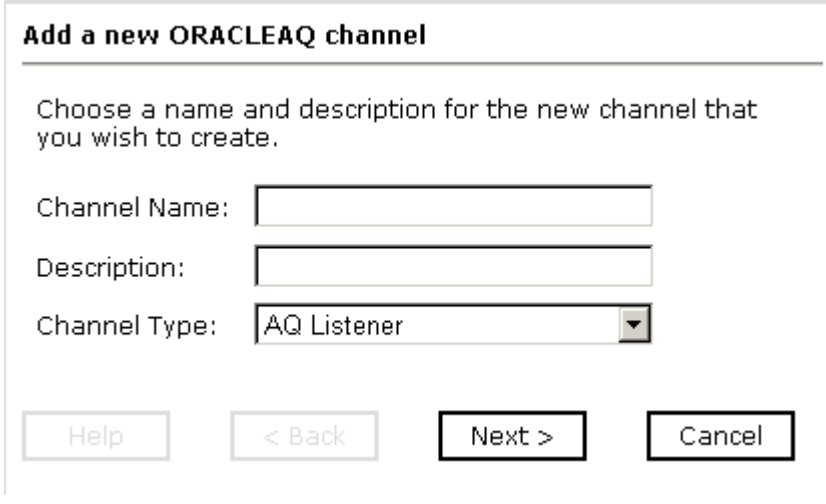
1. Click the *Event Adapters* tab.

   The Event Adapters window opens. The iWay Adapters that appear in the left pane support events.
2. In the left pane, expand the *OracleAQ* node.

   The ports and channels nodes appear in the left pane.
3. Select the *channels* node.

4. In the right pane, move the pointer over *Operations* and select *Add a new channel*.

The Add a new ORACLEAQ channel dialog box opens in the right pane containing fields to enter a name, description, and channel type.



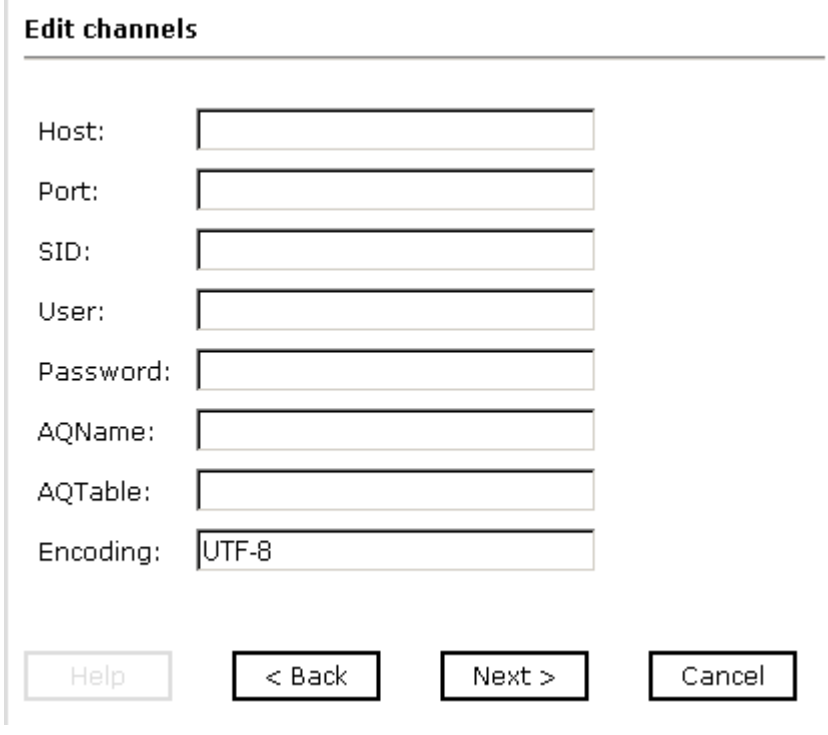
a. In the Channel Name field, type a descriptive name for the channel, for example, NewChannel.

b. In the Description field, type a brief description for the channel.

c. In the Channel Type field, specify AQ Listener.

5. Click *Next*.

The Edit Channels dialog box opens in the right pane containing parameters and three action buttons (Back, Finish, and Cancel).



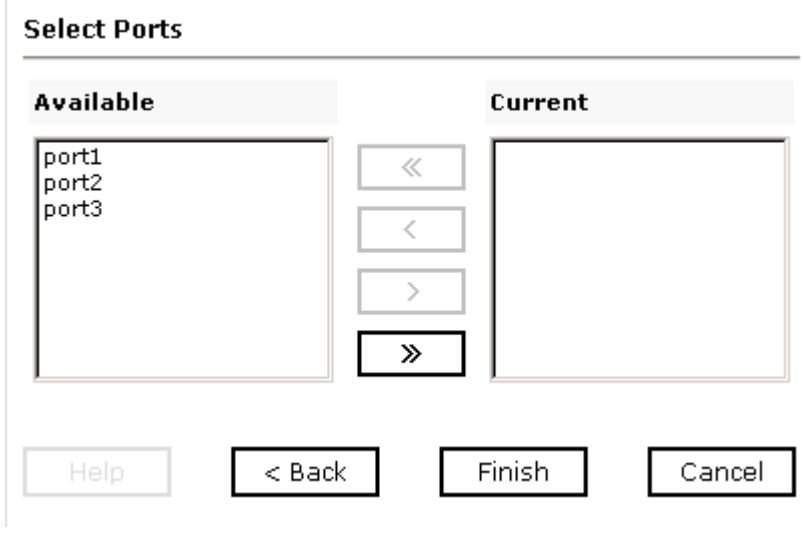
a. Specify the parameters in the Edit channels dialog box.

The following table lists and describes the parameters for creating an Oracle AQ event.

Parameter	Description
Host	Name of the server on which the Oracle database instance resides.
Port	Port number on which the database is listening.
SID	Unique name of the database service, chosen by the database administrator or the person who installed Oracle.
User	Oracle database user ID to access the Oracle database underlying the Oracle AQ system. The user ID must have database access to the interface tables being accessed.
Password	Password associated with the specified user ID.
AQName	Queue that enables asynchronous communication between your application and the Oracle database.
AQTable	Table in the Queue being queried.
Encoding	Code representing data (for example, UTF-8).

6. Click *Next*.

The Select Ports dialog box opens in the right pane containing lists for available and current ports and buttons to enable you to move ports from one list to the other:



a. Select an event port from the list of available ports. To select more than one, hold down the *Ctrl* key and click the ports.

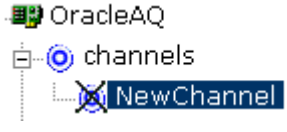
b. Click the single right (>) arrow button to transfer the selected port(s) to the list of current ports. To transfer all event ports, click the double right (>>) arrow button.

7. Click *Finish*.

Summary information appears in the right pane:

The summary information provides the channel description, channel status, and current ports. All the information is associated with the channel you created.

The channel also 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.

Procedure How to Start and Stop a Channel

1. Expand the *Event Adapters* node.

2. Expand the *OracleAQ* node.

3. Select the channel you want to start or stop.

4. To start the channel, move the pointer over *Operations* and select *Start the channel*.

The channel becomes active and the X over the icon disappears:

5. To stop the channel, move the pointer over *Operations* and select *Stop the channel*.

Editing and Deleting a Channel

The following procedures describe how to edit and delete a channel.

Procedure How to Edit a Channel

1. Expand the *Event Adapters* node.
2. Expand the *OracleAQ* node.
3. In the left pane, select the channel you want to edit.
4. In the right pane, move the pointer over *Operations* and select *Edit*.

   The Edit channels dialog box opens.
5. Make the required changes to the channel configuration and click *Finish*.

Procedure How to Delete a Channel

1. Expand the *Event Adapters* node.
2. Expand the *OracleAQ* node.
3. In the left pane, select the channel you want to delete.
4. In the right pane, move the pointer over *Operations* and select *Delete*.

   A confirmation dialog box opens.
5. To delete the channel you selected, click *OK*.

   The channel disappears from the list in the left pane.

CHAPTER 4

Using Web Services Policy-Based Security

Topics:

- iWay Business Services Policy-Based Security
- Configuring iWay Business Services Policy-Based Security

Servlet Application Explorer provides a security feature called iWay Business Services policy-based security. The following topics describe how this feature works and how to configure it.

Note: For the iWay 5.5 RG2 Release, it is recommended that policy-based security not be enabled.

iWay Business Services Policy-Based Security

iWay Business Services provide a layer of abstraction between the back-end business logic they invoke and the user or application running the business service. This enables easy application integration but raises the issue of controlling the use and execution of critical and sensitive business logic that is run as a business service.

Servlet Application Explorer controls the use of business services that use adapters with a feature called policy-based security. This feature enables an administrator to apply *policies* to iWay Business Services (iBS) to deny or permit their execution.

A *policy* is a set of privileges associated with the execution of a business service that can be applied to an existing or new iBS. When you assign specific rights or privileges inside a policy, you need not recreate privileges for every iBS that has security issues in common with other iWay Business Services. Instead, you can use one policy for many iWay Business Services.

The goal is to secure requests at both the transport and the SOAP request level that is transmitted on the wire. Some policies do not deal with security issues directly but affect the run-time behavior of the business services to which they are applied.

The iBSE administrator creates an instance of a policy type, names it, associates individual users and/or groups (a collection of users), and then applies the policy to one or more business services.

You can assign a policy to an iBS or to a method within an iBS. If a policy is applied only to a method, other methods in that iBS are not governed by it. However, if a policy is applied to the iBS, all methods are governed by it. At run time, the user ID and password that are sent to iBSE in the SOAP request message are checked against the list of users for all policies applied to the specific iBS. The Resource Execution policy type is supported and dictates who can or cannot execute the iBS.

When a policy is not applied, the default value for an iBS is to “grant all.” For example, anyone can execute the iBS until the Resource Execution policy is associated to the iBS. At that time, only users granted execution permission, or those who do not belong to a group that was denied execution permissions, have access to the iBS.

Configuring iWay Business Services Policy-Based Security

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 Servlet Application Explorer. For more information, see *How to Create a User to Associate With a Policy* on page 4-3 or *How to Create a Group to Associate With a Policy* on page 4-5.

An execution policy governs who can execute the business service to which the policy is applied. For more information, see *How to Create an Execution Policy* on page 4-7.

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 iBSE and therefore, need not be applied to an individual business service. You need not create a policy, however, you must enable the Security Policy option in Servlet Application Explorer. For more information, see *How to Configure IP and Domain Restrictions* on page 4-10.

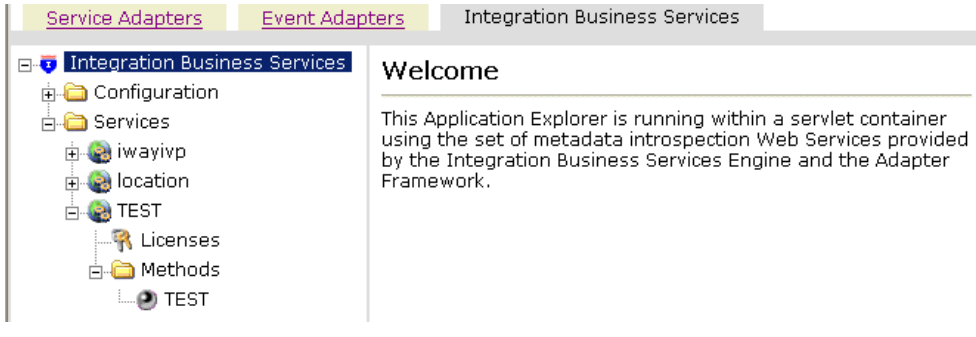
Note: For the iWay 5.5 RG2 Release, it is recommended that policy-based security not be enabled.

Procedure How to Create a User to Associate With a Policy

To create a user to associate with a policy:

1. Open *Servlet Application Explorer*.

   The following image shows the window that opens and includes three tabs corresponding to Service Adapters, Event Adapters, and iWay Business Services. The iWay Business Services tab is active and displays a Welcome screen on the right. The image shows the iWay Business Services node expanded in the left pane.



   a. Click the *iWay Business Services* tab.

   b. Expand the *Configuration* node.

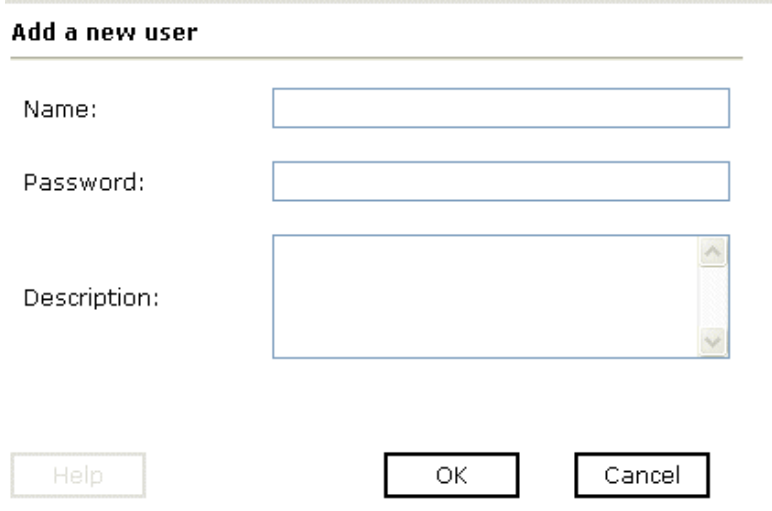
   c. Expand the *Security* node.

   d. Expand the *Users and Groups* node.

e. Select *Users*.

2. In the right pane, move the pointer over *Operations* and select *Add*.

The following image shows the Add a new user pane that opens and includes fields where you enter a user name, a password, and a description of the user. The pane includes a Help button, an OK button to instruct the system to accept inputs, and a Cancel button to escape from the pane.



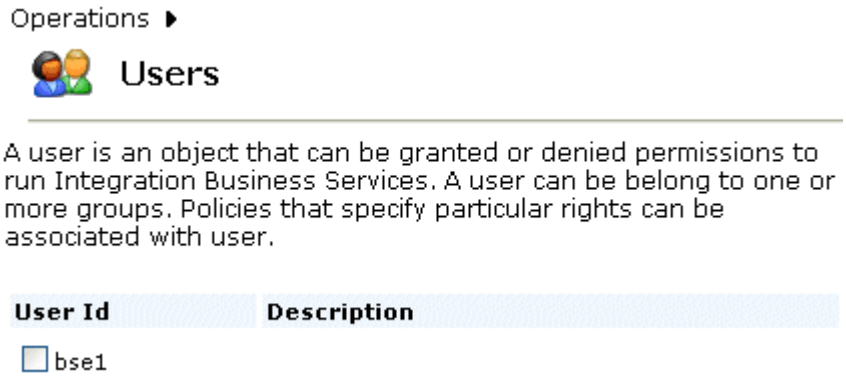
a. In the Name field, type a user ID.

b. In the Password field, type the password associated with the user ID.

c. In the Description field, type a description of the user (optional).

3. Click *OK*.

The following image opens and shows a new user added to the configuration. It includes a definition of a user and a user ID and description.

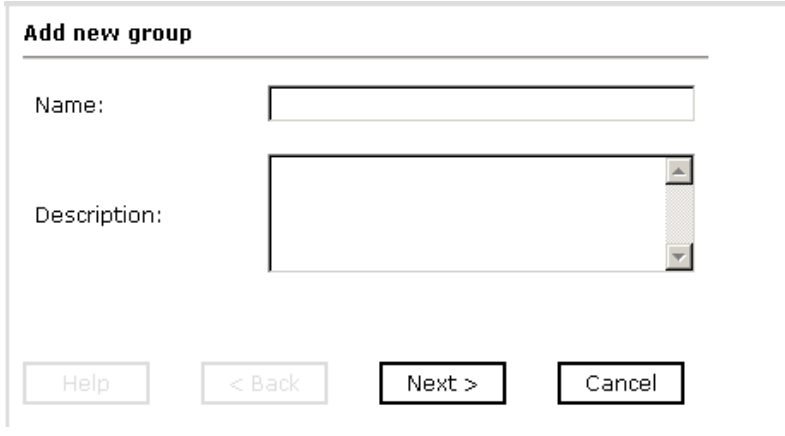


Procedure How to Create a Group to Associate With a Policy

To create a group to associate with a policy:

1. Open *Servlet Application Explorer*.
   a. Click the *iWay Business Services* tab.
   b. Expand the *Configuration* node.
   c. Expand the *Security* node.
   d. Expand the *Users and Groups* node.
   e. Select *Groups*.
2. In the right pane, move the pointer over *Operations* and click *Add*.

The following image shows the Add new group pane that opens with fields where you enter a name and a description for the group. To continue after typing inputs, click the *Next* button. The pane also includes a Help button, a Back button to return to the previous screen, and a Cancel button to escape from the pane.

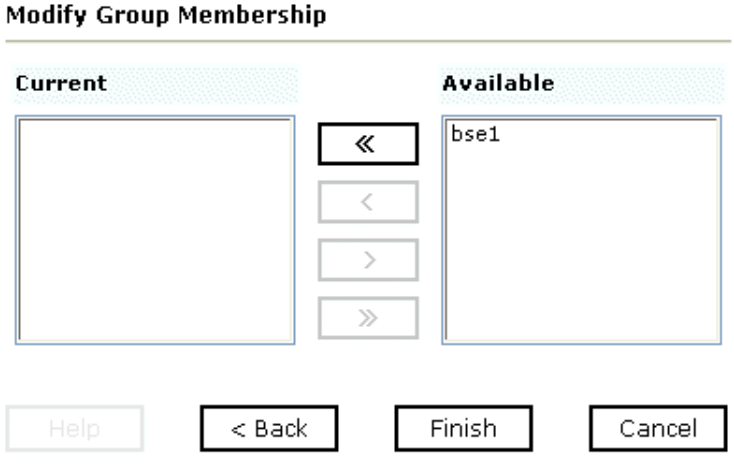


a. In the Name field, type a a name for the group.

b. In the Description field, type a description for the group (optional).

3. Click *Next*.

The following image shows the Modify Group Membership pane where you can move users to or from a group using the arrow keys to move them between the Current and Available lists and then clicking the Finish button. The pane includes a Help button, a Back button to return to the previous screen, and a Cancel button to escape from the pane.

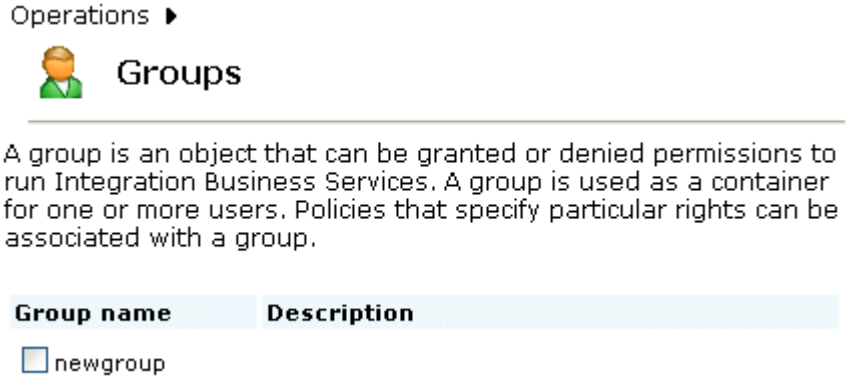


You can either highlight a single user in the list of available users and add it to the current list by clicking the left arrow, or you can click the double left arrow to add all users in the list of available users to the group.

4. After you select a minimum of one user, click *Finish*.

   The new group is added.

   The following image shows a pane with a new group added to the configuration. It includes a definition of a group and the group name and description.



Procedure How to Create an Execution Policy

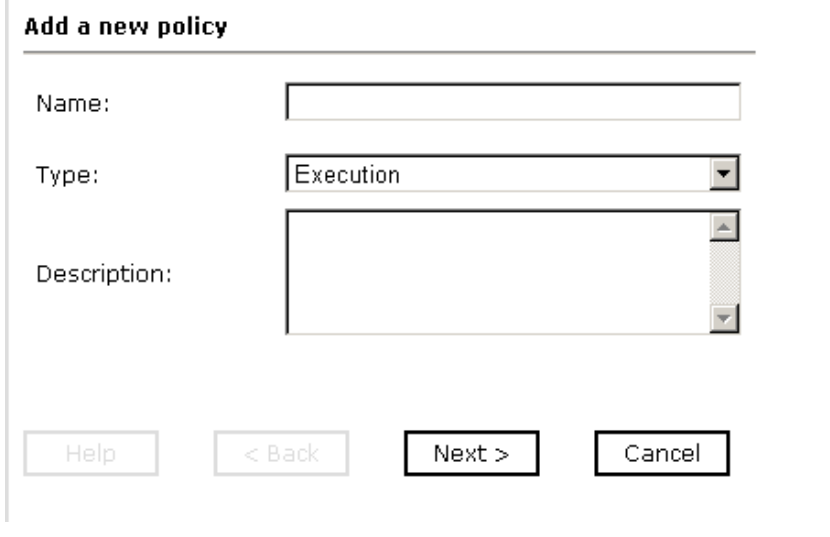
To create an execution policy:

1. Open *Servlet Application Explorer*.
   a. Click the *iWay Business Services* tab.
   b. Expand the *Configuration* node.
   c. Select *Policies*.

The following image shows the Policies pane on the right where you apply a policy. The Operations menu becomes available with three options, Build/Rebuild, Add, and Refresh.

2. Move the pointer over *Operations* and click *Add*.

The following image shows the Add a new policy pane that opens with fields for entering the name, type, and description of the policy. To continue, click the *Next* button. The pane includes a Help button, a Back button to return to the previous screen, and a Cancel button to escape from the pane.



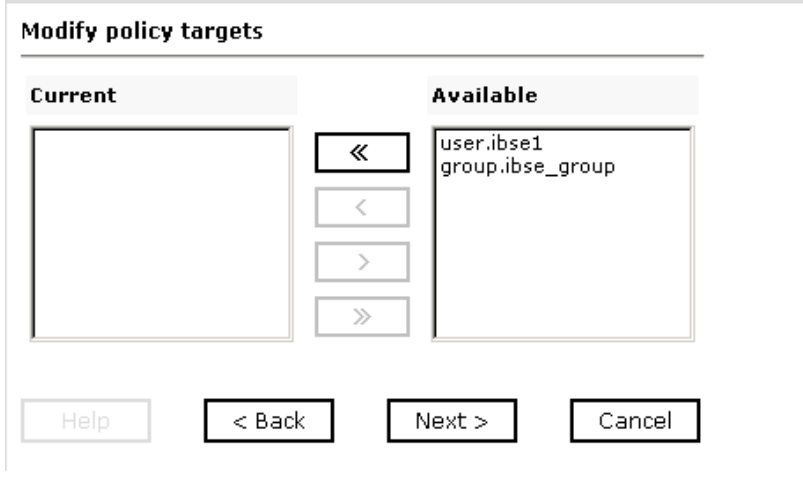
a. In the Name field, type a a name for the policy.

b. From the Type drop-down list, select *Execution*.

c. In the Description field, type a description for the policy (optional).

3. Click *Next*.

The following image shows the Modify policy targets pane that opens and includes a list of current and available targets and arrow buttons to move targets from one list to the other. The pane also includes a Help button, a Back button to return to the previous screen, a Next button to continue to the next screen, and a Cancel button to escape from the pane.

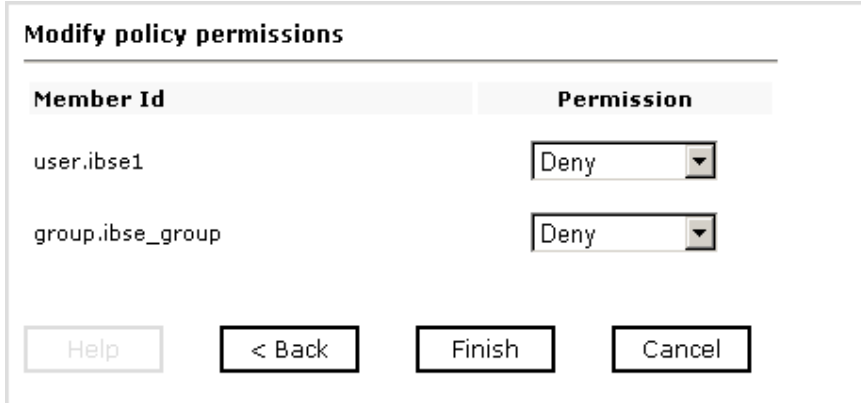


4. Select a minimum of one user or group from the Available pane.

Note: This user ID is checked against the value in the user ID element of the SOAP header sent to iBSE in a SOAP request.

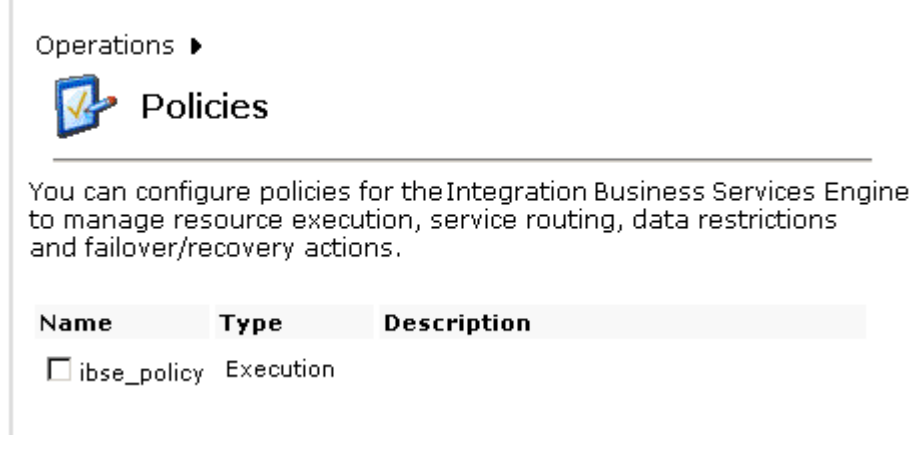
5. Click *Next*.

The following image shows the Modify policy permissions pane that opens and includes drop-down lists where you can select to grant or deny permission to members and then click a button to finish. The pane also includes a Help button, a Back button to return to the previous screen, and a Cancel button to escape from the pane.



6. To assign whether users or groups may execute the iBSE, select *Grant* to permit execution or *Deny* to restrict execution from a Permission drop-down list.
7. Click *Finish*.

   The following image shows the pane that summarizes your configuration. It includes a definition of policies and the name, type, and description of the policies.



Procedure How to Configure IP and Domain Restrictions

To configure IP and domain restrictions:

1. Open *Servlet Application Explorer.*

a. Select the *iWay Business Services* tab.

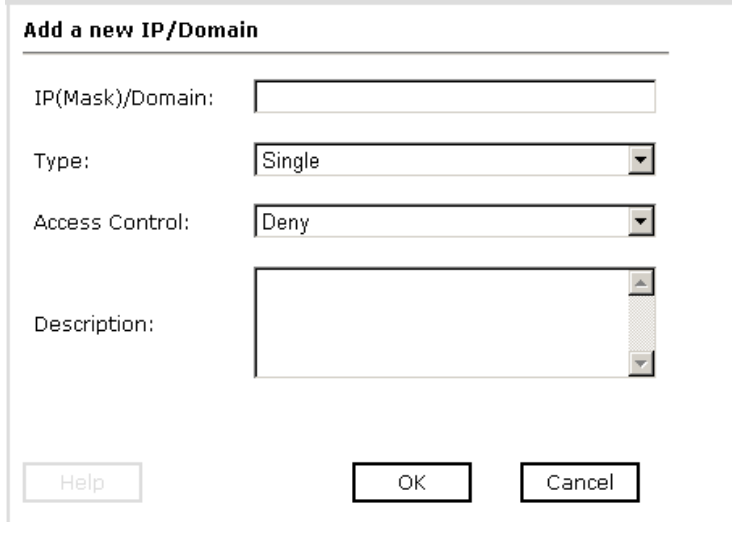
b. Expand the *Configuration* node.

c. Expand the *Security* node.

d. Select *IP and Domain*.

2. In the right pane, move the pointer over *Operations* and click *Add*.

The following image shows the Add a new IP/Domain pane that opens where you enter information for the IP/Domain in four fields. You must select a type of restriction from a drop-down list before you can enter information in the IP(Mask)/Domain field. The pane also includes a Help button, an OK button to instruct the system to accept inputs, and a Cancel button to escape from the pane.



a. From the Type drop-down list, select the type of restriction.

b. In the IP(Mask)/Domain field, type the IP or domain name using the following guidelines.

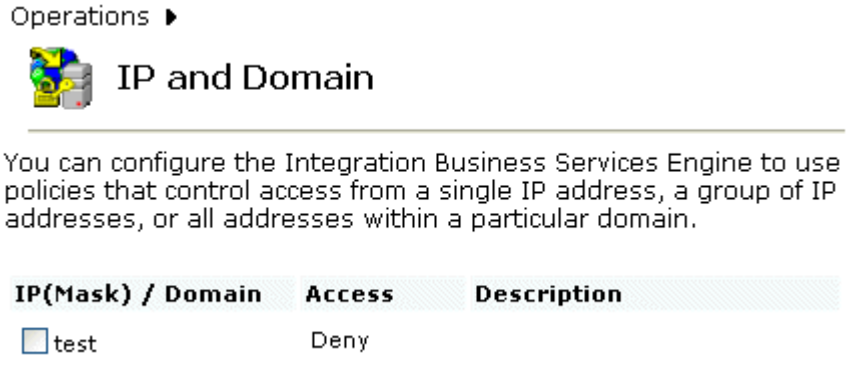
If you select Single (Computer) from the Type drop-down list, you must provide the IP address for that computer. If you only know the DNS name for the computer, click *DNS Lookup* to obtain the IP Address based on the DNS name.

If you select Group (of Computers), you must provide the IP address and subnet mask for the computer group.

If you select Domain, you must provide the domain name, for example, yahoo.com.

3. From the Access Control drop-down list, select *Grant* to permit access or *Deny* to restrict access for the IP addresses and domain names you are adding.
4. Click *OK*.

   The following image shows the pane that opens and summarizes your configuration including the domain name, whether access is granted or denied, and a description (optional).



CHAPTER 5

Management and Monitoring

Topics:

- Managing and Monitoring Services and Events Using iBSE
- Managing and Monitoring Services and Events Using the JCA Test Tool
- Setting Engine Log Levels
- Configuring Connection Pool Sizes
- Migrating Repositories
- Exporting or Importing Targets
- Retrieving or Updating Web Service Method Connection Information
- Starting or Stopping a Channel Programmatically

After you create services and events using Servlet Application Explorer, you can use managing and monitoring tools provided by the Integration Business Services Engine (iBSE) and the iWay Connector for JCA to measure the performance of your run-time environment. This section describes how to configure and use these features.

Managing and Monitoring Services and Events Using iBSE

Integration Business Services Engine (iBSE) provides a console to manage and monitor services and events currently in use and to display resource usage and invocation statistics. These indicators can help you adjust your environment for optimum efficiency.

The following monitoring levels are available for services:

- System
- Service
- Method

The following monitoring levels are available for events:

- System
- Channel
- Port

Procedure: How to Configure Monitoring Settings

To configure monitoring settings:

1. Ensure that your BEA WebLogic Server is started.
2. To access the monitoring console, enter the following URL in your Web browser:

   `http://localhost:port/ibse/IBSEConfig`

   where:

   localhost

   Is the machine where the application server is running.

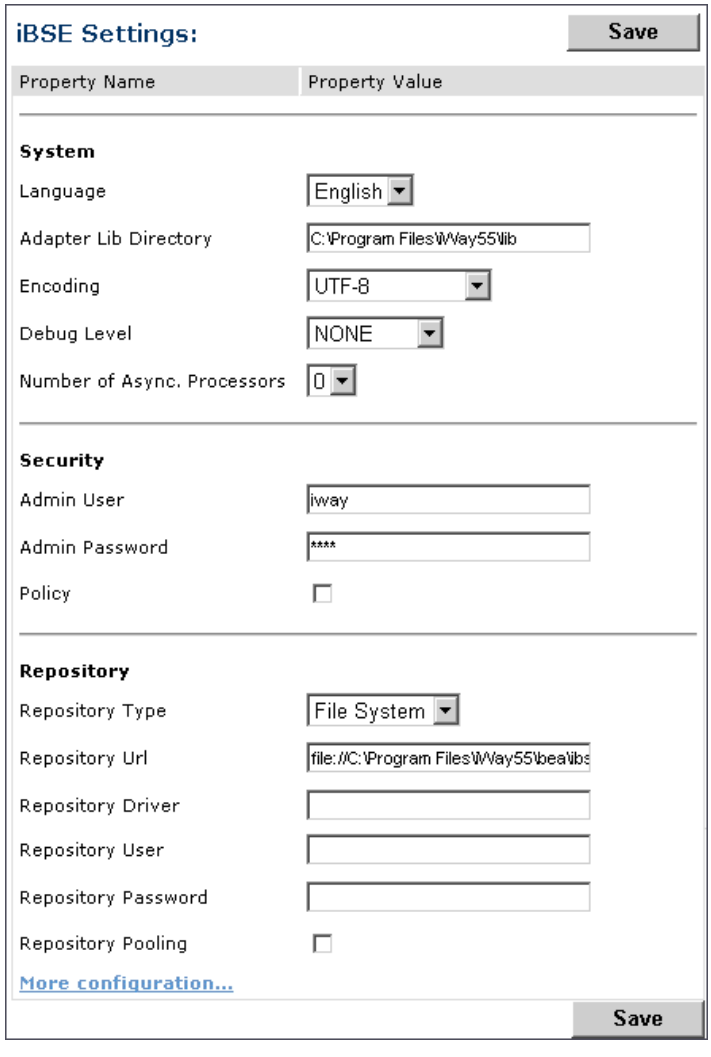
   port

   Is the HTTP port for the application server.

   The following image shows the iBSE Settings window that opens. It lists property names and includes fields where you can enter values for each property. To configure system settings, the System pane contains drop-down lists for selecting language, encoding, the debug level, and the number of asynchronous processors. It also contains a field where you can enter a path to the adapters lib directory.

   To configure security settings, the Security pane contains fields for typing the Admin User name and the associated password and a check box for specifying policy.

To configure repository settings, the Repository pane contains a drop-down list for selecting the repository type, fields to type information for the repository URL, driver, user, and password, and a check box where you can enable repository pooling. In the upper and lower right of the window is a Save button. In the lower left of the window is an option to click to access more configuration settings.



3. Click *More configuration*.

Tip: To access the monitoring console directly, enter the following URL in your Web browser:

`http://localhost:port/ibse/IBSEStatus`

where:

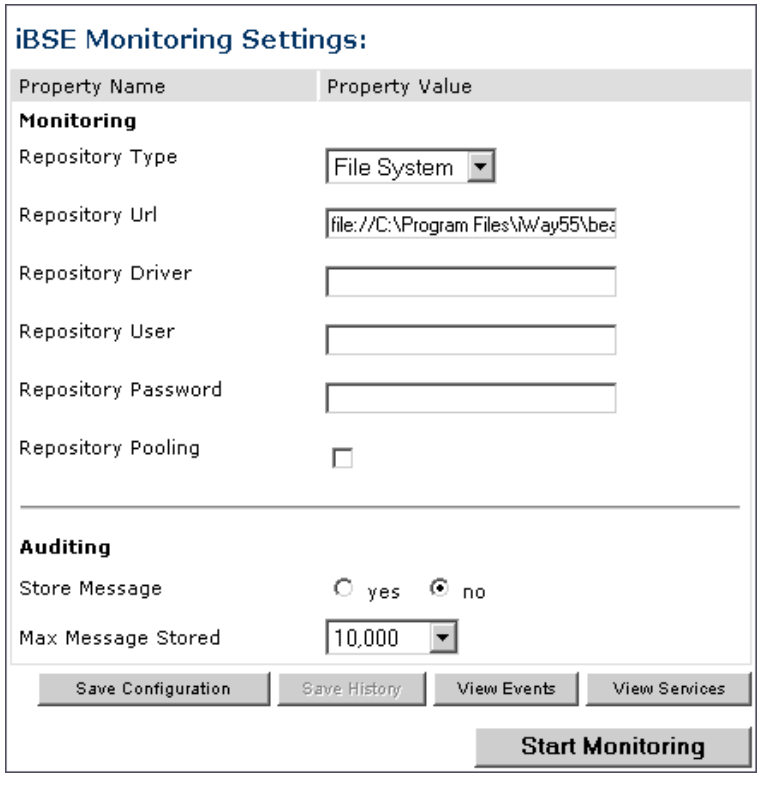
localhost

Is the machine where the application server is running.

port

Is the HTTP port for the application server.

The following image shows the iBSE Monitoring Settings window that opens. It lists property names and includes a corresponding field where you can enter values for each property. The Monitoring pane contains a drop-down list for selecting the repository type, fields to type information for the repository URL, driver, user, and password, and a check box where you can enable repository pooling. The Auditing pane contains an option button to click to specify whether to store a message and a drop-down list where you can select the maximum messages to store. At the bottom of the window is a row of buttons that you can click to save your configuration, view events, or view services. The Save History button is inactive. After you enter properties and choose whether to save or view, you can click the Start Monitoring button.



a. In the Monitoring pane, from the Repository Type drop-down list, select the type of repository you are using.

b. To connect to the database in the Repository Url field, type a JDBC URL.

c. To connect to the database in the Repository Driver field, type a JDBC Class.

d. To access the monitoring repository database, type a user ID and password.

e. To enable pooling, click the *Repository Pooling* check box.

f. In the Auditing pane, select *yes* if you want to store messages.

This option is disabled by default.

Note: You must start and then, stop monitoring to enable this option.

g. Select the maximum number of messages you want to store.

By default, 10,000 is selected.

Note: Depending on your environment and the number of messages that are exchanged, storing a large number of messages may affect system performance. If you need more information about your system resources, consult your system administrator.

h. Click *Save Configuration*.

4. Click *Start Monitoring*.

iBSE begins to monitor all services and events currently in use. If you selected the option to store messages, iBSE stores messages.

5. To stop monitoring, click *Stop Monitoring*.

Procedure: How to Monitor Services

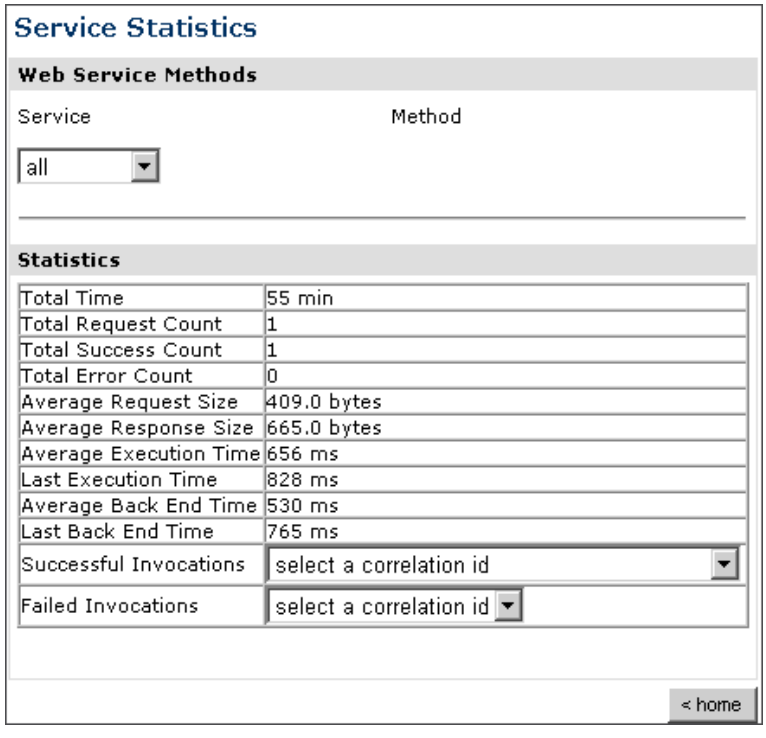
To monitor services:

1. Ensure that your BEA WebLogic Server is started.

2. From the iBSE Monitoring Settings window, click *Start Monitoring*.

3. Click *View Services*.

The following image shows the System Level Summary (Service Statistics) window that opens. The Web Service Methods pane contains a drop-down list where you select a service. On the right, space is reserved for a drop-down list of methods that will appear. The Statistics pane contains a table with a summary of service statistics and two drop-down lists where you can select a successful or failed invocation to view more information about that service. At the bottom of the window is a home button to click to return to the iBSE Monitoring Settings window.



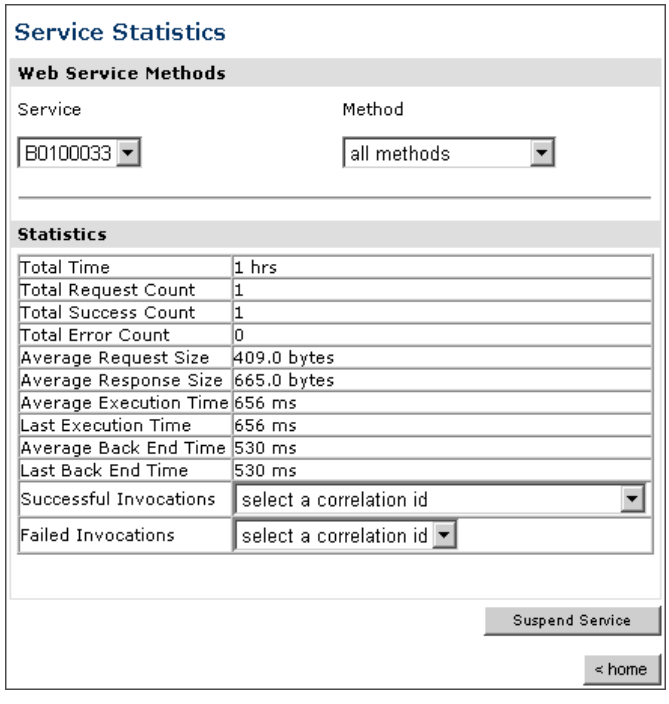
The system level summary provides services statistics at a system level.

The following table consists of two columns, one that lists the name of each statistic and the other that describes the corresponding service statistic.

Statistic	Description
Total Time	Total amount of time iBSE monitors services. The time starts after you click Start Monitoring in the iBSE Monitoring Settings window.
Total Request Count	Total number of services requests that were made during the monitoring session.
Total Success Count	Total number of successful service executions.
Total Error Count	Total number of errors that were encountered.
Average Request Size	Average size of an available service request.
Average Response Size	Average size of an available service response size.
Average Execution Time	Average execution time for a service.
Last Execution Time	Last execution time for a service.
Average Back End Time	Average back end time for a service.
Last Back End Time	Last back end time for a service.
Successful Invocations	A list of successful services arranged by correlation ID. To retrieve more information for a service, you can select the service from the drop-down list.
Failed Invocations	A list of failed services arranged by correlation ID. To retrieve more information for a service, you can select the service from the drop-down list.

4. Select a service from the drop-down list.

The following image shows the System Level Summary (Service Statistics) window that opens. The Web Service Methods pane contains a drop-down list on the left where you select a service and a drop-down list on the right where you select a service method. The Statistics pane contains a table with a summary of service statistics and two drop-down lists. To view more information about that service, you can select it from the Successful Invocations or Failed Invocations drop-down list. To suspend or resume a service, you can click a button in the lower right. To return to the iBSE Monitoring Settings window, you click the home button (also located in the lower right).

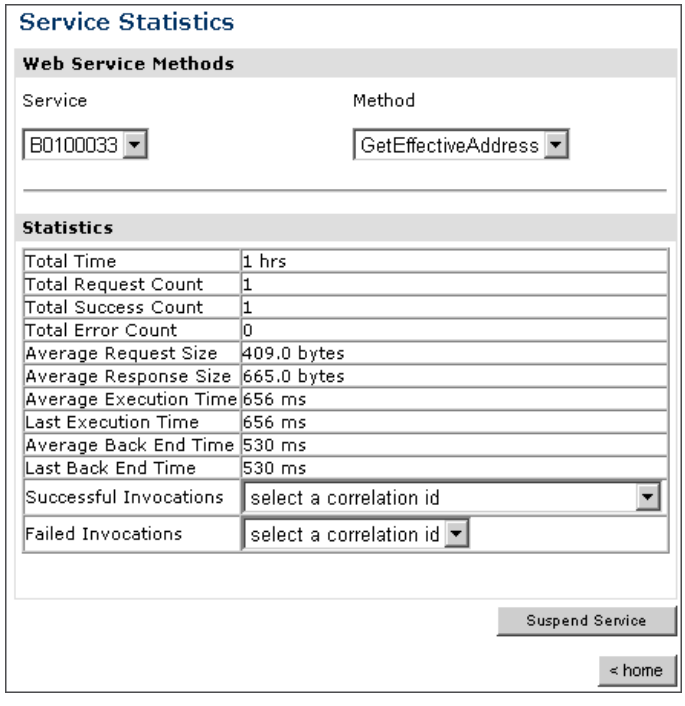


a. To stop a service at any time, click *Suspend Service*.

b. To restart the service, click *Resume Service*.

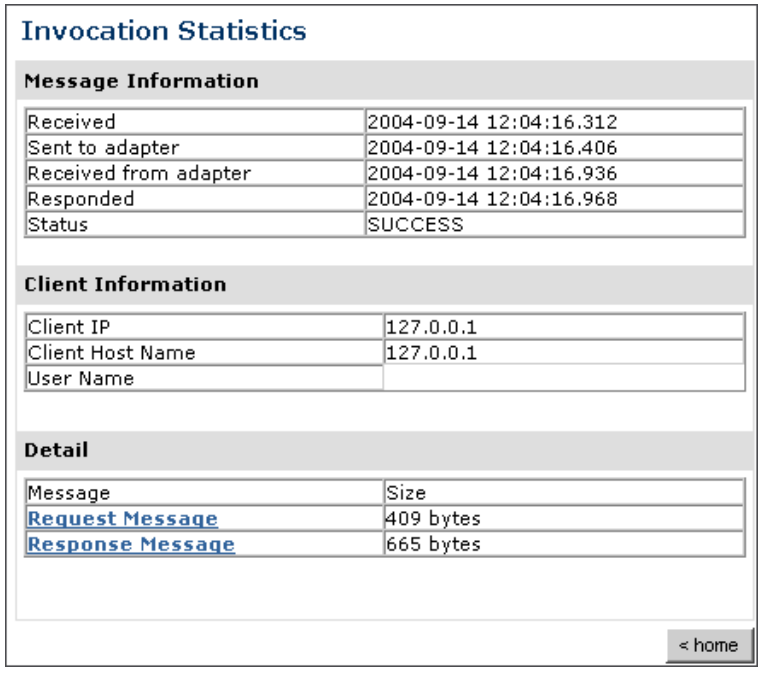
5. Select a method for the service from the Method drop-down list.

The following image shows the Method Level Summary (Service Statistics) window that opens. The Web Service Methods pane contains a drop-down list on the left where you select a service and a drop-down list on the right where you select a service method. The Statistics pane contains a table with a summary of service statistics and two drop-down lists. To view more information about that service, you can select it from the Successful Invocations or Failed Invocations drop-down list. To suspend or resume a service, you can click a button in the lower right. To return to the iBSE Monitoring Settings window, you click the home button (also located in the lower right).



6. For additional information about a successful service and its method, select a service based on its correlation ID from the Successful Invocation drop-down list.

The following image shows the Invocation Level Statistics window that opens. The Message Information pane contains a table of information about the message. The Client Information pane contains a table of information about the client. The Detail pane contains a table that shows the size of the request and response messages, with options to click to view the respective XML documents. In the lower right of the window is a home button to click to return to the iBSE Monitoring Settings window.



7. To view the XML request document in your Web browser, click *Request Message*.

   You can also view the XML response document for the service.

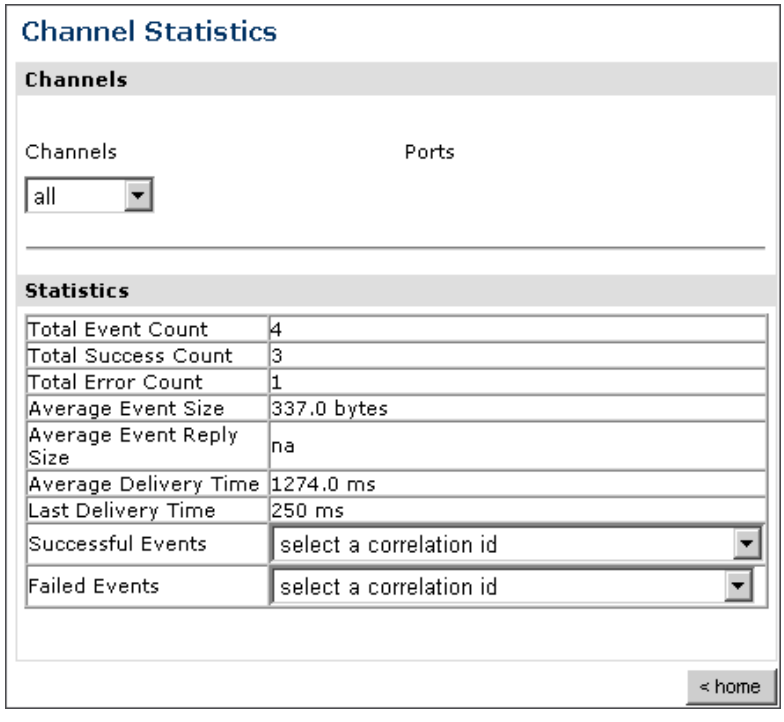
8. To return to the iBSE Monitoring Settings window, click *home*.

Procedure: How to Monitor Events

To monitor events:

1. Ensure that your BEA WebLogic Server is started.
2. In the iBSE Monitoring Settings window, click *Start Monitoring*.
3. Click *View Events*.

The following image shows the System Level Summary (Channel Statistics) window that opens. The Channels pane contains a drop-down list on the left where you select a channel. On the right, space is reserved for a drop-down list of ports that will appear. The Statistics pane contains a table with a summary of event statistics and two drop-down lists where you can select a successful or failed event to view more information about that event. In the lower right of the window is a home button to click to return to the iBSE Monitoring Settings window.



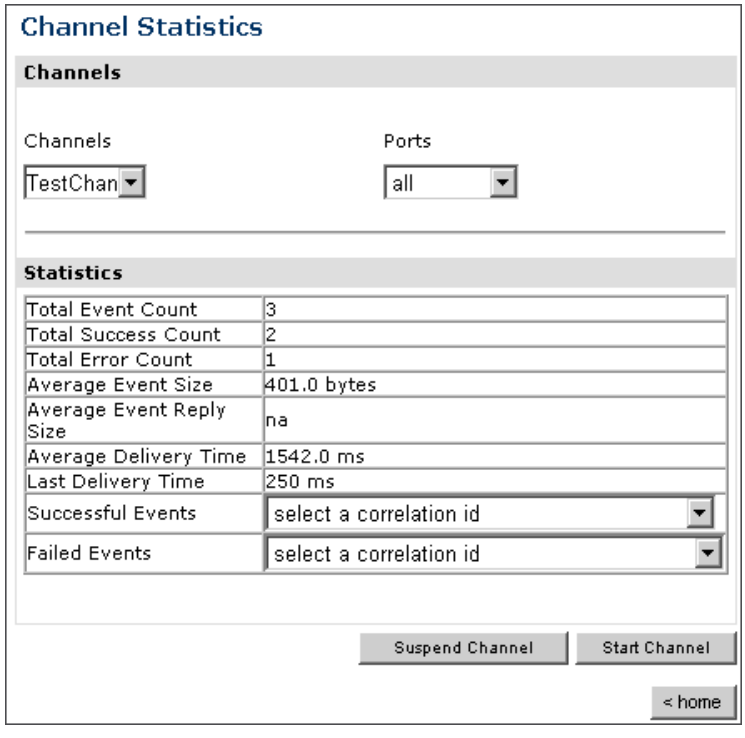
The system level summary provides event statistics at a system level.

The following table consists of two columns, one that lists the name of each statistic and the other that describes the corresponding event statistic.

Statistic	**Description**
Total Event Count	Total number of events.
Total Success Count	Total number of successful event executions.
Total Error Count	Total number of errors that were encountered.
Average Event Size	Average size of an available event request.
Average Event Reply Size	Average size of an available event response.
Average Delivery Time	Average delivery time for an event.
Last Delivery Time	Last delivery time for an event.
Successful Events	List of successful events arranged by correlation ID. To retrieve more information for an event, select the event from the drop-down list.
Failed Events	List of failed events arranged by correlation ID. To retrieve more information for an event, select the event from the drop-down list.

4. Select a channel from the drop-down list.

The following image shows the Channel Level Event Summary (Channel Statistics) window that opens. The Channels pane contains a drop-down list on the left where you select a channel and a drop-down list on the right where you select a port. The Statistics pane contains a table with a summary of event statistics and two drop-down lists where you can select a successful or failed event to view more information about that event. In the lower right of the window is a button to click to suspend or resume a channel and a home button to click to return to the iBSE Monitoring Settings window.

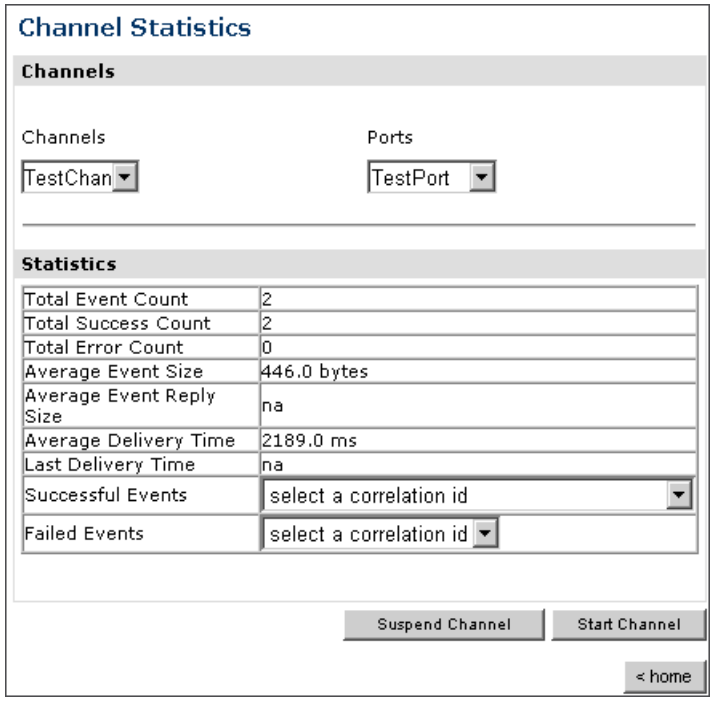


a. To stop a channel at any time, click *Suspend Channel*.

b. To start the channel, click *Start Channel*.

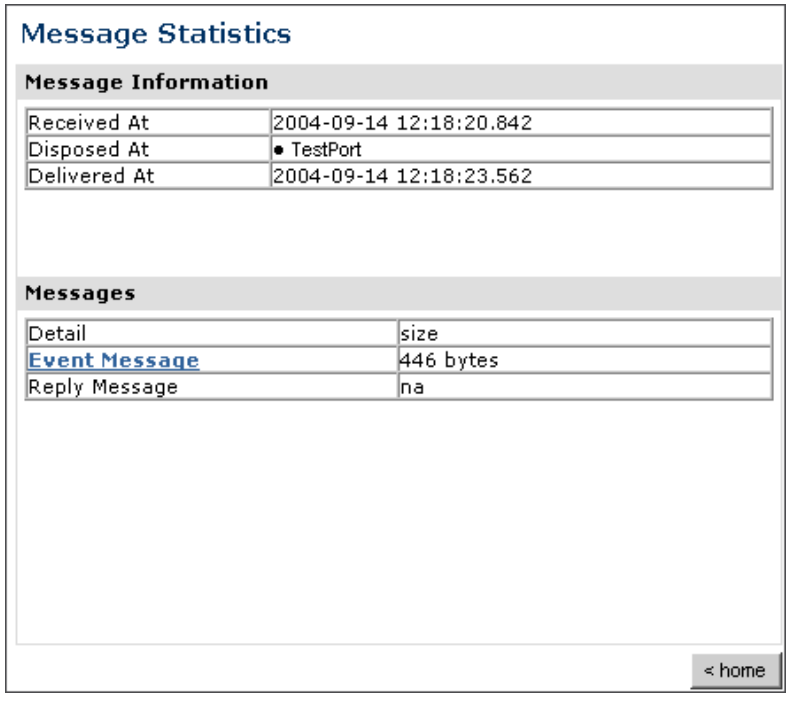
5. From the Ports drop-down list, select a port for the channel.

The following image shows the Port Level Event Summary (Channel Statistics) window that opens. The Channels pane contains a drop-down list on the left where you select a channel and a drop-down list on the right where you select a port. The Statistics pane contains a table with a summary of event statistics and two drop-down lists where you can select a successful or failed event to view more information about that event. In the lower right of the window is a button to click to suspend or resume a channel and a home button to click to return to the iBSE Monitoring Settings window.



6. For more information about a successful event and its port, select an event based on its correlation ID from the Successful Events drop-down list.

The following image shows the Event Level Statistics (Message Statistics) window that opens. The Message Information pane contains a table of information pertaining to the event message. The Messages pane contains a table that shows the size of the event and reply messages, with an option to view an XML document of the event message. In the lower right of the window is a home button to click to return to the iBSE Monitoring Settings window.



a. To view the XML event document in your Web browser, click *Event Message*.

b. To return to the iBSE Monitoring Settings window, click *home*.

Managing and Monitoring Services and Events Using the JCA Test Tool

The JCA Test Tool, which is also known as the JCA Installation Verification Program (IVP), provides a console to manage and monitor services and events currently in use and to display resource usage and invocation statistics. These indicators can help you adjust your environment for optimum efficiency.

Procedure: How to Manage and Monitor Services Using the JCA Test Tool

To manage and monitor services using the JCA Test Tool:

1. Open a Web browser to:

   `http://localhost:port/iwjcaivp`

   where:

   localhost

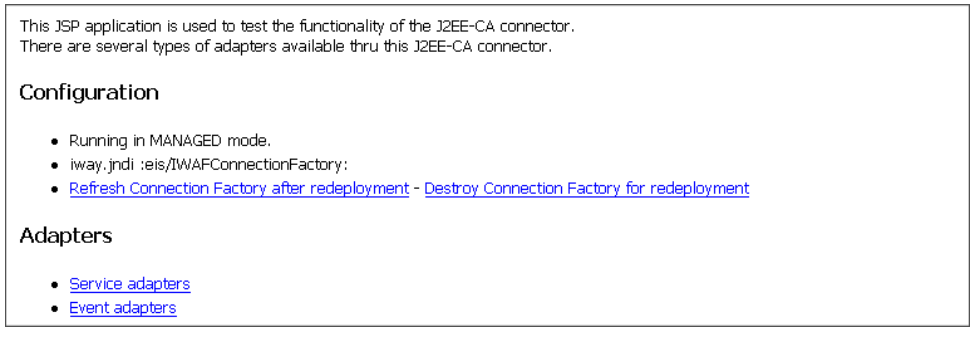
   Is the name of the machine where your application server is running.

   port

   Is the port for the domain you are using. The port for the default domain is 7001.,for example:

   `http://localhost:7001/iwjcaivp`

   The following image shows the JCA Test Tool page that opens. The page contains a description of the function of the tool and configuration information, including options to change your connection settings. It also provides options for viewing service or event adapters.



   The JCA Test Tool runs in managed mode by default.

2. Perform the following steps to monitor the latest service adapter configuration.

   Note: You must perform these steps for every new adapter target that is created using a JCA implementation of Application Explorer. In addition, you also must perform these steps for every new JCA configuration that is created using Application Explorer.

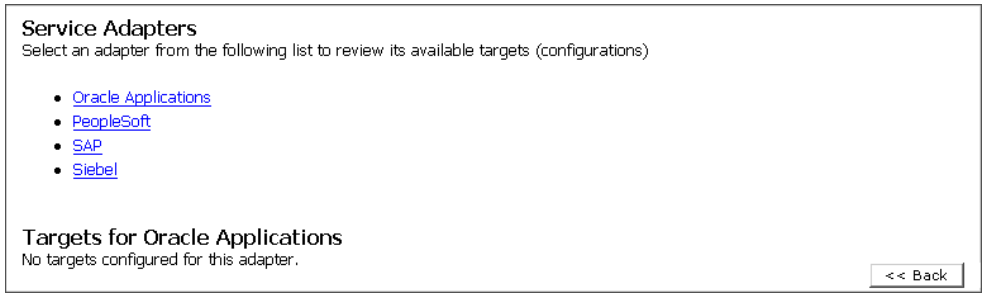
a. Click *Destroy Connection Factory for redeployment*.

b. Redeploy the JCA connector module using the BEA WebLogic Server console.

c. In the JCA Test Tool, click *Refresh Connection Factory after redeployment*.

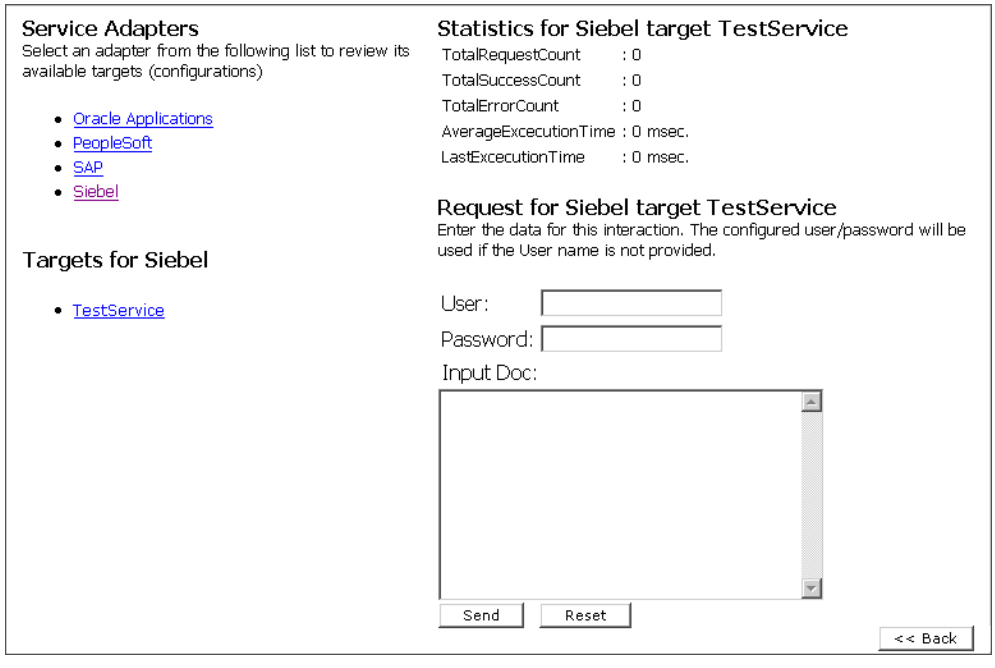
3. Click *Service adapters*.

The following image shows the Service Adapters page that opens. The page provides a live list of available service adapters and a list of targets configured for a specific adapter. In the lower right is a Back button to click to return to the previous page.



4. Select a service adapter to monitor.

The following image shows the page that opens. The left side provides a live list of available service adapters and a list of any targets configured for a specific adapter. The upper right side shows statistics for a selected target. The middle right has a User field and a Password field. The lower right contains a box where you type or paste an input document. Below the input box is a Send button to click to send a request for a test service and a Reset button to click to reset the fields. In the lower right is a Back button to click to return to the previous page.



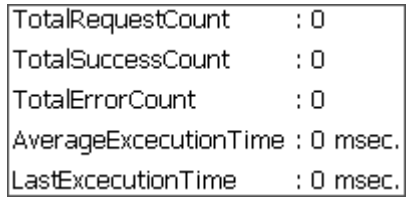
a. Click the desired target for your service adapter.

b. In the Request area, enter a user name and password.

c. In the Input Doc area, enter a request document that was created from the request schema for your service.

5. Click *Send*.

The following image shows the updated statistics that appear for your service if the request is successful. The statistics include the total number of requests, successes, and errors and the average and last execution time in milliseconds.



Procedure: How to Manage and Monitor Events Using the JCA Test Tool

To manage and monitor events using the JCA Test Tool:

1. Open a Web browser to:

   `http://localhost:port/iwjcaivp`

   where:

   localhost

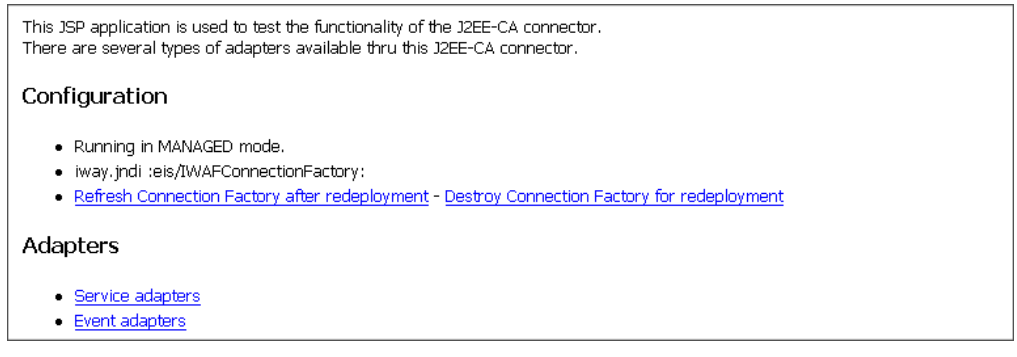
   Is the name of the machine where your application server is running.

   port

   Is the port for the domain you are using. The port for the default domain is 7001, for example:

   ```
   http://localhost:7001/iwjcaivp
   ```

   The following image shows the JCA Test Tool page that opens. The page contains a description of the function of the tool and configuration information, including options to change your connection settings. It also provides options for viewing service or event adapters.



   The JCA Test Tool runs in managed mode by default.

2. Perform the following steps to monitor the latest event adapter configuration.

   Note: You must perform these steps for every new adapter target that is created using a JCA implementation of Application Explorer. In addition, you must also perform these steps for every new JCA configuration that is created using Application Explorer.

   a. Click *Destroy Connection Factory for redeployment*.

   b. Redeploy the JCA connector module using the BEA WebLogic Server console.

   c. In the JCA Test Tool, click *Refresh Connection Factory after redeployment*.

3. Click *Event adapters*.

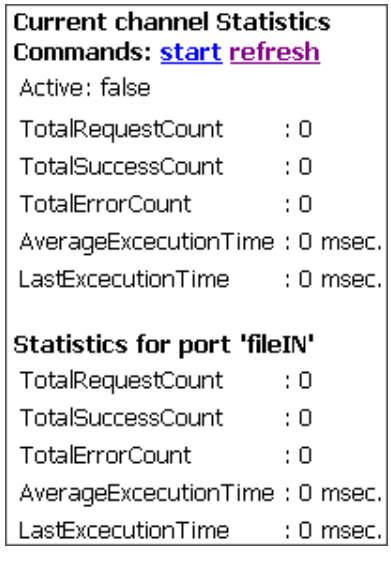
   The Event Adapters page opens.

4. Select the event adapter to monitor.

5. Click the desired channel for your event adapter.

6. Click *start*.

   The following image shows the updated statistics for your channel and the port. The statistics include the total number of requests, successes, and errors and the average and last execution time in milliseconds. There are options to click in the upper right of the page to start or refresh the channel.



Setting Engine Log Levels

The following section describes how to set engine log levels for Servlet iBSE and JCA. For more information, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

Procedure: How to Enable Tracing for Servlet iBSE

To enable tracing for Servlet iBSE:

1. Open the Servlet iBSE configuration page at:

   ```
   http://localhost:port/ibse/IBSEConfig
   ```

   where:

   localhost

   Is the name of the machine where your application server is running.

   port

   Is the port for the domain you are using. The port for the default domain is 7001, for example:

   ```
   http://localhost:7001/ibse/IBSEConfig
   ```

2. In the System pane, from the Debug drop-down list, select the level of tracing.
3. Click *Save*.

The default location for the trace information on Windows is:

```
C:\Program FIles\bea\ibse\ibselogs
```

Procedure: How to Enable Tracing for JCA

To enable tracing for JCA:

1. Open the extracted ra.xml file in a text editor.
2. Locate and change the following setting:

   LogLevel. This setting can be set to DEBUG, INFO, or ERROR.

   ```
   <context-param>
   <config-property>
       <config-property-name>LogLevel</config-property-name>
       <config-property-type>java.lang.String</config-property-type>
       <config-property-value></config-property-value>
   </config-property>
   ```

   For example:

   ```
   <config-property-value>DEBUG</config-property-value>
   ```

A directory in the configuration directory contains the logs.

a. Review the logs generated by your application server.

b. Leave the remainder of the previous file unchanged.

3. Save the file and exit the editor.

4. Redeploy the connector.

Configuring Connection Pool Sizes

The following topic describes how to configure connection pool sizes for the JCA connector.

Procedure: How to Configure Connection Pool Sizes

To configure connection pool sizes:

1. Open the extracted ra.xml file in a text editor.

2. Locate and change the following setting:

pool-params. The JCA Resource Connector has an initial capacity value of 0 by default and cannot be changed. The maximum capacity value is 10 by default and can be changed to a higher value.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE weblogic-connection-factory-dd (View Source for full
doctype...)>
- <weblogic-connection-factory-dd>
  <connection-factory-name>IWAFJCA</connection-factory-name>
  <jndi-name>eis/IWAFConnectionFactory</jndi-name>
  - <pool-params>
    <initial-capacity>0</initial-capacity>
    <max-capacity>10</max-capacity>
    <capacity-increment>1</capacity-increment>
    <shrinking-enabled>false</shrinking-enabled>
    <shrink-period-minutes>200</shrink-period-minutes>
  </pool-params>
  <security-principal-map />
</weblogic-connection-factory-dd>
```

3. Save the file and exit the editor.

4. Redeploy the connector.

Migrating Repositories

During design time, a 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. For more information on configuring repositories, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

The information in the repository also is referenced at run time. For management purposes, you can migrate iBSE and JCA repositories to new destinations without affecting your existing configuration. For example, you may want to migrate a repository from a development environment to a production environment. The BEA WebLogic Server must be restarted to detect new repository changes.

File Repositories

If you want to migrate a File repository to another destination, copy the ibserepo.xml file from the following path:

```
drive:\Program Files\iWay55\bea\ibse\ibserepo.xml
```

where:

drive

Is the location of your iWay 5.5 installation.

You can place the ibserepo.xml file in a new location that is a root directory of the iBSE Web application, for example:

```
drive:\ProductionConfig\bea\ibse\ibserepo.xml
```

iBSE Repositories

The following topic describes how to migrate an iBSE repository that is configured for Oracle. You can follow the same procedure if you want to migrate an iBSE repository that is configured for Microsoft SQL Server 2000, Sybase, or DB2. However, when you are configuring a new environment, you must execute the script that creates the repository tables for your database. In addition, verify that all required files and drivers for your database are in the class path. For more information on configuring repositories, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

Note: The following procedure allows you to migrate only Web services. If migrating event handling information is one of your requirements, you must migrate at the database level. For more information, see *Migrating Event Handling Configurations* on page 5-28.

Procedure: How to Migrate an iBSE Repository Configured for Oracle

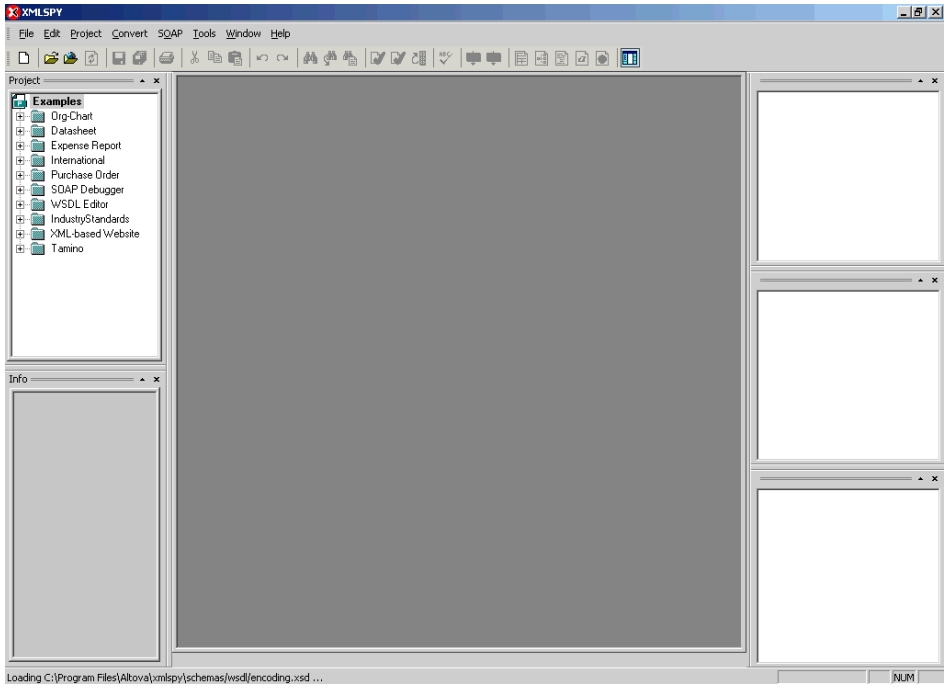
To migrate an iBSE repository that is configured for Oracle:

1. Copy the iBSE configuration service URL, for example:

   `http://localhost:7777/ibse/IBSEServlet/admin/iwconfig.ibs?wsdl`

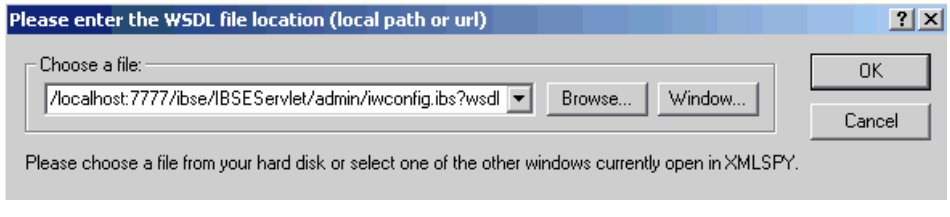
2. Open a third party XML editor, for example, XMLSPY.

   The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.



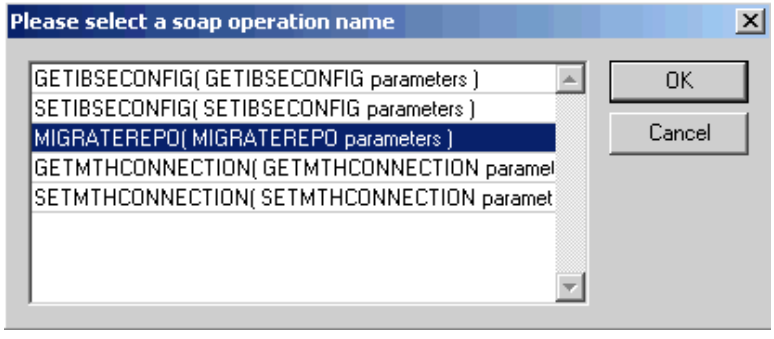
3. From the SOAP menu, select *Create new SOAP request*.

   The following image shows the WSDL file location dialog box that opens, where you enter a local path or URL. The dialog includes Browse, Window, OK, and Cancel buttons.



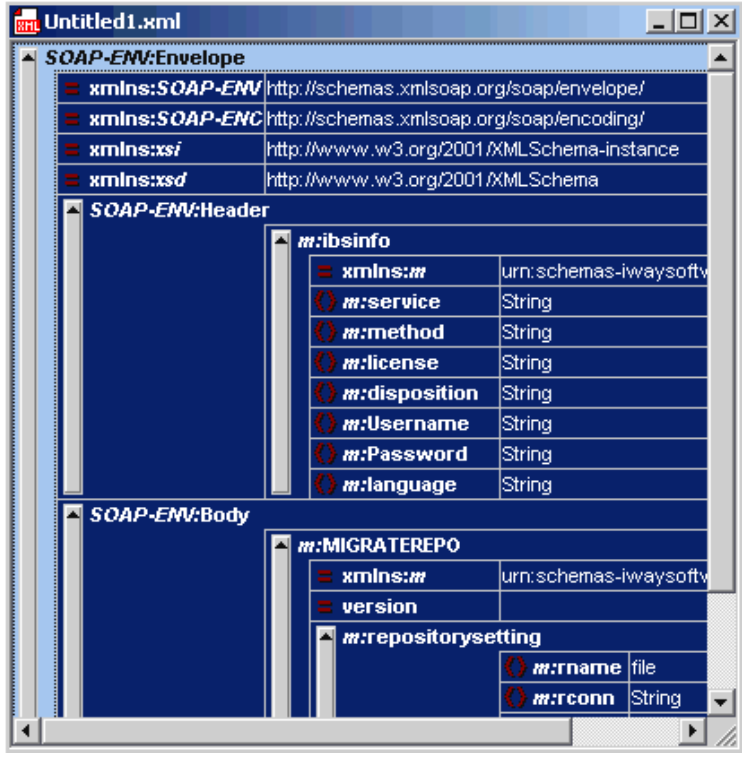
4. In the Choose a file field, paste the iBSE configuration service URL.
5. Click *OK*.

   The following image shows the soap operation name dialog box that opens with a list of available control methods. You can select from the list and click OK or to escape from the dialog box, you can click Cancel.



6. Select the *MIGRATEREPO(MIGRATEREPO parameters)* control method and click *OK*.

The following image shows a portion of the window that opens with the structure of the SOAP envelope. It includes information about location and schemas.



7. Locate the *Text view* icon in the tool bar.

In the following image, the pointer points to the 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>
```

a. For the <m:rconn> tag, replace the String placeholder with the repository URL where you want to migrate your existing iBSE repository.

For example, 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.

Note: This is an optional tag. If you do not specify a value, the default Oracle JDBC driver is used.

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 iBSE repository, enter the Web service name in the <m:servicename> tag, for example:

```
<m:servicename>Service1</m:servicename>
```

If you want to migrate **multiple** Web services from the current iBSE repository, duplicate the <m:servicename> tag for each Web service, for example:

```
<m:servicename>Service1</m:servicename>
<m:servicename>Service2</m:servicename>
```

If you want to migrate **all** Web services from the current iBSE repository, remove the <m:servicename> tag.

11. From the SOAP menu, select *Send request to server*.

Your iBSE repository and the Web services you specified migrate to the new Oracle repository URL that you specified.

JCA Repositories

The following procedure describes how to migrate a JCA repository. For more information on configuring JCA repositories, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

Procedure: How to Migrate a JCA Repository

To migrate a JCA repository:

1. Navigate to the location of your JCA configuration directory where the repository schemas and other information is stored, for example:

   ```
   C:\Program Files\iway55\config\base
   ```

2. Locate and copy the *repository.xml* file.

3. Place this file in a new JCA configuration directory to migrate the existing repository.

   Your JCA repository migrates to the new JCA configuration directory.

Migrating Event Handling Configurations

This topic describes how to migrate your iBSE repositories at a database level for Microsoft SQL Server 2000, Oracle, Sybase, or DB2. You can use this information to migrate event handling information, for example, port or channel configurations.

Procedure How to Migrate a Microsoft SQL Server 2000 Repository

To migrate a Microsoft SQL Server 2000 repository:

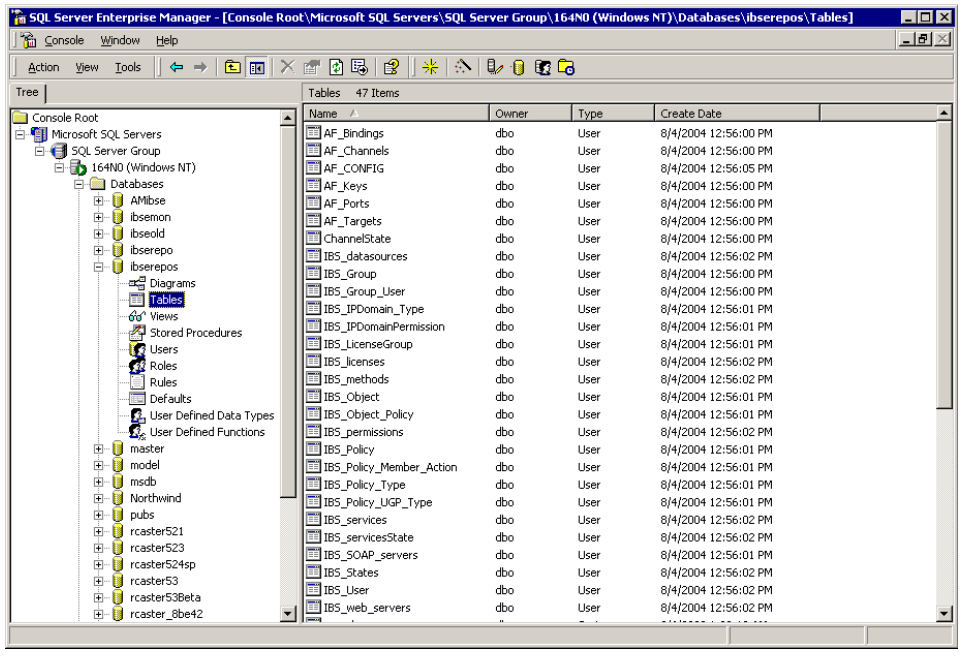
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

   ```
   C:\Program Files\iWay55\etc\setup
   ```

   This directory contains SQL to create the repository tables in the following file:

   ```
   iwse.sql
   ```

You can use iwse.sql to create the database tables that are used by iBSE. For example, the following image shows the tree in the left pane and tables in the right pane. The tables are listed by name in one column with corresponding columns for information about owner, type, and the date the table was created.



For more information on configuring the Microsoft SQL Server 2000 repository, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

2. To migrate the tables that were created by the iwse.sql script for iBSE, use your Microsoft SQL Server 2000 database tool set. For more information, consult your database administrator.

Procedure How to Migrate an Oracle Repository

To migrate an Oracle repository:

1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

   ```
   C:\Program Files\iWay55\etc\setup
   ```

   This directory contains SQL to create the repository tables in the following files:

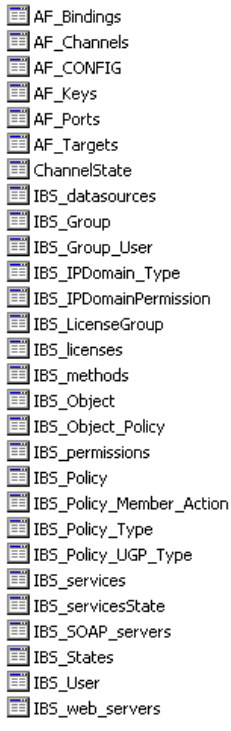
   For Oracle 8:

   ```
   iwse.ora
   ```

For Oracle 9:

```
iwse.ora9
```

2. To create the Oracle database tables that are used by iBSE, use the SQL script as shown in the example in the following image that shows a list of tables.



For more information on configuring the Oracle repository, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

3. To migrate the tables that were created by the SQL script for iBSE, use your Oracle database tool set. For more information, consult your database administrator.

Procedure How to Migrate a Sybase Repository

To migrate a Sybase repository:

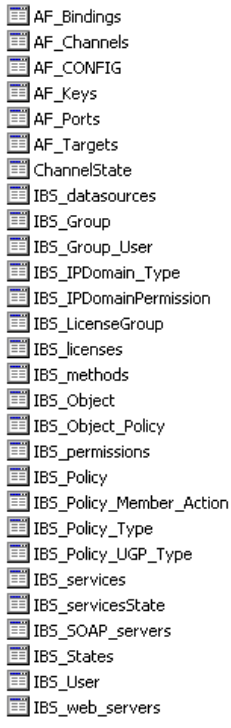
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

```
C:\Program Files\iWay55\etc\setup
```

This directory contains SQL to create the repository tables in the following file:

```
sybase-iwse.sql
```

2. To create the Sybase database tables that are used by iBSE, use the SQL script as shown in the example in the following image that shows a list of tables.



   For more information on configuring the Sybase repository, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

3. To migrate the tables that were created by the SQL script for iBSE, use your Sybase database tool set. For more information, consult your database administrator.

Procedure How to Migrate a DB2 Repository

To migrate a DB2 repository:

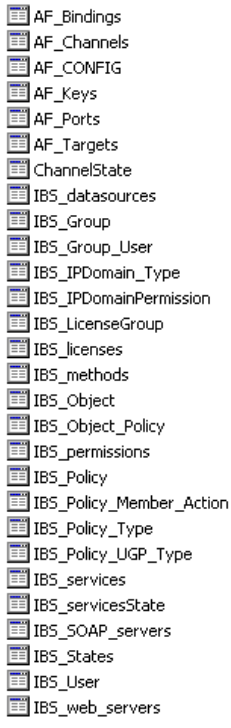
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

   ```
   C:\Program Files\iWay55\etc\setup
   ```

   This directory contains SQL to create the repository tables in the following file:

   ```
   db2-iwse.sql
   ```

2. To create the DB2 database tables that are used by iBSE, use the SQL script as shown in the example in the following image that shows a list of tables.



For more information on configuring the DB2 repository, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

You can migrate the tables that were created by the SQL script for iBSE using your DB2 database toolset. For more information, consult your database administrator.

Exporting or Importing Targets

After you migrate your repository, you can export or import targets with their connection information and persistent data between repositories.

Procedure: How to Export a Target

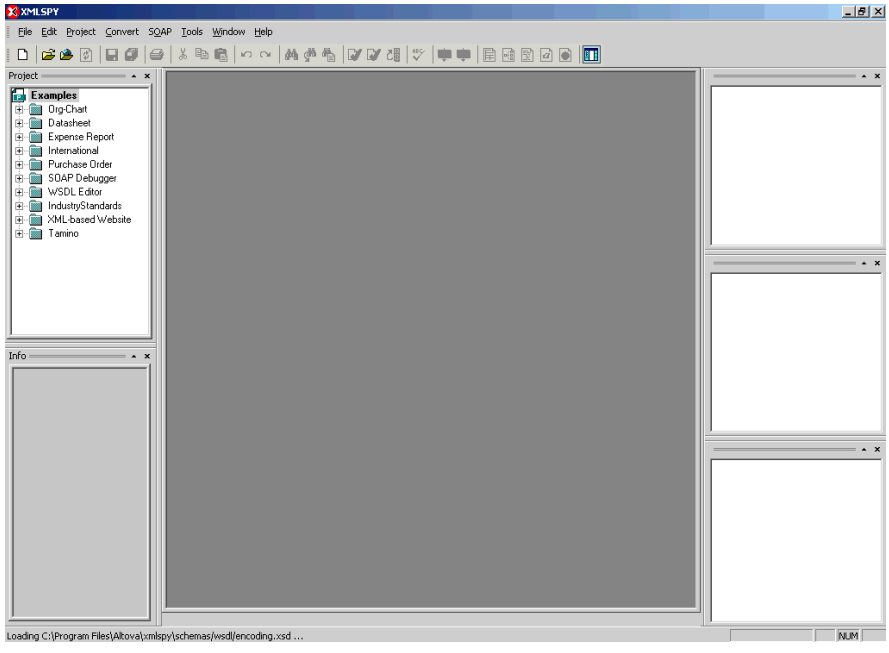
To export a target:

1. Copy the iBSE administrative services for Application Explorer URL, for example:

   `http://localhost:7777/ibse/IBSEServlet/admin/iwae.ibs?wsdl`

2. Open a third party XML editor, for example, XMLSPY.

The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.



3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE administrative services for Application Explorer URL.

5. Click *OK*.

The soap operation name dialog box opens and lists the available control methods.

6. Select the *EXPORTTARGET(EXPORTTARGET parameters)* control method and click *OK*.

A window opens that shows the structure of the SOAP envelope.

7. Locate the *Text view* icon in the tool bar.

In the following image, the pointer points to the 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:EXPORTTARGET
xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:af">
<m:target>String</m:target>
<m:name>String</m:name>
</m:EXPORTTARGET>
```

   a. For the <m:target> tag, replace the String placeholder with the EIS target system name as it appears in Application Explorer and verify whether this value is case sensitive.

   b. For the <m:name> tag, replace the String placeholder with the name of the target you want to export.

10. From the SOAP menu, select *Send request to server.*

    A response is returned that contains the <m: exporttime> and <m: contents> elements. You must use these elements when importing your target.

Procedure: How to Import a Target

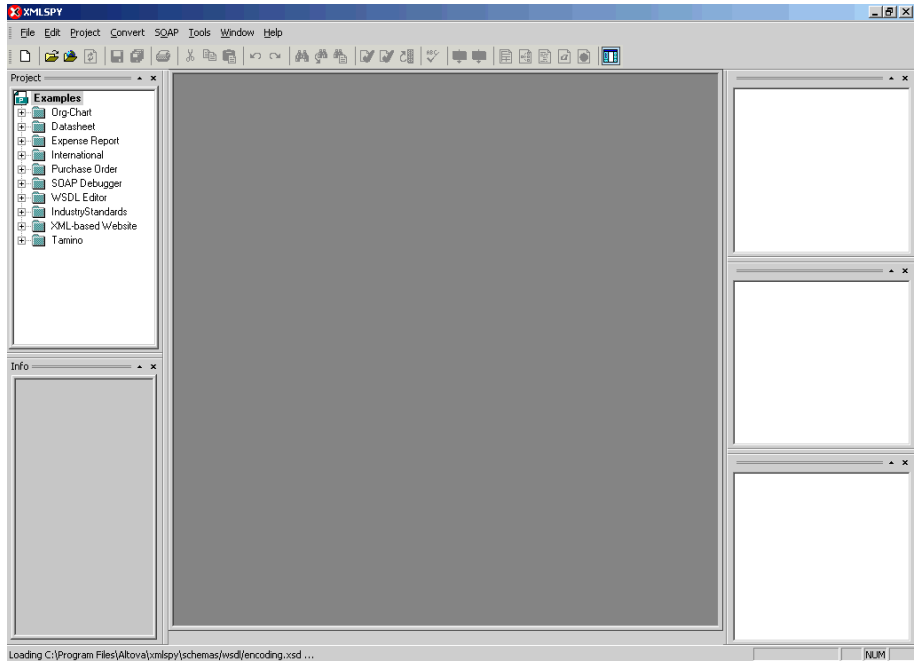
To import a target:

1. Copy the iBSE administrative services for Application Explorer URL, for example:

```
http://localhost:7777/ibse/IBSEServlet/admin/iwae.ibs?wsdl
```

2. Open a third party XML editor, for example, XMLSPY.

The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.



3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE administrative services for Application Explorer URL and click *OK*.

The soap operation name dialog box opens and lists the available control methods.

5. Select the *IMPORTTARGET(IMPORTTARGET parameters)* control method and click *OK*.

A window opens, which shows the structure of the SOAP envelope.

6. Locate the *Text view* icon in the toolbar.

In the following image, the pointer points to the Text view icon.

7. 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.

8. Locate the following section:

```
<m:IMPORTTARGET
xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:af">
<m:targetinstance>
<m:target>String</m:target>
<m:name>String</m:name>
<m:description>String</m:description>
<m:repositoryid>String</m:repositoryid>
<m:exporttime>2001-12-17T09:30:47-05:00</m:exporttime>
<m:contents>R0lGODlhcgGSALMAAAQCAEMmCZtuMFQxDS8b</m:contents>
</m:targetinstance>
</m:IMPORTTARGET>
```

   a. For the <m:target> tag, replace the String placeholder with the EIS target system name.

   b. For the <m:name> tag, replace the String placeholder with the new name of the target you want to import.

   c. For the <m:description> tag, replace the String placeholder with a description of the target.

   d. For the <m:repositoryid> tag, copy and paste the contents of the <m:repositoryid> tag that was returned when you exported your target.

   e. For the <m: exporttime> tag, copy and paste the contents of the <m: exporttime> tag that was returned when you exported your target.

   f. For the <m: contents> tag, copy and paste the contents of the <m: contents> tag that was returned when you exported your target.

9. From the SOAP menu, select *Send request to server*.

Retrieving or Updating Web Service Method Connection Information

After you migrate your repository, you can retrieve or update connection information for your Web service methods.

Procedure: How to Retrieve Web Service Method Connection Information

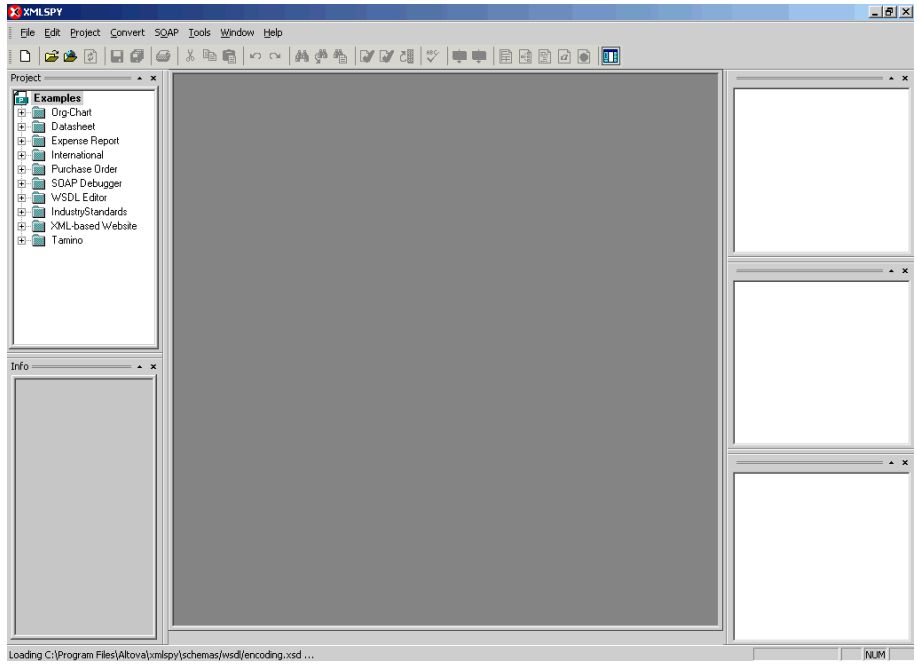
To retrieve Web service method connection information:

1. Copy the iBSE configuration service URL, for example:

   ```
   http://localhost:7777/ibse/IBSEServlet/admin/iwconfig.ibs?wsdl
   ```

2. Open a third party XML editor, for example, XMLSPY.

The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.



3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE configuration service URL, and click *OK*.

The soap operation name dialog box opens and lists the available control methods.

5. Select the *GETMTHCONNECTION(GETMTHCONNECTION parameters)* control method and click *OK*.

A window opens, which shows the structure of the SOAP envelope.

6. Locate the *Text view* icon in the toolbar.

In the following image, the pointer points to the Text view icon.

7. 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.

8. Locate the following section:

```
<m:GETMTHCONNECTION
xmlns:m="urn:schemas-iwaysoftware-com:jul2003:ibse:config">
<m:servicename>String</m:servicename>
<m:methodname>String</m:methodname>
</m:GETMTHCONNECTION>
```

   a. For the <m:servicename> tag, replace the String placeholder with the name of the Web service.

   b. For the <m:methodname> tag, replace the String placeholder with name of the Web service method.

9. From the SOAP menu, select *Send request to server.*

   A response is returned that contains the <m: descriptor> element. You must use this element when updating your Web service method.

Procedure: How to Update Web Service Method Connection Information

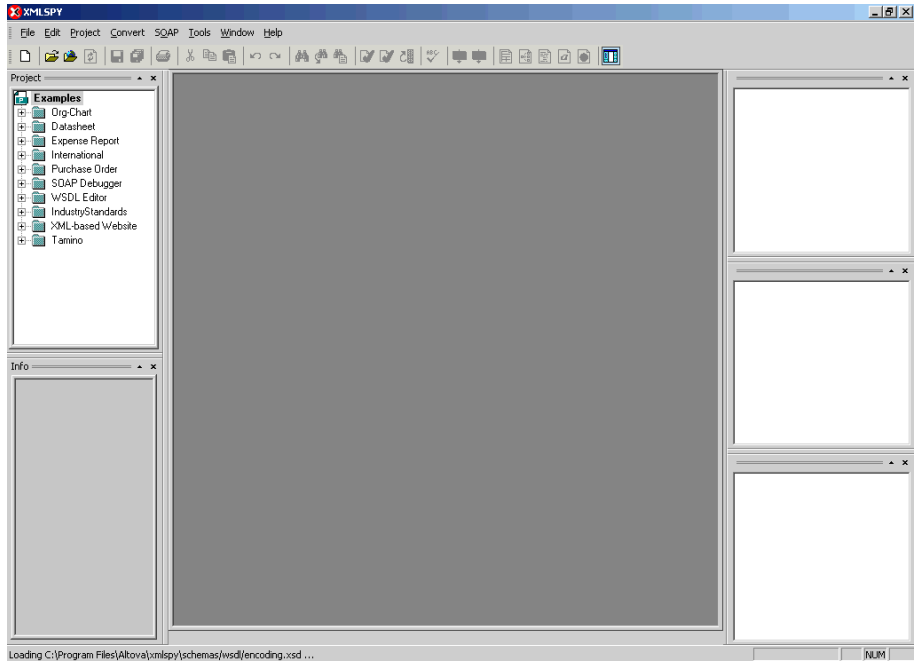
To update Web service method connection information:

1. Copy the iBSE configuration service URL, for example:

   ```
   http://localhost:7777/ibse/IBSEServlet/admin/iwconfig.ibs?wsdl
   ```

2. Open a third party XML editor, for example, XMLSPY.

The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.



3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE configuration service URL, and click *OK*.

The soap operation name dialog box opens and lists the available control methods.

5. Select the *SETMTHCONNECTION(SETMTHCONNECTION parameters)* control method and click *OK*.

A window opens that shows the structure of the SOAP envelope.

6. Locate the *Text view* icon in the toolbar.

In the following image, the pointer points to the Text view icon.

7. 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.

8. Locate the following section:

```
<m:SETMTHCONNECTION
xmlns:m="urn:schemas-iwaysoftware-com:jul2003:ibse:config">
<m:servicename>String</m:servicename>
<m:methodname>String</m:methodname>
<m:descriptor format="" channel="">
     <m:option title="">
       <m:group title="">
          <m:param/>
       </m:group>
     </m:option>
</m:descriptor>
</m:SETMTHCONNECTION>
```

   a. For the <m:servicename> tag, replace the String placeholder with the name of the Web service.

   b. For the <m:methodname> tag, replace the String placeholder with the name of the Web service method.

   c. For the <m: descriptor> tag, copy and paste the contents of the <m: descriptor> tag that was returned when you retrieved Web Service method connection information.

9. Modify the contents of the <m: descriptor> tag to change the existing Web Service method connection information.

10. From the SOAP menu, select *Send request to server.*

Starting or Stopping a Channel Programmatically

The following topic describes how to start or stop a channel programmatically.

Procedure: How to Start a Channel Programmatically

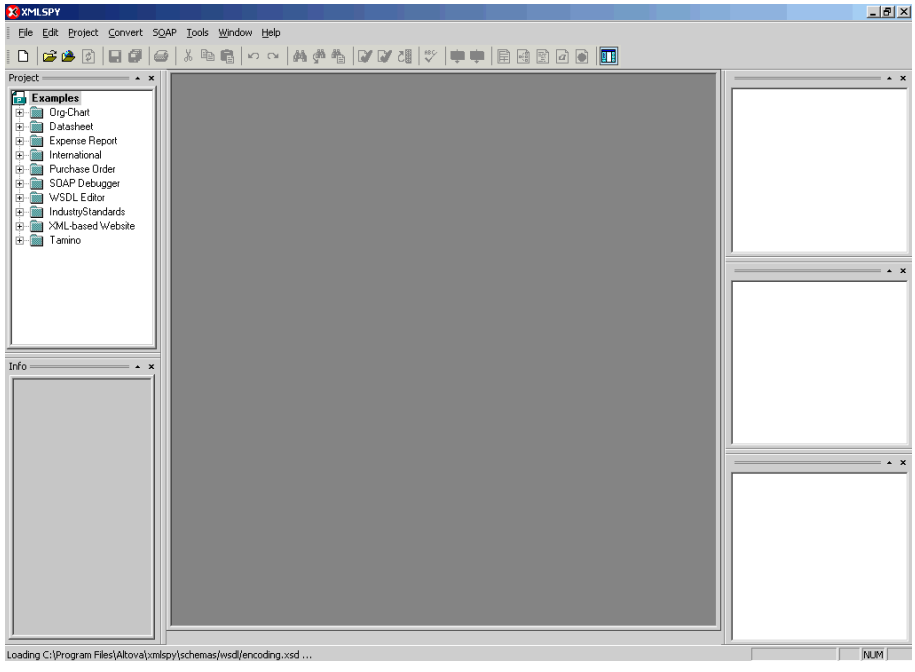
To start a channel programmatically:

1. Copy the iBSE control event URL, for example:

   ```
   http://localhost:7777/ibse/IBSEServlet/admin/iwevent.ibs?wsdl
   ```

2. Open a third party XML editor, for example, XMLSPY.

The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.

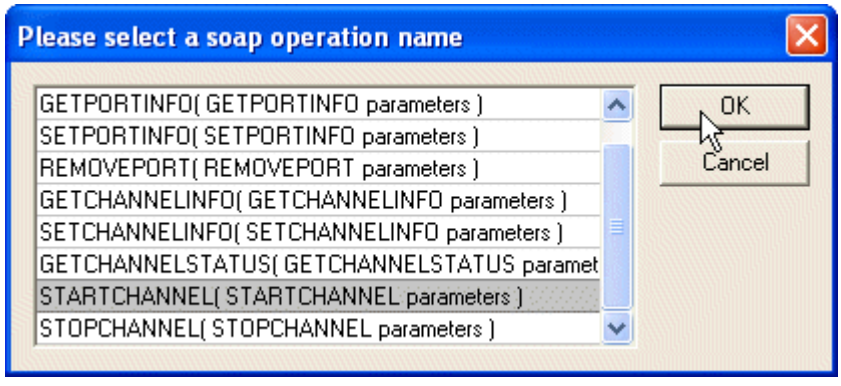


3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE control event URL, and click *OK*.

The following image shows the soap operation name dialog box that opens with a list of available control methods. You can select one and click OK or to escape from the dialog box, you can click Cancel.



5. Select the *STARTCHANNEL(STARTCHANNEL parameters)* control method and click *OK*.

   A window opens, which shows the structure of the SOAP envelope.

6. Locate the *Text view* icon in the toolbar.

   In the following image, the pointer points to the Text view icon.

7. 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.

8. Locate the following section:

```
<SOAP-ENV:Body>
  <m:STARTCHANNEL
     xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:event">
           <m:channel>String</m:channel>
  </m:STARTCHANNEL>
</SOAP-ENV:Body>
```

9. For the <m:channel> tag, replace the String placeholder with the name of the Channel you want to start.

10. From the SOAP menu, select *Send request to server.*

Procedure: How to Stop a Channel Programmatically

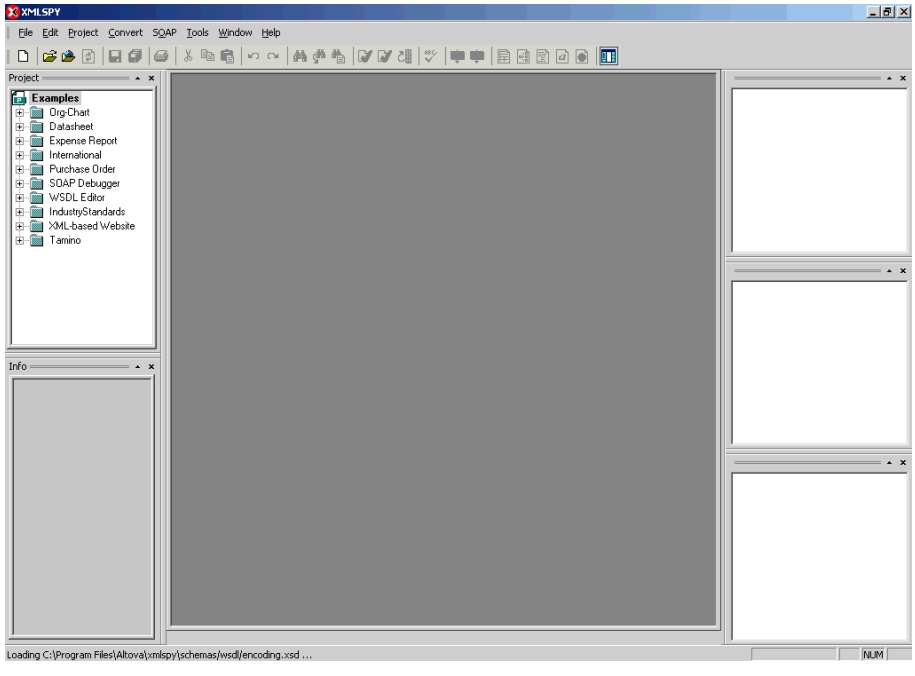
To stop a channel programmatically:

1. Copy the iBSE control event URL, for example:

   `http://localhost:7777/ibse/IBSEServlet/admin/iwevent.ibs?wsdl`

2. Open a third party XML editor, for example, XMLSPY.

   The following image shows the XMLSPY window. The upper left has a Project pane that contains a tree of sample files, and the lower left has a blank Info pane. The middle pane is blank. The right side is divided into three blank panes.

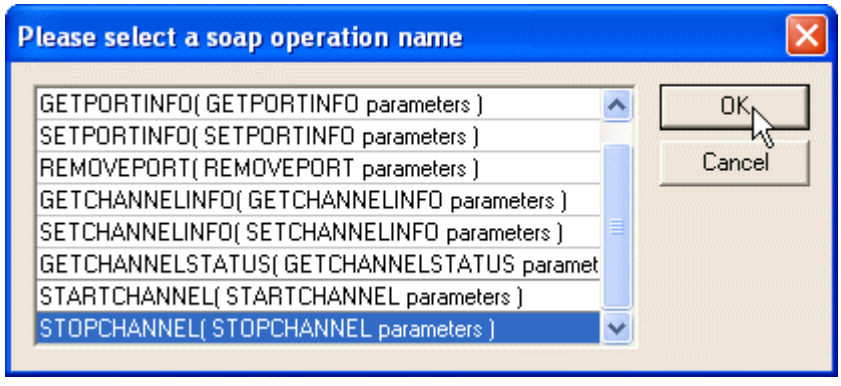


3. From the SOAP menu, select *Create new SOAP request*.

   The WSDL file location dialog box opens.

4. In the Choose a file field, paste the iBSE control event URL, and click *OK*.

The following image shows the soap operation name dialog box that opens with a list of available control methods. You can select one and click OK or to escape from the dialog box, you can click Cancel.



5. Select the *STOPCHANNEL(STOPCHANNEL parameters)* control method and click *OK*.

   A window opens, which shows the structure of the SOAP envelope.

6. Locate the *Text view* icon in the toolbar.

   In the following image, the pointer points to the Text view icon.

7. 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.

8. Locate the following section:

```
<SOAP-ENV:Body>
  <m:STOPCHANNEL
     xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:event">
           <m:channel>String</m:channel>
  </m:STOPCHANNEL>
</SOAP-ENV:Body>
```

9. For the <m:channel> tag, replace the String placeholder with the name of the Channel you want to stop.

10. From the SOAP menu, select *Send request to server.*

APPENDIX A

Using Application Explorer in BEA WebLogic Workshop to Create XML Schemas and Web Services

Topics:

- Starting iWay Application Explorer in BEA WebLogic Workshop
- Creating and Managing a Connection
- Creating Schemas for Services
- Understanding Integration Business Services
- Adding a Control for an iWay Resource in BEA WebLogic Workshop
- Adding an Extensible CCI Control

This section describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to create XML schemas for Oracle AQ. Application Explorer deployed in WebLogic Workshop is functionally similar to the Servlet iWay Application Explorer. In addition, this section provides information on creating Web services that are published by the Integration Business Services Engine (iBSE).

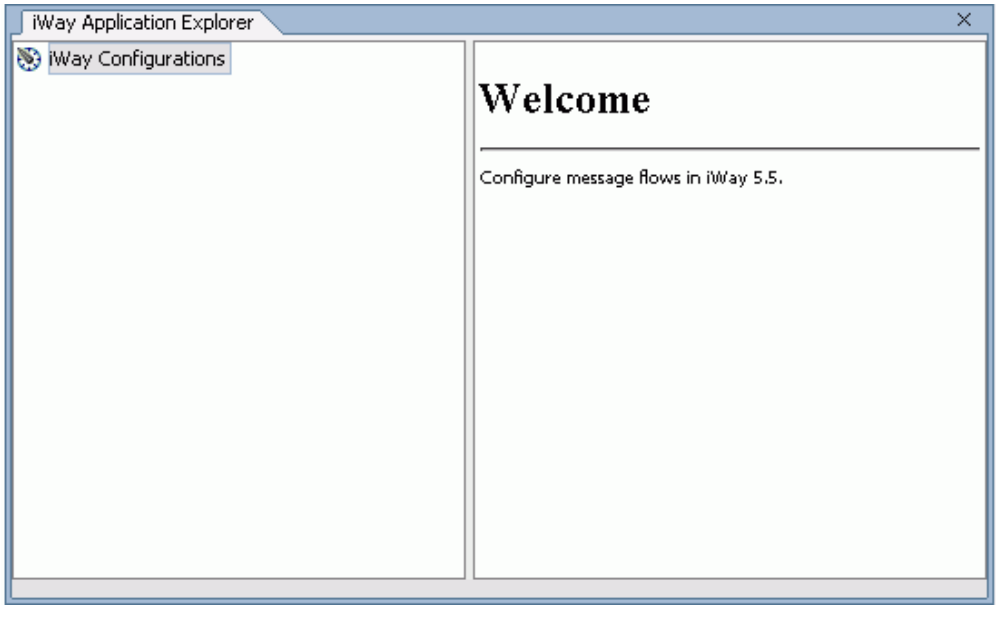
Starting iWay Application Explorer in BEA WebLogic Workshop

You can use iWay Application Explorer with an iBSE or a JCA configuration. Before you can use Application Explorer, you must start BEA WebLogic Server.

Procedure How to Start Application Explorer in BEA WebLogic Workshop

1. Start WebLogic Workshop.
2. Ensure that the server on which Application Explorer is deployed is started. If it is not started, select *WebLogic Server* from the Tools menu and then click *Start WebLogic Server*.
3. From the View menu, select *Windows* and then click *iWay Application Explorer*.

   Application Explorer opens as a frame within the Workshop.

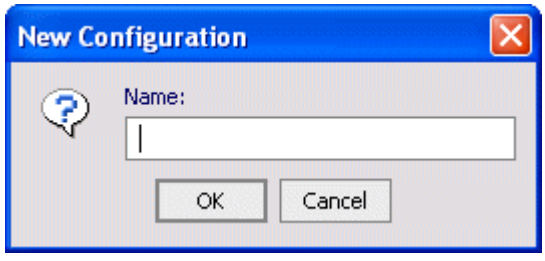


Procedure How to Define a New Configuration

Before you can start using Application Explorer, you must define a new configuration by performing the following steps:

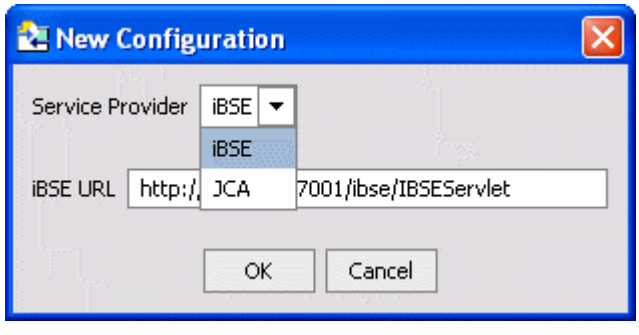
1. Right-click *iWay Configurations* and select *New*.

   The New Configuration dialog box opens.



2. Enter a name for the new configuration (for example, OracleAQ) and click *OK*.

   The following dialog box opens.



3. From the Service Provider drop-down list, select *iBSE* or *JCA*.

   - If you select iBSE, type the URL for iBSE, for example,

     `http://localhost:7001/ibse/IBSEServlet`

     where:

     localhost is where your application server is running.

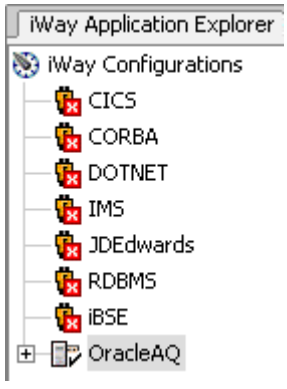
   - If you select JCA, enter the full path to the directory where iWay 5.5 is installed, for example,

     `C:\Program Files\iWay55`

     where:

iWay55 is the full path to your iWay installation.

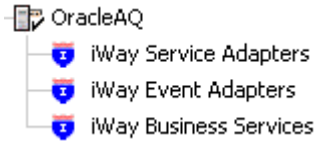
A node representing the new configuration appears under the iWay Configurations node. The right pane provides details of the configuration you created.



Procedure How to Connect to a New Configuration

Right-click the configuration to which you want to connect (for example, OracleAQ), and select *Connect*.

Nodes are displayed for iWay Service Adapters, iWay Event Adapters, and Integration Business Services (also known as Web services).



You are now ready to define a new target to OracleAQ.

Creating and Managing a Connection

To access an adapter, you must define a target that connects to the adapter. After the defined target is created, it automatically is saved. You must establish a connection to the defined target every time you start Application Explorer or after disconnecting.

Procedure **How to Define a New Target**

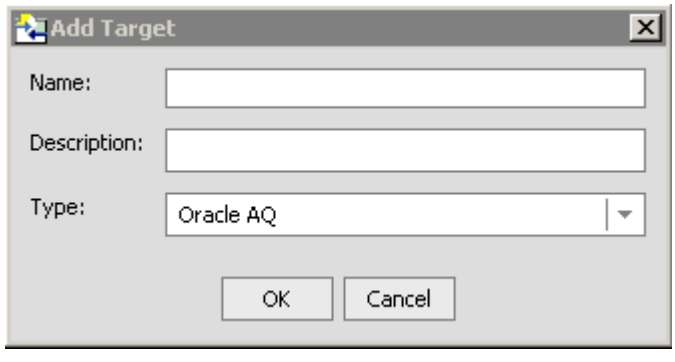
1. Expand the *iWay Service Adapters* node.

   An expandable list of adapter nodes (based on the iWay adapters installed) appears in the left pane. The right pane provides the details of the selected adapter, and is the work area where you will define and modify adapter functions and services.

2. Expand the *OracleAQ* node.

3. Right-click the *OracleAQ* node and select *Add Target*.

   The Add Target dialog box opens containing the Name, Description, and Type fields.



   a. In the Name field, type a descriptive name for the target, for example, OracleAQ.

   b. In the Description field, type a brief description for the connection.

   c. In the Type field, type the type of database to which you are connecting.

4. Click *OK*. The OracleAQ connection parameters dialog box opens:

a. Specify the connection parameters.

The following table lists and describes the parameters for connecting to your Oracle AQ target.

Parameter	Description
Host	Name of the server on which the Oracle database instance resides.
Port	Port number on which the database is listening.
SID	Unique name of the database service, chosen by the database administrator or the person who installed Oracle.
User	Oracle database user ID to access the Oracle database underlying the Oracle AQ system. The user ID must have database access to the interface tables being accessed.
Password	Password associated with the specified user ID.
AQName	Queue that enables asynchronous communication between your application and the Oracle database.

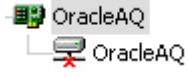
Parameter	Description
AQTable	Table in the Queue being queried.

5. Click *OK*.

   The target name appears under the node where you created the new connection. For information on connecting to the node, see *How to Connect to a Defined Target* on page A-7.

Procedure How to Connect to a Defined Target

1. Expand the *iWay Service Adapters* node.
2. Expand the *OracleAQ* node.
3. Click the target name (for example, *OracleAQ*) under the OracleAQ node.



   The Connection dialog box opens, populated with values you entered for the connection parameters.

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

   The x icon disappears, indicating that the node is connected.

Disconnecting From a Defined Target

Although you can maintain multiple open connections, iWay Software recommends disconnecting from targets that are not in use.

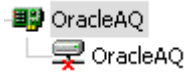
Procedure How to Disconnect From a Defined Target

1. Expand the *iWay Service Adapters* node.
2. Expand the *OracleAQ* node.

3. Right-click the target to which you are connected (for example, *OracleAQ*), and select *Disconnect*.

   Disconnecting from *OracleAQ* drops the connection with OracleAQ, but the node remains.

4. The x icon appears, indicating that the node is disconnected.



Editing a Defined Target

After you create a defined target using Application Explorer, you can edit any information that you provided during the creation process.

Procedure How to Edit a Defined Target

1. Expand the *iWay Service Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the target to which you are connected (for example, *OracleAQ*), and select *Edit*.

   The OracleAQ connection parameters dialog box opens.

4. Edit the information as needed and then click *OK*.

Deleting a Defined 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 OracleAQ targets in the left pane of the explorer.

Procedure How to Delete a Defined Target

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

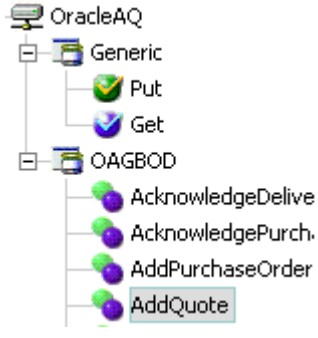
   The node disappears from the list of available connections.

Creating Schemas for Services

Application Explorer creates schemas for services that interact directly with your target Oracle AQ system. Each service the adapter uses must be defined by an XML schema. In order to use services, you must generate XML schemas for service requests and service responses. These schemas are dependent upon the application listening for the document being posted by the service.

Procedure How to Create Schemas for Services

1. If you are not connected to a OracleAQ target, connect to one, as described in *How to Connect to a Defined Target* on page A-7.
2. Click the service for which you want to generate the schemas (for example, AddQuote). Note that the adapter supplies a generic queue where you can put services, and a predefined queue (OAGBOD).



   The schemas are automatically created when you select the node. A screen appears in the right pane containing Request Schema and Response Schema tabs.
3. Click the *Request Schema* tab to view the request schema information.
4. Click the *Response Schema* tab to view the response schema information.

Reference Schema Location

Application Explorer stores the schemas it creates in subdirectories under the iWay home directory of the machine where it is installed. The exact location of the schemas differs depending on whether you deploy Application Explorer with an iBSE or a JCA configuration.

- When using the adapter with an iBSE configuration, the schemas are stored under a \schemas subdirectory of the iWay home directory, for example,

  `C:\Program Files\iway55\bea\ibse\wsdl\schemas\service\OracleAQ\OracleAQ`

where:

OracleAQ

Is the name of the connection to the OracleAQ system as defined in Application Explorer. Under this directory, Application Explorer creates subdirectories containing schemas.

- When using the adapter with a JCA configuration, the schemas are stored under a \schemas subdirectory of the iWay home directory, for example,

```
C:\Program Files\iWay55\config\base\schemas\OracleAQ\OracleAQ
```

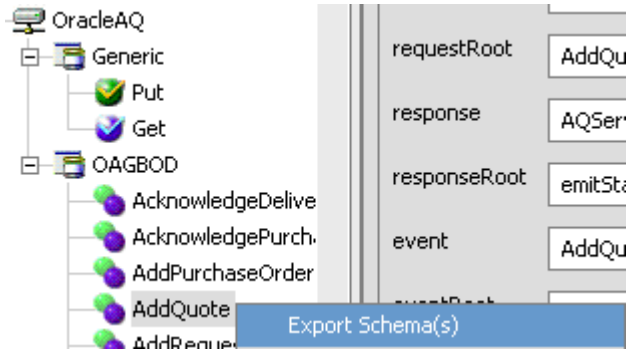
where:

OracleAQ

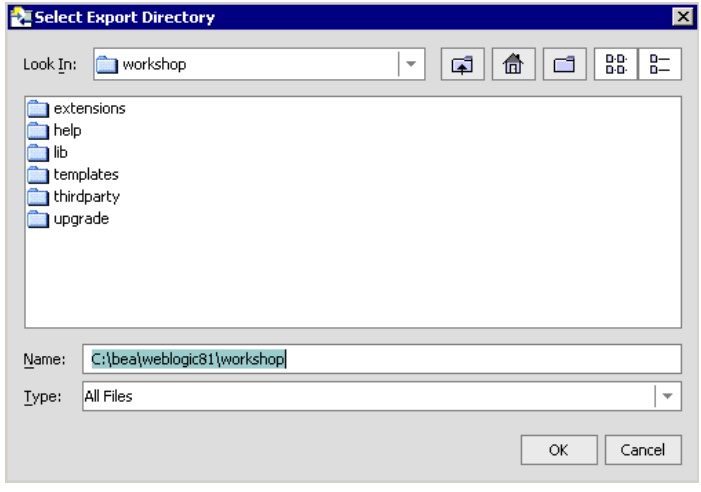
Is the name of the connection to the OracleAQ system as defined in Application Explorer. Application Explorer stores the schemas in this directory.

Procedure How to Export a Schema

1. If you have not already done so, connect to the target from which you want to export a schema (for example, *OracleAQ*).
2. Right-click the service from which you want to export a schema (for example, AddQuote), and select *Export Schema(s)*.



The Select Export Directory dialog box opens.



3. Select the directory to which you want to save the schema and click *OK*.

Understanding Integration Business Services

Application Explorer provides Web developers with a simple, consistent mechanism for extending the capabilities of the adapter. The Integration Business Services Engine exposes functionality as Web services. It serves as a gateway to heterogeneous back-end applications and databases.

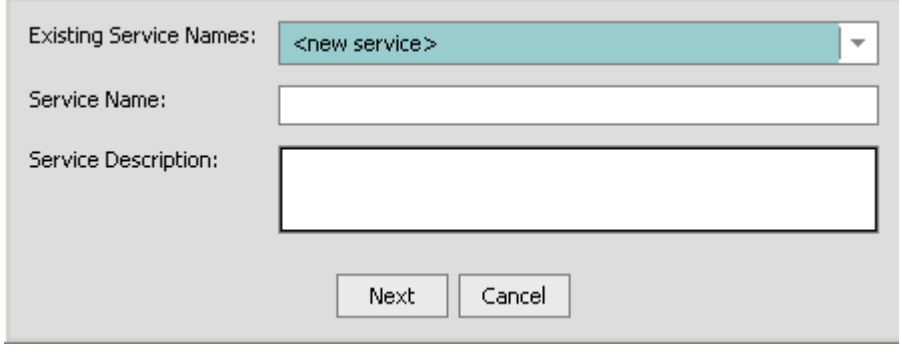
A Web service is a self-contained, modularized function that can be published and accessed across a network using open standards. It is the implementation of an interface by a component and is an executable entity. For the caller or sender, a Web service can be considered as a "black box" that may require input and delivers a result. A Web service integrates within an enterprise as well as across enterprises on any communication technology stack, whether asynchronous or synchronous, in any format.

Note: In a J2EE Connector Architecture (JCA) implementation of iWay adapters, Web services are not available. When the adapters are deployed to use the iWay Connector for JCA, the Common Client Interface provides integration services using the iWay adapters. For more information, see the *iWay Installation and Configuration for BEA WebLogic* manual and the *iWay Connector for JCA for BEA WebLogic User's Guide*.

Procedure How to Generate a Business Service

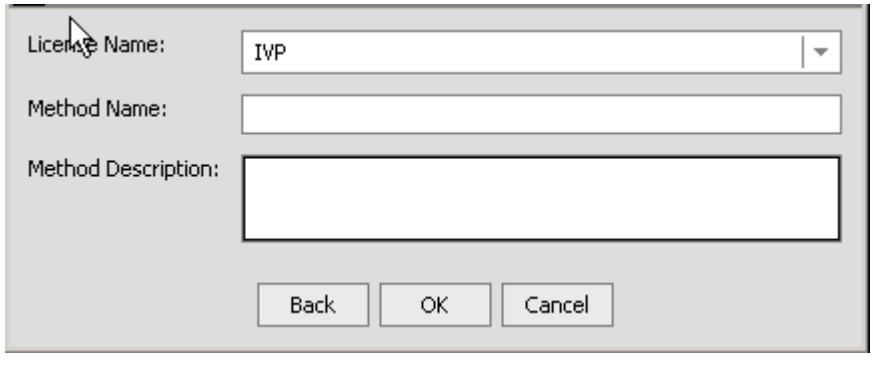
1. If you are not connected to a defined target, connect to one, as described in *How to Connect to a Defined Target* on page A-7.
2. Right-click the node containing the service for which you want to create a business service, and select *Create Integration Business Service*.

   The Create Integration Business Service dialog box opens.



3. Choose whether to create a new service or use an existing service.
   a. Select either a new service or an existing service from the Existing Service Names drop-down box.
   b. Specify a service name if you are creating a new service. This name identifies the Web service in the list of services under the Integration Business Services node.
   c. Provide a description for the service.
4. Click *Next*.

   The license and method dialog box opens.



a. In the License Name field, select one or more license codes to assign to the Web Service. To select more than one, hold down the *Ctrl* key and click the licenses.

b. In the Method Name field, type a descriptive name for the method.

c. In the Method Description field, provide a brief description for the method.

5. Click *OK*.

Application Explorer expands the Integration Business Services node in the left pane to show the new Web service and presents a test input area in the right pane.

Testing a Business Service

After a business service is created, test it to ensure that it functions properly. iWay provides a test tool for testing the business service.

Procedure How to Test a Business Service

1. Expand the *Integration Business Services* node.

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. This pane provides a text field in which to paste the XML input or browse to a file that can be uploaded. Below the text field is the browse field and the Invoke button.

5. Provide the appropriate XML input.

6. Click *Invoke*.

The result appears in the right pane.

Generating WSDL From a Web Service

Generating Web Services Description Language (WSDL) from a Web service enables you to make the Web service available to other services within a host server such as BEA WebLogic Server.

Procedure How to Generate WSDL From a Web Service

1. Expand the *Integration Business Services* node.
2. Expand the *Services* node to display the service for which you want to generate WSDL.
3. Right-click the service and select *Export WSDL*.

   The Save dialog box opens.
4. Choose a location for the file and specify .wsdl for the extension.

   Note: The file extension must be .wsdl.
5. Click *Save*.

Identity Propagation

If you test or execute a Web service using a third party XML editor, for example XMLSPY, the Username and Password values that you specify in the SOAP header must be valid and are used to connect to Oracle AQ. The user name and password values that you provided for Oracle AQ 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>
```

Note: You can remove the following tags from the SOAP header, since they are not required:

```
<m:disposition>String</m:disposition>
```

```
<m:language>String</m:language>
```

Adding a Control for an iWay Resource in BEA WebLogic Workshop

Java controls provide a convenient way to incorporate access to iWay resources. You can add controls in BEA WebLogic Workshop to use Web services created by Application Explorer, or you can add controls that enable you to take advantage of the JCA resources of Application Explorer.

Adding a Web Service Control to a BEA WebLogic Workshop Application

After you create an iWay Web service using Application Explorer and export the WSDL file, you can create a control for the Web service.

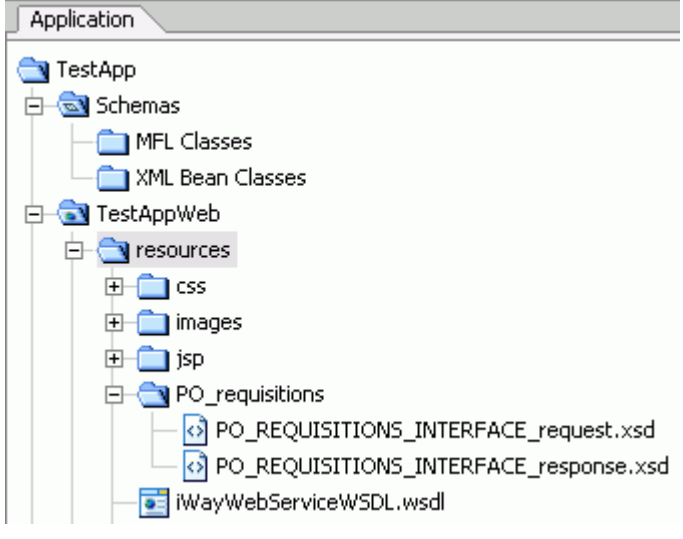
For more information on exporting a WSDL file, see *How to Generate WSDL From a Web Service* on page A-14.

Procedure How to Add a Web Service Control

To add a Web service control:

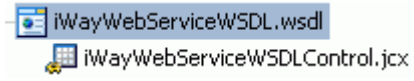
1. After exporting the WSDL file from Application Explorer, locate the file in the Application tab of your BEA WebLogic Workshop application.

   For example, a WSDL file saved to the \resources directory in your BEA WebLogic Workshop Web application directory structure appears as follows:



2. Right-click the *WSDL* file and select *Generate Service Control*.

   The control for the WSDL appears below the WSDL file in the resources tree.



Adding an Extensible CCI Control

An iWay control enables access to resources provided by Application Explorer when it is used in conjunction with a JCA deployment. You must add an iWay control before using it in a BEA WebLogic Workshop application workflow.

The following topic describes the enhanced CCI control, which is extensible and provides JCX with typed inputs and outputs for JCA in BEA WebLogic Workshop.

Overview

The extensible iWay CCI control provides:

- **Method and tag validation**. BEA WebLogic Workshop provides warnings regarding invalid methods and tags.
- **Improved error handling**.

You can define new methods that rely on the generic *service* and *authService* methods. For example, you can define a JCX with a new method without writing casting code or explicit transformations such as the following:

```
public ResponseDataType MethodName(RequestDataType VariableName) throws
Exception;
```

where:

ResponseDataType

Is the XML Bean Class value that is generated from the response schema.

MethodName

Is the method name used by the extensible CCI control.

RequestDataType

Is the XML Bean Class value that is generated from the request schema.

VariableName

Is the request variable that stores the request document, which is used as input by the extensible CCI control.

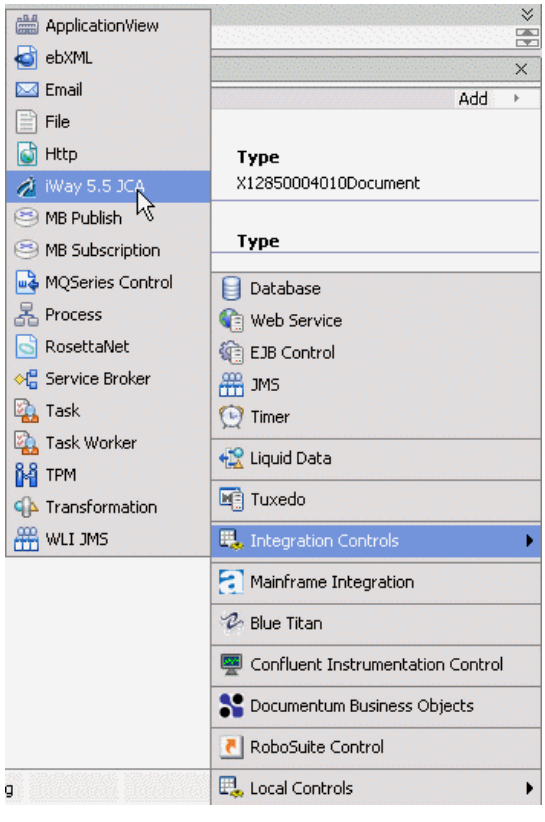
In addition, the extensible CCI control now generates a JCX file to which you can add your own methods. For more information, see *Defining a Control Using the Extensible CCI Control* on page A-17.

You can also use dynamic class casting to specify schema-based input or output XmlObjects to be casted into a pure XmlObject as a service method, which is expected by the CCI control. For more information, see *Using Dynamic Class Casting* on page A-23.

Example Defining a Control Using the Extensible CCI Control

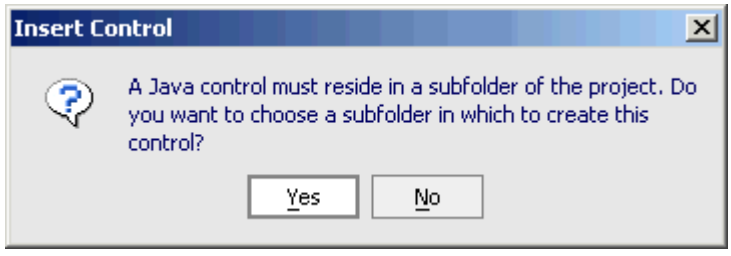
The following sample JCX demonstrates how to define a control for OracleAQ using the extensible CCI control in BEA WebLogic Workshop.

1. Start BEA WebLogic Workshop and create a new project.



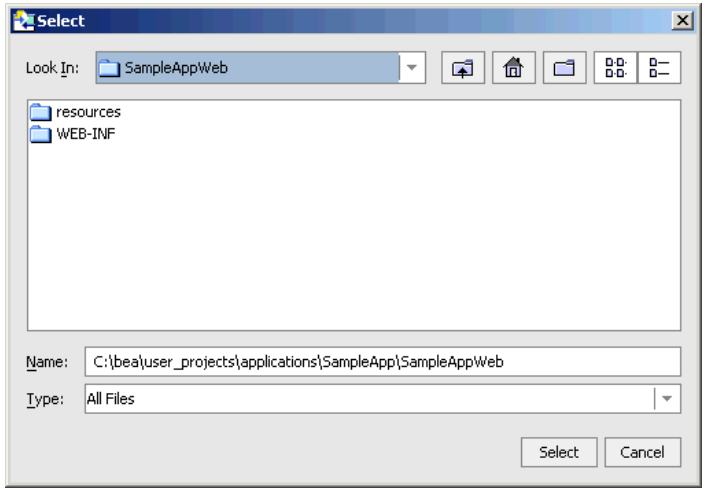
2. Click *Add* from the Controls section in the Data Palette tab, select *Integration Controls*, and click *iWay 5.5 JCA*.

The Insert Control message box opens.



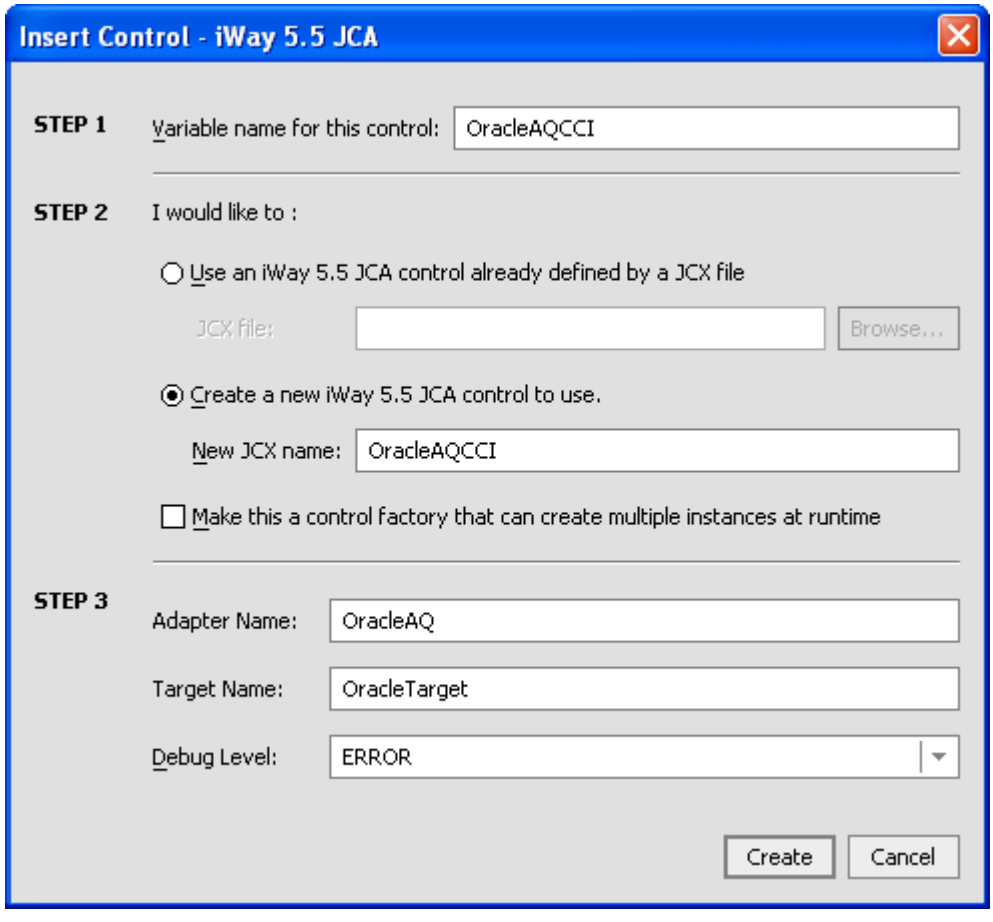
3. Click *Yes*.

The Select dialog box opens.



4. Choose a subfolder for the CCI control and click *Select*.

The Insert Control - iWay 5.5 JCA dialog box opens.



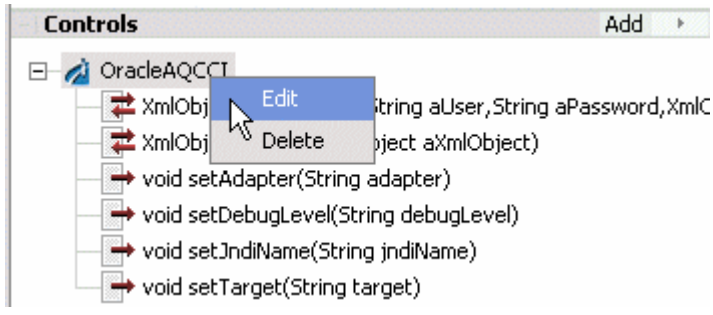
a. Provide a variable name for the control.

b. Click *Create a new iWay 5.5 JCA control to use* and provide a new JCX name.

c. Enter the adapter name, target name, and select a debug level from the drop-down list.

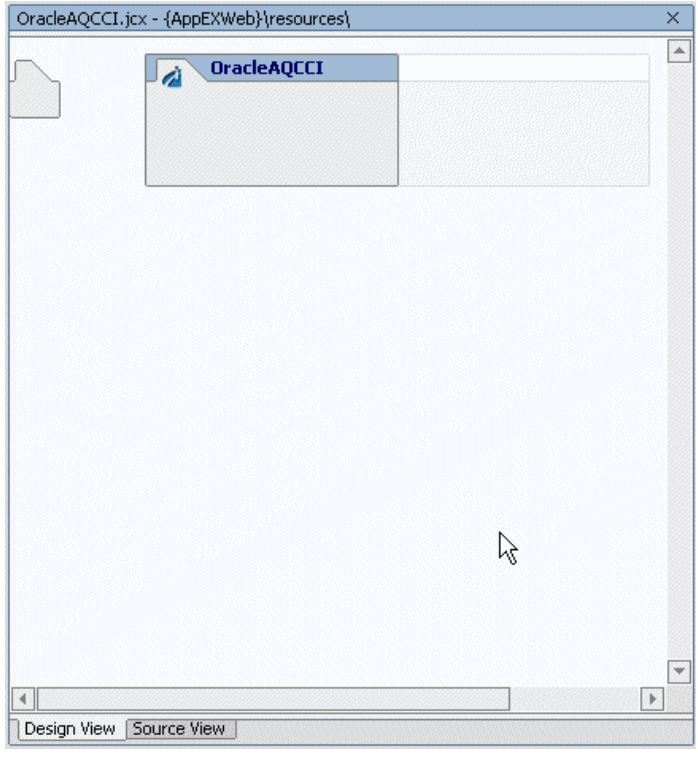
5. Click *Create*.

A new JCX file is created.



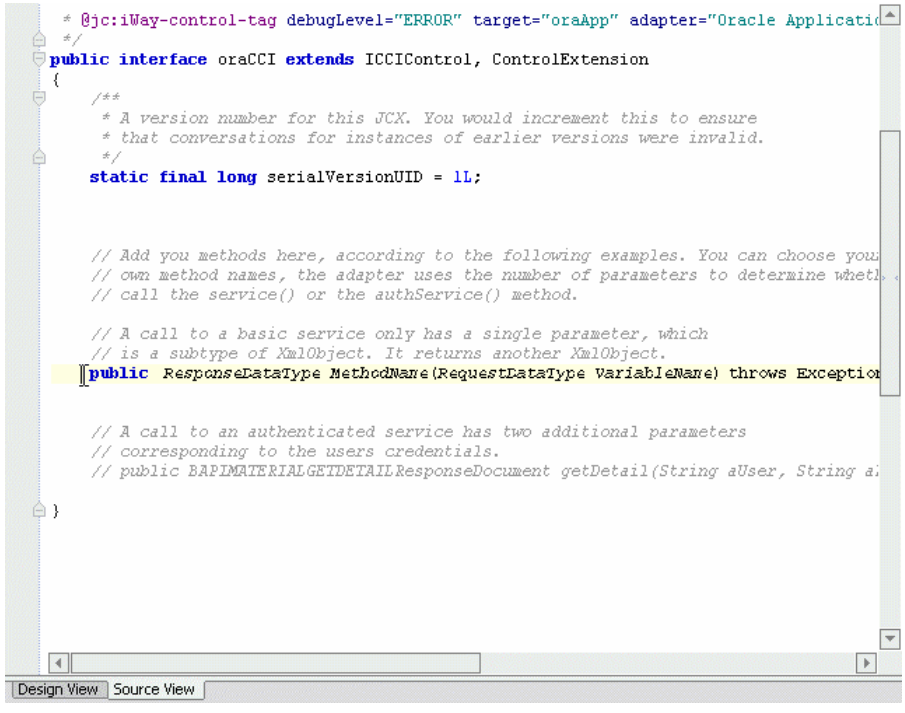
6. Right-click the control, for example, OracleAQCCI, and select *Edit*.

The Design View for the control opens.



7. Click the *Source View* tab.

The Source View for the control opens.



Perform the following steps:

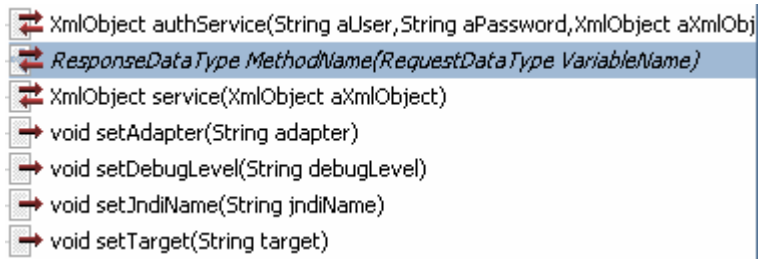
a. Uncomment the public class definition.

b. Change the existing response data type to match your response data type that is generated from your OracleAQ response schema.

c. Change the existing method name to match your method.

d. Change the existing request data type to match your request data type that is generated from your OracleAQ request schema.

The following control is now available in BEA WebLogic Workshop and can be added to a workflow:



Note: You can view available data types under the *XML Bean Classes* folder in the *Application* tab, which are added once you import your XML request or response schemas from Application Explorer.

These data types are case sensitive and must be entered exactly as shown.

Using the Extensible CCI Control

The extensible CCI control functions much like a database control since it generates JCX files to which you can add your own methods.

Your own methods can use the correct input and output types rather than the generic XmlObject types that the JCA control uses. Since the control is just a proxy that uses a reflection to call the relevant method, it handles the casting for you. You are no longer required to write custom code that does the cast or transformations that are cast between an XmlObject.

For example, instead of the generic XmlObject:

```
XmlObject service(XmlObject input) throws java.lang.Exception;
```

you call:

```
public ResponseDataType MethodName(RequestDataType VariableName) throws
Exception;
```

where:

ResponseDataType

Is the XML Bean Class value that is generated from the response schema.

MethodName

Is the method name used by the extensible CCI control.

RequestDataType

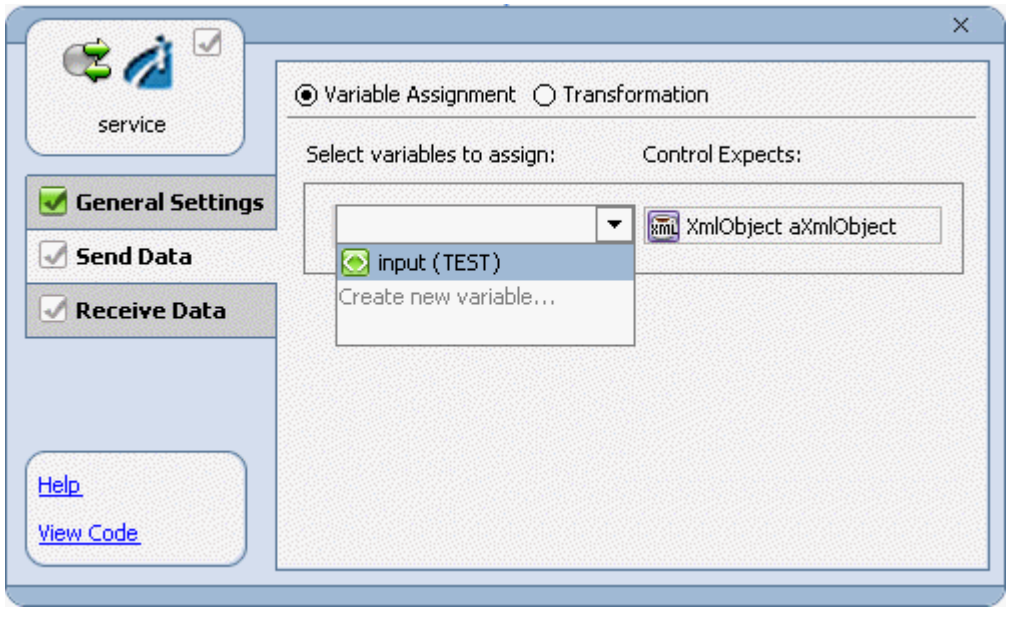
Is the XML Bean Class value that is generated from the request schema.

VariableName

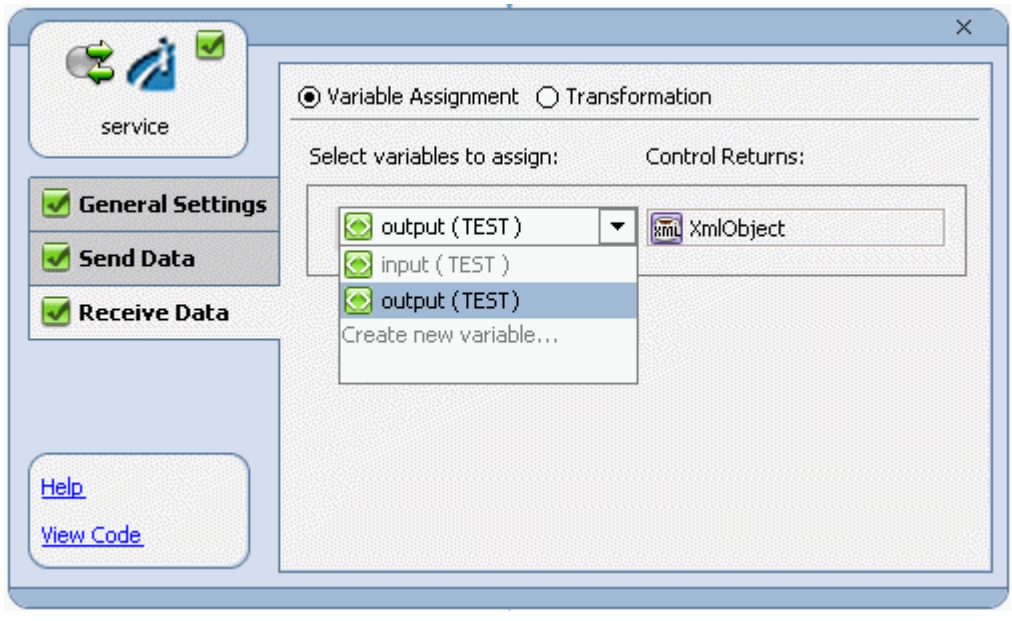
Is the request variable that stores the request document, which is used as input by the extensible CCI control.

Example Using Dynamic Class Casting

The following example uses dynamic class casting to specify a schema-based input XmlObject to be casted into a pure XmlObject as a service method, which is expected by the CCI control.



The following example uses dynamic class casting where the CCI control returns a pure XmlObject, which is casted dynamically into a schema-based output XmlObject.



APPENDIX B

Using Application Explorer in BEA WebLogic Workshop for Event Handling

Topics:

- Starting iWay Application Explorer in BEA WebLogic Workshop
- Understanding iWay Event Functionality
- Creating, Editing, or Deleting an Event Port
- Creating, Editing, or Deleting an Event Channel
- Deploying iWay Components in a Clustered BEA WebLogic Environment

This section describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to listen for events posted to a Oracle AQ queue. It describes how to use the iWay Adapter for Oracle AQ for BEA WebLogic to listen, react, and dispose of event data coming from the Oracle AQ queue. In addition, this section provides information on deploying components in a clustered BEA WebLogic environment.

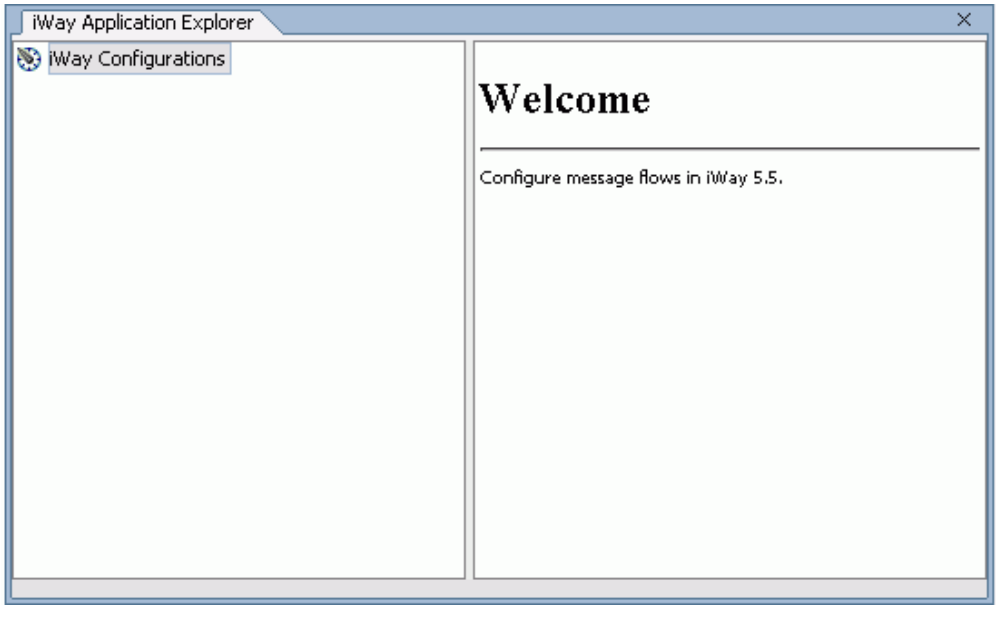
Starting iWay Application Explorer in BEA WebLogic Workshop

You can use iWay Application Explorer with an iBSE or a JCA configuration. Before you can use Application Explorer, you must start BEA WebLogic Server.

Procedure How to Start Application Explorer in BEA WebLogic Workshop

1. Start WebLogic Workshop.
2. Ensure that the server on which Application Explorer is deployed is started. If it is not started, select *WebLogic Server* from the Tools menu and then click *Start WebLogic Server*.
3. From the View menu, select *Windows* and then click *iWay Application Explorer*.

   Application Explorer opens as a frame within the Workshop.



Understanding iWay Event Functionality

Events are generated as a result of a document arriving on an Oracle AQ queue. For example, an update to an application (for example, Oracle applications) results in a document being posted to an Oracle AQ queue. If your integration application must perform an act upon this event, your integration application is the consumer of the event.

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

- Port

  A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and resulting location of the event data. The port defines the end point of the event consumption. For more information, see *Creating, Editing, or Deleting an Event Port* on page B-3.

- Channel

  A channel represents configured connections to particular instances of back-end or other types of systems. A channel binds one or more event ports to a particular listener managed by an adapter. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Creating, Editing, or Deleting an Event Port

Application Explorer enables you to create event ports from the iWay Service Adapters tab or from the iWay Events Adapters tab. You also can edit or delete an existing port.

Creating an Event Port From the iWay Event Adapters Tab

The following procedures describe how to create an event port from the iWay Event Adapters window for various dispositions using Application Explorer. The following dispositions are available when using Application Explorer in conjunction with an iBSE deployment:

- File
- iBSE
- MSMQ
- JMSQ
- SOAP
- HTTP
- MQSeries

Note: The MAIL disposition option will be supported in a future release.

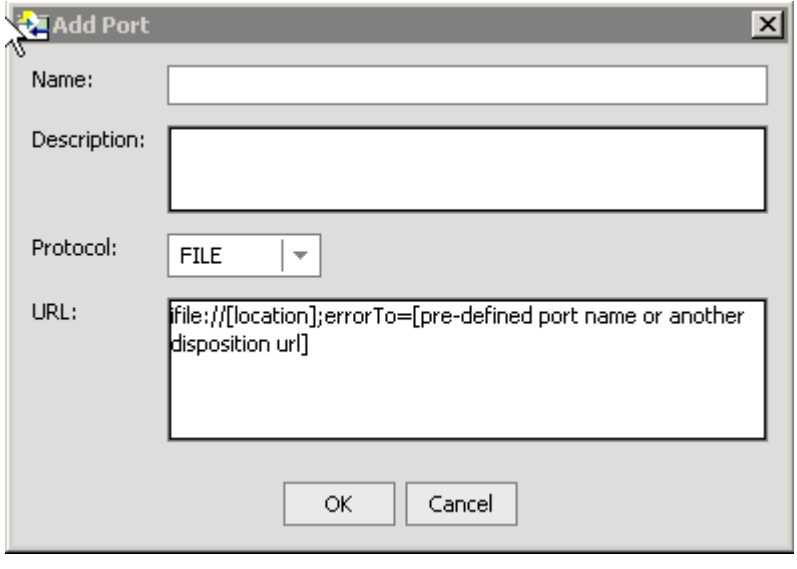
The following dispositions are available when using Application Explorer in conjunction with a JCA connector deployment.

- File
- JMSQ
- HTTP
- MQSeries

Procedure How to Create an Event Port for File

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

   The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



   a. Type a name for the event port and provide a brief description.

   b. From the Protocol drop-down list, select *File*.

   c. In the URL field, specify a destination file to which the event data is written.

   When pointing Application Explorer to an **iBSE** deployment, specify the destination file using the following format:

```
ifile://[location];errorTo=[pre-defined port name or another
disposition url]
```

When pointing Application Explorer to a **JCA** deployment, provide the full path to the directory.

The following table lists and defines the parameters for the File disposition.

Parameter	Description
location	Destination and file name of the document where event data is written. For example, D:\in\x.txt
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

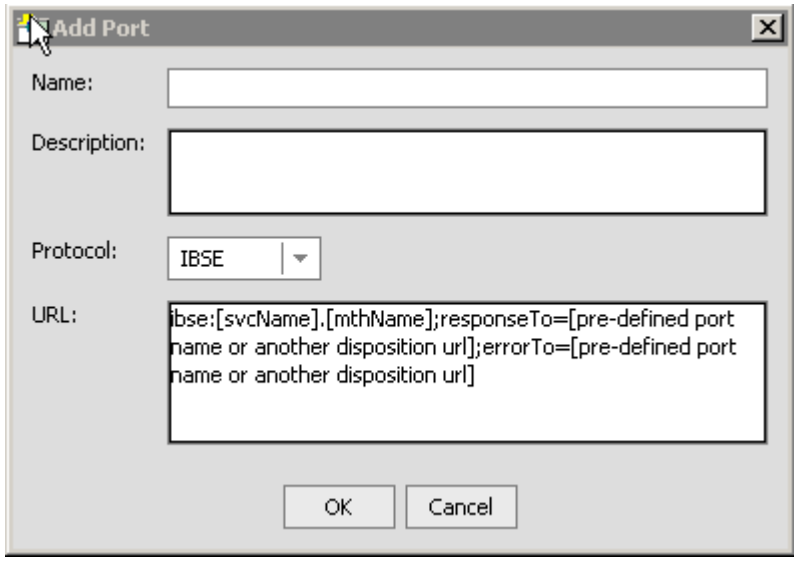
   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for iBSE

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



a. Type a name for the event port and provide a brief description.

b. From the Protocol drop-down list, select *iBSE*.

c. In the URL field, enter an iBSE destination in the following format:

```
ibse:[svcName].[mthName];responseTo=[pre-defined port name or another disposition url];errorTo=[pre-defined port name or another disposition url]
```

The following table lists and defines the parameters for the iBSE disposition:

Parameter	Description
svcName	Name of the service created with iBSE.
mthName	Name of the method created for the Web service.
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

Parameter	Description
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

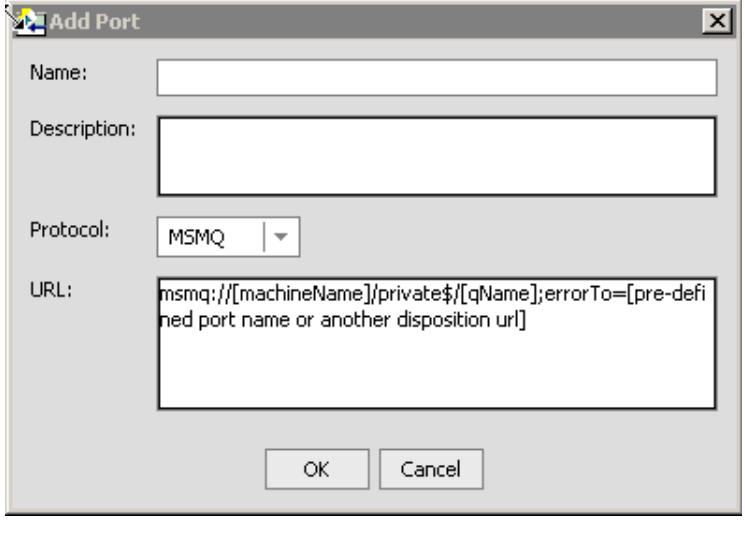
   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for MSMQ

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

   The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



   a. Type a name for the event port and provide a brief description.

   b. From the Protocol drop-down list, select *MSMQ*.

c. In the URL field, enter an MSMQ destination in the following format:

```
msmq://[machineName]/private$/[qName];errorTo=[pre-defined port
name or another disposition url]
```

Note: This syntax is for a private queue. Private queues are queues that are not published in Active Directory. They appear only on the local computer that contains them. Private queues are accessible only by Message Queuing applications that recognize the full path name or format name of the queue.

The following table lists and defines the parameters for the MSMQ disposition:

Parameter	Description
machineName	Machine name where the Microsoft Queuing system is running.
qName	Name of the private queue where messages are placed.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

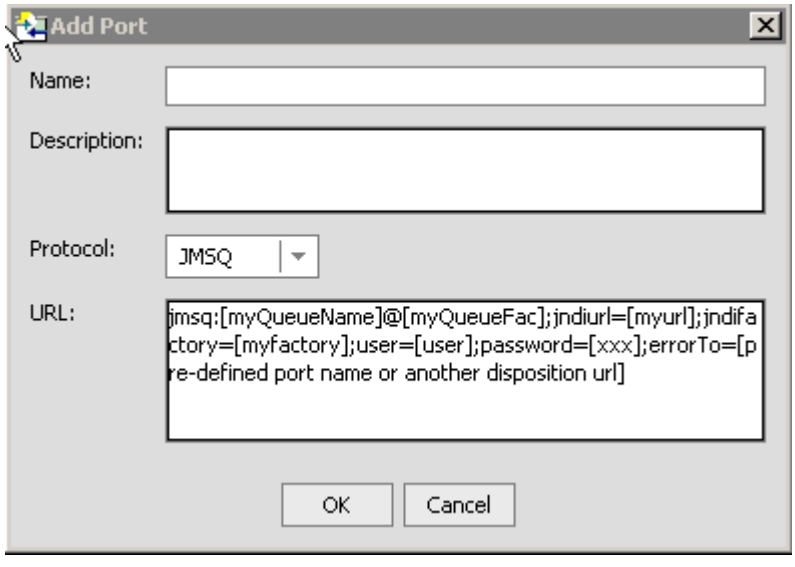
The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for JMSQ

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

   The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



   a. Type a name for the event port and provide a brief description.

   b. From the Protocol drop-down list, select *JMSQ*.

   c. In the URL field, enter a JMS destination.

   When pointing Application Explorer to an **iBSE** deployment, use the following format:

```
jmsq:[myQueueName]@[myQueueFac];jndiurl=[myurl];
jndifactory=[myfactory];user=[user];password=[xxx];
errorTo=[pre-defined port name or another disposition url]
```

   When pointing Application Explorer to a **JCA** deployment, use the following format:

```
jms:jmsqueue@jmsfactory;jndiurl=;jndifactory=;
```

The following table lists and defines the parameters for the JMSQ disposition:

Parameter	Description
myQueueName or jmsqueue	JNDI name of a queue to which events are emitted.
myQueueFac or jmsfactory	Resource that contains information about the JMS Server. The WebLogic connection factory is: `javax.jms.QueueConnectionFactory`

jndiurl	URL to use to contact the JNDI provider. The syntax of this URL depends on the JNDI provider being used. This value corresponds to the standard JNDI property,
	`java.naming.provider.url.`
	The URL of the WebLogic Server is
	`t3://host:port`
	where:
	`host`
	Is the machine name where WebLogic Server is installed.
	`port`
	Is the port on which WebLogic Server is listening. The default port, if not changed at installation, is 7001.

jndifactory	Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider. For WebLogic Server, the WebLogic factory is: `weblogic.jndi.WLInitialContextFactory.`
user	Valid user name required to access a JMS server.
password	Valid password required to access a JMS server.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

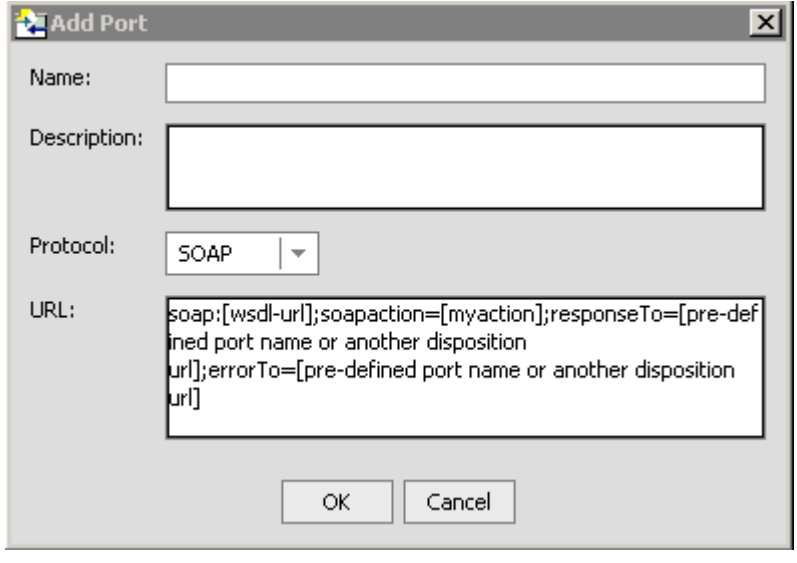
   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for SOAP

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

   The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



   a. Type a name for the event port and provide a brief description.

   b. From the Protocol drop-down list, select *SOAP*.

   c. In the URL field, enter a SOAP destination in the following format:

```
soap:[wsdl-url];soapaction=[myaction];method=[web service
method];namespace=[namespace];responseTo=[pre-defined port name or
another disposition URL];errorTo=[pre-defined port name or another
disposition url]
```

The following table lists and defines the parameters for the SOAP disposition:

Parameter	Description
wsdl-url	The URL to the WSDL file that is required to create the SOAP message. For example: `http://localhost:7001/ibse/IBSEServlet/test/webservice.ibs?wsdl` where: *webservice* Is the name of the Web service you created using Application Explorer. This value can be found by navigating to the Integration Business Services tab and opening the *Service Description* link in a new window. The WSDL URL appears in the Address field. You can also open the WSDL file in a third party XML editor (for example, XMLSPY) and view the SOAP request settings to find this value.
soapaction	The method that will be called by the SOAP disposition. This value can be found in the WSDL file.
method	Web service method you are using. This value can be found in the WSDL file.
namespace	XML namespace you are using. This value can be found in the WSDL file.
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

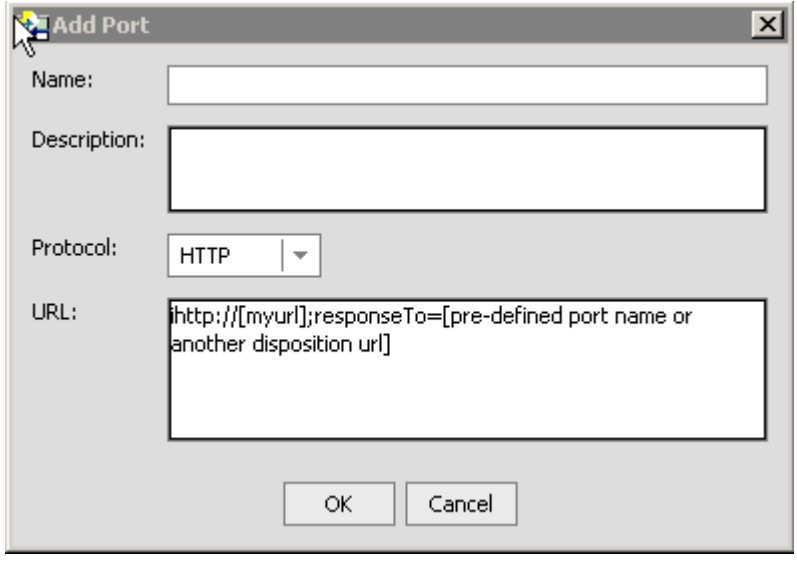
   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for HTTP

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

   The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



   a. Type a name for the event port and provide a brief description.

   b. From the Protocol drop-down list, select *HTTP*.

   c. In the URL field, enter an HTTP destination.

   When pointing Application Explorer to an **iBSE** deployment, use the following format:

```
ihttp://[myurl];responseTo=[pre-defined port name or another
disposition url];
```

When pointing Application Explorer to a **JCA** deployment, use the following format:

```
http://host:port/uri
```

The following table lists and defines the parameters for the HTTP disposition when using an **iBSE** deployment:

Parameter	Description
myurl	URL target for the post operation, for example, `http://myhost:1234/docroot`
responseTo	Location to which responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

The following table lists and defines the parameters for the HTTP disposition when using a **JCA** deployment:

Parameter	Description
host:port	Combination of the name of the host on which the Web server resides and the port on which the server is listening for the post operation.
uri	Universal resource identifier that completes the URL specification.

4. Click *OK*.

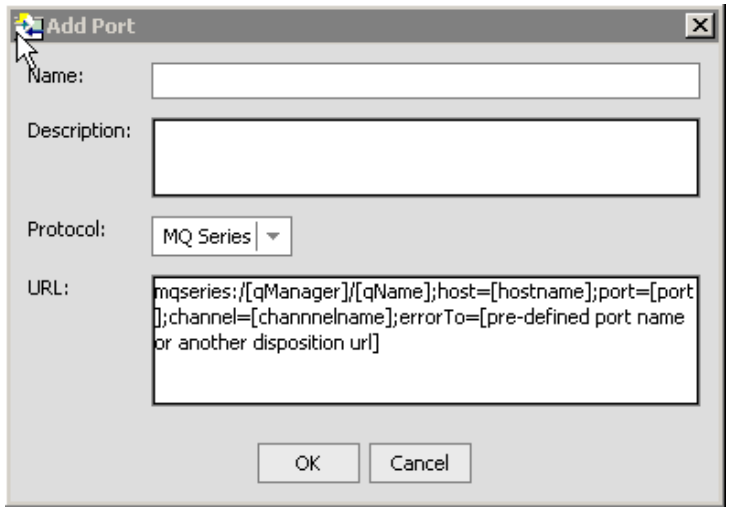
   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Procedure How to Create an Event Port for MQSeries

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Ports* node and select *Add Port*.

The Add Port dialog box opens containing fields to enter a name, description, protocol, and URL.



a. Type a name for the event port and provide a brief description.

b. From the Protocol drop-down list, select *MQSeries*.

c. In the URL field, enter an MQSeries destination.

When pointing Application Explorer to an **iBSE** deployment, use the following format:

```
mqseries:/[qManager]/[qName];host=[hostname];port=[port];
channel=[channnelname];errorTo=[pre-defined port name or another
disposition url]
```

When pointing Application Explorer to a **JCA** deployment, use the following format:

```
mq:qmanager@respqueue;host=;port=;channel=
```

The following table lists and defines the parameters for the MQSeries disposition:

Parameter	Description
qManager	Name of the queue manager to which the server must connect.
qName or respqueue	Name of the queue where messages are placed.
host	Host on which the MQ Server is located (for the MQ Client only).

Parameter	Description
port	Port number to connect to an MQ Server queue manager (for the MQ client only).
channel	Case-sensitive name of the channel that connects with the remote MQ Server queue manager (for the MQ client only). The default channel name for MQSeries is SYSTEM.DEF.SVRCONN.
errorTo	Location to which error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

4. Click *OK*.

   The port appears under the ports node in the left pane. To review the port settings, select the port name. A table summarizing the port settings appears in the right pane.

   You are ready to associate the event port with a channel. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.

Editing and Deleting an Event Port

The following procedures provide information on how to edit and delete an event port using Application Explorer.

Procedure How to Edit an Event Port

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the event port you want to edit and select *Edit*.

   The Edit Port window opens.
4. Make the necessary changes and click *OK*.

Procedure How to Delete an Event Port

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the event port you want to delete and select *Delete*.

The event port disappears from the list in the left pane.

Creating, Editing, or Deleting an Event Channel

The following topics describe how to create, edit, or delete a channel for your iWay Event. All defined event ports must be associated with a channel.

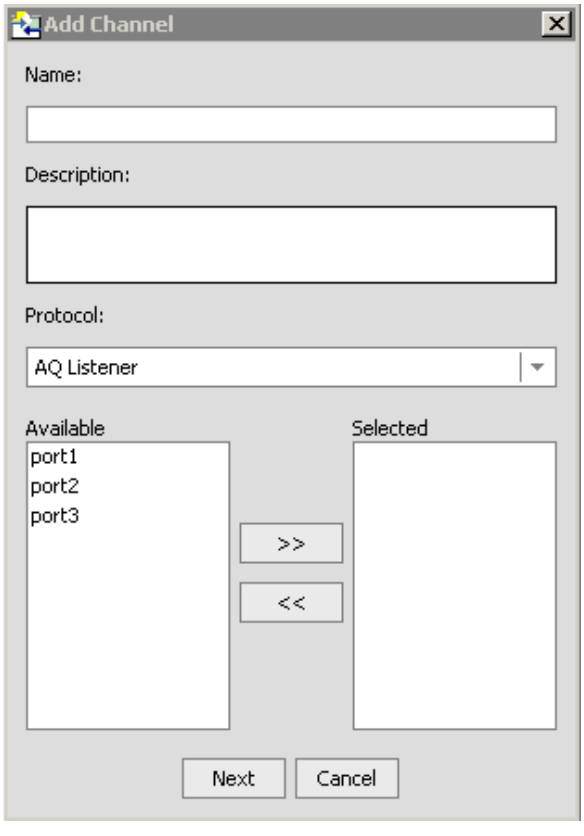
Creating a Channel

The following procedure describes how to create a channel.

Procedure How to Create a Channel

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the *Channels* node and select *Add Channel*.

   The Add Channel dialog box opens containing fields to enter a name, description, and protocol, as well as lists for available and selected ports and buttons to enable you to move ports from one list to the other.



4. Specify information for the channel you are creating.

   a. Type a name for the channel (for example, Channel1) and provide a brief description.

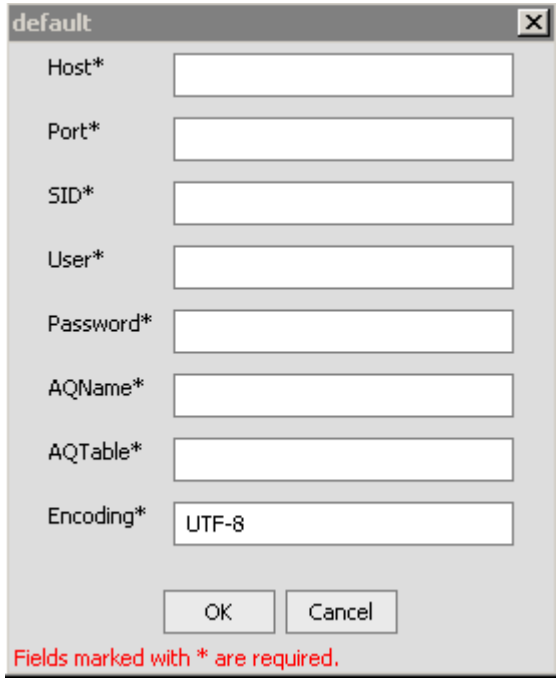
   b. From the *Protocol* drop-down list, select AQ Listener.

   c. Select an event port from the list of available ports. To select more than one, hold down the *Ctrl* key and click the ports.

   d. Click the double right arrow (>>) to transfer the port(s) to the list of selected ports.

5. Click *Next*.

   The default dialog box opens.



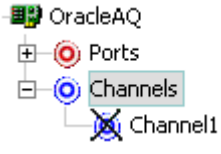
   a. Specify the OracleAQ event parameters in the default dialog box.

The following table lists and describes the parameters for creating an OracleAQ event.

Parameter	Description
Host	Name of the server on which the Oracle database instance resides.
Port	Port number on which the database is listening.
SID	Unique name of the database service, chosen by the database administrator or the person who installed Oracle.
User	Oracle database user ID to access the Oracle database underlying the Oracle AQ system. The user ID must have database access to the interface tables being accessed.
Password	Password associated with the specified user ID.
AQName	Queue that enables asynchronous communication between your application and the Oracle database.
AQTable	Table in the Queue being queried.
Encoding	Code representing data (for example, UTF-8).

6. Click *OK*.

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



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

To review the settings for the channel, select the channel. The right pane contains tabs that summarize the channel settings.

Procedure How to Start and Stop a Channel

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. To start a channel, right-click the channel node and select *Start*.

   The channel becomes active and the X over the icon disappears.

4. To stop a channel, right-click the connected channel node and select *Stop*.

   The channel becomes inactive and the X appears over the icon.

Editing and Deleting a Channel

The following procedures describe how to edit and delete a channel.

Procedure How to Edit a Channel

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the channel you want to edit and select *Edit*.

   The Edit Channel dialog box appears.
4. Make the necessary changes to the channel configuration.
5. Click *OK*.

Procedure How to Delete a Channel

1. Expand the *iWay Event Adapters* node.
2. Expand the *OracleAQ* node.
3. Right-click the channel you want to delete and select *Delete*.

The channel disappears from the list in the left pane.

Deploying iWay Components in a Clustered BEA WebLogic Environment

Events can be configured in a clustered BEA WebLogic environment. You can deploy iBSE or JCA to this environment. This topic uses iBSE as an example, but you can follow the same procedures when deploying JCA. The only difference is that you need to deploy the JCA connector .RAR file to the clustered environment.

A cluster consists of multiple server instances running simultaneously, yet appears to clients to be a single server instance. The server instances that contain a cluster can be run on one machine, but are usually run on multiple machines.

Clustering provides the following benefits:

- Load balancing
- High availability

Service requests are processed through the HTTP router and routed to an available managed server.

Events are server-specific and are not processed through the HTTP router. You must configure each server separately.

Procedure How to Deploy iWay Components in a Clustered Environment

To deploy iWay components in a clustered environment:

1. Using the BEA Configuration Wizard:
   a. Configure an administrative server to manage the managed servers.
   b. Add and configure as many managed servers as required.
   c. Add and configure an HTTP router. This does not have to be a part of WebLogic and can be an outside component.
   d. If you configure the HTTP router within WebLogic, start it by entering the following command:

      ```
      StartManagedWebLogic HTTPROUTER http://localhost:7001
      ```

      where:

      HTTPROUTER is the name of the server on which the HTTP router is running.

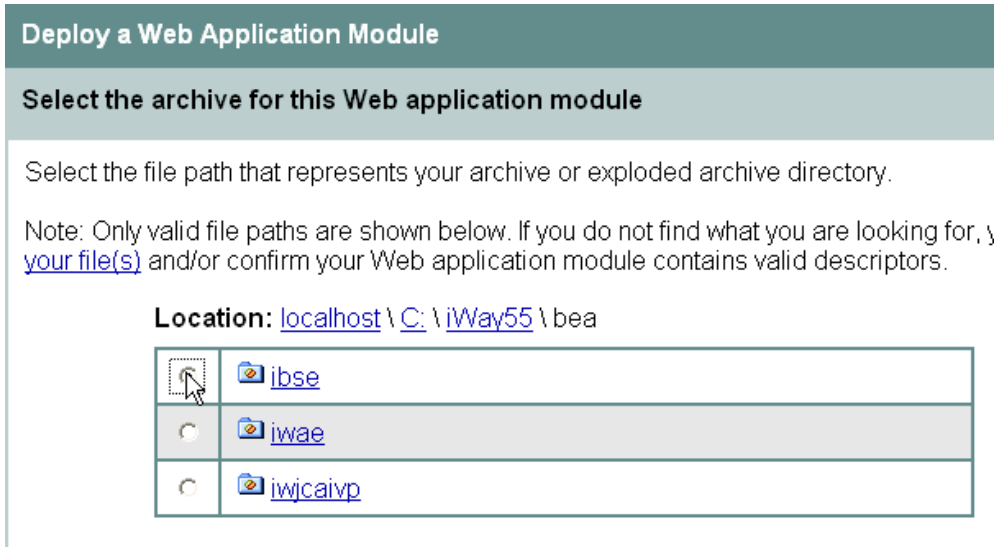
      `http://localhost:7001` is the location of the admin console.

   e. Add the managed servers to your cluster/clusters.

   For more information on configuring WebLogic Integration for deployment in a clustered environment, see *Deploying WebLogic Integration Solutions*.

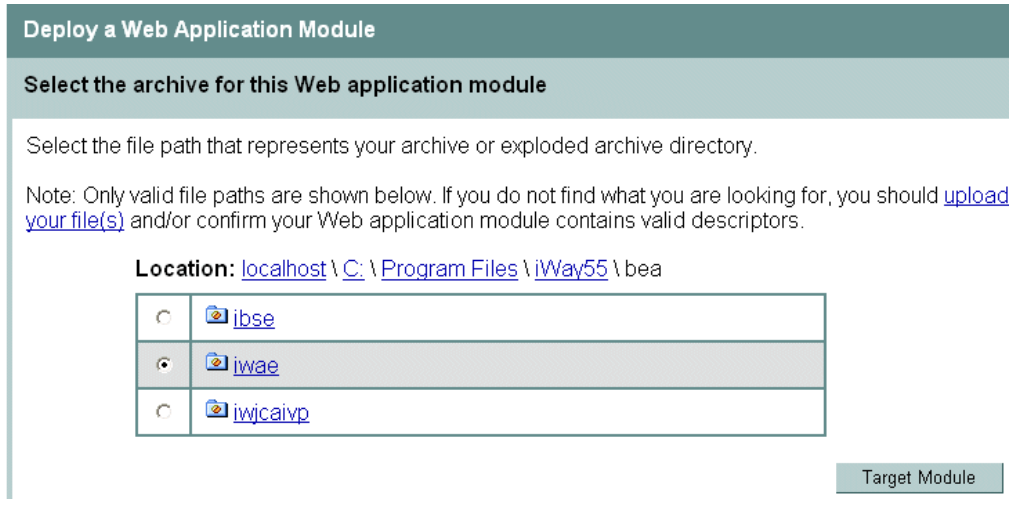
2. Start the WebLogic Server and open WebLogic Server Console.
3. Deploy iBSE to the cluster by selecting *Web Application Modules* from the Domain Configurations section, and clicking *Deploy a new Web Application Module*.

   A page appears for you to specify where the Web application is located.
4. To deploy iBSE, select the option button next to the ibse directory and then click *Target Module*.

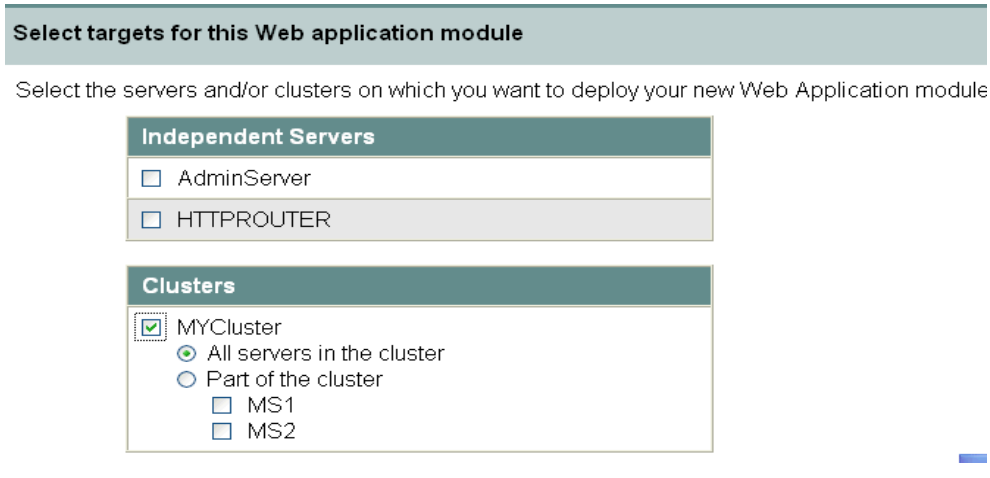


5. To deploy servlet Application Explorer, select the option button next to the iwae directory and then click *Target Module*.

If you are using servlet Application Explorer, deploy it only on the admin server or one of the managed servers.

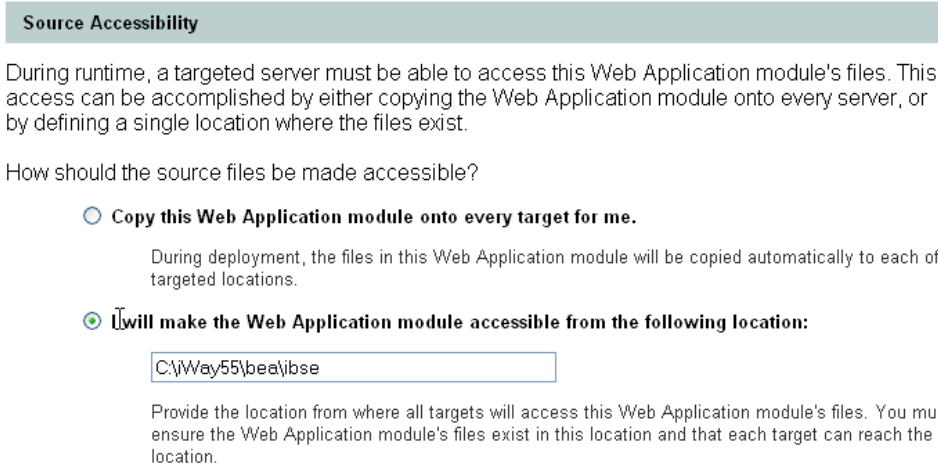


The following window opens.



6. Select the servers and/or clusters on which you want to deploy the application and click *Continue*.

The following window opens.



7. Select the *I will make the Web Application module accessible from the following location* option button and provide the location from which all targets will access iBSE.

iWay Software recommends that you use a single instance of iBSE, rather than copying iBSE onto every target.

Note: iBSE must use a database repository (SQL or Oracle). Do not use a file repository. You can select this in the Repository Type drop-down list in the iBSE monitoring page. After configuring a database repository, you must restart all of the managed servers.

`http://hostname:port/ibse/IBSEConfig/`

where:

hostname

Is where your application server is running. Use the IP address or machine name in the URL; do not use localhost.

port

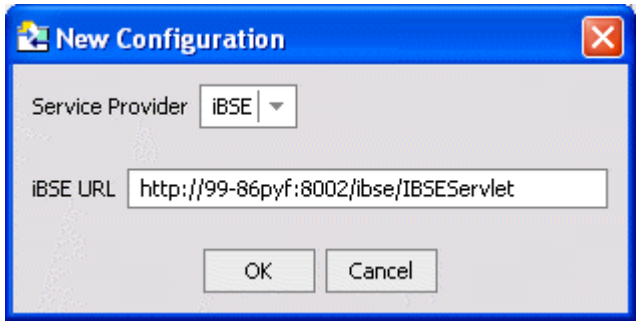
Is the port specific to each server, since you deploy iBSE to an entire cluster. For example, 8001, 8002, or any other port that is specified for each managed node.

8. Click *Deploy*.

Procedure Configuring Ports and Channels in a Clustered Environment

To configure ports and channels in a clustered environment:

1. Open Swing Application Explorer in BEA WebLogic Workshop.
2. Create a new connection to the iBSE instance. For information on creating a new configuration, see *How to Define a New Configuration* on page A-3.



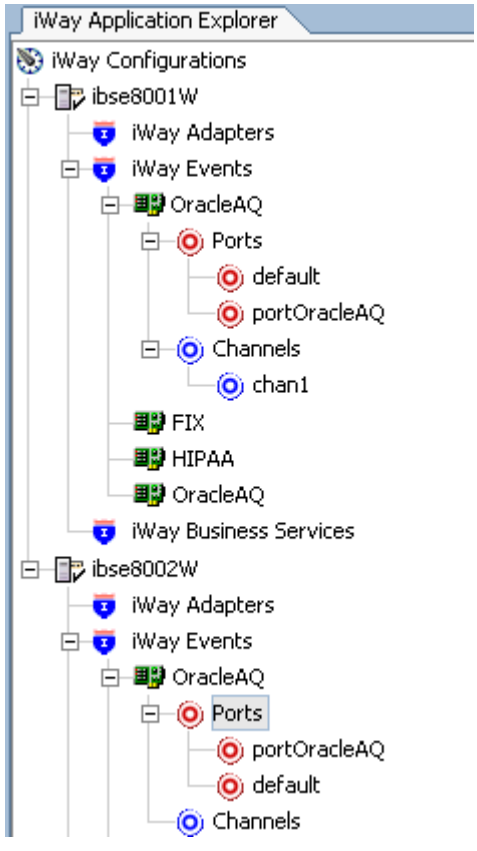
   Note: Use the IP address or machine name in the URL; do not use localhost.

3. Connect to the new configuration and select the iWay Events node in the left pane of Application Explorer.

4. Add a new port for the Oracle AQ adapter. For more information, see *Creating, Editing, or Deleting an Event Port* on page B-3.
5. Create a channel and add the port you created. For more information, see *Creating, Editing, or Deleting an Event Channel* on page B-17.
6. Click *Next* and enter the application server parameters.
7. Start the channel.
8. Create a new configuration and connect to the second iBSE instance.

   The connection to iBSE must be configured to each instance of the managed server.

The following graphic shows two configurations.



The following operations performed on one managed server will be replicated on all other managed servers:

- Create port and channel: Creates the channel and port under all available servers.
- Delete port and channel. Deletes the port and channel under all available servers.

The following operations must be performed on each server:

- Start channel. Starts the channel for the specific server.
- Stop channel. Stops the channel for the specific server.

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